Compliance Checklist

675-685 East Middlefield Road Mixed-Use Project

Prepared by

City of Mountain View

In Consultation with

DAVID J. POWERS & ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS & PLANNERS

November 2024

INITIAL STUDY OF ENVIRONMENTAL SIGNIFICANCE

PROJECT NAME:	**675-685 East Middlefield Road Mixed-Use Project**	FILE NUMBERS: PL-2022-259 & PL-2022-260
SITE ADDRESS:	675-685 East Middlefield Road	APN: 160-60-013
APPLICANT:	Prometheus Real Estate Group	
PROPERTY OWNER:	PREG Middlefield, LP	

PREVIOUSLY CERTIFIED EIRS:

- City of Mountain View. *East Whisman Precise Plan Final Environmental Impact Report*, SCH No.: 2017082051. September 20, 2019. (Precise Plan FEIR)
- City of Mountain View. *City of Mountain View 2030 General Plan and Greenhouse Gas Reduction Program Final Environmental Impact Report.* SCH No. 2011012069. September 2012. (General Plan FEIR)

PROJECT DESCRIPTION SUMMARY:

The project proposes to demolish the existing, two-story office/research and development (R&D) buildings on-site totaling 163,638 square feet, and all associated surface parking and landscaping on-site to construct:

- Three, seven- and eight-story residential buildings (1. Market Rate North, 2. Market Rate South, and 3. Below Market Rate), which would provide a total of 836 residential units and amenities, and parking;
- A six-story, approximately 275,200 square foot office building;
- An 8.5-level, aboveground parking garage structure;
- 2,344 square feet of commercial/retail space; and
- A 0.52-acre (or 22,600 square feet) privately-owned publicly accessible (POPA) park.

The office building would be constructed on the northeastern corner of the project site, the parking structure would be constructed on the northwestern corner of the project site, and the residential buildings would be constructed on the southern portion of the project site. The commercial/retail space would be located within the Market Rate North residential building, south of the POPA park. The project is subject to the provisions of Senate Bill 330 (SB 330).

ENVIRONMENTAL SETTING:

The approximately 10.6-acre project site is located on the northwest corner of East Middlefield Road and Ferguson Drive at 675-685 East Middlefield Road in the City of Mountain View. For ease of reference, the roughly rectangular project site is bound by Valley Transportation Authority (VTA) light rail tracks to the north, residential uses to the west, East Middlefield Road to the east, and Ferguson Drive and State Route 237 (SR 237) to the south. The project site is currently developed with two, two-story, multi-tenant office/R&D buildings (totaling 163,638 square feet) that are connected by a shared corridor, surface

parking, and ornamental landscaping. Surrounding land uses include office and R&D uses to the north, east, and south, and residential uses to the west of the project site.

The Mountain View 2030 General Plan land use designation for the project site is East Whisman Mixed-Use. The project site is located within the High Intensity Mixed-Use Character Area of the Precise Plan.

DETERMINATION: The analysis in this checklist determined that the proposed project would result in either the same or lesser impact than addressed in the Precise Plan FEIR; therefore, the standard for subsequent environmental review pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15162 has not been met. The project complies with the California Environmental Quality Act (CEQA) with the preparation of this checklist pursuant to CEQA Guidelines Section 15183 since the impacts of the proposed uses at the proposed intensity on the site were previously analyzed in the certified Precise Plan FEIR and General Plan FEIR.

NO ADDITIONAL IMPACT FINDING: The proposed project is in compliance with the California Environmental Quality Act, because the Checklist was prepared pursuant to CEQA Guidelines and found that with implementation of standard City policies and conditions of approval and certain mitigation measures identified in the Precise Plan FEIR, the proposed project would not result in any new or substantially more significant environmental impacts beyond those previously evaluated and disclosed in these EIRs.

Prepared by: Phillip Brennan
Community Development Department

Date: November 1, 2024

All referenced documentation is available for public review at the City of Mountain View, located at 500 Castro Street, Mountain View, CA 94039 during normal business hours.

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SECTION 1.0 INTRODUCTION AND PURPOSE

1.1 INTRODUCTION

Per Section 15183(a) of the CEQA Guidelines, CEQA mandates that projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.

The following environmental checklist provides information for the decision-makers and the public regarding the City's evidence and reasoning for determining the project's consistency with the assumptions and mitigation measures in the certified Greenhouse Gas Reduction Program (GGRP) and East Whisman Precise Plan Final Environmental Impact Report (Precise Plan FEIR).[1]

1.2 HISTORY OF ENVIRONMENTAL REVIEW AND PROJECT APPROVAL

The Precise Plan FEIR (certified in November 2019) evaluated the environmental impacts of the East Whisman Precise Plan (Precise Plan). The Precise Plan area is identified in the Mountain View 2030 General Plan (General Plan) as the East Whisman Change Area.

The Precise Plan was adopted in November 2019 and consists of City-initiated revisions to the General Plan and zoning ordinance to allow an increase in the intensity of office, commercial, hotel, and residential uses in the Precise Plan area. The Precise Plan provides a vision and guiding principles, development standards, and design guidelines for the properties in this area, in conformance with the General Plan vision for the East Whisman Change Area.

The certified Precise Plan EIR evaluated up to 2.3 million square feet of net new office uses, 100,000 net new square feet retail uses, 200 hotel rooms, and 5,000 multi-family residential units (with goal of 20 percent of the residential units being affordable). The Precise Plan includes new and enhanced parks, trail corridors, and public streets. The Precise Plan establishes an overall goal of 30 acres of publicly accessible open space to serve the projected 10,000 residents of the Precise Plan area.

[1] City of Mountain View. *East Whisman Precise Plan Integrated Final Environmental Impact Report*. SCH #: 2017082051. January 2020.

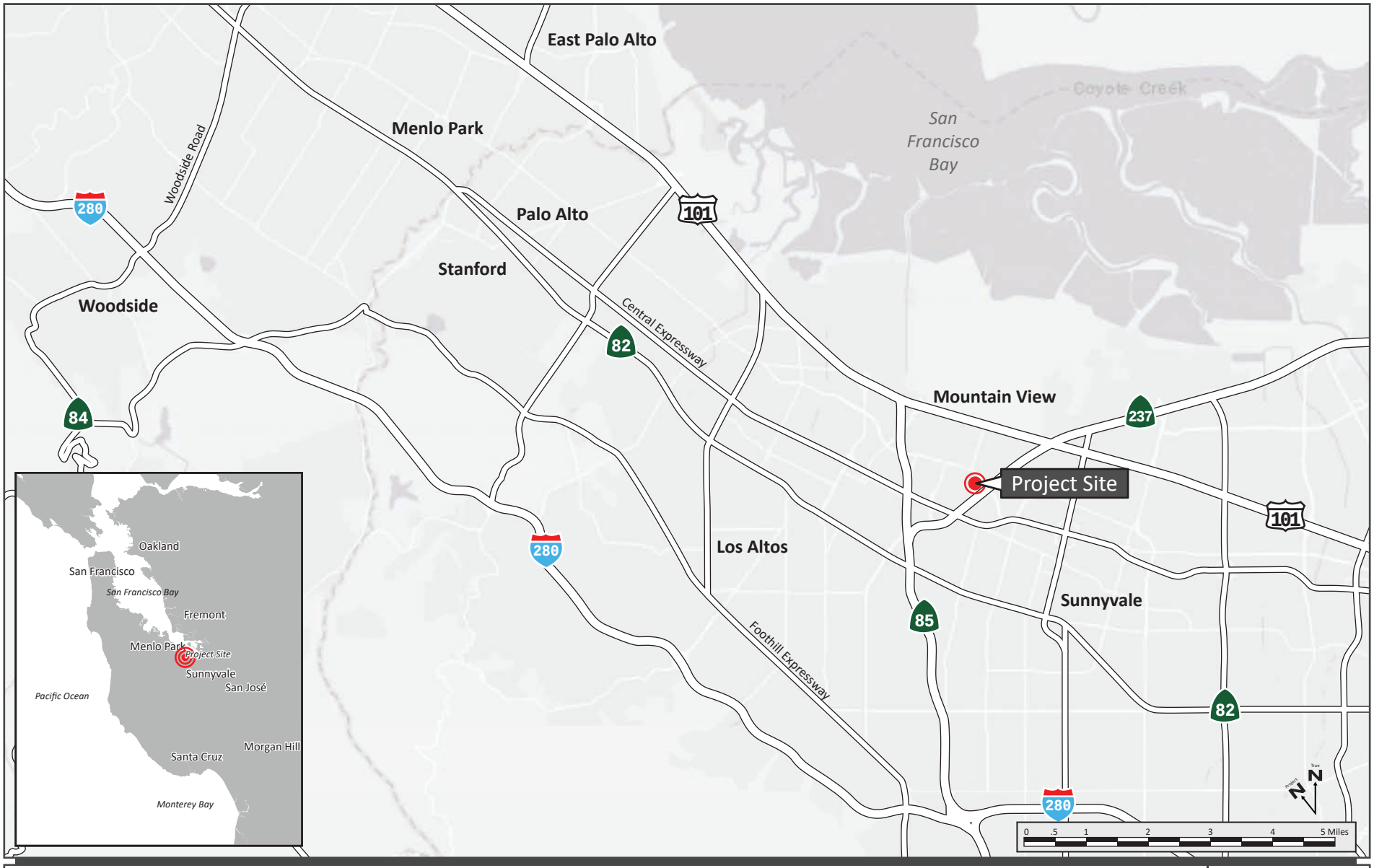
SECTION 2.0 PROJECT INFORMATION

2.1 EXISTING SITE CONDITIONS

The approximately 10.6-acre project site is located at 675-685 East Middlefield Road in the City of Mountain View (Assessor's Parcel Number [APN] 160-60-013) on the northwest corner of East Middlefield Road and Ferguson Drive. For ease of reference, East Middlefield Road is considered east of the site and Ferguson Drive is considered south of the site.

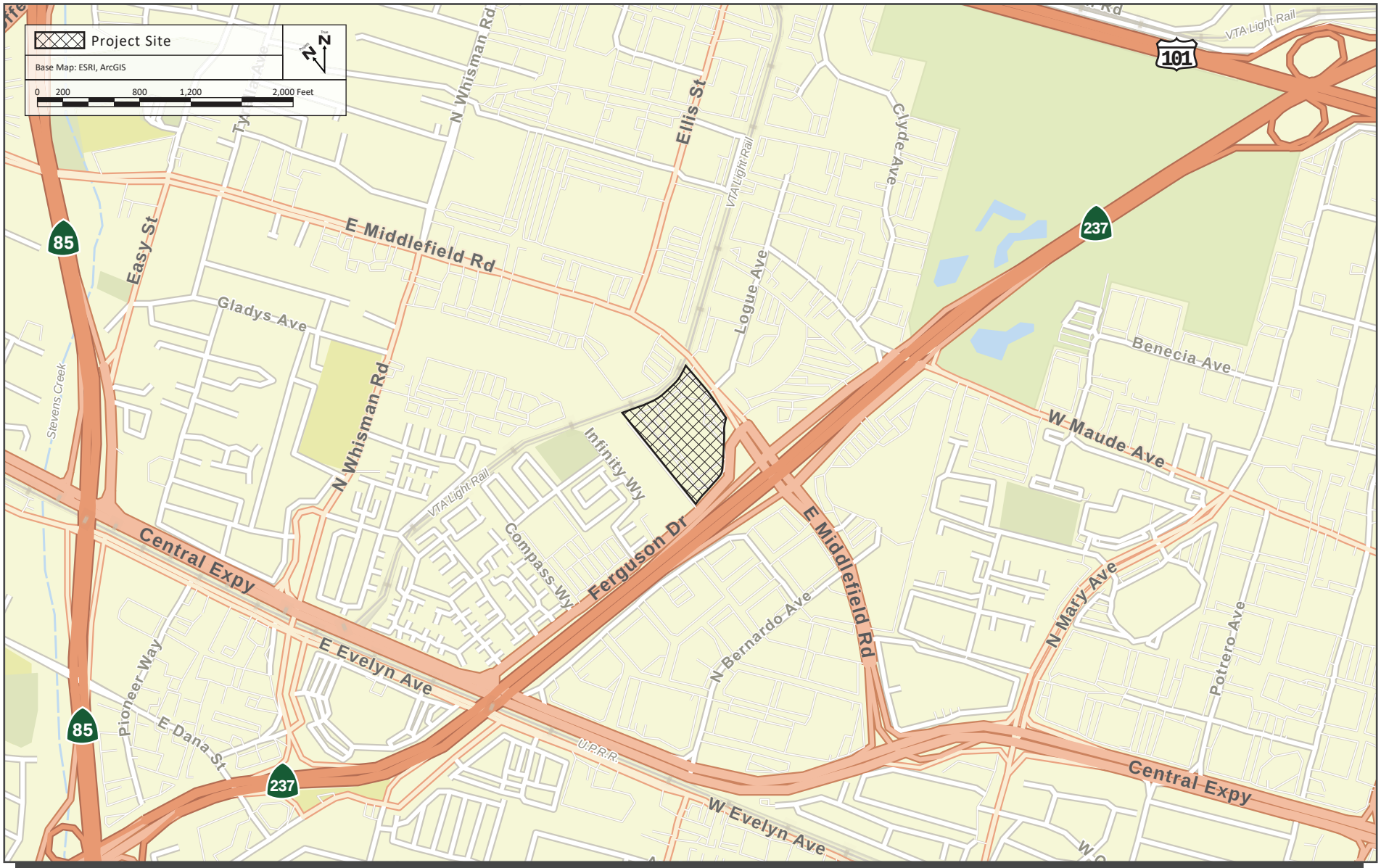
The roughly rectangular project site is bound by VTA light rail tracks to the north, residential uses to the west, East Middlefield Road to the east, and Ferguson Drive and SR 237 to the south. The project site is currently developed with two, two-story, multi-tenant office/research and development (R&D) buildings (totaling 163,638 square feet) that are connected by a shared corridor, surface parking, and ornamental landscaping. The existing buildings were fully occupied until December 2022, when the tenants of the southernmost building vacated the office space. The site remained partially occupied until March 2023, when the remaining tenants in the northernmost building vacated the site. The application for the project was submitted on December 14, 2022, and environmental review for the project began in January 2023. The analysis in this document assumes both buildings on-site are unoccupied under baseline conditions, which provides a more conservative (i.e., more impactful) analysis of environmental impacts resulting from the proposed development.

Surrounding land uses include office and R&D uses to the north, east, and south, and residential uses to the west of the project site. Regional and vicinity maps of the site are shown below on Figure 2.1-1 and Figure 2.1-2, respectively, and an aerial photograph of the project site and the surrounding land uses is shown on Figure 2.1-3.

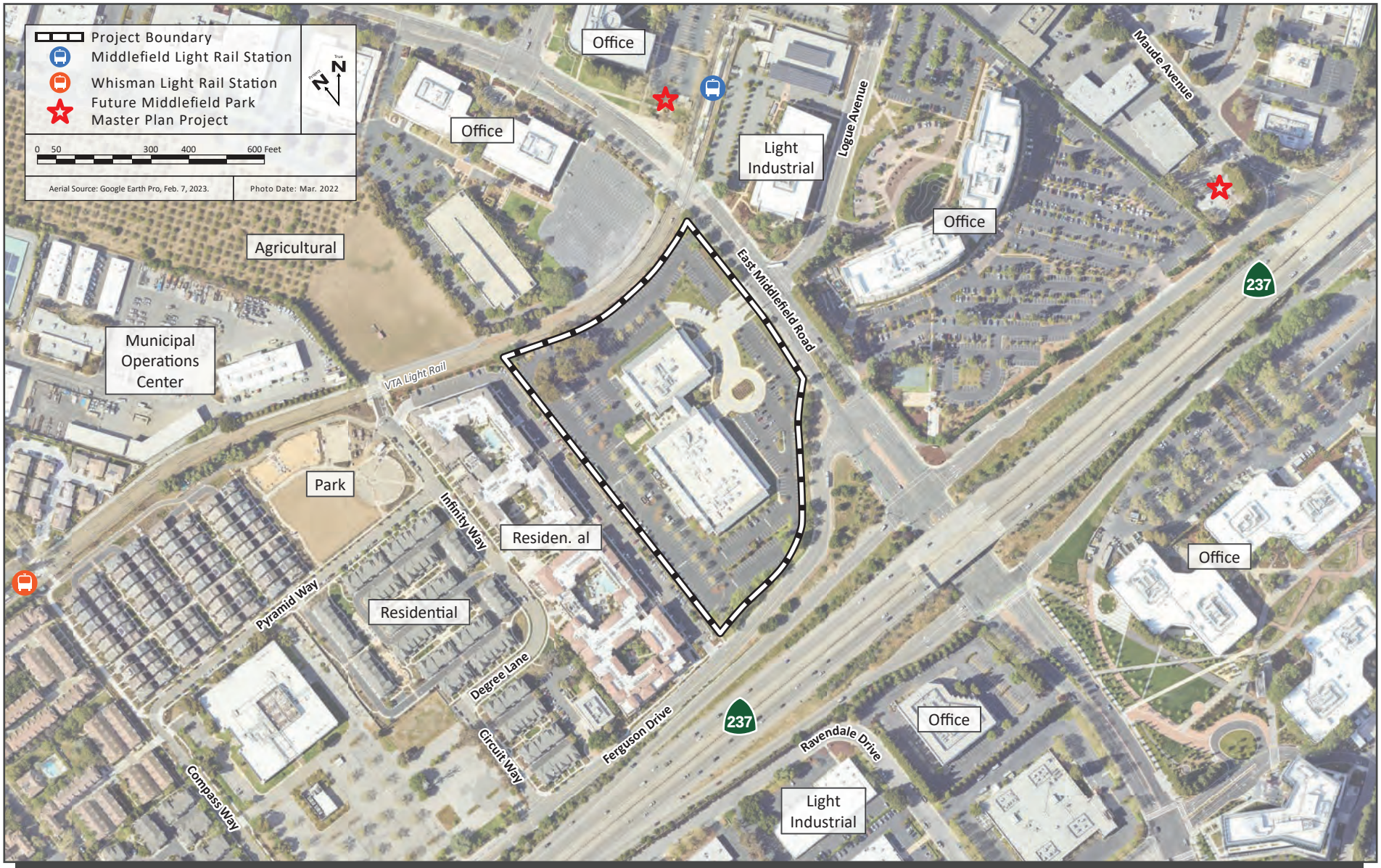


REGIONAL MAP

FIGURE 2.1-1



VICINITY MAP | FIGURE 2.1-2



AERIAL MAP | FIGURE 2.1-3

2.2 GENERAL PLAN DESIGNATION AND ZONING DISTRICT

2.2.1 General Plan

The General Plan land use designation for the project site is East Whisman Mixed-Use, which allows for a mix of uses including office, commercial, lodging, residential, parks, and open space. Office development under this General Plan designation can have a maximum height of six stories, and residential development under this designation can have a maximum height of eight stories. Development standards for this land use designation are regulated under Precise Plan standards.

2.2.2 Zoning

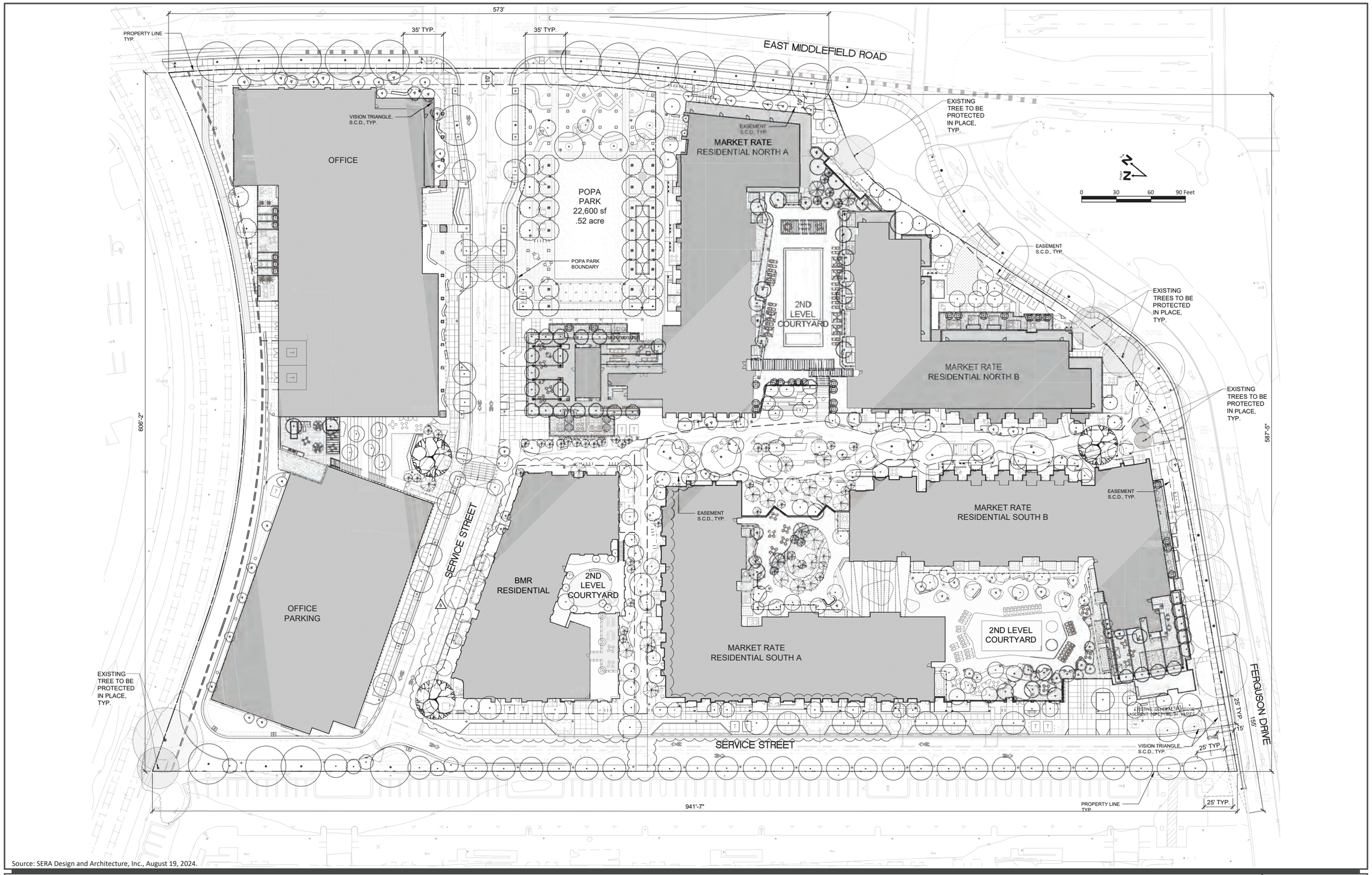
Under the Precise Plan, the site is designated as Mixed-Use Character Area and is located within the High-Intensity subarea, which allows a maximum Floor-Area-Ratio (FAR) of 3.50 for mixed-use developments utilizing the Bonus FAR program and a maximum height of up to 95 feet. The northern portion of the parcel nearest to the Middlefield Light-Rail Station is within the High-Rise Core of the Precise Plan, which allows residential and mixed-use projects to propose building heights up to 135 feet, subject to specific Precise Plan requirements. The Precise Plan includes other development standards applicable to development in the Mixed-Use Character areas such as setbacks, open space requirements, personal storage requirements, and signage.

2.3 PROPOSED PROJECT

The project would demolish the existing two-story office/R&D buildings totaling 163,638 square feet, and all associated surface parking and landscaping on-site to construct:

- Three, seven- and eight-story residential buildings (1. Market Rate North, 2. Market Rate South, and 3. Below Market Rate) providing a total of 836 residential units (322 units in Market Rate North; 364 units in Market Rate South; and 150 in the Below Market Rate building) and on-site amenities and parking;
- A six-story, approximately 275,200 square foot office building;
- An 8.5-level, aboveground parking garage structure;
- 2,344 square feet of commercial/retail space; and
- A 0.52-acre (or 22,600 square feet) privately-owned publicly accessible (POPA) park.
- In addition, the project proposes a Vesting Tentative Map to create five lots, including one common lot, with one lot further subdivided into six units for condominium purposes for three garage units, two residential units, and one commercial unit.

The office building would be constructed on the northeastern corner of the project site, the parking structure would be constructed on the northwestern corner of the project site, and the residential buildings would be constructed on the southern portion of the project site. The commercial/retail space would be located within the Market Rate North residential building, south of the POPA park. These project components are described in more detail below. A conceptual site plan is shown in Figure 2.3-1, and conceptual project elevations are shown in Figure 2.3-2. The proposed mixed-use development would have maximum structure heights ranging from approximately 88 feet to up to 93 feet (top of curb to top of parapet or highest roof peak) for the residential buildings, 88 feet for the office parking garage, approximately 92 feet for the office building, and an overall FAR of approximately 2.711.



Source: SERA Design and Architecture, Inc., August 19, 2024.

PROPOSED SITE PLAN | FIGURE 2.3-1



MIDDLEFIELD ROAD - LOOKING SOUTH



FERGUSON DRIVE - LOOKING WEST



SERVICE STREET - LOOKING EAST



SERVICE STREET - LOOKING WEST



SERVICE STREET - LOOKING NORTH



LINEAR PARK - LOOKING NORTH



LINEAR PARK - LOOKING SOUTH

Source: SERA Design and Architecture, Inc., August 22, 2024.

PROPOSED PROJECT ELEVATIONS | FIGURE 2.3-2

2.3.1 Residential Buildings

As discussed in Section 2.3, the project would construct 836 residential units in three residential buildings: 1) Market Rate North (MRN), 2) Market Rate South (MRS), and Below Market Rate (BMR). Each residential building would include amenities on various floors and each residential unit would have personal storage space in lockers located in common areas throughout their respective buildings or within the individual apartment units. The residential buildings and proposed amenities are described in further detail below. The ground floor of each residential building would include a 200 kilowatts (kW) emergency generator powered by 320 horsepower diesel-fired engines. The generators would be tested periodically and would provide power to the buildings in the event of a power failure.

2.3.1.1 *Market Rate North*

The MRN residential building would be constructed on the southeastern portion of the project site. The building would be seven stories tall with a maximum building height of up to approximately 93 feet and include two levels of below ground parking. The building would contain a total of 322 units including studio, one-bedroom, two-bedroom, and three-bedroom apartments, and amenity areas located on the first, second, and seventh floors. The building would also contain 2,344 square feet of retail space that is envisioned to be used for "grab-and-go" commercial uses such as pre-packaged retail food items and beverages.

The ground-floor amenities would include the lobby and leasing office and other amenities such as coworking space and lounge areas. The second-floor amenities would include a courtyard, fitness center, and meeting rooms. Most of the courtyard area would be buffered from East Middlefield Road and Ferguson Drive by the surrounding residential units on floors two through seven. The courtyard would include amenities such as a pool and spa, landscaping, and lounge furniture. The seventh floor of the MRN residential building would include a covered, outdoor amenity pavilion with landscaping on the northern corner of the building. A corridor connecting the POPA park and the paseo area between the two market rate buildings would be located adjacent to the retail space on the ground floor of the MRN residential building.

2.3.1.2 *Market Rate South*

The MRS residential building would be constructed on the southwestern portion of the project site. The building would be eight stories tall with a maximum building height of up to approximately 90 feet and include one underground parking level and one at-grade podium parking level. The building would contain a total of 364 units including studio, one-bedroom, two-bedroom, and three-bedroom apartments, and amenity areas located on the first three floors, as well as the seventh and eighth floors.

The ground-floor amenities would include the building lobby and other amenities such as bicycle repair and lounge areas. The second-floor amenities would include a courtyard, resident lounge, and a club room. The courtyard area would be buffered from Ferguson Drive by the residential units on floors two through eight. The courtyard would include amenities such as walking paths, lounge furniture, landscaping, a pool, and planter beds. The seventh floor would include a private patio for residents on the southern corner with landscaped areas and seating, and a fitness room would be included on the eighth floor.

2.3.1.3 *Below Market Rate*

The BMR residential building would be constructed on the western portion of the project site. The building would be eight stories tall with a maximum building height of up to approximately 90 feet and include one at-grade podium parking level. The building would contain a total of 150 below-market-rate units including studio, one-bedroom, two-bedroom, and three-bedroom apartments with amenity areas located on the first, second and eighth floors.

The ground-floor amenities would include the lobby and leasing office and other amenities such as lounge areas. A courtyard on the ground-floor level on the south side of the building is also proposed. This courtyard would contain landscaped areas, a children's play structure, and a variety of seating areas. The eighth floor would include a private terrace for residents on the southern corner with landscaped areas and seating.

2.3.2 Office Building and Parking Structure

The project would construct a six-story, up to 92 foot tall (or 105 feet tall as measured to the top of the mechanical equipment on the rooftop)[2], 275,200 square foot office building on the northeast corner of the project site, adjacent to East Middlefield Road and the VTA light rail tracks. The project would also construct an 8.5 level aboveground parking structure, with a maximum building height of up to approximately 88 feet, on the northwest corner of the project site that would provide 638 parking stalls, which would be reserved for employees of the new office building, with the exception of three carshare stalls located at the ground-floor of the garage.

The office building would provide outdoor open space on multiple levels of the building. The second floor would include an outdoor plaza (above the loading zone) located between the aboveground parking structure and the office building. The third and fifth floors would include outdoor terraces which would wrap around the east corner of the building. An additional outdoor terrace would be located on the sixth floor along the building's western side, adjacent to the VTA tracks. These outdoor open space areas would provide seating areas and raised planter beds to be utilized by office employees.

The ground floor of the office building would include a 200-kW emergency generator powered by a 320-horsepower diesel-fired engine. The generator would be tested periodically and would provide power to the building in the event of a power failure.

2.3.3 POPA Park and Paseo Walkway

The project would construct a 0.52-acre POPA park on the northern portion of the project site between the proposed office building and the MRN residential building. The POPA park would be accessible to pedestrians via the sidewalk along East Middlefield Road, as well as off Ferguson Drive via the service street and paseo. The POPA park would contain newly planted trees, seating areas, accent lighting, grass areas, and other amenities.

The project would also include an approximately 29,985 square foot publicly accessible linear park walkway between the MRN residential building and the BMR and MRS residential buildings, and an

[2] The overall building height would measure up to approximately 105 feet tall to the top of the covered mechanical penthouse/screening structure on the rooftop. The additional height beyond the 95-foot maximum height limit is exempted per the provisions of Municipal Code Section SEC. 36.08.30 (e).

approximately 6,400 square foot publicly accessible walkway between the BMR and MRS buildings. These walkways would include new trees, landscaping, seating areas, and open gathering spaces.

2.3.4 Site Access, On-Site Circulation, and Parking

The project site is currently accessible to vehicles via two, two-way driveways on East Middlefield Road. These driveways would be replaced with two new, two-way driveways that would be connected by a new publicly accessible service street on-site. One of the new driveways would be constructed on East Middlefield Road and the second new driveway would be constructed on Ferguson Drive. The segment of the service street accessed via the driveway on East Middlefield Road would run between the residential buildings and the non-residential buildings, and the stretch of the service street accessed via the driveway on Ferguson Drive would run parallel to the western boundary of the project site. This service street would provide direct access to the proposed aboveground office parking structure and the parking garages located within the BMR, MRN, and MRS residential buildings. Access to the office building for service and loading vehicles would be provided via a separate service road that would branch off the elbow of the service street and wrap around the parking structure to the back of the office building.

Pedestrian access to the project site would be provided via sidewalks along East Middlefield Road and Ferguson Drive. Several internal walking paths on-site would connect to these sidewalks on the east and south side of the project site.

The MRN residential building would contain two levels of underground parking which would provide a total of 452 parking stalls, including 124 stalls of shared parking on the first level that would serve the residents of all residential buildings, retail patrons, park visitors, guests, and employees of the new office building, and an additional five spaces allocated for the leasing office, which would be shared after hours. The 323 stalls on the second level would be reserved for the residents of the building. Residents would have access to the 129 office parking stalls on Monday through Friday, from 6:00 PM to 8:00 AM and all day on weekends. The leasing office spaces would be available to potential new residents on weekdays from 8:00 AM to 6:00 PM and would be available for shared parking afterhours. Office employees would only be permitted to park in the MRN residential building on weekdays between 8:00 AM and 6:00 PM. Access to the parking garage levels would be provided via a driveway ramp located on the north side of the MRN residential building that would be accessible from the new service street on-site.

The MRS residential building would contain one level of ground floor podium parking and one level of underground parking, providing 359 parking stalls, all of which would be reserved for residents. Of the 359 parking stalls in the MRS residential building, 137 would be provided as mechanical stacker parking stalls. Access to parking would be provided via a driveway located on the southwest side of the MRS residential building that would be accessible from the new service street on-site.

Most of the parking for the office building would be provided in the new 8.5-level aboveground parking structure, which would include 638 parking stalls. Access to this aboveground parking structure would be provided via a driveway located on the south side of the building.

A total of 33 parking spaces would be provided for residents of the BMR building at the ground-floor level of the BMR building and would be accessed from the service street from a driveway located on

the west side of the building. Residents of the BMR residential building would not have access to the shared stalls located in the MRN building.

A breakdown of the parking by location and type of parking stalls is provided in Table 2.3-1 below.

Table 2.3-1: On-Site Structured Parking Summary

	Carshare	ADA Accessible	ADA Accessible EVCS	EVCS	Standard	Total
MRN Residential	0	12	7	61	372	*452*
MRS Residential	0	7	5	49	298	*359*
BMR Residential		1	3	2	27	*33*
Parking Structure	3	11	7	89	528*	*638*
Total	*3*	*31*	*22*	*201*	*1,225*	*1,482*

*Includes six standard-size loading stalls

In addition to the parking outlined in Table 2.3-1 above, the project would provide 19 surface parking stalls located primarily along the service street and adjacent to the proposed structures (two spaces in the loading bay behind the office) which could be used for truck loading, pedestrian drop-off, guest parking, shuttle stops, or carshare stalls.

The project would provide a total of 1,108 bicycle parking spaces. Generally, the long-term spaces would be provided within secure bike rooms on-site. The short-term spaces would be provided on racks near the entrances of each building. A summary of the bicycle parking by location and type is provided in Table 2.3-2.

Table 2.3-2: Bicycle Parking Spaces

	Short-Term Spaces	Long-Term Spaces	Total
MRN Residential	34	324	*358*
MRS Residential	46	365	*411*
BMR Residential	18	150	*168*
Office Building	14	139	*153*
POPA	8	-	*8*
Retail Space	8	2	*10*
Total	*128*	*980*	*1,108*

2.3.5 Utility and Right-of-Way Improvements

The project would construct new lateral connections to the existing water, storm drain, fire water, and sanitary sewer mains in East Middlefield Road. The project would also construct new storm drain lateral connections to the existing mains in Ferguson Drive. Electricity lines would connect to existing and relocated electrical infrastructure on the southern portion of the project site adjacent to Ferguson Drive and an existing communications vault would remain on the northwest corner of the project site. No connections to natural gas are proposed.

The sidewalks along the project frontages on East Middlefield Road and Ferguson Drive would be reconstructed. A new crosswalk and associated stop bars would be striped at the southwest side of the East Middlefield Road and Logue Avenue intersection as part of the project. The project would also construct a buffered bike lane along the project frontage on Middlefield Road and stripe the new service street with "sharrows" to designate the street as a bicycle route.

2.3.6 Landscaping, Heritage Trees, and Stormwater Treatment

The project site currently contains 241 trees, 47 of which are protected Heritage trees under Section 32.25 of the City's Municipal Code.[3] The proposed project would remove all on-site trees except for seven (7) existing Heritage trees to be preserved: two (2) existing Heritage trees at the west corner of the project site adjacent to the VTA light rail tracks and five (5) Heritage trees along Ferguson Drive. The completed project would provide a total of 353 trees including planting 346 replacement trees in areas surrounding the buildings and within the courtyards and paseos on-site and seven (7) existing Heritage trees to be preserved. In addition to the replacement trees, the project would plant other new landscaping, including new shrubs and groundcover, throughout the project area. The landscaping would incorporate low to moderate water use plants and California native species throughout the project site.

The proposed project would result in a decrease of impervious area by approximately 54,764 square feet (or 12 percent) compared to existing conditions due to the addition of landscaped areas, bioretention areas, and flow-through planters on-site.

2.3.7 Construction Activities

Project construction activities would include demolition, site preparation, grading and excavation, building construction, architectural coatings, and paving. Construction staging would occur on-site. Construction of the project would occur over two phases that would take a total of approximately 48 months.[4]

Phase One would include demolition and preparation of the entire site, construction of the service street, and construction of the MRN residential building and associated off-site improvements. This

[3] A "Heritage Tree" is any tree that has a trunk with a circumference of 48 inches or more measured at 54 inches above natural grade. Multi-trunk trees are measured just below the first major trunk fork. Three species, quercus (oak), sequoia (redwood) or cedrus (cedar) are considered "Heritage" if they have a circumference of 12 inches measured at 54 inches above natural grade. Source: City of Mountain View. "Municipal Code: Section 32.23 – Definitions." Accessed February 2, 2023. https://library.municode.com/ca/mountain_view/codes/code_of_ordinances?nodeId=PTIIITHCO_CH32TRSHPL

[4] The overall construction period could extend to 55 months; however, this analysis is conservative by evaluating a comparatively more impactful 48-month construction period.

phase would last approximately 36 months and require excavation at a maximum depth of approximately 31 feet below ground surface. Excavation and removal of approximately 89,500 cubic yards of soil would be necessary to accommodate the proposed building foundations, underground parking levels, footings, service street, and utilities. Construction dewatering would be required for approximately 17 months while the underground parking is constructed.

Phase Two would begin approximately 18 months after the start of Phase One, and would include construction of the MRS residential building, BMR residential building, office building, aboveground parking structure, and associated off-site improvements. This phase would last approximately 30 months and require excavation at a maximum depth of 13 feet below ground surface. Excavation and removal of approximately 49,245 cubic yards of soil would be necessary to accommodate the proposed building foundations, underground parking level, footings, and utilities.

2.3.8 Green Building and Emissions Reduction Features

The proposed non-residential buildings (i.e., the office building and aboveground parking garage) would meet the intent of LEED BD+C Platinum and the residential buildings would achieve a minimum of 120 points on the Green Point Rated system by incorporating a variety of green building measures. These features would include landscaped bioretention areas, drought tolerant landscaping with high-efficiency irrigation, water efficient interior fixtures, energy efficient appliances, and solar panels on the rooftops of each building. Pursuant to the City's Green Building Code, the buildings would be 100 percent electric and no natural gas would be used.

2.4 COMPARISON WITH PRECISE PLAN

The project would construct 836 residential units, 275,200 square feet of office uses, and 2,344 square feet for neighborhood commercial uses within the Precise Plan area. This development would be consistent with the type and scale of development envisioned in the Precise Plan for the project site by creating transit-oriented residential and office uses in a mixed-use environment and would comply with most standards in the Precise Plan.[5] The project would also provide the required number of new residential units proportionate to the proposed office floor area on-site, which is consistent with the Precise Plan "jobs-housing linkage" requirement.[6]

2.4.1 Transportation Demand Management

The Precise Plan specifies that all new residential development with at least 100 units is required to provide a Transportation Demand Management (TDM) plan with programs and measures to reduce vehicle trips. Pursuant to the Precise Plan, the proposed residential portion of the project is required to incorporate the following TDM measures:

[5] Design exceptions are permitted under the Planned Community Permit.

[6] The East Whisman Precise Plan Jobs -Housing Linkage Program requires that the proposed strategies to facilitate residential development shall be roughly proportional to the net new office floor area. Each 1,000 square feet of net new office floor area should be associated with at least three housing units. The proportion may be less if affordable units are provided in excess of the City's inclusionary requirements (1.5 units per 1,000 square feet, as specified in the Precise Plan's development reserve set-aside), or if other housing-related policy goals are met. The project would result in a net increase in 111,562 square feet of office uses. Per the program, the project would need to provide at least 335 residential units. The project provides a total of 836 residential units.

- **TDM Plan Site Requirements:** New residential development shall include the following TDM site design strategies:
    - Maximum parking and carshare parking as defined by Chapter 3 of the Precise Plan
    - Bicycle parking as defined by Chapter 3 of the Precise Plan
    - Residential project over 100 units shall provide a shared, common, collaborative workspace available to residents and their guests, which can be offered in partnership with nearby residences or businesses
    - Site design that supports alternative modes, such as orienting building entrances toward sidewalks, transit stops, and bicycle routes
    - Accessible secure storage space for grocery and package delivery shall be provided in multifamily development

- **TDM Plan Operational Requirements:** The TDM plan shall include the following minimum operational measures or equivalent:
    - Property managers or homeowner associations (HOAs) shall provide access to shared bicycles if a bikeshare service is not available nearby.
    - Property managers or HOAs shall provide local transportation information to all residents through a website, leasing office, or initial leasing information.
    - Property managers or HOAs shall support Safe Routes to Schools programs including facilitating parent gatherings and coordination of walking school buses and/or bike trains.
    - Monetary incentives for alternative modes, such as subsidized transit passes or bike-share for residents and/ or unbundled parking.
- **Parking Rationale:** The TDM plan shall demonstrate that the parking provided is adequate to serve the needs of the development and shall consider the project's trip-reduction measures.
- **TDM Monitoring:** Annual TDM monitoring shall be conducted by a third party and paid for by the property owner(s) or their representative. It shall include parking counts to measure the peak parking demand and resulting parking rate.
- **Monitoring Results:** Annual monitoring results shall be submitted to the City for review. The report shall include a description of the measures in place and any new or modified measures since the last monitoring period. If the required trip-reduction standard is not met, the property manager or HOA shall submit a revised TDM plan to the City identifying new programs or polices to address the exceedance and reduce the number of vehicle trips.

The Precise Plan specifies that all office projects with new construction or additions greater than 10,000 square feet shall provide a TDM plan with programs and measures to reduce vehicle trips. Pursuant to the Precise Plan, the proposed office portion of the project is required to incorporate the following TDM measures:

- **TDM Plan Site Requirements.** The TDM plan shall include the following transportation demand management site design features, though other measures may be needed to reach required trip caps:
    - Priority parking for carpools and vanpools.
    - Bicycle parking and shower and changing facilities as defined by this chapter.

- Maximum parking and carshare parking as defined by this chapter.
- Site design that supports alternative modes, such as orienting building entrances toward sidewalks, transit stops and bicycle facilities.

- **TDM Plan Operational Requirements.** The TDM plan shall include the following minimum operational measures, though other measures may be needed to reach required trip caps:
  - The property owner shall join the Mountain View Transportation Management Association (TMA). Tenants may join in lieu of property owners, but if a tenant is unable to maintain membership, the property owner shall be responsible.
  - Monetary incentives for alternative modes, such as subsidized transit passes, bike-share or carpools.
- **TDM Plan Alternative Requirements.** The TDM plan may include other measures to reach required trip targets, including but not limited to:
  - Shared bicycles if a bikeshare service is not available nearby.
  - Parking cash-out, paid parking or other parking monetization.
  - Guaranteed ride home program.
  - Telecommute support.
  - Alternative work schedules.
- **Parking Rationale.** The TDM plan shall demonstrate that the parking provided is adequate to serve the needs of the development and shall consider the project's trip-reduction measures.
- **Implementation and Approval.** The TDM Plan shall identify how the required measures will be implemented and describe and other measures proposed to meet or exceed trip reduction goals. TDM plans are required prior to project approval.
- **Trip Cap.** In addition to the requirements in Section 1, office and research and development projects with TDM plans shall limit vehicle trips to the site. The long-term trip cap across the entire East Whisman area is an average of 0.95 AM and 0.88 PM peak-hour trips per 1,000 square feet across all office, R&D and industrial sites, which may be increased based on capacity-increasing improvements at the gateways identified in Chapter 6. This areawide average shall be implemented through site-specific trip caps, as established through the Office Trip Cap Phasing Program and Administrative Guidelines. These site-specific trip caps are subject to the following:
  - Other Sites. Based on the area-wide average standard, applicants may be allowed a higher trip-cap rate if they apply their TDM program to existing buildings in addition to their development.
  - Enforcement. Trip caps will be monitored and enforced. The property owner is responsible for achieving the performance measures established in the TDM Plan, including site-specific vehicle trip caps.
  - Phase-in Trip Cap. The City will allow near-term flexibility in meeting the trip cap requirement. Trip-cap requirements in any given year will be established through the Office Trip Cap Phasing Program and Administrative Guidelines, which will be based on:
    - The ultimate requirement above, as adjusted by any capacity-increasing improvements,
    - Changes to the East Whisman area that may demonstrably result in fewer vehicle trips, such as the construction of new housing, and

- The peak hour vehicle trip rate of office, R&D and industrial sites without TDM programs.
- When required trip-cap rates change, all existing development with affected TDM plans shall be responsible for lowering their vehicle trips in compliance with the Phasing Program.

- **Monitoring and Enforcement.** Annual TDM monitoring shall be conducted by a third party and paid for by the property owner(s) or their representative. It shall include driveway counts and a survey of employee travel modes.

  If the site-specific vehicle trip cap is exceeded, the property owner or representative shall submit a revised TDM plan to the City identifying new programs or polices to address the exceedance and reduce the number of site-specific vehicle trips, or identifying additional sites where the TDM program will be enforced (pursuant to Section 2(a) above).

  If the following annual monitoring report indicates that despite changes to their TDM program, the site still does not comply with its vehicle trip cap, then the City may assess the employer/property owner/building manager a financial penalty. The amount of financial penalty will be determined based on the employer's TDM program and precedent TDM penalty programs developed by the City. In determining whether a TDM penalty is appropriate, the City may consider whether the property owner has made a good-faith effort to meet the TDM goals and may allow the property owner a certain "grace period" to implement additional measures to meet their TDM goals. TDM penalties shall be collected and used at the City's discretion and shall promote alternatives to single occupancy vehicle use in the City.

2.5 APPROVALS REQUIRED

- Development Review Permit
- Heritage Tree Removal Permit
- Planned Community Permit
- Vesting Tentative Map
- Building Permits

SECTION 3.0 ENVIRONMENTAL CHECKLIST

The purpose of the checklist is to evaluate the categories in terms of any **"changes"** or **"new information"** that may result in a changed environmental impact evaluation. A "no" answer does not necessarily mean that there are no potential impacts relative to the environmental category, but that there is no relevant change in the condition or status of the impact due to its insignificance or its treatment in a previous environmental document.

Overriding considerations were adopted with the certification of an EIR that accepted the possibility of certain impacts regardless of whether mitigations could reduce them to a less-than-significant level. Thus, certain environmental categories might be answered with a "no" in the checklist because the proposed project does not introduce changes that would result in a modification to the conclusion of the EIR Findings Document.

EXPLANATION OF CHECKLIST EVALUATION CATEGORIES:

A. Where an Impact Was Analyzed in Prior Environmental Documents
This column provides a reference to the pages of the other environmental documents where information and analysis may be found relative to the environmental issue listed under each topic.

B. Do Proposed Changes Involve New or More Severe Impacts?
Pursuant to Section 15162(a)(1) of the CEQA Guidelines, this column indicates whether the changes represented by the proposed project will result in new significant impacts not disclosed in the prior EIR or substantial increases in the severity of a previously identified significant impact. A yes answer is required if there are new or worsened significant impacts that require "major revisions of the previous EIR or negative declaration." If a "yes" answer is given, additional mitigation measures or alternatives may be needed.

C. Any New Circumstances Involving New or More Severe Impacts?
Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether changed circumstances affecting the proposed project will result in new significant impacts not disclosed in the prior EIR or substantial increases of the severity of a previously identified significant impact. A yes answer is required if there are new or worsened significant impacts that require "major revisions of the previous EIR or negative declaration." If a "yes" answer is given, additional mitigation measures or alternatives may be needed.

D. Any New Information of Substantial Importance Requiring New Analysis or Verification?
Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column indicates whether new information "of substantial importance" is available requiring an update to the analysis of a previous EIR to verify that the environmental conclusions and mitigations remain valid. Any such information is only relevant if it "was not known and could not have been known with reasonable diligence at the time of the previous EIR." To be relevant in this context, such new information must show one or more of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

If the new information shows the existence of new significant effects or significant effects that are substantially more severe than were previously disclosed, then new mitigation measures should be considered.

If the new information shows that previously rejected mitigation measures or alternatives are now feasible, such measures or alternatives should be considered again.

If the new information shows the existence of mitigation measures or alternatives that are (i) considerably different from those included in the prior EIR and (ii) able to substantially reduce one or more significant effects, then such mitigation measures or alternatives also should be considered.

E. Prior Environmental Document Mitigations Implemented or Mitigations Address Impacts.
Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column indicates whether the Precise Plan FEIR provides mitigations to address effects in the related impact category. If N/A is indicated, the Precise Plan FEIR and this checklist conclude that the impact does not occur with this project and, therefore, no mitigation is needed.

DISCUSSION AND MITIGATION SECTIONS

Discussion
A discussion of the elements of the checklist is provided under each environmental category in order to clarify the answers. The discussion provides information about the particular environmental issue, how the project relates to the issue and the status of any mitigation that may be required or that has already been implemented.

Standard Mitigation Measures
Applicable Standard Mitigation Measures are listed under each environmental category.

EIR Mitigation Measures
Applicable mitigation measures from previous EIRs that apply to the changes or new information are referenced under each environmental category.

Special Mitigation Measures
If changes or new information involve new impacts, special mitigations will be listed which will be included as project conditions to address those impacts.

3.1 AESTHETICS

	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Have a substantial adverse effect on a scenic vista?	Precise Plan Draft EIR (2019) Pages 49-50	No	No	No	No
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Precise Plan Draft EIR (2019) Page 49	No	No	No	No
c. Substantially degrade the existing visual character or quality of public views of the site and its surroundings? Would the project conflict with applicable zoning and other regulations governing scenic quality?	Precise Plan Draft EIR (2019) Page 50	No	No	No	No
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Precise Plan Draft EIR (2019) Page 50-51	No	No	No	No

3.1.1 Existing Setting

The existing aesthetics setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR.

The project site is located in the High Intensity Mixed-Use Character Area of the Precise Plan, which allows a maximum FAR of 3.50 and a maximum height of up to 95 feet (with an additional 10 feet above the maximum height allowed for equipment and screening). The northern portion of the parcel nearest to the Middlefield Light-Rail Station is within the High-Rise Core of the Precise Plan, which allows residential and mixed-use projects to construct building heights up to 135 feet, subject to specific Precise Plan requirements. The project site is currently developed with two, two-story, multi-tenant office/R&D buildings that are connected by a shared corridor, surface parking, and landscaping around the perimeter of the site and buildings. Pursuant to SB 743, the project site is located within a

transit priority area (TPA) based on its location within one half-mile of a major transit stop (Middlefield Light Rail Station).[7]

3.1.2 Discussion

a-d. The Precise Plan FEIR found that the buildout of the Precise Plan (which includes the development proposed) would not result in a significant impact on aesthetic resources. As described in the Precise Plan FEIR, most of the Precise Plan area (including the project site) is considered an infill site located within a SB 743-defined TPA due to the proximity of the VTA light rail stations in and around the Precise Plan area.[8] Pursuant to SB 743, "aesthetic and parking impacts of a residential, mixed-use residential, or employment center on an infill site within a transit priority area shall not be considered significant impacts on the environment." Thus, the aesthetics impacts of the proposed project, which would be a mixed-use residential project within a transit priority area, would be less than significant.

The project would be subject to the City's development review process, which would ensure the proposed building design and construction materials would not adversely affect the Precise Plan area's visual quality or create new sources of light and glare. The proposed maximum building heights ranging from 88 to 93 feet would not exceed the maximum allowed building height in the Mixed-Use Character Area of the East Whisman Precise Plan area, which is 95 feet (with an additional 10 feet allowed for architectural features and elevator runs). Furthermore, the project's lighting would be required to comply with the California Building Standards Code (CBC), which minimizes light pollution that is disruptive to the environment by reducing the amount of backlight, uplight, and glare produced by luminaries. This less than significant conclusion is consistent with the conclusion in the Precise Plan FEIR.

3.1.3 Conclusion

The proposed project would not result in a new or substantially more severe significant aesthetic impact than disclosed in the Precise Plan FEIR.

[7] Metropolitan Transportation Commission. Transit Priority Areas (2021). Accessed January 18, 2024. https://opendata.mtc.ca.gov/datasets/transit-priority-areas-2021-1/explore?location=37.773000%2C-122.191730%2C9.35.

[8] "Transit priority area" means an area within one-half mile of a major transit stop that is existing or planned.

3.2 AIR QUALITY

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Conflict with or obstruct implementation of the applicable air quality plan?	Precise Plan Draft EIR (2019) Page 59-62	No	No	No	MM AQ-3.1
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Precise Plan Draft EIR (2019) Page 62-65	No	No	No	MM AQ-3.1
c. Expose sensitive receptors to substantial pollutant concentrations?	Precise Plan Draft EIR (2019) Page 65	No	No	No	MM AQ-3.1
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Precise Plan Draft EIR (2019) Page 65-66	No	No	No	N/A

The discussion in this section is based, in part, on the Air Quality Assessment prepared by Illingworth & Rodkin, Inc. dated May 2, 2024. This report is attached as Appendix A.

3.2.1 Environmental Setting

The existing air quality setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR. The project site previously generated air quality emissions from operations of the on-site buildings and vehicle trips by employees and visitors. The closest existing sensitive receptors to the project site are multi-family residential units (Revela Apartments) on Infinity Way directly adjacent to the western project boundary. In addition, sensitive receptors will be located at the recently approved but not yet constructed Middlefield Park Master Plan project site located 120 feet north of the project site (see Figure 2.1-3).

3.2.2 Discussion

a. The Precise Plan FEIR concluded the Precise Plan would not conflict with the 2017 Clean Air Plan (2017 CAP) nor interfere with its implementation, and the impact would be less than significant.

The project is consistent with the Precise Plan, including its policies. In addition, the project would not conflict with the goals of the 2017 CAP of protecting public health by progressing towards attaining air quality standards and eliminating health risk (as discussed under checklist questions b. and c.). by implementing Precise Plan FEIR mitigation measure MM AQ-3.1 and associated conditions of approval. The project, therefore, would result in the same impact as disclosed in the Precise Plan FEIR.

b. The Precise Plan FEIR identified a potentially significant air quality impact (Impact AQ-3) related to construction and operational emissions of criteria pollutants and their precursors; however, this would be reduced to a less than significant level with implementation of MM AQ-3.1.

Precise Plan FEIR Mitigation Measure:

FEIR MM AQ-3.1: Construction criteria pollutant and TAC quantification shall be required on individual projects developed under the Precise Plan once construction equipment and phasing details are available through modeling to identify impacts and, if necessary, include measures to reduce emissions below the applicable BAAQMD construction thresholds. Reductions in emissions can be accomplished through, not limited to, the following measures:

- Construction equipment selection for low emissions;
- Use of alternative fuels, engine retrofits, and added exhaust devices;
- Low-VOC paints;
- Modify construction schedule; and
- Implementation of BAAQMD Basic and/or Additional Construction Mitigation Measures for control of fugitive dust.

Construction Period Emissions

Consistent with the requirements of Precise Plan mitigation measure MM AQ-3.1, the project's construction criteria pollutant and Toxic Air Contaminant (TAC) TAC emissions were quantified in an Air Quality Assessment. The California Air Pollution Control Officers Association's California Emissions Estimator Model (CalEEMod) provides annual emission estimates for the construction of projects. CalEEMod provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activities include worker and truck traffic. The CalEEMod modeling of project-generated construction emissions was based on the applicant-provided schedule and equipment usage assumptions. The construction schedule assumes the earliest possible start date would be October 2025 and that the project would be built out over a period of approximately 47 months (or 1,045 construction workdays). The earliest year of operation was assumed to be 2030.

Table 3.2-1 below shows the project's estimated average daily construction emissions of reactive organic gases (ROG), nitrogen oxides (NOx), coarse particulate matter (PM_{10}) exhaust, and fine particulate matter ($PM_{2.5}$) exhaust from construction activities and diesel exhaust.

Table 3.2-1: Estimated Construction Period Emissions

	ROG	NOx	PM_{10}	$PM_{2.5}$
Construction Emissions (tons/year)				
2025	0.08	0.85	0.03	0.03
2026	0.30	2.94	0.10	0.09
2027	1.35	2.91	0.09	0.08
2028	4.23	1.57	0.04	0.03
2029	3.49	0.23	0.01	0.01
Average Daily Construction Emissions (pounds/day)				
2025 (66 construction workdays)	2.49	25.77	0.97	0.88
2026 (261 construction workdays)	2.28	22.51	0.77	0.71
2027 (261 construction workdays)	10.032	22.30	0.65	0.61
2028 (262 construction workdays)	32.33	11.98	0.28	0.24
2029 (195 construction workdays)	35.75	2.41	0.07	0.06
BAAQMD Threshold (pounds/day)	*54*	*54*	*82*	*54*
Exceed Threshold?	**No**	**No**	**No**	**No**

Source: Illingworth & Rodkin, Inc. *675-685 East Middlefield Mixed-Use Development Air Quality Assessment.* May 2, 2024.

As shown in Table 3.2-1, predicted construction emissions would not exceed the Bay Area Air Quality Management District (BAAQMD) significance thresholds during any year of construction activities. However, construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site deposit mud on local streets, which is an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider construction criteria air pollutant emissions impacts that are below BAAQMD thresholds to be less than significant with the incorporation of BAAQMD Best Management Practices (BMPs) (described below as standard conditions of approval). The project would implement the BAAQMD BMPs identified in the Precise Plan FEIR as standard conditions of approval to reduce fugitive dust emissions. The project, therefore, would result in the same less than significant construction period emissions disclosed in the Precise Plan FEIR.

Standard Conditions of Approval:

- **Basic Air Quality Construction Measures:** The applicant shall require all construction contractors to implement the basic construction mitigation measures recommended by BAAQMD to reduce fugitive dust emissions. Emission reduction measures will include, at a minimum, the following measures:
    - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day.
    - All haul trucks transporting soil, sand, or other loose material off-site will be covered.
    - All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
    - All vehicle speeds on unpaved roads will be limited to 15 mph.
    - All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
    - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measures Title 13, Section 2485, of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
    - All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
    - Post a publicly visible sign with the telephone number and person to contact at the City of Mountain View regarding dust complaints. This person will respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Operational Period Emissions

ROG, PM, and NO_X emissions from the project would be generated primarily from vehicles driven by future residents and employees; however, operational emissions would also be generated by the diesel-powered emergency generators on-site and evaporative emissions from architectural coatings and maintenance products. CalEEMod was used to estimate emissions from operation of the proposed project at buildout.

Table 3.2-2 below shows the project's unmitigated net average daily operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ during operation of the project. As discussed in Section 2.1 Existing Site Conditions, this analysis assumes that the existing buildings on-site are unoccupied, therefore, there are no existing operational emissions credited in the emissions modeling.

Table 3.2-2: Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2030 Annual Project Operational Emissions (*tons/year*)				
Unmitigated	**10.15**	2.19	5	1.31
Mitigated[2]	9.45	-	-	-
BAAQMD Thresholds (tons/year)	*10*	*10*	*10*	*10*
Exceed Threshold?				
Unmitigated	**Yes**	No	No	No
Mitigated[2]	No	-	-	-
2030 Daily Project Operational Emissions (*pounds/day*)[1]				
Unmitigated	**55.60**	11.85	26.98	7.05
Mitigated[2]	51.76	-	-	-
BAAQMD Threshold (pounds/day)	*54*	*54*	*82*	*54*
Exceed Threshold?				
Unmitigated	**Yes**	No	No	No
Mitigated[2]	No	-	-	-

[1] Assumes 365-day operation.

[2] Mitigated results represent modeled emissions with implementation of COA AQ-1.

Source: Illingworth & Rodkin, Inc. *675-685 East Middlefield Mixed-Use Development Air Quality Assessment.* May 2, 2024.

As shown in Table 3.2-2, operational period emissions would exceed the daily and annual BAAQMD significance thresholds for ROG emissions in 2030.

During construction of the project, there would be a period where Phase One of the development is operational, and construction of Phase Two would still be ongoing. The combination of operational and construction emissions is shown simply as the sum of Phase One annual operation emissions for 2029 and the Phase Two construction emissions for 2029. That year (2029) would be the only year where construction and operational emissions would overlap. Table 3.2-3 shows the annual and average daily emissions during this period.

Table 3.2-3: Maximum Year Operational and Construction Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2029 Annual Emissions (*tons/year*)				
Unmitigated	7.29	1.24	2.10	0.56
Mitigated[2]	4.14	-	-	-
BAAQMD Thresholds (tons/year)	*10*	*10*	*10*	*10*
Exceed Threshold?				
Unmitigated	No	No	No	No
Mitigated[2]	No	No	No	No
2029 Daily Average Emissions for days with construction (*pounds/day*)[1]				
Unmitigated	**56.62**	7.89	11.55	3.07
Mitigated[2]	24.32	-	-	-
BAAQMD Threshold (pounds/day)	*54*	*54*	*82*	*54*
Exceed Threshold?				
Unmitigated	**Yes**	No	No	No
Mitigated[2]	No	No	No	No

[1] Assumes 365-day operation and 195 days of construction.

[2] Mitigated results represent modeled emissions with implementation of COA AQ-1.

Source: Illingworth & Rodkin, Inc. *675-685 East Middlefield Mixed-Use Development Air Quality Assessment.* May 2, 2024.

As shown in Table 3.2-3, the overlap of operational and construction period emissions would exceed the BAAQMD significance thresholds for ROG emissions. Consistent with Precise Plan FEIR mitigation measure MM AQ-3.1, the project would be able to reduce ROG emissions through the use of low- volatile organic compounds (VOC) coatings as detailed in the condition of approval below.

Condition of Approval Pursuant to Precise Plan FEIR MM AIR-3.1

COA AQ-1: Require use of low interior and exterior volatile organic compounds (VOC) coatings to reduce reactive organic gases (ROG) emissions. The project shall use super-compliant volatile organic compound or VOC (i.e., ROG) coatings, that are below current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 90 percent of all interior and exterior paints. This includes all architectural coatings applied during both construction of Phase Two and reapplications throughout the project's operational lifetime for all buildings constructed during Phase One and Phase Two. At least 90 percent of coatings applied must meet a "super-compliant" VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project's operational lifetime, the tenant leases and building sales disclosures shall contain information that the project is required to use "super-compliant" VOC coatings.

This mitigation measure applies to 90 percent of coatings since there may be some special coatings required for certain aspects of the project that cannot meet this requirement.

With implementation of COA AQ-1, the project's ROG emissions would be reduced below the applicable BAAQMD significance thresholds as shown in Table 3.2-2 and Table 3.2-3.

c. The Precise Plan FEIR identified a potentially significant air quality community risk impact (Impact AQ-3) from project construction and operations near sensitive uses, specifically from short-term construction air pollutant emissions, including criteria pollutants, toxic air contaminants, and $PM_{2.5}$. Mitigation measure MM AQ-3.1 in the Precise Plan FEIR requires future development to complete Construction Health Risk Analyses, depending on the project size and location, in compliance with the BAAQMD Air Quality CEQA Guidelines and the BAAQMD Construction Health Risk Screening Table.

Health Risks from Project Construction

Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known TAC and would pose a health risk to nearby sensitive receptors. Pursuant to Precise Plan FEIR mitigation measure MM AQ-3.1, a project-specific health risk assessment was completed for the project (refer to Appendix A). The assessment evaluated potential health effects to nearby sensitive receptors (within 1,000 feet of the project site) from project construction emissions of diesel particulate matter (DPM) and $PM_{2.5}$. For the purposes of this analysis, receptors are locations where sensitive populations would be present for extended periods of time including existing and future residential uses. As noted in Section 2.1 Existing Site Conditions, the project site is surrounded primarily by office and R&D uses; however, there are residential uses adjacent to the western border of the project site. In addition, the Middlefield Park Master Plan project, which includes residential development, has been approved 120 feet north of the project site.

The CalEEMod model was used to determine total annual PM_{10} exhaust emissions (assumed to be DPM) and $PM_{2.5}$ dust emissions from the off-road construction equipment and on-road vehicles that would be used during project construction. Additionally, the U.S. EPA AERMOD dispersion model was used to predict construction related DPM and $PM_{2.5}$ concentrations at existing receptors in the vicinity of the project. The off-site truck and passenger vehicle emission rates were calculated using the EMFAC2021 model. Modeling assumptions and results are included in Appendix A.

The maximum modeled annual DPM and $PM_{2.5}$ concentrations were identified at nearby sensitive receptors to find the maximally exposed individual (MEI), or the sensitive receptor that is most impacted by the project's construction. Results of this assessment indicated that the construction MEIs were located at three different locations within the residences to the southwest of the site: 1) the unmitigated cancer risk MEI is located in a unit on the first floor, 2) the $PM_{2.5}$ concentration MEI is located at a different unit on the first floor , and 3) the mitigated cancer risk MEI is located at an adjacent unit south of the unmitigated cancer risk MEI. Figure 3.2-1 shows the location of off-site receptors and MEIs and Table 3.2-4 summarizes the health risk impacts for off-site receptors from construction and operation of the project.



Source: Illingworth & Rodkin, Inc., December 15, 2023.

LOCATIONS OF OFF-SITE SENSITIVE RECEPTORS AND MEIS | FIGURE 3.2-1

Table 3.2-4: Construction and Operation Risk Impacts at the Off-Site Receptors

	Cancer Risk[1] (per million)	**Annual $PM_{2.5}$[1] ($\mu g/m^3$)**	**Hazard Index**
Source			
Project Construction (Years 0 – 5)			
Unmitigated	**25.77**	**0.50**	0.02
Mitigated[2]	4.81	0.18	<0.01
Operational Emergency Diesel Generators (Years 6 – 30)	0.65[3]	<0.01	<0.01
Total/Maximum Project Impact (Years 0-30)			
Unmitigated	**26.41**	**0.50**	0.02
Mitigated[2]	5.46	0.18	<0.01
BAAQMD Single-Source Threshold	*10*	*0.3*	*1.0*
Exceed Threshold?			
Unmitigated	**Yes**	**Yes**	No
Mitigated[2]	No	No	No

[1] Unmitigated maximum cancer risk and $PM_{2.5}$ concentration occur at two different receptors. Unmitigated results represent modeled emissions without implementation of COA AQ-2.

[2] Mitigated maximum cancer risk occurs at a receptor adjacent to the unmitigated maximum cancer risk. Mitigated results represent modeled emissions with implementation of COA AQ-2.

[3] Cancer risk from generator operation at the unmitigated cancer risk MEI is 0.63 per million.

Source: Illingworth & Rodkin, Inc. *675-685 East Middlefield Mixed-Use Development Air Quality Assessment.* May 2, 2024.

As shown in Table 3.2-4, the maximum cancer risks and maximum annual $PM_{2.5}$ concentration from unmitigated construction activities at the MEI would exceed the BAAQMD single-source thresholds. Therefore, consistent with Precise Plan Mitigation Measure MM AQ-3.1, the following conditions of approval shall be implemented by the project.

Condition of Approval Pursuant to Precise Plan FEIR MM AIR-3.1:

COA AQ-2: The project shall implement a feasible plan to reduce diesel particulate matter (DPM) emissions by 70 percent such that increased cancer risk and annual $PM_{2.5}$ concentrations from construction would be reduced below Toxic Air Contaminant (TAC) significance levels as follows:

1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards for PM (PM_{10} and $PM_{2.5}$), if feasible, otherwise,

a. If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 70 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).

2. Use electric cranes and install electric power lines in order to use avoid use of diesel-powered generators.

3. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in construction diesel particulate matter emissions by 70 percent or greater. Elements of the plan could include a combination of some of the following measures:

- Implementation of No. 1 above to use Tier 4 engines or alternatively fueled equipment,
- Installation of electric power lines during early construction phases to avoid use of diesel generators and compressors,
- Use of electrically-powered equipment,
- Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,
- Change in construction buildout plans to lengthen phases, and
- Implementation of different building techniques that result in less diesel equipment usage.

Such a construction operations plan would be subject to review by an air quality expert and approved by the City prior to construction.

Implementation of these measures would reduce the project's construction cancer risk levels by 81 percent and annual $PM_{2.5}$ concentration by 64 percent, which would reduce the cancer risk and annual $PM_{2.5}$ concentration below their respective BAAQMD single-source thresholds (see the "mitigated" risks identified in Table 3.2-4).

Health Risks from Project Operations

The operation of the project would have long-term emissions from mobile sources (i.e., traffic) and stationary sources (i.e., diesel generators). While these emissions would not be as intense at or near the site as construction activity, they would contribute to long-term effects to sensitive receptors.

Vehicle traffic can be a source of TACs if traffic is made up of hundreds of diesel truck trips or 10,000 light-duty vehicles or more. The project would generate 4,875 net daily trips, with a majority of those

trips being from light-duty gasoline-powered vehicles (i.e., passenger vehicles). The project is not anticipated to generate large amounts of diesel truck trips. Therefore, emissions from project traffic would be considered negligible and are not evaluated further in this analysis.

The project would include four, 200 kW emergency generators powered by 320 horsepower diesel-fired engines. These generators would be located on the ground floor of the office building, MRN residential building, BMR building, and MRS residential building. The generators would be tested periodically and would provide power to the buildings in the event of a power failure. This operation of the diesel generators would generate TAC emissions. Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally would not be considered to have a significant air quality health risk impact; however, modeling was still completed to evaluate health risk impacts resulting from these stationary sources.

Health Risks from Combined Project Construction and Operations

As shown in Table 3.2-4 above, the maximum cancer risks and maximum annual $PM_{2.5}$ concentration from unmitigated construction activities at the MEI combined with the operational emissions of the project would exceed the BAAQMD single-source thresholds. Consistent with Precise Plan FEIR MM AIR-3.1, the project would implement COA AQ-2 during construction activities to reduce health risk impacts below the BAAQMD single-source thresholds.

Cumulative Health Risks

Construction of the project in combination with existing stationary and mobile sources of TAC emissions could affect nearby sensitive receptors. Figure 3.2-2 shows the location of nearby TAC and $PM_{2.5}$ sources and Table 3.2-5 shows the project and cumulative health risk impacts on the off-site MEIs. See Appendix A for additional information regarding the evaluated cumulative sources.

Table 3.2-5: Cumulative Health Risk Impacts at the Project MEIs

	Cancer Risk (per million)	**Annual $PM_{2.5}$ ($\mu g/m^3$)**	**Hazard Index**
Total/Maximum Project Impact (Years 0-30)			
Unmitigated[1]	26.41	0.50	0.02
Mitigated[2]	5.46	0.18	<0.01
SR-237, ADT 61,362	1.75	<0.01	<0.01
East Middlefield Road, ADT 14,230	0.22	0.01	<0.01
Raytheon Company (Facility ID #909, Semiconductor and Related Device Manufacturing), MEI at 1000+ feet	-	-	-
Verizon Wireless (Smiley Tower) (Facility # 17902, Generator), MEI at 830 feet	0.96	<0.01	<0.01

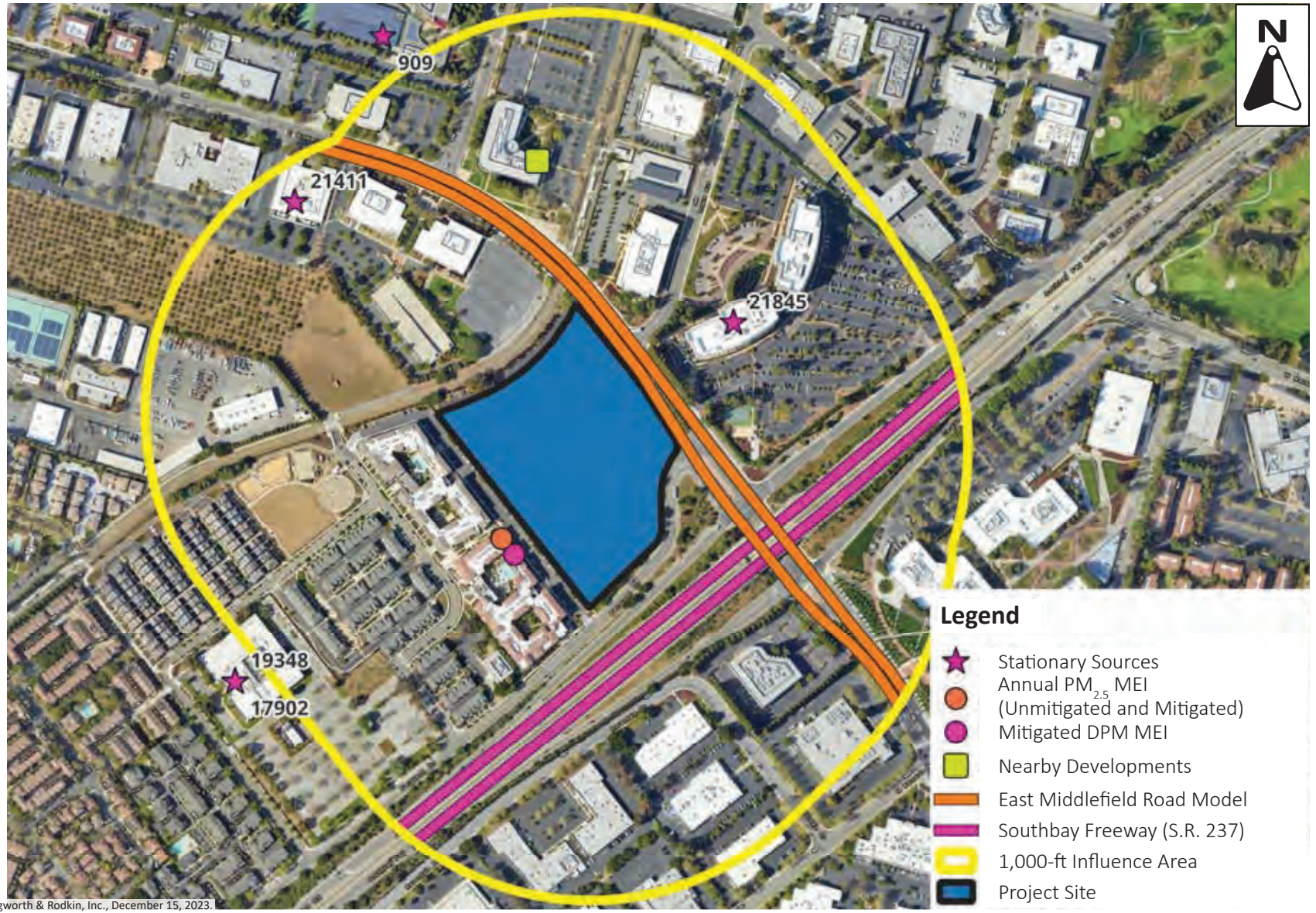
	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Cisco Systems (Facility #19348, Generator), MEI at 830 feet	1.04	<0.01	<0.01
Cushman & Wakefield at NortonLifeLock (Facility #21411, Generator), MEI at 1000+ feet	0.28	<0.01	<0.01
Kilroy Realty Corporation (Facility #21845, Generator), MEI at 890 feet	1.99	<0.01	<0.01
Middlefield Park Master Plan – 1,000 feet north of MEI	7.26	0.22	<0.01
Combined Sources			
Unmitigated	39.91	<0.80	<0.09
Mitigated	18.96	<0.48	<0.08
BAAQMD Cumulative Source Threshold	*100*	*0.8*	*10.0*
Exceed Threshold?			
Unmitigated	No	No	No
Mitigated	No	No	No

[1] Unmitigated results represent modeled emissions without implementation of COA AQ-2.

[2] Mitigated results represent modeled emissions with implementation of COA AQ-2.

Source: Illingworth & Rodkin, Inc. *675-685 East Middlefield Mixed-Use Development Air Quality Assessment.* May 2, 2024.

As shown in the Table 3.2-5 above, the cumulative TAC emissions would not result in a significant cumulative health risk impact. As discussed previously above, implementation BAAQMD basic construction mitigation measures and the measures included in COA AQ-2 (as required per Precise Plan mitigation measure MM AQ-3.1) would reduce the construction-related cancer risk and annual $PM_{2.5}$ concentration below their respective BAAQMD single-source thresholds.



Source: Illingworth & Rodkin, Inc., December 15, 2023.

PROJECT SITE AND NEARBY TAC AND $PM_{2.5}$ SOURCES

FIGURE 3.2-2

Non-CEQA Health Risk Effects to Future Project Residences

Per California Building Industry Association v. Bay Area Air Quality Management District, 62 Cal. 4th 369 (BIA v BAAQMD), effects of the environment on the project are not considered CEQA impacts. The following discussion is included for informational purposes only because the City of Mountain View has General Plan Policy INC 20.7 that addresses existing air quality conditions affecting a proposed project.

In addition to evaluating potential health impacts from project construction, a health risk assessment was completed to assess the impact that the phased construction emissions from the proposed project and the existing TAC sources would have on the new proposed sensitive receptors (residents) that the project would introduce. The same TAC sources identified above were used in this health risk assessment. The health risk assessment completed for the project (included in Appendix A) determined that if residents are introduced to the site during Phase One of the project, they would not be exposed to substantial health risk effects during construction of Phase Two of the project.

d. The Precise Plan FEIR did not identify a significant odor impact. BAAQMD has identified a variety of land uses and types of operations that would produce emissions that may lead to odors. Land uses identified include wastewater treatment plants, sanitary landfills, food processing facilities, coffee roasters, composting facilities, and confined animal facility/feed lot/dairy facility. The proposed mix of uses on-site does not fall into the aforementioned categories and would not create objectionable odors.

3.2.3 Conclusion

The proposed project would not result in a new or substantially more severe significant air quality impact than disclosed in the Precise Plan FEIR.

3.3 BIOLOGICAL RESOURCES

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
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 Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?	Precise Plan Draft EIR (2019) Page 78-79	No	No	No	N/A
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?	Precise Plan Draft EIR (2019) Page 80	No	No	No	N/A
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Precise Plan Draft EIR (2019) Page 80	No	No	No	N/A
d. Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Precise Plan Draft EIR (2019) Page 78-80	No	No	No	N/A
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Precise Plan Draft EIR (2019) Page 80-81	No	No	No	N/A

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
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?	Precise Plan Draft EIR (2019) Page 81	No	No	No	N/A

The discussion in this section is based, in part, on the Arborist Report prepared by SavATree Consulting Group, dated October 11, 2024. This report is attached as Appendix B.

3.3.1 Environmental Setting

The existing biological resources setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR. The project site is within a developed urban area and provides habitat and foraging opportunities for urban-adapted birds. As discussed in the Precise Plan FEIR, no natural communities or habitats for special-status plant and animal species are present within the Precise Plan area, including the project site. The primary biological resource on-site are trees. The project site contains 241 trees, including 47 Heritage trees as defined in the City's Municipal Code.[9]

3.3.2 Discussion

a. The Precise Plan FEIR concluded that buildout of the Precise Plan would result in less than significant impacts to special status plant and animal species because no natural communities or habitats for special status species exist within the Precise Plan area.

As discussed in Section 3.3.1, the 241 trees on-site are the primary biological resources present. These trees, in addition to the buildings and other vegetation on-site, could provide foraging and nesting opportunities for a variety of bird species. The proposed project would demolish the two existing buildings and associated surface parking areas and remove all on-site trees except for two existing Heritage trees on the western corner of the project site adjacent to the VTA light rail tracks and five Heritage trees along the perimeter of the site on Ferguson Drive.

Raptors (birds of prey) and nesting birds are protected by the Migratory Bird Treaty Act (MBTA) and the California Department of Fish and Wildlife (CDFW) code requirements. Urban-adapted raptors or other avian nests present on or adjacent to the site could be disturbed by project construction activities

[9] Mountain View Municipal Code Chapter 32, Article II defines a "Heritage Tree" as a tree with any of the following characteristics: a tree trunk with a circumference of forty-eight inches or more, measured at fifty-four inches above natural grade. Multi-trunk trees are measured just below the first major trunk fork. Any of the following three species of trees with a circumference of twelve inches or more, measured at fifty-four inches above natural grade: Quercus (oak), Sequoia (redwood), Cedrus (cedar), and groves of trees designated as "heritage" by the City Council.

and result in the loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFW and would constitute a significant impact.

In compliance with the MBTA and CDFW code, the project shall implement the following City standard condition of approval, consistent with the Precise Plan FEIR, to avoid construction-related impacts to nesting birds (including raptors) and their nests.

Standard Conditions of Approval:

- **Preconstruction Nesting Bird Survey:** To the extent practicable, vegetation removal and construction activities shall be performed from September 1 through January 31 to avoid the general nesting period for birds. If construction or vegetation removal cannot be performed during this period, preconstruction surveys will be performed no more than two days prior to construction activities to locate any active nests as follows:

  The applicant shall be responsible for the retention of a qualified biologist to conduct a survey of the project site and surrounding 500' for active nests—with particular emphasis on nests of migratory birds—if construction (including site preparation) will begin during the bird nesting season, from February 1 through August 31. If active nests are observed on either the project site or the surrounding area, the applicant, in coordination with the appropriate City staff, shall establish no-disturbance buffer zones around the nests, with the size to be determined in consultation with the California Department of Fish and Wildlife (usually 100' for perching birds and 300' for raptors). The no-disturbance buffer will remain in place until the biologist determines the nest is no longer active or the nesting season ends. If construction ceases for two days or more and then resumes during the nesting season, an additional survey will be necessary to avoid impacts on active bird nests that may be present.

In addition, the project would comply with the Bird Safe Design measures included in the Precise Plan to diminish the likelihood of building collision fatalities for birds in the area. These measures include façade treatments, occupancy sensors for non-emergency lighting, designing the site to avoid funneling flight paths towards glass façades, and avoiding transparent walls and building features. The specific standards are identified below.

Precise Plan Standards:

- **Façade Treatments.** No more than 10 percent of the surface area of a building's total exterior façade shall have untreated glazing between the ground and 60 feet above ground. Examples of bird-friendly glazing treatments include opaque glass, covering of clear glass surface with patterns, use of paned glass with fenestration patterns, and use of external screens over non-reflective glass.
- **Occupancy Sensors.** For non-residential development, occupancy sensors or other switch control devices shall be installed on non-emergency lights. These lights should be programmed to shut off during non-work hours and between 10:00 PM and sunrise.
- **Funneling of Flight Paths.** New construction shall avoid funneling of flight paths along buildings or trees towards a building façade.

- **Skyways, Walkways, or Glass Walls.** New construction and building additions shall avoid building glass skyways or walkways, freestanding glass walls, transparent building corners, or landscaping behind glass (such as in atriums). New construction and building additions should minimize the use of glass at tops of buildings, especially when incorporating a green roof into the design.

With the implementation of the Precise Plan FEIR condition of approval requiring preconstruction nesting bird surveys and no-disturbance buffer zones (if needed) and incorporation of the Precise Plan bird safe design standards, the proposed project would have a less than significant impact to nesting and migratory birds. The identified bird safe design features would be incorporated into the final development plans for the project, which would be reviewed by the Planning Division prior to the issuance of building permits to ensure implementation consistent with the Precise Plan.

b-c. The Precise Plan FEIR concluded that the Precise Plan area does not contain any streams, rivers, or wetlands; therefore, the project would not have a significant impact on any riparian areas or protected wetlands.

There is no riparian habitat or wetland on or adjacent to the site. The nearest wetlands are the freshwater ponds at Sunnyvale Municipal Golf Course, approximately 0.36-mile northeast of the project site. The nearest riparian habitat is the Stevens Creek riverine habitat approximately 0.83-mile west of the project site.[10] Therefore, the project would not have an impact on state or federally protected riparian habitat, sensitive natural communities, or wetlands.

d. The Precise Plan FEIR concluded that implementation of the Precise Plan would not interfere substantially with the movement of native or migratory species with incorporation of standard conditions of approval for nesting birds and implementation of Precise Plan Bird Safe Design Standards, therefore, impacts would be less than significant.

As discussed previously, the project would comply with the City's standard condition of approval to protect nesting birds and would incorporate the Precise Plan's Bird Safe Design standards into the project design. These measures would minimize adverse effects on native and migratory bird species by reducing the likelihood of building collision fatalities on-site. With incorporation of the condition of approval and Precise Plan standards, the proposed project would have a less than significant impact on migratory bird movement. In addition, there are no waterways on-site, therefore, the project site does not support the movement of fish. The project site is currently developed and surrounded by existing urban development. For that reason, the project site is not an important area for movement for non-flying wildlife, and it does not contain any high-quality corridors allowing dispersal of such animals through the Precise Plan area.

e. The Precise Plan FEIR concluded that implementation of the Precise Plan would not result in significant impacts regarding conflicts with local policies or ordinances protecting biological resources with incorporation of City standard conditions of approval.

[10] United States Fish and Wildlife Service. *National Wetlands Inventory, Surface Waters and Wetlands.* Map. November 2019.

As discussed previously, the proposed project would remove 234 trees on-site, including 40 Heritage trees. The project would plant approximately 346 replacement trees in areas surrounding the buildings and within the courtyards and paseos on-site. A City of Mountain View Heritage tree removal permit is required before any Heritage trees are removed. The proposed project would implement the following standard conditions of approval identified in the Precise Plan FEIR regarding tree replacement, protection, mitigation, and preservation. As a result, the project would not result in a new or substantially more severe significant impact to trees or conflicts with the City's Heritage Tree Ordinance than previously disclosed in the Precise Plan FEIR.

Standard Conditions of Approval

- **Replacement:** The applicant shall offset the loss of each Heritage tree with a minimum of two new trees. Each replacement tree shall be no smaller than a 24-inch box and shall be noted on the landscape plans submitted for building permit review as Heritage replacement trees.
- **Tree Protection Measures:** The tree protection measures listed in the arborist's report prepared by and dated shall be included as notes on the title sheet of all grading and landscape plans. These measures shall include, but may not be limited to, six-foot chain link fencing at the drip line, a continuous maintenance and care program, and protective grading techniques. Also, no materials may be stored within the drip line of any tree on the project site.
- **Tree Mitigation and Preservation Plan:** The applicant shall develop a tree mitigation and preservation plan to avoid impacts on regulated trees and mitigate for the loss of trees that cannot be avoided. The plan shall also outline measures to be taken to preserve off-site trees. Routine monitoring for the first five years and corrective actions for trees that consistently fail the performance standards shall be included in the tree mitigation and preservation plan. The tree mitigation and preservation plan shall be developed in accordance with Chapter 32, Articles I and II, of the City Code, and subject to approval of the Zoning Administrator prior to removal or disturbance of any Heritage trees resulting from project activities, including site preparation activities.

f. The Precise Plan FEIR concluded that buildout of the Precise Plan would not result in conflicts with an adopted Habitat Conservation Plan because the Precise Plan area is not covered by a Habitat Plan. The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (Habitat Plan) is a conservation program that covers portions of Santa Clara County. The Precise Plan area, including the project site, is located outside the Habitat Plan area and expanded study area for burrowing owl conservation.

Nitrogen deposition contribution estimates of impacts on serpentine habitat in Santa Clara County were made as a part of the development of the Habitat Plan. The Precise Plan FEIR concluded that the nitrogen emissions (based on existing and future vehicle emissions) that would result from buildout of the Precise Plan were found less than cumulatively considerable (given that buildout of the Precise Plan is a small portion of Santa Clara County's overall emissions). The Habitat Plan accounts for the indirect impacts of nitrogen deposition (existing and future) and identifies measures to conserve and manage serpentine areas over the term of the Habitat Plan, such that cumulative impacts to this habitat and associated special-status species would not be significant and adverse. For these reasons, the project would not conflict with an adopted habitat conservation plan.

3.3.3 Conclusion

The proposed project would not result in a new or substantially more severe significant biological resources impact than disclosed in the Precise Plan FEIR.

3.4 CULTURAL RESOURCES

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	Precise Plan Draft EIR (2019) Page 86-87	No	No	No	N/A
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Precise Plan Draft EIR (2019) Page 87-88	No	No	No	N/A
c. Disturb any human remains, including those interred outside the formal cemeteries?	Precise Plan Draft EIR (2019) Page 87-88	No	No	No	N/A

3.4.1 Existing Setting

The existing cultural resources setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR. There are no known cultural resources within the Precise Plan area, which includes the project site.[11] Areas near natural water sources (e.g., riparian corridors and tidal marshland) are considered highly sensitive for prehistoric archaeological deposits and human remains and the Precise Plan area itself is considered to be a moderately archaeologically sensitive area. The project site is approximately 2.3 from the San Francisco Bay and approximately 0.83-mile east of Stevens Creek. There are no properties listed on federal, state, or local registers within the Precise Plan area (which includes the project site).[12,13,14] 355-365 East Middlefield Road, located approximately 0.3-mile west of the site, has been identified as a potentially eligible historic resource; however, it has not been officially registered on federal, state, or local registers.

3.4.2 Discussion

a. There are no historic resources in the Precise Plan area listed in the National Register of Historic Places or the California Register of Historical Resources. In addition, the Precise Plan area does not contain property or parcels listed on the City's Register of Historic Resources; therefore, the Precise

[11] City of Mountain View. *East Whisman Precise Plan Integrated Final Environmental Impact Report*. January 2020. SCH #: 2017082051. Page 72.
[12] National Park Service. "National Register of Historic Places." Accessed January 18, 2024. https://www.nps.gov/subjects/nationalregister/database-research.htm
[13] California State Parks Office of Historic Preservation. "California Register of Historical Resources." Accessed January 18, 2024. https://ohp.parks.ca.gov/?page_id=21238
[14] City of Mountain View. "Register of Historic Resources." Accessed January 18, 2024. https://www.mountainview.gov/home/showpublisheddocument/7915/638346084894870000.

Plan FEIR concluded that implementation of the Precise Plan would not result in impacts to known historic resources.

The project site is not listed in the National Register of Historic Places, California Register of Historical Resources, or City's Register of Historic Resources. In addition, the existing buildings on-site were constructed in 1982. Therefore, they are less than 50 years old and not considered to be eligible historic resources. For these reasons, the proposed project would not result in a significant impact on historic resources.

b-c. The Precise Plan FEIR concluded that, with implementation of City standard conditions of approval, buildout of the Precise Plan would result in a less than significant impact to unknown archaeological resources and human remains. The applicable standard conditions of approval would require halting work if resources or human remains are discovered, notifying and consulting appropriate parties, and implementing measures to avoid significantly impacting the resource or human remains as outlined below.

Standard Conditions of Approval:

- **Discovery of Archaeological Resources:** If prehistoric, or historic-period cultural materials are unearthed during ground-disturbing activities, all work within 100 feet of the find be halted until a qualified archaeologist and Native American representative can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and wall, filled wells or privies, and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative, shall develop a treatment plan that could include site avoidance, capping, or data recovery.
- **Discovery of Human Remains:** In the event of the discovery of human remains during construction or demolition, there shall be no further excavation or disturbance of the site within a 50-foot radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his/her authority, he/she shall notify the NAHC, which shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner shall reinter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

  A final report shall be submitted to the City's Community Development Director prior to release of a Certificate of Occupancy. This report shall contain a description of the mitigation programs and its results, including a description of the monitoring and testing resources analysis methodology and conclusions, and a description of the disposition/curation of the resources. The report shall verify completion of the mitigation program to the satisfaction of the City's Community Development Director.

The project would implement the above City standard conditions of approval related to the discovery of archaeological resources and human remains identified in the Precise Plan FEIR, which are consistent with General Plan Policies LU-11.5 and LU-11.6.[15] Should any archaeological resources and/or human remains be encountered on the site, these conditions would reduce impacts to those resources to a less than significant level. The project, therefore, would result in the same less than significant impact disclosed in the Precise Plan FEIR.

3.4.3 Conclusion

The proposed project would not result in a new or substantially more severe significant cultural resources impact than disclosed in the Precise Plan FEIR.

[15] General Plan Policy LUD 11.5 states Require all new development to meet state codes regarding the identification and protection of archaeological and paleontological deposits. General Plan Policy LUD 11.6 states Require all new development to meet state codes regarding the identification and protection of human remains.

3.5 ENERGY

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Address Impacts.
Would the project:					
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	Precise Plan Draft EIR (2019) Page 93-95	No	No	No	N/A
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Precise Plan Draft EIR (2019) Page 95	No	No	No	N/A

The discussion in this section is based, in part, on air quality calculations completed for the project using CalEEMod. These calculations are attached to this checklist as part of Appendix A.

3.5.1 Environmental Setting

The existing energy setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR. The uses on-site have used energy in the form of electricity for building operations, lighting, heating, and cooling, and gasoline and diesel fuel for vehicle trips.

3.5.2 Discussion

a. The Precise Plan FEIR concluded that construction and operation of development allowed under the Precise Plan would not result in a significant impact due to wasteful, inefficient, or unnecessary consumption of energy or wasteful use of energy resources because:

- Construction processes are generally designed to be efficient,
- Development would occur in an urbanized area with access to roadways, construction supplies, and workers,
- Standard BAAQMD BMPs would be implemented to restrict construction equipment idling times and prohibit unnecessary idling,
- Construction equipment with reduced emissions would be used,
- Projects would comply with the City's requirements to recycle and/or salvage for reuse a minimum of 65 percent of nonhazardous construction and demolition waste, and

- Projects would comply with Precise Plan green building standards.[16]

In addition, as discussed in the Precise Plan FEIR, implementation of the Precise Plan (which includes the project) would result in an overall decrease in gasoline use due to the Precise Plan area's proximity to transit, requirement for TDM plans, and mix of land uses. The annual energy demand of the Precise Plan at buildout is estimated to be approximately 156.1 million kWh of electricity, 188.2 million kBtu of natural gas, and 1.6 million gallons of gasoline.[17]

The project is consistent with the development analyzed in the Precise Plan FEIR and, therefore, the energy demand generated by the project was accounted for in the Precise Plan FEIR. Construction of the proposed project would require energy for the manufacture and transportation of building materials, preparation of the project site (e.g., demolition and grading), and the construction of the residential buildings (including the below ground parking structures), office building, and parking structure. The project would occur in an accessible, urbanized area, incorporate standard BAAQMD BMPs regarding equipment idling, utilize construction equipment with reduced emissions, and recycle and/or salvage a minimum of 65 percent of nonhazardous construction and demolition waste.

The proposed non-residential buildings would meet the intent of LEED BD+C Gold and the residential buildings would achieve a minimum of 120 points on the Green Point Rated system. Occupation and operation of the project would consume energy for building heating and cooling, lighting, and appliance use. Energy consumption for the proposed project was estimated using CalEEMod standard assumptions for residential, retail, and office land uses. As shown in Appendix A, the project would use approximately 14.2 million kWh of electricity annually.[18] Consistent with the City's Reach Code, the building would not include natural gas infrastructure, therefore, no natural gas would be used during project operations.

The project would be required to comply with state mandated Title 24 energy efficiency standards, California Green Building Standards Code (CALGreen) standards, and Mountain View Green Building Code standards; including all water efficiency and GreenPoint Rated (or equivalent) requirements. Compliance with these standards and requirements would further decrease the potential for energy waste and increase building efficiency. For the reasons described above and consistent with the Precise Plan FEIR, the proposed project would not result in the inefficient or wasteful use of energy or resources.

b. The Precise Plan FEIR concluded that buildout of the Precise Plan would not obstruct a state or local plan for renewable energy or energy efficiency (including the state's Renewables Portfolio Standard program, SB 350, Title 24 energy efficiency standards, CALGreen standards, the City's greenhouse gas (GHG) Reduction Program, and Mountain View Green Building Code standards) because future development would implement TDM plans, obtain 100 percent carbon free electricity from SVCE, and meet or exceed the state mandated Title 24 energy efficiency standards through compliance with Precise Plan standards.

[16] City of Mountain View. *East Whisman Precise Plan: Integrated Final Environmental Impact Report*. SCH# 2017082051. January 2020. Pages 80 to 82.
[17] Ibid. Page 81.
[18] Energy use estimates shown are conservative in that they do not net out the existing energy use at the site. Source: Illingworth & Rodkin, Inc. *675-685 East Middlefield Mixed-Use Development Air Quality Assessment*. May 2, 2024.

As required under the City of Mountain View GHG Reduction Program and Precise Plan, the project proposes TDM measures including bicycle storage, on-site shared workspaces, and TDM monitoring. In addition, the project would obtain 100 percent GHG-emission free electricity from SCVE and comply with Precise Plan includes building standards that meet or exceed state mandated Title 24 energy efficiency standards, CALGreen standards, and Mountain View Green Building Code standards (especially with the inclusion of water efficiency and GreenPoint Rated [or equivalent] requirements). Therefore, the project is consistent with the Precise Plan FEIR and would not obstruct a state or local plan for renewable energy or energy efficiency.

3.5.3 Conclusion

The proposed project would not result in a new or substantially more severe significant energy impact than disclosed in the Precise Plan FEIR.

3.6 GEOLOGY, SOILS, AND MINERALS

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction? iv. Landslides?	Precise Plan Draft EIR (2019) Page 101-102	No	No	No	N/A
b. Result in substantial soil erosion or the loss of topsoil?	Precise Plan Draft EIR (2019) Page 103	No	No	No	N/A
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?	Precise Plan Draft EIR (2019) Page 102-103	No	No	No	N/A
d. Be located on expansive soil, as defined in the current California Building Code, creating substantial risks to life or property?	Precise Plan Draft EIR (2019) Page 102-103	No	No	No	N/A

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Precise Plan Draft EIR (2019) Page 102-103	No	No	No	N/A
e. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	Precise Plan Draft EIR (2019) Page 103	No	No	No	N/A
f. 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?	Precise Plan Draft EIR (2019) Page 103	No	No	No	N/A
g. 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?	Precise Plan Draft EIR (2019) Page 103	No	No	No	N/A

The discussion in this section is based, in part, on the Preliminary Geotechnical Investigation report prepared by Rockridge Geotechnical dated September 11, 2017. This report is attached as Appendix C.

3.6.1 Existing Setting

The existing geology and soils setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR. The project site is located within the San Francisco Bay Area, which is one of the most seismically active regions in the United States. Major faults in the vicinity include the Monte Vista-Shannon, San Andreas, and Hayward faults which are approximately five, eight, and 11 miles away from the project site, respectively. The project site is not located in a fault rupture hazard zone; however, it is located within a county and state designated liquefaction hazard zone.[19] The project site is not located within the Alquist-Priolo special study zone on the California Geological Survey fault zone map.[20] There are no open faces near the project site where lateral spreading could occur; therefore, the potential for lateral spreading on-site is low.

[19] Santa Clara County. "Geologic Hazard Zones." Accessed February 14, 2023. https://sccplanning.maps.arcgis.com/apps/webappviewer/index.html?id=5ef8100336234fbdafc5769494cfe373.
[20] Department of Conservation, California Geological Survey. *Earthquake Zones of Required Investigation*. Map. 2019.

Ground surface elevations on-site range from approximately 65 to 72 feet above mean sea level (amsl). The soil on-site primarily consists of stiff to very stiff, moderately compressible fine-grained deposits with occasional zones of medium stiff clay down to depths of 37 feet below ground surface (bgs). There are soil layers approximately one to two feet thick between depths of 15 and 42 feet bgs that could be susceptible to liquefaction during a major earthquake. The near surface clay soil likely has a moderate expansion potential. The project site is not located within a Santa Clara County Compressible Soils Hazard Zone.[21]

Groundwater was measured on-site at depths between 17 to 21 feet bgs; however, it is estimated that the highest historic ground water level in the vicinity is approximately 12 feet bgs.[22] Water levels on-site may vary depending on seasonal precipitation, irrigation practices, and other climate conditions.

Although there have been no recorded fossils discovered within the City of Mountain View, soils within the Precise Plan area could have paleontological sensitivity. Based on mapping by the California Division of Mines and Geology, as well as the California Department of Conservation, there have been no mineral or aggregate sources of statewide importance identified within the Mountain View city limits.[23]

3.6.2 Discussion

a. (i-iv) The Precise Plan FEIR concluded that potential seismic impacts to projects allowed under the Precise Plan would be reduced to a less than significant level or avoided through conformance with CBC requirements, General Plan policies, and the below standard condition of approval which requires the preparation of a design-level geotechnical investigation report and implementation of the standard engineering and design recommendations in the report to minimize seismic and seismic-related hazards (including liquefaction and lateral spreading) to a less than significant level.

Standard Condition of Approval:

- **Geotechnical Report:** The applicant shall have a design-level geotechnical investigation prepared which includes recommendations to address and mitigate geologic hazards in accordance with the specifications of California Geological Survey Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards, and the requirements of the Seismic Hazards Mapping Act. The report shall be submitted to the City prior to the issuance of building permits, and the recommendations made in the geotechnical report shall be implemented as part of the project. Recommendations may include considerations for design of permanent below-grade walls to resist static lateral earth pressures, lateral pressures caused by seismic activity, and traffic loads; method for back draining walls to prevent the buildup of hydrostatic pressure; considerations for design of excavation shoring system; excavation monitoring; and seismic design. Additionally, recommendations shall include measures (e.g., shoring walls, and waterproofing) to minimize the amount of dewatering required during construction and prevent substantial impacts to aquifers or existing wells. Specific recommendations contained in the

[21] Santa Clara County. "Geologic Hazard Zones." Accessed February 14, 2023. https://sccplanning.maps.arcgis.com/apps/webappviewer/index.html?id=5ef8100336234fbdafc5769494cfe373.
[22] Rockridge Geotechnical. *Preliminary Geotechnical Investigation to Support Due Diligence Evaluation 675 & 685 East Middlefield Road, Mountain View, California*. Page 4. September 11, 2017.
[23] City of Mountain View. *East Whisman Precise Plan Integrated Final Environmental Impact Report*. January 2020. SCH #: 2017082051. Page 90.

geotechnical report prepared for the future development projects shall also be implemented to the satisfaction of the City of Mountain View Building Inspection Division.

Consistent with the Precise Plan FEIR, the proposed project would be designed and constructed in accordance with CBC requirements, and General Plan Policies PSA 4.2, PSA 5.1, PSA 5.2, PSA 5.3, PSA 5.4, and INC 2.3.[24] Additionally, the project would comply with the above standard condition of approval by preparing a design-level geotechnical report and incorporating any design recommendations into the project.

b, c, d. The Precise Plan FEIR concluded that compliance with CBC, General Plan policies, and the City's standard conditions of approval would ensure that soils impacts would be less than significant.

The Precise Plan area, including the project site, is located on relatively flat, stable ground and would not be exposed to slope instability, erosion, or landslide related hazards. Given this topography, the Preliminary Geotechnical Investigation concluded that the risk of lateral spready on-site is very low. As discussed in Section 3.9 Hydrology and Water Quality, the project would disturb more than one acre of soil and would therefore be subject to the requirements of the Construction General Permit to reduce runoff and pollution in runoff from construction activities, including preparation of a Stormwater Pollution Prevention Plan (SWPPP) and implementation of stormwater control Best Management Practices. Consistent with the findings in the Precise Plan FEIR, implementation of these measures and other Precise Plan standards would ensure that erosion and loss of topsoil would not occur during construction and operation of the project.

As discussed in Section 3.6.1 Existing Setting, the project site is within a State of California liquefaction hazard zone as well as a County Liquefaction Hazard Zone. The geotechnical investigation completed on-site collected samples from the thin, potentially liquefiable layers on-site to determine the liquefaction potential at the project site. The analysis of these samples concluded that several layers of soil on-site could experience liquefaction during a seismic event. Based on the soil composition, it is estimated that this could result in potential soil settlement at the surface of approximately 0.75 inches or less. The analysis also concluded that the non-liquefiable soil over the potentially liquefiable soil layers is thick enough to result in low potential for ground deformation or surficial cracking resulting from subsurface liquefaction. Consistent with the Precise Plan FEIR, adherence to the CBC and the structural design recommendations in the site-specific geotechnical report would reduce the risk of liquefaction at the project site to acceptable levels.

As discussed further in Section 3.9 Hydrology and Water Quality, construction dewatering would be required for approximately 17 months while the underground parking garages are constructed on-site. The standard condition of approval above includes evaluation and implementation of measures to minimize dewatering during construction, which would prevent subsidence from the temporary construction dewatering. No permanent dewatering is required for the project as the permanent building walls for the underground levels of proposed buildings would be constructed with

[24] General Plan Policy PSA 4.2: Minimize impacts of natural disasters. General Plan Policies PSA 5.1 – 5.4: Ensure new development addresses seismically induced geologic hazards, Development shall comply with Alquist-Priolo Earthquake Fault Zoning Act, Ensure City uses effective technology to inform the community about potential hazards and emergency response, Ensure new underground utilities are designed to meet current seismic standards. General Plan Policy INC 2.3 requires the use of available technology and earthquake resistant materials in the design and construction of all infrastructure projects.

waterproofing materials and drainage panels.[25] Soils with moderate expansion potential occur on-site, which can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. The project would prepare a design-level geotechnical investigation report and implement the recommendations in the report to reduce the impacts of expansive soils to a less than significant level, consistent with the findings of the Precise Plan FEIR.

e. The Precise Plan FEIR concluded that buildout of the Precise Plan would not result in impacts related to soils incapable of accommodating a septic tank because the Precise Plan area is and would continue to be served by the City's existing sanitary sewer system.

Consistent with the determination in the Precise Plan FEIR, the project would connect to existing City sewer lines and would not propose treatment of wastewater on-site. Therefore, the project would have no substantial impact on the project site soils' ability to support alternative wastewater systems.

f. The Precise Plan FEIR concluded that buildout of the Precise Plan would result in less than significant impacts to paleontological resources with compliance with the below City's standard condition of approval, which requires halting work in the event of a fossil discovery, examination of the find by a qualified paleontologist, and implementation of avoidance measures or a data recovery plan.

Standard Condition of Approval:

- **Discovery of Paleontological Resources:** In the event a fossil is discovered during construction of the project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.

Consistent with the Precise Plan FEIR, the project would implement the above standard condition of approval regarding the discovery of paleontological resources identified in the Precise Plan FEIR to reduce impacts to unknown paleontological resources to a less than significant level.

g-h. The Precise Plan FEIR concluded that implementation of the Precise Plan would not result in an impact on mineral resources as there are none present within the Precise Plan area. Implementation of the project, therefore, would not result in an impact on mineral resources.

3.6.3 Conclusion

The proposed project would not result in a new or substantially more severe significant geology, soils, and minerals impact than disclosed in the Precise Plan FEIR.

[25] Rockridge Geotechnical. *Preliminary Geotechnical Investigation to Support Due Diligence Evaluation 675 & 685 East Middlefield Road.* September 11, 2017. Page 15.

3.7 GREENHOUSE GAS EMISSIONS

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	Precise Plan Draft EIR (2019) Page 109-111	No	No	No	N/A
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions?	Precise Plan Draft EIR (2019) Page 111-113	No	No	No	N/A

3.7.1 Environmental Setting

The existing GHG setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR. Subsequent to the certification of the Precise Plan FEIR, in April 2022, BAAQMD adopted new CEQA thresholds of significance for GHG emissions from new development projects.

Historically, the project site generated GHG emissions primarily from fossil fuel combustion from vehicle trips.

3.7.2 Discussion

a. The Precise Plan FEIR found that GHG emissions-related impacts would be less than significant with incorporation of City standard conditions of approval and Precise Plan requirements for recycling or reusing building materials, implementation of TDM programs, compliance with Title 24 building standards, and utilization of 100 percent carbon-free electricity. Consistent with the Precise Plan FEIR, the project would comply with the same regulations and City requirement and obtain 100 percent carbon free electricity from SVCE.

As noted above, subsequent to the certification of the Precise Plan FEIR, BAAQMD adopted updated thresholds for GHG impacts. Per CEQA Guidelines Section 15088.5, adoption of new policies and/or regulations is not considered substantial new information requiring recirculation of the EIR because it does not result in a new significant environmental impact, increase the severity of an environmental impact, or alter the existing mitigation measure or alternative. Therefore, for informational purposes only, the project's consistency with the updated BAAQMD GHG threshold is discussed below.

Pursuant to the current BAAQMD thresholds of significance, if a land use project meets the following criteria, it would have a less than significant GHG impact:

- Projects must either not include natural gas appliances or plumbing,
- Not result in wasteful, inefficient, or unnecessary energy use,
- Achieve a 15 percent reduction in project-generated vehicle miles traveled (VMT) below the regional average, and
- Include off-street electric vehicle infrastructure consistent with CalGreen Tier 2 requirements.

The project would comply with the City's Reach Code for all-electric buildings. In addition, the non-residential buildings would meet the intent of LEED BD+C Platinum and the residential buildings would achieve a minimum of 120 points on the Green Point Rated system by incorporating green building measures such as landscaped bioretention areas, drought tolerant landscaping with high-efficiency irrigation, water efficient interior fixtures, energy efficient appliances, and solar panels on the rooftops of each building. The project would include sufficient EV charging and EV-ready parking stalls to meet CalGreen Tier 2 requirements. As discussed in Section 3.5 Energy, the project's implementation of BAAQMD BMPs and compliance with existing regulations (CALGreen, Title 24, and MVGBC) would result in energy efficiencies. In addition, as described in Section 3.15 Transportation, the project is presumed to have a less than significant impact on VMT due to its proximity to the Middlefield Light Rail Station and the implementation of a TDM Plan for residents and employees on-site. For these reasons, the project would meet current BAAQMD GHG thresholds for a less than significant GHG emissions impact.

b. As discussed in Section 3.2 Air Quality, the proposed project would be consistent with the 2017 CAP. Further, the Precise Plan FEIR determined that development projects would be consistent with Plan Bay Area and the GGRP by locating development within a Priority Development Area (PDA), requiring TDM plans for projects within the Precise Plan area, and requiring projects to meet applicable green building codes (i.e., LEED Certification, GreenPoint Rated, CALGreen, Mountain View Green Building Code, Title 24). The project is located within a PDA, proposes to implement a TDM plan, and would meet applicable green building codes.

3.7.3 Conclusion

The proposed project would not result in a new or substantially more severe significant GHG impact than disclosed in the Precise Plan FEIR.

3.8 HAZARDS AND HAZARDOUS MATERIALS

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Precise Plan Draft EIR (2019) Page 127-128	No	No	No	N/A
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?	Precise Plan Draft EIR (2019) Page 128-132	No	No	No	Yes, MM HAZ-3.1
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Precise Plan Draft EIR (2019) Page 132	No	No	No	N/A
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?	Precise Plan Draft EIR (2019) Page 128-132	No	No	No	N/A
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?	Precise Plan Draft EIR (2019) Page 132-137	No	No	No	N/A
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Precise Plan Draft EIR (2019) Page 137	No	No	No	N/A

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
g. Expose people or structures to a significant risk of loss, injury or death involving wildland fires?	Precise Plan Draft EIR (2019) Page 137	No	No	No	N/A

The discussion in this section is based, in part, on the Phase I Environmental Site Assessment (ESA) and Phase II Site Investigation Report prepared by RMD Environmental Solutions dated October 28, 2022 and December 2, 2022, respectively. This section is also based, in part, on peer reviews of these documents by Cornerstone Earth Group and a separate Preliminary Soil Corrosion Screening report dated March 2, 2023 and February 17, 2023, respectively. These reports are attached as Appendix D.

3.8.1 Existing Setting

The existing hazards and hazardous materials setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR.

Prior to being developed with the current buildings on-site, the project site was used for primarily agricultural purposes. By 1963, several commercial/industrial buildings, greenhouses, and associated outbuildings (e.g., barns or sheds) were constructed on-site and a residence was located on the southern portion of the site. The existing office/R&D buildings on-site were constructed by 1982. The current buildings were occupied by research, telecommunication, and technology companies through 2023. These uses typically include the use of hazardous materials and the generation of hazardous waste. The Phase I ESA did not identify any recorded violations from on-site tenants impacting the site.[26] A Phase II Site Investigation concluded that organochlorine pesticides (OCPs) have impacted the subsurface, likely from the historical agricultural use of the project site and surrounding area.

One of the sites associated with the Middlefield-Ellis-Whisman (MEW) Superfund Study Area (365 East Middlefield Road) is located approximately 270 feet northwest of the project site. In the 1960s and 1970s, companies involved in semiconductor, electronic, and other manufacturing and research contaminated the soil in the MEW Superfund Study Area and groundwater with volatile organic compounds (VOC), primarily trichloroethylene (TCE). The area was deemed a Superfund site, and a clean-up plan was approved by the U.S. Environmental Protection Agency (EPA) in 1989. Three other locations adjacent to the project site (Hewlett Packard at 690 East Middlefield Road, 590 East Middlefield Road, and Microscience International at 575 East Middlefield Road) have also been listed in environmental databases for contaminating soil and groundwater with hazardous materials. All four of these sites are either cross-gradient or down-gradient from the project site and, therefore, are not

[26] RMD Environmental Solutions. *Phase I Environmental Site Assessment – 675-685 E. Middlefield Road*. October 28, 2022. Page 3-4.

considered Recognized Environmental Conditions for the project site as the pollutants would not migrate to the project site.[27]

Based on the site's history and location near the MEW Superfund Study Area, on-site soil, soil vapor, and groundwater samples were collected and analyzed for contaminants. Several contaminants were measured at levels above the Tier 1 Environmental Screening Levels established by the RWQCB in the soil on-site, including total petroleum hydrocarbon diesel range (TPHd), Methylene chloride, 4,4-dichlorodiphenyltrichloroethane (4,4-DDT), Dieldrin, and Toxaphene. The soil samples contained arsenic, barium, nickel, and vanadium at levels exceeding their respective residential screening levels. Chromium was detected above the concentration to require additional Soluble Threshold Limit Concentration analysis for off-site disposal characterization considerations. Groundwater samples contained TPHd and TCE at concentrations above their respective screening levels. Benzene was the only VOC detected above the residential ESL in the soil vapor samples that were collected on-site.[28]

The nearest airport to the Precise Plan area is Moffett Federal Airfield, which is approximately 0.5-mile north of the project site. According to the Moffett Federal Airfield Comprehensive Land Use Plan (CLUP), the project site is located within its Airport Influence Area (AIA) and within the mapped Part 77 182-foot amsl horizontal surface for Moffett Federal Airfield.[29] The project site is not located within any of the noise contours or airport safety zones of the Moffett Federal Airfield.[30]

3.8.2 Discussion

a. The Precise Plan FEIR concluded that with compliance with federal, state, local requirements, and City of Mountain View General Plan policies, future development (including the proposed project) would not create a significant hazard to the public or environment through routine transport, use, or disposal of hazardous materials. The conditions in and around the project site have not changed substantially since certification of the Precise Plan FEIR and the project proposes land uses consistent with those identified for the site and previously analyzed in the Precise Plan FEIR.

The proposed office, residential, and retail/commercial uses on-site would involve the routine use and storage of hazardous materials such as limited amounts of fuels and oils for landscaping and maintenance activities, in addition to cleaning materials. The quantities used would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. For these reasons, the project would result in the same impact as disclosed in the Precise Plan FEIR

b. The Precise Plan FEIR concluded that future construction and demolition activities could expose construction workers, the environment, and area residents to potentially unacceptable health risks from contaminated groundwater, soils, and soil gas, resulting in a significant impact. However, with incorporation of Precise Plan FEIR mitigation measure MM HAZ-3.1, which requires the preparation

[27] RMD Environmental Solutions. *Phase I Environmental Site Assessment – 675-685 E. Middlefield Road*. October 28, 2022. Pages 4-4 to 4-5.
[28] RMD Environmental Solutions. *Phase II Site Investigation Report– 675-685 E. Middlefield Road*. December 2, 2022. Pages 4 to 8.
[29] County of Santa Clara. *Comprehensive Land Use Plan Moffett Federal Airfield*. December 19, 2018. Figure 6.
[30] Ibid. Figure 5 and Figure 7.

of a site-specific Phase I ESA and a Site Management Plan (SMP) for all development projects with Recognized Environmental Conditions, impacts would be reduced to a less than significant level.

Precise Plan FEIR Mitigation Measure

Precise Plan FEIR MM HAZ-3.1 Prior to the start of any redevelopment activity, a property-specific Phase I Environmental Site Assessment (ESA) shall be completed in accordance with ASTM Standard Designation E 1527- 13 to identify Recognized Environmental Conditions, evaluate the property history, and establish if the property is likely to have been impacted by chemical releases. Soil, soil vapor, and/or groundwater quality studies shall subsequently be conducted, if warranted based on the findings of the property-specific Phase I ESAs, to evaluate if mitigation measures are needed to protect the health and safety of construction workers, the environment, and area residents.

At properties identified as being impacted or potentially impacted by Recognized Environmental Conditions as part of the property-specific Phase I ESA or subsequent studies, a Site Management Plan (SMP) shall be prepared prior to development activities to establish management practices for handling contaminated soil, soil vapor, groundwater, or other materials during construction activities. The SMP shall be prepared by an Environmental Professional and submitted to the overseeing regulatory agency (e.g., United States Environmental Protection Agency, Regional Water Quality Control Board (RWQCB) and/or County Department of Environmental Health) for review and approval prior to commencing construction activities. Management of site risks during earthwork activities in areas where impacted soil, soil vapor, and/or groundwater are present or suspected, shall be described. Worker training requirements, health and safety measures and soil handling procedures shall be described. The SMP shall also be submitted to the City of Mountain View Planning Division for review.

Consistent with Precise Plan FEIR MM HAZ-3.1, a Phase I ESA and Phase II were completed for the project site (refer to Appendix D). The Phase I ESA identified an SMP that had been previously prepared for the site in 2017; however, the report noted that it did not receive approval from any regulatory agency. To comply with Precise Plan FEIR MM HAZ-3.1, the SMP shall be submitted to the appropriate regulatory oversight agency for review and approval. As part of the regulatory oversight agency's review, additional sampling of the on-site soil, soil vapor, and groundwater may be required to further document the lateral and vertical extent of OCPs, lead, asbestos, and PCBs on-site. Per Precise Plan FEIR MM HAZ-3.1, the approved SMP shall be implemented by the project to protect construction workers and the environment from on-site contamination including elevated levels of contamination in the soil, soil vapor, and groundwater.

Since TCE was detected in the groundwater and benzene was detected in the soil vapor on-site at concentrations exceeding their respective ESLs, the project would construct vapor barriers consistent with the requirements of the below City standard condition of approval. The appropriate structural and engineering design features required to reduce the risk of vapor intrusion into the proposed buildings would be outlined in the SMP submitted to the appropriate regulatory agency for their review and written approval.

Standard Condition of Approval:

- **Vapor Barrier:** A vapor barrier shall be installed beneath all structures to mitigate any issues associated with the potential for vapor intrusion within the structure. The vapor barrier design shall be equivalent to those required for sites with known concerns in Mountain View that are also exposed to groundwater. Specifications for the vapor barrier included in the Site Management Plan shall include thickness, type, durability, and diffusion rates for VOCs of concern. The specifications shall also describe the effectiveness of the liner over the life of the building.

As noted in Section 2.3.7 Construction Activities, the project would include excavation of the subsurface portion of the building parking garage to a maximum depth of 31 feet bgs (groundwater is located approximately 17 to 21 feet bgs on-site) and would require temporary dewatering for a period of approximately 17 months. Because the MEW Superfund Study Area sites in the project vicinity are cross-gradient or down-gradient from the project site and the contaminants in those plumes are not expected to present a risk to the project site, construction dewatering activities would not result in the migration of any additional contaminants that could pose a risk to construction workers on-site. The Phase II prepared for the site determined that groundwater treatment using carbon filters would be required prior to discharging the groundwater, consistent with standard practices under a sewer discharge permit and the NPDES permit. Refer to Section 3.9 Hydrology and Water Quality for a discussion of water quality impacts associated with dewatering effluent.

Based on the above discussion, with implementation of Precise Plan FEIR Mitigation Measure MM HAZ-3.1, impacts associated with the release of hazardous materials would be less than significant (consistent with the Precise Plan FEIR).

c. The Precise Plan FEIR concluded that implementation of the Precise Plan would not construct a school on a property that is subject to hazards from hazardous materials contamination, emissions, or accidental release and would not result in impacts to existing or proposed schools.

There are no schools within 0.25-mile of the project site. The nearest school to the project site is Vargas Elementary school, approximately 0.4-mile west of the project site. The project would construct residential, commercial, and office uses on-site, which would not constitute a substantial source of hazardous emissions and would not produce hazardous materials or hazardous waste following construction. For these reasons, the project would result in the same less than significant impact as identified in the Precise Plan FEIR.

d. The Precise Plan FEIR concluded that implementation of the Precise Plan could include development on sites included on lists of hazardous materials sites compiled pursuant to Government Code Section 65962; however, with implementation of the EPA-required ROD measures for properties within the MEW Study Area, VOC-related soil and vapor potential impacts from MEW contaminants to construction workers, area residents, and the environment would be less than significant.

The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.[31] Therefore, the project would not result in new or substantially more severe significant impacts than disclosed in the Precise Plan FEIR.

e. The Precise Plan FEIR concluded that, with required coordination with the County of Santa Clara Airport Land Use Commission and the FAA, buildout of the Precise Plan would not result in increased airport safety hazards.

As discussed in Section 3.8.1, the project site is located within the AIA and the mapped Part 77 182-foot amsl horizontal surface for Moffett Federal Airfield. The project site is outside the CLUP safety zones and noise contour for the Moffett Federal Airfield. Based on the site location and elevation of 72 feet amsl, any obstruction (permanent or temporary) exceeding 110 feet above grade would require FAA review. The proposed maximum building height of up to 93 feet would not require notification and review by the FAA to determine potential aviation hazard. However, the project's construction equipment (i.e., cranes) would reach a maximum potential height of 170 to 200 feet, which would be subject to FAA's review. Compliance with FAA's regulations would reduce aviation hazards to a less than significant level.

Based on the discussion above, the project would comply with FAA regulations and therefore, would not expose people residing or working at the project site to safety hazards or excessive noise from Airfield operations.

f. The Precise Plan FEIR concluded that future development under the Precise Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan due to the City's conformance with General Plan Policies MOB 10.1, MOB 10.2, and MOB 10.4,[32] therefore impacts would be less than significant.

The proposed project would not interfere with an adopted Mountain View emergency response or evacuation plan because the project would incorporate relevant fire code requirements and have the site plan reviewed by the Mountain View Fire Department (MVFD), is not located along specified evacuation or emergency routes, and would implement the TDM measures required under the Precise Plan.

g. The Precise Plan FEIR concluded that future development within the Precise Plan (which includes the project site) would not expose people or structures to hazards from wildland fires because the Precise Plan area is within a developed urban area outside of wildfire hazard severity zones. This condition has not changed since the certification of the Precise Plan FEIR.

3.8.3 Conclusion

The proposed project would not result in a new or substantially more severe significant hazards impact than disclosed in the Precise Plan FEIR.

[31] California Environmental Protection Agency. Cortese List Data Resources. Accessed December 15, 2023. https://calepa.ca.gov/sitecleanup/corteselist/.

[32] General Plan Policies MOB 10.1, MOB 10.2 and MOB 10.4 call for the City to maximize the efficiency of existing automobile infrastructure and manage streets to discourage cut through traffic, reduce travel demand through effective TDM programs, and monitoring emergency response times and review emergency response time standards. Source: City of Mountain View. *Mountain View 2030 General Plan.* July 10, 2012.

3.9 HYDROLOGY AND WATER QUALITY

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Precise Plan Draft EIR (2019) Page 146-147	No	No	No	N/A
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Precise Plan Draft EIR (2019) Page 147	No	No	No	N/A
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i. result in substantial erosion or siltation on- or off-site; ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv. impede or redirect flood flows?	Precise Plan Draft EIR (2019) Page 148-149	No	No	No	N/A

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Precise Plan Draft EIR (2019) Page 149-150	No	No	No	N/A
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Precise Plan Draft EIR (2019) Page 150	No	No	No	N/A

3.9.1 Existing Setting

The existing hydrology and water quality setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR. Since certification of the Precise Plan FEIR, in November 2021, Santa Clara Valley Water District adopted the 2021 Groundwater Management Plan for the Santa Clara and Llagas Subbasins which establishes recharge facilities, recycled water systems, and conservation strategies to proactively manage groundwater and surface water resources within its jurisdiction.

The project site consists of 437,970 square feet (or 95 percent) of impervious surfaces and 23,082 square feet (or five percent) of pervious surfaces. The existing pervious surface on-site consists of landscaping areas and other permeable surfaces.

The project site is located within Flood Zone X, which is not a Special Flood Hazard Area as identified by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM).[33] Flood Zone X is defined as an area determined to be outside the one percent and 0.2 percent annual chance floodplains, indicative of a minimal flood hazard. As discussed in Section 3.6 Geology and Soils, groundwater was measured on-site at depths between 17 to 21 feet bgs. There are no streams, creeks, ponds, or other surface water bodies located within the project site.

3.9.2 Discussion

a. The Precise Plan FEIR concluded that compliance with the General Construction Permit, Municipal Regional Stormwater NPDES Permit (MRP) requirements, Precise Plan design guidelines and standards, and City standard conditions of approval would ensure that future project construction and post-construction runoff would not result in substantial sources of polluted runoff and impacts would be less than significant.

[33] Federal Emergency Management Agency. *Flood Insurance Rate Map, Community Panel No. 06085C0045H*. Effective Date May 18, 2009.

Construction of the proposed project would require demolition, excavation, grading, and paving of the project site, which could result in temporary impacts to surface water quality. Since the proposed project would disturb more than one acre, it is required to comply with the State of California General Construction Permit to reduce runoff and pollution in runoff from construction activities, including preparation of a SWPPP and implementation of stormwater control BMPs, including ones that would minimize water quality impacts from discharge of dewatering effluent. In addition, the project would submit a Notice of Intent (NOI) to the California State Water Resources Control Board (SWRCB). Compliance with the General Construction Permit would ensure that all BMPs related to stormwater pollution prevention for construction projects are implemented.

The project would also be required to comply with the requirements of the MRP. Provision C.3 requires the project to incorporate site design, source control, and Low Impact Development (LID) -based stormwater treatment controls to reduce the pollutant loads of runoff from the project. The project would reduce and treat surface runoff on-site by increasing impervious surface area, directing runoff from impervious surfaces to landscaped areas, and installing bioretention areas throughout the project site.

The project would be consistent with the following design guidelines and standards from the Precise Plan:

- Chapter 4.3.4: Landscaping and Sustainability of the Precise Plan states that stormwater capture and treatment should be incorporated into landscaping design. The project would include flow-through planters and bioretention basins in landscaped areas throughout the project site.
- Chapter 5.3.1: Public Streetscape Design states that stormwater treatment measures may include in-street landscape areas, tree wells, planters within the parking lane, permeable pavements, and subsurface features such as tree trenches. The project would incorporate bioretention basins along the private drive on-site to capture stormwater runoff from the streets and surrounding hardscape areas.

For the reasons mentioned above, the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. This is the same impact as previously disclosed in the Precise Plan FEIR.

b. The Precise Plan FEIR concluded that buildout of the Precise Plan would not substantially decrease groundwater supplies, interfere with sustainable groundwater management of the Santa Clara Valley subbasin, or result in other groundwater-related impacts because development would not be located on or impact recharge facilities, pump plants, or drinking water treatment plants. The Precise Plan FEIR also concluded that temporary dewatering of groundwater would not substantially impact groundwater supplies in the region, nor would it deplete or contaminate existing aquifers relied upon for potable water uses.

Consistent with the finding of the Precise Plan FEIR, the project site is not located in a recharge area as identified by the 2021 GWMP.[34] In addition, as discussed in Section 2.0 Project Description, the proposed project would decrease the amount of impervious surface on-site from 95 percent to 83

[34] Santa Clara Valley Water District. *2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins*. November 2021. Page 2-1.

percent compared to existing conditions. Therefore, implementation of the project would not interfere with groundwater recharge because it would not reduce the amount of surface water that is allowed to percolate on-site.

As discussed in Section 3.9.1 Existing Setting, groundwater was measured on-site at depths between 17 to 21 feet bgs. The project would require a maximum excavation depth of 31 feet to accommodate the proposed basement parking levels, foundations, and utilities on-site. Based on the required excavation depth and the known groundwater depth on the site, temporary construction dewatering would be required for the project. As discussed in Section 2.3.7 Construction Activities, dewatering would only occur on-site for approximately 17 months. However, the project could potentially include a continuous cut-off wall type shoring system that would be used in conjunction with an internal passive dewatering system operating within the excavation footprint to reduce the amount of groundwater required to be pumped from the site.[35] The project would comply with the design recommendations in the design-level geotechnical investigation required as a condition of approval (see Section 3.6 Geology, Soils, and Minerals), which would include design and engineering controls to minimize the volume and duration of dewatering. For the above reasons, the project would not result in new or substantially increased impacts than those described in the Precise Plan FEIR.

c. The Precise Plan FEIR concluded that, with implementation of the following standard City conditions of approval, as well as compliance with the MRP and Precise Plan standards and guidelines, the City's stormwater system would adequately convey flows from buildout of the Precise Plan and result in less than significant impacts to existing stormwater drainage systems.

Standard Conditions of Approval:

- **Construction Best Management Practices**: All construction projects shall be conducted in a manner which prevents the release of hazardous materials, hazardous waste, polluted water, and sediments to the storm drain system.
- **Construction Sediment and Erosion Control Plan**: The applicant shall submit a written plan acceptable to the City which shows controls that will be used at the site to minimize sediment runoff and erosion during storm events. The plan should include installation of the following items where appropriate: (a) silt fences around the site perimeter; (b) gravel bags surrounding catch basins; (c) filter fabric over catch basins; (d) covering of exposed stockpiles; (e) concrete washout areas; (f) stabilized rock/gravel driveways at points of egress from the site; and (g) vegetation, hydroseeding, or other soil stabilization methods for high-erosion areas. The plan should also include routine street sweeping and storm drain catch basin cleaning.
- **Stormwater Treatment (C.3)**: This project will create or replace more than ten thousand (10,000) square feet of impervious surface; therefore, stormwater runoff shall be directed to approved permanent treatment controls as described in the City's guidance document entitled, "Stormwater Quality Guidelines for Development Projects." The City's guidelines also describe the requirement to select Low-Impact Development (LID) types of stormwater treatment controls; the types of projects that are exempt from this requirement; and the Infeasibility and Special Projects exemptions from the LID requirement.

[35] Rockridge Geotechnical. *Preliminary Geotechnical Investigation to Support Due Diligence Evaluation 675 & 685 East Middlefield Road.* September 11, 2017. Page 16.

The "Stormwater Quality Guidelines for Development Projects" document requires applicants to submit a Stormwater Management Plan, including information such as the type, location, and sizing calculations of the treatment controls that will be installed. Include three stamped and signed copies of the Final Stormwater Management Plan with the building plan submittal. The Stormwater Management Plan must include a stamped and signed certification by a qualified Engineer, stating that the Stormwater Management Plan complies with the City's guidelines and the State NPDES Permit. Stormwater treatment controls required under this condition may be required to enter into a formal recorded Maintenance Agreement with the City.

There are no streams or rivers on-site, therefore, the proposed project would not affect the existing drainage pattern of any streams or rivers. As discussed under checklist questions a. and b., the proposed project would comply with Provision C.3 of the MRP requirement to incorporate site design, source control, and LID-based stormwater treatment controls consistent with the findings of the Precise Plan FEIR. In addition, the project would decrease the amount of impervious surface area on-site from 95 to 83 percent, thereby reducing the amount of surface runoff compared to existing conditions. Therefore, the existing storm drain system would continue to adequately serve the project site under project conditions and the project would not result in substantial erosion or siltation, flooding, or additional sources of polluted runoff, consistent with the findings of the Precise Plan FEIR.

d. The Precise Plan FEIR concluded that buildout of the Precise Plan would not result in increased flood hazards, increased tsunami or seiche risks, or increased risk of pollutant release due to inundation with compliance with existing Fire Department policies regarding proper storage and handling of large quantities of hazardous materials and preparation of a Hazardous Materials Business Plan.

There are no enclosed or semi-enclosed bodies of water near the project site that would be subject to seiches. The project site is not located in an identified FEMA 100-year flood hazard zone or within a tsunami evacuation zone.[36] As discussed in Section 3.8 Hazards and Hazardous Materials, the proposed residential, retail/commercial, and office uses would not use or store substantial quantities of hazardous materials on-site. Based on the location of the project and the fact that it would not include the use or storage of significant amounts of hazardous materials, the project would not result in a release of pollutants from flooding, seiches, or tsunamis.

e. The Precise Plan FEIR concluded that buildout of the Precise Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan because there are no recharge facilities, pump plants, or drinking water treatment plants in the Precise Plan area, therefore, impacts would be less than significant. As discussed previously under checklist question a., the project site is not identified in the 2021 Groundwater Management Plan as containing any recharge facilities, pump plants, or drinking water treatment plants; therefore, the project would not impact any of these facilities.

3.9.3 Conclusion

The proposed project would not result in a new or substantially more severe significant hydrology and water quality impact than disclosed in the Precise Plan FEIR.

[36] Association of Bay Area Governments. "MTC/ABAG Hazard Viewer Map." Accessed February 16, 2023. Available at: https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8

3.10 LAND USE AND PLANNING

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Physically divide an established community?	Precise Plan Draft EIR (2019) Page 156	No	No	No	N/A
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Precise Plan Draft EIR (2019) Page 156- 158	No	No	No	N/A

3.10.1 Existing Setting

The existing land use setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR.

Since certification of the Precise Plan FEIR (October 2021), the Association of Bay Area Governments adopted Plan Bay Area 2050 which builds on Plan Bay Area 2040 and includes 35 strategies for housing, transportation, economic viability and the environment.

As noted in Section 5.8 Hazards and Hazardous materials. The project site is located within the AIA and within the mapped Part 77 182-foot amsl horizontal surface for Moffett Federal Airfield.[37] The project site is not located within any of the noise contours or airport safety zones of the Moffett Federal Airfield.[38]

3.10.2 Discussion

a. The Precise Plan FEIR concluded that although the Precise Plan could include new trails, streets, and the extension of existing streets, they would facilitate multimodal transportation use and break down large blocks into smaller, more walkable units, and no dividing infrastructure such as highways or railways are planned, thus, impacts would be less than significant.

The project would replace the existing office/R&D buildings with three new residential buildings (which would include limited retail/commercial uses), an office building, a parking structure, and a

[37] County of Santa Clara. *Comprehensive Land Use Plan Moffett Federal Airfield*. December 19, 2018. Figure 6.
[38] Ibid. Figure 5 and Figure 7.

new service street on-site, consistent with the Precise Plan's vision, and would not involve components that would physically divide an existing community (i.e., highways or railways).

b. The Precise Plan was intended to implement the goals and policies of the General Plan by providing development guidelines and policies for the entire East Whisman Change Area. The Precise Plan FEIR concluded that the Precise Plan incorporates standards and guidelines to minimize environmental impacts and would be consistent with land use plans, policies, and regulations including the General Plan, Zoning Ordinance, Moffett Field CLUP, and Plan Bay Area 2040. The Precise Plan FEIR concluded that development allowed under the Precise Plan would not conflict with the Moffett Field CLUP because the Precise Plan includes standards and guidelines to ensure that proposed building designs and heights would comply with the limits established by the CLUP. The Precise Plan FEIR also concluded that development allowed under the Precise Plan would not conflict with the Plan Bay Area 2040 because the Precise Plan meets the intent of Plan Bay Area 2040 to focus the growth of mixed-use, transit-oriented, and infill districts in PDAs and streamline the review process for development projects.

The proposed project's density and land use are consistent with the Precise Plan, and the designs of the proposed residential and non-residential buildings comply with Precise Plan design standards and guidelines. The project includes high density, mixed-use development proximate to the Middlefield Light Rail Station within the Whisman PDA identified in Plan Bay Area 2050. Because the mixed-use and transit-oriented, infill project would be located within a PDA, it would remain consistent with the vision for projects in PDAs that was outlined in both Plan Bay Area 2040 and Plan Bay Area 2050.[39] In addition, the proposed project is consistent with the East Whisman Mixed-Use General Plan land use designation and General Plan Policy LUD 19.1, which calls for greater land use intensity and transit-oriented developments within a half-mile of light rail transit stations.

As discussed in Section 3.10.1 Existing Setting, The maximum elevation on-site is 72 feet amsl and the tallest building proposed as part of the project would be approximately up to 93 feet tall. The proposed maximum building height of up to 93 feet would not require notification and review by the FAA to determine potential aviation hazard. However, the project's construction equipment (e.g., cranes) would reach a maximum potential height of 170 to 200 feet and would therefore be subject to the FAA's review. Compliance with FAA's regulations would reduce aviation hazards to a less than significant level and ensure consistency with the Moffett Field CLUP.

3.10.3 Conclusion

The proposed project would not result in a new or substantially more severe significant land use and planning impact than disclosed in the Precise Plan FEIR.

[39] Association of Bay Area Governments. Priority Development Areas (Plan Bay Area 2050) July 27, 2020. Accessed February 15, 2023. Available at: https://opendata.mtc.ca.gov/datasets/MTC::priority-development-areas-plan-bay-area-2050/about.

3.11 NOISE AND VIBRATION

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project result in:					
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Precise Plan Draft EIR (2019) Page 169-173	No	No	No	N/A
b. Generation of excessive groundborne vibration or groundborne noise levels?	Precise Plan Draft EIR (2019) Page 173 -174	No	No	No	Yes, MM NOI-4.1
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Precise Plan Draft EIR (2019) Page 179	No	No	No	N/A

3.11.1 Existing Setting

The existing noise and vibration setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR.

The existing noise environment in the Precise Plan area results primarily from vehicular traffic along freeway and roadways (including U.S. 101, East Middlefield Road, North Whisman Road, and Ellis Street), VTA light rail pass-bys, and aircraft associated with Moffett Federal Airfield. As discussed in Section 3.8 Hazards and Hazardous Materials, the project site is located outside the 65 dBA CNEL noise contour for Moffett Federal Airfield. The nearest sensitive receptors are residential uses located directly adjacent to the western boundary of the project site.

3.11.2 Discussion

a. The Precise Plan FEIR concluded that buildout of the Precise Plan would not result in substantial short-term construction noise, or permanent noise level increases from increased traffic, or operation of mechanical equipment with implementation of the City's standard conditions of approval (listed below) and with adherence to City Code requirements.

Standard Conditions of Approval:

- **Construction Noise Reduction:** The following noise reduction measures shall be incorporated into construction plans and contractor specifications to reduce the impact of temporary construction-related noise on nearby properties: a. comply with manufacturer's muffler requirements on all construction equipment engines; b. turn off construction equipment when not in use, where applicable; c. locate stationary equipment as far as practicable from receiving properties; d. use temporary sound barriers or sound curtains around loud stationary equipment if the other noise reduction methods are not effective or possible; e. and shroud or shield impact tools and use electric powered rather than diesel-powered construction equipment.
- **Construction Practices Noticing – Disturbance Coordinator:** The project applicant shall designate a "disturbance coordinator" who shall be responsible for responding to any local complaints regarding construction noise. The coordinator (who may be an employee of the general contractor) shall determine the cause of the complaint and shall require that reasonable measures warranted to correct the problem be implemented. A telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site fence and on the notification sent to neighbors adjacent to the site. The sign must also list an emergency after-hours contact number for emergency personnel.
- **Mechanical Equipment:** The noise emitted by any mechanical equipment shall not exceed a level of 55 dBA during the day (between 7:00 AM and 10:00 PM) or 50 dBA during the night (between 10:00 PM to 7:00 AM) as measured at residential land uses.

A discussion of the project's construction and operational noise impacts is provided below.

Construction Noise

Construction activities for the proposed project would be completed between 7:00 AM and 6:00 PM, Monday through Friday, and would adhere to the allowable hours of construction specified in the City's Municipal Code (Chapter 8). Construction is anticipated to occur over approximately 48 months, and the project would implement the previously listed standard conditions of approval identified in the Precise Plan FEIR, which include implementing standard construction noise reduction measures and designating a disturbance coordinator to respond to and address complaints.

With implementation of the above standard conditions of approval, the Precise Plan FEIR determined that construction of future projects (including the proposed project) would have a less than significant construction noise impact.

Operational Noise

Traffic Noise

As identified in the Precise Plan FEIR, a significant permanent noise level increase would occur if the increase in traffic generated by the project would result in a noise level increase of three dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.[40]

The future traffic noise from buildout of the Precise Plan was modeled and disclosed in the Precise Plan FEIR. Traffic noise increases above existing levels from Precise Plan-generated traffic would be one to two dBA Ldn or less at noise sensitive receptors within or adjacent to the Precise Plan area. The increase in traffic noise as a result of the Precise Plan buildout (which includes traffic from the proposed project) would be less than three dBA; therefore, the Precise Plan (as well as project) traffic noise would have a less than significant impact on noise-sensitive receptors in the area.

Mechanical Equipment Noise

General Plan Policy NOI 1.7 restricts noise levels from stationary sources through enforcement of the Noise Ordinance, which states that stationary equipment noise from any property must be maintained at or below 55 dBA L_{eq} during daytime hours (i.e., between 7:00 AM and 10:00 PM) and at or below 50 dBA L_{eq} during nighttime hours (i.e., between 10:00 PM and 7:00 AM) as measured at residential land uses.

The project would include mechanical systems (i.e., HVAC, exhaust fans, intake ventilation) on the rooftops of the proposed office and residential buildings. The project would comply with the standard condition of approval regarding mechanical equipment that was included in the Precise Plan FEIR and listed above, to reduce potential noise impacts from new mechanical equipment included in the proposed project. With implementation of this standard condition of approval, the Precise Plan FEIR determined that mechanical equipment noise would be less than significant. Therefore, the project would result in the same less than significant impact disclosed in the Precise Plan FEIR.

b. The Precise Plan FEIR identified a less than significant vibration noise impact with implementation of mitigation measure MM NOI-4.1 below, which calls for avoiding impact pile driving, avoiding use of vibratory rollers and tampers near sensitive uses, completing site-specific vibration studies and monitoring if activities are proximate to adjacent structures, and making appropriate repairs (or providing compensation) for damage.

Precise Plan FEIR Mitigation Measures:

Precise Plan FEIR MM NOI-4.1: Use drilled piles (which cause lower vibration levels) where geological conditions permit their use. In areas where project construction is anticipated to include vibration-generating activities, such as pile driving or use of vibratory rollers, in close proximity to existing structures, site-specific vibration

[40] Noise is measured on a decibel scale, which serves as an index of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA. The day-night average sound level (L_{dn}) is the average noise level over a 24-hour period, with additional weight added to noise generated in the late-night or early-morning hours.

studies should be conducted to determine the area of impact and to identify appropriate mitigation measures which may include the following:

- Identification of sites that would include vibration compaction activities such as pile driving and have the potential to generate ground-borne vibration, and the sensitivity of nearby structures to ground-borne vibration. Vibration limits should be applied to all vibration-sensitive structures located within 200 feet of the project. A qualified structural engineer should conduct this task.
- Development of a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions.
- Construction contingencies would be identified for when vibration levels approached the limits.
- At a minimum, vibration monitoring should be conducted during initial demolition activities and during pile driving activities. Monitoring results may indicate the need for more or less intensive measurements.
- When vibration levels approach limits, suspend construction and implement contingencies to either lower vibration levels or secure the affected structures.
- Conduct post-survey on structures where either monitoring has indicated high levels or complaints of damage has been made. Make appropriate repairs or compensation where damage has occurred as a result of construction activities.

The project would be constructed in proximity to existing uses and, while no pile driving is proposed, other construction tools that could generate vibration such as vibratory rollers could be used. For this reason, the project would prepare a site-specific vibration study per Precise Plan mitigation measure MM NOI-4.1 and implement the recommendations in the study. Therefore, the project would result in the same less than significant impact construction-vibration impact as identified in the Precise Plan FEIR.

c. The Precise Plan FEIR concluded that impacts associated with exposure of people living or working in a project area to excessive noise from airport operations was not a CEQA impact.

Moffett Federal Airfield is a joint civilian/military airport located approximately 0.5 miles north of the project site. According to the Moffett Federal Airfield CLUP 2022 Aircraft Noise Contour Map, the project site is outside the 65 dBA Community Noise Equivalent level (CNEL) noise contour. Therefore, the project would not expose future residents to excessive noise from aircraft operations.

3.11.3 Conclusion

The proposed project would not result in a new or substantially more severe significant noise and vibration impact than disclosed in the Precise Plan FEIR.

3.12 POPULATION AND HOUSING

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Precise Plan Draft EIR (2019) Page 183-185	No	No	No	N/A
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Precise Plan Draft EIR (2019) Page 185	No	No	No	N/A

3.12.1 Existing Setting

The existing population and housing setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR.

The growth projections for the Precise Plan are consistent with the growth projections for the area in the General Plan. According to the Precise Plan FEIR, the approved Precise Plan would result in employment growth of approximately 12,000 new jobs over existing conditions for a total of 27,360 employees at full buildout in 2030. Buildout of the Precise Plan would add 5,000 residential units, resulting in an estimated 10,750 residents.[41] Currently there is one single-family residence in the Precise Plan area located on Middlefield Road. Since the adoption of the Precise Plan and certification of the Precise Plan FEIR, 2,308 residential units have been approved for development within the Precise Plan area. To date, none of those approved units have been constructed. There are no residential units on-site; however, there are two multi-family residential developments directly adjacent to the western border of the project site.

3.12.2 Discussion

a. The Precise Plan FEIR concluded that implementation of the Precise Plan would provide housing near an employment center and would not induce population growth by extending or expanding infrastructure beyond areas planned for development, therefore, impacts would be less than significant.

[41] City of Mountain View. *East Whisman Precise Plan Integrated Final Environmental Impact Report. SCH #: 2017082051.* January 2020. Page 172.

As discussed in Section 2.1 Existing Site Conditions, the project site is currently developed with two office/R&D buildings. The proposed project would demolish the two, existing buildings and construct 836 residential units, 2,344 square feet of neighborhood commercial space, and a new 275,200 square foot office building. The increase in residential units on-site would generate approximately 1,798 new residents, or 16.72 percent of the total anticipated population growth for the Precise Plan area.[42] Population and housing impacts from the project were previously analyzed the Precise Plan FEIR, therefore, the project would result in the same impact as disclosed in the Precise Plan FEIR.

b. The Precise Plan FEIR concluded that buildout of the Precise Plan would not displace substantial numbers of existing housing or people because only one existing single-family residential unit was located within the Precise Plan area at the time of certification of the Precise Plan FEIR. This was found to be a less than significant impact as implementation of the project would create up to 5,000 residential units.

The project site is developed with office/R&D uses and does not contain housing; therefore, the project would not displace existing residents or housing.

3.12.3 Conclusion

The proposed project would not result in a new or substantially more severe significant population and housing impact than disclosed in the Precise Plan FEIR.

[42] Resident generation estimates for the project were calculated based on the service population estimates for the Precise Plan FEIR. The project proposes 836 residential units, which is 16.72 percent of the residential development assumed in the Precise Plan. Therefore, project was assumed to generate 16.72 percent of the residents assumed. Source: City of Mountain View. *East Whisman Precise Plan: Integrated Final Environmental Impact Report. SCH #: 2017082051*. January 2020. Page 172.

3.13 PUBLIC SERVICES

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
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?	Precise Plan Draft EIR (2019) Page 188-193	No	No	No	N/A
b. Police protection?	Precise Plan Draft EIR (2019) Page 188-193	No	No	No	N/A
c. Schools?	Precise Plan Draft EIR (2019) Page 188-193	No	No	No	N/A
d. Parks?	Precise Plan Draft EIR (2019) Page 188-193	No	No	No	N/A
e. Other public facilities?	Precise Plan Draft EIR (2019) Page 188-193	No	No	No	N/A

3.13.1 Existing Setting

The existing public services setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR.

The Precise Plan area is served by the MVFD. The nearest fire station to the project site is Station Four (located approximately 0.35-miles west of the project site at 229 North Whisman Road). Police protection services are provided by the Mountain View Police Department (MVPD) who operate out of the police station located at 1000 Villa Street, approximately 1.5-miles west of the project site. The MVPD consists of authorized staff of approximately 90 sworn and 45 non-sworn personnel.

The Precise Plan area is located within the Mountain View Whisman School District and the Mountain View Los Altos High School District. Table 3.13-1 shows the capacity and enrollment data for schools serving the project site.

Table 3.13-1: 2022 – 2023 School Capacity and Enrollment

School	Capacity	Enrollment[3]	Remaining Capacity
Jose Antonio Vargas Elementary School	492[1]	339	153
Crittenden Middle School	1,008[1]	537	471
Mountain View High School	1,546[2]	2,220	-674

[1] Mountain View Whisman School District. Level I Developer Fee Study for Mountain View Whisman School District. May 5, 2022. Appendix E.

[2] Aguilar, Irene. Assistant to the Associate Superintendent, Business Services. Mountain View Los Altos High School District. Personal Communication. September 12, 2022.

[3] California Department of Education. Data Quest, School Enrollment by Grade. Accessed August 4, 2023. Available at: https://dq.cde.ca.gov/dataquest/.

The City of Mountain View currently owns or manages approximately 993 acres of parks and open space facilities, including 22 urban parks (13 of which are under joint use agreements with local school districts) and the Stevens Creek Trail. The nearest park is Pyramid Park, located approximately 400 feet west of the project site.

The Mountain View Public Library, located approximately 1.6-miles southwest of the project site at 585 Franklin Street, is the City's only library.

3.13.2 Discussion

a. The Precise Plan FEIR concluded that buildout of the Precise Plan (which includes the proposed project) would incrementally increase the needs for fire suppression and rescue response services; however, the MVFD does not anticipate the need to construct a new fire station to accommodate growth anticipated in the buildout of the General Plan, of which the Precise Plan is a part. Further, the Precise Plan FEIR concluded that there is existing capacity at nearby Station Four (located approximately 0.35-miles west of the project site at 229 North Whisman Road) to respond to additional service calls created by buildout of the Precise Plan (including the proposed project) and no new facilities or expansion of existing facilities would be required. Consistent with the findings of the Precise Plan FEIR, the proposed project would be constructed to current Fire Code standards to increase fire safety and the project would be reviewed by the MVFD to ensure compliance with the City's codes and standards.

b. MVPD maintains a staffing ratio of approximately 1.3 officers per 1,000 residents. As noted in Section 3.12 Population and Housing, 836 new residential units are proposed, and the project would generate approximately 1,798 new residents on-site.

The General Plan FEIR and Precise Plan FEIR concluded that growth in the City (including the residential population growth from the proposed project) would increase the demand for police services; however, the City has policies to ensure police staffing is adequate to serve the needs of the community. While the proposed project would intensify the use of the site, the MVPD confirmed that implementation of projects consistent with the Precise Plan would not require the construction or expansion of police facilities. In addition, the project site plan would be reviewed by MVPD during

the building permit stage to ensure safety features are incorporated to minimize the opportunity for criminal activity.

c. The Precise Plan FEIR concluded that implementation of the Precise Plan would increase the demand for new school facilities in the City; however, payment of school impact fees would offset this increase in demand, resulting in a less than significant impact.

As noted under Section 3.12 Population and Housing, 836 new residential units are proposed, which would result in approximately 1,798 new residents. Based on the recent student generation rates by the school districts, the project would generate approximately 169 elementary and middle school students and 79 high school students.[43]

As shown in Table 3.13-1 both Vargas Elementary School and Crittenden Middle School would have adequate capacity to accommodate the projected increase in elementary and middle school students. As of the end of the 2022 to 2023 school year, Mountain View High School is over capacity by 674 students. The school currently utilizes portable classrooms in addition to permanent education facilities to accommodate additional students.[44] The construction of permanent classroom facilities is underway through Measure E bond program funding and has undergone separate environmental review. The construction of these additional facilities would result in an overall increase in capacity of 2,379 students,[45] which would not be sufficient to accommodate the currently enrolled students in addition to the approximately 79 new high school students generated by the project. Capacity and enrollment numbers fluctuate over time as facilities are renovated and population trends in the City shift. It is unknown what the local school enrollment will be at the time in the future when the project is constructed and fully occupied (if approved). Consistent with General Plan Policies POS 5.3 and POS 5.4, the City continuously collaborates with school districts serving the community to provide information on development and growth trends and evaluate facility needs.

No new or expanded school facilities are proposed at this time. In the event that new or expanded school facilities are proposed, they are subject to a separate CEQA review. Per the Precise Plan FEIR and state law, the project shall pay school impact fees. Both MVWSD and MVLASD have fee programs in place and the project would be subject to payment of applicable developer fees. Payment of the adopted developer fees by the applicant would, in accordance with Section 65995(h) of the California Government Code and consistent with the findings of the Precise Plan FEIR, reduce school impacts to a less than significant level. This is the same impact as disclosed in the Precise Plan FEIR.

d. The Precise Plan FEIR concluded that buildout of the Precise Plan would not substantially affect the provision of parks and open space or result in deterioration of existing facilities with payment of required park fees and/or dedication of park land by future development projects.

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[43] Based on the following student generation rates: Elementary and middle school students per market-rate multi-family unit: 0.124 (0.555 per below market-rate unit) Source: Mountain View Whisman School District. *Level I Developer Fee Study*. Appendix E. May 5, 2022. Accessed February 17, 2023.
High school students per market-rate multi-family unit = 0.047 (0.312 per below market-rate unit) Source: Mountain View/Los Altos Union High School District. *Level 1 Developer Fee Study*. July 27, 2020. Table 1.

[44] Aguilar, Irene. Assistant to the Associate Superintendent, Business Services. Mountain View Los Altos High School District. Personal Communication. September 12, 2022. and City of Mountain View. *East Whisman Precise Plan: Integrated Final Environmental Impact Report. State Clearinghouse Number 2017082051*. January 2020. P. 180.

[45] Mountain View/Los Altos Union High School District. *Draft Mitigated Negative Declaration- Mountain View High School Expansion Project (SCH Number 2011092006)*. November 2018. Page 10.

Project-related impacts to parks (as well as other recreational facilities) are discussed in Section 3.14 Recreation below and concluded to be less than significant.

e. The Precise Plan FEIR concluded that the growth projected in the Precise Plan (which includes the proposed project), would not trigger the City to build or operate a new library in the Precise Plan area. The proposed project is consistent with the Precise Plan; therefore, the proposed project would result in the same less than significant impact on library services as disclosed in the Precise Plan FEIR.

3.13.3 Conclusion

The proposed project would not result in a new or substantially more severe significant public services impact than disclosed in the Precise Plan FEIR.

3.14 RECREATION

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
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?	Precise Plan Draft EIR (2019) Page 188-193	No	No	No	N/A
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?	Precise Plan Draft EIR (2019) Page 188-193	No	No	No	N/A

3.14.1 Existing Setting

The existing recreational setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR.

The City of Mountain View owns 993 acres of parks and open space facilities, including 22 urban parks (13 of which are under joint use agreements with local school districts) and Stevens Creek Trail. The nearest park is Pyramid Park, located approximately 400 feet west of the project site. The Precise Plan area currently does not meet the City's standard of 3.0 acres of parkland per 1,000 residents.[46]

3.14.2 Discussion

a-b. While the Precise Plan area currently does not meet the City's standard of 3.0 acres of parkland per 1,000 residents, the buildout of the Precise Plan would add 30 acres of publicly accessible open space to serve the projected 10,000 residents of the Precise Plan area (which would meet the City's standard of three acres per 1,000 residents) through payment of parkland in-lieu fees by new development and acquisition of new parkland and open space areas within non-residential developments. Therefore, the Precise Plan FEIR concluded the implementation of the Precise Plan's Park and Open Space Strategy and payment of park impact fees would reduce park impacts to a less than significant level.

[46] City of Mountain View. *East Whisman Precise Plan Integrated Final Environmental Impact Report*. January 2020. SCH #: 2017082051. Page 177.

As noted in Section 3.12 Population and Housing, the project would result in approximately 1,798 new residents on-site compared to existing conditions. Although the increase in residents could potentially increase the level of use of existing recreational facilities, this increase would be partially offset by the incorporation of the POPA park and common space on-site. As discussed in Section 2.3 Proposed Project, the project would construct a 0.52-acre (or 22,600-square-foot) POPA park between the MRN residential building and office building. Further, the project would include an additional approximately three acres (or 129,449 square feet) of common open space throughout the project site, including within the landscaped linear parks between the residential buildings, courtyards, and terraces. The environmental impacts associated with construction of this open space are discussed throughout this document.

The proposed outdoor common areas, including the POPA park, would partially offset the proposed project's demand on existing parks and recreational facilities in the project area. In addition, consistent with state law (Quimby Act), the project would also pay parkland fees to offset increased use of existing parks and recreational facilities and contribute toward the City's development of new parks and open spaces in the project area. Therefore, consistent with the Precise Plan FEIR and state law (Quimby Act), the project would result in the same less than significant impact as disclosed in the Precise Plan FEIR.

3.14.3 Conclusion

The proposed project would incrementally increase the use of parks and recreational facilities; however, it would not result in a new or substantially increased parks impact compared to the Precise Plan FEIR.

3.15 TRANSPORTATION

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian facilities?	Precise Plan Draft EIR (2019) Page 219-244	No	No	No	N/A
b. For a land use project, conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	Precise Plan Draft EIR (2019) Page 244-247	No	No	No	N/A
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	Precise Plan Draft EIR (2019) Page 247	No	No	No	N/A
d. Result in inadequate emergency access?	Precise Plan Draft EIR (2019) Page 247	No	No	No	N/A

The discussion in this section is based, in part, on the Multi-Modal Transportation Analysis (MTA) prepared by Hexagon Transportation Consultants dated September 30, 2024. This report is attached as Appendix E.

3.15.1 Existing Setting

The existing transportation setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR. Notable changes include the City's adoption of a nexus study and impact fee and VMT Policy. These are described below.

The City of Mountain View adopted a nexus study and impact fee in May 2022 for transportation and utilities improvements necessary to address impacts generated by development in the East Whisman Precise Plan area. As stated in the Precise Plan, development projects will contribute funding to the following transportation improvements (which were also identified in the Precise Plan FEIR):

- Signalize intersection of Ellis Street and Manila Drive
- Add westbound left- and southbound right-turn lanes to US 101 Northbound Ramps and Ellis Street

- Add Southbound turb lane on Fairchild Drive and Ellis Street
- Construct new interchange at Maude Avenue and SR 237 Ramps
- Add a dedicated Eastbound right turn lane to Maude Avenue and North Mary Avenue
- Add a dedicated Eastbound right turn lane to East Middlefield Road and North Whisman Road
- Add an Eastbound left turn lane to East Middlefield Road and Ellis Street
- Convert southbound right turn lane to shared southbound left/ right turn lane on Central Expressway and SR 85 Southbound Ramp
- Add westbound lane, Westbound turn lane and eastbound turn lanes to Central Expressway and North Mary Avenue
- Add Eastbound lane to West Evelyn Avenue and North Mary Avenue
- Add dedicated northbound right, southbound right, and eastbound right turn lanes to Moffett Boulevard and West Middlefield Road
- Close Castro Street between Moffett Boulevard and Central Expressway[47]

The project is responsible for contributing its fair share towards planned East Whisman area transportation improvements through payment of the development impact fee.

Additionally, on June 30, 2020, the Mountain View City Council adopted its VMT Policy, which replaces Level of Service (LOS) with VMT as the metric for determining a significant transportation impact under CEQA consistent with SB 743. The City's VMT Policy includes screening criteria for projects which are presumed to have a less than significant VMT impact and do not require further project-specific VMT analysis if the project: is located within a half mile of an existing major transit stop[48] or an existing stop along a high-quality transit corridor; has an FAR of greater than 0.75; has reduced parking compared to the maximum parking required by the City; is consistent with Plan Bay Area; and does not replace affordable residential units with fewer units of moderate to high income. As discussed in additional detail under checklist question b. below, the project site is located within 0.5 miles of the Middlefield Light Rail station, has an FAR greater than 0.75, and provides reduced parking below the City's maximum; therefore, the project would screen out of the requirement for a project-specific VMT analysis, consistent with the City's VMT Policy.

Regional access to the project site is provided by US 101 and SR 237. Local access to the project site is provided via Middlefield Road, Ellis Street, and Ferguson Drive. Existing transit services in the area are provided by VTA and the Mountain View Transportation Management Association (MVTMA). VTA operates bus and light rail transit services in Santa Clara County, and the MVTMA provides free MVgo shuttle service between the Mountain View Transit Center and corporate campuses in the Whisman area. The site is served by VTA Local Route 21 and MVgo Route A, with bus stops on Logue Avenue and Middlefield Road, and is located approximately 650 feet from the Middlefield Light Rail Station, which is considered a major transit stop. Pedestrian facilities in the vicinity include sidewalks and crosswalks on most surrounding roadways and at signalized and unsignalized intersections. Most of the signalized intersections near the project site include pedestrian signal heads and push buttons.

[47] City of Mountain View. *East Whisman Precise Plan Integrated Final Environmental Impact Report*. SCH# 2017082051. January 2020. Pages 220 to 222.

[48] According to the City's Multi-Modal Transportation Analysis Handbook, existing major transit stops include the Downtown Mountain View Caltrain station, San Antonio Caltrain station, light rail stations, and/or El Camino Real transit stops. Source: City of Mountain View. *Multi-Modal Transportation Analysis Handbook, Version 1.0*. February 2021. Page 47. https://www.mountainview.gov/home/showpublisheddocument/2322/637957259243370000.

The primary bicycle facilities within one mile of the project site include a multi-use trail (Class I bikeway), striped bike lanes (Class II bikeway), and shared bike routes/boulevards (Class III bikeway).

3.15.2 Discussion

a.

Roadway Facilities

The Precise Plan FEIR found that development and identified improvements in the Precise Plan area would result in LOS deficiencies under existing LOS policies, improvements to address select deficiencies would be implemented, and select deficiencies would be significant and unavoidable.[49] However, as noted above, consistent with SB 743, beginning on July 1, 2020, impacts to LOS can no longer constitute a significant impact under CEQA.

2030 General Plan Action Item MOB 8.1.3

Compared to existing conditions, the project is estimated to generate 4,954 daily vehicle trips, with 514 trips during the AM peak hour, and 504 trips during the PM peak hour.[50] While a project's effect on automobile delay is no longer considered an impact under CEQA, local jurisdictions have roadway LOS standards. Per 2030 General Plan Action Item MOB 8.1.3, the City's interim standard for signalized intersections is LOS D. The City does not have an adopted level of service standard for unsignalized intersections; however, the City strives to maintain LOS D for unsignalized intersections.

As discussed in more detail in Appendix E, the results of the LOS analysis conducted for the project show that all study intersections would operate at acceptable levels during both the AM and PM peak hours under background conditions, with and without the project. In addition, as discussed in Section 2.4.1 Transportation Demand Management, the project would implement TDM measures for the office and residential uses on-site which would reduce vehicle trips generated by the project. Furthermore, the MTA prepared for the project determined that signal modifications would not be necessary for any of the study intersections and the new Ferguson Drive/service street intersection would not meet the thresholds under project conditions to warrant installation of a traffic signal or installation of an all-way stop. Based on this discussion, the project is consistent with General Plan Action Item MOB 8.1.3.

Pedestrian and Bicycle Facilities

The Precise Plan FEIR concluded that with implementation of City and county policies and requirements (such as those related to Complete Streets), future development and transportation improvements consistent with the Precise Plan would not conflict with a program, plan, ordinance, or policy addressing bicycle lanes and pedestrian facilities.

Pedestrian access to the project site is currently provided by sidewalks on Middlefield Road, Ferguson Drive, and other surrounding streets in the vicinity. The project would add pedestrian facilities along the new service street on-site and improve the project frontages along Middlefield Road and Ferguson

[49] City of Mountain View. *East Whisman Precise Plan: Integrated Final Environmental Impact Report. State Clearinghouse Number 2017082051.* January 2020. Pages 219 to 240.

[50] The trip generation estimates and the corresponding analysis in the MTA are based on an earlier version of the project that included 858 dwelling units instead of 836. Therefore, the potential impacts of the proposed project with 836 dwelling units are covered in this conservative analysis.

Drive. These sidewalks would range in width from five feet to eight feet, consistent with Precise Plan requirements. Pedestrian walkways would also be constructed between the proposed buildings and within the paseo walkway. Raised crosswalks would be installed along the internal service street, at the southwest corner of the site, and adjacent to existing property to the southwest of the site. These improvements are consistent with the planned improvements, standards, and guidelines for pedestrian facilities included in the Precise Plan. For these reasons, the project would not conflict with the Precise Plan or Access MV policies addressing pedestrian facilities.

The proposed project would add vehicle trips to Whisman Road, Ellis Street, and Middlefield Road, contributing to an increased bicycle level of stress along these roadways. However, the project would construct a buffered bike lane along the project frontage on Middlefield Road, stripe the service street with "sharrows" to designate the street as a bicycle route, and include secure, long-term bicycle storage for residents and office employees on the ground floors of the office, MRN residential building, and MRS residential building. The BMR residential building would include secure, long-term bicycle storage within the storage units located on the ground floor and on each of the upper floors of the building. Short-term bicycle parking would be installed in well-lit, highly visible locations in front of the office building lobby and in various locations surrounding the residential buildings.

The Precise Plan included bicycle facilities improvements such as the installation of buffered bike lanes on Ellis Street and Middlefield Road where the project would add vehicle trips. In accordance with the recently adopted nexus study and impact fee, the proposed project would pay a fair share contribution toward the cost of constructing planned buffered bike lane improvements in the project area. For these reasons, consistent with the Precise Plan FEIR, the project would not conflict with the Precise Plan or Access MV policies addressing bicycle facilities.

Transit Facilities

The Precise Plan FEIR identified a significant and unavoidable effect on transit vehicle operations at intersections with a deficient LOS (see Precise Plan FEIR Impact TRA-3) and found that transit operational improvements such as signal coordination and transit vehicle preemption could reduce the magnitude of congestion on transit operations and improve the overall reliability of transit in congested areas.[51] However, these improvements would not fully mitigate these impacts to a less than significant level. Pursuant to SB 743, LOS is no longer a significant impact under CEQA. Additionally, the Precise Plan FEIR identified that a significant impact associated with increased light rail service delay due to gate operations at the proposed Street C at-grade crossing of the light-rail tracks between Ellis Street and Logue Avenue (see Precise Plan FEIR Impact TRA-4). The Precise Plan includes mitigation measure FEIR MM TRA-4.1, requiring the removal of Street C from the Precise Plan. Consistent with Precise Plan FEIR mitigation measure FEIR MM TRA-4.1, Street C was removed from the Precise Plan and replaced with a grade-separated multi-use path.

As discussed in Section 3.15.1 Existing Setting, the project site is located approximately 650 feet from the Middlefield Light Rail Station, which is considered a major transit stop. The General Plan and Precise Plan include policies to encourage an increase in the City's transit ridership, decrease dependence on motor vehicles, and reduce transit delays. The City and VTA have not established policies or significance criteria related to transit vehicle delay. An analysis of the project's contribution

[51] City of Mountain View. *East Whisman Precise Plan: Integrated Final Environmental Impact Report. State Clearinghouse Number 2017082051.* January 2020. Page 212.

to the transit vehicle delay disclosed in the Precise Plan FEIR was completed. According to the project-specific MTA[52], the project would generate approximately 28 to 29 new riders during the AM and PM peak hours. Although it is estimated that the project would generate 4,954 new daily vehicle trips (514 AM and 504 PM trips), the project would result in a minimal increase in vehicle delay at the study intersections (less than 10 seconds per vehicle) and would not cause a noticeable change in transit travel times and vehicle delay for the bus routes in the study area.[53] Therefore, the proposed project would result in a minimal contribution to the increase in transit vehicle delay at intersections with LOS deficiencies identified in the Precise Plan FEIR. In addition, implementation of the project would not disrupt existing or interfere with planned transit facilities and services. Based on the above discussion, the project would result in the same impact to transit facilities as disclosed in the Precise Plan FEIR.

In summary, the project would be consistent with roadway, pedestrian, bicycle, and transit programs, plans, ordinances, and policies disclosed in the Precise Plan FEIR.

b. The Precise Plan FEIR identified a significant and unavoidable project- and cumulative-level VMT impact due to Precise Plan project-generated VMT on both a citywide and countywide basis. As disclosed in the Precise Plan FEIR, the Precise Plan project-level VMT per service population was calculated to be 35.93 and the Precise Plan cumulative VMT per service population was calculated to be 36.27. The proposed project's VMT was included in the VMT calculation in the Precise Plan FEIR for the Precise Plan as a whole. For this reason, the project would contribute to the same impact as disclosed in the Precise Plan FEIR.

As noted in Section 3.15.1 Existing Setting above, since adoption of the Precise Plan and certification of the Precise Plan FEIR, City Council adopted the Mountain View VMT Policy, which establishes screening criteria for developments that are expected to cause a less than significant transportation impact under CEQA and for which future VMT analysis is not required. Per CEQA Guidelines Section 15088.5, adoption of new policies and/or regulations is not considered substantial new information requiring recirculation of the EIR because it does not result in a new significant environmental impact, increase the severity of an environmental impact, or alter an existing mitigation measure or alternative. Additionally, projects approved prior to adoption of the Mountain View VMT Policy (such as the Precise Plan, of which the current project is a part) are considered exempt from the new policy. Nevertheless, the project is consistent with the VMT Policy as described below.

The City's current VMT Policy (which was adopted after the Precise Plan FEIR was certified) establishes screening criteria for developments that are expected to cause a less than significant transportation impact under CEQA and are not required to prepare further VMT analysis.[54] The project site is located within 0.5 miles of the Middlefield Light Rail station, has an FAR greater than 0.75, and

[52] The number of new riders generated and the corresponding analysis in the MTA are based on an earlier version of the project that included 858 dwelling units instead of 836. Therefore, the potential impacts of the proposed project with 836 dwelling units are covered in this conservative analysis.

[53] Hexagon Transportation Consultants, Inc. *675-685 E. Middlefield Road Mixed-Use Development MTA*. November 21, 2023. Pages 49 to 50.

[54] The proximity to transit screening criterion was developed based on the CEQA Guidelines Section 15064.3, subdivision (b)(1), which states that lead agencies generally should presume that certain projects proposed within 0.5 miles of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less than significant impact on VMT. Less than significant VMT is defined as exhibiting VMT that is 15 percent or greater below the existing Nine-County Bay Area regional reference average VMT. Source: City of Mountain View. *Policy Implementing the California Environmental Quality Act (CEQA) to Comply with California Senate Bill 743 (SB 743) Regarding the Use of Vehicle Miles Traveled (VMT) in Transportation Analysis.* June 30. 2022.

provides reduced parking below the City's maximum; therefore, the project would have a less than significant impact on VMT and is consistent with the City's VMT Policy.

c. The Precise Plan FEIR concluded that future development under the Precise Plan would not result in project- or cumulative-level impacts due to hazards from geometric design features because the Precise Plan would result in greater connectivity of the street and multimodal network, and all proposed structures would be reviewed by MVFD for compliance with emergency access and design requirements under the City's fire code.

The proposed project would be consistent with the land uses, design, and development standards in the Precise Plan. The project would construct a new service street that would link the main access points to the project site on Middlefield Road and Ferguson Drive. The service street and driveway entrances on Middlefield Road and Ferguson Drive would be designed in accordance with the standards in the Precise Plan and the City's Municipal Code to ensure adequate street and driveway widths, intersection sight distances, and corner visibility are provided. In addition, the final design of the project would be reviewed by MVFD for compliance with emergency access and design requirements under the City's fire code. For this reason, the project would result in the same less than significant impact as disclosed in the Precise Plan FEIR.

d. The Precise Plan FEIR concluded that since the implementation of the Precise Plan would result in greater connectivity of the street and multimodal network and all future development would be reviewed by the MVFD for compliance with the City's fire code regarding emergency access and design requirements, the Precise Plan would not result in inadequate emergency access.

The project is consistent with the Precise Plan and the final design of the project would be reviewed by the MVFD for compliance with the City's fire code. For this reason, the project would result in the same less than significant impact regarding emergency access as disclosed in the Precise Plan FEIR.

3.15.3 Conclusion

The proposed project would not result in a new or substantially more severe significant transportation impact than disclosed in the Precise Plan FEIR.

3.16 TRIBAL CULTURAL RESOURCES

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	Precise Plan Draft EIR (2019) Page 264-265	No	No	No	N/A
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Precise Plan Draft EIR (2019) Page 264-265	No	No	No	N/A

3.16.1 Existing Setting

The existing Tribal Cultural Resources (TCRs) setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR. As part of the Precise Plan FEIR, the Native American Heritage Commission (NAHC) was contacted to request a review of the Sacred Land Files for any evidence of cultural resources or traditional properties of potential concern that might be present on lands within or adjacent to the Precise Plan area (including the project site). Outreach to the appropriate tribal representatives was conducted in January 2017, and no responses were received regarding any potential concerns that tribes may have regarding the Precise Plan area. On May 28, 2021, subsequent to the certification of the Precise Plan FEIR, the Tamien Nation requested notification on all non-exempt projects pursuant to AB 52.

3.16.2 Discussion

a-b. The Precise Plan FEIR concluded that buildout of the Precise Plan (which includes the project site) would result in less than significant impacts to TCRs with implementation of the same standard conditions of approval identified in Section 3.4 Cultural Resources of this document.

No tribal cultural resources or Native American resources were identified in the Precise Plan area (which includes the project site) as a result of email and telephone consultation and outreach completed for the Precise Plan FEIR. The project would implement the same conditions as identified in the Precise Plan FEIR. These conditions of approval are listed in Section 3.4 Cultural Resources of this document.

3.16.3 Conclusion

The proposed project would not result in a new or substantially increased tribal resources impact compared to the Precise Plan FEIR.

3.17 UTILITIES AND SERVICE SYSTEMS

Environmental Issue Area	A. Where Impact Was Analyzed in Prior Environmental Documents.	B. Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	C. Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	D. Any New Information of Substantial Importance Requiring New Analysis or Verification?	E. Prior Environmental Documents Mitigations Implemented or Mitigations Address Impacts.
Would the project:					
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Precise Plan Draft EIR (2019) Page 267-279	No	No	No	Yes, MM UTL-1.1
b. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Precise Plan Draft EIR (2019) Page 267-279	No	No	No	N/A
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Precise Plan Draft EIR (2019) Page 267-279	No	No	No	N/A
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Precise Plan Draft EIR (2019) Page 267-279	No	No	No	N/A
e. Be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste?	Precise Plan Draft EIR (2019) Page 267-279	No	No	No	N/A

The discussion in this section is based, in part, on the Utility Impact Study (UIS) prepared by Schaaf & Wheeler dated April 4, 2024. This report is attached as Appendix F.

3.17.1 Environmental Setting

The existing utilities and service systems setting, including regulatory framework, has not substantially changed since the certification of the Precise Plan FEIR. Per the Precise Plan, the Mountain View City Council adopted a nexus fee study on May 24, 2022 that requires all new development within the East Whisman Precise Plan Area to pay a proportional fair-share nexus-fee to fund identified improvements including improvements to water and wastewater facilities.

Water and wastewater services in the Precise Plan area are owned and operated by the City of Mountain View. Wastewater from the Precise Plan area is gravity fed to the Shoreline Sewer Pump Station. Storm drain infrastructure in the Precise Plan area includes a network of pipes, channels, ditches, culverts, ponds and pumps that are operated and maintained by the City of Mountain View and eventually discharge to Stevens Creek.

Solid waste collection and recycling services for residents and businesses in Mountain View are provided by Recology Mountain View. Once solid waste and recyclables are collected, they are transported to the SMaRT Station® in Sunnyvale for sorting and commercial compostables are transported to a composting facility in Vernalis, California while the remaining solid waste is transported to Kirby Canyon Landfill in San José. As of January 1, 2023, Kirby Canyon Landfill has an estimated remaining capacity of approximately 13.8 million tons and an estimated closing year of 2060.[55]

3.17.2 Discussion

a. The Precise Plan FEIR concluded that future large-scale, site-specific development projects associated with implementation of the Precise Plan could result in impacts to the existing water, sewer, and storm drainage infrastructure; however, implementation of the below Precise Plan FEIR mitigation measure MM UTL-1.1 would reduce this impact to a less than significant level. Furthermore, the Precise Plan FEIR concluded that buildout of the Precise Plan would not result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities.

Precise Plan FEIR Mitigation Measure:

Precise Plan FEIR MM UTL-1.1: The City shall require, determined on a project-by-project basis, the preparation of a site-specific utility analysis of applicable water, sewer, and stormwater infrastructure systems adjacent to and downstream of the project site to identify capacity issues. The utility impact analysis will be submitted to the Planning Division as part of future project applications. The analysis will determine the proportional utility impact fees to be paid under the nexus study and will identify any other utility infrastructure improvements required as a result of individual projects.

[55] Azevedo, Becky. Waste Management Technical Manager. Personal Communication. May 23, 2023.

Consistent with MM UTL-1.1, a UIS (see Appendix F) was prepared for the proposed project to evaluate potential impacts to the water system and sanitary sewer system.

Water System

Based on the existing uses on-site, it is estimated that the historic water demand on-site was approximately 8,700 gallons per day (gpd). The project would redevelop the site with residential, office, and retail uses which would increase the estimated water demand on-site by approximately 111,435 gpd for a total of 120,135 gpd.

Water Storage

The State Water Resources Control Board Division of Drinking Water (DDW) requires cities to store enough water to meet eight hours of Maximum Day Demand (MDD) in addition to four hours of fire flow volume. The proposed project's impact on the utility system for water storage was analyzed under future cumulative conditions. The future cumulative demand for the project is based on the City's hydraulic model developed as part of the 2022 Water Master Plan (WMP). In the 2022 WMP model, water demands in the City are based on water projections for future years as established in the City's 2020 Urban Water Management Plan (UWMP). In order to meet DDW requirements under pre-project conditions, the City must have storage capacity for 9.82 million gallons (mg) of water. The City's maximum water storage capacity is approximately 17.3 mg, which provides sufficient storage capacity for current needs. Post-project, the required storage capacity would increase to 9.85 mg. Implementation of the project would not require any additional increases in storage capacity, as the City's infrastructure is capable of storing up to 17.3 mg.

Hydraulic Conveyance

The proposed project's impact on the utility system for hydraulic conveyance was analyzed under existing conditions and cumulative conditions. The existing conditions scenario models the project's impact on the existing condition and configuration of the City's utility system. The cumulative condition scenario is based on future buildout of the City, future water demand projections for the year 2030 as described in the City's 2020 UWMP, and the assumption that capital improvement projects (CIPs) identified in the City's 2022 WMP are implemented. In either scenario, the water system must meet minimum allowable pressure levels under the Peak Hour Demand (PHD) scenario, which is 40 pounds per square inch (psi).

Under existing conditions, the performance criteria under the PHD scenario is met system-wide in both the pre- and post-project scenarios. Under future cumulative conditions, the analysis in the UIS found that the system would continue to maintain an adequate pressure level and the system hydraulic performance would not be adversely affected by the project. No new deficiencies would result from the project under existing or future cumulative conditions. Based on this analysis, the project would have a less than significant impact on pressure levels within the system.

Fire Flow

The proposed project's impact on the utility system for fire flow was analyzed under existing conditions and cumulative conditions. Under existing conditions, the planning-level required flow rate is 3,500 gallons per minute (gpm) in both pre- and post-project scenarios. Based on the analysis in the

UIS, the two hydrant locations at the project site would continue to maintain adequate fire flow under existing conditions in both pre- and post-project scenarios. Post-project, the available flow rate from these hydrants would decrease slightly from 8,319 to 8,267 gpm and 8,742 to 8,681 gpm. These available flow rates would continue to meet the required rate of 3,500 gpm at both hydrant locations. The project would not result in a significant contribution to any existing deficiencies in the vicinity.

Under future cumulative conditions, the required fire flow rate would be 3,500 gpm for both pre- and post-project scenarios. Based on the analysis in the UIS, the hydrant locations at the project site would continue to maintain adequate fire flow under future cumulative conditions in both pre- and post-project scenarios. Post-project, the available flow rate from these hydrants would decrease slightly from 8,189 to 8,173 gpm and 8,812 to 8,794 gpm. These available flow rates would continue to meet the required rate of 3,500 gpm at both hydrant locations. Based on this discussion, the project would have a less than significant impact on required fire flow rates at the project site.

Sanitary Sewer Infrastructure

Based on the existing land uses on-site, it is estimated that the historic sanitary sewer demand was 5,976 gpd. The project would redevelop the site with residential, office, and retail uses which would increase the estimated sanitary sewer demand generated on-site by approximately 86,368 gpd for a total of 92,344 gpd. Sanitary sewer capacity is analyzed under Peak Wet Weather Flow (PWWF) by utilizing the performance criteria outlined in the City's 2022 Sewer Master Plan (2022 SMP) to determine whether the project would cause any hydraulic deficiencies in the system. A segment of sewer system is considered to have sufficient capacity if the freeboard in the upstream manhole is greater than five feet below the ground surface under PWWF conditions.[56] Once pipes are considered deficient, improvements are necessary to correct the deficiency.

Under existing conditions, the sewer system would meet the City's performance criteria along the project flow path in both pre- and post-project scenarios. There would be no pipes with deficiencies downstream of the project site under either scenario.

The future cumulative condition assumes that all recommended CIPs in the City's 2022 SMP have been constructed. Under these future cumulative conditions, the sewer system downstream of the project site would meet the City's performance criteria along the project flow path in both pre- and post-project scenarios. There would be no new deficiencies downstream of the project site due to the project's incremental increase in sewer flow under either scenario.

Stormwater Drainage Infrastructure

As discussed in Section 3.9 Hydrology and Water Quality, the Precise Plan FEIR concluded that with implementation of City standard conditions of approval and compliance with the MRP and Precise Plan standards and guidelines, the City's stormwater drainage system would adequately convey flows from buildout of the Precise Plan. The proposed project would comply with Provision C.3 of the MRP requirement to incorporate site design, source control, and LID-based stormwater treatment controls consistent with the findings of the Precise Plan FEIR. In addition, the project would decrease the amount of impervious surface area on-site from 95 to 83 percent, thereby reducing the amount of surface runoff reaching the stormwater system compared to system conditions. The project would

[56] Freeboard is defined as the vertical distance between the wastewater surface and the manhole.

construct lateral connections to the existing storm drain system and would not need to further expand existing stormwater infrastructure. For these reasons, the existing storm drain system would continue to adequately serve the project site.

Electric Power and Telecommunications Facilities

Existing electricity and telecommunications utility infrastructure currently exist on-site and would continue to serve the site under the proposed project. The project would be 100 percent electric and no new natural gas connections are proposed.

b. The Precise Plan FEIR concluded that although the buildout of the Precise Plan would result in an increase in water demand within the City, sufficient water supplies are available to serve buildout under the Precise Plan during normal year, as well as during drought years with implementation of Precise Plan policies and the City's UWMP Water Shortage Contingency Plan measures. Shortfalls of 11 percent are projected for single dry years and up to 13 percent in multiple dry years. The City's Water Shortage Contingency Plan can mitigate shortfalls of up to 50 percent. As part of the Water Shortage Contingency Plan, the City would institute mandatory conservation measures with escalating levels of conservation requirements as the shortages in water supply increase. These measures include limiting outdoor water use, encouraging further conservation through outreach programs, and requiring the rapid repair of leaks. The entire City, including the proposed project, would be subject to these measures during dry and multiple dry years. Compliance with mandatory conservation measures in the City would ensure that sufficient water supply is maintained in normal, dry, and multiple dry years.

c. As described in the Precise Plan FEIR, implementation of the Precise Plan (which includes the proposed project) would not exceed the treatment capacity at the Regional Water Quality Control Plant (RWQCP). Conditions at the RWQCP have not changed since certification of the Precise Plan FEIR. The proposed project is consistent with the development and growth assumptions for the site analyzed in the Precise Plan FEIR and would, therefore, generate wastewater consistent with the assumptions analyzed in the Precise Plan FEIR. Thus, the proposed project would result in the same less than significant wastewater impact as disclosed in the Precise Plan FEIR.

d-e. The Precise Plan FEIR concluded that although future developments would result in an increase in solid waste generation above existing conditions, there is sufficient capacity at Kirby Canyon Landfill to serve the Precise Plan and therefore, impacts would be less than significant. Additionally, the Precise Plan FEIR found that the Precise Plan would not conflict with existing statutes and regulations governing solid waste.

The proposed project is consistent with the Precise Plan and its solid waste generation accounted for in the Precise Plan FEIR analysis, which determined there would be sufficient landfill capacity. Conditions at Kirby Canyon Landfill have not changed since certification of the Precise Plan FEIR. As of January 2023, Kirby Canyon Landfill had a remaining capacity of approximately 13.8 million cubic yards and an estimated closure year of 2060.[57] In addition, consistent with the analysis in the Precise Plan FEIR, the project would be consistent with the General Plan Policy INC 11.1 through INC 11.4,

[57] Azevedo, Beck. Technical Manager, Waste Management, Inc. Personal Communication. May 23, 2023.

California mandated 50 percent waste diversion, and CALGreen standards during operation and achieve a 65 percent construction waste recycling requirement during construction.[58]

3.17.3 Conclusion

The proposed project would not result in a new or substantially more severe significant utilities and service systems impact than disclosed in the Precise Plan FEIR.

[58] General Plan Policies INC-11.1 through INC- 11.4 call for waste diversion, recycling, and composing to ensure all municipal solid waste generated within the city is collected, transported, and disposed of in a manner that protects public health and safety.

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SECTION 5.0 LEAD AGENCY AND CONSULTANTS

5.1 LEAD AGENCY

City of Mountain View
Community Development Department
Christian Murdock, Community Development Director
Amber Blizinski, Assistant Community Development Director
Rebecca Shapiro, Deputy Zoning Administrator
Phillip Brennan, Senior Planner

5.2 CONSULTANTS

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Ryan Osako, Graphic Artist

SavATree Consulting Group
Arborist Consultants
Leonardo Tuchman, Certified Arborist

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Rockridge Geotechnical
Geotechnical Consultants

Schaaf & Wheeler
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APPENDIX A

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Memo

Date: October 31, 2024

To: Nick Towstopiat
Project Manager – David J. Powers & Associates, Inc.
San Jose, CA

From: Illingworth & Rodkin, Inc.
Zachary Palm

Subject: **675-685 East Middlefield Road Below Market Rate Building Construction Changes** I&R# 23-018

The 675-685 East Middlefield Road project located in Mountain View, California is a mixed-use project that would be constructed in two phases. As originally proposed, Phase 1 construction would include construction of the service street and the Market Rate North (MRN) and Below Market Rate (BMR) buildings. Phase 2 would include the construction of an office building with associated parking structure and Market Rate South (MRS) building. The project is now proposing to construct 22 fewer units than analyzed previously, increase the overall gross square footage of the project by approximately 39,000 square feet, and construct the BMR building during Phase 2. This adjustment would not change the impact findings described in Illingworth & Rodkin, Inc.'s (I&R) most recent air quality analysis dated May 2024.

Construction Period Emissions

The most recent air quality analysis found that project construction period emissions were all below significance threshold levels without mitigation and would have a less-than-significant impact. The closest criteria pollutant emission quantity to a BAAQMD significance threshold were daily construction reactive organic gas (ROG) emissions during year 2029. The vast majority of these emissions were from architectural coatings being applied to building surfaces. Since the BMR building was to receive its coatings in 2027 and 2028, those emissions would now likely occur in 2028 and 2029 during the architectural coating phase of Phase 2.

ROG emissions are based on the square footage of the building and larger buildings require more coatings. The BMR building accounted for approximately 30 percent of the total square footage that was to be constructed in Phase 1. Even with an increase of 30 percent to the highest year of ROG emissions (year 2029), the project would still not exceed the BAAQMD significance threshold. This approach is conservative as it assumes all of the BMR coatings would be applied in a single year rather than spread between two calendar years as the construction schedule implies.

On a percentage basis, all other criteria pollutants have daily (and yearly) emission quantities further below a BAAQMD significance threshold than daily ROG emissions in 2029.

Operational Period Emissions

As shown in the most recent air quality analysis, operational ROG emissions (and maximum Phase 2 construction plus Phase 1 operational ROG emissions) exceed the BAAQMD significance threshold, requiring the inclusion of *Mitigation Measure AQ-2* (COA AQ-1 in the City's Compliance Checklist for the project). With the inclusion of this measure, ROG emissions were reduced to a level below the significance threshold and the impact was found to be less-than-significant. Operational ROG emissions are based on the square footage of the total project. Since the square footage of the total project is not affected by shifting the construction of the BMR building to Phase 2, any reanalysis would yield the same results from the prior analysis and no additional mitigation measures are necessary.

Project Health Risks

The project's health risk analysis found that the cancer risk and annual $PM_{2.5}$ concentration would exceed the BAAQMD single-source significance thresholds, requiring the inclusion of *Mitigation Measure AQ-1* (included as a City standard condition of approval for implementing basic air quality construction measures in the City's Compliance Checklist for the project) and *Mitigation Measure AQ-3* (COA AQ-2 in the City's Compliance Checklist for the project). With the inclusion of these measures, both the cancer risk and annual $PM_{2.5}$ concentration were reduced to levels below the significance thresholds and the impact was found to be less-than-significant. No cumulative-source thresholds would be exceeded.

Cancer risk is a cumulative risk that is affected by diesel particulate matter (DPM) emissions produced over the entire construction period. Constructing the BMR building in Phase 2 of the project would not substantially affect cancer risk from construction activity because no additional DPM emissions are generated from this change. In fact, pushing the BMR construction DPM emissions into later years could reduce the construction cancer risk since those emissions would occur during years of child exposure parameters instead of infant exposure parameters as originally modeled.

While grading of the BMR building would also shift into Phase 2, this would not be enough to trigger new mitigation measures since the majority of Phase 2 earthwork emissions occur from grading of the office building with associated parking structure and of the MRS building. Furthermore, since this change would spread out the annual $PM_{2.5}$ emissions more than what was previously analyzed, the resulting concentration would decrease when compared to the prior analysis.

Finally, the analysis of on-site receptors (new project residents) found that there were no impacts exceeding any BAAQMD single-source or cumulative source threshold. Since the occupation of the MRN building would occur in the final year of Phase 2 construction, and since that building would not be downwind of the BMR construction site, the analysis at on-site receptors would be unaffected by this change.

675-685 EAST MIDDLEFIELD MIXED-USE DEVELOPMENT AIR QUALITY ASSESSMENT

Mountain View, California

January 24, 2024
Revised May 2, 2024

Prepared for:

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I&R Project#: 23-018

Introduction

This report addresses the potential air quality and health risk impacts associated with the proposed mixed-use development located at 675-685 East Middlefield Road in Mountain View, California. Air quality impacts would be associated with the construction of the new buildings and infrastructure and operation of the project. Air pollutant emissions were estimated using appropriate computer models. In addition, the potential health risks associated with construction and operation of the project and the impact of existing toxic air contaminant (TAC) sources affecting the nearby and proposed sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The 10.58-acre project site is currently occupied by two vacant buildings and an associated surface parking lot. The project proposes to demolish the vacant buildings to construct three new seven- and eight-story residential buildings with a total of 858 units and associated parking, a six-story office building totaling approximately 277,600 square feet (sf), an 8.5 level above ground parking garage with 638 parking spaces, and 2,344-sf of commercial/retail space. The project is proposed to be built in two phases. Phase 1 will include the construction of the Market Rate North (MRN) and Below Market Rate (BMR) buildings which includes the 2,344-sf retail space, 494 residential units, and a parking garage with 453 parking spaces. Phase 2 includes the office building, the office parking structure, and Market Rate South (MRS) building which includes 364 residential units and 358 parking spaces. The 214,020-sf parking garage will have a total of 638 parking spaces. The project proposes to include four 200-kW diesel backup generators. Construction for Phase 1 is expected to begin in October 2025 and be completed by September 2028 and construction for Phase 2 is expected to begin in April 2027 and be completed by September 2029. The project site is located within the East Whisman Precise Plan area.

Setting

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High ozone concentrations in the air basin are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form ozone concentrations. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ambient ozone concentrations. The highest ozone concentrations in the Bay Area occur in the eastern and southern inland valleys downwind of existing air pollutant sources. High ozone concentrations aggravate

[1] Bay Area Air Quality Management District, *2022 CEQA Guidelines*, April 2023.

respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant in the air basin. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter concentrations aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

TACs are a broad class of compounds known to cause morbidity or mortality, often because they cause cancer. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure of TACs can result in adverse health effects, they are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects from diesel exhaust exposure a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. Health risks from TACs are estimated using the Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines, which were published in February of 2015 and incorporated into BAAQMD's CEQA guidance.[2]

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, people over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, infants and small children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are the multi-family residences adjacent to the southwest. This project would introduce new sensitive receptors (i.e., residents) to the area.

[2] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide ambient air quality standards (NAAQS) and emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards.

In the past twenty years, the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter ($PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The current standards limit the amount of sulfur allowed in diesel fuel to 15 parts per million by weight (ppmw). Ultra-low sulfur diesel (ULSD), as it is referred to, is required for use by all vehicles in the U.S.

All of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

State Regulations

The California Air Resources Board (CARB) has set statewide ambient air quality standards (CAAQS) and emission standards for on-road and off-road mobile sources that are more stringent than those adopted by the EPA. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a regulation to reduce emissions of DPM and NO_X from on-road heavy-duty diesel fueled vehicles.[4] The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by

[3] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.
[4] Available online: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed: November 21, 2014.

2023. Advanced Clean Cars and Advanced Clean Cars II (ACC II) that will require new all new cars and light trucks sold in California will be zero-emission vehicles by 2035.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce DPM and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with the Federal off-road equipment engine emission limits for new vehicles, has significantly reduce emissions of DPM and NO_X.

To address the issue of diesel emissions in the state, CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*[5]. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the Federal on-road and non-road emission standards for new diesel engines, as well as adoption of regulations for ULSD fuel in California.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the NAAQS and CAAQS. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.[6] The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program has been implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement

[5] California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.
[6] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program.

programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses has been used to develop emission reduction activities in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. Seven areas have been identified by BAAQMD as impacted communities. They include Eastern San Francisco, Richmond/San Pablo, Western Alameda, San José, Vallejo, Concord, and Pittsburgh/Antioch. The project site is not within a BAAQMD CARE area.

Overburdened communities are areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.[7] The BAAQMD has identified several overburdened areas within the air district's boundaries. However, the project site is not within an overburdened area as the Project site is scored at the 8th percentile on CalEnviroScreen.[8]

BAAQMD CEQA Air Quality Guidelines

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. In 2023, the BAAQMD revised the *California Environmental Quality Act* (*CEQA) Air Quality Guidelines* that include significance thresholds to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The current BAAQMD guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They include assessment methodologies for criteria air pollutants, air toxics, odors, and GHG emissions, as shown in Table 1.[9] Air quality impacts and health risks are considered potentially significant if they exceed these thresholds.

[7] See BAAQMD: https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofoverburdenedcommunities-pdf.pdf?la=en.
[8] OEHAA, CalEnviroScreen 4.0 Maps https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40
[9] Bay Area Air Quality Management District, 2023. *2022 CEQA Guidelines*. April.

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices (BMPs)*	None	
Health Risks and Hazards	**Single Sources/ Individual Project**	**Combined Sources (Cumulative from all sources within 1000-foot zone of influence)**	
Excess Cancer Risk	>10 in a million	OR Compliance with Qualified Community Risk Reduction Plan	>100 in a million	OR Compliance with Qualified Community Risk Reduction Plan
Hazard Index	>1.0		>10.0	
Incremental annual $PM_{2.5}$	>0.3 $\mu g/m^3$		>0.8 $\mu g/m^3$	

Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less.

* BAAQMD strongly recommends implementing all feasible fugitive dust management practices especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses.

Source: Bay Area Air Quality Management District, 2022

The BAAQMD recommends all projects include a "basic" set of best management practices (BMPs) to manage fugitive dust and consider impacts from dust (i.e., fugitive PM_{10} and $PM_{2.5}$) to be less than significant if BMPs are implemented.

Basic Best Management Practices: **Include measures to control dust and exhaust during construction.**

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. The contractor shall implement the BMPs that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

7. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

8. Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.

9. Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

BAAQMD strongly encourages enhanced BMPs for construction sites near schools, residential areas, or other sensitive land uses. Enhanced measures include:

- Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.
- Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
- Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- Minimize the amount of excavated material or waste materials stored at the site.
- Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days.

<u>BAAQMD Rules and Regulations</u>

Combustion equipment associated with the proposed project that includes new diesel engines to power generators would establish new sources of particulate matter and gaseous emissions. Emissions would primarily result from the testing of the emergency backup generators. Certain

emission sources would be subject to BAAQMD Regulations and Rules. The District's rules and regulations that may apply to the project include:

- Regulation 2 – Permits
  - Rule 2-1: General Requirements
  - Rule 2-2: New Source Review
  - Rule 2-5: New Source Review of Toxic Air Contaminants
- Regulation 6 – Particulate Matter and Visible Emissions
  - Rule 6-3: Wood-Burning Devices
- Regulation 9 – Inorganic Gaseous Pollutants
  - Rule 9-1: Sulfur Dioxide
  - Rule 9-7: Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, And Process Heaters
  - Rule 9-8: Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines

Permits

Rule 2-1-301 requires that any person installing, modifying, or replacing any equipment, the use of which may reduce or control the emission of air contaminants, shall first obtain an Authority to Construct (ATC).

Rule 2-1-302 requires that written authorization from the BAAQMD in the form of a Permit to Operate (PTO) be secured before any such equipment is used or operated.

Rule 2-1 lists sources that are exempt from permitting.

New Source Review

Rule 2-2, New Source Review (NSR), applies to all new and modified sources or facilities that are subject to the requirements of Rule 2-1-301. The purpose of the rule is to provide for review of such sources and to provide mechanisms by which no net increase in emissions will result.

Rule 2-2-301 requires that an applicant for an ATC or PTO apply Best Available Control Technology (BACT) to any new or modified source that results in an increase in emissions and has emissions of precursor organic compounds, non-precursor organic compounds, NOx, SO_2, PM_{10}, or CO of 10.0 pounds or more per highest day. Based on the estimated emissions from the proposed project, BACT will be required for NOx emissions from the diesel-fueled generator engines.

Rule 2-5 applies to new and modified sources of TAC emissions. BAAQMD evaluates the TAC emissions in order to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced. Toxics BACT (or TBACT) is applied to any new or modified source of TACs where the source risk is a cancer risk greater than 1.0 in one million and/or a chronic hazard index greater than 0.20. Permits are not

issued for any new or modified source that has risks or net project risks that exceed a cancer risk of 10.0 in one million or a chronic or acute hazard index of 1.0.

Stationary Diesel Airborne Toxic Control Measure

The BAAQMD administers the CARB's Airborne Toxic Control Measure (ACTM) for Stationary Diesel engines (section 93115, title 17 CA Code of Regulations). The project's stationary sources will be new stationary emergency stationary emergency standby diesel engines larger than 50 hp. These limits vary based on maximum engine power. All engines are limited to PM emission rates of 0.15 g/hp-hour, regardless of size. This ACTM limits engine operation 50 hours per year for routine testing and maintenance.

Offsets

Rule 2-2-302 requires that offsets be provided for a new or modified source that emits more than 10 tons per year of NOx or precursor organic compounds.

Prohibitory Rules

Regulation 6 pertains to particulate matter and visible emissions. Although the engines will be fueled with diesel, they will be modern, low emission engines. Thus, the engines are expected to comply with Regulation 6.

Rule 6-3 applies to emissions from wood-burning devices. Effective November 1, 2016, no person or builder shall install a wood-burning device in a new building construction.

Rule 9-1 applies to sulfur dioxide. The engines will use ultra-low sulfur diesel fuel (less than 15 ppm sulfur) and will not be a significant source of sulfur dioxide emissions and are expected to comply with the requirements of Rule 9-1.

Rule 9-7 limits the emissions of NOx CO from industrial, institutional and commercial boilers, steam generators and process heaters. This regulation typically applies to boilers with a heat rating of 2 million British Thermal Units (BTU) per hour.

Rule 9-8 prescribes NOx and CO emission limits for stationary internal combustion engines. Since the proposed engines will be used with emergency standby generators, Regulation 9-8-110 exempts the engines from the requirements of this Rule, except for the recordkeeping requirements (9-8-530) and limitations on hours of operation for reliability-related operation (maintenance and testing). The engines will not operate more than 50 hours per year, which will satisfy the requirements of 9-8-111.

BACT for Diesel Generator Engines

Since the generators will be used exclusively for emergency use during involuntary loss of power, the BACT levels listed for IC compression engines in the BAAQMD BACT Guidelines would apply. These are provided for two separate size ranges of diesel engines:

I.C. Engine – Compression Ignition >50hp and <1.000hp: BAAQMD applies BACT 2 emission limits based on the ATCM for stationary emergency standby diesel engines larger than 50 brake-horsepower (BHP). NOx emission factor limit is subject to the CARB ACTM that ranges from 3.0 to 3.5 grams per horsepower hour (g/hp-hr). The PM (PM10 or PM2.5) limit is 0.15 g/hp-hr per CARB's ACTM.

I.C. Engine – Compression Ignition <999hp: BAAQMD applies specific BACT emission limits for stationary emergency standby diesel engines equal or larger than 1,000 brake-horsepower (BHP). NOx emission factor limit is subject to the CARB ACTM that ranges from 0.5 g/hp-hr. The PM (PM10 or PM2.5) limit is 0.02 g/hp-hr. POC (i.e., ROG) limits are 0.14 g/hp-hr.

City of Mountain View 2030 General Plan

The Mountain View 2030 General Plan includes goals, policies, and actions to reduce exposure of the City's sensitive population to exposure of air pollution, toxic air contaminants, and GHG emissions. The following goals, policies, and actions are applicable to the proposed project:

Climate Change

INC 12.1: Emissions reduction target. Maintain a greenhouse gas emissions reduction target.

INC 12.2: Emissions reduction strategies. Develop cost-effective strategies for reducing greenhouse gas emissions.

INC 12.3: Adaptation strategies. Develop strategies for adapting to climate change in partnership with local and regional agencies.

Air Quality

INC 20.1: Pollution prevention. Discourage mobile and stationary sources of air pollution.

INC 20.2: Collaboration. Participate in state and regional planning efforts to improve air quality.

INC 20.6: Air quality standards. Protect the public and construction workers from construction exhaust and particulate emissions.

INC 20.7: Protect sensitive receptors. Protect the public from substantial pollutant concentrations.

INC 20.8: Offensive odors. Protect residents from offensive odors.

East Whisman Precise Plan

In 2019, the City Council adopted the East Whisman Precise Plan, or EWPP, to implement the 2030 General Plan goals and policies for the area allowing new residential land uses and expanded commercial land uses, open spaces, and multi-modal connectivity in the area. The General Plan identifies East Whisman as a highly sustainable, transit-oriented employment center with a diversity of land uses. The EWPP includes development standards, such as building setbacks and height limits, allowed land uses, urban design guidelines, locations for new public open space, and other public improvements for the area.

The EIR for the EWPP computed air pollutant emissions associated with build-out of the plan. The increase in emissions was estimated at about 29 tons of ROG, 43 tons of NOx, 10 tons of PM_{10} and 4 tons of $PM_{2.5}$. These increases in emissions were considered less than significant since the rate of increased vehicle miles travelled (VMT) was less than the increase in population growth and the project would not interfere with implementation of the 2017 BAAQMD CAP measures.

The EIR evaluated sources of TACs both in and near the EWPP that included freeways such as U.S. 101 and State Route 237, as well as busy local roadways and stationary sources. Impacts from U.S. 101 in terms of increased in cancer risk, annual $PM_{2.5}$ concentrations and health hazards were not found to be significant at the proposed Project site with the following exceptions:

1. Within 75 feet of E. Middlefield Road.
2. Within 45 feet of Ellis Street.
3. Near stationary sources permitted by BAAQMD.

Significant impacts were identified that required construction emissions analysis and health risk assessments to show EWPP projects would not cause significant health risks to existing sensitive receptors or expose new sensitive receptors to substantial levels of TACs and $PM_{2.5}$.

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: 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?

The Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the NAAQS and the CAAQS. The area is also considered non-attainment for PM_{10} under the CAAQS, but not the NAAQS. The area has attained both State and Federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O_3, $PM_{2.5}$ and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. The O_3 precursor pollutant thresholds are for ROG and NOx, while PM_{10}, and $PM_{2.5}$ have specific thresholds. The thresholds apply to both construction period emissions and operational period emissions.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2022 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CalEEMod model output along with construction inputs are included in *Attachment 1*.

CalEEMod Inputs

Land Use Inputs

The proposed project would be constructed in two phases: Phase 1 would include the retail use, Market Rate North, and Below Market Rate residential and Phase 2 would include the Market Rate South, Office Building, and Office Parking Garage. Separate CalEEMod runs were conducted for each phase. The land uses for each construction phase were entered into CalEEMod as described in Table 2.

Table 2. Construction Land Uses Entered into CalEEMod

Project Land Uses	Size	Units	Square Feet	Acreage
Phase 1 – Market Rate North & BMR Building (2025-2028)				
Apartments Mid Rise	494	Dwelling Unit	528,771	5.14
Strip Mall	2.34	1,000-sf	2,344	
Enclosed Parking with Elevator	453	Parking Spaces	181,477	
Phase 2- Market Rate South, Office Building, Office Parking Garage (2027 - 2029)				
General Office Building	277	1,000-sf	277,600	5.44
Apartments Mid Rise	364	Dwelling Unit	445,183	
Unenclosed Parking with Elevator	638	Parking Spaces	214,020	
Enclosed Parking with Elevator	358	Parking Spaces	123,437	

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenarios, including equipment list and schedule, were provided by the project applicant (included in *Attachment 1*). The construction schedules assumed that the earliest possible start date would be October 2025 and the project would be built out over a period of approximately 47 months or 1,045 construction workdays. The earliest year of operation was assumed to be 2030.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the amount of demolition material to be exported, soil imported and/or exported to the site and the estimate of amount of concrete truck trips to and from the site,

and the amount of asphalt to and from the site. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. Daily haul trips for demolition and grading were developed by CalEEMod using the provided demolition and soil import/export volumes. The number of total asphalt round haul trips was provided for the project but the total amount of concrete was estimated and converted to daily one-way trips, assuming two trips per delivery.

Summary of Computed Construction Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active workdays during that year. Table 3 shows the unmitigated annualized average daily construction emissions of ROG, NOx, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 3, predicted unmitigated annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

Table 3. Construction Period Emissions - Unmitigated

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2025	0.08	0.85	0.03	0.03
2026	0.30	2.94	0.10	0.09
2027	1.35	2.91	0.09	0.08
2028	4.23	1.57	0.04	0.03
2029	3.49	0.23	0.01	0.01
Average Daily Construction Emissions Per Year (pounds/day)				
2025 (66 construction workdays)	2.49	25.77	0.97	0.88
2026 (261 construction workdays)	2.28	22.51	0.77	0.71
2027 (261 construction workdays)	10.32	22.30	0.65	0.61
2028 (262 construction workdays)	32.33	11.98	0.28	0.24
2029 (195 construction workdays)	35.75	2.41	0.07	0.06
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site deposit mud on local streets, which is an additional source of airborne dust after it dries. The BAAQMD recommends all projects include a "basic" set of best management practices (BMPs) to manage fugitive dust and considers impacts from dust (i.e., fugitive PM_{10} and $PM_{2.5}$) to be less-than-significant if BMPs are implemented to reduce these emissions.

Mitigation Measure AQ-1: **Include basic BMPs (listed above) to control dust and exhaust during construction.**

Effectiveness of Mitigation Measure AQ-1

The measures above are consistent with BAAQMD-recommended basic BMPs for reducing fugitive dust contained in the BAAQMD CEQA Air Quality Guidelines. For this analysis, only

the basic set of BMPs are required as the Project emissions and $PM_{2.5}$ impacts were below the BAAQMD thresholds. Enhanced BMPs would be required as mitigation if air quality impacts were found to be significant.

Operational Period Emissions

ROG, PM, and NO_X emissions from the project would be generated primarily from autos driven by future residents and employees and the diesel-powered emergency generators. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are also typical ROG emission sources from these types of land uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

CalEEMod Inputs

Land Uses

All project land uses were combined and input to CalEEMod for the operational period modeling in the year 2030. Inputs are summarized in Table 4.

Table 4. Operational Land Uses Entered into CalEEMod

Project Land Uses	Size	Units	Square Feet	Acreage
Apartments Mid Rise	858	Dwelling Unit	1,249,154	5.14
Strip Mall	2.34	1,000-sf	2,344	
Enclosed Parking with Elevator	453	Parking Spaces	181,477	
General Office Building	277	1,000-sf	277,600	5.44
Unenclosed Parking with Elevator	638	Parking Spaces	214,020	
Enclosed Parking with Elevator	358	Parking Spaces	123,437	

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest year of full operation would be 2030 if construction begins in 2025. Emissions associated with build-out later than 2030 would be lower.

Traffic Information

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate provided by the traffic consultant was entered into the model.[10] The project would produce approximately 5,408 daily trips. When accounting for the *Housing/Office Internal Capture, Housing/Retail Internal Capture, Transit Reduction, and Pass-by Reduction,* the project would produce 4,875 net daily trips. The daily trip generation was calculated using ITE trip generation rates, the size of the project land uses, and the adjusted total

[10] Email Correspondence from Nick Towstopiat, Project Manager, David J. Powers & Associates, Inc., October 25, 2023, *675-685 E Middlefield Volume Summary_for DJP*.

automobile trips after reductions. The Saturday and Sunday trip rates were derived by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate with the project-specific daily weekday trip rate. The default trip lengths and trip types specified by CalEEMod were used.

Energy

Silicon Valley Clean Energy (SVCE) is the default electricity provider for Mountain View. SVCE purchases carbon-free electricity and partners with PG&E to deliver this electricity over existing power lines that they maintain. SVCE provides 100-percent carbon-free energy and customers in the City of Mountain View are automatically enrolled in the SVCE GreenStart default program, which offers electricity that is carbon-free and with 50 percent of the power from renewable sources.[11]

The City of Mountain View adopted the Mountain View Green Building Code and Reach Code amendments in November 2019 that prohibits the use of natural gas infrastructure in new residential, hotel, office, and most retail-type buildings.[12] This ordinance applies to any new construction starting January 1, 2020. Natural gas use for the project land uses was set to zero and assigned to electricity use in CalEEMod.

Project Generators

The project would include four emergency generators. The generators would each be 200 kilowatts (kW) powered by a 320 horsepower (hp) diesel-fired engine. The generators would be located on level one in the office building, the north residential building, the below market rate south building, and the south residential building. The generators would be tested periodically and power the buildings in the event of a power failure. For modeling purposes, it was assumed that the generators would be operated for testing and maintenance purposes as well as non-testing purposes per BAAQMD's newest Guidelines. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year for testing and maintenance, and new BAAQMD Guidelines recommend including 100 hours each year for non-testing and non-maintenance operations. During testing periods, the engines would typically be run for less than one hour. The engines would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. Additionally, the generators would have to meet BAAQMD BACT requirements for IC Engine-Compression Ignition: Stationary Emergency, non-Agricultural, non-direct drive fire pump sources. The emissions from the operation of the generator were calculated using the CalEEMod model.

[11] See: https://www.svcleanenergy.org/choices/
[12] City of Mountain View, 2019. Web: https://www.mountainview.gov/depts/comdev/building/construction/2019_mountain_view_green_building_and_reach_codes.asp

Wood-Burning Devices

CalEEMod default inputs assume new residential construction would include wood-burning fireplaces and stoves. The project would not include wood-burning devices, as these devices are prohibited by BAAQMD Regulation 6, Rule 3.[13] Therefore, the number of woodstoves and woodburning fireplaces in CalEEMod were set to zero.

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water use were applied to the project. Wastewater treatment was estimated to be 100% aerobic conditions to represent City wastewater treatment plant conditions. The project site would not send wastewater to on-site septic tanks or facultative lagoons.

Existing Uses

The existing site is occupied by two vacant buildings and associated parking. As a result, an existing use CalEEMod run was not created for the project since the existing use of the site generates no emissions.

Summary of Computed Operational Emissions

Annual emissions were predicted using CalEEMod and daily emissions were estimated assuming 365 days of operation. Table 5 shows unmitigated average daily operational emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the project. Operational period ROG emissions would exceed the BAAQMD significance threshold. No other operational criteria pollutant emissions would exceed the BAAQMD significance threshold. However, with the implementation of *Mitigation Measure AQ-2*, the project's ROG emissions would no longer exceed the BAAQMD significance threshold.

Table 5. Operational Period Emissions

Scenario	ROG		NOx	PM_{10}	$PM_{2.5}$
	Unmit	Mit	Unmit	Unmit	Unmit
2030 Annual Project Operational Emissions (*tons/year*)	**10.15**	9.45	2.19	5.00	1.31
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	***Yes***	*No*	*No*	*No*	*No*
2030 Daily Project Operational Emissions (*pounds/day*)[1]	**55.60**	51.76	11.98	27.38	7.16
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54 lbs.*	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	***Yes***	*No*	*No*	*No*	*No*
Notes: [1]Assumes 365-day operation.					

[13] Bay Area Air Quality Management District, https://www.baaqmd.gov/~/media/dotgov/files/rules/regulation-6-rule-3/documents/20191120_r0603_final-pdf.pdf?la=en

Summary of Operational and Construction Emissions

There would be a period where Phase 1 of the Project is operational and construction of Phase 2 would occur at the same time. The combination of operational and construction emissions are shown simply as the sum of Phase 1 emissions for 2029 annual operation and the Phase 2 construction emissions for 2029. Calendar year 2029 is the only year where construction and operational emissions would overlap. Table 6 shows the annual and average daily emissions during this period. The overlap of operational and construction period emissions would exceed the BAAQMD significance thresholds for ROG emissions. However, with the implementation of *Mitigation Measure AQ-2*, the project's ROG emissions would no longer exceed the BAAQMD significance threshold.

Table 6. Maximum Year Operational and Construction Period Emissions

Scenario	ROG		NOx	PM_{10}	$PM_{2.5}$
	Unmit	Mit	Unmit	Unmit	Unmit
2029 Annual Emissions (*tons/year*)	7.29	4.14	1.24	2.10	0.56
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*	*No*
2029 Daily Average Emissions for days with construction (*pounds/day*)[1]	**56.62**	24.32	7.89	11.55	3.07
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54 lbs.*	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	***Yes***	*No*	*No*	*No*	*No*
Notes: [1]Assumes 365-day operation and 195 days of construction.					

Mitigation Measure AQ-2: Require use of low interior and exterior VOC coatings to reduce ROG emissions.

The project shall use super-compliant volatile organic compound or VOC (i.e., ROG) coatings, that are below current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 90 percent of all interior and exterior paints. This includes all architectural coatings applied during both construction of phase 2 and reapplications throughout the project's operational lifetime. At least 90 percent of coatings applied must meet a "super-compliant" VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project's operational lifetime, the tenant leases and building sales disclosures shall contain information that the project is required to use "super-compliant" VOC coatings. This mitigation measure applies to 90 percent of coatings since there may be some special coatings required for certain aspects of the project that cannot meet this requirement.

Effectiveness of Mitigation Measure AQ-2

Super-compliant architectural coatings are provided by some of the most popular manufacturers, including Behr, Benjamin Moore, Dunn Edwards, Rust-Oleum, and Sherwin-Williams.[14] It is assumed that interior and exterior paint applications could be feasibly controlled through this mitigation measure. Through *Mitigation Measure AQ-2,* construction ROG emissions during

[14] South Coast Air Quality Management District, Super Compliant Architectural Coatings, available at https://www.aqmd.gov/home/rules-compliance/compliance/vocs/architectural-coatings/super-compliant-coatings.

phase 2 would decrease by about 90 percent during the year with the highest emissions. During operation, the implementation of *Mitigation Measure AQ-2* would reduce total ROG emissions by 7 percent or 0.70 tons per year for operation (3.84 pounds per average day).

Impact AIR-2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased health risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. This project would introduce new sources of TACs during construction (i.e., on-site construction and truck hauling emissions) and operation (i.e., mobile and stationary sources).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would include the installation of emergency generators powered by diesel engines and would generate some traffic consisting of mostly light-duty gasoline-powered vehicles.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of existing sources of TACs was assessed in terms of the cumulative risk which includes the project contribution, as well as the risk on the new sensitive receptors introduced by the project.

Health Risk Methodology for Construction and Operation

Health risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations, and by computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risks from construction and operation sources. These sources include on-site construction activity, construction truck hauling, emergency generator operation, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure period was used, per BAAQMD guidance,[15] with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

The project increased cancer risk is computed by summing the project construction cancer risk and operation cancer risk contributions. Unlike the increased maximum cancer risk, the annual $PM_{2.5}$ concentration and HI values are not additive but based on the annual maximum values for the entirety of the project. The project maximally exposed individual (MEI) is identified as the sensitive receptor that is most impacted by the project's construction and operation.

The methodology for computing health risks impacts is contained in Appendix E of the BAAQMD CEQA Guidelines. TAC and $PM_{2.5}$ emissions are calculated, a dispersion model used to estimate ambient pollutant concentrations, and cancer risks and HI calculated using DPM concentrations.

[15]BAAQMD, Appendix E of the 2022 *BAAQMD CEQA Guidelines*, April 2023

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations closest to the project would be present for extended periods of time (i.e., chronic exposures). This includes the existing residences surrounding the site, as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions. While there are additional sensitive receptors within 1,000 feet of the project site, the receptors chosen are adequate to identify maximum impacts from the project.

Health Risk from Project Construction

The primary health risk impact issues associated with construction projects are cancer risks associated with diesel exhaust (i.e., DMP), which is a known TAC, and exposure to high ambient concentrations of dust (i.e., $PM_{2.5}$) DPM poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[16] This assessment included dispersion modeling to predict the offsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be estimated.

Construction Emissions

The CalEEMod model provided total uncontrolled annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles. Total DPM emissions were estimated to be 0.16 tons (319 pounds) and 0.08 tons (163 pounds) for phase 1 and phase 2. Fugitive dust emissions ($PM_{2.5}$) to be 0.43 tons (857 pounds) and 0.20 tons (409 pounds) for phase 1 and phase 2. The on-road emissions are a result of haul truck travel during grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that the emissions from on-road vehicles traveling at or near the site would occur at the construction site.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (i.e., residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[17] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

[16] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.
[17] BAAQMD, Appendix E of the 2022 *BAAQMD CEQA Guidelines*, April 2023

Construction Sources

Combustion equipment DPM exhaust emissions were modeled as an array of point sources to reflect construction equipment and trucks operating at the site. These sources included nine-foot release heights (construction equipment exhaust stack height) that were placed at 23 feet (7 meter) intervals throughout the construction site. This resulted in 351 individual point sources being used to represent mobile equipment DPM exhaust emissions in the construction area. The total DPM emissions were divided into each of the point sources that were spread throughout the project construction site. In addition, the following stack parameters were used: a vertical release, a stack diameter of 2.5 inches, an exhaust temperature of 918˚F, and an exit velocity of 309 feet per second. Point source plume rise is calculated by the AERMOD dispersion model. Emissions from vehicle travel on- and off-site were also distributed among the point sources throughout the site. The array of point sources used for the modeling are shown in Figure 1.

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Figure 1 shows the project construction site and receptors.

AERMOD Inputs and Meteorological Data

The modeling used a five-year meteorological data set (2013-2017) from Moffett Federal Airfield prepared for use with the AERMOD model by the BAAQMD. Construction emissions were modeled as occurring Monday through Friday between 8:00 a.m. to 5:00 p.m., when the majority of construction activity is expected to occur. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2025-2029 period were calculated at nearby sensitive receptors using the model. Receptor heights of 5 feet (1.5 meters), 15 feet (4.5 meters), 25 feet (7.6 meters) were used to represent the breathing height on the first through third floors of nearby multi-family residences.[18]

Summary of Construction Health Risk Impacts

The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with BAAQMD CEQA guidance for age sensitivity factors and exposure parameters. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Third trimester, infant, child, and adult exposures were assumed to occur at all residences during the entire construction period.

[18] Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0. May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

Non-cancer health hazards and maximum $PM_{2.5}$ concentrations were also calculated. The maximum modeled annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI value was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation DPM reference exposure level of 5 $\mu g/m^3$.

The modeled maximum annual DPM and $PM_{2.5}$ concentrations were identified at nearby sensitive receptors to find the MEIs. Results of this assessment indicated that the construction MEIs were located at three different receptors. The MEIs were located at receptors in a multi-family building southwest of the project site, with the unmitigated cancer risk MEI located on the first floor (5 feet above ground) of a unit to the southwest and the $PM_{2.5}$ concentration MEI located on the first floor (5 feet above ground) at a different unit to the southwest. Once mitigation was applied, the cancer risk MEI moved to a unit that is adjacent to the unmitigated cancer risk MEI. The location of the MEIs and nearby sensitive receptors are shown in Figure 1. Table 7 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities. *Attachment 3* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Figure 1. Locations of Project Construction Site with Phases, Project Generators, Off-Site Sensitive Receptors, and Maximum TAC Impact Locations (MEIs)



Health Risks from Project Operation

Operation of the project would have long-term emissions from mobile sources (i.e., traffic) and stationary sources (i.e., diesel generators). While these emissions would not be as intensive at or near the site as construction activity, they would contribute to long-term effects to sensitive receptors.

Project Traffic

Diesel powered vehicles are the primary concern with local traffic-generated TAC impacts. This project would generate 5,408 daily trips or 4,875 net daily trips[19] with a majority of the trips being from light-duty gasoline-powered vehicles (i.e., passenger cars). The project is not anticipated to generate large amounts of truck trips that would involve diesel vehicles. Projects with the potential to cause or contribute to increased cancer risk from traffic include those that have high numbers of diesel-powered on road trucks or use off-road diesel equipment on site, such as a distribution center, a quarry, or a manufacturing facility, may potentially expose existing or future planned receptors to substantial cancer risk levels and/or health hazards. This is not a project of concern for mobile sources. Emissions from project traffic are considered negligible and not included within this analysis.

Project Stand-By Diesel Generators

The project would include four emergency generators. The generators would be 200 kilowatts (kW) powered by 320 horsepower (hp) diesel-fired engines. The generators would be located on level one in the office building, the north residential building, the below market rate south building, and the south residential building. The location of the modeled generators is shown in Figure 2.

Operation of the diesel generators would be a source of TAC emissions. The generators would be tested periodically and power the system in the event of a power failure. For modeling purposes, it was assumed that the generators would be operated for testing and maintenance purposes as well as non-testing purposes per BAAQMD's newest Guidelines. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year for testing and maintenance, and new BAAQMD Guidelines recommend including 100 hours each year for non-testing and non-maintenance operations. During testing periods, the engines would typically be run for less than one hour. The engines would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. Additionally, the generators would have to meet BAAQMD BACT requirements for IC Engine-Compression Ignition: Stationary Emergency, non-Agricultural, non-direct drive fire pump sources.

The diesel engines would be subject to CARB's Stationary Diesel Airborne Toxics Control Measure (ATCM) and require permits from the BAAQMD, since they will be equipped with an engine larger than 50-HP. BACT requirements would apply to the generators that would limit DPM emissions. As part of the BAAQMD permit requirements for toxics screening analysis, the engine emissions will have to meet Best Available Control Technology for Toxics (BACT) and

[19] Email Correspondence from Nick Towstopiat, Project Manager, David J. Powers & Associates, Inc., October 25, 2023, *675-685 E Middlefield Volume Summary_for DJP*.

pass the toxic risk screening level of less than ten in a million. The risk assessment would be prepared by BAAQMD. Depending on results, BAAQMD would set limits for DPM emissions (e.g., more restricted engine operation periods). Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally will not be considered to have a significant air quality health risk impact.

Dispersion Modeling

To estimate potential increased cancer risks and $PM_{2.5}$ impacts from operation of the generator, the same AERMOD dispersion model was used to compute the maximum annual DPM concentration at off-site sensitive receptors (i.e., nearby residences). Emissions of DPM were based on PM_{10} exhaust emissions predicted by CalEEMod for operation of the project generator. The same receptors, breathing heights, and meteorological data used in the construction dispersion modeling were used for the generator modeling. Stack parameters (stack height, exhaust flow rate, and exhaust gas temperature) for modeling the generator were based on BAAQMD default parameters for emergency generators.[20] Annual average DPM and $PM_{2.5}$ concentrations were modeled assuming that generator testing could occur at any time of the day (24 hours per day, 365 days per year).

To calculate the increased cancer risk from the generator at the MEIs, the cancer risks were adjusted for exposure duration to account for the MEIs being exposed to construction for the first 5 years of the 30-year period. The operational exposure duration was adjusted for 25 years of exposure since receptors would be exposed to 5 years of construction before the generators would be operational. Table 7 lists the health risks from the stand-by generators at the location of MEIs. The emissions and health risk calculations for the proposed generators are included in *Attachment 2*.

Summary of Project-Related Health Risks at the Off-Site Project MEIs

The cumulative risk impacts from a project are the combination of construction and operation sources. For this project, these sources include the on-site construction activity and emergency generators. The project impact is computed by adding the construction cancer risk for an infant to the increased cancer risk for the project operational conditions for the generator at the MEIs over a 30-year period. The project MEIs are identified as the sensitive receptors that are most impacted by the project's construction and operation.

At the MEI locations, the MEIs would be exposed to 5 years of construction cancer risks and 25 years of operational cancer risks. Unlike the increased maximum cancer risk, the annual $PM_{2.5}$ concentration and HI risks are not additive but based on an annual maximum risk for the entirety of the project.

Project risk impacts are shown in Table 7. The unmitigated maximum cancer risks and annual $PM_{2.5}$ concentration would exceed the BAAQMD single-source threshold. As a result, further measures are required under *Mitigation Measure AQ-3* to reduce the impacts below BAAQMD

[20] The San Francisco Community Risk Reduction Plan: Technical Support Document, BAAQMD, San Francisco Dept. of Public Health, and San Francisco Planning Dept., December 2012

single-source thresholds. Implementation of the additional mitigation measure would cause the cancer risk and annual $PM_{2.5}$ concentration to fall below the BAAQMD single-source thresholds.

Table 7. Construction and Operation Risk Impacts at the Off-Site Receptors

Source		Cancer Risk[1] (per million)	Annual $PM_{2.5}$[1] ($\mu g/m^3$)	Hazard Index
Project Construction (Years 0 – 5)	Unmitigated	**25.77 (infant)**	**0.50**	0.02
	Mitigated[2]	4.81 (infant)	0.18	<0.01
Operational Emergency Diesel Generators (Years 6 – 30)		0.65[3]	<0.01	<0.01
Total/Maximum Project Impact (Years 0-30)	Unmitigated	**26.41**	**0.50**	0.02
	Mitigated	5.46	0.18	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	***Yes***	*No*
	Mitigated[2]	*No*	*No*	*No*

Notes: [1] Unmitigated maximum cancer risk and $PM_{2.5}$ concentration occur at two different receptors.
[2] Mitigated maximum cancer risk occurs at a receptor adjacent to the unmitigated maximum cancer risk.
[3] Cancer risk from generator operation at the unmitigated cancer risk MEI is 0.63 per million.

Mitigation Measure AQ-3: Use construction equipment that has low diesel particulate matter exhaust emissions.

Implement a feasible plan to reduce DPM emissions by 70 percent such that increased cancer risk and annual $PM_{2.5}$ concentrations from construction would be reduced below TAC significance levels as follows:

1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards for PM (PM_{10} and $PM_{2.5}$), if feasible, otherwise,

    a. If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 70 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).

2. Use electric cranes and install electric power lines in order to use avoid use of diesel-powered generators.

3. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in construction diesel particulate matter emissions by 70 percent or greater. Elements of the plan could include a combination of some of the following measures:
    - Implementation of No. 1 above to use Tier 4 engines or alternatively fueled equipment,
    - Installation of electric power lines during early construction phases to avoid use of diesel generators and compressors,

- Use of electrically-powered equipment,
- Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,
- Change in construction build-out plans to lengthen phases, and
- Implementation of different building techniques that result in less diesel equipment usage.

Such a construction operations plan would be subject to review by an air quality expert and approved by the City prior to construction.

Effectiveness of Mitigation Measure AQ-3

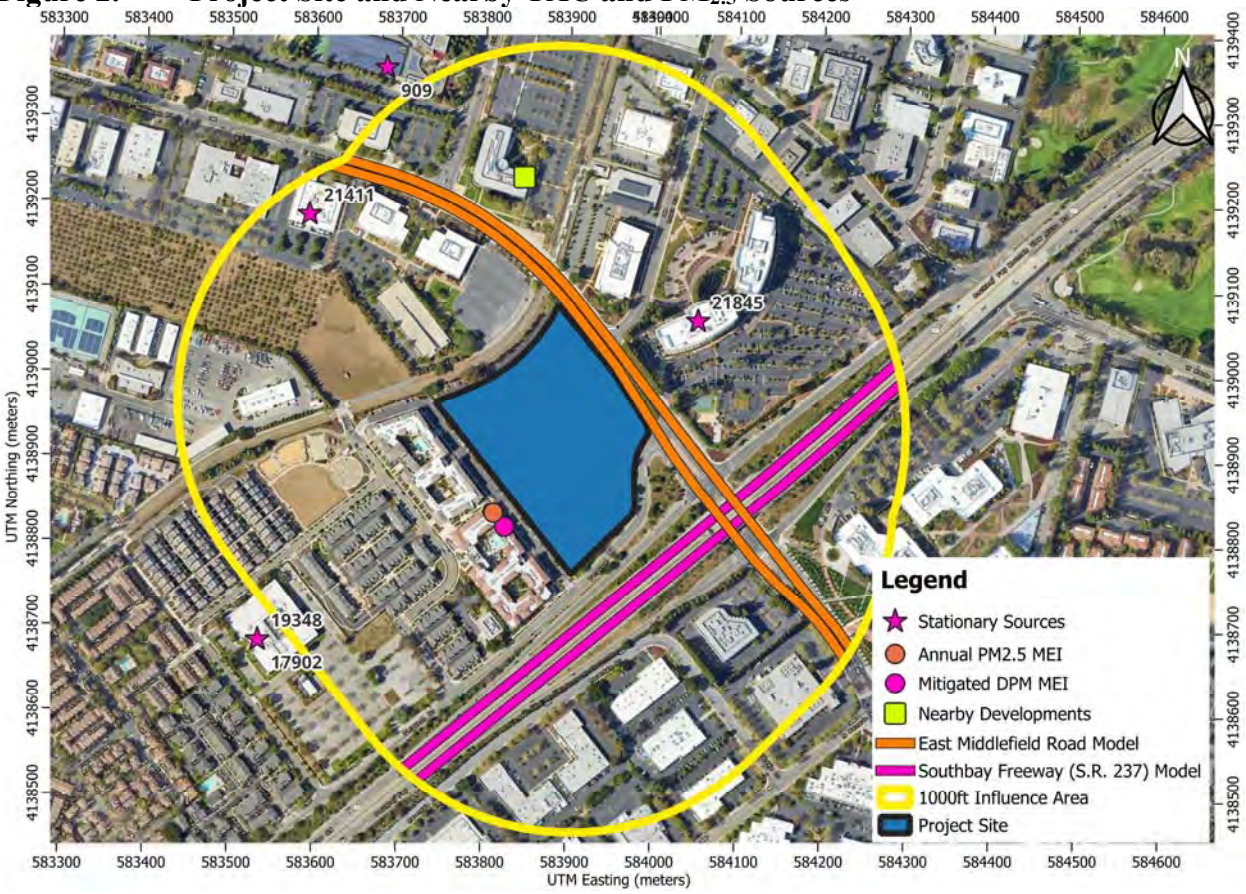
CalEEMod was used to compute emissions associated with this mitigation measure assuming that all equipment met U.S. EPA Tier 4 Interim engine standards, used electric cranes and generators, and BAAQMD basic BMPs were included. With these implemented, the project's construction cancer risk levels (assuming infant exposure) would be reduced by 81 percent to 4.81 per million and the annual $PM_{2.5}$ concentration would be reduced by 64 percent to 0.18 $\mu g/m^3$. As a result, the project's construction risks and hazards would be reduced below the BAAQMD single-source thresholds.

Cumulative Health Risks of all TAC Sources at the Off-Site Project MEIs

Cumulative health risk assessments look at all substantial sources of TACs located within 1,000 feet of a project site (i.e., influence area) that can affect sensitive receptors. These sources include freeways or highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of the project area using BAAQMD's geographic information systems (GIS) screening tools indicated that two roadways (Southbay Freeway/ State Route 237 (S.R. 237) and East Middlefield Road) and eight stationary sources within the 1,000-foot influence area could have cumulative health risk impacts at the MEIs. However, two of these sources will be removed when the project is constructed, and another is over 1,000 feet away. Figure 2 shows the location of the sources affecting the MEIs. Health risk impacts from these sources upon the MEIs are reported in Table 8. Details of the modeling and health risk calculations are included in *Attachment 3.*

Figure 2. Project Site and Nearby TAC and $PM_{2.5}$ Sources



Highways – Southbay Freeway (S.R. 237)

The project MEIs are located near S.R.237. A refined analysis of the impacts of TACs and $PM_{2.5}$ to the MEI receptors are necessary to evaluate potential cancer risks and $PM_{2.5}$ concentrations from S.R. 237. A review of the traffic information reported by Caltrans indicates that S.R. 85 traffic includes 59,000 vehicles per day (based on an annual average)[21] that are about 5.4 percent trucks, of which 2.6 percent are considered diesel heavy duty trucks and 2.8 percent are medium duty trucks.[22]

Local Roadways – East Middlefield Road

A refined analysis of potential health impacts from vehicle traffic on East Middlefield Road was conducted since the BAAQMD GIS roadway screening tool indicated that the health risk concentrations were high from this roadway. The refined analysis involved predicting emissions for the traffic volume and mix of vehicle types on the roadway near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks are then computed based on the modeled exposures.

Traffic Emissions Modeling

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for traffic on S.R. 237 and East Middlefield Road using the Caltrans version of the CARB EMFAC2021 emissions model, known as CT-EMFAC2021. CT-EMFAC2021 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. All $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear from re-entrained roadway dust were included in these emissions. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2021 emissions data. Inputs to the model include region (Santa Clara County), type of road (freeway and major/collector), traffic mix assigned by CT-EMFAC2021 for the county, adjusted for the local truck mix on S.R. 237 and truck percentage for non-state highways in Santa Clara County (3.51 percent)[23] for the local roadways, year of analysis (2025 – construction start year), and season (annual).

To estimate TAC and $PM_{2.5}$ emissions over the 30-year exposure period used for calculating the increased cancer risks for sensitive receptors at the MEI, the CT-EMFAC2021 model was used to develop vehicle emission factors for the year 2025 (construction start year). Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the

[21] Caltrans. 2021. *2021 Traffic Volumes California State Highways.*
[22] Caltrans. 2021. *2021 Annual Average Daily Truck Traffic on the California State Highway System.*
[23] Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

higher the emission rates utilized by CT-EMFAC2021. Year 2025 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated since, as discussed above, overall vehicle emissions, and in particular diesel truck emissions, will decrease in the future.

The ADT volumes and truck percentages were based on Caltrans data for S.R. 237. Traffic volumes were assumed to increase 1 percent per year for a total of 61,362 vehicles. Hourly traffic distributions specific to these segments of S.R. 237 were obtained from Caltrans Traffic Census Program.[24] The fraction of traffic volume each hour was calculated and applied to the 2025 average daily traffic volumes estimate to estimate hourly traffic emission rates for S.R. 237. An average travel speed of 55 mph for traffic on S.R. 237 was used for all hours of the day based on posted speed limit signs.

The ADT for East Middlefield Road was calculated based on traffic data provided by the project's traffic consultant.[25] Assuming a 1 percent per year increase, the predicted ADT on East Middlefield Road was 14,230 vehicles. Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[26] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for each roadway. An average travel speed of 35 mph for traffic on East Middlefield Road was used for all hours of the day based on posted speed limit signs on the roadway.

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for future traffic on S.R. 237 and East Middlefield Road and using these emissions with an air quality dispersion model to calculate TAC and $PM_{2.5}$ concentrations at the project MEI receptor locations. Maximum increased lifetime cancer risks and annual $PM_{2.5}$ concentrations for the receptors were then computed using modeled TAC and $PM_{2.5}$ concentrations and BAAQMD methods and exposure parameters.

Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the EPA AERMOD air quality dispersion model, which is recommended by the BAAQMD for this type of analysis.[27] TAC and $PM_{2.5}$ emissions from traffic on S.R. 237 and East Middlefield Road within 1,000 feet of the project site were evaluated. Vehicle traffic on the roadways was modeled using a series of area sources along a line (line area sources); with line segments used for travel on the roadways in opposing directions. The same meteorological data and off-site sensitive receptors used in the previous construction site dispersion modeling scenario were used in the roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations. Annual TAC and $PM_{2.5}$ concentrations using 2025 emissions from traffic on each roadway were calculated using the model. Concentrations were calculated at the project MEIs with receptor

[24] https://dot.ca.gov/programs/traffic-operations/census
[25] Hexagon Transportation Consultants, Inc. File: *675-685 E Middlefield Volume Summary_2023-11-20 for DJP.xlsx*
[26] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2021 does not include Burden type output with hour by hour traffic volume information.
[27] BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012

heights of 5 feet (1.5 meters) to represent the breathing heights on the first floor of residents in the multi-family residences.

Computed Cancer and Non-Cancer Health Impacts

The cancer risk, $PM_{2.5}$ concentration, and HI impacts from S.R. 237 and East Middlefield Road on the off-site MEIs are shown in Table 8. Figure 2 shows the roadway links modeled and receptor locations where concentrations were calculated. Details of the emission calculations, dispersion modeling, and cancer risk calculations for the receptors with the maximum cancer risk from traffic on both roadways are provided in *Attachment 3.*

Construction Risk Impacts from Nearby Developments

A review of the City of Mountain View's Development Projects webpage December 2023 update indicates that the following planned or approved projects are located near the proposed project[28]:

- **400 Logue Avenue** – This project is located approximately 1,100 feet from the proposed project and over 1,900 feet from the project MEIs. This project is approved to develop an 8-story, 408-unit residential building, a 36,000-sf Transfer of Development Rights from the Los Altos School District TDR Program, and a Heritage Tree Removal Permit. The project is currently approved and could have construction that overlaps with the construction of this proposed project. However, given the distance from the 400 Logue Avenue to this project and this project's MEIs, the impacts from 400 Logue Avenue are considered negligible and not included within this analysis.

- **Middlefield Park Master Plan** – This project is located at the northeast corner of West Middlefield Road and Ellis Street and north of West Maude Avenue between Logue Avenue and Clyde Avenue. Only the portion of Middlefield Park Master Plan located along Ellis Street north of East Middlefield Road is within 1,000 feet of the proposed project. This project was analyzed by *Illingworth & Rodkin, Inc.* and is currently approved for construction. As a result, construction of the portion of the Middlefield Park Master Plan within 1,000 feet of this proposed project could overlap with this project's construction period.

The mitigated construction risks and hazard impact values for Middlefield Park Master Plan was available from its air quality technical report. For the purpose of this analysis, it was conservatively assumed the entire construction period from the proposed project would overlap with the Middlefield Park Master Plan construction schedule. However, given the distance between the project MEIs and Middlefield Park Master Plan (about 1,000 feet) and since only a portion of the total Middlefield Park Master Plan project is within 1,000 feet of this proposed project, the impacts upon the MEI from that project are halved. This approach likely provides an overestimate of the community risk and hazard levels because it assumes that maximum impacts from the nearby development occurs concurrently with the proposed project at the proposed project's MEI. The

[28] City of Mountain View Development Update – December 2023, web: https://www.mountainview.gov/home/showpublisheddocument/8025/638374711524970000

mitigated construction risks reported in that air quality assessment were included in the cumulative risks Table 8.

BAAQMD Permitted Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2021* GIS map website.[29] This mapping tool identifies the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance. Eight sources were identified using this tool, six diesel generators and two generic sources. However, when looking up the location of source #15088, it was located far outside of the 1,000-foot influence area. Sources #21100 and #24326 will be removed as part of the proposed project. As a result, only five sources were analyzed. The BAAQMD GIS website provided screening risks and hazards for the remaining sources. Therefore, a stationary source information request was not required to be submitted to BAAQMD.

The screening risk and hazard levels provided by BAAQMD for the stationary sources were adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines and Generic Sources.* Health risk impacts from the stationary source upon the MEIs are reported in Table 8.

Source #19348 Cisco Systems

Source #19348, Cisco Systems, is a data center facility. Screening risks provided by BAAQMD were used with the Distance Adjustment Multiplier Tool for Generic Sources to account for the distance between source and receptor. Cisco Systems is located at 364 Ferguson Drive which is approximately 830 feet southwest of the project site. Adjustments to the screening risk values were made based on this distance from Cisco Systems to the project MEIs. However, screening risk values exceeded the BAAQMD single-source significance threshold for cancer risk so refined modeling using the AERMOD dispersion model was required.

Dispersion Modeling

To estimate potential increased cancer risks and $PM_{2.5}$ impacts from operation of the Cisco generator, the same AERMOD dispersion model was used to compute the maximum annual DPM concentration at off-site sensitive receptors (i.e., nearby residences). Emissions of DPM for this source were gathered from the California Emissions Inventory Data Analysis and Reporting System (CEIDARS) for the 2021 calendar year. The same receptors, breathing heights, and meteorological data used in the construction dispersion modeling were used for the Cisco generator modeling. Stack parameters (stack height, exhaust flow rate, and exhaust gas temperature) for modeling the generator were based on BAAQMD default parameters for emergency generators.[30] Annual average DPM and $PM_{2.5}$ concentrations were modeled assuming that generator testing could occur at any time of the day (24 hours per day, 365 days per year).

[29] BAAQMD, Web: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3

[30] The San Francisco Community Risk Reduction Plan: Technical Support Document, BAAQMD, San Francisco Dept. of Public Health, and San Francisco Planning Dept., December 2012

A 30-year exposure period was used in calculating cancer risks assuming the residents would include third trimester pregnancy and infants/children and were assumed to be in the new residential areas for 24 hours per day for 350 days per year. Table 7 lists the health risks from the stand-by Cisco generator at the location of MEIs. The emissions and health risk calculations for the proposed generators are included in *Attachment 3*.

Summary of Cumulative Risks at the Project MEIs

Table 8 reports both the project and cumulative health risk impacts at the sensitive receptors most affected by project construction (i.e., the MEIs). The project's unmitigated construction maximum cancer risk and annual $PM_{2.5}$ concentration exceeds the BAAQMD single-source threshold. With the implementation of *Mitigation Measure AQ-1 and AQ-2*, the project's cancer risk and annual $PM_{2.5}$ concentration would be lowered to a level below the single-source threshold. The cancer risk, annual $PM_{2.5}$ concentration, and HI, unmitigated and mitigated, do not exceed the cumulative-source thresholds.

Table 8. Cumulative Health Risk Impacts at the Project MEIs

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impacts				
Total/Maximum Project Impact (Years 0-30)	Unmitigated	**26.41**	**0.50**	0.02
	Mitigated	5.46	0.18	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	***Yes***	*No*
	Mitigated	*No*	*No*	*No*
Cumulative Impacts				
SR-237, ADT 61,362		1.75	0.03	<0.01
East Middlefield Road, ADT 14,230		0.22	0.01	<0.01
Raytheon Company (Facility ID #909, Semiconductor and Related Device Manufacturing), MEI at 1000+ feet		-	-	-
Verizon Wireless (Smiley Tower) (Facility # 17902, Generator), MEI at 830 feet		0.96	<0.01	<0.01
Cisco Systems (Facility #19348, Generator), MEI at 830 feet		1.04	<0.01	<0.01
Cushman & Wakefield at NortonLifeLock (Facility #21411, Generator), MEI at 1000+ feet		0.28	<0.01	<0.01
Kilroy Realty Corporation (Facility #21845, Generator), MEI at 890 feet		1.99	<0.01	<0.01
Cumulative Temporary Construction Sources				
Middlefield Park Master Plan – 1,000 feet north of MEI		7.26	0.22	<0.01
Combined Sources	Unmitigated	39.91	<0.80	<0.09
	Mitigated	18.96	<0.48	<0.08
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
	Mitigated	*No*	*No*	*No*

Non-CEQA: On-site Health Risk Assessment of TAC Sources - New Sensitive Receptors

In addition to evaluating health impact from project construction, a health risk assessment was completed to assess the impact that the phased construction emissions from the proposed project and the existing TAC sources would have on the new proposed sensitive receptors (residents) that the project would introduce. The same TAC sources identified above were used in this health risk assessment.[31] BAAQMD's recommended thresholds for health risks and hazards, shown in Table 1, are used to evaluate on-site exposure. Figure 3 shows the on-site sensitive receptors in relation to the project's phased construction and nearby TAC sources. All on-site health risk results are listed in Table 9. *Attachment 3* includes the dispersion modeling and risk calculations for TAC source impacts upon the proposed on-site sensitive receptors.

Project Phased Construction

Project residents could occupy a building once it has completed construction. Therefore, it was assumed that Phase 1 buildings would have sensitive receptors during the construction of Phase 2. The construction analysis for the project residents was conducted in the same manner as described above for the off-site cancer risk and $PM_{2.5}$ MEIs. Receptors were placed within each affected residential area and were spaced every 23 feet (7 meters). Project impacts were modeled at receptor heights used to represent the first through third residential levels of the respective buildings. Maximum increased cancer risks were calculated for the residents at the project site using the maximum modeled TAC concentrations. A 30-year exposure period was used in calculating cancer risks assuming the residents would include third trimester pregnancy and infants/children and were assumed to be in the new residential areas for 24 hours per day for 350 days per year. Maximum construction impacts would occur at the second-floor level as shown in Figure 3. The project construction health risk impacts at the project sites are shown in Table 9. Details of the on-site construction emission calculations, dispersion modeling, and cancer risk calculations are contained in *Attachment 2.*

Local Highways & Roadways – Southbay Freeway (S.R. 237) & East Middlefield Road

The highway and roadway impacts on new project residents was conducted in the same manner as described above for the off-site MEIs. However, year 2030 (operational year) emission factors were conservatively assumed as being representative of future conditions, instead of 2025 (construction year). An analysis based on 2030 resulted in an increased ADT on S.R. 237 of 64,312 vehicles and 14,920 vehicles on East Middlefield Road.

[31] We note that to the extent this analysis considers *existing* air quality issues in relation to the impact on *future residents* of the Project, it does so for informational purposes only pursuant to the judicial decisions in *CBIA v. BAAQMD* (2015) 62 Cal.4th 369, 386 and *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473, which confirm that the impacts of the environment on a project are excluded from CEQA unless the project itself "exacerbates" such impacts.

On-site receptors were placed throughout the project site with a spacing of 7 meters (23 feet). Roadway impacts were modeled at receptor heights of 5 feet (1.5 meters) and 16 feet (4.9 meters) and 26 feet (7.9 meters) representing sensitive receptors on the first, second, and third floors of the proposed buildings. The portion of the roadways included in the modeling is shown in Figure 3 along with the project site and receptor locations where impacts were modeled.

Maximum increased cancer risks were calculated for the residents at the project site using the maximum modeled TAC concentrations. A 30-year exposure period was used in calculating cancer risks assuming the residents would include infants and adults were assumed to be in the new apartments for 24 hours per day for 350 days per year. The highest impacts from the combined roadways occurred at a receptor on the first floor in the southern corner of the multi-family building. Cancer risks associated with the roadways are greatest closest to the roadways and decrease with distance from the roads. The roadway impacts at the project site are shown in Table 9. Details of the emission calculations, dispersion modeling, and cancer risk calculations are contained in *Attachment 3.* As shown in Figure 3, the max TAC impacts occur at two different receptors for East Middlefield Road. The maximum cancer risks occur at a receptor on the second floor (16 feet above the ground) that borders East Middlefield Road while the annual $PM_{2.5}$ concentration MEI occurs at an adjacent receptor on the first floor (5 feet above the ground).

Construction Risk Impacts from Nearby Developments

Since construction of the Middlefield Park Master Plan is assumed to overlap with construction of this proposed project, the operational risks from the Middlefield Park Master Plan are included in the screening analysis for the new project sensitive receptors. The risk values from the operational sources at the Middlefield Park Master Plan were available from their technical documents.

Stationary Sources

The stationary source screening analysis for the new project sensitive receptors was conducted in the same manner as described above for the project MEIs. Table 9 includes the health risk assessment results for the stationary sources.

Source #19348 Cisco Systems

The dispersion modeling for Cisco Systems Source #19348 for the new project sensitive receptors was conducted in the same manner as described above for the project MEIs. Table 9 includes the health risk assessment results for this stationary source.

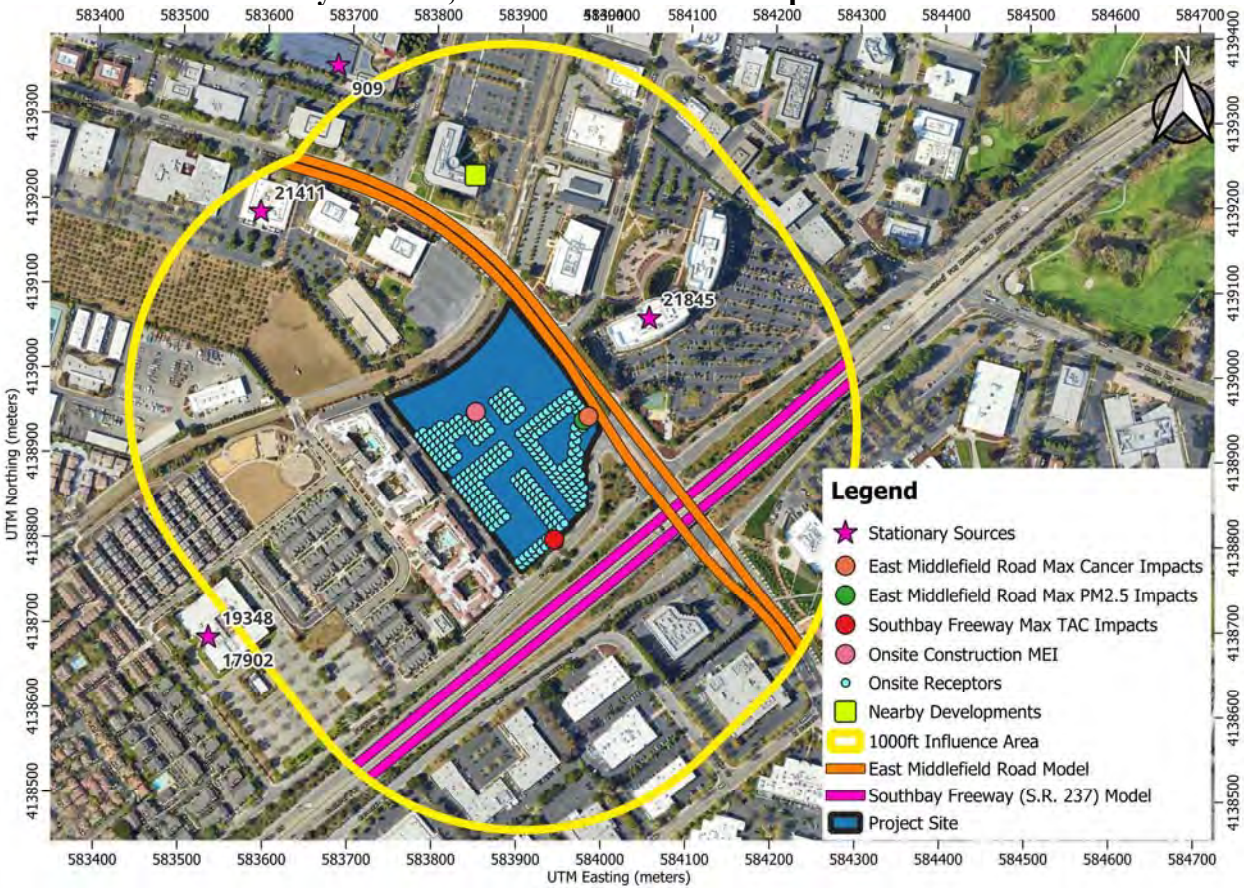
Summary of Cumulative Health Risks at the Project Site

Health risk impacts from the existing and TAC sources upon the project site are reported in Table 9. The risks from the singular TAC sources are compared against the BAAQMD single-source threshold. The risks from all the sources are then combined and compared against the BAAQMD cumulative-source threshold. As shown, none of the sources exceed the single-source or cumulative-source thresholds.

Table 9. Impacts from Combined Sources to Project Site Receptors

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Phase 2 Construction Impacts Unmitigated	2.68	0.02	<0.01
SR-237, ADT 64,312	2.78	0.07	<0.01
East Middlefield Road, ADT 14,920	1.61	0.18	<0.01
Raytheon Company (Facility ID #909, Semiconductor and Related Device Manufacturing), Project Site at 910 feet	<0.01	<0.01	<0.01
Verizon Wireless (Smiley Tower) (Facility # 17902, Generator), Project Site at 1,055 feet	0.09	<0.01	<0.01
Cisco Systems (Facility #19348, Generator), MEI at 1,055 feet	1.40	<0.01	<0.01
Cushman & Wakefield at NortonLifeLock (Facility #21411, Generator), Project Site at 770 feet	0.50	<0.01	<0.01
Kilroy Realty Corporation (Facility #21845, Generator), Project Site at 260 feet	2.13	<0.01	<0.01
Cumulative Nearby Development's Operational Risks			
Middlefield Park Master Plan Operational Risks	3.06	0.02	<0.01
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold? Unmitigated	*No*	*No*	*No*
Combined Sources Unmitigated	14.26	<0.34	<0.09
BAAQMD Cumulative Source Threshold	***100***	***0.8***	***10.0***
Exceed Threshold? Unmitigated	*No*	*No*	*No*

Figure 3. Locations of Project Site, On-Site Residential Receptors, Roadway Models, Stationary Sources, and Maximum TAC Impacts



Supporting Documentation

Attachment 1 includes the CalEEMod output for project construction and operational criteria air pollutant emissions. Also included are any modeling assumptions.

Attachment 2 is the construction health risk assessment. AERMOD dispersion modeling files for these assessments, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 3 includes the cumulative health risk calculations, modeling results, and health risk calculations from sources affecting the MEI.

Attachment 1: CalEEMod Modeling Inputs and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: Phase 1 - Market Rate North & BMR Building DEFAULTS

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	496 Dwelling Units	5.14 total project acres disturbed	Total project acreage includes MRN, BMR & private road
	509,872 s.f. residential		**Pile Driving? Y/N?**
	2,545 s.f. retail		
	s.f. office/commercial		**Project include on-site GENERATOR OR FIRE PUMP during project OPERATION (not construction)? Y/N? ____**
	s.f. other, specify:		IF YES (if BOTH separate values) -->
	194,492 s.f. parking garage	449 spaces	Kilowatts/Horsepower: _____
	s.f. parking lot	spaces	Fuel Type: _____
Construction Days (i.e, M-F)	to		Location in project (Plans Desired if Available):
Construction Hours	am to	pm	

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Demolition	**Start Date:**	**10/1/2025**	**Total phase:**	**88**			**Overall Import/Export Volumes**
		End Date:	**1/31/2026**					
1	Concrete/Industrial Saws	81	0.73	8	88	8	41628	**Demolition Volume**
3	Excavators	158	0.38	8	88	8	126804	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4	8	88	8	139110	(or total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			0	0	Building demolition all in phase 1 = 242,650 (two-story footprint)
	Other Equipment?							Demolition & site preparation of phase 2 included in phase 1 project
								Asphalt & concrete demolished all in phase 1 = 303,750
	Site Preparation	**Start Date:**	**2/1/2026**	**Total phase:**	**41**			
		End Date:	**3/30/2026**					
	Graders	187	0.41			0	0	
3	Rubber Tired Dozers	247	0.4	8	41	8	97219	
4	Tractors/Loaders/Backhoes	97	0.37	8	41	8	47088	
	Other Equipment?							
	Grading / Excavation	**Start Date:**	**4/1/2026**	**Total phase:**	**109**			
		End Date:	**8/31/2026**					**Soil Hauling Volume**
1	Excavators	158	0.38	8	109	8	52355	Export volume = 89,500 cubic yards
1	Graders	187	0.41	8	109	8	66856	Import volume = 5,000 cubic yards
1	Rubber Tired Dozers	247	0.4	8	109	8	86154	
	Concrete/Industrial Saws	81	0.73			0	0	
3	Tractors/Loaders/Backhoes	97	0.37	8	109	8	93888	
	Other Equipment?							
	Trenching/Foundation	**Start Date:**	**9/1/2026**	**Total phase:**	**22**			
		End Date:	**9/30/2026**					
1	Tractor/Loader/Backhoe	97	0.37	8	22	8	6317	
1	Excavators	158	0.38	8	22	8	10567	
	Other Equipment?							
	Building - Exterior	**Start Date:**	**10/1/2026**	**Total phase:**	**261**			**Cement Trucks? Est 369 Total Round-Trips**
		End Date:	**9/30/2027**					
1	Cranes	231	0.29	7	261	7	122391	Electric? (Y/N) Y Otherwise assumed diesel
3	Forklifts	89	0.2	8	261	8	111499	Liquid Propane (LPG)? (Y/N) N Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	261	8	129790	Or temporary line power? (Y/N) Temp Power
3	Tractors/Loaders/Backhoes	97	0.37	7	261	7	196713	
1	Welders	46	0.45	8	261	8	43222	
	Other Equipment?							
Building - Interior/Architectural Coating		**Start Date:**	**10/1/2027**	**Total phase:**	**261**			
		End Date:	**9/30/2028**					
1	Air Compressors	78	0.48	6	261	6	58631	
	Aerial Lift	62	0.31			0	0	
	Other Equipment?							
	Paving	**Start Date:**	**6/1/2026**	**Total phase:**	**66**			
		Start Date:	**8/31/2026**					
2	Cement and Mortar Mixers	9	0.56	6	66	6	3992	
1	Pavers	130	0.42	8	66	8	28829	New asphalt = 900 cubic yards
2	Paving Equipment	132	0.36	6	66	6	37636	
2	Rollers	80	0.38	6	66	6	24077	
1	Tractors/Loaders/Backhoes	97	0.37	8	66	8	18950	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Air Quality/Noise Construction Information Data Request

Project Name: Phase 2-Office, Office Parking, & Market Rate South DEFAULTS

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	364 Dwelling Units	5.44 total project acres disturbed	**Includes MRS, linear park, office/garage**
	407,355 s.f. residential		**Pile Driving? Y/N?**
	s.f. retail		
	260,000 s.f. office/commercial		**Project include on-site GENERATOR OR FIRE PUMP during project OPERATION (not construction)? Y/N? ____**
	s.f. other, specify:		**IF YES (if BOTH separate values) -->**
	337,174 s.f. parking garage	1,003 spaces	**Kilowatts/Horsepower: _____**
	s.f. parking lot	spaces	**Fuel Type: _____**
Construction Days (i.e, M-F)	to		**Location in project (Plans Desired if Available):**
Construction Hours	am to	pm	

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Demolition	**Start Date:**	**00/00/00**	**Total phase:**	**0**			**Overall Import/Export Volumes**
		End Date:	**00/00/00**					
1	Concrete/Industrial Saws	81	0.73	0	0	#DIV/0!	0	**Demolition Volume**
3	Excavators	158	0.38	0	0	#DIV/0!	0	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4	0	0	#DIV/0!	0	(or total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	0	Demolition is completed in its entirety as part of phase `
	Other Equipment?							
	Site Preparation	**Start Date:**	**00/00/00**	**Total phase:**	**0**			
		End Date:	**00/00/00**					
	Graders	187	0.41			#DIV/0!	0	
3	Rubber Tired Dozers	247	0.4	0	0	#DIV/0!	0	
4	Tractors/Loaders/Backhoes	97	0.37	0	0	#DIV/0!	0	
	Other Equipment?							
	Grading / Excavation	**Start Date:**	**4/1/2027**	**Total phase:**	**109**			
		End Date:	**8/31/2027**					**Soil Hauling Volume**
1	Excavators	158	0.38	8	109	8	52355	Export volume = 49,245 cubic yards?
1	Graders	187	0.41	8	109	8	66856	
1	Rubber Tired Dozers	247	0.4	8	109	8	86154	
	Concrete/Industrial Saws	81	0.73			0	0	
3	Tractors/Loaders/Backhoes	97	0.37	8	109	8	93888	
	Other Equipment?							
	Trenching/Foundation	**Start Date:**	**9/1/2027**	**Total phase:**	**22**			
		End Date:	**9/30/2027**					
1	Tractor/Loader/Backhoe	97	0.37	8	22	8	6317	
1	Excavators	158	0.38	8	22	8	10567	
	Other Equipment?							
	Building - Exterior	**Start Date:**	**10/1/2027**	**Total phase:**	**261**			**Cement Trucks? Est. 640 Total Round-Trips**
		End Date:	**9/30/2028**					
1	Cranes	231	0.29	7	261	7	122391	Electric? (Y/N) Y Otherwise assumed diesel
3	Forklifts	89	0.2	8	261	8	111499	Liquid Propane (LPG)? (Y/N) N Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	261	8	129790	Or temporary line power? (Y/N) Temp Power
3	Tractors/Loaders/Backhoes	97	0.37	7	261	7	196713	
1	Welders	46	0.45	8	261	8	43222	
	Other Equipment?							
	Building - Interior/Architectural Coating	**Start Date:**	**10/1/2028**	**Total phase:**	**260**			
		End Date:	**9/30/2029**					
1	Air Compressors	78	0.48	6	260	6	58406	
	Aerial Lift	62	0.31			0	0	
	Other Equipment?							
	Paving	**Start Date:**	**8/1/2029**	**Total phase:**	**43**			
		Start Date:	**9/30/2029**					
	Cement and Mortar Mixers	9	0.56			0	0	
2	Pavers	130	0.42	8	43	8	37565	
2	Paving Equipment	132	0.36	8	43	8	32694	
2	Rollers	80	0.38	8	43	8	20915	
	Tractors/Loaders/Backhoes	97	0.37			0	0	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Total Construction Criteria Air Pollutants - Unmitigated							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	CO2e	
Year			Tons			MT	
			Construction Equipment				
2025	0.08	0.85	0.03	0.03	0.02	194.39	
2026	0.30	2.94	0.10	0.09	0.47	1024.87	
2027	1.35	2.91	0.09	0.08	0.35	1423.88	
2028	4.23	1.57	0.04	0.03	0.14	1007.57	
2029	3.49	0.23	0.01	0.01	0.02	109.70	
			Total Construction Emissions				
Tons	9.45	8.50	0.26	0.24		3760.40	
Pounds/Workdays			*Average Daily Emissions*			Workdays	
2025	2.49	25.77	0.97	0.88			66
2026	2.28	22.51	0.77	0.71			261
2027	10.32	22.30	0.65	0.61			261
2028	32.33	11.98	0.28	0.24			262
2029	35.75	2.41	0.07	0.06			195
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
			Total Construction Emissions				
Pounds	18894.04	17004.28	522.00	477.52		0.00	
Average	18.08	16.27	0.50	0.46		0.00	1045.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Operational Criteria Air Pollutants - Unmitigated				
Unmitigated	ROG	NOX	Total PM10	Total PM2.5
Year			Tons	
Total	10.15	2.19	5.00	1.31
			Existing Use Emissions	
Total	0.00	0.00	0.00	0.00
			Net Annual Operational Emissions	
Tons/year	10.15	2.19	5.00	1.31
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**
			Average Daily Emissions	
Pounds Per Day	55.60	11.98	27.38	7.16
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**

Phase 1 Construction Criteria Air Pollutants - Unmitigated							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	CO2e	
Year			Tons			MT	
			Construction Equipment				
2025	0.08	0.85	0.03	0.03	0.02	194.39	
2026	0.30	2.94	0.10	0.09	0.47	1024.87	
2027	1.17	1.34	0.04	0.03	0.10	754.68	
2028	2.83	0.10	0.00	0.00	0.02	71.10	
2029							
			Total Construction Emissions				
Tons	4.38	5.22	0.17	0.16		2045.05	
Pounds/Workdays			*Average Daily Emissions*			Workdays	
2025	2.49	25.77	0.97	0.88			66
2026	2.28	22.51	0.77	0.71			261
2027	8.97	10.25	0.28	0.26			261
2028	28.91	0.99	0.02	0.01			196
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
			Total Construction Emissions				
Pounds	8767.94	10444.70	340.97	314.43		0.00	
Average	11.18	13.32	0.43	0.40		0.00	784.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Operational Criteria Air Pollutants - Unmitigated				
Unmitigated	ROG	NOX	Total PM10	Total PM2.5
Year			Tons	
Total	3.81	1.00	2.10	0.55
			Existing Use Emissions	
Total				
			Net Annual Operational Emissions	
Tons/year	3.81	1.00	2.10	0.55
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**
			Average Daily Emissions	
Pounds Per Day	20.86	5.49	11.48	3.01
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**

Phase 2 Construction Criteria Air Pollutants - Unmitigated							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	CO2e	
Year			Tons			MT	
			Construction Equipment				
2025							
2026							
2027	0.18	1.57	0.05	0.05	0.24	669.20	
2028	1.40	1.47	0.04	0.03	0.12	936.46	
2029	3.49	0.23	0.01	0.01	0.02	109.70	
			Total Construction Emissions				
Tons	5.06	3.28	0.09	0.08		1715.36	
Pounds/Workdays			*Average Daily Emissions*			Workdays	
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
2027	1.79	15.97	0.49	0.46			197
2028	10.70	11.24	0.27	0.23			262
2029	35.75	2.41	0.07	0.06			195
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
			Total Construction Emissions				
Pounds	10126.10	6559.58	181.03	163.09		0.00	
Average	15.48	10.03	0.28	0.25		0.00	654.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Max Construction + Operational Criteria Air Pollutants - Unmitigated				
Unmitigated	ROG	NOX	Total PM10	Total PM2.5
Year			Tons	
Total	7.29	1.24	2.10	0.56
			Existing Use Emissions	
Total				
			Net Annual Operational Emissions	
Tons/year	7.29	1.24	2.10	0.56
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**
			Average Daily Emissions	
Pounds Per Day	56.62	7.89	11.55	3.07
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**

Total Construction Criteria Air Pollutants							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	CO2e	
Year			Tons			MT	
			Construction Equipment				
2025	0.08	0.85	0.03	0.03	0.02	194.39	
2026	0.30	2.94	0.10	0.09	0.47	1024.87	
2027	1.25	2.61	0.05	0.05	0.23	1394.86	
2028	3.10	1.35	0.01	0.01	0.14	921.10	
2029	0.34	0.28	0.00	0.00	0.02	109.70	
			Total Construction Emissions				
Tons	5.07	8.03	0.20	0.18		3644.92	
Pounds/Workdays			*Average Daily Emissions*			Workdays	
2025	2.49	25.77	0.97	0.88			66
2026	2.28	22.51	0.77	0.71			261
2027	9.60	19.99	0.37	0.35			261
2028	23.67	10.33	0.11	0.09			262
2029	3.45	2.85	0.05	0.05			195
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
			Total Construction Emissions				
Pounds	10142.42	16053.05	401.17	367.47		0.00	
Average	9.71	15.36	0.38	0.35		0.00	1045.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Operational Criteria Air Pollutants - Mitigated							
Unmitigated	ROG	NOX	Total PM10	Total PM2.5			
Year			Tons				
Total	9.45	2.19	5.00	1.31			
			Existing Use Emissions				
Total	0.00	0.00	0.00	0.00			
			Net Annual Operational Emissions				
Tons/year	9.45	2.19	5.00	1.31			
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**			
			Average Daily Emissions				
Pounds Per Day	51.76	11.98	27.38	7.16			
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Phase 1 Construction Criteria Air Pollutants - Unmitigated							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	CO2e	
Year			Tons			MT	
			Construction Equipment				
2025	0.08	0.85	0.03	0.03	0.02	194.39	
2026	0.30	2.94	0.10	0.09	0.47	1024.87	
2027	1.17	1.34	0.04	0.03	0.10	754.68	
2028	2.83	0.10	0.00	0.00	0.02	71.10	
2029							
			Total Construction Emissions				
Tons	4.38	5.22	0.17	0.16		2045.05	
Pounds/Workdays			*Average Daily Emissions*			Workdays	
2025	2.49	25.77	0.97	0.88			66
2026	2.28	22.51	0.77	0.71			261
2027	8.97	10.25	0.28	0.26			261
2028	28.91	0.99	0.02	0.01			196
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
			Total Construction Emissions				
Pounds	8767.94	10444.70	340.97	314.43		0.00	
Average	11.18	13.32	0.43	0.40		0.00	784.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Operational Criteria Air Pollutants - Unmitigated							
Unmitigated	ROG	NOX	Total PM10	Total PM2.5			
Year			Tons				
Total	3.81	1.00	2.10	0.55			
			Existing Use Emissions				
Total							
			Net Annual Operational Emissions				
Tons/year	3.81	1.00	2.10	0.55			
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**			
			Average Daily Emissions				
Pounds Per Day	20.86	5.49	11.48	3.01			
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Phase 2 Construction Criteria Air Pollutants - Mitigated							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	CO2e	
Year			Tons			MT	
			Construction Equipment				
2025							
2026							
2027	0.08	1.27	0.01	0.01	0.13	640.18	
2028	0.27	1.26	0.01	0.01	0.13	850.00	
2029	0.34	0.28	0.00	0.00	0.02	109.70	
			Total Construction Emissions				
Tons	0.69	2.80	0.03	0.03		1599.88	
Pounds/Workdays			*Average Daily Emissions*			Workdays	
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
2027	0.84	12.90	0.12	0.12			197
2028	2.04	9.59	0.10	0.08			262
2029	3.45	2.85	0.05	0.05			195
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
			Total Construction Emissions				
Pounds	1374.48	5608.35	60.20	53.04		0.00	
Average	2.10	8.58	0.09	0.08		0.00	654.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Max Construction + Operational Criteria Air Pollutants - Mitigated							
Unmitigated	ROG	NOX	Total PM10	Total PM2.5			
Year			Tons				
Total	4.14	1.28	2.10	0.55			
			Existing Use Emissions				
Total							
			Net Annual Operational Emissions				
Tons/year	4.14	1.28	2.10	0.55			
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**			
			Average Daily Emissions				
Pounds Per Day	24.32	8.33	11.53	3.06			
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Traffic Consultant Trip Gen						CalEEMod Default		
Land Use		**Size**	**Daily Trips**	**New Trips**	**Weekday Trip Gen**	**Weekday**	**Sat**	**Sun**
General Office Building	ksf	277.6	1457	1457	***5.25***	9.74	2.21	2.21
						Rev	***1.19***	***1.19***
Apartment Mid-Rise	DU	858	3419	2992	***3.49***	5.44	4.91	4.09
Housing/Office Internal Capture	3%		*-102*			*Rev*	***3.1***	***2.62***
Housing/Retail Internal Capture	15%		*-18*					
Transit Reduction	9%		*-307*					
Strip Mall	ksf	2.344	76	46	***19.62***	44.32	42.04	20.43
Housing/Retail internal Capture	15%		*-11*			*Rev*	***18.62***	***9.05***
Pass-By Reduction	30%daily30%AM30%P		*-19*					

23-018 675-685 E Middlefield Rd Phase 1 - Market Rate North & BMR T4i 2029 Const Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-018 675-685 E Middlefield Rd Phase 1 - Market Rate North & BMR T4i 2029 Const
Construction Start Date	10/1/2025
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	28.2
Location	675 E Middlefield Rd, Mountain View, CA 94043, USA
County	Santa Clara
City	Mountain View
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1712
EDFZ	1
Electric Utility	Silicon Valley Clean Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Strip Mall	2.34	1000sqft	0.00	2,344	0.00	—	—	—
Enclosed Parking with Elevator	453	Space	0.00	181,477	0.00	—	—	—
Apartments Mid Rise	494	Dwelling Unit	5.14	528,771	0.00	—	1,477	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-1-A	Use Electric or Hybrid Powered Equipment
Construction	C-5	Use Advanced Engine Tiers
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	29.0	31.8	1.06	9.45	10.5	0.99	4.06	5.04	12,986
Mit.	28.9	27.2	0.27	5.10	5.37	0.26	1.96	2.23	12,986
% Reduced	< 0.5%	14%	75%	46%	49%	73%	52%	56%	> -0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	29.0	29.2	1.24	19.8	21.0	1.14	10.1	11.3	8,331
Mit.	28.9	15.7	0.25	7.81	7.91	0.22	3.97	4.07	7,357
% Reduced	< 0.5%	46%	80%	61%	62%	80%	61%	64%	12%
Average Daily (Max)	—	—	—	—	—	—	—	—	—

Unmit.	15.5	16.1	0.55	5.98	6.53	0.51	2.56	3.07	6,190
Mit.	15.5	12.0	0.12	3.33	3.45	0.11	1.24	1.36	6,015
% Reduced	< 0.5%	25%	79%	44%	47%	78%	51%	56%	3%
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	2.83	2.94	0.10	1.09	1.19	0.09	0.47	0.56	1,025
Mit.	2.82	2.19	0.02	0.61	0.63	0.02	0.23	0.25	996
% Reduced	< 0.5%	25%	79%	44%	47%	78%	51%	56%	3%

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2026	2.67	31.8	1.06	9.45	10.5	0.99	4.06	5.04	12,986
2027	2.30	13.1	0.37	4.21	4.58	0.34	1.01	1.36	8,493
2028	29.0	0.97	0.02	0.72	0.73	0.01	0.17	0.18	840
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	2.50	26.0	0.97	3.61	4.58	0.88	0.65	1.53	6,519
2026	3.19	29.2	1.24	19.8	21.0	1.14	10.1	11.3	8,331
2027	29.0	13.4	0.37	4.21	4.58	0.34	1.01	1.36	8,216
2028	29.0	1.02	0.02	0.72	0.73	0.01	0.17	0.18	793
Average Daily	—	—	—	—	—	—	—	—	—
2025	0.45	4.66	0.17	0.65	0.82	0.16	0.12	0.27	1,174
2026	1.63	16.1	0.55	5.98	6.53	0.51	2.56	3.07	6,190
2027	6.41	7.33	0.20	2.34	2.54	0.19	0.56	0.75	4,558
2028	15.5	0.53	0.01	0.38	0.38	0.01	0.09	0.10	429
Annual	—	—	—	—	—	—	—	—	—

2025	0.08	0.85	0.03	0.12	0.15	0.03	0.02	0.05	194
2026	0.30	2.94	0.10	1.09	1.19	0.09	0.47	0.56	1,025
2027	1.17	1.34	0.04	0.43	0.46	0.03	0.10	0.14	755
2028	2.83	0.10	< 0.005	0.07	0.07	< 0.005	0.02	0.02	71.1

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2026	0.89	27.2	0.27	5.10	5.37	0.26	1.96	2.23	12,986
2027	1.49	10.4	0.10	4.21	4.32	0.10	1.01	1.11	7,519
2028	28.9	1.23	0.03	0.72	0.75	0.03	0.17	0.20	840
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	0.52	15.7	0.25	3.61	3.86	0.22	0.65	0.87	6,519
2026	1.49	15.5	0.24	7.81	7.91	0.22	3.97	4.07	7,357
2027	28.9	10.7	0.10	4.21	4.32	0.10	1.01	1.11	7,243
2028	28.9	1.28	0.03	0.72	0.75	0.03	0.17	0.20	793
Average Daily	—	—	—	—	—	—	—	—	—
2025	0.09	2.81	0.05	0.65	0.69	0.04	0.12	0.16	1,174
2026	0.61	12.0	0.12	3.33	3.45	0.11	1.24	1.36	6,015
2027	5.96	5.89	0.06	2.34	2.40	0.06	0.56	0.62	4,038
2028	15.5	0.67	0.02	0.38	0.39	0.02	0.09	0.10	429
Annual	—	—	—	—	—	—	—	—	—
2025	0.02	0.51	0.01	0.12	0.13	0.01	0.02	0.03	194
2026	0.11	2.19	0.02	0.61	0.63	0.02	0.23	0.25	996
2027	1.09	1.08	0.01	0.43	0.44	0.01	0.10	0.11	669

2028	2.82	0.12	< 0.005	0.07	0.07	< 0.005	0.02	0.02	71.1

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	22.9	4.27	0.10	12.2	12.3	0.08	3.08	3.17	13,556
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	18.9	4.61	0.07	12.2	12.2	0.06	3.08	3.15	12,687
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	20.9	5.49	0.14	11.3	11.5	0.13	2.88	3.01	12,463
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	3.81	1.00	0.03	2.07	2.10	0.02	0.52	0.55	2,063

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	5.75	3.94	0.07	12.2	12.2	0.06	3.08	3.15	12,658
Area	17.2	0.33	0.03	—	0.03	0.02	—	0.02	108
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	23.5
Water	—	—	—	—	—	—	—	—	68.2
Waste	—	—	—	—	—	—	—	—	693
Refrig.	—	—	—	—	—	—	—	—	3.80
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total	22.9	4.27	0.10	12.2	12.3	0.08	3.08	3.17	13,556
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	5.51	4.61	0.07	12.2	12.2	0.06	3.08	3.15	11,898
Area	13.4	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	23.5
Water	—	—	—	—	—	—	—	—	68.2
Waste	—	—	—	—	—	—	—	—	693
Refrig.	—	—	—	—	—	—	—	—	3.80
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18.9	4.61	0.07	12.2	12.2	0.06	3.08	3.15	12,687
Average Daily	—	—	—	—	—	—	—	—	—
Mobile	5.17	4.12	0.07	11.3	11.4	0.06	2.88	2.94	11,399
Area	15.3	0.16	0.01	—	0.01	0.01	—	0.01	53.4
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	23.5
Water	—	—	—	—	—	—	—	—	68.2
Waste	—	—	—	—	—	—	—	—	693
Refrig.	—	—	—	—	—	—	—	—	3.80
Stationary	0.43	1.21	0.06	0.00	0.06	0.06	0.00	0.06	222
Total	20.9	5.49	0.14	11.3	11.5	0.13	2.88	3.01	12,463
Annual	—	—	—	—	—	—	—	—	—
Mobile	0.94	0.75	0.01	2.07	2.08	0.01	0.52	0.54	1,887
Area	2.78	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.83
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	3.89
Water	—	—	—	—	—	—	—	—	11.3
Waste	—	—	—	—	—	—	—	—	115
Refrig.	—	—	—	—	—	—	—	—	0.63
Stationary	0.08	0.22	0.01	0.00	0.01	0.01	0.00	0.01	36.7

Total	3.81	1.00	0.03	2.07	2.10	0.02	0.52	0.55	2,063

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	5.75	3.94	0.07	12.2	12.2	0.06	3.08	3.15	12,658
Area	17.2	0.33	0.03	—	0.03	0.02	—	0.02	108
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	23.5
Water	—	—	—	—	—	—	—	—	68.2
Waste	—	—	—	—	—	—	—	—	693
Refrig.	—	—	—	—	—	—	—	—	3.80
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	22.9	4.27	0.10	12.2	12.3	0.08	3.08	3.17	13,556
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	5.51	4.61	0.07	12.2	12.2	0.06	3.08	3.15	11,898
Area	13.4	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	23.5
Water	—	—	—	—	—	—	—	—	68.2
Waste	—	—	—	—	—	—	—	—	693
Refrig.	—	—	—	—	—	—	—	—	3.80
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18.9	4.61	0.07	12.2	12.2	0.06	3.08	3.15	12,687
Average Daily	—	—	—	—	—	—	—	—	—
Mobile	5.17	4.12	0.07	11.3	11.4	0.06	2.88	2.94	11,399
Area	15.3	0.16	0.01	—	0.01	0.01	—	0.01	53.4

Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	23.5
Water	—	—	—	—	—	—	—	—	68.2
Waste	—	—	—	—	—	—	—	—	693
Refrig.	—	—	—	—	—	—	—	—	3.80
Stationary	0.43	1.21	0.06	0.00	0.06	0.06	0.00	0.06	222
Total	20.9	5.49	0.14	11.3	11.5	0.13	2.88	3.01	12,463
Annual	—	—	—	—	—	—	—	—	—
Mobile	0.94	0.75	0.01	2.07	2.08	0.01	0.52	0.54	1,887
Area	2.78	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.83
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	3.89
Water	—	—	—	—	—	—	—	—	11.3
Waste	—	—	—	—	—	—	—	—	115
Refrig.	—	—	—	—	—	—	—	—	0.63
Stationary	0.08	0.22	0.01	0.00	0.01	0.01	0.00	0.01	36.7
Total	3.81	1.00	0.03	2.07	2.10	0.02	0.52	0.55	2,063

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.40	22.2	0.92	—	0.92	0.84	—	0.84	3,437
Demolition	—	—	—	2.76	2.76	—	0.42	0.42	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	4.00	0.17	—	0.17	0.15	—	0.15	619
Demolition	—	—	—	0.50	0.50	—	0.08	0.08	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.73	0.03	—	0.03	0.03	—	0.03	102
Demolition	—	—	—	0.09	0.09	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.00	0.12	0.12	0.00	0.03	0.03	121
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	3.71	0.05	0.73	0.78	0.03	0.20	0.23	2,961
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	0.01	0.01	22.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.66	0.01	0.13	0.14	0.01	0.04	0.04	533
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.12	< 0.005	0.02	0.03	< 0.005	0.01	0.01	88.3

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	11.9	0.20	—	0.20	0.19	—	0.19	3,437
Demolition	—	—	—	2.76	2.76	—	0.42	0.42	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.14	0.04	—	0.04	0.03	—	0.03	619
Demolition	—	—	—	0.50	0.50	—	0.08	0.08	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.39	0.01	—	0.01	0.01	—	0.01	102
Demolition	—	—	—	0.09	0.09	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.00	0.12	0.12	0.00	0.03	0.03	121
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	3.71	0.05	0.73	0.78	0.03	0.20	0.23	2,961
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	0.01	0.01	22.0

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.66	0.01	0.13	0.14	0.01	0.04	0.04	533
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.12	< 0.005	0.02	0.03	< 0.005	0.01	0.01	88.3

3.3. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.29	20.7	0.84	—	0.84	0.78	—	0.78	3,438
Demolition	—	—	—	2.76	2.76	—	0.42	0.42	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.25	0.05	—	0.05	0.05	—	0.05	209
Demolition	—	—	—	0.17	0.17	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.23	0.01	—	0.01	0.01	—	0.01	34.5
Demolition	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.00	0.12	0.12	0.00	0.03	0.03	118
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	3.58	0.03	0.73	0.77	0.03	0.20	0.23	2,904
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.21	< 0.005	0.04	0.05	< 0.005	0.01	0.01	176
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	29.2

3.4. Demolition (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	11.9	0.20	—	0.20	0.19	—	0.19	3,438
Demolition	—	—	—	2.76	2.76	—	0.42	0.42	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.72	0.01	—	0.01	0.01	—	0.01	209

Demolition	—	—	—	0.17	0.17	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.13	< 0.005	—	< 0.005	< 0.005	—	< 0.005	34.5
Demolition	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.00	0.12	0.12	0.00	0.03	0.03	118
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	3.58	0.03	0.73	0.77	0.03	0.20	0.23	2,904
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.21	< 0.005	0.04	0.05	< 0.005	0.01	0.01	176
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	29.2

3.5. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	29.2	1.24	—	1.24	1.14	—	1.14	5,316
Dust From Material Movement	—	—	—	19.7	19.7	—	10.1	10.1	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	3.28	0.14	—	0.14	0.13	—	0.13	597
Dust From Material Movement	—	—	—	2.21	2.21	—	1.13	1.13	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.60	0.03	—	0.03	0.02	—	0.02	98.9
Dust From Material Movement	—	—	—	0.40	0.40	—	0.21	0.21	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.00	0.14	0.14	0.00	0.03	0.03	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	0.02	0.02	0.00	< 0.005	< 0.005	15.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Site Preparation (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	14.7	0.10	—	0.10	0.10	—	0.10	5,316
Dust From Material Movement	—	—	—	7.67	7.67	—	3.94	3.94	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.66	0.01	—	0.01	0.01	—	0.01	597
Dust From Material Movement	—	—	—	0.86	0.86	—	0.44	0.44	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.30	< 0.005	—	< 0.005	< 0.005	—	< 0.005	98.9
Dust From Material Movement	—	—	—	0.16	0.16	—	0.08	0.08	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.00	0.14	0.14	0.00	0.03	0.03	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	0.02	0.02	0.00	< 0.005	< 0.005	15.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.65	15.0	0.65	—	0.65	0.59	—	0.59	2,970
Dust From Material Movement	—	—	—	7.13	7.13	—	3.43	3.43	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.49	4.47	0.19	—	0.19	0.18	—	0.18	887
Dust From Material Movement	—	—	—	2.13	2.13	—	1.03	1.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.82	0.04	—	0.04	0.03	—	0.03	147
Dust From Material Movement	—	—	—	0.39	0.39	—	0.19	0.19	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.03	0.00	0.12	0.12	0.00	0.03	0.03	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	9.35	0.10	2.01	2.10	0.10	0.55	0.65	8,003
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	35.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	2.89	0.03	0.59	0.62	0.03	0.16	0.19	2,388
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.53	0.01	0.11	0.11	0.01	0.03	0.03	395

3.8. Grading (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	10.3	0.08	—	0.08	0.08	—	0.08	2,970
Dust From Material Movement	—	—	—	2.78	2.78	—	1.34	1.34	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	3.07	0.03	—	0.03	0.02	—	0.02	887
Dust From Material Movement	—	—	—	0.83	0.83	—	0.40	0.40	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.56	< 0.005	—	< 0.005	< 0.005	—	< 0.005	147
Dust From Material Movement	—	—	—	0.15	0.15	—	0.07	0.07	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.03	0.00	0.12	0.12	0.00	0.03	0.03	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	9.35	0.10	2.01	2.10	0.10	0.55	0.65	8,003
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	35.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	2.89	0.03	0.59	0.62	0.03	0.16	0.19	2,388
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.53	0.01	0.11	0.11	0.01	0.03	0.03	395

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	0.38	—	0.38	0.35	—	0.35	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.77	0.07	—	0.07	0.06	—	0.06	433
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.32	0.01	—	0.01	0.01	—	0.01	71.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	1.21	1.20	0.00	3.58	3.58	0.00	0.84	0.84	3,417
Vendor	0.06	2.89	0.03	0.58	0.62	0.03	0.16	0.19	2,299
Hauling	< 0.005	0.26	< 0.005	0.05	0.05	< 0.005	0.01	0.02	209
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.21	0.19	0.00	0.63	0.63	0.00	0.15	0.15	622
Vendor	0.01	0.51	0.01	0.10	0.11	0.01	0.03	0.03	414
Hauling	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.6
Annual	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.12	0.12	0.00	0.03	0.03	103
Vendor	< 0.005	0.09	< 0.005	0.02	0.02	< 0.005	0.01	0.01	68.6
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.22

3.10. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	6.62	0.07	—	0.07	0.07	—	0.07	1,432
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.19	0.01	—	0.01	0.01	—	0.01	258
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.22	< 0.005	—	< 0.005	< 0.005	—	< 0.005	42.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	1.21	1.20	0.00	3.58	3.58	0.00	0.84	0.84	3,417
Vendor	0.06	2.89	0.03	0.58	0.62	0.03	0.16	0.19	2,299
Hauling	< 0.005	0.26	< 0.005	0.05	0.05	< 0.005	0.01	0.02	209
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.21	0.19	0.00	0.63	0.63	0.00	0.15	0.15	622
Vendor	0.01	0.51	0.01	0.10	0.11	0.01	0.03	0.03	414
Hauling	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.6
Annual	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.12	0.12	0.00	0.03	0.03	103
Vendor	< 0.005	0.09	< 0.005	0.02	0.02	< 0.005	0.01	0.01	68.6
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.22

3.11. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	0.34	—	0.34	0.31	—	0.31	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.03	9.39	0.34	—	0.34	0.31	—	0.31	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	5.02	0.18	—	0.18	0.17	—	0.17	1,285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.92	0.03	—	0.03	0.03	—	0.03	213
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	1.20	0.91	0.00	3.58	3.58	0.00	0.84	0.84	3,626
Vendor	0.07	2.61	0.03	0.58	0.62	0.03	0.16	0.19	2,257
Hauling	< 0.005	0.24	< 0.005	0.05	0.05	< 0.005	0.01	0.02	204
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	1.16	1.07	0.00	3.58	3.58	0.00	0.84	0.84	3,353
Vendor	0.06	2.74	0.03	0.58	0.62	0.03	0.16	0.19	2,254
Hauling	< 0.005	0.25	< 0.005	0.05	0.05	< 0.005	0.01	0.02	204
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.61	0.56	0.00	1.88	1.88	0.00	0.44	0.44	1,813
Vendor	0.03	1.43	0.02	0.31	0.32	0.02	0.09	0.10	1,205
Hauling	< 0.005	0.13	< 0.005	0.03	0.03	< 0.005	0.01	0.01	109
Annual	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.00	0.34	0.34	0.00	0.08	0.08	300
Vendor	0.01	0.26	< 0.005	0.06	0.06	< 0.005	0.02	0.02	200
Hauling	< 0.005	0.02	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.0

3.12. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	6.62	0.07	—	0.07	0.07	—	0.07	1,432
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	6.62	0.07	—	0.07	0.07	—	0.07	1,432
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	3.54	0.04	—	0.04	0.04	—	0.04	765
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.65	0.01	—	0.01	0.01	—	0.01	127
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	1.20	0.91	0.00	3.58	3.58	0.00	0.84	0.84	3,626
Vendor	0.07	2.61	0.03	0.58	0.62	0.03	0.16	0.19	2,257
Hauling	< 0.005	0.24	< 0.005	0.05	0.05	< 0.005	0.01	0.02	204
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	1.16	1.07	0.00	3.58	3.58	0.00	0.84	0.84	3,353

Vendor	0.06	2.74	0.03	0.58	0.62	0.03	0.16	0.19	2,254
Hauling	< 0.005	0.25	< 0.005	0.05	0.05	< 0.005	0.01	0.02	204
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.61	0.56	0.00	1.88	1.88	0.00	0.44	0.44	1,813
Vendor	0.03	1.43	0.02	0.31	0.32	0.02	0.09	0.10	1,205
Hauling	< 0.005	0.13	< 0.005	0.03	0.03	< 0.005	0.01	0.01	109
Annual	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.00	0.34	0.34	0.00	0.08	0.08	300
Vendor	0.01	0.26	< 0.005	0.06	0.06	< 0.005	0.02	0.02	200
Hauling	< 0.005	0.02	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.0

3.13. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	7.12	0.32	—	0.32	0.29	—	0.29	1,516
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.29	0.06	—	0.06	0.05	—	0.05	274
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.23	0.01	—	0.01	0.01	—	0.01	45.4
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.03	0.00	0.12	0.12	0.00	0.03	0.03	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.28	< 0.005	0.06	0.06	< 0.005	0.02	0.02	241
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	0.01	0.01	21.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	43.6
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	7.22

3.14. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	7.21	0.09	—	0.09	0.08	—	0.08	1,516
Paving	0.00	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.30	0.02	—	0.02	0.01	—	0.01	274
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.24	< 0.005	—	< 0.005	< 0.005	—	< 0.005	45.4
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.03	0.00	0.12	0.12	0.00	0.03	0.03	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.28	< 0.005	0.06	0.06	< 0.005	0.02	0.02	241
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	0.01	0.01	21.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	43.6
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	7.22

3.15. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.83	0.02	—	0.02	0.02	—	0.02	134
Architectural Coatings	28.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.15	< 0.005	—	< 0.005	< 0.005	—	< 0.005	24.1
Architectural Coatings	5.15	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.99
Architectural Coatings	0.94	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.00	0.72	0.72	0.00	0.17	0.17	671
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.00	0.13	0.13	0.00	0.03	0.03	122
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	0.01	0.01	20.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	28.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.19	0.01	—	0.01	0.01	—	0.01	24.1
Architectural Coatings	5.15	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.04	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.99
Architectural Coatings	0.94	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.00	0.72	0.72	0.00	0.17	0.17	671
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.00	0.13	0.13	0.00	0.03	0.03	122
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	0.01	0.01	20.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	0.02	—	0.02	0.01	—	0.01	134

Architectural Coatings	28.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	0.02	—	0.02	0.01	—	0.01	134
Architectural Coatings	28.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.43	0.01	—	0.01	0.01	—	0.01	71.8
Architectural Coatings	15.3	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	11.9
Architectural Coatings	2.80	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.23	0.16	0.00	0.72	0.72	0.00	0.17	0.17	706
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.00	0.72	0.72	0.00	0.17	0.17	659
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.00	0.38	0.38	0.00	0.09	0.09	358
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.07	0.07	0.00	0.02	0.02	59.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	28.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	28.6	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.57	0.02	—	0.02	0.02	—	0.02	71.8
Architectural Coatings	15.3	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	11.9
Architectural Coatings	2.80	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.23	0.16	0.00	0.72	0.72	0.00	0.17	0.17	706
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.00	0.72	0.72	0.00	0.17	0.17	659
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.00	0.38	0.38	0.00	0.09	0.09	358
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.07	0.07	0.00	0.02	0.02	59.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Trenching (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.86	0.06	—	0.06	0.05	—	0.05	433
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.11	< 0.005	—	< 0.005	< 0.005	—	< 0.005	26.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.33
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	0.04	0.04	0.00	0.01	0.01	42.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.41
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Trenching (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.28	0.04	—	0.04	0.03	—	0.03	433
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	< 0.005	—	< 0.005	< 0.005	—	< 0.005	26.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.33
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	0.04	0.04	0.00	0.01	0.01	42.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.41
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	0.22	0.16	< 0.005	0.53	0.53	< 0.005	0.13	0.14	549
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	5.53	3.77	0.07	11.6	11.7	0.06	2.95	3.01	12,109
Total	5.75	3.94	0.07	12.2	12.2	0.06	3.08	3.15	12,658
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	0.21	0.19	< 0.005	0.53	0.53	< 0.005	0.13	0.14	516
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Apartments Mid Rise	5.30	4.42	0.07	11.6	11.7	0.06	2.95	3.01	11,382
Total	5.51	4.61	0.07	12.2	12.2	0.06	3.08	3.15	11,898
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	0.04	0.03	< 0.005	0.09	0.09	< 0.005	0.02	0.02	78.9
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	0.91	0.72	0.01	1.98	1.99	0.01	0.50	0.51	1,808
Total	0.94	0.75	0.01	2.07	2.08	0.01	0.52	0.54	1,887

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	0.22	0.16	< 0.005	0.53	0.53	< 0.005	0.13	0.14	549
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	5.53	3.77	0.07	11.6	11.7	0.06	2.95	3.01	12,109
Total	5.75	3.94	0.07	12.2	12.2	0.06	3.08	3.15	12,658
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	0.21	0.19	< 0.005	0.53	0.53	< 0.005	0.13	0.14	516
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	5.30	4.42	0.07	11.6	11.7	0.06	2.95	3.01	11,382
Total	5.51	4.61	0.07	12.2	12.2	0.06	3.08	3.15	11,898
Annual	—	—	—	—	—	—	—	—	—

Strip Mall	0.04	0.03	< 0.005	0.09	0.09	< 0.005	0.02	0.02	78.9
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	0.91	0.72	0.01	1.98	1.99	0.01	0.50	0.51	1,808
Total	0.94	0.75	0.01	2.07	2.08	0.01	0.52	0.54	1,887

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.17
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	4.29
Apartments Mid Rise	—	—	—	—	—	—	—	—	19.1
Total	—	—	—	—	—	—	—	—	23.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.17
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	4.29
Apartments Mid Rise	—	—	—	—	—	—	—	—	19.1
Total	—	—	—	—	—	—	—	—	23.5
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.03

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.71
Apartments Mid Rise	—	—	—	—	—	—	—	—	3.15
Total	—	—	—	—	—	—	—	—	3.89

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.17
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	4.29
Apartments Mid Rise	—	—	—	—	—	—	—	—	19.1
Total	—	—	—	—	—	—	—	—	23.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.17
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	4.29
Apartments Mid Rise	—	—	—	—	—	—	—	—	19.1
Total	—	—	—	—	—	—	—	—	23.5
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.03
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.71
Apartments Mid Rise	—	—	—	—	—	—	—	—	3.15
Total	—	—	—	—	—	—	—	—	3.89

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	11.4	—	—	—	—	—	—	—	—
Architectural Coatings	2.05	—	—	—	—	—	—	—	—
Landscape Equipment	3.74	0.33	0.03	—	0.03	0.02	—	0.02	108
Total	17.2	0.33	0.03	—	0.03	0.02	—	0.02	108
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	11.4	—	—	—	—	—	—	—	—
Architectural Coatings	2.05	—	—	—	—	—	—	—	—
Total	13.4	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	2.07	—	—	—	—	—	—	—	—
Architectural Coatings	0.37	—	—	—	—	—	—	—	—
Landscape Equipment	0.34	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.83
Total	2.78	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.83

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Consumer Products	11.4	—	—	—	—	—	—	—	—
Architectural Coatings	2.05	—	—	—	—	—	—	—	—
Landscape Equipment	3.74	0.33	0.03	—	0.03	0.02	—	0.02	108
Total	17.2	0.33	0.03	—	0.03	0.02	—	0.02	108
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	11.4	—	—	—	—	—	—	—	—
Architectural Coatings	2.05	—	—	—	—	—	—	—	—
Total	13.4	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	2.07	—	—	—	—	—	—	—	—
Architectural Coatings	0.37	—	—	—	—	—	—	—	—
Landscape Equipment	0.34	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.83
Total	2.78	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.83

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Strip Mall	—	—	—	—	—	—	—	—	0.71
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	67.5
Total	—	—	—	—	—	—	—	—	68.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.71
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	67.5
Total	—	—	—	—	—	—	—	—	68.2
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.12
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	11.2
Total	—	—	—	—	—	—	—	—	11.3

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.71
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	67.5

Total	—	—	—	—	—	—	—	—	68.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.71
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	67.5
Total	—	—	—	—	—	—	—	—	68.2
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.12
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	11.2
Total	—	—	—	—	—	—	—	—	11.3

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	4.64
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	689
Total	—	—	—	—	—	—	—	—	693
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Strip Mall	—	—	—	—	—	—	—	—	4.64
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	689
Total	—	—	—	—	—	—	—	—	693
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.77
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	114
Total	—	—	—	—	—	—	—	—	115

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	4.64
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	689
Total	—	—	—	—	—	—	—	—	693
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	4.64
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	689

Total	—	—	—	—	—	—	—	—	693
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.77
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	114
Total	—	—	—	—	—	—	—	—	115

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.01
Apartments Mid Rise	—	—	—	—	—	—	—	—	3.79
Total	—	—	—	—	—	—	—	—	3.80
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.01
Apartments Mid Rise	—	—	—	—	—	—	—	—	3.79
Total	—	—	—	—	—	—	—	—	3.80
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	< 0.005
Apartments Mid Rise	—	—	—	—	—	—	—	—	0.63
Total	—	—	—	—	—	—	—	—	0.63

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.01
Apartments Mid Rise	—	—	—	—	—	—	—	—	3.79
Total	—	—	—	—	—	—	—	—	3.80
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	0.01
Apartments Mid Rise	—	—	—	—	—	—	—	—	3.79
Total	—	—	—	—	—	—	—	—	3.80
Annual	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	< 0.005
Apartments Mid Rise	—	—	—	—	—	—	—	—	0.63
Total	—	—	—	—	—	—	—	—	0.63

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—
Emergency Generator	0.08	0.22	0.01	0.00	0.01	0.01	0.00	0.01	36.7
Total	0.08	0.22	0.01	0.00	0.01	0.01	0.00	0.01	36.7

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Emergency Generator	0.08	0.22	0.01	0.00	0.01	0.01	0.00	0.01	36.7
Total	0.08	0.22	0.01	0.00	0.01	0.01	0.00	0.01	36.7

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/1/2025	1/31/2026	5.00	88.0	—
Site Preparation	Site Preparation	2/1/2026	3/30/2026	5.00	41.0	—
Grading	Grading	4/1/2026	8/31/2026	5.00	109	—
Building Construction	Building Construction	10/1/2026	9/30/2027	5.00	261	—
Paving	Paving	6/1/2026	8/31/2026	5.00	66.0	—
Architectural Coating	Architectural Coating	10/1/2027	9/30/2028	5.00	261	—
Trenching	Trenching	9/1/2026	9/30/2026	5.00	22.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Interim	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Tier 4 Interim	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Interim	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	8.00	84.0	0.37
Building Construction	Cranes	Electric	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Electric	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Interim	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 4 Interim	1.00	6.00	37.0	0.48
Trenching	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Trenching	Excavators	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	39.4	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	108	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	433	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	82.9	8.40	HHDT,MHDT
Building Construction	Hauling	2.83	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	3.27	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	86.5	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	—	8.40	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	39.4	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	108	20.0	HHDT
Grading	Onsite truck	—	—	HHDT

Building Construction	—	—	—	—
Building Construction	Worker	433	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	82.9	8.40	HHDT,MHDT
Building Construction	Hauling	2.83	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	3.27	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	86.5	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	—	8.40	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,070,761	356,920	3,516	1,172	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	242,650	—
Site Preparation	—	—	61.5	0.00	—
Grading	5,000	89,500	109	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Strip Mall	0.00	0%
Enclosed Parking with Elevator	0.00	100%
Apartments Mid Rise	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	2.34	0.00	0.00
2026	0.00	2.34	0.00	0.00

2027	0.00	2.34	0.00	0.00
2028	0.00	2.34	0.00	0.00

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Strip Mall	76.4	72.5	35.2	25,547	751	713	346	251,028
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	1,969	1,778	1,482	683,246	16,497	14,903	12,419	5,725,558

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Strip Mall	76.4	72.5	35.2	25,547	751	713	346	251,028
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	1,969	1,778	1,482	683,246	16,497	14,903	12,419	5,725,558

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1070761.275	356,920	3,516	1,172	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Strip Mall	25,997	2.34	0.0000	0.0000	0.00
Enclosed Parking with Elevator	669,910	2.34	0.0000	0.0000	0.00
Apartments Mid Rise	2,971,868	2.34	0.0000	0.0000	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Strip Mall	25,997	2.34	0.0000	0.0000	0.00
Enclosed Parking with Elevator	669,910	2.34	0.0000	0.0000	0.00
Apartments Mid Rise	2,971,868	2.34	0.0000	0.0000	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Strip Mall	188,515	0.00
Enclosed Parking with Elevator	0.00	0.00
Apartments Mid Rise	17,988,134	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Strip Mall	188,515	0.00
Enclosed Parking with Elevator	0.00	0.00
Apartments Mid Rise	17,988,134	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Strip Mall	2.46	—
Enclosed Parking with Elevator	0.00	—
Apartments Mid Rise	365	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Strip Mall	2.46	—
Enclosed Parking with Elevator	0.00	—
Apartments Mid Rise	365	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	2.00	0.00	150	320	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	9.65	annual days of extreme heat

Extreme Precipitation	3.10	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	10.2	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	14.9
AQ-PM	15.4
AQ-DPM	84.2
Drinking Water	49.5
Lead Risk Housing	16.0
Pesticides	0.00

Toxic Releases	31.6
Traffic	71.8
Effect Indicators	—
CleanUp Sites	96.2
Groundwater	76.4
Haz Waste Facilities/Generators	71.6
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	6.79
Cardio-vascular	14.0
Low Birth Weights	25.7
Socioeconomic Factor Indicators	—
Education	4.67
Housing	4.51
Linguistic	36.0
Poverty	5.35
Unemployment	17.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	93.22468882
Employed	97.60041062
Median HI	96.68933658
Education	—

Bachelor's or higher	97.52341845
High school enrollment	100
Preschool enrollment	45.37405364
Transportation	—
Auto Access	81.29090209
Active commuting	72.62928269
Social	—
2-parent households	95.534454
Voting	93.85345823
Neighborhood	—
Alcohol availability	32.78583344
Park access	4.568202233
Retail density	84.75554985
Supermarket access	2.399589375
Tree canopy	87.97638907
Housing	—
Homeownership	47.18336969
Housing habitability	91.40254074
Low-inc homeowner severe housing cost burden	94.73886822
Low-inc renter severe housing cost burden	96.5610163
Uncrowded housing	52.3675093
Health Outcomes	—
Insured adults	94.43089953
Arthritis	97.9
Asthma ER Admissions	90.9
High Blood Pressure	97.3
Cancer (excluding skin)	82.6

Asthma	96.9
Coronary Heart Disease	98.5
Chronic Obstructive Pulmonary Disease	99.2
Diagnosed Diabetes	98.0
Life Expectancy at Birth	94.2
Cognitively Disabled	98.0
Physically Disabled	98.6
Heart Attack ER Admissions	69.4
Mental Health Not Good	96.9
Chronic Kidney Disease	98.0
Obesity	95.5
Pedestrian Injuries	19.6
Physical Health Not Good	99.2
Stroke	98.8
Health Risk Behaviors	—
Binge Drinking	29.5
Current Smoker	96.2
No Leisure Time for Physical Activity	97.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	2.7
Elderly	95.9
English Speaking	58.3
Foreign-born	77.4
Outdoor Workers	73.3
Climate Change Adaptive Capacity	—

Impervious Surface Cover	39.8
Traffic Density	54.8
Traffic Access	87.4
Other Indices	—
Hardship	0.9
Other Decision Support	—
2016 Voting	95.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	8.00
Healthy Places Index Score for Project Location (b)	97.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Characteristics: Utility Information	Mountain View default clean energy provider.
Land Use	Total lot acreage, square footages, and number of units/parking spaces provided by applicant.
Construction: Construction Phases	Provided by project applicant.
Construction: Off-Road Equipment	Defaults
Construction: Trips and VMT	Demolition = 303,750-sf asphalt and concrete demo (7.67 trips/day), Building Const = Est. 369 concrete truck round trips (2.83 trips/day), Paving = 900-cy asphalt (3.27 trips/day).
Operations: Vehicle Data	Rates calculated from data provided by applicant.
Operations: Hearths	No fireplaces/hearths.
Operations: Energy Use	No natural gas usage per reach code.
Operations: Water and Waste Water	100% aerobic.

2. Emissions Summary - HRA

2.2 Construction Emissions by Year, Unmitigated

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily - Summer (Max)									
2026	2.5636908	24.076139	0.9710048	7.2577962	8.2288010	0.8937182	3.4656901	4.3594083	5108.111925975148
2027	2.1877698	10.780568	0.3404609	0.3847970	0.7252579	0.3135349	0.0932965	0.4068315	3167.3747431037714
2028	27.933585	0.8643543	0.0153564	0.0621217	0.0774781	0.0141278	0.0145612	0.0286891	210.0563865063261
Daily - Winter (Max)									
2025	2.4632779	22.948426	0.9200869	2.8035683	3.7236553	0.8458199	0.4298873	1.2757073	3664.8242393809005
2026	3.1886224	29.178970	1.2425129	19.669373	20.911886	1.1431118	10.105344	11.248456	5331.20677835696
2027	27.941562	10.890182	0.3404609	0.3847970	0.7252579	0.3135349	0.0932965	0.4068315	3147.7889682693567
2028	27.925832	0.8779231	0.0153564	0.0621217	0.0774781	0.0141278	0.0145612	0.0286891	206.48968902182972
Average Daily									
2025	0.4436800	4.1280935	0.1656516	0.5046267	0.6702784	0.1522807	0.0773652	0.2296459	659.6724786543595
2026	1.5813830	13.086375	0.5154960	4.6129977	5.1284937	0.4744370	2.2121659	2.6866030	2760.099173993474
2027	6.1665797	5.9547415	0.1853195	0.2129505	0.3982701	0.1706601	0.0515124	0.2221725	1720.1001711332794
2028	14.972890	0.4676273	0.0082341	0.0327066	0.0409408	0.0075754	0.0076569	0.0152324	110.96694496451325
Annual									
2025	0.0809716	0.7533770	0.0302314	0.0920943	0.1223258	0.0277912	0.0141191	0.0419103	109.21630698661954
2026	0.2886024	2.3882634	0.0940780	0.8418720	0.9359501	0.0865847	0.4037202	0.4903050	456.9659163518511
2027	1.1254007	1.0867403	0.0338208	0.0388634	0.0726843	0.0311454	0.0094010	0.0405464	284.7822130179564
2028	2.7325524	0.0853419	0.0015027	0.0059689	0.0074716	0.0013825	0.0013973	0.0027799	18.371844087437896

2. Emissions Summary - HRA

2.3 Construction Emissions by Year, Mitigated

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily - Summer (Max)									
2026	0.7810728	19.467639	0.1753594	2.9066026	3.0819621	0.1681212	1.3719343	1.5400556	5108.1163592573375
2027	1.3752823	8.0100777	0.0744142	0.3847970	0.4592112	0.0707633	0.0932965	0.1640599	2193.8837803286306
2028	27.847418	1.1251204	0.0305401	0.0621217	0.0926619	0.0281909	0.0145612	0.0427521	210.0563865063261
Daily - Winter (Max)									
2025	0.4793969	12.659699	0.2037179	2.8035683	3.0072863	0.1913625	0.4298873	0.6212499	3664.8242393809005
2026	1.3810253	14.749436	0.2028495	7.6785978	7.7781973	0.1913625	3.9428521	4.0424516	5331.21121163915
2027	27.849357	8.1196914	0.0744142	0.3847970	0.4592112	0.0707633	0.0932965	0.1640599	2174.298005494216
2028	27.839665	1.1386892	0.0305401	0.0621217	0.0926619	0.0281909	0.0145612	0.0427521	206.48968902182972
Average Daily									
2025	0.0865038	2.2757198	0.0366772	0.5046267	0.5413039	0.0344527	0.0773652	0.1118179	659.6724786543595
2026	0.5553636	8.9916975	0.0813274	1.9666911	2.0480186	0.0782348	0.8946822	0.9729171	2584.8332629400907
2027	5.7159105	4.5174196	0.0452539	0.2129505	0.2582045	0.0428805	0.0515124	0.0943929	1200.0169557398685
2028	14.926687	0.6074510	0.0163757	0.0327066	0.0490824	0.0151160	0.0076569	0.0227730	110.96694496451325
Annual									
2025	0.0157869	0.4153188	0.0066935	0.0920943	0.0987879	0.0062876	0.0141191	0.0204067	109.21630698661954
2026	0.1013538	1.6409848	0.0148422	0.3589211	0.3737634	0.0142778	0.1632795	0.1775573	427.94864465219996
2027	1.0431536	0.8244290	0.0082588	0.0388634	0.0471223	0.0078257	0.0094010	0.0172267	198.67650154904337
2028	2.7241203	0.1108598	0.0029885	0.0059689	0.0089575	0.0027586	0.0013973	0.0041560	18.371844087437896

5.3. Construction Vehicles - HRA

5.3.1 Unmitigated

Phase Nam	Trip Type	One-Way T	Miles per T	Vehicle Mix
Demolition				
Demolitior	Worker	15	1	LDA,LDT1,LDT2
Demolitior	Vendor		1	HHDT,MHDT
Demolitior	Hauling	39.39	1	HHDT
Demolitior	Onsite truc			HHDT
Site Preparation				
Site Prepar	Worker	17.5	1	LDA,LDT1,LDT2
Site Prepar	Vendor		1	HHDT,MHDT
Site Prepar	Hauling	0	1	HHDT
Site Prepar	Onsite truc			HHDT
Grading				
Grading	Worker	15	1	LDA,LDT1,LDT2
Grading	Vendor		1	HHDT,MHDT
Grading	Hauling	108.37614	1	HHDT
Grading	Onsite truc			HHDT
Building Construction				
Building Cc	Worker	439.62104	1	LDA,LDT1,LDT2
Building Cc	Vendor	85.316764	1	HHDT,MHDT
Building Cc	Hauling	2.83	1	HHDT
Building Cc	Onsite truc			HHDT
Paving				
Paving	Worker	15	1	LDA,LDT1,LDT2
Paving	Vendor		1	HHDT,MHDT
Paving	Hauling	3.27	1	HHDT
Paving	Onsite truc			HHDT
Architectural Coating				
Architectu	Worker	87.924208	1	LDA,LDT1,LDT2
Architectu	Vendor		1	HHDT,MHDT
Architectu	Hauling	0	1	HHDT
Architectu	Onsite truc			HHDT
Trenching				
Trenching	Worker	5	1	LDA,LDT1,LDT2
Trenching	Vendor		1	HHDT,MHDT
Trenching	Hauling	0	1	HHDT
Trenching	Onsite truc			HHDT

5.3. Construction Vehicles - HRA

5.3.2 Mitigated

Phase Nam	Trip Type	One-Way T	Miles per T	Vehicle Mix
Demolition				
Demolitior	Worker	15	1	LDA,LDT1,LDT2
Demolitior	Vendor		1	HHDT,MHDT
Demolitior	Hauling	39.39	1	HHDT
Demolitior	Onsite truc			HHDT
Site Preparation				
Site Prepar	Worker	17.5	1	LDA,LDT1,LDT2
Site Prepar	Vendor		1	HHDT,MHDT
Site Prepar	Hauling	0	1	HHDT
Site Prepar	Onsite truc			HHDT
Grading				
Grading	Worker	15	1	LDA,LDT1,LDT2
Grading	Vendor		1	HHDT,MHDT
Grading	Hauling	108.37614	1	HHDT
Grading	Onsite truc			HHDT
Building Construction				
Building Cc	Worker	439.62104	1	LDA,LDT1,LDT2
Building Cc	Vendor	85.316764	1	HHDT,MHDT
Building Cc	Hauling	2.83	1	HHDT
Building Cc	Onsite truc			HHDT
Paving				
Paving	Worker	15	1	LDA,LDT1,LDT2
Paving	Vendor		1	HHDT,MHDT
Paving	Hauling	3.27	1	HHDT
Paving	Onsite truc			HHDT
Architectural Coating				
Architectu	Worker	87.924208	1	LDA,LDT1,LDT2
Architectu	Vendor		1	HHDT,MHDT
Architectu	Hauling	0	1	HHDT
Architectu	Onsite truc			HHDT
Trenching				
Trenching	Worker	5	1	LDA,LDT1,LDT2
Trenching	Vendor		1	HHDT,MHDT
Trenching	Hauling	0	1	HHDT
Trenching	Onsite truc			HHDT

23-018 675-685 E Middlefield Rd Phase 2 - Office, Office Parking, & Market Rate South T4i 2030 Const Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-018 675-685 E Middlefield Rd Phase 2 - Office, Office Parking, & Market Rate South T4i 2030 Const
Construction Start Date	4/1/2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	28.2
Location	675 E Middlefield Rd, Mountain View, CA 94043, USA
County	Santa Clara
City	Mountain View
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1712
EDFZ	1
Electric Utility	Silicon Valley Clean Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

General Office Building	278	1000sqft	5.44	277,600	0.00	—	—	—
Unenclosed Parking with Elevator	638	Space	0.00	214,020	0.00	—	—	—
Enclosed Parking with Elevator	358	Space	0.00	123,437	0.00	—	—	—
Apartments Mid Rise	364	Dwelling Unit	0.00	445,183	0.00	—	1,088	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-1-A	Use Electric or Hybrid Powered Equipment
Construction	C-5	Use Advanced Engine Tiers
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-13	Use Low-VOC Paints for Construction

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	36.3	19.0	0.65	8.28	8.93	0.60	3.74	4.34	10,474
Mit.	3.67	15.0	0.13	5.15	5.27	0.13	1.65	1.78	9,500
% Reduced	90%	21%	79%	38%	41%	78%	56%	59%	9%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	35.6	15.6	0.39	5.15	5.54	0.37	1.25	1.62	10,374

Mit.	3.41	12.9	0.13	5.15	5.27	0.12	1.25	1.37	9,400
% Reduced	90%	18%	68%	—	5%	66%	—	15%	9%
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	19.1	8.62	0.27	3.38	3.65	0.25	1.34	1.59	5,656
Mit.	1.85	6.96	0.07	2.86	2.93	0.06	0.71	0.78	5,134
% Reduced	90%	19%	73%	16%	20%	74%	47%	51%	9%
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	3.49	1.57	0.05	0.62	0.67	0.05	0.24	0.29	936
Mit.	0.34	1.27	0.01	0.52	0.53	0.01	0.13	0.14	850
% Reduced	90%	19%	73%	16%	20%	74%	47%	51%	9%

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2027	1.71	19.0	0.65	8.28	8.93	0.60	3.74	4.34	7,168
2028	2.42	14.4	0.36	5.15	5.50	0.31	1.25	1.56	10,474
2029	36.3	7.46	0.25	0.94	1.19	0.23	0.22	0.45	2,560
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2027	2.47	15.6	0.39	5.15	5.54	0.37	1.25	1.62	10,374
2028	35.6	14.9	0.36	5.15	5.50	0.31	1.25	1.56	10,203
2029	35.6	1.01	0.01	0.81	0.83	0.01	0.19	0.20	872
Average Daily	—	—	—	—	—	—	—	—	—
2027	0.96	8.62	0.27	3.38	3.65	0.25	1.34	1.59	4,042
2028	7.68	8.07	0.19	2.86	3.05	0.17	0.69	0.86	5,656

2029	19.1	1.29	0.04	0.44	0.48	0.03	0.10	0.14	663
Annual	—	—	—	—	—	—	—	—	—
2027	0.18	1.57	0.05	0.62	0.67	0.05	0.24	0.29	669
2028	1.40	1.47	0.04	0.52	0.56	0.03	0.13	0.16	936
2029	3.49	0.23	0.01	0.08	0.09	0.01	0.02	0.02	110

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2027	0.52	15.0	0.13	3.94	4.08	0.13	1.65	1.78	7,168
2028	1.65	12.1	0.13	5.15	5.27	0.10	1.25	1.35	9,500
2029	3.67	8.48	0.12	0.94	1.06	0.11	0.22	0.33	2,560
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2027	1.65	12.9	0.13	5.15	5.27	0.12	1.25	1.37	9,400
2028	3.41	12.6	0.13	5.15	5.27	0.10	1.25	1.35	9,229
2029	3.40	1.28	0.03	0.81	0.85	0.03	0.19	0.22	872
Average Daily	—	—	—	—	—	—	—	—	—
2027	0.45	6.96	0.07	2.09	2.15	0.06	0.71	0.78	3,867
2028	1.47	6.88	0.07	2.86	2.93	0.06	0.69	0.75	5,134
2029	1.85	1.52	0.03	0.44	0.47	0.02	0.10	0.13	663
Annual	—	—	—	—	—	—	—	—	—
2027	0.08	1.27	0.01	0.38	0.39	0.01	0.13	0.14	640
2028	0.27	1.26	0.01	0.52	0.53	0.01	0.13	0.14	850
2029	0.34	0.28	< 0.005	0.08	0.09	< 0.005	0.02	0.02	110

3. Construction Emissions Details

3.1. Grading (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.59	14.2	0.60	—	0.60	0.55	—	0.55	2,970
Dust From Material Movement	—	—	—	7.11	7.11	—	3.43	3.43	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	4.25	0.18	—	0.18	0.16	—	0.16	887
Dust From Material Movement	—	—	—	2.12	2.12	—	1.02	1.02	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.78	0.03	—	0.03	0.03	—	0.03	147
Dust From Material Movement	—	—	—	0.39	0.39	—	0.19	0.19	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.12	0.12	0.00	0.03	0.03	126

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	4.69	0.05	1.05	1.10	0.05	0.29	0.34	4,072
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	35.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	1.45	0.01	0.31	0.32	0.01	0.08	0.10	1,215
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.26	< 0.005	0.06	0.06	< 0.005	0.02	0.02	201

3.2. Grading (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	10.3	0.08	—	0.08	0.08	—	0.08	2,970
Dust From Material Movement	—	—	—	2.77	2.77	—	1.34	1.34	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	3.07	0.03	—	0.03	0.02	—	0.02	887
Dust From Material Movement	—	—	—	0.83	0.83	—	0.40	0.40	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.56	< 0.005	—	< 0.005	< 0.005	—	< 0.005	147
Dust From Material Movement	—	—	—	0.15	0.15	—	0.07	0.07	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.12	0.12	0.00	0.03	0.03	126
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	4.69	0.05	1.05	1.10	0.05	0.29	0.34	4,072
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	35.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	1.45	0.01	0.31	0.32	0.01	0.08	0.10	1,215
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.26	< 0.005	0.06	0.06	< 0.005	0.02	0.02	201

3.3. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	0.34	—	0.34	0.31	—	0.31	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.69	0.06	—	0.06	0.06	—	0.06	433
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.31	0.01	—	0.01	0.01	—	0.01	71.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	1.32	1.22	0.00	4.07	4.07	0.00	0.95	0.95	3,818
Vendor	0.11	4.61	0.05	0.98	1.04	0.05	0.27	0.32	3,798
Hauling	0.01	0.43	< 0.005	0.09	0.10	< 0.005	0.02	0.03	353
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.00	0.72	0.72	0.00	0.17	0.17	696
Vendor	0.02	0.81	0.01	0.17	0.18	0.01	0.05	0.06	684
Hauling	< 0.005	0.08	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	63.5
Annual	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.00	0.13	0.13	0.00	0.03	0.03	115
Vendor	< 0.005	0.15	< 0.005	0.03	0.03	< 0.005	0.01	0.01	113
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	10.5

3.4. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	6.62	0.07	—	0.07	0.07	—	0.07	1,432
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.19	0.01	—	0.01	0.01	—	0.01	258
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.22	< 0.005	—	< 0.005	< 0.005	—	< 0.005	42.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	1.32	1.22	0.00	4.07	4.07	0.00	0.95	0.95	3,818
Vendor	0.11	4.61	0.05	0.98	1.04	0.05	0.27	0.32	3,798
Hauling	0.01	0.43	< 0.005	0.09	0.10	< 0.005	0.02	0.03	353
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.00	0.72	0.72	0.00	0.17	0.17	696
Vendor	0.02	0.81	0.01	0.17	0.18	0.01	0.05	0.06	684
Hauling	< 0.005	0.08	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	63.5

Annual	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.00	0.13	0.13	0.00	0.03	0.03	115
Vendor	< 0.005	0.15	< 0.005	0.03	0.03	< 0.005	0.01	0.01	113
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	10.5

3.5. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	0.30	—	0.30	0.28	—	0.28	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	0.30	—	0.30	0.28	—	0.28	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	4.79	0.16	—	0.16	0.15	—	0.15	1,290
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.87	0.03	—	0.03	0.03	—	0.03	214
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Worker	1.31	0.90	0.00	4.07	4.07	0.00	0.95	0.95	4,019
Vendor	0.11	4.16	0.05	0.98	1.04	0.03	0.27	0.30	3,704
Hauling	0.01	0.39	< 0.005	0.09	0.10	< 0.005	0.02	0.03	344
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	1.27	1.20	0.00	4.07	4.07	0.00	0.95	0.95	3,752
Vendor	0.11	4.40	0.05	0.98	1.04	0.03	0.27	0.30	3,701
Hauling	0.01	0.41	< 0.005	0.09	0.10	< 0.005	0.02	0.03	344
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.67	0.57	0.00	2.14	2.14	0.00	0.50	0.50	2,036
Vendor	0.06	2.32	0.03	0.52	0.55	0.01	0.14	0.16	1,985
Hauling	< 0.005	0.22	< 0.005	0.05	0.05	< 0.005	0.01	0.02	185
Annual	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.00	0.39	0.39	0.00	0.09	0.09	337
Vendor	0.01	0.42	0.01	0.09	0.10	< 0.005	0.03	0.03	329
Hauling	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	30.6

3.6. Building Construction (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	6.62	0.07	—	0.07	0.07	—	0.07	1,432
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	6.62	0.07	—	0.07	0.07	—	0.07	1,432

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	3.55	0.04	—	0.04	0.04	—	0.04	768
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.65	0.01	—	0.01	0.01	—	0.01	127
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	1.31	0.90	0.00	4.07	4.07	0.00	0.95	0.95	4,019
Vendor	0.11	4.16	0.05	0.98	1.04	0.03	0.27	0.30	3,704
Hauling	0.01	0.39	< 0.005	0.09	0.10	< 0.005	0.02	0.03	344
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	1.27	1.20	0.00	4.07	4.07	0.00	0.95	0.95	3,752
Vendor	0.11	4.40	0.05	0.98	1.04	0.03	0.27	0.30	3,701
Hauling	0.01	0.41	< 0.005	0.09	0.10	< 0.005	0.02	0.03	344
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.67	0.57	0.00	2.14	2.14	0.00	0.50	0.50	2,036
Vendor	0.06	2.32	0.03	0.52	0.55	0.01	0.14	0.16	1,985
Hauling	< 0.005	0.22	< 0.005	0.05	0.05	< 0.005	0.01	0.02	185
Annual	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.00	0.39	0.39	0.00	0.09	0.09	337
Vendor	0.01	0.42	0.01	0.09	0.10	< 0.005	0.03	0.03	329
Hauling	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	30.6

3.7. Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	6.46	0.24	—	0.24	0.22	—	0.22	1,516
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.76	0.03	—	0.03	0.03	—	0.03	179
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.14	0.01	—	0.01	< 0.005	—	< 0.005	29.6
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.12	0.12	0.00	0.03	0.03	120
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	13.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Paving (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	7.21	0.09	—	0.09	0.08	—	0.08	1,516
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.85	0.01	—	0.01	0.01	—	0.01	179
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.15	< 0.005	—	< 0.005	< 0.005	—	< 0.005	29.6
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.12	0.12	0.00	0.03	0.03	120
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	13.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	0.02	—	0.02	0.01	—	0.01	134
Architectural Coatings	35.3	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.15	< 0.005	—	< 0.005	< 0.005	—	< 0.005	24.1
Architectural Coatings	6.35	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.99
Architectural Coatings	1.16	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.25	0.24	0.00	0.81	0.81	0.00	0.19	0.19	750
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.00	0.14	0.14	0.00	0.03	0.03	137
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.03	0.03	0.00	0.01	0.01	22.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Architectural Coating (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	3.13	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.19	0.01	—	0.01	0.01	—	0.01	24.1
Architectural Coatings	0.56	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.99
Architectural Coatings	0.10	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.25	0.24	0.00	0.81	0.81	0.00	0.19	0.19	750
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Worker	0.05	0.04	0.00	0.14	0.14	0.00	0.03	0.03	137
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.03	0.03	0.00	0.01	0.01	22.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.79	0.01	—	0.01	0.01	—	0.01	134
Architectural Coatings	35.3	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.79	0.01	—	0.01	0.01	—	0.01	134
Architectural Coatings	35.3	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.42	0.01	—	0.01	0.01	—	0.01	71.6
Architectural Coatings	18.8	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	11.8
Architectural Coatings	3.44	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.25	0.18	0.00	0.81	0.81	0.00	0.19	0.19	790
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.24	0.21	0.00	0.81	0.81	0.00	0.19	0.19	738
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.13	0.10	0.00	0.43	0.43	0.00	0.10	0.10	399
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.08	0.08	0.00	0.02	0.02	66.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	3.13	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	3.13	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.57	0.02	—	0.02	0.02	—	0.02	71.6
Architectural Coatings	1.67	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	11.8
Architectural Coatings	0.31	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.25	0.18	0.00	0.81	0.81	0.00	0.19	0.19	790

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.24	0.21	0.00	0.81	0.81	0.00	0.19	0.19	738
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.13	0.10	0.00	0.43	0.43	0.00	0.10	0.10	399
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.08	0.08	0.00	0.02	0.02	66.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Trenching (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.80	0.05	—	0.05	0.05	—	0.05	434
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.11	< 0.005	—	< 0.005	< 0.005	—	< 0.005	26.1

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.33
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	41.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Trenching (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.28	0.04	—	0.04	0.03	—	0.03	434

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	< 0.005	—	< 0.005	< 0.005	—	< 0.005	26.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.33
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	41.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Grading	Grading	4/1/2027	8/31/2027	5.00	109	—
Building Construction	Building Construction	10/1/2027	9/30/2028	5.00	261	—

Paving	Paving	8/1/2029	9/30/2029	5.00	43.0	—
Architectural Coating	Architectural Coating	10/1/2028	9/30/2029	5.00	260	—
Trenching	Trenching	9/1/2027	9/30/2027	5.00	22.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Excavators	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	8.00	84.0	0.37
Building Construction	Cranes	Electric	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Electric	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Interim	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 4 Interim	1.00	6.00	37.0	0.48
Trenching	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Trenching	Excavators	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	15.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	56.5	20.0	HHDT

Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	493	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	140	8.40	HHDT,MHDT
Building Construction	Hauling	4.90	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	98.5	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	—	8.40	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	15.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT

Grading	Hauling	56.5	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	493	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	140	8.40	HHDT,MHDT
Building Construction	Hauling	4.90	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	98.5	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	—	8.40	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	901,496	300,499	416,400	138,800	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	—	49,245	109	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Unenclosed Parking with Elevator	0.00	100%
Enclosed Parking with Elevator	0.00	100%
Apartments Mid Rise	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00	2.34	0.00	0.00
2028	0.00	2.34	0.00	0.00

2029	0.00	2.34	0.00	0.00

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	9.65	annual days of extreme heat
Extreme Precipitation	3.10	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	10.2	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—

AQ-Ozone	14.9
AQ-PM	15.4
AQ-DPM	84.2
Drinking Water	49.5
Lead Risk Housing	16.0
Pesticides	0.00
Toxic Releases	31.6
Traffic	71.8
Effect Indicators	—
CleanUp Sites	96.2
Groundwater	76.4
Haz Waste Facilities/Generators	71.6
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	6.79
Cardio-vascular	14.0
Low Birth Weights	25.7
Socioeconomic Factor Indicators	—
Education	4.67
Housing	4.51
Linguistic	36.0
Poverty	5.35
Unemployment	17.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	93.22468882
Employed	97.60041062
Median HI	96.68933658
Education	—
Bachelor's or higher	97.52341845
High school enrollment	100
Preschool enrollment	45.37405364
Transportation	—
Auto Access	81.29090209
Active commuting	72.62928269
Social	—
2-parent households	95.534454
Voting	93.85345823
Neighborhood	—
Alcohol availability	32.78583344
Park access	4.568202233
Retail density	84.75554985
Supermarket access	2.399589375
Tree canopy	87.97638907
Housing	—
Homeownership	47.18336969
Housing habitability	91.40254074
Low-inc homeowner severe housing cost burden	94.73886822
Low-inc renter severe housing cost burden	96.5610163
Uncrowded housing	52.3675093

Health Outcomes	—
Insured adults	94.43089953
Arthritis	97.9
Asthma ER Admissions	90.9
High Blood Pressure	97.3
Cancer (excluding skin)	82.6
Asthma	96.9
Coronary Heart Disease	98.5
Chronic Obstructive Pulmonary Disease	99.2
Diagnosed Diabetes	98.0
Life Expectancy at Birth	94.2
Cognitively Disabled	98.0
Physically Disabled	98.6
Heart Attack ER Admissions	69.4
Mental Health Not Good	96.9
Chronic Kidney Disease	98.0
Obesity	95.5
Pedestrian Injuries	19.6
Physical Health Not Good	99.2
Stroke	98.8
Health Risk Behaviors	—
Binge Drinking	29.5
Current Smoker	96.2
No Leisure Time for Physical Activity	97.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	2.7
Elderly	95.9
English Speaking	58.3
Foreign-born	77.4
Outdoor Workers	73.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	39.8
Traffic Density	54.8
Traffic Access	87.4
Other Indices	—
Hardship	0.9
Other Decision Support	—
2016 Voting	95.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	8.00
Healthy Places Index Score for Project Location (b)	97.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	Mountain View default clean energy provider is Silicon Valley Clean Energy.
Land Use	Lot acreages and square footages provided by applicant.
Construction: Construction Phases	Provided by construction worksheet filled out by applicant.
Construction: Off-Road Equipment	Defaults
Construction: Trips and VMT	Building Const = Estimated 640 concrete truck round trips (4.9 trips/day). One mile trips for HRA.

2. Emissions Summary - HRA

2.2 Construction Emissions by Year, Unmitigated

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily - Summer (Max)									
2027	1.6630271	15.221012	0.6001615	7.1718640	7.7720256	0.5523478	3.4455408	3.9978886	3278.5008361063624
2028	2.2418831	10.938944	0.3064857	0.4632905	0.7697762	0.2794509	0.1135792	0.3930302	3411.6176147798637
2029	33.528712	7.3216982	0.2518837	0.0793996	0.3312834	0.2317330	0.0186111	0.2503441	1745.3823653279017
Daily - Winter (Max)									
2027	2.2847066	11.623507	0.3428217	0.4632905	0.8061122	0.3158957	0.1135792	0.4294750	3414.7022936437543
2028	32.830951	11.099935	0.3064857	0.4632905	0.7697762	0.2794509	0.1135792	0.3930302	3394.596574395273
2029	32.813116	0.8671489	0.0128409	0.0688016	0.0816425	0.0118136	0.0161269	0.0279406	212.8879949106888
Average Daily									
2027	0.9157951	6.7426177	0.2440364	2.2236331	2.4676695	0.2246629	1.0490097	1.2736726	1620.457590048099
2028	7.0820640	6.0705720	0.1671034	0.2562681	0.4233715	0.1523861	0.0626708	0.2150570	1859.1071684053145
2029	17.613430	1.2206779	0.0350214	0.0373173	0.0723387	0.0322197	0.0087363	0.0409561	294.04870096828495
Annual									
2027	0.1671326	1.2305277	0.0445366	0.4058130	0.4503496	0.0410009	0.1914442	0.2324452	268.28524660374853
2028	1.2924766	1.1078793	0.0304963	0.0467689	0.0772653	0.0278104	0.0114374	0.0392479	307.79640775641144
2029	3.2144510	0.2227737	0.0063914	0.0068104	0.0132018	0.0058801	0.0015943	0.0074744	48.6831181126108

2. Emissions Summary - HRA

2.3 Construction Emissions by Year, Mitigated

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily - Summer (Max)									
2027	0.4708639	11.263222	0.0868937	2.8354278	2.9223216	0.0844810	1.3540197	1.4385008	3278.5081798367
2028	1.4678404	8.6344352	0.0767750	0.4632905	0.5400655	0.0701085	0.1135792	0.1836877	2437.634866469047
2029	33.004727	8.3437959	0.1165733	0.0793996	0.1959730	0.1093986	0.0186111	0.1280098	1745.3823653279017
Daily - Winter (Max)									
2027	1.4722192	8.8530160	0.0767750	0.4632905	0.5400655	0.0731241	0.1135792	0.1867034	2441.213133603513
2028	32.744784	8.7954264	0.0767750	0.4632905	0.5400655	0.0701085	0.1135792	0.1836877	2420.6138260844564
2029	32.731903	1.1418991	0.0305401	0.0688016	0.0993418	0.0281909	0.0161269	0.0443179	212.8879949106888
Average Daily									
2027	0.4060997	5.0904289	0.0419925	0.9286425	0.9706351	0.0404692	0.4244184	0.4648877	1445.194075598866
2028	6.6515061	4.8818340	0.0466654	0.2562681	0.3029335	0.0426679	0.0626708	0.1053387	1336.8551827724336
2029	17.517880	1.4555060	0.0264514	0.0373173	0.0637687	0.0246278	0.0087363	0.0333642	294.04870096828495
Annual									
2027	0.0741132	0.9290032	0.0076636	0.1694772	0.1771409	0.0073856	0.0774563	0.0848420	239.2683716892644
2028	1.2138998	0.8909347	0.0085164	0.0467689	0.0552853	0.0077868	0.0114374	0.0192243	221.33163162446965
2029	3.1970132	0.2656298	0.0048273	0.0068104	0.0116377	0.0044945	0.0015943	0.0060889	48.6831181126108

5.3. Construction Vehicles - HRA

5.3.1 Unmitigated

Phase Nam	Trip Type	One-Way T	Miles per T	Vehicle Mix
Grading				
Grading	Worker	15	1	LDA,LDT1,LDT2
Grading	Vendor		1	HHDT,MHDT
Grading	Hauling	56.477064	1	HHDT
Grading	Onsite truc			HHDT
Building Construction				
Building Cc	Worker	486.89308	1	LDA,LDT1,LDT2
Building Cc	Vendor	136.78841	1	HHDT,MHDT
Building Cc	Hauling	4.9	1	HHDT
Building Cc	Onsite truc			HHDT
Paving				
Paving	Worker	15	1	LDA,LDT1,LDT2
Paving	Vendor		1	HHDT,MHDT
Paving	Hauling	0	1	HHDT
Paving	Onsite truc			HHDT
Architectural Coating				
Architectu	Worker	97.378616	1	LDA,LDT1,LDT2
Architectu	Vendor		1	HHDT,MHDT
Architectu	Hauling	0	1	HHDT
Architectu	Onsite truc			HHDT
Trenching				
Trenching	Worker	5	1	LDA,LDT1,LDT2
Trenching	Vendor		1	HHDT,MHDT
Trenching	Hauling	0	1	HHDT
Trenching	Onsite truc			HHDT

5.3. Construction Vehicles - HRA

5.3.2 Mitigated

Phase Nam	Trip Type	One-Way T	Miles per T	Vehicle Mix
Grading				
Grading	Worker	15	1	LDA,LDT1,LDT2
Grading	Vendor		1	HHDT,MHDT
Grading	Hauling	56.477064	1	HHDT
Grading	Onsite truc			HHDT
Building Construction				
Building Cc	Worker	486.89308	1	LDA,LDT1,LDT2
Building Cc	Vendor	136.78841	1	HHDT,MHDT
Building Cc	Hauling	4.9	1	HHDT
Building Cc	Onsite truc			HHDT
Paving				
Paving	Worker	15	1	LDA,LDT1,LDT2
Paving	Vendor		1	HHDT,MHDT
Paving	Hauling	0	1	HHDT
Paving	Onsite truc			HHDT
Architectural Coating				
Architectu	Worker	97.378616	1	LDA,LDT1,LDT2
Architectu	Vendor		1	HHDT,MHDT
Architectu	Hauling	0	1	HHDT
Architectu	Onsite truc			HHDT
Trenching				
Trenching	Worker	5	1	LDA,LDT1,LDT2
Trenching	Vendor		1	HHDT,MHDT
Trenching	Hauling	0	1	HHDT
Trenching	Onsite truc			HHDT

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-018 675-685 E Middlefield 2030 Operation
Operational Year	2030
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	28.2
Location	675 E Middlefield Rd, Mountain View, CA 94043, USA
County	Santa Clara
City	Mountain View
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1712
EDFZ	1
Electric Utility	Silicon Valley Clean Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	278	1000sqft	5.44	277,600	0.00	—	—	—

Apartments Mid Rise	858	Dwelling Unit	0.00	1,249,154	0.00	—	2,565	—
Strip Mall	2.34	1000sqft	5.14	2,344	0.00	—	—	—
Unenclosed Parking with Elevator	638	Space	0.00	214,020	0.00	—	—	—
Enclosed Parking with Elevator	358	Space	0.00	123,437	0.00	—	—	—
Enclosed Parking with Elevator	453	Space	0.00	181,477	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Area Sources	AS-2	Use Low-VOC Paints

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	61.7	10.1	0.25	30.8	31.1	0.22	7.82	8.03	33,868
Mit.	57.9	10.1	0.25	30.8	31.1	0.22	7.82	8.03	33,868
% Reduced	6%	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	51.3	10.9	0.16	30.8	31.0	0.15	7.82	7.97	31,705
Mit.	47.5	10.9	0.16	30.8	31.0	0.15	7.82	7.97	31,705
% Reduced	7%	—	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	55.6	12.0	0.32	27.1	27.4	0.30	6.86	7.16	29,389
Mit.	51.8	12.0	0.32	27.1	27.4	0.30	6.86	7.16	29,389
% Reduced	7%	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	10.1	2.19	0.06	4.94	5.00	0.05	1.25	1.31	4,866
Mit.	9.45	2.19	0.06	4.94	5.00	0.05	1.25	1.31	4,866
% Reduced	7%	—	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	13.5	9.33	0.16	30.8	31.0	0.15	7.82	7.97	31,515
Area	48.3	0.75	0.08	—	0.08	0.06	—	0.06	274
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	91.2
Water	—	—	—	—	—	—	—	—	291
Waste	—	—	—	—	—	—	—	—	1,688
Refrig.	—	—	—	—	—	—	—	—	9.64
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	61.7	10.1	0.25	30.8	31.1	0.22	7.82	8.03	33,868
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	12.9	10.9	0.16	30.8	31.0	0.15	7.82	7.97	29,625
Area	38.3	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	91.2
Water	—	—	—	—	—	—	—	—	291

Waste	—	—	—	—	—	—	—	—	1,688
Refrig.	—	—	—	—	—	—	—	—	9.64
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	51.3	10.9	0.16	30.8	31.0	0.15	7.82	7.97	31,705
Average Daily	—	—	—	—	—	—	—	—	—
Mobile	11.5	9.20	0.15	27.1	27.2	0.14	6.86	7.00	26,731
Area	43.2	0.37	0.04	—	0.04	0.03	—	0.03	135
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	91.2
Water	—	—	—	—	—	—	—	—	291
Waste	—	—	—	—	—	—	—	—	1,688
Refrig.	—	—	—	—	—	—	—	—	9.64
Stationary	0.86	2.41	0.13	0.00	0.13	0.13	0.00	0.13	443
Total	55.6	12.0	0.32	27.1	27.4	0.30	6.86	7.16	29,389
Annual	—	—	—	—	—	—	—	—	—
Mobile	2.10	1.68	0.03	4.94	4.97	0.03	1.25	1.28	4,426
Area	7.89	0.07	0.01	—	0.01	0.01	—	0.01	22.4
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	15.1
Water	—	—	—	—	—	—	—	—	48.2
Waste	—	—	—	—	—	—	—	—	279
Refrig.	—	—	—	—	—	—	—	—	1.60
Stationary	0.16	0.44	0.02	0.00	0.02	0.02	0.00	0.02	73.4
Total	10.1	2.19	0.06	4.94	5.00	0.05	1.25	1.31	4,866

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	13.5	9.33	0.16	30.8	31.0	0.15	7.82	7.97	31,515
Area	44.4	0.75	0.08	—	0.08	0.06	—	0.06	274
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	91.2
Water	—	—	—	—	—	—	—	—	291
Waste	—	—	—	—	—	—	—	—	1,688
Refrig.	—	—	—	—	—	—	—	—	9.64
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	57.9	10.1	0.25	30.8	31.1	0.22	7.82	8.03	33,868
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	12.9	10.9	0.16	30.8	31.0	0.15	7.82	7.97	29,625
Area	34.5	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	91.2
Water	—	—	—	—	—	—	—	—	291
Waste	—	—	—	—	—	—	—	—	1,688
Refrig.	—	—	—	—	—	—	—	—	9.64
Stationary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	47.5	10.9	0.16	30.8	31.0	0.15	7.82	7.97	31,705
Average Daily	—	—	—	—	—	—	—	—	—
Mobile	11.5	9.20	0.15	27.1	27.2	0.14	6.86	7.00	26,731
Area	39.4	0.37	0.04	—	0.04	0.03	—	0.03	135
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	91.2
Water	—	—	—	—	—	—	—	—	291
Waste	—	—	—	—	—	—	—	—	1,688
Refrig.	—	—	—	—	—	—	—	—	9.64
Stationary	0.86	2.41	0.13	0.00	0.13	0.13	0.00	0.13	443
Total	51.8	12.0	0.32	27.1	27.4	0.30	6.86	7.16	29,389

Annual	—	—	—	—	—	—	—	—	—
Mobile	2.10	1.68	0.03	4.94	4.97	0.03	1.25	1.28	4,426
Area	7.19	0.07	0.01	—	0.01	0.01	—	0.01	22.4
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	15.1
Water	—	—	—	—	—	—	—	—	48.2
Waste	—	—	—	—	—	—	—	—	279
Refrig.	—	—	—	—	—	—	—	—	1.60
Stationary	0.16	0.44	0.02	0.00	0.02	0.02	0.00	0.02	73.4
Total	9.45	2.19	0.06	4.94	5.00	0.05	1.25	1.31	4,866

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	4.06	2.96	0.05	10.1	10.2	0.05	2.56	2.61	10,293
Apartments Mid Rise	9.22	6.21	0.11	20.2	20.3	0.10	5.12	5.22	20,682
Strip Mall	0.21	0.16	< 0.005	0.53	0.53	< 0.005	0.13	0.14	540
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	13.5	9.33	0.16	30.8	31.0	0.15	7.82	7.97	31,515

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	3.90	3.46	0.05	10.1	10.2	0.05	2.56	2.61	9,673
Apartments Mid Rise	8.85	7.27	0.11	20.2	20.3	0.10	5.12	5.22	19,445
Strip Mall	0.20	0.18	< 0.005	0.53	0.53	< 0.005	0.13	0.14	507
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	12.9	10.9	0.16	30.8	31.0	0.15	7.82	7.97	29,625
Annual	—	—	—	—	—	—	—	—	—
General Office Building	0.55	0.46	0.01	1.41	1.42	0.01	0.36	0.36	1,259
Apartments Mid Rise	1.52	1.19	0.02	3.44	3.46	0.02	0.87	0.89	3,089
Strip Mall	0.03	0.03	< 0.005	0.09	0.09	< 0.005	0.02	0.02	77.6
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.10	1.68	0.03	4.94	4.97	0.03	1.25	1.28	4,426

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	4.06	2.96	0.05	10.1	10.2	0.05	2.56	2.61	10,293

Apartments Mid Rise	9.22	6.21	0.11	20.2	20.3	0.10	5.12	5.22	20,682
Strip Mall	0.21	0.16	< 0.005	0.53	0.53	< 0.005	0.13	0.14	540
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	13.5	9.33	0.16	30.8	31.0	0.15	7.82	7.97	31,515
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	3.90	3.46	0.05	10.1	10.2	0.05	2.56	2.61	9,673
Apartments Mid Rise	8.85	7.27	0.11	20.2	20.3	0.10	5.12	5.22	19,445
Strip Mall	0.20	0.18	< 0.005	0.53	0.53	< 0.005	0.13	0.14	507
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	12.9	10.9	0.16	30.8	31.0	0.15	7.82	7.97	29,625
Annual	—	—	—	—	—	—	—	—	—
General Office Building	0.55	0.46	0.01	1.41	1.42	0.01	0.36	0.36	1,259
Apartments Mid Rise	1.52	1.19	0.02	3.44	3.46	0.02	0.87	0.89	3,089
Strip Mall	0.03	0.03	< 0.005	0.09	0.09	< 0.005	0.02	0.02	77.6
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.10	1.68	0.03	4.94	4.97	0.03	1.25	1.28	4,426

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	46.9
Apartments Mid Rise	—	—	—	—	—	—	—	—	33.0
Strip Mall	—	—	—	—	—	—	—	—	0.17
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	3.87
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	7.22
Total	—	—	—	—	—	—	—	—	91.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	46.9
Apartments Mid Rise	—	—	—	—	—	—	—	—	33.0
Strip Mall	—	—	—	—	—	—	—	—	0.17
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	3.87
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	7.22
Total	—	—	—	—	—	—	—	—	91.2
Annual	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	7.76
Apartments Mid Rise	—	—	—	—	—	—	—	—	5.47
Strip Mall	—	—	—	—	—	—	—	—	0.03
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.64
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	1.19
Total	—	—	—	—	—	—	—	—	15.1

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	46.9
Apartments Mid Rise	—	—	—	—	—	—	—	—	33.0
Strip Mall	—	—	—	—	—	—	—	—	0.17
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	3.87
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	7.22
Total	—	—	—	—	—	—	—	—	91.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	46.9

Apartments Mid Rise	—	—	—	—	—	—	—	—	33.0
Strip Mall	—	—	—	—	—	—	—	—	0.17
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	3.87
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	7.22
Total	—	—	—	—	—	—	—	—	91.2
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	7.76
Apartments Mid Rise	—	—	—	—	—	—	—	—	5.47
Strip Mall	—	—	—	—	—	—	—	—	0.03
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.64
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	1.19
Total	—	—	—	—	—	—	—	—	15.1

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Strip Mall	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	32.7	—	—	—	—	—	—	—	—
Architectural Coatings	5.62	—	—	—	—	—	—	—	—
Landscape Equipment	9.92	0.75	0.08	—	0.08	0.06	—	0.06	274
Total	48.3	0.75	0.08	—	0.08	0.06	—	0.06	274
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	32.7	—	—	—	—	—	—	—	—
Architectural Coatings	5.62	—	—	—	—	—	—	—	—
Total	38.3	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	5.97	—	—	—	—	—	—	—	—
Architectural Coatings	1.03	—	—	—	—	—	—	—	—
Landscape Equipment	0.89	0.07	0.01	—	0.01	0.01	—	0.01	22.4
Total	7.89	0.07	0.01	—	0.01	0.01	—	0.01	22.4

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	32.7	—	—	—	—	—	—	—	—
Architectural Coatings	1.78	—	—	—	—	—	—	—	—
Landscape Equipment	9.92	0.75	0.08	—	0.08	0.06	—	0.06	274
Total	44.4	0.75	0.08	—	0.08	0.06	—	0.06	274
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	32.7	—	—	—	—	—	—	—	—
Architectural Coatings	1.78	—	—	—	—	—	—	—	—
Total	34.5	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Consumer Products	5.97	—	—	—	—	—	—	—	—
Architectural Coatings	0.33	—	—	—	—	—	—	—	—
Landscape Equipment	0.89	0.07	0.01	—	0.01	0.01	—	0.01	22.4
Total	7.19	0.07	0.01	—	0.01	0.01	—	0.01	22.4

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	173
Apartments Mid Rise	—	—	—	—	—	—	—	—	117
Strip Mall	—	—	—	—	—	—	—	—	0.71
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	291
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	173
Apartments Mid Rise	—	—	—	—	—	—	—	—	117
Strip Mall	—	—	—	—	—	—	—	—	0.71

Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	291
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	28.7
Apartments Mid Rise	—	—	—	—	—	—	—	—	19.4
Strip Mall	—	—	—	—	—	—	—	—	0.12
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	48.2

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	173
Apartments Mid Rise	—	—	—	—	—	—	—	—	117
Strip Mall	—	—	—	—	—	—	—	—	0.71
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	291
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	173
Apartments Mid Rise	—	—	—	—	—	—	—	—	117
Strip Mall	—	—	—	—	—	—	—	—	0.71
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	291
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	28.7
Apartments Mid Rise	—	—	—	—	—	—	—	—	19.4
Strip Mall	—	—	—	—	—	—	—	—	0.12
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	48.2

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	487
Apartments Mid Rise	—	—	—	—	—	—	—	—	1,196
Strip Mall	—	—	—	—	—	—	—	—	4.64
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	1,688
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	487
Apartments Mid Rise	—	—	—	—	—	—	—	—	1,196
Strip Mall	—	—	—	—	—	—	—	—	4.64
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	1,688
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	80.6
Apartments Mid Rise	—	—	—	—	—	—	—	—	198
Strip Mall	—	—	—	—	—	—	—	—	0.77

Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	279

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	487
Apartments Mid Rise	—	—	—	—	—	—	—	—	1,196
Strip Mall	—	—	—	—	—	—	—	—	4.64
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	1,688
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	487
Apartments Mid Rise	—	—	—	—	—	—	—	—	1,196
Strip Mall	—	—	—	—	—	—	—	—	4.64
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	1,688
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	80.6
Apartments Mid Rise	—	—	—	—	—	—	—	—	198
Strip Mall	—	—	—	—	—	—	—	—	0.77
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	279

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.68
Apartments Mid Rise	—	—	—	—	—	—	—	—	8.95
Strip Mall	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	9.64
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	0.68
Apartments Mid Rise	—	—	—	—	—	—	—	—	8.95
Strip Mall	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	9.64
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.11
Apartments Mid Rise	—	—	—	—	—	—	—	—	1.48
Strip Mall	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	1.60

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.68
Apartments Mid Rise	—	—	—	—	—	—	—	—	8.95
Strip Mall	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	9.64
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.68
Apartments Mid Rise	—	—	—	—	—	—	—	—	8.95
Strip Mall	—	—	—	—	—	—	—	—	0.01

Total	—	—	—	—	—	—	—	—	9.64
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.11
Apartments Mid Rise	—	—	—	—	—	—	—	—	1.48
Strip Mall	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	1.60

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Emergency Generator	0.16	0.44	0.02	0.00	0.02	0.02	0.00	0.02	73.4
Total	0.16	0.44	0.02	0.00	0.02	0.02	0.00	0.02	73.4

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Emergency Generator	0.16	0.44	0.02	0.00	0.02	0.02	0.00	0.02	73.4
Total	0.16	0.44	0.02	0.00	0.02	0.02	0.00	0.02	73.4

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	1,457	330	330	414,415	14,321	3,246	3,246	4,072,084
Apartments Mid Rise	3,419	3,089	2,574	1,186,691	28,652	25,884	21,570	9,944,390
Strip Mall	76.4	72.5	35.2	25,547	751	713	346	251,028
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	1,457	330	330	414,415	14,321	3,246	3,246	4,072,084
Apartments Mid Rise	3,419	3,089	2,574	1,186,691	28,652	25,884	21,570	9,944,390
Strip Mall	76.4	72.5	35.2	25,547	751	713	346	251,028
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0

Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
2529536.85	843,179	419,916	139,972	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	7,313,581	2.34	0.0000	0.0000	0.00
Apartments Mid Rise	5,152,836	2.34	0.0000	0.0000	0.00

Strip Mall	25,997	2.34	0.0000	0.0000	0.00
Unenclosed Parking with Elevator	603,108	2.34	0.0000	0.0000	0.00
Enclosed Parking with Elevator	455,659	2.34	0.0000	0.0000	0.00
Enclosed Parking with Elevator	669,910	2.34	0.0000	0.0000	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	7,313,581	2.34	0.0000	0.0000	0.00
Apartments Mid Rise	5,152,836	2.34	0.0000	0.0000	0.00
Strip Mall	25,997	2.34	0.0000	0.0000	0.00
Unenclosed Parking with Elevator	603,108	2.34	0.0000	0.0000	0.00
Enclosed Parking with Elevator	455,659	2.34	0.0000	0.0000	0.00
Enclosed Parking with Elevator	669,910	2.34	0.0000	0.0000	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	46,210,774	0.00
Apartments Mid Rise	31,189,104	0.00
Strip Mall	188,515	0.00
Unenclosed Parking with Elevator	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	46,210,774	0.00
Apartments Mid Rise	31,189,104	0.00
Strip Mall	188,515	0.00
Unenclosed Parking with Elevator	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	258	—
Apartments Mid Rise	634	—
Strip Mall	2.46	—
Unenclosed Parking with Elevator	0.00	—
Enclosed Parking with Elevator	0.00	—
Enclosed Parking with Elevator	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	258	—
Apartments Mid Rise	634	—
Strip Mall	2.46	—
Unenclosed Parking with Elevator	0.00	—

Enclosed Parking with Elevator	0.00	—
Enclosed Parking with Elevator	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	4.00	0.00	150	320	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	9.65	annual days of extreme heat
Extreme Precipitation	3.10	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	10.2	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	14.9
AQ-PM	15.4
AQ-DPM	84.2
Drinking Water	49.5
Lead Risk Housing	16.0
Pesticides	0.00
Toxic Releases	31.6
Traffic	71.8
Effect Indicators	—
CleanUp Sites	96.2
Groundwater	76.4
Haz Waste Facilities/Generators	71.6
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	6.79
Cardio-vascular	14.0
Low Birth Weights	25.7
Socioeconomic Factor Indicators	—
Education	4.67
Housing	4.51
Linguistic	36.0
Poverty	5.35

Unemployment	17.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	93.22468882
Employed	97.60041062
Median HI	96.68933658
Education	—
Bachelor's or higher	97.52341845
High school enrollment	100
Preschool enrollment	45.37405364
Transportation	—
Auto Access	81.29090209
Active commuting	72.62928269
Social	—
2-parent households	95.534454
Voting	93.85345823
Neighborhood	—
Alcohol availability	32.78583344
Park access	4.568202233
Retail density	84.75554985
Supermarket access	2.399589375
Tree canopy	87.97638907
Housing	—
Homeownership	47.18336969

Housing habitability	91.40254074
Low-inc homeowner severe housing cost burden	94.73886822
Low-inc renter severe housing cost burden	96.5610163
Uncrowded housing	52.3675093
Health Outcomes	—
Insured adults	94.43089953
Arthritis	97.9
Asthma ER Admissions	90.9
High Blood Pressure	97.3
Cancer (excluding skin)	82.6
Asthma	96.9
Coronary Heart Disease	98.5
Chronic Obstructive Pulmonary Disease	99.2
Diagnosed Diabetes	98.0
Life Expectancy at Birth	94.2
Cognitively Disabled	98.0
Physically Disabled	98.6
Heart Attack ER Admissions	69.4
Mental Health Not Good	96.9
Chronic Kidney Disease	98.0
Obesity	95.5
Pedestrian Injuries	19.6
Physical Health Not Good	99.2
Stroke	98.8
Health Risk Behaviors	—
Binge Drinking	29.5
Current Smoker	96.2

No Leisure Time for Physical Activity	97.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	2.7
Elderly	95.9
English Speaking	58.3
Foreign-born	77.4
Outdoor Workers	73.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	39.8
Traffic Density	54.8
Traffic Access	87.4
Other Indices	—
Hardship	0.9
Other Decision Support	—
2016 Voting	95.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	8.00
Healthy Places Index Score for Project Location (b)	97.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	Mountain View default clean energy provider is Silicon Valley Clean Energy.
Land Use	Combined phase 1 and phase 2 land uses for operational run. Land uses, total lot acreages, square footages, and number of units and parking spaces provided by project applicant.
Operations: Vehicle Data	Provided trip gen with adjustments.
Operations: Hearths	No hearths.
Operations: Energy Use	Mountain View REACH Code - no natural gas. Convert natural gas to electricity.
Operations: Water and Waste Water	Wastewater treatment 100% aerobic - no septic tanks or lagoons.
Operations: Emergency Generators and Fire Pumps	150 hours for crit pol.

4.8. Stationary Emissions By Equipment Type - HRA

4.8.1 Unmitigated

Equipment	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily, Summer (Max)									
Emergency	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)									
Emergency	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
Annual									
Emergency	0.0525071	0.1467749	0.0077249	0	0.0077249	0.0077249	0	0.0077249	24.4524100943916
Total	0.0525071	0.1467749	0.0077249	0	0.0077249	0.0077249	0	0.0077249	24.4524100943916

Attachment 2: Project Construction Emissions and Health Risk Calculations

675-685 E Middlefield Road, Mountain View, CA

DPM Emissions and Modeling Emission Rates - Phase 1 Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2025	Construction	0.0302	CON_DPM	60.5	0.01841	2.32E-03	16,418	1.41E-07
2026	Construction	0.0941	CON_DPM	188.2	0.05728	7.22E-03	16,418	4.40E-07
2027	Construction	0.0338	CON_DPM	67.6	0.02059	2.59E-03	16,418	1.58E-07
2028	Construction	0.0015	CON_DPM	3.0	0.00091	1.15E-04	16,418	7.02E-09
Total		***0.1596***		***319.3***	***0.0972***	***0.0122***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

DPM Construction Emissions and Modeling Emission Rates - Phase 1 With Mitigation

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2025	Construction	0.0067	CON_DPM	13.4	0.00408	5.13E-04	16,418	3.13E-08
2026	Construction	0.0148	CON_DPM	29.7	0.00904	1.14E-03	16,418	6.93E-08
2027	Construction	0.0083	CON_DPM	16.5	0.00503	6.34E-04	16,418	3.86E-08
2028	Construction	0.0030	CON_DPM	6.0	0.00182	2.29E-04	16,418	1.40E-08
Total		***0.0328***		***65.6***	***0.0200***	***0.0025***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

675-685 E Middlefield Road, Mountain View, CA

PM2.5 Fugitive Dust Emissions for Modeling - Phase 1 Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2025	Construction	CON_FUG	0.0141	28.2	0.00860	1.08E-03	16,418	6.60E-08
2026	Construction	CON_FUG	0.4037	807.4	0.24580	3.10E-02	16,418	1.89E-06
2027	Construction	CON_FUG	0.0094	18.8	0.00572	7.21E-04	16,418	4.39E-08
2028	Construction	CON_FUG	0.0014	2.8	0.00085	1.07E-04	16,418	6.53E-09
Total			***0.4286***	***857.3***	***0.2610***	***0.0329***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

PM2.5 Fugitive Dust Construction Emissions for Modeling - Phase 1 With Mitigation

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2025	Construction	CON_FUG	0.0141	28.2	0.00860	1.08E-03	16,418	6.60E-08
2026	Construction	CON_FUG	0.1633	326.6	0.09941	1.25E-02	16,418	7.63E-07
2027	Construction	CON_FUG	0.0094	18.8	0.00572	7.21E-04	16,418	4.39E-08
2028	Construction	CON_FUG	0.0014	2.8	0.00085	1.07E-04	16,418	6.53E-09
Total			***0.1882***	***376.4***	***0.1146***	***0.0144***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

675-685 E Middlefield Road, Mountain View, CA

DPM Emissions and Modeling Emission Rates - Phase 2 Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2027	Construction	0.0445	CON_DPM	89.1	0.02712	3.42E-03	23,162	1.48E-07
2028	Construction	0.0305	CON_DPM	61.0	0.01857	2.34E-03	23,162	1.01E-07
2029	Construction	0.0064	CON_DPM	12.8	0.00389	4.90E-04	23,162	2.12E-08
Total		***0.0814***		***162.8***	***0.0496***	***0.0062***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

DPM Construction Emissions and Modeling Emission Rates - Phase 2 With Mitigation

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2027	Construction	0.0077	CON_DPM	15.3	0.00467	5.88E-04	23,162	2.54E-08
2028	Construction	0.0085	CON_DPM	17.0	0.00519	6.53E-04	23,162	2.82E-08
2029	Construction	0.0048	CON_DPM	9.7	0.00294	3.70E-04	23,162	1.60E-08
Total		***0.0210***		***42.0***	***0.0128***	***0.0016***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

675-685 E Middlefield Road, Mountain View, CA

PM2.5 Fugitive Dust Emissions for Modeling - Phase 2 Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2027	Construction	CON_FUG	0.1914	382.9	0.11656	1.47E-02	23,162	6.34E-07
2028	Construction	CON_FUG	0.0114	22.9	0.00696	8.77E-04	23,162	3.79E-08
2029	Construction	CON_FUG	0.0016	3.2	0.00097	1.22E-04	23,162	5.28E-09
Total			***0.2045***	***409.0***	***0.1245***	***0.0157***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

PM2.5 Fugitive Dust Construction Emissions for Modeling - Phase 2 With Mitigation

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2027	Construction	CON_FUG	0.0775	154.9	0.04716	5.94E-03	23,162	2.57E-07
2028	Construction	CON_FUG	0.0114	22.9	0.00696	8.77E-04	23,162	3.79E-08
2029	Construction	CON_FUG	0.0016	3.2	0.00097	1.22E-04	23,162	5.28E-09
Total			***0.0905***	***181.0***	***0.0551***	***0.0069***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	365	
hours/year =	3285	

																							Unmitigated Project Total Risk		
Receptor									2025	2026	2027	2028	2029	2030 - 2054	2025	2026	2027	2028	2029	2025-2029	2030 - 2054	2025-2054
No.	UTM-X	UTM-Y	Flagpole	2025	2026	2027	2028	2029	Construction					Generator	Construction					Total Con	GEN	Total
(m)	(m)	(m)	Height (m)						DPM	DPM	DPM	DPM	DPM	DPM	Risk	Risk	Risk	Risk	Risk	Risk	Risk	Risk
266	583821.02	4138824.38	1.5	0.02634	0.08219	0.0674	0.02717	0.00543	0.02634	0.08219	0.0674	0.02717	0.00543	0.00181	0.36	13.50	11.07	0.70	0.14	25.77	0.63	26.41
267	583825.41	4138818.93	1.5	0.02555	0.07974	0.06913	0.02891	0.0058	0.02555	0.07974	0.06913	0.02891	0.0058	0.00185	0.35	13.10	11.35	0.75	0.15	25.70	0.65	26.34
265	583816.63	4138829.83	1.5	0.02691	0.08397	0.06555	0.0255	0.00507	0.02691	0.08397	0.06555	0.0255	0.00507	0.00174	0.37	13.79	10.77	0.66	0.13	25.71	0.61	26.32
268	583829.8	4138813.48	1.5	0.02465	0.07693	0.07075	0.03066	0.00618	0.02465	0.07693	0.07075	0.03066	0.00618	0.00187	0.34	12.64	11.62	0.79	0.16	25.54	0.66	26.20
264	583812.24	4138835.29	1.5	0.02713	0.08467	0.06357	0.02398	0.00475	0.02713	0.08467	0.06357	0.02398	0.00475	0.00163	0.37	13.91	10.44	0.62	0.12	25.46	0.57	26.03
269	583834.19	4138808.03	1.5	0.02372	0.07402	0.07227	0.03236	0.00654	0.02372	0.07402	0.07227	0.03236	0.00654	0.00188	0.32	12.16	11.87	0.84	0.17	25.36	0.66	26.01
270	583838.59	4138802.57	1.5	0.0228	0.07114	0.07369	0.03399	0.0069	0.0228	0.07114	0.07369	0.03399	0.0069	0.00189	0.31	11.68	12.10	0.88	0.18	25.16	0.66	25.82
271	583842.98	4138797.12	1.5	0.02192	0.0684	0.07501	0.03552	0.00723	0.02192	0.0684	0.07501	0.03552	0.00723	0.00191	0.30	11.23	12.32	0.92	0.19	24.96	0.67	25.63
272	583847.37	4138791.67	1.5	0.0211	0.06586	0.07623	0.03694	0.00753	0.0211	0.06586	0.07623	0.03694	0.00753	0.00194	0.29	10.82	12.52	0.96	0.19	24.77	0.68	25.45
273	583856.15	4138780.76	1.5	0.01968	0.06142	0.0784	0.03943	0.00807	0.01968	0.06142	0.0784	0.03943	0.00807	0.00209	0.27	10.09	12.88	1.02	0.21	24.46	0.73	25.19
274	583860.54	4138775.31	1.5	0.01908	0.05953	0.07934	0.0405	0.0083	0.01908	0.05953	0.07934	0.0405	0.0083	0.00222	0.26	9.78	13.03	1.05	0.21	24.33	0.78	25.11
275	583864.93	4138769.86	1.5	0.01854	0.05785	0.08017	0.04146	0.00851	0.01854	0.05785	0.08017	0.04146	0.00851	0.00236	0.25	9.50	13.17	1.07	0.22	24.21	0.83	25.04
276	583869.32	4138764.41	1.5	0.01806	0.05636	0.08089	0.04229	0.00869	0.01806	0.05636	0.08089	0.04229	0.00869	0.00249	0.25	9.26	13.29	1.09	0.22	24.11	0.87	24.98
277	583873.71	4138758.95	1.5	0.01763	0.05502	0.08145	0.04298	0.00884	0.01763	0.05502	0.08145	0.04298	0.00884	0.0026	0.24	9.04	13.38	1.11	0.23	23.99	0.91	24.91
278	583878.1	4138753.5	1.5	0.01725	0.05383	0.08185	0.04352	0.00896	0.01725	0.05383	0.08185	0.04352	0.00896	0.00266	0.23	8.84	13.44	1.13	0.23	23.88	0.93	24.81
251	583828.74	4138803.64	1.5	0.02116	0.06602	0.06205	0.02722	0.00549	0.02116	0.06602	0.06205	0.02722	0.00549	0.00176	0.29	10.84	10.19	0.70	0.14	22.17	0.62	22.79
250	583824.35	4138809.09	1.5	0.02172	0.06778	0.06056	0.0258	0.00519	0.02172	0.06778	0.06056	0.0258	0.00519	0.00172	0.30	11.13	9.95	0.67	0.13	22.18	0.60	22.78
252	583833.13	4138798.18	1.5	0.02054	0.0641	0.06343	0.0286	0.00579	0.02054	0.0641	0.06343	0.0286	0.00579	0.00178	0.28	10.53	10.42	0.74	0.15	22.11	0.62	22.74
249	583819.96	4138814.54	1.5	0.02219	0.06926	0.05898	0.02438	0.00489	0.02219	0.06926	0.05898	0.02438	0.00489	0.00168	0.30	11.38	9.69	0.63	0.13	22.12	0.59	22.71
253	583837.52	4138792.73	1.5	0.01992	0.06217	0.06474	0.02994	0.00608	0.01992	0.06217	0.06474	0.02994	0.00608	0.00181	0.27	10.21	10.63	0.77	0.16	22.05	0.63	22.68
254	583841.91	4138787.28	1.5	0.01932	0.06028	0.06597	0.03121	0.00635	0.01932	0.06028	0.06597	0.03121	0.00635	0.00184	0.26	9.90	10.84	0.81	0.16	21.97	0.64	22.61
255	583846.3	4138781.83	1.5	0.01874	0.05848	0.06711	0.0324	0.0066	0.01874	0.05848	0.06711	0.0324	0.0066	0.00189	0.25	9.61	11.02	0.84	0.17	21.89	0.66	22.55
248	583815.57	4138819.99	1.5	0.02251	0.07025	0.0573	0.02301	0.00459	0.02251	0.07025	0.0573	0.02301	0.00459	0.00161	0.31	11.54	9.41	0.59	0.12	21.97	0.56	22.53
256	583850.69	4138776.37	1.5	0.0182	0.05679	0.06815	0.0335	0.00684	0.0182	0.05679	0.06815	0.0335	0.00684	0.00196	0.25	9.33	11.19	0.87	0.18	21.81	0.69	22.50
138	583797.58	4138852.51	1.5	0.02358	0.07359	0.05512	0.02076	0.00411	0.02358	0.07359	0.05512	0.02076	0.00411	0.00103	0.32	12.09	9.05	0.54	0.11	22.10	0.36	22.46
257	583855.08	4138770.92	1.5	0.0177	0.05524	0.06911	0.03451	0.00706	0.0177	0.05524	0.06911	0.03451	0.00706	0.00204	0.24	9.07	11.35	0.89	0.18	21.74	0.71	22.45
258	583859.47	4138765.47	1.5	0.01725	0.05382	0.06998	0.03543	0.00726	0.01725	0.05382	0.06998	0.03543	0.00726	0.00215	0.23	8.84	11.49	0.92	0.19	21.67	0.75	22.43
259	583863.86	4138760.02	1.5	0.01683	0.05252	0.07074	0.03624	0.00743	0.01683	0.05252	0.07074	0.03624	0.00743	0.00226	0.23	8.63	11.62	0.94	0.19	21.60	0.79	22.40
260	583868.25	4138754.56	1.5	0.01645	0.05135	0.07137	0.03694	0.00758	0.01645	0.05135	0.07137	0.03694	0.00758	0.00236	0.22	8.43	11.72	0.96	0.20	21.53	0.83	22.36
261	583872.64	4138749.11	1.5	0.01611	0.05028	0.07184	0.03751	0.0077	0.01611	0.05028	0.07184	0.03751	0.0077	0.00244	0.22	8.26	11.80	0.97	0.20	21.45	0.86	22.30
262	583877.03	4138743.66	1.5	0.0158	0.04931	0.07211	0.03791	0.00779	0.0158	0.04931	0.07211	0.03791	0.00779	0.00249	0.21	8.10	11.84	0.98	0.20	21.34	0.87	22.21
247	583811.18	4138825.44	1.5	0.0226	0.07053	0.05551	0.02172	0.00432	0.0226	0.07053	0.05551	0.02172	0.00432	0.00151	0.31	11.58	9.12	0.56	0.11	21.68	0.53	22.21
263	583881.42	4138738.21	1.5	0.01552	0.04842	0.0721	0.03811	0.00784	0.01552	0.04842	0.0721	0.03811	0.00784	0.00251	0.21	7.95	11.84	0.99	0.20	21.19	0.88	22.07
246	583806.79	4138830.9	1.5	0.02239	0.06986	0.0536	0.02058	0.00408	0.02239	0.06986	0.0536	0.02058	0.00408	0.00139	0.30	11.47	8.80	0.53	0.11	21.22	0.49	21.71
137	583793.2	4138857.98	1.5	0.02146	0.06697	0.05246	0.02046	0.00407	0.02146	0.06697	0.05246	0.02046	0.00407	0.00084	0.29	11.00	8.62	0.53	0.11	20.54	0.29	20.84
241	583858.41	4138755.63	1.5	0.01562	0.04874	0.06188	0.03106	0.00636	0.01562	0.04874	0.06188	0.03106	0.00636	0.00206	0.21	8.01	10.16	0.80	0.16	19.35	0.72	20.07
240	583854.02	4138761.08	1.5	0.01596	0.0498	0.06109	0.03028	0.00619	0.01596	0.0498	0.06109	0.03028	0.00619	0.00197	0.22	8.18	10.03	0.78	0.16	19.37	0.69	20.06
242	583862.8	4138750.17	1.5	0.0153	0.04775	0.06255	0.03175	0.0065	0.0153	0.04775	0.06255	0.03175	0.0065	0.00214	0.21	7.84	10.27	0.82	0.17	19.31	0.75	20.06
239	583849.63	4138766.53	1.5	0.01632	0.05093	0.06021	0.02942	0.00601	0.01632	0.05093	0.06021	0.02942	0.00601	0.00189	0.22	8.37	9.89	0.76	0.16	19.39	0.66	20.05
243	583867.19	4138744.72	1.5	0.01501	0.04684	0.06309	0.03232	0.00663	0.01501	0.04684	0.06309	0.03232	0.00663	0.00222	0.20	7.69	10.36	0.84	0.17	19.27	0.78	20.04
238	583845.24	4138771.98	1.5	0.0167	0.05212	0.05924	0.02849	0.00581	0.0167	0.05212	0.05924	0.02849	0.00581	0.00182	0.23	8.56	9.73	0.74	0.15	19.40	0.64	20.04
237	583840.85	4138777.44	1.5	0.0171	0.05338	0.0582	0.02749	0.00559	0.0171	0.05338	0.0582	0.02749	0.00559	0.00177	0.23	8.77	9.56	0.71	0.14	19.41	0.62	20.03
236	583836.46	4138782.89	1.5	0.01751	0.05465	0.05707	0.02643	0.00536	0.01751	0.05465	0.05707	0.02643	0.00536	0.00173	0.24	8.98	9.37	0.68	0.14	19.41	0.61	20.02
244	583871.58	4138739.27	1.5	0.01474	0.046	0.06346	0.03277	0.00672	0.01474	0.046	0.06346	0.03277	0.00672	0.00228	0.20	7.56	10.42	0.85	0.17	19.20	0.80	20.00
235	583832.07	4138788.34	1.5	0.01792	0.05591	0.05587	0.02532	0.00513	0.01792	0.05591	0.05587	0.02532	0.00513	0.00169	0.24	9.18	9.18	0.65	0.13	19.39	0.59	19.98
234	583827.68	4138793.79	1.5	0.0183	0.05711	0.05458	0.02417	0.00488	0.0183	0.05711	0.05458	0.02417	0.00488	0.00165	0.25	9.38	8.96	0.62	0.13	19.34	0.58	19.92
245	583875.97	4138733.82	1.5	0.01449	0.04522	0.0636	0.03305	0.00679	0.01449	0.04522	0.0636	0.03305	0.00679	0.00232	0.20	7.43	10.45	0.85	0.18	19.10	0.81	19.91
136	583788.83	4138863.44	1.5	0.019	0.05928	0.04964	0.0203	0.00406	0.019	0.05928	0.04964	0.0203	0.00406	0.00069	0.26	9.74	8.15	0.52	0.10	18.78	0.24	19.02
233	583805.73	4138821.05	1.5	0.01881	0.05869	0.04694	0.01859	0.00371	0.01881	0.05869	0.04694	0.01859	0.00371	0.0013	0.26	9.64	7.71	0.48	0.10	18.18	0.46	18.64
119	583792.12	4138848.14	1.5	0.01858	0.05797	0.04579	0.01797	0.00358	0.01858	0.05797	0.04579	0.01797	0.00358	0.00086	0.25	9.52	7.52	0.46	0.09	17.85	0.30	18.15
228	583861.74	4138740.33	1.5	0.01394	0.0435	0.05552	0.02792	0.00572	0.01394	0.0435	0.05552	0.02792	0.00572	0.00203	0.19	7.14	9.12	0.72	0.15	17.32	0.71	18.03
232	583801.34	4138826.51	1.5	0.01834	0.05723	0.04515	0.0177	0.00352	0.01834	0.05723	0.04515	0.0177	0.00352	0.00118	0.25	9.40	7.42	0.46	0.09	17.61	0.41	18.03
229	583866.13	4138734.88	1.5	0.01372	0.0428	0.05596	0.02839	0.00581	0.01372	0.0428	0.05596	0.02839	0.00581	0.00209	0.19	7.03	9.19	0.73	0.15	17.29	0.73	18.02
230	583870.52	4138729.43	1.5	0.0135	0.04214	0.05623	0.02872	0.00589	0.0135	0.04214	0.05623	0.02872	0.00589	0.00214	0.18	6.92	9.24	0.74	0.15	17.24	0.75	17.99
227	583839.79	4138767.59	1.5	0.01522	0.0475	0.05159	0.02433	0.00495	0.01522	0.0475	0.05159	0.02433	0.00495	0.0017	0.21	7.80	8.47	0.63	0.13	17.24	0.60	17.84
226	583835.4	4138773.05	1.5	0.01549	0.04834	0.05056	0.02343	0.00476	0.01549	0.04834	0.05056	0.02343	0.00476	0.00165	0.21	7.94	8.30	0.61	0.12	17.18	0.58	17.76
225	583831.01	4138778.5	1.5	0.01574	0.04913	0.04946	0.0225	0.00456	0.01574	0.04913	0.04946	0.0225	0.00456	0.0016	0.21	8.07	8.12	0.58	0.12	17.11	0.56	17.67
224	583826.62	4138783.95	1.5	0.01597	0.04984	0.04829	0.02153	0.00435	0.01597	0.04984	0.04829	0.02153	0.00435	0.00156	0.22	8.19	7.93	0.56	0.11	17.00	0.55	17.55
231	583796.95	4138831.96	1.5	0.0176	0.05491	0.04325	0.01693	0.00337	0.0176	0.05491	0.04325	0.01693	0.00337	0.00104	0.24	9.02	7.10	0.44	0.09	16.89	0.36	17.25
135	583784.45	4138868.91	1.5	0.01635	0.05101	0.04667	0.02016	0.00406	0.01635	0.05101	0.04667	0.02016	0.00406	0.00058	0.22	8.38	7.67	0.52	0.10	16.89	0.20	17.10
118	583787.74	4138853.6	1.5	0.01678	0.05235	0.04337	0.0176	0.00352	0.01678	0.05235	0.04337	0.0176	0.00352	0.00072	0.23	8.60	7.12	0.46	0.09	16.50	0.25	16.75
219	583860.68	4138730.49	1.5	0.01272	0.03971	0.04949	0.02468	0.00505	0.01272	0.03971	0.04949	0.02468	0.00505	0.00192	0.17	6.52	8.13	0.64	0.13	15.59	0.67	16.27
220	583865.07	4138725.04	1.5	0.01255	0.03918	0.04985	0.02504	0.00513	0.01255	0.03918	0.04985	0.02504	0.00513	0.00197	0.17	6.44	8.19	0.65	0.13	15.57	0.69	16.26
218	583856.29	4138735.94	1.5	0.0129	0.04025	0.04899	0.02421	0.00495	0.0129	0.04025	0.04899	0.02421	0.00495	0.00186	0.18	6.61	8.05	0.63	0.13	15.59	0.65	16.24
217	583834.34	4138763.2	1.5	0.01378	0.04301	0.04505	0.02089	0.00424	0.01378	0.04301	0.04505	0.02089	0.00424	0.00157	0.19	7.06	7.40	0.54	0.11	15.30	0.55	15.85
216	583829.95	4138768.66	1.5	0.01393	0.04348	0.04404	0.02009	0.00407	0.01393	0.04348	0.04404	0.02009	0.00407	0.00152	0.19	7.14	7.23	0.52	0.11	15.19	0.53	15.72

223	583800.28	4138816.66	1.5	0.01559	0.04865	0.03977	0.01599	0.00319		0.01559	0.04865	0.03977	0.01599	0.00319		0.00112	0.21	7.99	6.53	0.41	0.08	15.23	0.39	15.62
215	583825.56	4138774.11	1.5	0.01405	0.04386	0.04297	0.01928	0.0039		0.01405	0.04386	0.04297	0.01928	0.0039		0.00147	0.19	7.20	7.06	0.50	0.10	15.05	0.52	15.57
214	583821.17	4138779.56	1.5	0.01414	0.04411	0.04184	0.01845	0.00372		0.01414	0.04411	0.04184	0.01845	0.00372		0.00142	0.19	7.24	6.87	0.48	0.10	14.88	0.50	15.38
117	583783.36	4138859.07	1.5	0.01478	0.04611	0.04084	0.01731	0.00348		0.01478	0.04611	0.04084	0.01731	0.00348		0.00061	0.20	7.57	6.71	0.45	0.09	15.02	0.21	15.23
134	583780.08	4138874.37	1.5	0.01368	0.04269	0.04358	0.01996	0.00405		0.01368	0.04269	0.04358	0.01996	0.00405		0.0005	0.19	7.01	7.16	0.52	0.10	14.98	0.18	15.15
222	583795.89	4138822.12	1.5	0.01501	0.04684	0.0381	0.01527	0.00305		0.01501	0.04684	0.0381	0.01527	0.00305		0.00101	0.20	7.69	6.26	0.39	0.08	14.63	0.35	14.98
210	583859.61	4138720.65	1.5	0.01164	0.03632	0.04431	0.02192	0.00448		0.01164	0.03632	0.04431	0.02192	0.00448		0.00181	0.16	5.97	7.28	0.57	0.12	14.08	0.63	14.72
100	583786.65	4138843.76	1.5	0.01465	0.0457	0.03801	0.01547	0.00309		0.01465	0.0457	0.03801	0.01547	0.00309		0.00074	0.20	7.51	6.24	0.40	0.08	14.43	0.26	14.69
209	583855.22	4138726.1	1.5	0.01177	0.03672	0.04389	0.02154	0.0044		0.01177	0.03672	0.04389	0.02154	0.0044		0.00176	0.16	6.03	7.21	0.56	0.11	14.07	0.62	14.69
208	583850.83	4138731.55	1.5	0.01189	0.03711	0.04335	0.02108	0.0043		0.01189	0.03711	0.04335	0.02108	0.0043		0.00171	0.16	6.10	7.12	0.55	0.11	14.03	0.60	14.63
221	583791.5	4138827.57	1.5	0.01424	0.04443	0.03634	0.01462	0.00292		0.01424	0.04443	0.03634	0.01462	0.00292		0.00089	0.19	7.30	5.97	0.38	0.08	13.91	0.31	14.23
207	583828.88	4138758.81	1.5	0.01241	0.03873	0.03944	0.01804	0.00366		0.01241	0.03873	0.03944	0.01804	0.00366		0.00144	0.17	6.36	6.48	0.47	0.09	13.57	0.50	14.07
206	583824.49	4138764.27	1.5	0.01246	0.03889	0.03847	0.01734	0.00351		0.01246	0.03889	0.03847	0.01734	0.00351		0.00139	0.17	6.39	6.32	0.45	0.09	13.41	0.49	13.90
205	583820.1	4138769.72	1.5	0.01248	0.03894	0.03744	0.01663	0.00336		0.01248	0.03894	0.03744	0.01663	0.00336		0.00134	0.17	6.40	6.15	0.43	0.09	13.23	0.47	13.70
116	583778.99	4138864.53	1.5	0.0127	0.03962	0.03821	0.017	0.00344		0.0127	0.03962	0.03821	0.017	0.00344		0.00052	0.17	6.51	6.28	0.44	0.09	13.48	0.18	13.67
99	583782.28	4138849.23	1.5	0.01315	0.04105	0.03585	0.01506	0.00302		0.01315	0.04105	0.03585	0.01506	0.00302		0.00063	0.18	6.74	5.89	0.39	0.08	13.28	0.22	13.50
204	583815.71	4138775.17	1.5	0.01245	0.03884	0.03636	0.01591	0.00321		0.01245	0.03884	0.03636	0.01591	0.00321		0.00129	0.17	6.38	5.97	0.41	0.08	13.02	0.45	13.47
199	583854.16	4138716.26	1.5	0.01076	0.03359	0.03949	0.01925	0.00393		0.01076	0.03359	0.03949	0.01925	0.00393		0.00167	0.15	5.52	6.49	0.50	0.10	12.75	0.59	13.33
198	583849.77	4138721.71	1.5	0.01085	0.03385	0.03903	0.01888	0.00385		0.01085	0.03385	0.03903	0.01888	0.00385		0.00162	0.15	5.56	6.41	0.49	0.10	12.71	0.57	13.27
133	583775.7	4138879.83	1.5	0.01112	0.03472	0.04035	0.01959	0.00399		0.01112	0.03472	0.04035	0.01959	0.00399		0.00044	0.15	5.70	6.63	0.51	0.10	13.09	0.15	13.25
197	583845.38	4138727.16	1.5	0.01093	0.0341	0.03847	0.01844	0.00376		0.01093	0.0341	0.03847	0.01844	0.00376		0.00157	0.15	5.60	6.32	0.48	0.10	12.64	0.55	13.19
213	583794.83	4138812.27	1.5	0.01293	0.04036	0.0338	0.01382	0.00277		0.01293	0.04036	0.0338	0.01382	0.00277		0.00097	0.18	6.63	5.55	0.36	0.07	12.79	0.34	13.13
212	583790.44	4138817.73	1.5	0.01232	0.03846	0.03226	0.0132	0.00264		0.01232	0.03846	0.03226	0.0132	0.00264		0.00087	0.17	6.32	5.30	0.34	0.07	12.19	0.30	12.50
196	583823.43	4138754.42	1.5	0.01113	0.03474	0.03463	0.01568	0.00317		0.01113	0.03474	0.03463	0.01568	0.00317		0.00132	0.15	5.71	5.69	0.41	0.08	12.03	0.46	12.50
195	583819.04	4138759.88	1.5	0.0111	0.03465	0.0337	0.01506	0.00305		0.0111	0.03465	0.0337	0.01506	0.00305		0.00127	0.15	5.69	5.54	0.39	0.08	11.85	0.45	12.29
98	583777.9	4138854.69	1.5	0.01155	0.03605	0.0336	0.01467	0.00296		0.01155	0.03605	0.0336	0.01467	0.00296		0.00055	0.16	5.92	5.52	0.38	0.08	12.05	0.19	12.25
115	583774.61	4138869.99	1.5	0.01065	0.03322	0.03549	0.01661	0.00337		0.01065	0.03322	0.03549	0.01661	0.00337		0.00046	0.14	5.46	5.83	0.43	0.09	11.95	0.16	12.11
185	583848.71	4138711.87	1.5	0.00993	0.03097	0.03528	0.01698	0.00346		0.00993	0.03097	0.03528	0.01698	0.00346		0.00154	0.14	5.09	5.79	0.44	0.09	11.54	0.54	12.08
194	583814.65	4138765.33	1.5	0.01104	0.03444	0.03272	0.01444	0.00292		0.01104	0.03444	0.03272	0.01444	0.00292		0.00122	0.15	5.66	5.37	0.37	0.08	11.63	0.43	12.06
184	583844.32	4138717.32	1.5	0.00997	0.03112	0.0348	0.01662	0.00338		0.00997	0.03112	0.0348	0.01662	0.00338		0.00149	0.14	5.11	5.72	0.43	0.09	11.48	0.52	12.00
86	583781.19	4138839.39	1.5	0.01164	0.03632	0.03165	0.01328	0.00267		0.01164	0.03632	0.03165	0.01328	0.00267		0.00065	0.16	5.97	5.20	0.34	0.07	11.73	0.23	11.96
183	583839.93	4138722.77	1.5	0.01001	0.03124	0.03423	0.0162	0.0033		0.01001	0.03124	0.03423	0.0162	0.0033		0.00145	0.14	5.13	5.62	0.42	0.09	11.39	0.51	11.90
211	583786.05	4138823.18	1.5	0.01158	0.03615	0.03066	0.01264	0.00253		0.01158	0.03615	0.03066	0.01264	0.00253		0.00077	0.16	5.94	5.04	0.33	0.07	11.52	0.27	11.79
193	583810.26	4138770.78	1.5	0.01093	0.0341	0.0317	0.01382	0.00279		0.01093	0.0341	0.0317	0.01382	0.00279		0.00116	0.15	5.60	5.21	0.36	0.07	11.39	0.41	11.79
182	583835.54	4138728.22	1.5	0.01004	0.03132	0.0336	0.01575	0.0032		0.01004	0.03132	0.0336	0.01575	0.0032		0.0014	0.14	5.14	5.52	0.41	0.08	11.29	0.49	11.78
181	583831.15	4138733.68	1.5	0.01005	0.03135	0.0329	0.01527	0.0031		0.01005	0.03135	0.0329	0.01527	0.0031		0.00135	0.14	5.15	5.40	0.39	0.08	11.16	0.47	11.64
203	583793.76	4138802.43	1.5	0.01127	0.03516	0.03021	0.01256	0.00252		0.01127	0.03516	0.03021	0.01256	0.00252		0.00093	0.15	5.77	4.96	0.32	0.07	11.28	0.33	11.61
180	583826.76	4138739.13	1.5	0.01004	0.03133	0.03215	0.01476	0.00299		0.01004	0.03133	0.03215	0.01476	0.00299		0.00131	0.14	5.15	5.28	0.38	0.08	11.02	0.46	11.48
132	583771.33	4138885.3	1.5	0.00882	0.02752	0.03705	0.01898	0.00389		0.00882	0.02752	0.03705	0.01898	0.00389		0.00041	0.12	4.52	6.09	0.49	0.10	11.32	0.14	11.46
179	583822.37	4138744.58	1.5	0.01001	0.03123	0.03135	0.01424	0.00288		0.01001	0.03123	0.03135	0.01424	0.00288		0.00126	0.14	5.13	5.15	0.37	0.07	10.86	0.44	11.30
192	583801.48	4138781.69	1.5	0.01055	0.03292	0.02953	0.01261	0.00254		0.01055	0.03292	0.02953	0.01261	0.00254		0.00104	0.14	5.41	4.85	0.33	0.07	10.79	0.36	11.16
178	583817.98	4138750.03	1.5	0.00995	0.03106	0.0305	0.0137	0.00277		0.00995	0.03106	0.0305	0.0137	0.00277		0.00121	0.14	5.10	5.01	0.35	0.07	10.67	0.42	11.10
202	583789.37	4138807.88	1.5	0.01077	0.0336	0.02884	0.01199	0.0024		0.01077	0.0336	0.02884	0.01199	0.0024		0.00085	0.15	5.52	4.74	0.31	0.06	10.77	0.30	11.07
97	583773.52	4138860.15	1.5	0.00993	0.03098	0.03129	0.01425	0.00289		0.00993	0.03098	0.03129	0.01425	0.00289		0.00048	0.14	5.09	5.14	0.37	0.07	10.81	0.17	10.97
166	583843.26	4138707.48	1.5	0.00913	0.02849	0.03159	0.01503	0.00306		0.00913	0.02849	0.03159	0.01503	0.00306		0.00142	0.12	4.68	5.19	0.39	0.08	10.46	0.50	10.96
85	583776.81	4138844.85	1.5	0.01041	0.03248	0.02972	0.01284	0.00259		0.01041	0.03248	0.02972	0.01284	0.00259		0.00056	0.14	5.33	4.88	0.33	0.07	10.76	0.20	10.95
177	583813.59	4138755.49	1.5	0.00987	0.03079	0.02961	0.01316	0.00266		0.00987	0.03079	0.02961	0.01316	0.00266		0.00116	0.13	5.06	4.86	0.34	0.07	10.46	0.41	10.87
165	583838.87	4138712.93	1.5	0.00914	0.02854	0.0311	0.01468	0.00299		0.00914	0.02854	0.0311	0.01468	0.00299		0.00138	0.12	4.69	5.11	0.38	0.08	10.38	0.48	10.86
191	583797.09	4138787.14	1.5	0.01027	0.03204	0.02838	0.01203	0.00242		0.01027	0.03204	0.02838	0.01203	0.00242		0.00097	0.14	5.26	4.66	0.31	0.06	10.44	0.34	10.78
164	583834.48	4138718.38	1.5	0.00915	0.02854	0.03053	0.0143	0.00291		0.00915	0.02854	0.03053	0.0143	0.00291		0.00133	0.12	4.69	5.01	0.37	0.08	10.27	0.47	10.74
176	583809.2	4138760.94	1.5	0.00974	0.0304	0.02869	0.01261	0.00255		0.00974	0.0304	0.02869	0.01261	0.00255		0.00111	0.13	4.99	4.71	0.33	0.07	10.23	0.39	10.62
114	583770.24	4138875.46	1.5	0.00873	0.02725	0.03272	0.01608	0.00328		0.00873	0.02725	0.03272	0.01608	0.00328		0.00041	0.12	4.48	5.37	0.42	0.08	10.47	0.14	10.61
163	583830.09	4138723.83	1.5	0.00913	0.0285	0.02991	0.01388	0.00282		0.00913	0.0285	0.02991	0.01388	0.00282		0.00129	0.12	4.68	4.91	0.36	0.07	10.15	0.45	10.60
201	583784.98	4138813.34	1.5	0.01018	0.03176	0.02744	0.01145	0.0023		0.01018	0.03176	0.02744	0.01145	0.0023		0.00076	0.14	5.22	4.51	0.30	0.06	10.22	0.27	10.48
162	583825.7	4138729.29	1.5	0.0091	0.0284	0.02923	0.01344	0.00273		0.0091	0.0284	0.02923	0.01344	0.00273		0.00125	0.12	4.66	4.80	0.35	0.07	10.01	0.44	10.45
190	583792.7	4138792.59	1.5	0.00992	0.03095	0.0272	0.01147	0.0023		0.00992	0.03095	0.0272	0.01147	0.0023		0.00089	0.13	5.08	4.47	0.30	0.06	10.04	0.31	10.35
175	583804.81	4138766.39	1.5	0.00958	0.02989	0.02772	0.01207	0.00243		0.00958	0.02989	0.02772	0.01207	0.00243		0.00105	0.13	4.91	4.55	0.31	0.06	9.97	0.37	10.34
161	583821.31	4138734.74	1.5	0.00905	0.02825	0.02851	0.01298	0.00263		0.00905	0.02825	0.02851	0.01298	0.00263		0.0012	0.12	4.64	4.68	0.34	0.07	9.85	0.42	10.27
160	583816.92	4138740.19	1.5	0.00898	0.02802	0.02774	0.01251	0.00253		0.00898	0.02802	0.02774	0.01251	0.00253		0.00116	0.12	4.60	4.56	0.32	0.07	9.67	0.41	10.08
174	583800.42	4138771.84	1.5	0.00937	0.02925	0.02673	0.01154	0.00232		0.00937	0.02925	0.02673	0.01154	0.00232		0.00099	0.13	4.80	4.39	0.30	0.06	9.68	0.35	10.03
150	583837.8	4138703.09	1.5	0.00838	0.02615	0.02835	0.01335	0.00272		0.00838	0.02615	0.02835	0.01335	0.00272		0.00131	0.11	4.30	4.66	0.35	0.07	9.48	0.46	9.94
84	583772.44	4138850.32	1.5	0.00914	0.02852	0.02775	0.01241	0.00251		0.00914	0.02852	0.02775	0.01241	0.00251		0.0005	0.12	4.68	4.56	0.32	0.06	9.75	0.18	9.93
189	583788.31	4138798.04	1.5	0.0095	0.02964	0.02598	0.01094	0.0022		0.0095	0.02964	0.02598	0.01094	0.0022		0.00082	0.13	4.87	4.27	0.28	0.06	9.60	0.29	9.89
159	583812.53	4138745.64	1.5	0.00888	0.02771	0.02694	0.01203	0.00243		0.00888	0.02771	0.02694	0.01203	0.00243		0.00111	0.12	4.55	4.42	0.31	0.06	9.47	0.39	9.86
200	583780.59	4138818.79	1.5	0.0095	0.02964	0.02599	0.01094	0.0022		0.0095	0.02964	0.02599	0.01094	0.0022		0.00068	0.13	4.87	4.27	0.28	0.06	9.61	0.24	9.84
131	583766.95	4138890.76	1.5	0.00687	0.02145	0.03365	0.01805	0.00372		0.00687	0.02145	0.03365	0.01805	0.00372		0.00038	0.09	3.52	5.53	0.47	0.10	9.71	0.13	9.84
76	583775.72	4138835.01	1.5	0.00935	0.02918	0.02649	0.01139	0.00229		0.00935	0.02918	0.02649	0.01139	0.00229		0.00058	0.13	4.79	4.35	0.29	0.06	9.62	0.20	9.83
149	583833.41	4138708.54	1.5	0.00837	0.0261	0.02784	0.01302	0.00265		0.00837	0.0261	0.02784	0.01302	0.00265		0.00127	0.11	4.29	4.57	0.34	0.07	9.38	0.45	9.82
96	583769.15	4138865.62	1.5	0.00837	0.02612	0.02894	0.01377	0.0028		0.00837	0.02612	0.02894	0.01377	0.0028		0.00043	0.11	4.29	4.75	0.36	0.07	9.59	0.15	9.74
148	583829.02	4138713.99	1.5	0.00834	0.02601	0.02729	0.01266	0.00257		0.00834	0.02601	0.02729	0.01266	0.00257		0.00123	0.11	4.27	4.48	0.33	0.07	9.26	0.43	9.69
173	583796.03	4138777.3	1.5	0.00912	0.02845	0.0257	0.01102	0.00222		0.00912	0.02845	0.0257	0.01102	0.00222		0.00093	0.12	4.67	4.22	0.28	0.06	9.36	0.33	9.69
158	583808.14	4138751.1	1.5	0.00875	0.02731	0.0261	0.01155	0.00233		0.00875	0.02731	0.0261	0.01155	0.00233		0.00106	0.12	4.49	4.29	0.30	0.06	9.25	0.37	9.62

147	583824.63	4138719.44	1.5	0.00829	0.02587	0.02668	0.01228	0.00249		0.00829	0.02587	0.02668	0.01228	0.00249		0.00119	0.11	4.25	4.38	0.32	0.06	9.13	0.42	9.54
188	583783.92	4138803.49	1.5	0.00901	0.02813	0.02473	0.01043	0.0021		0.00901	0.02813	0.02473	0.01043	0.0021		0.00075	0.12	4.62	4.06	0.27	0.05	9.13	0.26	9.39
146	583820.24	4138724.9	1.5	0.00823	0.02568	0.02603	0.01188	0.00241		0.00823	0.02568	0.02603	0.01188	0.00241		0.00115	0.11	4.22	4.28	0.31	0.06	8.97	0.40	9.38
157	583803.75	4138756.55	1.5	0.00859	0.02681	0.02523	0.01107	0.00223		0.00859	0.02681	0.02523	0.01107	0.00223		0.001	0.12	4.40	4.14	0.29	0.06	9.01	0.35	9.36
172	583791.64	4138782.75	1.5	0.00881	0.0275	0.02464	0.01051	0.00211		0.00881	0.0275	0.02464	0.01051	0.00211		0.00086	0.12	4.52	4.05	0.27	0.05	9.01	0.30	9.31
113	583765.86	4138880.92	1.5	0.00703	0.02194	0.02988	0.01536	0.00315		0.00703	0.02194	0.02988	0.01536	0.00315		0.00038	0.10	3.60	4.91	0.40	0.08	9.09	0.13	9.22
145	583815.85	4138730.35	1.5	0.00815	0.02542	0.02534	0.01147	0.00232		0.00815	0.02542	0.02534	0.01147	0.00232		0.0011	0.11	4.18	4.16	0.30	0.06	8.80	0.39	9.19
156	583799.36	4138762	1.5	0.0084	0.0262	0.02433	0.0106	0.00214		0.0084	0.0262	0.02433	0.0106	0.00214		0.00095	0.11	4.30	4.00	0.27	0.06	8.74	0.33	9.08
144	583811.46	4138735.8	1.5	0.00804	0.0251	0.02461	0.01104	0.00223		0.00804	0.0251	0.02461	0.01104	0.00223		0.00106	0.11	4.12	4.04	0.29	0.06	8.62	0.37	8.99
75	583771.35	4138840.48	1.5	0.00835	0.02606	0.02479	0.01095	0.00221		0.00835	0.02606	0.02479	0.01095	0.00221		0.00051	0.11	4.28	4.07	0.28	0.06	8.81	0.18	8.98
171	583787.25	4138788.2	1.5	0.00846	0.02639	0.02355	0.01002	0.00202		0.00846	0.02639	0.02355	0.01002	0.00202		0.0008	0.12	4.33	3.87	0.26	0.05	8.63	0.28	8.91
187	583779.53	4138808.95	1.5	0.00847	0.02643	0.02345	0.00995	0.002		0.00847	0.02643	0.02345	0.00995	0.002		0.00068	0.12	4.34	3.85	0.26	0.05	8.62	0.24	8.86
155	583794.97	4138767.45	1.5	0.00817	0.02548	0.0234	0.01013	0.00204		0.00817	0.02548	0.0234	0.01013	0.00204		0.00089	0.11	4.19	3.84	0.26	0.05	8.45	0.31	8.77
143	583807.07	4138741.25	1.5	0.00791	0.0247	0.02385	0.01062	0.00215		0.00791	0.0247	0.02385	0.01062	0.00215		0.00101	0.11	4.06	3.92	0.27	0.06	8.41	0.35	8.77
95	583764.77	4138871.08	1.5	0.00693	0.02163	0.02655	0.01317	0.00269		0.00693	0.02163	0.02655	0.01317	0.00269		0.00039	0.09	3.55	4.36	0.34	0.07	8.42	0.14	8.55
142	583802.68	4138746.71	1.5	0.00776	0.02422	0.02306	0.01019	0.00206		0.00776	0.02422	0.02306	0.01019	0.00206		0.00096	0.11	3.98	3.79	0.26	0.05	8.19	0.34	8.52
170	583782.86	4138793.65	1.5	0.00805	0.02512	0.02244	0.00956	0.00192		0.00805	0.02512	0.02244	0.00956	0.00192		0.00073	0.11	4.13	3.69	0.25	0.05	8.22	0.26	8.47
130	583762.57	4138896.23	1.5	0.00537	0.01675	0.03021	0.01678	0.00347		0.00537	0.01675	0.03021	0.01678	0.00347		0.00037	0.07	2.75	4.96	0.43	0.09	8.31	0.13	8.44
186	583775.14	4138814.4	1.5	0.00787	0.02455	0.02215	0.00949	0.00191		0.00787	0.02455	0.02215	0.00949	0.00191		0.00061	0.11	4.03	3.64	0.25	0.05	8.07	0.21	8.29
141	583798.29	4138752.16	1.5	0.00758	0.02365	0.02225	0.00976	0.00197		0.00758	0.02365	0.02225	0.00976	0.00197		0.00091	0.10	3.88	3.65	0.25	0.05	7.95	0.32	8.26
67	583770.26	4138830.64	1.5	0.00761	0.02375	0.02231	0.00978	0.00197		0.00761	0.02375	0.02231	0.00978	0.00197		0.00052	0.10	3.90	3.66	0.25	0.05	7.97	0.18	8.15
74	583766.97	4138845.94	1.5	0.00734	0.02289	0.02306	0.01049	0.00213		0.00734	0.02289	0.02306	0.01049	0.00213		0.00046	0.10	3.76	3.79	0.27	0.06	7.97	0.16	8.13
169	583778.47	4138799.1	1.5	0.0076	0.02371	0.0213	0.00911	0.00183		0.0076	0.02371	0.0213	0.00911	0.00183		0.00067	0.10	3.89	3.50	0.24	0.05	7.78	0.23	8.01
140	583793.9	4138757.61	1.5	0.00737	0.02299	0.02141	0.00934	0.00188		0.00737	0.02299	0.02141	0.00934	0.00188		0.00086	0.10	3.78	3.52	0.24	0.05	7.68	0.30	7.98
112	583761.49	4138886.39	1.5	0.00561	0.01752	0.02703	0.01444	0.00297		0.00561	0.01752	0.02703	0.01444	0.00297		0.00036	0.08	2.88	4.44	0.37	0.08	7.84	0.13	7.97
139	583789.51	4138763.06	1.5	0.00713	0.02224	0.02055	0.00893	0.0018		0.00713	0.02224	0.02055	0.00893	0.0018		0.00081	0.10	3.65	3.38	0.23	0.05	7.40	0.28	7.69
168	583774.08	4138804.56	1.5	0.00711	0.02217	0.02015	0.00867	0.00175		0.00711	0.02217	0.02015	0.00867	0.00175		0.00061	0.10	3.64	3.31	0.22	0.05	7.32	0.21	7.53
94	583760.4	4138876.55	1.5	0.00567	0.0177	0.02417	0.01244	0.00255		0.00567	0.0177	0.02417	0.01244	0.00255		0.00036	0.08	2.91	3.97	0.32	0.07	7.34	0.13	7.47
66	583765.88	4138836.1	1.5	0.00679	0.0212	0.02081	0.00934	0.00189		0.00679	0.0212	0.02081	0.00934	0.00189		0.00047	0.09	3.48	3.42	0.24	0.05	7.28	0.16	7.45
154	583777.41	4138789.26	1.5	0.00686	0.02142	0.01947	0.00838	0.00169		0.00686	0.02142	0.01947	0.00838	0.00169		0.00066	0.09	3.52	3.20	0.22	0.04	7.07	0.23	7.30
129	583758.2	4138901.69	1.5	0.00431	0.01346	0.02678	0.01519	0.00314		0.00431	0.01346	0.02678	0.01519	0.00314		0.00036	0.06	2.21	4.40	0.39	0.08	7.14	0.13	7.27
167	583769.69	4138810.01	1.5	0.00658	0.02053	0.01899	0.00826	0.00166		0.00658	0.02053	0.01899	0.00826	0.00166		0.00055	0.09	3.37	3.12	0.21	0.04	6.84	0.19	7.03
153	583773.02	4138794.71	1.5	0.00645	0.02013	0.01844	0.00797	0.00161		0.00645	0.02013	0.01844	0.00797	0.00161		0.0006	0.09	3.31	3.03	0.21	0.04	6.67	0.21	6.88
111	583757.11	4138891.85	1.5	0.0045	0.01405	0.02418	0.01328	0.00274		0.0045	0.01405	0.02418	0.01328	0.00274		0.00034	0.06	2.31	3.97	0.34	0.07	6.75	0.12	6.87
57	583764.8	4138826.26	1.5	0.00628	0.01959	0.01891	0.00842	0.0017		0.00628	0.01959	0.01891	0.00842	0.0017		0.00048	0.09	3.22	3.11	0.22	0.04	6.67	0.17	6.84
65	583761.51	4138841.56	1.5	0.00598	0.01868	0.01931	0.0089	0.00181		0.00598	0.01868	0.01931	0.0089	0.00181		0.00042	0.08	3.07	3.17	0.23	0.05	6.60	0.15	6.75
93	583756.02	4138882.01	1.5	0.00462	0.01443	0.02179	0.01157	0.00238		0.00462	0.01443	0.02179	0.01157	0.00238		0.00034	0.06	2.37	3.58	0.30	0.06	6.37	0.12	6.49
152	583768.63	4138800.17	1.5	0.00602	0.01877	0.01741	0.00758	0.00153		0.00602	0.01877	0.01741	0.00758	0.00153		0.00055	0.08	3.08	2.86	0.20	0.04	6.26	0.19	6.45
128	583753.82	4138907.15	1.5	0.00364	0.01135	0.02337	0.01335	0.00276		0.00364	0.01135	0.02337	0.01335	0.00276		0.00035	0.05	1.86	3.84	0.35	0.07	6.17	0.12	6.29
56	583760.42	4138831.72	1.5	0.00561	0.01751	0.0176	0.008	0.00162		0.00561	0.01751	0.0176	0.008	0.00162		0.00043	0.08	2.88	2.89	0.21	0.04	6.09	0.15	6.24
64	583757.13	4138847.03	1.5	0.00521	0.01624	0.01782	0.00844	0.00172		0.00521	0.01624	0.01782	0.00844	0.00172		0.00038	0.07	2.67	2.93	0.22	0.04	5.93	0.13	6.06
151	583764.24	4138805.62	1.5	0.00556	0.01734	0.01638	0.0072	0.00145		0.00556	0.01734	0.01638	0.0072	0.00145		0.0005	0.08	2.85	2.69	0.19	0.04	5.84	0.18	6.01
110	583752.73	4138897.31	1.5	0.0037	0.01154	0.02138	0.01195	0.00247		0.0037	0.01154	0.02138	0.01195	0.00247		0.00033	0.05	1.90	3.51	0.31	0.06	5.83	0.12	5.95
55	583756.05	4138837.19	1.5	0.00496	0.01547	0.01631	0.00759	0.00154		0.00496	0.01547	0.01631	0.00759	0.00154		0.00039	0.07	2.54	2.68	0.20	0.04	5.52	0.14	5.66
92	583751.65	4138887.47	1.5	0.0038	0.01185	0.01947	0.01057	0.00218		0.0038	0.01185	0.01947	0.01057	0.00218		0.00032	0.05	1.95	3.20	0.27	0.06	5.53	0.11	5.64
127	583749.45	4138912.62	1.5	0.00322	0.01004	0.02009	0.01141	0.00236		0.00322	0.01004	0.02009	0.01141	0.00236		0.00034	0.04	1.65	3.30	0.30	0.06	5.35	0.12	5.47
83	583750.56	4138877.63	1.5	0.00386	0.01204	0.01773	0.00934	0.00192		0.00386	0.01204	0.01773	0.00934	0.00192		0.00032	0.05	1.98	2.91	0.24	0.05	5.23	0.11	5.35
36	583754.96	4138827.35	1.5	0.0047	0.01465	0.01501	0.00688	0.0014		0.0047	0.01465	0.01501	0.00688	0.0014		0.0004	0.06	2.41	2.47	0.18	0.04	5.15	0.14	5.29
109	583748.36	4138902.78	1.5	0.00315	0.00983	0.01868	0.0105	0.00217		0.00315	0.00983	0.01868	0.0105	0.00217		0.00032	0.04	1.61	3.07	0.27	0.06	5.05	0.11	5.17
54	583751.67	4138842.65	1.5	0.00434	0.01353	0.01503	0.00715	0.00146		0.00434	0.01353	0.01503	0.00715	0.00146		0.00036	0.06	2.22	2.47	0.18	0.04	4.97	0.13	5.10
91	583747.27	4138892.94	1.5	0.00318	0.00992	0.01721	0.00947	0.00196		0.00318	0.00992	0.01721	0.00947	0.00196		0.00031	0.04	1.63	2.83	0.24	0.05	4.79	0.11	4.90
35	583750.58	4138832.81	1.5	0.00416	0.013	0.01388	0.0065	0.00132		0.00416	0.013	0.01388	0.0065	0.00132		0.00037	0.06	2.14	2.28	0.17	0.03	4.67	0.13	4.80
126	583745.07	4138918.08	1.5	0.00294	0.00918	0.01701	0.00951	0.00196		0.00294	0.00918	0.01701	0.00951	0.00196		0.00034	0.04	1.51	2.79	0.25	0.05	4.64	0.12	4.76
82	583746.18	4138883.1	1.5	0.00323	0.01007	0.01584	0.0085	0.00175		0.00323	0.01007	0.01584	0.0085	0.00175		0.0003	0.04	1.65	2.60	0.22	0.05	4.56	0.11	4.67
53	583747.29	4138848.12	1.5	0.00376	0.01174	0.01377	0.00671	0.00137		0.00376	0.01174	0.01377	0.00671	0.00137		0.00033	0.05	1.93	2.26	0.17	0.04	4.45	0.12	4.57
398	583793.75	4138663.96	1.5	0.00398	0.01243	0.01239	0.00561	0.00114		0.00398	0.01243	0.01239	0.00561	0.00114		0.00073	0.05	2.04	2.04	0.15	0.03	4.31	0.26	4.56
18	583749.49	4138822.97	1.5	0.00398	0.01242	0.01289	0.00595	0.00121		0.00398	0.01242	0.01289	0.00595	0.00121		0.00037	0.05	2.04	2.12	0.15	0.03	4.40	0.13	4.53
108	583743.98	4138908.24	1.5	0.00279	0.0087	0.01612	0.00901	0.00186		0.00279	0.0087	0.01612	0.00901	0.00186		0.00032	0.04	1.43	2.65	0.23	0.05	4.40	0.11	4.51
73	583745.09	4138873.26	1.5	0.00326	0.01018	0.0146	0.00763	0.00157		0.00326	0.01018	0.0146	0.00763	0.00157		0.0003	0.04	1.67	2.40	0.20	0.04	4.35	0.11	4.46
393	583789.44	4138669.47	1.5	0.00389	0.01215	0.01206	0.00544	0.0011		0.00389	0.01215	0.01206	0.00544	0.0011		0.0007	0.05	2.00	1.98	0.14	0.03	4.20	0.25	4.44
34	583746.21	4138838.28	1.5	0.00366	0.01143	0.01279	0.00611	0.00124		0.00366	0.01143	0.01279	0.00611	0.00124		0.00034	0.05	1.88	2.10	0.16	0.03	4.22	0.12	4.34
90	583742.89	4138898.4	1.5	0.00274	0.00855	0.01508	0.00833	0.00172		0.00274	0.00855	0.01508	0.00833	0.00172		0.0003	0.04	1.40	2.48	0.22	0.04	4.18	0.11	4.28
388	583781.9	4138680.41	1.5	0.00375	0.0117	0.0115	0.00517	0.00105		0.00375	0.0117	0.0115	0.00517	0.00105		0.00066	0.05	1.92	1.89	0.13	0.03	4.02	0.23	4.25
399	583788.23	4138659.65	1.5	0.00365	0.01138	0.01131	0.00511	0.00103		0.00365	0.01138	0.01131	0.00511	0.00103		0.00068	0.05	1.87	1.86	0.13	0.03	3.94	0.24	4.17
125	583740.69	4138923.54	1.5	0.00274	0.00855	0.01427	0.00778	0.0016		0.00274	0.00855	0.01427	0.00778	0.0016		0.00033	0.04	1.40	2.34	0.20	0.04	4.03	0.12	4.14
383	583777.59	4138685.93	1.5	0.00364	0.01137	0.01113	0.00499	0.00101		0.00364	0.01137	0.01113	0.00499	0.00101		0.00063	0.05	1.87	1.83	0.13	0.03	3.90	0.22	4.12
17	583745.12	4138828.44	1.5	0.00355	0.01106	0.01192	0.0056	0.00114		0.00355	0.01106	0.01192	0.0056	0.00114		0.00034	0.05	1.82	1.96	0.14	0.03	4.00	0.12	4.12
81	583741.81	4138888.56	1.5	0.00275	0.00857	0.01404	0.00761	0.00157		0.00275	0.00857	0.01404	0.00761	0.00157		0.00029	0.04	1.41	2.31	0.20	0.04	3.99	0.10	4.09
52	583742.92	4138853.58	1.5	0.00325	0.01014	0.01256	0.00625	0.00128		0.00325	0.01014	0.01256	0.00625	0.00128		0.0003	0.04	1.67	2.06	0.16	0.03	3.97	0.11	4.07
394	583783.92	4138665.17	1.5	0.00356	0.01111	0.01099	0.00495	0.001		0.00356	0.01111	0.01099	0.00495	0.001		0.00066	0.05	1.82	1.81	0.13	0.03	3.83	0.23	4.06
107	583739.61	4138913.7	1.5	0.00254	0.00793	0.01379	0.0076	0.00157		0.00254	0.00793	0.01379	0.0076	0.00157		0.00031	0.03	1.30	2.26	0.20	0.04	3.84	0.11	3.95
72	583740.72	4138878.72	1.5	0.00277	0.00865	0.01306	0.00693	0.00143		0.00277	0.00865	0.01306	0.00693	0.00143		0.00028	0.04	1.42	2.15	0.18	0.04	3.82	0.10	3.92

33	583741.83	4138843.74	1.5	0.0032	0.00999	0.01172	0.00571	0.00116		0.0032	0.00999	0.01172	0.00571	0.00116		0.00031	0.04	1.64	1.92	0.15	0.03	3.79	0.11	3.90
389	583776.38	4138676.1	1.5	0.00342	0.01067	0.01046	0.0047	0.00095		0.00342	0.01067	0.01046	0.0047	0.00095		0.00062	0.05	1.75	1.72	0.12	0.02	3.66	0.22	3.88
400	583782.71	4138655.34	1.5	0.00334	0.01044	0.01034	0.00466	0.00094		0.00334	0.01044	0.01034	0.00466	0.00094		0.00064	0.05	1.71	1.70	0.12	0.02	3.60	0.22	3.83
63	583739.63	4138868.88	1.5	0.00279	0.00872	0.01218	0.00632	0.0013		0.00279	0.00872	0.01218	0.00632	0.0013		0.00028	0.04	1.43	2.00	0.16	0.03	3.67	0.10	3.77
384	583772.07	4138681.62	1.5	0.00332	0.01035	0.01011	0.00453	0.00092		0.00332	0.01035	0.01011	0.00453	0.00092		0.00059	0.05	1.70	1.66	0.12	0.02	3.55	0.21	3.75
378	583766.43	4138699.17	1.5	0.00333	0.01039	0.01007	0.00449	0.00091		0.00333	0.01039	0.01007	0.00449	0.00091		0.00056	0.05	1.71	1.65	0.12	0.02	3.55	0.20	3.74
16	583740.74	4138833.9	1.5	0.00314	0.00978	0.01098	0.00525	0.00107		0.00314	0.00978	0.01098	0.00525	0.00107		0.00032	0.04	1.61	1.80	0.14	0.03	3.62	0.11	3.73
395	583778.4	4138660.86	1.5	0.00326	0.01017	0.01004	0.00452	0.00091		0.00326	0.01017	0.01004	0.00452	0.00091		0.00062	0.04	1.67	1.65	0.12	0.02	3.50	0.22	3.72
124	583736.32	4138929.01	1.5	0.00258	0.00804	0.01196	0.00632	0.0013		0.00258	0.00804	0.01196	0.00632	0.0013		0.00033	0.04	1.32	1.96	0.16	0.03	3.52	0.12	3.63
51	583738.54	4138859.04	1.5	0.0028	0.00874	0.01139	0.00577	0.00118		0.0028	0.00874	0.01139	0.00577	0.00118		0.00028	0.04	1.44	1.87	0.15	0.03	3.52	0.10	3.62
373	583762.12	4138704.69	1.5	0.00321	0.01001	0.00968	0.00431	0.00087		0.00321	0.01001	0.00968	0.00431	0.00087		0.00053	0.04	1.64	1.59	0.11	0.02	3.41	0.19	3.60
80	583737.43	4138894.03	1.5	0.00239	0.00747	0.01235	0.00672	0.00138		0.00239	0.00747	0.01235	0.00672	0.00138		0.00028	0.03	1.23	2.03	0.17	0.04	3.50	0.10	3.60
390	583770.86	4138671.8	1.5	0.00312	0.00974	0.00954	0.00428	0.00087		0.00312	0.00974	0.00954	0.00428	0.00087		0.00058	0.04	1.60	1.57	0.11	0.02	3.34	0.20	3.55
401	583777.19	4138651.03	1.5	0.00307	0.00958	0.00947	0.00426	0.00086		0.00307	0.00958	0.00947	0.00426	0.00086		0.0006	0.04	1.57	1.56	0.11	0.02	3.30	0.21	3.51
32	583737.45	4138849.2	1.5	0.00279	0.0087	0.01069	0.0053	0.00108		0.00279	0.0087	0.01069	0.0053	0.00108		0.00029	0.04	1.43	1.76	0.14	0.03	3.39	0.10	3.49
106	583735.23	4138919.17	1.5	0.00236	0.00736	0.01174	0.00633	0.0013		0.00236	0.00736	0.01174	0.00633	0.0013		0.00031	0.03	1.21	1.93	0.16	0.03	3.37	0.11	3.48
71	583736.34	4138884.19	1.5	0.00239	0.00747	0.01161	0.00621	0.00128		0.00239	0.00747	0.01161	0.00621	0.00128		0.00027	0.03	1.23	1.91	0.16	0.03	3.36	0.09	3.45
385	583766.55	4138677.31	1.5	0.00302	0.00944	0.00921	0.00413	0.00083		0.00302	0.00944	0.00921	0.00413	0.00083		0.00056	0.04	1.55	1.51	0.11	0.02	3.23	0.20	3.43
396	583772.89	4138656.55	1.5	0.00299	0.00933	0.00918	0.00413	0.00084		0.00299	0.00933	0.00918	0.00413	0.00084		0.00058	0.04	1.53	1.51	0.11	0.02	3.21	0.20	3.41
379	583760.91	4138694.86	1.5	0.00302	0.00943	0.00914	0.00408	0.00082		0.00302	0.00943	0.00914	0.00408	0.00082		0.00053	0.04	1.55	1.50	0.11	0.02	3.22	0.19	3.40
298	583742.32	4138780.73	1.5	0.00304	0.00947	0.00932	0.00419	0.00085		0.00304	0.00947	0.00932	0.00419	0.00085		0.00038	0.04	1.56	1.53	0.11	0.02	3.26	0.13	3.39
15	583736.37	4138839.36	1.5	0.00276	0.00861	0.01007	0.0049	0.001		0.00276	0.00861	0.01007	0.0049	0.001		0.00029	0.04	1.41	1.65	0.13	0.03	3.26	0.10	3.36
368	583754.25	4138715.3	1.5	0.00298	0.0093	0.00897	0.00399	0.00081		0.00298	0.0093	0.00897	0.00399	0.00081		0.00049	0.04	1.53	1.47	0.10	0.02	3.17	0.17	3.34
62	583735.25	4138874.35	1.5	0.00241	0.00751	0.01092	0.00573	0.00118		0.00241	0.00751	0.01092	0.00573	0.00118		0.00027	0.03	1.23	1.79	0.15	0.03	3.24	0.09	3.33
374	583756.6	4138700.38	1.5	0.00291	0.00907	0.00878	0.00391	0.00079		0.00291	0.00907	0.00878	0.00391	0.00079		0.0005	0.04	1.49	1.44	0.10	0.02	3.09	0.18	3.27
391	583765.35	4138667.49	1.5	0.00285	0.00891	0.00872	0.00391	0.00079		0.00285	0.00891	0.00872	0.00391	0.00079		0.00055	0.04	1.46	1.43	0.10	0.02	3.06	0.19	3.25
402	583771.68	4138646.73	1.5	0.00282	0.00881	0.00868	0.00391	0.00079		0.00282	0.00881	0.00868	0.00391	0.00079		0.00057	0.04	1.45	1.43	0.10	0.02	3.03	0.20	3.23
123	583731.94	4138934.47	1.5	0.00243	0.0076	0.01015	0.00519	0.00106		0.00243	0.0076	0.01015	0.00519	0.00106		0.00033	0.03	1.25	1.67	0.13	0.03	3.11	0.12	3.23
50	583734.17	4138864.51	1.5	0.00242	0.00756	0.01029	0.00529	0.00109		0.00242	0.00756	0.01029	0.00529	0.00109		0.00027	0.03	1.24	1.69	0.14	0.03	3.13	0.09	3.22
363	583749.94	4138720.82	1.5	0.00285	0.00889	0.00857	0.00381	0.00077		0.00285	0.00889	0.00857	0.00381	0.00077		0.00046	0.04	1.46	1.41	0.10	0.02	3.02	0.16	3.19
297	583737.9	4138786.16	1.5	0.0028	0.00874	0.00873	0.00396	0.0008		0.0028	0.00874	0.00873	0.00396	0.0008		0.00036	0.04	1.44	1.43	0.10	0.02	3.03	0.13	3.16
397	583767.37	4138652.24	1.5	0.00274	0.00857	0.00842	0.00378	0.00077		0.00274	0.00857	0.00842	0.00378	0.00077		0.00055	0.04	1.41	1.38	0.10	0.02	2.95	0.19	3.14
386	583761.04	4138673.01	1.5	0.00276	0.00862	0.00841	0.00377	0.00076		0.00276	0.00862	0.00841	0.00377	0.00076		0.00052	0.04	1.42	1.38	0.10	0.02	2.95	0.18	3.13
31	583733.08	4138854.67	1.5	0.00243	0.00758	0.00972	0.0049	0.001		0.00243	0.00758	0.00972	0.0049	0.001		0.00027	0.03	1.24	1.60	0.13	0.03	3.03	0.09	3.12
354	583742.06	4138753.66	1.5	0.00279	0.00872	0.00845	0.00377	0.00076		0.00279	0.00872	0.00845	0.00377	0.00076		0.0004	0.04	1.43	1.39	0.10	0.02	2.98	0.14	3.12
380	583755.39	4138690.56	1.5	0.00275	0.00857	0.00832	0.00371	0.00075		0.00275	0.00857	0.00832	0.00371	0.00075		0.0005	0.04	1.41	1.37	0.10	0.02	2.93	0.18	3.10
105	583730.86	4138924.63	1.5	0.00221	0.0069	0.01003	0.00526	0.00108		0.00221	0.0069	0.01003	0.00526	0.00108		0.0003	0.03	1.13	1.65	0.14	0.03	2.97	0.11	3.08
70	583731.97	4138889.65	1.5	0.00211	0.00658	0.01027	0.0055	0.00113		0.00211	0.00658	0.01027	0.0055	0.00113		0.00026	0.03	1.08	1.69	0.14	0.03	2.97	0.09	3.06
369	583748.73	4138710.99	1.5	0.0027	0.00841	0.00812	0.00362	0.00073		0.0027	0.00841	0.00812	0.00362	0.00073		0.00046	0.04	1.38	1.33	0.09	0.02	2.86	0.16	3.03
14	583731.99	4138844.83	1.5	0.00242	0.00756	0.0092	0.00455	0.00093		0.00242	0.00756	0.0092	0.00455	0.00093		0.00027	0.03	1.24	1.51	0.12	0.02	2.93	0.09	3.02
293	583736.89	4138776.31	1.5	0.00269	0.00839	0.0083	0.00374	0.00076		0.00269	0.00839	0.0083	0.00374	0.00076		0.00036	0.04	1.38	1.36	0.10	0.02	2.89	0.13	3.02
392	583759.83	4138663.18	1.5	0.00262	0.00816	0.00798	0.00358	0.00072		0.00262	0.00816	0.00798	0.00358	0.00072		0.00052	0.04	1.34	1.31	0.09	0.02	2.80	0.18	2.98
375	583751.09	4138696.07	1.5	0.00264	0.00824	0.00798	0.00356	0.00072		0.00264	0.00824	0.00798	0.00356	0.00072		0.00047	0.04	1.35	1.31	0.09	0.02	2.81	0.16	2.98
61	583730.88	4138879.81	1.5	0.0021	0.00656	0.00975	0.00515	0.00106		0.0021	0.00656	0.00975	0.00515	0.00106		0.00026	0.03	1.08	1.60	0.13	0.03	2.87	0.09	2.96
349	583737.76	4138759.18	1.5	0.00262	0.00818	0.00799	0.00358	0.00072		0.00262	0.00818	0.00799	0.00358	0.00072		0.00038	0.04	1.34	1.31	0.09	0.02	2.80	0.13	2.94
296	583733.48	4138791.59	1.5	0.00257	0.00802	0.00815	0.00373	0.00076		0.00257	0.00802	0.00815	0.00373	0.00076		0.00033	0.03	1.32	1.34	0.10	0.02	2.81	0.12	2.92
122	583727.57	4138939.94	1.5	0.00231	0.00721	0.00884	0.00438	0.0009		0.00231	0.00721	0.00884	0.00438	0.0009		0.00033	0.03	1.18	1.45	0.11	0.02	2.80	0.12	2.92
364	583744.43	4138716.51	1.5	0.00257	0.00803	0.00776	0.00346	0.0007		0.00257	0.00803	0.00776	0.00346	0.0007		0.00043	0.03	1.32	1.27	0.09	0.02	2.74	0.15	2.89
387	583755.52	4138668.7	1.5	0.00253	0.00789	0.0077	0.00344	0.0007		0.00253	0.00789	0.0077	0.00344	0.0007		0.0005	0.03	1.30	1.26	0.09	0.02	2.70	0.18	2.88
49	583729.79	4138869.97	1.5	0.00211	0.00659	0.00925	0.00481	0.00099		0.00211	0.00659	0.00925	0.00481	0.00099		0.00025	0.03	1.08	1.52	0.12	0.03	2.78	0.09	2.87
381	583749.88	4138686.25	1.5	0.0025	0.00782	0.00759	0.00339	0.00068		0.0025	0.00782	0.00759	0.00339	0.00068		0.00047	0.03	1.28	1.25	0.09	0.02	2.67	0.16	2.84
292	583732.47	4138781.74	1.5	0.00248	0.00775	0.00777	0.00353	0.00071		0.00248	0.00775	0.00777	0.00353	0.00071		0.00034	0.03	1.27	1.28	0.09	0.02	2.69	0.12	2.81
355	583736.55	4138749.35	1.5	0.0025	0.0078	0.00759	0.0034	0.00069		0.0025	0.0078	0.00759	0.0034	0.00069		0.00038	0.03	1.28	1.25	0.09	0.02	2.67	0.13	2.80
30	583728.7	4138860.13	1.5	0.00212	0.00662	0.0088	0.00449	0.00092		0.00212	0.00662	0.0088	0.00449	0.00092		0.00025	0.03	1.09	1.45	0.12	0.02	2.70	0.09	2.79
104	583726.48	4138930.1	1.5	0.00209	0.00653	0.00867	0.00442	0.00091		0.00209	0.00653	0.00867	0.00442	0.00091		0.0003	0.03	1.07	1.42	0.11	0.02	2.66	0.11	2.77
370	583743.22	4138706.68	1.5	0.00245	0.00763	0.00738	0.00329	0.00066		0.00245	0.00763	0.00738	0.00329	0.00066		0.00043	0.03	1.25	1.21	0.09	0.02	2.60	0.15	2.75
376	583745.57	4138691.77	1.5	0.00241	0.00751	0.00728	0.00325	0.00066		0.00241	0.00751	0.00728	0.00325	0.00066		0.00045	0.03	1.23	1.20	0.08	0.02	2.56	0.16	2.72
13	583727.61	4138850.29	1.5	0.00213	0.00664	0.00837	0.00419	0.00086		0.00213	0.00664	0.00837	0.00419	0.00086		0.00026	0.03	1.09	1.37	0.11	0.02	2.62	0.09	2.72
295	583729.06	4138797.02	1.5	0.00235	0.00733	0.00759	0.0035	0.00071		0.00235	0.00733	0.00759	0.0035	0.00071		0.00031	0.03	1.20	1.25	0.09	0.02	2.59	0.11	2.70
121	583723.19	4138945.4	1.5	0.0022	0.00686	0.00794	0.00385	0.00078		0.0022	0.00686	0.00794	0.00385	0.00078		0.00033	0.03	1.13	1.30	0.10	0.02	2.58	0.12	2.70
350	583732.24	4138754.87	1.5	0.00235	0.00732	0.00718	0.00322	0.00065		0.00235	0.00732	0.00718	0.00322	0.00065		0.00036	0.03	1.20	1.18	0.08	0.02	2.51	0.13	2.64
60	583726.5	4138885.27	1.5	0.00187	0.00583	0.00867	0.00458	0.00094		0.00187	0.00583	0.00867	0.00458	0.00094		0.00025	0.03	0.96	1.42	0.12	0.02	2.55	0.09	2.64
365	583738.91	4138712.2	1.5	0.00233	0.00728	0.00705	0.00314	0.00063		0.00233	0.00728	0.00705	0.00314	0.00063		0.00041	0.03	1.20	1.16	0.08	0.02	2.48	0.14	2.63
291	583728.05	4138787.17	1.5	0.00228	0.00712	0.00726	0.00332	0.00067		0.00228	0.00712	0.00726	0.00332	0.00067		0.00032	0.03	1.17	1.19	0.09	0.02	2.50	0.11	2.61
382	583744.36	4138681.94	1.5	0.00229	0.00714	0.00694	0.0031	0.00063		0.00229	0.00714	0.00694	0.0031	0.00063		0.00044	0.03	1.17	1.14	0.08	0.02	2.44	0.15	2.59
48	583725.42	4138875.43	1.5	0.00186	0.00581	0.0083	0.00433	0.00089		0.00186	0.00581	0.0083	0.00433	0.00089		0.00024	0.03	0.95	1.36	0.11	0.02	2.48	0.08	2.56
120	583718.82	4138950.86	1.5	0.0021	0.00654	0.00732	0.00349	0.00071		0.0021	0.00654	0.00732	0.00349	0.00071		0.00033	0.03	1.07	1.20	0.09	0.02	2.41	0.12	2.53
356	583731.03	4138745.04	1.5	0.00225	0.00701	0.00685	0.00307	0.00062		0.00225	0.00701	0.00685	0.00307	0.00062		0.00036	0.03	1.15	1.13	0.08	0.02	2.40	0.13	2.53
103	583722.1	4138935.56	1.5	0.00199	0.0062	0.00765	0.0038	0.00078		0.00199	0.0062	0.00765	0.0038	0.00078		0.0003	0.03	1.02	1.26	0.10	0.02	2.42	0.11	2.53
371	583737.7	4138702.38	1.5	0.00223	0.00695	0.00673	0.003	0.00061		0.00223	0.00695	0.00673	0.003	0.00061		0.00041	0.03	1.14	1.11	0.08	0.02	2.37	0.14	2.51
29	583724.33	4138865.59	1.5	0.00187	0.00583	0.00794	0.00408	0.00084		0.00187	0.00583	0.00794	0.00408	0.00084		0.00024	0.03	0.96	1.30	0.11	0.02	2.41	0.08	2.50
377	583740.05	4138687.46	1.5	0.0022	0.00686	0.00665	0.00297	0.0006		0.0022	0.00686	0.00665	0.00297	0.0006		0.00043	0.03	1.13	1.09	0.08	0.02	2.34	0.15	2.49

294	583724.64	4138802.44	1.5	0.00214	0.00667	0.00705	0.00329	0.00067		0.00214	0.00667	0.00705	0.00329	0.00067		0.00029	0.03	1.10	1.16	0.09	0.02	2.38	0.10	2.49
12	583723.24	4138855.76	1.5	0.00188	0.00585	0.0076	0.00385	0.00079		0.00188	0.00585	0.0076	0.00385	0.00079		0.00024	0.03	0.96	1.25	0.10	0.02	2.35	0.08	2.44
290	583723.63	4138792.6	1.5	0.00209	0.00652	0.00677	0.00312	0.00063		0.00209	0.00652	0.00677	0.00312	0.00063		0.0003	0.03	1.07	1.11	0.08	0.02	2.31	0.11	2.41
366	583733.39	4138707.89	1.5	0.00212	0.00663	0.00642	0.00286	0.00058		0.00212	0.00663	0.00642	0.00286	0.00058		0.00039	0.03	1.09	1.05	0.07	0.01	2.26	0.14	2.40
344	583725.23	4138767.58	1.5	0.00211	0.00659	0.00658	0.00298	0.0006		0.00211	0.00659	0.00658	0.00298	0.0006		0.00032	0.03	1.08	1.08	0.08	0.02	2.28	0.11	2.40
351	583726.72	4138750.56	1.5	0.00211	0.00659	0.00647	0.00291	0.00059		0.00211	0.00659	0.00647	0.00291	0.00059		0.00034	0.03	1.08	1.06	0.08	0.02	2.26	0.12	2.38
102	583717.73	4138941.02	1.5	0.00189	0.00591	0.00692	0.00337	0.00069		0.00189	0.00591	0.00692	0.00337	0.00069		0.0003	0.03	0.97	1.14	0.09	0.02	2.24	0.11	2.34
47	583721.04	4138880.9	1.5	0.00167	0.0052	0.00742	0.00387	0.0008		0.00167	0.0052	0.00742	0.00387	0.0008		0.00024	0.02	0.85	1.22	0.10	0.02	2.22	0.08	2.30
372	583732.18	4138698.07	1.5	0.00203	0.00634	0.00614	0.00274	0.00055		0.00203	0.00634	0.00614	0.00274	0.00055		0.00039	0.03	1.04	1.01	0.07	0.01	2.16	0.14	2.30
357	583725.51	4138740.74	1.5	0.00203	0.00634	0.0062	0.00278	0.00056		0.00203	0.00634	0.0062	0.00278	0.00056		0.00034	0.03	1.04	1.02	0.07	0.01	2.17	0.12	2.29
28	583719.95	4138871.06	1.5	0.00166	0.00518	0.00715	0.00369	0.00076		0.00166	0.00518	0.00715	0.00369	0.00076		0.00023	0.02	0.85	1.17	0.10	0.02	2.16	0.08	2.24
339	583720.92	4138773.09	1.5	0.00196	0.00612	0.00618	0.00281	0.00057		0.00196	0.00612	0.00618	0.00281	0.00057		0.0003	0.03	1.01	1.02	0.07	0.01	2.13	0.11	2.24
289	583719.21	4138798.02	1.5	0.00191	0.00595	0.00629	0.00293	0.0006		0.00191	0.00595	0.00629	0.00293	0.0006		0.00028	0.03	0.98	1.03	0.08	0.02	2.13	0.10	2.23
89	583716.64	4138931.18	1.5	0.00173	0.00541	0.00665	0.0033	0.00067		0.00173	0.00541	0.00665	0.0033	0.00067		0.00027	0.02	0.89	1.09	0.09	0.02	2.11	0.09	2.20
101	583713.35	4138946.49	1.5	0.00181	0.00565	0.00638	0.00306	0.00062		0.00181	0.00565	0.00638	0.00306	0.00062		0.0003	0.02	0.93	1.05	0.08	0.02	2.10	0.11	2.20
11	583718.86	4138861.22	1.5	0.00166	0.0052	0.00689	0.00351	0.00072		0.00166	0.0052	0.00689	0.00351	0.00072		0.00023	0.02	0.85	1.13	0.09	0.02	2.12	0.08	2.20
367	583727.87	4138703.59	1.5	0.00194	0.00605	0.00587	0.00262	0.00053		0.00194	0.00605	0.00587	0.00262	0.00053		0.00037	0.03	0.99	0.96	0.07	0.01	2.07	0.13	2.20
345	583719.71	4138763.27	1.5	0.0019	0.00593	0.00593	0.00269	0.00054		0.0019	0.00593	0.00593	0.00269	0.00054		0.00031	0.03	0.97	0.97	0.07	0.01	2.06	0.11	2.17
352	583721.2	4138746.25	1.5	0.00191	0.00595	0.00586	0.00264	0.00053		0.00191	0.00595	0.00586	0.00264	0.00053		0.00033	0.03	0.98	0.96	0.07	0.01	2.05	0.12	2.16
358	583719.99	4138736.43	1.5	0.00184	0.00575	0.00563	0.00253	0.00051		0.00184	0.00575	0.00563	0.00253	0.00051		0.00033	0.03	0.94	0.92	0.07	0.01	1.97	0.12	2.09
46	583716.66	4138886.36	1.5	0.00152	0.00473	0.00664	0.00345	0.00071		0.00152	0.00473	0.00664	0.00345	0.00071		0.00023	0.02	0.78	1.09	0.09	0.02	2.00	0.08	2.08
88	583712.26	4138936.65	1.5	0.00165	0.00516	0.00605	0.00295	0.0006		0.00165	0.00516	0.00605	0.00295	0.0006		0.00027	0.02	0.85	0.99	0.08	0.02	1.96	0.09	2.05
27	583715.58	4138876.52	1.5	0.0015	0.00468	0.00643	0.00332	0.00068		0.0015	0.00468	0.00643	0.00332	0.00068		0.00022	0.02	0.77	1.06	0.09	0.02	1.95	0.08	2.03
340	583715.4	4138768.79	1.5	0.00177	0.00551	0.00557	0.00254	0.00051		0.00177	0.00551	0.00557	0.00254	0.00051		0.00029	0.02	0.90	0.91	0.07	0.01	1.92	0.10	2.02
10	583714.49	4138866.68	1.5	0.00149	0.00466	0.00623	0.00318	0.00065		0.00149	0.00466	0.00623	0.00318	0.00065		0.00022	0.02	0.77	1.02	0.08	0.02	1.91	0.08	1.99
353	583715.69	4138741.95	1.5	0.00173	0.0054	0.00533	0.0024	0.00049		0.00173	0.0054	0.00533	0.0024	0.00049		0.00031	0.02	0.89	0.88	0.06	0.01	1.86	0.11	1.97
346	583714.19	4138758.96	1.5	0.00172	0.00536	0.00537	0.00243	0.00049		0.00172	0.00536	0.00537	0.00243	0.00049		0.0003	0.02	0.88	0.88	0.06	0.01	1.86	0.11	1.97
288	583712.01	4138817.59	1.5	0.0016	0.005	0.00564	0.0027	0.00055		0.0016	0.005	0.00564	0.0027	0.00055		0.00024	0.02	0.82	0.93	0.07	0.01	1.85	0.08	1.94
87	583707.89	4138942.11	1.5	0.00158	0.00494	0.00561	0.00269	0.00055		0.00158	0.00494	0.00561	0.00269	0.00055		0.00027	0.02	0.81	0.92	0.07	0.01	1.84	0.09	1.93
334	583711.14	4138784.41	1.5	0.00163	0.0051	0.00531	0.00246	0.0005		0.00163	0.0051	0.00531	0.00246	0.0005		0.00027	0.02	0.84	0.87	0.06	0.01	1.81	0.09	1.90
45	583712.29	4138891.83	1.5	0.0014	0.00437	0.00595	0.00306	0.00063		0.0014	0.00437	0.00595	0.00306	0.00063		0.00022	0.02	0.72	0.98	0.08	0.02	1.81	0.08	1.89
26	583711.2	4138881.99	1.5	0.00137	0.00427	0.00579	0.00297	0.00061		0.00137	0.00427	0.00579	0.00297	0.00061		0.00022	0.02	0.70	0.95	0.08	0.02	1.76	0.08	1.84
341	583709.88	4138764.48	1.5	0.0016	0.00499	0.00505	0.0023	0.00047		0.0016	0.00499	0.00505	0.0023	0.00047		0.00028	0.02	0.82	0.83	0.06	0.01	1.74	0.10	1.84
79	583706.8	4138932.27	1.5	0.00146	0.00456	0.00533	0.00259	0.00053		0.00146	0.00456	0.00533	0.00259	0.00053		0.00025	0.02	0.75	0.88	0.07	0.01	1.72	0.09	1.81
9	583710.11	4138872.15	1.5	0.00135	0.00422	0.00563	0.00288	0.00059		0.00135	0.00422	0.00563	0.00288	0.00059		0.00021	0.02	0.69	0.92	0.07	0.02	1.73	0.07	1.80
347	583708.67	4138754.65	1.5	0.00156	0.00487	0.00488	0.00221	0.00045		0.00156	0.00487	0.00488	0.00221	0.00045		0.00028	0.02	0.80	0.80	0.06	0.01	1.69	0.10	1.79
287	583707.59	4138823.02	1.5	0.00145	0.00451	0.0052	0.00251	0.00051		0.00145	0.00451	0.0052	0.00251	0.00051		0.00023	0.02	0.74	0.85	0.06	0.01	1.69	0.08	1.77
329	583706.83	4138789.93	1.5	0.0015	0.00469	0.00496	0.00231	0.00047		0.0015	0.00469	0.00496	0.00231	0.00047		0.00025	0.02	0.77	0.81	0.06	0.01	1.68	0.09	1.76
283	583706.59	4138813.17	1.5	0.00145	0.00452	0.00506	0.00242	0.00049		0.00145	0.00452	0.00506	0.00242	0.00049		0.00023	0.02	0.74	0.83	0.06	0.01	1.67	0.08	1.75
44	583707.91	4138897.29	1.5	0.00131	0.00408	0.00535	0.00272	0.00056		0.00131	0.00408	0.00535	0.00272	0.00056		0.00022	0.02	0.67	0.88	0.07	0.01	1.65	0.08	1.73
335	583705.62	4138780.1	1.5	0.00148	0.00462	0.0048	0.00222	0.00045		0.00148	0.00462	0.0048	0.00222	0.00045		0.00026	0.02	0.76	0.79	0.06	0.01	1.64	0.09	1.73
78	583702.42	4138937.74	1.5	0.0014	0.00437	0.00495	0.00238	0.00048		0.0014	0.00437	0.00495	0.00238	0.00048		0.00025	0.02	0.72	0.81	0.06	0.01	1.62	0.09	1.71
342	583704.37	4138760.17	1.5	0.00145	0.00454	0.00459	0.00209	0.00042		0.00145	0.00454	0.00459	0.00209	0.00042		0.00027	0.02	0.75	0.75	0.05	0.01	1.58	0.09	1.68
8	583705.74	4138877.61	1.5	0.00124	0.00388	0.0051	0.00259	0.00053		0.00124	0.00388	0.0051	0.00259	0.00053		0.00021	0.02	0.64	0.84	0.07	0.01	1.57	0.07	1.65
348	583703.16	4138750.34	1.5	0.00142	0.00444	0.00445	0.00202	0.00041		0.00142	0.00444	0.00445	0.00202	0.00041		0.00027	0.02	0.73	0.73	0.05	0.01	1.54	0.09	1.64
77	583698.05	4138943.2	1.5	0.00134	0.00419	0.00466	0.00222	0.00045		0.00134	0.00419	0.00466	0.00222	0.00045		0.00025	0.02	0.69	0.77	0.06	0.01	1.54	0.09	1.63
286	583703.17	4138828.45	1.5	0.00131	0.00408	0.00479	0.00233	0.00048		0.00131	0.00408	0.00479	0.00233	0.00048		0.00022	0.02	0.67	0.79	0.06	0.01	1.55	0.08	1.62
282	583702.17	4138818.6	1.5	0.00131	0.00409	0.00467	0.00225	0.00046		0.00131	0.00409	0.00467	0.00225	0.00046		0.00022	0.02	0.67	0.77	0.06	0.01	1.53	0.08	1.60
330	583701.31	4138785.62	1.5	0.00136	0.00425	0.00449	0.00209	0.00042		0.00136	0.00425	0.00449	0.00209	0.00042		0.00024	0.02	0.70	0.74	0.05	0.01	1.52	0.08	1.60
43	583703.54	4138902.75	1.5	0.00123	0.00385	0.00484	0.00242	0.0005		0.00123	0.00385	0.00484	0.00242	0.0005		0.00021	0.02	0.63	0.79	0.06	0.01	1.52	0.07	1.59
336	583700.1	4138775.8	1.5	0.00135	0.0042	0.00436	0.00201	0.00041		0.00135	0.0042	0.00436	0.00201	0.00041		0.00025	0.02	0.69	0.72	0.05	0.01	1.49	0.09	1.57
343	583698.85	4138755.86	1.5	0.00133	0.00414	0.00419	0.00191	0.00039		0.00133	0.00414	0.00419	0.00191	0.00039		0.00026	0.02	0.68	0.69	0.05	0.01	1.45	0.09	1.54
69	583696.96	4138933.36	1.5	0.00125	0.00391	0.00441	0.00211	0.00043		0.00125	0.00391	0.00441	0.00211	0.00043		0.00023	0.02	0.64	0.72	0.05	0.01	1.45	0.08	1.53
324	583697.74	4138801.94	1.5	0.00125	0.00389	0.00427	0.00202	0.00041		0.00125	0.00389	0.00427	0.00202	0.00041		0.00022	0.02	0.64	0.70	0.05	0.01	1.42	0.08	1.50
42	583699.16	4138908.22	1.5	0.00117	0.00366	0.00442	0.00218	0.00044		0.00117	0.00366	0.00442	0.00218	0.00044		0.00021	0.02	0.60	0.73	0.06	0.01	1.41	0.07	1.48
285	583698.75	4138833.88	1.5	0.00118	0.00369	0.0044	0.00216	0.00044		0.00118	0.00369	0.0044	0.00216	0.00044		0.0002	0.02	0.61	0.72	0.06	0.01	1.41	0.07	1.48
281	583697.75	4138824.03	1.5	0.00119	0.00371	0.00431	0.00209	0.00043		0.00119	0.00371	0.00431	0.00209	0.00043		0.00021	0.02	0.61	0.71	0.05	0.01	1.40	0.07	1.47
331	583695.8	4138781.31	1.5	0.00124	0.00388	0.00408	0.0019	0.00038		0.00124	0.00388	0.00408	0.0019	0.00038		0.00023	0.02	0.64	0.67	0.05	0.01	1.38	0.08	1.46
68	583692.59	4138938.82	1.5	0.0012	0.00375	0.00415	0.00197	0.0004		0.0012	0.00375	0.00415	0.00197	0.0004		0.00023	0.02	0.62	0.68	0.05	0.01	1.38	0.08	1.46
337	583694.59	4138771.49	1.5	0.00123	0.00383	0.00397	0.00183	0.00037		0.00123	0.00383	0.00397	0.00183	0.00037		0.00024	0.02	0.63	0.65	0.05	0.01	1.35	0.08	1.44
25	583698.07	4138898.38	1.5	0.00112	0.0035	0.00431	0.00214	0.00044		0.00112	0.0035	0.00431	0.00214	0.00044		0.0002	0.02	0.57	0.71	0.06	0.01	1.36	0.07	1.43
41	583694.78	4138913.68	1.5	0.00112	0.00349	0.00407	0.00198	0.0004		0.00112	0.00349	0.00407	0.00198	0.0004		0.00021	0.02	0.57	0.67	0.05	0.01	1.32	0.07	1.39
319	583693.43	4138807.45	1.5	0.00114	0.00356	0.00397	0.00189	0.00039		0.00114	0.00356	0.00397	0.00189	0.00039		0.00021	0.02	0.58	0.65	0.05	0.01	1.31	0.07	1.38
59	583691.5	4138928.98	1.5	0.00113	0.00353	0.00394	0.00188	0.00038		0.00113	0.00353	0.00394	0.00188	0.00038		0.00022	0.02	0.58	0.65	0.05	0.01	1.30	0.08	1.38
325	583692.22	4138797.63	1.5	0.00114	0.00356	0.00388	0.00183	0.00037		0.00114	0.00356	0.00388	0.00183	0.00037		0.00022	0.02	0.58	0.64	0.05	0.01	1.29	0.08	1.37
284	583694.33	4138839.31	1.5	0.00108	0.00336	0.00405	0.00199	0.00041		0.00108	0.00336	0.00405	0.00199	0.00041		0.0002	0.01	0.55	0.67	0.05	0.01	1.29	0.07	1.36
280	583693.33	4138829.46	1.5	0.00108	0.00338	0.00398	0.00194	0.0004		0.00108	0.00338	0.00398	0.00194	0.0004		0.0002	0.01	0.56	0.65	0.05	0.01	1.28	0.07	1.35
332	583690.28	4138777.01	1.5	0.00114	0.00355	0.00372	0.00173	0.00035		0.00114	0.00355	0.00372	0.00173	0.00035		0.00023	0.02	0.58	0.61	0.04	0.01	1.26	0.08	1.34
24	583693.7	4138903.84	1.5	0.00107	0.00333	0.00395	0.00194	0.0004		0.00107	0.00333	0.00395	0.00194	0.0004		0.0002	0.01	0.55	0.65	0.05	0.01	1.27	0.07	1.34
338	583689.07	4138767.18	1.5	0.00113	0.00351	0.00363	0.00167	0.00034		0.00113	0.00351	0.00363	0.00167	0.00034		0.00023	0.02	0.58	0.60	0.04	0.01	1.24	0.08	1.32
58	583687.12	4138934.45	1.5	0.00109	0.00339	0.00373	0.00177	0.00036		0.00109	0.00339	0.00373	0.00177	0.00036		0.00022	0.01	0.56	0.61	0.05	0.01	1.24	0.08	1.32
40	583690.41	4138919.14	1.5	0.00107	0.00334	0.00378	0.00182	0.00037		0.00107	0.00334	0.00378	0.00182	0.00037		0.00021	0.01	0.55	0.62	0.05	0.01	1.24	0.07	1.31

7	583692.61	4138894	1.5	0.00103	0.0032	0.00386	0.0019	0.00039		0.00103	0.0032	0.00386	0.0019	0.00039		0.00019	0.01	0.53	0.63	0.05	0.01	1.23	0.07	1.30
320	583687.91	4138803.15	1.5	0.00105	0.00326	0.00361	0.00172	0.00035		0.00105	0.00326	0.00361	0.00172	0.00035		0.0002	0.01	0.54	0.59	0.04	0.01	1.20	0.07	1.27
23	583689.32	4138909.31	1.5	0.00102	0.00318	0.00366	0.00177	0.00036		0.00102	0.00318	0.00366	0.00177	0.00036		0.0002	0.01	0.52	0.60	0.05	0.01	1.19	0.07	1.26
326	583686.7	4138793.32	1.5	0.00104	0.00326	0.00354	0.00167	0.00034		0.00104	0.00326	0.00354	0.00167	0.00034		0.00021	0.01	0.54	0.58	0.04	0.01	1.18	0.07	1.26
39	583686.03	4138924.61	1.5	0.00103	0.00321	0.00355	0.00169	0.00034		0.00103	0.00321	0.00355	0.00169	0.00034		0.00021	0.01	0.53	0.58	0.04	0.01	1.18	0.07	1.25
279	583688.91	4138834.89	1.5	0.00099	0.00309	0.00367	0.0018	0.00037		0.00099	0.00309	0.00367	0.0018	0.00037		0.00019	0.01	0.51	0.60	0.05	0.01	1.18	0.07	1.25
333	583684.76	4138772.7	1.5	0.00104	0.00326	0.00341	0.00158	0.00032		0.00104	0.00326	0.00341	0.00158	0.00032		0.00022	0.01	0.54	0.56	0.04	0.01	1.16	0.08	1.24
6	583688.23	4138899.47	1.5	0.00098	0.00305	0.00356	0.00173	0.00035		0.00098	0.00305	0.00356	0.00173	0.00035		0.00019	0.01	0.50	0.58	0.04	0.01	1.15	0.07	1.22
22	583684.95	4138914.77	1.5	0.00098	0.00305	0.00342	0.00163	0.00033		0.00098	0.00305	0.00342	0.00163	0.00033		0.00019	0.01	0.50	0.56	0.04	0.01	1.13	0.07	1.19
38	583681.66	4138930.07	1.5	0.00099	0.00309	0.00336	0.00159	0.00032		0.00099	0.00309	0.00336	0.00159	0.00032		0.0002	0.01	0.51	0.55	0.04	0.01	1.12	0.07	1.19
321	583682.4	4138798.84	1.5	0.00096	0.003	0.0033	0.00156	0.00032		0.00096	0.003	0.0033	0.00156	0.00032		0.0002	0.01	0.49	0.54	0.04	0.01	1.10	0.07	1.17
327	583681.19	4138789.01	1.5	0.00096	0.003	0.00324	0.00152	0.00031		0.00096	0.003	0.00324	0.00152	0.00031		0.0002	0.01	0.49	0.53	0.04	0.01	1.09	0.07	1.16
5	583683.86	4138904.93	1.5	0.00094	0.00292	0.00331	0.00159	0.00032		0.00094	0.00292	0.00331	0.00159	0.00032		0.00019	0.01	0.48	0.54	0.04	0.01	1.09	0.07	1.15
37	583677.28	4138935.54	1.5	0.00095	0.00298	0.00321	0.00151	0.00031		0.00095	0.00298	0.00321	0.00151	0.00031		0.0002	0.01	0.49	0.53	0.04	0.01	1.08	0.07	1.15
314	583682.62	4138820.66	1.5	0.00092	0.00287	0.0033	0.00159	0.00033		0.00092	0.00287	0.0033	0.00159	0.00033		0.00019	0.01	0.47	0.54	0.04	0.01	1.08	0.07	1.14
21	583680.57	4138920.23	1.5	0.00094	0.00294	0.00322	0.00152	0.00031		0.00094	0.00294	0.00322	0.00152	0.00031		0.00019	0.01	0.48	0.53	0.04	0.01	1.07	0.07	1.14
304	583682.45	4138847.98	1.5	0.00087	0.00272	0.00326	0.0016	0.00033		0.00087	0.00272	0.00326	0.0016	0.00033		0.00018	0.01	0.45	0.54	0.04	0.01	1.04	0.06	1.11
4	583679.48	4138910.39	1.5	0.0009	0.0028	0.0031	0.00148	0.0003		0.0009	0.0028	0.0031	0.00148	0.0003		0.00018	0.01	0.46	0.51	0.04	0.01	1.03	0.06	1.09
20	583676.19	4138925.7	1.5	0.00091	0.00283	0.00305	0.00143	0.00029		0.00091	0.00283	0.00305	0.00143	0.00029		0.00019	0.01	0.46	0.50	0.04	0.01	1.02	0.07	1.09
322	583676.88	4138794.53	1.5	0.00089	0.00277	0.00303	0.00143	0.00029		0.00089	0.00277	0.00303	0.00143	0.00029		0.00019	0.01	0.45	0.50	0.04	0.01	1.01	0.07	1.08
328	583675.67	4138784.71	1.5	0.00089	0.00277	0.00297	0.00139	0.00028		0.00089	0.00277	0.00297	0.00139	0.00028		0.0002	0.01	0.45	0.49	0.04	0.01	1.00	0.07	1.07
309	583678.31	4138826.18	1.5	0.00085	0.00265	0.00307	0.00149	0.0003		0.00085	0.00265	0.00307	0.00149	0.0003		0.00018	0.01	0.44	0.50	0.04	0.01	1.00	0.06	1.06
315	583677.1	4138816.36	1.5	0.00085	0.00265	0.00302	0.00145	0.0003		0.00085	0.00265	0.00302	0.00145	0.0003		0.00018	0.01	0.44	0.50	0.04	0.01	0.99	0.06	1.05
19	583671.82	4138931.16	1.5	0.00087	0.00273	0.00291	0.00136	0.00028		0.00087	0.00273	0.00291	0.00136	0.00028		0.00019	0.01	0.45	0.48	0.04	0.01	0.98	0.07	1.05
3	583675.11	4138915.86	1.5	0.00087	0.0027	0.00293	0.00138	0.00028		0.00087	0.0027	0.00293	0.00138	0.00028		0.00018	0.01	0.44	0.48	0.04	0.01	0.98	0.06	1.04
299	583678.14	4138853.5	1.5	0.00081	0.00254	0.00302	0.00148	0.0003		0.00081	0.00254	0.00302	0.00148	0.0003		0.00017	0.01	0.42	0.50	0.04	0.01	0.97	0.06	1.03
305	583676.93	4138843.67	1.5	0.00081	0.00252	0.00297	0.00145	0.0003		0.00081	0.00252	0.00297	0.00145	0.0003		0.00017	0.01	0.41	0.49	0.04	0.01	0.96	0.06	1.02
2	583670.73	4138921.32	1.5	0.00083	0.0026	0.00278	0.0013	0.00026		0.00083	0.0026	0.00278	0.0013	0.00026		0.00018	0.01	0.43	0.46	0.03	0.01	0.94	0.06	1.00
323	583671.36	4138790.22	1.5	0.00082	0.00257	0.00278	0.00131	0.00027		0.00082	0.00257	0.00278	0.00131	0.00027		0.00019	0.01	0.42	0.46	0.03	0.01	0.93	0.07	1.00
310	583672.79	4138821.87	1.5	0.00079	0.00246	0.00281	0.00136	0.00028		0.00079	0.00246	0.00281	0.00136	0.00028		0.00017	0.01	0.40	0.46	0.04	0.01	0.92	0.06	0.98
316	583671.59	4138812.05	1.5	0.00079	0.00246	0.00277	0.00133	0.00027		0.00079	0.00246	0.00277	0.00133	0.00027		0.00018	0.01	0.40	0.45	0.03	0.01	0.91	0.06	0.97
1	583666.35	4138926.78	1.5	0.00081	0.00252	0.00266	0.00124	0.00025		0.00081	0.00252	0.00266	0.00124	0.00025		0.00018	0.01	0.41	0.44	0.03	0.01	0.90	0.06	0.96
300	583672.62	4138849.19	1.5	0.00076	0.00236	0.00276	0.00134	0.00027		0.00076	0.00236	0.00276	0.00134	0.00027		0.00017	0.01	0.39	0.45	0.03	0.01	0.89	0.06	0.95
306	583671.41	4138839.36	1.5	0.00075	0.00234	0.00272	0.00132	0.00027		0.00075	0.00234	0.00272	0.00132	0.00027		0.00017	0.01	0.38	0.45	0.03	0.01	0.88	0.06	0.94
311	583667.28	4138817.56	1.5	0.00073	0.00228	0.00259	0.00124	0.00025		0.00073	0.00228	0.00259	0.00124	0.00025		0.00017	0.01	0.37	0.43	0.03	0.01	0.85	0.06	0.91
317	583666.07	4138807.74	1.5	0.00073	0.00229	0.00255	0.00122	0.00025		0.00073	0.00229	0.00255	0.00122	0.00025		0.00017	0.01	0.38	0.42	0.03	0.01	0.84	0.06	0.90
301	583667.11	4138844.88	1.5	0.0007	0.00219	0.00254	0.00123	0.00025		0.0007	0.00219	0.00254	0.00123	0.00025		0.00016	0.01	0.36	0.42	0.03	0.01	0.82	0.06	0.88
307	583665.9	4138835.06	1.5	0.0007	0.00218	0.00251	0.00121	0.00025		0.0007	0.00218	0.00251	0.00121	0.00025		0.00016	0.01	0.36	0.41	0.03	0.01	0.82	0.06	0.87
312	583661.76	4138813.26	1.5	0.00068	0.00213	0.00239	0.00114	0.00023		0.00068	0.00213	0.00239	0.00114	0.00023		0.00016	0.01	0.35	0.39	0.03	0.01	0.79	0.06	0.84
318	583660.55	4138803.43	1.5	0.00068	0.00213	0.00236	0.00112	0.00023		0.00068	0.00213	0.00236	0.00112	0.00023		0.00017	0.01	0.35	0.39	0.03	0.01	0.78	0.06	0.84
302	583661.59	4138840.57	1.5	0.00066	0.00205	0.00234	0.00113	0.00023		0.00066	0.00205	0.00234	0.00113	0.00023		0.00016	0.01	0.34	0.38	0.03	0.01	0.77	0.06	0.82
308	583660.38	4138830.75	1.5	0.00065	0.00203	0.00231	0.00111	0.00023		0.00065	0.00203	0.00231	0.00111	0.00023		0.00016	0.01	0.33	0.38	0.03	0.01	0.76	0.06	0.81
313	583656.24	4138808.95	1.5	0.00064	0.00199	0.00221	0.00105	0.00021		0.00064	0.00199	0.00221	0.00105	0.00021		0.00016	0.01	0.33	0.36	0.03	0.01	0.73	0.06	0.79
303	583656.07	4138836.27	1.5	0.00061	0.00191	0.00217	0.00104	0.00021		0.00061	0.00191	0.00217	0.00104	0.00021		0.00015	0.01	0.31	0.36	0.03	0.01	0.71	0.05	0.76
361	583655.45	4138826.91	1.5	0.00061	0.00192	0.00216	0.00104	0.00021		0.00061	0.00192	0.00216	0.00104	0.00021		0.00015	0.01	0.32	0.35	0.03	0.01	0.71	0.05	0.76
359	583651.14	4138832.43	1.5	0.00058	0.00181	0.00203	0.00097	0.0002		0.00058	0.00181	0.00203	0.00097	0.0002		0.00015	0.01	0.30	0.33	0.03	0.01	0.67	0.05	0.72
362	583649.93	4138822.61	1.5	0.00058	0.0018	0.00201	0.00096	0.0002		0.00058	0.0018	0.00201	0.00096	0.0002		0.00015	0.01	0.30	0.33	0.02	0.01	0.66	0.05	0.72
360	583645.62	4138828.12	1.5	0.00054	0.0017	0.00189	0.0009	0.00018		0.00054	0.0017	0.00189	0.0009	0.00018		0.00015	0.01	0.28	0.31	0.02	0.00	0.62	0.05	0.68

																							Unmitigated Project Maximum PM2.5 Concentration		
Receptor									2025	2026	2027	2028	2029		Annual	2025	2026	2027	2028	2029	Maximum	Annual	Annual
No.	UTM-X	UTM-Y	Flagpole	2025	2026	2027	2028	2029	Construction						Generators	Construction						GEN	Max
(m)	(m)	(m)	Height (m)						TPM	TPM	TPM	TPM	TPM		TPM	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3
264	583812.24	4138835.29	1.5	0.0418	0.50458	0.23813	0.03529	0.00612	0.0418	0.50458	0.23813	0.03529	0.00612		0.00163	0.04	0.50	0.24	0.04	0.01	0.50	0.00	0.50
265	583816.63	4138829.83	1.5	0.04113	0.49135	0.25295	0.03754	0.00655	0.04113	0.49135	0.25295	0.03754	0.00655		0.00174	0.04	0.49	0.25	0.04	0.01	0.49	0.00	0.49
266	583821.02	4138824.38	1.5	0.04001	0.47368	0.26825	0.03998	0.00702	0.04001	0.47368	0.26825	0.03998	0.00702		0.00181	0.04	0.47	0.27	0.04	0.01	0.47	0.00	0.47
138	583797.58	4138852.51	1.5	0.03733	0.46722	0.19926	0.03019	0.00523	0.03733	0.46722	0.19926	0.03019	0.00523		0.00103	0.04	0.47	0.20	0.03	0.01	0.47	0.00	0.47
267	583825.41	4138818.93	1.5	0.03862	0.45384	0.28341	0.04249	0.00751	0.03862	0.45384	0.28341	0.04249	0.00751		0.00185	0.04	0.45	0.28	0.04	0.01	0.45	0.00	0.45
268	583829.8	4138813.48	1.5	0.0371	0.43345	0.29806	0.04498	0.008	0.0371	0.43345	0.29806	0.04498	0.008		0.00187	0.04	0.43	0.30	0.04	0.01	0.43	0.00	0.43
137	583793.2	4138857.98	1.5	0.03426	0.43339	0.19375	0.02966	0.00518	0.03426	0.43339	0.19375	0.02966	0.00518		0.00084	0.03	0.43	0.19	0.03	0.01	0.43	0.00	0.43
269	583834.19	4138808.03	1.5	0.03558	0.41355	0.31198	0.04739	0.00848	0.03558	0.41355	0.31198	0.04739	0.00848		0.00188	0.04	0.41	0.31	0.05	0.01	0.41	0.00	0.41
246	583806.79	4138830.9	1.5	0.03409	0.40499	0.19543	0.02975	0.0052	0.03409	0.40499	0.19543	0.02975	0.0052		0.00139	0.03	0.40	0.20	0.03	0.01	0.40	0.00	0.40
247	583811.18	4138825.44	1.5	0.03426	0.40446	0.20616	0.03142	0.00551	0.03426	0.40446	0.20616	0.03142	0.00551		0.00151	0.03	0.40	0.21	0.03	0.01	0.40	0.00	0.40
248	583815.57	4138819.99	1.5	0.03399	0.39896	0.21764	0.03327	0.00587	0.03399	0.39896	0.21764	0.03327	0.00587		0.00161	0.03	0.40	0.22	0.03	0.01	0.40	0.00	0.40
278	583878.1	4138753.5	1.5	0.02549	0.28974	0.398	0.06291	0.01154	0.02549	0.28974	0.398	0.06291	0.01154		0.00266	0.03	0.29	0.40	0.06	0.01	0.40	0.00	0.40
270	583838.59	4138802.57	1.5	0.0341	0.39469	0.32505	0.04968	0.00893	0.0341	0.39469	0.32505	0.04968	0.00893		0.00189	0.03	0.39	0.33	0.05	0.01	0.39	0.00	0.39
277	583873.71	4138758.95	1.5	0.02607	0.29655	0.39433	0.06218	0.0114	0.02607	0.29655	0.39433	0.06218	0.0114		0.0026	0.03	0.30	0.39	0.06	0.01	0.39	0.00	0.39
136	583788.83	4138863.44	1.5	0.03056	0.39035	0.18997	0.02937	0.00517	0.03056	0.39035	0.18997	0.02937	0.00517		0.00069	0.03	0.39	0.19	0.03	0.01	0.39	0.00	0.39
249	583819.96	4138814.54	1.5	0.03339	0.39	0.22946	0.03524	0.00624	0.03339	0.39	0.22946	0.03524	0.00624		0.00168	0.03	0.39	0.23	0.04	0.01	0.39	0.00	0.39
276	583869.32	4138764.41	1.5	0.02672	0.3043	0.3893	0.06124	0.01121	0.02672	0.3043	0.3893	0.06124	0.01121		0.00249	0.03	0.30	0.39	0.06	0.01	0.39	0.00	0.39
275	583864.93	4138769.86	1.5	0.02745	0.31307	0.38308	0.06009	0.01098	0.02745	0.31307	0.38308	0.06009	0.01098		0.00236	0.03	0.31	0.38	0.06	0.01	0.38	0.00	0.38
250	583824.35	4138809.09	1.5	0.03259	0.37893	0.24129	0.03725	0.00663	0.03259	0.37893	0.24129	0.03725	0.00663		0.00172	0.03	0.38	0.24	0.04	0.01	0.38	0.00	0.38
271	583842.98	4138797.12	1.5	0.03271	0.37728	0.33714	0.05182	0.00935	0.03271	0.37728	0.33714	0.05182	0.00935		0.00191	0.03	0.38	0.34	0.05	0.01	0.38	0.00	0.38
274	583860.54	4138775.31	1.5	0.02828	0.32304	0.37582	0.05877	0.01072	0.02828	0.32304	0.37582	0.05877	0.01072		0.00222	0.03	0.32	0.38	0.06	0.01	0.38	0.00	0.38
273	583856.15	4138780.76	1.5	0.02921	0.33434	0.36759	0.05728	0.01043	0.02921	0.33434	0.36759	0.05728	0.01043		0.00209	0.03	0.33	0.37	0.06	0.01	0.37	0.00	0.37
251	583828.74	4138803.64	1.5	0.03166	0.36679	0.25288	0.03925	0.00702	0.03166	0.36679	0.25288	0.03925	0.00702		0.00176	0.03	0.37	0.25	0.04	0.01	0.37	0.00	0.37
272	583847.37	4138791.67	1.5	0.03143	0.36141	0.34828	0.05381	0.00974	0.03143	0.36141	0.34828	0.05381	0.00974		0.00194	0.03	0.36	0.35	0.05	0.01	0.36	0.00	0.36
252	583833.13	4138798.18	1.5	0.03068	0.35427	0.26402	0.04119	0.0074	0.03068	0.35427	0.26402	0.04119	0.0074		0.00178	0.03	0.35	0.26	0.04	0.01	0.35	0.00	0.35
119	583792.12	4138848.14	1.5	0.02869	0.3474	0.16702	0.02581	0.00453	0.02869	0.3474	0.16702	0.02581	0.00453		0.00086	0.03	0.35	0.17	0.03	0.00	0.35	0.00	0.35
253	583837.52	4138792.73	1.5	0.02969	0.34199	0.27465	0.04307	0.00777	0.02969	0.34199	0.27465	0.04307	0.00777		0.00181	0.03	0.34	0.27	0.04	0.01	0.34	0.00	0.34
135	583784.45	4138868.91	1.5	0.02649	0.34149	0.18694	0.02915	0.00517	0.02649	0.34149	0.18694	0.02915	0.00517		0.00058	0.03	0.34	0.19	0.03	0.01	0.34	0.00	0.34
263	583881.42	4138738.21	1.5	0.02292	0.26026	0.33698	0.05438	0.01	0.02292	0.26026	0.33698	0.05438	0.01		0.00251	0.02	0.26	0.34	0.05	0.01	0.34	0.00	0.34
262	583877.03	4138743.66	1.5	0.02334	0.26523	0.3362	0.05415	0.00995	0.02334	0.26523	0.3362	0.05415	0.00995		0.00249	0.02	0.27	0.34	0.05	0.01	0.34	0.00	0.34
261	583872.64	4138749.11	1.5	0.02381	0.27074	0.33344	0.0536	0.00984	0.02381	0.27074	0.33344	0.0536	0.00984		0.00244	0.02	0.27	0.33	0.05	0.01	0.33	0.00	0.33
254	583841.91	4138787.28	1.5	0.02874	0.33024	0.28467	0.04484	0.00812	0.02874	0.33024	0.28467	0.04484	0.00812		0.00184	0.03	0.33	0.28	0.04	0.01	0.33	0.00	0.33
233	583805.73	4138821.05	1.5	0.02829	0.3302	0.17137	0.02659	0.00469	0.02829	0.3302	0.17137	0.02659	0.00469		0.0013	0.03	0.33	0.17	0.03	0.00	0.33	0.00	0.33
260	583868.25	4138754.56	1.5	0.02433	0.27686	0.32921	0.05282	0.00969	0.02433	0.27686	0.32921	0.05282	0.00969		0.00236	0.02	0.28	0.33	0.05	0.01	0.33	0.00	0.33
259	583863.86	4138760.02	1.5	0.0249	0.2837	0.3239	0.05185	0.00949	0.0249	0.2837	0.3239	0.05185	0.00949		0.00226	0.02	0.28	0.32	0.05	0.01	0.32	0.00	0.32
232	583801.34	4138826.51	1.5	0.02765	0.32385	0.1632	0.02531	0.00445	0.02765	0.32385	0.1632	0.02531	0.00445		0.00118	0.03	0.32	0.16	0.03	0.00	0.32	0.00	0.32
255	583846.3	4138781.83	1.5	0.02785	0.31922	0.29401	0.0465	0.00844	0.02785	0.31922	0.29401	0.0465	0.00844		0.00189	0.03	0.32	0.29	0.05	0.01	0.32	0.00	0.32
258	583859.47	4138765.47	1.5	0.02554	0.29129	0.31761	0.05072	0.00927	0.02554	0.29129	0.31761	0.05072	0.00927		0.00215	0.03	0.29	0.32	0.05	0.01	0.32	0.00	0.32
118	583787.74	4138853.6	1.5	0.02601	0.31688	0.16201	0.02524	0.00446	0.02601	0.31688	0.16201	0.02524	0.00446		0.00072	0.03	0.32	0.16	0.03	0.00	0.32	0.00	0.32
234	583827.68	4138793.79	1.5	0.02727	0.31408	0.21807	0.03447	0.00619	0.02727	0.31408	0.21807	0.03447	0.00619		0.00165	0.03	0.31	0.22	0.03	0.01	0.31	0.00	0.31
231	583796.95	4138831.96	1.5	0.02659	0.31249	0.15582	0.02419	0.00426	0.02659	0.31249	0.15582	0.02419	0.00426		0.00104	0.03	0.31	0.16	0.02	0.00	0.31	0.00	0.31
257	583855.08	4138770.92	1.5	0.02624	0.29971	0.3105	0.04944	0.00902	0.02624	0.29971	0.3105	0.04944	0.00902		0.00204	0.03	0.30	0.31	0.05	0.01	0.31	0.00	0.31
256	583850.69	4138776.37	1.5	0.02701	0.30901	0.3026	0.04803	0.00874	0.02701	0.30901	0.3026	0.04803	0.00874		0.00196	0.03	0.31	0.30	0.05	0.01	0.31	0.00	0.31
235	583832.07	4138788.34	1.5	0.02667	0.30648	0.22726	0.03608	0.00651	0.02667	0.30648	0.22726	0.03608	0.00651		0.00169	0.03	0.31	0.23	0.04	0.01	0.31	0.00	0.31
236	583836.46	4138782.89	1.5	0.02603	0.29864	0.2361	0.03763	0.00681	0.02603	0.29864	0.2361	0.03763	0.00681		0.00173	0.03	0.30	0.24	0.04	0.01	0.30	0.00	0.30
237	583840.85	4138777.44	1.5	0.0254	0.29087	0.24451	0.03912	0.0071	0.0254	0.29087	0.24451	0.03912	0.0071		0.00177	0.03	0.29	0.24	0.04	0.01	0.29	0.00	0.29
134	583780.08	4138874.37	1.5	0.02233	0.29023	0.18389	0.02886	0.00517	0.02233	0.29023	0.18389	0.02886	0.00517		0.0005	0.02	0.29	0.18	0.03	0.01	0.29	0.00	0.29
245	583875.97	4138733.82	1.5	0.0214	0.24308	0.28778	0.04686	0.00861	0.0214	0.24308	0.28778	0.04686	0.00861		0.00232	0.02	0.24	0.29	0.05	0.01	0.29	0.00	0.29
244	583871.58	4138739.27	1.5	0.02178	0.24748	0.28583	0.04648	0.00854	0.02178	0.24748	0.28583	0.04648	0.00854		0.00228	0.02	0.25	0.29	0.05	0.01	0.29	0.00	0.29
238	583845.24	4138771.98	1.5	0.02478	0.28331	0.25238	0.04051	0.00737	0.02478	0.28331	0.25238	0.04051	0.00737		0.00182	0.02	0.28	0.25	0.04	0.01	0.28	0.00	0.28
243	583867.19	4138744.72	1.5	0.02219	0.25229	0.28247	0.04586	0.00841	0.02219	0.25229	0.28247	0.04586	0.00841		0.00222	0.02	0.25	0.28	0.05	0.01	0.28	0.00	0.28
117	583783.36	4138859.07	1.5	0.023	0.28157	0.15775	0.02478	0.00441	0.023	0.28157	0.15775	0.02478	0.00441		0.00061	0.02	0.28	0.16	0.02	0.00	0.28	0.00	0.28
242	583862.8	4138750.17	1.5	0.02263	0.25753	0.27799	0.04506	0.00826	0.02263	0.25753	0.27799	0.04506	0.00826		0.00214	0.02	0.26	0.28	0.05	0.01	0.28	0.00	0.28
239	583849.63	4138766.53	1.5	0.02419	0.27616	0.25975	0.04182	0.00762	0.02419	0.27616	0.25975	0.04182	0.00762		0.00189	0.02	0.28	0.26	0.04	0.01	0.28	0.00	0.28
241	583858.41	4138755.63	1.5	0.02311	0.26327	0.27264	0.0441	0.00807	0.02311	0.26327	0.27264	0.0441	0.00807		0.00206	0.02	0.26	0.27	0.04	0.01	0.27	0.00	0.27
224	583826.62	4138783.95	1.5	0.02373	0.27195	0.19054	0.0305	0.00549	0.02373	0.27195	0.19054	0.0305	0.00549		0.00156	0.02	0.27	0.19	0.03	0.01	0.27	0.00	0.27
240	583854.02	4138761.08	1.5	0.02363	0.26947	0.26652	0.04302	0.00786	0.02363	0.26947	0.26652	0.04302	0.00786		0.00197	0.02	0.27	0.27	0.04	0.01	0.27	0.00	0.27
223	583800.28	4138816.66	1.5	0.02329	0.269	0.14439	0.0227	0.00402	0.02329	0.269	0.14439	0.0227	0.00402		0.00112	0.02	0.27	0.14	0.02	0.00	0.27	0.00	0.27
225	583831.01	4138778.5	1.5	0.02337	0.26756	0.19825	0.03184	0.00575	0.02337	0.26756	0.19825	0.03184	0.00575		0.0016	0.02	0.27	0.20	0.03	0.01	0.27	0.00	0.27
226	583835.4	4138773.05	1.5	0.02298	0.26274	0.20571	0.03315	0.00601	0.02298	0.26274	0.20571	0.03315	0.00601		0.00165	0.02	0.26	0.21	0.03	0.01	0.26	0.00	0.26
100	583786.65	4138843.76	1.5	0.02221	0.26234	0.14026	0.02203	0.0039	0.02221	0.26234	0.14026	0.02203	0.0039		0.00074	0.02	0.26	0.14	0.02	0.00	0.26	0.00	0.26
222	583795.89	4138822.12	1.5	0.02244	0.25951	0.1378	0.02167	0.00384	0.02244	0.25951	0.1378	0.02167	0.00384		0.00101	0.02	0.26	0.14	0.02	0.00	0.26	0.00	0.26
227	583839.79	4138767.59	1.5	0.02256	0.25771	0.21282	0.0344	0.00625	0.02256	0.25771	0.21282	0.0344	0.00625		0.0017	0.02	0.26	0.21	0.03	0.01	0.26	0.00	0.26
230	583870.52	4138729.43	1.5	0.01994	0.22655	0.24772	0.04055	0.00745	0.01994	0.22655	0.24772	0.04055	0.00745		0.00214	0.02	0.23	0.25	0.04	0.01	0.25	0.00	0.25
221	583791.5	4138827.57	1.5	0.0213	0.24657	0.13172	0.02074	0.00368	0.0213	0.24657	0.13172	0.02074	0.00368		0.00089	0.02	0.25	0.13	0.02	0.00	0.25	0.00	0.25

229	583866.13	4138734.88	1.5	0.02026	0.23029	0.24511	0.04008	0.00735		0.02026	0.23029	0.24511	0.04008	0.00735		0.00209	0.02	0.23	0.25	0.04	0.01	0.25	0.00	0.25
116	583778.99	4138864.53	1.5	0.01983	0.2438	0.15363	0.02432	0.00436		0.01983	0.2438	0.15363	0.02432	0.00436		0.00052	0.02	0.24	0.15	0.02	0.00	0.24	0.00	0.24
228	583861.74	4138740.33	1.5	0.0206	0.23427	0.24144	0.03943	0.00723		0.0206	0.23427	0.24144	0.03943	0.00723		0.00203	0.02	0.23	0.24	0.04	0.01	0.24	0.00	0.24
214	583821.17	4138779.56	1.5	0.02096	0.23943	0.16154	0.02601	0.00468		0.02096	0.23943	0.16154	0.02601	0.00468		0.00142	0.02	0.24	0.16	0.03	0.00	0.24	0.00	0.24
133	583775.7	4138879.83	1.5	0.01826	0.23901	0.18009	0.02836	0.00512		0.01826	0.23901	0.18009	0.02836	0.00512		0.00044	0.02	0.24	0.18	0.03	0.01	0.24	0.00	0.24
215	583825.56	4138774.11	1.5	0.02083	0.23783	0.16824	0.02717	0.00491		0.02083	0.23783	0.16824	0.02717	0.00491		0.00147	0.02	0.24	0.17	0.03	0.00	0.24	0.00	0.24
99	583782.28	4138849.23	1.5	0.01998	0.23664	0.13545	0.02142	0.00382		0.01998	0.23664	0.13545	0.02142	0.00382		0.00063	0.02	0.24	0.14	0.02	0.00	0.24	0.00	0.24
216	583829.95	4138768.66	1.5	0.02064	0.23554	0.1748	0.02831	0.00512		0.02064	0.23554	0.1748	0.02831	0.00512		0.00152	0.02	0.24	0.17	0.03	0.01	0.24	0.00	0.24
217	583834.34	4138763.2	1.5	0.02041	0.23276	0.18116	0.02942	0.00534		0.02041	0.23276	0.18116	0.02942	0.00534		0.00157	0.02	0.23	0.18	0.03	0.01	0.23	0.00	0.23
213	583794.83	4138812.27	1.5	0.01919	0.21961	0.12279	0.01951	0.00347		0.01919	0.21961	0.12279	0.01951	0.00347		0.00097	0.02	0.22	0.12	0.02	0.00	0.22	0.00	0.22
218	583856.29	4138735.94	1.5	0.01906	0.21669	0.20792	0.03408	0.00624		0.01906	0.21669	0.20792	0.03408	0.00624		0.00186	0.02	0.22	0.21	0.03	0.01	0.22	0.00	0.22
220	583865.07	4138725.04	1.5	0.01854	0.21059	0.21466	0.03525	0.00646		0.01854	0.21059	0.21466	0.03525	0.00646		0.00197	0.02	0.21	0.21	0.04	0.01	0.21	0.00	0.21
219	583860.68	4138730.49	1.5	0.0188	0.21358	0.21169	0.03473	0.00636		0.0188	0.21358	0.21169	0.03473	0.00636		0.00192	0.02	0.21	0.21	0.03	0.01	0.21	0.00	0.21
205	583820.1	4138769.72	1.5	0.01845	0.21008	0.14403	0.02335	0.00421		0.01845	0.21008	0.14403	0.02335	0.00421		0.00134	0.02	0.21	0.14	0.02	0.00	0.21	0.00	0.21
206	583824.49	4138764.27	1.5	0.01843	0.20981	0.14981	0.02435	0.0044		0.01843	0.20981	0.14981	0.02435	0.0044		0.00139	0.02	0.21	0.15	0.02	0.00	0.21	0.00	0.21
204	583815.71	4138775.17	1.5	0.01841	0.20955	0.13821	0.02235	0.00403		0.01841	0.20955	0.13821	0.02235	0.00403		0.00129	0.02	0.21	0.14	0.02	0.00	0.21	0.00	0.21
212	583790.44	4138817.73	1.5	0.01829	0.20916	0.11722	0.01864	0.00332		0.01829	0.20916	0.11722	0.01864	0.00332		0.00087	0.02	0.21	0.12	0.02	0.00	0.21	0.00	0.21
207	583828.88	4138758.81	1.5	0.01836	0.2089	0.15546	0.02533	0.00459		0.01836	0.2089	0.15546	0.02533	0.00459		0.00144	0.02	0.21	0.16	0.03	0.00	0.21	0.00	0.21
98	583777.9	4138854.69	1.5	0.01757	0.20847	0.13081	0.02084	0.00373		0.01757	0.20847	0.13081	0.02084	0.00373		0.00055	0.02	0.21	0.13	0.02	0.00	0.21	0.00	0.21
115	583774.61	4138869.99	1.5	0.01667	0.2056	0.1491	0.02376	0.00429		0.01667	0.2056	0.1491	0.02376	0.00429		0.00046	0.02	0.21	0.15	0.02	0.00	0.21	0.00	0.21
86	583781.19	4138839.39	1.5	0.01742	0.20173	0.11806	0.01879	0.00335		0.01742	0.20173	0.11806	0.01879	0.00335		0.00065	0.02	0.20	0.12	0.02	0.00	0.20	0.00	0.20
208	583850.83	4138731.55	1.5	0.01757	0.1996	0.18017	0.0296	0.00541		0.01757	0.1996	0.18017	0.0296	0.00541		0.00171	0.02	0.20	0.18	0.03	0.01	0.20	0.00	0.20
209	583855.22	4138726.1	1.5	0.01738	0.19737	0.1839	0.03024	0.00553		0.01738	0.19737	0.1839	0.03024	0.00553		0.00176	0.02	0.20	0.18	0.03	0.01	0.20	0.00	0.20
211	583786.05	4138823.18	1.5	0.01718	0.19645	0.11195	0.01783	0.00318		0.01718	0.19645	0.11195	0.01783	0.00318		0.00077	0.02	0.20	0.11	0.02	0.00	0.20	0.00	0.20
210	583859.61	4138720.65	1.5	0.01719	0.19515	0.18703	0.03078	0.00564		0.01719	0.19515	0.18703	0.03078	0.00564		0.00181	0.02	0.20	0.19	0.03	0.01	0.20	0.00	0.20
132	583771.33	4138885.3	1.5	0.01452	0.19062	0.17501	0.02756	0.00501		0.01452	0.19062	0.17501	0.02756	0.00501		0.00041	0.01	0.19	0.18	0.03	0.01	0.19	0.00	0.19
203	583793.76	4138802.43	1.5	0.01663	0.18883	0.11018	0.01766	0.00316		0.01663	0.18883	0.11018	0.01766	0.00316		0.00093	0.02	0.19	0.11	0.02	0.00	0.19	0.00	0.19
196	583823.43	4138754.42	1.5	0.01643	0.18657	0.13439	0.02195	0.00398		0.01643	0.18657	0.13439	0.02195	0.00398		0.00132	0.02	0.19	0.13	0.02	0.00	0.19	0.00	0.19
195	583819.04	4138759.88	1.5	0.01639	0.18601	0.12937	0.02109	0.00381		0.01639	0.18601	0.12937	0.02109	0.00381		0.00127	0.02	0.19	0.13	0.02	0.00	0.19	0.00	0.19
194	583814.65	4138765.33	1.5	0.01629	0.18477	0.12429	0.02022	0.00365		0.01629	0.18477	0.12429	0.02022	0.00365		0.00122	0.02	0.18	0.12	0.02	0.00	0.18	0.00	0.18
197	583845.38	4138727.16	1.5	0.01613	0.18313	0.15703	0.02584	0.00472		0.01613	0.18313	0.15703	0.02584	0.00472		0.00157	0.02	0.18	0.16	0.03	0.00	0.18	0.00	0.18
193	583810.26	4138770.78	1.5	0.01612	0.18274	0.11921	0.01936	0.00349		0.01612	0.18274	0.11921	0.01936	0.00349		0.00116	0.02	0.18	0.12	0.02	0.00	0.18	0.00	0.18
198	583849.77	4138721.71	1.5	0.01601	0.18176	0.16065	0.02646	0.00483		0.01601	0.18176	0.16065	0.02646	0.00483		0.00162	0.02	0.18	0.16	0.03	0.00	0.18	0.00	0.18
85	583776.81	4138844.85	1.5	0.01558	0.18052	0.11329	0.01814	0.00325		0.01558	0.18052	0.11329	0.01814	0.00325		0.00056	0.02	0.18	0.11	0.02	0.00	0.18	0.00	0.18
199	583854.16	4138716.26	1.5	0.01589	0.18028	0.16379	0.02699	0.00494		0.01589	0.18028	0.16379	0.02699	0.00494		0.00167	0.02	0.18	0.16	0.03	0.00	0.18	0.00	0.18
202	583789.37	4138807.88	1.5	0.01588	0.18014	0.10509	0.01685	0.00301		0.01588	0.18014	0.10509	0.01685	0.00301		0.00085	0.02	0.18	0.11	0.02	0.00	0.18	0.00	0.18
97	583773.52	4138860.15	1.5	0.01512	0.17953	0.12604	0.02022	0.00365		0.01512	0.17953	0.12604	0.02022	0.00365		0.00048	0.02	0.18	0.13	0.02	0.00	0.18	0.00	0.18
192	583801.48	4138781.69	1.5	0.01554	0.17587	0.10917	0.01767	0.00317		0.01554	0.17587	0.10917	0.01767	0.00317		0.00104	0.02	0.18	0.11	0.02	0.00	0.18	0.00	0.18
191	583797.09	4138787.14	1.5	0.01511	0.17082	0.10428	0.01685	0.00302		0.01511	0.17082	0.10428	0.01685	0.00302		0.00097	0.02	0.17	0.10	0.02	0.00	0.17	0.00	0.17
201	583784.98	4138813.34	1.5	0.015	0.16991	0.10022	0.01608	0.00288		0.015	0.16991	0.10022	0.01608	0.00288		0.00076	0.02	0.17	0.10	0.02	0.00	0.17	0.00	0.17
114	583770.24	4138875.46	1.5	0.01369	0.16915	0.14376	0.02301	0.00418		0.01369	0.16915	0.14376	0.02301	0.00418		0.00041	0.01	0.17	0.14	0.02	0.00	0.17	0.00	0.17
181	583831.15	4138733.68	1.5	0.01482	0.16793	0.12983	0.02135	0.00388		0.01482	0.16793	0.12983	0.02135	0.00388		0.00135	0.01	0.17	0.13	0.02	0.00	0.17	0.00	0.17
182	583835.54	4138728.22	1.5	0.0148	0.1678	0.13381	0.02203	0.00401		0.0148	0.1678	0.13381	0.02203	0.00401		0.0014	0.01	0.17	0.13	0.02	0.00	0.17	0.00	0.17
131	583766.95	4138890.76	1.5	0.01128	0.1476	0.16778	0.02633	0.00481		0.01128	0.1476	0.16778	0.02633	0.00481		0.00038	0.01	0.15	0.17	0.03	0.00	0.17	0.00	0.17
180	583826.76	4138739.13	1.5	0.0148	0.16771	0.12565	0.02063	0.00375		0.0148	0.16771	0.12565	0.02063	0.00375		0.00131	0.01	0.17	0.13	0.02	0.00	0.17	0.00	0.17
183	583839.93	4138722.77	1.5	0.01477	0.16741	0.13756	0.02266	0.00413		0.01477	0.16741	0.13756	0.02266	0.00413		0.00145	0.01	0.17	0.14	0.02	0.00	0.17	0.00	0.17
179	583822.37	4138744.58	1.5	0.01475	0.16709	0.12133	0.0199	0.00361		0.01475	0.16709	0.12133	0.0199	0.00361		0.00126	0.01	0.17	0.12	0.02	0.00	0.17	0.00	0.17
184	583844.32	4138717.32	1.5	0.01471	0.1668	0.141	0.02325	0.00424		0.01471	0.1668	0.141	0.02325	0.00424		0.00149	0.01	0.17	0.14	0.02	0.00	0.17	0.00	0.17
185	583848.71	4138711.87	1.5	0.01464	0.16602	0.14408	0.02376	0.00434		0.01464	0.16602	0.14408	0.02376	0.00434		0.00154	0.01	0.17	0.14	0.02	0.00	0.17	0.00	0.17
178	583817.98	4138750.03	1.5	0.01466	0.16599	0.11691	0.01914	0.00347		0.01466	0.16599	0.11691	0.01914	0.00347		0.00121	0.01	0.17	0.12	0.02	0.00	0.17	0.00	0.17
190	583792.7	4138792.59	1.5	0.01459	0.16463	0.09952	0.01607	0.00288		0.01459	0.16463	0.09952	0.01607	0.00288		0.00089	0.01	0.16	0.10	0.02	0.00	0.16	0.00	0.16
177	583813.59	4138755.49	1.5	0.01453	0.16435	0.11245	0.01838	0.00332		0.01453	0.16435	0.11245	0.01838	0.00332		0.00116	0.01	0.16	0.11	0.02	0.00	0.16	0.00	0.16
176	583809.2	4138760.94	1.5	0.01434	0.16206	0.10796	0.01762	0.00318		0.01434	0.16206	0.10796	0.01762	0.00318		0.00111	0.01	0.16	0.11	0.02	0.00	0.16	0.00	0.16
175	583804.81	4138766.39	1.5	0.01409	0.15905	0.10349	0.01687	0.00304		0.01409	0.15905	0.10349	0.01687	0.00304		0.00105	0.01	0.16	0.10	0.02	0.00	0.16	0.00	0.16
84	583772.44	4138850.32	1.5	0.01368	0.15845	0.10858	0.01751	0.00316		0.01368	0.15845	0.10858	0.01751	0.00316		0.0005	0.01	0.16	0.11	0.02	0.00	0.16	0.00	0.16
200	583780.59	4138818.79	1.5	0.01399	0.15825	0.09553	0.01537	0.00275		0.01399	0.15825	0.09553	0.01537	0.00275		0.00068	0.01	0.16	0.10	0.02	0.00	0.16	0.00	0.16
76	583775.72	4138835.01	1.5	0.01385	0.15791	0.09958	0.01603	0.00288		0.01385	0.15791	0.09958	0.01603	0.00288		0.00058	0.01	0.16	0.10	0.02	0.00	0.16	0.00	0.16
130	583762.57	4138896.23	1.5	0.00871	0.1125	0.1579	0.02461	0.00451		0.00871	0.1125	0.1579	0.02461	0.00451		0.00037	0.01	0.11	0.16	0.02	0.00	0.16	0.00	0.16
189	583788.31	4138798.04	1.5	0.01396	0.15728	0.09489	0.01532	0.00275		0.01396	0.15728	0.09489	0.01532	0.00275		0.00082	0.01	0.16	0.09	0.02	0.00	0.16	0.00	0.16
174	583800.42	4138771.84	1.5	0.01377	0.15526	0.09905	0.01612	0.0029		0.01377	0.15526	0.09905	0.01612	0.0029		0.00099	0.01	0.16	0.10	0.02	0.00	0.16	0.00	0.16
165	583838.87	4138712.93	1.5	0.01348	0.15259	0.12428	0.02051	0.00374		0.01348	0.15259	0.12428	0.02051	0.00374		0.00138	0.01	0.15	0.12	0.02	0.00	0.15	0.00	0.15
164	583834.48	4138718.38	1.5	0.01348	0.15253	0.12104	0.01996	0.00364		0.01348	0.15253	0.12104	0.01996	0.00364		0.00133	0.01	0.15	0.12	0.02	0.00	0.15	0.00	0.15
166	583843.26	4138707.48	1.5	0.01346	0.15243	0.12724	0.02101	0.00383		0.01346	0.15243	0.12724	0.02101	0.00383		0.00142	0.01	0.15	0.13	0.02	0.00	0.15	0.00	0.15
163	583830.09	4138723.83	1.5	0.01345	0.1522	0.11757	0.01938	0.00352		0.01345	0.1522	0.11757	0.01938	0.00352		0.00129	0.01	0.15	0.12	0.02	0.00	0.15	0.00	0.15
162	583825.7	4138729.29	1.5	0.0134	0.15159	0.11392	0.01876	0.00341		0.0134	0.15159	0.11392	0.01876	0.00341		0.00125	0.01	0.15	0.11	0.02	0.00	0.15	0.00	0.15
96	583769.15	4138865.62	1.5	0.01274	0.15139	0.12086	0.01952	0.00354		0.01274	0.15139	0.12086	0.01952	0.00354		0.00043	0.01	0.15	0.12	0.02	0.00	0.15	0.00	0.15
173	583796.03	4138777.3	1.5	0.01339	0.15067	0.09469	0.0154	0.00277		0.01339	0.15067	0.09469	0.0154	0.00277		0.00093	0.01	0.15	0.09	0.02	0.00	0.15	0.00	0.15
161	583821.31	4138734.74	1.5	0.01332	0.15059	0.11012	0.01811	0.00329		0.01332	0.15059	0.11012	0.01811	0.00329		0.0012	0.01	0.15	0.11	0.02	0.00	0.15	0.00	0.15
160	583816.92	4138740.19	1.5	0.01321	0.14918	0.10622	0.01745	0.00316		0.01321	0.14918	0.10622	0.01745	0.00316		0.00116	0.01	0.15	0.11	0.02	0.00	0.15	0.00	0.15
188	583783.92	4138803.49	1.5	0.01323	0.14883	0.09041	0.01461	0.00262		0.01323	0.14883	0.09041	0.01461	0.00262		0.00075	0.01	0.15	0.09	0.01	0.00	0.15	0.00	0.15
159	583812.53	4138745.64	1.5	0.01306	0.14731	0.10227	0.01678	0.00304		0.01306	0.14731	0.10227	0.01678	0.00304		0.00111	0.01	0.15	0.10	0.02	0.00	0.15	0.00	0.15
172	583791.64	4138782.75	1.5	0.01292	0.14521	0.0904	0.01469	0.00264		0.01292	0.14521	0.0904	0.01469	0.00264		0.00086	0.01	0.15	0.09	0.01	0.00	0.15	0.00	0.15

129	583758.2	4138901.69	1.5	0.00687	0.08676	0.14506	0.02241	0.00411		0.00687	0.08676	0.14506	0.02241	0.00411		0.00036	0.01	0.09	0.15	0.02	0.00	0.15	0.00	0.15
158	583808.14	4138751.1	1.5	0.01286	0.14493	0.09829	0.01611	0.00291		0.01286	0.14493	0.09829	0.01611	0.00291		0.00106	0.01	0.14	0.10	0.02	0.00	0.14	0.00	0.14
157	583803.75	4138756.55	1.5	0.01261	0.14196	0.0943	0.01544	0.00279		0.01261	0.14196	0.0943	0.01544	0.00279		0.001	0.01	0.14	0.09	0.02	0.00	0.14	0.00	0.14
75	583771.35	4138840.48	1.5	0.01236	0.14081	0.09501	0.01538	0.00277		0.01236	0.14081	0.09501	0.01538	0.00277		0.00051	0.01	0.14	0.10	0.02	0.00	0.14	0.00	0.14
150	583837.8	4138703.09	1.5	0.01234	0.13957	0.11277	0.01863	0.0034		0.01234	0.13957	0.11277	0.01863	0.0034		0.00131	0.01	0.14	0.11	0.02	0.00	0.14	0.00	0.14
187	583779.53	4138808.95	1.5	0.01241	0.13938	0.08608	0.01393	0.0025		0.01241	0.13938	0.08608	0.01393	0.0025		0.00068	0.01	0.14	0.09	0.01	0.00	0.14	0.00	0.14
149	583833.41	4138708.54	1.5	0.01231	0.13919	0.10996	0.01816	0.00331		0.01231	0.13919	0.10996	0.01816	0.00331		0.00127	0.01	0.14	0.11	0.02	0.00	0.14	0.00	0.14
171	583787.25	4138788.2	1.5	0.01238	0.1389	0.08621	0.014	0.00252		0.01238	0.1389	0.08621	0.014	0.00252		0.0008	0.01	0.14	0.09	0.01	0.00	0.14	0.00	0.14
148	583829.02	4138713.99	1.5	0.01227	0.13857	0.10693	0.01766	0.00321		0.01227	0.13857	0.10693	0.01766	0.00321		0.00123	0.01	0.14	0.11	0.02	0.00	0.14	0.00	0.14
156	583799.36	4138762	1.5	0.01231	0.13839	0.09033	0.01477	0.00266		0.01231	0.13839	0.09033	0.01477	0.00266		0.00095	0.01	0.14	0.09	0.01	0.00	0.14	0.00	0.14
147	583824.63	4138719.44	1.5	0.01219	0.13767	0.10373	0.01712	0.00311		0.01219	0.13767	0.10373	0.01712	0.00311		0.00119	0.01	0.14	0.10	0.02	0.00	0.14	0.00	0.14
113	583765.86	4138880.92	1.5	0.01101	0.13594	0.13711	0.02201	0.00402		0.01101	0.13594	0.13711	0.02201	0.00402		0.00038	0.01	0.14	0.14	0.02	0.00	0.14	0.00	0.14
146	583820.24	4138724.9	1.5	0.0121	0.13646	0.10039	0.01656	0.00301		0.0121	0.13646	0.10039	0.01656	0.00301		0.00115	0.01	0.14	0.10	0.02	0.00	0.14	0.00	0.14
145	583815.85	4138730.35	1.5	0.01197	0.13489	0.09694	0.01597	0.0029		0.01197	0.13489	0.09694	0.01597	0.0029		0.0011	0.01	0.13	0.10	0.02	0.00	0.13	0.00	0.13
155	583794.97	4138767.45	1.5	0.01196	0.13419	0.08641	0.01412	0.00254		0.01196	0.13419	0.08641	0.01412	0.00254		0.00089	0.01	0.13	0.09	0.01	0.00	0.13	0.00	0.13
144	583811.46	4138735.8	1.5	0.01181	0.13292	0.09342	0.01538	0.00279		0.01181	0.13292	0.09342	0.01538	0.00279		0.00106	0.01	0.13	0.09	0.02	0.00	0.13	0.00	0.13
170	583782.86	4138793.65	1.5	0.01178	0.1318	0.08212	0.01334	0.0024		0.01178	0.1318	0.08212	0.01334	0.0024		0.00073	0.01	0.13	0.08	0.01	0.00	0.13	0.00	0.13
143	583807.07	4138741.25	1.5	0.01161	0.13052	0.08987	0.01478	0.00268		0.01161	0.13052	0.08987	0.01478	0.00268		0.00101	0.01	0.13	0.09	0.01	0.00	0.13	0.00	0.13
128	583753.82	4138907.15	1.5	0.00568	0.06988	0.12947	0.01981	0.00364		0.00568	0.06988	0.12947	0.01981	0.00364		0.00035	0.01	0.07	0.13	0.02	0.00	0.13	0.00	0.13
186	583775.14	4138814.4	1.5	0.01152	0.12907	0.08185	0.01328	0.00239		0.01152	0.12907	0.08185	0.01328	0.00239		0.00061	0.01	0.13	0.08	0.01	0.00	0.13	0.00	0.13
112	583761.49	4138886.39	1.5	0.00876	0.10757	0.12899	0.02072	0.0038		0.00876	0.10757	0.12899	0.02072	0.0038		0.00036	0.01	0.11	0.13	0.02	0.00	0.13	0.00	0.13
142	583802.68	4138746.71	1.5	0.01137	0.12768	0.08631	0.01418	0.00256		0.01137	0.12768	0.08631	0.01418	0.00256		0.00096	0.01	0.13	0.09	0.01	0.00	0.13	0.00	0.13
67	583770.26	4138830.64	1.5	0.01118	0.12592	0.08429	0.0137	0.00247		0.01118	0.12592	0.08429	0.0137	0.00247		0.00052	0.01	0.13	0.08	0.01	0.00	0.13	0.00	0.13
95	583764.77	4138871.08	1.5	0.01055	0.12517	0.1149	0.01866	0.00341		0.01055	0.12517	0.1149	0.01866	0.00341		0.00039	0.01	0.13	0.11	0.02	0.00	0.13	0.00	0.13
141	583798.29	4138752.16	1.5	0.01109	0.12434	0.08275	0.01359	0.00245		0.01109	0.12434	0.08275	0.01359	0.00245		0.00091	0.01	0.12	0.08	0.01	0.00	0.12	0.00	0.12
169	583778.47	4138799.1	1.5	0.0111	0.12396	0.07813	0.01271	0.00229		0.0111	0.12396	0.07813	0.01271	0.00229		0.00067	0.01	0.12	0.08	0.01	0.00	0.12	0.00	0.12
74	583766.97	4138845.94	1.5	0.01085	0.12344	0.09036	0.01472	0.00267		0.01085	0.12344	0.09036	0.01472	0.00267		0.00046	0.01	0.12	0.09	0.01	0.00	0.12	0.00	0.12
140	583793.9	4138757.61	1.5	0.01077	0.12052	0.07921	0.013	0.00235		0.01077	0.12052	0.07921	0.013	0.00235		0.00086	0.01	0.12	0.08	0.01	0.00	0.12	0.00	0.12
111	583757.11	4138891.85	1.5	0.00698	0.08487	0.11913	0.01911	0.00352		0.00698	0.08487	0.11913	0.01911	0.00352		0.00034	0.01	0.08	0.12	0.02	0.00	0.12	0.00	0.12
139	583789.51	4138763.06	1.5	0.01041	0.1162	0.07571	0.01242	0.00224		0.01041	0.1162	0.07571	0.01242	0.00224		0.00081	0.01	0.12	0.08	0.01	0.00	0.12	0.00	0.12
168	583774.08	4138804.56	1.5	0.01037	0.11551	0.07423	0.0121	0.00218		0.01037	0.11551	0.07423	0.0121	0.00218		0.00061	0.01	0.12	0.07	0.01	0.00	0.12	0.00	0.12
127	583749.45	4138912.62	1.5	0.00495	0.05968	0.1122	0.01702	0.00312		0.00495	0.05968	0.1122	0.01702	0.00312		0.00034	0.00	0.06	0.11	0.02	0.00	0.11	0.00	0.11
66	583765.88	4138836.1	1.5	0.00997	0.1121	0.07995	0.01307	0.00237		0.00997	0.1121	0.07995	0.01307	0.00237		0.00047	0.01	0.11	0.08	0.01	0.00	0.11	0.00	0.11
154	583777.41	4138789.26	1.5	0.01	0.11121	0.07136	0.01167	0.0021		0.01	0.11121	0.07136	0.01167	0.0021		0.00066	0.01	0.11	0.07	0.01	0.00	0.11	0.00	0.11
94	583760.4	4138876.55	1.5	0.00862	0.10202	0.10808	0.01763	0.00323		0.00862	0.10202	0.10808	0.01763	0.00323		0.00036	0.01	0.10	0.11	0.02	0.00	0.11	0.00	0.11
110	583752.73	4138897.31	1.5	0.00567	0.06812	0.10771	0.01722	0.00318		0.00567	0.06812	0.10771	0.01722	0.00318		0.00033	0.01	0.07	0.11	0.02	0.00	0.11	0.00	0.11
167	583769.69	4138810.01	1.5	0.00958	0.10657	0.07041	0.01151	0.00208		0.00958	0.10657	0.07041	0.01151	0.00208		0.00055	0.01	0.11	0.07	0.01	0.00	0.11	0.00	0.11
153	583773.02	4138794.71	1.5	0.00939	0.10415	0.06778	0.0111	0.002		0.00939	0.10415	0.06778	0.0111	0.002		0.0006	0.01	0.10	0.07	0.01	0.00	0.10	0.00	0.10
57	583764.8	4138826.26	1.5	0.00916	0.10217	0.07163	0.01174	0.00212		0.00916	0.10217	0.07163	0.01174	0.00212		0.00048	0.01	0.10	0.07	0.01	0.00	0.10	0.00	0.10
93	583756.02	4138882.01	1.5	0.007	0.08252	0.10022	0.0164	0.00302		0.007	0.08252	0.10022	0.0164	0.00302		0.00034	0.01	0.08	0.10	0.02	0.00	0.10	0.00	0.10
65	583761.51	4138841.56	1.5	0.00877	0.09847	0.07559	0.01243	0.00226		0.00877	0.09847	0.07559	0.01243	0.00226		0.00042	0.01	0.10	0.08	0.01	0.00	0.10	0.00	0.10
152	583768.63	4138800.17	1.5	0.00874	0.09674	0.06427	0.01055	0.0019		0.00874	0.09674	0.06427	0.01055	0.0019		0.00055	0.01	0.10	0.06	0.01	0.00	0.10	0.00	0.10
109	583748.36	4138902.78	1.5	0.00479	0.05669	0.09519	0.01517	0.0028		0.00479	0.05669	0.09519	0.01517	0.0028		0.00032	0.00	0.06	0.10	0.02	0.00	0.10	0.00	0.10
126	583745.07	4138918.08	1.5	0.00448	0.05332	0.0944	0.01422	0.0026		0.00448	0.05332	0.0944	0.01422	0.0026		0.00034	0.00	0.05	0.09	0.01	0.00	0.09	0.00	0.09
92	583751.65	4138887.47	1.5	0.00572	0.06706	0.09149	0.01499	0.00277		0.00572	0.06706	0.09149	0.01499	0.00277		0.00032	0.01	0.07	0.09	0.01	0.00	0.09	0.00	0.09
56	583760.42	4138831.72	1.5	0.00818	0.09102	0.06763	0.01115	0.00202		0.00818	0.09102	0.06763	0.01115	0.00202		0.00043	0.01	0.09	0.07	0.01	0.00	0.09	0.00	0.09
151	583764.24	4138805.62	1.5	0.00806	0.08906	0.06081	0.01001	0.00181		0.00806	0.08906	0.06081	0.01001	0.00181		0.0005	0.01	0.09	0.06	0.01	0.00	0.09	0.00	0.09
64	583757.13	4138847.03	1.5	0.00762	0.08539	0.07111	0.01177	0.00215		0.00762	0.08539	0.07111	0.01177	0.00215		0.00038	0.01	0.09	0.07	0.01	0.00	0.09	0.00	0.09
108	583743.98	4138908.24	1.5	0.0042	0.04923	0.08213	0.01304	0.0024		0.0042	0.04923	0.08213	0.01304	0.0024		0.00032	0.00	0.05	0.08	0.01	0.00	0.08	0.00	0.08
91	583747.27	4138892.94	1.5	0.00477	0.05545	0.08202	0.01344	0.00249		0.00477	0.05545	0.08202	0.01344	0.00249		0.00031	0.00	0.06	0.08	0.01	0.00	0.08	0.00	0.08
55	583756.05	4138837.19	1.5	0.00722	0.0802	0.06363	0.01055	0.00192		0.00722	0.0802	0.06363	0.01055	0.00192		0.00039	0.01	0.08	0.06	0.01	0.00	0.08	0.00	0.08
83	583750.56	4138877.63	1.5	0.00574	0.06581	0.07907	0.01312	0.00242		0.00574	0.06581	0.07907	0.01312	0.00242		0.00032	0.01	0.07	0.08	0.01	0.00	0.08	0.00	0.08
125	583740.69	4138923.54	1.5	0.00415	0.04892	0.07744	0.01164	0.00212		0.00415	0.04892	0.07744	0.01164	0.00212		0.00033	0.00	0.05	0.08	0.01	0.00	0.08	0.00	0.08
36	583754.96	4138827.35	1.5	0.00681	0.0752	0.05755	0.00955	0.00174		0.00681	0.0752	0.05755	0.00955	0.00174		0.0004	0.01	0.08	0.06	0.01	0.00	0.08	0.00	0.08
90	583742.89	4138898.4	1.5	0.00409	0.04722	0.07217	0.01182	0.00219		0.00409	0.04722	0.07217	0.01182	0.00219		0.0003	0.00	0.05	0.07	0.01	0.00	0.07	0.00	0.07
82	583746.18	4138883.1	1.5	0.00479	0.05472	0.07166	0.01193	0.00221		0.00479	0.05472	0.07166	0.01193	0.00221		0.0003	0.00	0.05	0.07	0.01	0.00	0.07	0.00	0.07
54	583751.67	4138842.65	1.5	0.00631	0.06993	0.05956	0.00993	0.00182		0.00631	0.06993	0.05956	0.00993	0.00182		0.00036	0.01	0.07	0.06	0.01	0.00	0.07	0.00	0.07
107	583739.61	4138913.7	1.5	0.00381	0.04433	0.06942	0.011	0.00202		0.00381	0.04433	0.06942	0.011	0.00202		0.00031	0.00	0.04	0.07	0.01	0.00	0.07	0.00	0.07
35	583750.58	4138832.81	1.5	0.00603	0.0665	0.05393	0.009	0.00164		0.00603	0.0665	0.05393	0.009	0.00164		0.00037	0.01	0.07	0.05	0.01	0.00	0.07	0.00	0.07
398	583793.75	4138663.96	1.5	0.00579	0.06415	0.04646	0.00775	0.00141		0.00579	0.06415	0.04646	0.00775	0.00141		0.00073	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
81	583741.81	4138888.56	1.5	0.00406	0.0463	0.06403	0.01068	0.00198		0.00406	0.0463	0.06403	0.01068	0.00198		0.00029	0.00	0.05	0.06	0.01	0.00	0.06	0.00	0.06
73	583745.09	4138873.26	1.5	0.00479	0.05401	0.06341	0.01064	0.00197		0.00479	0.05401	0.06341	0.01064	0.00197		0.0003	0.00	0.05	0.06	0.01	0.00	0.06	0.00	0.06
18	583749.49	4138822.97	1.5	0.00575	0.06309	0.04927	0.00823	0.0015		0.00575	0.06309	0.04927	0.00823	0.0015		0.00037	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
393	583789.44	4138669.47	1.5	0.00565	0.06255	0.04501	0.00752	0.00137		0.00565	0.06255	0.04501	0.00752	0.00137		0.0007	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
124	583736.32	4138929.01	1.5	0.00388	0.04549	0.06247	0.00942	0.00171		0.00388	0.04549	0.06247	0.00942	0.00171		0.00033	0.00	0.05	0.06	0.01	0.00	0.06	0.00	0.06
53	583747.29	4138848.12	1.5	0.00546	0.06051	0.05544	0.0093	0.00171		0.00546	0.06051	0.05544	0.0093	0.00171		0.00033	0.01	0.06	0.06	0.01	0.00	0.06	0.00	0.06
388	583781.9	4138680.41	1.5	0.00543	0.05994	0.04265	0.00713	0.0013		0.00543	0.05994	0.04265	0.00713	0.0013		0.00066	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
399	583788.23	4138659.65	1.5	0.00529	0.05849	0.0422	0.00705	0.00128		0.00529	0.05849	0.0422	0.00705	0.00128		0.00068	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
34	583746.21	4138838.28	1.5	0.0053	0.05835	0.05033	0.00845	0.00155		0.0053	0.05835	0.05033	0.00845	0.00155		0.00034	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
383	583777.59	4138685.93	1.5	0.00528	0.05807	0.04111	0.00688	0.00125		0.00528	0.05807	0.04111	0.00688	0.00125		0.00063	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
106	583735.23	4138919.17	1.5	0.00353	0.04081	0.05776	0.00915	0.00168		0.00353	0.04081	0.05776	0.00915	0.00168		0.00031	0.00	0.04	0.06	0.01	0.00	0.06	0.00	0.06
72	583740.72	4138878.72	1.5	0.00407	0.04577	0.05731	0.00965	0.00179		0.00407	0.04577	0.05731	0.00965	0.00179		0.00028	0.00	0.05	0.06	0.01	0.00	0.06	0.00	0.06

394	583783.92	4138665.17	1.5	0.00516	0.05694	0.04086	0.00683	0.00124		0.00516	0.05694	0.04086	0.00683	0.00124		0.00066	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
80	583737.43	4138894.03	1.5	0.00353	0.04013	0.05639	0.00942	0.00175		0.00353	0.04013	0.05639	0.00942	0.00175		0.00028	0.00	0.04	0.06	0.01	0.00	0.06	0.00	0.06
17	583745.12	4138828.44	1.5	0.00512	0.05605	0.04607	0.00774	0.00141		0.00512	0.05605	0.04607	0.00774	0.00141		0.00034	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
389	583776.38	4138676.1	1.5	0.00494	0.05438	0.03867	0.00647	0.00118		0.00494	0.05438	0.03867	0.00647	0.00118		0.00062	0.00	0.05	0.04	0.01	0.00	0.05	0.00	0.05
400	583782.71	4138655.34	1.5	0.00484	0.0534	0.03842	0.00643	0.00117		0.00484	0.0534	0.03842	0.00643	0.00117		0.00064	0.00	0.05	0.04	0.01	0.00	0.05	0.00	0.05
378	583766.43	4138699.17	1.5	0.0048	0.05262	0.03691	0.00618	0.00112		0.0048	0.05262	0.03691	0.00618	0.00112		0.00056	0.00	0.05	0.04	0.01	0.00	0.05	0.00	0.05
384	583772.07	4138681.62	1.5	0.00479	0.0526	0.03725	0.00624	0.00113		0.00479	0.0526	0.03725	0.00624	0.00113		0.00059	0.00	0.05	0.04	0.01	0.00	0.05	0.00	0.05
52	583742.92	4138853.58	1.5	0.00471	0.05212	0.05127	0.00865	0.00159		0.00471	0.05212	0.05127	0.00865	0.00159		0.0003	0.00	0.05	0.05	0.01	0.00	0.05	0.00	0.05
395	583778.4	4138660.86	1.5	0.00472	0.05191	0.03717	0.00623	0.00113		0.00472	0.05191	0.03717	0.00623	0.00113		0.00062	0.00	0.05	0.04	0.01	0.00	0.05	0.00	0.05
63	583739.63	4138868.88	1.5	0.00407	0.04534	0.05173	0.00876	0.00162		0.00407	0.04534	0.05173	0.00876	0.00162		0.00028	0.00	0.05	0.05	0.01	0.00	0.05	0.00	0.05
71	583736.34	4138884.19	1.5	0.00351	0.0394	0.05118	0.00864	0.0016		0.00351	0.0394	0.05118	0.00864	0.0016		0.00027	0.00	0.04	0.05	0.01	0.00	0.05	0.00	0.05
33	583741.83	4138843.74	1.5	0.00463	0.05088	0.04671	0.00789	0.00145		0.00463	0.05088	0.04671	0.00789	0.00145		0.00031	0.00	0.05	0.05	0.01	0.00	0.05	0.00	0.05
373	583762.12	4138704.69	1.5	0.00462	0.05052	0.03537	0.00593	0.00108		0.00462	0.05052	0.03537	0.00593	0.00108		0.00053	0.00	0.05	0.04	0.01	0.00	0.05	0.00	0.05
123	583731.94	4138934.47	1.5	0.00366	0.04263	0.05027	0.00766	0.00139		0.00366	0.04263	0.05027	0.00766	0.00139		0.00033	0.00	0.04	0.05	0.01	0.00	0.05	0.00	0.05
16	583740.74	4138833.9	1.5	0.00452	0.04946	0.04289	0.00724	0.00133		0.00452	0.04946	0.04289	0.00724	0.00133		0.00032	0.00	0.05	0.04	0.01	0.00	0.05	0.00	0.05
390	583770.86	4138671.8	1.5	0.00451	0.04943	0.03513	0.00589	0.00107		0.00451	0.04943	0.03513	0.00589	0.00107		0.00058	0.00	0.05	0.04	0.01	0.00	0.05	0.00	0.05
401	583777.19	4138651.03	1.5	0.00444	0.04882	0.03504	0.00587	0.00107		0.00444	0.04882	0.03504	0.00587	0.00107		0.0006	0.00	0.05	0.04	0.01	0.00	0.05	0.00	0.05
105	583730.86	4138924.63	1.5	0.0033	0.03809	0.04778	0.00758	0.00139		0.0033	0.03809	0.04778	0.00758	0.00139		0.0003	0.00	0.04	0.05	0.01	0.00	0.05	0.00	0.05
385	583766.55	4138677.31	1.5	0.00436	0.04776	0.03382	0.00568	0.00103		0.00436	0.04776	0.03382	0.00568	0.00103		0.00056	0.00	0.05	0.03	0.01	0.00	0.05	0.00	0.05
379	583760.91	4138694.86	1.5	0.00435	0.04753	0.03341	0.00561	0.00102		0.00435	0.04753	0.03341	0.00561	0.00102		0.00053	0.00	0.05	0.03	0.01	0.00	0.05	0.00	0.05
396	583772.89	4138656.55	1.5	0.00432	0.0474	0.03389	0.00569	0.00103		0.00432	0.0474	0.03389	0.00569	0.00103		0.00058	0.00	0.05	0.03	0.01	0.00	0.05	0.00	0.05
298	583742.32	4138780.73	1.5	0.00436	0.04728	0.03431	0.00576	0.00105		0.00436	0.04728	0.03431	0.00576	0.00105		0.00038	0.00	0.05	0.03	0.01	0.00	0.05	0.00	0.05
51	583738.54	4138859.04	1.5	0.00406	0.04484	0.04706	0.00798	0.00147		0.00406	0.04484	0.04706	0.00798	0.00147		0.00028	0.00	0.04	0.05	0.01	0.00	0.05	0.00	0.05
62	583735.25	4138874.35	1.5	0.00351	0.03901	0.04671	0.00794	0.00147		0.00351	0.03901	0.04671	0.00794	0.00147		0.00027	0.00	0.04	0.05	0.01	0.00	0.05	0.00	0.05
368	583754.25	4138715.3	1.5	0.00429	0.04668	0.03264	0.00548	0.001		0.00429	0.04668	0.03264	0.00548	0.001		0.00049	0.00	0.05	0.03	0.01	0.00	0.05	0.00	0.05
374	583756.6	4138700.38	1.5	0.00418	0.04559	0.032	0.00538	0.00098		0.00418	0.04559	0.032	0.00538	0.00098		0.0005	0.00	0.05	0.03	0.01	0.00	0.05	0.00	0.05
70	583731.97	4138889.65	1.5	0.00309	0.03464	0.04524	0.00765	0.00142		0.00309	0.03464	0.04524	0.00765	0.00142		0.00026	0.00	0.03	0.05	0.01	0.00	0.05	0.00	0.05
391	583765.35	4138667.49	1.5	0.00412	0.04504	0.03199	0.00537	0.00098		0.00412	0.04504	0.03199	0.00537	0.00098		0.00055	0.00	0.05	0.03	0.01	0.00	0.05	0.00	0.05
402	583771.68	4138646.73	1.5	0.00408	0.04472	0.03203	0.00538	0.00098		0.00408	0.04472	0.03203	0.00538	0.00098		0.00057	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
363	583749.94	4138720.82	1.5	0.00409	0.04447	0.03112	0.00523	0.00095		0.00409	0.04447	0.03112	0.00523	0.00095		0.00046	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
32	583737.45	4138849.2	1.5	0.00403	0.04422	0.04311	0.00732	0.00135		0.00403	0.04422	0.04311	0.00732	0.00135		0.00029	0.00	0.04	0.04	0.01	0.00	0.04	0.00	0.04
297	583737.9	4138786.16	1.5	0.00402	0.04352	0.03224	0.00543	0.00099		0.00402	0.04352	0.03224	0.00543	0.00099		0.00036	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
386	583761.04	4138673.01	1.5	0.00398	0.04347	0.03079	0.00518	0.00094		0.00398	0.04347	0.03079	0.00518	0.00094		0.00052	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
15	583736.37	4138839.36	1.5	0.00398	0.04345	0.03977	0.00675	0.00124		0.00398	0.04345	0.03977	0.00675	0.00124		0.00029	0.00	0.04	0.04	0.01	0.00	0.04	0.00	0.04
354	583742.06	4138753.66	1.5	0.004	0.04341	0.03076	0.00518	0.00094		0.004	0.04341	0.03076	0.00518	0.00094		0.0004	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
397	583767.37	4138652.24	1.5	0.00396	0.04336	0.03096	0.0052	0.00095		0.00396	0.04336	0.03096	0.0052	0.00095		0.00055	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
380	583755.39	4138690.56	1.5	0.00395	0.04306	0.03031	0.0051	0.00093		0.00395	0.04306	0.03031	0.0051	0.00093		0.0005	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
50	583734.17	4138864.51	1.5	0.00351	0.03874	0.04288	0.0073	0.00135		0.00351	0.03874	0.04288	0.0073	0.00135		0.00027	0.00	0.04	0.04	0.01	0.00	0.04	0.00	0.04
369	583748.73	4138710.99	1.5	0.00387	0.04207	0.0295	0.00496	0.0009		0.00387	0.04207	0.0295	0.00496	0.0009		0.00046	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
61	583730.88	4138879.81	1.5	0.00306	0.03406	0.04182	0.00712	0.00132		0.00306	0.03406	0.04182	0.00712	0.00132		0.00026	0.00	0.03	0.04	0.01	0.00	0.04	0.00	0.04
293	583736.89	4138776.31	1.5	0.00385	0.04169	0.03047	0.00514	0.00094		0.00385	0.04169	0.03047	0.00514	0.00094		0.00036	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
122	583727.57	4138939.94	1.5	0.00346	0.04019	0.04131	0.00639	0.00116		0.00346	0.04019	0.04131	0.00639	0.00116		0.00033	0.00	0.04	0.04	0.01	0.00	0.04	0.00	0.04
375	583751.09	4138696.07	1.5	0.00379	0.04128	0.02903	0.00489	0.00089		0.00379	0.04128	0.02903	0.00489	0.00089		0.00047	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
392	583759.83	4138663.18	1.5	0.00377	0.04112	0.02919	0.00491	0.00089		0.00377	0.04112	0.02919	0.00491	0.00089		0.00052	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
349	583737.76	4138759.18	1.5	0.00376	0.04067	0.02911	0.00491	0.00089		0.00376	0.04067	0.02911	0.00491	0.00089		0.00038	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
364	583744.43	4138716.51	1.5	0.00369	0.04007	0.02813	0.00474	0.00086		0.00369	0.04007	0.02813	0.00474	0.00086		0.00043	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
296	583733.48	4138791.59	1.5	0.00368	0.03987	0.03024	0.00511	0.00093		0.00368	0.03987	0.03024	0.00511	0.00093		0.00033	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
104	583726.48	4138930.1	1.5	0.00311	0.03581	0.03977	0.00634	0.00116		0.00311	0.03581	0.03977	0.00634	0.00116		0.0003	0.00	0.04	0.04	0.01	0.00	0.04	0.00	0.04
387	583755.52	4138668.7	1.5	0.00364	0.03966	0.02809	0.00473	0.00086		0.00364	0.03966	0.02809	0.00473	0.00086		0.0005	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
31	583733.08	4138854.67	1.5	0.00351	0.03845	0.03956	0.00674	0.00124		0.00351	0.03845	0.03956	0.00674	0.00124		0.00027	0.00	0.04	0.04	0.01	0.00	0.04	0.00	0.04
381	583749.88	4138686.25	1.5	0.0036	0.03914	0.02758	0.00465	0.00085		0.0036	0.03914	0.02758	0.00465	0.00085		0.00047	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
49	583729.79	4138869.97	1.5	0.00306	0.03375	0.03877	0.00663	0.00123		0.00306	0.03375	0.03877	0.00663	0.00123		0.00025	0.00	0.03	0.04	0.01	0.00	0.04	0.00	0.04
355	583736.55	4138749.35	1.5	0.00358	0.03874	0.02759	0.00465	0.00085		0.00358	0.03874	0.02759	0.00465	0.00085		0.00038	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
292	583732.47	4138781.74	1.5	0.00355	0.03844	0.02863	0.00484	0.00088		0.00355	0.03844	0.02863	0.00484	0.00088		0.00034	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
14	583731.99	4138844.83	1.5	0.00349	0.03808	0.03668	0.00625	0.00115		0.00349	0.03808	0.03668	0.00625	0.00115		0.00027	0.00	0.04	0.04	0.01	0.00	0.04	0.00	0.04
370	583743.22	4138706.68	1.5	0.00351	0.03805	0.02675	0.00451	0.00082		0.00351	0.03805	0.02675	0.00451	0.00082		0.00043	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
121	583723.19	4138945.4	1.5	0.00329	0.03804	0.0353	0.00555	0.00101		0.00329	0.03804	0.0353	0.00555	0.00101		0.00033	0.00	0.04	0.04	0.01	0.00	0.04	0.00	0.04
376	583745.57	4138691.77	1.5	0.00345	0.0375	0.0264	0.00445	0.00081		0.00345	0.0375	0.0264	0.00445	0.00081		0.00045	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
60	583726.5	4138885.27	1.5	0.00272	0.03027	0.03713	0.00633	0.00117		0.00272	0.03027	0.03713	0.00633	0.00117		0.00025	0.00	0.03	0.04	0.01	0.00	0.04	0.00	0.04
295	583729.06	4138797.02	1.5	0.00336	0.03636	0.02831	0.0048	0.00088		0.00336	0.03636	0.02831	0.0048	0.00088		0.00031	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
350	583732.24	4138754.87	1.5	0.00336	0.0363	0.0261	0.00441	0.0008		0.00336	0.0363	0.0261	0.00441	0.0008		0.00036	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
365	583738.91	4138712.2	1.5	0.00334	0.03623	0.02549	0.0043	0.00078		0.00334	0.03623	0.02549	0.0043	0.00078		0.00041	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
120	583718.82	4138950.86	1.5	0.00313	0.03611	0.03147	0.005	0.00091		0.00313	0.03611	0.03147	0.005	0.00091		0.00033	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
30	583728.7	4138860.13	1.5	0.00306	0.03357	0.03607	0.00617	0.00114		0.00306	0.03357	0.03607	0.00617	0.00114		0.00025	0.00	0.03	0.04	0.01	0.00	0.04	0.00	0.04
382	583744.36	4138681.94	1.5	0.00329	0.03567	0.02515	0.00424	0.00077		0.00329	0.03567	0.02515	0.00424	0.00077		0.00044	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
291	583728.05	4138787.17	1.5	0.00327	0.03529	0.02685	0.00455	0.00083		0.00327	0.03529	0.02685	0.00455	0.00083		0.00032	0.00	0.04	0.03	0.00	0.00	0.04	0.00	0.04
48	583725.42	4138875.43	1.5	0.0027	0.0298	0.03483	0.00597	0.00111		0.0027	0.0298	0.03483	0.00597	0.00111		0.00024	0.00	0.03	0.03	0.01	0.00	0.03	0.00	0.03
356	583731.03	4138745.04	1.5	0.00322	0.03474	0.02483	0.0042	0.00076		0.00322	0.03474	0.02483	0.0042	0.00076		0.00036	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
371	583737.7	4138702.38	1.5	0.00319	0.03454	0.02431	0.00411	0.00075		0.00319	0.03454	0.02431	0.00411	0.00075		0.00041	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
377	583740.05	4138687.46	1.5	0.00315	0.03417	0.02407	0.00407	0.00074		0.00315	0.03417	0.02407	0.00407	0.00074		0.00043	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
103	583722.1	4138935.56	1.5	0.00295	0.03387	0.0338	0.00542	0.00099		0.00295	0.03387	0.0338	0.00542	0.00099		0.0003	0.00	0.03	0.03	0.01	0.00	0.03	0.00	0.03
13	583727.61	4138850.29	1.5	0.00306	0.03341	0.03367	0.00576	0.00106		0.00306	0.03341	0.03367	0.00576	0.00106		0.00026	0.00	0.03	0.03	0.01	0.00	0.03	0.00	0.03

294	583724.64	4138802.44	1.5	0.00306	0.03302	0.02645	0.0045	0.00082		0.00306	0.03302	0.02645	0.0045	0.00082		0.00029	0.00	0.03	0.03	0.00	0.00	0.03	0.00	0.03
366	583733.39	4138707.89	1.5	0.00304	0.03289	0.02317	0.00392	0.00071		0.00304	0.03289	0.02317	0.00392	0.00071		0.00039	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
29	583724.33	4138865.59	1.5	0.0027	0.02957	0.0327	0.00561	0.00104		0.0027	0.02957	0.0327	0.00561	0.00104		0.00024	0.00	0.03	0.03	0.01	0.00	0.03	0.00	0.03
344	583725.23	4138767.58	1.5	0.00302	0.03259	0.02403	0.00408	0.00074		0.00302	0.03259	0.02403	0.00408	0.00074		0.00032	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
351	583726.72	4138750.56	1.5	0.00302	0.03258	0.02349	0.00398	0.00073		0.00302	0.03258	0.02349	0.00398	0.00073		0.00034	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
290	583723.63	4138792.6	1.5	0.00299	0.03227	0.02514	0.00428	0.00078		0.00299	0.03227	0.02514	0.00428	0.00078		0.0003	0.00	0.03	0.03	0.00	0.00	0.03	0.00	0.03
102	583717.73	4138941.02	1.5	0.00281	0.03218	0.0296	0.00478	0.00087		0.00281	0.03218	0.0296	0.00478	0.00087		0.0003	0.00	0.03	0.03	0.00	0.00	0.03	0.00	0.03
372	583732.18	4138698.07	1.5	0.00291	0.03146	0.02216	0.00375	0.00068		0.00291	0.03146	0.02216	0.00375	0.00068		0.00039	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
357	583725.51	4138740.74	1.5	0.0029	0.03131	0.02243	0.0038	0.00069		0.0029	0.03131	0.02243	0.0038	0.00069		0.00034	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
47	583721.04	4138880.9	1.5	0.00242	0.02674	0.03109	0.00533	0.00099		0.00242	0.02674	0.03109	0.00533	0.00099		0.00024	0.00	0.03	0.03	0.01	0.00	0.03	0.00	0.03
12	583723.24	4138855.76	1.5	0.0027	0.02945	0.03076	0.00528	0.00098		0.0027	0.02945	0.03076	0.00528	0.00098		0.00024	0.00	0.03	0.03	0.01	0.00	0.03	0.00	0.03
101	583713.35	4138946.49	1.5	0.00268	0.03067	0.02673	0.00433	0.00079		0.00268	0.03067	0.02673	0.00433	0.00079		0.0003	0.00	0.03	0.03	0.00	0.00	0.03	0.00	0.03
339	583720.92	4138773.09	1.5	0.0028	0.0302	0.02263	0.00385	0.0007		0.0028	0.0302	0.02263	0.00385	0.0007		0.0003	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
367	583727.87	4138703.59	1.5	0.00277	0.02996	0.02112	0.00358	0.00065		0.00277	0.02996	0.02112	0.00358	0.00065		0.00037	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
28	583719.95	4138871.06	1.5	0.0024	0.02635	0.02948	0.00507	0.00094		0.0024	0.02635	0.02948	0.00507	0.00094		0.00023	0.00	0.03	0.03	0.01	0.00	0.03	0.00	0.03
289	583719.21	4138798.02	1.5	0.00273	0.0294	0.0235	0.00401	0.00073		0.00273	0.0294	0.0235	0.00401	0.00073		0.00028	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
352	583721.2	4138746.25	1.5	0.00273	0.02938	0.02122	0.0036	0.00066		0.00273	0.02938	0.02122	0.0036	0.00066		0.00033	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
345	583719.71	4138763.27	1.5	0.00272	0.02926	0.02161	0.00367	0.00067		0.00272	0.02926	0.02161	0.00367	0.00067		0.00031	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
89	583716.64	4138931.18	1.5	0.00256	0.02914	0.02831	0.00464	0.00085		0.00256	0.02914	0.02831	0.00464	0.00085		0.00027	0.00	0.03	0.03	0.00	0.00	0.03	0.00	0.03
358	583719.99	4138736.43	1.5	0.00263	0.02835	0.02033	0.00345	0.00063		0.00263	0.02835	0.02033	0.00345	0.00063		0.00033	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
11	583718.86	4138861.22	1.5	0.0024	0.02616	0.02796	0.00481	0.00089		0.0024	0.02616	0.02796	0.00481	0.00089		0.00023	0.00	0.03	0.03	0.00	0.00	0.03	0.00	0.03
88	583712.26	4138936.65	1.5	0.00244	0.02775	0.02522	0.00414	0.00076		0.00244	0.02775	0.02522	0.00414	0.00076		0.00027	0.00	0.03	0.03	0.00	0.00	0.03	0.00	0.03
46	583716.66	4138886.36	1.5	0.0022	0.0244	0.02765	0.00474	0.00088		0.0022	0.0244	0.02765	0.00474	0.00088		0.00023	0.00	0.02	0.03	0.00	0.00	0.03	0.00	0.03
340	583715.4	4138768.79	1.5	0.00252	0.02716	0.02036	0.00347	0.00063		0.00252	0.02716	0.02036	0.00347	0.00063		0.00029	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
353	583715.69	4138741.95	1.5	0.00247	0.02663	0.01925	0.00327	0.0006		0.00247	0.02663	0.01925	0.00327	0.0006		0.00031	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
87	583707.89	4138942.11	1.5	0.00233	0.02651	0.02302	0.00378	0.00069		0.00233	0.02651	0.02302	0.00378	0.00069		0.00027	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
27	583715.58	4138876.52	1.5	0.00217	0.02382	0.02647	0.00456	0.00084		0.00217	0.02382	0.02647	0.00456	0.00084		0.00022	0.00	0.02	0.03	0.00	0.00	0.03	0.00	0.03
346	583714.19	4138758.96	1.5	0.00245	0.0264	0.01951	0.00332	0.00061		0.00245	0.0264	0.01951	0.00332	0.00061		0.0003	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
10	583714.49	4138866.68	1.5	0.00215	0.0235	0.02532	0.00436	0.00081		0.00215	0.0235	0.02532	0.00436	0.00081		0.00022	0.00	0.02	0.03	0.00	0.00	0.03	0.00	0.03
334	583711.14	4138784.41	1.5	0.00233	0.02512	0.01962	0.00335	0.00061		0.00233	0.02512	0.01962	0.00335	0.00061		0.00027	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
288	583712.01	4138817.59	1.5	0.00229	0.02469	0.02153	0.00369	0.00068		0.00229	0.02469	0.02153	0.00369	0.00068		0.00024	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
45	583712.29	4138891.83	1.5	0.00204	0.02262	0.02456	0.00421	0.00078		0.00204	0.02262	0.02456	0.00421	0.00078		0.00022	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
341	583709.88	4138764.48	1.5	0.00228	0.02454	0.0184	0.00314	0.00057		0.00228	0.02454	0.0184	0.00314	0.00057		0.00028	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
79	583706.8	4138932.27	1.5	0.00215	0.02432	0.02176	0.00362	0.00066		0.00215	0.02432	0.02176	0.00362	0.00066		0.00025	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
347	583708.67	4138754.65	1.5	0.00223	0.02394	0.01769	0.00302	0.00055		0.00223	0.02394	0.01769	0.00302	0.00055		0.00028	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
26	583711.2	4138881.99	1.5	0.00198	0.02186	0.0237	0.00408	0.00076		0.00198	0.02186	0.0237	0.00408	0.00076		0.00022	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
78	583702.42	4138937.74	1.5	0.00206	0.02327	0.02002	0.00332	0.00061		0.00206	0.02327	0.02002	0.00332	0.00061		0.00025	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
329	583706.83	4138789.93	1.5	0.00214	0.02305	0.01841	0.00315	0.00058		0.00214	0.02305	0.01841	0.00315	0.00058		0.00025	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
9	583710.11	4138872.15	1.5	0.00195	0.02138	0.02285	0.00394	0.00073		0.00195	0.02138	0.02285	0.00394	0.00073		0.00021	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
335	583705.62	4138780.1	1.5	0.00211	0.02269	0.01768	0.00303	0.00055		0.00211	0.02269	0.01768	0.00303	0.00055		0.00026	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
77	583698.05	4138943.2	1.5	0.00198	0.02232	0.0187	0.0031	0.00057		0.00198	0.02232	0.0187	0.0031	0.00057		0.00025	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
342	583704.37	4138760.17	1.5	0.00207	0.02229	0.01669	0.00285	0.00052		0.00207	0.02229	0.01669	0.00285	0.00052		0.00027	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
287	583707.59	4138823.02	1.5	0.00207	0.02225	0.01997	0.00343	0.00063		0.00207	0.02225	0.01997	0.00343	0.00063		0.00023	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
283	583706.59	4138813.17	1.5	0.00207	0.02223	0.01921	0.0033	0.00061		0.00207	0.02223	0.01921	0.0033	0.00061		0.00023	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
44	583707.91	4138897.29	1.5	0.00191	0.02123	0.02184	0.00374	0.00069		0.00191	0.02123	0.02184	0.00374	0.00069		0.00022	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
348	583703.16	4138750.34	1.5	0.00203	0.02181	0.0161	0.00275	0.0005		0.00203	0.02181	0.0161	0.00275	0.0005		0.00027	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
330	583701.31	4138785.62	1.5	0.00194	0.02088	0.01661	0.00285	0.00052		0.00194	0.02088	0.01661	0.00285	0.00052		0.00024	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
69	583696.96	4138933.36	1.5	0.00184	0.0207	0.01757	0.00293	0.00054		0.00184	0.0207	0.01757	0.00293	0.00054		0.00023	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
336	583700.1	4138775.8	1.5	0.00192	0.02061	0.01601	0.00274	0.0005		0.00192	0.02061	0.01601	0.00274	0.0005		0.00025	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
8	583705.74	4138877.61	1.5	0.0018	0.01972	0.02059	0.00355	0.00066		0.0018	0.01972	0.02059	0.00355	0.00066		0.00021	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
343	583698.85	4138755.86	1.5	0.00189	0.02033	0.0152	0.0026	0.00048		0.00189	0.02033	0.0152	0.0026	0.00048		0.00026	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
282	583702.17	4138818.6	1.5	0.00187	0.02013	0.01785	0.00307	0.00057		0.00187	0.02013	0.01785	0.00307	0.00057		0.00022	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
43	583703.54	4138902.75	1.5	0.0018	0.0201	0.01953	0.00333	0.00061		0.0018	0.0201	0.01953	0.00333	0.00061		0.00021	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
286	583703.17	4138828.45	1.5	0.00187	0.02009	0.01848	0.00318	0.00059		0.00187	0.02009	0.01848	0.00318	0.00059		0.00022	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
68	583692.59	4138938.82	1.5	0.00177	0.01988	0.01648	0.00275	0.0005		0.00177	0.01988	0.01648	0.00275	0.0005		0.00023	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
42	583699.16	4138908.22	1.5	0.00171	0.01915	0.01762	0.003	0.00055		0.00171	0.01915	0.01762	0.003	0.00055		0.00021	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
324	583697.74	4138801.94	1.5	0.00178	0.01911	0.01604	0.00276	0.00051		0.00178	0.01911	0.01604	0.00276	0.00051		0.00022	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
331	583695.8	4138781.31	1.5	0.00177	0.01901	0.01505	0.00258	0.00047		0.00177	0.01901	0.01505	0.00258	0.00047		0.00023	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
337	583694.59	4138771.49	1.5	0.00175	0.0188	0.01456	0.0025	0.00046		0.00175	0.0188	0.01456	0.0025	0.00046		0.00024	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
59	583691.5	4138928.98	1.5	0.00166	0.01862	0.01554	0.00261	0.00048		0.00166	0.01862	0.01554	0.00261	0.00048		0.00022	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
41	583694.78	4138913.68	1.5	0.00164	0.01831	0.01606	0.00272	0.0005		0.00164	0.01831	0.01606	0.00272	0.0005		0.00021	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
281	583697.75	4138824.03	1.5	0.0017	0.01826	0.01655	0.00285	0.00053		0.0017	0.01826	0.01655	0.00285	0.00053		0.00021	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
285	583698.75	4138833.88	1.5	0.00169	0.01821	0.01708	0.00295	0.00054		0.00169	0.01821	0.01708	0.00295	0.00054		0.0002	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
25	583698.07	4138898.38	1.5	0.00164	0.01819	0.01715	0.00294	0.00054		0.00164	0.01819	0.01715	0.00294	0.00054		0.0002	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
58	583687.12	4138934.45	1.5	0.00159	0.01789	0.01464	0.00245	0.00045		0.00159	0.01789	0.01464	0.00245	0.00045		0.00022	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
40	583690.41	4138919.14	1.5	0.00157	0.01757	0.01483	0.00251	0.00046		0.00157	0.01757	0.01483	0.00251	0.00046		0.00021	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
319	583693.43	4138807.45	1.5	0.00163	0.01747	0.015	0.00258	0.00047		0.00163	0.01747	0.015	0.00258	0.00047		0.00021	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
325	583692.22	4138797.63	1.5	0.00162	0.01742	0.01451	0.0025	0.00046		0.00162	0.01742	0.01451	0.0025	0.00046		0.00022	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
332	583690.28	4138777.01	1.5	0.00162	0.01738	0.0137	0.00235	0.00043		0.00162	0.01738	0.0137	0.00235	0.00043		0.00023	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
24	583693.7	4138903.84	1.5	0.00156	0.01737	0.01559	0.00266	0.00049		0.00156	0.01737	0.01559	0.00266	0.00049		0.0002	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
338	583689.07	4138767.18	1.5	0.0016	0.01722	0.01328	0.00228	0.00042		0.0016	0.01722	0.01328	0.00228	0.00042		0.00023	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
39	583686.03	4138924.61	1.5	0.00151	0.01688	0.01385	0.00233	0.00043		0.00151	0.01688	0.01385	0.00233	0.00043		0.00021	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02

23	583689.32	4138909.31	1.5	0.00149	0.01665	0.0143	0.00243	0.00045		0.00149	0.01665	0.0143	0.00243	0.00045		0.0002	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
280	583693.33	4138829.46	1.5	0.00155	0.01662	0.01533	0.00265	0.00049		0.00155	0.01662	0.01533	0.00265	0.00049		0.0002	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
284	583694.33	4138839.31	1.5	0.00154	0.01659	0.01575	0.00272	0.0005		0.00154	0.01659	0.01575	0.00272	0.0005		0.0002	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
7	583692.61	4138894	1.5	0.00149	0.01655	0.01522	0.00261	0.00048		0.00149	0.01655	0.01522	0.00261	0.00048		0.00019	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
38	583681.66	4138930.07	1.5	0.00145	0.01625	0.01308	0.0022	0.0004		0.00145	0.01625	0.01308	0.0022	0.0004		0.0002	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
22	583684.95	4138914.77	1.5	0.00143	0.01601	0.01326	0.00225	0.00041		0.00143	0.01601	0.01326	0.00225	0.00041		0.00019	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
320	583687.91	4138803.15	1.5	0.00149	0.01598	0.01359	0.00234	0.00043		0.00149	0.01598	0.01359	0.00234	0.00043		0.0002	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
326	583686.7	4138793.32	1.5	0.00149	0.01595	0.01319	0.00227	0.00042		0.00149	0.01595	0.01319	0.00227	0.00042		0.00021	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
333	583684.76	4138772.7	1.5	0.00149	0.01595	0.01252	0.00215	0.00039		0.00149	0.01595	0.01252	0.00215	0.00039		0.00022	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
6	583688.23	4138899.47	1.5	0.00142	0.01584	0.01391	0.00238	0.00044		0.00142	0.01584	0.01391	0.00238	0.00044		0.00019	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
37	583677.28	4138935.54	1.5	0.0014	0.01567	0.01246	0.00208	0.00038		0.0014	0.01567	0.01246	0.00208	0.00038		0.0002	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
21	583680.57	4138920.23	1.5	0.00138	0.01541	0.01243	0.0021	0.00038		0.00138	0.01541	0.01243	0.0021	0.00038		0.00019	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
5	583683.86	4138904.93	1.5	0.00137	0.01522	0.01283	0.00219	0.0004		0.00137	0.01522	0.01283	0.00219	0.0004		0.00019	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
279	583688.91	4138834.89	1.5	0.00141	0.01521	0.01418	0.00245	0.00045		0.00141	0.01521	0.01418	0.00245	0.00045		0.00019	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
20	583676.19	4138925.7	1.5	0.00133	0.01486	0.01177	0.00198	0.00036		0.00133	0.01486	0.01177	0.00198	0.00036		0.00019	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
321	583682.4	4138798.84	1.5	0.00137	0.01468	0.01237	0.00213	0.00039		0.00137	0.01468	0.01237	0.00213	0.00039		0.0002	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
4	583679.48	4138910.39	1.5	0.00131	0.01466	0.01194	0.00203	0.00037		0.00131	0.01466	0.01194	0.00203	0.00037		0.00018	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
327	583681.19	4138789.01	1.5	0.00137	0.01466	0.01203	0.00207	0.00038		0.00137	0.01466	0.01203	0.00207	0.00038		0.0002	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
19	583671.82	4138931.16	1.5	0.00128	0.01435	0.01122	0.00188	0.00034		0.00128	0.01435	0.01122	0.00188	0.00034		0.00019	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
3	583675.11	4138915.86	1.5	0.00126	0.01414	0.01123	0.0019	0.00035		0.00126	0.01414	0.01123	0.0019	0.00035		0.00018	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
314	583682.62	4138820.66	1.5	0.00131	0.01407	0.0126	0.00217	0.0004		0.00131	0.01407	0.0126	0.00217	0.0004		0.00019	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
2	583670.73	4138921.32	1.5	0.00122	0.01366	0.01065	0.0018	0.00033		0.00122	0.01366	0.01065	0.0018	0.00033		0.00018	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
322	583676.88	4138794.53	1.5	0.00126	0.01353	0.0113	0.00195	0.00036		0.00126	0.01353	0.0113	0.00195	0.00036		0.00019	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
328	583675.67	4138784.71	1.5	0.00126	0.01353	0.01102	0.0019	0.00035		0.00126	0.01353	0.01102	0.0019	0.00035		0.0002	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
304	583682.45	4138847.98	1.5	0.00125	0.01348	0.01263	0.00218	0.0004		0.00125	0.01348	0.01263	0.00218	0.0004		0.00018	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
1	583666.35	4138926.78	1.5	0.00118	0.01321	0.01017	0.00171	0.00031		0.00118	0.01321	0.01017	0.00171	0.00031		0.00018	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
309	583678.31	4138826.18	1.5	0.00121	0.01299	0.01174	0.00203	0.00037		0.00121	0.01299	0.01174	0.00203	0.00037		0.00018	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
315	583677.1	4138816.36	1.5	0.00121	0.01298	0.01147	0.00198	0.00036		0.00121	0.01298	0.01147	0.00198	0.00036		0.00018	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
299	583678.14	4138853.5	1.5	0.00117	0.01263	0.01168	0.00201	0.00037		0.00117	0.01263	0.01168	0.00201	0.00037		0.00017	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
323	583671.36	4138790.22	1.5	0.00117	0.01251	0.01036	0.00179	0.00033		0.00117	0.01251	0.01036	0.00179	0.00033		0.00019	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
305	583676.93	4138843.67	1.5	0.00115	0.01245	0.01147	0.00198	0.00036		0.00115	0.01245	0.01147	0.00198	0.00036		0.00017	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
310	583672.79	4138821.87	1.5	0.00112	0.01202	0.01071	0.00185	0.00034		0.00112	0.01202	0.01071	0.00185	0.00034		0.00017	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
316	583671.59	4138812.05	1.5	0.00112	0.01201	0.01049	0.00181	0.00033		0.00112	0.01201	0.01049	0.00181	0.00033		0.00018	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
300	583672.62	4138849.19	1.5	0.00108	0.0117	0.01063	0.00183	0.00034		0.00108	0.0117	0.01063	0.00183	0.00034		0.00017	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
306	583671.41	4138839.36	1.5	0.00107	0.01153	0.01046	0.0018	0.00033		0.00107	0.01153	0.01046	0.0018	0.00033		0.00017	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
311	583667.28	4138817.56	1.5	0.00104	0.01116	0.00982	0.00169	0.00031		0.00104	0.01116	0.00982	0.00169	0.00031		0.00017	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
317	583666.07	4138807.74	1.5	0.00104	0.01115	0.00963	0.00166	0.00031		0.00104	0.01115	0.00963	0.00166	0.00031		0.00017	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
301	583667.11	4138844.88	1.5	0.00101	0.01086	0.00973	0.00168	0.00031		0.00101	0.01086	0.00973	0.00168	0.00031		0.00016	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
307	583665.9	4138835.06	1.5	0.001	0.01072	0.00958	0.00165	0.0003		0.001	0.01072	0.00958	0.00165	0.0003		0.00016	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
318	583660.55	4138803.43	1.5	0.00097	0.01039	0.00887	0.00153	0.00028		0.00097	0.01039	0.00887	0.00153	0.00028		0.00017	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
312	583661.76	4138813.26	1.5	0.00097	0.01038	0.00903	0.00156	0.00029		0.00097	0.01038	0.00903	0.00156	0.00029		0.00016	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
302	583661.59	4138840.57	1.5	0.00094	0.01011	0.00894	0.00154	0.00028		0.00094	0.01011	0.00894	0.00154	0.00028		0.00016	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
308	583660.38	4138830.75	1.5	0.00093	0.00999	0.00882	0.00152	0.00028		0.00093	0.00999	0.00882	0.00152	0.00028		0.00016	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
313	583656.24	4138808.95	1.5	0.00091	0.00969	0.00833	0.00144	0.00026		0.00091	0.00969	0.00833	0.00144	0.00026		0.00016	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
303	583656.07	4138836.27	1.5	0.00088	0.00944	0.00825	0.00142	0.00026		0.00088	0.00944	0.00825	0.00142	0.00026		0.00015	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
361	583655.45	4138826.91	1.5	0.00088	0.0094	0.00821	0.00141	0.00026		0.00088	0.0094	0.00821	0.00141	0.00026		0.00015	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
359	583651.14	4138832.43	1.5	0.00083	0.0089	0.00769	0.00132	0.00024		0.00083	0.0089	0.00769	0.00132	0.00024		0.00015	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
362	583649.93	4138822.61	1.5	0.00082	0.0088	0.0076	0.00131	0.00024		0.00082	0.0088	0.0076	0.00131	0.00024		0.00015	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
360	583645.62	4138828.12	1.5	0.00078	0.00834	0.00714	0.00123	0.00023		0.00078	0.00834	0.00714	0.00123	0.00023		0.00015	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01

																							Mitigated Project Total Risk		
Receptor									2025	2026	2027	2028	2029	2030 - 2054	2025	2026	2027	2028	2029	2025-2029	2030 - 2054	2025-2054
No.	UTM-X	UTM-Y	Flagpole	2025	2026	2027	2028	2029	Construction					Generator	Construction					Total Con	GEN	Total
(m)	(m)	(m)	Height (m)						DPM	DPM	DPM	DPM	DPM	DPM	Risk	Risk	Risk	Risk	Risk	Risk	Risk	Risk
267	583825.41	4138818.93	1.5	0.00567	0.01256	0.01395	0.01025	0.00438	0.00567	0.01256	0.01395	0.01025	0.00438	0.00185	0.08	2.06	2.29	0.27	0.11	4.81	0.65	5.46
266	583821.02	4138824.38	1.5	0.00585	0.01294	0.01371	0.00983	0.0041	0.00585	0.01294	0.01371	0.00983	0.0041	0.00181	0.08	2.13	2.25	0.25	0.11	4.82	0.63	5.45
277	583873.71	4138758.95	1.5	0.00391	0.00867	0.01542	0.01351	0.00667	0.00391	0.00867	0.01542	0.01351	0.00667	0.0026	0.05	1.42	2.53	0.35	0.17	4.53	0.91	5.44
278	583878.1	4138753.5	1.5	0.00383	0.00848	0.01545	0.01363	0.00676	0.00383	0.00848	0.01545	0.01363	0.00676	0.00266	0.05	1.39	2.54	0.35	0.17	4.51	0.93	5.44
268	583829.8	4138813.48	1.5	0.00547	0.01212	0.01415	0.01067	0.00466	0.00547	0.01212	0.01415	0.01067	0.00466	0.00187	0.07	1.99	2.32	0.28	0.12	4.79	0.66	5.44
276	583869.32	4138764.41	1.5	0.00401	0.00888	0.01535	0.01335	0.00656	0.00401	0.00888	0.01535	0.01335	0.00656	0.00249	0.05	1.46	2.52	0.35	0.17	4.55	0.87	5.42
269	583834.19	4138808.03	1.5	0.00527	0.01166	0.01433	0.01106	0.00494	0.00527	0.01166	0.01433	0.01106	0.00494	0.00188	0.07	1.92	2.35	0.29	0.13	4.75	0.66	5.41
265	583816.63	4138829.83	1.5	0.00597	0.01322	0.01344	0.00942	0.00383	0.00597	0.01322	0.01344	0.00942	0.00383	0.00174	0.08	2.17	2.21	0.24	0.10	4.80	0.61	5.41
275	583864.93	4138769.86	1.5	0.00412	0.00911	0.01527	0.01316	0.00642	0.00412	0.00911	0.01527	0.01316	0.00642	0.00236	0.06	1.50	2.51	0.34	0.17	4.57	0.83	5.39
270	583838.59	4138802.57	1.5	0.00506	0.0112	0.0145	0.01144	0.0052	0.00506	0.0112	0.0145	0.01144	0.0052	0.00189	0.07	1.84	2.38	0.30	0.13	4.72	0.66	5.38
274	583860.54	4138775.31	1.5	0.00424	0.00938	0.01517	0.01294	0.00627	0.00424	0.00938	0.01517	0.01294	0.00627	0.00222	0.06	1.54	2.49	0.33	0.16	4.59	0.78	5.36
271	583842.98	4138797.12	1.5	0.00487	0.01077	0.01466	0.01179	0.00545	0.00487	0.01077	0.01466	0.01179	0.00545	0.00191	0.07	1.77	2.41	0.30	0.14	4.69	0.67	5.36
273	583856.15	4138780.76	1.5	0.00437	0.00967	0.01506	0.01269	0.00609	0.00437	0.00967	0.01506	0.01269	0.00609	0.00209	0.06	1.59	2.47	0.33	0.16	4.61	0.73	5.34
272	583847.37	4138791.67	1.5	0.00468	0.01037	0.0148	0.01211	0.00568	0.00468	0.01037	0.0148	0.01211	0.00568	0.00194	0.06	1.70	2.43	0.31	0.15	4.66	0.68	5.34
264	583812.24	4138835.29	1.5	0.00602	0.01333	0.01312	0.00901	0.00359	0.00602	0.01333	0.01312	0.00901	0.00359	0.00163	0.08	2.19	2.15	0.23	0.09	4.75	0.57	5.32
261	583872.64	4138749.11	1.5	0.00358	0.00792	0.01364	0.01185	0.00581	0.00358	0.00792	0.01364	0.01185	0.00581	0.00244	0.05	1.30	2.24	0.31	0.15	4.05	0.86	4.90
262	583877.03	4138743.66	1.5	0.00351	0.00777	0.01366	0.01194	0.00588	0.00351	0.00777	0.01366	0.01194	0.00588	0.00249	0.05	1.28	2.24	0.31	0.15	4.03	0.87	4.90
260	583868.25	4138754.56	1.5	0.00365	0.00809	0.01359	0.01172	0.00572	0.00365	0.00809	0.01359	0.01172	0.00572	0.00236	0.05	1.33	2.23	0.30	0.15	4.06	0.83	4.89
263	583881.42	4138738.21	1.5	0.00344	0.00763	0.01364	0.01196	0.00591	0.00344	0.00763	0.01364	0.01196	0.00591	0.00251	0.05	1.25	2.24	0.31	0.15	4.00	0.88	4.88
259	583863.86	4138760.02	1.5	0.00374	0.00827	0.01351	0.01156	0.00561	0.00374	0.00827	0.01351	0.01156	0.00561	0.00226	0.05	1.36	2.22	0.30	0.15	4.07	0.79	4.86
258	583859.47	4138765.47	1.5	0.00383	0.00848	0.01341	0.01136	0.00548	0.00383	0.00848	0.01341	0.01136	0.00548	0.00215	0.05	1.39	2.20	0.29	0.14	4.08	0.75	4.84
257	583855.08	4138770.92	1.5	0.00393	0.0087	0.0133	0.01115	0.00533	0.00393	0.0087	0.0133	0.01115	0.00533	0.00204	0.05	1.43	2.18	0.29	0.14	4.09	0.71	4.81
256	583850.69	4138776.37	1.5	0.00404	0.00894	0.01318	0.01091	0.00516	0.00404	0.00894	0.01318	0.01091	0.00516	0.00196	0.05	1.47	2.16	0.28	0.13	4.10	0.69	4.79
255	583846.3	4138781.83	1.5	0.00416	0.00921	0.01304	0.01065	0.00498	0.00416	0.00921	0.01304	0.01065	0.00498	0.00189	0.06	1.51	2.14	0.28	0.13	4.12	0.66	4.78
252	583833.13	4138798.18	1.5	0.00456	0.0101	0.01256	0.00974	0.00437	0.00456	0.0101	0.01256	0.00974	0.00437	0.00178	0.06	1.66	2.06	0.25	0.11	4.15	0.62	4.77
253	583837.52	4138792.73	1.5	0.00442	0.00979	0.01273	0.01006	0.00459	0.00442	0.00979	0.01273	0.01006	0.00459	0.00181	0.06	1.61	2.09	0.26	0.12	4.14	0.63	4.77
251	583828.74	4138803.64	1.5	0.0047	0.0104	0.01237	0.00941	0.00414	0.0047	0.0104	0.01237	0.00941	0.00414	0.00176	0.06	1.71	2.03	0.24	0.11	4.15	0.62	4.77
254	583841.91	4138787.28	1.5	0.00429	0.00949	0.01289	0.01036	0.00479	0.00429	0.00949	0.01289	0.01036	0.00479	0.00184	0.06	1.56	2.12	0.27	0.12	4.13	0.64	4.77
250	583824.35	4138809.09	1.5	0.00482	0.01068	0.01216	0.00906	0.00392	0.00482	0.01068	0.01216	0.00906	0.00392	0.00172	0.07	1.75	2.00	0.23	0.10	4.15	0.60	4.76
249	583819.96	4138814.54	1.5	0.00493	0.01091	0.01193	0.0087	0.00369	0.00493	0.01091	0.01193	0.0087	0.00369	0.00168	0.07	1.79	1.96	0.22	0.10	4.14	0.59	4.73
248	583815.57	4138819.99	1.5	0.005	0.01107	0.01167	0.00835	0.00347	0.005	0.01107	0.01167	0.00835	0.00347	0.00161	0.07	1.82	1.92	0.22	0.09	4.11	0.56	4.67
247	583811.18	4138825.44	1.5	0.00502	0.01111	0.01137	0.00799	0.00326	0.00502	0.01111	0.01137	0.00799	0.00326	0.00151	0.07	1.82	1.87	0.21	0.08	4.05	0.53	4.58
138	583797.58	4138852.51	1.5	0.00524	0.01159	0.01138	0.00781	0.0031	0.00524	0.01159	0.01138	0.00781	0.0031	0.00103	0.07	1.90	1.87	0.20	0.08	4.13	0.36	4.49
246	583806.79	4138830.9	1.5	0.00497	0.011	0.01102	0.00766	0.00308	0.00497	0.011	0.01102	0.00766	0.00308	0.00139	0.07	1.81	1.81	0.20	0.08	3.96	0.49	4.45
244	583871.58	4138739.27	1.5	0.00327	0.00725	0.01209	0.01041	0.00507	0.00327	0.00725	0.01209	0.01041	0.00507	0.00228	0.04	1.19	1.99	0.27	0.13	3.62	0.80	4.42
245	583875.97	4138733.82	1.5	0.00322	0.00712	0.0121	0.01046	0.00512	0.00322	0.00712	0.0121	0.01046	0.00512	0.00232	0.04	1.17	1.99	0.27	0.13	3.60	0.81	4.42
243	583867.19	4138744.72	1.5	0.00333	0.00738	0.01205	0.01031	0.005	0.00333	0.00738	0.01205	0.01031	0.005	0.00222	0.05	1.21	1.98	0.27	0.13	3.63	0.78	4.41
242	583862.8	4138750.17	1.5	0.0034	0.00752	0.01198	0.01017	0.00491	0.0034	0.00752	0.01198	0.01017	0.00491	0.00214	0.05	1.24	1.97	0.26	0.13	3.64	0.75	4.39
241	583858.41	4138755.63	1.5	0.00347	0.00768	0.01189	0.01001	0.0048	0.00347	0.00768	0.01189	0.01001	0.0048	0.00206	0.05	1.26	1.95	0.26	0.12	3.64	0.72	4.37
240	583854.02	4138761.08	1.5	0.00354	0.00784	0.01178	0.00982	0.00467	0.00354	0.00784	0.01178	0.00982	0.00467	0.00197	0.05	1.29	1.93	0.25	0.12	3.65	0.69	4.34
239	583849.63	4138766.53	1.5	0.00362	0.00802	0.01166	0.00961	0.00453	0.00362	0.00802	0.01166	0.00961	0.00453	0.00189	0.05	1.32	1.92	0.25	0.12	3.65	0.66	4.31
238	583845.24	4138771.98	1.5	0.00371	0.00821	0.01153	0.00938	0.00438	0.00371	0.00821	0.01153	0.00938	0.00438	0.00182	0.05	1.35	1.89	0.24	0.11	3.65	0.64	4.29
237	583840.85	4138777.44	1.5	0.0038	0.00841	0.01138	0.00914	0.00422	0.0038	0.00841	0.01138	0.00914	0.00422	0.00177	0.05	1.38	1.87	0.24	0.11	3.65	0.62	4.27
236	583836.46	4138782.89	1.5	0.00389	0.00861	0.01122	0.00887	0.00405	0.00389	0.00861	0.01122	0.00887	0.00405	0.00173	0.05	1.41	1.84	0.23	0.10	3.64	0.61	4.25
235	583832.07	4138788.34	1.5	0.00398	0.00881	0.01105	0.0086	0.00387	0.00398	0.00881	0.01105	0.0086	0.00387	0.00169	0.05	1.45	1.81	0.22	0.10	3.64	0.59	4.23
234	583827.68	4138793.79	1.5	0.00406	0.00899	0.01086	0.00831	0.00368	0.00406	0.00899	0.01086	0.00831	0.00368	0.00165	0.06	1.48	1.78	0.21	0.10	3.63	0.58	4.20
137	583793.2	4138857.98	1.5	0.00476	0.01055	0.01075	0.00754	0.00307	0.00476	0.01055	0.01075	0.00754	0.00307	0.00084	0.06	1.73	1.77	0.19	0.08	3.84	0.29	4.13
230	583870.52	4138729.43	1.5	0.003	0.00664	0.01075	0.00917	0.00444	0.003	0.00664	0.01075	0.00917	0.00444	0.00214	0.04	1.09	1.77	0.24	0.11	3.25	0.75	4.00
229	583866.13	4138734.88	1.5	0.00304	0.00674	0.01072	0.0091	0.00439	0.00304	0.00674	0.01072	0.0091	0.00439	0.00209	0.04	1.11	1.76	0.24	0.11	3.26	0.73	3.99
228	583861.74	4138740.33	1.5	0.00309	0.00685	0.01066	0.00899	0.00431	0.00309	0.00685	0.01066	0.00899	0.00431	0.00203	0.04	1.13	1.75	0.23	0.11	3.26	0.71	3.97
233	583805.73	4138821.05	1.5	0.00417	0.00924	0.00959	0.0068	0.0028	0.00417	0.00924	0.00959	0.0068	0.0028	0.0013	0.06	1.52	1.58	0.18	0.07	3.40	0.46	3.85
227	583839.79	4138767.59	1.5	0.00338	0.00748	0.01009	0.00809	0.00373	0.00338	0.00748	0.01009	0.00809	0.00373	0.0017	0.05	1.23	1.66	0.21	0.10	3.24	0.60	3.83
226	583835.4	4138773.05	1.5	0.00344	0.00761	0.00994	0.00786	0.00359	0.00344	0.00761	0.00994	0.00786	0.00359	0.00165	0.05	1.25	1.63	0.20	0.09	3.23	0.58	3.80
225	583831.01	4138778.5	1.5	0.00349	0.00774	0.00977	0.00763	0.00344	0.00349	0.00774	0.00977	0.00763	0.00344	0.0016	0.05	1.27	1.60	0.20	0.09	3.21	0.56	3.77
136	583788.83	4138863.44	1.5	0.00422	0.00934	0.01007	0.00729	0.00307	0.00422	0.00934	0.01007	0.00729	0.00307	0.00069	0.06	1.53	1.65	0.19	0.08	3.51	0.24	3.76
224	583826.62	4138783.95	1.5	0.00355	0.00785	0.00959	0.00738	0.00329	0.00355	0.00785	0.00959	0.00738	0.00329	0.00156	0.05	1.29	1.58	0.19	0.09	3.19	0.55	3.74
232	583801.34	4138826.51	1.5	0.00407	0.00901	0.00924	0.00651	0.00266	0.00407	0.00901	0.00924	0.00651	0.00266	0.00118	0.06	1.48	1.52	0.17	0.07	3.29	0.41	3.70
119	583792.12	4138848.14	1.5	0.00412	0.00913	0.00937	0.0066	0.0027	0.00412	0.00913	0.00937	0.0066	0.0027	0.00086	0.06	1.50	1.54	0.17	0.07	3.34	0.30	3.64
220	583865.07	4138725.04	1.5	0.00279	0.00617	0.00958	0.00806	0.00387	0.00279	0.00617	0.00958	0.00806	0.00387	0.00197	0.04	1.01	1.57	0.21	0.10	2.93	0.69	3.62
219	583860.68	4138730.49	1.5	0.00282	0.00625	0.00953	0.00798	0.00381	0.00282	0.00625	0.00953	0.00798	0.00381	0.00192	0.04	1.03	1.57	0.21	0.10	2.94	0.67	3.61
218	583856.29	4138735.94	1.5	0.00286	0.00634	0.00946	0.00786	0.00373	0.00286	0.00634	0.00946	0.00786	0.00373	0.00186	0.04	1.04	1.55	0.20	0.10	2.93	0.65	3.59
231	583796.95	4138831.96	1.5	0.00391	0.00865	0.00886	0.00623	0.00254	0.00391	0.00865	0.00886	0.00623	0.00254	0.00104	0.05	1.42	1.46	0.16	0.07	3.16	0.36	3.52
217	583834.34	4138763.2	1.5	0.00306	0.00677	0.00885	0.00701	0.0032	0.00306	0.00677	0.00885	0.00701	0.0032	0.00157	0.04	1.11	1.45	0.18	0.08	2.87	0.55	3.42
216	583829.95	4138768.66	1.5	0.00309	0.00685	0.00869	0.0068	0.00307	0.00309	0.00685	0.00869	0.0068	0.00307	0.00152	0.04	1.13	1.43	0.18	0.08	2.85	0.53	3.38
135	583784.45	4138868.91	1.5	0.00363	0.00803	0.00934	0.00703	0.00307	0.00363	0.00803	0.00934	0.00703	0.00307	0.00058	0.05	1.32	1.53	0.18	0.08	3.16	0.20	3.37
215	583825.56	4138774.11	1.5	0.00312	0.00691	0.00852	0.00658	0.00294	0.00312	0.00691	0.00852	0.00658	0.00294	0.00147	0.04	1.13	1.40	0.17	0.08	2.82	0.52	3.34

118	583787.74	4138853.6	1.5	0.00372	0.00825	0.00881	0.00635	0.00266		0.00372	0.00825	0.00881	0.00635	0.00266		0.00072	0.05	1.36	1.45	0.16	0.07	3.09	0.25	3.34
214	583821.17	4138779.56	1.5	0.00314	0.00695	0.00833	0.00636	0.00281		0.00314	0.00695	0.00833	0.00636	0.00281		0.00142	0.04	1.14	1.37	0.16	0.07	2.79	0.50	3.29
210	583859.61	4138720.65	1.5	0.00258	0.00572	0.00855	0.00711	0.00338		0.00258	0.00572	0.00855	0.00711	0.00338		0.00181	0.04	0.94	1.40	0.18	0.09	2.65	0.63	3.28
209	583855.22	4138726.1	1.5	0.00261	0.00578	0.00849	0.00702	0.00332		0.00261	0.00578	0.00849	0.00702	0.00332		0.00176	0.04	0.95	1.39	0.18	0.09	2.65	0.62	3.26
223	583800.28	4138816.66	1.5	0.00346	0.00766	0.0081	0.0058	0.00241		0.00346	0.00766	0.0081	0.0058	0.00241		0.00112	0.05	1.26	1.33	0.15	0.06	2.85	0.39	3.24
208	583850.83	4138731.55	1.5	0.00264	0.00585	0.00841	0.0069	0.00325		0.00264	0.00585	0.00841	0.0069	0.00325		0.00171	0.04	0.96	1.38	0.18	0.08	2.64	0.60	3.24
222	583795.89	4138822.12	1.5	0.00333	0.00738	0.00776	0.00554	0.0023		0.00333	0.00738	0.00776	0.00554	0.0023		0.00101	0.05	1.21	1.27	0.14	0.06	2.73	0.35	3.09
207	583828.88	4138758.81	1.5	0.00276	0.0061	0.00778	0.0061	0.00276		0.00276	0.0061	0.00778	0.0061	0.00276		0.00144	0.04	1.00	1.28	0.16	0.07	2.55	0.50	3.05
117	583783.36	4138859.07	1.5	0.00328	0.00726	0.00821	0.00609	0.00262		0.00328	0.00726	0.00821	0.00609	0.00262		0.00061	0.04	1.19	1.35	0.16	0.07	2.81	0.21	3.02
206	583824.49	4138764.27	1.5	0.00277	0.00613	0.00762	0.00591	0.00265		0.00277	0.00613	0.00762	0.00591	0.00265		0.00139	0.04	1.01	1.25	0.15	0.07	2.52	0.49	3.00
134	583780.08	4138874.37	1.5	0.00304	0.00672	0.00859	0.00674	0.00305		0.00304	0.00672	0.00859	0.00674	0.00305		0.0005	0.04	1.10	1.41	0.17	0.08	2.81	0.18	2.98
199	583854.16	4138716.26	1.5	0.00239	0.00529	0.00765	0.0063	0.00297		0.00239	0.00529	0.00765	0.0063	0.00297		0.00167	0.03	0.87	1.26	0.16	0.08	2.40	0.59	2.98
100	583786.65	4138843.76	1.5	0.00325	0.0072	0.00772	0.00557	0.00233		0.00325	0.0072	0.00772	0.00557	0.00233		0.00074	0.04	1.18	1.27	0.14	0.06	2.70	0.26	2.96
198	583849.77	4138721.71	1.5	0.00241	0.00533	0.00758	0.0062	0.00291		0.00241	0.00533	0.00758	0.0062	0.00291		0.00162	0.03	0.88	1.24	0.16	0.08	2.39	0.57	2.96
205	583820.1	4138769.72	1.5	0.00277	0.00613	0.00744	0.00571	0.00254		0.00277	0.00613	0.00744	0.00571	0.00254		0.00134	0.04	1.01	1.22	0.15	0.07	2.48	0.47	2.95
197	583845.38	4138727.16	1.5	0.00243	0.00537	0.00749	0.00608	0.00284		0.00243	0.00537	0.00749	0.00608	0.00284		0.00157	0.03	0.88	1.23	0.16	0.07	2.38	0.55	2.93
221	583791.5	4138827.57	1.5	0.00316	0.007	0.0074	0.0053	0.0022		0.00316	0.007	0.0074	0.0053	0.0022		0.00089	0.04	1.15	1.22	0.14	0.06	2.60	0.31	2.91
204	583815.71	4138775.17	1.5	0.00276	0.00612	0.00725	0.00551	0.00242		0.00276	0.00612	0.00725	0.00551	0.00242		0.00129	0.04	1.01	1.19	0.14	0.06	2.44	0.45	2.89
213	583794.83	4138812.27	1.5	0.00287	0.00636	0.00685	0.00496	0.00209		0.00287	0.00636	0.00685	0.00496	0.00209		0.00097	0.04	1.04	1.13	0.13	0.05	2.39	0.34	2.73
196	583823.43	4138754.42	1.5	0.00247	0.00547	0.00685	0.00533	0.0024		0.00247	0.00547	0.00685	0.00533	0.0024		0.00132	0.03	0.90	1.13	0.14	0.06	2.26	0.46	2.72
185	583848.71	4138711.87	1.5	0.0022	0.00488	0.00686	0.00559	0.00261		0.0022	0.00488	0.00686	0.00559	0.00261		0.00154	0.03	0.80	1.13	0.14	0.07	2.17	0.54	2.71
116	583778.99	4138864.53	1.5	0.00282	0.00624	0.00759	0.00583	0.00259		0.00282	0.00624	0.00759	0.00583	0.00259		0.00052	0.04	1.02	1.25	0.15	0.07	2.53	0.18	2.71
99	583782.28	4138849.23	1.5	0.00292	0.00647	0.00722	0.00533	0.00228		0.00292	0.00647	0.00722	0.00533	0.00228		0.00063	0.04	1.06	1.19	0.14	0.06	2.49	0.22	2.71
184	583844.32	4138717.32	1.5	0.00221	0.0049	0.00678	0.00549	0.00255		0.00221	0.0049	0.00678	0.00549	0.00255		0.00149	0.03	0.80	1.11	0.14	0.07	2.16	0.52	2.68
195	583819.04	4138759.88	1.5	0.00246	0.00546	0.00669	0.00515	0.0023		0.00246	0.00546	0.00669	0.00515	0.0023		0.00127	0.03	0.90	1.10	0.13	0.06	2.22	0.45	2.67
183	583839.93	4138722.77	1.5	0.00222	0.00492	0.00669	0.00538	0.00249		0.00222	0.00492	0.00669	0.00538	0.00249		0.00145	0.03	0.81	1.10	0.14	0.06	2.14	0.51	2.65
133	583775.7	4138879.83	1.5	0.00247	0.00547	0.00783	0.00642	0.00301		0.00247	0.00547	0.00783	0.00642	0.00301		0.00044	0.03	0.90	1.29	0.17	0.08	2.46	0.15	2.62
182	583835.54	4138728.22	1.5	0.00223	0.00493	0.00658	0.00526	0.00242		0.00223	0.00493	0.00658	0.00526	0.00242		0.0014	0.03	0.81	1.08	0.14	0.06	2.12	0.49	2.61
194	583814.65	4138765.33	1.5	0.00245	0.00542	0.00651	0.00497	0.0022		0.00245	0.00542	0.00651	0.00497	0.0022		0.00122	0.03	0.89	1.07	0.13	0.06	2.18	0.43	2.61
212	583790.44	4138817.73	1.5	0.00274	0.00606	0.00654	0.00474	0.00199		0.00274	0.00606	0.00654	0.00474	0.00199		0.00087	0.04	1.00	1.07	0.12	0.05	2.28	0.30	2.59
181	583831.15	4138733.68	1.5	0.00223	0.00494	0.00647	0.00512	0.00234		0.00223	0.00494	0.00647	0.00512	0.00234		0.00135	0.03	0.81	1.06	0.13	0.06	2.10	0.47	2.57
193	583810.26	4138770.78	1.5	0.00243	0.00537	0.00633	0.00479	0.0021		0.00243	0.00537	0.00633	0.00479	0.0021		0.00116	0.03	0.88	1.04	0.12	0.05	2.13	0.41	2.54
180	583826.76	4138739.13	1.5	0.00223	0.00493	0.00634	0.00498	0.00226		0.00223	0.00493	0.00634	0.00498	0.00226		0.00131	0.03	0.81	1.04	0.13	0.06	2.07	0.46	2.53
179	583822.37	4138744.58	1.5	0.00222	0.00492	0.0062	0.00483	0.00218		0.00222	0.00492	0.0062	0.00483	0.00218		0.00126	0.03	0.81	1.02	0.12	0.06	2.04	0.44	2.48
166	583843.26	4138707.48	1.5	0.00203	0.00449	0.00617	0.00498	0.00231		0.00203	0.00449	0.00617	0.00498	0.00231		0.00142	0.03	0.74	1.01	0.13	0.06	1.97	0.50	2.46
98	583777.9	4138854.69	1.5	0.00256	0.00568	0.00671	0.00508	0.00223		0.00256	0.00568	0.00671	0.00508	0.00223		0.00055	0.03	0.93	1.10	0.13	0.06	2.26	0.19	2.45
203	583793.76	4138802.43	1.5	0.0025	0.00554	0.0061	0.00447	0.0019		0.0025	0.00554	0.0061	0.00447	0.0019		0.00093	0.03	0.91	1.00	0.12	0.05	2.11	0.33	2.44
165	583838.87	4138712.93	1.5	0.00203	0.00449	0.00608	0.00488	0.00225		0.00203	0.00449	0.00608	0.00488	0.00225		0.00138	0.03	0.74	1.00	0.13	0.06	1.95	0.48	2.43
178	583817.98	4138750.03	1.5	0.00221	0.00489	0.00605	0.00467	0.00209		0.00221	0.00489	0.00605	0.00467	0.00209		0.00121	0.03	0.80	0.99	0.12	0.05	2.00	0.42	2.43
211	583786.05	4138823.18	1.5	0.00257	0.00569	0.00621	0.00452	0.00191		0.00257	0.00569	0.00621	0.00452	0.00191		0.00077	0.03	0.93	1.02	0.12	0.05	2.16	0.27	2.43
86	583781.19	4138839.39	1.5	0.00258	0.00572	0.00638	0.0047	0.00201		0.00258	0.00572	0.00638	0.0047	0.00201		0.00065	0.04	0.94	1.05	0.12	0.05	2.20	0.23	2.42
115	583774.61	4138869.99	1.5	0.00236	0.00523	0.00696	0.00555	0.00255		0.00236	0.00523	0.00696	0.00555	0.00255		0.00046	0.03	0.86	1.14	0.14	0.07	2.24	0.16	2.40
164	583834.48	4138718.38	1.5	0.00203	0.00449	0.00598	0.00477	0.00219		0.00203	0.00449	0.00598	0.00477	0.00219		0.00133	0.03	0.74	0.98	0.12	0.06	1.93	0.47	2.39
192	583801.48	4138781.69	1.5	0.00234	0.00518	0.00593	0.00442	0.00191		0.00234	0.00518	0.00593	0.00442	0.00191		0.00104	0.03	0.85	0.97	0.11	0.05	2.02	0.36	2.38
177	583813.59	4138755.49	1.5	0.00219	0.00485	0.00589	0.00452	0.00201		0.00219	0.00485	0.00589	0.00452	0.00201		0.00116	0.03	0.80	0.97	0.12	0.05	1.96	0.41	2.37
163	583830.09	4138723.83	1.5	0.00203	0.00449	0.00588	0.00466	0.00213		0.00203	0.00449	0.00588	0.00466	0.00213		0.00129	0.03	0.74	0.97	0.12	0.06	1.91	0.45	2.36
162	583825.7	4138729.29	1.5	0.00202	0.00447	0.00576	0.00453	0.00206		0.00202	0.00447	0.00576	0.00453	0.00206		0.00125	0.03	0.73	0.95	0.12	0.05	1.88	0.44	2.32
202	583789.37	4138807.88	1.5	0.00239	0.00529	0.00583	0.00427	0.00181		0.00239	0.00529	0.00583	0.00427	0.00181		0.00085	0.03	0.87	0.96	0.11	0.05	2.02	0.30	2.31
176	583809.2	4138760.94	1.5	0.00216	0.00479	0.00572	0.00435	0.00192		0.00216	0.00479	0.00572	0.00435	0.00192		0.00111	0.03	0.79	0.94	0.11	0.05	1.92	0.39	2.31
191	583797.09	4138787.14	1.5	0.00228	0.00505	0.00571	0.00423	0.00182		0.00228	0.00505	0.00571	0.00423	0.00182		0.00097	0.03	0.83	0.94	0.11	0.05	1.95	0.34	2.29
132	583771.33	4138885.3	1.5	0.00196	0.00433	0.00708	0.00605	0.00294		0.00196	0.00433	0.00708	0.00605	0.00294		0.00041	0.03	0.71	1.16	0.16	0.08	2.13	0.14	2.28
161	583821.31	4138734.74	1.5	0.00201	0.00445	0.00563	0.0044	0.00199		0.00201	0.00445	0.00563	0.0044	0.00199		0.0012	0.03	0.73	0.92	0.11	0.05	1.85	0.42	2.27
150	583837.8	4138703.09	1.5	0.00186	0.00412	0.00555	0.00444	0.00205		0.00186	0.00412	0.00555	0.00444	0.00205		0.00131	0.03	0.68	0.91	0.11	0.05	1.78	0.46	2.24
175	583804.81	4138766.39	1.5	0.00213	0.00471	0.00554	0.00419	0.00184		0.00213	0.00471	0.00554	0.00419	0.00184		0.00105	0.03	0.77	0.91	0.11	0.05	1.87	0.37	2.24
160	583816.92	4138740.19	1.5	0.00199	0.00441	0.00549	0.00426	0.00191		0.00199	0.00441	0.00549	0.00426	0.00191		0.00116	0.03	0.72	0.90	0.11	0.05	1.81	0.41	2.22
85	583776.81	4138844.85	1.5	0.00231	0.00512	0.00595	0.00447	0.00195		0.00231	0.00512	0.00595	0.00447	0.00195		0.00056	0.03	0.84	0.98	0.12	0.05	2.02	0.20	2.21
149	583833.41	4138708.54	1.5	0.00186	0.00411	0.00546	0.00435	0.002		0.00186	0.00411	0.00546	0.00435	0.002		0.00127	0.03	0.68	0.90	0.11	0.05	1.76	0.45	2.21
97	583773.52	4138860.15	1.5	0.0022	0.00488	0.00618	0.00483	0.00218		0.0022	0.00488	0.00618	0.00483	0.00218		0.00048	0.03	0.80	1.02	0.12	0.06	2.03	0.17	2.20
190	583792.7	4138792.59	1.5	0.0022	0.00487	0.00548	0.00405	0.00174		0.0022	0.00487	0.00548	0.00405	0.00174		0.00089	0.03	0.80	0.90	0.10	0.04	1.88	0.31	2.19
201	583784.98	4138813.34	1.5	0.00226	0.005	0.00554	0.00407	0.00173		0.00226	0.005	0.00554	0.00407	0.00173		0.00076	0.03	0.82	0.91	0.11	0.04	1.91	0.27	2.18
148	583829.02	4138713.99	1.5	0.00185	0.0041	0.00536	0.00425	0.00194		0.00185	0.0041	0.00536	0.00425	0.00194		0.00123	0.03	0.67	0.88	0.11	0.05	1.74	0.43	2.17
159	583812.53	4138745.64	1.5	0.00197	0.00436	0.00535	0.00412	0.00184		0.00197	0.00436	0.00535	0.00412	0.00184		0.00111	0.03	0.72	0.88	0.11	0.05	1.78	0.39	2.16
174	583800.42	4138771.84	1.5	0.00208	0.00461	0.00535	0.00402	0.00175		0.00208	0.00461	0.00535	0.00402	0.00175		0.00099	0.03	0.76	0.88	0.10	0.05	1.81	0.35	2.16
147	583824.63	4138719.44	1.5	0.00184	0.00407	0.00525	0.00414	0.00188		0.00184	0.00407	0.00525	0.00414	0.00188		0.00119	0.03	0.67	0.86	0.11	0.05	1.71	0.42	2.13
114	583770.24	4138875.46	1.5	0.00194	0.00429	0.00633	0.00524	0.00248		0.00194	0.00429	0.00633	0.00524	0.00248		0.00041	0.03	0.70	1.04	0.14	0.06	1.97	0.14	2.11
158	583808.14	4138751.1	1.5	0.00194	0.0043	0.00519	0.00397	0.00176		0.00194	0.0043	0.00519	0.00397	0.00176		0.00106	0.03	0.71	0.85	0.10	0.05	1.73	0.37	2.10
146	583820.24	4138724.9	1.5	0.00183	0.00404	0.00514	0.00402	0.00182		0.00183	0.00404	0.00514	0.00402	0.00182		0.00115	0.02	0.66	0.84	0.10	0.05	1.68	0.40	2.09
189	583788.31	4138798.04	1.5	0.00211	0.00467	0.00523	0.00386	0.00166		0.00211	0.00467	0.00523	0.00386	0.00166		0.00082	0.03	0.77	0.86	0.10	0.04	1.80	0.29	2.08
173	583796.03	4138777.3	1.5	0.00202	0.00448	0.00515	0.00385	0.00167		0.00202	0.00448	0.00515	0.00385	0.00167		0.00093	0.03	0.74	0.85	0.10	0.04	1.75	0.33	2.08
157	583803.75	4138756.55	1.5	0.00191	0.00422	0.00503	0.00383	0.00169		0.00191	0.00422	0.00503	0.00383	0.00169		0.001	0.03	0.69	0.83	0.10	0.04	1.69	0.35	2.04
145	583815.85	4138730.35	1.5	0.00181	0.004	0.00501	0.0039	0.00175		0.00181	0.004	0.00501	0.0039	0.00175		0.0011	0.02	0.66	0.82	0.10	0.05	1.65	0.39	2.04
200	583780.59	4138818.79	1.5	0.00211	0.00467	0.00523	0.00387	0.00166		0.00211	0.00467	0.00523	0.00387	0.00166		0.00068	0.03	0.77	0.86	0.10	0.04	1.80	0.24	2.04

76	583775.72	4138835.01	1.5	0.00208	0.0046	0.00531	0.00398	0.00173		0.00208	0.0046	0.00531	0.00398	0.00173		0.00058	0.03	0.76	0.87	0.10	0.04	1.80	0.20	2.01
84	583772.44	4138850.32	1.5	0.00203	0.00449	0.00551	0.00424	0.00189		0.00203	0.00449	0.00551	0.00424	0.00189		0.0005	0.03	0.74	0.90	0.11	0.05	1.83	0.18	2.00
172	583791.64	4138782.75	1.5	0.00196	0.00433	0.00495	0.00369	0.0016		0.00196	0.00433	0.00495	0.00369	0.0016		0.00086	0.03	0.71	0.81	0.10	0.04	1.69	0.30	1.99
144	583811.46	4138735.8	1.5	0.00179	0.00395	0.00488	0.00377	0.00169		0.00179	0.00395	0.00488	0.00377	0.00169		0.00106	0.02	0.65	0.80	0.10	0.04	1.62	0.37	1.99
188	583783.92	4138803.49	1.5	0.002	0.00443	0.00498	0.00368	0.00158		0.002	0.00443	0.00498	0.00368	0.00158		0.00075	0.03	0.73	0.82	0.10	0.04	1.71	0.26	1.97
156	583799.36	4138762	1.5	0.00186	0.00413	0.00486	0.00368	0.00161		0.00186	0.00413	0.00486	0.00368	0.00161		0.00095	0.03	0.68	0.80	0.10	0.04	1.64	0.33	1.97
131	583766.95	4138890.76	1.5	0.00153	0.00338	0.00634	0.00563	0.00281		0.00153	0.00338	0.00634	0.00563	0.00281		0.00038	0.02	0.56	1.04	0.15	0.07	1.84	0.13	1.97
96	583769.15	4138865.62	1.5	0.00186	0.00411	0.00565	0.00456	0.00211		0.00186	0.00411	0.00565	0.00456	0.00211		0.00043	0.03	0.68	0.93	0.12	0.05	1.80	0.15	1.95
143	583807.07	4138741.25	1.5	0.00176	0.00389	0.00474	0.00364	0.00162		0.00176	0.00389	0.00474	0.00364	0.00162		0.00101	0.02	0.64	0.78	0.09	0.04	1.58	0.35	1.93
171	583787.25	4138788.2	1.5	0.00188	0.00416	0.00473	0.00352	0.00152		0.00188	0.00416	0.00473	0.00352	0.00152		0.0008	0.03	0.68	0.78	0.09	0.04	1.62	0.28	1.90
155	583794.97	4138767.45	1.5	0.00181	0.00401	0.00468	0.00353	0.00154		0.00181	0.00401	0.00468	0.00353	0.00154		0.00089	0.02	0.66	0.77	0.09	0.04	1.58	0.31	1.89
142	583802.68	4138746.71	1.5	0.00172	0.00381	0.00459	0.00351	0.00155		0.00172	0.00381	0.00459	0.00351	0.00155		0.00096	0.02	0.63	0.75	0.09	0.04	1.53	0.34	1.87
187	583779.53	4138808.95	1.5	0.00188	0.00416	0.00471	0.0035	0.00151		0.00188	0.00416	0.00471	0.0035	0.00151		0.00068	0.03	0.68	0.77	0.09	0.04	1.61	0.24	1.85
113	583765.86	4138880.92	1.5	0.00156	0.00346	0.0057	0.00489	0.00238		0.00156	0.00346	0.0057	0.00489	0.00238		0.00038	0.02	0.57	0.94	0.13	0.06	1.71	0.13	1.85
75	583771.35	4138840.48	1.5	0.00185	0.0041	0.00493	0.00377	0.00167		0.00185	0.0041	0.00493	0.00377	0.00167		0.00051	0.03	0.67	0.81	0.10	0.04	1.65	0.18	1.83
141	583798.29	4138752.16	1.5	0.00168	0.00372	0.00444	0.00337	0.00149		0.00168	0.00372	0.00444	0.00337	0.00149		0.00091	0.02	0.61	0.73	0.09	0.04	1.49	0.32	1.81
170	583782.86	4138793.65	1.5	0.00179	0.00396	0.00451	0.00336	0.00145		0.00179	0.00396	0.00451	0.00336	0.00145		0.00073	0.02	0.65	0.74	0.09	0.04	1.54	0.26	1.80
140	583793.9	4138757.61	1.5	0.00164	0.00362	0.00427	0.00324	0.00142		0.00164	0.00362	0.00427	0.00324	0.00142		0.00086	0.02	0.59	0.70	0.08	0.04	1.44	0.30	1.74
186	583775.14	4138814.4	1.5	0.00175	0.00387	0.00444	0.00332	0.00144		0.00175	0.00387	0.00444	0.00332	0.00144		0.00061	0.02	0.64	0.73	0.09	0.04	1.51	0.21	1.73
95	583764.77	4138871.08	1.5	0.00154	0.00341	0.00512	0.00427	0.00203		0.00154	0.00341	0.00512	0.00427	0.00203		0.00039	0.02	0.56	0.84	0.11	0.05	1.58	0.14	1.72
130	583762.57	4138896.23	1.5	0.00119	0.00264	0.00562	0.00514	0.00262		0.00119	0.00264	0.00562	0.00514	0.00262		0.00037	0.02	0.43	0.92	0.13	0.07	1.57	0.13	1.70
169	583778.47	4138799.1	1.5	0.00169	0.00373	0.00427	0.00319	0.00138		0.00169	0.00373	0.00427	0.00319	0.00138		0.00067	0.02	0.61	0.70	0.08	0.04	1.46	0.23	1.69
67	583770.26	4138830.64	1.5	0.00169	0.00374	0.00445	0.00338	0.00149		0.00169	0.00374	0.00445	0.00338	0.00149		0.00052	0.02	0.61	0.73	0.09	0.04	1.49	0.18	1.68
139	583789.51	4138763.06	1.5	0.00158	0.0035	0.00411	0.0031	0.00136		0.00158	0.0035	0.00411	0.0031	0.00136		0.00081	0.02	0.57	0.68	0.08	0.04	1.39	0.28	1.67
74	583766.97	4138845.94	1.5	0.00163	0.00361	0.00456	0.00356	0.0016		0.00163	0.00361	0.00456	0.00356	0.0016		0.00046	0.02	0.59	0.75	0.09	0.04	1.50	0.16	1.66
112	583761.49	4138886.39	1.5	0.00125	0.00276	0.0051	0.00451	0.00224		0.00125	0.00276	0.0051	0.00451	0.00224		0.00036	0.02	0.45	0.84	0.12	0.06	1.48	0.13	1.61
168	583774.08	4138804.56	1.5	0.00158	0.00349	0.00404	0.00303	0.00132		0.00158	0.00349	0.00404	0.00303	0.00132		0.00061	0.02	0.57	0.66	0.08	0.03	1.37	0.21	1.58
154	583777.41	4138789.26	1.5	0.00152	0.00337	0.0039	0.00293	0.00127		0.00152	0.00337	0.0039	0.00293	0.00127		0.00066	0.02	0.55	0.64	0.08	0.03	1.32	0.23	1.55
66	583765.88	4138836.1	1.5	0.00151	0.00334	0.00412	0.00319	0.00143		0.00151	0.00334	0.00412	0.00319	0.00143		0.00047	0.02	0.55	0.68	0.08	0.04	1.37	0.16	1.53
94	583760.4	4138876.55	1.5	0.00126	0.00279	0.00461	0.00396	0.00193		0.00126	0.00279	0.00461	0.00396	0.00193		0.00036	0.02	0.46	0.76	0.10	0.05	1.38	0.13	1.51
129	583758.2	4138901.69	1.5	0.00096	0.00212	0.00495	0.00461	0.00237		0.00096	0.00212	0.00495	0.00461	0.00237		0.00036	0.01	0.35	0.81	0.12	0.06	1.35	0.13	1.48
167	583769.69	4138810.01	1.5	0.00146	0.00323	0.0038	0.00287	0.00126		0.00146	0.00323	0.0038	0.00287	0.00126		0.00055	0.02	0.53	0.62	0.07	0.03	1.28	0.19	1.47
153	583773.02	4138794.71	1.5	0.00143	0.00317	0.00369	0.00278	0.00121		0.00143	0.00317	0.00369	0.00278	0.00121		0.0006	0.02	0.52	0.61	0.07	0.03	1.25	0.21	1.46
57	583764.8	4138826.26	1.5	0.00139	0.00309	0.00376	0.00289	0.00128		0.00139	0.00309	0.00376	0.00289	0.00128		0.00048	0.02	0.51	0.62	0.07	0.03	1.25	0.17	1.42
111	583757.11	4138891.85	1.5	0.001	0.00221	0.00452	0.00409	0.00207		0.001	0.00221	0.00452	0.00409	0.00207		0.00034	0.01	0.36	0.74	0.11	0.05	1.28	0.12	1.40
65	583761.51	4138841.56	1.5	0.00133	0.00294	0.0038	0.003	0.00136		0.00133	0.00294	0.0038	0.003	0.00136		0.00042	0.02	0.48	0.62	0.08	0.04	1.24	0.15	1.39
152	583768.63	4138800.17	1.5	0.00134	0.00296	0.00348	0.00263	0.00115		0.00134	0.00296	0.00348	0.00263	0.00115		0.00055	0.02	0.49	0.57	0.07	0.03	1.17	0.19	1.37
93	583756.02	4138882.01	1.5	0.00103	0.00227	0.00412	0.00362	0.0018		0.00103	0.00227	0.00412	0.00362	0.0018		0.00034	0.01	0.37	0.68	0.09	0.05	1.20	0.12	1.32
56	583760.42	4138831.72	1.5	0.00125	0.00276	0.00348	0.00271	0.00122		0.00125	0.00276	0.00348	0.00271	0.00122		0.00043	0.02	0.45	0.57	0.07	0.03	1.14	0.15	1.29
128	583753.82	4138907.15	1.5	0.00081	0.00179	0.00431	0.00404	0.00209		0.00081	0.00179	0.00431	0.00404	0.00209		0.00035	0.01	0.29	0.71	0.10	0.05	1.17	0.12	1.29
151	583764.24	4138805.62	1.5	0.00123	0.00273	0.00326	0.00249	0.0011		0.00123	0.00273	0.00326	0.00249	0.0011		0.0005	0.02	0.45	0.54	0.06	0.03	1.09	0.18	1.27
64	583757.13	4138847.03	1.5	0.00116	0.00256	0.00348	0.0028	0.0013		0.00116	0.00256	0.00348	0.0028	0.0013		0.00038	0.02	0.42	0.57	0.07	0.03	1.11	0.13	1.25
110	583752.73	4138897.31	1.5	0.00082	0.00182	0.00397	0.00365	0.00186		0.00082	0.00182	0.00397	0.00365	0.00186		0.00033	0.01	0.30	0.65	0.09	0.05	1.10	0.12	1.22
55	583756.05	4138837.19	1.5	0.0011	0.00244	0.0032	0.00254	0.00116		0.0011	0.00244	0.0032	0.00254	0.00116		0.00039	0.01	0.40	0.53	0.07	0.03	1.04	0.14	1.17
92	583751.65	4138887.47	1.5	0.00084	0.00187	0.00365	0.00328	0.00164		0.00084	0.00187	0.00365	0.00328	0.00164		0.00032	0.01	0.31	0.60	0.08	0.04	1.05	0.11	1.16
127	583749.45	4138912.62	1.5	0.00071	0.00158	0.00371	0.00346	0.00178		0.00071	0.00158	0.00371	0.00346	0.00178		0.00034	0.01	0.26	0.61	0.09	0.05	1.01	0.12	1.13
36	583754.96	4138827.35	1.5	0.00104	0.00231	0.00296	0.00232	0.00105		0.00104	0.00231	0.00296	0.00232	0.00105		0.0004	0.01	0.38	0.49	0.06	0.03	0.97	0.14	1.11
83	583750.56	4138877.63	1.5	0.00086	0.0019	0.00336	0.00294	0.00145		0.00086	0.0019	0.00336	0.00294	0.00145		0.00032	0.01	0.31	0.55	0.08	0.04	0.99	0.11	1.10
109	583748.36	4138902.78	1.5	0.0007	0.00155	0.00346	0.0032	0.00164		0.0007	0.00155	0.00346	0.0032	0.00164		0.00032	0.01	0.25	0.57	0.08	0.04	0.96	0.11	1.07
398	583793.75	4138663.96	1.5	0.00088	0.00196	0.00245	0.00191	0.00086		0.00088	0.00196	0.00245	0.00191	0.00086		0.00073	0.01	0.32	0.40	0.05	0.02	0.81	0.26	1.06
54	583751.67	4138842.65	1.5	0.00096	0.00213	0.00293	0.00237	0.0011		0.00096	0.00213	0.00293	0.00237	0.0011		0.00036	0.01	0.35	0.48	0.06	0.03	0.93	0.13	1.06
393	583789.44	4138669.47	1.5	0.00086	0.00191	0.00239	0.00185	0.00083		0.00086	0.00191	0.00239	0.00185	0.00083		0.0007	0.01	0.31	0.39	0.05	0.02	0.79	0.25	1.03
91	583747.27	4138892.94	1.5	0.00071	0.00156	0.00321	0.00292	0.00148		0.00071	0.00156	0.00321	0.00292	0.00148		0.00031	0.01	0.26	0.53	0.08	0.04	0.91	0.11	1.02
35	583750.58	4138832.81	1.5	0.00092	0.00205	0.00272	0.00217	0.001		0.00092	0.00205	0.00272	0.00217	0.001		0.00037	0.01	0.34	0.45	0.06	0.03	0.88	0.13	1.01
126	583745.07	4138918.08	1.5	0.00065	0.00145	0.00316	0.00291	0.00148		0.00065	0.00145	0.00316	0.00291	0.00148		0.00034	0.01	0.24	0.52	0.08	0.04	0.88	0.12	1.00
388	583781.9	4138680.41	1.5	0.00083	0.00184	0.00228	0.00176	0.00079		0.00083	0.00184	0.00228	0.00176	0.00079		0.00066	0.01	0.30	0.37	0.05	0.02	0.75	0.23	0.99
399	583788.23	4138659.65	1.5	0.00081	0.00179	0.00224	0.00174	0.00078		0.00081	0.00179	0.00224	0.00174	0.00078		0.00068	0.01	0.29	0.37	0.04	0.02	0.74	0.24	0.98
82	583746.18	4138883.1	1.5	0.00072	0.00159	0.00298	0.00265	0.00132		0.00072	0.00159	0.00298	0.00265	0.00132		0.0003	0.01	0.26	0.49	0.07	0.03	0.86	0.11	0.97
18	583749.49	4138822.97	1.5	0.00088	0.00196	0.00254	0.002	0.00091		0.00088	0.00196	0.00254	0.002	0.00091		0.00037	0.01	0.32	0.42	0.05	0.02	0.83	0.13	0.96
53	583747.29	4138848.12	1.5	0.00084	0.00185	0.00267	0.00219	0.00103		0.00084	0.00185	0.00267	0.00219	0.00103		0.00033	0.01	0.30	0.44	0.06	0.03	0.84	0.12	0.95
383	583777.59	4138685.93	1.5	0.00081	0.00179	0.00221	0.0017	0.00076		0.00081	0.00179	0.00221	0.0017	0.00076		0.00063	0.01	0.29	0.36	0.04	0.02	0.73	0.22	0.95
394	583783.92	4138665.17	1.5	0.00079	0.00175	0.00218	0.00169	0.00076		0.00079	0.00175	0.00218	0.00169	0.00076		0.00066	0.01	0.29	0.36	0.04	0.02	0.72	0.23	0.95
108	583743.98	4138908.24	1.5	0.00062	0.00137	0.00299	0.00275	0.00141		0.00062	0.00137	0.00299	0.00275	0.00141		0.00032	0.01	0.23	0.49	0.07	0.04	0.83	0.11	0.94
73	583745.09	4138873.26	1.5	0.00072	0.0016	0.00277	0.00241	0.00118		0.00072	0.0016	0.00277	0.00241	0.00118		0.0003	0.01	0.26	0.45	0.06	0.03	0.82	0.11	0.93
34	583746.21	4138838.28	1.5	0.00081	0.0018	0.00249	0.00202	0.00094		0.00081	0.0018	0.00249	0.00202	0.00094		0.00034	0.01	0.30	0.41	0.05	0.02	0.79	0.12	0.91
389	583776.38	4138676.1	1.5	0.00076	0.00168	0.00207	0.0016	0.00072		0.00076	0.00168	0.00207	0.0016	0.00072		0.00062	0.01	0.28	0.34	0.04	0.02	0.69	0.22	0.90
400	583782.71	4138655.34	1.5	0.00074	0.00164	0.00205	0.00159	0.00071		0.00074	0.00164	0.00205	0.00159	0.00071		0.00064	0.01	0.27	0.34	0.04	0.02	0.68	0.22	0.90
90	583742.89	4138898.4	1.5	0.00061	0.00135	0.00281	0.00256	0.0013		0.00061	0.00135	0.00281	0.00256	0.0013		0.0003	0.01	0.22	0.46	0.07	0.03	0.79	0.11	0.90
125	583740.69	4138923.54	1.5	0.00061	0.00135	0.00267	0.00241	0.00121		0.00061	0.00135	0.00267	0.00241	0.00121		0.00033	0.01	0.22	0.44	0.06	0.03	0.76	0.12	0.88
395	583778.4	4138660.86	1.5	0.00072	0.0016	0.00199	0.00154	0.00069		0.00072	0.0016	0.00199	0.00154	0.00069		0.00062	0.01	0.26	0.33	0.04	0.02	0.66	0.22	0.87
384	583772.07	4138681.62	1.5	0.00074	0.00163	0.00201	0.00155	0.00069		0.00074	0.00163	0.00201	0.00155	0.00069		0.00059	0.01	0.27	0.33	0.04	0.02	0.67	0.21	0.87
17	583745.12	4138828.44	1.5	0.00079	0.00174	0.00233	0.00187	0.00086		0.00079	0.00174	0.00233	0.00187	0.00086		0.00034	0.01	0.29	0.38	0.05	0.02	0.75	0.12	0.87

378	583766.43	4138699.17	1.5	0.00074	0.00164	0.002	0.00154	0.00069		0.00074	0.00164	0.002	0.00154	0.00069		0.00056	0.01	0.27	0.33	0.04	0.02	0.67	0.20	0.86
81	583741.81	4138888.56	1.5	0.00061	0.00135	0.00263	0.00236	0.00118		0.00061	0.00135	0.00263	0.00236	0.00118		0.00029	0.01	0.22	0.43	0.06	0.03	0.75	0.10	0.86
52	583742.92	4138853.58	1.5	0.00072	0.0016	0.00242	0.00202	0.00096		0.00072	0.0016	0.00242	0.00202	0.00096		0.0003	0.01	0.26	0.40	0.05	0.02	0.75	0.11	0.85
107	583739.61	4138913.7	1.5	0.00056	0.00125	0.00257	0.00234	0.00118		0.00056	0.00125	0.00257	0.00234	0.00118		0.00031	0.01	0.21	0.42	0.06	0.03	0.73	0.11	0.83
401	583777.19	4138651.03	1.5	0.00068	0.00151	0.00187	0.00145	0.00065		0.00068	0.00151	0.00187	0.00145	0.00065		0.0006	0.01	0.25	0.31	0.04	0.02	0.62	0.21	0.83
390	583770.86	4138671.8	1.5	0.00069	0.00153	0.00189	0.00146	0.00065		0.00069	0.00153	0.00189	0.00146	0.00065		0.00058	0.01	0.25	0.31	0.04	0.02	0.63	0.20	0.83
373	583762.12	4138704.69	1.5	0.00071	0.00158	0.00192	0.00148	0.00066		0.00071	0.00158	0.00192	0.00148	0.00066		0.00053	0.01	0.26	0.32	0.04	0.02	0.64	0.19	0.83
33	583741.83	4138843.74	1.5	0.00071	0.00157	0.00227	0.00187	0.00088		0.00071	0.00157	0.00227	0.00187	0.00088		0.00031	0.01	0.26	0.37	0.05	0.02	0.71	0.11	0.82
72	583740.72	4138878.72	1.5	0.00062	0.00136	0.00247	0.00217	0.00108		0.00062	0.00136	0.00247	0.00217	0.00108		0.00028	0.01	0.22	0.41	0.06	0.03	0.72	0.10	0.82
396	583772.89	4138656.55	1.5	0.00066	0.00147	0.00182	0.00141	0.00063		0.00066	0.00147	0.00182	0.00141	0.00063		0.00058	0.01	0.24	0.30	0.04	0.02	0.60	0.20	0.81
385	583766.55	4138677.31	1.5	0.00067	0.00149	0.00183	0.00141	0.00063		0.00067	0.00149	0.00183	0.00141	0.00063		0.00056	0.01	0.24	0.30	0.04	0.02	0.61	0.20	0.80
16	583740.74	4138833.9	1.5	0.0007	0.00154	0.00214	0.00173	0.00081		0.0007	0.00154	0.00214	0.00173	0.00081		0.00032	0.01	0.25	0.35	0.04	0.02	0.68	0.11	0.79
63	583739.63	4138868.88	1.5	0.00062	0.00137	0.00232	0.002	0.00098		0.00062	0.00137	0.00232	0.002	0.00098		0.00028	0.01	0.23	0.38	0.05	0.03	0.69	0.10	0.79
379	583760.91	4138694.86	1.5	0.00067	0.00148	0.00181	0.0014	0.00062		0.00067	0.00148	0.00181	0.0014	0.00062		0.00053	0.01	0.24	0.30	0.04	0.02	0.60	0.19	0.79
124	583736.32	4138929.01	1.5	0.00057	0.00127	0.00226	0.00199	0.00098		0.00057	0.00127	0.00226	0.00199	0.00098		0.00033	0.01	0.21	0.37	0.05	0.03	0.66	0.12	0.78
402	583771.68	4138646.73	1.5	0.00063	0.00139	0.00172	0.00133	0.0006		0.00063	0.00139	0.00172	0.00133	0.0006		0.00057	0.01	0.23	0.28	0.03	0.02	0.57	0.20	0.77
391	583765.35	4138667.49	1.5	0.00063	0.0014	0.00173	0.00133	0.0006		0.00063	0.0014	0.00173	0.00133	0.0006		0.00055	0.01	0.23	0.28	0.03	0.02	0.57	0.19	0.77
368	583754.25	4138715.3	1.5	0.00066	0.00146	0.00178	0.00137	0.00061		0.00066	0.00146	0.00178	0.00137	0.00061		0.00049	0.01	0.24	0.29	0.04	0.02	0.59	0.17	0.76
51	583738.54	4138859.04	1.5	0.00062	0.00138	0.00218	0.00185	0.00089		0.00062	0.00138	0.00218	0.00185	0.00089		0.00028	0.01	0.23	0.36	0.05	0.02	0.66	0.10	0.76
80	583737.43	4138894.03	1.5	0.00053	0.00118	0.00231	0.00208	0.00104		0.00053	0.00118	0.00231	0.00208	0.00104		0.00028	0.01	0.19	0.38	0.05	0.03	0.66	0.10	0.76
374	583756.6	4138700.38	1.5	0.00065	0.00143	0.00174	0.00134	0.0006		0.00065	0.00143	0.00174	0.00134	0.0006		0.0005	0.01	0.23	0.29	0.03	0.02	0.58	0.18	0.75
106	583735.23	4138919.17	1.5	0.00052	0.00116	0.00221	0.00197	0.00098		0.00052	0.00116	0.00221	0.00197	0.00098		0.00031	0.01	0.19	0.36	0.05	0.03	0.64	0.11	0.75
397	583767.37	4138652.24	1.5	0.00061	0.00135	0.00167	0.00129	0.00058		0.00061	0.00135	0.00167	0.00129	0.00058		0.00055	0.01	0.22	0.27	0.03	0.01	0.55	0.19	0.75
298	583742.32	4138780.73	1.5	0.00067	0.00149	0.00185	0.00143	0.00064		0.00067	0.00149	0.00185	0.00143	0.00064		0.00038	0.01	0.24	0.30	0.04	0.02	0.61	0.13	0.74
32	583737.45	4138849.2	1.5	0.00062	0.00137	0.00206	0.00172	0.00082		0.00062	0.00137	0.00206	0.00172	0.00082		0.00029	0.01	0.23	0.34	0.04	0.02	0.64	0.10	0.74
386	583761.04	4138673.01	1.5	0.00061	0.00136	0.00167	0.00129	0.00057		0.00061	0.00136	0.00167	0.00129	0.00057		0.00052	0.01	0.22	0.27	0.03	0.01	0.55	0.18	0.74
71	583736.34	4138884.19	1.5	0.00053	0.00118	0.00219	0.00194	0.00097		0.00053	0.00118	0.00219	0.00194	0.00097		0.00027	0.01	0.19	0.36	0.05	0.03	0.64	0.09	0.73
363	583749.94	4138720.82	1.5	0.00063	0.0014	0.0017	0.00131	0.00058		0.00063	0.0014	0.0017	0.00131	0.00058		0.00046	0.01	0.23	0.28	0.03	0.01	0.57	0.16	0.73
380	583755.39	4138690.56	1.5	0.00061	0.00135	0.00165	0.00127	0.00057		0.00061	0.00135	0.00165	0.00127	0.00057		0.0005	0.01	0.22	0.27	0.03	0.01	0.55	0.18	0.72
15	583736.37	4138839.36	1.5	0.00061	0.00136	0.00195	0.0016	0.00075		0.00061	0.00136	0.00195	0.0016	0.00075		0.00029	0.01	0.22	0.32	0.04	0.02	0.61	0.10	0.71
392	583759.83	4138663.18	1.5	0.00058	0.00129	0.00158	0.00122	0.00055		0.00058	0.00129	0.00158	0.00122	0.00055		0.00052	0.01	0.21	0.26	0.03	0.01	0.53	0.18	0.71
62	583735.25	4138874.35	1.5	0.00053	0.00118	0.00207	0.00181	0.00089		0.00053	0.00118	0.00207	0.00181	0.00089		0.00027	0.01	0.19	0.34	0.05	0.02	0.61	0.09	0.71
123	583731.94	4138934.47	1.5	0.00054	0.0012	0.00194	0.00166	0.0008		0.00054	0.0012	0.00194	0.00166	0.0008		0.00033	0.01	0.20	0.32	0.04	0.02	0.59	0.12	0.70
354	583742.06	4138753.66	1.5	0.00062	0.00137	0.00168	0.00129	0.00058		0.00062	0.00137	0.00168	0.00129	0.00058		0.0004	0.01	0.23	0.28	0.03	0.01	0.56	0.14	0.70
369	583748.73	4138710.99	1.5	0.0006	0.00132	0.00161	0.00124	0.00055		0.0006	0.00132	0.00161	0.00124	0.00055		0.00046	0.01	0.22	0.26	0.03	0.01	0.54	0.16	0.70
297	583737.9	4138786.16	1.5	0.00062	0.00138	0.00173	0.00134	0.0006		0.00062	0.00138	0.00173	0.00134	0.0006		0.00036	0.01	0.23	0.28	0.03	0.02	0.57	0.13	0.70
375	583751.09	4138696.07	1.5	0.00059	0.0013	0.00159	0.00122	0.00054		0.00059	0.0013	0.00159	0.00122	0.00054		0.00047	0.01	0.21	0.26	0.03	0.01	0.53	0.16	0.69
50	583734.17	4138864.51	1.5	0.00054	0.00119	0.00196	0.00168	0.00082		0.00054	0.00119	0.00196	0.00168	0.00082		0.00027	0.01	0.20	0.32	0.04	0.02	0.59	0.09	0.68
387	583755.52	4138668.7	1.5	0.00056	0.00124	0.00153	0.00118	0.00053		0.00056	0.00124	0.00153	0.00118	0.00053		0.0005	0.01	0.20	0.25	0.03	0.01	0.51	0.18	0.68
293	583736.89	4138776.31	1.5	0.0006	0.00132	0.00164	0.00127	0.00057		0.0006	0.00132	0.00164	0.00127	0.00057		0.00036	0.01	0.22	0.27	0.03	0.01	0.54	0.13	0.67
105	583730.86	4138924.63	1.5	0.00049	0.00109	0.0019	0.00166	0.00082		0.00049	0.00109	0.0019	0.00166	0.00082		0.0003	0.01	0.18	0.31	0.04	0.02	0.56	0.11	0.67
381	583749.88	4138686.25	1.5	0.00056	0.00123	0.00151	0.00116	0.00052		0.00056	0.00123	0.00151	0.00116	0.00052		0.00047	0.01	0.20	0.25	0.03	0.01	0.50	0.16	0.67
31	583733.08	4138854.67	1.5	0.00054	0.00119	0.00187	0.00157	0.00076		0.00054	0.00119	0.00187	0.00157	0.00076		0.00027	0.01	0.20	0.31	0.04	0.02	0.57	0.09	0.66
364	583744.43	4138716.51	1.5	0.00057	0.00126	0.00154	0.00118	0.00053		0.00057	0.00126	0.00154	0.00118	0.00053		0.00043	0.01	0.21	0.25	0.03	0.01	0.51	0.15	0.66
349	583737.76	4138759.18	1.5	0.00058	0.00129	0.00158	0.00122	0.00055		0.00058	0.00129	0.00158	0.00122	0.00055		0.00038	0.01	0.21	0.26	0.03	0.01	0.53	0.13	0.66
70	583731.97	4138889.65	1.5	0.00047	0.00104	0.00193	0.00172	0.00086		0.00047	0.00104	0.00193	0.00172	0.00086		0.00026	0.01	0.17	0.32	0.04	0.02	0.56	0.09	0.65
14	583731.99	4138844.83	1.5	0.00054	0.00119	0.00178	0.00148	0.0007		0.00054	0.00119	0.00178	0.00148	0.0007		0.00027	0.01	0.20	0.29	0.04	0.02	0.55	0.09	0.65
122	583727.57	4138939.94	1.5	0.00051	0.00114	0.00171	0.00142	0.00068		0.00051	0.00114	0.00171	0.00142	0.00068		0.00033	0.01	0.19	0.28	0.04	0.02	0.53	0.12	0.64
296	583733.48	4138791.59	1.5	0.00057	0.00126	0.00161	0.00126	0.00057		0.00057	0.00126	0.00161	0.00126	0.00057		0.00033	0.01	0.21	0.26	0.03	0.01	0.53	0.12	0.64
370	583743.22	4138706.68	1.5	0.00054	0.0012	0.00147	0.00113	0.0005		0.00054	0.0012	0.00147	0.00113	0.0005		0.00043	0.01	0.20	0.24	0.03	0.01	0.49	0.15	0.64
376	583745.57	4138691.77	1.5	0.00053	0.00118	0.00144	0.00111	0.0005		0.00053	0.00118	0.00144	0.00111	0.0005		0.00045	0.01	0.19	0.24	0.03	0.01	0.48	0.16	0.64
355	583736.55	4138749.35	1.5	0.00055	0.00123	0.00151	0.00116	0.00052		0.00055	0.00123	0.00151	0.00116	0.00052		0.00038	0.01	0.20	0.25	0.03	0.01	0.50	0.13	0.63
61	583730.88	4138879.81	1.5	0.00047	0.00103	0.00184	0.00162	0.0008		0.00047	0.00103	0.00184	0.00162	0.0008		0.00026	0.01	0.17	0.30	0.04	0.02	0.54	0.09	0.63
292	583732.47	4138781.74	1.5	0.00055	0.00122	0.00154	0.0012	0.00054		0.00055	0.00122	0.00154	0.0012	0.00054		0.00034	0.01	0.20	0.25	0.03	0.01	0.51	0.12	0.62
382	583744.36	4138681.94	1.5	0.00051	0.00113	0.00138	0.00106	0.00047		0.00051	0.00113	0.00138	0.00106	0.00047		0.00044	0.01	0.19	0.23	0.03	0.01	0.46	0.15	0.61
49	583729.79	4138869.97	1.5	0.00047	0.00104	0.00176	0.00152	0.00074		0.00047	0.00104	0.00176	0.00152	0.00074		0.00025	0.01	0.17	0.29	0.04	0.02	0.52	0.09	0.61
365	583738.91	4138712.2	1.5	0.00052	0.00115	0.0014	0.00108	0.00048		0.00052	0.00115	0.0014	0.00108	0.00048		0.00041	0.01	0.19	0.23	0.03	0.01	0.47	0.14	0.61
104	583726.48	4138930.1	1.5	0.00046	0.00103	0.00166	0.00141	0.00068		0.00046	0.00103	0.00166	0.00141	0.00068		0.0003	0.01	0.17	0.27	0.04	0.02	0.50	0.11	0.61
121	583723.19	4138945.4	1.5	0.00049	0.00108	0.00154	0.00126	0.00059		0.00049	0.00108	0.00154	0.00126	0.00059		0.00033	0.01	0.18	0.25	0.03	0.02	0.48	0.12	0.60
350	583732.24	4138754.87	1.5	0.00052	0.00115	0.00142	0.0011	0.00049		0.00052	0.00115	0.00142	0.0011	0.00049		0.00036	0.01	0.19	0.23	0.03	0.01	0.47	0.13	0.60
30	583728.7	4138860.13	1.5	0.00047	0.00104	0.00168	0.00143	0.00069		0.00047	0.00104	0.00168	0.00143	0.00069		0.00025	0.01	0.17	0.28	0.04	0.02	0.51	0.09	0.60
295	583729.06	4138797.02	1.5	0.00052	0.00115	0.00149	0.00118	0.00054		0.00052	0.00115	0.00149	0.00118	0.00054		0.00031	0.01	0.19	0.24	0.03	0.01	0.49	0.11	0.59
377	583740.05	4138687.46	1.5	0.00049	0.00108	0.00132	0.00102	0.00045		0.00049	0.00108	0.00132	0.00102	0.00045		0.00043	0.01	0.18	0.22	0.03	0.01	0.44	0.15	0.59
371	583737.7	4138702.38	1.5	0.00049	0.00109	0.00134	0.00103	0.00046		0.00049	0.00109	0.00134	0.00103	0.00046		0.00041	0.01	0.18	0.22	0.03	0.01	0.44	0.14	0.59
13	583727.61	4138850.29	1.5	0.00047	0.00105	0.00161	0.00135	0.00065		0.00047	0.00105	0.00161	0.00135	0.00065		0.00026	0.01	0.17	0.26	0.03	0.02	0.50	0.09	0.59
291	583728.05	4138787.17	1.5	0.00051	0.00112	0.00143	0.00112	0.00051		0.00051	0.00112	0.00143	0.00112	0.00051		0.00032	0.01	0.18	0.23	0.03	0.01	0.47	0.11	0.58
356	583731.03	4138745.04	1.5	0.0005	0.0011	0.00136	0.00105	0.00047		0.0005	0.0011	0.00136	0.00105	0.00047		0.00036	0.01	0.18	0.22	0.03	0.01	0.45	0.13	0.58
120	583718.82	4138950.86	1.5	0.00047	0.00103	0.00143	0.00115	0.00054		0.00047	0.00103	0.00143	0.00115	0.00054		0.00033	0.01	0.17	0.23	0.03	0.01	0.45	0.12	0.57
60	583726.5	4138885.27	1.5	0.00041	0.00092	0.00164	0.00144	0.00071		0.00041	0.00092	0.00164	0.00144	0.00071		0.00025	0.01	0.15	0.27	0.04	0.02	0.48	0.09	0.57
103	583722.1	4138935.56	1.5	0.00044	0.00098	0.00147	0.00123	0.00059		0.00044	0.00098	0.00147	0.00123	0.00059		0.0003	0.01	0.16	0.24	0.03	0.02	0.46	0.11	0.56
366	583733.39	4138707.89	1.5	0.00047	0.00104	0.00127	0.00098	0.00044		0.00047	0.00104	0.00127	0.00098	0.00044		0.00039	0.01	0.17	0.21	0.03	0.01	0.42	0.14	0.56
48	583725.42	4138875.43	1.5	0.00041	0.00092	0.00158	0.00137	0.00067		0.00041	0.00092	0.00158	0.00137	0.00067		0.00024	0.01	0.15	0.26	0.04	0.02	0.47	0.08	0.55

294	583724.64	4138802.44	1.5	0.00047	0.00105	0.00138	0.0011	0.0005		0.00047	0.00105	0.00138	0.0011	0.0005		0.00029	0.01	0.17	0.23	0.03	0.01	0.45	0.10	0.55
351	583726.72	4138750.56	1.5	0.00047	0.00104	0.00128	0.00099	0.00044		0.00047	0.00104	0.00128	0.00099	0.00044		0.00034	0.01	0.17	0.21	0.03	0.01	0.42	0.12	0.54
372	583732.18	4138698.07	1.5	0.00045	0.001	0.00122	0.00094	0.00042		0.00045	0.001	0.00122	0.00094	0.00042		0.00039	0.01	0.16	0.20	0.02	0.01	0.41	0.14	0.54
344	583725.23	4138767.58	1.5	0.00047	0.00104	0.0013	0.00101	0.00046		0.00047	0.00104	0.0013	0.00101	0.00046		0.00032	0.01	0.17	0.21	0.03	0.01	0.43	0.11	0.54
29	583724.33	4138865.59	1.5	0.00041	0.00092	0.00151	0.0013	0.00063		0.00041	0.00092	0.00151	0.0013	0.00063		0.00024	0.01	0.15	0.25	0.03	0.02	0.45	0.08	0.54
290	583723.63	4138792.6	1.5	0.00046	0.00103	0.00133	0.00105	0.00048		0.00046	0.00103	0.00133	0.00105	0.00048		0.0003	0.01	0.17	0.22	0.03	0.01	0.43	0.11	0.54
12	583723.24	4138855.76	1.5	0.00042	0.00092	0.00146	0.00123	0.00059		0.00042	0.00092	0.00146	0.00123	0.00059		0.00024	0.01	0.15	0.24	0.03	0.02	0.44	0.08	0.53
357	583725.51	4138740.74	1.5	0.00045	0.001	0.00123	0.00095	0.00042		0.00045	0.001	0.00123	0.00095	0.00042		0.00034	0.01	0.16	0.20	0.02	0.01	0.41	0.12	0.53
102	583717.73	4138941.02	1.5	0.00042	0.00093	0.00134	0.0011	0.00052		0.00042	0.00093	0.00134	0.0011	0.00052		0.0003	0.01	0.15	0.22	0.03	0.01	0.42	0.11	0.53
367	583727.87	4138703.59	1.5	0.00043	0.00095	0.00116	0.0009	0.0004		0.00043	0.00095	0.00116	0.0009	0.0004		0.00037	0.01	0.16	0.19	0.02	0.01	0.39	0.13	0.52
339	583720.92	4138773.09	1.5	0.00044	0.00096	0.00122	0.00095	0.00043		0.00044	0.00096	0.00122	0.00095	0.00043		0.0003	0.01	0.16	0.20	0.02	0.01	0.40	0.11	0.50
47	583721.04	4138880.9	1.5	0.00037	0.00082	0.00141	0.00122	0.0006		0.00037	0.00082	0.00141	0.00122	0.0006		0.00024	0.01	0.13	0.23	0.03	0.02	0.42	0.08	0.50
352	583721.2	4138746.25	1.5	0.00042	0.00094	0.00116	0.0009	0.0004		0.00042	0.00094	0.00116	0.0009	0.0004		0.00033	0.01	0.15	0.19	0.02	0.01	0.38	0.12	0.50
289	583719.21	4138798.02	1.5	0.00042	0.00094	0.00124	0.00098	0.00045		0.00042	0.00094	0.00124	0.00098	0.00045		0.00028	0.01	0.15	0.20	0.03	0.01	0.40	0.10	0.50
101	583713.35	4138946.49	1.5	0.0004	0.00089	0.00124	0.00101	0.00047		0.0004	0.00089	0.00124	0.00101	0.00047		0.0003	0.01	0.15	0.20	0.03	0.01	0.39	0.11	0.50
345	583719.71	4138763.27	1.5	0.00042	0.00093	0.00117	0.00091	0.00041		0.00042	0.00093	0.00117	0.00091	0.00041		0.00031	0.01	0.15	0.19	0.02	0.01	0.38	0.11	0.49
89	583716.64	4138931.18	1.5	0.00038	0.00085	0.00128	0.00107	0.00051		0.00038	0.00085	0.00128	0.00107	0.00051		0.00027	0.01	0.14	0.21	0.03	0.01	0.40	0.09	0.49
28	583719.95	4138871.06	1.5	0.00037	0.00082	0.00136	0.00117	0.00057		0.00037	0.00082	0.00136	0.00117	0.00057		0.00023	0.01	0.13	0.22	0.03	0.01	0.41	0.08	0.49
358	583719.99	4138736.43	1.5	0.00041	0.0009	0.00112	0.00086	0.00039		0.00041	0.0009	0.00112	0.00086	0.00039		0.00033	0.01	0.15	0.18	0.02	0.01	0.37	0.12	0.49
11	583718.86	4138861.22	1.5	0.00037	0.00082	0.00132	0.00112	0.00054		0.00037	0.00082	0.00132	0.00112	0.00054		0.00023	0.01	0.13	0.22	0.03	0.01	0.40	0.08	0.48
340	583715.4	4138768.79	1.5	0.00039	0.00087	0.0011	0.00086	0.00039		0.00039	0.00087	0.0011	0.00086	0.00039		0.00029	0.01	0.14	0.18	0.02	0.01	0.36	0.10	0.46
88	583712.26	4138936.65	1.5	0.00037	0.00081	0.00117	0.00096	0.00045		0.00037	0.00081	0.00117	0.00096	0.00045		0.00027	0.01	0.13	0.19	0.02	0.01	0.37	0.09	0.46
353	583715.69	4138741.95	1.5	0.00038	0.00085	0.00106	0.00082	0.00037		0.00038	0.00085	0.00106	0.00082	0.00037		0.00031	0.01	0.14	0.17	0.02	0.01	0.35	0.11	0.46
46	583716.66	4138886.36	1.5	0.00034	0.00075	0.00126	0.00109	0.00053		0.00034	0.00075	0.00126	0.00109	0.00053		0.00023	0.00	0.12	0.21	0.03	0.01	0.38	0.08	0.46
346	583714.19	4138758.96	1.5	0.00038	0.00084	0.00106	0.00083	0.00037		0.00038	0.00084	0.00106	0.00083	0.00037		0.0003	0.01	0.14	0.17	0.02	0.01	0.35	0.11	0.45
27	583715.58	4138876.52	1.5	0.00033	0.00074	0.00123	0.00105	0.00051		0.00033	0.00074	0.00123	0.00105	0.00051		0.00022	0.00	0.12	0.20	0.03	0.01	0.37	0.08	0.45
87	583707.89	4138942.11	1.5	0.00035	0.00078	0.00109	0.00089	0.00041		0.00035	0.00078	0.00109	0.00089	0.00041		0.00027	0.00	0.13	0.18	0.02	0.01	0.35	0.09	0.44
10	583714.49	4138866.68	1.5	0.00033	0.00073	0.00119	0.00102	0.00049		0.00033	0.00073	0.00119	0.00102	0.00049		0.00022	0.00	0.12	0.20	0.03	0.01	0.36	0.08	0.44
288	583712.01	4138817.59	1.5	0.00036	0.00079	0.0011	0.00089	0.00042		0.00036	0.00079	0.0011	0.00089	0.00042		0.00024	0.00	0.13	0.18	0.02	0.01	0.35	0.08	0.43
334	583711.14	4138784.41	1.5	0.00036	0.0008	0.00104	0.00083	0.00038		0.00036	0.0008	0.00104	0.00083	0.00038		0.00027	0.00	0.13	0.17	0.02	0.01	0.34	0.09	0.43
341	583709.88	4138764.48	1.5	0.00035	0.00079	0.001	0.00078	0.00035		0.00035	0.00079	0.001	0.00078	0.00035		0.00028	0.00	0.13	0.16	0.02	0.01	0.33	0.10	0.43
45	583712.29	4138891.83	1.5	0.00031	0.00069	0.00113	0.00097	0.00047		0.00031	0.00069	0.00113	0.00097	0.00047		0.00022	0.00	0.11	0.19	0.03	0.01	0.34	0.08	0.42
347	583708.67	4138754.65	1.5	0.00035	0.00077	0.00096	0.00075	0.00034		0.00035	0.00077	0.00096	0.00075	0.00034		0.00028	0.00	0.13	0.16	0.02	0.01	0.32	0.10	0.42
79	583706.8	4138932.27	1.5	0.00032	0.00072	0.00103	0.00085	0.0004		0.00032	0.00072	0.00103	0.00085	0.0004		0.00025	0.00	0.12	0.17	0.02	0.01	0.32	0.09	0.41
26	583711.2	4138881.99	1.5	0.0003	0.00067	0.0011	0.00095	0.00046		0.0003	0.00067	0.0011	0.00095	0.00046		0.00022	0.00	0.11	0.18	0.02	0.01	0.33	0.08	0.41
329	583706.83	4138789.93	1.5	0.00033	0.00074	0.00097	0.00077	0.00035		0.00033	0.00074	0.00097	0.00077	0.00035		0.00025	0.00	0.12	0.16	0.02	0.01	0.31	0.09	0.40
9	583710.11	4138872.15	1.5	0.0003	0.00067	0.00108	0.00092	0.00044		0.0003	0.00067	0.00108	0.00092	0.00044		0.00021	0.00	0.11	0.18	0.02	0.01	0.33	0.07	0.40
287	583707.59	4138823.02	1.5	0.00032	0.00071	0.00101	0.00083	0.00039		0.00032	0.00071	0.00101	0.00083	0.00039		0.00023	0.00	0.12	0.17	0.02	0.01	0.32	0.08	0.40
335	583705.62	4138780.1	1.5	0.00033	0.00073	0.00094	0.00075	0.00034		0.00033	0.00073	0.00094	0.00075	0.00034		0.00026	0.00	0.12	0.15	0.02	0.01	0.31	0.09	0.40
283	583706.59	4138813.17	1.5	0.00032	0.00071	0.00099	0.0008	0.00037		0.00032	0.00071	0.00099	0.0008	0.00037		0.00023	0.00	0.12	0.16	0.02	0.01	0.31	0.08	0.39
78	583702.42	4138937.74	1.5	0.00031	0.00069	0.00096	0.00078	0.00037		0.00031	0.00069	0.00096	0.00078	0.00037		0.00025	0.00	0.11	0.16	0.02	0.01	0.30	0.09	0.39
342	583704.37	4138760.17	1.5	0.00032	0.00071	0.00091	0.00071	0.00032		0.00032	0.00071	0.00091	0.00071	0.00032		0.00027	0.00	0.12	0.15	0.02	0.01	0.30	0.09	0.39
44	583707.91	4138897.29	1.5	0.00029	0.00064	0.00102	0.00087	0.00042		0.00029	0.00064	0.00102	0.00087	0.00042		0.00022	0.00	0.11	0.17	0.02	0.01	0.31	0.08	0.39
348	583703.16	4138750.34	1.5	0.00032	0.0007	0.00088	0.00068	0.00031		0.00032	0.0007	0.00088	0.00068	0.00031		0.00027	0.00	0.11	0.14	0.02	0.01	0.29	0.09	0.38
77	583698.05	4138943.2	1.5	0.0003	0.00066	0.00091	0.00073	0.00034		0.0003	0.00066	0.00091	0.00073	0.00034		0.00025	0.00	0.11	0.15	0.02	0.01	0.29	0.09	0.38
8	583705.74	4138877.61	1.5	0.00028	0.00061	0.00098	0.00083	0.0004		0.00028	0.00061	0.00098	0.00083	0.0004		0.00021	0.00	0.10	0.16	0.02	0.01	0.30	0.07	0.37
330	583701.31	4138785.62	1.5	0.0003	0.00067	0.00088	0.0007	0.00032		0.0003	0.00067	0.00088	0.0007	0.00032		0.00024	0.00	0.11	0.14	0.02	0.01	0.29	0.08	0.37
286	583703.17	4138828.45	1.5	0.00029	0.00064	0.00093	0.00076	0.00036		0.00029	0.00064	0.00093	0.00076	0.00036		0.00022	0.00	0.11	0.15	0.02	0.01	0.29	0.08	0.37
336	583700.1	4138775.8	1.5	0.0003	0.00066	0.00086	0.00068	0.00031		0.0003	0.00066	0.00086	0.00068	0.00031		0.00025	0.00	0.11	0.14	0.02	0.01	0.28	0.09	0.37
282	583702.17	4138818.6	1.5	0.00029	0.00064	0.00091	0.00074	0.00035		0.00029	0.00064	0.00091	0.00074	0.00035		0.00022	0.00	0.11	0.15	0.02	0.01	0.29	0.08	0.36
343	583698.85	4138755.86	1.5	0.00029	0.00065	0.00083	0.00065	0.00029		0.00029	0.00065	0.00083	0.00065	0.00029		0.00026	0.00	0.11	0.14	0.02	0.01	0.27	0.09	0.36
43	583703.54	4138902.75	1.5	0.00027	0.00061	0.00093	0.00078	0.00037		0.00027	0.00061	0.00093	0.00078	0.00037		0.00021	0.00	0.10	0.15	0.02	0.01	0.29	0.07	0.36
69	583696.96	4138933.36	1.5	0.00028	0.00062	0.00086	0.0007	0.00032		0.00028	0.00062	0.00086	0.0007	0.00032		0.00023	0.00	0.10	0.14	0.02	0.01	0.27	0.08	0.35
324	583697.74	4138801.94	1.5	0.00028	0.00061	0.00083	0.00067	0.00031		0.00028	0.00061	0.00083	0.00067	0.00031		0.00022	0.00	0.10	0.14	0.02	0.01	0.27	0.08	0.34
331	583695.8	4138781.31	1.5	0.00028	0.00061	0.0008	0.00064	0.00029		0.00028	0.00061	0.0008	0.00064	0.00029		0.00023	0.00	0.10	0.13	0.02	0.01	0.26	0.08	0.34
42	583699.16	4138908.22	1.5	0.00026	0.00058	0.00085	0.00071	0.00034		0.00026	0.00058	0.00085	0.00071	0.00034		0.00021	0.00	0.10	0.14	0.02	0.01	0.27	0.07	0.34
68	583692.59	4138938.82	1.5	0.00027	0.00059	0.00081	0.00065	0.0003		0.00027	0.00059	0.00081	0.00065	0.0003		0.00023	0.00	0.10	0.13	0.02	0.01	0.26	0.08	0.34
281	583697.75	4138824.03	1.5	0.00026	0.00059	0.00084	0.00069	0.00032		0.00026	0.00059	0.00084	0.00069	0.00032		0.00021	0.00	0.10	0.14	0.02	0.01	0.26	0.07	0.34
337	583694.59	4138771.49	1.5	0.00027	0.0006	0.00078	0.00062	0.00028		0.00027	0.0006	0.00078	0.00062	0.00028		0.00024	0.00	0.10	0.13	0.02	0.01	0.25	0.08	0.34
285	583698.75	4138833.88	1.5	0.00026	0.00058	0.00085	0.0007	0.00033		0.00026	0.00058	0.00085	0.0007	0.00033		0.0002	0.00	0.10	0.14	0.02	0.01	0.27	0.07	0.34
25	583698.07	4138898.38	1.5	0.00025	0.00055	0.00083	0.00069	0.00033		0.00025	0.00055	0.00083	0.00069	0.00033		0.0002	0.00	0.09	0.14	0.02	0.01	0.26	0.07	0.33
59	583691.5	4138928.98	1.5	0.00025	0.00056	0.00077	0.00062	0.00029		0.00025	0.00056	0.00077	0.00062	0.00029		0.00022	0.00	0.09	0.13	0.02	0.01	0.25	0.08	0.32
41	583694.78	4138913.68	1.5	0.00025	0.00055	0.00079	0.00065	0.0003		0.00025	0.00055	0.00079	0.00065	0.0003		0.00021	0.00	0.09	0.13	0.02	0.01	0.25	0.07	0.32
325	583692.22	4138797.63	1.5	0.00025	0.00056	0.00076	0.00061	0.00028		0.00025	0.00056	0.00076	0.00061	0.00028		0.00022	0.00	0.09	0.12	0.02	0.01	0.24	0.08	0.32
319	583693.43	4138807.45	1.5	0.00025	0.00056	0.00077	0.00063	0.00029		0.00025	0.00056	0.00077	0.00063	0.00029		0.00021	0.00	0.09	0.13	0.02	0.01	0.25	0.07	0.32
332	583690.28	4138777.01	1.5	0.00025	0.00056	0.00073	0.00058	0.00026		0.00025	0.00056	0.00073	0.00058	0.00026		0.00023	0.00	0.09	0.12	0.01	0.01	0.24	0.08	0.32
338	583689.07	4138767.18	1.5	0.00025	0.00055	0.00072	0.00056	0.00026		0.00025	0.00055	0.00072	0.00056	0.00026		0.00023	0.00	0.09	0.12	0.01	0.01	0.23	0.08	0.31
284	583694.33	4138839.31	1.5	0.00024	0.00053	0.00078	0.00065	0.00031		0.00024	0.00053	0.00078	0.00065	0.00031		0.0002	0.00	0.09	0.13	0.02	0.01	0.24	0.07	0.31
280	583693.33	4138829.46	1.5	0.00024	0.00053	0.00077	0.00063	0.0003		0.00024	0.00053	0.00077	0.00063	0.0003		0.0002	0.00	0.09	0.13	0.02	0.01	0.24	0.07	0.31
58	583687.12	4138934.45	1.5	0.00024	0.00053	0.00073	0.00059	0.00027		0.00024	0.00053	0.00073	0.00059	0.00027		0.00022	0.00	0.09	0.12	0.02	0.01	0.23	0.08	0.31
24	583693.7	4138903.84	1.5	0.00024	0.00052	0.00077	0.00063	0.0003		0.00024	0.00052	0.00077	0.00063	0.0003		0.0002	0.00	0.09	0.13	0.02	0.01	0.24	0.07	0.31
40	583690.41	4138919.14	1.5	0.00024	0.00053	0.00074	0.0006	0.00028		0.00024	0.00053	0.00074	0.0006	0.00028		0.00021	0.00	0.09	0.12	0.02	0.01	0.23	0.07	0.31

7	583692.61	4138894	1.5	0.00023	0.0005	0.00075	0.00062	0.00029		0.00023	0.0005	0.00075	0.00062	0.00029		0.00019	0.00	0.08	0.12	0.02	0.01	0.23	0.07	0.30
320	583687.91	4138803.15	1.5	0.00023	0.00051	0.00071	0.00057	0.00026		0.00023	0.00051	0.00071	0.00057	0.00026		0.0002	0.00	0.08	0.12	0.01	0.01	0.22	0.07	0.30
39	583686.03	4138924.61	1.5	0.00023	0.00051	0.00069	0.00056	0.00026		0.00023	0.00051	0.00069	0.00056	0.00026		0.00021	0.00	0.08	0.11	0.01	0.01	0.22	0.07	0.30
326	583686.7	4138793.32	1.5	0.00023	0.00051	0.00069	0.00055	0.00026		0.00023	0.00051	0.00069	0.00055	0.00026		0.00021	0.00	0.08	0.11	0.01	0.01	0.22	0.07	0.29
333	583684.76	4138772.7	1.5	0.00023	0.00051	0.00067	0.00053	0.00024		0.00023	0.00051	0.00067	0.00053	0.00024		0.00022	0.00	0.08	0.11	0.01	0.01	0.22	0.08	0.29
23	583689.32	4138909.31	1.5	0.00023	0.0005	0.00071	0.00058	0.00027		0.00023	0.0005	0.00071	0.00058	0.00027		0.0002	0.00	0.08	0.12	0.01	0.01	0.22	0.07	0.29
279	583688.91	4138834.89	1.5	0.00022	0.00049	0.00071	0.00059	0.00028		0.00022	0.00049	0.00071	0.00059	0.00028		0.00019	0.00	0.08	0.12	0.02	0.01	0.22	0.07	0.29
6	583688.23	4138899.47	1.5	0.00022	0.00048	0.00069	0.00057	0.00027		0.00022	0.00048	0.00069	0.00057	0.00027		0.00019	0.00	0.08	0.11	0.01	0.01	0.22	0.07	0.28
38	583681.66	4138930.07	1.5	0.00022	0.00049	0.00066	0.00053	0.00024		0.00022	0.00049	0.00066	0.00053	0.00024		0.0002	0.00	0.08	0.11	0.01	0.01	0.21	0.07	0.28
22	583684.95	4138914.77	1.5	0.00022	0.00048	0.00067	0.00054	0.00025		0.00022	0.00048	0.00067	0.00054	0.00025		0.00019	0.00	0.08	0.11	0.01	0.01	0.21	0.07	0.28
321	583682.4	4138798.84	1.5	0.00021	0.00047	0.00064	0.00052	0.00024		0.00021	0.00047	0.00064	0.00052	0.00024		0.0002	0.00	0.08	0.11	0.01	0.01	0.20	0.07	0.27
327	583681.19	4138789.01	1.5	0.00021	0.00047	0.00063	0.00051	0.00023		0.00021	0.00047	0.00063	0.00051	0.00023		0.0002	0.00	0.08	0.10	0.01	0.01	0.20	0.07	0.27
37	583677.28	4138935.54	1.5	0.00021	0.00047	0.00063	0.0005	0.00023		0.00021	0.00047	0.00063	0.0005	0.00023		0.0002	0.00	0.08	0.10	0.01	0.01	0.20	0.07	0.27
5	583683.86	4138904.93	1.5	0.00021	0.00046	0.00064	0.00052	0.00024		0.00021	0.00046	0.00064	0.00052	0.00024		0.00019	0.00	0.08	0.11	0.01	0.01	0.20	0.07	0.27
314	583682.62	4138820.66	1.5	0.0002	0.00045	0.00064	0.00052	0.00025		0.0002	0.00045	0.00064	0.00052	0.00025		0.00019	0.00	0.07	0.11	0.01	0.01	0.20	0.07	0.27
21	583680.57	4138920.23	1.5	0.00021	0.00046	0.00063	0.00051	0.00023		0.00021	0.00046	0.00063	0.00051	0.00023		0.00019	0.00	0.08	0.10	0.01	0.01	0.20	0.07	0.27
20	583676.19	4138925.7	1.5	0.0002	0.00045	0.0006	0.00048	0.00022		0.0002	0.00045	0.0006	0.00048	0.00022		0.00019	0.00	0.07	0.10	0.01	0.01	0.19	0.07	0.26
304	583682.45	4138847.98	1.5	0.00019	0.00043	0.00063	0.00052	0.00025		0.00019	0.00043	0.00063	0.00052	0.00025		0.00018	0.00	0.07	0.10	0.01	0.01	0.20	0.06	0.26
328	583675.67	4138784.71	1.5	0.0002	0.00044	0.00058	0.00046	0.00021		0.0002	0.00044	0.00058	0.00046	0.00021		0.0002	0.00	0.07	0.10	0.01	0.01	0.19	0.07	0.26
4	583679.48	4138910.39	1.5	0.0002	0.00044	0.00061	0.00049	0.00023		0.0002	0.00044	0.00061	0.00049	0.00023		0.00018	0.00	0.07	0.10	0.01	0.01	0.19	0.06	0.26
322	583676.88	4138794.53	1.5	0.0002	0.00044	0.00059	0.00047	0.00022		0.0002	0.00044	0.00059	0.00047	0.00022		0.00019	0.00	0.07	0.10	0.01	0.01	0.19	0.07	0.26
309	583678.31	4138826.18	1.5	0.00019	0.00042	0.0006	0.00049	0.00023		0.00019	0.00042	0.0006	0.00049	0.00023		0.00018	0.00	0.07	0.10	0.01	0.01	0.19	0.06	0.25
19	583671.82	4138931.16	1.5	0.00019	0.00043	0.00057	0.00046	0.00021		0.00019	0.00043	0.00057	0.00046	0.00021		0.00019	0.00	0.07	0.09	0.01	0.01	0.18	0.07	0.25
315	583677.1	4138816.36	1.5	0.00019	0.00042	0.00059	0.00048	0.00022		0.00019	0.00042	0.00059	0.00048	0.00022		0.00018	0.00	0.07	0.10	0.01	0.01	0.19	0.06	0.25
3	583675.11	4138915.86	1.5	0.00019	0.00043	0.00057	0.00046	0.00021		0.00019	0.00043	0.00057	0.00046	0.00021		0.00018	0.00	0.07	0.09	0.01	0.01	0.18	0.06	0.25
299	583678.14	4138853.5	1.5	0.00018	0.0004	0.00058	0.00048	0.00023		0.00018	0.0004	0.00058	0.00048	0.00023		0.00017	0.00	0.07	0.10	0.01	0.01	0.18	0.06	0.24
305	583676.93	4138843.67	1.5	0.00018	0.0004	0.00058	0.00047	0.00022		0.00018	0.0004	0.00058	0.00047	0.00022		0.00017	0.00	0.07	0.10	0.01	0.01	0.18	0.06	0.24
323	583671.36	4138790.22	1.5	0.00018	0.0004	0.00054	0.00044	0.0002		0.00018	0.0004	0.00054	0.00044	0.0002		0.00019	0.00	0.07	0.09	0.01	0.01	0.17	0.07	0.24
2	583670.73	4138921.32	1.5	0.00019	0.00041	0.00055	0.00043	0.0002		0.00019	0.00041	0.00055	0.00043	0.0002		0.00018	0.00	0.07	0.09	0.01	0.01	0.18	0.06	0.24
316	583671.59	4138812.05	1.5	0.00017	0.00039	0.00054	0.00044	0.0002		0.00017	0.00039	0.00054	0.00044	0.0002		0.00018	0.00	0.06	0.09	0.01	0.01	0.17	0.06	0.23
310	583672.79	4138821.87	1.5	0.00017	0.00039	0.00055	0.00045	0.00021		0.00017	0.00039	0.00055	0.00045	0.00021		0.00017	0.00	0.06	0.09	0.01	0.01	0.17	0.06	0.23
1	583666.35	4138926.78	1.5	0.00018	0.0004	0.00052	0.00041	0.00019		0.00018	0.0004	0.00052	0.00041	0.00019		0.00018	0.00	0.07	0.09	0.01	0.00	0.17	0.06	0.23
300	583672.62	4138849.19	1.5	0.00017	0.00037	0.00054	0.00044	0.00021		0.00017	0.00037	0.00054	0.00044	0.00021		0.00017	0.00	0.06	0.09	0.01	0.01	0.17	0.06	0.23
306	583671.41	4138839.36	1.5	0.00017	0.00037	0.00053	0.00043	0.0002		0.00017	0.00037	0.00053	0.00043	0.0002		0.00017	0.00	0.06	0.09	0.01	0.01	0.17	0.06	0.23
311	583667.28	4138817.56	1.5	0.00016	0.00036	0.0005	0.00041	0.00019		0.00016	0.00036	0.0005	0.00041	0.00019		0.00017	0.00	0.06	0.08	0.01	0.00	0.16	0.06	0.22
317	583666.07	4138807.74	1.5	0.00016	0.00036	0.0005	0.0004	0.00019		0.00016	0.00036	0.0005	0.0004	0.00019		0.00017	0.00	0.06	0.08	0.01	0.00	0.16	0.06	0.22
301	583667.11	4138844.88	1.5	0.00016	0.00035	0.00049	0.0004	0.00019		0.00016	0.00035	0.00049	0.0004	0.00019		0.00016	0.00	0.06	0.08	0.01	0.00	0.16	0.06	0.21
307	583665.9	4138835.06	1.5	0.00015	0.00034	0.00049	0.0004	0.00019		0.00015	0.00034	0.00049	0.0004	0.00019		0.00016	0.00	0.06	0.08	0.01	0.00	0.15	0.06	0.21
318	583660.55	4138803.43	1.5	0.00015	0.00034	0.00046	0.00037	0.00017		0.00015	0.00034	0.00046	0.00037	0.00017		0.00017	0.00	0.06	0.08	0.01	0.00	0.15	0.06	0.21
312	583661.76	4138813.26	1.5	0.00015	0.00034	0.00047	0.00038	0.00018		0.00015	0.00034	0.00047	0.00038	0.00018		0.00016	0.00	0.06	0.08	0.01	0.00	0.15	0.06	0.21
302	583661.59	4138840.57	1.5	0.00015	0.00032	0.00046	0.00037	0.00017		0.00015	0.00032	0.00046	0.00037	0.00017		0.00016	0.00	0.05	0.08	0.01	0.00	0.14	0.06	0.20
308	583660.38	4138830.75	1.5	0.00014	0.00032	0.00045	0.00037	0.00017		0.00014	0.00032	0.00045	0.00037	0.00017		0.00016	0.00	0.05	0.07	0.01	0.00	0.14	0.06	0.20
313	583656.24	4138808.95	1.5	0.00014	0.00031	0.00043	0.00035	0.00016		0.00014	0.00031	0.00043	0.00035	0.00016		0.00016	0.00	0.05	0.07	0.01	0.00	0.14	0.06	0.19
303	583656.07	4138836.27	1.5	0.00014	0.0003	0.00042	0.00034	0.00016		0.00014	0.0003	0.00042	0.00034	0.00016		0.00015	0.00	0.05	0.07	0.01	0.00	0.13	0.05	0.19
361	583655.45	4138826.91	1.5	0.00014	0.0003	0.00042	0.00034	0.00016		0.00014	0.0003	0.00042	0.00034	0.00016		0.00015	0.00	0.05	0.07	0.01	0.00	0.13	0.05	0.19
359	583651.14	4138832.43	1.5	0.00013	0.00028	0.0004	0.00032	0.00015		0.00013	0.00028	0.0004	0.00032	0.00015		0.00015	0.00	0.05	0.07	0.01	0.00	0.13	0.05	0.18
362	583649.93	4138822.61	1.5	0.00013	0.00028	0.00039	0.00032	0.00015		0.00013	0.00028	0.00039	0.00032	0.00015		0.00015	0.00	0.05	0.06	0.01	0.00	0.12	0.05	0.18
360	583645.62	4138828.12	1.5	0.00012	0.00027	0.00037	0.0003	0.00014		0.00012	0.00027	0.00037	0.0003	0.00014		0.00015	0.00	0.04	0.06	0.01	0.00	0.12	0.05	0.17

																									Mitigated Project Maximum PM2.5 Concentration	
Receptor									2025	2026	2027	2028	2029		Annual	2025	2026	2027	2028	2029	Maximum	Annual	Annual
No.	UTM-X	UTM-Y	Flagpole	2025	2026	2027	2028	2029	Construction						Generators	Construction					Max Con	GEN	Max
(m)	(m)	(m)	Height (m)						TPM	TPM	TPM	TPM	TPM		TPM	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3
264	583812.24	4138835.29	1.5	0.02069	0.18286	0.08968	0.02032	0.00496	0.02069	0.18286	0.08968	0.02032	0.00496		0.00163	0.02	0.18	0.09	0.02	0.00	0.18	0.00	0.18
265	583816.63	4138829.83	1.5	0.0202	0.17769	0.09503	0.02146	0.00531	0.0202	0.17769	0.09503	0.02146	0.00531		0.00174	0.02	0.18	0.10	0.02	0.01	0.18	0.00	0.18
266	583821.02	4138824.38	1.5	0.01952	0.17099	0.10053	0.02265	0.00569	0.01952	0.17099	0.10053	0.02265	0.00569		0.00181	0.02	0.17	0.10	0.02	0.01	0.17	0.00	0.17
138	583797.58	4138852.51	1.5	0.01898	0.1705	0.07525	0.01724	0.00423	0.01898	0.1705	0.07525	0.01724	0.00423		0.00103	0.02	0.17	0.08	0.02	0.00	0.17	0.00	0.17
267	583825.41	4138818.93	1.5	0.01874	0.16358	0.10597	0.02384	0.00609	0.01874	0.16358	0.10597	0.02384	0.00609		0.00185	0.02	0.16	0.11	0.02	0.01	0.16	0.00	0.16
137	583793.2	4138857.98	1.5	0.01756	0.15847	0.07309	0.01675	0.00418	0.01756	0.15847	0.07309	0.01675	0.00418		0.00084	0.02	0.16	0.07	0.02	0.00	0.16	0.00	0.16
268	583829.8	4138813.48	1.5	0.01792	0.15605	0.11122	0.02499	0.00649	0.01792	0.15605	0.11122	0.02499	0.00649		0.00187	0.02	0.16	0.11	0.02	0.01	0.16	0.00	0.16
269	583834.19	4138808.03	1.5	0.01712	0.14873	0.11619	0.02609	0.00687	0.01712	0.14873	0.11619	0.02609	0.00687		0.00188	0.02	0.15	0.12	0.03	0.01	0.15	0.00	0.15
278	583878.1	4138753.5	1.5	0.01207	0.10372	0.14687	0.03301	0.00935	0.01207	0.10372	0.14687	0.03301	0.00935		0.00266	0.01	0.10	0.15	0.03	0.01	0.15	0.00	0.15
246	583806.79	4138830.9	1.5	0.01667	0.1463	0.07314	0.01683	0.0042	0.01667	0.1463	0.07314	0.01683	0.0042		0.00139	0.02	0.15	0.07	0.02	0.00	0.15	0.00	0.15
247	583811.18	4138825.44	1.5	0.01668	0.14591	0.07705	0.01769	0.00445	0.01668	0.14591	0.07705	0.01769	0.00445		0.00151	0.02	0.15	0.08	0.02	0.00	0.15	0.00	0.15
277	583873.71	4138758.95	1.5	0.01235	0.10617	0.14558	0.03271	0.00923	0.01235	0.10617	0.14558	0.03271	0.00923		0.0026	0.01	0.11	0.15	0.03	0.01	0.15	0.00	0.15
276	583869.32	4138764.41	1.5	0.01267	0.10897	0.1438	0.0323	0.00908	0.01267	0.10897	0.1438	0.0323	0.00908		0.00249	0.01	0.11	0.14	0.03	0.01	0.14	0.00	0.14
248	583815.57	4138819.99	1.5	0.01648	0.14376	0.0812	0.01861	0.00474	0.01648	0.14376	0.0812	0.01861	0.00474		0.00161	0.02	0.14	0.08	0.02	0.00	0.14	0.00	0.14
136	583788.83	4138863.44	1.5	0.01578	0.14299	0.07152	0.01636	0.00417	0.01578	0.14299	0.07152	0.01636	0.00417		0.00069	0.02	0.14	0.07	0.02	0.00	0.14	0.00	0.14
270	583838.59	4138802.57	1.5	0.01636	0.14182	0.12086	0.02713	0.00724	0.01636	0.14182	0.12086	0.02713	0.00724		0.00189	0.02	0.14	0.12	0.03	0.01	0.14	0.00	0.14
275	583864.93	4138769.86	1.5	0.01303	0.11215	0.14158	0.03179	0.00889	0.01303	0.11215	0.14158	0.03179	0.00889		0.00236	0.01	0.11	0.14	0.03	0.01	0.14	0.00	0.14
249	583819.96	4138814.54	1.5	0.01613	0.14039	0.08547	0.01956	0.00505	0.01613	0.14039	0.08547	0.01956	0.00505		0.00168	0.02	0.14	0.09	0.02	0.01	0.14	0.00	0.14
274	583860.54	4138775.31	1.5	0.01344	0.11576	0.13899	0.03121	0.00868	0.01344	0.11576	0.13899	0.03121	0.00868		0.00222	0.01	0.12	0.14	0.03	0.01	0.14	0.00	0.14
250	583824.35	4138809.09	1.5	0.01569	0.13629	0.08972	0.0205	0.00536	0.01569	0.13629	0.08972	0.0205	0.00536		0.00172	0.02	0.14	0.09	0.02	0.01	0.14	0.00	0.14
273	583856.15	4138780.76	1.5	0.0139	0.11985	0.13606	0.03054	0.00845	0.0139	0.11985	0.13606	0.03054	0.00845		0.00209	0.01	0.12	0.14	0.03	0.01	0.14	0.00	0.14
271	583842.98	4138797.12	1.5	0.01565	0.13547	0.12519	0.0281	0.00758	0.01565	0.13547	0.12519	0.0281	0.00758		0.00191	0.02	0.14	0.13	0.03	0.01	0.14	0.00	0.14
251	583828.74	4138803.64	1.5	0.0152	0.13182	0.09388	0.02144	0.00568	0.0152	0.13182	0.09388	0.02144	0.00568		0.00176	0.02	0.13	0.09	0.02	0.01	0.13	0.00	0.13
272	583847.37	4138791.67	1.5	0.01501	0.12969	0.12916	0.02899	0.00789	0.01501	0.12969	0.12916	0.02899	0.00789		0.00194	0.02	0.13	0.13	0.03	0.01	0.13	0.00	0.13
252	583833.13	4138798.18	1.5	0.01469	0.12724	0.09788	0.02233	0.00598	0.01469	0.12724	0.09788	0.02233	0.00598		0.00178	0.01	0.13	0.10	0.02	0.01	0.13	0.00	0.13
119	583792.12	4138848.14	1.5	0.01423	0.12597	0.06251	0.01445	0.00365	0.01423	0.12597	0.06251	0.01445	0.00365		0.00086	0.01	0.13	0.06	0.01	0.00	0.13	0.00	0.13
135	583784.45	4138868.91	1.5	0.01377	0.1253	0.07021	0.01601	0.00418	0.01377	0.1253	0.07021	0.01601	0.00418		0.00058	0.01	0.13	0.07	0.02	0.00	0.13	0.00	0.13
263	583881.42	4138738.21	1.5	0.01084	0.09315	0.12394	0.02824	0.00808	0.01084	0.09315	0.12394	0.02824	0.00808		0.00251	0.01	0.09	0.12	0.03	0.01	0.12	0.00	0.12
262	583877.03	4138743.66	1.5	0.01105	0.09493	0.12369	0.02817	0.00804	0.01105	0.09493	0.12369	0.02817	0.00804		0.00249	0.01	0.09	0.12	0.03	0.01	0.12	0.00	0.12
253	583837.52	4138792.73	1.5	0.01419	0.12276	0.10169	0.02319	0.00628	0.01419	0.12276	0.10169	0.02319	0.00628		0.00181	0.01	0.12	0.10	0.02	0.01	0.12	0.00	0.12
261	583872.64	4138749.11	1.5	0.01128	0.09692	0.12273	0.02794	0.00795	0.01128	0.09692	0.12273	0.02794	0.00795		0.00244	0.01	0.10	0.12	0.03	0.01	0.12	0.00	0.12
260	583868.25	4138754.56	1.5	0.01153	0.09913	0.12122	0.0276	0.00783	0.01153	0.09913	0.12122	0.0276	0.00783		0.00236	0.01	0.10	0.12	0.03	0.01	0.12	0.00	0.12
259	583863.86	4138760.02	1.5	0.01181	0.1016	0.11933	0.02717	0.00767	0.01181	0.1016	0.11933	0.02717	0.00767		0.00226	0.01	0.10	0.12	0.03	0.01	0.12	0.00	0.12
233	583805.73	4138821.05	1.5	0.01366	0.11886	0.06378	0.0148	0.00378	0.01366	0.11886	0.06378	0.0148	0.00378		0.0013	0.01	0.12	0.06	0.01	0.00	0.12	0.00	0.12
254	583841.91	4138787.28	1.5	0.01372	0.11848	0.10528	0.02399	0.00656	0.01372	0.11848	0.10528	0.02399	0.00656		0.00184	0.01	0.12	0.11	0.02	0.01	0.12	0.00	0.12
258	583859.47	4138765.47	1.5	0.01212	0.10434	0.11708	0.02666	0.00749	0.01212	0.10434	0.11708	0.02666	0.00749		0.00215	0.01	0.10	0.12	0.03	0.01	0.12	0.00	0.12
232	583801.34	4138826.51	1.5	0.01338	0.11665	0.06078	0.01412	0.00359	0.01338	0.11665	0.06078	0.01412	0.00359		0.00118	0.01	0.12	0.06	0.01	0.00	0.12	0.00	0.12
118	583787.74	4138853.6	1.5	0.01296	0.11503	0.06056	0.01399	0.00359	0.01296	0.11503	0.06056	0.01399	0.00359		0.00072	0.01	0.12	0.06	0.01	0.00	0.12	0.00	0.12
257	583855.08	4138770.92	1.5	0.01247	0.1074	0.11453	0.02608	0.00729	0.01247	0.1074	0.11453	0.02608	0.00729		0.00204	0.01	0.11	0.11	0.03	0.01	0.11	0.00	0.11
255	583846.3	4138781.83	1.5	0.01327	0.11447	0.10862	0.02475	0.00682	0.01327	0.11447	0.10862	0.02475	0.00682		0.00189	0.01	0.11	0.11	0.02	0.01	0.11	0.00	0.11
234	583827.68	4138793.79	1.5	0.01304	0.11273	0.08068	0.01861	0.005	0.01304	0.11273	0.08068	0.01861	0.005		0.00165	0.01	0.11	0.08	0.02	0.01	0.11	0.00	0.11
231	583796.95	4138831.96	1.5	0.0129	0.11263	0.05805	0.01349	0.00343	0.0129	0.11263	0.05805	0.01349	0.00343		0.00104	0.01	0.11	0.06	0.01	0.00	0.11	0.00	0.11
256	583850.69	4138776.37	1.5	0.01285	0.11077	0.1117	0.02544	0.00707	0.01285	0.11077	0.1117	0.02544	0.00707		0.00196	0.01	0.11	0.11	0.03	0.01	0.11	0.00	0.11
235	583832.07	4138788.34	1.5	0.01273	0.10996	0.08399	0.01936	0.00525	0.01273	0.10996	0.08399	0.01936	0.00525		0.00169	0.01	0.11	0.08	0.02	0.01	0.11	0.00	0.11
236	583836.46	4138782.89	1.5	0.01241	0.10711	0.08716	0.02008	0.00549	0.01241	0.10711	0.08716	0.02008	0.00549		0.00173	0.01	0.11	0.09	0.02	0.01	0.11	0.00	0.11
134	583780.08	4138874.37	1.5	0.01168	0.10666	0.06889	0.01564	0.00417	0.01168	0.10666	0.06889	0.01564	0.00417		0.0005	0.01	0.11	0.07	0.02	0.00	0.11	0.00	0.11
245	583875.97	4138733.82	1.5	0.01013	0.087	0.1057	0.02427	0.00695	0.01013	0.087	0.1057	0.02427	0.00695		0.00232	0.01	0.09	0.11	0.02	0.01	0.11	0.00	0.11
244	583871.58	4138739.27	1.5	0.01031	0.08858	0.10502	0.02412	0.00689	0.01031	0.08858	0.10502	0.02412	0.00689		0.00228	0.01	0.09	0.11	0.02	0.01	0.11	0.00	0.11
237	583840.85	4138777.44	1.5	0.01209	0.10428	0.09018	0.02076	0.00573	0.01209	0.10428	0.09018	0.02076	0.00573		0.00177	0.01	0.10	0.09	0.02	0.01	0.10	0.00	0.10
243	583867.19	4138744.72	1.5	0.01051	0.09032	0.10382	0.02385	0.00679	0.01051	0.09032	0.10382	0.02385	0.00679		0.00222	0.01	0.09	0.10	0.02	0.01	0.10	0.00	0.10
117	583783.36	4138859.07	1.5	0.0115	0.10232	0.05885	0.01357	0.00355	0.0115	0.10232	0.05885	0.01357	0.00355		0.00061	0.01	0.10	0.06	0.01	0.00	0.10	0.00	0.10
242	583862.8	4138750.17	1.5	0.01072	0.09221	0.10221	0.02348	0.00666	0.01072	0.09221	0.10221	0.02348	0.00666		0.00214	0.01	0.09	0.10	0.02	0.01	0.10	0.00	0.10
238	583845.24	4138771.98	1.5	0.01178	0.10154	0.09301	0.0214	0.00594	0.01178	0.10154	0.09301	0.0214	0.00594		0.00182	0.01	0.10	0.09	0.02	0.01	0.10	0.00	0.10
241	583858.41	4138755.63	1.5	0.01096	0.09428	0.10029	0.02305	0.00651	0.01096	0.09428	0.10029	0.02305	0.00651		0.00206	0.01	0.09	0.10	0.02	0.01	0.10	0.00	0.10
239	583849.63	4138766.53	1.5	0.01149	0.09895	0.09566	0.022	0.00615	0.01149	0.09895	0.09566	0.022	0.00615		0.00189	0.01	0.10	0.10	0.02	0.01	0.10	0.00	0.10
240	583854.02	4138761.08	1.5	0.01121	0.09653	0.09809	0.02255	0.00634	0.01121	0.09653	0.09809	0.02255	0.00634		0.00197	0.01	0.10	0.10	0.02	0.01	0.10	0.00	0.10
224	583826.62	4138783.95	1.5	0.0113	0.09752	0.07032	0.01634	0.00443	0.0113	0.09752	0.07032	0.01634	0.00443		0.00156	0.01	0.10	0.07	0.02	0.00	0.10	0.00	0.10
223	583800.28	4138816.66	1.5	0.01116	0.09662	0.05355	0.01251	0.00324	0.01116	0.09662	0.05355	0.01251	0.00324		0.00112	0.01	0.10	0.05	0.01	0.00	0.10	0.00	0.10
225	583831.01	4138778.5	1.5	0.01112	0.09592	0.0731	0.01697	0.00464	0.01112	0.09592	0.0731	0.01697	0.00464		0.0016	0.01	0.10	0.07	0.02	0.00	0.10	0.00	0.10
100	583786.65	4138843.76	1.5	0.01082	0.09465	0.05216	0.01213	0.00314	0.01082	0.09465	0.05216	0.01213	0.00314		0.00074	0.01	0.09	0.05	0.01	0.00	0.09	0.00	0.09
226	583835.4	4138773.05	1.5	0.01093	0.09417	0.07579	0.01758	0.00484	0.01093	0.09417	0.07579	0.01758	0.00484		0.00165	0.01	0.09	0.08	0.02	0.00	0.09	0.00	0.09
222	583795.89	4138822.12	1.5	0.01076	0.09323	0.05111	0.01194	0.00309	0.01076	0.09323	0.05111	0.01194	0.00309		0.00101	0.01	0.09	0.05	0.01	0.00	0.09	0.00	0.09
227	583839.79	4138767.59	1.5	0.01072	0.09235	0.07835	0.01816	0.00504	0.01072	0.09235	0.07835	0.01816	0.00504		0.0017	0.01	0.09	0.08	0.02	0.01	0.09	0.00	0.09
230	583870.52	4138729.43	1.5	0.00944	0.08109	0.09092	0.021	0.006	0.00944	0.08109	0.09092	0.021	0.006		0.00214	0.01	0.08	0.09	0.02	0.01	0.09	0.00	0.09
229	583866.13	4138734.88	1.5	0.00959	0.08243	0.08998	0.02079	0.00593	0.00959	0.08243	0.08998	0.02079	0.00593		0.00209	0.01	0.08	0.09	0.02	0.01	0.09	0.00	0.09

116	583778.99	4138864.53	1.5	0.00995	0.08867	0.0572	0.01315	0.00351		0.00995	0.08867	0.0572	0.01315	0.00351		0.00052	0.01	0.09	0.06	0.01	0.00	0.09	0.00	0.09
228	583861.74	4138740.33	1.5	0.00976	0.08387	0.08866	0.02049	0.00582		0.00976	0.08387	0.08866	0.02049	0.00582		0.00203	0.01	0.08	0.09	0.02	0.01	0.09	0.00	0.09
221	583791.5	4138827.57	1.5	0.01022	0.0886	0.04885	0.01142	0.00296		0.01022	0.0886	0.04885	0.01142	0.00296		0.00089	0.01	0.09	0.05	0.01	0.00	0.09	0.00	0.09
133	583775.7	4138879.83	1.5	0.0096	0.08794	0.0673	0.01519	0.00414		0.0096	0.08794	0.0673	0.01519	0.00414		0.00044	0.01	0.09	0.07	0.02	0.00	0.09	0.00	0.09
214	583821.17	4138779.56	1.5	0.00996	0.0858	0.05955	0.01392	0.00377		0.00996	0.0858	0.05955	0.01392	0.00377		0.00142	0.01	0.09	0.06	0.01	0.00	0.09	0.00	0.09
99	583782.28	4138849.23	1.5	0.00975	0.08542	0.0503	0.01169	0.00307		0.00975	0.08542	0.0503	0.01169	0.00307		0.00063	0.01	0.09	0.05	0.01	0.00	0.09	0.00	0.09
215	583825.56	4138774.11	1.5	0.00989	0.08521	0.06198	0.01447	0.00395		0.00989	0.08521	0.06198	0.01447	0.00395		0.00147	0.01	0.09	0.06	0.01	0.00	0.09	0.00	0.09
216	583829.95	4138768.66	1.5	0.0098	0.08438	0.06435	0.01501	0.00413		0.0098	0.08438	0.06435	0.01501	0.00413		0.00152	0.01	0.08	0.06	0.02	0.00	0.08	0.00	0.08
217	583834.34	4138763.2	1.5	0.00969	0.08338	0.06665	0.01554	0.0043		0.00969	0.08338	0.06665	0.01554	0.0043		0.00157	0.01	0.08	0.07	0.02	0.00	0.08	0.00	0.08
220	583865.07	4138725.04	1.5	0.00877	0.07537	0.07875	0.01827	0.00521		0.00877	0.07537	0.07875	0.01827	0.00521		0.00197	0.01	0.08	0.08	0.02	0.01	0.08	0.00	0.08
213	583794.83	4138812.27	1.5	0.00913	0.07872	0.0454	0.01065	0.00279		0.00913	0.07872	0.0454	0.01065	0.00279		0.00097	0.01	0.08	0.05	0.01	0.00	0.08	0.00	0.08
219	583860.68	4138730.49	1.5	0.0089	0.07645	0.07768	0.01803	0.00513		0.0089	0.07645	0.07768	0.01803	0.00513		0.00192	0.01	0.08	0.08	0.02	0.01	0.08	0.00	0.08
218	583856.29	4138735.94	1.5	0.00902	0.07757	0.07632	0.01773	0.00502		0.00902	0.07757	0.07632	0.01773	0.00502		0.00186	0.01	0.08	0.08	0.02	0.01	0.08	0.00	0.08
98	583777.9	4138854.69	1.5	0.00859	0.07528	0.04849	0.01125	0.00301		0.00859	0.07528	0.04849	0.01125	0.00301		0.00055	0.01	0.08	0.05	0.01	0.00	0.08	0.00	0.08
205	583820.1	4138769.72	1.5	0.00875	0.07522	0.05302	0.01243	0.00339		0.00875	0.07522	0.05302	0.01243	0.00339		0.00134	0.01	0.08	0.05	0.01	0.00	0.08	0.00	0.08
206	583824.49	4138764.27	1.5	0.00874	0.07513	0.05511	0.01291	0.00354		0.00874	0.07513	0.05511	0.01291	0.00354		0.00139	0.01	0.08	0.06	0.01	0.00	0.08	0.00	0.08
204	583815.71	4138775.17	1.5	0.00872	0.07503	0.0509	0.01195	0.00324		0.00872	0.07503	0.0509	0.01195	0.00324		0.00129	0.01	0.08	0.05	0.01	0.00	0.08	0.00	0.08
212	583790.44	4138817.73	1.5	0.0087	0.07497	0.04334	0.01017	0.00267		0.0087	0.07497	0.04334	0.01017	0.00267		0.00087	0.01	0.07	0.04	0.01	0.00	0.07	0.00	0.07
115	583774.61	4138869.99	1.5	0.00838	0.07482	0.05539	0.01269	0.00346		0.00838	0.07482	0.05539	0.01269	0.00346		0.00046	0.01	0.07	0.06	0.01	0.00	0.07	0.00	0.07
207	583828.88	4138758.81	1.5	0.0087	0.0748	0.05716	0.01338	0.00369		0.0087	0.0748	0.05716	0.01338	0.00369		0.00144	0.01	0.07	0.06	0.01	0.00	0.07	0.00	0.07
86	583781.19	4138839.39	1.5	0.00836	0.0725	0.04369	0.01021	0.0027		0.00836	0.0725	0.04369	0.01021	0.0027		0.00065	0.01	0.07	0.04	0.01	0.00	0.07	0.00	0.07
208	583850.83	4138731.55	1.5	0.00831	0.07144	0.06611	0.01542	0.00435		0.00831	0.07144	0.06611	0.01542	0.00435		0.00171	0.01	0.07	0.07	0.02	0.00	0.07	0.00	0.07
209	583855.22	4138726.1	1.5	0.00822	0.07064	0.06747	0.01572	0.00445		0.00822	0.07064	0.06747	0.01572	0.00445		0.00176	0.01	0.07	0.07	0.02	0.00	0.07	0.00	0.07
211	583786.05	4138823.18	1.5	0.00817	0.07041	0.04137	0.00971	0.00256		0.00817	0.07041	0.04137	0.00971	0.00256		0.00077	0.01	0.07	0.04	0.01	0.00	0.07	0.00	0.07
132	583771.33	4138885.3	1.5	0.00765	0.07018	0.06525	0.01464	0.00405		0.00765	0.07018	0.06525	0.01464	0.00405		0.00041	0.01	0.07	0.07	0.01	0.00	0.07	0.00	0.07
210	583859.61	4138720.65	1.5	0.00813	0.06984	0.0686	0.01597	0.00454		0.00813	0.06984	0.0686	0.01597	0.00454		0.00181	0.01	0.07	0.07	0.02	0.00	0.07	0.00	0.07
203	583793.76	4138802.43	1.5	0.00787	0.06757	0.04064	0.00957	0.00254		0.00787	0.06757	0.04064	0.00957	0.00254		0.00093	0.01	0.07	0.04	0.01	0.00	0.07	0.00	0.07
196	583823.43	4138754.42	1.5	0.00777	0.06677	0.04939	0.0116	0.0032		0.00777	0.06677	0.04939	0.0116	0.0032		0.00132	0.01	0.07	0.05	0.01	0.00	0.07	0.00	0.07
195	583819.04	4138759.88	1.5	0.00775	0.06656	0.04756	0.01119	0.00307		0.00775	0.06656	0.04756	0.01119	0.00307		0.00127	0.01	0.07	0.05	0.01	0.00	0.07	0.00	0.07
194	583814.65	4138765.33	1.5	0.0077	0.06611	0.04571	0.01076	0.00293		0.0077	0.06611	0.04571	0.01076	0.00293		0.00122	0.01	0.07	0.05	0.01	0.00	0.07	0.00	0.07
197	583845.38	4138727.16	1.5	0.00763	0.06554	0.05761	0.01348	0.00379		0.00763	0.06554	0.05761	0.01348	0.00379		0.00157	0.01	0.07	0.06	0.01	0.00	0.07	0.00	0.07
193	583810.26	4138770.78	1.5	0.00762	0.06538	0.04386	0.01033	0.0028		0.00762	0.06538	0.04386	0.01033	0.0028		0.00116	0.01	0.07	0.04	0.01	0.00	0.07	0.00	0.07
198	583849.77	4138721.71	1.5	0.00757	0.06504	0.05892	0.01377	0.00389		0.00757	0.06504	0.05892	0.01377	0.00389		0.00162	0.01	0.07	0.06	0.01	0.00	0.07	0.00	0.07
85	583776.81	4138844.85	1.5	0.00748	0.06488	0.04187	0.00978	0.00262		0.00748	0.06488	0.04187	0.00978	0.00262		0.00056	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
97	583773.52	4138860.15	1.5	0.00739	0.06485	0.04664	0.0108	0.00294		0.00739	0.06485	0.04664	0.0108	0.00294		0.00048	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
199	583854.16	4138716.26	1.5	0.00751	0.06451	0.06007	0.01403	0.00397		0.00751	0.06451	0.06007	0.01403	0.00397		0.00167	0.01	0.06	0.06	0.01	0.00	0.06	0.00	0.06
202	583789.37	4138807.88	1.5	0.00751	0.06445	0.03876	0.00913	0.00242		0.00751	0.06445	0.03876	0.00913	0.00242		0.00085	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
192	583801.48	4138781.69	1.5	0.00733	0.0629	0.04018	0.00948	0.00255		0.00733	0.0629	0.04018	0.00948	0.00255		0.00104	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
131	583766.95	4138890.76	1.5	0.00593	0.0543	0.06245	0.01391	0.0039		0.00593	0.0543	0.06245	0.01391	0.0039		0.00038	0.01	0.05	0.06	0.01	0.00	0.06	0.00	0.06
114	583770.24	4138875.46	1.5	0.00689	0.06158	0.0533	0.01217	0.00338		0.00689	0.06158	0.0533	0.01217	0.00338		0.00041	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
191	583797.09	4138787.14	1.5	0.00713	0.06107	0.03839	0.00906	0.00243		0.00713	0.06107	0.03839	0.00906	0.00243		0.00097	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
201	583784.98	4138813.34	1.5	0.00708	0.06077	0.03695	0.0087	0.00231		0.00708	0.06077	0.03695	0.0087	0.00231		0.00076	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
181	583831.15	4138733.68	1.5	0.007	0.06007	0.04764	0.0112	0.00312		0.007	0.06007	0.04764	0.0112	0.00312		0.00135	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
182	583835.54	4138728.22	1.5	0.00699	0.06003	0.04909	0.01153	0.00322		0.00699	0.06003	0.04909	0.01153	0.00322		0.0014	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
180	583826.76	4138739.13	1.5	0.00699	0.05999	0.04612	0.01085	0.00301		0.00699	0.05999	0.04612	0.01085	0.00301		0.00131	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
183	583839.93	4138722.77	1.5	0.00698	0.05989	0.05046	0.01184	0.00332		0.00698	0.05989	0.05046	0.01184	0.00332		0.00145	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
179	583822.37	4138744.58	1.5	0.00697	0.05977	0.04455	0.01049	0.0029		0.00697	0.05977	0.04455	0.01049	0.0029		0.00126	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
184	583844.32	4138717.32	1.5	0.00695	0.05967	0.05171	0.01212	0.00341		0.00695	0.05967	0.05171	0.01212	0.00341		0.00149	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
185	583848.71	4138711.87	1.5	0.00692	0.0594	0.05283	0.01237	0.00349		0.00692	0.0594	0.05283	0.01237	0.00349		0.00154	0.01	0.06	0.05	0.01	0.00	0.06	0.00	0.06
178	583817.98	4138750.03	1.5	0.00692	0.05937	0.04294	0.01012	0.00279		0.00692	0.05937	0.04294	0.01012	0.00279		0.00121	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
190	583792.7	4138792.59	1.5	0.00687	0.05884	0.03664	0.00865	0.00232		0.00687	0.05884	0.03664	0.00865	0.00232		0.00089	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
177	583813.59	4138755.49	1.5	0.00685	0.05877	0.04131	0.00974	0.00267		0.00685	0.05877	0.04131	0.00974	0.00267		0.00116	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
130	583762.57	4138896.23	1.5	0.00454	0.04129	0.0587	0.01297	0.00366		0.00454	0.04129	0.0587	0.01297	0.00366		0.00037	0.00	0.04	0.06	0.01	0.00	0.06	0.00	0.06
176	583809.2	4138760.94	1.5	0.00676	0.05794	0.03967	0.00936	0.00256		0.00676	0.05794	0.03967	0.00936	0.00256		0.00111	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
84	583772.44	4138850.32	1.5	0.00657	0.05695	0.04007	0.00934	0.00254		0.00657	0.05695	0.04007	0.00934	0.00254		0.0005	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
175	583804.81	4138766.39	1.5	0.00664	0.05685	0.03803	0.00898	0.00244		0.00664	0.05685	0.03803	0.00898	0.00244		0.00105	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
200	583780.59	4138818.79	1.5	0.0066	0.05659	0.0352	0.00829	0.00221		0.0066	0.05659	0.0352	0.00829	0.00221		0.00068	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
76	583775.72	4138835.01	1.5	0.00657	0.05656	0.03671	0.00861	0.00231		0.00657	0.05656	0.03671	0.00861	0.00231		0.00058	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
189	583788.31	4138798.04	1.5	0.00657	0.0562	0.03493	0.00825	0.00221		0.00657	0.0562	0.03493	0.00825	0.00221		0.00082	0.01	0.06	0.03	0.01	0.00	0.06	0.00	0.06
174	583800.42	4138771.84	1.5	0.00648	0.05548	0.03641	0.00861	0.00233		0.00648	0.05548	0.03641	0.00861	0.00233		0.00099	0.01	0.06	0.04	0.01	0.00	0.06	0.00	0.06
96	583769.15	4138865.62	1.5	0.00623	0.05469	0.04464	0.01031	0.00286		0.00623	0.05469	0.04464	0.01031	0.00286		0.00043	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
165	583838.87	4138712.93	1.5	0.00636	0.05458	0.04557	0.01071	0.00301		0.00636	0.05458	0.04557	0.01071	0.00301		0.00138	0.01	0.05	0.05	0.01	0.00	0.05	0.00	0.05
164	583834.48	4138718.38	1.5	0.00636	0.05455	0.04439	0.01044	0.00292		0.00636	0.05455	0.04439	0.01044	0.00292		0.00133	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
166	583843.26	4138707.48	1.5	0.00635	0.05452	0.04665	0.01095	0.00308		0.00635	0.05452	0.04665	0.01095	0.00308		0.00142	0.01	0.05	0.05	0.01	0.00	0.05	0.00	0.05
163	583830.09	4138723.83	1.5	0.00635	0.05443	0.04312	0.01015	0.00283		0.00635	0.05443	0.04312	0.01015	0.00283		0.00129	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
162	583825.7	4138729.29	1.5	0.00632	0.0542	0.04179	0.00985	0.00274		0.00632	0.0542	0.04179	0.00985	0.00274		0.00125	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
129	583758.2	4138901.69	1.5	0.00352	0.03171	0.05391	0.01183	0.00334		0.00352	0.03171	0.05391	0.01183	0.00334		0.00036	0.00	0.03	0.05	0.01	0.00	0.05	0.00	0.05
161	583821.31	4138734.74	1.5	0.00628	0.05384	0.0404	0.00953	0.00264		0.00628	0.05384	0.0404	0.00953	0.00264		0.0012	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
173	583796.03	4138777.3	1.5	0.00629	0.05382	0.03481	0.00823	0.00222		0.00629	0.05382	0.03481	0.00823	0.00222		0.00093	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
160	583816.92	4138740.19	1.5	0.00622	0.05333	0.03898	0.0092	0.00254		0.00622	0.05333	0.03898	0.0092	0.00254		0.00116	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
188	583783.92	4138803.49	1.5	0.00622	0.05316	0.03327	0.00786	0.0021		0.00622	0.05316	0.03327	0.00786	0.0021		0.00075	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
159	583812.53	4138745.64	1.5	0.00615	0.05265	0.03753	0.00887	0.00244		0.00615	0.05265	0.03753	0.00887	0.00244		0.00111	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05

172	583791.64	4138782.75	1.5	0.00607	0.05185	0.03323	0.00786	0.00212		0.00607	0.05185	0.03323	0.00786	0.00212		0.00086	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
158	583808.14	4138751.1	1.5	0.00605	0.05178	0.03608	0.00853	0.00234		0.00605	0.05178	0.03608	0.00853	0.00234		0.00106	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
113	583765.86	4138880.92	1.5	0.00554	0.04948	0.05074	0.01154	0.00325		0.00554	0.04948	0.05074	0.01154	0.00325		0.00038	0.01	0.05	0.05	0.01	0.00	0.05	0.00	0.05
157	583803.75	4138756.55	1.5	0.00593	0.05071	0.03462	0.00819	0.00224		0.00593	0.05071	0.03462	0.00819	0.00224		0.001	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
75	583771.35	4138840.48	1.5	0.00586	0.05043	0.03499	0.0082	0.00223		0.00586	0.05043	0.03499	0.0082	0.00223		0.00051	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
150	583837.8	4138703.09	1.5	0.00582	0.04991	0.04134	0.00972	0.00273		0.00582	0.04991	0.04134	0.00972	0.00273		0.00131	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
149	583833.41	4138708.54	1.5	0.00581	0.04977	0.04031	0.00949	0.00266		0.00581	0.04977	0.04031	0.00949	0.00266		0.00127	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
187	583779.53	4138808.95	1.5	0.00582	0.04976	0.03166	0.00748	0.00201		0.00582	0.04976	0.03166	0.00748	0.00201		0.00068	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
171	583787.25	4138788.2	1.5	0.00581	0.04958	0.03169	0.0075	0.00202		0.00581	0.04958	0.03169	0.0075	0.00202		0.0008	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
148	583829.02	4138713.99	1.5	0.00578	0.04954	0.0392	0.00924	0.00258		0.00578	0.04954	0.0392	0.00924	0.00258		0.00123	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
156	583799.36	4138762	1.5	0.00578	0.04942	0.03317	0.00785	0.00214		0.00578	0.04942	0.03317	0.00785	0.00214		0.00095	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
147	583824.63	4138719.44	1.5	0.00574	0.04921	0.03803	0.00897	0.0025		0.00574	0.04921	0.03803	0.00897	0.0025		0.00119	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
146	583820.24	4138724.9	1.5	0.0057	0.04877	0.03681	0.00869	0.00242		0.0057	0.04877	0.03681	0.00869	0.00242		0.00115	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
145	583815.85	4138730.35	1.5	0.00563	0.0482	0.03555	0.0084	0.00233		0.00563	0.0482	0.03555	0.0084	0.00233		0.0011	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
128	583753.82	4138907.15	1.5	0.00285	0.02542	0.04813	0.0105	0.00296		0.00285	0.02542	0.04813	0.0105	0.00296		0.00035	0.00	0.03	0.05	0.01	0.00	0.05	0.00	0.05
155	583794.97	4138767.45	1.5	0.00561	0.0479	0.03173	0.00752	0.00204		0.00561	0.0479	0.03173	0.00752	0.00204		0.00089	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
112	583761.49	4138886.39	1.5	0.00439	0.03912	0.04767	0.01079	0.00307		0.00439	0.03912	0.04767	0.01079	0.00307		0.00036	0.00	0.04	0.05	0.01	0.00	0.05	0.00	0.05
144	583811.46	4138735.8	1.5	0.00555	0.04748	0.03426	0.00811	0.00224		0.00555	0.04748	0.03426	0.00811	0.00224		0.00106	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
170	583782.86	4138793.65	1.5	0.00551	0.04702	0.03017	0.00714	0.00193		0.00551	0.04702	0.03017	0.00714	0.00193		0.00073	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
143	583807.07	4138741.25	1.5	0.00545	0.04661	0.03296	0.00781	0.00215		0.00545	0.04661	0.03296	0.00781	0.00215		0.00101	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
186	583775.14	4138814.4	1.5	0.0054	0.04606	0.03009	0.00711	0.00192		0.0054	0.04606	0.03009	0.00711	0.00192		0.00061	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
142	583802.68	4138746.71	1.5	0.00534	0.04558	0.03166	0.0075	0.00206		0.00534	0.04558	0.03166	0.0075	0.00206		0.00096	0.01	0.05	0.03	0.01	0.00	0.05	0.00	0.05
95	583764.77	4138871.08	1.5	0.00515	0.0452	0.04236	0.00976	0.00275		0.00515	0.0452	0.04236	0.00976	0.00275		0.00039	0.01	0.05	0.04	0.01	0.00	0.05	0.00	0.05
67	583770.26	4138830.64	1.5	0.00526	0.04499	0.03098	0.0073	0.00199		0.00526	0.04499	0.03098	0.0073	0.00199		0.00052	0.01	0.04	0.03	0.01	0.00	0.04	0.00	0.04
141	583798.29	4138752.16	1.5	0.0052	0.04438	0.03035	0.0072	0.00197		0.0052	0.04438	0.03035	0.0072	0.00197		0.00091	0.01	0.04	0.03	0.01	0.00	0.04	0.00	0.04
169	583778.47	4138799.1	1.5	0.00519	0.04421	0.02869	0.0068	0.00184		0.00519	0.04421	0.02869	0.0068	0.00184		0.00067	0.01	0.04	0.03	0.01	0.00	0.04	0.00	0.04
74	583766.97	4138845.94	1.5	0.00514	0.0442	0.03323	0.00779	0.00215		0.00514	0.0442	0.03323	0.00779	0.00215		0.00046	0.01	0.04	0.03	0.01	0.00	0.04	0.00	0.04
111	583757.11	4138891.85	1.5	0.00347	0.0308	0.04398	0.00992	0.00285		0.00347	0.0308	0.04398	0.00992	0.00285		0.00034	0.00	0.03	0.04	0.01	0.00	0.04	0.00	0.04
140	583793.9	4138757.61	1.5	0.00504	0.04299	0.02905	0.00689	0.00188		0.00504	0.04299	0.02905	0.00689	0.00188		0.00086	0.01	0.04	0.03	0.01	0.00	0.04	0.00	0.04
127	583749.45	4138912.62	1.5	0.00245	0.02162	0.04173	0.00907	0.00254		0.00245	0.02162	0.04173	0.00907	0.00254		0.00034	0.00	0.02	0.04	0.01	0.00	0.04	0.00	0.04
139	583789.51	4138763.06	1.5	0.00486	0.04143	0.02777	0.00659	0.0018		0.00486	0.04143	0.02777	0.00659	0.0018		0.00081	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
168	583774.08	4138804.56	1.5	0.00484	0.04117	0.02725	0.00645	0.00175		0.00484	0.04117	0.02725	0.00645	0.00175		0.00061	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
66	583765.88	4138836.1	1.5	0.00468	0.04004	0.02935	0.00691	0.0019		0.00468	0.04004	0.02935	0.00691	0.0019		0.00047	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
94	583760.4	4138876.55	1.5	0.0042	0.03683	0.03979	0.00915	0.00261		0.0042	0.03683	0.03979	0.00915	0.00261		0.00036	0.00	0.04	0.04	0.01	0.00	0.04	0.00	0.04
110	583752.73	4138897.31	1.5	0.0028	0.02466	0.03975	0.00893	0.00257		0.0028	0.02466	0.03975	0.00893	0.00257		0.00033	0.00	0.02	0.04	0.01	0.00	0.04	0.00	0.04
154	583777.41	4138789.26	1.5	0.00466	0.03962	0.02618	0.00621	0.00169		0.00466	0.03962	0.02618	0.00621	0.00169		0.00066	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
167	583769.69	4138810.01	1.5	0.00447	0.03797	0.02582	0.00612	0.00167		0.00447	0.03797	0.02582	0.00612	0.00167		0.00055	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
153	583773.02	4138794.71	1.5	0.00437	0.03709	0.02485	0.0059	0.00161		0.00437	0.03709	0.02485	0.0059	0.00161		0.0006	0.00	0.04	0.02	0.01	0.00	0.04	0.00	0.04
93	583756.02	4138882.01	1.5	0.0034	0.02976	0.03685	0.00845	0.00244		0.0034	0.02976	0.03685	0.00845	0.00244		0.00034	0.00	0.03	0.04	0.01	0.00	0.04	0.00	0.04
57	583764.8	4138826.26	1.5	0.00428	0.03642	0.02627	0.00621	0.00171		0.00428	0.03642	0.02627	0.00621	0.00171		0.00048	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
65	583761.51	4138841.56	1.5	0.00411	0.03515	0.02772	0.00653	0.00182		0.00411	0.03515	0.02772	0.00653	0.00182		0.00042	0.00	0.04	0.03	0.01	0.00	0.04	0.00	0.04
126	583745.07	4138918.08	1.5	0.00219	0.01927	0.03514	0.00762	0.00212		0.00219	0.01927	0.03514	0.00762	0.00212		0.00034	0.00	0.02	0.04	0.01	0.00	0.04	0.00	0.04
109	583748.36	4138902.78	1.5	0.00234	0.02046	0.03512	0.00787	0.00227		0.00234	0.02046	0.03512	0.00787	0.00227		0.00032	0.00	0.02	0.04	0.01	0.00	0.04	0.00	0.04
152	583768.63	4138800.17	1.5	0.00406	0.03443	0.02355	0.00559	0.00153		0.00406	0.03443	0.02355	0.00559	0.00153		0.00055	0.00	0.03	0.02	0.01	0.00	0.03	0.00	0.03
92	583751.65	4138887.47	1.5	0.00277	0.02416	0.03361	0.00769	0.00223		0.00277	0.02416	0.03361	0.00769	0.00223		0.00032	0.00	0.02	0.03	0.01	0.00	0.03	0.00	0.03
56	583760.42	4138831.72	1.5	0.00381	0.03243	0.02477	0.00586	0.00163		0.00381	0.03243	0.02477	0.00586	0.00163		0.00043	0.00	0.03	0.02	0.01	0.00	0.03	0.00	0.03
151	583764.24	4138805.62	1.5	0.00374	0.03169	0.02227	0.00529	0.00145		0.00374	0.03169	0.02227	0.00529	0.00145		0.0005	0.00	0.03	0.02	0.01	0.00	0.03	0.00	0.03
64	583757.13	4138847.03	1.5	0.00357	0.03047	0.02604	0.00613	0.00173		0.00357	0.03047	0.02604	0.00613	0.00173		0.00038	0.00	0.03	0.03	0.01	0.00	0.03	0.00	0.03
108	583743.98	4138908.24	1.5	0.00203	0.01773	0.03031	0.00678	0.00195		0.00203	0.01773	0.03031	0.00678	0.00195		0.00032	0.00	0.02	0.03	0.01	0.00	0.03	0.00	0.03
91	583747.27	4138892.94	1.5	0.0023	0.01994	0.03011	0.00688	0.00201		0.0023	0.01994	0.03011	0.00688	0.00201		0.00031	0.00	0.02	0.03	0.01	0.00	0.03	0.00	0.03
83	583750.56	4138877.63	1.5	0.00273	0.0236	0.02896	0.00672	0.00195		0.00273	0.0236	0.02896	0.00672	0.00195		0.00032	0.00	0.02	0.03	0.01	0.00	0.03	0.00	0.03
125	583740.69	4138923.54	1.5	0.00202	0.01764	0.02884	0.00627	0.00173		0.00202	0.01764	0.02884	0.00627	0.00173		0.00033	0.00	0.02	0.03	0.01	0.00	0.03	0.00	0.03
55	583756.05	4138837.19	1.5	0.00336	0.02857	0.02328	0.0055	0.00154		0.00336	0.02857	0.02328	0.0055	0.00154		0.00039	0.00	0.03	0.02	0.01	0.00	0.03	0.00	0.03
36	583754.96	4138827.35	1.5	0.00316	0.02675	0.02104	0.00499	0.0014		0.00316	0.02675	0.02104	0.00499	0.0014		0.0004	0.00	0.03	0.02	0.00	0.00	0.03	0.00	0.03
90	583742.89	4138898.4	1.5	0.00196	0.01696	0.02649	0.00605	0.00177		0.00196	0.01696	0.02649	0.00605	0.00177		0.0003	0.00	0.02	0.03	0.01	0.00	0.03	0.00	0.03
82	583746.18	4138883.1	1.5	0.00228	0.01961	0.02623	0.00608	0.00178		0.00228	0.01961	0.02623	0.00608	0.00178		0.0003	0.00	0.02	0.03	0.01	0.00	0.03	0.00	0.03
107	583739.61	4138913.7	1.5	0.00184	0.01594	0.02563	0.00574	0.00164		0.00184	0.01594	0.02563	0.00574	0.00164		0.00031	0.00	0.02	0.03	0.01	0.00	0.03	0.00	0.03
54	583751.67	4138842.65	1.5	0.00293	0.0249	0.02176	0.00515	0.00146		0.00293	0.0249	0.02176	0.00515	0.00146		0.00036	0.00	0.02	0.02	0.01	0.00	0.02	0.00	0.02
35	583750.58	4138832.81	1.5	0.00279	0.02365	0.01969	0.00467	0.00132		0.00279	0.02365	0.01969	0.00467	0.00132		0.00037	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
81	583741.81	4138888.56	1.5	0.00193	0.01658	0.02342	0.00543	0.00159		0.00193	0.01658	0.02342	0.00543	0.00159		0.00029	0.00	0.02	0.02	0.01	0.00	0.02	0.00	0.02
124	583736.32	4138929.01	1.5	0.00188	0.01639	0.02325	0.00508	0.00139		0.00188	0.01639	0.02325	0.00508	0.00139		0.00033	0.00	0.02	0.02	0.01	0.00	0.02	0.00	0.02
73	583745.09	4138873.26	1.5	0.00225	0.0193	0.02316	0.00542	0.00158		0.00225	0.0193	0.02316	0.00542	0.00158		0.0003	0.00	0.02	0.02	0.01	0.00	0.02	0.00	0.02
398	583793.75	4138663.96	1.5	0.00269	0.02284	0.01697	0.00405	0.00113		0.00269	0.02284	0.01697	0.00405	0.00113		0.00073	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
18	583749.49	4138822.97	1.5	0.00265	0.02241	0.01798	0.00428	0.0012		0.00265	0.02241	0.01798	0.00428	0.0012		0.00037	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
393	583789.44	4138669.47	1.5	0.00262	0.02226	0.01644	0.00393	0.0011		0.00262	0.02226	0.01644	0.00393	0.0011		0.0007	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
53	583747.29	4138848.12	1.5	0.00254	0.02154	0.02023	0.00479	0.00137		0.00254	0.02154	0.02023	0.00479	0.00137		0.00033	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
106	583735.23	4138919.17	1.5	0.00169	0.01467	0.02132	0.00479	0.00136		0.00169	0.01467	0.02132	0.00479	0.00136		0.00031	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.02
388	583781.9	4138680.41	1.5	0.00252	0.02132	0.01557	0.00373	0.00104		0.00252	0.02132	0.01557	0.00373	0.00104		0.00066	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
72	583740.72	4138878.72	1.5	0.00191	0.01635	0.02092	0.00489	0.00144		0.00191	0.01635	0.02092	0.00489	0.00144		0.00028	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
399	583788.23	4138659.65	1.5	0.00245	0.02081	0.01541	0.00368	0.00103		0.00245	0.02081	0.01541	0.00368	0.00103		0.00068	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
34	583746.21	4138838.28	1.5	0.00245	0.02074	0.01836	0.00436	0.00124		0.00245	0.02074	0.01836	0.00436	0.00124		0.00034	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
383	583777.59	4138685.93	1.5	0.00244	0.02064	0.01501	0.00359	0.001		0.00244	0.02064	0.01501	0.00359	0.001		0.00063	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02

80	583737.43	4138894.03	1.5	0.00167	0.01436	0.02062	0.00478	0.00141		0.00167	0.01436	0.02062	0.00478	0.00141		0.00028	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.02
394	583783.92	4138665.17	1.5	0.00239	0.02025	0.01492	0.00357	0.001		0.00239	0.02025	0.01492	0.00357	0.001		0.00066	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
17	583745.12	4138828.44	1.5	0.00236	0.0199	0.0168	0.004	0.00113		0.00236	0.0199	0.0168	0.004	0.00113		0.00034	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
389	583776.38	4138676.1	1.5	0.00229	0.01933	0.01411	0.00338	0.00094		0.00229	0.01933	0.01411	0.00338	0.00094		0.00062	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
400	583782.71	4138655.34	1.5	0.00224	0.01899	0.01402	0.00336	0.00094		0.00224	0.01899	0.01402	0.00336	0.00094		0.00064	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
63	583739.63	4138868.88	1.5	0.0019	0.01616	0.01885	0.00444	0.0013		0.0019	0.01616	0.01885	0.00444	0.0013		0.00028	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
52	583742.92	4138853.58	1.5	0.00219	0.01854	0.01869	0.00442	0.00128		0.00219	0.01854	0.01869	0.00442	0.00128		0.0003	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
123	583731.94	4138934.47	1.5	0.00176	0.01534	0.01869	0.00413	0.00113		0.00176	0.01534	0.01869	0.00413	0.00113		0.00033	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
384	583772.07	4138681.62	1.5	0.00221	0.01869	0.01359	0.00326	0.00091		0.00221	0.01869	0.01359	0.00326	0.00091		0.00059	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
378	583766.43	4138699.17	1.5	0.00221	0.01868	0.01346	0.00323	0.0009		0.00221	0.01868	0.01346	0.00323	0.0009		0.00056	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
71	583736.34	4138884.19	1.5	0.00165	0.01407	0.01867	0.00437	0.00129		0.00165	0.01407	0.01867	0.00437	0.00129		0.00027	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.02
395	583778.4	4138660.86	1.5	0.00218	0.01845	0.01356	0.00325	0.00091		0.00218	0.01845	0.01356	0.00325	0.00091		0.00062	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
33	583741.83	4138843.74	1.5	0.00214	0.01808	0.01702	0.00404	0.00116		0.00214	0.01808	0.01702	0.00404	0.00116		0.00031	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
373	583762.12	4138704.69	1.5	0.00213	0.01793	0.0129	0.0031	0.00086		0.00213	0.01793	0.0129	0.0031	0.00086		0.00053	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
105	583730.86	4138924.63	1.5	0.00158	0.01368	0.01764	0.00398	0.00112		0.00158	0.01368	0.01764	0.00398	0.00112		0.0003	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.02
16	583740.74	4138833.9	1.5	0.00208	0.01756	0.01562	0.00372	0.00106		0.00208	0.01756	0.01562	0.00372	0.00106		0.00032	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
390	583770.86	4138671.8	1.5	0.00208	0.01756	0.01281	0.00307	0.00086		0.00208	0.01756	0.01281	0.00307	0.00086		0.00058	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
401	583777.19	4138651.03	1.5	0.00205	0.01735	0.01278	0.00306	0.00086		0.00205	0.01735	0.01278	0.00306	0.00086		0.0006	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
51	583738.54	4138859.04	1.5	0.00188	0.01595	0.01714	0.00406	0.00118		0.00188	0.01595	0.01714	0.00406	0.00118		0.00028	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
62	583735.25	4138874.35	1.5	0.00163	0.0139	0.01701	0.00401	0.00118		0.00163	0.0139	0.01701	0.00401	0.00118		0.00027	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.02
385	583766.55	4138677.31	1.5	0.00201	0.01696	0.01233	0.00296	0.00083		0.00201	0.01696	0.01233	0.00296	0.00083		0.00056	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
379	583760.91	4138694.86	1.5	0.002	0.01687	0.01218	0.00293	0.00082		0.002	0.01687	0.01218	0.00293	0.00082		0.00053	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
396	583772.89	4138656.55	1.5	0.00199	0.01684	0.01236	0.00296	0.00083		0.00199	0.01684	0.01236	0.00296	0.00083		0.00058	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
298	583742.32	4138780.73	1.5	0.00199	0.01676	0.0125	0.003	0.00084		0.00199	0.01676	0.0125	0.003	0.00084		0.00038	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
368	583754.25	4138715.3	1.5	0.00197	0.01656	0.01189	0.00286	0.0008		0.00197	0.01656	0.01189	0.00286	0.0008		0.00049	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
70	583731.97	4138889.65	1.5	0.00145	0.01237	0.0165	0.00386	0.00114		0.00145	0.01237	0.0165	0.00386	0.00114		0.00026	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.02
374	583756.6	4138700.38	1.5	0.00192	0.01617	0.01166	0.0028	0.00078		0.00192	0.01617	0.01166	0.0028	0.00078		0.0005	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
391	583765.35	4138667.49	1.5	0.0019	0.01599	0.01166	0.0028	0.00078		0.0019	0.01599	0.01166	0.0028	0.00078		0.00055	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
402	583771.68	4138646.73	1.5	0.00188	0.01588	0.01168	0.0028	0.00078		0.00188	0.01588	0.01168	0.0028	0.00078		0.00057	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
363	583749.94	4138720.82	1.5	0.00187	0.01577	0.01134	0.00273	0.00076		0.00187	0.01577	0.01134	0.00273	0.00076		0.00046	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
32	583737.45	4138849.2	1.5	0.00186	0.01571	0.01569	0.00373	0.00108		0.00186	0.01571	0.01569	0.00373	0.00108		0.00029	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.02
50	583734.17	4138864.51	1.5	0.00163	0.01378	0.01561	0.0037	0.00108		0.00163	0.01378	0.01561	0.0037	0.00108		0.00027	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.02
386	583761.04	4138673.01	1.5	0.00183	0.01543	0.01122	0.0027	0.00075		0.00183	0.01543	0.01122	0.0027	0.00075		0.00052	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
15	583736.37	4138839.36	1.5	0.00183	0.01542	0.01447	0.00345	0.00099		0.00183	0.01542	0.01447	0.00345	0.00099		0.00029	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
297	583737.9	4138786.16	1.5	0.00184	0.01542	0.01174	0.00282	0.00079		0.00184	0.01542	0.01174	0.00282	0.00079		0.00036	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
397	583767.37	4138652.24	1.5	0.00182	0.0154	0.01129	0.00271	0.00076		0.00182	0.0154	0.01129	0.00271	0.00076		0.00055	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
354	583742.06	4138753.66	1.5	0.00183	0.01538	0.0112	0.0027	0.00075		0.00183	0.01538	0.0112	0.0027	0.00075		0.0004	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
122	583727.57	4138939.94	1.5	0.00166	0.01445	0.01532	0.00343	0.00094		0.00166	0.01445	0.01532	0.00343	0.00094		0.00033	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.02
380	583755.39	4138690.56	1.5	0.00181	0.01527	0.01104	0.00266	0.00074		0.00181	0.01527	0.01104	0.00266	0.00074		0.0005	0.00	0.02	0.01	0.00	0.00	0.02	0.00	0.02
61	583730.88	4138879.81	1.5	0.00143	0.01213	0.01523	0.00359	0.00106		0.00143	0.01213	0.01523	0.00359	0.00106		0.00026	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.02
369	583748.73	4138710.99	1.5	0.00177	0.01491	0.01074	0.00259	0.00072		0.00177	0.01491	0.01074	0.00259	0.00072		0.00046	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
293	583736.89	4138776.31	1.5	0.00176	0.01477	0.01109	0.00267	0.00075		0.00176	0.01477	0.01109	0.00267	0.00075		0.00036	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
104	583726.48	4138930.1	1.5	0.00149	0.01285	0.01467	0.00333	0.00094		0.00149	0.01285	0.01467	0.00333	0.00094		0.0003	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
375	583751.09	4138696.07	1.5	0.00174	0.01464	0.01057	0.00255	0.00071		0.00174	0.01464	0.01057	0.00255	0.00071		0.00047	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
392	583759.83	4138663.18	1.5	0.00173	0.01459	0.01064	0.00256	0.00072		0.00173	0.01459	0.01064	0.00256	0.00072		0.00052	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
349	583737.76	4138759.18	1.5	0.00172	0.0144	0.0106	0.00255	0.00072		0.00172	0.0144	0.0106	0.00255	0.00072		0.00038	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
31	583733.08	4138854.67	1.5	0.00162	0.01366	0.01439	0.00342	0.001		0.00162	0.01366	0.01439	0.00342	0.001		0.00027	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
364	583744.43	4138716.51	1.5	0.00169	0.0142	0.01024	0.00247	0.00069		0.00169	0.0142	0.01024	0.00247	0.00069		0.00043	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
296	583733.48	4138791.59	1.5	0.00168	0.01412	0.011	0.00265	0.00075		0.00168	0.01412	0.011	0.00265	0.00075		0.00033	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
49	583729.79	4138869.97	1.5	0.00142	0.012	0.0141	0.00334	0.00099		0.00142	0.012	0.0141	0.00334	0.00099		0.00025	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
387	583755.52	4138668.7	1.5	0.00167	0.01407	0.01023	0.00246	0.00069		0.00167	0.01407	0.01023	0.00246	0.00069		0.0005	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
381	583749.88	4138686.25	1.5	0.00165	0.01388	0.01004	0.00242	0.00068		0.00165	0.01388	0.01004	0.00242	0.00068		0.00047	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
355	583736.55	4138749.35	1.5	0.00164	0.01372	0.01004	0.00242	0.00068		0.00164	0.01372	0.01004	0.00242	0.00068		0.00038	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
121	583723.19	4138945.4	1.5	0.00158	0.01367	0.01306	0.00296	0.00081		0.00158	0.01367	0.01306	0.00296	0.00081		0.00033	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
292	583732.47	4138781.74	1.5	0.00162	0.01361	0.01041	0.00251	0.00071		0.00162	0.01361	0.01041	0.00251	0.00071		0.00034	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
60	583726.5	4138885.27	1.5	0.00127	0.01079	0.01352	0.00319	0.00094		0.00127	0.01079	0.01352	0.00319	0.00094		0.00025	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
14	583731.99	4138844.83	1.5	0.0016	0.01351	0.01334	0.00318	0.00092		0.0016	0.01351	0.01334	0.00318	0.00092		0.00027	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
370	583743.22	4138706.68	1.5	0.00161	0.01348	0.00974	0.00235	0.00066		0.00161	0.01348	0.00974	0.00235	0.00066		0.00043	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
376	583745.57	4138691.77	1.5	0.00158	0.01329	0.00961	0.00232	0.00065		0.00158	0.01329	0.00961	0.00232	0.00065		0.00045	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
30	583728.7	4138860.13	1.5	0.00141	0.01192	0.01311	0.00312	0.00092		0.00141	0.01192	0.01311	0.00312	0.00092		0.00025	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
120	583718.82	4138950.86	1.5	0.0015	0.01296	0.01162	0.00266	0.00073		0.0015	0.01296	0.01162	0.00266	0.00073		0.00033	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
295	583729.06	4138797.02	1.5	0.00154	0.01288	0.01029	0.00248	0.0007		0.00154	0.01288	0.01029	0.00248	0.0007		0.00031	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
350	583732.24	4138754.87	1.5	0.00153	0.01285	0.00949	0.00229	0.00064		0.00153	0.01285	0.00949	0.00229	0.00064		0.00036	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
365	583738.91	4138712.2	1.5	0.00153	0.01283	0.00928	0.00224	0.00063		0.00153	0.01283	0.00928	0.00224	0.00063		0.00041	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
48	583725.42	4138875.43	1.5	0.00125	0.0106	0.01266	0.003	0.00089		0.00125	0.0106	0.01266	0.003	0.00089		0.00024	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
382	583744.36	4138681.94	1.5	0.0015	0.01264	0.00915	0.00221	0.00062		0.0015	0.01264	0.00915	0.00221	0.00062		0.00044	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
291	583728.05	4138787.17	1.5	0.00149	0.01249	0.00976	0.00235	0.00067		0.00149	0.01249	0.00976	0.00235	0.00067		0.00032	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
103	583722.1	4138935.56	1.5	0.00141	0.01215	0.01246	0.00285	0.0008		0.00141	0.01215	0.01246	0.00285	0.0008		0.0003	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
356	583731.03	4138745.04	1.5	0.00147	0.0123	0.00903	0.00218	0.00061		0.00147	0.0123	0.00903	0.00218	0.00061		0.00036	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
371	583737.7	4138702.38	1.5	0.00146	0.01224	0.00885	0.00214	0.0006		0.00146	0.01224	0.00885	0.00214	0.0006		0.00041	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
13	583727.61	4138850.29	1.5	0.00141	0.01185	0.01223	0.00292	0.00085		0.00141	0.01185	0.01223	0.00292	0.00085		0.00026	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
377	583740.05	4138687.46	1.5	0.00144	0.01211	0.00876	0.00211	0.00059		0.00144	0.01211	0.00876	0.00211	0.00059		0.00043	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01

29	583724.33	4138865.59	1.5	0.00124	0.0105	0.01188	0.00283	0.00083		0.00124	0.0105	0.01188	0.00283	0.00083		0.00024	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
294	583724.64	4138802.44	1.5	0.00139	0.01169	0.00961	0.00231	0.00066		0.00139	0.01169	0.00961	0.00231	0.00066		0.00029	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
366	583733.39	4138707.89	1.5	0.00139	0.01164	0.00843	0.00204	0.00057		0.00139	0.01164	0.00843	0.00204	0.00057		0.00039	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
102	583717.73	4138941.02	1.5	0.00134	0.01154	0.0109	0.00251	0.0007		0.00134	0.01154	0.0109	0.00251	0.0007		0.0003	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
344	583725.23	4138767.58	1.5	0.00138	0.01153	0.00873	0.00211	0.0006		0.00138	0.01153	0.00873	0.00211	0.0006		0.00032	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
351	583726.72	4138750.56	1.5	0.00138	0.01153	0.00854	0.00206	0.00058		0.00138	0.01153	0.00854	0.00206	0.00058		0.00034	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
290	583723.63	4138792.6	1.5	0.00136	0.01142	0.00914	0.0022	0.00063		0.00136	0.01142	0.00914	0.0022	0.00063		0.0003	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
47	583721.04	4138880.9	1.5	0.00112	0.00951	0.0113	0.00268	0.00079		0.00112	0.00951	0.0113	0.00268	0.00079		0.00024	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
12	583723.24	4138855.76	1.5	0.00124	0.01045	0.01117	0.00267	0.00078		0.00124	0.01045	0.01117	0.00267	0.00078		0.00024	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
372	583732.18	4138698.07	1.5	0.00133	0.01114	0.00806	0.00195	0.00055		0.00133	0.01114	0.00806	0.00195	0.00055		0.00039	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
357	583725.51	4138740.74	1.5	0.00132	0.01108	0.00815	0.00197	0.00055		0.00132	0.01108	0.00815	0.00197	0.00055		0.00034	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
101	583713.35	4138946.49	1.5	0.00128	0.01099	0.00984	0.00228	0.00064		0.00128	0.01099	0.00984	0.00228	0.00064		0.0003	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
28	583719.95	4138871.06	1.5	0.00111	0.00936	0.01071	0.00255	0.00075		0.00111	0.00936	0.01071	0.00255	0.00075		0.00023	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
339	583720.92	4138773.09	1.5	0.00128	0.01069	0.00822	0.00199	0.00056		0.00128	0.01069	0.00822	0.00199	0.00056		0.0003	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
367	583727.87	4138703.59	1.5	0.00127	0.0106	0.00768	0.00186	0.00052		0.00127	0.0106	0.00768	0.00186	0.00052		0.00037	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
89	583716.64	4138931.18	1.5	0.00121	0.01043	0.01039	0.00241	0.00068		0.00121	0.01043	0.01039	0.00241	0.00068		0.00027	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
289	583719.21	4138798.02	1.5	0.00124	0.0104	0.00854	0.00206	0.00059		0.00124	0.0104	0.00854	0.00206	0.00059		0.00028	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
352	583721.2	4138746.25	1.5	0.00124	0.0104	0.00771	0.00187	0.00053		0.00124	0.0104	0.00771	0.00187	0.00053		0.00033	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
345	583719.71	4138763.27	1.5	0.00124	0.01035	0.00785	0.0019	0.00054		0.00124	0.01035	0.00785	0.0019	0.00054		0.00031	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
11	583718.86	4138861.22	1.5	0.0011	0.00928	0.01015	0.00243	0.00071		0.0011	0.00928	0.01015	0.00243	0.00071		0.00023	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
46	583716.66	4138886.36	1.5	0.00102	0.00869	0.01005	0.00239	0.00071		0.00102	0.00869	0.01005	0.00239	0.00071		0.00023	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
358	583719.99	4138736.43	1.5	0.0012	0.01003	0.00739	0.00179	0.0005		0.0012	0.01003	0.00739	0.00179	0.0005		0.00033	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
88	583712.26	4138936.65	1.5	0.00116	0.00993	0.00926	0.00216	0.00061		0.00116	0.00993	0.00926	0.00216	0.00061		0.00027	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
27	583715.58	4138876.52	1.5	0.001	0.00847	0.00961	0.00229	0.00068		0.001	0.00847	0.00961	0.00229	0.00068		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
340	583715.4	4138768.79	1.5	0.00115	0.00961	0.00739	0.00179	0.00051		0.00115	0.00961	0.00739	0.00179	0.00051		0.00029	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
87	583707.89	4138942.11	1.5	0.0011	0.00949	0.00845	0.00197	0.00056		0.0011	0.00949	0.00845	0.00197	0.00056		0.00027	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
353	583715.69	4138741.95	1.5	0.00113	0.00942	0.00699	0.00169	0.00048		0.00113	0.00942	0.00699	0.00169	0.00048		0.00031	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
346	583714.19	4138758.96	1.5	0.00112	0.00934	0.00709	0.00172	0.00049		0.00112	0.00934	0.00709	0.00172	0.00049		0.0003	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
10	583714.49	4138866.68	1.5	0.00099	0.00834	0.00919	0.0022	0.00065		0.00099	0.00834	0.00919	0.0022	0.00065		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
45	583712.29	4138891.83	1.5	0.00095	0.00806	0.00893	0.00212	0.00062		0.00095	0.00806	0.00893	0.00212	0.00062		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
334	583711.14	4138784.41	1.5	0.00106	0.00888	0.00712	0.00172	0.00049		0.00106	0.00888	0.00712	0.00172	0.00049		0.00027	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
288	583712.01	4138817.59	1.5	0.00104	0.00873	0.00781	0.00188	0.00054		0.00104	0.00873	0.00781	0.00188	0.00054		0.00024	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
79	583706.8	4138932.27	1.5	0.00101	0.0087	0.00797	0.00187	0.00053		0.00101	0.0087	0.00797	0.00187	0.00053		0.00025	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
341	583709.88	4138764.48	1.5	0.00104	0.00868	0.00668	0.00162	0.00046		0.00104	0.00868	0.00668	0.00162	0.00046		0.00028	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
26	583711.2	4138881.99	1.5	0.00092	0.00777	0.00861	0.00205	0.00061		0.00092	0.00777	0.00861	0.00205	0.00061		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
347	583708.67	4138754.65	1.5	0.00101	0.00847	0.00642	0.00156	0.00044		0.00101	0.00847	0.00642	0.00156	0.00044		0.00028	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
78	583702.42	4138937.74	1.5	0.00097	0.00832	0.00733	0.00172	0.00049		0.00097	0.00832	0.00733	0.00172	0.00049		0.00025	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
9	583710.11	4138872.15	1.5	0.0009	0.00759	0.00829	0.00198	0.00059		0.0009	0.00759	0.00829	0.00198	0.00059		0.00021	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
329	583706.83	4138789.93	1.5	0.00097	0.00815	0.00668	0.00162	0.00046		0.00097	0.00815	0.00668	0.00162	0.00046		0.00025	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
335	583705.62	4138780.1	1.5	0.00096	0.00802	0.00642	0.00155	0.00044		0.00096	0.00802	0.00642	0.00155	0.00044		0.00026	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
77	583698.05	4138943.2	1.5	0.00093	0.00798	0.00685	0.00161	0.00045		0.00093	0.00798	0.00685	0.00161	0.00045		0.00025	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
44	583707.91	4138897.29	1.5	0.00089	0.00756	0.00795	0.00189	0.00055		0.00089	0.00756	0.00795	0.00189	0.00055		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
342	583704.37	4138760.17	1.5	0.00094	0.00788	0.00606	0.00147	0.00042		0.00094	0.00788	0.00606	0.00147	0.00042		0.00027	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
287	583707.59	4138823.02	1.5	0.00094	0.00787	0.00724	0.00175	0.00051		0.00094	0.00787	0.00724	0.00175	0.00051		0.00023	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
283	583706.59	4138813.17	1.5	0.00094	0.00786	0.00697	0.00168	0.00049		0.00094	0.00786	0.00697	0.00168	0.00049		0.00023	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
348	583703.16	4138750.34	1.5	0.00092	0.00771	0.00584	0.00142	0.0004		0.00092	0.00771	0.00584	0.00142	0.0004		0.00027	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
8	583705.74	4138877.61	1.5	0.00083	0.00701	0.00748	0.00179	0.00053		0.00083	0.00701	0.00748	0.00179	0.00053		0.00021	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
69	583696.96	4138933.36	1.5	0.00086	0.0074	0.00643	0.00152	0.00043		0.00086	0.0074	0.00643	0.00152	0.00043		0.00023	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
330	583701.31	4138785.62	1.5	0.00088	0.00738	0.00602	0.00146	0.00042		0.00088	0.00738	0.00602	0.00146	0.00042		0.00024	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
336	583700.1	4138775.8	1.5	0.00087	0.00729	0.00581	0.00141	0.0004		0.00087	0.00729	0.00581	0.00141	0.0004		0.00025	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
343	583698.85	4138755.86	1.5	0.00086	0.00719	0.00551	0.00134	0.00038		0.00086	0.00719	0.00551	0.00134	0.00038		0.00026	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
43	583703.54	4138902.75	1.5	0.00084	0.00717	0.00711	0.00169	0.00049		0.00084	0.00717	0.00711	0.00169	0.00049		0.00021	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
282	583702.17	4138818.6	1.5	0.00085	0.00712	0.00647	0.00156	0.00045		0.00085	0.00712	0.00647	0.00156	0.00045		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
286	583703.17	4138828.45	1.5	0.00085	0.00711	0.0067	0.00161	0.00047		0.00085	0.00711	0.0067	0.00161	0.00047		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
68	583692.59	4138938.82	1.5	0.00083	0.0071	0.00603	0.00142	0.0004		0.00083	0.0071	0.00603	0.00142	0.0004		0.00023	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
42	583699.16	4138908.22	1.5	0.0008	0.00683	0.00642	0.00153	0.00044		0.0008	0.00683	0.00642	0.00153	0.00044		0.00021	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
324	583697.74	4138801.94	1.5	0.00081	0.00676	0.00582	0.00141	0.00041		0.00081	0.00676	0.00582	0.00141	0.00041		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
331	583695.8	4138781.31	1.5	0.0008	0.00672	0.00546	0.00132	0.00038		0.0008	0.00672	0.00546	0.00132	0.00038		0.00023	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
59	583691.5	4138928.98	1.5	0.00078	0.00665	0.00568	0.00135	0.00038		0.00078	0.00665	0.00568	0.00135	0.00038		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
337	583694.59	4138771.49	1.5	0.0008	0.00665	0.00528	0.00128	0.00037		0.0008	0.00665	0.00528	0.00128	0.00037		0.00024	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
41	583694.78	4138913.68	1.5	0.00077	0.00653	0.00586	0.00139	0.0004		0.00077	0.00653	0.00586	0.00139	0.0004		0.00021	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
25	583698.07	4138898.38	1.5	0.00076	0.00648	0.00624	0.00149	0.00043		0.00076	0.00648	0.00624	0.00149	0.00043		0.0002	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
281	583697.75	4138824.03	1.5	0.00077	0.00646	0.006	0.00145	0.00042		0.00077	0.00646	0.006	0.00145	0.00042		0.00021	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
285	583698.75	4138833.88	1.5	0.00077	0.00644	0.00619	0.00149	0.00044		0.00077	0.00644	0.00619	0.00149	0.00044		0.0002	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
58	583687.12	4138934.45	1.5	0.00075	0.00639	0.00535	0.00127	0.00036		0.00075	0.00639	0.00535	0.00127	0.00036		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
40	583690.41	4138919.14	1.5	0.00073	0.00627	0.00541	0.00129	0.00037		0.00073	0.00627	0.00541	0.00129	0.00037		0.00021	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
24	583693.7	4138903.84	1.5	0.00073	0.00619	0.00567	0.00136	0.00039		0.00073	0.00619	0.00567	0.00136	0.00039		0.0002	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
319	583693.43	4138807.45	1.5	0.00074	0.00617	0.00544	0.00131	0.00038		0.00074	0.00617	0.00544	0.00131	0.00038		0.00021	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
325	583692.22	4138797.63	1.5	0.00074	0.00616	0.00526	0.00127	0.00037		0.00074	0.00616	0.00526	0.00127	0.00037		0.00022	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
332	583690.28	4138777.01	1.5	0.00074	0.00614	0.00497	0.0012	0.00035		0.00074	0.00614	0.00497	0.0012	0.00035		0.00023	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
338	583689.07	4138767.18	1.5	0.00073	0.00609	0.00482	0.00117	0.00033		0.00073	0.00609	0.00482	0.00117	0.00033		0.00023	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
39	583686.03	4138924.61	1.5	0.00071	0.00603	0.00506	0.0012	0.00034		0.00071	0.00603	0.00506	0.0012	0.00034		0.00021	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01

23	583689.32	4138909.31	1.5	0.0007	0.00594	0.00521	0.00124	0.00036		0.0007	0.00594	0.00521	0.00124	0.00036		0.0002	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
7	583692.61	4138894	1.5	0.00069	0.00589	0.00553	0.00133	0.00039		0.00069	0.00589	0.00553	0.00133	0.00039		0.00019	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
280	583693.33	4138829.46	1.5	0.0007	0.00588	0.00556	0.00134	0.00039		0.0007	0.00588	0.00556	0.00134	0.00039		0.0002	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
284	583694.33	4138839.31	1.5	0.0007	0.00587	0.00571	0.00138	0.0004		0.0007	0.00587	0.00571	0.00138	0.0004		0.0002	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
38	583681.66	4138930.07	1.5	0.00068	0.0058	0.00478	0.00114	0.00032		0.00068	0.0058	0.00478	0.00114	0.00032		0.0002	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
22	583684.95	4138914.77	1.5	0.00067	0.00571	0.00484	0.00115	0.00033		0.00067	0.00571	0.00484	0.00115	0.00033		0.00019	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
320	583687.91	4138803.15	1.5	0.00068	0.00565	0.00492	0.00119	0.00034		0.00068	0.00565	0.00492	0.00119	0.00034		0.0002	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
6	583688.23	4138899.47	1.5	0.00066	0.00564	0.00506	0.00121	0.00035		0.00066	0.00564	0.00506	0.00121	0.00035		0.00019	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
326	583686.7	4138793.32	1.5	0.00068	0.00564	0.00478	0.00116	0.00033		0.00068	0.00564	0.00478	0.00116	0.00033		0.00021	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
333	583684.76	4138772.7	1.5	0.00068	0.00564	0.00454	0.0011	0.00032		0.00068	0.00564	0.00454	0.0011	0.00032		0.00022	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
37	583677.28	4138935.54	1.5	0.00065	0.00559	0.00455	0.00108	0.00031		0.00065	0.00559	0.00455	0.00108	0.00031		0.0002	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
21	583680.57	4138920.23	1.5	0.00064	0.0055	0.00454	0.00108	0.00031		0.00064	0.0055	0.00454	0.00108	0.00031		0.00019	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
5	583683.86	4138904.93	1.5	0.00064	0.00542	0.00467	0.00112	0.00032		0.00064	0.00542	0.00467	0.00112	0.00032		0.00019	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
279	583688.91	4138834.89	1.5	0.00064	0.00538	0.00514	0.00124	0.00036		0.00064	0.00538	0.00514	0.00124	0.00036		0.00019	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01
20	583676.19	4138925.7	1.5	0.00062	0.0053	0.0043	0.00102	0.00029		0.00062	0.0053	0.0043	0.00102	0.00029		0.00019	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
4	583679.48	4138910.39	1.5	0.00061	0.00523	0.00435	0.00104	0.0003		0.00061	0.00523	0.00435	0.00104	0.0003		0.00018	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
321	583682.4	4138798.84	1.5	0.00062	0.00519	0.00448	0.00108	0.00031		0.00062	0.00519	0.00448	0.00108	0.00031		0.0002	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
327	583681.19	4138789.01	1.5	0.00062	0.00518	0.00436	0.00106	0.0003		0.00062	0.00518	0.00436	0.00106	0.0003		0.0002	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
19	583671.82	4138931.16	1.5	0.0006	0.00512	0.0041	0.00098	0.00028		0.0006	0.00512	0.0041	0.00098	0.00028		0.00019	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
3	583675.11	4138915.86	1.5	0.00059	0.00505	0.0041	0.00098	0.00028		0.00059	0.00505	0.0041	0.00098	0.00028		0.00018	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
314	583682.62	4138820.66	1.5	0.0006	0.00497	0.00457	0.0011	0.00032		0.0006	0.00497	0.00457	0.0011	0.00032		0.00019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	583670.73	4138921.32	1.5	0.00057	0.00487	0.00389	0.00093	0.00026		0.00057	0.00487	0.00389	0.00093	0.00026		0.00018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
322	583676.88	4138794.53	1.5	0.00057	0.00478	0.00409	0.00099	0.00029		0.00057	0.00478	0.00409	0.00099	0.00029		0.00019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
328	583675.67	4138784.71	1.5	0.00057	0.00478	0.00399	0.00097	0.00028		0.00057	0.00478	0.00399	0.00097	0.00028		0.0002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
304	583682.45	4138847.98	1.5	0.00057	0.00477	0.00458	0.0011	0.00032		0.00057	0.00477	0.00458	0.0011	0.00032		0.00018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	583666.35	4138926.78	1.5	0.00055	0.00471	0.00371	0.00089	0.00025		0.00055	0.00471	0.00371	0.00089	0.00025		0.00018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309	583678.31	4138826.18	1.5	0.00055	0.00459	0.00425	0.00103	0.0003		0.00055	0.00459	0.00425	0.00103	0.0003		0.00018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315	583677.1	4138816.36	1.5	0.00055	0.00459	0.00416	0.001	0.00029		0.00055	0.00459	0.00416	0.001	0.00029		0.00018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
299	583678.14	4138853.5	1.5	0.00053	0.00448	0.00423	0.00102	0.0003		0.00053	0.00448	0.00423	0.00102	0.0003		0.00017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
323	583671.36	4138790.22	1.5	0.00053	0.00442	0.00375	0.00091	0.00026		0.00053	0.00442	0.00375	0.00091	0.00026		0.00019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305	583676.93	4138843.67	1.5	0.00053	0.0044	0.00416	0.001	0.00029		0.00053	0.0044	0.00416	0.001	0.00029		0.00017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310	583672.79	4138821.87	1.5	0.00051	0.00425	0.00388	0.00094	0.00027		0.00051	0.00425	0.00388	0.00094	0.00027		0.00017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
316	583671.59	4138812.05	1.5	0.00051	0.00424	0.0038	0.00092	0.00027		0.00051	0.00424	0.0038	0.00092	0.00027		0.00018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	583672.62	4138849.19	1.5	0.00049	0.00414	0.00386	0.00093	0.00027		0.00049	0.00414	0.00386	0.00093	0.00027		0.00017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
306	583671.41	4138839.36	1.5	0.00049	0.00408	0.00379	0.00091	0.00027		0.00049	0.00408	0.00379	0.00091	0.00027		0.00017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
311	583667.28	4138817.56	1.5	0.00047	0.00394	0.00356	0.00086	0.00025		0.00047	0.00394	0.00356	0.00086	0.00025		0.00017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
317	583666.07	4138807.74	1.5	0.00047	0.00394	0.00349	0.00084	0.00024		0.00047	0.00394	0.00349	0.00084	0.00024		0.00017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
301	583667.11	4138844.88	1.5	0.00046	0.00384	0.00353	0.00085	0.00025		0.00046	0.00384	0.00353	0.00085	0.00025		0.00016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
307	583665.9	4138835.06	1.5	0.00045	0.00379	0.00347	0.00084	0.00024		0.00045	0.00379	0.00347	0.00084	0.00024		0.00016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312	583661.76	4138813.26	1.5	0.00044	0.00367	0.00327	0.00079	0.00023		0.00044	0.00367	0.00327	0.00079	0.00023		0.00016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
318	583660.55	4138803.43	1.5	0.00044	0.00367	0.00321	0.00078	0.00023		0.00044	0.00367	0.00321	0.00078	0.00023		0.00017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
302	583661.59	4138840.57	1.5	0.00043	0.00358	0.00324	0.00078	0.00023		0.00043	0.00358	0.00324	0.00078	0.00023		0.00016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
308	583660.38	4138830.75	1.5	0.00042	0.00353	0.0032	0.00077	0.00022		0.00042	0.00353	0.0032	0.00077	0.00022		0.00016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
313	583656.24	4138808.95	1.5	0.00041	0.00342	0.00302	0.00073	0.00021		0.00041	0.00342	0.00302	0.00073	0.00021		0.00016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
303	583656.07	4138836.27	1.5	0.0004	0.00334	0.00299	0.00072	0.00021		0.0004	0.00334	0.00299	0.00072	0.00021		0.00015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
361	583655.45	4138826.91	1.5	0.0004	0.00332	0.00297	0.00072	0.00021		0.0004	0.00332	0.00297	0.00072	0.00021		0.00015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
359	583651.14	4138832.43	1.5	0.00038	0.00315	0.00279	0.00067	0.00019		0.00038	0.00315	0.00279	0.00067	0.00019		0.00015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
362	583649.93	4138822.61	1.5	0.00037	0.00311	0.00275	0.00067	0.00019		0.00037	0.00311	0.00275	0.00067	0.00019		0.00015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360	583645.62	4138828.12	1.5	0.00035	0.00295	0.00259	0.00063	0.00018		0.00035	0.00295	0.00259	0.00063	0.00018		0.00015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

675-685 E Middlefield Road, Mountain View, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at On-Site MEI Location - 7.9 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled DPM Conc (ug/m3)		Age	Adult			
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Hazard Index**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2029	0.0095	10	0.13	2029	0.0095	-	-			
1	1	0 - 1	2029	0.0095	10	1.57	2029	0.0095	1	0.03	0.00	0.00	0.01
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00			
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**1.70**				**0.03**			

* Third trimester of pregnancy

675-685 E Middlefield Road, Mountain View, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at On-Site MEI Location - 4.9 meter receptor height

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Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
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AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
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Values

	Infant/Child			Adult
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* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled		Age	Adult			
Exposure	Exposure Duration				Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2029	0.0151	10	0.20	2029	0.0151	-	-			
1	1	0 - 1	2029	0.0151	10	2.47	2029	0.0151	1	0.04	0.00	0.00	0.02
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00			
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**2.68**				**0.04**			

* Third trimester of pregnancy

675-685 E Middlefield Road, Mountain View, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at On-Site MEI Location - 1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled		Age	Adult			
Exposure	Exposure Duration				Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2029	0.0103	10	0.14	2029	0.0103	-	-			
1	1	0 - 1	2029	0.0103	10	1.70	2029	0.0103	1	0.03	0.00	0.01	0.02
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00			
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**1.84**				**0.03**			

* Third trimester of pregnancy

Attachment 3: Health Risk Modeling Information and Calculations

File Name: Highways 2025.EF
CT-EMFAC2021 Version: 1.0.2.0
Run Date: 11/28/2023 11:24:32 AM
Area: Santa Clara (SF)
Analysis Year: 2025
Season: Annual

Vehicle Category	VMT Fraction	Diesel VMT Fraction	Gas VMT Fraction
	Across Category	Within Category	Within Category
Truck 1	0.028	0.416	0.572
Truck 2	0.026	0.909	0.045
Non-Truck	0.946	0.007	0.917

Road Type: Freeway
Silt Loading Factor: CARB 0.015 g/m2
Precipitation Correction: CARB P = 63 days N = 365 days

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	55 mph
PM2.5	0.001494
TOG	0.017076
Diesel PM	0.000703

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	0.996619

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.002146

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	55 mph
PM2.5	0.002755

==========

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.008193

==========END==========

File Name: Highways 2030.EF
CT-EMFAC2021 Version: 1.0.2.0
Run Date: 11/28/2023 11:24:59 AM
Area: Santa Clara (SF)
Analysis Year: 2030
Season: Annual

Vehicle Category	VMT Fraction	Diesel VMT Fraction	Gas VMT Fraction
	Across Category	Within Category	Within Category
Truck 1	0.028	0.395	0.513
Truck 2	0.026	0.857	0.042
Non-Truck	0.946	0.006	0.904

Road Type: Freeway
Silt Loading Factor: CARB 0.015 g/m2
Precipitation Correction: CARB P = 63 days N = 365 days

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	55 mph
PM2.5	0.001165
TOG	0.012175
Diesel PM	0.000564

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	0.870225

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.002145

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	55 mph
PM2.5	0.002715

==========

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.008263

==========END==========

File Name: Local Roadways 2025.EF
CT-EMFAC2021 Version: 1.0.2.0
Run Date: 11/28/2023 11:22:29 AM
Area: Santa Clara (SF)
Analysis Year: 2025
Season: Annual

==========

Vehicle Category	VMT Fraction	Diesel VMT Fraction	Gas VMT Fraction
	Across Category	Within Category	Within Category
Truck 1	0.016	0.416	0.572
Truck 2	0.019	0.909	0.045
Non-Truck	0.965	0.007	0.917

==========

Road Type: Major/Collector
Silt Loading Factor: CARB 0.032 g/m2
Precipitation Correction: CARB P = 63 days N = 365 days

==========

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	35 mph
PM2.5	0.001421
TOG	0.021181
Diesel PM	0.000374

==========

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	0.998556

==========

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.002107

==========

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	35 mph
PM2.5	0.005497

==========

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.015309

==========END==========

File Name: Local Roadways 2030.EF
CT-EMFAC2021 Version: 1.0.2.0
Run Date: 11/28/2023 11:22:48 AM
Area: Santa Clara (SF)
Analysis Year: 2030
Season: Annual

Vehicle Category	VMT Fraction	Diesel VMT Fraction	Gas VMT Fraction
	Across Category	Within Category	Within Category
Truck 1	0.017	0.395	0.513
Truck 2	0.018	0.857	0.042
Non-Truck	0.965	0.006	0.904

Road Type: Major/Collector
Silt Loading Factor: CARB 0.032 g/m2
Precipitation Correction: CARB P = 63 days N = 365 days

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	35 mph
PM2.5	0.001062
TOG	0.015118
Diesel PM	0.000265

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	0.874937

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.002102

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	35 mph
PM2.5	0.005443

==========

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.015354

==========END==========

675-685 E Middlefield Road, Mountain View, CA - Southbay Freeway Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction MEI Receptor (1.5 meter receptor height)

Emission Year	2025
Receptor Information	Construction MEI receptor
Number of Receptors	2
Receptor Height	1.5 meters
Receptor Distances	At Construction MEI location
Meteorological Conditions	
BAAQMD Moffett Field Met Data	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0021	0.0388	0.0412

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0293	0.0263	0.0030

675-685 E Middlefield Road, Mountain View, CA - Southbay Freeway Traffic Cancer Risk
Impacts at Construction Residential MEIs - 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Age Sensitivity Factor**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	
0	0.25	-0.25 - 0*	2025	10	0.0021	0.0388	0.0412	0.029	0.003	0.0002	0.03
1	1	0 - 1	2025	10	0.0021	0.0388	0.0412	0.347	0.036	0.0023	0.39
2	1	1 - 2	2026	10	0.0021	0.0388	0.0412	0.347	0.036	0.0023	0.39
3	1	2 - 3	2027	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
4	1	3 - 4	2028	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
5	1	4 - 5	2029	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
6	1	5 - 6	2030	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
7	1	6 - 7	2031	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
8	1	7 - 8	2032	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
9	1	8 - 9	2033	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
10	1	9 - 10	2034	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
11	1	10 - 11	2035	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
12	1	11 - 12	2036	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
13	1	12 - 13	2037	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
14	1	13 - 14	2038	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
15	1	14 - 15	2039	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
16	1	15 - 16	2040	3	0.0021	0.0388	0.0412	0.055	0.006	0.0004	0.06
17	1	16-17	2041	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
18	1	17-18	2042	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
19	1	18-19	2043	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
20	1	19-20	2044	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
21	1	20-21	2045	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
22	1	21-22	2046	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
23	1	22-23	2047	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
24	1	23-24	2048	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
25	1	24-25	2049	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
26	1	25-26	2050	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
27	1	26-27	2051	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
28	1	27-28	2052	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
29	1	28-29	2053	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
30	1	29-30	2054	1	0.0021	0.0388	0.0412	0.006	0.001	0.0000	0.01
Total Increased Cancer Risk								1.57	0.165	0.010	**1.75**

* Third trimester of pregnancy

Maximum Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00042	0.03	0.03

675-685 E Middlefield Road, Mountain View, CA - E Middlefield Road Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction MEI Receptor (1.5 meter receptor height)

Emission Year	2025
Receptor Information	Construction MEI receptor
Number of Receptors	2
Receptor Height	1.5 meters
Receptor Distances	At Construction MEI location
Meteorological Conditions	
BAAQMD Moffett Field Met Data	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0002	0.0125	0.0168

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0142	0.0134	0.0008

675-685 E Middlefield Road, Mountain View, CA - E Middlefield Road Traffic Cancer Risk
Impacts at Construction Residential MEIs - 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Age Sensitivity Factor**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**TOTAL**
0	0.25	-0.25 - 0*	2025	10	0.0002	0.0125	0.0168	0.003	0.001	0.0001	0.00
1	1	0 - 1	2025	10	0.0002	0.0125	0.0168	0.036	0.012	0.0009	0.05
2	1	1 - 2	2026	10	0.0002	0.0125	0.0168	0.036	0.012	0.0009	0.05
3	1	2 - 3	2027	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
4	1	3 - 4	2028	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
5	1	4 - 5	2029	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
6	1	5 - 6	2030	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
7	1	6 - 7	2031	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
8	1	7 - 8	2032	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
9	1	8 - 9	2033	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
10	1	9 - 10	2034	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
11	1	10 - 11	2035	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
12	1	11 - 12	2036	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
13	1	12 - 13	2037	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
14	1	13 - 14	2038	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
15	1	14 - 15	2039	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
16	1	15 - 16	2040	3	0.0002	0.0125	0.0168	0.006	0.002	0.0001	0.01
17	1	16-17	2041	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
18	1	17-18	2042	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
19	1	18-19	2043	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
20	1	19-20	2044	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
21	1	20-21	2045	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
22	1	21-22	2046	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
23	1	22-23	2047	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
24	1	23-24	2048	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
25	1	24-25	2049	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
26	1	25-26	2050	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
27	1	26-27	2051	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
28	1	27-28	2052	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
29	1	28-29	2053	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
30	1	29-30	2054	1	0.0002	0.0125	0.0168	0.001	0.000	0.0000	0.00
Total Increased Cancer Risk								0.16	0.053	0.004	**0.22**

Maximum Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00004	0.01	0.01

* Third trimester of pregnancy

675-685 E Middlefield Road, Mountain View, CA - Southbay Freeway Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Onsite MEI Receptor (1.5, 4.6, 7.9 meter receptor height)

Emission Year	2030
Receptor Information	Onsite MEI receptor
Number of Receptors	297
Receptor Height	1.5, 4.6, 7.9 meters
Receptor Distances	At Onsite MEI location

Meteorological Conditions

BAAQMD Moffett Field Met Data	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)			
	DPM	Exhaust TOG	Evaporative TOG	
2013-2017	0.0034	0.0633	0.0825	1st Floor
2013-2017	0.0031	0.0540	0.0704	2nd Floor
2013-2017	0.0023	0.0376	0.0490	3rd Floor

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)			
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5	
2013-2017	0.0730	0.0670	0.0061	1st Floor
2013-2017	0.0623	0.0571	0.0052	2nd Floor
2013-2017	0.0433	0.0397	0.0036	3rd Floor

675-685 E Middlefield Road, Mountain View, CA - Southbay Freeway Traffic Cancer Risk
Impacts at Onsite Residential MEI - 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Age Sensitivity Factor**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	
0	0.25	-0.25 - 0*	2030	10	0.0034	0.0633	0.0825	0.046	0.005	0.0004	0.05
1	1	0 - 1	2030	10	0.0034	0.0633	0.0825	0.550	0.059	0.0046	0.61
2	1	1 - 2	2031	10	0.0034	0.0633	0.0825	0.550	0.059	0.0046	0.61
3	1	2 - 3	2032	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
4	1	3 - 4	2033	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
5	1	4 - 5	2034	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
6	1	5 - 6	2035	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
7	1	6 - 7	2036	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
8	1	7 - 8	2037	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
9	1	8 - 9	2038	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
10	1	9 - 10	2039	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
11	1	10 - 11	2040	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
12	1	11 - 12	2041	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
13	1	12 - 13	2042	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
14	1	13 - 14	2043	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
15	1	14 - 15	2044	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
16	1	15 - 16	2045	3	0.0034	0.0633	0.0825	0.087	0.009	0.0007	0.10
17	1	16-17	2046	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
18	1	17-18	2047	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
19	1	18-19	2048	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
20	1	19-20	2049	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
21	1	20-21	2050	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
22	1	21-22	2051	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
23	1	22-23	2052	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
24	1	23-24	2053	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
25	1	24-25	2054	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
26	1	25-26	2055	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
27	1	26-27	2056	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
28	1	27-28	2057	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
29	1	28-29	2058	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
30	1	29-30	2059	1	0.0034	0.0633	0.0825	0.010	0.001	0.0001	0.01
Total Increased Cancer Risk								2.49	0.269	0.021	**2.78**

Maximum Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00067	0.07	0.07

* Third trimester of pregnancy

675-685 E Middlefield Road, Mountain View, CA - Southbay Freeway Traffic Cancer Risk
Impacts at Onsite Residential MEI - 4.6 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Age Sensitivity Factor**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	
0	0.25	-0.25 - 0*	2030	10	0.0031	0.0540	0.0704	0.042	0.004	0.0003	0.05
1	1	0 - 1	2030	10	0.0031	0.0540	0.0704	0.504	0.051	0.0039	0.56
2	1	1 - 2	2031	10	0.0031	0.0540	0.0704	0.504	0.051	0.0039	0.56
3	1	2 - 3	2032	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
4	1	3 - 4	2033	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
5	1	4 - 5	2034	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
6	1	5 - 6	2035	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
7	1	6 - 7	2036	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
8	1	7 - 8	2037	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
9	1	8 - 9	2038	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
10	1	9 - 10	2039	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
11	1	10 - 11	2040	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
12	1	11 - 12	2041	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
13	1	12 - 13	2042	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
14	1	13 - 14	2043	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
15	1	14 - 15	2044	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
16	1	15 - 16	2045	3	0.0031	0.0540	0.0704	0.079	0.008	0.0006	0.09
17	1	16-17	2046	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
18	1	17-18	2047	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
19	1	18-19	2048	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
20	1	19-20	2049	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
21	1	20-21	2050	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
22	1	21-22	2051	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
23	1	22-23	2052	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
24	1	23-24	2053	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
25	1	24-25	2054	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
26	1	25-26	2055	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
27	1	26-27	2056	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
28	1	27-28	2057	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
29	1	28-29	2058	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
30	1	29-30	2059	1	0.0031	0.0540	0.0704	0.009	0.001	0.0001	0.01
Total Increased Cancer Risk								2.28	0.230	0.018	**2.53**

Maximum Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00061	0.06	0.06

* Third trimester of pregnancy

675-685 E Middlefield Road, Mountain View, CA - Southbay Freeway Traffic Cancer Risk
Impacts at Onsite Residential MEI - 7.9 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Age Sensitivity Factor**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	
0	0.25	-0.25 - 0*	2030	10	0.0023	0.0376	0.0490	0.031	0.003	0.0002	0.03
1	1	0 - 1	2030	10	0.0023	0.0376	0.0490	0.378	0.035	0.0027	0.42
2	1	1 - 2	2031	10	0.0023	0.0376	0.0490	0.378	0.035	0.0027	0.42
3	1	2 - 3	2032	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
4	1	3 - 4	2033	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
5	1	4 - 5	2034	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
6	1	5 - 6	2035	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
7	1	6 - 7	2036	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
8	1	7 - 8	2037	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
9	1	8 - 9	2038	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
10	1	9 - 10	2039	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
11	1	10 - 11	2040	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
12	1	11 - 12	2041	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
13	1	12 - 13	2042	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
14	1	13 - 14	2043	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
15	1	14 - 15	2044	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
16	1	15 - 16	2045	3	0.0023	0.0376	0.0490	0.059	0.006	0.0004	0.07
17	1	16-17	2046	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
18	1	17-18	2047	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
19	1	18-19	2048	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
20	1	19-20	2049	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
21	1	20-21	2050	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
22	1	21-22	2051	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
23	1	22-23	2052	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
24	1	23-24	2053	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
25	1	24-25	2054	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
26	1	25-26	2055	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
27	1	26-27	2056	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
28	1	27-28	2057	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
29	1	28-29	2058	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
30	1	29-30	2059	1	0.0023	0.0376	0.0490	0.007	0.001	0.0000	0.01
Total Increased Cancer Risk								1.71	0.160	0.012	**1.88**

Maximum Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00046	0.06	0.06

* Third trimester of pregnancy

675-685 E Middlefield Road, Mountain View, CA - E Middlefield Road Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Onsite MEI Receptor (1.5, 4.6, 7.9 meter receptor height)

Emission Year	2030
Receptor Information	Onsite MEI receptor
Number of Receptors	297
Receptor Height	1.5, 4.6, 7.9 meters
Receptor Distances	At Onsite MEI location
Meteorological Conditions	
BAAQMD Moffett Field Met Data	2013 - 2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)			
	DPM	Exhaust TOG	Evaporative TOG	
2013-2017	0.0014	0.1126	0.1867	1st Floor
2013-2017	0.0015	0.1032	0.1712	2nd Floor
2013-2017	0.0011	0.0589	0.0977	3rd Floor

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)			
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5	
2013-2017	0.1785	0.1706	0.0079	1st Floor
2013-2017	0.1637	0.1565	0.0073	2nd Floor
2013-2017	0.0934	0.0893	0.0041	3rd Floor

675-685 E Middlefield Road, Mountain View, CA - E Middlefield Road Traffic Cancer Risk
Impacts at Onsite Residential MEI - 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Age Sensitivity Factor**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	
0	0.25	-0.25 - 0*	2030	10	0.0014	0.1126	0.1867	0.019	0.009	0.0009	0.03
1	1	0 - 1	2030	10	0.0014	0.1126	0.1867	0.233	0.106	0.0103	0.35
2	1	1 - 2	2031	10	0.0014	0.1126	0.1867	0.233	0.106	0.0103	0.35
3	1	2 - 3	2032	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
4	1	3 - 4	2033	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
5	1	4 - 5	2034	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
6	1	5 - 6	2035	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
7	1	6 - 7	2036	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
8	1	7 - 8	2037	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
9	1	8 - 9	2038	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
10	1	9 - 10	2039	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
11	1	10 - 11	2040	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
12	1	11 - 12	2041	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
13	1	12 - 13	2042	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
14	1	13 - 14	2043	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
15	1	14 - 15	2044	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
16	1	15 - 16	2045	3	0.0014	0.1126	0.1867	0.037	0.017	0.0016	0.05
17	1	16-17	2046	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
18	1	17-18	2047	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
19	1	18-19	2048	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
20	1	19-20	2049	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
21	1	20-21	2050	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
22	1	21-22	2051	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
23	1	22-23	2052	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
24	1	23-24	2053	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
25	1	24-25	2054	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
26	1	25-26	2055	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
27	1	26-27	2056	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
28	1	27-28	2057	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
29	1	28-29	2058	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
30	1	29-30	2059	1	0.0014	0.1126	0.1867	0.004	0.002	0.0002	0.01
Total Increased Cancer Risk								1.06	0.478	0.047	**1.58**

Maximum Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00028	0.17	0.18

* Third trimester of pregnancy

675-685 E Middlefield Road, Mountain View, CA - E Middlefield Road Traffic Cancer Risk
Impacts at Onsite Residential MEI - 4.6 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Age Sensitivity Factor**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	
0	0.25	-0.25 - 0*	2030	10	0.0015	0.1032	0.1712	0.021	0.008	0.0008	0.03
1	1	0 - 1	2030	10	0.0015	0.1032	0.1712	0.250	0.097	0.0095	0.36
2	1	1 - 2	2031	10	0.0015	0.1032	0.1712	0.250	0.097	0.0095	0.36
3	1	2 - 3	2032	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
4	1	3 - 4	2033	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
5	1	4 - 5	2034	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
6	1	5 - 6	2035	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
7	1	6 - 7	2036	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
8	1	7 - 8	2037	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
9	1	8 - 9	2038	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
10	1	9 - 10	2039	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
11	1	10 - 11	2040	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
12	1	11 - 12	2041	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
13	1	12 - 13	2042	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
14	1	13 - 14	2043	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
15	1	14 - 15	2044	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
16	1	15 - 16	2045	3	0.0015	0.1032	0.1712	0.039	0.015	0.0015	0.06
17	1	16-17	2046	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
18	1	17-18	2047	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
19	1	18-19	2048	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
20	1	19-20	2049	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
21	1	20-21	2050	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
22	1	21-22	2051	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
23	1	22-23	2052	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
24	1	23-24	2053	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
25	1	24-25	2054	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
26	1	25-26	2055	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
27	1	26-27	2056	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
28	1	27-28	2057	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
29	1	28-29	2058	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
30	1	29-30	2059	1	0.0015	0.1032	0.1712	0.004	0.002	0.0002	0.01
Total Increased Cancer Risk								1.13	0.439	0.043	**1.61**

Maximum Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00030	0.16	0.16

* Third trimester of pregnancy

675-685 E Middlefield Road, Mountain View, CA - E Middlefield Road Traffic Cancer Risk
Impacts at Onsite Residential MEI - 7.9 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Age Sensitivity Factor**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	
0	0.25	-0.25 - 0*	2030	10	0.0011	0.0589	0.0977	0.015	0.005	0.0004	0.02
1	1	0 - 1	2030	10	0.0011	0.0589	0.0977	0.186	0.055	0.0054	0.25
2	1	1 - 2	2031	10	0.0011	0.0589	0.0977	0.186	0.055	0.0054	0.25
3	1	2 - 3	2032	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
4	1	3 - 4	2033	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
5	1	4 - 5	2034	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
6	1	5 - 6	2035	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
7	1	6 - 7	2036	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
8	1	7 - 8	2037	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
9	1	8 - 9	2038	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
10	1	9 - 10	2039	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
11	1	10 - 11	2040	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
12	1	11 - 12	2041	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
13	1	12 - 13	2042	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
14	1	13 - 14	2043	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
15	1	14 - 15	2044	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
16	1	15 - 16	2045	3	0.0011	0.0589	0.0977	0.029	0.009	0.0008	0.04
17	1	16-17	2046	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
18	1	17-18	2047	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
19	1	18-19	2048	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
20	1	19-20	2049	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
21	1	20-21	2050	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
22	1	21-22	2051	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
23	1	22-23	2052	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
24	1	23-24	2053	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
25	1	24-25	2054	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
26	1	25-26	2055	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
27	1	26-27	2056	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
28	1	27-28	2057	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
29	1	28-29	2058	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
30	1	29-30	2059	1	0.0011	0.0589	0.0977	0.003	0.001	0.0001	0.00
Total Increased Cancer Risk								0.84	0.250	0.024	**1.12**

Maximum Hazard Index	**Maximum Fugitive PM2.5**	**Total PM2.5**
0.00023	0.09	0.09

* Third trimester of pregnancy

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - Southbay Freeway (SR237)
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area Area (sq m)	Line Area Area (sq ft)	Line Area Emission (g/s/m2)	Line Area Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_SBF	Southbay Freeway Northbound	EB	2	717.4	0.45	13.3	43.7	3.4	55	30,681	9,552	102,820	1.165E-08	8.590E-09	6.8	3.16
DPM_SB_SBF	Southbay Freeway Southbound	WB	2	716.2	0.45	13.3	43.7	3.4	55	30,681	9,536	102,648	1.165E-08	8.590E-09	6.8	3.16
									Total	61,362						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	55			
Emissions per Vehicle (g/VMT)	0.00070			

Emisson Factors from CT-EMFAC2021

2025 Hourly Traffic Volumes and DPM Emissions - DPM_NB_SBF

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.93%	1207	1.05E-04	9	6.41%	1965	1.71E-04	17	5.55%	1703	1.48E-04
2	2.62%	805	7.00E-05	10	7.36%	2260	1.97E-04	18	3.16%	968	8.43E-05
3	2.85%	875	7.61E-05	11	6.34%	1945	1.69E-04	19	2.36%	723	6.30E-05
4	3.31%	1015	8.83E-05	12	6.92%	2123	1.85E-04	20	0.87%	266	2.31E-05
5	2.17%	665	5.79E-05	13	6.29%	1930	1.68E-04	21	3.09%	948	8.25E-05
6	3.36%	1032	8.98E-05	14	6.23%	1913	1.67E-04	22	4.12%	1263	1.10E-04
7	6.00%	1840	1.60E-04	15	5.15%	1581	1.38E-04	23	2.58%	790	6.88E-05
8	4.58%	1406	1.22E-04	16	3.84%	1178	1.03E-04	24	0.92%	283	2.46E-05
								Total		30,681	

2025 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_SBF

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.93%	1207	1.05E-04	9	6.41%	1965	1.71E-04	17	5.55%	1703	1.48E-04
2	2.62%	805	6.99E-05	10	7.36%	2260	1.96E-04	18	3.16%	968	8.41E-05
3	2.85%	875	7.60E-05	11	6.34%	1945	1.69E-04	19	2.36%	723	6.29E-05
4	3.31%	1015	8.82E-05	12	6.92%	2123	1.84E-04	20	0.87%	266	2.31E-05
5	2.17%	665	5.78E-05	13	6.29%	1930	1.68E-04	21	3.09%	948	8.24E-05
6	3.36%	1032	8.97E-05	14	6.23%	1913	1.66E-04	22	4.12%	1263	1.10E-04
7	6.00%	1840	1.60E-04	15	5.15%	1581	1.37E-04	23	2.58%	790	6.87E-05
8	4.58%	1406	1.22E-04	16	3.84%	1178	1.02E-04	24	0.92%	283	2.46E-05
								Total		30,681	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - Southbay Freeway (SR237)
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_NB_SAN	Southbay Freeway Northbound	EB	2	717.4	0.45	13.3	44	1.3	55	30,681	9,552	102,820	2.48E-08	1.83E-08	2.6	1.21
PM2.5_SB_SAN	Southbay Freeway Southbound	WB	2	716.2	0.45	13.3	44	1.3	55	30,681	9,536	102,648	2.48E-08	1.83E-08	2.6	1.21
									Total	61,362						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	55			
Emissions per Vehicle (g/VMT)	0.001494			

Emisson Factors from CT-EMFAC2021

2025 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_SAN

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	353	6.53E-05	9	7.11%	2183	4.04E-04	17	7.39%	2267	4.19E-04
2	0.42%	129	2.39E-05	10	4.39%	1346	2.49E-04	18	8.18%	2509	4.64E-04
3	0.41%	125	2.32E-05	11	4.66%	1430	2.65E-04	19	5.69%	1747	3.23E-04
4	0.26%	80	1.48E-05	12	5.89%	1806	3.34E-04	20	4.28%	1312	2.43E-04
5	0.50%	152	2.82E-05	13	6.15%	1887	3.49E-04	21	3.25%	998	1.85E-04
6	0.91%	278	5.15E-05	14	6.04%	1853	3.43E-04	22	3.30%	1011	1.87E-04
7	3.79%	1162	2.15E-04	15	7.01%	2151	3.98E-04	23	2.46%	755	1.40E-04
8	7.77%	2383	4.41E-04	16	7.14%	2191	4.05E-04	24	1.86%	572	1.06E-04
								Total		30,681	

2025 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_SAN

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	353	6.51E-05	9	7.11%	2183	4.03E-04	17	7.39%	2267	4.19E-04
2	0.42%	129	2.39E-05	10	4.39%	1346	2.49E-04	18	8.18%	2509	4.63E-04
3	0.41%	125	2.31E-05	11	4.66%	1430	2.64E-04	19	5.69%	1747	3.23E-04
4	0.26%	80	1.47E-05	12	5.89%	1806	3.34E-04	20	4.28%	1312	2.42E-04
5	0.50%	152	2.82E-05	13	6.15%	1887	3.49E-04	21	3.25%	998	1.84E-04
6	0.91%	278	5.14E-05	14	6.04%	1853	3.42E-04	22	3.30%	1011	1.87E-04
7	3.79%	1162	2.15E-04	15	7.01%	2151	3.97E-04	23	2.46%	755	1.39E-04
8	7.77%	2383	4.40E-04	16	7.14%	2191	4.05E-04	24	1.86%	572	1.06E-04
								Total		30,681	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - Southbay Freeway (SR237)
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_SAN	Southbay Freeway Northbound	EB	2	717.4	0.45	13.3	44	1.3	55	30,681	9,552	102,820	2.83E-07	2.09E-07	2.6	1.21
TEXH_SB_SAN	Southbay Freeway Southbound	WB	2	716.2	0.45	13.3	44	1.3	55	30,681	9,536	102,648	2.83E-07	2.09E-07	2.6	1.21
									Total	61,362						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	55			
Emissions per Vehicle (g/VMT)	0.01708			

Emisson Factors from CT-EMFAC2021

2025 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_SAN

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	353	7.46E-04	9	7.11%	2183	4.61E-03	17	7.39%	2267	4.79E-03
2	0.42%	129	2.74E-04	10	4.39%	1346	2.85E-03	18	8.18%	2509	5.30E-03
3	0.41%	125	2.65E-04	11	4.66%	1430	3.02E-03	19	5.69%	1747	3.69E-03
4	0.26%	80	1.69E-04	12	5.89%	1806	3.82E-03	20	4.28%	1312	2.77E-03
5	0.50%	152	3.22E-04	13	6.15%	1887	3.99E-03	21	3.25%	998	2.11E-03
6	0.91%	278	5.88E-04	14	6.04%	1853	3.92E-03	22	3.30%	1011	2.14E-03
7	3.79%	1162	2.46E-03	15	7.01%	2151	4.55E-03	23	2.46%	755	1.60E-03
8	7.77%	2383	5.04E-03	16	7.14%	2191	4.63E-03	24	1.86%	572	1.21E-03
								Total		30,681	

2025 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_SAN

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	353	7.45E-04	9	7.11%	2183	4.61E-03	17	7.39%	2267	4.79E-03
2	0.42%	129	2.73E-04	10	4.39%	1346	2.84E-03	18	8.18%	2509	5.30E-03
3	0.41%	125	2.64E-04	11	4.66%	1430	3.02E-03	19	5.69%	1747	3.69E-03
4	0.26%	80	1.68E-04	12	5.89%	1806	3.81E-03	20	4.28%	1312	2.77E-03
5	0.50%	152	3.22E-04	13	6.15%	1887	3.98E-03	21	3.25%	998	2.11E-03
6	0.91%	278	5.87E-04	14	6.04%	1853	3.91E-03	22	3.30%	1011	2.14E-03
7	3.79%	1162	2.45E-03	15	7.01%	2151	4.54E-03	23	2.46%	755	1.59E-03
8	7.77%	2383	5.03E-03	16	7.14%	2191	4.62E-03	24	1.86%	572	1.21E-03
								Total		30,681	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - Southbay Freeway (SR237)
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_SAN	Southbay Freeway Northbound	EB	2	717.4	0.45	13.3	44	1.3	55	30,681	9,552	102,820	3.00E-07	2.21E-07	2.6	1.21
TEVAP_SB_SAN	Southbay Freeway Southbound	WB	2	716.2	0.45	13.3	44	1.3	55	30,681	9,536	102,648	3.00E-07	2.21E-07	2.6	1.21
									Total	61,362						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	55			
Emissions per Vehicle per Hour (g/hour)	0.99662			
Emissions per Vehicle per Mile (g/VMT)	0.01812			

Emisson Factors from CT-EMFAC2021

2025 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_SAN

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	353	7.91E-04	9	7.11%	2183	4.90E-03	17	7.39%	2267	5.09E-03
2	0.42%	129	2.90E-04	10	4.39%	1346	3.02E-03	18	8.18%	2509	5.63E-03
3	0.41%	125	2.81E-04	11	4.66%	1430	3.21E-03	19	5.69%	1747	3.92E-03
4	0.26%	80	1.79E-04	12	5.89%	1806	4.05E-03	20	4.28%	1312	2.94E-03
5	0.50%	152	3.42E-04	13	6.15%	1887	4.23E-03	21	3.25%	998	2.24E-03
6	0.91%	278	6.24E-04	14	6.04%	1853	4.16E-03	22	3.30%	1011	2.27E-03
7	3.79%	1162	2.61E-03	15	7.01%	2151	4.83E-03	23	2.46%	755	1.69E-03
8	7.77%	2383	5.35E-03	16	7.14%	2191	4.92E-03	24	1.86%	572	1.28E-03
								Total		30,681	

2025 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_SAN

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	353	7.90E-04	9	7.11%	2183	4.89E-03	17	7.39%	2267	5.08E-03
2	0.42%	129	2.90E-04	10	4.39%	1346	3.01E-03	18	8.18%	2509	5.62E-03
3	0.41%	125	2.81E-04	11	4.66%	1430	3.20E-03	19	5.69%	1747	3.91E-03
4	0.26%	80	1.79E-04	12	5.89%	1806	4.05E-03	20	4.28%	1312	2.94E-03
5	0.50%	152	3.41E-04	13	6.15%	1887	4.23E-03	21	3.25%	998	2.24E-03
6	0.91%	278	6.23E-04	14	6.04%	1853	4.15E-03	22	3.30%	1011	2.27E-03
7	3.79%	1162	2.60E-03	15	7.01%	2151	4.82E-03	23	2.46%	755	1.69E-03
8	7.77%	2383	5.34E-03	16	7.14%	2191	4.91E-03	24	1.86%	572	1.28E-03
								Total		30,681	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - Southbay Freeway (SR237)
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_NB_SAN	Southbay Freeway Northbound	EB	2	717.4	0.45	13.3	44	1.3	55	30,681	9,552	102,820	2.17E-07	1.60E-07	2.6	1.21
FUG_SB_SAN	Southbay Freeway Southbound	WB	2	716.2	0.45	13.3	44	1.3	55	30,681	9,536	102,648	2.17E-07	1.60E-07	2.6	1.21
									Total	61,362						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	55			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00215			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00276			
Road Dust - Emissions per Vehicle (g/VMT)	0.00819			
tal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.01309			

Emisson Factors from CT-EMFAC2021

2025 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_SAN

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	353	5.72E-04	9	7.11%	2183	3.54E-03	17	7.39%	2267	3.68E-03
2	0.42%	129	2.10E-04	10	4.39%	1346	2.18E-03	18	8.18%	2509	4.07E-03
3	0.41%	125	2.03E-04	11	4.66%	1430	2.32E-03	19	5.69%	1747	2.83E-03
4	0.26%	80	1.29E-04	12	5.89%	1806	2.93E-03	20	4.28%	1312	2.13E-03
5	0.50%	152	2.47E-04	13	6.15%	1887	3.06E-03	21	3.25%	998	1.62E-03
6	0.91%	278	4.51E-04	14	6.04%	1853	3.00E-03	22	3.30%	1011	1.64E-03
7	3.79%	1162	1.88E-03	15	7.01%	2151	3.49E-03	23	2.46%	755	1.22E-03
8	7.77%	2383	3.86E-03	16	7.14%	2191	3.55E-03	24	1.86%	572	9.27E-04
								Total		30,681	

2025 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_SAN

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	353	5.71E-04	9	7.11%	2183	3.53E-03	17	7.39%	2267	3.67E-03
2	0.42%	129	2.09E-04	10	4.39%	1346	2.18E-03	18	8.18%	2509	4.06E-03
3	0.41%	125	2.03E-04	11	4.66%	1430	2.32E-03	19	5.69%	1747	2.83E-03
4	0.26%	80	1.29E-04	12	5.89%	1806	2.92E-03	20	4.28%	1312	2.12E-03
5	0.50%	152	2.47E-04	13	6.15%	1887	3.05E-03	21	3.25%	998	1.62E-03
6	0.91%	278	4.50E-04	14	6.04%	1853	3.00E-03	22	3.30%	1011	1.64E-03
7	3.79%	1162	1.88E-03	15	7.01%	2151	3.48E-03	23	2.46%	755	1.22E-03
8	7.77%	2383	3.86E-03	16	7.14%	2191	3.55E-03	24	1.86%	572	9.26E-04
								Total		30,681	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - Southbay Freeway (SR237)
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2030

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_SBF	Southbay Freeway Northbound	EB	2	741.4	0.46	13.3	43.7	3.4	55	32,156	9,872	106,260	9.796E-09	7.223E-09	6.8	3.16
DPM_SB_SBF	Southbay Freeway Southbound	WB	2	756.1	0.47	13.3	43.7	3.4	55	32,156	10,068	108,367	9.796E-09	7.223E-09	6.8	3.16
									Total	64,312						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	55			
Emissions per Vehicle (g/VMT)	0.00056			

Emisson Factors from CT-EMFAC2021

2030 Hourly Traffic Volumes and DPM Emissions - DPM_NB_SBF

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.98%	1278	9.23E-05	9	6.45%	2073	1.50E-04	17	5.61%	1803	1.30E-04
2	2.63%	846	6.11E-05	10	7.45%	2397	1.73E-04	18	3.20%	1029	7.42E-05
3	2.86%	918	6.63E-05	11	6.39%	2055	1.48E-04	19	2.19%	704	5.08E-05
4	3.25%	1044	7.54E-05	12	7.01%	2253	1.63E-04	20	0.85%	272	1.97E-05
5	2.18%	702	5.07E-05	13	6.28%	2019	1.46E-04	21	3.09%	992	7.16E-05
6	3.30%	1062	7.67E-05	14	6.17%	1983	1.43E-04	22	4.26%	1371	9.89E-05
7	6.05%	1947	1.41E-04	15	5.10%	1641	1.18E-04	23	2.58%	828	5.98E-05
8	4.43%	1425	1.03E-04	16	3.87%	1245	8.98E-05	24	0.84%	270	1.95E-05
								Total		32,156	

2030 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_SBF

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.98%	1278	9.41E-05	9	6.45%	2073	1.53E-04	17	5.61%	1803	1.33E-04
2	2.63%	846	6.23E-05	10	7.45%	2397	1.76E-04	18	3.20%	1029	7.57E-05
3	2.86%	918	6.76E-05	11	6.39%	2055	1.51E-04	19	2.19%	704	5.18E-05
4	3.25%	1044	7.69E-05	12	7.01%	2253	1.66E-04	20	0.85%	272	2.00E-05
5	2.18%	702	5.17E-05	13	6.28%	2019	1.49E-04	21	3.09%	992	7.31E-05
6	3.30%	1062	7.82E-05	14	6.17%	1983	1.46E-04	22	4.26%	1371	1.01E-04
7	6.05%	1947	1.43E-04	15	5.10%	1641	1.21E-04	23	2.58%	828	6.10E-05
8	4.43%	1425	1.05E-04	16	3.87%	1245	9.16E-05	24	0.84%	270	1.99E-05
								Total		32,156	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - Southbay Freeway (SR237)
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2030

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_NB_SAN	Southbay Freeway Northbound	EB	2	741.4	0.46	13.3	44	1.3	55	32,156	9,872	106,260	2.02E-08	1.49E-08	2.6	1.21
PM2.5_SB_SAN	Southbay Freeway Southbound	WB	2	756.1	0.47	13.3	44	1.3	55	32,156	10,068	108,367	2.02E-08	1.49E-08	2.6	1.21
									Total	64,312						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	55			
Emissions per Vehicle (g/VMT)	0.001165			

Emisson Factors from CT-EMFAC2021

2030 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_SAN

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	369	5.50E-05	9	7.11%	2288	3.41E-04	17	7.39%	2377	3.54E-04
2	0.42%	135	2.01E-05	10	4.39%	1411	2.10E-04	18	8.18%	2631	3.92E-04
3	0.40%	130	1.93E-05	11	4.66%	1499	2.23E-04	19	5.70%	1833	2.73E-04
4	0.26%	83	1.23E-05	12	5.89%	1893	2.82E-04	20	4.28%	1376	2.05E-04
5	0.49%	159	2.37E-05	13	6.15%	1978	2.95E-04	21	3.25%	1046	1.56E-04
6	0.90%	290	4.33E-05	14	6.04%	1941	2.89E-04	22	3.30%	1061	1.58E-04
7	3.79%	1218	1.82E-04	15	7.01%	2255	3.36E-04	23	2.46%	792	1.18E-04
8	7.76%	2496	3.72E-04	16	7.14%	2297	3.42E-04	24	1.86%	600	8.94E-05
								Total		32,156	

2030 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_SAN

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	369	5.61E-05	9	7.11%	2288	3.48E-04	17	7.39%	2377	3.61E-04
2	0.42%	135	2.05E-05	10	4.39%	1411	2.15E-04	18	8.18%	2631	4.00E-04
3	0.40%	130	1.97E-05	11	4.66%	1499	2.28E-04	19	5.70%	1833	2.79E-04
4	0.26%	83	1.26E-05	12	5.89%	1893	2.88E-04	20	4.28%	1376	2.09E-04
5	0.49%	159	2.41E-05	13	6.15%	1978	3.01E-04	21	3.25%	1046	1.59E-04
6	0.90%	290	4.41E-05	14	6.04%	1941	2.95E-04	22	3.30%	1061	1.61E-04
7	3.79%	1218	1.85E-04	15	7.01%	2255	3.43E-04	23	2.46%	792	1.20E-04
8	7.76%	2496	3.80E-04	16	7.14%	2297	3.49E-04	24	1.86%	600	9.12E-05
								Total		32,156	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - Southbay Freeway (SR237)
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2030

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_SAN	Southbay Freeway Northbound	EB	2	741.4	0.46	13.3	44	1.3	55	32,156	9,872	106,260	2.11E-07	1.56E-07	2.6	1.21
TEXH_SB_SAN	Southbay Freeway Southbound	WB	2	756.1	0.47	13.3	44	1.3	55	32,156	10,068	108,367	2.11E-07	1.56E-07	2.6	1.21
									Total	64,312						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	55			
Emissions per Vehicle (g/VMT)	0.01218			

Emisson Factors from CT-EMFAC2021

2030 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_SAN

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	369	5.75E-04	9	7.11%	2288	3.56E-03	17	7.39%	2377	3.70E-03
2	0.42%	135	2.10E-04	10	4.39%	1411	2.20E-03	18	8.18%	2631	4.10E-03
3	0.40%	130	2.02E-04	11	4.66%	1499	2.34E-03	19	5.70%	1833	2.86E-03
4	0.26%	83	1.29E-04	12	5.89%	1893	2.95E-03	20	4.28%	1376	2.14E-03
5	0.49%	159	2.47E-04	13	6.15%	1978	3.08E-03	21	3.25%	1046	1.63E-03
6	0.90%	290	4.52E-04	14	6.04%	1941	3.02E-03	22	3.30%	1061	1.65E-03
7	3.79%	1218	1.90E-03	15	7.01%	2255	3.51E-03	23	2.46%	792	1.23E-03
8	7.76%	2496	3.89E-03	16	7.14%	2297	3.58E-03	24	1.86%	600	9.34E-04
								Total		32,156	

2030 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_SAN

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	369	5.86E-04	9	7.11%	2288	3.63E-03	17	7.39%	2377	3.78E-03
2	0.42%	135	2.14E-04	10	4.39%	1411	2.24E-03	18	8.18%	2631	4.18E-03
3	0.40%	130	2.06E-04	11	4.66%	1499	2.38E-03	19	5.70%	1833	2.91E-03
4	0.26%	83	1.31E-04	12	5.89%	1893	3.01E-03	20	4.28%	1376	2.19E-03
5	0.49%	159	2.52E-04	13	6.15%	1978	3.14E-03	21	3.25%	1046	1.66E-03
6	0.90%	290	4.61E-04	14	6.04%	1941	3.08E-03	22	3.30%	1061	1.69E-03
7	3.79%	1218	1.94E-03	15	7.01%	2255	3.58E-03	23	2.46%	792	1.26E-03
8	7.76%	2496	3.97E-03	16	7.14%	2297	3.65E-03	24	1.86%	600	9.53E-04
								Total		32,156	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - Southbay Freeway (SR237)
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2030

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_SAN	Southbay Freeway Northbound	EB	2	741.4	0.46	13.3	44	1.3	55	32,156	9,872	106,260	2.75E-07	2.03E-07	2.6	1.21
TEVAP_SB_SAN	Southbay Freeway Southbound	WB	2	756.1	0.47	13.3	44	1.3	55	32,156	10,068	108,367	2.75E-07	2.03E-07	2.6	1.21
									Total	64,312						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	55			
Emissions per Vehicle per Hour (g/hour)	0.87023			
Emissions per Vehicle per Mile (g/VMT)	0.01582			

Emisson Factors from CT-EMFAC2021

2030 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_SAN

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	369	7.47E-04	9	7.11%	2288	4.63E-03	17	7.39%	2377	4.81E-03
2	0.42%	135	2.73E-04	10	4.39%	1411	2.86E-03	18	8.18%	2631	5.33E-03
3	0.40%	130	2.63E-04	11	4.66%	1499	3.03E-03	19	5.70%	1833	3.71E-03
4	0.26%	83	1.67E-04	12	5.89%	1893	3.83E-03	20	4.28%	1376	2.79E-03
5	0.49%	159	3.21E-04	13	6.15%	1978	4.01E-03	21	3.25%	1046	2.12E-03
6	0.90%	290	5.88E-04	14	6.04%	1941	3.93E-03	22	3.30%	1061	2.15E-03
7	3.79%	1218	2.47E-03	15	7.01%	2255	4.57E-03	23	2.46%	792	1.60E-03
8	7.76%	2496	5.05E-03	16	7.14%	2297	4.65E-03	24	1.86%	600	1.21E-03
								Total		32,156	

2030 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_SAN

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	369	7.61E-04	9	7.11%	2288	4.72E-03	17	7.39%	2377	4.91E-03
2	0.42%	135	2.79E-04	10	4.39%	1411	2.91E-03	18	8.18%	2631	5.43E-03
3	0.40%	130	2.68E-04	11	4.66%	1499	3.09E-03	19	5.70%	1833	3.78E-03
4	0.26%	83	1.71E-04	12	5.89%	1893	3.91E-03	20	4.28%	1376	2.84E-03
5	0.49%	159	3.28E-04	13	6.15%	1978	4.08E-03	21	3.25%	1046	2.16E-03
6	0.90%	290	5.99E-04	14	6.04%	1941	4.01E-03	22	3.30%	1061	2.19E-03
7	3.79%	1218	2.51E-03	15	7.01%	2255	4.66E-03	23	2.46%	792	1.63E-03
8	7.76%	2496	5.15E-03	16	7.14%	2297	4.74E-03	24	1.86%	600	1.24E-03
								Total		32,156	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - Southbay Freeway (SR237)
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2030

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_NB_SAN	Southbay Freeway Northbound	EB	2	741.4	0.46	13.3	44	1.3	55	32,156	9,872	106,260	2.28E-07	1.68E-07	2.6	1.21
FUG_SB_SAN	Southbay Freeway Southbound	WB	2	756.1	0.47	13.3	44	1.3	55	32,156	10,068	108,367	2.28E-07	1.68E-07	2.6	1.21
									Total	64,312						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	55			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00215			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00272			
Road Dust - Emissions per Vehicle (g/VMT)	0.00826			
tal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.01312			

Emisson Factors from CT-EMFAC2021

2030 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_SAN

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	369	6.19E-04	9	7.11%	2288	3.84E-03	17	7.39%	2377	3.99E-03
2	0.42%	135	2.27E-04	10	4.39%	1411	2.37E-03	18	8.18%	2631	4.42E-03
3	0.40%	130	2.18E-04	11	4.66%	1499	2.52E-03	19	5.70%	1833	3.08E-03
4	0.26%	83	1.39E-04	12	5.89%	1893	3.18E-03	20	4.28%	1376	2.31E-03
5	0.49%	159	2.67E-04	13	6.15%	1978	3.32E-03	21	3.25%	1046	1.76E-03
6	0.90%	290	4.87E-04	14	6.04%	1941	3.26E-03	22	3.30%	1061	1.78E-03
7	3.79%	1218	2.05E-03	15	7.01%	2255	3.79E-03	23	2.46%	792	1.33E-03
8	7.76%	2496	4.19E-03	16	7.14%	2297	3.86E-03	24	1.86%	600	1.01E-03
								Total		32,156	

2030 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_SAN

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	369	6.32E-04	9	7.11%	2288	3.92E-03	17	7.39%	2377	4.07E-03
2	0.42%	135	2.31E-04	10	4.39%	1411	2.42E-03	18	8.18%	2631	4.51E-03
3	0.40%	130	2.22E-04	11	4.66%	1499	2.57E-03	19	5.70%	1833	3.14E-03
4	0.26%	83	1.41E-04	12	5.89%	1893	3.24E-03	20	4.28%	1376	2.36E-03
5	0.49%	159	2.72E-04	13	6.15%	1978	3.39E-03	21	3.25%	1046	1.79E-03
6	0.90%	290	4.97E-04	14	6.04%	1941	3.33E-03	22	3.30%	1061	1.82E-03
7	3.79%	1218	2.09E-03	15	7.01%	2255	3.86E-03	23	2.46%	792	1.36E-03
8	7.76%	2496	4.28E-03	16	7.14%	2297	3.93E-03	24	1.86%	600	1.03E-03
								Total		32,156	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - E Middlefield Road
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_EB_MID	E Middlefield Road Eastbound	EB	2	717.4	0.45	13.3	43.7	3.4	35	7,115	9,552	102,820	1.437E-09	1.060E-09	6.8	3.16
DPM_WB_MID	E Middlefield Road Westbound	WB	2	716.2	0.45	13.3	43.7	3.4	35	7,115	9,536	102,648	1.437E-09	1.060E-09	6.8	3.16
									Total	14,230						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00037			

Emisson Factors from CT-EMFAC2021

2025 Hourly Traffic Volumes and DPM Emissions - DPM_EB_MID

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.93%	280	1.30E-05	9	6.41%	456	2.11E-05	17	5.55%	395	1.83E-05
2	2.62%	187	8.64E-06	10	7.36%	524	2.43E-05	18	3.16%	225	1.04E-05
3	2.85%	203	9.39E-06	11	6.34%	451	2.09E-05	19	2.36%	168	7.77E-06
4	3.31%	235	1.09E-05	12	6.92%	492	2.28E-05	20	0.87%	62	2.85E-06
5	2.17%	154	7.14E-06	13	6.29%	448	2.07E-05	21	3.09%	220	1.02E-05
6	3.36%	239	1.11E-05	14	6.23%	444	2.05E-05	22	4.12%	293	1.36E-05
7	6.00%	427	1.98E-05	15	5.15%	367	1.70E-05	23	2.58%	183	8.49E-06
8	4.58%	326	1.51E-05	16	3.84%	273	1.27E-05	24	0.92%	66	3.04E-06
								Total		7,115	

2025 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_WB_MID

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.93%	280	1.29E-05	9	6.41%	456	2.11E-05	17	5.55%	395	1.83E-05
2	2.62%	187	8.63E-06	10	7.36%	524	2.42E-05	18	3.16%	225	1.04E-05
3	2.85%	203	9.38E-06	11	6.34%	451	2.09E-05	19	2.36%	168	7.76E-06
4	3.31%	235	1.09E-05	12	6.92%	492	2.28E-05	20	0.87%	62	2.85E-06
5	2.17%	154	7.13E-06	13	6.29%	448	2.07E-05	21	3.09%	220	1.02E-05
6	3.36%	239	1.11E-05	14	6.23%	444	2.05E-05	22	4.12%	293	1.35E-05
7	6.00%	427	1.97E-05	15	5.15%	367	1.69E-05	23	2.58%	183	8.47E-06
8	4.58%	326	1.51E-05	16	3.84%	273	1.26E-05	24	0.92%	66	3.03E-06
								Total		7,115	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - E Middlefield Road
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_EB_MID	E Middlefield Road Eastbound	EB	2	717.4	0.45	13.3	44	1.3	35	7,115	9,552	102,820	5.46E-09	4.03E-09	2.6	1.21
PM2.5_WB_MID	E Middlefield Road Westbound	WB	2	716.2	0.45	13.3	44	1.3	35	7,115	9,536	102,648	5.46E-09	4.03E-09	2.6	1.21
									Total	14,230						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001421			

Emisson Factors from CT-EMFAC2021

2025 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_EB_MID

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	82	1.44E-05	9	7.11%	506	8.91E-05	17	7.39%	526	9.25E-05
2	0.42%	30	5.28E-06	10	4.39%	312	5.49E-05	18	8.18%	582	1.02E-04
3	0.41%	29	5.11E-06	11	4.66%	332	5.84E-05	19	5.69%	405	7.13E-05
4	0.26%	18	3.25E-06	12	5.89%	419	7.37E-05	20	4.28%	304	5.35E-05
5	0.50%	35	6.22E-06	13	6.15%	438	7.70E-05	21	3.25%	232	4.07E-05
6	0.91%	65	1.14E-05	14	6.04%	430	7.56E-05	22	3.30%	235	4.13E-05
7	3.79%	269	4.74E-05	15	7.01%	499	8.78E-05	23	2.46%	175	3.08E-05
8	7.77%	553	9.72E-05	16	7.14%	508	8.94E-05	24	1.86%	133	2.33E-05
								Total		7,115	

2025 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_WB_MID

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	82	1.44E-05	9	7.11%	506	8.89E-05	17	7.39%	526	9.23E-05
2	0.42%	30	5.27E-06	10	4.39%	312	5.48E-05	18	8.18%	582	1.02E-04
3	0.41%	29	5.10E-06	11	4.66%	332	5.83E-05	19	5.69%	405	7.12E-05
4	0.26%	18	3.25E-06	12	5.89%	419	7.36E-05	20	4.28%	304	5.34E-05
5	0.50%	35	6.21E-06	13	6.15%	438	7.69E-05	21	3.25%	232	4.07E-05
6	0.91%	65	1.13E-05	14	6.04%	430	7.55E-05	22	3.30%	235	4.12E-05
7	3.79%	269	4.73E-05	15	7.01%	499	8.76E-05	23	2.46%	175	3.08E-05
8	7.77%	553	9.71E-05	16	7.14%	508	8.92E-05	24	1.86%	133	2.33E-05
								Total		7,115	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - E Middlefield Road
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_EB_MID	E Middlefield Road Eastbound	EB	2	717.4	0.45	13.3	44	1.3	35	7,115	9,552	102,820	8.14E-08	6.00E-08	2.6	1.21
TEXH_WB_MID	E Middlefield Road Westbound	WB	2	716.2	0.45	13.3	44	1.3	35	7,115	9,536	102,648	8.14E-08	6.00E-08	2.6	1.21
									Total	14,230						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.02118			

Emisson Factors from CT-EMFAC2021

2025 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_EB_MID

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	82	2.15E-04	9	7.11%	506	1.33E-03	17	7.39%	526	1.38E-03
2	0.42%	30	7.87E-05	10	4.39%	312	8.19E-04	18	8.18%	582	1.53E-03
3	0.41%	29	7.62E-05	11	4.66%	332	8.70E-04	19	5.69%	405	1.06E-03
4	0.26%	18	4.85E-05	12	5.89%	419	1.10E-03	20	4.28%	304	7.98E-04
5	0.50%	35	9.27E-05	13	6.15%	438	1.15E-03	21	3.25%	232	6.07E-04
6	0.91%	65	1.69E-04	14	6.04%	430	1.13E-03	22	3.30%	235	6.15E-04
7	3.79%	269	7.07E-04	15	7.01%	499	1.31E-03	23	2.46%	175	4.59E-04
8	7.77%	553	1.45E-03	16	7.14%	508	1.33E-03	24	1.86%	133	3.48E-04
								Total		7,115	

2025 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB_MID

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	82	2.14E-04	9	7.11%	506	1.33E-03	17	7.39%	526	1.38E-03
2	0.42%	30	7.86E-05	10	4.39%	312	8.17E-04	18	8.18%	582	1.52E-03
3	0.41%	29	7.61E-05	11	4.66%	332	8.69E-04	19	5.69%	405	1.06E-03
4	0.26%	18	4.84E-05	12	5.89%	419	1.10E-03	20	4.28%	304	7.96E-04
5	0.50%	35	9.26E-05	13	6.15%	438	1.15E-03	21	3.25%	232	6.06E-04
6	0.91%	65	1.69E-04	14	6.04%	430	1.13E-03	22	3.30%	235	6.14E-04
7	3.79%	269	7.06E-04	15	7.01%	499	1.31E-03	23	2.46%	175	4.58E-04
8	7.77%	553	1.45E-03	16	7.14%	508	1.33E-03	24	1.86%	133	3.47E-04
								Total		7,115	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - E Middlefield Road
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_EB_MID	E Middlefield Road Eastbound	EB	2	717.4	0.45	13.3	44	1.3	35	7,115	9,552	102,820	1.10E-07	8.08E-08	2.6	1.21
TEVAP_WB_MID	E Middlefield Road Westbound	WB	2	716.2	0.45	13.3	44	1.3	35	7,115	9,536	102,648	1.10E-07	8.08E-08	2.6	1.21
									Total	14,230						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	0.99856			
Emissions per Vehicle per Mile (g/VMT)	0.02853			

Emisson Factors from CT-EMFAC2021

2025 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_EB_MID

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	82	2.89E-04	9	7.11%	506	1.79E-03	17	7.39%	526	1.86E-03
2	0.42%	30	1.06E-04	10	4.39%	312	1.10E-03	18	8.18%	582	2.06E-03
3	0.41%	29	1.03E-04	11	4.66%	332	1.17E-03	19	5.69%	405	1.43E-03
4	0.26%	18	6.53E-05	12	5.89%	419	1.48E-03	20	4.28%	304	1.07E-03
5	0.50%	35	1.25E-04	13	6.15%	438	1.55E-03	21	3.25%	232	8.18E-04
6	0.91%	65	2.28E-04	14	6.04%	430	1.52E-03	22	3.30%	235	8.29E-04
7	3.79%	269	9.52E-04	15	7.01%	499	1.76E-03	23	2.46%	175	6.19E-04
8	7.77%	553	1.95E-03	16	7.14%	508	1.79E-03	24	1.86%	133	4.69E-04
								Total		7,115	

2025 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WB_MID

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	82	2.88E-04	9	7.11%	506	1.78E-03	17	7.39%	526	1.85E-03
2	0.42%	30	1.06E-04	10	4.39%	312	1.10E-03	18	8.18%	582	2.05E-03
3	0.41%	29	1.02E-04	11	4.66%	332	1.17E-03	19	5.69%	405	1.43E-03
4	0.26%	18	6.52E-05	12	5.89%	419	1.48E-03	20	4.28%	304	1.07E-03
5	0.50%	35	1.25E-04	13	6.15%	438	1.54E-03	21	3.25%	232	8.17E-04
6	0.91%	65	2.28E-04	14	6.04%	430	1.52E-03	22	3.30%	235	8.27E-04
7	3.79%	269	9.50E-04	15	7.01%	499	1.76E-03	23	2.46%	175	6.18E-04
8	7.77%	553	1.95E-03	16	7.14%	508	1.79E-03	24	1.86%	133	4.68E-04
								Total		7,115	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - E Middlefield Road
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_EB_MID	E Middlefield Road Eastbound	EB	2	717.4	0.45	13.3	44	1.3	35	7,115	9,552	102,820	8.81E-08	6.49E-08	2.6	1.21
FUG_WB_MID	E Middlefield Road Westbound	WB	2	716.2	0.45	13.3	44	1.3	35	7,115	9,536	102,648	8.81E-08	6.49E-08	2.6	1.21
									Total	14,230						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00550			
Road Dust - Emissions per Vehicle (g/VMT)	0.01531			
tal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02291			

Emisson Factors from CT-EMFAC2021

2025 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_EB_MID

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	82	2.32E-04	9	7.11%	506	1.44E-03	17	7.39%	526	1.49E-03
2	0.42%	30	8.51E-05	10	4.39%	312	8.86E-04	18	8.18%	582	1.65E-03
3	0.41%	29	8.24E-05	11	4.66%	332	9.41E-04	19	5.69%	405	1.15E-03
4	0.26%	18	5.25E-05	12	5.89%	419	1.19E-03	20	4.28%	304	8.63E-04
5	0.50%	35	1.00E-04	13	6.15%	438	1.24E-03	21	3.25%	232	6.57E-04
6	0.91%	65	1.83E-04	14	6.04%	430	1.22E-03	22	3.30%	235	6.66E-04
7	3.79%	269	7.65E-04	15	7.01%	499	1.42E-03	23	2.46%	175	4.97E-04
8	7.77%	553	1.57E-03	16	7.14%	508	1.44E-03	24	1.86%	133	3.76E-04
								Total		7,115	

2025 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB_MID

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	82	2.32E-04	9	7.11%	506	1.43E-03	17	7.39%	526	1.49E-03
2	0.42%	30	8.50E-05	10	4.39%	312	8.84E-04	18	8.18%	582	1.65E-03
3	0.41%	29	8.23E-05	11	4.66%	332	9.40E-04	19	5.69%	405	1.15E-03
4	0.26%	18	5.24E-05	12	5.89%	419	1.19E-03	20	4.28%	304	8.62E-04
5	0.50%	35	1.00E-04	13	6.15%	438	1.24E-03	21	3.25%	232	6.56E-04
6	0.91%	65	1.83E-04	14	6.04%	430	1.22E-03	22	3.30%	235	6.64E-04
7	3.79%	269	7.63E-04	15	7.01%	499	1.41E-03	23	2.46%	175	4.96E-04
8	7.77%	553	1.57E-03	16	7.14%	508	1.44E-03	24	1.86%	133	3.76E-04
								Total		7,115	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - E Middlefield Road
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2030

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_EB_MID	E Middlefield Road Eastbound	EB	2	864.1	0.54	13.3	43.7	3.4	35	7,460	11,506	123,846	1.068E-09	7.873E-10	6.8	3.16
DPM_WB_MID	E Middlefield Road Westbound	WB	2	850.4	0.53	13.3	43.7	3.4	35	7,460	11,323	121,882	1.068E-09	7.873E-10	6.8	3.16
									Total	14,920						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00027			

Emisson Factors from CT-EMFAC2021

2030 Hourly Traffic Volumes and DPM Emissions - DPM_EB_MID

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.98%	297	1.17E-05	9	6.45%	481	1.90E-05	17	5.61%	418	1.65E-05
2	2.63%	196	7.76E-06	10	7.45%	556	2.20E-05	18	3.20%	239	9.43E-06
3	2.86%	213	8.42E-06	11	6.39%	477	1.88E-05	19	2.19%	163	6.46E-06
4	3.25%	242	9.58E-06	12	7.01%	523	2.07E-05	20	0.85%	63	2.50E-06
5	2.18%	163	6.44E-06	13	6.28%	468	1.85E-05	21	3.09%	230	9.10E-06
6	3.30%	246	9.74E-06	14	6.17%	460	1.82E-05	22	4.26%	318	1.26E-05
7	6.05%	452	1.79E-05	15	5.10%	381	1.50E-05	23	2.58%	192	7.59E-06
8	4.43%	331	1.31E-05	16	3.87%	289	1.14E-05	24	0.84%	63	2.48E-06
								Total		7,460	

2030 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_WB_MID

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.98%	297	1.15E-05	9	6.45%	481	1.87E-05	17	5.61%	418	1.63E-05
2	2.63%	196	7.64E-06	10	7.45%	556	2.16E-05	18	3.20%	239	9.28E-06
3	2.86%	213	8.29E-06	11	6.39%	477	1.85E-05	19	2.19%	163	6.36E-06
4	3.25%	242	9.42E-06	12	7.01%	523	2.03E-05	20	0.85%	63	2.46E-06
5	2.18%	163	6.34E-06	13	6.28%	468	1.82E-05	21	3.09%	230	8.96E-06
6	3.30%	246	9.59E-06	14	6.17%	460	1.79E-05	22	4.26%	318	1.24E-05
7	6.05%	452	1.76E-05	15	5.10%	381	1.48E-05	23	2.58%	192	7.47E-06
8	4.43%	331	1.29E-05	16	3.87%	289	1.12E-05	24	0.84%	63	2.44E-06
								Total		7,460	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - E Middlefield Road
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2030

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM2.5_EB_MID	E Middlefield Road Eastbound	EB	2	864.1	0.54	13.3	44	1.3	35	7,460	11,506	123,846	4.28E-09	3.16E-09	2.6	1.21
PM2.5_WB_MID	E Middlefield Road Westbound	WB	2	850.4	0.53	13.3	44	1.3	35	7,460	11,323	121,882	4.28E-09	3.16E-09	2.6	1.21
									Total	14,920						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001062			

Emisson Factors from CT-EMFAC2021

2030 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_EB_MID

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	86	1.36E-05	9	7.11%	531	8.41E-05	17	7.39%	551	8.74E-05
2	0.42%	31	4.96E-06	10	4.39%	327	5.19E-05	18	8.18%	610	9.67E-05
3	0.40%	30	4.77E-06	11	4.66%	348	5.51E-05	19	5.70%	425	6.73E-05
4	0.26%	19	3.04E-06	12	5.89%	439	6.96E-05	20	4.28%	319	5.05E-05
5	0.49%	37	5.83E-06	13	6.15%	459	7.27E-05	21	3.25%	243	3.84E-05
6	0.90%	67	1.07E-05	14	6.04%	450	7.13E-05	22	3.30%	246	3.90E-05
7	3.79%	283	4.48E-05	15	7.01%	523	8.29E-05	23	2.46%	184	2.91E-05
8	7.76%	579	9.17E-05	16	7.14%	533	8.44E-05	24	1.86%	139	2.20E-05
								Total		7,460	

2030 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_WB_MID

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	86	1.33E-05	9	7.11%	531	8.27E-05	17	7.39%	551	8.60E-05
2	0.42%	31	4.88E-06	10	4.39%	327	5.10E-05	18	8.18%	610	9.52E-05
3	0.40%	30	4.69E-06	11	4.66%	348	5.42E-05	19	5.70%	425	6.63E-05
4	0.26%	19	2.99E-06	12	5.89%	439	6.85E-05	20	4.28%	319	4.97E-05
5	0.49%	37	5.74E-06	13	6.15%	459	7.15E-05	21	3.25%	243	3.78E-05
6	0.90%	67	1.05E-05	14	6.04%	450	7.02E-05	22	3.30%	246	3.84E-05
7	3.79%	283	4.40E-05	15	7.01%	523	8.16E-05	23	2.46%	184	2.86E-05
8	7.76%	579	9.03E-05	16	7.14%	533	8.31E-05	24	1.86%	139	2.17E-05
								Total		7,460	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - E Middlefield Road
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2030

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_EB_MID	E Middlefield Road Eastbound	EB	2	864.1	0.54	13.3	44	1.3	35	7,460	11,506	123,846	6.09E-08	4.49E-08	2.6	1.21
TEXH_WB_MID	E Middlefield Road Westbound	WB	2	850.4	0.53	13.3	44	1.3	35	7,460	11,323	121,882	6.09E-08	4.49E-08	2.6	1.21
									Total	14,920						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.01512			

Emisson Factors from CT-EMFAC2021

2030 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_EB_MID

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	86	1.93E-04	9	7.11%	531	1.20E-03	17	7.39%	551	1.24E-03
2	0.42%	31	7.06E-05	10	4.39%	327	7.38E-04	18	8.18%	610	1.38E-03
3	0.40%	30	6.78E-05	11	4.66%	348	7.84E-04	19	5.70%	425	9.59E-04
4	0.26%	19	4.32E-05	12	5.89%	439	9.90E-04	20	4.28%	319	7.20E-04
5	0.49%	37	8.31E-05	13	6.15%	459	1.03E-03	21	3.25%	243	5.47E-04
6	0.90%	67	1.52E-04	14	6.04%	450	1.02E-03	22	3.30%	246	5.55E-04
7	3.79%	283	6.37E-04	15	7.01%	523	1.18E-03	23	2.46%	184	4.14E-04
8	7.76%	579	1.31E-03	16	7.14%	533	1.20E-03	24	1.86%	139	3.14E-04
								Total		7,460	

2030 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB_MID

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	86	1.90E-04	9	7.11%	531	1.18E-03	17	7.39%	551	1.22E-03
2	0.42%	31	6.95E-05	10	4.39%	327	7.26E-04	18	8.18%	610	1.35E-03
3	0.40%	30	6.68E-05	11	4.66%	348	7.72E-04	19	5.70%	425	9.44E-04
4	0.26%	19	4.25E-05	12	5.89%	439	9.75E-04	20	4.28%	319	7.08E-04
5	0.49%	37	8.17E-05	13	6.15%	459	1.02E-03	21	3.25%	243	5.38E-04
6	0.90%	67	1.49E-04	14	6.04%	450	1.00E-03	22	3.30%	246	5.46E-04
7	3.79%	283	6.27E-04	15	7.01%	523	1.16E-03	23	2.46%	184	4.08E-04
8	7.76%	579	1.29E-03	16	7.14%	533	1.18E-03	24	1.86%	139	3.09E-04
								Total		7,460	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - E Middlefield Road
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2030

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_EB_MID	E Middlefield Road Eastbound	EB	2	864.1	0.54	13.3	44	1.3	35	7,460	11,506	123,846	1.01E-07	7.43E-08	2.6	1.21
TEVAP_WB_MID	E Middlefield Road Westbound	WB	2	850.4	0.53	13.3	44	1.3	35	7,460	11,323	121,882	1.01E-07	7.43E-08	2.6	1.21
									Total	14,920						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	0.87494			
Emissions per Vehicle per Mile (g/VMT)	0.02500			

Emisson Factors from CT-EMFAC2021

2030 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_EB_MID

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	86	3.19E-04	9	7.11%	531	1.98E-03	17	7.39%	551	2.06E-03
2	0.42%	31	1.17E-04	10	4.39%	327	1.22E-03	18	8.18%	610	2.28E-03
3	0.40%	30	1.12E-04	11	4.66%	348	1.30E-03	19	5.70%	425	1.59E-03
4	0.26%	19	7.14E-05	12	5.89%	439	1.64E-03	20	4.28%	319	1.19E-03
5	0.49%	37	1.37E-04	13	6.15%	459	1.71E-03	21	3.25%	243	9.05E-04
6	0.90%	67	2.51E-04	14	6.04%	450	1.68E-03	22	3.30%	246	9.18E-04
7	3.79%	283	1.05E-03	15	7.01%	523	1.95E-03	23	2.46%	184	6.85E-04
8	7.76%	579	2.16E-03	16	7.14%	533	1.99E-03	24	1.86%	139	5.19E-04
								Total		7,460	

2030 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WB_MID

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	86	3.14E-04	9	7.11%	531	1.95E-03	17	7.39%	551	2.02E-03
2	0.42%	31	1.15E-04	10	4.39%	327	1.20E-03	18	8.18%	610	2.24E-03
3	0.40%	30	1.10E-04	11	4.66%	348	1.28E-03	19	5.70%	425	1.56E-03
4	0.26%	19	7.03E-05	12	5.89%	439	1.61E-03	20	4.28%	319	1.17E-03
5	0.49%	37	1.35E-04	13	6.15%	459	1.68E-03	21	3.25%	243	8.90E-04
6	0.90%	67	2.47E-04	14	6.04%	450	1.65E-03	22	3.30%	246	9.03E-04
7	3.79%	283	1.04E-03	15	7.01%	523	1.92E-03	23	2.46%	184	6.74E-04
8	7.76%	579	2.13E-03	16	7.14%	533	1.96E-03	24	1.86%	139	5.10E-04
								Total		7,460	

675-685 E Middlefield Rd, Mountain View, CA - Off-Site Residential
Cumulative Operation - E Middlefield Road
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2030

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_EB_MID	E Middlefield Road Eastbound	EB	2	864.1	0.54	13.3	44	1.3	35	7,460	11,506	123,846	9.23E-08	6.80E-08	2.6	1.21
FUG_WB_MID	E Middlefield Road Westbound	WB	2	850.4	0.53	13.3	44	1.3	35	7,460	11,323	121,882	9.23E-08	6.80E-08	2.6	1.21
									Total	14,920						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00210			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00544			
Road Dust - Emissions per Vehicle (g/VMT)	0.01535			
tal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02290			

Emisson Factors from CT-EMFAC2021

2030 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_EB_MID

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	86	2.92E-04	9	7.11%	531	1.81E-03	17	7.39%	551	1.88E-03
2	0.42%	31	1.07E-04	10	4.39%	327	1.12E-03	18	8.18%	610	2.08E-03
3	0.40%	30	1.03E-04	11	4.66%	348	1.19E-03	19	5.70%	425	1.45E-03
4	0.26%	19	6.54E-05	12	5.89%	439	1.50E-03	20	4.28%	319	1.09E-03
5	0.49%	37	1.26E-04	13	6.15%	459	1.57E-03	21	3.25%	243	8.29E-04
6	0.90%	67	2.30E-04	14	6.04%	450	1.54E-03	22	3.30%	246	8.41E-04
7	3.79%	283	9.65E-04	15	7.01%	523	1.79E-03	23	2.46%	184	6.27E-04
8	7.76%	579	1.98E-03	16	7.14%	533	1.82E-03	24	1.86%	139	4.75E-04
								Total		7,460	

2030 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB_MID

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	86	2.88E-04	9	7.11%	531	1.78E-03	17	7.39%	551	1.85E-03
2	0.42%	31	1.05E-04	10	4.39%	327	1.10E-03	18	8.18%	610	2.05E-03
3	0.40%	30	1.01E-04	11	4.66%	348	1.17E-03	19	5.70%	425	1.43E-03
4	0.26%	19	6.44E-05	12	5.89%	439	1.48E-03	20	4.28%	319	1.07E-03
5	0.49%	37	1.24E-04	13	6.15%	459	1.54E-03	21	3.25%	243	8.15E-04
6	0.90%	67	2.26E-04	14	6.04%	450	1.51E-03	22	3.30%	246	8.27E-04
7	3.79%	283	9.50E-04	15	7.01%	523	1.76E-03	23	2.46%	184	6.17E-04
8	7.76%	579	1.95E-03	16	7.14%	533	1.79E-03	24	1.86%	139	4.68E-04
								Total		7,460	

675-685 E Middlefield Road, Mountain View, CA

Cisco Emergency Generator Impacts

Off-site Sensitive Receptors

MEI Location = 1.5 meter receptor height

DPM Emission Rates		
	DPM Emissions per Generator	
	Max Daily	Annual
Source Type	(lb/day)	(lb/year)
Generator	0.277	101.21
2021 CEIDARS DPM Emissions	0.0506	tons/year

Modeling Information	
Model	AERMOD
Source	Diesel Generator Engine
Source Type	Point
Meteorological Data	2013 - 2017 Moffett Field Meteorological Data
Point Source Stack Parameters	
Generator Engine Size (hp)	Unknown
Stack Height (ft)	10.00
Stack Diameter (ft)**	0.60
Exhaust Gas Flowrate (CFM)*	2527.73
Stack Exit Velocity (ft/sec)**	149.00
Exhaust Temperature (˚F)**	872.00
Emissions Rate (lb/hr)	0.011554

* AERMOD default

**BAAQMD default generator parameters

675-685 E Middlefield Road, Mountain View, CA - Cancer Risks from Cisco Generator
Cisco Emergency Generators
Impacts at Off-Site Receptors- 1.5m MEI Receptor Heights
Impact at Project MEI (30-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information						
			DPM Conc (ug/m3)						
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Age Sensitivity Factor**	**Infant/Child Cancer Risk (per million)**		**Hazard Index**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2025	0.0014	10	0.019				
1	1	0 - 1	2025	0.0014	10	0.230		0.00028	0.0014	0.0028
2	1	1 - 2	2026	0.0014	10	0.230		0.00028	0.0014	0.0028
3	1	2 - 3	2027	0.0014	3	0.036		0.00028	0.0014	0.0028
4	1	3 - 4	2028	0.0014	3	0.036		0.00028	0.0014	0.0028
5	1	4 - 5	2029	0.0014	3	0.036		0.00028	0.0014	0.0028
6	1	5 - 6	2030	0.0014	3	0.036		0.00028	0.0014	0.0028
7	1	6 - 7	2031	0.0014	3	0.036		0.00028	0.0014	0.0028
8	1	7 - 8	2032	0.0014	3	0.036		0.00028	0.0014	0.0028
9	1	8 - 9	2033	0.0014	3	0.036		0.00028	0.0014	0.0028
10	1	9 - 10	2034	0.0014	3	0.036		0.00028	0.0014	0.0028
11	1	10 - 11	2035	0.0014	3	0.036		0.00028	0.0014	0.0028
12	1	11 - 12	2036	0.0014	3	0.036		0.00028	0.0014	0.0028
13	1	12 - 13	2037	0.0014	3	0.036		0.00028	0.0014	0.0028
14	1	13 - 14	2038	0.0014	3	0.036		0.00028	0.0014	0.0028
15	1	14 - 15	2039	0.0014	3	0.036		0.00028	0.0014	0.0028
16	1	15 - 16	2040	0.0014	3	0.036		0.00028	0.0014	0.0028
17	1	16-17	2041	0.0014	1	0.004		0.00028	0.0014	0.0028
18	1	17-18	2042	0.0014	1	0.004		0.00028	0.0014	0.0028
19	1	18-19	2043	0.0014	1	0.004		0.00028	0.0014	0.0028
20	1	19-20	2044	0.0014	1	0.004		0.00028	0.0014	0.0028
21	1	20-21	2045	0.0014	1	0.004		0.00028	0.0014	0.0028
22	1	21-22	2046	0.0014	1	0.004		0.00028	0.0014	0.0028
23	1	22-23	2047	0.0014	1	0.004		0.00028	0.0014	0.0028
24	1	23-24	2048	0.0014	1	0.004		0.00028	0.0014	0.0028
25	1	24-25	2049	0.0014	1	0.004		0.00028	0.0014	0.0028
26	1	25-26	2050	0.0014	1	0.004		0.00028	0.0014	0.0028
27	1	26-27	2051	0.0014	1	0.004		0.00028	0.0014	0.0028
28	1	27-28	2052	0.0014	1	0.004		0.00028	0.0014	0.0028
29	1	28-29	2053	0.0014	1	0.004		0.00028	0.0014	0.0028
30	1	29-30	2054	0.0014	1	0.004		0.00028	0.0014	0.0028
Total Increased Cancer Risk						**1.04**	**Max**	**0.00028**	**0.0014**	**0.0028**

* Third trimester of pregnancy

675-685 E Middlefield Road, Mountain View, CA - Cancer Risks from Cisco Generator
Cisco Emergency Generators
Impacts at Off-Site Receptors- 1.5m MEI Receptor Heights
Impact at Onsite MEI (30-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information						
			DPM Conc (ug/m3)						
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Age Sensitivity Factor**	**Infant/Child Cancer Risk (per million)**		**Hazard Index**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2030	0.0019	10	0.026				
1	1	0 - 1	2030	0.0019	10	0.309		0.00038	0.0019	0.0038
2	1	1 - 2	2031	0.0019	10	0.309		0.00038	0.0019	0.0038
3	1	2 - 3	2032	0.0019	3	0.049		0.00038	0.0019	0.0038
4	1	3 - 4	2033	0.0019	3	0.049		0.00038	0.0019	0.0038
5	1	4 - 5	2034	0.0019	3	0.049		0.00038	0.0019	0.0038
6	1	5 - 6	2035	0.0019	3	0.049		0.00038	0.0019	0.0038
7	1	6 - 7	2036	0.0019	3	0.049		0.00038	0.0019	0.0038
8	1	7 - 8	2037	0.0019	3	0.049		0.00038	0.0019	0.0038
9	1	8 - 9	2038	0.0019	3	0.049		0.00038	0.0019	0.0038
10	1	9 - 10	2039	0.0019	3	0.049		0.00038	0.0019	0.0038
11	1	10 - 11	2040	0.0019	3	0.049		0.00038	0.0019	0.0038
12	1	11 - 12	2041	0.0019	3	0.049		0.00038	0.0019	0.0038
13	1	12 - 13	2042	0.0019	3	0.049		0.00038	0.0019	0.0038
14	1	13 - 14	2043	0.0019	3	0.049		0.00038	0.0019	0.0038
15	1	14 - 15	2044	0.0019	3	0.049		0.00038	0.0019	0.0038
16	1	15 - 16	2045	0.0019	3	0.049		0.00038	0.0019	0.0038
17	1	16-17	2046	0.0019	1	0.005		0.00038	0.0019	0.0038
18	1	17-18	2047	0.0019	1	0.005		0.00038	0.0019	0.0038
19	1	18-19	2048	0.0019	1	0.005		0.00038	0.0019	0.0038
20	1	19-20	2049	0.0019	1	0.005		0.00038	0.0019	0.0038
21	1	20-21	2050	0.0019	1	0.005		0.00038	0.0019	0.0038
22	1	21-22	2051	0.0019	1	0.005		0.00038	0.0019	0.0038
23	1	22-23	2052	0.0019	1	0.005		0.00038	0.0019	0.0038
24	1	23-24	2053	0.0019	1	0.005		0.00038	0.0019	0.0038
25	1	24-25	2054	0.0019	1	0.005		0.00038	0.0019	0.0038
26	1	25-26	2055	0.0019	1	0.005		0.00038	0.0019	0.0038
27	1	26-27	2056	0.0019	1	0.005		0.00038	0.0019	0.0038
28	1	27-28	2057	0.0019	1	0.005		0.00038	0.0019	0.0038
29	1	28-29	2058	0.0019	1	0.005		0.00038	0.0019	0.0038
30	1	29-30	2059	0.0019	1	0.005		0.00038	0.0019	0.0038
Total Increased Cancer Risk						**1.40**	**Max**	**0.00038**	**0.0019**	**0.0038**

* Third trimester of pregnancy

Bay Area Air Quality Management District

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	**8/8/2023**
Contact Name	Jordyn Bauer
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	jbauer@illingworthrodkin.com
Project Name	675-685 E Middlefield Rd
Address	675-685 E Middlefield Rd
City	Mountain View
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Mixed-Use
Project Size (# of units or building square feet)	860

Comments:

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in **Table A** ncomplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/,** and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.** The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in **Table B** lue section only.

6. Note that a small percentage of the stationa ve Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Matthew Hanson at 415-749-8733, or mhanson@baaqmd.gov

Table B: Google Earth data

Project MEI

Distance from Receptor (feet) or MEI[1]	Plant No.	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
1000+	909	Raytheon Company	350 Ellis Street	0	0	0		Semiconductor and Related Device Manu		2021 Dataset	0.36	0.00	0.00000	0.0000
830	17902	Verizon Wireless (Smiley Towe	364 Ferguson Drive	2.302	0.001	0.003		Generator		2021 Dataset	0.42	0.96	0.00042	0.0012
830	19348	Cisco Systems	364 Ferguson Drive	390.072	0.105	0.524		Generator		2021 Dataset	0.06	1.04	0.00028	0.0028
1000+	21411	Cushman & Wakefield at Nortc	455 E Middlefield Road	7.089	0.013	0.009		Generator		2021 Dataset	0.04	0.28	0.00052	0.0004
890	21845	Kilroy Realty Corporation	690 E Middlefield Road	6.867	0.002	0.009		Generator		2021 Dataset	0.29	1.99	0.00058	0.0026

Footnotes:

1. Maximally exposed individual

2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.

Project Site

Distance from Receptor (feet) or MEI[1]	FACID (Plant No.)	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
910	909	0.155	0.00	0.0000	0.0000
1000+	17902	0.04	0.09	0.0000	0.0001
1000+	19348	0.04	1.40	0.0004	0.0038
770	21411	0.07	0.50	0.0009	0.0006
260	21845	0.31	2.13	0.0006	0.0028

8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of 0.003 or
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead should reflect
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

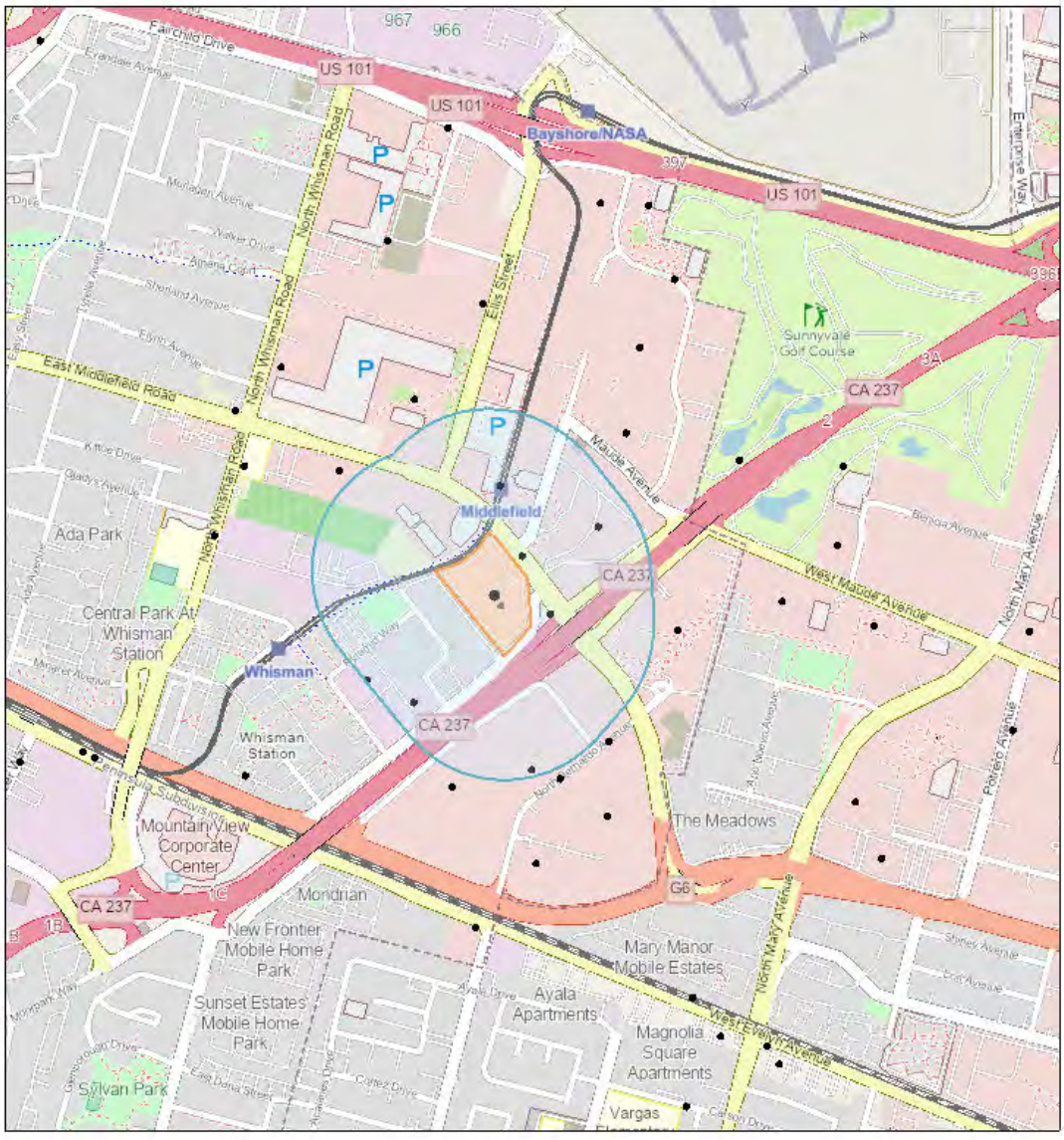
Date last updated:
03/13/2018

Screening Report

Area of Interest (AOI) Information

Area : 6,797,259.83 ft²

Aug 7 2023 16:18:38 Pacific Daylight Time



Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Stationary Sources	8	N/A	N/A

Permitted Stationary Sources

#	Facility_I	Facility_N	Address	City	State
1	909	Raytheon Company	350 Ellis Street	Mountain View	CA
2	15088	MedImmune	319 N Bernardo Avenue	Mountain View	CA
3	17902	Verizon Wireless (Smiley Tower)	364 Ferguson Drive	Mountain View	CA
4	19348	Cisco Systems	364 Ferguson Drive	Mountain View	CA
5	21100	Siemens Medical Solutions USA Inc	685 E Middlefield Road	Mountain View	CA
6	21411	Cushman & Wakefield at NortonLifeLock	455 E Middlefield Road	Mountain View	CA
7	21845	Kilroy Realty Corporation	690 E Middlefield Road	Mountain View	CA
8	24326	JD COM American Technologies Corporation	675 E Middlefield Road	Mountain View	CA

#	Zip	County	Latitude	Longitude	Details
1	94043	Santa Clara	37.395776	-122.052137	*No Data*
2	94043	Santa Clara	37.389148	-122.051221	*No Data*
3	94043	Santa Clara	37.390722	-122.054658	Generator
4	94043	Santa Clara	37.391250	-122.056041	Generator
5	94043	Santa Clara	37.392967	-122.052117	Generator
6	94043	Santa Clara	37.392789	-122.050661	Generator
7	94043	Santa Clara	37.394811	-122.049259	Generator
8	94043	Santa Clara	37.394127	-122.051492	Generator

#	NAICS	NAICS_Sect	NAICS_Subs	NAICS_Indu	Cancer_Ris
1	334413	Manufacturing	Computer and Electronic Product Manufacturing	Semiconductor and Related Device Manufacturing	0.000000
2	325412	Manufacturing	Chemical Manufacturing	Pharmaceutical Preparation Manufacturing	4.891000
3	517210	Information	Telecommunications	Wireless Telecommunications Carriers (except Satellite)	2.302000
4	518210	Information	Data Processing, Hosting and Related Services	Data Processing, Hosting, and Related Services	390.072000
5	541710	N/A	N/A	N/A	17.690000
6	511210	Information	Publishing Industries (except Internet)	Software Publishers	7.089000
7	238210	Construction	Specialty Trade Contractors	Electrical Contractors and Other Wiring Installation Contractors	6.867000
8	531390	Real Estate and Rental and Leasing	Real Estate	Other Activities Related to Real Estate	0.285000

#	Chronic_Ha	PM25	Count
1	0.000000	0.000000	1
2	0.010000	0.006000	1
3	0.001000	0.003000	1
4	0.105000	0.524000	1
5	0.012000	0.024000	1
6	0.013000	0.009000	1
7	0.002000	0.009000	1
8	0.000000	0.000000	1

NOTE: A larger buffer than 1000 feet may be warranted depending on proximity to significant sources.

APPENDIX B

SavATree Consulting Group

550 Bedford Road, Bedford Hills NY
phone: (914) 241-4999 • fax: (914) 244-9375
email: consultinggroup@savatree.com
savatree.com/consulting

CANOPY STUDY AND ARBORIST REPORT

For

MICHAEL DUCOTE

Development Director

For Service at

685 MIDDLEFIELD RD.
MOUNTAIN VIEW, CA

SavATree® Consulting Group

Rev. March 24, 2023; Rev. Apr 25, 2023; Rev. July 5, 2023; Rev. June 3, 2024; Rev. Aug. 16, 2024 ; Rev. October 11, 2024

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SavATree Consulting Group

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SAVATREE
Consulting Group

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SUMMARY

SavATree was retained to assess the trees located at 685 Middlefield Rd. Mountain View, CA. The project involves the redevelopment of a multi-use property where multiple trees on site will be impacted by the construction.

SavATree surveyed the property and evaluated the trees on site. At the time of the survey, there were two-hundred and forty-one (241) trees on the site. Of those trees inventoried, forty-seven (47) are considered “Heritage trees” according to the City of Mountain View tree ordinance. Of the Heritage trees identified, only seven (7) are intended to be preserved at this time.

Due to conflicts with building footprint, sidewalk footprint, species age/condition and lack of available onsite storage, no trees that are not the seven Heritage trees identified in this report will be retained. The total number of removals is two hundred and thirty-four (234), of which forty (40) are Heritage trees.

Heritage trees are required to be replaced at a ratio of 2:1 for 24” box sized trees or an in-lieu fee paid if the replacements cannot be accommodated onsite. The remaining replacements are required to have a 1:1 replacement for each tree removed.

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WHY DID SAVATREE PROVIDE THE MIDDLEFIELD CANOPY STUDY AND ARBORIST REPORT?

You are developing a project in the City of Mountain View, CA, and require further information by request of the city arborist. The Arborist Report dated March 28, 2022, was used for base information obtained during the initial inventory and construction documents were received from your office.

Information requested follows:

- Table of Heritage trees to be removed with accompanying data
- Table of all trees to be preserved with accompanying data
- Table with all existing trees and their construction impacts
- Tree protection plan for preserved trees minimizing root loss and soil compaction with post-construction guidelines

You would also like canopy cover measurements of the existing site for a baseline canopy study. Additionally, you require information concerning the placement of purple leaf plums #1304-1310 and a second Oak noted at the edge of the property behind tree #1267.

HOW DID SAVATREE PRODUCE THE DATA AND THE REPORT?

SavATree deployed an ISA Certified Arborist who is Tree Risk Qualified to the site on February 19, 2023, to obtain canopy cover measurements. Two hundred forty tree crown measurements were taken per arborist stride estimation using the cross-method. Diameter of crowns were obtained at the widest point followed by a second measurement perpendicular to the widest point (Figure 1) and recorded in a table for all trees.

Additionally, field data and construction documents were compared to complete the tables requested and identify possible preservation opportunities.

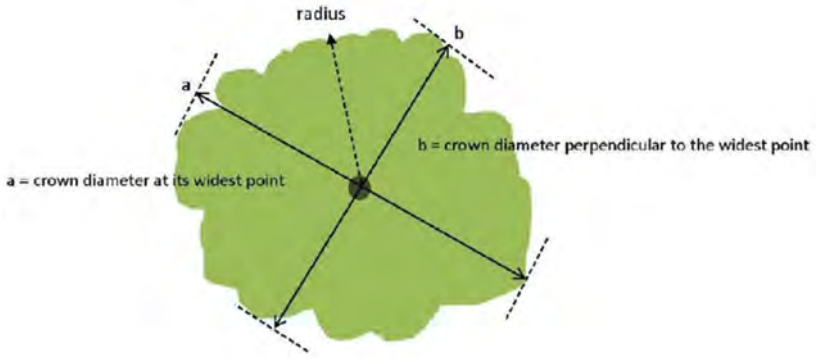


Figure 1 - Calculating individual tree canopy cover (courtesy of City of Decatur, GA)

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WHAT DID SAVATREE FIND?

Preservation Opportunities

(Root Management BMP, 2017) states "cutting roots at a distance greater than 6x the trunk diameter (DBH) minimizes the likelihood of affecting both health and tree stability. At this distance approximately 25% of the root system would be lost" therefore, opportunity for tree preservation is based on impacts to trees sustaining no more than 25% root loss. Using this formula, three Heritage trees are identified for preservation consideration which includes the additional coast live oak found on-site (Table 1).

Table 1 - Preservation opportunities.

ID #	Canopy long (ft)	Canopy wide (ft)	Common	Botanical	Circumference	Health	Heritage Status	Suitability
1267	55	55	Oak, Valley	*Quercus lobata*	50", 47", 41", 41"	3	Yes	Moderate
747	33	33	Coast Live oak	*Quercus agrifolia*	79"	2	Yes	Moderate
1360	47	36	Liquidambar	*Liquidambar styraciflua*	88"	3	Yes	High
1361	22	33	Liquidambar	*Liquidambar styraciflua*	79"	3	Yes	High
1362	36	36	Southern Magnolia	*Magnolia grandiflora*	50"	3	Yes	High
1363	44	44	Southern Magnolia	*Magnolia grandiflora*	72"	4	Yes	High
1432	44	36	Southern Magnolia	*Magnolia grandiflora*	75"	2	Yes	Moderate

*Limitations to Preservation

The plotted tree survey locations are not survey grade and may be off up to nine feet therefore, the Project Lead should confirm if design modifications are possible for these trees and if tree protection zones (TPZ) have adequate space to minimize root damage (no more than 25% total damage to the critical root zone per the preservation plan).

Purple leaf plum trees are relatively short-lived trees and per Google Earth imagery have been on site a minimum of 30 years. A significant number of these are in conflict of construction. Rather than retain the remaining trees, the project would benefit from replacing these trees with new longer-lived species. The project planting plan is extensive, and current trees are relatively small.[1]

[1] Gilman and Watson, "Prunus Cerasifera 'Atropupurea': Pissard Plum."

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Heritage Trees

There are forty-seven (47) Heritage trees on the property. The construction project will preserve the Heritage trees on the property identified above in Table 1. The Tree Preservation Narrative shall be implemented to ensure survivability of the Heritage trees.

According to the City of Mountain View, a Heritage tree is defined as:

- Any Oak, Redwood or Cedar tree that has a trunk circumference of 12” or more when measured at 54” above natural grade; or
- Any tree that has a trunk circumference of 48" or more measured 54" from the ground; or
- A multi-branched tree that has major branches below 54” above the natural grade with a circumference of 48” measured just below the first major trunk fork; or
- A grove of trees designated as "heritage" by the City Council.

Of the forty-seven total Heritage trees on site, forty (40) trees will be removed and seven (7) will be retained.

Canopy Measurements and Impacts to all Existing Trees

The original data table from the previous report dated March 2022, has been updated to reflect the canopy measurements requested and construction impacts to all existing trees (Appendix B and C). Purple leaf plums #1304-10 are located on the Middlefield property; points are not survey grade.

Transplanting

The provided construction plans show no available area for storing transplants. As mentioned in the previous arborist report from 2023, transplanting is technically possible for some trees on site. However, upon further review of the restricted growing conditions within concrete curbing limiting tree spade use, the associated likelihood of trees perishing while being stored off site, poor expectations of transplant success, and inexpensive replacement cost, removal with a 1:1 or 2:1 replacement is recommended in lieu of transplanting efforts.

Removals and Mitigation

At the time of the tree survey, we identified and evaluated two hundred and forty-one trees (241). Due to various constraints including species lifespan, likelihood of transplant success and lack of onsite storage, only seven (7) trees, all of which are Heritage trees will be retained.

Replacements for the proposed two-hundred and thirty-four trees (234) being removed would consist of a 1:1 ratio for non-heritage tree, and a 2:1 ratio for Heritage trees.

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TREE PRESERVATION NARRATIVE

In the case that transplants are identified, or trees preserved, see this preservation narrative:

Pre-construction:

1. Add trees to the construction plans, update the critical root zone (CRZ) and structural root zone (SRZ) for all trees to reflect 1' per 1" diameter for CRZ and .5' per 1" diameter for SRZ. Tree Protection Zones (TPZ) should be established at the edge of the CRZ. Where this is not possible, confer with an ISA certified arborist for optimal TPZ placement.
2. Pre-construction meeting to discuss tree preservation measures, discuss heavy equipment access, discuss sediment storage location, and finalize the tree protection fencing and/or root protection measures.
3. Install root protection measures under all trees to be preserved. This may be done by one of the following measures:
    a. Laying ¾ inch minimum thickness plywood or "alturnamats" over 6–8-inch layer of wood chip mulch. This is suitable for heavy equipment.
    b. Applying 6 inches of gravel over a taut, staked, geotextile fabric. This is suitable for heavy equipment.
4. Tree protection areas shall be established and enforced to prevent any soil compaction, grade change, and root damage. Tree protection devices shall be installed and shall conform to the details below:
    a. Tree protection fencing shall be 6' chain link fence on 8' galvanized steel posts driven 2' into the ground. Refer to the tree protection fencing detail for additional information (Appendix E).
    b. Erosion control measures within the CRZ shall be trenchless.
    c. Tree protection signage in English and Spanish shall be installed on tree protection fencing at 30' intervals. There shall be a minimum of two per tree protection fence area.
5. Apply biostimulant treatment with mycorrhizae to all trees to be preserved.
6. If roots larger than 2" or more than 25% of any root system is disturbed, apply plant growth regulator to Heritage trees and consult the project arborist.
7. Establish a concrete spoil area away from tree root zones and without flow paths into tree protection areas with compliance monitoring during construction.
8. Establish an area outside of the CRZ to store sediment. Remove sediment daily when plausible.
9. No materials or equipment shall be stored or placed within the CRZ of preserved trees unless proper anti-compaction measures have been installed in that area.

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Construction:

1. Conduct supplemental watering throughout the growing season to trees impacted by construction, adjusted for rainfall. Watering should occur by either a watering truck or by the installation of a drip irrigation system. Confer with a Certified Arborist as necessary to establish a sufficient irrigation regimen.
2. Tree preservation measures shall remain in place until construction is fully completed. Final landscaping may take place after the removal of the tree preservation measures if completed by hand.

Post Construction:

Inspections to be performed by an ISA Certified Arborist.

1. Year 1
    a. Inspect trees for any needed remedial treatments or changes in condition.
    b. Conduct supplemental watering adjusted for rainfall and under the care of a Certified Arborist. Watering should occur by either a watering truck or by the installation of a drip irrigation system.
    c. Apply biostimulant treatment with mycorrhizae to all trees to be preserved.
2. Year 2
    a. Inspect tree for any needed remedial treatments or change in condition.
3. Year 3
    a. Inspect tree for any needed remedial treatments or change in condition.

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Actionable Tree Intelligence

Due to construction activities encompassing nearly 100% of the site, I recommend total tree removal of those trees identified with a 1:1 or 2:1 replacement ratio considering the canopy study of existing site trees to offset removals.

The original arborist report was compiled by:

Sincerely,



Sherry Fabricant, Consulting Arborist, SavATree

Certified Arborist TX 4631A | TRAQ | TXWRRQ | ASCA Member

Revisions and updates as of 10/01/2024 were completed by:

Klayton Soucy

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APPENDIX

Appendix A: Heritage Trees

ID	Common	Botanical	Circum. (in)	Health	Suitability	Description	Removal or preservation (impacts)
1201	Magnolia, Southern	*Magnolia grandiflora*	66, 53	2	Low	Codominant at 2'; wide form; somewhat sparse; deep cavity at attachment; girdling roots.	grade conflict
1202	Magnolia, Southern	*Magnolia grandiflora*	60	4	High	Healthy canopy; good form and structure.	grade conflict
1203	Magnolia, Southern	*Magnolia grandiflora*	75	3	Moderate	Healthy canopy; bark peeling; good form and structure.	grade conflict
1204	Magnolia, Southern	*Magnolia grandiflora*	57	3	Moderate	Somewhat sparse; good form and structure.	grade conflict
1205	Liquidambar	*Liquidambar styraciflua*	50	2	Moderate	Good form; history of heading cuts.	low health, stressed
1206	Liquidambar	*Liquidambar styraciflua*	47	2	Moderate	Epicormic growth; upper canopy dieback; narrow canopy.	building conflict
1226	Eucalyptus, Lemon Gum	*Corymbia citriodora*	220	3	Moderate	Tip dieback, epicormic growth, multiple attachments at base.	building conflict
1227	Eucalyptus, Lemon Gum	*Corymbia citriodora*	204	3	Moderate	Epicormic growth, multiple attachments at eight feet	building conflict
1228	Eucalyptus, Lemon Gum	*Corymbia citriodora*	239	3	Moderate	Poor structure; crowded; included bark; epicormic growth.	building conflict
1229	Eucalyptus, Lemon Gum	*Corymbia citriodora*	126	2	Low	Suppressed; poor structure; epicormic growth.	building conflict
1231	Eucalyptus, Lemon Gum	*Corymbia citriodora*	97, 88	3	Moderate	Codominant U-shaped attachment at base; epicormic growth; crowded.	building conflict
1232	Liquidambar	*Liquidambar styraciflua*	63	3	Moderate	Narrow canopy; crowded; one sided.	Loading zone conflict
1233	Liquidambar	*Liquidambar styraciflua*	57	3	Moderate	Narrow canopy; crowded; narrow attachments.	Loading zone conflict
1234	Liquidambar	*Liquidambar styraciflua*	53	2	Moderate	Narrow canopy; crowded; sparse branches.	Loading zone conflict
1235	Magnolia, Southern	*Magnolia grandiflora*	63	3	Moderate	Wide canopy; growing next to utility boxes; healthy foliage.	Sidewalk conflict
1258	Eucalyptus, Lemon Gum	*Corymbia citriodora*	119	4	Moderate	Healthy canopy; good form and structure.	building conflict
1259	Eucalyptus, Lemon Gum	*Corymbia citriodora*	135	4	Moderate	Healthy canopy; epicormic growth; crowded.	building conflict
1267	Oak, Valley	*Quercus lobata*	50, 47, 41, 41	3	Moderate	Growing against fence next to utility box; multiple attachments from base; healthy canopy.	Preserve per developer

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1274	Tulip Tree	*Liriodendron tulipifera*	94	3	Moderate	Good form and structure; buds present.	building conflict
1302	Tulip Tree	*Liriodendron tulipifera*	85	3	Moderate	Narrow form and attachments; epicormic growth on trunk.	building conflict
1303	Tulip Tree	*Liriodendron tulipifera*	66	3	Moderate	Narrow form with poor attachments.	Building conflict
1345	Liquidambar	*Liquidambar styraciflua*	60	3	High	Narrow form; growing in cluster; codominant attachment with included bark at 10'.	building conflict
1346	Liquidambar	*Liquidambar styraciflua*	63	2	Moderate	Narrow form; growing in cluster; U shaped attachment at 30'; circling roots.	building conflict
1347	Liquidambar	*Liquidambar styraciflua*	53	3	High	Narrow form; growing in cluster; decay cavity and attachments at 30'.	street conflict
1348	Liquidambar	*Liquidambar styraciflua*	53	3	High	Narrow form; growing in cluster; good form.	street conflict
1349	Liquidambar	*Liquidambar styraciflua*	60	3	High	Narrow form; growing in cluster; sinuous form; epicormic growth.	street conflict
1350	Liquidambar	*Liquidambar styraciflua*	47	3	High	Narrow form; growing in cluster.	street conflict
1351	Liquidambar	*Liquidambar styraciflua*	75	4	High	Narrow form; growing in cluster; good structure.	building conflict
1352	Liquidambar	*Liquidambar styraciflua*	50	3	High	Narrow form; growing in cluster; one sided canopy.	building conflict
1353	Liquidambar	*Liquidambar styraciflua*	60	3	Moderate	Narrow form; growing in cluster; heading cuts present.	building conflict
1354	Liquidambar	*Liquidambar styraciflua*	69	3	High	Good form and structure until 25'; sinuous form; poor attachments above.	building conflict
1355	Liquidambar	*Liquidambar styraciflua*	79	3	High	Codominant at 12'; wide form; growing on edge of cluster.	building conflict
1356	Liquidambar	*Liquidambar styraciflua*	88	3	High	Codominant narrow attachments at 4' and 12' feet; included bark.	building conflict
1358	Liquidambar	*Liquidambar styraciflua*	66	3	Moderate	Codominant attachment at 8'; narrow form; crowded.	building conflict
1359	Liquidambar	*Liquidambar styraciflua*	72	3	High	Multiples attachments at 9'; multiple heading cuts.	building conflict
1360	Liquidambar	*Liquidambar styraciflua*	88, 79, 47, 72	3	High	Good form and structure; spreading surface roots.	Preserve per developer
1361	Liquidambar	*Liquidambar styraciflua*	60	3	Moderate	Good form and structure; spreading surface roots.	Preserve per developer
1362	Magnolia, Southern	*Magnolia grandiflora*	79	3	High	Good form and structure; somewhat sparse.	Preserve per developer
1363	Magnolia, Southern	*Magnolia grandiflora*	60	4	High	Healthy dense canopy; multiple attachments at 12'.	Preserve per developer
1428	Magnolia, Southern	*Magnolia grandiflora*	63	3	High	Codominant at 6'; good form and structure.	Emergency vehicle access
1429	Magnolia, Southern	*Magnolia grandiflora*	53	2	Moderate	Bark peeling; twig dieback; small foliage.	building conflict

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1430	Magnolia, Southern	*Magnolia grandiflora*	60	3	Moderate	Branch oozing; epicormic growth; twig dieback.	building conflict
1431	Magnolia, Southern	*Magnolia grandiflora*	85	3	High	Wide form; bark peeling; epicormic growth.	building conflict
1432	Magnolia, Southern	*Magnolia grandiflora*	75	2	Moderate	Twig dieback; irregular foliage; extensive bark peeling.	Preserve per developer
1433	Magnolia, Southern	*Magnolia grandiflora*	63	3	High	Good form and structure; healthy foliage; minor twig dieback.	grade conflict
1434	Liquidambar	*Liquidambar styraciflua*	66	3	Moderate	Narrow attachments; included bark; good form, epicormic growth.	building conflict
747	Coast Live Oak	*Quercus agrifolia*	79	2	High	Utility pruning over time, multi trunk, decay	Preserve per developer

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Appendix B: Canopy Cover

ID #	Canopy long (ft)	Canopy wide (ft)	AVE Crown Spread	Common	Botanical
1201	55	47	51	Magnolia, Southern	*Magnolia grandiflora*
1202	33	25	29	Magnolia, Southern	*Magnolia grandiflora*
1203	39	47	43	Magnolia, Southern	*Magnolia grandiflora*
1204	33	22	28	Magnolia, Southern	*Magnolia grandiflora*
1205	22	14	18	Liquidambar	*Liquidambar styraciflua*
1206	14	25	19	Liquidambar	*Liquidambar styraciflua*
1207	19	22	21	Liquidambar	*Liquidambar styraciflua*
1208	8	11	10	Chinese Pistache	*Pistacia chinensis*
1209	11	8	10	Chinese Pistache	*Pistacia chinensis*
1210	22	14	18	Chinese Pistache	*Pistacia chinensis*
1211	11	11	11	Chinese Pistache	*Pistacia chinensis*
1212	8	8	8	Crape Myrtle	*Lagerstroemia indica*
1213	8	11	10	Crape Myrtle	*Lagerstroemia indica*
1214	8	8	8	Crape Myrtle	*Lagerstroemia indica*
1215	8	8	8	Chinese Pistache	*Pistacia chinensis*
1216	11	11	11	Hornbeam	*Carpinus betulus*
1217	17	14	15	Chinese Pistache	*Pistacia chinensis*
1218	17	11	14	Chinese Pistache	*Pistacia chinensis*
1219	19	17	18	Chinese Pistache	*Pistacia chinensis*
1220	14	17	15	Chinese Pistache	*Pistacia chinensis*
1221	19	30	25	Sycamore	*Platanus x acerfolia*
1222	25	28	26	Sycamore	*Platanus x acerfolia*
1223	30	33	32	Sycamore	*Platanus x acerfolia*
1224	25	17	21	Sycamore	*Platanus x acerfolia*
1225	22	19	21	Sycamore	*Platanus x acerfolia*
1226	88	72	80	Eucalyptus, Lemon Gum	*Corymbia citriodora*
1227	74	74	74	Eucalyptus, Lemon Gum	*Corymbia citriodora*
1228	55	85	70	Eucalyptus, Lemon Gum	*Corymbia citriodora*
1229	44	39	41	Eucalyptus, Lemon Gum	*Corymbia citriodora*
1230	22	8	15	Eucalyptus, Peppermint Gum	*Eucalyptus radiata*
1231	50	44	47	Eucalyptus, Lemon Gum	*Corymbia citriodora*

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ID #	Canopy long (ft)	Canopy wide (ft)	AVE Crown Spread	Common	Botanical	D
1232	25	25	25	Liquidambar	*Liquidambar styraciflua*	
1233	19	41	30	Liquidambar	*Liquidambar styraciflua*	
1234	19	25	22	Liquidambar	*Liquidambar styraciflua*	
1235	33	41	37	Magnolia, Southern	*Magnolia grandiflora*	
1236	11	11	11	Purple leaf plum	*Prunus sp.*	
1237	17	22	19	Purple leaf plum	*Prunus sp.*	
1238	17	22	19	Purple leaf plum	*Prunus sp.*	
1239	19	17	18	Purple leaf plum	*Prunus sp.*	
1240	14	11	12	Purple leaf plum	*Prunus sp.*	
1241	17	11	14	Purple leaf plum	*Prunus sp.*	
1242	11	17	14	Purple leaf plum	*Prunus sp.*	
1243	8	17	12	Purple leaf plum	*Prunus sp.*	
1244	14	14	14	Purple leaf plum	*Prunus sp.*	
1245	19	17	18	Purple leaf plum	*Prunus sp.*	
1246	19	19	19	Purple leaf plum	*Prunus sp.*	
1247	19	19	19	Purple leaf plum	*Prunus sp.*	
1248	17	22	19	Purple leaf plum	*Prunus sp.*	
1249	19	22	21	Purple leaf plum	*Prunus sp.*	
1250	19	19	19	Purple leaf plum	*Prunus sp.*	
1251	17	19	18	Purple leaf plum	*Prunus sp.*	
1252	19	25	22	Purple leaf plum	*Prunus sp.*	
1253	14	19	17	Purple leaf plum	*Prunus sp.*	
1254	14	17	15	Purple leaf plum	*Prunus sp.*	
1255	8	11	10	Purple leaf plum	*Prunus sp.*	
1256	8	8	8	Purple leaf plum	*Prunus sp.*	
1257	8	8	8	Purple leaf plum	*Prunus sp.*	
1258	94	61	77	Eucalyptus, Lemon Gum	*Corymbia citriodora*	
1259	72	55	63	Eucalyptus, Lemon Gum	*Corymbia citriodora*	
1260	11	11	11	Purple leaf plum	*Prunus sp.*	
1261	14	14	14	Purple leaf plum	*Prunus sp.*	
1262	14	17	15	Purple leaf plum	*Prunus sp.*	
1263	11	8	10	Purple leaf plum	*Prunus sp.*	
1264	8	11	10	Purple leaf plum	*Prunus sp.*	
1265	14	11	12	Purple leaf plum	*Prunus sp.*	
1266	11	11	11	Purple leaf plum	*Prunus sp.*	
1267	55	55	55	Oak, Valley	*Quercus lobata*	
1268	6	6	6	Hornbeam	*Carpinus betulus*	
1269	11	11	11	Chinese Pistache	*Pistacia chinensis*	
1270	19	19	19	Crape Myrtle	*Lagerstoemia indica*	

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ID #	Canopy long (ft)	Canopy wide (ft)	AVE Crown Spread	Common	Botanical
1271	14	14	14	Birch, European White	*Betula pendula*
1272	14	11	12	Birch, European White	*Betula pendula*
1273	11	11	11	Birch, European White	*Betula pendula*
1274	44	33	39	Tulip Tree	*Liriodendron tulipifera*
1275	8	8	8	Crape Myrtle	*Lagerstroemia indica*
1276	17	14	15	Liquidambar	*Liquidambar styraciflua*
1277	17	17	17	Chinese Pistache	*Pistacia chinensis*
1278	14	14	14	Chinese Pistache	*Pistacia chinensis*
1279	17	22	19	Sycamore	*Platanus x acerfolia*
1280	19	22	21	Sycamore	*Platanus x acerfolia*
1281	17	17	17	Sycamore	*Platanus x acerfolia*
1282	17	17	17	Chinese Pistache	*Pistacia chinensis*
1283	17	19	18	Chinese Pistache	*Pistacia chinensis*
1284	17	17	17	Chinese Pistache	*Pistacia chinensis*
1285	17	17	17	Chinese Pistache	*Pistacia chinensis*
1286	22	25	23	Sycamore	*Platanus x acerfolia*
1287	25	28	26	Sycamore	*Platanus x acerfolia*
1288	25	25	25	Sycamore	*Platanus x acerfolia*
1289	25	28	26	Sycamore	*Platanus x acerfolia*
1290	17	17	17	Chinese Pistache	*Pistacia chinensis*
1291	8	14	11	Chinese Pistache	*Pistacia chinensis*
1292	19	17	18	Chinese Pistache	*Pistacia chinensis*
1293	25	19	22	Chinese Pistache	*Pistacia chinensis*
1294	25	28	26	Sycamore	*Platanus x acerfolia*
1295	22	22	22	Sycamore	*Platanus x acerfolia*
1296	17	17	17	Sycamore	*Platanus x acerfolia*
1297	25	25	25	Sycamore	*Platanus x acerfolia*
1298	22	25	23	Sycamore	*Platanus x acerfolia*
1299	22	22	22	Sycamore	*Platanus x acerfolia*
1300	11	11	11	Chinese Pistache	*Pistacia chinensis*
1301	14	11	12	Chinese Pistache	*Pistacia chinensis*
1302	28	22	25	Tulip Tree	*Liriodendron tulipifera*
1303	28	22	25	Tulip Tree	*Liriodendron tulipifera*
1304	8	6	7	Purple leaf plum	*Prunus sp.*
1305	8	11	10	Purple leaf plum	*Prunus sp.*
1306	8	6	7	Purple leaf plum	*Prunus sp.*
1307	8	8	8	Purple leaf plum	*Prunus sp.*
1308	8	8	8	Purple leaf plum	*Prunus sp.*
1309	8	8	8	Purple leaf plum	*Prunus sp.*
1310	11	8	10	Purple leaf plum	*Prunus sp.*

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ID #	Canopy long (ft)	Canopy wide (ft)	AVE Crown Spread	Common	Botanical
1312	8	11	10	Purple leaf plum	*Prunus sp.*
1313	8	11	10	Purple leaf plum	*Prunus sp.*
1314	8	11	10	Purple leaf plum	*Prunus sp.*
1315	11	8	10	Purple leaf plum	*Prunus sp.*
1316	8	11	10	Purple leaf plum	*Prunus sp.*
1317	8	11	10	Purple leaf plum	*Prunus sp.*
1318	11	11	11	Purple leaf plum	*Prunus sp.*
1319	11	11	11	Purple leaf plum	*Prunus sp.*
1320	11	11	11	Purple leaf plum	*Prunus sp.*
1321	11	11	11	Purple leaf plum	*Prunus sp.*
1322	11	11	11	Purple leaf plum	*Prunus sp.*
1323	11	11	11	Purple leaf plum	*Prunus sp.*
1324	14	11	12	Purple leaf plum	*Prunus sp.*
1325	14	14	14	Purple leaf plum	*Prunus sp.*
1326	11	8	10	Purple leaf plum	*Prunus sp.*
1327	17	8	12	Purple leaf plum	*Prunus sp.*
1328	17	11	14	Purple leaf plum	*Prunus sp.*
1329	17	14	15	Purple leaf plum	*Prunus sp.*
1330	11	17	14	Purple leaf plum	*Prunus sp.*
1331	14	17	15	Purple leaf plum	*Prunus sp.*
1332	14	17	15	Purple leaf plum	*Prunus sp.*
1333	14	14	14	Purple leaf plum	*Prunus sp.*
1334	11	11	11	Purple leaf plum	*Prunus sp.*
1335	11	11	11	Purple leaf plum	*Prunus sp.*
1336	17	8	12	Purple leaf plum	*Prunus sp.*
1337	11	14	12	Purple leaf plum	*Prunus sp.*
1338	14	14	14	Purple leaf plum	*Prunus sp.*
1339	8	11	10	Purple leaf plum	*Prunus sp.*
1340	14	14	14	Purple leaf plum	*Prunus sp.*
1341	14	14	14	Purple leaf plum	*Prunus sp.*
1342	11	14	12	Purple leaf plum	*Prunus sp.*
1343	11	14	12	Purple leaf plum	*Prunus sp.*
1344	17	17	17	Purple leaf plum	*Prunus sp.*
1345	25	22	23	Liquidambar	*Liquidambar styraciflua*
1346	28	19	23	Liquidambar	*Liquidambar styraciflua*
1347	19	28	23	Liquidambar	*Liquidambar styraciflua*
1348	39	28	33	Liquidambar	*Liquidambar styraciflua*
1349	22	28	25	Liquidambar	*Liquidambar styraciflua*
1350	25	25	25	Liquidambar	*Liquidambar styraciflua*
1351	28	28	28	Liquidambar	*Liquidambar styraciflua*

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ID #	Canopy long (ft)	Canopy wide (ft)	AVE Crown Spread	Common	Botanical
1352	19	19	19	Liquidambar	*Liquidambar styraciflua*
1353`	19	19	19	Liquidambar	*Liquidambar styraciflua*
1354	19	44	32	Liquidambar	*Liquidambar styraciflua*
1355	52	28	40	Liquidambar	*Liquidambar styraciflua*
1356	25	25	25	Liquidambar	*Liquidambar styraciflua*
1357	8	14	11	Liquidambar	*Liquidambar styraciflua*
1358	19	33	26	Liquidambar	*Liquidambar styraciflua*
1359	30	36	33	Liquidambar	*Liquidambar styraciflua*
1360	47	36	41	Liquidambar	*Liquidambar styraciflua*
1361	22	33	28	Liquidambar	*Liquidambar styraciflua*
1362	36	36	36	Magnolia, Southern	*Magnolia grandiflora*
1363	44	44	44	Magnolia, Southern	*Magnolia grandiflora*
1364	11	8	10	Chinese Pistache	*Pistacia chinensis*
1365	11	14	12	Chinese Pistache	*Pistacia chinensis*
1366	11	14	12	Chinese Pistache	*Pistacia chinensis*
1367	17	14	15	Liquidambar	*Liquidambar styraciflua*
1368	19	22	21	Liquidambar	*Liquidambar styraciflua*
1369	8	8	8	Crape Myrtle	*Lagerstroemia indica*
1370	6	6	6	Crape Myrtle	*Lagerstroemia indica*
1371	11	11	11	Crape Myrtle	*Lagerstroemia indica*
1372	19	22	21	Magnolia, Southern	*Magnolia grandiflora*
1373	11	14	12	Crape Myrtle	*Lagerstroemia indica*
1374	11	14	12	Crape Myrtle	*Lagerstroemia indica*
1375	11	14	12	Crape Myrtle	*Lagerstroemia indica*
1376	11	11	11	Chinese Pistache	*Pistacia chinensis*
1377	8	8	8	Hornbeam	*Carpinus betulus*
1378	17	11	14	Sycamore	*Platanus x acerfolia*
1379	19	11	15	Sycamore	*Platanus x acerfolia*
1380	8	11	10	Sycamore	*Platanus x acerfolia*
1381	17	17	17	Sycamore	*Platanus x acerfolia*
1382	14	14	14	Sycamore	*Platanus x acerfolia*
1383	14	14	14	Sycamore	*Platanus x acerfolia*
1384	17	11	14	Chinese Pistache	*Pistacia chinensis*
1385	11	11	11	Hornbeam	*Carpinus betulus*
1386	8	8	8	Purple leaf plum	*Prunus sp.*
1387	8	8	8	Purple leaf plum	*Prunus sp.*
1388	8	8	8	Purple leaf plum	*Prunus sp.*
1389	8	8	8	Purple leaf plum	*Prunus sp.*
1390	11	11	11	Purple leaf plum	*Prunus sp.*
1391	17	17	17	Hornbeam	*Carpinus betulus*
1392	11	11	11	Podocarpus	*Podocarpus gracilior*
1393	8	8	8	Podocarpus	*Podocarpus gracilior*
1394	11	8	10	Podocarpus	*Podocarpus gracilior*
1396	14	14	14	Birch, European	*Betula pendula*
1397	14	11	12	Birch, European, white	*Betula pendula*

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1398	19	11	15	Birch, European,	*Betula pendula*
1398	11	11	11	Podocarpus	*Podocarpus gracilior*
1399	11	11	11	Chinese Pistache	*Pistacia chinensis*
1400	11	11	11	Chinese Pistache	*Pistacia chinensis*
1401	8	8	8	Hornbeam	*Carpinus betulus*
1402	8	8	8	Crape Myrtle	*Lagerstroemia indica*
1403	8	11	10	Crape Myrtle	*Lagerstroemia indica*
1404	17	19	18	Chinese Pistache	*Pistacia chinensis*
1405	17	19	18	Chinese Pistache	*Pistacia chinensis*
1406	19	19	19	Chinese Pistache	*Pistacia chinensis*
1407	17	17	17	Chinese Pistache	*Pistacia chinensis*
1408	17	22	19	Chinese Pistache	*Pistacia chinensis*
1409	14	11	12	Chinese Pistache	*Pistacia chinensis*
1410	8	11	10	Chinese Pistache	*Pistacia chinensis*
1411	19	19	19	Chinese Pistache	*Pistacia chinensis*
1412	8	11	10	Crape Myrtle	*Lagerstroemia indica*
1413	8	8	8	Crape Myrtle	*Lagerstroemia indica*
1414	11	11	11	Crape Myrtle	*Lagerstroemia indica*
1415	14	8	11	Crape Myrtle	*Lagerstroemia indica*
1416	11	11	11	Crape Myrtle	*Lagerstroemia indica*
1417	11	11	11	Crape Myrtle	*Lagerstroemia indica*
1418	6	6	6	Crape Myrtle	*Lagerstroemia indica*
1419	6	6	6	Crape Myrtle	*Lagerstroemia indica*
1420	6	6	6	Crape Myrtle	*Lagerstroemia indica*
1421	8	8	8	Crape Myrtle	*Lagerstroemia indica*
1422	6	6	6	Crape Myrtle	*Lagerstroemia indica*
1423	8	8	8	Crape Myrtle	*Lagerstroemia indica*
1424	8	11	10	Crape Myrtle	*Lagerstroemia indica*
1425	8	8	8	Chinese Pistache	*Pistacia chinensis*
1426	8	8	8	Chinese Pistache	*Pistacia chinensis*
1427	14	14	14	Magnolia, Southern	*Magnolia grandiflora*
1428	39	36	37	Magnolia, Southern	*Magnolia grandiflora*
1429	41	39	40	Magnolia, Southern	*Magnolia grandiflora*
1430	28	39	33	Magnolia, Southern	*Magnolia grandiflora*
1431	39	55	47	Magnolia, Southern	*Magnolia grandiflora*
1432	44	36	40	Magnolia, Southern	*Magnolia grandiflora*
1433	44	41	43	Magnolia, Southern	*Magnolia grandiflora*
1434	30	30	30	Liquidambar	*Liquidambar styraciflua*
1435	0	0	0	Liquidambar	*Liquidambar styraciflua*
1436	8	8	8	Magnolia, Southern	*Magnolia grandiflora*
1437	6	6	6	Magnolia, Southern	*Magnolia grandiflora*
1438	22	22	22	Magnolia, Southern	*Magnolia grandiflora*
no #	8.25	8.25	8	Purple leaf plum	*Prunus sp.*
747*	33	33	33	Coast Live oak	Quercus agrifolia
no #	13.75	11	12	Purple leaf plum	*Prunus sp.*

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Appendix C: Tree Data Summary

Tag #	*Species (common)*	*Botanical*	*Height*	*Circumference (in)*	*Health*	*Heritage?*	*Suitability for Preservation*	*Construction Impacts*
1201	Magnolia, Southern	*Magnolia grandiflora*	40'	66, 53	2	Yes	Low	Grade conflict
1202	Magnolia, Southern	*Magnolia grandiflora*	25'	60	4	Yes	High	Grade conflict
1203	Magnolia, Southern	*Magnolia grandiflora*	40'	75	3	Yes	Moderate	Grade conflict
1204	Magnolia, Southern	*Magnolia grandiflora*	45'	57	3	Yes	Moderate	Grade conflict
1205	Liquidambar	*Liquidambar styracilflua*	45'	50	2	Yes	Moderate	Grade conflict
1206	Liquidambar	*Liquidambar styracilflua*	40'	47	2	Yes	Moderate	Building conflict
1207	Liquidambar	*Liquidambar styracilflua*	40'	41	3	No	Moderate	Building conflict
1208	Chinese Pistache	*Pistacia chinensis*	10'	13	4	No	Moderate	Building conflict
1209	Chinese Pistache	*Pistacia chinensis*	12'	16	4	No	Moderate	Building conflict
1210	Chinese Pistache	*Pistacia chinensis*	12'	19	4	No	Moderate	Building conflict
1211	Chinese Pistache	*Pistacia chinensis*	12'	16	3	No	Moderate	Building conflict
1212	Crape Myrtle	*Lagerstroemia indica*	15'	13	4	No	Moderate	Building conflict
1213	Crape Myrtle	*Lagerstroemia indica*	15'	13	4	No	Moderate	Building conflict
1214	Crape Myrtle	*Lagerstroemia indica*	15'	13	4	No	Moderate	Street conflict
1215	Chinese Pistache	*Pistacia chinensis*	12'	16	4	No	Moderate	Building conflict
1216	Hornbeam	*Carpinus betulus*	20'	16	4	No	Moderate	Sidewalk conflict

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1217	Chinese Pistache	*Pistacia chinensis*	12'	19	4	No	Moderate	Building conflict
1218	Chinese Pistache	*Pistacia chinensis*	10'	16	3	No	Moderate	Building conflict
1219	Chinese Pistache	*Pistacia chinensis*	15'	25	3	No	Moderate	Building conflict
1220	Chinese Pistache	*Pistacia chinensis*	15'	25	4	No	Moderate	Building conflict
1221	Sycamore	*Platanus x acerfolia*	35'	31	4	No	Moderate	Building conflict
1222	Sycamore	*Platanus x acerfolia*	35'	35	4	No	Moderate	Building conflict
1223	Sycamore	*Platanus x acerfolia*	35'	38	4	No	Moderate	Building conflict
1224	Sycamore	*Platanus x acerfolia*	35'	25	3	No	Moderate	Building conflict
1225	Sycamore	*Platanus x acerfolia*	30'	28	3	No	Moderate	Building conflict
1226	Eucalyptus, Lemon Gum	*Coryimbia citriodora*	95'	220	3	Yes	Moderate	Building conflict
1227	Eucalyptus, Lemon Gum	*Coryimbia citriodora*	95'	204	3	Yes	Moderate	Building conflict
1228	Eucalyptus, Lemon Gum	*Coryimbia citriodora*	95'	239	3	Yes	Moderate	Building conflict
1229	Eucalyptus, Lemon Gum	*Coryimbia citriodora*	70'	126	2	Yes	Low	Building conflict
1230	Eucalyptus, Peppermint Gum	*Coryimbia radiata*	30'	38, 35	3	No	Low	Building conflict
1231	Eucalyptus, Lemon Gum	*Coryimbia citriodora*	90'	97, 88	3	Yes	Moderate	Building conflict
1232	Liquidambar	*Liquidambar styracilflua*	40'	63	3	Yes	Moderate	Garage conflict
1233	Liquidambar	*Liquidambar styracilflua*	45'	57	3	Yes	Moderate	Garage conflict

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1234	Liquidambar	*Liquidambar styracilflua*	45'	53	2	Yes	Moderate	Garage conflict
1235	Magnolia, Southern	*Magnolia grandiflora*	25'	63	3	Yes	Moderate	Sidewalk conflict
1236	Purple leaf plum	*Prunus cerasifera*	10'	13	3	No	Moderate	Replace species
1237	Purple leaf plum	*Prunus cerasifera*	15'	28	3	No	Moderate	Replace species
1238	Purple leaf plum	*Prunus cerasifera*	15'	28	3	No	Moderate	Replace species
1239	Purple leaf plum	*Prunus cerasifera*	15'	28	3	No	Moderate	Replace species
1240	Purple leaf plum	*Prunus cerasifera*	15'	22	3	No	Moderate	Replace species
1241	Purple leaf plum	*Prunus cerasifera*	15'	28	3	No	Moderate	Replace species
1242	Purple leaf plum	*Prunus cerasifera*	15'	22	2	No	Moderate	Replace species
1243	Purple leaf plum	*Prunus cerasifera*	15'	22	2	No	Low	Replace species
1244	Purple leaf plum	*Prunus cerasifera*	15'	22	2	No	Low	Construction conflict
1245	Purple leaf plum	*Prunus cerasifera*	15'	28	3	No	Moderate	Construction conflict
1246	Purple leaf plum	*Prunus cerasifera*	15'	22	3	No	Moderate	Construction conflict
1247	Purple leaf plum	*Prunus cerasifera*	15'	28	3	No	Moderate	Construction conflict
1248	Purple leaf plum	*Prunus cerasifera*	15'	31	1	No	Low	Construction conflict
1249	Purple leaf plum	*Prunus cerasifera*	15'	31	1	No	Low	Construction conflict
1250	Purple leaf plum	*Prunus cerasifera*	15'	28	2	No	Moderate	Construction conflict
1251	Purple leaf plum	*Prunus cerasifera*	15'	28	2	No	Moderate	Construction conflict

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1252	Purple leaf plum	*Prunus cerasifera*	15'	31	2	No	Moderate	Construction conflict
1253	Purple leaf plum	*Prunus cerasifera*	15'	25	3	No	Moderate	Construction conflict
1254	Purple leaf plum	*Prunus cerasifera*	12'	22	2	No	Moderate	Construction conflict
1255	Purple leaf plum	*Prunus cerasifera*	12'	13	3	No	Moderate	Construction conflict
1256	Purple leaf plum	*Prunus cerasifera*	12'	9	3	No	Moderate	Construction conflict
1257	Purple leaf plum	*Prunus cerasifera*	12'	9	3	No	Moderate	Construction conflict
1258	Eucalyptus, Lemon Gum	*Corymbia citriodora*	95'	119	4	Yes	Moderate	Building conflict
1259	Eucalyptus, Lemon Gum	*Corymbia citriodora*	95'	135	4	Yes	Moderate	Building conflict
1260	Purple leaf plum	*Prunus cerasifera*	12'	13	3	No	Moderate	Construction conflict
1261	Purple leaf plum	*Prunus cerasifera*	15'	16	3	No	Moderate	Construction conflict
1262	Purple leaf plum	*Prunus cerasifera*	15'	22	4	No	Moderate	Replace species
1263	Purple leaf plum	*Prunus cerasifera*	15'	16	3	No	Moderate	Replace species
1264	Purple leaf plum	*Prunus cerasifera*	15'	16	3	No	Moderate	Replace species
1265	Purple leaf plum	*Prunus cerasifera*	15'	16	3	No	Moderate	Replace species
1266	Purple leaf plum	*Prunus cerasifera*	12'	9	2	No	Low	Replace species
1267	Oak, Valley	*Quercus lobata*	45'	50, 47, 41, 41	3	Yes	Moderate	Preserve
1268	Hornbeam	*Carpinus betulus*	15'	6.28	4	No	High	Building conflict
1269	Chinese Pistache	*Pistacia chinensis*	15'	15.70	3	No	High	Building conflict

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1270	Crape Myrtle	*Lagerstroemia indica*	25'	16, 13, 13, 13, 9, 9, 6	3	No	High	Building conflict
1271	Birch, European White	*Betula pendula*	35'	35	3	No	Moderate	Building conflict
1272	Birch, European White	*Betula pendula*	40'	35	3	No	Moderate	Building conflict
1273	Birch, European White	*Betula pendula*	30'	25	1	No	Poor	Building conflict
1274	Tulip Tree	*Liriodendron tulipifera*	55'	94	3	Yes	Moderate	Building conflict
1275	Crape Myrtle	*Lagerstroemia indica*	20'	9	3	No	High	Building conflict
1276	Liquidambar	*Liquidambar styracilflua*	25'	38	2	No	Low	Building conflict
1277	Chinese Pistache	*Pistacia chinensis*	15'	16	4	No	Moderate	Building conflict
1278	Chinese Pistache	*Pistacia chinensis*	15'	13	3	No	Moderate	Building conflict
1279	Sycamore	*Platanus x acerfolia*	30'	25	3	No	Moderate	Street conflict
1280	Sycamore	*Platanus x acerfolia*	30'	28	4	No	Moderate	Street conflict
1281	Sycamore	*Platanus x acerfolia*	30'	22	3	No	Moderate	Building conflict
1282	Chinese Pistache	*Pistacia chinensis*	15'	22	4	No	Moderate	Building conflict
1283	Chinese Pistache	*Pistacia chinensis*	15'	22	3	No	Moderate	Street conflict
1284	Chinese Pistache	*Pistacia chinensis*	15'	22	3	No	Moderate	Building conflict
1285	Chinese Pistache	*Pistacia chinensis*	15'	25	3	No	Moderate	Building conflict
1286	Sycamore	*Platanus x acerfolia*	35'	31	4	No	Moderate	Building conflict

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1287	Sycamore	*Platanus x acerfolia*	35'	38	4	No	Moderate	Building conflict
1288	Sycamore	*Platanus x acerfolia*	35'	31	4	No	Moderate	Building conflict
1289	Sycamore	*Platanus x acerfolia*	35'	31	4	No	Moderate	Building conflict
1290	Chinese Pistache	*Pistacia chinensis*	18'	25	3	No	Moderate	Building conflict
1291	Chinese Pistache	*Pistacia chinensis*	15'	19	3	No	Moderate	Building conflict
1292	Chinese Pistache	*Pistacia chinensis*	20'	25	3	No	Moderate	Building conflict
1293	Chinese Pistache	*Pistacia chinensis*	20'	22	4	No	Moderate	Building conflict
1294	Sycamore	*Platanus x acerfolia*	40'	35	4	No	Moderate	Building conflict
1295	Sycamore	*Platanus x acerfolia*	35'	25	3	No	Moderate	Building conflict
1296	Sycamore	*Platanus x acerfolia*	25'	19	3	No	Moderate	Building conflict
1297	Sycamore	*Platanus x acerfolia*	35'	28	3	No	Moderate	Building conflict
1298	Sycamore	*Platanus x acerfolia*	35'	28	3	No	Moderate	Building conflict
1299	Sycamore	*Platanus x acerfolia*	35'	28	3	No	Moderate	Building conflict
1300	Chinese Pistache	*Pistacia chinensis*	15'	19	3	No	Moderate	Building conflict
1301	Chinese Pistache	*Pistacia chinensis*	15'	16	3	No	Moderate	Building conflict
1302	Tulip Tree	*Lirodendron tulipifera*	75'	85	3	Yes	Moderate	Building conflict
1303	Tulip Tree	*Liriodendron tulipifera*	75'	66	3	Yes	Moderate	Building conflict
1304	Purple leaf plum	*Prunus cerasifera*	12'	22	3	No	Moderate	Replace species

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1305	Purple leaf plum	*Prunus cerasifera*	12'	22	3	No	Moderate	Replace species
1306	Purple leaf plum	*Prunus cerasifera*	12'	22	3	No	Moderate	Replace species
1307	Purple leaf plum	*Prunus cerasifera*	12'	25	3	No	Moderate	Replace species
1308	Purple leaf plum	*Prunus cerasifera*	12'	25	3	No	Moderate	Replace species
1309	Purple leaf plum	*Prunus cerasifera*	12'	16	3	No	Moderate	Replace species
1310	Purple leaf plum	*Prunus cerasifera*	12'	19	3	No	Moderate	Replace species
1311	Purple leaf plum	*Prunus cerasifera*	12'	25	2	No	Moderate	Sidewalk conflict
1312	Purple leaf plum	*Prunus cerasifera*	12'	19	2	No	Moderate	Sidewalk conflict
1313	Purple leaf plum	*Prunus cerasifera*	12'	16	3	No	Moderate	Sidewalk conflict
1314	Purple leaf plum	*Prunus cerasifera*	12'	16	3	No	Moderate	Sidewalk conflict
1315	Purple leaf plum	*Prunus cerasifera*	12'	19	3	No	Moderate	Sidewalk conflict
1316	Purple leaf plum	*Prunus cerasifera*	12'	16	3	No	Moderate	Sidewalk conflict
1317	Purple leaf plum	*Prunus cerasifera*	12'	25	3	No	Moderate	Sidewalk conflict
1318	Purple leaf plum	*Prunus cerasifera*	12'	25	3	No	Moderate	Sidewalk conflict
1319	Purple leaf plum	*Prunus cerasifera*	12'	25	3	No	Moderate	Sidewalk conflict
1320	Purple leaf plum	*Prunus cerasifera*	12'	19	3	No	Moderate	Sidewalk conflict
1321	Purple leaf plum	*Prunus cerasifera*	12'	22	3	No	Moderate	Sidewalk conflict
1322	Purple leaf plum	*Prunus cerasifera*	12'	19	3	No	Moderate	Sidewalk conflict

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1323	Purple leaf plum	*Prunus cerasifera*	12'	19	3	No	Moderate	Sidewalk conflict
1324	Purple leaf plum	*Prunus cerasifera*	12'	19	3	No	Moderate	Sidewalk conflict
1325	Purple leaf plum	*Prunus cerasifera*	12'	25	2	No	Moderate	Sidewalk conflict
1326	Purple leaf plum	*Prunus cerasifera*	12'	25	3	No	Moderate	Sidewalk conflict
1327	Purple leaf plum	*Prunus cerasifera*	12'	28	3	No	Moderate	Sidewalk conflict
1328	Purple leaf plum	*Prunus cerasifera*	12'	25	3	No	Moderate	Sidewalk conflict
1329	Purple leaf plum	*Prunus cerasifera*	12'	25	3	No	Moderate	Sidewalk conflict
1330	Purple leaf plum	*Prunus cerasifera*	12'	25	3	No	Moderate	Sidewalk conflict
1331	Purple leaf plum	*Prunus cerasifera*	12'	22	3	No	Moderate	Sidewalk conflict
1332	Purple leaf plum	*Prunus cerasifera*	12'	25	1	No	Low	Sidewalk conflict
1333	Purple leaf plum	*Prunus cerasifera*	12'	25	3	No	Moderate	Sidewalk conflict
1334	Purple leaf plum	*Prunus cerasifera*	12'	28	2	No	Moderate	Sidewalk conflict
1335	Purple leaf plum	*Prunus cerasifera*	12'	22	3	No	Moderate	Sidewalk conflict
1336	Purple leaf plum	*Prunus cerasifera*	12'	19	3	No	Moderate	Sidewalk conflict
1337	Purple leaf plum	*Prunus cerasifera*	12'	19	3	No	Moderate	Sidewalk conflict
1338	Purple leaf plum	*Prunus cerasifera*	12'	16	3	No	Moderate	Sidewalk conflict
1339	Purple leaf plum	*Prunus cerasifera*	12'	13	3	No	Moderate	Sidewalk conflict
1340	Purple leaf plum	*Prunus cerasifera*	12'	16	3	No	Moderate	Sidewalk conflict

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1341	Purple leaf plum	*Prunus cerasifera*	12'	25	2	No	Moderate	Sidewalk conflict
1342	Purple leaf plum	*Prunus cerasifera*	12'	22	3	No	Moderate	Sidewalk conflict
1343	Purple leaf plum	*Prunus cerasifera*	12'	22	3	No	Moderate	Sidewalk conflict
1344	Purple leaf plum	*Prunus cerasifera*	12'	22	3	No	Moderate	Sidewalk conflict
1345	Liquidambar	*Liquidambar styracilflua*	65'	60	3	Yes	High	Building conflict
1346	Liquidambar	*Liquidambar styracilflua*	65'	63	2	Yes	Moderate	Building conflict
1347	Liquidambar	*Liquidambar styracilflua*	70'	53	3	Yes	High	Street conflict
1348	Liquidambar	*Liquidambar styracilflua*	70'	53	3	Yes	High	Street conflict
1349	Liquidambar	*Liquidambar styracilflua*	70'	60	3	Yes	High	Street conflict
1350	Liquidambar	*Liquidambar styracilflua*	75'	47	3	Yes	High	Street conflict
1351	Liquidambar	*Liquidambar styracilflua*	75'	75	4	Yes	High	Building conflict
1352	Liquidambar	*Liquidambar styracilflua*	75'	50	3	Yes	High	Building conflict
1353	Liquidambar	*Liquidambar styracilflua*	75'	60	3	Yes	Moderate	Building conflict
1354	Liquidambar	*Liquidambar styracilflua*	75'	69	3	Yes	High	Building conflict
1355	Liquidambar	*Liquidambar styracilflua*	75'	79	3	Yes	High	Building conflict
1356	Liquidambar	*Liquidambar styracilflua*	70'	88	3	Yes	High	Building conflict
1357	Liquidambar	*Liquidambar styracilflua*	70'	38	3	No	Moderate	Building conflict
1358	Liquidambar	*Liquidambar styracilflua*	70'	66	3	Yes	Moderate	Building conflict

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1359	Liquidambar	*Liquidambar styracilflua*	70'	72	3	Yes	High	Building conflict
1360	Liquidambar	*Liquidambar styracilflua*	80'	88	3	Yes	High	Preserve
1361	Liquidambar	*Liquidambar styracilflua*	80'	79	3	Yes	Moderate	Preserve
1362	Magnolia, Southern	*Magnolia grandiflora*	45'	47	3	Yes	High	Preserve
1363	Magnolia, Southern	*Magnolia grandiflora*	45'	72	4	Yes	High	Preserve
1364	Chinese Pistache	*Pistacia chinensis*	12'	9	3	No	Moderate	Building conflict
1365	Chinese Pistache	*Pistacia chinensis*	15'	16	3	No	Moderate	Building conflict
1366	Chinese Pistache	*Pistacia chinensis*	15'	16	3	No	Moderate	Building conflict
1367	Liquidambar	*Liquidambar styracilflua*	50'	38	2	No	Moderate	Building conflict
1368	Liquidambar	*Liquidambar styracilflua*	50'	41	3	No	Moderate	Building conflict
1369	Crape Myrtle	*Lagerstroemia indica*	15'	13	3	No	High	Building conflict
1370	Crape Myrtle	*Lagerstroemia indica*	15'	13	3	No	Moderate	Building conflict
1371	Crape Myrtle	*Lagerstroemia indica*	18'	16	3	No	High	Building conflict
1372	Magnolia, Southern	*Magnolia grandiflora*	25'	22	3	No	High	Building conflict
1373	Crape Myrtle	*Lagerstroemia indica*	18'	16	3	No	High	Building conflict
1374	Crape Myrtle	*Lagerstroemia indica*	18'	16	3	No	High	Building conflict
1375	Crape Myrtle	*Lagerstroemia indica*	18'	16	3	No	High	Building conflict
1376	Chinese Pistache	*Pistacia chinensis*	15'	19	3	No	High	Building conflict

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1377	Hornbeam	*Carpinus betulus*	20'	6	4	No	High	Building conflict
1378	Sycamore	*Platanus x acerfolia*	20'	16	3	No	Moderate	Building conflict
1379	Sycamore	*Platanus x acerfolia*	25'	16	3	No	Moderate	Building conflict
1380	Sycamore	*Platanus x acerfolia*	20'	13	3	No	Moderate	Building conflict
1381	Sycamore	*Platanus x acerfolia*	35'	22	3	No	Moderate	Building conflict
1382	Sycamore	*Platanus x acerfolia*	30'	16	3	No	Moderate	Building conflict
1383	Sycamore	*Platanus x acerfolia*	25'	19	3	No	Moderate	Building conflict
1384	Chinese Pistache	*Pistacia chinensis*	12'	19	3	No	High	Building conflict
1385	Hornbeam	*Carpinus betulus*	20'	13	4	No	High	Building conflict
1386	Purple leaf plum	*Prunus cerasifera*	7'	3	4	No	High	Building conflict
1387	Purple leaf plum	*Prunus cerasifera*	7'	6	4	No	High	Building conflict
1388	Purple leaf plum	*Prunus cerasifera*	7'	6	4	No	High	Building conflict
1389	Purple leaf plum	*Prunus cerasifera*	7'	6	4	No	High	Building conflict
1390	Purple leaf plum	*Prunus cerasifera*	10'	9	4	No	High	Building conflict
1391	Hornbeam	*Carpinus betulus*	35'	25	4	No	High	Building conflict
1392	Podocarpus	*Podocarpus macrophyllus*	15'	9	2	No	Low	Building conflict
1393	Podocarpus	*Podocarpus macrophyllus*	20'	25	2	No	Low	Building conflict
1394	Podocarpus	*Podocarpus macrophyllus*	20'	19	2	No	Low	Building conflict

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1398	Podocarpus	*Podocarpus macrophyllus*	12'	16, 13	3	No	Moderate	Building conflict
1396	Birch, European White	*Betula pendula*	30'	38	3	No	Moderate	Building conflict
1397	Birch, European White	*Betula pendula*	30'	28	3	No	Moderate	Building conflict
1398	Birch, European White	*Betula pendula*	25'	19, 9	2	No	Moderate	Building conflict
1399	Chinese Pistache	*Pistacia chinensis*	12'	16	3	No	Moderate	Building conflict
1400	Chinese Pistache	*Pistacia chinensis*	15'	13	3	No	Moderate	Building conflict
1401	Hornbeam	*Carpinus betulus*	18'	13	4	No	High	Building conflict
1402	Crape Myrtle	*Lagerstroemia indica*	14'	13	4	No	Moderate	Building conflict
1403	Crape Myrtle	*Lagerstroemia indica*	15'	16	4	No	Moderate	Building conflict
1404	Chinese Pistache	*Pistacia chinensis*	15'	19	3	No	Moderate	Building conflict
1405	Chinese Pistache	*Pistacia chinensis*	15'	16	3	No	Moderate	Building conflict
1406	Chinese Pistache	*Pistacia chinensis*	15'	16	3	No	High	Building conflict
1407	Chinese Pistache	*Pistacia chinensis*	15'	16	3	No	High	Building conflict
1408	Chinese Pistache	*Pistacia chinensis*	15'	19	3	No	Moderate	Building conflict
1409	Chinese Pistache	*Pistacia chinensis*	15'	16	3	No	High	Building conflict
1410	Chinese Pistache	*Pistacia chinensis*	15'	13	3	No	High	Building conflict
1411	Chinese Pistache	*Pistacia chinensis*	18'	22	3	No	High	Building conflict
1412	Crape Myrtle	*Lagerstroemia indica*	15'	16	4	No	Moderate	Building conflict

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1413	Crape Myrtle	*Lagerstroemia indica*	15'	16	4	No	Moderate	Building conflict
1414	Crape Myrtle	*Lagerstroemia indica*	15'	16	4	No	Moderate	Building conflict
1415	Crape Myrtle	*Lagerstroemia indica*	15'	13	4	No	Moderate	Building conflict
1416	Crape Myrtle	*Lagerstroemia indica*	15'	16	4	No	High	Building conflict
1417	Crape Myrtle	*Lagerstroemia indica*	15'	16	4	No	High	Building conflict
1418	Crape Myrtle	*Lagerstroemia indica*	10'	6	3	No	High	Building conflict
1419	Crape Myrtle	*Lagerstroemia indica*	10'	6	3	No	High	Building conflict
1420	Crape Myrtle	*Lagerstroemia indica*	10'	6	3	No	High	Building conflict
1421	Crape Myrtle	*Lagerstroemia indica*	12'	9	3	No	High	Building conflict
1422	Crape Myrtle	*Lagerstroemia indica*	10'	9	3	No	High	Building conflict
1423	Crape Myrtle	*Lagerstroemia indica*	12'	13	3	No	High	Building conflict
1424	Crape Myrtle	*Lagerstroemia indica*	12'	16	4	No	High	Building conflict
1425	Chinese Pistache	*Pistacia chinensis*	8'	9	3	No	Moderate	Building conflict
1426	Chinese Pistache	*Pistacia chinensis*	10'	9	3	No	Moderate	Building conflict
1427	Magnolia, Southern	*Magnolia grandiflora*	25'	38	2	No	Moderate	Sidewalk conflict
1428	Magnolia, Southern	*Magnolia grandiflora*	35'	60	3	Yes	High	Street conflict
1429	Magnolia, Southern	*Magnolia grandiflora*	35'	79	2	Yes	Moderate	Building conflict
1430	Magnolia, Southern	*Magnolia grandiflora*	40'	60	3	Yes	Moderate	Building conflict

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1431	Magnolia, Southern	*Magnolia grandiflora*	40'	85	3	Yes	High	Sidewalk conflict
1432	Magnolia, Southern	*Magnolia grandiflora*	40'	75	2	Yes	Moderate	Preserve
1433	Magnolia, Southern	*Magnolia grandiflora*	35'	63	3	Yes	High	Grade conflict
1434	Liquidambar	*Liquidambar styracilflua*	60'	66	3	Yes	Moderate	Building conflict
1435	Liquidambar	*Liquidambar styracilflua*	35'	38	2	No	Moderate	Dead
1436	Magnolia, Southern	*Magnolia grandiflora*	18'	13	3	No	High	Grade conflict
1437	Magnolia, Southern	*Magnolia grandiflora*	15'	9	3	No	High	Grade conflict
1438	Magnolia, Southern	*Magnolia grandiflora*	25'	35	2	No	Moderate	Grade conflict
no #	Purple leaf plum	*Prunus cerasifera*	12'	16	2	No	High	Building conflict
747	Oak, Coast live	*Quercus agrifolia*	33'	79	2	Yes	Moderate	Preserve
no #	Purple leaf plum	*Prunus cerasifera*	12'	16.00	2	No	High	Building conflict

APPENDIX C

ROCKRIDGE GEOTECHNICAL

Prepared for **Prometheus Real Estate Group, Inc.**

PRELIMINARY GEOTECHNICAL INVESTIGATION
TO SUPPORT DUE DILIGENCE EVALUATION
675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

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September 11, 2017
Project No. 17-1365

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ROCKRIDGE GEOTECHNICAL

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APPENDIX A

Figures A-1 to A-7	Cone Penetration Test Results CPT-1 through CPT-7

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ROCKRIDGE GEOTECHNICAL

PRELIMINARY GEOTECHNICAL INVESTIGATION
TO SUPPORT DUE DILIGENCE EVALUATION
675 AND 685 EAST MIDDLEFIELD ROAD
Mountain View, California

1.0 INTRODUCTION

This report presents the results of the preliminary geotechnical investigation performed by Rockridge Geotechnical, Inc. (Rockridge) for the due diligence evaluation of the property at 675 and 685 East Middlefield Road in Mountain View, California. The subject site is located on the western corner of the intersection of East Middlefield Road and Ferguson Drive, as shown on the Site Location Map (Figure 1).

The subject property is an irregularly shaped parcel that encompasses an area of approximately 10.6 acres. It is bordered by East Middlefield Road to the northeast, Ferguson Drive to the south, a vacant lot to the southwest, and the Southern Pacific Railroad easement to the northwest. The site is currently occupied by two office buildings, which are both two stories high and founded at-grade. Asphalt-paved parking lots and driveways are present around the existing buildings.

We understand Prometheus Real Estate Group, Inc. is evaluating whether to acquire and redevelop the subject property. Schematic development plans are not currently available, but we understand the development may consist of a podium-type building with three levels of reinforced concrete and five stories of wood-frame construction above. Two subterranean levels are also being considered and may be incorporated during design development.

2.0 SCOPE OF SERVICES

Our preliminary investigation was performed in accordance with our proposal dated July 28, 2017. The purpose of our preliminary investigation was to evaluate whether there are any adverse geotechnical or geological conditions that may affect site development. Our scope of work consisted of evaluating subsurface conditions at the site by reviewing published geological

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maps, performing seven cone penetration tests (CPTs), and performing engineering analyses to develop preliminary conclusions and recommendations regarding:

- the most appropriate foundation type(s) for the proposed building
- preliminary design criteria for the recommended foundation type(s)
- estimates of foundation settlement
- options for excavation shoring and dewatering systems
- lateral earth pressures for basement wall design
- site seismicity and seismic hazards, including the potential for liquefaction and liquefaction-induced ground failure
- 2016 California Building Code (CBC) site class and design spectral response acceleration parameters
- construction considerations.

3.0 FIELD INVESTIGATION

Subsurface conditions at the site were investigated by advancing seven CPTs. Prior to advancing the CPTs, we contacted Underground Service Alert (USA) to notify them of our work, as required by law. We also retained Precision Locating, LLC, a private utility locator, to check the CPT locations for the presence of underground utilities.

Seven CPTs were advance on August 19, 2017 by Gregg Drilling and Testing of Martinez, California at the approximate locations shown on the Site Plan, Figure 2. The CPTs, designated as CPT-1 through CPT-7 were performed to provide in-situ soil data. The CPTs were each advanced to a depth of about 44-1/2 feet below the existing ground surface (bgs).

The CPTs were performed by hydraulically pushing a 1.7-inch-diameter cone-tipped probe with a projected area of 15 square centimeters into the ground using a 30-ton truck rig. The cone-tipped probe measured tip resistance and the friction sleeve behind the cone tip measured frictional resistance. Electrical strain gauges within the cone continuously measured soil parameters for the entire depth advanced. Soil data, including tip resistance, frictional resistance, and pore water pressure, were recorded by a computer while the test was conducted. Accumulated data were processed by computer to provide engineering information such as the

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soil behavior types, approximate strength characteristics, and the liquefaction potential of the soil encountered. The CPT logs, showing tip resistance, friction ratio, and pore water pressure by depth, as well as correlated soil behavior type (Robertson, 2010), are presented in Appendix A Figures A-1 through A-7. Groundwater was measured in all CPTs and the depth of groundwater and measurement method is noted on the CPT logs. Upon completion, the CPT holes were backfilled with cement grout and the pavement was patched with cold-mix asphalt.

4.0 SUBSURFACE CONDITIONS

A regional geologic map prepared by Graymer (2006), a portion of which is presented on Figure 3, indicates the site is underlain by Holocene-age alluvium (Qha). Alluvial deposits generally consist of a mixture of fine-grained and coarse-grained deposits that are interbedded.

The results of our CPTs indicate the alluvium primarily consists of medium stiff to very stiff fine-grained deposits with interbedded layers of medium dense to very dense granular deposits to the maximum depth explored of about 44-1/2 feet bgs. The upper 19 to 37 feet of soil primarily consists of stiff to very stiff, moderately compressible fine-grained deposits with occasional zones of medium stiff clay. The granular layers were encountered between depths of 19 to 37 feet bgs. The thickness of granular layers encountered at this site varied in thickness from 1 to greater than 8 feet. Interbedded within the granular layers, a medium stiff, moderately compressible layer was encountered in CPTs between approximately 30 and 36 feet bgs.

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4.1 Groundwater

Groundwater level measurements were taken in the CPTs by performing several pore pressure dissipation tests. Pore pressure dissipation tests were performed in sand layers at 5 of the 7 CPT locations to provide an estimated static groundwater level; the results of the dissipation tests are presented in Table 1.

TABLE 1
Pore Pressure Dissipation Results

CPT Designation	Depth Pore Pressure Dissipation Test Performed At (feet bgs)	Depth to Groundwater (feet bgs)
CPT-1	34.8	17.2
CPT-2	21.3	19.0
CPT-3	32.5	20.5
CPT-5	39.2	19.1
CPT-7	28.9	19.2

At this time, no site survey was available to estimate the elevations of the measured groundwater levels. The groundwater level at the site is expected to fluctuate several feet seasonally with potentially larger fluctuations annually, depending on the amount of rainfall.

To estimate the highest potential groundwater level at the site, we reviewed information on the State of California Water Resources Control Board GeoTracker website (http://geotracker.waterboards.ca.gov/). The closest site with substantial historic groundwater data on the GeoTracker website is at 690 East Middlefield Road, located immediately to the northeast of the site. A groundwater monitoring report prepared by Stantec Consulting Services, Inc. for this site presents quarterly to annual groundwater level readings from monitoring wells from January 1999 to April 2014 (Stantec, 2014). The datum for the monitoring wells at the 690 East Middlefield Road is mean sea level and the conversion to the site datum is unknown. The highest groundwater levels were measured between approximately Elevation 49.5 and 52.6 feet (Mean Sea Level) on April 21, 1999. The groundwater level fluctuated about 4 feet over the 15-year monitoring period.

Because the depth to groundwater significantly impacts the design and construction of the proposed structures, we recommend installing at least one monitoring well at the property during the final investigation to allow monitoring of the groundwater level. For preliminary design, we recommend a design groundwater level of 14 feet bgs be used.

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5.0 SEISMIC CONSIDERATIONS

The San Francisco Bay Area is considered to be one of the more seismically active regions in the world. We evaluated the potential for earthquake-induced geologic hazards including ground shaking, ground surface rupture, liquefaction,[1] lateral spreading,[2] cyclic densification[3]. The results of our evaluation regarding seismic considerations for the project site are presented in the following sections.

5.1 Regional Seismicity and Faulting

The major active faults in the area are the San Andreas, Hayward, and San Gregorio faults. These and other faults of the region are shown on Figure 4. The fault systems in the Bay Area consist of several major right-lateral strike-slip faults that define the boundary zone between the Pacific and the North American tectonic plates. Numerous damaging earthquakes have occurred along these fault systems in recorded time. For these and other active faults within a 50-kilometer radius of the site, the distance from the site and estimated mean characteristic moment magnitude[4] [Working Group on California Earthquake Probabilities (WGCEP, 2008) and Cao et al. (2003)] are summarized in Table 2.

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[1] Liquefaction is a phenomenon where loose, saturated, cohesionless soil experiences temporary reduction in strength during cyclic loading such as that produced by earthquakes.

[2] Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon reaching mobilization, the surficial blocks are transported downslope or in the direction of a free face by earthquake and gravitational forces.

[3] Cyclic densification is a phenomenon in which non-saturated, cohesionless soil is compacted by earthquake vibrations, causing ground-surface settlement.

[4] Moment magnitude is an energy-based scale and provides a physically meaningful measure of the size of a faulting event. Moment magnitude is directly related to average slip and fault rupture area.

TABLE 2
Regional Faults and Seismicity

Fault Segment	Approximate Distance from Site (km)	Direction from Site	Mean Characteristic Moment Magnitude
Monte Vista-Shannon	8.1	Southwest	6.5
N. San Andreas - Peninsula	13	Southwest	7.2
N. San Andreas (1906 event)	13	Southwest	8.1
Total Hayward	18	Northeast	7.0
Total Hayward-Rodgers Creek	18	Northeast	7.3
Total Calaveras	22	East	7.0
N. San Andreas - Santa Cruz	25	South	7.1
San Gregorio Connected	32	West	7.5
Zayante-Vergeles	35	South	7.0
Mount Diablo Thrust	43	Northeast	6.7
Greenville Connected	46	Northeast	7.0

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In the past 200 years, four major earthquakes (i.e., Magnitude > 6) have been recorded on the San Andreas Fault. In 1836, an earthquake with an estimated maximum intensity of VII on the Modified Mercalli (MM) Intensity Scale occurred east of Monterey Bay on the San Andreas Fault (Toppozada and Borchardt, 1998). The estimated moment magnitude, Mw, for this earthquake is about 6.25. In 1838, an earthquake occurred on the Peninsula segment of the San Andreas Fault. Severe shaking occurred with an MM of about VIII-IX, corresponding to an Mw of about 7.5. The San Francisco Earthquake of 1906 caused the most significant damage in the history of the Bay Area in terms of loss of lives and property damage. This earthquake created a surface rupture along the San Andreas Fault from Shelter Cove to San Juan Bautista approximately 470 kilometers in length. It had a maximum intensity of XI (MM), an Mw of about 7.9, and was felt 560 kilometers away in Oregon, Nevada, and Los Angeles. The most

recent earthquake to affect the Bay Area was the Loma Prieta Earthquake of October 17, 1989 with an M_w of 6.9. This earthquake occurred in the Santa Cruz Mountains about 42 kilometers southwest of the site.

In 1868, an earthquake with an estimated maximum intensity of X on the MM scale occurred on the southern segment (between San Leandro and Fremont) of the Hayward Fault. The estimated Mw for the earthquake is 7.0. In 1861, an earthquake of unknown magnitude (probably an Mw of about 6.5) was reported on the Calaveras Fault. The most recent significant earthquake on this fault was the 1984 Morgan Hill earthquake (Mw = 6.2).

The U.S. Geological Survey's 2014 Working Group on California Earthquake Probabilities has compiled the earthquake fault research for the San Francisco Bay area in order to estimate the probability of fault segment rupture. They have determined that the overall probability of moment magnitude 6.7 or greater earthquake occurring in the San Francisco Bay Region during the next 30 years (starting from 2014) is 72 percent. The highest probabilities are assigned to the Hayward Fault, Calaveras Fault, and the northern segment of the San Andreas Fault. These probabilities are 14.3, 7.4, and 6.4 percent, respectively.

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5.2 Seismic Hazards

During a major earthquake on a segment of one of the nearby faults, strong to very strong ground shaking is expected to occur at the project site. Strong shaking during an earthquake can result in ground failure such as that associated with soil liquefaction, lateral spreading, and cyclic densification. We used the results of the CPTs to evaluate the potential of these phenomena occurring at the project site.

5.2.1 Ground Shaking

The ground shaking intensity felt at the project site will depend on: 1) the size of the earthquake (magnitude), 2) the distance from the site to the fault source, 3) the directivity (focusing of earthquake energy along the fault in the direction of the rupture), and 4) site-specific soil conditions. The site is less than 10 kilometers from the Monte Vista-Shannon Fault and is less than 20 kilometers from the San Andreas and Hayward faults. Therefore, the potential exists for

a large earthquake to induce strong to very strong ground shaking at the site during the life of the project.

5.2.2 Liquefaction and Associated Hazards

When a saturated, cohesionless soil liquefies, it experiences a temporary loss of shear strength created by a transient rise in excess pore pressure generated by strong ground motion. Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. Flow failure, lateral spreading, differential settlement, loss of bearing strength, ground fissures and sand boils are evidence of excess pore pressure generation and liquefaction.

As shown on Figure 5, the site is within a liquefaction hazard zone, defined by the map titled *State of California, Seismic Hazard Zones, Mountain View Quadrangle, Official Map,* prepared by the California Geological Survey (CGS), dated October 18, 2006.

Liquefaction susceptibility was assessed using the software CLiq v2.1.6.11 (GeoLogismiki, 2016). CLiq uses measured field CPT data and assesses liquefaction potential, including post-earthquake vertical settlement, given a user-defined earthquake magnitude and peak ground acceleration (PGA). Our liquefaction analyses were performed using the methodology proposed by Boulanger and Idriss (2014). We also used the relationship proposed by Zhang, et al (2002) to estimate post-liquefaction volumetric strains and corresponding ground surface settlement; a relationship that is an extension of the work by Ishihara and Yoshimine (1992).

Our preliminary analyses were performed using an assumed "during earthquake" groundwater depth of 14 feet bgs. In accordance with the 2016 California Building Code (CBC), we used a peak ground acceleration of 0.52 times gravity (g) in our liquefaction evaluation; this peak ground acceleration is consistent with the Maximum Considered Earthquake Geometric Mean (MCE_G) peak ground acceleration adjusted for site effects (PGA_M). We also used a moment magnitude 8.0 earthquake, which is consistent with the mean characteristic moment magnitude for the Northern San Andreas Fault (1906 rupture), as presented in Table 2.

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The results of our liquefaction analyses indicate there are interbedded thin, discontinuous layers of potentially liquefiable soil underlying the site, which is typical for younger alluvial deposits in this area. Our liquefaction analyses indicate there are soil layers between depths of 15 and 42 feet bgs that are susceptible to liquefaction during a major earthquake. In general, the potentially liquefiable layers are about 1 to 2 feet thick.

In CPT-2, two approximately two-foot-thick layers of potentially liquefiable soil were encountered at depths of about 22 and 26 feet bgs and a layer that is less than one foot thick was encountered at a depth of 29 feet bgs. In CPT-3, an approximately two-foot-thick layer of potentially liquefiable soil was encountered between approximately 18 and 20 feet bgs. In other CPTs, the thickness of interbedded potentially liquefiable soil was less than two feet thick.

Based on the results of our analyses, we estimate total and differential settlements associated with liquefaction after an MCE event will be on the order of 1/2 to 3/4 inch across the site with about 1/2 inch differential settlement over a horizontal distance of 30 feet. This settlement estimate represent free-field ground surface settlement resulting from liquefaction at depth. Where the bottom of the below-grade level is near the top of the liquefiable layer, there is a potential for additional foundation settlement due to bearing failure and/or punching shear following a major earthquake. We recommend additional exploration to better determine the extent of the potentially liquefiable layers be performed during the final geotechnical investigation.

Ishihara (1985) presented empirical relationship that provides criteria that can be used to evaluate whether liquefaction-induced ground failure, such as sand boils, would be expected to occur under a given level of shaking for a liquefiable layer of given thickness overlain by a resistant, or protective, surficial layer. Our analysis indicates the non-liquefiable soil overlying the potentially liquefiable soil layers is sufficiently thick and the uppermost potentially liquefiable layers are sufficiently thin such that the potential for surface manifestations of liquefaction, such as sand boils, are low.

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Considering the relatively flat site grades and the absence of a free face in the site topography, as well as the depth and discontinuous nature of the potentially liquefiable layers, we conclude the risk of lateral spreading is very low.

5.2.3 Cyclic Densification

Cyclic densification (also referred to as differential compaction) of non-saturated sand (sand above groundwater table) can occur during an earthquake, resulting in settlement of the ground surface and overlying improvements. The CPTs indicate the soil above the groundwater at the site consists of cohesive fine-grained material, which is not susceptible to cyclic densification due to its relatively high fines content and cohesion. Therefore, we conclude the potential for cyclic densification at the site is low.

5.2.4 Fault Rupture

Historically, ground surface displacements closely follow the trace of geologically young faults. The site is not within an Earthquake Fault Zone, as defined by the Alquist-Priolo Earthquake Fault Zoning Act, and no known active or potentially active faults exist on the site. We therefore conclude the risk of fault offset at the site from a known active fault is very low. In a seismically active area, the remote possibility exists for future faulting in areas where no faults previously existed; however, we conclude the risk of surface faulting and consequent secondary ground failure from previously unknown faults is also very low.

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6.0 PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our preliminary geotechnical investigation, we conclude there are no major geotechnical issues that would preclude development of the site as proposed. The primary geotechnical issues affecting the proposed development include:

- providing adequate foundation support for the proposed building;
- the potential for 1/2 to 3/4 inch of liquefaction-induced settlement throughout most of the site;
- a design groundwater depth above the proposed building foundation and excavation depth; and
- providing suitable lateral support and dewatering for the proposed excavations, while minimizing impacts to the surrounding improvements

Our preliminary conclusions and recommendations regarding these issues are presented in the following sections.

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6.1 Groundwater Level

Based on the existing and historical groundwater level data presented in Section 4.1, we conclude a design groundwater depth of 14 feet bgs should be used for preliminary design. Basement walls, building foundations, and mat/floor slabs extending below the design groundwater level should be waterproofed and designed to resist hydrostatic pressures. During construction, excavation dewatering will be necessary to construct the below-grade portions of the building where the excavation extends below the groundwater table.

6.2 Foundation Support and Settlement

The native soil encountered in our CPTs is generally over-consolidated and capable of supporting the new buildings on shallow foundations without excessive settlement under static loads. However, depending on the depth, size, and loading on new foundations, the stresses in thin soil layers may exceed the maximum past pressure (or pre-consolidation pressure) of these deposits, resulting in a new cycle of virgin consolidation. Virgin consolidation results in much higher settlements than recompression and takes much longer to occur. Based on our

preliminary settlement analyses using assumed building loads, we conclude the proposed building with two subterranean levels will likely not exceed the maximum past pressure of the native soil deposits.

Because groundwater is relatively shallow, the proposed building two-level below grade building will need to be fully waterproofed and designed for hydrostatic pressures. From a design and constructability standpoint, it is generally easier to detail the waterproofing system beneath a mat foundation, rather than isolated spread footings with a structural floor slab.

We performed preliminary settlement analyses using the CPT data and assumed structural loads. Our preliminary settlement analyses indicate total settlements of a mat foundation under static load conditions, assuming an average contact pressure of about 600 psf, will be about 1/2 to 1 inch for the two levels below-grade configuration. We anticipate most of the settlement will occur during construction. The amount of differential settlement between columns will be a function of the mat stiffness and hence its ability to spread the loads between columns, however, we expect the mats can be designed to limit differential settlements to about 1/2 inch in 30 feet. As discussed above in Section 5.2.2, there is the potential for liquefaction-induced settlement on the order of 1/2 to 3/4 inch with approximately 1/2 inch of differential settlement over a horizontal distance of 30 feet that may occur following a major earthquake. We conclude a mat foundation can likely be designed to accommodate the anticipated differential settlements and the potential loss of bearing strength resulting from the potentially liquefiable deposits encountered below the planned bottom of foundation.

A building founded two levels below grade may not have sufficient weight to resist the hydrostatic pressures with adequate factor of safety, and therefore, soil anchors (i.e., tiedowns) may need to be installed to resist uplift forces. The structural engineer should evaluate the uplift forces on the building using the design high water level presented wherein to determine if uplift elements will be required. The costs associated with tiedown anchors will likely be controlled by the required spacing of the elements, rather than the allowable capacity of the anchors. We recommend the approximate number of required uplift elements be evaluated by the structural

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engineer during preliminary design so that the costs of the anchors can be accounted for early in the design process.

For preliminary design of a mat foundation, we recommend using allowable bearing pressures of 3,000 psf for dead-plus-live loads and 4,000 psf for total loads (including seismic and wind loads. To develop adequate mat rigidity, we preliminary recommend the mat be designed for dead-plus-live-load conditions using a modulus of vertical subgrade reaction of 20 pounds per cubic inch (pci). This value has been corrected to take into account the mat width and may be increased by 50 percent for total load conditions. This value has been reduced to account for the size of the mat/equivalent footings (therefore, this is not k_{v1} for 1-foot-square plate). Once a structural engineer evaluates the initial distribution of bearing stress on the bottom of the mat and the corresponding deflections, we can review the distributions and revise the coefficients of subgrade reaction, if appropriate. The modulus may be re-evaluated or reduced depending on the final building configuration and the results of the final geotechnical investigation.

6.3 Basement Walls

Basement walls should be designed to resist static lateral earth pressures, lateral pressures caused by earthquakes, and traffic loads (if vehicular traffic is expected within 10 feet of the wall). We preliminarily recommend the permanent below-grade walls be designed for the more critical of the following criteria:

- At-rest equivalent fluid weight of 60 pcf above the design groundwater table and 90 pcf below.
- Active pressure of 40 pcf plus a seismic increment of 20 pcf (triangular distribution) above the design groundwater level, and 80 pcf plus a seismic increment of 9 pcf (triangular distribution) below the groundwater level.

The recommended pressures above are based on a level backfill condition with no additional surcharge loads. Where the permanent wall will be subject to vehicular loading within 10 feet of the wall, an additional uniform lateral pressure of 50 psf applied to the upper 10 feet of the wall.

The above design pressures for the basement walls above the groundwater table assume that water does not accumulate behind the walls. To protect against moisture migration, below-grade

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walls should be waterproofed and water stops should be placed at all construction joints. Considering the potential for water infiltration from the ground surface or perched water at the site, we recommend prefabricated drainage panels be placed behind the basement walls. To facilitate movement of groundwater around the buildings, we recommend the drainage panels extend to the design groundwater table. If backfill is required behind basement walls, the walls should be braced, or hand compaction equipment used, to prevent unacceptable surcharges on walls (as determined by the structural engineer).

6.4 Temporary Cut Slopes and Shoring

We estimate construction of the two-level below-grade building will require an excavation bottomed roughly 28 feet below grade. The soil to be excavated would consist of predominantly clay with some sand, which can be excavated using conventional earth-moving equipment such as loaders and backhoes.

Excavations that will be deeper than five feet and will be entered by workers should be sloped or shored in accordance with CAL-OSHA standards (29 CFR Part 1926). The shoring engineer should be responsible for shoring design. The contractor should be responsible for the construction and safety of temporary slopes.

We judge that temporary slope cuts in the native soil above the groundwater table inclined no steeper than 1:1 (horizontal:vertical) will be stable provided that they are not surcharged by equipment or building material. Below groundwater (assumed as a depth of 14 feet), we recommend inclinations of temporary cuts not exceed 1.5:1, assuming the groundwater has been lowered below the bottom of the excavation.

If there is insufficient space to slope the excavation sides, installation of shoring will be required. We believe the most suitable and economical shoring system would consist of a conventional soldier-pile-and-lagging shoring system. A soldier-pile-and-lagging system typically consists of steel H-beams (soldier piles) extending below the bottom of the excavation. The soldier piles can be vibrated in place, assuming there are no improvements sensitive to vibrations with 25 feet of the excavation, or placed in predrilled holes extending below the bottom of excavation. Wood

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lagging is placed between the piles as the excavation proceeds. Because the proposed excavation depth is greater than 12 feet, we judge cantilevered shoring systems are not cost effective – therefore, tiebacks or internal bracing will be required. Where tieback anchors extend below the public sidewalk and street, encroachment agreements with the City of Mountain View may be required. If encroachment agreements cannot be obtained or prove cost-prohibitive, the shoring systems may be internally braced.

As an alternative to soldier beams and lagging, soil-cement mixing (SMX), also called deep soil mixing (DSM), is a viable option for creating a continuous shoring wall that supports the excavation, as well as provides a hydraulic barrier when properly constructed. SMX columns are installed by injecting and blending cement into the soil using a drill rig equipped with single or multiple augers/paddles, or a specialized proprietary cutterhead. The soil is mixed with the binder material(s) in situ, forming continuous, overlapping, soil-cement columns or a continuous wall of uniform thickness. Steel beams are placed in the soil-cement columns to provide rigidity. The SMX system, in combination with steel soldier beams and tiebacks, serves to shore the excavation as well as cut off lateral groundwater flow, thus reducing the amount of dewatering required from within the excavation. Soil-cement walls are considered temporary and permanent building walls are built inside of the soil-cement walls following application of drainage panels and waterproofing.

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6.5 Temporary Dewatering

During excavation, the groundwater will need to be lowered to a depth of at least three feet below the bottom of the planned excavation and maintained at that level until sufficient weight is available to resist the hydrostatic uplift forces on the bottom of the foundation. The groundwater depth at the site is currently below the proposed excavation depth. We believe it would be prudent to monitor the groundwater level during the design phase and after the final geotechnical investigation to both determine whether the design groundwater depth of 14 feet bgs is reasonable and to allow measurement of the groundwater depth prior to construction to evaluate whether temporary dewatering will be necessary during construction.

If a conventional soldier pile-and-lagging system is selected for excavation shoring, we conclude the dewatering system will need to include perimeter wells installed outside the excavation. However, a combination of active and passive approaches will likely be required to adequately manage water in the excavation during construction, especially around localized depressions, such as those for elevator pits or underslab vaults. A perimeter dewatering system may temporarily lower the groundwater level outside the site, which could result in ground settlement.

To significantly reduce the amount of required dewatering, a continuous cut-off wall type shoring system may be used in conjunction with an internal passive dewatering system operating within the excavation footprint. Such a system would also reduce the potential for ground settlement outside the excavation footprint.

Variables which significantly influence the performance of the dewatering system and the quantity of water produced include the number of wells, the depth and positioning of the wells, the interval over which each well is screened, and the rate at which each well is pumped. The contractor should be responsible for the design, construction, operation, maintenance, and removal of any system that is implemented to control the inflow of surface water and groundwater. Disposal of water from construction dewatering also must be planned carefully. Because of regulatory requirements, discharging pumped groundwater directly into nearby drainages or storm drain systems may require permits from the regulatory agencies having jurisdiction over the project. Groundwater should be tested prior to disposal for substances that are of an environmental concern. If encountered during construction, this water will require special handling. Options that the contractor may use for disposal of pumped groundwater should be identified and evaluated during design. If groundwater treatment and discharge will be costly, a low-permeability shoring system, such as a continuous soil-mix wall, should be considered.

The design and proper implementation of the excavation dewatering system should be the responsibility of the contractor. Dewatering permits should also be the responsibility of the

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contractor. The system should be capable of drawing the water level down at least three feet below the bottom of excavation during construction.

To facilitate the collection of groundwater at discrete extraction well and sump locations, we recommend over-excavating by at least 12 inches below the design bottom-of-mat and installing a minimum 12-inch-thick continuous layer of clean 3/4-inch drain rock. The drainage layer will help protect the soil subgrade, which will be sensitive to disturbance from construction equipment, as well as provide a means for water to flow to the extraction points, reducing the potential for hydrostatic pressure to prematurely build up beneath the mat. The construction dewatering system must be capable of maintaining the groundwater level below the foundation subgrade until sufficient building weight is available to resist the hydrostatic uplift pressure, at which time the groundwater may be allowed to rise to its normal elevation. The project structural engineer should determine when the temporary dewatering system can be turned off.

6.6 Seismic Design

We understand the proposed buildings will be designed using the seismic provisions in the 2016 CBC. For design in accordance with the 2016 CBC, we recommend Site Class D be used. The latitude and longitude of the site are 37.3931° and -122.0512°, respectively. Hence, in accordance with the 2016 CBC, we recommend the following:

- S_S = 1.500g, S_1 = 0.600g
- S_{MS} = 1.500g, S_{M1} = 0.900g
- S_{DS} = 1.000g, S_{D1} = 0.600g
- Seismic Design Category D for Risk Categories I, II, and III.

7.0 FUTURE GEOTECHNICAL STUDY AND LIMITATIONS

The preliminary conclusions and recommendations presented within the report are based on a preliminary field investigation and not intended for final design. Prior to final design, we should be retained to provide a final geotechnical report based on a supplemental field investigation. Borings will be required to further evaluate the subsurface conditions beneath the site and

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develop final foundation design recommendations. Once our final report has been completed, the design team has selected a foundation system, and prior to construction, we should review the project plans and specifications to check their conformance with the intent of our final recommendations. During construction, we should observe site preparation, foundation installation, and the placement and compaction of fill. These observations will allow us to compare the actual with the anticipated soil conditions and to check if the contractor's work conforms with the geotechnical aspects of the plans and specifications.

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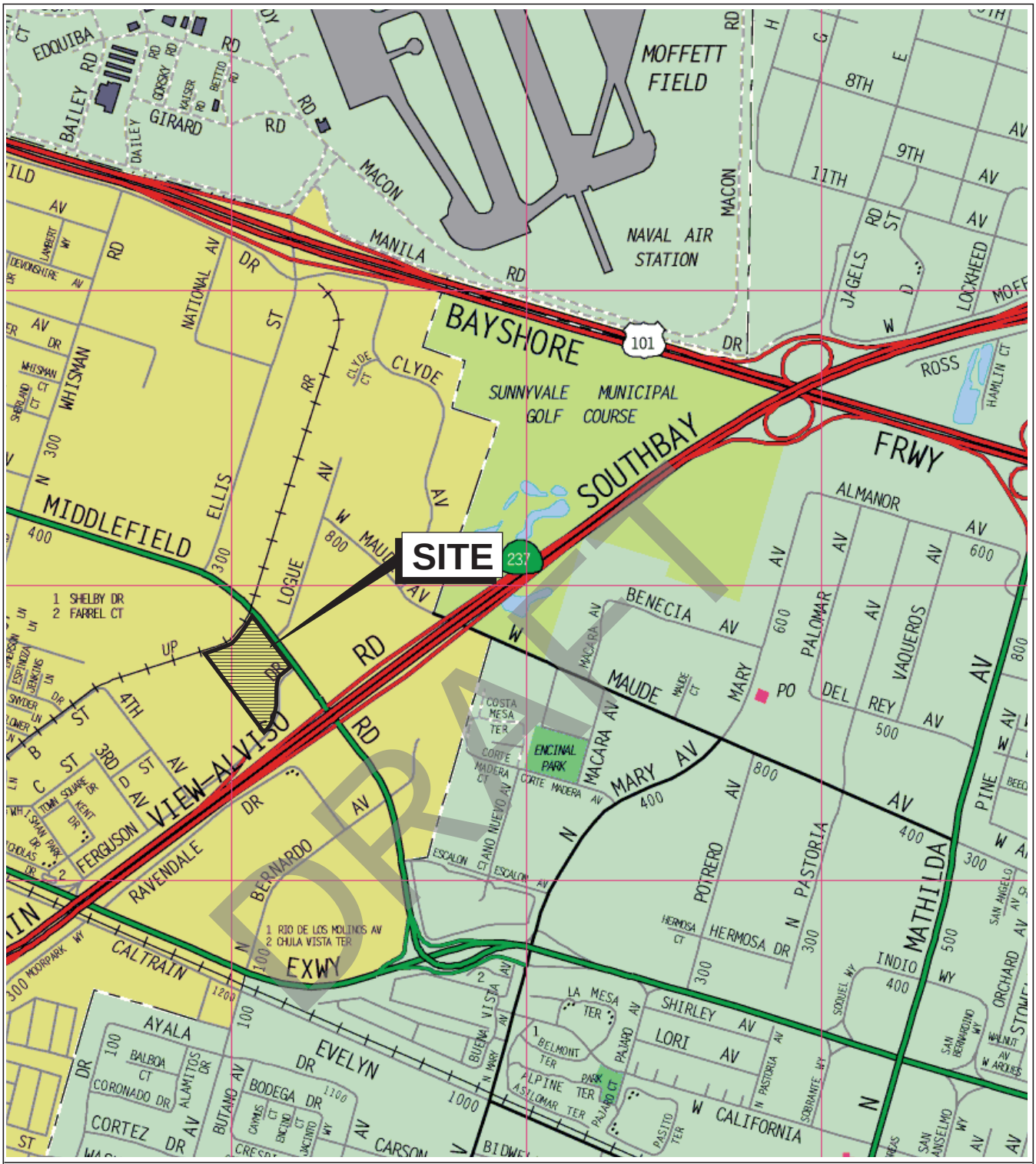
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FIGURES

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Base map: The Thomas Guide
Santa Clara County
2002

0 1/4 1/2 Mile

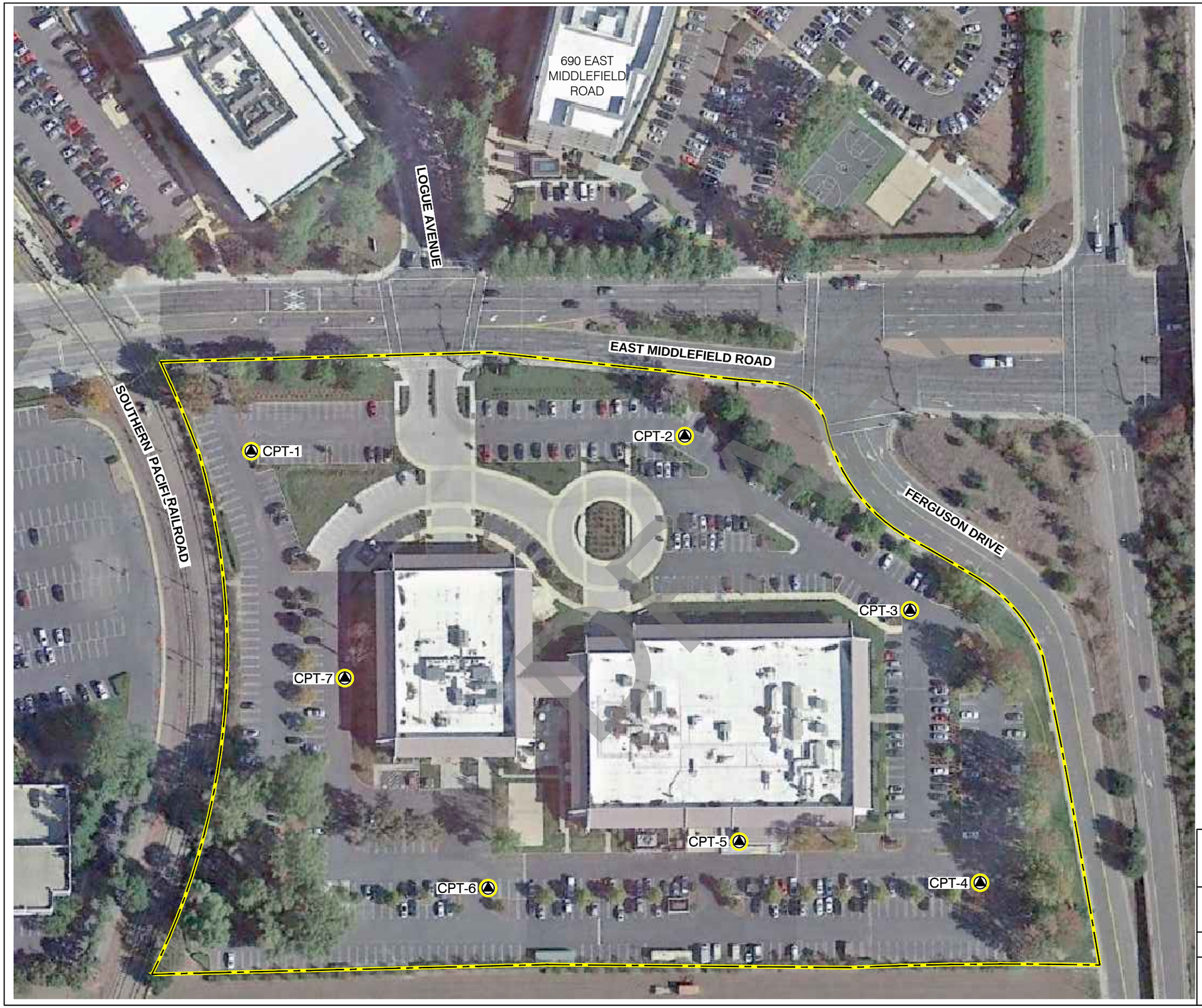
Approximate scale

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

SITE LOCATION MAP

ROCKRIDGE GEOTECHNICAL

Date 09/11/17	Project No. 17-1365	Figure 1



EXPLANATION

CPT-1 — Approximate location of cone penetration test by Rockridge Geotechnical Inc., August 4, 2017

Approximate parcel limits

0 100 Feet

Approximate scale

Base map: Google Earth, 2017.

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

SITE PLAN

Date 09/11/17	Project No. 17-1365	Figure 2

ROCKRIDGE GEOTECHNICAL



Base map: Google Earth with U.S. Geological Survey (USGS), Santa Clara County, 2016.

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EXPLANATION

af	**Artificial Fill**
Qhym	**Mud deposits (late Holocene)**
Qha	**Alluvium (Holocene)**
	Geologic contact: dashed where approximate and dotted where concealed, queried where uncertin

0 4000 8000 Feet

Approximate scale

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

REGIONAL GEOLOGIC MAP

ROCKRIDGE GEOTECHNICAL

Date 08/30/17	Project No. 17-1365	Figure 3



Base Map: U.S. Geological Survey (USGS), National Seismic Hazards Maps - Fault Sources, 2008.

EXPLANATION

- Strike slip
- Thrust (Reverse)
- Normal

N

0 5 10 Miles

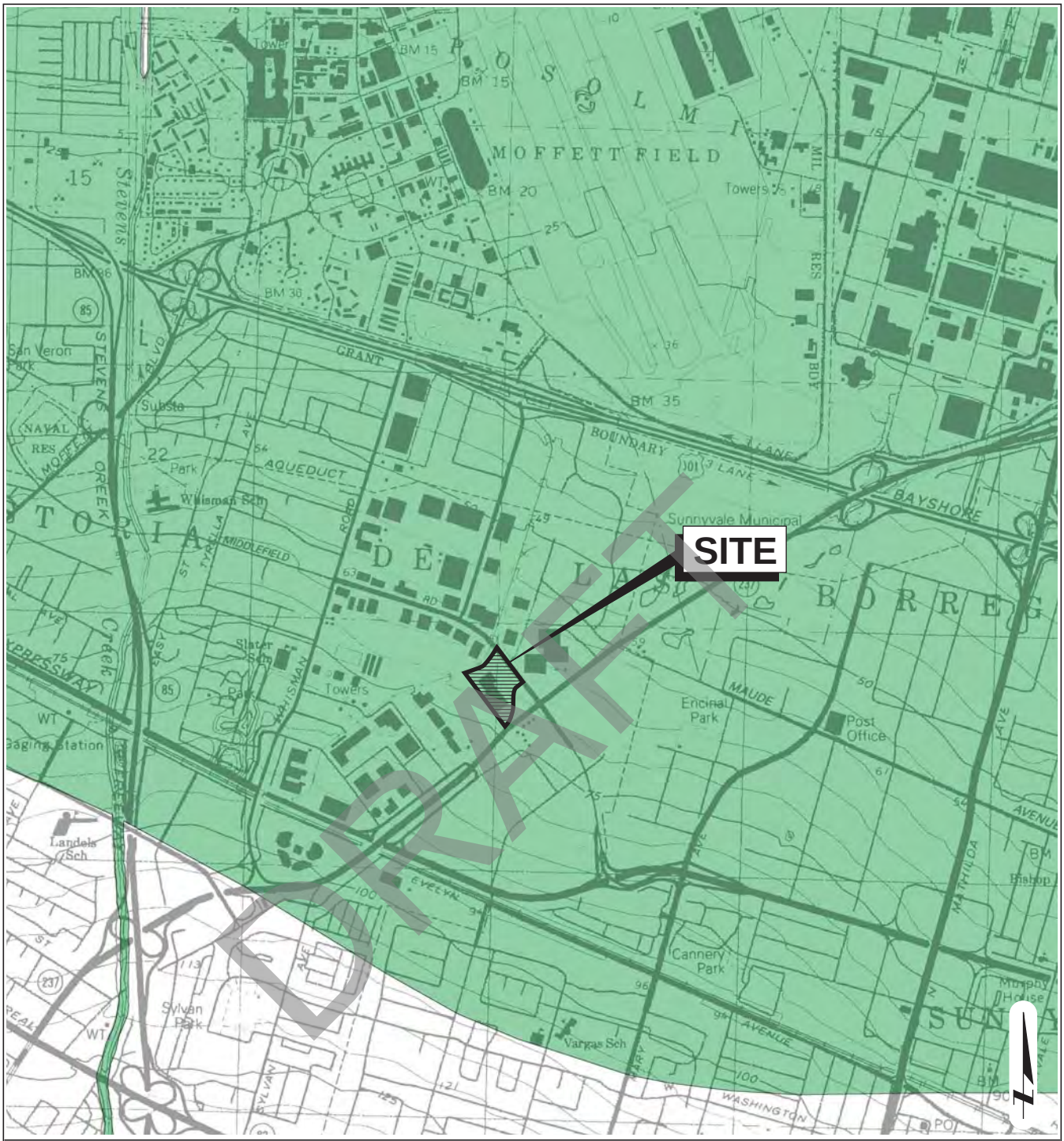
Approximate scale

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

REGIONAL FAULT MAP

ROCKRIDGE GEOTECHNICAL

Date 09/11/17	Project No. 17-1365	Figure 4



0 2000 4000 Feet

Approximate scale

EXPLANATION

Liquefaction; Areas where historic occurence of liquefaction, or local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacements.

Reference:
State of California "Seismic Hazard Zones"
Mountain View Quadrangle.
Released on October 18, 2006

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

SEISMIC HAZARDS ZONE MAP

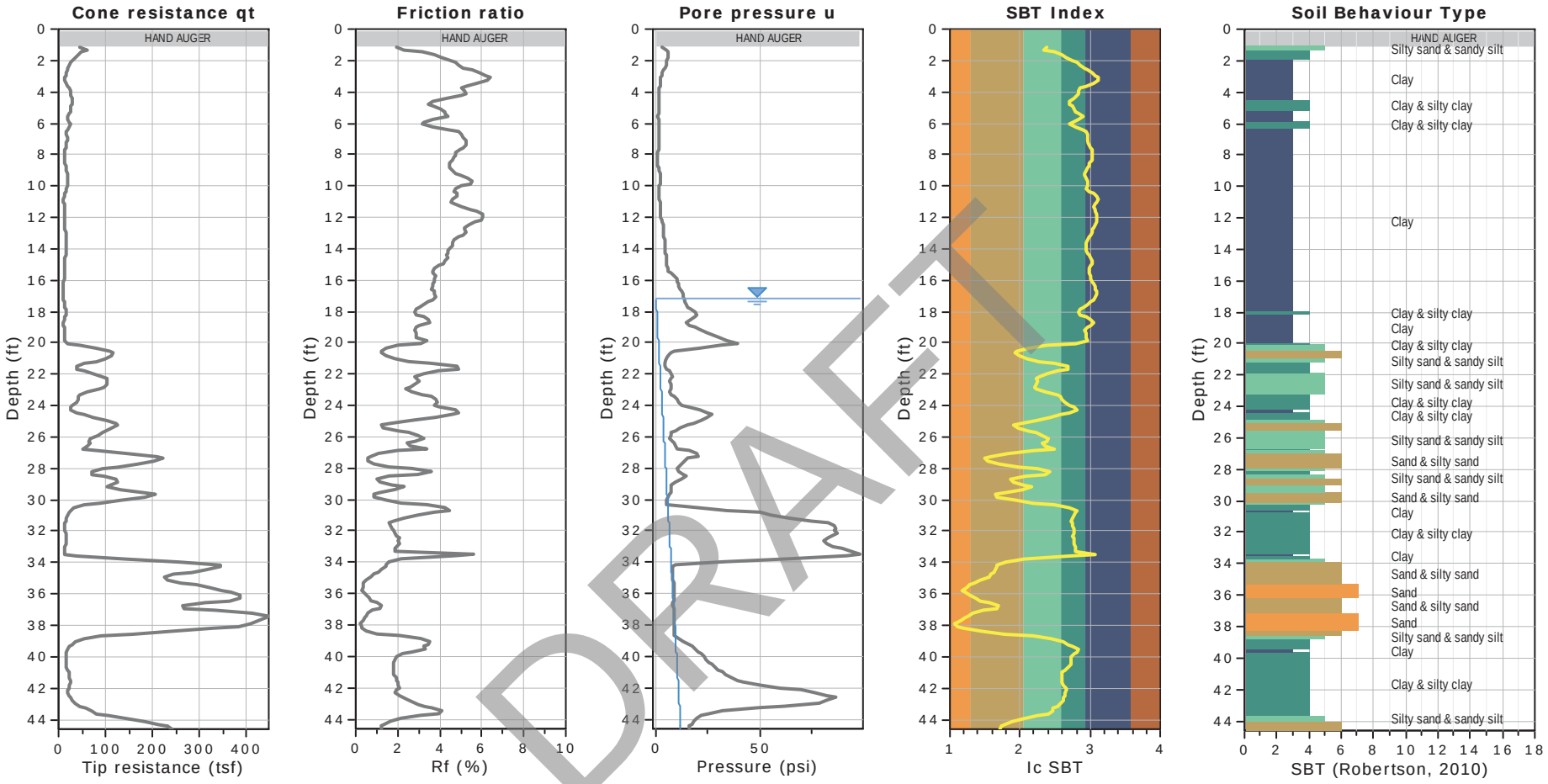
ROCKRIDGE GEOTECHNICAL

Date 09/11/17	Project No. 17-1365	Figure 5

ROCKRIDGE GEOTECHNICAL

APPENDIX A
Cone Penetration Test Results

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SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

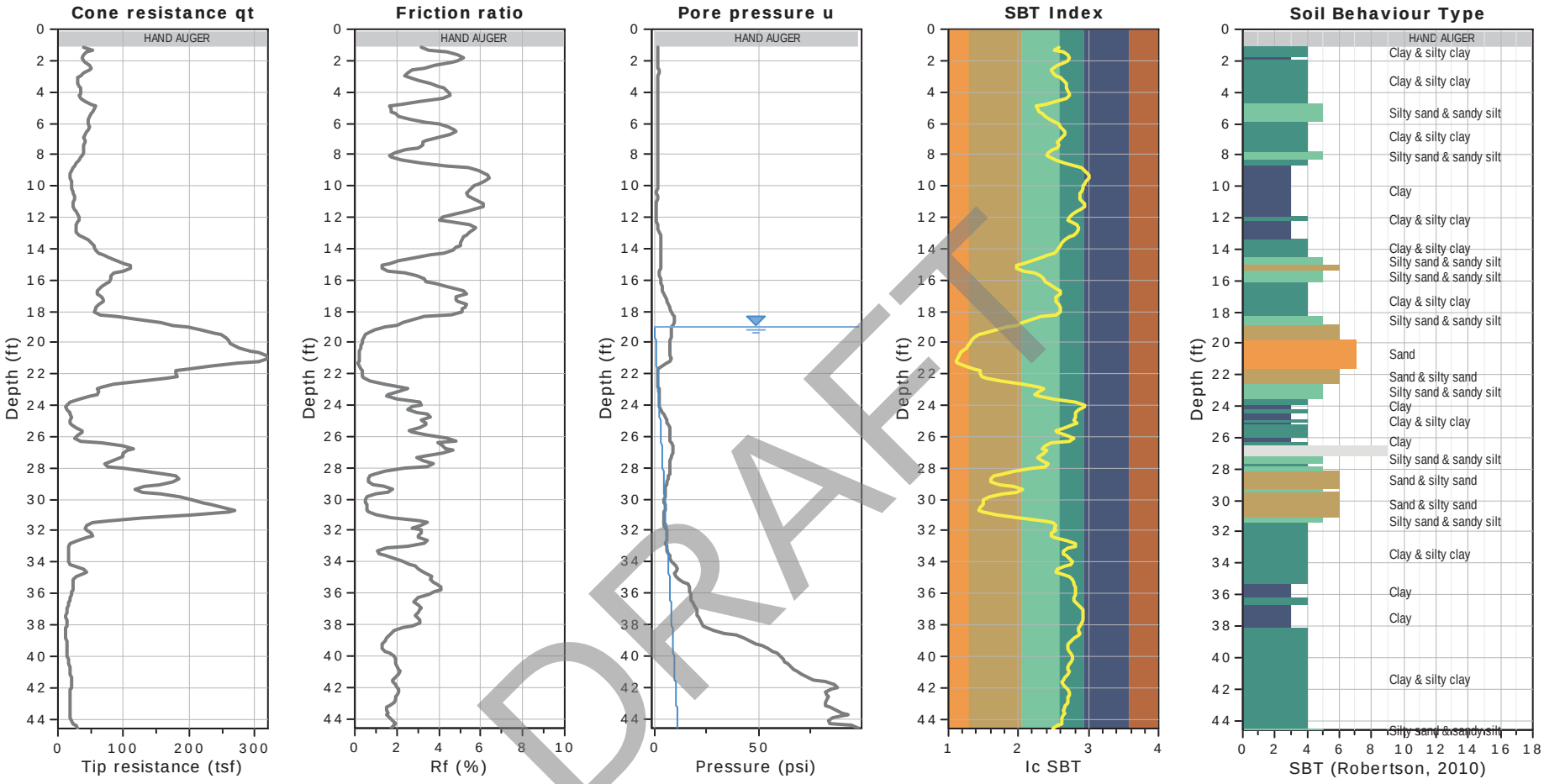
Total depth: 44.62 ft, Date: 8/19/2017
Measured Groundwater Depth: 17.2 feet (pore pressure dissipation test)
Cone Operator: Gregg Drilling & Testing

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-1

Date 09/11/17	Project No. 17-1365	Figure A-1



DRAFT

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

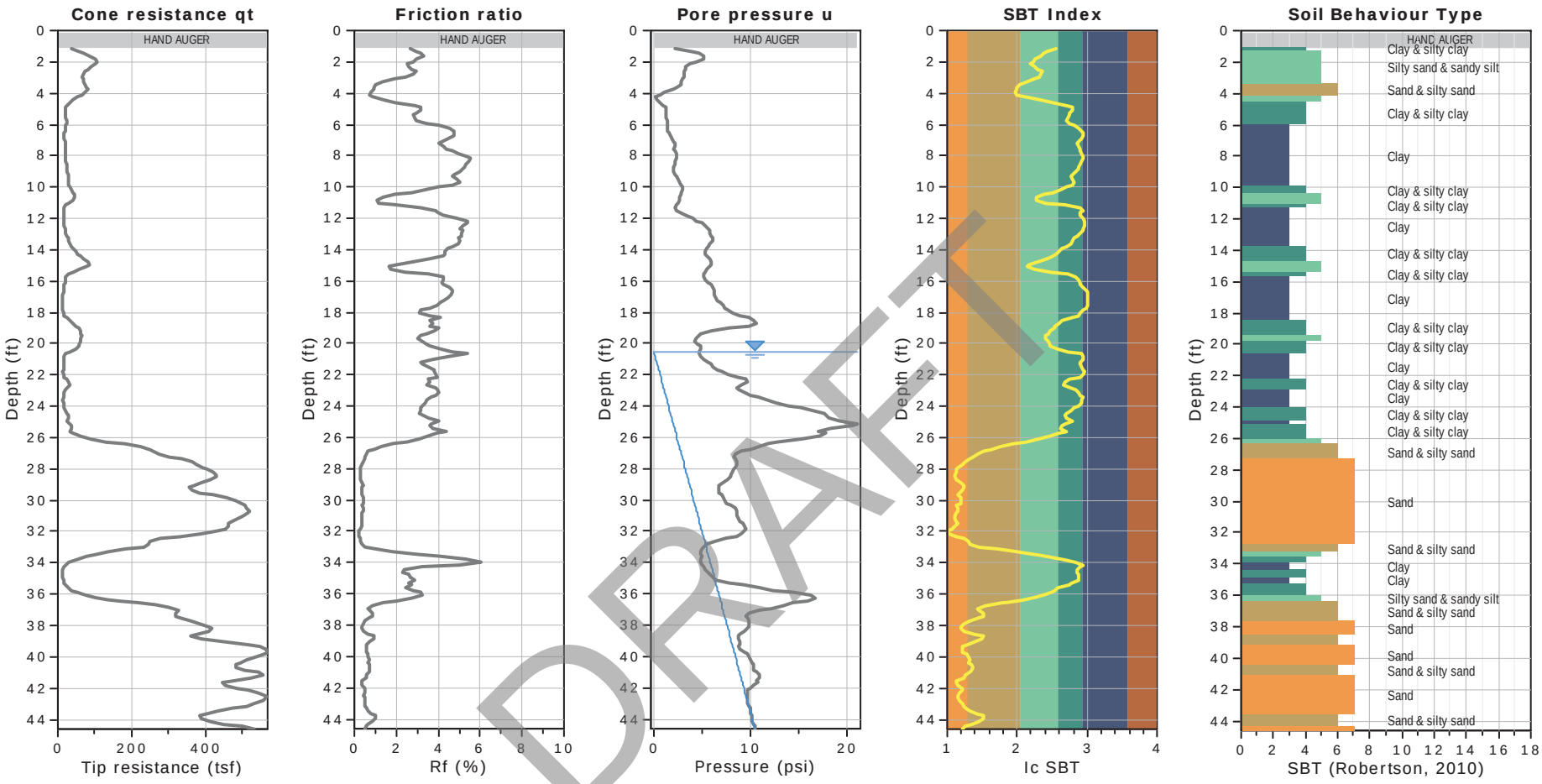
Total depth: 44.62 ft, Date: 8/19/2017
Measured Groundwater Depth: 19.0 feet (pore pressure dissipation test)
Cone Operator: Gregg Drilling & Testing

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-2

Date 09/11/17	Project No. 17-1365	Figure A-2



SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

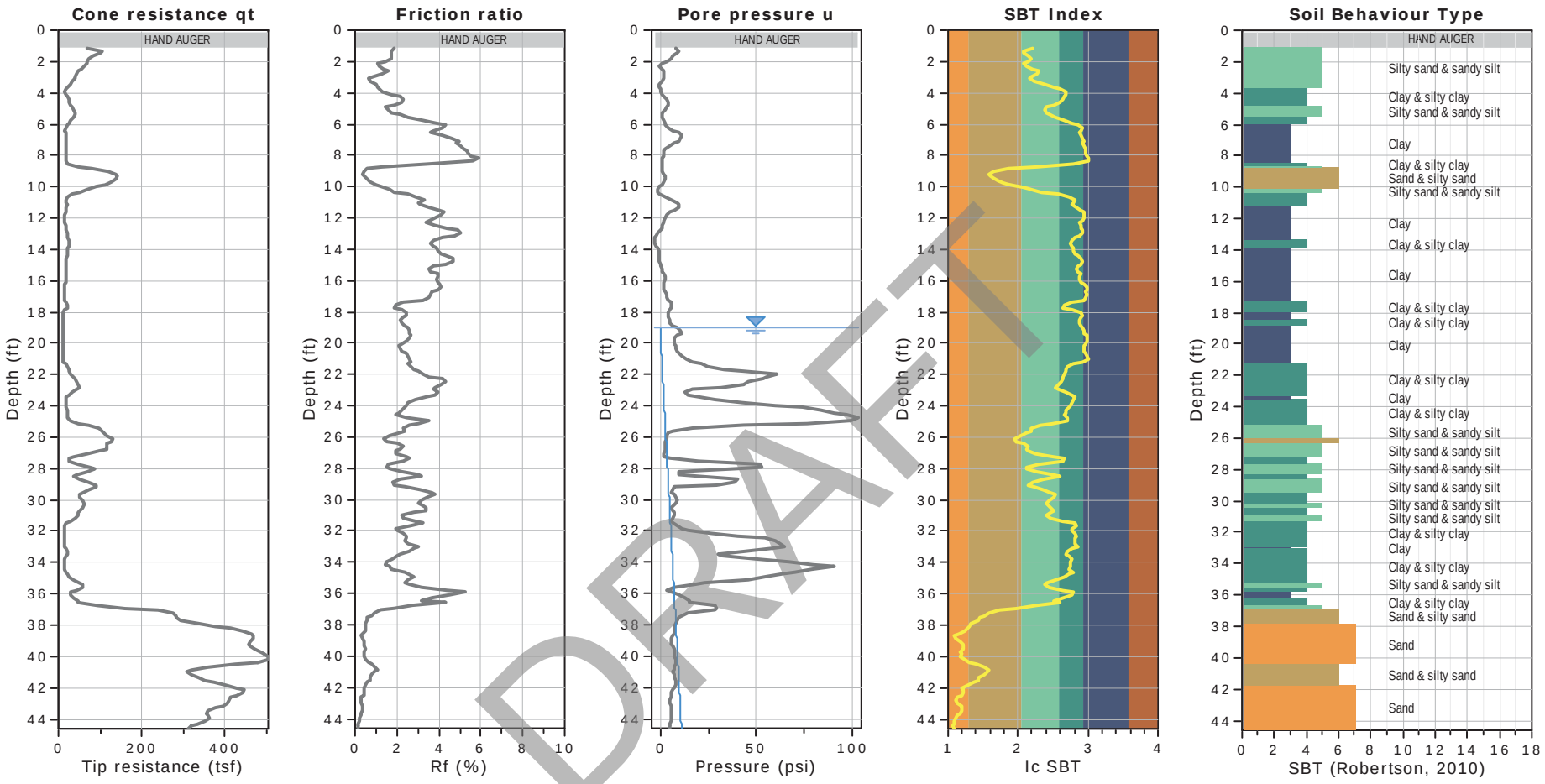
Total depth: 44.62 ft, Date: 8/19/2017
Measured Groundwater Depth: 20.5 feet (pore pressure dissipation test)
Cone Operator: Gregg Drilling & Testing

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-3

Date 09/11/17	Project No. 17-1365	Figure A-3



DRAFT

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

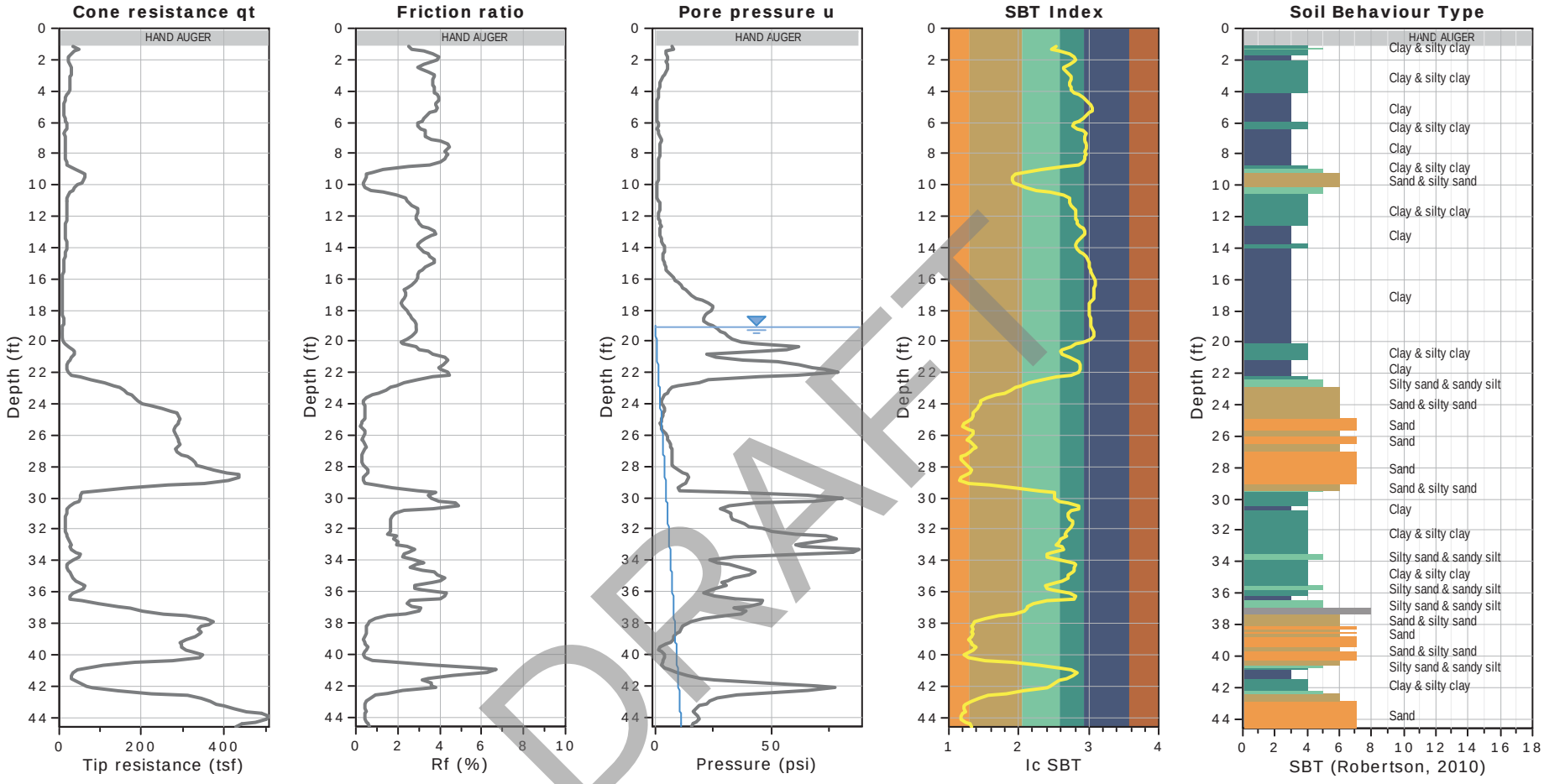
Total depth: 44.62 ft, Date: 8/19/2017
Assumed Groundwater Depth: 19.0 feet
Cone Operator: Gregg Drilling & Testing

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-4

Date 09/11/17	Project No. 17-1365	Figure A-4



DRAFT

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

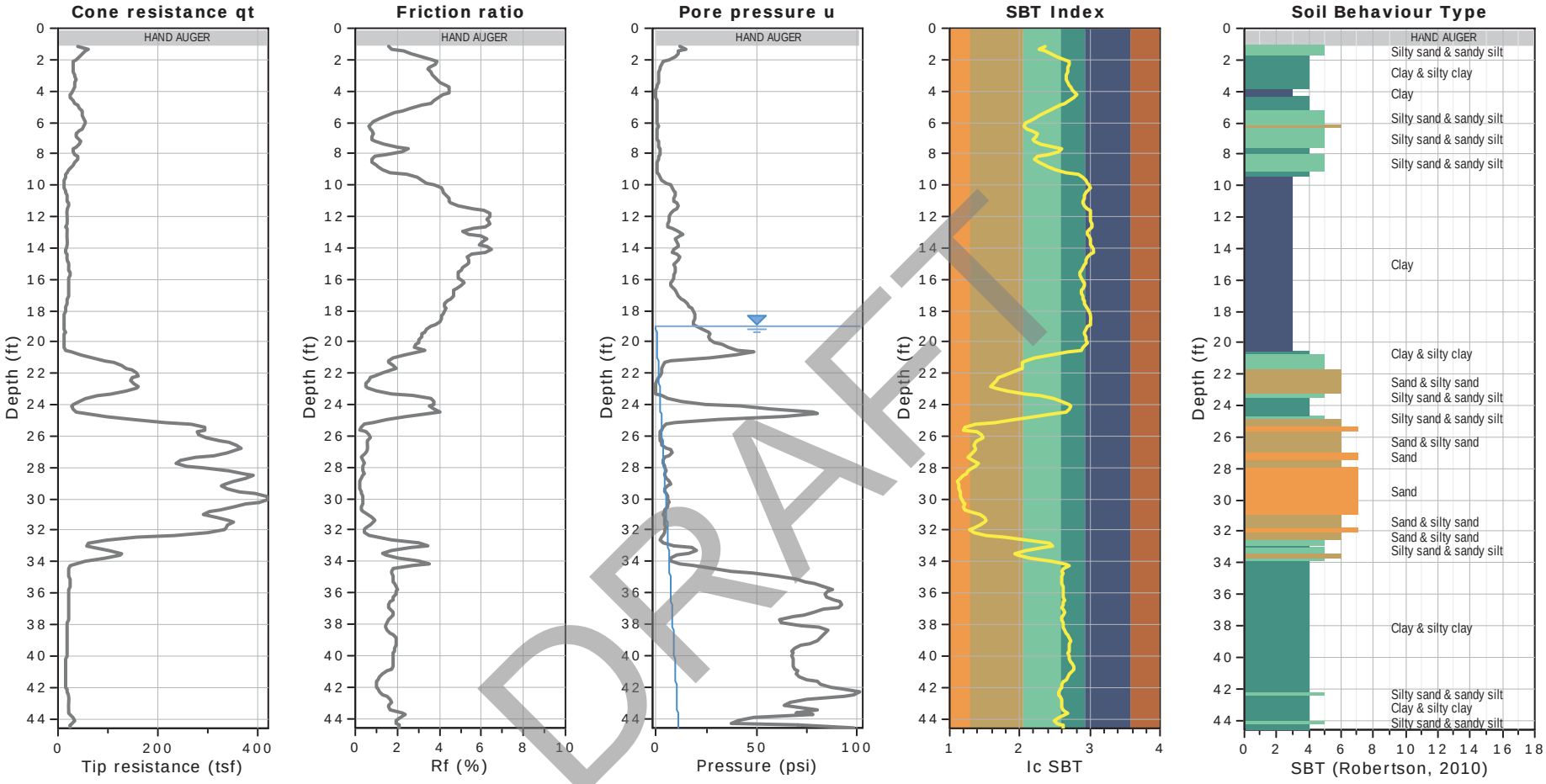
Total depth: 44.62 ft, Date: 8/19/2017
Measured Groundwater Depth: 19.1 feet (pore pressure dissipation test)
Cone Operator: Gregg Drilling & Testing

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-5

Date 09/11/17	Project No. 17-1365	Figure A-5



DRAFT

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

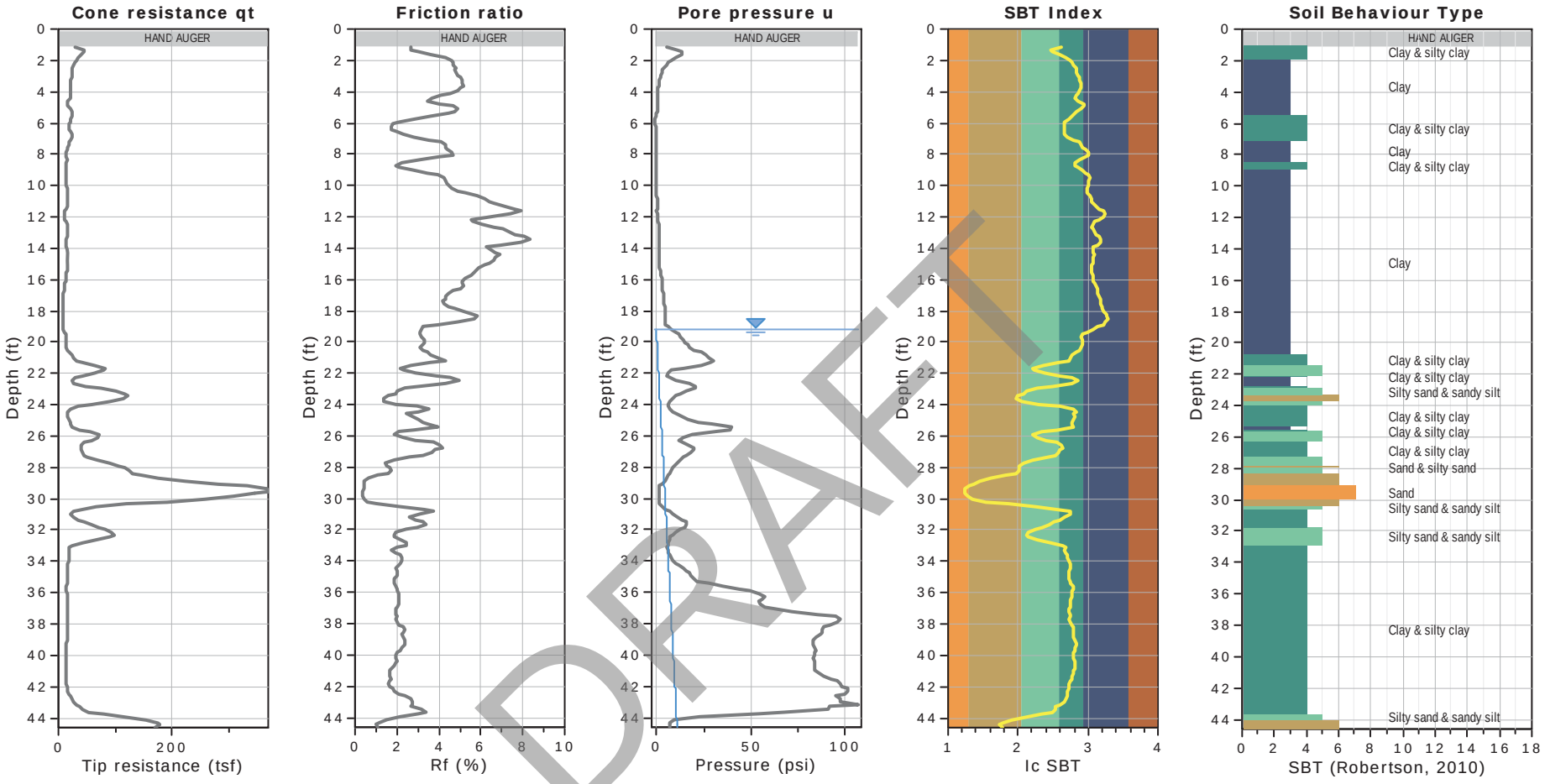
Total depth: 44.62 ft, Date: 8/19/2017
Assumed Groundwater Depth: 19.0 feet
Cone Operator: Gregg Drilling & Testing

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-6

Date 09/11/17	Project No. 17-1365	Figure A-6



DRAFT

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

Total depth: 44.62 ft, Date: 8/19/2017
Measured Groundwater Depth: 19.2 feet (pore pressure dissipation test)
Cone Operator: Gregg Drilling & Testing

675 & 685 EAST MIDDLEFIELD ROAD
Mountain View, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-7

Date 09/11/17	Project No. 17-1365	Figure A-7

APPENDIX D

CORNERSTONE EARTH GROUP

Date:	March 2, 2023
Project No.:	118-150-2
Prepared For:	Mr. Nick Towstopiat **DAVID J. POWERS & ASSOCIATES** 1871 The Alameda, Suite 200 San Jose, California 95126
Re:	Environmental Document Review 675-685 East Middlefield Road Mountain View, California

Dear Mr. Towstopiat:

Per your request, Cornerstone Earth Group, Inc. (Cornerstone) is pleased to present this letter summarizing our review of the provided environmental reports for 675-685 East Middlefield Road in Mountain View, California, California (Site). This letter was prepared for David J. Powers & Associates (Powers) in accordance with our January 30, 2023 agreement (Agreement).

Project Background

We understand that Powers is providing California Environmental Quality Act (CEQA) support associated with the planned redevelopment of the Site. The approximately 10.6-acre site (APN 160-60-013) is located within the East Whisman Precise Plan area and currently is developed with two commercial office buildings. The project proposes to demolish the existing structures and construct a mixed-use development consisting of two market-rate residential buildings with associated below ground parking, a below market-rate residential building, an office building, a multi-level aboveground parking garage, a privately-owned publicly accessible park, a paseo, various courtyards, and a new private drive connecting Ferguson Drive and East Middlefield Road to provide direct access to the new parking garage.

Documents Reviewed

This letter briefly summarizes selected information obtained from the following reports:

- RMD Environmental Solutions. October 28, 2022a. *Phase I Environmental Site Assessment, 675 & 685 E. Middlefield Road, Mountain View, California.*
- RMD Environmental Solutions. December 2, 2022b. *Phase II Site Investigation Report (Draft), 675-685 E. Middlefield Road, Mountain View, California.*

For complete details, please refer directly to the original reports.

Site History

Based on the information reviewed, the Site historically was used for agricultural purposes (row crops). By the mid-1950s, two small buildings were located on the southern portion of the Site. RMD (2022a) stated that by the 1960s, multiple commercial buildings were located on-Site.

Based on Cornerstone's review of the historical aerial photographs contained in the Phase I ESA report, the commercial buildings noted by RMD were greenhouses and what appear to have been associated outbuildings (*e.g.*, barns or sheds). What appears to have been a residence also was located on the southern portion of the Site. The two existing commercial buildings were constructed by 1982.

Occupants of the existing buildings reportedly have included, Bell North Research (BNR), Northern Telecom, Inc., Global MVLG Communications, Netscape Communications, Verisign Inc., Middlefield Crossing, Siemens Medical Solutions, Symantec, Siemens AG and JD.com.

RMD (2022a) noted that Siemens Medical Solutions, Symantec, JD.com, Verisign, Middlefield Crossing, and Northern Telecom were listed as handlers of hazardous waste at the Site, and Bell Northern Research was listed as a generator of halogenated solvents, including tetrachloroethene (PCE), at the Site in 1983 and 1985.

Prior Studies Reviewed by RMD

Soil Management Plan, July 2017: RMD (2022a) reported that Northgate Environmental Management, Inc. (Northgate) prepared a soil management plan (SMP) for the Site in 2017 as a general guidance document for anyone disturbing the subsurface of the Site. Excavation activities reportedly were conducted on the northern portion of the Site in 2011 and the presence of organochlorine pesticides were identified in soil at concentrations above screening levels for residential land use and commercial land use.

Phase I Environmental Site Assessment, September 2017: Geosyntec Consultants (Geosyntec) reportedly prepared a Phase I for the Site in 2017. A Recognized Environmental Condition (REC[1]) was identified by Geosyntec associated with potential chlorinated solvent impacts to groundwater from off-Site sources. Geosyntec reportedly identified the removal of 3,000 cubic yards of soil impacted by pesticides from the northern portion of the Site as a Historical Recognized Environmental Condition (HREC[2]). RMD noted that sampling was conducted from stockpiled soil and that no records were identified indicating that sampling was conducted to confirm that impacts did not remain in the areas that were excavated. The prior agricultural use the Site reportedly was identified by Geosyntec as a Controlled Recognized Environmental Condition[3] based on the SMP that was prepared by Northgate. RMD stated that they did not find records indicating that the SMP has been reviewed or approved by a regulatory agency.

The SMP prepared by Northgate and the Phase I ESA prepared by Geosyntec were not provided for review by Cornerstone and details regarding the reported excavation activities in 2011 were not described by RMD.

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[1] As defined by ASTM E1527-21, the term Recognized Environmental Condition means 1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; 2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or 3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

[2] A previous release of hazardous substances or petroleum products affecting the Site that has been addressed to the satisfaction of the applicable regulatory agency and meeting unrestricted use criteria established by the applicable regulatory agency without subjecting the Site to any controls.

[3] A Recognized Environmental Condition that has been addressed to the satisfaction of the applicable regulatory agency with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

Phase II Site Investigation by RMD

In October 2022, RMD collected soil, soil vapor and groundwater samples from the Site. Four borings were advanced to a maximum depth of 28 feet. Groundwater samples were collected from each boring. Six soil vapor probes were installed in and sampled from the four borings. Dual-depth nested soil vapor probes were installed in two of the borings. Soil samples were collected from each boring at approximate depths of 1, 5, 10, and 15 feet.

Organochlorine pesticides (OCPs), predominantly dieldrin and toxaphene, were detected in shallow soil at concentrations exceeding their respective residential Environmental Screening Levels (ESLs[4]). Total petroleum hydrocarbons as diesel (TPHd) was detected above its residential ESL in the soil sample collected at a depth of 15 feet from boring SB-2.

In groundwater, trichloroethene (TCE) was detected at concentrations up to 2.29 micrograms per liter (µg/L) and exceeded the Tier 1 ESL (1.2 µg/L) in two of the four groundwater samples. The Tier 1 ESL for TCE is based on potential residential vapor intrusion[5] concerns. TPHd was detected in groundwater from boring SB-2 at 1,020 µg/L, exceeding its Tier 1 ESL of 100 ug/L. The Tier 1 ESL for TPHd is based on potential odor/nuisance concerns in drinking water. Shallow groundwater at the Site, however, is not used as a drinking water source.

In soil vapor, benzene was detected above its residential ESL of 3.2 micrograms per cubic meter (µg/m^3) in two of the six soil vapor samples at concentrations of 3.55 µg/m^3 and 37.1 µg/m^3. The detection of 37.1 µg/m^3 in sample SVP-3-D also was above the commercial ESL of 14 µg/m^3. TCE and other chlorinated volatile organic compounds (VOCs) were not detected in soil vapor at concentrations exceeding their respective residential ESLs.

RMD (2022a) identified the OCP impacted soil at the Site as a REC and indicted that impacted soil should be excavated and disposed of in accordance with applicable laws and regulations or capped with hardscape. RMD noted that if capping is selected, a land use covenant (LUC) and associated site management plan may be required by a regulatory agency.

Regarding the detected concentrations of VOCs and TPH in the groundwater and/or soil vapor samples, RMD (2022a) stated that based on the low concentrations reported and considering the anticipated land use (groundwater is not being used as potable water and at least one level of garage beneath occupied spaces), these detections are considered a de minimis condition[6]. Note, however, that based on plans provided to Cornerstone, the current proposed development includes a commercial office building and a below market-rate residential building, both of which will be constructed on grade, with no underlying parking garage. Thus, the assumption by RMD

[4] Environmental Screening Levels (ESLs) established by the Water Board (January 2019) are used to screen sites for potential human health concerns where releases of chemicals have occurred. These screening levels are risk-based concentrations derived from standardized equations combining exposure information assumptions with toxicity data. Under most circumstances, the presence of a chemical at concentrations below the corresponding screening level can be assumed not to pose a significant health risk.

[5] Vapor intrusion is the movement of chemical vapors from contaminated ground water or soil into a nearby building. Vapors primarily enter through openings in the building's foundation, such as cracks in the concrete slab and gaps around utility lines. It is also possible for vapors to pass through concrete, which is naturally porous. Once inside the building, vapors may be inhaled posing potential health risks to building occupants.

[6] A de minimis condition is defined by the ASTM Standard as a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

that at least one level of parking garage will be present beneath occupied spaces does not appear accurate.

RMD (2022b) indicated that if dewatering is to occur during construction activities, groundwater treatment using carbon filters may be required prior to discharge pursuant to standard practices under a sewer discharge permit.

Conclusions and Recommendations

Based on the information obtained during this study, Cornerstone concludes and recommends the following:

- Based on the prior sampling, OCPs and TPHd have been detected in Site soil at concentrations exceeding residential ESLs. In groundwater, TCE was detected above its ESL associated with potential residential vapor intrusion concerns. In soil vapor, benzene was identified at concentrations exceeding both residential and commercial ESLs.

- The Site is located within the East Whisman Precise Plan area. The January 2020 Integrated Final Environmental Impact Report (EIR) for the East Whisman Precise Plan Project includes the following mitigation measure (MM HAZ-3.1):

  Prior to the start of any redevelopment activity, a property-specific Phase I Environmental Site Assessment (ESA) shall be completed in accordance with ASTM Standard Designation E 1527-13 (or the standard that is effective at the time the Phase I ESA is conducted) to identify Recognized Environmental Conditions, evaluate the property history, and establish if the property is likely to have been impacted by chemical releases. Soil, soil vapor, and/or groundwater quality studies shall subsequently be conducted, if warranted based on the findings of the property-specific Phase I ESAs, to evaluate if mitigation measures are needed to protect the health and safety of construction workers, the environment, and area residents.

  At properties identified as being impacted or potentially impacted by Recognized Environmental Conditions pertaining to contaminated soil, soil vapor and/or groundwater (based on the professional judgement of the environmental professional and/or determination by the City based on the property specific Phase I ESA or subsequent studies), a Site Management Plan (SMP) shall be prepared prior to development activities to establish management practices for handling contaminated soil, soil vapor, groundwater, or other materials during construction activities. The SMP shall be prepared by an Environmental Professional and submitted to the overseeing regulatory agency (e.g., U.S. Environmental Protection Agency [EPA], Regional Water Quality Control Board [RWQCB] and/or County Department of Environmental Health) for review and approval prior to commencing construction activities. Management of site risks during earthwork activities in areas where impacted soil, soil vapor, and/or groundwater are present or suspected, shall be described. Worker training requirements and health and safety shall be described. The SMP shall be submitted to the City of Mountain View Planning Division for review. The project developer shall also submit to the City agency approval of the SMP or provide documentation of a regulatory agency's decision declining involvement in the project.

Although a SMP was prepared for the Site in 2017[7], we recommend that the SMP be updated under the oversight of a regulatory agency. The preparation of a SMP to establish protocols for handling and management of contaminated soil, soil vapor and groundwater at the Site, and to obtain regulatory agency oversight as required by MM HAZ-3.1 appear appropriate to address the identified contaminants at the Site. The updated SMP should be submitted to the regulatory agency for their review and written approval; a copy of the approval should be provided to the City of Mountain View.

- To facilitate preparation of the SMP, we recommend that additional sampling be conducted under the oversight of a regulatory agency to further document the lateral and vertical extent of OCPs in Site soil. In addition to the historical presence of row crops, multiple greenhouses and what appear to have been associated outbuildings (*e.g.*, barns or sheds) were previously located on-Site. At agricultural properties, pesticides often were stored within structures such as barns or sheds. Pesticide application practices also often varied between individual greenhouses. The recommended sampling should include an evaluation soil quality in the approximate interior locations of the former greenhouses and outbuildings, as well as within the former agricultural field areas. We also recommend sampling along the exterior of the walls of the former greenhouses to evaluate for OCPs, lead (associated with lead-based paint), and asbestos and polychlorinated biphenyls (PCBs) (often associated with window glazing putty). Information regarding the reported soil excavations activities conducted in 2011 should also be reviewed to help establish an appropriate sampling plan.

- What appears to have been a residence also previously was located on the southern portion of the Site. As discussed above, soil adjacent to structures, if painted with lead-containing paint, can become impacted with lead as a result of the weathering and/or peeling of painted surfaces. Soil near wood-framed structures also can be impacted by pesticides historically used to control termites. Lead and/or pesticides often are identified in soil near old residences. We recommend that soil quality at the former residence location be evaluated.

- RMD (2022a) indicated that the anticipated development includes at least one level of below grade parking garage beneath occupied spaces. We understand that the development plans may have since changed and based on plans provided to Cornerstone, the current proposed development includes a commercial office building and a below market-rate residential building, both of which will be constructed on grade, with no underlying parking garage. The RMD project description included one level of parking garage beneath occupied spaces, which is not accurate based on current plans.

  Based on the current development plans and because TCE in groundwater and benzene in soil vapor were detected at concentrations exceeding ESLs associated with potential vapor intrusion concerns, we recommend that the need for vapor intrusion mitigation measures be evaluated under regulatory oversight and that such measures, if warranted, be presented in the SMP or in a separate Vapor Mitigation Plan (VMP) that describes the measures to be implemented to help prevent exposure of Site occupants to volatile organic compounds (VOCs) in indoor air as a result of vapor intrusion. The Vapor Mitigation Plan should present the appropriate structural and engineering design features for the proposed occupied spaces to reduce risk of vapor intrusion into

[7] The SMP (2017) was not provided for Cornerstone's review.

buildings.

The SMP and VMP, if prepared, should be submitted to the regulatory agency for their review and written approval; a copy of the approval should be provided to the City of Mountain View.

Mitigation measures for vapor intrusion for new buildings typically include: 1) passive sub-slab ventilation with a vapor barrier (and with the ability to convert the system from passive to active ventilation; 2) monitoring to ensure the long-term effectiveness of the remedy; and 3) the implementation of Institutional controls.

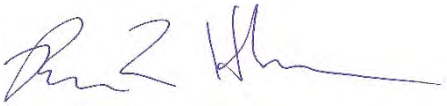
Limitations

Cornerstone performed this investigation to support David J. Powers & Associates in the evaluation of the referenced Site. Conclusions presented in this letter are based on limited, readily available information. This letter, an instrument of professional service, was prepared for the sole use of David J. Powers & Associates and may not be reproduced or distributed without written authorization from Cornerstone. It is valid for 180 days. Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

We thank you for this opportunity to work with you on this important project. Should you have any questions, please contact us at your convenience.

Sincerely,

Cornerstone Earth Group, Inc.



Ron L. Helm, C.E.G.
Senior Principal Geologist

APPENDIX E

HEXAGON TRANSPORTATION CONSULTANTS, INC.

675-685 E. Middlefield Road Mixed-Use Development

Multi-Modal Transportation Analysis

Prepared for:

David J. Powers & Associates

October 31, 2024

Hexagon Transportation Consultants, Inc.
Hexagon Office: 100 Century Center Court, Suite 501
San Jose, CA 95112
Phone: 408.971.6100
Hexagon Job Number: 23KK01
Client Name: David J. Powers & Associates, Inc.

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Executive Summary

This report presents the results of the multi-modal transportation analysis (MTA) conducted for the proposed mixed-use development at 675-685 E. Middlefield Road in Mountain View, California (see Figure 1). The project is located within the Mixed-Use Character Area of the East Whisman Precise Plan (EWPP) area. The project site is located on the south side of E. Middlefield Road between the Santa Clara Valley Transportation Authority (VTA) light rail transit (LRT) tracks and Ferguson Drive. The project proposes to construct three 7-8 story residential buildings providing 858 residential units, a 6-story 277,600 square-foot office building[1], and a 2,344 square-foot retail building on a 10.58-acre site with a combination of both at-grade and underground parking garages within two market-rate residential buildings, at-grade parking garage within the below-market-rate (BMR) residential building, and one above ground office parking garage (see Figure 2). Vehicle access to the site would be via a private internal road intersecting Middlefield Road opposite Logue Avenue and intersecting Ferguson Drive in the southeast corner of the site. The new internal road would provide direct access to the new parking garages. Two existing vacant office buildings totaling 163,638 square feet (s.f.) on the site would be demolished.

It should be noted that the number of proposed residential units was reduced from 858 units to 836 units during preparation of this MTA. This report analyzes the higher unit count (858 units) that was initially planned and is considered to be a conservative analysis. The project (as proposed originally with 858 units) is compliant with applicable City standards and policies. With the reduced intensity (836 units), the project would remain in compliance with City standards and policies.

The MTA evaluates potential transportation effects of the project in accordance with the standards and methodologies set forth by the City of Mountain View's *MTA Handbook.* The MTA includes an analysis of the traffic operational effects of the project on the key intersections in the vicinity of the site, an evaluation of City policy conformance, a review of site access and on-site circulation, an evaluation of potential adverse effects on transit services and pedestrian and bicycle facilities, and a parking evaluation.

[1] For the purposes of determining floor area compliance, the office building is 275,200 s.f. The City exempts employees areas such showers, bike repair stations, and other bike related facilities from the floor area calculations when located within the interior of a non-residential building. The report uses the gross floor area of 277,660 s.f. to analyze the office building's traffic operational effect.

VMT Analysis

The Mountain View Vehicle Miles Traveled (VMT) Policy establishes screening criteria for developments that are expected to cause a less-than-significant transportation impact under the California Environmental Quality Act (CEQA), which confirm no further VMT analysis is required. The project would meet the screening criteria for projects located within one-half mile of transit.

The proximity to transit screening criterion was developed based on the CEQA Guidelines Section 15064.3, subdivision (b)(1), which states lead agencies generally should presume that certain projects proposed within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT. The project is located within a half mile of the Middlefield LRT Station, which is considered a major transit stop, and complies with the Mountain View VMT Policy.

Project Trip Estimates

Trip generation estimates for the proposed project were based on trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition, and the trip caps for new office developments in the EWPP area. After applying the applicable trip reductions, the net new project trips would be 4,954 daily trips, including 514 trips (271 inbound and 243 outbound) during the AM peak hour and 504 trips (218 inbound and 286 outbound) during the PM peak hour.

Intersection Level of Service Analysis

The results of the intersection level of service analysis (see Table ES-1) show that all study intersections would operate at an acceptable level of service with and without the project.

Pedestrian and Bicycle Operations

The project would have an adverse effect on pedestrian operations because the project is expected to add vehicle trips to nearby street segments that have a pedestrian quality of service (PQOS) score of 3 or more. The project would provide wider sidewalks with landscaping along the project frontages to enhance the pedestrian environment. The project should also improve the crosswalks at the Ferguson Drive/Middlefield Road and Logue Avenue/Middlefield Road intersections by installing high visibility ladder crosswalks and build new curb ramps to ADA standards at the southwest corner of the Ferguson Drive/Middlefield Road intersection. In addition, the publicly accessible internal road with sidewalks and sharrows and the linear park with bike and pedestrian pathways would allow pedestrians a safe passageway off the street between Middlefield Road and Ferguson Drive. Taking these factors into account, the project is expected to improve the PQOS along Middlefield Road and Ferguson Drive along the project frontage.

The project would create an adverse effect on bicycle operations, as the project is expected to add vehicle trips to Whisman Road, Ellis Street, and Middlefield Street, which have a bicycle level of service (BLTS) of 3 or more. The EWPP proposes to implement buffered bike lanes on Ellis Street and Middlefield Road, where the project would add vehicle trips. The project would install a buffered bike lane along the project frontage on Middlefield Road. The internal roads proposed by the project would also provide sharrows, which would allow bicyclists off the main streets. Additionally, the project would be required to contribute to the bike lane improvements identified by the EWPP by paying for the EWPP Development Impact Fee, which would address the adverse effects.

Other Transportation Issues

Hexagon has the following recommendations resulting from the on-site circulation and parking evaluations.

Recommendations

- The project should implement Transportation Demand Management (TDM) measures and meet the trip cap for the office building as required by the EWPP.
- As required by the EWPP, the project should implement unbundled parking for residents and require office employers to provide subsidized transit passes for employees. The project should provide access to shared bicycles within the site if a bikeshare service is not available within walking distance of the site.
- The project should implement signal preemption for eastbound Middlefield Road at Logue Avenue to prevent the eastbound vehicle queues extending to the LRT tracks.
- The project should build new curb ramps to ADA standards at the southwest corner of the Ferguson Drive/Middlefield Road intersection.
- The project should improve the crosswalks at the Ferguson Drive/Middlefield Road and Logue Avenue/Middlefield Road intersections by installing high visibility ladder crosswalks.
- The driveway to the north and BMR residential garages should be stop-controlled with a stop sign installed at the back of the sidewalk for outbound vehicles approaching the sidewalk.
- The garage gate of the BMR residential garage should be moved farther into the garage to provide inbound stacking space (at least 20 feet) for one vehicle between the gate and sidewalk, or keep the garage entry gate open during the time period of the day when most inbound vehicle trips are likely to occur (typically from 3:00 PM to 7:00 PM). If the gates open towards the street, the stacking space shall be measured between the back of sidewalk and the extended fully open length of the gate.
- A turnaround space should be provided at all dead-end aisles in the public parking area of the north residential garage.
- The project applicant should coordinate with City staff to determine if the proposed loading space for the office would be adequate to serve the project.
- At the Logue Avenue/Middlefield Road/project access road intersection, the project should modify the traffic signal and intersection lane configuration to provide protected left-turn phases with dedicated left-turn lanes for the northbound and southbound approaches.
- The project should contribute to the bike lane improvements identified by the EWPP by paying for the EWPP Development Impact Fee.
- The project should allow the shared parking spaces to be used by all uses during the day.
- For easy access to the bicycle storage, the project should provide a bike room on the ground floor of the residential buildings to accommodate the required number of long-term bicycle parking spaces.

Table ES-1
Intersection Level of Service Summary

ID	Intersection	LOS Standard	Peak Hour	Count Date	Existing Avg. Delay[1]	Existing LOS	Background Avg. Delay[1]	Background LOS	Background+Project Avg. Delay[1]	Background+Project LOS	Incr. In Crit. Del.	Incr. In Crit. V/C
1	Ellis Street and Manila Dr	D	AM	11/15/22	10.4	B	12.1	B	12.1	B	--	--
	(all-way stop)		PM	11/15/22	8.3	A	8.8	A	8.8	A	--	--
2	Ellis Street and US 101 NB Ramps	D	AM	11/15/22	12.4	B	14.6	B	14.8	B	0.1	0.022
			PM	11/15/22	19.2	B	20.1	C	20.1	C	0.0	0.042
3	Ellis Street and US 101 SB Ramps	D	AM	11/15/22	12.9	B	15.8	B	17.4	B	2.1	0.041
			PM	11/15/22	10.6	B	15.5	B	13.6	B	0.0	0.178
4	Ellis Street and Fairchild Drive	D	AM	11/15/22	14.5	B	15.7	B	15.7	B	0.0	0.036
			PM	11/15/22	12.6	B	15.3	B	15.1	B	0.0	0.042
5	SR 237 Ramps and Maude Ave	D	AM	11/15/22	41.8	D	53.2	D	52.7	D	0.4	0.007
			PM	11/15/22	37.8	D	39.4	D	40.0	D	0.0	0.024
6	Whisman Rd and Middlefield Rd	D	AM	11/15/22	26.3	C	26.1	C	25.9	C	-0.2	0.005
			PM	11/15/22	29.2	C	28.2	C	28.0	C	0.0	0.004
7	Ellis Street and Middlefield Rd	D	AM	11/15/22	12.6	B	16.2	B	16.6	B	0.6	0.073
			PM	11/15/22	18.1	B	21.0	C	21.3	C	0.0	0.046
8	Logue Ave/Internal Road and Middlefield Rd	D	AM	11/15/22	15.2	B	18.6	B	19.3	B	0.0	0.000
			PM	11/15/22	14.4	B	17.7	B	19.1	B	0.0	0.055
9	Ferguson Dr and Middlefield Rd	D	AM	11/15/22	11.8	B	10.7	B	12.9	B	1.4	0.021
			PM	11/15/22	8.9	A	8.5	A	10.5	B	0.0	0.043
10	SR 237 WB Ramps and Middlefield Rd	D	AM	11/15/22	20.9	C	20.5	C	20.5	C	-6.1	0.117
			PM	11/15/22	22.9	C	23.5	C	23.2	C	0.0	0.050
11	SR 237 EB Ramps and Middlefield Rd	D	AM	11/15/22	20.8	C	22.0	C	22.3	C	1.0	0.024
			PM	11/15/22	21.3	C	21.4	C	21.9	C	0.0	0.025
12	Bernardo Ave and Middlefield Rd	D	AM	04/04/23	18.6	B	19.8	B	19.7	B	-0.1	0.006
			PM	04/04/23	23.1	C	25.5	C	25.3	C	0.0	0.006
13	Mary Ave and Central Expy*	E	AM	11/15/22	42.7	D	44.4	D	44.7	D	0.1	0.008
			PM	11/15/22	47.9	D	48.8	D	49.0	D	0.0	0.006
14	Ferguson Dr and Central Expy*	E	AM	11/15/22	4.4	A	4.5	A	5.0	A	0.4	0.008
			PM	11/15/22	5.0	A	5.5	A	5.9	A	0.0	0.011
15	Ferguson Dr and Internal Road (one-way stop)	N/A	AM		Project Driveway				10.2	B	--	--
			PM						10.9	B	--	--

Notes:
* Denotes VTA CMP intersection
1. Weighted average control delay measured in seconds per vehicle for signalized and all-way stop intersections. Worst approach delay (seconds per vehicle) and LOS are reported for side-street stop-controlled intersections.

1. Introduction

This report presents the results of the multi-modal transportation analysis (MTA) conducted for the proposed mixed-use development at 675-685 E. Middlefield Road in Mountain View, California (see Figure 1). The project is located within the Mixed-Use Character Area of the East Whisman Precise Plan (EWPP) area. The project site is located on the south side of E. Middlefield Road between the Santa Clara Valley Transportation Authority (VTA) light rail transit (LRT) tracks and Ferguson Drive. The project proposes to construct three 7-8 story residential buildings providing 858 residential units, a 6-story 277,600 square-foot office building[2], and a 2,344 square-foot retail building on a 10.58-acre site with a combination of both at-grade and underground parking garages within two market-rate residential buildings, at-grade parking garage within the below-market-rate (BMR) residential building, and one above ground office parking garage (see Figure 2). Vehicle access to the site would be via a private internal road intersecting Middlefield Road opposite Logue Avenue and intersecting Ferguson Drive in the southeast corner of the site. The new internal road would provide direct access to the new parking garages. Two existing vacant office buildings totaling 163,638 square feet (s.f.) on the site would be demolished.

It should be noted that the number of proposed residential units was reduced from 858 units to 836 units during preparation of this MTA. This report analyzes the higher unit count (858 units) that was initially planned and is considered to be a conservative analysis. The project (as proposed originally with 858 units) is compliant with applicable City standards and policies. With the reduced intensity (836 units), the project would remain in compliance with City standards and policies.

Scope of Study

The purpose of the study is to evaluate potential transportation effects of the project in accordance with the standards and methodologies set forth by the City of Mountain View and the Santa Clara Valley Transportation Authority (VTA). The VTA administers the Congestion Management Program (CMP).

[2] For the purposes of determining floor area compliance, the office building is 275,200 s.f. The City exempts employees areas such showers, bike repair stations, and other bike related facilities from the floor area calculations when located within the interior of a non-residential building. The report uses the gross floor area of 277,660 s.f. to analyze the office building's traffic operational effect.

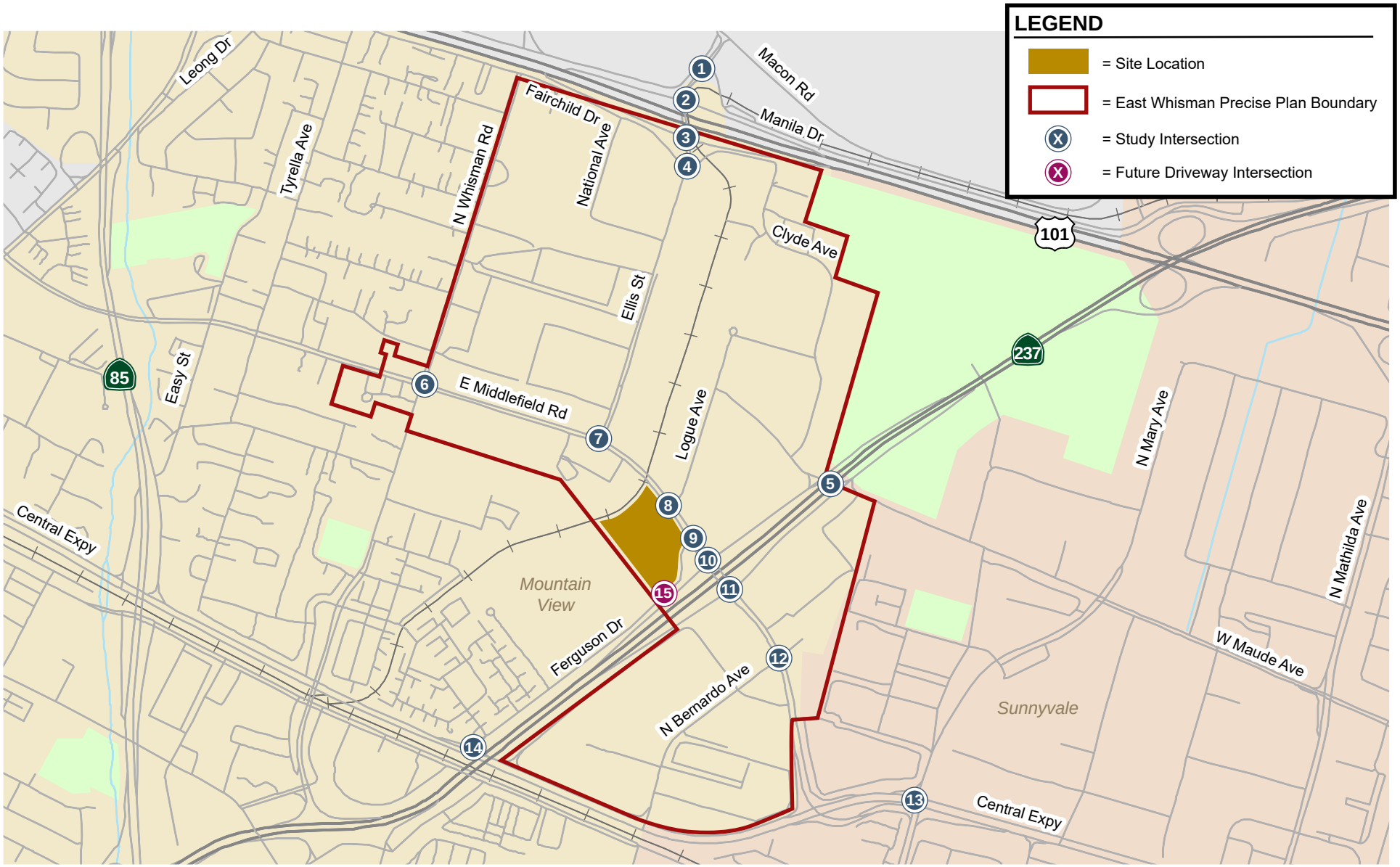


Figure 1
Site Location and Study Intersections



Figure 2
Proposed Site Plan

NORTH
Not to Scale

The MTA was prepared based on the City's *MTA Handbook* (February 2021), which is consistent with the VTA *Transportation Impact Analysis (TIA) Guidelines* for projects that are anticipated to create 100 new peak-hour trips or more. The MTA includes an analysis of the traffic operational effects of the project on the key intersections in the project area, an evaluation of EWPP conformance, a review of site access and on-site circulation, an evaluation of potential adverse effects on pedestrian and bicycle facilities and transit services, an evaluation of traffic effects on neighborhood streets, and a parking evaluation.

Because the project is consistent with and conforms to the land uses and development density of the EWPP, the project would not result in additional adverse traffic operational effects under cumulative conditions on intersection levels of service, freeway segment levels of service, and freeway ramp operations. Therefore, the MTA focuses on evaluating the project's traffic operational effects at intersections in the project vicinity under near-term conditions and identifies whether the project would contribute to the cumulative adverse intersection effects identified in the EWPP EIR.

The study intersections were selected in accordance with the City's *MTA Handbook*, VTA's *Transportation Impact Analysis (TIA) Guidelines* (October 2014), and in consultation with Mountain View staff. The study includes those intersections that would experience a traffic increase of 10 or more peak-hour trips per lane. The study intersections are listed below and shown on Figure 1. Two study intersections are designated as CMP intersections.

1. Ellis Street and Manila Street (unsignalized)
2. Ellis Street and US 101 Northbound Ramps
3. Ellis Street and US 101 Southbound Ramps
4. Ellis Street and Fairchild Drive
5. SR 237 Ramps and Maude Avenue
6. Whisman Road and E. Middlefield Road
7. Ellis Street and E. Middlefield Road
8. Logue Avenue and E. Middlefield Road
9. Ferguson Drive and E. Middlefield Road
10. SR 237 Westbound Ramps and E. Middlefield Road
11. SR 237 Eastbound Ramps and E. Middlefield Road
12. Bernardo Avenue and E. Middlefield Road
13. Mary Avenue and Central Expressway (CMP)
14. Ferguson Drive and Central Expressway (CMP)
15. Ferguson Drive and Internal Road (unsignalized) – future project access

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of traffic. Locally, the AM peak hour of traffic is usually between 7:00 and 10:00 AM, and the PM peak hour is typically between 4:00 and 7:00 PM. It is during these periods that the most congested traffic conditions occur on an average weekday.

Intersection traffic conditions were evaluated for the following scenarios:

- ***Existing Conditions.*** Existing AM and PM peak-hour traffic volumes were obtained from new turning-movement counts conducted in November 2022 and April 2023.
- ***Background Conditions*****.** Background traffic volumes were estimated by adding to existing traffic volumes the projected volumes from approved but not yet constructed developments in the vicinity of the project. The added traffic from approved but not yet constructed developments was based on the list of approved projects provided by the Cities of Mountain View and Sunnyvale***.***

- ***Background Plus Project Conditions.*** Background plus project traffic volumes were estimated by adding the additional traffic generated by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project adverse effects.

The project is consistent with the EWPP and is covered by the EWPP EIR. Therefore, the MTA identifies the project-level traffic operational effects at the study intersections under background conditions. Cumulative effects of the project were evaluated in the EWPP EIR.

Intersection Operations Analysis Methodology

This section presents the methods used to determine traffic conditions at the study intersections. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from new traffic counts, the Cities of Mountain View and Sunnyvale, Google Earth, and field observations. The following data were collected from these sources:

- Intersection traffic volumes,
- Lane geometries,
- Signal timing and phasing, and
- A list of approved but not yet constructed developments

Intersection Level of Service Analysis Methodologies and Standards

Traffic conditions at the study intersections were evaluated using level of service (LOS). Level of service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.

Signalized Intersections

For signalized intersections, the level of service method evaluates intersection operations on the basis of average control delay time for all vehicles at the intersection based on the methodology described in the *2000 Highway Capacity Manual* (HCM). Table 1 presents the level of service definitions for signalized intersections.

This study utilizes the TRAFFIX software to determine intersection levels of service based on the 2000 HCM methodology. Since TRAFFIX is approved by VTA as the level of service analysis software for CMP signalized intersections, the City of Mountain View employs the CMP default values for the analysis parameters. TRAFFIX software was used to analyze intersection operations and intersection adverse effects based on the increases in critical-movement delay and the volume-to-capacity ratio (v/c) between no-project and project scenarios.

According to the City's *MTA Handbook*, the standard for signalized intersections is LOS D, except for CMP intersections and facilities, County Expressway intersections, and intersections in the Downtown and San Antonio Center planning areas, where the standard is LOS E. Therefore, the LOS D standard applies to the study intersections.

Unsignalized Intersections

Level of service analysis at unsignalized intersections is generally used to determine the need for modifications in the type of intersection control (i.e., all-way stop or signalization). As part of the

evaluation, traffic volumes, delays and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

For unsignalized intersections, level of service depends on the average delay experienced by vehicles on the stop-controlled approaches. For side street stop-controlled intersections (two-way or T-intersections), operations are defined by the average control delay experienced by vehicles entering the intersection from the stop-controlled approaches on minor streets or from left-turn approaches on major streets. The level of service is reported based on the average delay for the worst approach. For all-way stop-controlled intersections, the level of service is based on the average delay for all the intersection approaches. The level of service definitions for unsignalized intersections is shown in Table 2. This study utilizes the TRAFFIX software to determine intersection levels of service based on the *2000 HCM* methodology for unsignalized intersections.

The City of Mountain View does not have an adopted level of service standard for unsignalized intersections. However, the City strives to maintain LOS D for unsignalized intersections.

Table 1
Signalized Intersection Level of Service Definitions Based on Average Control Delay

Level of Service	Description	Average Control Delay (seconds/vehicle)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	10.0 or less
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delays indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000), p.10-16.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Average Delay

Level of Service	Description	Average Delay Per Vehicle (Sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p17-2.

Intersection Vehicle Queuing Analysis

The analysis of intersection operations was supplemented with a vehicle queuing analysis at intersections where the project would add a substantial number of trips to the left-turn movements or stop-controlled approaches. The vehicle queuing analysis is used to determine the appropriate storage lengths for the high demand turn lanes where the project would add a substantial number of trips. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

$$P(x=n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

P (x=n) = probability of "n" vehicles in queue per lane
n = number of vehicles in the queue per lane
λ = average # of vehicles in the queue per lane (vehicles per hr per lane/signal cycles per hr)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile number of queued vehicles for a particular left-turn movement; (2) the estimated 95th percentile number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated 95th percentile queue length is compared to the existing or planned available storage capacity for the left-turn movement. This analysis thus provides a basis for estimating future turn pocket storage requirements at intersections.

For signalized intersections, the 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles, or a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Thus, turn pocket storage designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time for a signalized movement. Vehicle queuing at unsignalized intersections is evaluated based on the delay experienced by the specific study turn movement.

Definition of Adverse Intersection Operational Effects

Adverse operational effects at signalized intersections are based on the City of Mountain View level of service standards. For the unsignalized intersections, the City of Mountain View has applied adverse effect criteria in other traffic studies even though there is no formally adopted level of service policy for unsignalized intersections.

Signalized Intersections

According to the City of Mountain View level of service standards, a development is said to create an adverse operational effect on traffic conditions at a signalized intersection if for either peak hour, either of the following conditions occurs:

1. The level of service at the intersection drops below its respective level of service standard (LOS D or better for all local intersections in Mountain View and Sunnyvale and LOS E or better for CMP and expressway intersections) when project traffic is added, or
2. An intersection that operates below its level of service standard under no-project conditions experiences an increase in critical-movement delay of four (4) or more seconds, and an increase in critical volume-to-capacity ratio (v/c) of one percent (0.01) or more when project traffic is added.

The exception to this threshold is when the addition of project traffic reduces the amount of average control delay for critical movements, i.e., the change in average control delay for critical movements is negative. In this case, the threshold is when the project increases the critical v/c value by 0.01 or more.

Unsignalized Intersections

The project is said to create an adverse operational effect on traffic conditions at an unsignalized intersection in the City of Mountain View if for either peak hour:

1. The addition of project traffic causes the average intersection delay for all-way stop-controlled or the worst movement/approach for side-street stop-controlled intersections to degrade to LOS F, and
2. The intersection satisfies the *California Manual of Uniform Traffic Control Devices (CA MUTCD)* peak-hour volume signal warrant.

Report Organization

This report has a total of four chapters. Chapter 2 describes existing conditions including the existing roadway network, transit service, and bicycle and pedestrian facilities. Chapter 3 presents the vehicle operational analysis including the method by which project traffic is estimated, the project's traffic effects on the intersection operations, and a vehicle queuing analysis. Chapter 4 presents the analyses of other transportation-related issues, including conformance with the EWPP, site access and on-site circulation, potential effects on bicycle, pedestrian, and transit facilities, effects on surrounding neighborhood streets, and parking.

2. Existing Transportation Conditions

This chapter describes existing conditions for the transportation facilities in the vicinity of the site, including the roadway network, transit services, pedestrian and bicycle facilities, and traffic operations at the study intersections.

Existing Roadway Network

Regional access to the project site is provided by US 101 and SR 237. Local access to the project site is provided via Middlefield Road, Ellis Street, and Ferguson Drive. For the purposes of this study, US 101, Middlefield Road, and all parallel streets are considered to run east-west, and cross streets, such as SR 237, Ellis Street, and Ferguson Drive, are considered to run north-south.

US 101 is a freeway that extends through and beyond the Bay Area, connecting San Francisco to San Jose. US 101 is eight lanes wide with three mixed-flow lanes and one high-occupancy vehicle (HOV) lane in each direction in the vicinity of the project site. US 101 provides access to the project site via a full interchange at Ellis Street.

SR 237 is a four-lane to six-lane freeway that extends west to El Camino Real and east to I-880 in Milpitas. East of Mathilda Avenue, SR 237 has two mixed-flow lanes and one HOV lane in each direction. West of Mathilda Avenue, SR 237 has two mixed-flow lanes in each direction. SR 237 provides access to the project site via a full interchange at Middlefield Road.

Middlefield Road is a mostly east-west four-lane arterial that runs parallel to US 101. It begins at the intersection of Central Expressway in Mountain View and traverses north then westward through Redwood City. Middlefield Road has landscaped medians with left-turn pockets at intersections and has bike lanes and sidewalks on both sides of the street. The bike lanes on Middlefield Road between Thaddeus Drive and Whisman Road are part-time bike facilities that are used as bike lanes from 2 AM to 7 PM on weekdays and are used for on-street parking for the remaining hours (7 PM to 2 AM) and on weekends. The speed limit is 35 mph. Middlefield Road provides direct access to the project site via a private internal road opposite of Logue Avenue.

Ellis Street is a north-south four-lane arterial between Macon Road in the north and Middlefield Road in the south. Ellis Street has multiple landscaped medians and a two-way left turn lane at driveways with left turn pockets at intersections. Bike lanes exist along both sides of the street south of Fairchild Drive. Sidewalks exist along both sides of the street south of Fairchild Drive, except for a small segment just south of National Avenue. Sidewalks also exist along the west side of the street between Manila Avenue and Fairchild Drive. On-street parking is prohibited along both sides of the street. The

posted speed limit is 40 mph. Ellis Street provides access to the project site via its intersection with Middlefield Road.

Ferguson Drive is a two-lane residential collector connecting Middlefield Road and Central Expressway and providing access to developments on the west side of the street. It widens to four lanes at the intersection with Middlefield Road. Sidewalks exist along the west side of the street. On-street parking is prohibited along both sides of the street. The posted speed limit is 25 mph. Ferguson Drive would provide direct access to the project site via a new internal road.

Existing Transit Services

Existing public transit services in the study area are provided by the VTA and the Mountain View Transportation Management Association (TMA). VTA operates bus and light rail transit (LRT) services in Santa Clara County, and the TMA provides free MVgo shuttle service between the Mountain View Transit Center and corporate campuses in the North Bayshore and Whisman areas.

The VTA bus and LRT routes and MVgo shuttle routes in the project vicinity and the bus/shuttle stops near the project site are summarized in Table 3 and shown on Figure 3.

Table 3
Existing Transit Services

Route	Route Description	Weekday Hours of Operation	Headways[1] (minutes)	Nearby Bus Stops	Walking Distance from Nearest Stop to Project Site (feet)
VTA Bus Route					
Local Route 21	Stanford Shopping Center - Santa Clara Transit Center	5:30 AM - 9:50 PM	30	Middlefield Road and Logue Avenue	320
Mountain View Shuttle					
MVgo Shuttle[2] - Route A	Whisman, Clyde and Middlefield	7:10 AM - 10:35 AM 3:35 PM - 7:50 PM	30-40	Middlefield Road east of Ellis Street	650
VTA Light Rail Transit					
LRT Orange Line	Mountain View - Alum Rock	5:05 AM - 12:45 AM (next day)	15	Middlefield LRT Station	650

Notes:
1. Headways during weekday peak periods as of October 2023.
2. Operated by Mountain View Transportation Management Association. It provides free transportation connections between Mountain View Transit Center and the Bayshore/Whisman areas.

VTA Bus Service

VTA Local Route 21 serves the project area with bus stops in each direction on Middlefield Road and Logue Avenue. The bus stops closest to the project site are on Middlefield Road at Logue Avenue in front of the project site. Route 21 also stops at the Mountain View Transit Center, approximately 2.1 miles from the site. The Mountain View Transit Center provides connections to Caltrain, VTA LRT, several VTA bus routes (21, 40, and 52), MV Community Shuttle, and MVgo shuttle routes.

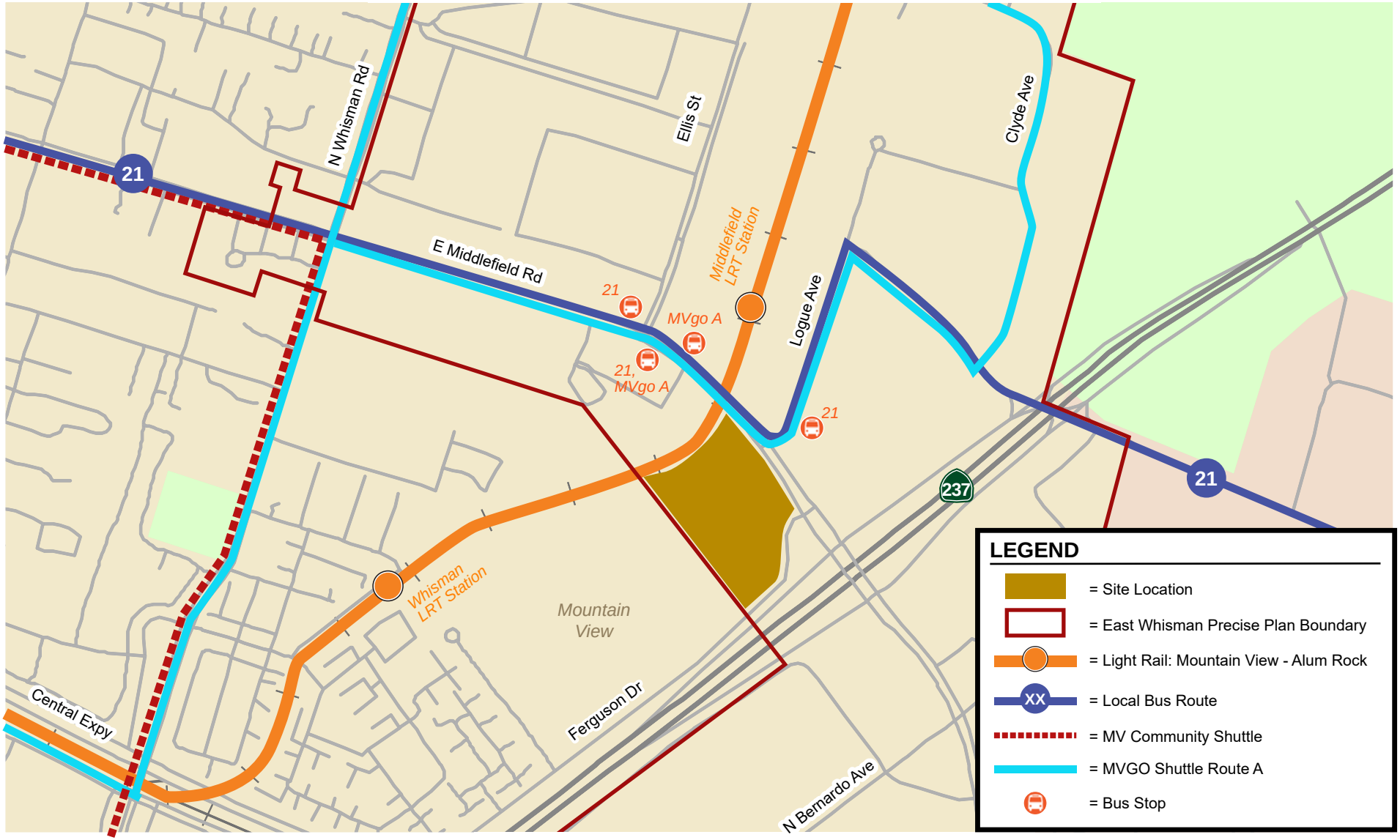


Figure 3
Existing Transit Services

Mountain View Transportation Management Association (TMA) Shuttles

The TMA operates the MVgo shuttle system. This shuttle system is provided through the collection of TMA member dues. MVgo operates four shuttle routes that provide service to employment areas from the Mountain View Transit Center. Three routes serve the North Bayshore area, and one route serves the N. Whisman area. The shuttles are timed to meet Caltrain arrivals during the AM and departures during PM commute periods. MVgo shuttle Route A provides service to the project area, with 6 buses in the morning and 7 buses in the afternoon. The nearest bus stops are located on Middlefield Road at Ellis Street, approximately 650 feet from the project site.

VTA Light Rail Transit (LRT)

The LRT Orange Line serves the project vicinity with the Middlefield LRT Station as the nearest stop to the project. The Middlefield LRT Station is approximately 650 feet from the project site. The Orange Line travels between the Mountain View Transit Center and Alum Rock.

Existing Pedestrian Facilities

Pedestrian facilities consist of sidewalks and crosswalks, which are present along most roadways in the project vicinity, and at signalized and unsignalized intersections. Pedestrian signal heads and push buttons are present at most of the signalized intersections in the project vicinity.

Within a typical walking distance (a half mile or 10 minutes), pedestrian facilities are mostly present between the project and the surrounding land uses, including bus stops and offices in the area. However, continuous sidewalks across a long street block are not equivalent to good pedestrian connectivity. In addition, long distances (wider roads), heavier traffic volumes, and high posted speed limits discourage pedestrian activity. Middlefield Road, Ellis Street, and Logue Avenue in the project vicinity all have long street blocks, such as Middlefield Road between Ellis Street and Logue Avenue and Logue Avenue between Middlefield Road and Maude Avenue.

The pedestrian counts at the study intersections indicated that the total number of pedestrians crossing Middlefield Road has the highest usage at Whisman Road of the study intersections during the peak commute hours: 41 pedestrians in the AM peak hour and 23 pedestrians in the PM peak hour. The intersection is signalized with pedestrian signal heads and push buttons. The other study intersections had lower pedestrian activity during either peak hour.

Existing Bicycle Facilities

The bicycle facilities that exist within one mile of the project site (see Figure 4) include a multi-use trail (Class I bikeway), striped bike lanes (Class II bikeway) and shared bike routes/boulevards (Class III bikeway). Bike paths or multi-use trails are shared between pedestrians and bicyclists and separated from motor vehicle traffic. Bike lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes are signed bike routes where bicyclists share a travel lane with motorists. Bike boulevards are modified bike routes with additional treatments that offer convenient and efficient through-routes for bicyclists of all skill levels.

The Hetch Hetchy Trail extends from N. Whisman Road and connects to the Stevens Creek Trail. The trail can be accessed from Whisman Road, approximately 0.8 mile from the project site. There is also a segment of multi-use trail that connects Ellis Street and Whisman Road, opposite the Hetch-Hetchy Trail.

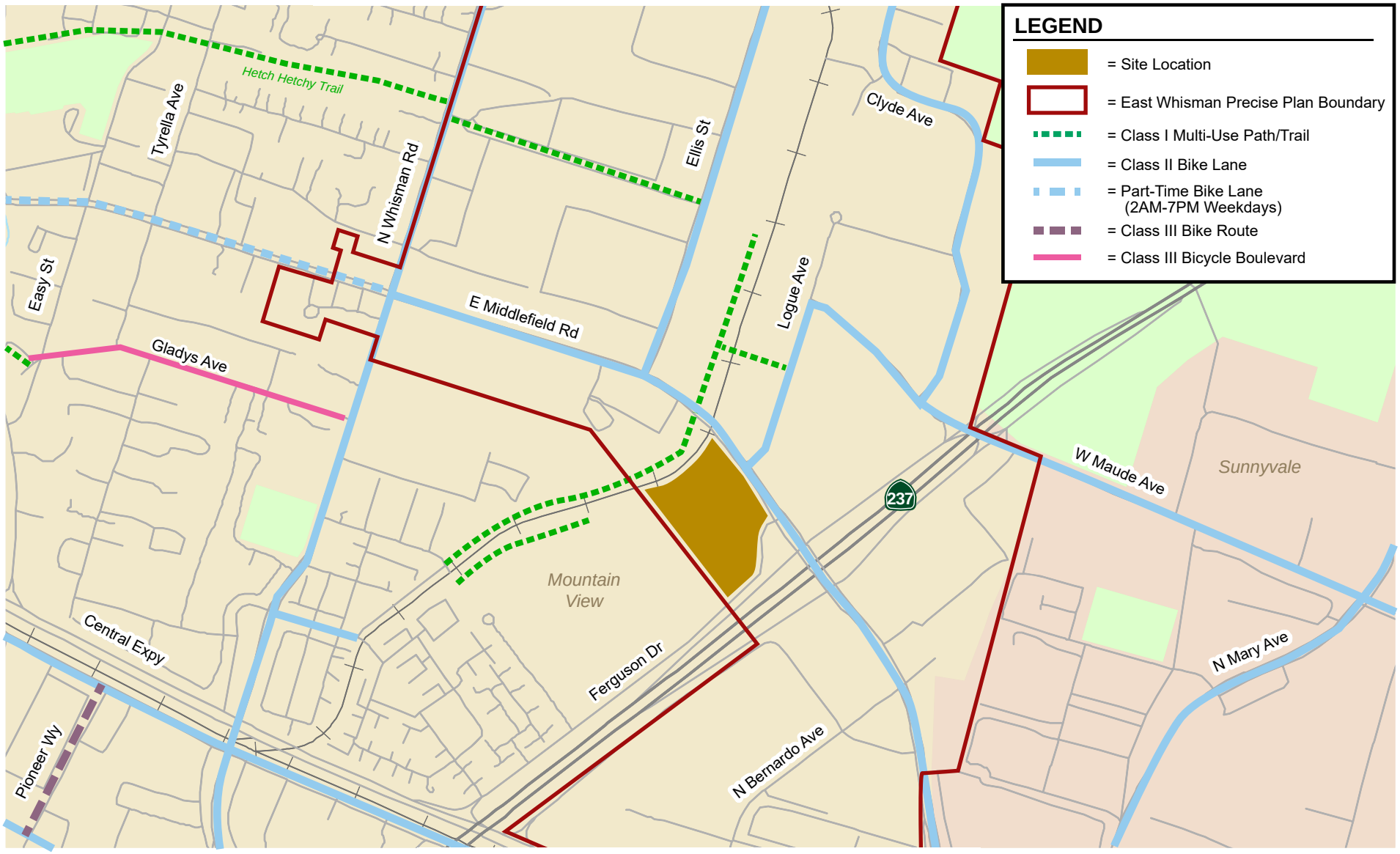


Figure 4
Existing Bicycle Facilities

NORTH
Not to Scale

A multi-use path exists along the west side of the LRT tracks between 475 Ellis Street and the South Whisman and Whisman Station neighborhoods. The path can be accessed from Middlefield Road. It should be noted that no crosswalk exists on Middlefield Road to connect the north and south sections of the path.

Striped bike lanes are present along the following street segments:

- Logue Avenue, between Middlefield Road and Maude Avenue
- Maude Avenue, for the entire street
- Middlefield Road, between Old Middlefield Way and Bernardo Avenue
- Whisman Road, for the entire street
- Ellis Street, south of Fairchild Drive
- Clyde Avenue, for the entire street

Some of these streets, while having bike lanes, are more suitable for experienced riders because of the traffic speed. The bike lanes on Middlefield Road between Thaddeus Drive and Whisman Road are part-time bike facilities that are used as bike lanes from 2 AM to 7 PM on weekdays and are used for on-street parking for the remaining hours (7 PM to 2 AM) and on weekends. Because the bike lanes are available only on weekdays, they are primarily suited to bicycle commuters and not to casual riders.

Bike routes are typically designated with sharrows (shared-lane pavement markings), and bikes may take the travel lane. Bike routes are appropriate for low-volume streets with slow travel speeds, especially those on which motorist volumes are low enough that passing maneuvers can use the full street width; on roadways with bicycle demand but without adequate space for bike lanes; and as “gap fillers” where there are short breaks in bike lanes due to right-of-way constraints. The City’s Bike Map shows Pioneer Way between Evelyn Avenue and Dana Street is designated as an existing bike route.

The City’s Bike Map shows Gladys Avenue is designated as an existing bike boulevard. There are signs on Gladys Avenue at Whisman Road to indicate the bike boulevard. Bike boulevards prioritize convenient and safe bicycle travel through traffic calming strategies, wayfinding signage, and other measures. Bicycle boulevard improvements are coupled with traffic calming features to discourage motor vehicle speeding.

Similar to the pedestrian facilities, continuous bike facilities are not equivalent to good bike connectivity. As discussed in Chapter 4, the project would improve the connectivity to the existing bicycle paths.

The bicycle counts at the study intersections indicated that bicycle traffic was moderate on Ellis Street and E. Middlefield Road during the peak commute hours. During the AM peak hour, there were 21 eastbound bicycles along Middlefield Road between Ellis Street and Logue Avenue. The other study intersections had relatively low bicycle activity during either peak hour.

Existing Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were obtained from field observations (see Figure 5).

Existing traffic volumes at the study intersections, except the Bernardo Avenue/Middlefield Road intersection, were obtained from turning movement counts collected during typical weekdays on November 15, 2022, between 7:00 and 10:00 AM and between 4:00 and 7:00 PM. The turning movement counts for the Bernardo Avenue/Middlefield Road intersection were collected on April 4, 2023. The existing peak-hour intersection volumes are shown in Figure 6. The intersection turning-movement counts conducted for this analysis are presented in Appendix A.

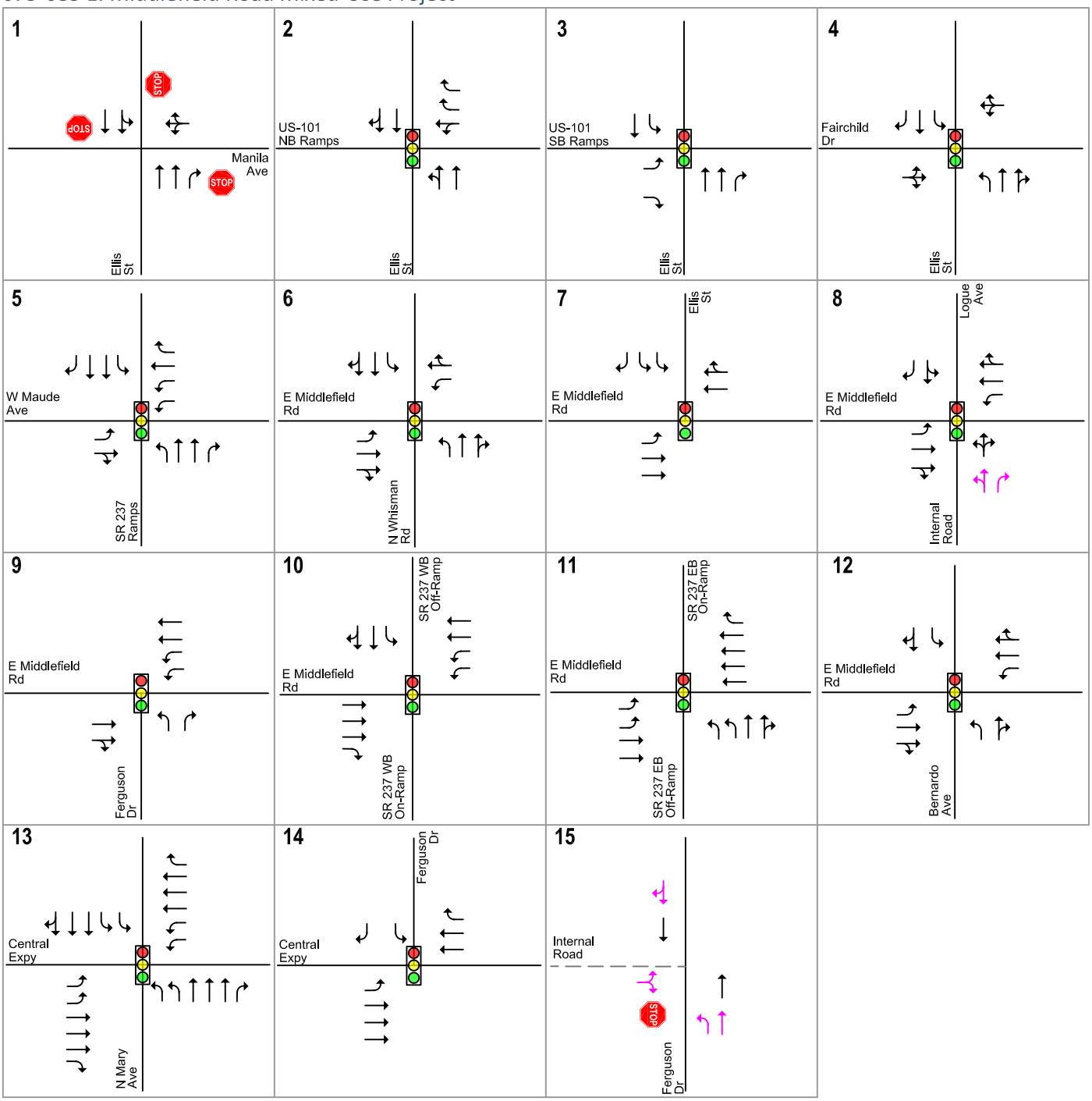
Existing Intersection Levels of Service

The results of the intersection level of service analysis show that all the study intersections currently are operating at acceptable levels of service (see Table 4). The intersection level of service calculation sheets for the project are included in Appendix B.

Table 4
Existing Intersection Levels of Service

					Existing	
ID	Intersection	LOS Standard	Peak Hour	Count Date	Avg. Delay[1]	LOS
1	Ellis Street and Manila Dr *(all-way stop)*	D	AM	11/15/22	10.4	B
			PM	11/15/22	8.3	A
2	Ellis Street and US 101 NB Ramps	D	AM	11/15/22	12.4	B
			PM	11/15/22	19.2	B
3	Ellis Street and US 101 SB Ramps	D	AM	11/15/22	12.9	B
			PM	11/15/22	10.6	B
4	Ellis Street and Fairchild Drive	D	AM	11/15/22	14.5	B
			PM	11/15/22	12.6	B
5	SR 237 Ramps and Maude Ave	D	AM	11/15/22	41.8	D
			PM	11/15/22	37.8	D
6	Whisman Rd and Middlefield Rd	D	AM	11/15/22	26.3	C
			PM	11/15/22	29.2	C
7	Ellis Street and Middlefield Rd	D	AM	11/15/22	12.6	B
			PM	11/15/22	18.1	B
8	Logue Ave and Middlefield Rd	D	AM	11/15/22	15.2	B
			PM	11/15/22	14.4	B
9	Ferguson Dr and Middlefield Rd	D	AM	11/15/22	11.8	B
			PM	11/15/22	8.9	A
10	SR 237 WB Ramps and Middlefield Rd	D	AM	11/15/22	20.9	C
			PM	11/15/22	22.9	C
11	SR 237 EB Ramps and Middlefield Rd	D	AM	11/15/22	20.8	C
			PM	11/15/22	21.3	C
12	Bernardo Ave and Middlefield Rd	D	AM	04/04/23	18.6	B
			PM	04/04/23	23.1	C
13	Mary Ave and Central Expy*	E	AM	11/15/22	42.7	D
			PM	11/15/22	47.9	D
14	Ferguson Dr and Central Expy*	E	AM	11/15/22	4.4	A
			PM	11/15/22	5.0	A

Notes:
* Denotes VTA CMP intersection
1. Weighted average control delay measured in seconds per vehicle for signalized and all-way stop intersections.



LEGEND

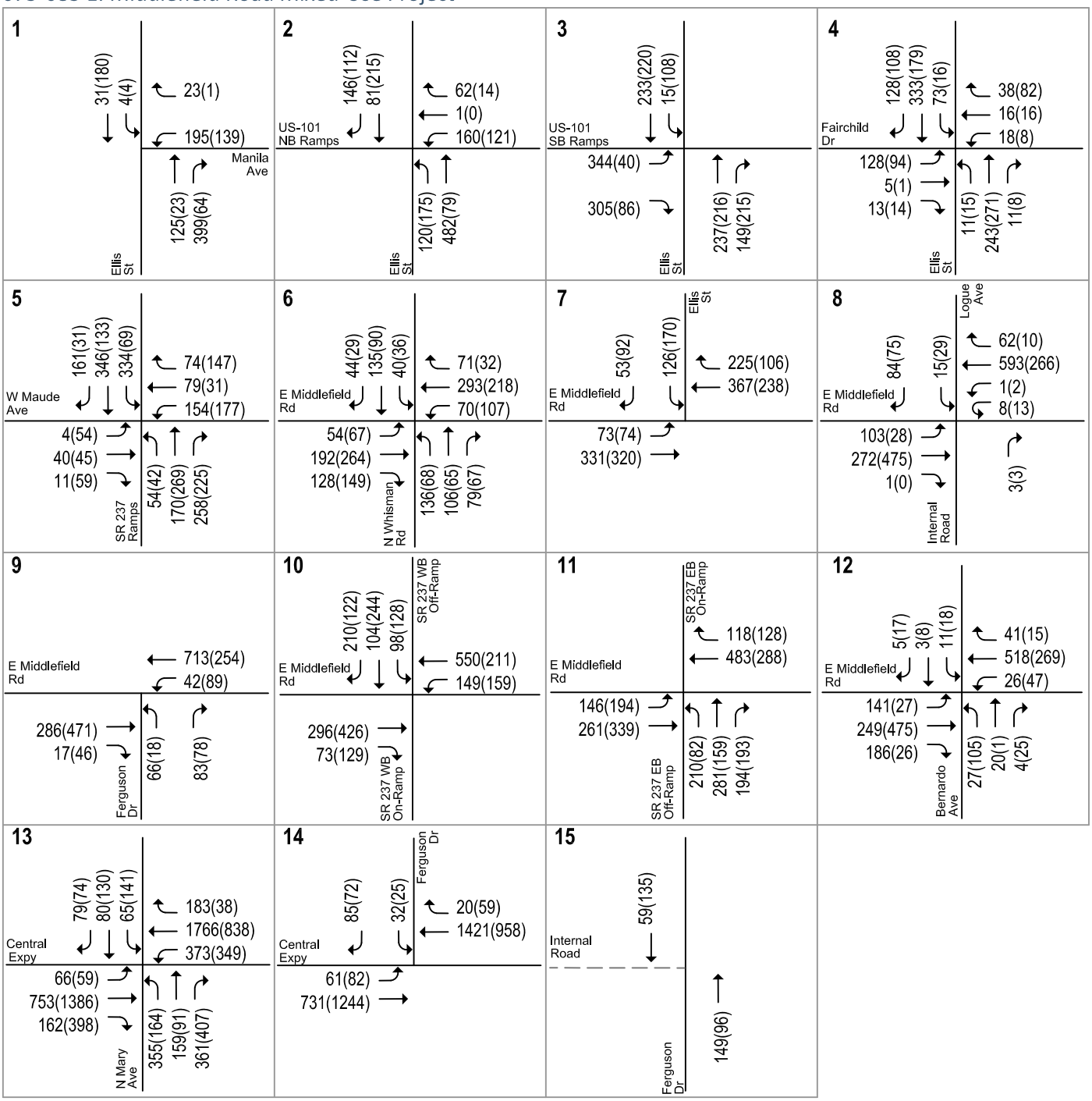
STOP = Stop Controlled Intersection

= Signalized Intersection

= Existing Condition

= Proposed Project Condition

Figure 5
Existing Lane Configurations



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 6
Existing Traffic Volumes

3. Intersection Operational Analysis

This chapter presents the vehicle traffic operational analysis including the method by which project traffic is estimated, the results of intersection level of service analysis for background and background plus project, any adverse effects to intersection level of service caused by the project, and an intersection vehicle queuing analysis. A potential adverse operational effect on a study intersection is not considered a CEQA impact.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed project was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that show trip generation rates for many types of land uses. The data are published in the Institute of Transportation Engineers' (ITE) manual entitled *Trip Generation Manual,* 11th Edition. The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. Trip generation estimates (see Table 1) for the project are based on standard trip generation rates published in the ITE *Trip Generation Manual* for "Mid-Rise Multifamily Housing" (Land use 221) and "Strip Retail Plaza" (Land use 822) and the trip caps for new office developments in the EWPP area.

The "Mid-Rise Multifamily Housing" category refers to apartments and condominiums located within the same building that have between four and 10 levels. The "Strip Retail Plaza" category refers to an integrated group of commercial establishments. This category includes trip data for retail/commercial uses less than 40,000 s.f.

Trips that would be generated by the proposed office were estimated based on the daily trip rate and peak-hour trip cap rates for new office developments in the EWPP area. The trip cap rates were determined through the transportation analysis for the 465 Fairchild Drive/600 Ellis Street office project. The rates are 0.83 trips per 1,000 s.f. (ksf) during the AM peak hour and 0.72 trips per ksf during the PM peak hour, which is inclusive of transportation demand management (TDM) measures required by

the EWPP.[3] Because the project would provide shared parking spaces between office and residential uses, the TDM plan should include a plan to monitor the office trips within the shared parking area.

Trip Adjustments and Reductions

Because the project would provide office, residential, and retail mixed-use on site, some residents would patronize the retail business and work in the office building, which would result in the internalization of some project trips. Per the Santa Clara Valley Transportation Authority (VTA)'s *Transportation Impact Analysis (TIA) Guidelines*, internal trip reductions of 15% between retail and residential uses and 3% between residential and office uses were applied to the project. The trip reduction factors were first applied to the smaller trip generator; then the same trips were subtracted from the larger trip generators to account for both trip ends.

The project is located within 2,000 feet of the VTA Light Rail Middlefield Station. Therefore, per the VTA TIA Guidelines, a 9% transit reduction was applied to the residential uses. This reduction is supported by a combination of the project's access to public transit and the proposed TDM program, which includes access to local transportation information.

The internalization and transit reduction factors for the office uses were not applied because the trip cap rates for new office developments in the EWPP area, which are 28 and 37 percent lower than the ITE trip rates for the AM and PM peak hours, respectively, account for internalization and TDM measures. Therefore, additional VTA internalization and transit reduction were not applied to the office uses. According to the City's Greenhouse Gas (GHG) Reduction Program, the project would be required to achieve a minimum 9% reduction for nonresidential land uses with 50 employees or more. Because the project would be required to achieve the trip caps through the TDM plan, it would meet the reduction goal required by the GHG Reduction Program.

In addition, trip generation for retail uses is typically adjusted to account for pass-by trips. Pass-by trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Pass-by trips are therefore excluded from the traffic projections (although pass-by traffic is accounted for at the site entrances). An average pass-by trip reduction of 30% was applied to the daily trips and the PM peak-hour trips of the retail component of the project based on the maximum allowable pass-by reduction per the VTA TIA Guidelines.

Project Trips

After applying the trip reductions, it is estimated that the proposed project would generate 4,954 daily trips, including 514 trips (271 inbound and 243 outbound) during the AM peak hour and 504 trips (218

[3] The EWPP identifies an area-wide average trip cap of 0.95 a.m. and 0.88 p.m. peak-hour trips per ksf of office and R&D sites to minimize vehicle trips into and out of East Whisman gateways. The 465 Fairchild Dr/600 Ellis Street Office Project transportation analysis, prepared by Fehr Peers dated September 2020, analyzed the combination of existing (legacy) office development not subject to TDM requirements and future new office development that will be subject to TDM requirements in order to refine the trip generation rate necessary for future new office development to be compliant with the gateway trip cap volumes. The resulting trip cap for new office development is 0.83 a.m. and 0.72 p.m., which includes the incorporation of TDM measures required by the EWPP.

inbound and 286 outbound) during the PM peak hour. Because the existing office buildings are unoccupied, no trip credits were given to the existing use.

Table 5
Project Trip Generation Estimates

Land Use	Size		Daily Trip Rate	Daily Trips	AM Peak Hour Trip Rate	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Trips Total	PM Peak Hour Trip Rate	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Trips Total
Proposed Uses												
Office[1]	277.6	ksf	5.25	1,457	0.83	203	28	231	0.72	34	167	201
Multifamily Housing[2]	858	du	4.54	3,895	0.37	73	244	317	0.39	204	131	335
- Housing/Office Internal Capture (3%)[4]				-117		-2	-8	-10		-6	-4	-10
- Housing/Retail Internal Capture[4]				-19		0	-1	-1		-1	-1	-2
- Transit Reduction (9%)[5]				-338		-6	-22	-28		-18	-11	-29
Sub-Total Residential				*3,421*		*65*	*213*	*278*		*179*	*115*	*294*
Retail[3]	2.344	ksf	54.45	128	2.36	4	2	6	6.59	8	7	15
- Housing/Retail Internal Capture (15%)[4]				-19		-1	0	-1		-1	-1	-2
- Pass-by Reduction (30% Daily/0% AM/30% PM)[6]				-33		0	0	0		-2	-2	-4
Sub-Total Retail				*76*		*3*	*2*	*5*		*5*	*4*	*9*
Gross Project Trips				***4,954***		***271***	***243***	***514***		***218***	***286***	***504***

Notes:
Source: ITE Trip Generation Manual, 11th Edition, 2021. VTA Transportation Impact Analysis (TIA) Guidelines, 2014.
1. Daily trip rate and AM and PM peak-hour trip cap rates developed for the 465 Fairchild Drive office project were used.
2. Mid-Rise Multifamily Housing (ITE Land Use 221): average trip rates in trips per dwelling unit were used.
3. Strip Retail Plaza less than 40 ksf (Land Use 822): average trip rates were used.
4. Internal trip reductions were applied to the project per VTA TIA Guidelines.
5. Per VTA TIA Guidelines, a transit trip reduction was applied to the project that is within 2,000 feet of a LRT station.
6. Pass-by reduction is based on the maximum allowable pass-by trip reduction rate in the VTA TIA Guidelines for the daily and PM peak hour. Hexagon assumes no pass-by trip reduction during the AM peak hour for retail uses.

Trip Distribution and Assignment

The trip distribution for the project was estimated based on existing travel patterns on the surrounding roadway network and the locations of complementary land uses (see Figure 7). The peak-hour trips generated by the project were assigned to the roadway system based on the directions of approach and departure, the roadway network connections, and the location of project's internal road (see Figure 8).

Roadway Network

The roadway network under background conditions would be the same as existing conditions because there are no planned and funded transportation improvements at the study intersections that would alter the existing intersection lane configurations.

Under background plus project conditions, the project would widen the driveway approach at the Logue Avenue/Middlefield Road intersection from one approach lane to one shared left-turn/through lane and one right-turn lane. With the project proposed configuration for the northbound approach, it is assumed that there would be no change to the northbound and southbound signal phases (permitted phases). The new internal road that intersects Ferguson Drive is assumed to have a stop sign for the driveway approach. The site plan shows that the project would extend the existing southbound right-turn lane on

Ferguson Drive to approximately 75 feet north of the internal road (see Figure 9). The right-turn lane would provide access to the project site and the adjacent property.

The intersection configurations for all other study intersections would be the same as background conditions.

Traffic Volumes

Background Traffic Volumes

Background traffic volumes for the study intersections (see Figure 10) were estimated by adding to the existing traffic volumes the trips generated by nearby approved projects that have not been constructed or occupied.

Lists of approved projects were obtained from the Cities of Mountain View and Sunnyvale. Hexagon considered both the location and size of the approved projects in order to eliminate those that were too far away or too small to affect traffic conditions of the study intersections. The approved projects considered for the study are listed in Appendix C. Vehicle trips from the approved projects were obtained from the project's TIA or environmental document (Initial Study or EIR), if available. For projects without a traffic study, trip estimates were developed using rates published in the *Trip Generation Manual*. The estimated trips were assigned to the study intersections according to distributions identified in the development traffic studies, if available, or knowledge of the study area.

The approved trips and traffic volumes for all components of traffic are tabulated in Appendix C.

Background Plus Project Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to background traffic volumes to obtain background plus project traffic volumes (see Figure 11).

Intersection Levels of Service

The results of the intersection level of service analysis (see Table 6) show that all study intersections would operate at acceptable levels during both the AM and PM peak hours under background conditions, with and without the project. The critical delay and v/c increase for unsignalized intersections are not calculated, as these values only determine the adverse effect at signalized intersections. The intersection level of service calculation sheets for the project are included in Appendix B.

The Logue Avenue/Middlefield Road and Ferguson Drive/Middlefield Road intersections are expected to operate adequately during both peak hours under background plus project conditions, using the existing signal phasing. Therefore, signal modifications would not be unnecessary. However, as discussed in Chapter 4 further below, because the project would increase the number of pedestrians crossing Middlefield Road at the Logue Avenue intersection, the project should modify the traffic signal and intersection lane configuration with protected left-turn phases and dedicated left-turn lanes for the northbound and southbound approaches (by changing the northbound and southbound approaches to a left-turn lane and a shared through and right-turn lane) to provide safer crossings for pedestrians. With the recommended lane configuration and phasing changes, the intersection would operate at LOS C during the AM and PM peak hours.

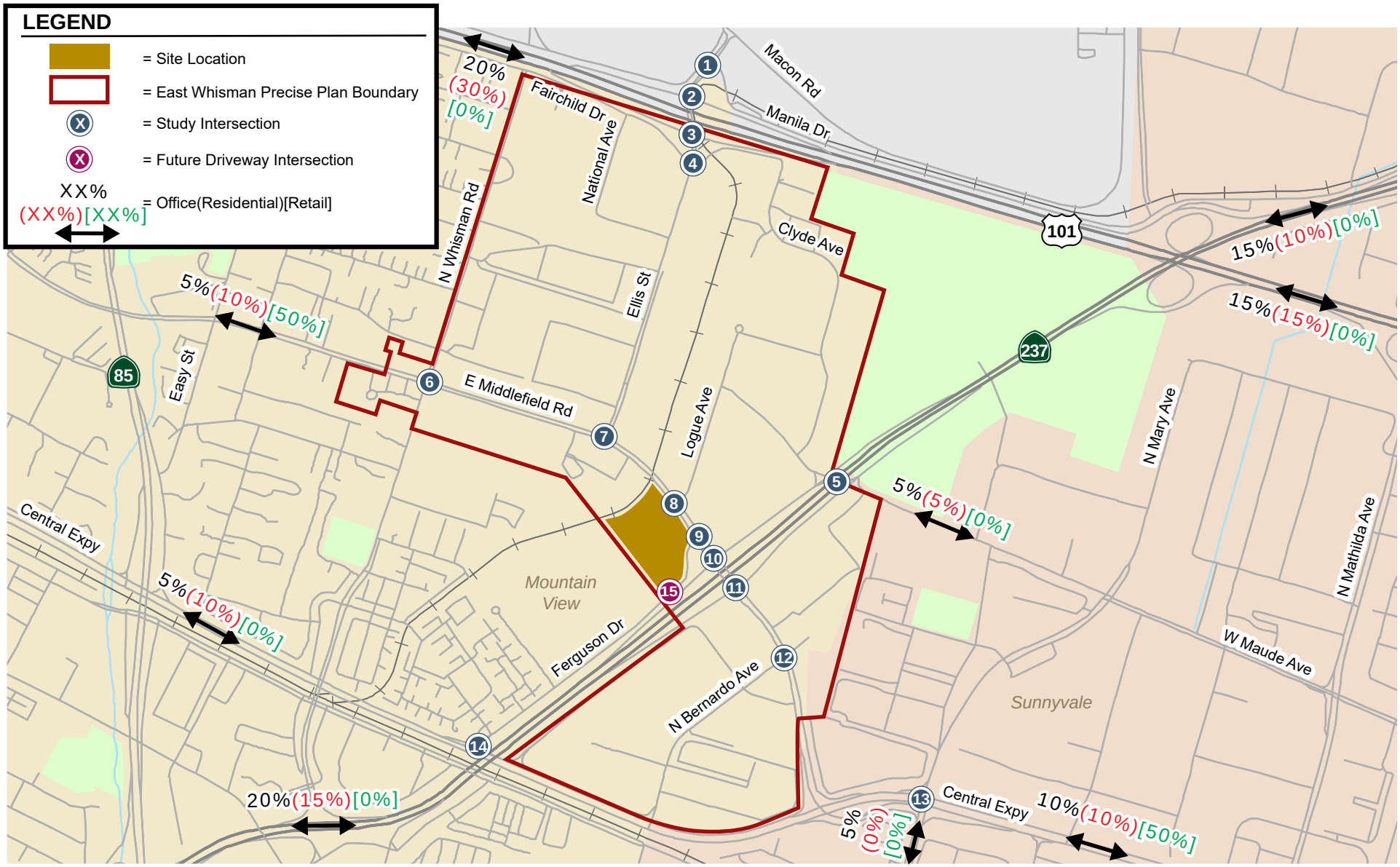
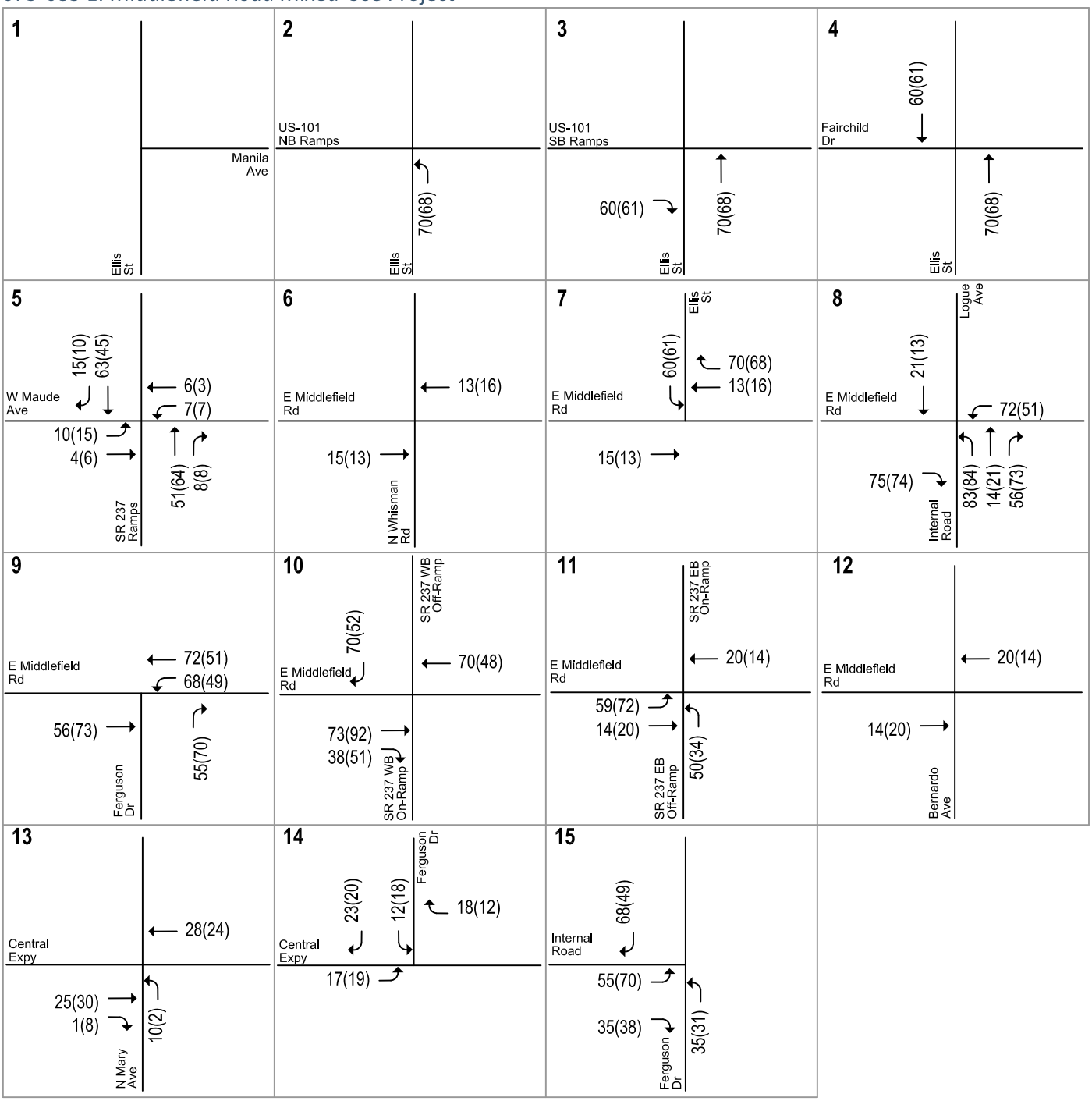


Figure 7
Project Trip Distribution



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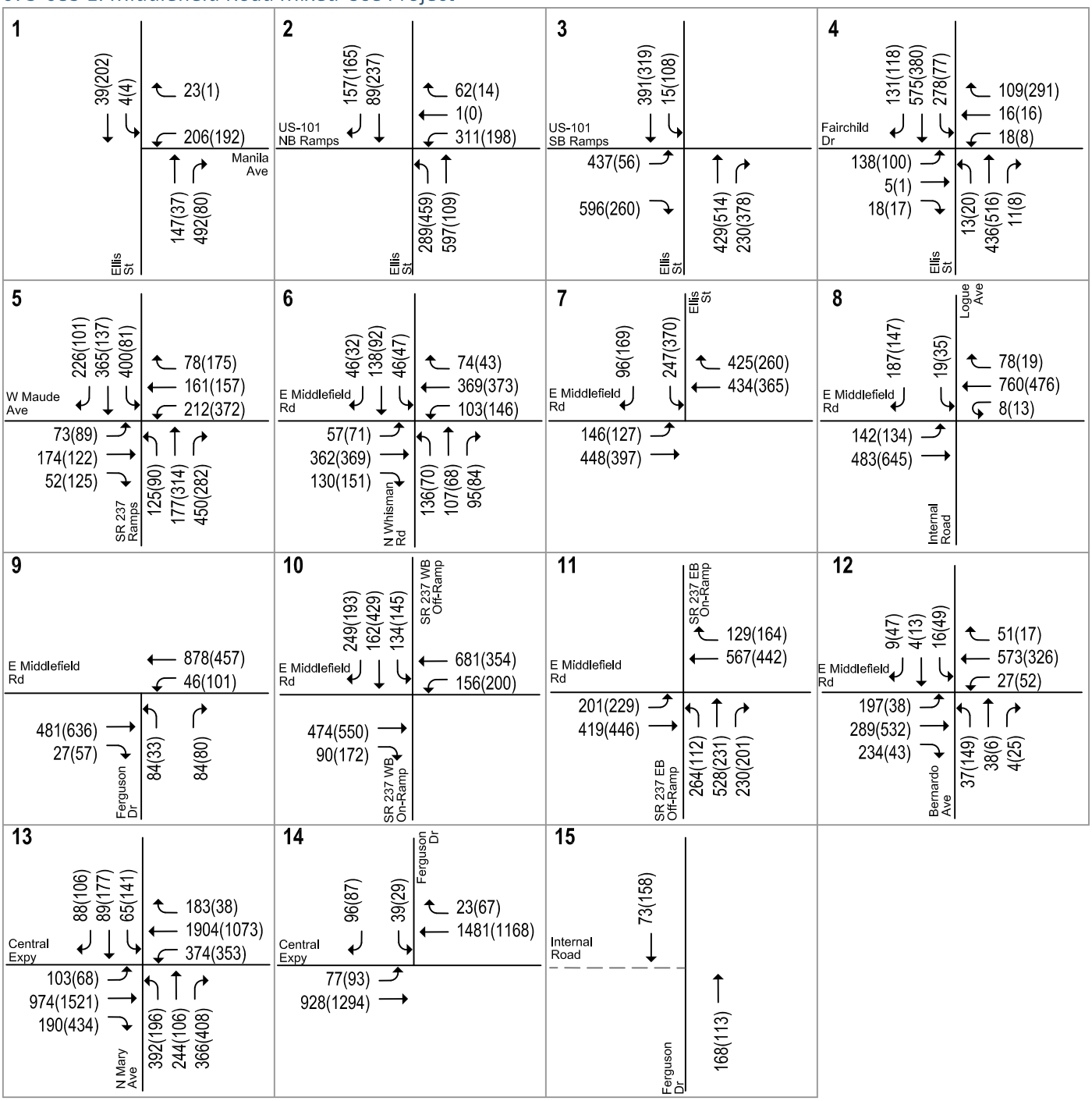
XX(XX) = AM(PM) Peak-Hour Trips

Figure 8
Project Trip Assignment



Figure 9
Ferguson Drive Proposed Lane Configuration

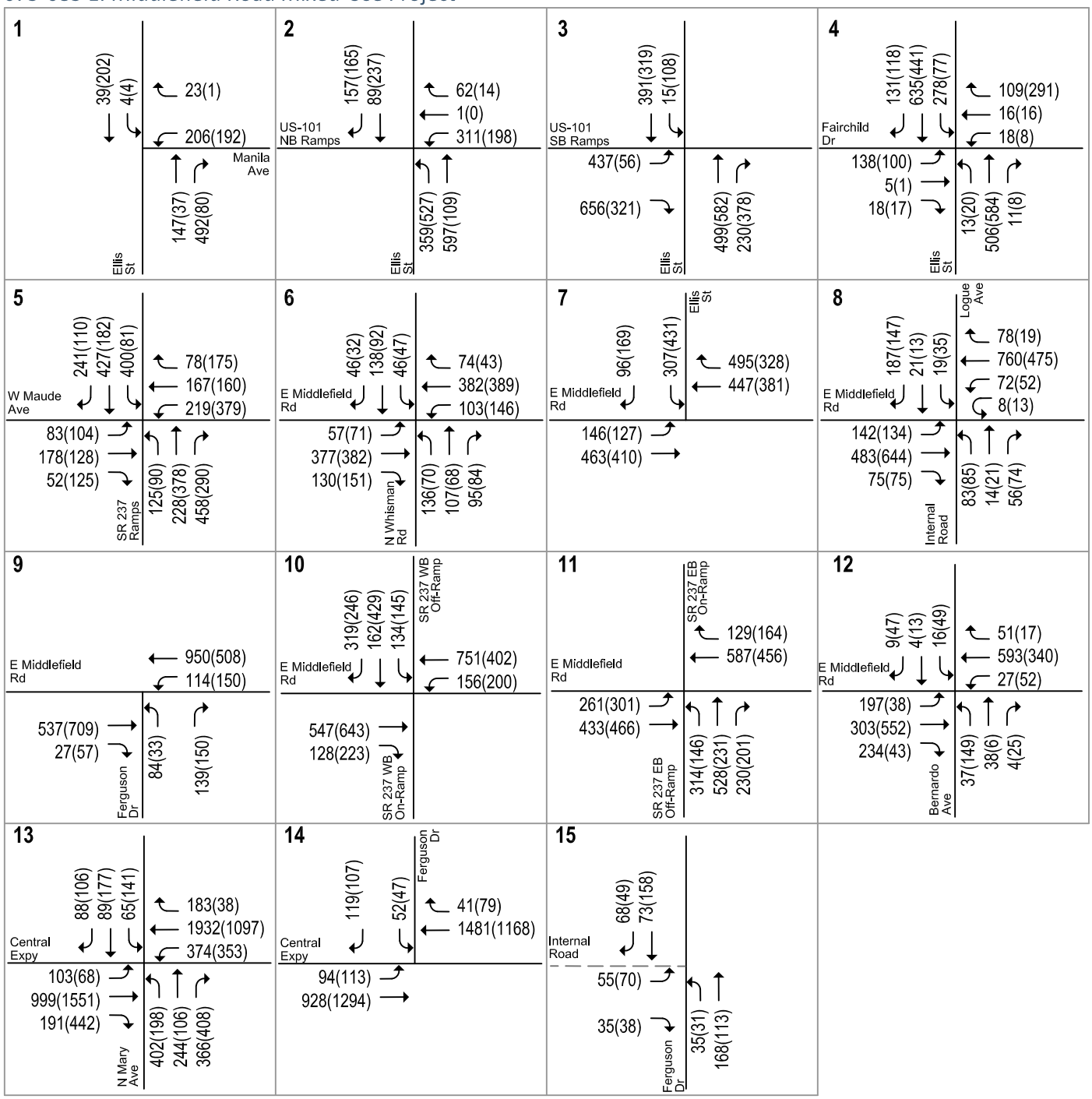
NORTH
Not to Scale



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XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 10
Background Traffic Volumes



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XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 11
Background Plus Project Traffic Volume

Table 6
Background Plus Project Intersection Levels of Service

ID	Intersection	LOS Standard	Peak Hour	Background Avg. Delay[1]	Background LOS	Background+Project Avg. Delay[1]	Background+Project LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
1	Ellis Street and Manila Dr	D	AM	12.1	B	12.1	B	--	--
	(all-way stop)		PM	8.8	A	8.8	A	--	--
2	Ellis Street and US 101 NB Ramps	D	AM	14.6	B	14.8	B	0.1	0.022
			PM	20.1	C	20.1	C	0.0	0.042
3	Ellis Street and US 101 SB Ramps	D	AM	15.8	B	17.4	B	2.1	0.041
			PM	15.5	B	13.6	B	0.0	0.178
4	Ellis Street and Fairchild Drive	D	AM	15.7	B	15.7	B	0.0	0.036
			PM	15.3	B	15.1	B	0.0	0.042
5	SR 237 Ramps and Maude Ave	D	AM	53.2	D	52.7	D	0.4	0.007
			PM	39.4	D	40.0	D	0.0	0.024
6	Whisman Rd and Middlefield Rd	D	AM	26.1	C	25.9	C	-0.2	0.005
			PM	28.2	C	28.0	C	0.0	0.004
7	Ellis Street and Middlefield Rd	D	AM	16.2	B	16.6	B	0.6	0.073
			PM	21.0	C	21.3	C	0.0	0.046
8	Logue Ave/Internal Road and Middlefield Rd	D	AM	18.6	B	19.3	B	0.0	0.000
			PM	17.7	B	19.1	B	0.0	0.055
9	Ferguson Dr and Middlefield Rd	D	AM	10.7	B	12.9	B	1.4	0.021
			PM	8.5	A	10.5	B	0.0	0.043
10	SR 237 WB Ramps and Middlefield Rd	D	AM	20.5	C	20.5	C	-6.1	0.117
			PM	23.5	C	23.2	C	0.0	0.050
11	SR 237 EB Ramps and Middlefield Rd	D	AM	22.0	C	22.3	C	1.0	0.024
			PM	21.4	C	21.9	C	0.0	0.025
12	Bernardo Ave and Middlefield Rd	D	AM	19.8	B	19.7	B	-0.1	0.006
			PM	25.5	C	25.3	C	0.0	0.006
13	Mary Ave and Central Expy*	E	AM	44.4	D	44.7	D	0.1	0.008
			PM	48.8	D	49.0	D	0.0	0.006
14	Ferguson Dr and Central Expy*	E	AM	4.5	A	5.0	A	0.4	0.008
			PM	5.5	A	5.9	A	0.0	0.011
15	Ferguson Dr and Internal Road	N/A	AM	Project		10.2	B	--	--
	(one-way stop)		PM	Driveway		10.9	B	--	--

Notes:
* Denotes VTA CMP intersection.
1. Weighted average control delay measured in seconds per vehicle for signalized and all-way stop intersections. Worst approach delay (seconds per vehicle) and LOS are reported for side stop-controlled intersections.

There are some signalized intersections for which the average delay under project conditions is shown to be less than under no project conditions during at least one peak hour. The decrease in average delay can be less under project conditions because the intersection delay is a weighted average of all intersection movements. The addition of project traffic to movements with delays lower than the average intersection delay can reduce the average delay for the entire intersection. There are also several signalized intersections at which there would be no increase in critical delay and/or critical v/c compared to no project conditions. This is because the project trips are assigned to the non-critical movements of these intersections.

Based on the EWPP, the Ellis Street/Manila Avenue, Whisman Road/Middlefield Road, Middlefield Road/SR 237 Ramps, and Ferguson Drive/Central Expressway intersections are considered trip

monitoring gateways, while the Ellis Street/US 101 Northbound Ramps, Ellis Street/US 101 Southbound Ramps, SR 237 Ramps/Maude Avenue, and Mary Avenue/Central Expressway intersections are considered trip target gateways. The monitoring gateways would be monitored over time to address unforeseen congestion impacts, and the trip target gateways are intersections that would be more likely to trigger congestion impacts. The results of the intersection level of service analysis show that the project is not expected to cause adverse effects at any of the trip target and monitoring gateway intersections.

Signal Warrant Analysis at Ferguson Drive and Internal Road

Traffic operations at the unsignalized Ferguson Drive/Internal Road intersection were also analyzed on the basis of the Peak-Hour Volume Signal Warrant, (Warrant #3) described in *the California Manual on Uniform Traffic Control Devices (MUTCD)*, 2014 Edition. This method makes no evaluation of intersection level of service, but simply provides an indication whether peak-hour traffic volumes are, or would be, sufficient to support the installation of a traffic signal. The results of peak-hour volume signal warrant analysis indicate that the Ferguson Drive/Internal Road intersection would not meet the thresholds that warrant signalization under project conditions during both AM and PM peak hours. The peak-hour signal warrant sheet is contained in Appendix D.

Stop Warrant Analysis at Ferguson Drive and Internal Road

A potential all-way stop at the Ferguson Drive/Internal Road intersection was evaluated under background plus project conditions, based on the criteria described in the City's stop warrant analysis worksheet. The criteria are as follows:

I. **Volume Warrant:** The vehicular volume entering the intersection from all approaches is at least 300 vehicles per hour (vph) for the highest 8 hours of an average day, AND the combined vehicular volume entering the intersection from the minor street approaches is at least 100 vehicles per hour for the same 8 hours.

   OR

   The vehicular volume entering the intersection from all approaches is at least 300 vehicles per hour for the highest 8 hours of an average day, AND the total pedestrian volume entering the intersection is at least 100 pedestrians per hour for the same 8 hours.

   If the intersection is located in a residential area, the above volume thresholds are decreased by 40%.

II. **Crash Warrant:** 3 or more reported crashes/collisions in a 12-month period.

III. **Line of Sight Warrant:** 150 feet or less line of sight distance on one or more approaches of the major street.

An intersection qualifies as a residential area if ALL of the following conditions exist:

- Both streets have residential frontage and have a 25-mph speed limit.
- Neither street is an adopted through street as defined in the CVC (California Vehicle Code).
- Neither street has more than one travel lane in each direction.
- No stop sign or traffic signal exists within 500 feet along the major street.
- The installation of a 4-way stop sign is compatible with overall traffic circulation.

The internal road volumes for the highest 8 hours would only be greater than 100 vph for one hour. The total intersection pedestrian volumes would be fewer than 100 pedestrians per hour based on the peak-

hour pedestrian counts at Ferguson Drive/Middlefield Road. There were no accidents on Ferguson Drive or at the Ferguson Drive/Middlefield Road intersection within the last year. Vehicles traveling eastbound at the Ferguson Drive/Internal Road intersection would have at least 150 feet looking both ways on Ferguson Drive.

The Ferguson Drive/Internal Road intersection does not qualify as a residential area because Ferguson Drive is considered a local collector street connecting Middlefield Road and Central Expressway and providing access to developments on the street, while the side street is just a project driveway.

Based on the City's stop warrant criteria, the intersection would not meet any of the three warrants under the project condition. The stop warrant analysis worksheets are included in Appendix D.

Intersection Queuing Analysis

The analysis of intersection operations was supplemented with a vehicle queuing analysis for intersections where the project would add a substantial number of trips to the left-turn movements or stop-controlled movements. This analysis provides a basis for estimating future storage requirements at the intersections under existing, background, and project conditions. Vehicle queues were estimated using a Poisson probability distribution, described in Chapter 1. The following left-turn movements were evaluated, and the results of the queueing analysis are summarized in Table 7:

- Southbound left turn from Ellis Street to Middlefield Road
- Westbound left turn from Middlefield Road to Ferguson Drive
- Northbound left turn and eastbound left turn at SR 237 Eastbound and Middlefield Road
- Southbound left turn and eastbound left turn at Ferguson Drive and Central Expressway

The queuing analysis indicates that there would be no queuing deficiencies caused or exacerbated by the project.

Traffic Operations at the Internal Road Intersections

In addition to the queuing analysis at the study intersections, traffic operations at the internal road were evaluated to identify whether there would be vehicle queuing issues. The results are summarized below and in Table 8. The gross site trips that would occur at the project entrance intersections are 271 inbound trips and 243 outbound trips during the AM peak hour, and 220 inbound trips and 288 outbound trips during the PM peak hour (see Figure 12), which includes pass-by trips during the PM peak hour.

Middlefield Road Access Intersection

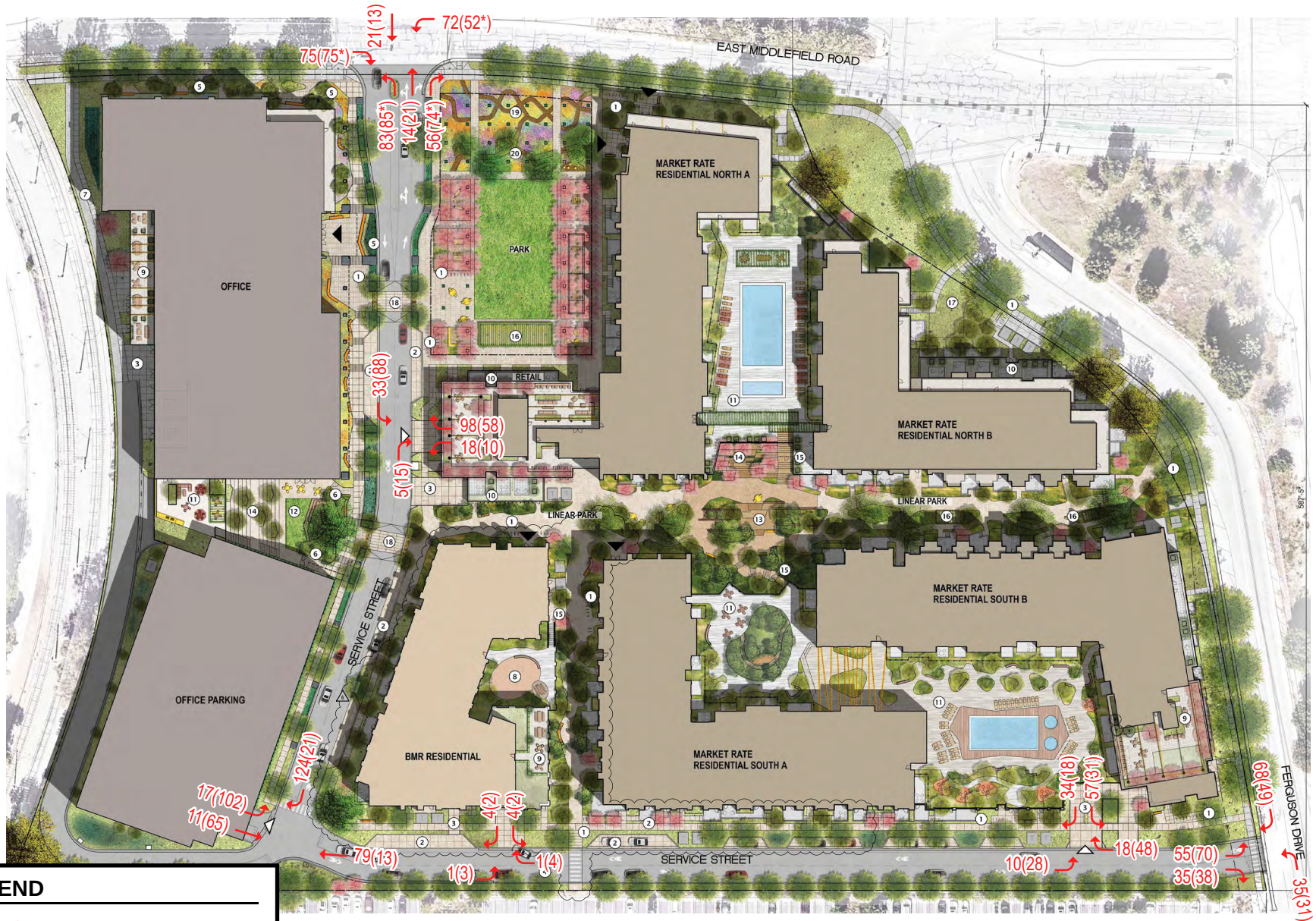
The project trips that are estimated to occur at the Middlefield Road intersection are 168 inbound trips and 151 outbound trips during the AM peak hour and 140 inbound trips and 180 outbound trips during the PM peak hour.

Traffic operations at the internal road intersection were evaluated with a level of service analysis (Table 6) and queuing analysis for inbound and outbound traffic (see Table 8). The analysis evaluates whether the added left-turn trips would affect the westbound through traffic, whether the added eastbound right-turn trips would affect the adjacent railroad tracks, and whether there would be long vehicle queues on site for the outbound traffic.

Table 7
Intersection Queuing Analysis Summary

	Ellis St & Middlefield Rd		Ferguson Dr & Middlefield Rd		SR 237 EB Ramps & Middlefield Rd				Ferguson Dr & Cental Expy			
	SBL[3]		WBL		NBL		EBL		SBL[4]		EBL	
Analysis Scenario	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Existing												
Cycle/Delay[1] (sec)	90	100	85	50	90	95	90	95	88	87	88	87
Volume (vph)	126	170	42	89	210	82	146	194	32	25	61	82
Number of lanes	2	2	2	2	2	2	2	2	1	1	1	1
Volume (vphpl)	63	85	21	45	105	41	73	97	32	25	61	82
95th %. Queue (veh/ln)	4	5	2	2	6	3	4	5	2	2	4	5
95th %. Queue[2] (ft/ln)	100	125	50	50	150	75	100	125	50	50	100	125
Storage (ft/ln)	250	250	175	175	200	200	175	175	150	150	175	175
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Background												
Cycle/Delay[1] (sec)	90	100	85	50	90	95	90	95	88	87	88	87
Volume (vph)	247	370	46	101	264	112	201	229	39	29	77	93
Number of lanes	2	2	2	2	2	2	2	2	1	1	1	1
Volume (vphpl)	124	185	23	51	132	56	101	115	39	29	77	93
95th %. Queue (veh/ln)	6	9	2	2	7	4	5	6	3	2	4	5
95th %. Queue[2] (ft/ln)	150	225	50	50	175	100	125	150	75	50	100	125
Storage (ft/ln)	250	250	175	175	200	200	175	175	150	150	175	175
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Background Plus Project												
Cycle/Delay[1] (sec)	90	100	85	50	90	95	90	95	88	87	88	87
Volume (vph)	307	431	114	150	314	146	261	301	52	47	94	113
Number of lanes	2	2	2	2	2	2	2	2	1	1	1	1
Volume (vphpl)	154	216	57	75	157	73	131	151	52	47	94	113
95th %. Queue (veh/ln)	7	10	3	3	7	4	6	7	3	3	4	5
95th %. Queue[2] (ft/ln)	175	250	75	75	175	100	150	175	75	75	100	125
Storage (ft/ln)	250	250	175	175	200	200	175	175	150	150	175	175
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes:
NB = northbound; SB = southbound; WB = westbound; EB = eastbound; L/T/R = left/through/right.
[1] Cycle length used for signalized intersections, delay of movement used for unsignalized intersections.
[2] Assumes 25 feet per vehicle queued.
[3] Storage length measured from the intersection to the beginning of the two-way left-turn lane.
[4] Storage length measured from the intersection to the nearest driveway.



LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

Note: * Includes passby volumes

Figure 12
Project Trips at Driveways

Table 8
Internal Road Intersection Queuing Analysis

Analysis Scenario	Middlefield Road and Logue Avenue/Internal Road						Ferguson Drive Access Intersection			
	NBL/T[3]		WBL[4]		EBT/R		NBL/T[5]		EBL/R	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Background Plus Project										
Cycle/Delay[1] (sec)	85	92	85	92	85	92	7.5	7.7	10.3	10.9
Volume (vph)	97	106	80	65	558	719	203	144	90	108
Number of lanes	1	1	1	1	2	2	1	1	1	1
Volume (vphpl)	97	106	76	65	279	360	203	144	90	108
95th %. Queue (veh/ln)	5	6	4	4	11	14	2	1	1	1
95th %. Queue[2] (ft/ln)	125	150	100	100	275	350	50	25	25	25
Storage (ft/ln)	150	150	150	150	250	250	50	50	125	125
Adequate (Y/N)	Y	Y	Y	Y	**N**	**N**	Y	Y	Y	Y

Notes:
NB = Northbound; SB = Southbound; WB = Westbound; EB = Eastbound; L/T/R = left-turn/through/right-turn movement
1. Cycle length used for signalized intersections, delay of movement used for unsignalized intersections.
2. Assumes 25 feet per vehicle queued.
3. Proposed storage length on site between the intersection and on-site crosswalk.
4. Proposed storage length.
5. Storage length measured from the project driveway to the adjacent driveway.

For the outbound traffic, there is expected to be a maximum vehicle queue of 5 vehicles during the AM and PM peak hours. The internal road has a total of 150 feet of storage in the northbound shared left-turn/through outbound lane from Middlefield Road to the proposed crosswalk between the office building and the park. Therefore, the outbound vehicle queue is not expected to cause an on-site circulation issue.

The westbound left-turn movement on Middlefield Road would have a storage lane of 150 feet with the project, which could accommodate a vehicle queue of 6 vehicles. The estimated maximum vehicle queues for the inbound left turn are 4 vehicles during AM and PM peak hours. Thus, the queue is not expected to affect the westbound through traffic.

The Logue Avenue/Middlefield Road/internal road intersection is located 250 feet east of the existing VTA light-rail tracks. With the project, the estimated maximum vehicle queues are 11 and 14 eastbound vehicles per lane during the AM and PM peak hours, which would potentially extend past the tracks by one vehicle during the AM peak hour and 4 vehicles during the PM peak hour.

Although the project would increase eastbound queues, the queue is not expected to create any conflicts with the VTA rail safety operations as there are gate arms at the rail to prevent vehicles from approaching the crossing. The MTA for the Middlefield Park Master Plan (MPMP) EIR evaluated a proposed pedestrian crossing at the LRT tracks and concluded a crossing with preemptive signals is recommended. The signals would be interconnected and coordinated with the signal at the Logue Avenue/Middlefield Road intersection. The project should implement signal preemption for eastbound Middlefield Road at Logue Avenue to prevent the eastbound vehicle queues extending to the LRT tracks.

Ferguson Drive Access Intersection

The project trips that are estimated to occur at the Ferguson Drive intersection are 103 inbound trips and 90 outbound trips during the AM peak hour and 80 inbound trips and 108 outbound trips during the PM peak hour.

The queuing analysis (Table 8) evaluates whether the added left-turn trips would affect the northbound traffic and whether there would be long vehicle queues on site for the outbound traffic. For the outbound traffic, there is expected to be a maximum vehicle queue of one vehicle during the AM and PM peak hours. The internal road has 125 feet of storage between Ferguson Drive and the parking garage entrance. Therefore, the outbound vehicle queue is not expected to cause an on-site circulation issue. During the AM and PM peak hours, the outbound traffic may experience a short delay (equivalent to LOS B). However, vehicles would be able to find a gap in traffic to make a left turn because of the traffic signal at the Ferguson Drive/Middlefield Road intersection.

For the inbound traffic, the estimated maximum vehicle queue for the northbound shared left-turn/through lane is no more than 2 vehicles and would not expect to block the adjacent driveway. The project would extend the existing southbound right-turn lane on the Ferguson Drive frontage to approximately 75 feet north of the internal road (see Figure 9). The right-turn lane would provide access to the project site and the adjacent property. With the extended southbound right-turn lane, the project is not expected to affect the southbound traffic operations.

Similar to the existing conditions, Ferguson Drive project frontage would be striped with no drive zones where the lanes are too wide.

CMP Intersection Conformance

With the project, both of the study CMP intersections (Mary Avenue/Central Expressway and Ferguson Drive/Central Expressway) would operate adequately (LOS E or better). The EWPP EIR studied other CMP intersections along Central Expressway between Shoreline Boulevard and Mathilda Avenue, along SR 237 between El Camino Real and Grant Road, and at Maude Avenue/Mathilda Avenue. The project is not expected to add more than 10 trips per lane to any of these CMP intersections. Thus, the project is not expected to result in additional adverse traffic operational effects on the other CMP study intersections analyzed in the EWPP EIR.

Because the project is consistent with and conforms to the land uses and development density of the EWPP, the project would not result in additional adverse traffic operational effects on freeway segment levels of service and freeway ramp operations. Therefore, a CMP freeway analysis was not required.

4. Other Transportation Issues

This chapter presents other transportation issues associated with the project, including:

- Conformance with the East Whisman Precise Plan
- Site access and circulation
- Effects on pedestrians, bicycles, and transit facilities
- Effects on surrounding neighborhood streets
- Parking

The analyses in this chapter are based on the City's *MTA Handbook* and professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Conformance with East Whisman Precise Plan (EWPP)

The project is located within the EWPP area, which includes parcels bounded by US 101 and NASA Ames/Moffett Field to the north, the Sunnyvale city limits to the east, Central Expressway and South Whisman and Whisman Station Precise Plan areas to the south, and Whisman Road to the west. The project is in conformance with the EWPP, as described below:

- **Key Corners.** The project is located at a key corner (Logue Avenue/Middlefield Road) based on the EWPP. A key corner should incorporate special building and open space design to provide a sense of place and wayfinding. Open space would be provided at the key corner along the internal road opposite Logue Avenue and along Middlefield Road.
- **Shared Common Usable Open Area.** The project would provide multiple open areas located in the middle of the project site that would be usable by the residents of the site, as well as open areas surrounding the buildings that would be usable by the public.
- **Local Streets.** Ferguson Street is a local street, which is defined by the EWPP to have low travel speeds, widened sidewalks, and dedicated bicycle facilities to help encourage travel by non-vehicle modes. The project would widen the sidewalks on Ferguson Street to 10 feet (5-foot walk zone and 5-foot landscaping).
- **Avenues.** Middlefield Road is an avenue, which is defined by the EWPP to have mixed residential and commercial frontages, wider streets with a generous landscaped median, and balanced modes of transportation, with dedicated bicycle facilities, high quality transit stops, and generous sidewalks. The project would widen the sidewalk to 14 feet (8-foot walk zone and 6-foot landscaping). The project would also install a buffered bike lane along the project frontage.

- **Curb-Cut Frequency.** The project would provide access via one existing private internal road intersecting Middlefield Road opposite Logue Avenue and one new internal road intersecting Ferguson Drive, which meets the requirement of one curb cut per 200 feet of public street frontage for each project site.
- **Wider Sidewalks.** The project would provide wider sidewalks along its frontages on Ferguson Drive and Middlefield Road. On Ferguson Drive, the sidewalk would be 10 feet wide (5 feet of walk zone and 5 feet of landscaping). The sidewalk on Middlefield Road would be 14 feet wide (8 feet of walk zone and 6 feet of landscaping).
- **Bicycle Facilities.** The project would install a 6-foot bike lane with a 3-foot buffer along Middlefield Road.
- **Parking Frontage.** Parking should be located at the interior, side, or rear of a lot and/or the least visible location from the street. Parking would be provided in below-grade garages for the residential buildings and an above-grade garage for the office, which would be behind the office and residential buildings at the rear of the lot in the southwest corner of the site. The entrances to the parking garages would be located on the internal road of the project site, away from the public street frontages.
- **Loading and Service Access.** Loading docks, trash enclosures, and similar areas should not face public streets, parks, and publicly accessible open spaces. The loading space and trash enclosure for the office would be located along the west side of the building, away from the street frontage. The loading space and trash enclosure for the residential and retail buildings would be located facing the internal road.
- **Service Street.** The EWPP proposes service streets within the area that would connect Middlefield Road and Ferguson Drive. The project would comply with the EWPP by providing an internal road through the site between Middlefield Road and Ferguson Drive. There would also be a service drive along the western edge of the site to provide access to the office loading area from the internal road. The internal road would provide a shared bicycle route.

Transportation Demand Management (TDM) Requirements

As previously discussed in Chapter 3, new office developments in the EWPP area are subject to peak-hour trip cap rates. The rates are inclusive of transportation demand management (TDM) measures required by the EWPP. Thus, the project is required to implement TDM measures and meet the trip cap.

The EWPP specifies that all new office developments greater than 10,000 square feet and residential developments with at least 100 units should become a member of the Mountain View Transportation Management Association (TMA) and provide a TDM plan with programs and measures to reduce vehicle trips. The project has prepared a TDM plan with the following site design features and operational TDM measures as required by the EWPP:

- On-site TDM coordinator (residents and non-residents),
- Mountain View TMA membership (residents and non-residents),
- TDM marketing (residents),
- Safe routes to schools (residents),
- Maximum parking supply (residents and non-residents),
- Carshare parking (residents and non-residents),

- Bicycle parking (residents and non-residents) and shower and changing facilities (non-residents),
- Common workspace (residents),
- Building entrances toward sidewalks, transit stops and bicycle routes (residents and non-residents),
- Secure storage (residents),
- Bikeshare access (residents and non-residents),
- Priority parking for carpools and vanpools (non-residents), and
- Carshare parking (non-residents).

As required by the EWPP, the proposed TDM plan should also include monetary incents for alternative modes, such as subsidized transit passes, bike-share, unbundled parking, or carpools. The project should implement unbundled parking for residents. The project should require office employers to provide subsidized transit passes for employees.

For the bikeshare access service, the project should indicate where the proposed bikeshare station would be within walking distance of the project site and how the project would provide access to the proposed bikeshare station. If a bikeshare service is not available nearby, the project should provide access to shared bicycles within the site.

Site Access and Circulation

A review of the project site plan was performed to determine if adequate vehicle site access and on-site circulation would be provided and to identify any access or circulation issues that should be improved. This review is based on the site plan, dated August 22, 2024, presented on Figure 2 and in accordance with generally accepted traffic engineering standards.

Vehicular Site Access

Vehicle access to the project site would be provided via a private internal road intersecting Middlefield Road opposite Logue Avenue and intersecting Ferguson Drive in the southeast corner of the site. The internal road would provide access to all the parking garages on site.

Private Service Street/Driveway Design

The project would provide a private internal road through the site that would be classified as a Service Street. The EWPP identifies service streets as slower, narrower streets that serve as access to parking garages, addresses for residential units, commercial loading spaces, and delivery for offices or R&D uses, which are private but can be publicly accessible. Service streets include trees and sidewalks, where bicycles may share the travel lane with slow-moving vehicles. The internal road would match the description for a service street as it provides access to the parking garages and loading spaces. The internal road would also be a bicycle route and provide landscaping and sidewalks.

Service streets that are a fire lane must be at least 26 feet wide (curb to curb) with a 13-foot vehicle lane in each direction, for a total width of 46 feet with a separation of 55 to 65 feet between buildings. Service streets must include a 5-foot minimum width sidewalk, separated from the street by landscaping. The proposed internal road would meet these requirements.

According to the City of Mountain View Zoning Code, driveways should be a minimum of 18 feet wide for a two-way driveway, unless fire access requires a minimum width of 26 feet. The driveways into the

garages would be 24 feet wide for the two market-rate residential garages and the office garage. The BMR garage would be 20 feet wide. Thus, all driveways into the garages would meet City guidelines.

Sight Distance at Access Intersections

The internal access road should be free and clear of any obstructions to provide adequate sight distance at the intersection, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and vehicles and bicycles traveling on Middlefield Road and Ferguson Drive. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway and provides drivers with the ability to locate sufficient gaps in traffic and exit a driveway.

According to the City's Standard Detail A-22, any landscaping and signage within the pedestrian triangle and vehicle triangle at the internal road access intersections should be no taller than 3 feet and located in such a way to ensure an unobstructed view for drivers exiting the site, and street trees must have a high canopy of at least 6 feet. The landscaping features shown on the site plan are not expected to obstruct the vision of exiting drivers provided the landscaping is also kept at a low level within the pedestrian triangle and vehicle triangle at the access intersections.

The speed limit on Ferguson Drive is 25 mph. According to the Standard Detail A-22, the stopping sight distance for a 25-mph roadway is 150 feet. Looking in either direction while exiting the internal road, adequate sight distance would be provided for vehicles traveling on Ferguson Drive. There are no roadway curves within 150 feet on Ferguson Drive that would obstruct the vision of eastbound vehicles at the intersection. There is an existing driveway south of the internal road for the adjacent property. However, eastbound vehicles would be able to clearly see the vehicles exiting out of the adjacent driveway. On-street parking would be prohibited near the internal road on Ferguson Drive. Thus, adequate sight distance would be provided along Ferguson Drive.

The landscape plan shows street trees would be added along Middlefield Road near the project internal access road. The landscaping provided at the corner would be less than 3 feet tall within 35 feet from the corner, which would maintain the required sight distance. The type and location of the street trees would be determined by the City of Mountain View Public Works Department at the implementation stage. Note that street trees have a high canopy and would not obstruct the view of drivers.

Corner Visibility at Ferguson Drive and Middlefield Road

The project site fronts the southwest corner of the Ferguson Drive/Middlefield Road intersection. The buildings need to be located and designed in such a way that the intersection corner is free and clear of any obstructions to optimize corner visibility per the City's Standard Details A-23. Any landscaping and signage within the safety visibility triangle at the intersection corner should be no taller than 3 feet and in such a way to ensure an unobstructed view for drivers on the street.

The landscape plan shows street trees would be added along Middlefield Road and Ferguson Drive. The landscaping provided at the corner would be less than 3 feet tall within 35 feet from the corner, which would maintain the required sight distance. The type and location of the street trees would be determined by the City of Mountain View Public Works Department at the implementation stage. Note that street trees have a high canopy and would not obstruct the view of drivers.

Vehicle On-Site Circulation

Within the site, two-way 26-foot service streets (the internal road and office service drive) would be provided to access the parking garages and loading zones, which would meet the EWPP minimum requirement of 22 feet curb to curb for service streets. The internal road would be signal controlled at Middlefield Road and stop controlled at Ferguson Drive.

The market-rate and office parking garage entrances would be 24 feet wide and lead to drive aisles with at least 24-foot widths. The BMR parking garage entrance would be 20 feet wide and lead to 24-foot drive aisles. The project would meet the City of Mountain View Zoning Code requirement of a 24-foot travel lane for double-loaded aisles with two-way traffic.

Sight Distance at On-Site Garage Entrances

According to the City's Standard Detail A-22, any landscaping structures and signage within the pedestrian triangle and vehicle triangle at the driveway should be no taller than 3 feet and located in such a way to ensure an unobstructed view for drivers exiting the site, and street trees must have a high canopy of at least 6 feet. The landscaping features shown on the site plan are not expected to obstruct the vision of exiting drivers provided the landscaping is also kept at a low level within the pedestrian triangle and vehicle triangle at the driveways.

Pedestrian triangles are measured 25 feet from the back of the sidewalk and 25 feet to both sides of a driveway. The walls of the garage entrance for the northern residential building would be within the pedestrian triangles and are likely to limit visibility for exiting vehicles to see pedestrians on the sidewalks. To ensure pedestrian safety, the project should install a stop sign at the back of the sidewalk for outbound vehicles approaching the sidewalk. The entrance for the southern residential garage would be more than 25 feet to the back of the sidewalk and have an adequate line of sight for pedestrians. The entrance for the BMR residential garage would be less than 25 feet to the back of the sidewalk and would be within the pedestrian triangles. To ensure pedestrian safety, the project should install a stop sign at the back of the sidewalk for outbound vehicles approaching the sidewalk. The office garage entrance would be stop controlled and there would be no sidewalk in front of the entrance.

Along the internal road, vehicles are expected to travel 25 mph or less. Thus, the stopping sight distance would be 150 feet according to the City's Standard Detail A-22. The north residential parking garage and office parking garage would have adequate sight distances of at least 150 feet. The south residential parking garage would be located 140 feet west of the Ferguson Drive intersection. Vehicles turning from Ferguson Drive are expected to travel at lower speed while making turns. Given that vehicles are more likely to travel at a speed of 15 mph, the recommended stopping sight distance would be 125 feet (based on a Caltrans design speed of 20 mph). Thus, the sight distance (140 feet) for traffic turning from the south residential garage is adequate. The BMR residential parking garage would be located 160 feet east of the internal road intersection with the office garage entrance. Because vehicles would need to stop at the intersection, the travel speed would be low for vehicles approaching and departing the intersection. The sight distance (140 feet) for traffic turning from the intersection is adequate.

Traffic Operations at On-Site Garage Entrances

Figure 12 shows the project trips that are estimated to occur at the driveway to each garage.

North Residential Garage

The project trips that are estimated to occur at the north residential garage are 38 inbound trips and 116 outbound trips during the AM peak hour and 103 inbound trips and 68 outbound trips during the PM peak hour. The southbound left-turn trips at the garage are expected to have a vehicle delay of 7.4 seconds during the AM peak hour and 7.6 seconds during the PM peak hour. The short delay is not expected to affect traffic flow on southbound traffic along the internal road. The gates to the residential parking area are located within the P1 level of the garage (see Figure 13). Therefore, the inbound traffic at the gates is not expected to extend to the internal road.

South Residential Garage

The project trips that are estimated to occur at the south residential garage are 28 inbound trips and 91 outbound trips during the AM peak hour and 76 inbound trips and 49 outbound trips during the PM peak hour. The eastbound left-turn trips at the garage are expected to have a vehicle delay of 7.4 seconds during the AM peak hour and 7.4 seconds during the PM peak hour. The short delay is not expected to affect traffic flow on eastbound traffic along the internal road. The garage door would be located 30 feet from the back of the sidewalk (see Figure 14), which can accommodate a vehicle queue of one vehicle without blocking the sidewalk. Given the estimated 76 inbound trips in the PM peak hour, which calculates one vehicle every 47 seconds, the probability of two or more inbound vehicles entering the garage at the same time would be low. The maximum queue is not expected to extend to the internal road.

Below Market Rate Residential Garage

The project trips that are estimated to occur at the south residential garage are 2 inbound trips and 8 outbound trips during the AM peak hour and 7 inbound trips and 4 outbound trips during the PM peak hour. The garage door would be located 14 feet from the back of the sidewalk (see Figure 14), which cannot accommodate a vehicle queue of one vehicle without blocking the sidewalk. Given the estimated 7 inbound trips in the PM peak hour, the probability of two or more inbound vehicles entering the garage at the same time would be low. The gate should be moved farther into the garage to provide inbound stacking space (at least 20 feet) for one vehicle between the gate and sidewalk, or keep the garage entry gates open during the time period of the day when most inbound vehicle trips are likely to occur (typically from 3:00 PM to 7:00 PM). If the gates open towards the street, the stacking space shall be measured between the back of sidewalk and the extended fully open length of the gate.

Office Garage

The project trips that are estimated to occur at the office garage are 203 inbound trips and 28 outbound trips during the AM peak hour and 34 inbound trips and 167 outbound trips during the PM peak hour. The office garage would be on the west leg of an all-way stop internal intersection. The average delay of all movements would be 7.5 seconds during the AM peak hour and 7.7 seconds during the PM peak hour.

Garage Circulation

There would be dead-end aisles within both market-rate residential parking garages (see Figures 13 and 14) and in the ground level of the BMR and office parking garages (see Figure 15). Dead-end aisles are undesirable because drivers can enter the aisle, and upon discovering that there is no available parking, must back out or conduct three-point turns. The BMR and office parking garages would provide a turnaround space. In the gated market-rate residential garages, residents of the north and south residential buildings would be assigned one parking space per unit. It is assumed each unit will be assigned to a specific space. Therefore, dead-end aisles within the gated garages would not be an issue. However, for the public/shared parking spaces in the north residential building, there would be dead-end aisles without turnaround space (see Figure 13). A turnaround space should be provided at these dead-end aisles in the public parking area of the north residential garage.

The parking stalls would be 90-degree uniform parking stalls. The stall depth (18 feet) of the parking spaces would meet City standards.

Truck Access and Circulation

Emergency vehicles and garbage trucks would access the site via the internal road. There would also be a 26-foot rolled curb along Ferguson Drive that would lead to an area for emergency truck access in the northeast corner of the north residential building, just east of the building's stairwell.

The site plan shows trash staging areas located in the southwest corner of the office building, southwest corner of the north residential building, the southeast corner of the south residential building, and along the southern border of the BMR residential building. Garbage trucks would use the internal road to access the loading zones next to the trash staging rooms. The site plan shows trucks would be able to access the office and residential loading zones via the internal road and the service drive running behind the office parking garage and pick up trash without any maneuvering issues (see Figure 16). The internal road would have low traffic and would allow garbage trucks to enter and exit the loading zones without affecting the on-site circulation.

Loading

For residential uses, the EWPP requires one standard size (8 feet by 24 feet) loading stall per 200 units to be utilized for pick-up/drop off, short-term parking, and loading and delivery purposes, in addition to at least one designated moving truck stall (10 feet by 25 feet). The project would provide five (5) loading/drop-off stalls along the service street which would serve the BMR and market rate buildings, in addition to four (4) moving truck loading spaces, for a total of nine (9) loading spaces serving the residential buildings.

The site plan shows moving truck loading spaces as follows (see Figure 17): two spaces south of the trash staging area in the north residential building and two spaces next to the trash staging area of the south residential building. The site plan shows four loading/drop-off zones on the internal street and one shuttle loading space located in front of the office building. Figure 17 shows the location of all loading spaces on site.

Basement Level P2



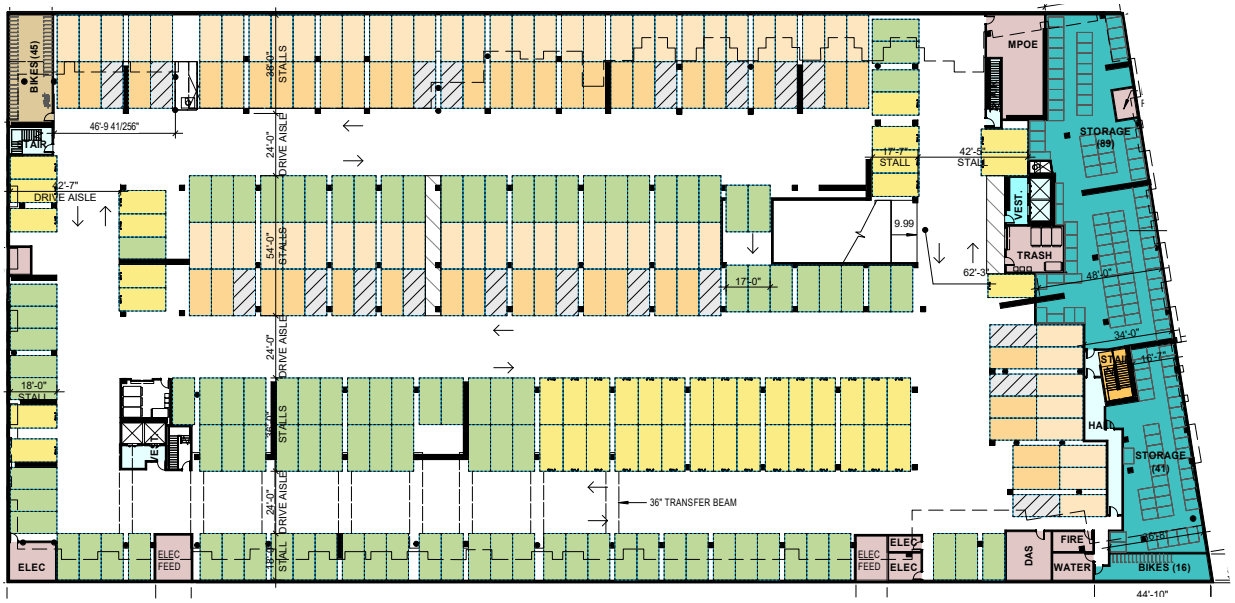
Basement Level P1



Figure 13
North Residential Parking Garage Plans

NORTH
Not to Scale

Basement Level P1



Level 1

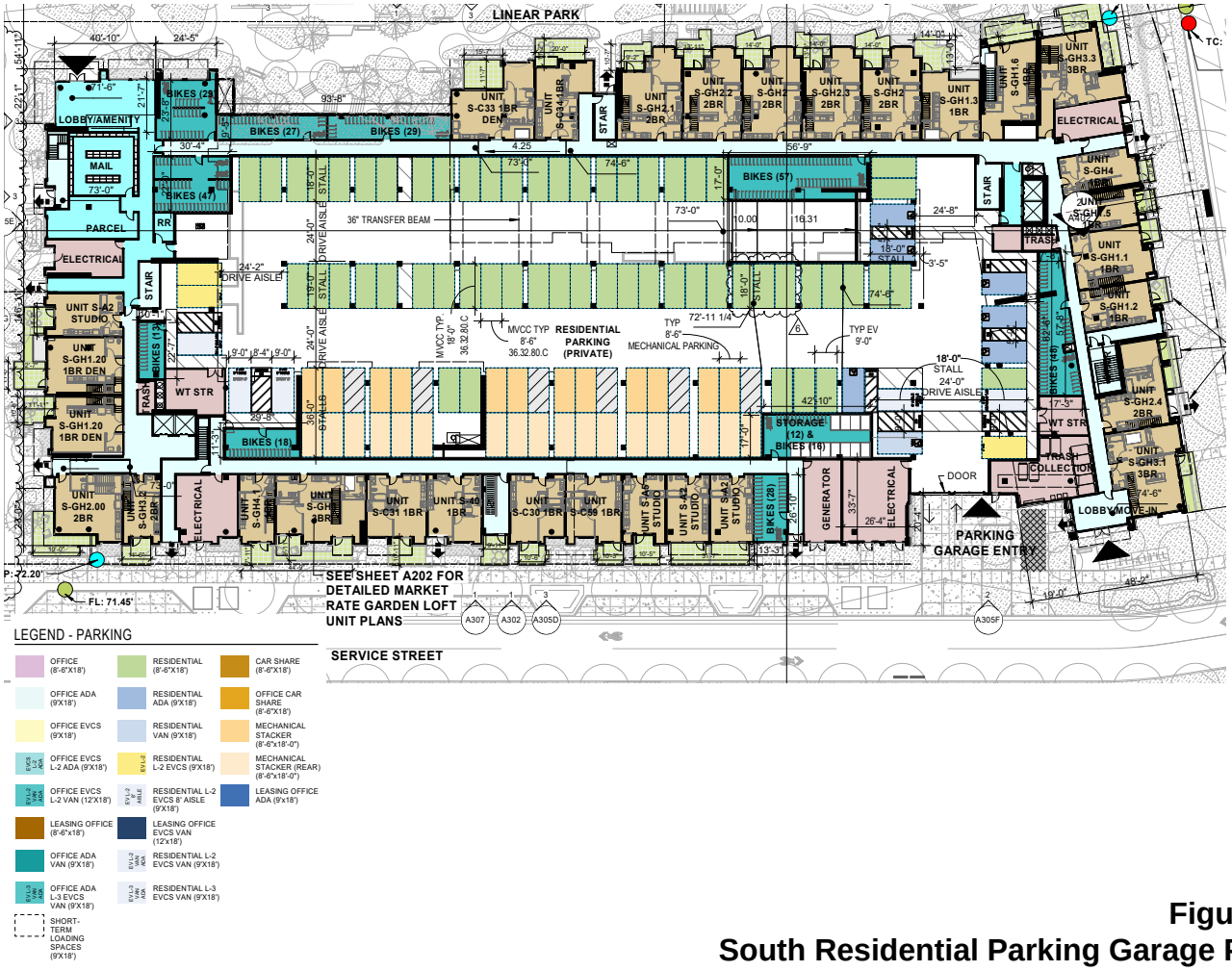


Figure 14
South Residential Parking Garage Plans

NORTH
Not to Scale

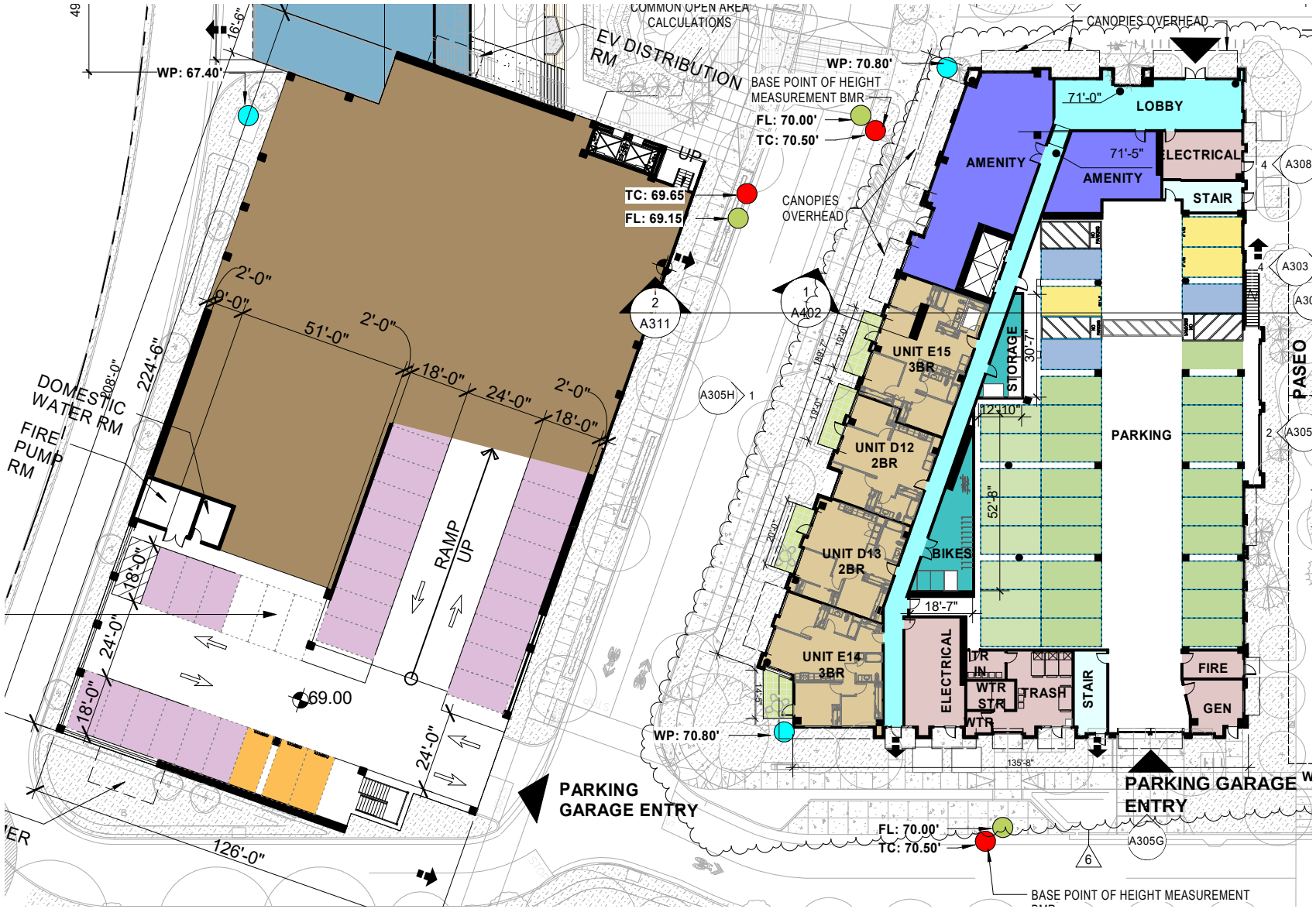
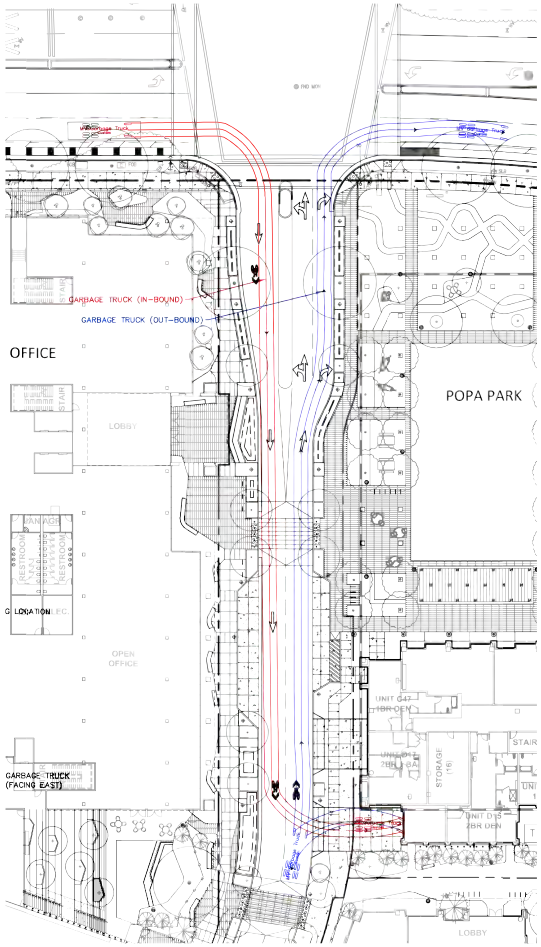
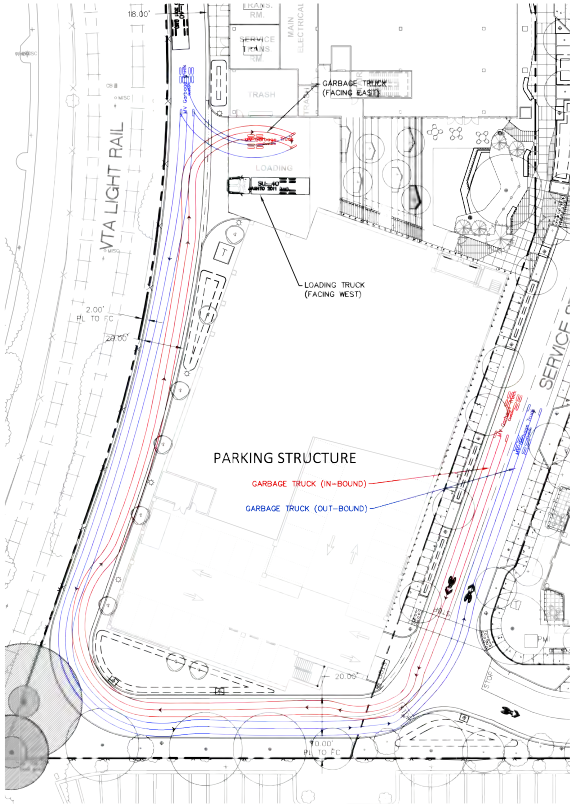


Figure 15
BMR Residential and Office Parking Garage Plans

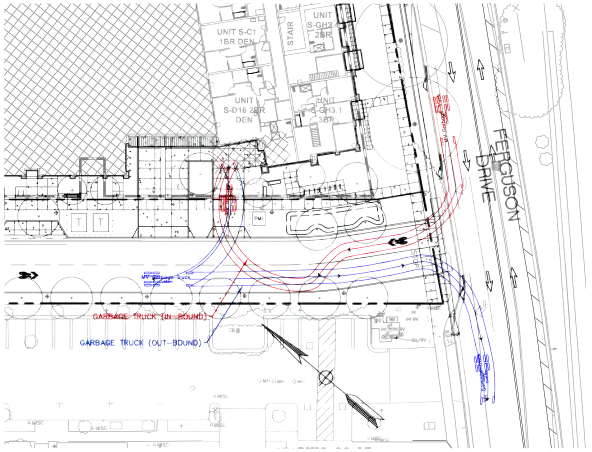
NORTH
Not to Scale



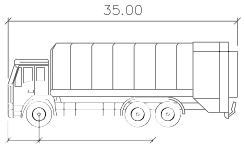
North Residential Building



Office Building

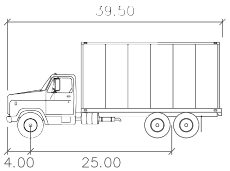


South Residential Building



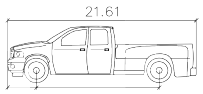
CITY OF MOUNTAIN VIEW
GARBAGE TRUCK

	Feet
Width	8.30
Track	6.70
Lock to Lock Time	6.0
Steering Angle	29.0



SU-40 (RETAIL/OFFICE LOADING)

	Feet
Width	8.00
Track	8.00
Lock to Lock Time	6.0
Steering Angle	31.8



PG&E SERVICE TRUCK

	Feet
Width	7.66
Track	7.25
Lock to Lock Time	6.0
Steering Angle	36.2

Figure 16
Freight and Garbage Truck Circulation for Office Building

NORTH
Not to Scale

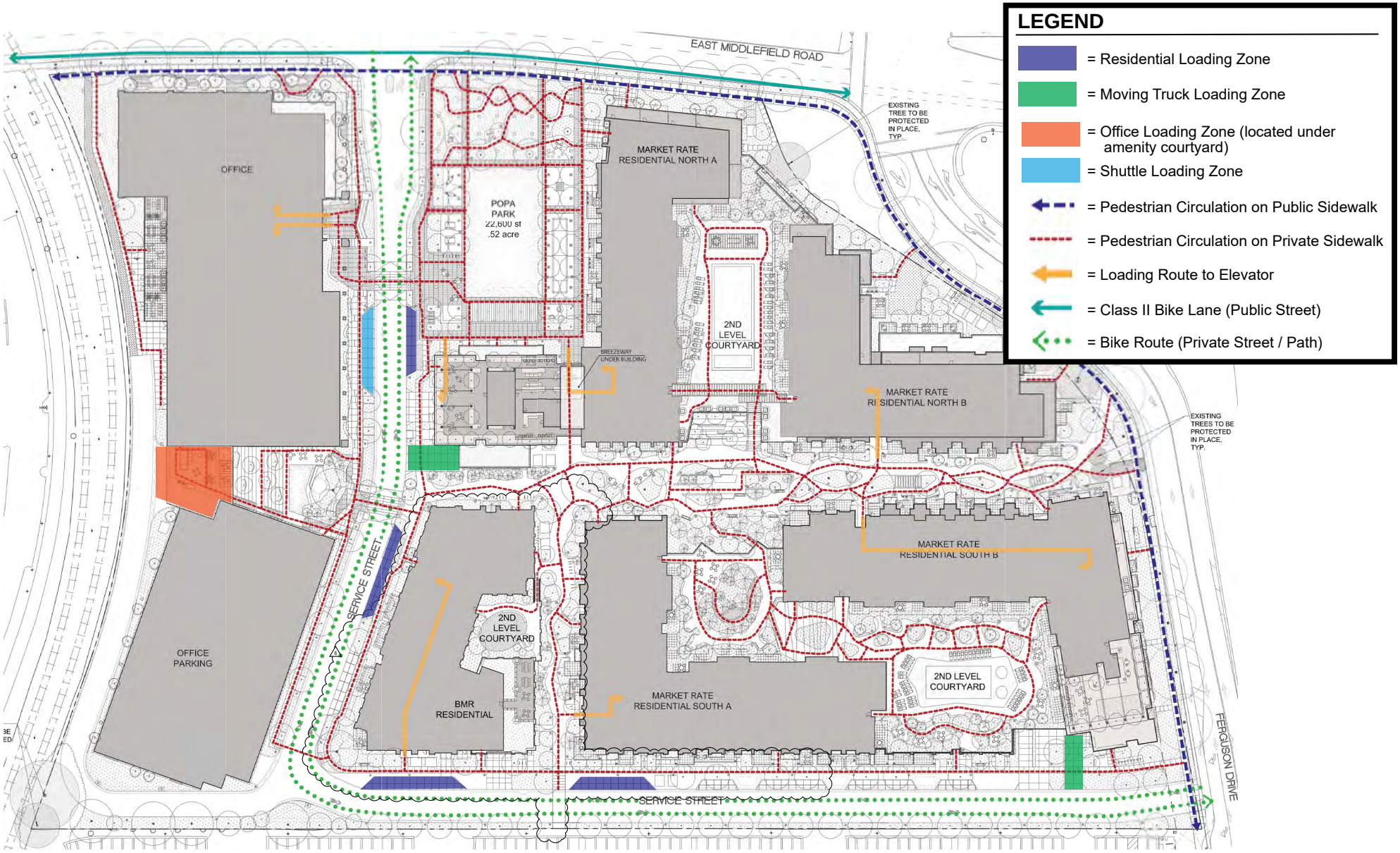


Figure 16
On-Site Loading Spaces

For nonresidential uses, the EWPP follows the City zoning code for loading space requirements. The City requires one loading space for commercial, industrial, institutional, and service uses of 10,000 to 30,000 square feet. For buildings with more than 30,000 square feet, one space is required per each additional 20,000 square feet. Based on these standards, the office building would require 13 loading spaces. The project would provide one large loading space (39 feet by 48 feet) for the office along the western edge of the office building south of the trash staging area, away from the internal road for the rest of the project site. Loading spaces are required to be at least 10 feet wide, 25 feet long, and 12 feet high for each space. The loading space would be approximately 16 feet tall. Therefore, it is likely that more than one truck would be able to load at a time. The project applicant should coordinate with City staff to determine if the proposed loading space for the office would be adequate to serve the project.

Pedestrian, Bicycle, and Transit Facility Assessment

The following describes the transit, pedestrian and bicycle facilities that serve the site and evaluates whether appropriate bicycle and pedestrian access and transit service are provided between the site and nearby destinations.

Pedestrian Operations

Pedestrian Access and Circulation

Pedestrian access to the project site is provided via sidewalks on Middlefield Road, Ferguson Drive, and surrounding streets. The project would provide an internal road that would act as a service street connecting Middlefield Road and Ferguson Drive. The EWPP requires service streets to have 5-foot minimum sidewalks, separated by landscaping. The project would provide sidewalks of at least 5 feet in width along the internal road. Additional pedestrian walkways would be provided through the site that provide pedestrian access to elevators and stairways to the residential and office buildings, amenities, and parks within the site (see Figure 2). Pedestrian walkways would also be provided between the garage entrances and the residential and office buildings. The project proposes a linear park running east-west between the north and south residential buildings. Two raised crosswalks would be provided along the internal road: one at the linear park and one in front of the office building and the park/open space area. The project would also provide a crosswalk at the southwest corner of the site at the intersection of the internal road/service drive/office garage entrance. A crosswalk to the adjacent existing property to the south of the project site would also be provided.

The project would provide 8-foot sidewalks with an additional 6 feet of landscaping between the sidewalk and vehicle travel lanes along the project frontage on Middlefield Road. This would improve pedestrian comfort compared to the 6-foot attached sidewalks currently in place. The project would also provide 5-foot sidewalks along Ferguson Drive along the project frontage with 5 feet of landscaping between the walk zone and vehicle travel lane.

ADA Access

ADA curb ramps are present at the intersection of Logue Avenue/Middlefield Road and all the other intersections on Middlefield Road between Bernardo Avenue and Easy Street. Most corners meet current ADA curb ramp designs, such as truncated domes and adequate curb ramp slopes. Truncated domes are the standard design requirement for detectable warnings which enable people with visual disabilities to determine the boundary between the sidewalk and the street.

There are curb ramps present on the three south leg corners of the Ferguson Drive/Middlefield Road intersection. However, the ramps do not include truncated domes, and the ramp slope of these ramps do not appear to meet the current ADA standard.

The project would build new curb ramps at the south leg of the Logue Avenue/Middlefield Road intersection. The new curb ramps would be built to ADA standards. The project should also build new curb ramps at the southwest corner of the Ferguson Drive/Middlefield Road intersection.

Pedestrian Infrastructure, Safety, and User Experience

Pedestrian facilities in the study area consist of sidewalks and crosswalks. All surrounding streets have sidewalks. Crosswalks with pedestrian signal heads are located at all of the signalized intersections in the project vicinity. The project would update the southwest and southeast corners of the Logue Avenue/Middlefield Road intersection with new curb ramps. The project would also provide multiple pedestrian pathways within the site, as well as a public park in the southeast corner of the Logue Avenue/Middlefield Road intersection.

According to the 2012 General Plan, a neighborhood is walkable when people can travel comfortably and safely on foot to many destinations. Convenient walking distance is considered to be a half mile to a mile, a walk that would take 10 to 20 minutes. There are a few restaurants and retail stores on Middlefield Road within a mile of the project site, and the Middlefield LRT Station and bus stops are located within 0.5 miles of the project.

Although located within one-half mile, access to some of the surrounding land uses and bus stops would require crossing busy arterial streets (Middlefield Road). The wide streets might be uncomfortable for some pedestrians to cross and would not be considered a quality pedestrian environment. The EWPP characterizes the area in which the project is located as a mixed-use area. Thus, it is expected that future developments would include more commercial uses to be utilized by the project's residents.

The EWPP proposes to implement new service streets, greenways, or multi-use paths within the area to improve pedestrian connectivity in the area. The project would implement a new service street that would connect Middlefield Road and Ferguson Drive and an east-west linear park between the north and south residential buildings. It is expected that additional pedestrian friendly infrastructure would be implemented as future developments are built in the area.

Pedestrian Quality of Service

Pedestrian quality of service (PQOS) identifies the level of comfort for pedestrians on any given roadway. Mountain View's Comprehensive Modal Plan (AccessMV), published in May 2021, includes a PQOS map (see Figure 18) that shows continuity or gaps in the pedestrian facilities as indicated with a PQOS score ranging from 1 to 5. A higher PQOS score indicates a low quality of service.

The PQOS metric in the AccessMV document covers the following factors:

- Proximity to a variety of destinations and amenities
- Street connectivity and directness of routes to destinations
- Presence of a continuous network of pedestrian facilities
- Motor vehicle traffic speed; and
- Street width and intersection conditions



Source: Access MV, City of Mountain View, 2021

Figure 18
Pedestrian Quality of Service Map

Based on the PQOS map, the following streets in the project vicinity have a PQOS greater than 2, which is not desirable:

- Whisman Road (PQOS 5)
- Ellis Street (PQOS 5)
- Logue Avenue (PQOS 4)
- Ferguson Drive (PQOS 4)
- Bernardo Avenue between Central Expressway and Ravendale Drive (PQOS 5)
- Bernardo Avenue north of Ravendale Drive (PQOS 4)
- Maude Avenue between Logue Avenue and Clyde Avenue (PQOS 4)
- Maude Avenue between Clyde Avenue and the City limit (PQOS 5)
- Middlefield Road (PQOS 5)
- Central Expressway (PQOS 5)

The project would have an adverse effect on pedestrian operations because the project is expected to add vehicle trips to these street segments that have a PQOS score of 3 or more, except for Bernardo Avenue and Whisman Road.

Based on the ITE *Trip Generation Manual*, the office use is estimated to generate 31 and 42pedestrian trips during the AM and PM peak hours, respectively. The multifamily housing use would generate 103 and 103 pedestrian trips during the AM and PM peak hours, respectively. The retail use would generate 0 pedestrian trips during the AM peak hour and 1 pedestrian trip during the PM peak hour. The project would generate a total of 134 AM pedestrian trips and 146 PM pedestrian trips (see Table 9), which would be much greater than the existing pedestrian crossings at the Logue Avenue/Middlefield Road intersection (30 trips during the AM peak hour and 16 trips during the PM peak hour). Because the project would be required to implement TDM measures, the number of pedestrian trips generated by the project is expected to be higher than the pedestrian trips estimated based on the ITE rates.

Because the project would increase the number of pedestrians crossing Middlefield Road at the Logue Avenue intersection, to provide safer crossings for pedestrians, the project should modify the traffic signal and intersection lane configuration to provide protected left-turn phases with dedicated left-turn lanes for the northbound and southbound approaches (by changing the northbound and southbound approaches to a left-turn lane and a shared through and right-turn lane).

The project would provide wider sidewalks with landscaping along the project frontages to enhance the pedestrian environment. The project should also improve the crosswalks at the Ferguson Drive/Middlefield Road and Logue Avenue/Middlefield Road intersections by installing high visibility ladder crosswalks and build new curb ramps to ADA standards at the southwest corner of the Ferguson Drive/Middlefield Road intersection. As previously mentioned, the project also proposes a publicly accessible internal road with sidewalks and sharrows and a linear park with bike and pedestrian pathways across the middle of the site. The internal road and linear park would allow pedestrians a safer passageway for a short segment of Middlefield Road and Ferguson Drive. Thus, the level of comfort would increase. Taking these factors into account, the project is expected to improve the PQOS along Middlefield Road and Ferguson Drive along the project frontage.

Table 9
Pedestrian Trip Generation Estimates

Land Use	Size		AM Peak Hour Trip Rate	AM Peak Hour Trips Total	PM Peak Hour Trip Rate	PM Peak Hour Trips Total
Proposed Uses						
Office[1]	278	ksf	0.11	31	0.15	42
Multifamily Housing[2]	858	du	0.12	103	0.12	103
Retail[3]	2.34	ksf	--	--	0.56	1
Gross Project Trips				***134***		***146***

Notes:
Source: ITE Trip Generation Manual, 11th Edition, 2021.
1. General Office (ITE Land Use 710): average trip rates in trips per ksf were used.
2. Mid-Rise Multifamily Housing (Close to Rail Transit) (ITE Land Use 221): average trip rates in trips per dwelling unit were used.
3. Strip Retail Plaza less than 40 ksf (Land Use 822): average trip rates per ksf were used.

Bicycle Operations

Bicycle Access and Circulation

Bicycle access to the project site is via Ellis Street, E. Middlefield Road, Logue Avenue, and Maude Avenue. There are bike lanes on Ellis Street, E. Middlefield Road, Logue Avenue, and Maude Avenue that connect cyclists from the project site to the surrounding areas. The project would construct a service street that would connect Middlefield Road and Ferguson Drive (see Figure 2). The service street would also be a bicycle route with sharrows (shared-lane pavement markings). The project would provide secure bicycle storage for residents and office employees on the ground floor of the office, north residential, and south residential buildings. The below market rate residential building would provide secure bicycle storage within the storage units located on the ground and upper floor levels.

Short-term bicycle racks would be placed in well-lit, highly visible locations in front of the office lobby and in various locations surrounding the residential buildings near the building entrances and along the pedestrian walkways. The bike racks could be accessed via Middlefield Road, Ferguson Drive, and the internal road.

Bicycle Infrastructure, Safety, and User Experience

In the immediate project vicinity, there are bike lanes on Logue Avenue and Middlefield Road. The bike lanes on Middlefield Road between Thaddeus Drive and Whisman Road are part-time bike facilities that are used as bike lanes from 2 AM to 7 PM on weekdays and are used for on-street parking for the remaining hours (7 PM to 2 AM) and on weekends. A buffered bicycle lane is proposed by the project along Middlefield Road. Additional planned bike facilities in the EWPP are described further below.

The 2015 Bicycle Transportation Plan Update evaluates the quality of the bicycle network in the City in terms of connectivity gaps and low stress gaps. The plan identifies spot gaps, connection gaps, and quality gaps along Whisman Road, Ellis Street, Middlefield Road, Logue Avenue, and Maude Avenue. Spot gaps refer to point-specific locations lacking dedicated bicycle facilities or other treatments to accommodate safe and comfortable bicycle travel. Connection gaps are missing segments on a clearly

defined bikeway, while quality gaps are links of an existing bikeway that are deficient or have operational shortcomings. The plan also identifies the low stress bicycle network. Low stress segments include Class I separated paths and streets with low traffic volumes, low traffic speeds, and bike facilities such as a protected bike lane or a bike boulevard. These are facilities where people feel most comfortable biking because they typically have the least interaction with motor-vehicles. None of the surrounding roads are classified as low stress bicycle facilities. However, the project would install a bike lane along the south side of Middlefield Road along the project site to provide better bicycle connectivity from the site. The project would also provide a bike route on the internal road, which would provide better connectivity within the site and to the adjacent streets.

The EWPP proposes to implement buffered bike lanes on Maude Avenue, National Avenue, Logue Avenue, Clyde Avenue, Maude Avenue, Ellis Streets, and Middlefield Road and new multi-use paths/linear park paths in the project vicinity. Cycle tracks are also proposed next to SR 237 between Middlefield Road and Maude Avenue. It is expected that this bicycle friendly infrastructure would improve the quality of the bicycle network in the area.

Bicycle Level of Traffic Stress

The City's AccessMV report includes a bicycle level of traffic stress (BLTS) map (see Figure 19) to identify the perceived comfort and safety of existing roads and bikeway facilities from the perspective of cyclists, as indicated with a BLTS score ranging from 1 to 4. A BLTS score of 1 is comfortable for all ages and abilities, a BLTS score of 2 is comfortable for an average adult, while a BLTS score of 4 indicates that the streets are comfortable only for highly confident riders. The metric (ranging from 1 to 4) in the AccessMV document covers the following factors:

- Number of through lanes or street width
- Posted speed limit or prevailing vehicle speed
- Presence and type of bicycle facilities
- Presence of traffic signals

Based on the BLTS map, the following streets in the project vicinity have a BLTS greater than 2, which is undesirable:

- Whisman Road (BLTS 3)
- Ellis Street (BLTS 4)
- Middlefield Road (BLTS 3)

The project would create an adverse effect on bicycle operations, as the project is expected to add vehicle trips to these streets.

The AccessMV report also includes a BLTS map considering the planned bicycle facilities listed in the Caltrans District 4 Bike Plan (2018), the VTA Countywide Bicycle Plan (2018), the City of Mountain View Bicycle Transportation Plan (2015), the Caltrain Bicycle Access and Parking Plan (2008), and several area precise plans, including the EWPP. With the planned improvements identified in these documents, Ellis Street is expected to continue to have a BLTS score of 4, and Middlefield Road and Whisman Road would continue to have a BLTS score of 3. All other streets in the project area would have a BLTS score of 2 or lower. As previously mentioned, the publicly accessible internal road would have sharrows, and the linear park would include a bicycle pathway. These proposed improvements would allow bicyclists to ride in a less vehicle congested area between Middlefield Road and Ferguson Drive, thus improving the level of comfort.



Source: Access MV, City of Mountain View, 2021

Figure 19
Bicycle Level of Traffic Stress Map

The EWPP proposes to implement buffered bike lanes on Ellis Street and Middlefield Road, where the project would add vehicle trips. The project would install a buffered bike lane along the project frontage on Middlefield Road. Additionally, the project will be required to contribute to the bike lane improvements identified by the EWPP by paying for the EWPP Development Impact Fee, which would address the adverse effects.

Pedestrian and Bicycle Access to Schools

The project site is located within the boundary of Vargas Elementary School, Crittenden Middle School, Mountain View High School and Los Altos High School, which are about 2.0 miles south, 2.8 miles west, 3.9 miles south, and 4.4 miles west of the project site, respectively. None of the schools are within reasonable walking distance of the project site. Some middle school students may wish to bike to school, in which case they could use the bike lanes on W. Middlefield Road according to the City of Mountain View's Safe Routes to Schools Program.

Transit Operations

Transit Facilities, Service, and Access

The project site is served by VTA Route 21 and MVgo Route A, with bus stops located on Logue Avenue and Middlefield Road, and is located approximately 650 feet from the Middlefield LRT Station. According to the California Public Resources Code Section 21155, a major transit stop is defined as an existing rail or bus rapid transit station or as the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during peak commute periods. Therefore, the project is located in a transit proximity area because it is within a half mile of an LRT station. The project would also provide a shuttle loading area in front of the office building.

Transit Ridership

It is expected that the project would generate some transit trips to get to the North Bayshore area or to other destinations. According to VTA *TIA Guidelines*, approximately 6 percent of Mountain View employees use public transit to get to work. The ITE trip generation rates for General Office (Land Use 710) are 1.52 for the AM peak hour and 1.44 for the PM peak hour. Applying 6 percent transit mode share equates to 24 transit riders during the AM peak hour and 23 riders during the PM peak hour. In addition, the guidelines state 9 percent of residents in housing within 2,000 feet of an LRT station are expected to utilize transit, which calculates 28 new riders during the AM peak hour and 29 new riders during the PM peak hour. During the AM and PM peak hours, there are three light rail trains that run in each direction, two Route 21 buses that run in each direction, and two MVgo shuttles that run northbound in the morning and southbound in the afternoon/evening. This new ridership generated by the project could be accommodated by these existing services.

Transit Vehicle Delay

To assess the project's effect on transit vehicle delay, the delay experienced by each route running through the study intersections was estimated based on the average vehicle delay that is calculated as part of the intersection level of service analysis. Table 10 summarizes the bus travel times through the study area and the increase in transit vehicle delays with the addition of the project traffic. VTA has not established policies or significance criteria related to transit vehicle delay. Therefore, this analysis is presented for information purposes only. The results show that the project would result in a minimal increase (less than 6 seconds per vehicle) in transit travel time for the bus routes in the study area.

Table 10
Transit Vehicle Delay in Study Area

Bus Route	Study Area Street(s)	Direction	Projected Change in Transit Vehicle Delay (sec/veh) AM	PM
21	Middlefield Rd, Logue Ave, Maude Ave	Eastbound	0.2	0.8
		Westbound	0.0	5.4
MVgo Route A	Whisman Rd, Fairchild Dr, Maude Ave, Logue Ave, Middlefield Rd	--	1.4	3.5

Note:
Projected increase in transit delay based on a comparison of background vs. background plus project intersection movement delays calculated by TRAFFIX.

VTA Light-Rail Crossing on Middlefield Road

As previously discussed, the queue is not expected to create any conflicts with the VTA rail safety operations as there are gate arms at the rail to prevent vehicles from approaching the crossing. The MPMP EIR concluded a pedestrian crossing with preemptive signals is recommended. The signals would be interconnected and coordinated with the signal at the Logue Avenue/Middlefield Road intersection. The project should implement preemptive signals with pedestrian crossing at the LRT crossing.

Effects on Surrounding Neighborhood Streets

Access to the project site is via Middlefield Road and Ferguson Drive. Middlefield Road and Ferguson Drive are already serving office, commercial, and multi-family residential uses in the project vicinity. Thus, project trips traveling on Middlefield Road and Ferguson Drive would not be considered cut-through traffic. In addition, there are no residential streets surrounding the project site that would provide access to the site. Therefore, the project is not expected to cause an adverse effect or cut-through traffic issues on the surrounding neighborhood streets.

Parking

Vehicle Parking

Vehicle parking for the project was reviewed per the City of Mountain View requirements, parking demand rates from local utilization survey data, and the Urban Land Institute (ULI) publication *Shared Parking*. A shared parking analysis was conducted for the office and residential developments based on the ULI *Shared Parking* methodology.

Parking rates for office and residential uses were evaluated based on the City of Mountain View requirements and local utilization survey data.

East Whisman Precise Plan Parking Requirements

The vehicle parking requirements for office and residential uses were calculated based on the parking maximums established in the EWPP (see Table 11). There is no minimum parking requirement for office and residential uses in the EWPP. The EWPP parking requirements are:

- **Office:** Maximum of 2.9 spaces per 1,000 s.f.

- **Residential**: Maximum of one space per studio/one-bedroom unit and two spaces per unit with more than one bedroom, which is inclusive of any visitor parking.

The EWPP requires a minimum of 4 spaces per 1,000 s.f. for retail. However, because the development is within a half mile of a major transit stop, the project is not required provide any parking spaces per AB 2097. Thus, the project does not propose retail parking spaces.

Based on the City's maximum office and residential parking requirements (see Table 11), the project could provide no more than a total of 805 spaces for the office building and no more than a total of 1,066 spaces for the residential buildings. The retail space would be used for "grab-and-go" commercial uses; therefore, it is expected that the majority of the visitors would be the residents and employees of the site.

The project proposes 1,490 total spaces, including 638 office parking spaces in the office garage, 682 residential parking spaces in both market-rate residential buildings, 33 residential parking spaces in the BMR building, and 129 shared parking spaces in the north residential building, which includes 5 spaces for the leasing office. Along the internal road, there would be 8 on-street parking spaces in front of the south residential building and BMR building. Table 11 shows that the number of proposed parking spaces for each use would not exceed the maximum parking requirement.

Residents of the north and south residential buildings would be assigned one parking space per unit within the residential garages. The BMP parking spaces would be designated to the BMR residents renting the spaces. Most of the 129 shared spaces would be reserved for the office on weekdays between 8:00 AM and 6:00 PM with some spaces designated for retail use. Residents and retail customers can park in the shared spaces at night (between 6:00 PM and 8:00 AM) and on weekends. Residents can also park in the office garage on nights and weekends.

While Table 11 shows the stand-alone maximum parking required for the project, the EWPP encourages shared parking where complementary uses occur, such as office, commercial, and residential uses, and encourages unbundled residential parking.

Table 11
East Whisman Precise Plan Maximum Parking Requirements

Proposed Uses	Size		Parking Ratio	Maximum Parking Spaces	Proposed Parking Spaces
Office Building					
Office[1]	277,600	s.f.	2.9 per ksf	805	
Office Total	***277,600***	***s.f.***		***805***	***638***
North Residential Building					
Residential[1]	43	Studio	1 per unit	43	
	216	1-bedroom	1 per unit	216	
	62	2-bedroom	2 per unit	124	
	1	3-bedroom	2 per unit	2	
North Residential Total	***322***	***units***		***385***	***323***
Shared Spaces in North Residential					***129***
South Residential Building					
Residential[1]	20	Studio	1 per unit	20	
	252	1-bedroom	1 per unit	252	
	81	2-bedroom	2 per unit	162	
	11	3-bedroom	2 per unit	22	
South Residential Total	***364***	***units***		***456***	***359***
BMR Residential Building					
Residential[1]	39	Studio	1 per unit	39	
	36	1-bedroom	1 per unit	36	
	37	2-bedroom	2 per unit	74	
	38	3-bedroom	2 per unit	76	
BMR Residential Total	***150***	***units***		***225***	***33***
Office Total				**805**	**638**
Residential Total				**1,066**	**715**
Project Total[2]				**1,871**	**1,490**

Notes:
1. Office and market rate residential parking ratios based on the maximum EWPP
2. The total number of proposed spaces by the project include 8 surface spaces that surround the site and 129 shared spaces.

Local Parking Surveys

Counts were conducted at local office buildings near transit between 2016 and 2018 by Hexagon (see Appendix E). The office locations surveyed are in close proximity to Caltrain stations or offer shuttles to a nearby Caltrain station. For office buildings near transit, the average peak parking demand rate was found to be 2.03 spaces per 1,000 s.f. Based on this rate, the parking demand for the office buildings would be 564 spaces, which is 74 spaces fewer than the proposed number of parking spaces in the office parking garage (see Table 12).

Table 12
Local Survey Parking Rates

Land Use	Size		Local Parking Surveys Rate	Number of Spaces		
				Local Demand	EWPP Max. Requirement	Proposed
Office	277.6	ksf	2.03	564	805	638
Residential						
North Residential	322	units	1.00	322	385	323
South Residential	364	units	1.00	364	456	359
BMR Residential[1]	150	units	1.00	150	225	33
Sub-Total Residential	***836***	***units***		***836***	***1,066***	***715***
Shared and Surface Spaces						137
Total Number of Parking Spaces				**1,400**	**1,871**	**1,490**

Notes:
1. BMR residential rates are assumed to be the same as market-rate residential rates.

A parking utilization count was conducted on March 15, 2022, at higher-density residential complexes in Mountain View near transit services and major arterials (see Appendix E). The counts were conducted at nighttime during the weekday when full occupancy is anticipated. Some of the surveyed sites offer partial unbundled parking, with one space included with monthly rent and additional spaces offered at an additional monthly rent. Peak parking demand rates were determined based on the average number of occupied parking spaces per bedroom. On average, the parking ratio was found to be 0.72 spaces per bedroom, or 1.00 spaces per unit, inclusive of visitor parking spaces. Using the rate per unit, the parking demand for the north and south residential buildings would be 4 spaces more than the number of proposed parking spaces. The parking demand for the BMR residential building would be 117 spaces more than the number of proposed parking spaces. The total residential parking demand would be 121more than the total number of proposed residential parking spaces, not including the 129 shared spaces. The peak parking demand that would occur at night can be accommodated by the shared parking spaces and office garage.

The 129 shared spaces in the north residential building would be used by office goers and the leasing office during the daytime and by residents overnight. Residents could also park in the office garage on nights and weekends. The project proposes to reserve the shared parking spaces for the office building during the day. Because the shared spaces cannot be parked by residents during the daytime and there would be only 33 parking spaces for the BMR units, there may not be sufficient parking spaces for the BMR residents during the daytime. Therefore, a shared parking analysis was conducted to estimate the total parking demand between the office and BMR residential uses.

Shared Parking Analysis for Office and BMR Residential

Shared parking is the use of a parking space to serve two or more individual land uses due to variations in parking demand by hour among differing land uses. Summing the parking demand generated by each use at every hour generally results in an overall peak parking demand for a mixed-use site that is less than the sum of the peak parking demands for each individual use. Thus, the application of the principle of shared parking may reduce the total parking demand for mixed-use developments.

The shared parking analysis is based on time-of-day factors obtained from the Urban Land Institute (ULI) *Shared Parking, 3rd Edition* and the local survey parking rates. Table 13 shows that during the office hours between 8 AM and 6 PM, the office parking demand of 564 spaces would be 203 spaces fewer than the 767 parking spaces (including the 129 shared parking spaces) available for the office.

The number of parking spaces in the office parking garage would be sufficient without the shared parking spaces. The maximum parking demand for the BMR residents would be 101 spaces during office hours between 8 AM and 6 PM. Because there would be only 33 parking spaces for the BMR building and the number of spaces in the office garage would be sufficient for the office building, to accommodate the parking demand for the BMR residents, it is recommended that the project allow the shared parking spaces to be used by all uses during the day.

During nights and weekends, the maximum demand by the BMR residents would be 150 parking spaces with 129 spared spaces available. The shared parking spaces would be sufficient for the estimated BMR parking demand. Residents could also park in the office garage on nights and weekends.

Table 13
Shared Parking Analysis

Hour of Day	Office[1]	BMR Residential[1]	Office + BMR Total	Total Provided[2]	
				Office	Residential
6 a.m.	17	143	159	638	129
7 a.m.	85	120	205	638	129
8 a.m.	282	**101**	383	767	0
9 a.m.	508	83	590	767	0
10 a.m.	**564**	75	**639**	767	0
11 a.m.	564	68	632	767	0
Noon	479	60	539	767	0
1 p.m.	479	60	539	767	0
2 p.m.	536	60	596	767	0
3 p.m.	536	60	596	767	0
4 p.m.	479	68	547	767	0
5 p.m.	338	75	413	767	0
6 p.m.	141	90	231	638	129
7 p.m.	85	105	190	638	129
8 p.m.	28	120	148	638	129
9 p.m.	17	128	144	638	129
10 p.m.	6	143	148	638	129
11 p.m.	0	146	146	638	129
Midnight	0	**150**	150	638	129
		Max. Demand			
Parking Demand	**564**	**150**	**639**		

Time of Day parking rates based on Urban Land Institute (ULI) Shared
Notes:
1. Office and residential demand are based on local survey rates.
2. The number of spaces provided reflect the shared spaces available for office use from 8 AM to 6 PM.

Bicycle Parking

The EWPP requirements and the proposed bicycle parking spaces are summarized in Table 14.

Table 14
Bicycle Parking Requirements

Proposed Uses	Size	Parking Ratio[1]		Required Parking Spaces		Proposed Parking Spaces	
		Long-Term	Short-Term	Long-Term	Short-Term	Long-Term	Short-Term[2]
Office	277,600 s.f.	1 per 2,000 s.f.	1 per 20,000 s.f.	139	13	139	--
Residential							
North	322 units	1 per unit	1 per 10 units	322	32	324	--
South	364 units	1 per unit	1 per 10 units	364	36	365	--
BMR	150 units	1 per unit	1 per 10 units	150	15	150	--
Retail	2,344 s.f.	1 per 5,000 s.f. (2 minimum)	4 per 5,000 s.f. (2 minimum)	2	2	2	--
Total				**977**	**98**	**980**	**128**

Notes:
1. Bicycle parking ratio based on EWPP requirements.
2. Short-term bicycle parking spaces are located in various locations around the site and would not be reserved by use.

There would be secure bike rooms on the ground floor of the office building, on the ground floor of the north residential building, on the P1 and P2 levels of the north residential garage, on the ground and P1 levels of the south residential garage, and on the ground floor of the BMR residential building. In addition, storage units would be provided on each floor of the BMR residential building for long-term bicycle parking. For easy access to the bicycle storage, the project should provide a bike room on the ground floor of the residential buildings to accommodate the required number of long-term bicycle parking spaces.

Short-term bicycle racks would be placed in well-lit, highly visible locations surrounding the buildings. There would be bike racks along the internal road in front of the office, park, and south residential building. There would also be bike racks within the linear park and pedestrian walkway between the BMR and south residential building. Bike racks for the north residential building would be provided in the northwest and eastern corners. The racks would be inverted U-racks to be consistent with the VTA Bike Technical Guidelines.

Recommendations

Hexagon has the following recommendations resulting from the on-site circulation and parking evaluations.

Recommendations

- The project should implement Transportation Demand Management (TDM) measures and meet the trip cap for the office building as required by the EWPP.
- As required by the EWPP, the project should implement unbundled parking for residents and require office employers to provide subsidized transit passes for employees. The project should provide access to shared bicycles within the site if a bikeshare service is not available within walking distance of the site.
- The project should implement signal preemption for eastbound Middlefield Road at Logue Avenue to prevent the eastbound vehicle queues extending to the LRT tracks.
- The project should build new curb ramps to ADA standards at the southwest corner of the Ferguson Drive/Middlefield Road intersection.

- The project should improve the crosswalks at the Ferguson Drive/Middlefield Road and Logue Avenue/Middlefield Road intersections by installing high visibility ladder crosswalks.
- The driveway to the north and BMR residential garages should be stop-controlled with a stop sign installed at the back of the sidewalk for outbound vehicles approaching the sidewalk.
- The garage gate of the BMR residential garage should be moved farther into the garage to provide inbound stacking space (at least 20 feet) for one vehicle between the gate and sidewalk, or keep the garage entry gate open during the time period of the day when most inbound vehicle trips are likely to occur (typically from 3:00 PM to 7:00 PM). If the gates open towards the street, the stacking space shall be measured between the back of sidewalk and the extended fully open length of the gate.
- A turnaround space should be provided at all dead-end aisles in the public parking area of the north residential garage.
- The project applicant should coordinate with City staff to determine if the proposed loading space for the office would be adequate to serve the project.
- At the Logue Avenue/Middlefield Road/project access road intersection, the project should modify the traffic signal and intersection lane configuration to provide protected left-turn phases with dedicated left-turn lanes for the northbound and southbound approaches.
- The project should contribute to the bike lane improvements identified by the EWPP by paying for the EWPP Development Impact Fee.
- The project should allow the shared parking spaces to be used by all uses during the day.
- For easy access to the bicycle storage, the project should provide a bike room on the ground floor of the residential buildings to accommodate the required number of long-term bicycle parking spaces.

675-685 E. Middlefield Road Mixed-Use Development
Multi-modal Transportation Analysis

Technical Appendices

April 23, 2024

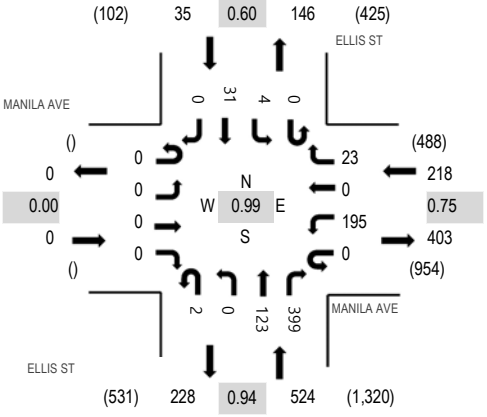
Appendix A

Traffic Counts

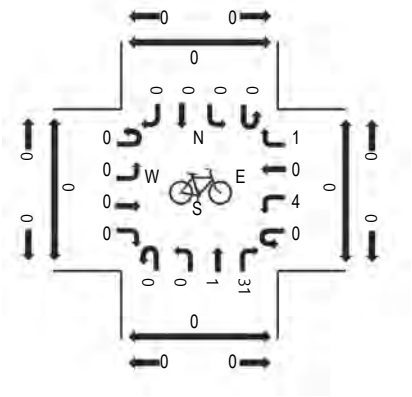
(303) 216-2439
www.alltrafficdata.net

Location: 1 ELLIS ST & MANILA AVE AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:45 AM - 09:45 AM
Peak 15-Minutes: 09:15 AM - 09:30 AM

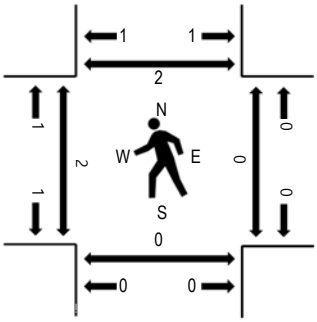
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MANILA AVE Eastbound				MANILA AVE Westbound				ELLIS ST Northbound				ELLIS ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	13	0	3	0	0	28	34	0	0	12	0	90	470	0	0	0	0
7:15 AM	0	0	0	0	0	15	0	4	0	0	35	51	0	0	4	0	109	535	0	0	0	0
7:30 AM	0	0	0	0	0	25	0	8	1	0	28	59	0	1	8	0	130	583	1	0	0	0
7:45 AM	0	0	0	0	0	27	0	3	0	0	30	76	0	0	5	0	141	635	0	0	0	0
8:00 AM	0	0	0	0	0	28	0	7	0	0	42	71	0	0	7	0	155	684	1	0	0	1
8:15 AM	0	0	0	0	0	38	0	2	0	0	24	85	0	1	7	0	157	725	0	0	0	0
8:30 AM	0	0	0	0	0	71	0	5	1	0	20	80	0	0	5	0	182	765	1	0	0	1
8:45 AM	0	0	0	0	0	37	0	3	0	0	42	97	0	1	10	0	190	777	1	0	0	1
9:00 AM	0	0	0	0	0	53	0	4	1	0	27	99	0	3	9	0	196	756	1	0	0	1
9:15 AM	0	0	0	0	0	43	0	13	1	0	23	112	0	0	5	0	197		0	0	0	0
9:30 AM	0	0	0	0	0	62	0	3	0	0	31	91	0	0	7	0	194		0	0	0	0
9:45 AM	0	0	0	0	0	19	0	2	1	0	38	92	0	1	16	0	169		1	0	0	1

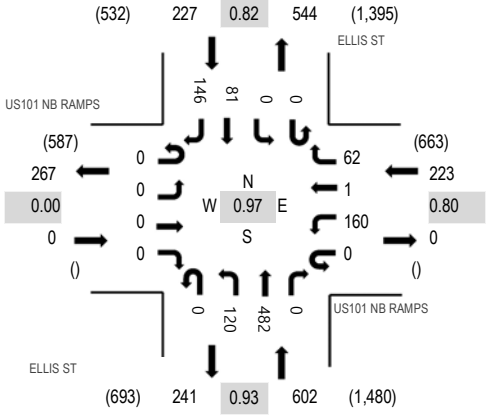
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	0	0	0	0	182	0	21	2	0	116	326	0	2	27	0	676
Mediums	0	0	0	0	0	13	0	2	0	0	7	73	0	2	3	0	100
Total	0	0	0	0	0	195	0	23	2	0	123	399	0	4	31	0	777

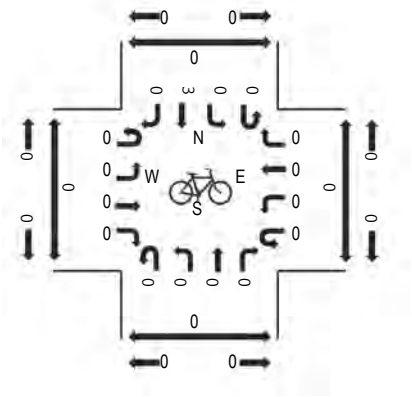
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 ELLIS ST & US101 NB RAMPS AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:45 AM - 09:45 AM
Peak 15-Minutes: 09:30 AM - 09:45 AM

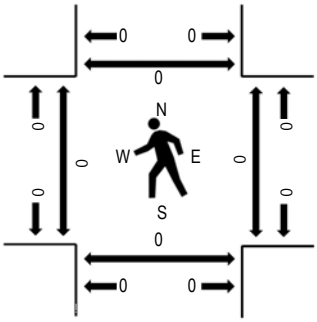
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US101 NB RAMPS Eastbound				US101 NB RAMPS Westbound				ELLIS ST Northbound				ELLIS ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	46	0	19	0	8	44	0	0	0	16	11	144	689	0	0	0	0
7:15 AM	0	0	0	0	0	31	0	20	0	16	76	0	0	0	11	4	158	745	1	0	0	0
7:30 AM	0	0	0	0	0	29	0	11	0	22	82	0	0	0	14	20	178	835	0	0	0	0
7:45 AM	0	0	0	0	0	36	0	18	0	21	101	0	0	0	17	16	209	889	1	0	0	0
8:00 AM	0	0	0	0	0	37	0	16	0	17	96	0	0	0	12	22	200	946	0	0	0	0
8:15 AM	0	0	0	0	0	48	0	11	0	22	117	0	0	0	20	30	248	993	0	0	0	0
8:30 AM	0	0	0	0	0	36	1	5	0	20	98	0	0	0	27	45	232	1,014	1	0	0	0
8:45 AM	0	0	0	0	0	40	1	16	0	33	128	0	0	0	24	24	266	1,052	0	0	0	0
9:00 AM	0	0	0	0	0	37	0	13	0	19	118	0	0	0	19	41	247	1,040	0	0	0	0
9:15 AM	0	0	0	0	0	39	0	13	0	32	129	0	0	0	18	38	269		0	0	0	0
9:30 AM	0	0	0	0	0	44	0	20	0	36	107	0	0	0	20	43	270		0	0	0	0
9:45 AM	0	0	0	0	0	52	0	24	0	25	113	0	0	0	20	20	254		2	0	0	0

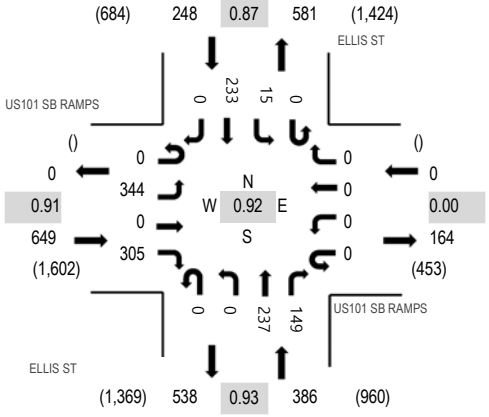
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	27	0	0	0	1	0	28
Lights	0	0	0	0	0	156	1	58	0	116	377	0	0	0	73	139	920
Mediums	0	0	0	0	0	4	0	4	0	4	78	0	0	0	7	7	104
Total	0	0	0	0	0	160	1	62	0	120	482	0	0	0	81	146	1,052

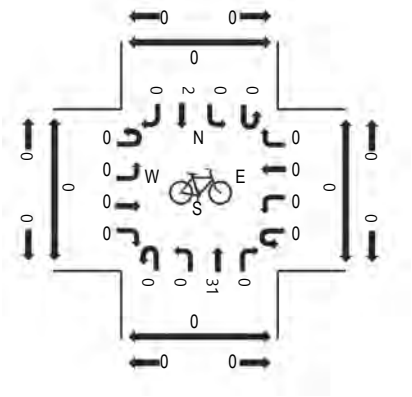
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 ELLIS ST & US101 SB RAMPS AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:45 AM - 09:45 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

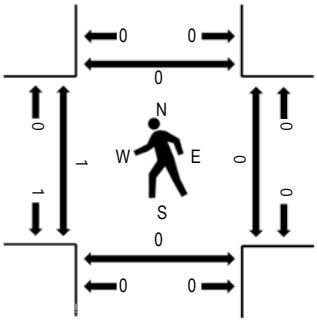
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US101 SB RAMPS Eastbound				US101 SB RAMPS Westbound				ELLIS ST Northbound				ELLIS ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	34	1	30	0	0	0	0	0	0	19	23	0	9	50	0	166	831	0	0	0	0
7:15 AM	0	49	1	42	0	0	0	0	0	0	35	25	0	2	43	0	197	932	0	0	0	0
7:30 AM	0	59	0	49	0	0	0	0	0	0	44	22	0	6	34	0	214	1,027	0	0	0	0
7:45 AM	0	60	0	60	0	0	0	0	0	0	52	32	0	1	49	0	254	1,084	1	0	0	0
8:00 AM	0	72	0	61	0	0	0	0	0	0	43	44	0	6	41	0	267	1,178	0	0	0	0
8:15 AM	0	78	0	65	0	0	0	0	0	0	44	34	0	10	61	0	292	1,200	0	0	0	0
8:30 AM	0	69	0	61	0	0	0	0	0	0	50	36	0	4	51	0	271	1,234	0	0	0	0
8:45 AM	0	94	0	78	0	0	0	0	0	0	65	38	0	6	67	0	348	1,283	0	0	0	0
9:00 AM	0	79	0	67	0	0	0	0	0	0	51	37	0	4	51	0	289	1,237	0	0	0	0
9:15 AM	0	96	0	83	0	0	0	0	0	0	58	33	0	4	52	0	326		1	0	0	0
9:30 AM	0	75	0	77	0	0	0	0	0	0	63	41	0	1	63	0	320		0	0	0	0
9:45 AM	0	90	0	72	0	0	0	0	0	0	45	26	0	7	62	0	302		1	1	1	0

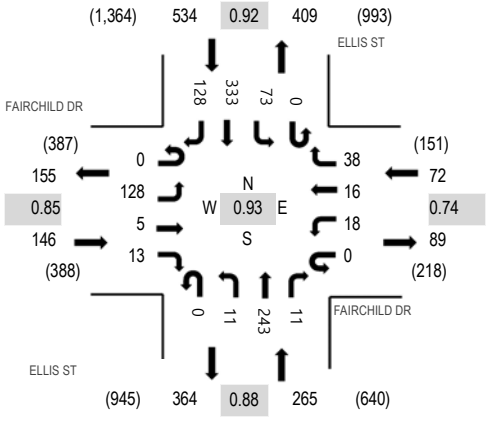
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Lights	0	278	0	288	0	0	0	0	0	0	220	142	0	12	221	0	1,161
Mediums	0	66	0	17	0	0	0	0	0	0	17	7	0	2	12	0	121
Total	0	344	0	305	0	0	0	0	0	0	237	149	0	15	233	0	1,283

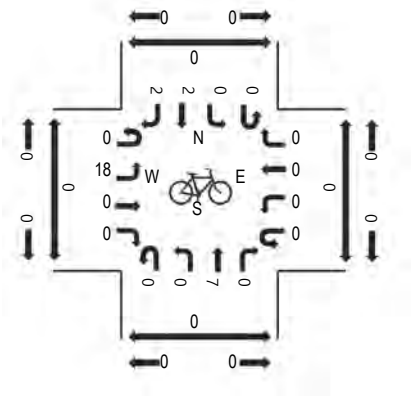
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 ELLIS ST & FAIRCHILD DR AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:45 AM - 09:45 AM
Peak 15-Minutes: 09:30 AM - 09:45 AM

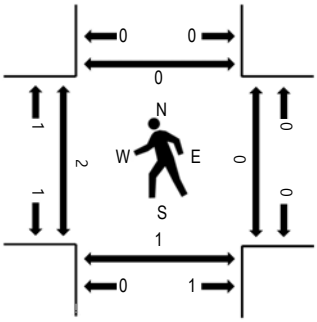
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	FAIRCHILD DR Eastbound				FAIRCHILD DR Westbound				ELLIS ST Northbound				ELLIS ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	12	0	3	0	1	0	5	0	1	26	0	0	8	54	19	129	652	0	0	1	0
7:15 AM	0	21	3	5	0	1	1	2	0	1	39	5	0	7	58	21	164	731	0	0	0	0
7:30 AM	0	18	1	4	0	1	0	6	1	1	42	1	0	11	53	18	157	793	0	0	0	0
7:45 AM	0	28	2	1	0	2	2	4	0	2	50	1	1	12	76	21	202	843	1	0	1	0
8:00 AM	0	33	1	1	0	3	4	4	0	4	53	0	0	18	65	22	208	910	0	0	1	0
8:15 AM	0	32	4	9	0	2	3	9	0	5	38	1	0	14	78	31	226	929	0	0	0	0
8:30 AM	0	30	2	0	0	2	1	8	0	7	48	0	0	13	67	29	207	952	0	0	0	0
8:45 AM	0	29	1	3	0	2	2	12	0	4	70	1	0	14	95	36	269	1,017	1	0	1	0
9:00 AM	0	38	2	6	0	7	4	2	0	2	48	1	0	8	71	38	227	981	0	0	0	0
9:15 AM	0	33	2	1	0	7	3	8	0	3	58	7	0	22	85	20	249		1	0	0	0
9:30 AM	0	28	0	3	0	2	7	16	0	2	67	2	0	29	82	34	272		0	0	0	0
9:45 AM	0	24	1	7	0	3	2	13	0	8	38	3	0	21	84	29	233		0	0	1	0

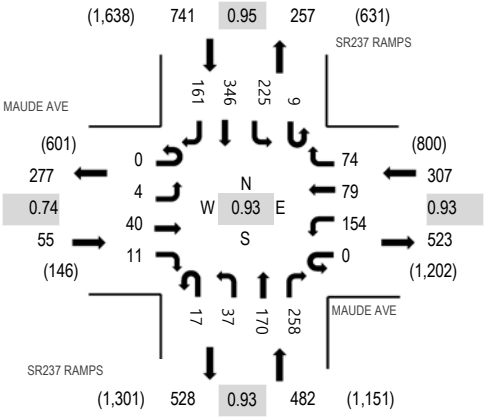
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	122	4	13	0	17	15	38	0	11	227	10	0	73	309	126	965
Mediums	0	6	1	0	0	1	1	0	0	0	16	1	0	0	24	2	52
Total	0	128	5	13	0	18	16	38	0	11	243	11	0	73	333	128	1,017

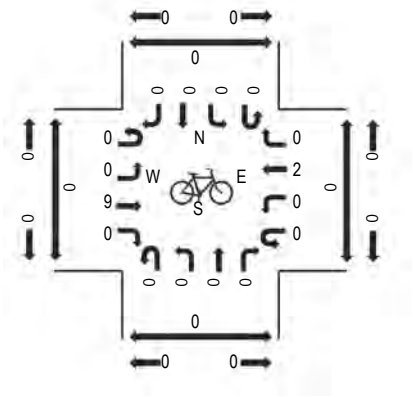
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 6 SR237 RAMPS & MAUDE AVE AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:45 AM - 09:45 AM
Peak 15-Minutes: 09:15 AM - 09:30 AM

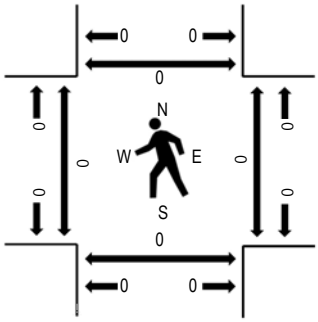
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MAUDE AVE Eastbound				MAUDE AVE Westbound				SR237 RAMPS Northbound				SR237 RAMPS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	1	2	0	25	11	9	0	3	19	25	2	25	42	14	179	922	0	0	0	2
7:15 AM	0	2	6	3	0	38	4	4	1	1	25	36	1	19	62	15	217	997	0	0	0	0
7:30 AM	0	1	3	3	0	51	10	16	1	0	25	41	0	22	53	21	247	1,081	0	0	0	0
7:45 AM	0	0	5	0	0	45	13	9	1	8	36	40	3	30	68	21	279	1,170	0	0	0	0
8:00 AM	0	3	7	2	0	36	18	8	2	2	35	46	0	32	41	22	254	1,272	0	0	0	1
8:15 AM	0	6	11	4	0	34	21	11	1	5	49	54	2	37	40	26	301	1,382	0	0	0	0
8:30 AM	0	1	11	3	0	42	11	25	4	8	32	54	0	50	66	29	336	1,507	0	0	0	0
8:45 AM	0	1	8	0	0	43	18	16	5	9	46	55	1	54	86	39	381	1,585	0	0	0	0
9:00 AM	0	0	7	2	0	41	17	17	3	11	33	62	6	62	68	35	364	1,541	0	0	0	0
9:15 AM	0	2	10	4	0	38	21	26	2	10	47	70	0	58	94	44	426		0	0	0	0
9:30 AM	0	1	15	5	0	32	23	15	7	7	44	71	2	51	98	43	414		0	0	0	0
9:45 AM	0	4	10	2	0	24	20	8	2	11	37	65	0	49	75	30	337		0	0	0	0

Peak Rolling Hour Flow Rates

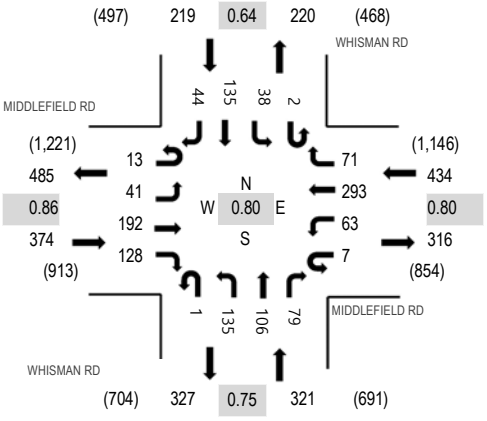
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	4	37	11	0	149	78	69	17	37	164	249	9	223	328	157	1,532
Mediums	0	0	3	0	0	5	1	5	0	0	6	9	0	2	17	4	52
Total	0	4	40	11	0	154	79	74	17	37	170	258	9	225	346	161	1,585

ALL TRAFFIC DATA SERVICES

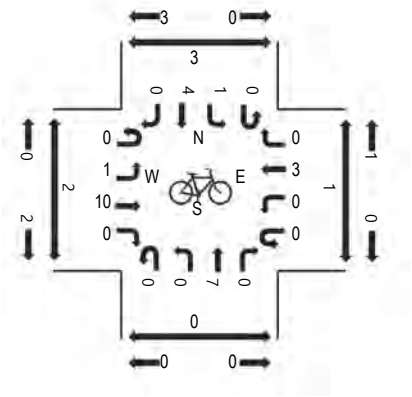
(303) 216-2439
www.alltrafficdata.net

Location: 7 WHISMAN RD & MIDDLEFIELD RD AM
Date: Tuesday, November 15, 2022
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

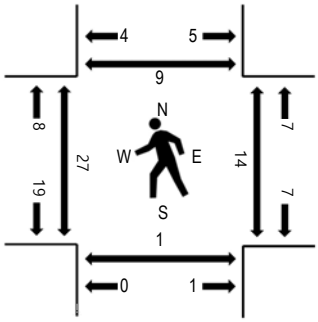
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				WHISMAN RD Northbound				WHISMAN RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	3	0	19	9	1	7	38	6	0	13	4	10	0	13	10	8	141	946	0	1	0	0
7:15 AM	3	4	21	11	0	6	52	7	0	7	8	13	2	7	14	4	159	1,119	0	3	0	0
7:30 AM	4	3	30	25	1	7	59	3	0	16	10	17	0	9	32	9	225	1,283	3	2	1	1
7:45 AM	2	9	48	42	4	16	97	18	0	38	37	21	2	7	67	13	421	1,348	5	4	1	2
8:00 AM	4	11	45	23	0	13	50	14	1	53	31	22	0	13	26	8	314	1,199	6	0	0	4
8:15 AM	4	12	53	40	1	14	82	22	0	22	16	15	0	10	23	9	323	1,192	8	4	0	3
8:30 AM	3	9	46	23	2	20	64	17	0	22	22	21	0	8	19	14	290	1,173	8	6	0	0
8:45 AM	4	9	46	19	2	11	66	13	0	23	25	25	0	8	16	5	272	1,144	1	1	0	0
9:00 AM	8	13	57	20	2	12	77	16	0	25	15	24	0	11	22	5	307	1,102	3	1	0	1
9:15 AM	5	6	52	19	2	18	90	19	0	12	12	29	0	10	20	10	304		6	0	0	3
9:30 AM	10	8	35	17	2	15	64	21	0	22	16	17	0	10	16	8	261		3	1	3	0
9:45 AM	5	9	46	19	0	16	64	15	0	12	4	11	0	8	16	5	230		1	4	2	0

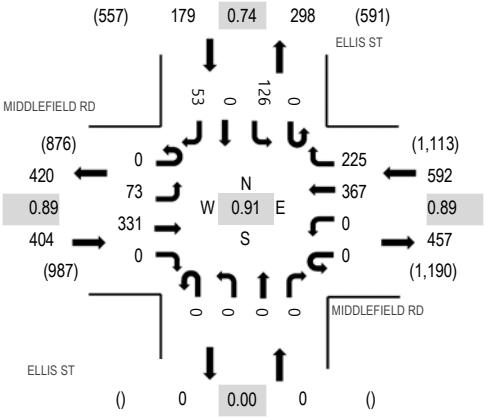
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	2	0	0	1	1	0	0	0	0	0	5
Lights	13	39	189	121	6	59	282	70	1	129	102	77	2	37	132	42	1,301
Mediums	0	2	3	7	1	3	9	1	0	5	3	2	0	1	3	2	42
Total	13	41	192	128	7	63	293	71	1	135	106	79	2	38	135	44	1,348

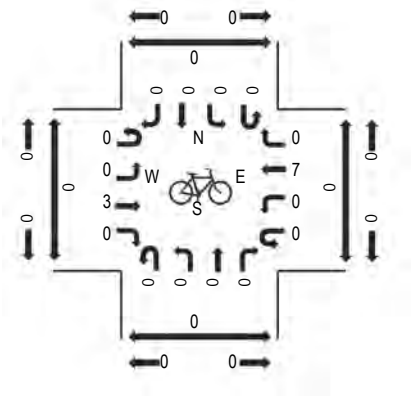
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 8 ELLIS ST & MIDDLEFIELD RD AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

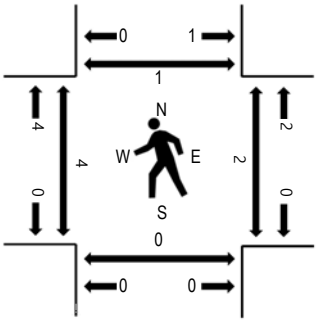
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				ELLIS ST Northbound				ELLIS ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	16	62	0	0	0	34	21	0	0	0	0	0	36	0	9	178	806	0	2	0	0
7:15 AM	0	13	75	0	0	0	32	30	0	0	0	0	0	29	0	20	199	889	0	0	0	0
7:30 AM	1	13	68	0	0	0	51	26	0	0	0	0	0	28	0	16	203	977	0	0	0	0
7:45 AM	0	15	66	0	0	0	54	21	0	0	0	0	0	42	0	28	226	1,096	0	1	0	2
8:00 AM	0	29	84	0	0	0	73	43	0	0	0	0	0	26	0	6	261	1,175	1	2	0	0
8:15 AM	0	14	77	0	0	0	96	52	0	0	0	0	0	32	0	16	287	1,110	1	0	0	0
8:30 AM	0	19	90	0	0	0	102	65	0	0	0	0	0	28	0	18	322	999	2	0	0	0
8:45 AM	0	11	80	0	0	0	96	65	0	0	0	0	0	40	0	13	305	834	0	0	0	1
9:00 AM	0	12	81	0	0	0	39	22	0	0	0	0	0	31	0	11	196	676	1	0	0	0
9:15 AM	0	5	51	0	0	0	51	24	0	0	0	0	0	27	0	18	176		0	0	0	0
9:30 AM	0	16	38	0	0	0	31	30	0	0	0	0	0	26	0	16	157		0	0	0	1
9:45 AM	0	3	48	0	0	0	29	26	0	0	0	0	0	25	0	16	147		0	0	0	0

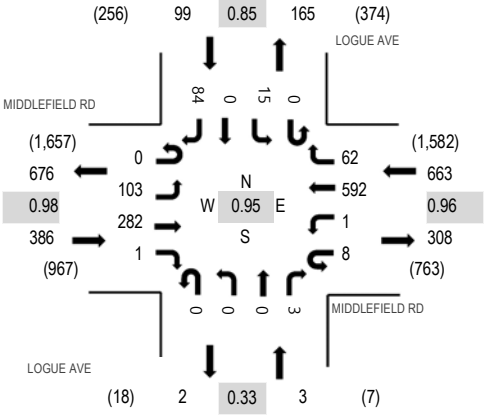
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
Lights	0	73	325	0	0	0	353	211	0	0	0	0	0	114	0	48	1,124
Mediums	0	0	6	0	0	0	13	14	0	0	0	0	0	11	0	5	49
Total	0	73	331	0	0	0	367	225	0	0	0	0	0	126	0	53	1,175

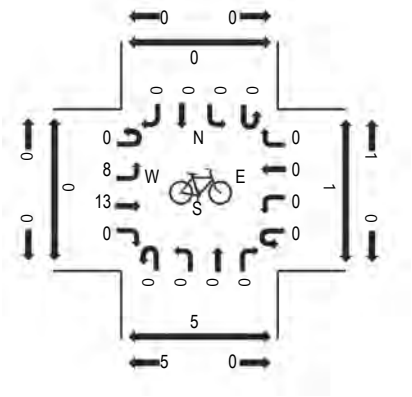
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 9 LOGUE AVE & MIDDLEFIELD RD AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:30 AM - 09:30 AM
Peak 15-Minutes: 09:15 AM - 09:30 AM

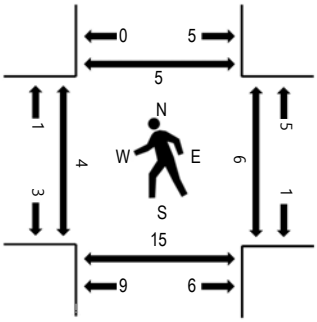
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				LOGUE AVE Northbound				LOGUE AVE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	6	34	1	1	2	49	4	0	1	0	0	0	2	0	13	113	689	0	0	0	0
7:15 AM	0	5	32	1	0	2	76	5	0	0	0	0	0	2	0	14	137	794	0	0	5	2
7:30 AM	0	10	45	1	0	0	98	6	0	1	0	2	0	0	0	13	176	899	0	0	1	0
7:45 AM	0	25	58	1	1	3	139	15	0	0	0	0	0	2	0	19	263	1,002	0	0	0	2
8:00 AM	0	11	75	0	0	3	100	7	0	0	0	0	0	2	0	20	218	1,019	0	0	1	0
8:15 AM	0	20	65	1	1	0	130	7	0	0	0	0	0	2	0	16	242	1,091	0	2	2	2
8:30 AM	0	29	65	0	2	1	145	12	0	0	0	0	0	4	0	21	279	1,151	0	2	5	1
8:45 AM	0	29	67	1	3	0	138	17	0	0	0	2	0	1	0	22	280	1,148	0	1	5	0
9:00 AM	0	18	78	0	2	0	154	17	0	0	0	0	0	3	0	18	290	1,104	1	0	2	2
9:15 AM	0	27	72	0	1	0	155	16	0	0	0	1	0	7	0	23	302		3	3	3	2
9:30 AM	1	31	63	0	0	0	137	13	0	0	0	0	0	1	0	30	276		0	0	1	0
9:45 AM	0	31	64	0	1	1	105	13	0	0	0	0	0	2	0	19	236		0	0	0	0

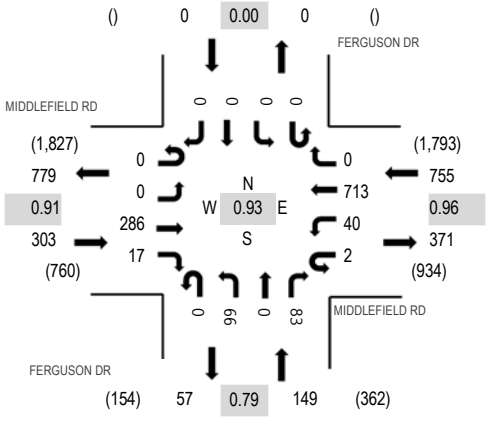
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	95	278	1	8	1	585	59	0	0	0	1	0	15	0	73	1,116
Mediums	0	8	3	0	0	0	7	3	0	0	0	2	0	0	0	11	34
Total	0	103	282	1	8	1	592	62	0	0	0	3	0	15	0	84	1,151

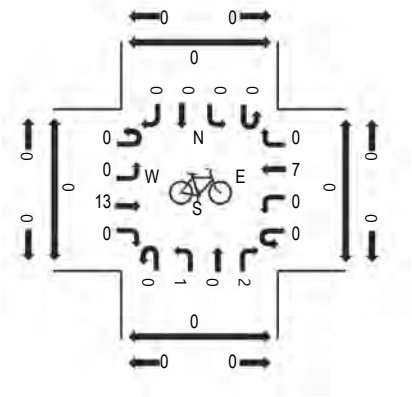
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 10 FERGUSON DR & MIDDLEFIELD RD AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:30 AM - 09:30 AM
Peak 15-Minutes: 09:15 AM - 09:30 AM

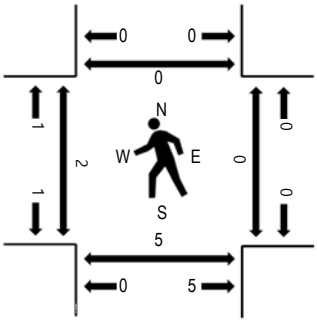
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				FERGUSON DR Northbound				FERGUSON DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	35	3	0	7	55	0	0	4	0	5	0	0	0	0	109	682	0	0	0	0
7:15 AM	0	0	34	0	1	9	89	0	0	3	0	13	0	0	0	0	149	817	0	0	0	0
7:30 AM	0	0	44	3	0	8	105	0	0	5	0	18	0	0	0	0	183	935	0	0	1	0
7:45 AM	0	0	62	0	0	7	145	0	0	15	0	12	0	0	0	0	241	1,037	4	0	0	0
8:00 AM	0	0	62	9	2	9	124	0	0	13	0	25	0	0	0	0	244	1,081	2	0	0	0
8:15 AM	0	0	65	8	1	8	151	0	0	8	0	26	0	0	0	0	267	1,148	0	0	1	0
8:30 AM	0	0	63	3	0	6	178	0	0	16	0	19	0	0	0	0	285	1,207	1	0	1	0
8:45 AM	0	0	67	4	1	12	166	0	0	15	0	20	0	0	0	0	285	1,196	0	0	3	0
9:00 AM	0	0	80	3	0	9	187	0	0	17	0	15	0	0	0	0	311	1,152	0	0	0	0
9:15 AM	0	0	76	7	1	13	182	0	0	18	0	29	0	0	0	0	326		1	0	1	0
9:30 AM	0	0	55	9	2	5	173	0	0	16	0	14	0	0	0	0	274		2	0	0	0
9:45 AM	0	0	64	4	0	8	129	0	0	13	0	23	0	0	0	0	241		1	0	0	0

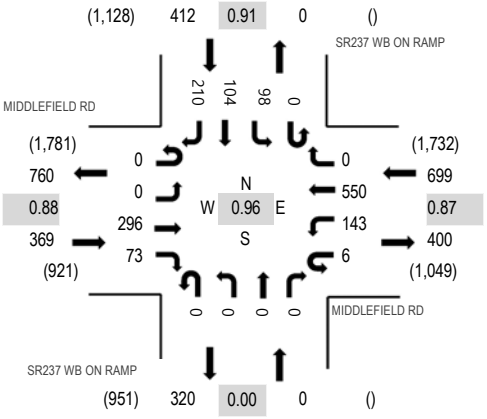
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Lights	0	0	279	17	2	38	702	0	0	66	0	83	0	0	0	0	1,187
Mediums	0	0	5	0	0	1	11	0	0	0	0	0	0	0	0	0	17
Total	0	0	286	17	2	40	713	0	0	66	0	83	0	0	0	0	1,207

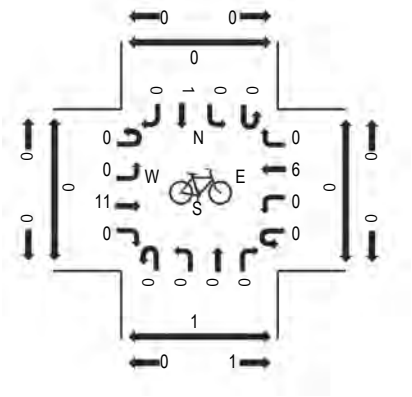
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 11 SR237 WB ON RAMP & MIDDLEFIELD RD AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:30 AM - 09:30 AM
Peak 15-Minutes: 09:15 AM - 09:30 AM

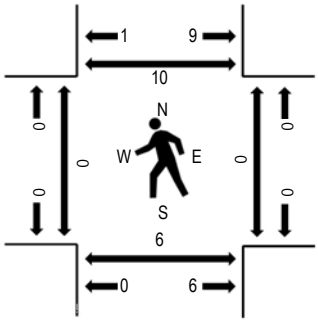
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				SR237 WB ON RAMP Northbound				SR237 WB ON RAMP Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	33	7	0	16	29	0	0	0	0	0	0	16	19	33	153	1,029	0	0	0	0
7:15 AM	0	0	36	10	0	32	54	0	0	0	0	0	0	21	31	43	227	1,182	0	0	0	1
7:30 AM	0	0	42	15	1	76	68	0	0	0	0	0	0	21	35	43	301	1,270	0	0	0	0
7:45 AM	0	0	64	11	0	68	104	0	0	0	0	0	0	20	31	50	348	1,310	0	0	0	3
8:00 AM	0	0	77	17	1	30	104	0	0	0	0	0	0	20	20	37	306	1,331	0	0	0	1
8:15 AM	0	0	68	21	1	24	129	0	0	0	0	0	0	23	24	25	315	1,409	0	0	1	1
8:30 AM	0	0	68	16	2	36	130	0	0	0	0	0	0	15	20	54	341	1,480	0	0	3	4
8:45 AM	0	0	70	19	1	36	125	0	0	0	0	0	0	25	37	56	369	1,477	0	0	2	1
9:00 AM	0	0	75	16	2	42	157	0	0	0	0	0	0	32	20	40	384	1,421	0	0	0	1
9:15 AM	0	0	83	22	1	29	138	0	0	0	0	0	0	26	27	60	386		0	0	1	4
9:30 AM	0	0	59	9	3	39	122	0	0	0	0	0	0	34	30	42	338		0	0	0	4
9:45 AM	0	0	66	17	2	27	103	0	0	0	0	0	0	41	22	35	313		0	0	0	1

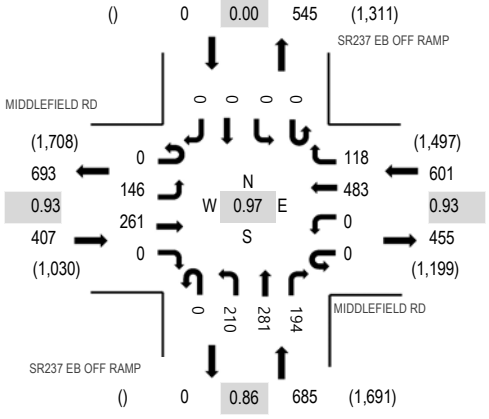
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Lights	0	0	292	70	6	139	545	0	0	0	0	0	0	95	99	200	1,446
Mediums	0	0	3	3	0	4	5	0	0	0	0	0	0	3	5	9	32
Total	0	0	296	73	6	143	550	0	0	0	0	0	0	98	104	210	1,480

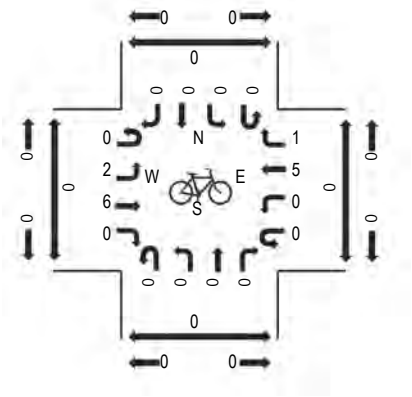
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 12 SR237 EB OFF RAMP & MIDDLEFIELD RD AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:45 AM - 09:45 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

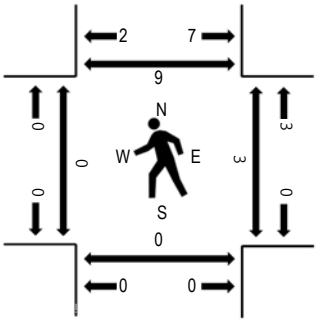
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				SR237 EB OFF RAMP Northbound				SR237 EB OFF RAMP Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	13	26	0	0	0	29	11	0	16	24	28	0	0	0	0	147	1,014	0	0	0	0
7:15 AM	0	22	37	0	0	0	55	11	0	30	36	43	0	0	0	0	234	1,212	0	0	0	1
7:30 AM	0	26	41	0	0	0	115	14	0	27	37	35	0	0	0	0	295	1,374	0	0	0	0
7:45 AM	1	32	42	0	0	0	125	19	0	32	43	44	0	0	0	0	338	1,473	0	0	0	5
8:00 AM	0	28	62	0	0	0	94	23	0	38	48	52	0	0	0	0	345	1,573	0	0	0	1
8:15 AM	0	48	57	0	0	0	104	24	0	47	68	48	0	0	0	0	396	1,651	0	1	0	1
8:30 AM	0	27	52	0	0	0	136	29	0	33	57	60	0	0	0	0	394	1,684	0	0	1	3
8:45 AM	0	35	63	0	0	0	108	33	0	57	76	66	0	0	0	0	438	1,693	0	3	0	2
9:00 AM	0	33	72	0	0	0	138	26	0	50	64	40	0	0	0	0	423	1,631	0	0	0	1
9:15 AM	0	52	60	0	0	0	115	28	0	55	72	47	0	0	0	0	429		0	0	0	3
9:30 AM	0	26	66	0	0	0	122	31	0	48	69	41	0	0	0	0	403		0	0	0	3
9:45 AM	0	40	69	0	0	0	88	19	0	45	67	48	0	0	0	0	376		0	0	0	1

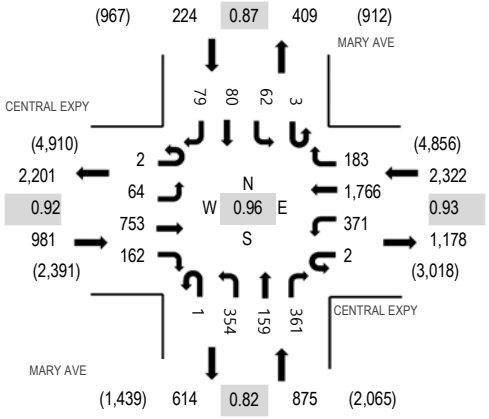
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	143	257	0	0	0	473	116	0	209	273	190	0	0	0	0	1,661
Mediums	0	3	3	0	0	0	10	2	0	1	8	4	0	0	0	0	31
Total	0	146	261	0	0	0	483	118	0	210	281	194	0	0	0	0	1,693

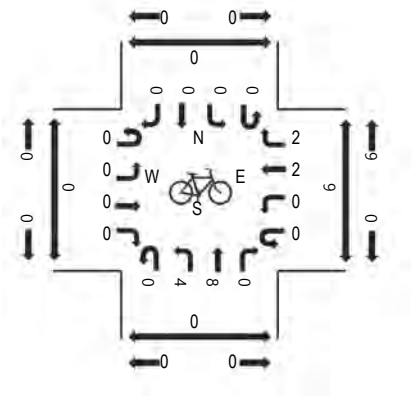
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 13 MARY AVE & CENTRAL EXPY AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

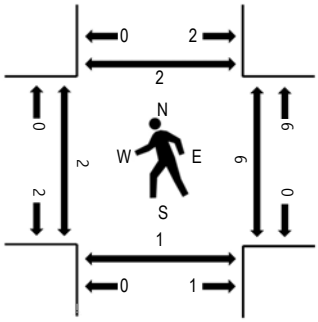
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	CENTRAL EXPY Eastbound				CENTRAL EXPY Westbound				MARY AVE Northbound				MARY AVE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	80	15	1	39	203	10	0	45	14	38	0	4	8	18	475	2,934	0	2	0	0
7:15 AM	0	3	94	23	1	38	295	12	0	26	13	40	0	6	10	16	577	3,552	0	2	0	0
7:30 AM	0	4	117	22	0	65	450	21	0	79	22	72	0	11	23	21	907	4,101	0	0	0	1
7:45 AM	1	14	137	37	1	99	458	32	0	54	23	68	0	10	25	16	975	4,232	2	0	1	0
8:00 AM	2	10	194	36	1	101	484	39	0	71	26	71	0	12	30	16	1,093	4,402	0	5	1	0
8:15 AM	0	19	181	49	0	119	393	37	0	111	55	108	0	19	24	11	1,126	4,026	0	0	0	0
8:30 AM	0	17	169	36	0	87	389	50	1	100	45	95	0	17	9	23	1,038	3,721	2	0	0	1
8:45 AM	0	18	209	41	1	64	500	57	0	72	33	87	3	14	17	29	1,145	3,404	0	1	0	1
9:00 AM	2	21	132	44	2	23	115	25	0	85	39	64	0	81	50	34	717	2,943	2	1	1	0
9:15 AM	1	30	179	40	1	32	185	20	0	67	49	70	0	69	47	31	821		1	2	3	1
9:30 AM	1	26	148	37	2	27	152	19	0	66	40	59	0	68	43	33	721		4	2	2	1
9:45 AM	1	16	157	28	2	19	165	20	0	56	30	71	0	55	31	33	684		0	1	0	0

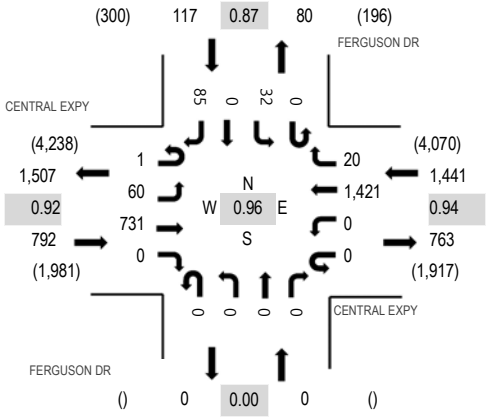
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	2	3	0	0	0	0	0	0	0	0	0	7
Lights	2	64	741	160	2	360	1,741	183	1	351	156	354	3	59	79	78	4,334
Mediums	0	0	10	2	0	9	22	0	0	3	3	7	0	3	1	1	61
Total	2	64	753	162	2	371	1,766	183	1	354	159	361	3	62	80	79	4,402

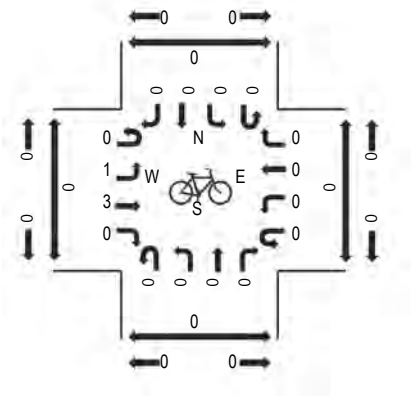
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 14 FERGUSON DR & CENTRAL EXPY AM
Date: Tuesday, November 15, 2022
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

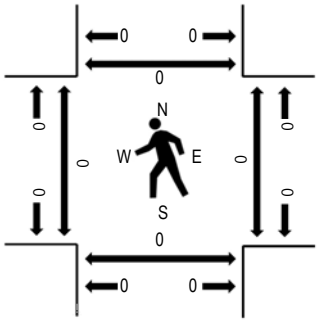
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	CENTRAL EXPY Eastbound				CENTRAL EXPY Westbound				FERGUSON DR Northbound				FERGUSON DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	2	58	0	0	0	208	4	0	0	0	0	0	7	0	7	286	1,831	0	0	0	0
7:15 AM	0	3	79	0	0	0	286	1	0	0	0	0	0	2	0	15	386	2,129	0	0	0	0
7:30 AM	0	5	102	0	0	0	421	0	0	0	0	0	0	5	0	15	548	2,334	0	0	0	0
7:45 AM	1	10	152	0	0	0	403	13	0	0	0	0	0	7	0	25	611	2,349	0	0	0	0
8:00 AM	0	9	156	0	0	0	380	3	0	0	0	0	0	8	0	28	584	2,350	0	0	0	0
8:15 AM	1	16	180	0	0	0	360	4	0	0	0	0	0	9	0	21	591	2,298	0	0	0	0
8:30 AM	0	18	192	0	0	0	320	6	0	0	0	0	0	8	0	19	563	2,326	0	0	0	0
8:45 AM	0	17	203	0	0	0	361	7	0	0	0	0	0	7	0	17	612	2,295	0	0	0	0
9:00 AM	1	15	174	0	0	0	310	3	0	0	0	0	0	10	0	19	532	2,170	0	0	0	0
9:15 AM	0	19	211	0	0	0	361	3	0	0	0	0	0	6	0	19	619		0	0	0	0
9:30 AM	1	21	174	0	0	0	314	6	0	0	0	0	0	5	0	11	532		0	0	0	0
9:45 AM	0	7	154	0	0	0	292	4	0	0	0	0	0	8	0	22	487		0	0	0	0

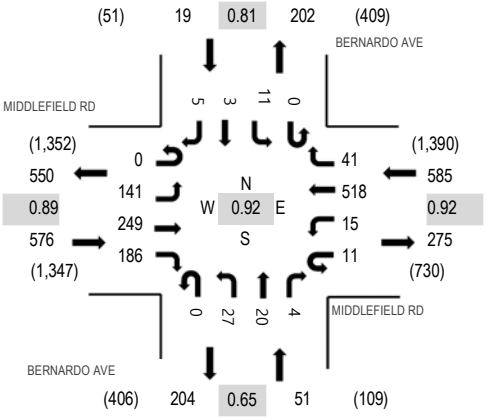
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
Lights	1	59	723	0	0	0	1,396	20	0	0	0	0	0	32	0	85	2,316
Mediums	0	1	7	0	0	0	24	0	0	0	0	0	0	0	0	0	32
Total	1	60	731	0	0	0	1,421	20	0	0	0	0	0	32	0	85	2,350

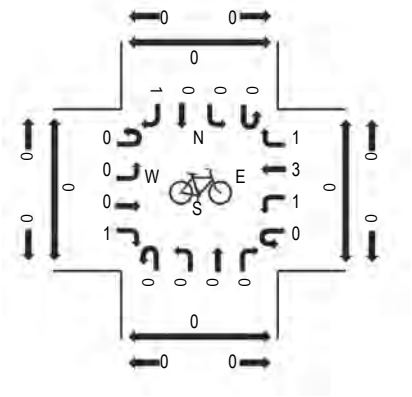
(303) 216-2439
www.alltrafficdata.net

Location: 1 BERNARDO AVE & MIDDLEFIELD RD AM
Date: Tuesday, April 4, 2023
Peak Hour: 08:45 AM - 09:45 AM
Peak 15-Minutes: 09:00 AM - 09:15 AM

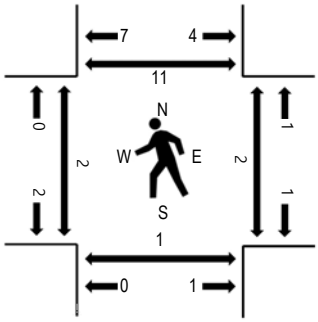
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				BERNARDO AVE Northbound				BERNARDO AVE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	2	8	31	16	1	1	41	1	0	2	1	1	0	2	0	0	107	646	0	0	0	0
7:15 AM	1	11	28	20	0	1	58	1	0	5	1	1	0	0	0	1	128	788	0	0	0	0
7:30 AM	0	18	46	15	1	0	110	2	0	2	1	0	0	3	0	1	199	907	0	0	0	2
7:45 AM	0	10	73	19	3	1	97	4	0	1	0	0	0	2	0	2	212	975	0	1	0	1
8:00 AM	0	26	67	24	2	3	108	8	0	4	2	0	0	2	0	3	249	1,085	0	1	0	1
8:15 AM	0	24	68	26	0	5	105	5	0	6	5	0	0	1	0	2	247	1,169	2	0	0	3
8:30 AM	0	29	59	27	0	4	121	6	0	12	2	2	0	2	1	2	267	1,205	0	0	1	1
8:45 AM	0	34	64	55	5	3	143	8	0	5	3	1	0	1	0	0	322	1,231	0	2	0	2
9:00 AM	0	42	61	58	2	6	138	13	0	4	5	0	0	3	1	0	333	1,166	0	0	0	0
9:15 AM	0	31	61	33	2	3	122	10	0	6	6	1	0	3	2	3	283		1	0	1	5
9:30 AM	0	34	63	40	2	3	115	10	0	12	6	2	0	4	0	2	293		1	0	0	4
9:45 AM	1	33	55	34	0	3	106	7	0	5	2	3	0	2	2	4	257		1	0	0	2

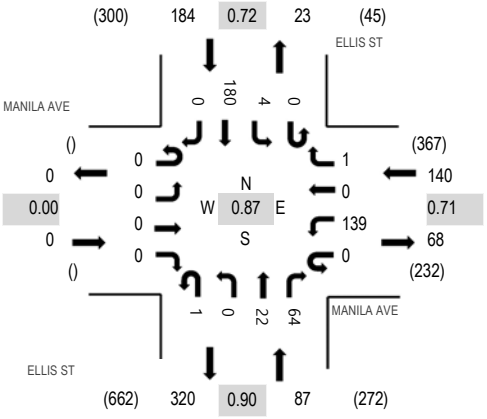
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	4	0	0	1	0	0	0	0	0	0	5
Lights	0	141	242	181	11	15	501	41	0	22	20	2	0	11	3	5	1,195
Mediums	0	0	7	5	0	0	13	0	0	4	0	2	0	0	0	0	31
Total	0	141	249	186	11	15	518	41	0	27	20	4	0	11	3	5	1,231

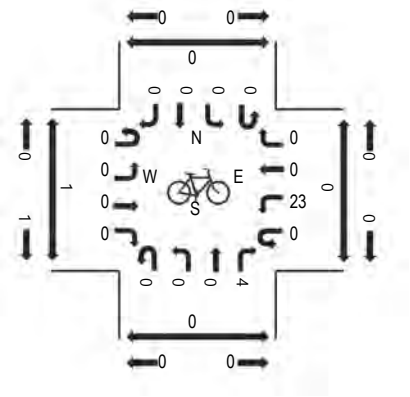
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 ELLIS ST & MANILA AVE PM
Date: Tuesday, November 15, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

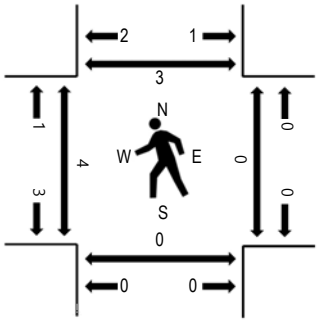
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MANILA AVE Eastbound				MANILA AVE Westbound				ELLIS ST Northbound				ELLIS ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	31	0	0	0	0	8	16	0	1	49	0	105	390	0	0	0	0
4:15 PM	0	0	0	0	0	30	0	0	0	0	5	15	0	0	27	0	77	379	1	0	0	1
4:30 PM	0	0	0	0	0	35	0	0	0	0	5	14	0	2	62	0	118	411	2	0	0	2
4:45 PM	0	0	0	0	0	28	0	1	0	0	9	17	0	0	35	0	90	378	1	0	0	1
5:00 PM	0	0	0	0	0	24	0	0	1	0	4	15	0	0	50	0	94	361	1	0	0	0
5:15 PM	0	0	0	0	0	52	0	0	0	0	4	18	0	2	33	0	109	306	0	0	0	0
5:30 PM	0	0	0	0	0	34	0	0	0	0	3	23	0	1	24	0	85	258	0	0	0	0
5:45 PM	0	0	0	0	0	34	0	0	0	0	3	23	0	0	13	0	73	217	0	0	0	0
6:00 PM	0	0	0	0	0	27	0	0	0	0	2	10	0	0	0	0	39	188	0	0	0	0
6:15 PM	0	0	0	0	0	34	0	0	1	0	1	25	0	0	0	0	61		0	0	0	0
6:30 PM	0	0	0	0	0	20	0	0	0	0	0	23	0	0	1	0	44		0	0	0	0
6:45 PM	0	0	0	0	0	17	0	0	0	0	0	27	0	0	0	0	44		1	0	0	1

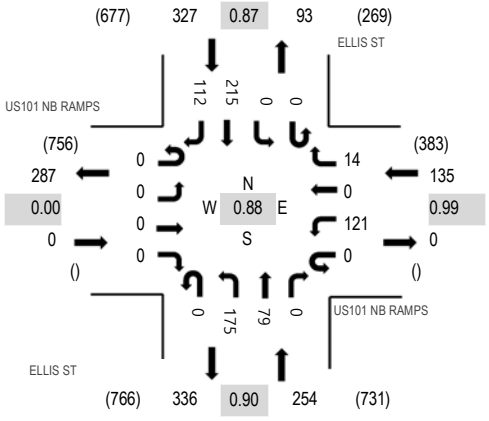
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	129	0	1	1	0	22	47	0	4	178	0	382
Mediums	0	0	0	0	0	10	0	0	0	0	0	17	0	0	2	0	29
Total	0	0	0	0	0	139	0	1	1	0	22	64	0	4	180	0	411

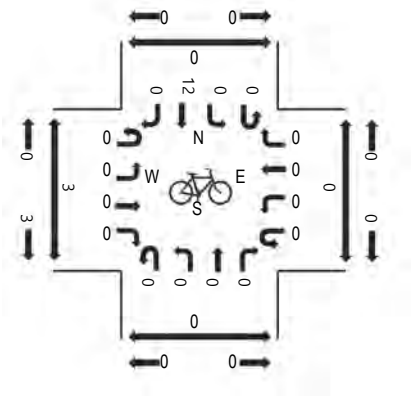
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 ELLIS ST & US101 NB RAMPS PM
Date: Tuesday, November 15, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

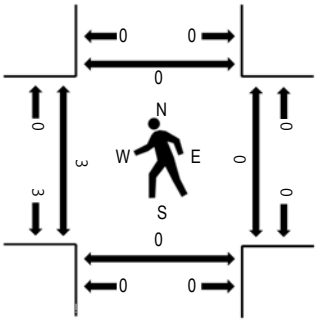
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US101 NB RAMPS Eastbound				US101 NB RAMPS Westbound				ELLIS ST Northbound				ELLIS ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	21	0	2	0	38	22	0	0	0	49	33	165	653	0	0	0	0
4:15 PM	0	0	0	0	0	29	0	1	0	35	17	0	0	0	37	20	139	652	1	0	0	0
4:30 PM	0	0	0	0	0	33	0	1	0	42	19	0	0	0	53	41	189	716	2	0	0	0
4:45 PM	0	0	0	0	0	29	0	7	0	37	21	0	0	0	48	18	160	688	0	0	0	0
5:00 PM	0	0	0	0	0	25	0	3	0	44	17	0	0	0	58	17	164	675	0	0	0	0
5:15 PM	0	0	0	0	0	34	0	3	0	52	22	0	0	0	56	36	203	633	1	0	0	0
5:30 PM	0	0	0	0	0	34	0	3	0	49	20	0	0	0	32	23	161	548	0	0	0	0
5:45 PM	0	0	0	0	0	32	0	3	0	40	23	0	0	0	27	22	147	503	0	0	0	0
6:00 PM	0	0	0	0	0	36	0	1	0	42	9	0	0	0	17	17	122	463	0	0	0	0
6:15 PM	0	0	0	0	0	20	0	1	0	36	28	0	0	0	16	17	118		0	0	0	0
6:30 PM	0	0	0	0	0	30	0	0	0	41	22	0	0	0	8	15	116		0	0	0	0
6:45 PM	0	0	0	0	0	32	1	2	0	33	22	0	0	0	10	7	107		1	0	0	0

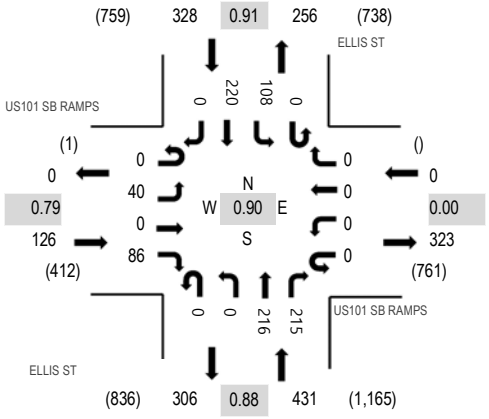
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
Lights	0	0	0	0	0	117	0	13	0	167	58	0	0	0	209	107	671
Mediums	0	0	0	0	0	4	0	1	0	8	17	0	0	0	6	5	41
Total	0	0	0	0	0	121	0	14	0	175	79	0	0	0	215	112	716

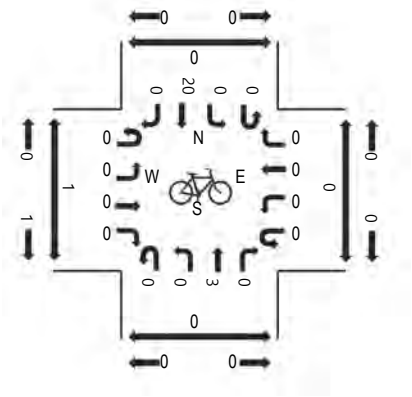
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 ELLIS ST & US101 SB RAMPS PM
Date: Tuesday, November 15, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

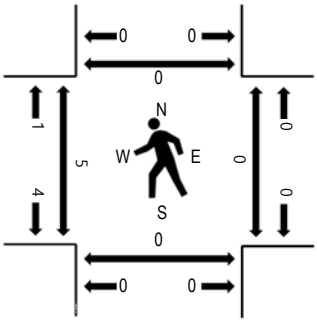
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US101 SB RAMPS Eastbound				US101 SB RAMPS Westbound				ELLIS ST Northbound				ELLIS ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	11	0	19	0	0	0	0	0	0	49	55	0	22	44	1	201	809	0	0	0	0
4:15 PM	0	13	0	16	0	0	0	0	0	0	43	55	0	17	48	0	192	854	0	0	0	0
4:30 PM	0	8	0	22	0	0	0	0	0	0	52	48	0	41	49	0	220	885	2	0	0	0
4:45 PM	0	9	0	20	0	0	0	0	0	0	46	48	0	17	56	0	196	879	1	0	0	0
5:00 PM	0	12	0	23	0	0	0	0	0	0	54	73	0	30	54	0	246	873	1	0	0	0
5:15 PM	0	11	0	21	0	0	0	0	0	0	64	46	0	20	61	0	223	804	1	0	0	0
5:30 PM	0	11	0	19	0	0	0	0	0	0	56	54	0	10	64	0	214	744	0	0	0	0
5:45 PM	0	15	0	21	0	0	0	0	0	0	49	51	0	8	46	0	190	695	0	0	0	0
6:00 PM	0	8	0	26	0	0	0	0	0	0	45	46	0	5	47	0	177	654	0	0	0	0
6:15 PM	0	20	0	31	0	0	0	0	0	0	38	33	0	4	37	0	163		0	0	0	0
6:30 PM	0	18	0	16	0	0	0	0	0	0	50	43	0	1	37	0	165		1	0	0	0
6:45 PM	0	20	0	22	0	0	0	0	0	0	36	31	0	3	37	0	149		0	0	0	0

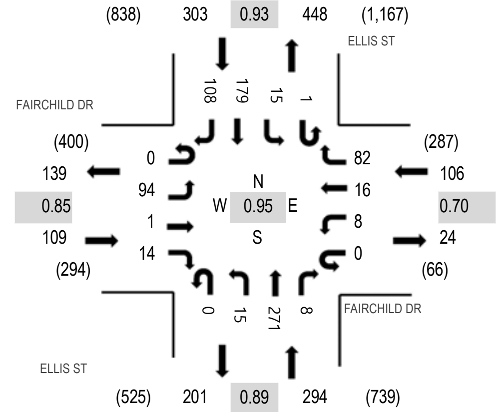
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	28	0	83	0	0	0	0	0	0	202	212	0	106	213	0	844
Mediums	0	12	0	3	0	0	0	0	0	0	14	3	0	2	7	0	41
Total	0	40	0	86	0	0	0	0	0	0	216	215	0	108	220	0	885

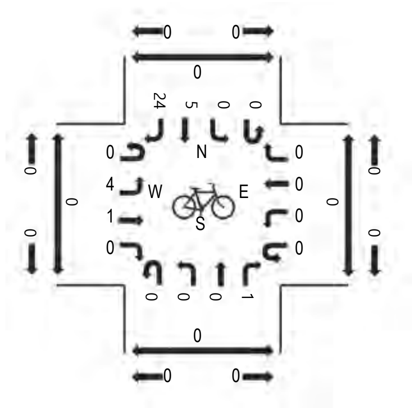
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 ELLIS ST & FAIRCHILD DR PM
Date: Tuesday, November 15, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

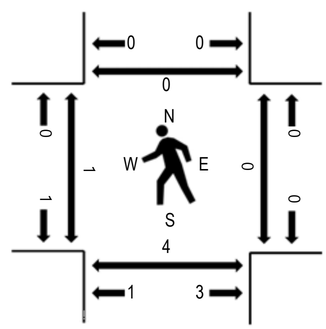
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	FAIRCHILD DR Eastbound U-Turn	Left	Thru	Right	FAIRCHILD DR Westbound U-Turn	Left	Thru	Right	ELLIS ST Northbound U-Turn	Left	Thru	Right	ELLIS ST Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
4:00 PM	0	21	1	1	0	0	0	14	0	2	70	4	1	1	35	27	177	712	0	0	0	0
4:15 PM	0	18	3	3	0	0	1	20	0	0	61	1	0	5	39	20	171	749	0	0	0	0
4:30 PM	0	15	0	3	0	2	2	23	0	2	60	1	0	2	40	28	178	783	1	0	0	0
4:45 PM	0	28	3	4	0	3	4	12	0	1	52	2	0	1	43	33	186	811	0	0	0	0
5:00 PM	0	23	1	4	0	2	4	23	0	4	78	1	1	4	49	20	214	812	0	0	3	0
5:15 PM	0	22	0	3	0	3	0	20	0	3	67	3	0	2	51	31	205	781	1	0	1	0
5:30 PM	0	25	0	6	0	1	4	18	0	3	71	2	0	2	47	27	206	728	0	0	0	0
5:45 PM	0	24	0	1	0	2	8	21	0	5	55	2	0	7	32	30	187	683	0	0	0	0
6:00 PM	0	17	0	5	0	3	9	31	0	1	42	1	0	4	32	38	183	634	0	0	0	0
6:15 PM	0	18	0	3	0	1	1	18	0	2	39	1	0	2	37	30	152		0	0	0	0
6:30 PM	0	16	2	3	0	3	0	17	0	3	59	1	0	6	25	26	161		0	0	0	0
6:45 PM	0	20	0	1	0	2	4	11	0	3	36	1	0	0	36	24	138		0	0	0	0

Peak Rolling Hour Flow Rates

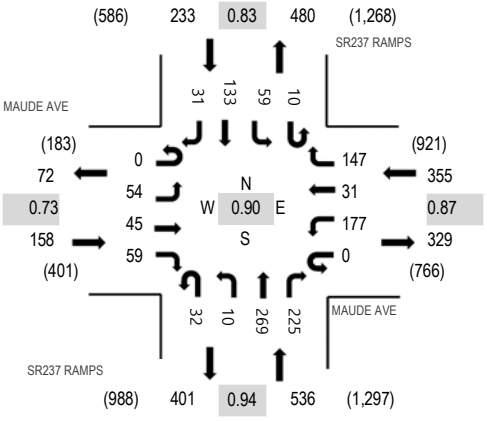
Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	94	1	14	0	8	13	82	0	15	260	8	1	15	176	107	794
Mediums	0	0	0	0	0	0	3	0	0	0	11	0	0	0	3	1	18
Total	0	94	1	14	0	8	16	82	0	15	271	8	1	15	179	108	812

ALL TRAFFIC DATA SERVICES

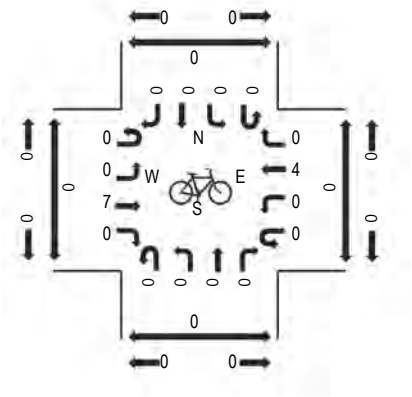
(303) 216-2439
www.alltrafficdata.net

Location: 6 SR237 RAMPS & MAUDE AVE PM
Date: Tuesday, November 15, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

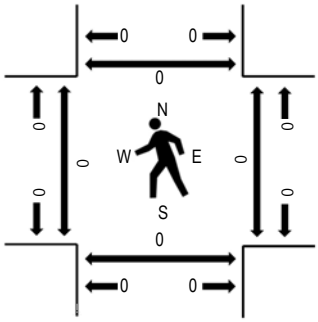
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MAUDE AVE Eastbound				MAUDE AVE Westbound				SR237 RAMPS Northbound				SR237 RAMPS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	15	10	5	0	34	5	33	4	5	44	44	3	5	27	3	237	1,054	0	0	0	0
4:15 PM	0	13	13	7	0	45	8	34	5	2	50	44	0	8	27	5	261	1,172	0	0	0	0
4:30 PM	0	16	10	7	0	37	4	41	9	0	54	42	5	6	39	6	276	1,236	0	0	0	0
4:45 PM	0	13	13	9	0	38	10	42	9	2	57	45	0	11	23	8	280	1,262	0	0	0	0
5:00 PM	0	22	16	19	0	38	7	61	8	4	79	51	4	18	21	7	355	1,282	0	0	0	0
5:15 PM	0	11	14	15	0	51	7	29	5	2	55	75	2	16	36	7	325	1,216	0	0	0	0
5:30 PM	0	15	10	10	0	49	10	25	10	3	72	46	0	13	33	6	302	1,120	0	0	0	0
5:45 PM	0	6	5	15	0	39	7	32	9	1	63	53	4	12	43	11	300	1,016	0	0	0	0
6:00 PM	0	14	11	20	0	40	10	30	4	1	72	40	4	7	26	10	289	869	0	0	0	0
6:15 PM	0	9	10	5	0	34	4	26	3	0	56	22	4	18	33	5	229		0	0	0	0
6:30 PM	0	14	6	8	0	17	3	29	1	0	56	30	3	4	25	2	198		0	0	0	0
6:45 PM	0	5	6	4	0	22	8	12	1	2	32	25	2	7	19	8	153		0	0	0	0

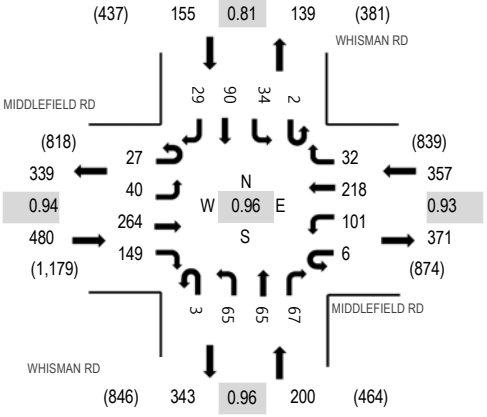
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Lights	0	54	43	59	0	174	29	141	32	10	267	225	10	57	130	30	1,261
Mediums	0	0	2	0	0	3	2	6	0	0	2	0	0	2	1	1	19
Total	0	54	45	59	0	177	31	147	32	10	269	225	10	59	133	31	1,282

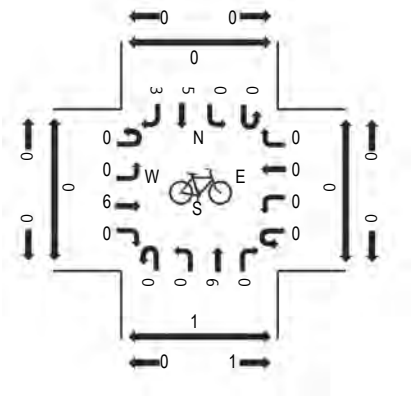
(303) 216-2439
www.alltrafficdata.net

Location: 7 WHISMAN RD & MIDDLEFIELD RD PM
Date: Tuesday, November 15, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

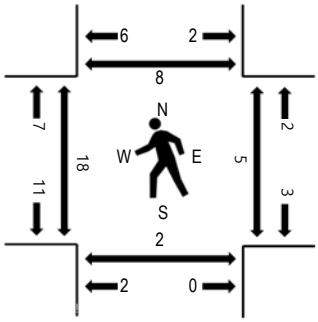
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				WHISMAN RD Northbound				WHISMAN RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	6	52	23	1	12	31	7	1	16	16	7	1	12	19	3	208	961	6	0	1	1
4:15 PM	7	6	57	29	0	10	31	7	0	15	12	10	0	9	17	5	215	1,025	3	0	0	5
4:30 PM	4	7	67	27	2	16	44	11	1	15	10	11	0	7	22	8	252	1,111	3	1	2	2
4:45 PM	7	4	53	40	3	25	64	5	0	10	17	9	0	6	30	13	286	1,170	5	3	0	0
5:00 PM	4	8	65	35	2	25	41	5	0	13	16	23	1	12	19	3	272	1,192	4	2	0	1
5:15 PM	7	10	61	40	2	23	62	11	1	17	17	17	1	9	18	5	301	1,142	7	2	0	5
5:30 PM	10	9	66	42	2	31	59	4	2	19	15	14	0	7	23	8	311	1,044	6	1	2	2
5:45 PM	6	13	72	32	0	22	56	12	0	16	17	13	0	6	30	13	308	901	1	0	0	0
6:00 PM	5	6	43	42	0	10	36	6	0	7	20	9	0	6	26	6	222	766	3	2	1	1
6:15 PM	4	10	40	26	0	14	42	12	0	11	12	2	0	4	21	5	203		4	0	1	1
6:30 PM	4	10	34	17	0	8	27	12	0	8	15	5	0	6	16	6	168		3	4	1	3
6:45 PM	5	10	33	20	0	10	24	12	1	10	8	6	0	9	20	5	173		0	0	0	2

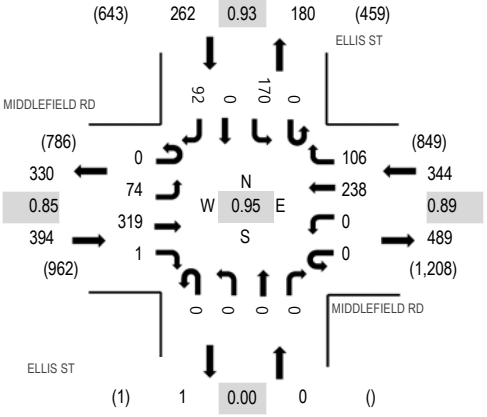
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	27	40	259	146	6	100	214	32	3	63	64	66	2	33	89	28	1,172
Mediums	0	0	5	3	0	1	4	0	0	2	1	1	0	1	1	1	20
Total	27	40	264	149	6	101	218	32	3	65	65	67	2	34	90	29	1,192

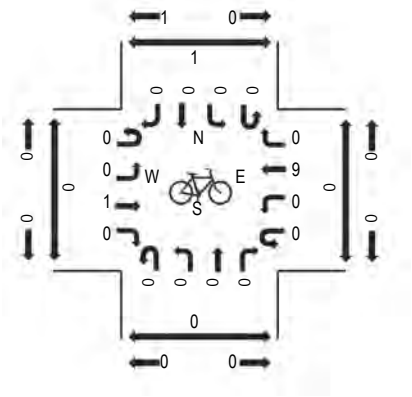
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 8 ELLIS ST & MIDDLEFIELD RD PM
Date: Tuesday, November 15, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

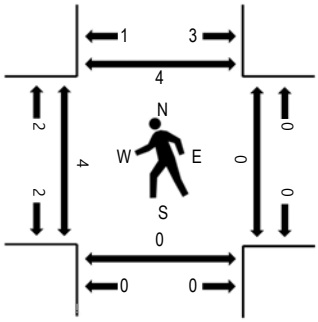
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				ELLIS ST Northbound				ELLIS ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	16	62	0	0	0	34	20	0	0	0	0	0	37	0	10	179	796	0	2	0	0
4:15 PM	0	13	73	0	0	0	31	29	0	0	0	0	0	28	0	21	195	881	0	0	0	0
4:30 PM	1	12	68	0	0	0	50	24	0	0	0	0	0	27	0	17	199	944	1	0	0	0
4:45 PM	0	15	62	0	0	0	54	22	0	0	0	0	0	41	0	29	223	999	0	1	0	2
5:00 PM	0	30	86	0	0	0	46	27	0	0	0	0	0	54	0	21	264	1,000	0	0	0	2
5:15 PM	0	17	77	0	0	0	67	30	0	0	0	0	0	41	0	26	258	932	1	0	0	0
5:30 PM	0	18	83	1	0	0	60	25	0	0	0	0	0	41	0	26	254	842	0	0	0	2
5:45 PM	0	9	73	0	0	0	65	24	0	0	0	0	0	34	0	19	224	742	3	0	0	0
6:00 PM	0	12	82	0	0	0	38	21	0	0	0	0	0	32	0	11	196	658	0	0	0	0
6:15 PM	0	3	48	0	0	0	48	23	0	0	0	0	0	27	0	19	168		0	0	0	0
6:30 PM	0	15	38	0	0	0	31	29	0	0	0	0	0	25	0	16	154		0	0	0	0
6:45 PM	0	4	44	0	0	0	30	21	0	0	0	0	0	25	0	16	140		0	0	0	0

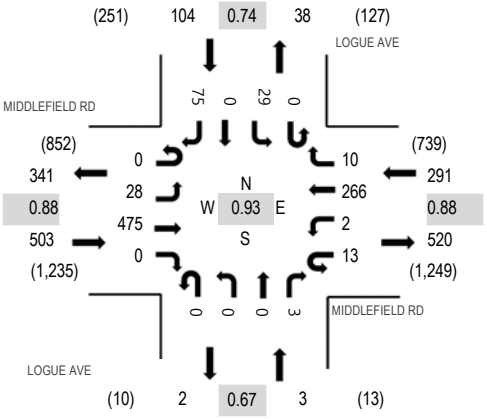
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	74	314	0	0	0	234	100	0	0	0	0	0	167	0	92	981
Mediums	0	0	5	1	0	0	4	6	0	0	0	0	0	3	0	0	19
Total	0	74	319	1	0	0	238	106	0	0	0	0	0	170	0	92	1,000

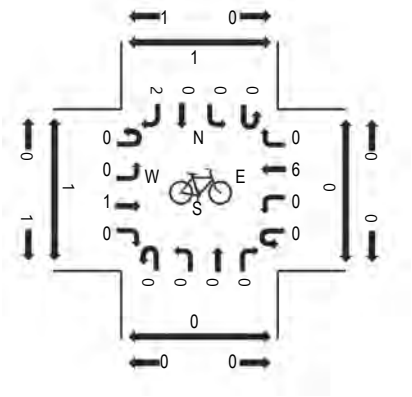
(303) 216-2439
www.alltrafficdata.net

Location: 9 LOGUE AVE & MIDDLEFIELD RD PM
Date: Tuesday, November 15, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

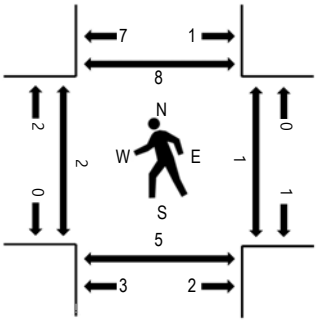
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				LOGUE AVE Northbound				LOGUE AVE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	9	86	0	2	0	36	2	0	0	0	0	0	5	0	19	159	720	1	0	2	0
4:15 PM	0	8	98	0	5	1	45	6	0	0	0	2	0	3	0	14	182	802	0	0	1	2
4:30 PM	0	15	80	0	3	2	55	2	0	1	0	2	0	3	0	17	180	850	0	1	0	3
4:45 PM	0	11	97	1	3	0	59	6	0	0	0	2	0	5	0	15	199	900	2	0	0	1
5:00 PM	0	3	140	0	6	0	55	1	0	0	0	0	0	13	0	23	241	901	1	0	2	3
5:15 PM	0	10	105	0	4	2	74	3	0	0	0	3	0	5	0	24	230	850	0	1	0	0
5:30 PM	0	4	127	0	3	0	70	4	0	0	0	0	0	6	0	16	230	777	1	0	1	4
5:45 PM	0	11	103	0	0	0	67	2	0	0	0	0	0	5	0	12	200	685	0	0	2	1
6:00 PM	0	5	106	0	2	2	45	3	0	1	0	1	0	10	0	15	190	617	0	0	2	0
6:15 PM	0	7	68	0	1	0	57	2	0	0	0	1	0	4	0	17	157		0	0	0	0
6:30 PM	0	3	65	0	1	0	51	4	0	0	0	0	0	2	0	12	138		1	0	0	0
6:45 PM	0	5	68	0	2	2	48	1	0	0	0	0	0	2	0	4	132		0	0	0	3

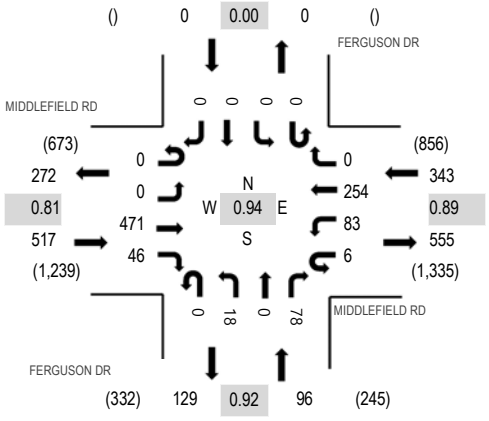
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	21	471	0	13	2	261	9	0	0	0	3	0	29	0	71	880
Mediums	0	7	4	0	0	0	5	1	0	0	0	0	0	0	0	4	21
Total	0	28	475	0	13	2	266	10	0	0	0	3	0	29	0	75	901

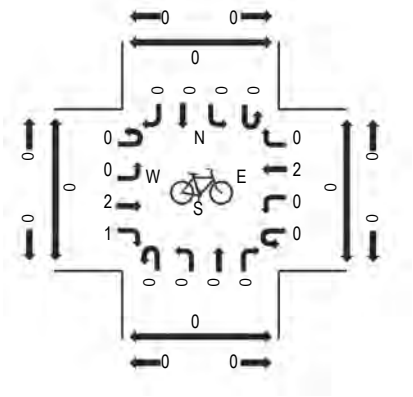
(303) 216-2439
www.alltrafficdata.net

Location: 10 FERGUSON DR & MIDDLEFIELD RD PM
Date: Tuesday, November 15, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

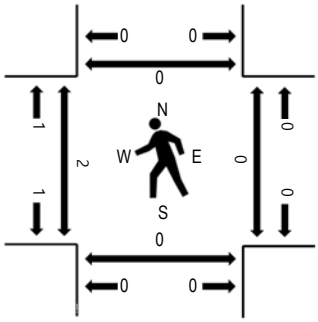
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				FERGUSON DR Northbound				FERGUSON DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	85	5	0	14	33	0	0	2	0	12	0	0	0	0	151	704	1	0	0	0
4:15 PM	0	0	103	4	0	10	41	0	0	4	0	18	0	0	0	0	180	806	0	0	0	0
4:30 PM	0	0	78	8	1	20	57	0	0	5	0	14	0	0	0	0	183	860	0	0	1	0
4:45 PM	0	0	96	9	0	14	57	0	0	1	0	13	0	0	0	0	190	921	2	0	0	0
5:00 PM	0	0	152	9	0	14	58	0	0	1	0	19	0	0	0	0	253	956	1	0	0	0
5:15 PM	0	0	109	11	1	20	69	0	0	5	0	19	0	0	0	0	234	912	0	0	0	0
5:30 PM	0	0	117	16	3	24	58	0	0	7	0	19	0	0	0	0	244	841	0	0	0	0
5:45 PM	0	0	93	10	2	25	69	0	0	5	0	21	0	0	0	0	225	753	1	0	0	0
6:00 PM	0	0	106	14	1	27	43	0	0	5	0	13	0	0	0	0	209	680	0	0	0	0
6:15 PM	0	0	66	8	1	15	50	0	0	5	0	18	0	0	0	0	163		1	0	0	0
6:30 PM	0	0	63	5	1	20	46	0	0	6	0	15	0	0	0	0	156		0	0	0	0
6:45 PM	0	0	61	11	0	19	43	0	0	3	0	15	0	0	0	0	152		0	0	0	0

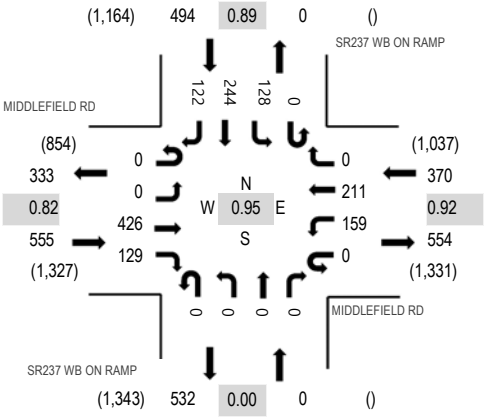
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	469	46	6	83	249	0	0	18	0	78	0	0	0	0	949
Mediums	0	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	7
Total	0	0	471	46	6	83	254	0	0	18	0	78	0	0	0	0	956

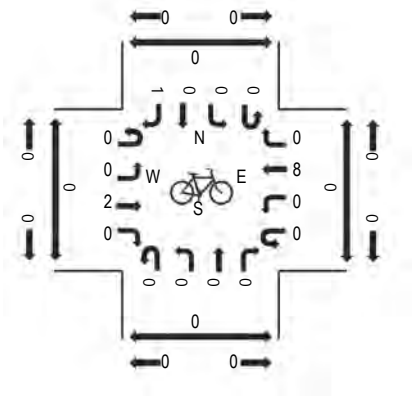
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 11 SR237 WB ON RAMP & MIDDLEFIELD RD PM
Date: Tuesday, November 15, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

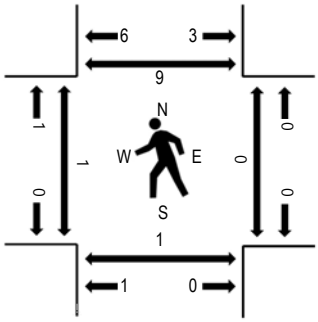
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				SR237 WB ON RAMP Northbound				SR237 WB ON RAMP Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	75	24	0	38	30	0	0	0	0	0	0	29	34	16	246	1,120	0	0	0	0
4:15 PM	0	0	82	34	0	39	32	0	0	0	0	0	0	20	55	20	282	1,224	0	0	0	1
4:30 PM	0	0	67	23	1	53	41	0	0	0	0	0	0	24	47	37	293	1,297	0	0	1	1
4:45 PM	0	0	98	21	0	44	46	0	0	0	0	0	0	17	42	31	299	1,376	0	0	0	1
5:00 PM	0	0	126	43	0	36	40	0	0	0	0	0	0	22	59	24	350	1,419	0	0	0	3
5:15 PM	0	0	96	31	0	50	53	0	0	0	0	0	0	34	55	36	355	1,373	0	0	0	1
5:30 PM	0	0	104	36	0	41	53	0	0	0	0	0	0	35	69	34	372	1,278	1	0	1	3
5:45 PM	0	0	100	19	0	32	65	0	0	0	0	0	0	37	61	28	342	1,137	0	0	0	2
6:00 PM	0	0	104	17	0	41	44	0	0	0	0	0	0	22	51	25	304	989	0	0	1	0
6:15 PM	0	0	65	17	1	43	48	0	0	0	0	0	0	25	40	21	260		0	0	0	1
6:30 PM	0	0	59	18	0	53	44	0	0	0	0	0	0	20	14	23	231		0	0	2	0
6:45 PM	0	0	51	17	2	16	51	0	0	0	0	0	0	15	30	12	194		0	0	0	2

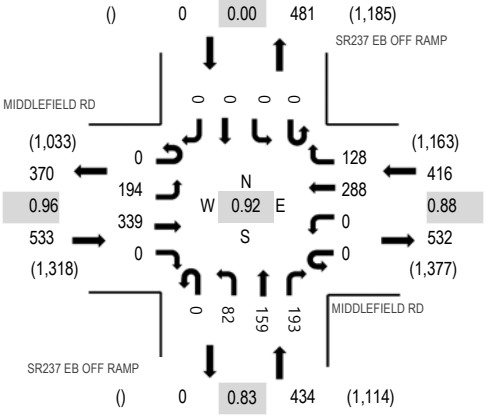
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Lights	0	0	423	128	0	159	208	0	0	0	0	0	0	126	243	119	1,406
Mediums	0	0	3	1	0	0	3	0	0	0	0	0	0	0	1	3	11
Total	0	0	426	129	0	159	211	0	0	0	0	0	0	128	244	122	1,419

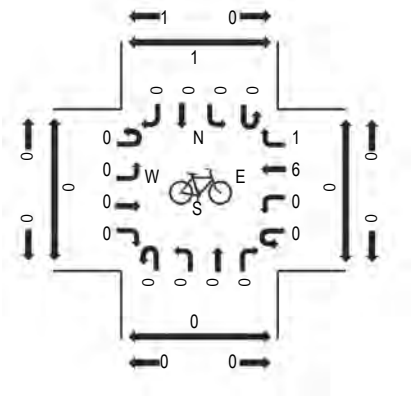
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 12 SR237 EB OFF RAMP & MIDDLEFIELD RD PM
Date: Tuesday, November 15, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

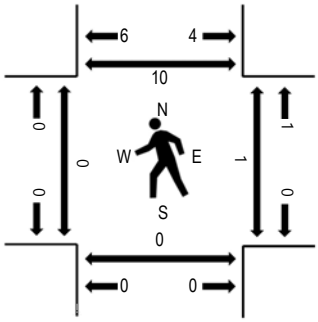
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				SR237 EB OFF RAMP Northbound				SR237 EB OFF RAMP Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	33	79	0	0	0	54	30	0	13	38	53	0	0	0	0	300	1,168	0	0	0	1
4:15 PM	0	33	60	0	0	0	49	26	0	19	28	44	0	0	0	0	259	1,208	0	0	2	0
4:30 PM	1	35	57	0	0	0	77	33	0	17	32	49	0	0	0	0	301	1,324	0	0	0	1
4:45 PM	0	41	70	0	0	0	65	21	0	22	37	52	0	0	0	0	308	1,376	0	1	0	1
5:00 PM	0	54	85	0	0	0	73	34	0	12	30	52	0	0	0	0	340	1,383	0	0	0	4
5:15 PM	0	46	92	0	0	0	72	34	0	23	52	56	0	0	0	0	375	1,372	0	1	0	1
5:30 PM	0	43	94	0	0	0	84	36	0	19	33	44	0	0	0	0	353	1,257	0	0	0	3
5:45 PM	0	51	68	0	0	0	59	24	0	28	44	41	0	0	0	0	315	1,168	0	0	0	2
6:00 PM	0	41	90	0	0	0	77	35	0	18	20	48	0	0	0	0	329	1,044	0	1	0	0
6:15 PM	0	32	62	0	0	0	63	36	0	19	12	36	0	0	0	0	260		0	0	0	1
6:30 PM	0	27	55	0	0	0	81	37	0	16	20	28	0	0	0	0	264		0	0	0	0
6:45 PM	0	26	43	0	0	0	53	10	0	19	21	19	0	0	0	0	191		0	0	0	2

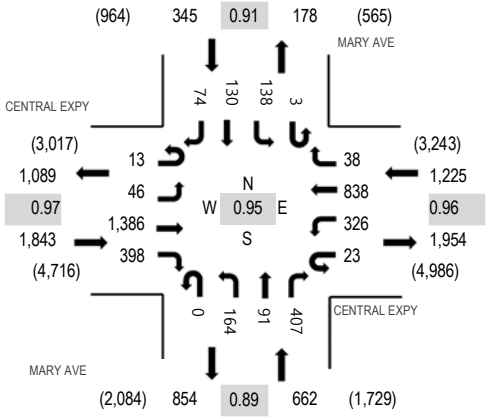
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3
Lights	0	190	337	0	0	0	286	128	0	79	159	193	0	0	0	0	1,372
Mediums	0	4	0	0	0	0	1	0	0	3	0	0	0	0	0	0	8
Total	0	194	339	0	0	0	288	128	0	82	159	193	0	0	0	0	1,383

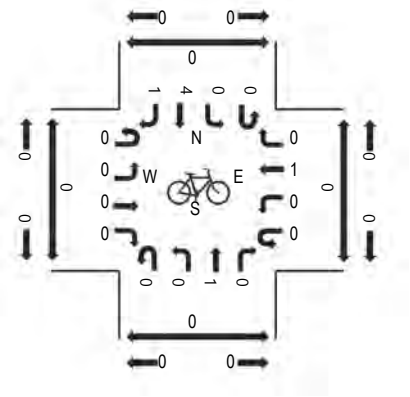
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 13 MARY AVE & CENTRAL EXPY PM
Date: Tuesday, November 15, 2022
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

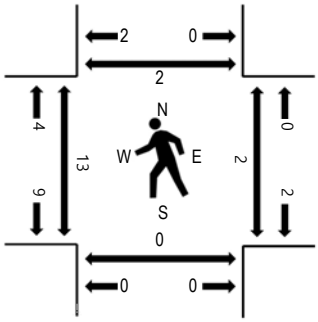
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	CENTRAL EXPY Eastbound				CENTRAL EXPY Westbound				MARY AVE Northbound				MARY AVE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	4	11	261	66	6	47	145	8	0	36	21	92	1	30	25	11	764	3,538	1	1	0	3
4:15 PM	1	15	335	76	2	64	192	8	0	39	20	76	0	30	23	11	892	3,798	5	1	1	0
4:30 PM	3	15	320	77	22	65	180	14	0	45	21	80	2	46	25	15	930	3,928	5	4	0	0
4:45 PM	3	7	355	81	9	59	182	8	0	46	13	109	0	32	27	21	952	4,075	6	0	0	2
5:00 PM	4	15	331	107	7	105	207	12	0	26	26	100	1	35	34	14	1,024	4,065	1	1	0	0
5:15 PM	5	7	356	109	6	63	223	11	0	43	18	95	1	37	32	16	1,022	3,944	3	0	0	0
5:30 PM	1	17	344	101	1	99	226	7	0	49	34	103	1	34	37	23	1,077	3,696	3	1	0	0
5:45 PM	1	10	313	102	6	87	209	10	0	37	25	79	1	16	28	18	942	3,374	1	1	0	0
6:00 PM	4	15	259	101	8	98	182	8	0	45	25	82	1	30	23	22	903	3,049	3	0	0	0
6:15 PM	2	13	256	85	6	38	162	11	0	31	21	80	1	25	28	15	774		1	0	0	0
6:30 PM	0	11	224	49	3	11	205	23	0	34	21	67	0	36	21	50	755		3	0	1	0
6:45 PM	3	7	167	67	2	8	157	31	0	22	17	51	0	22	16	47	617		1	0	0	0

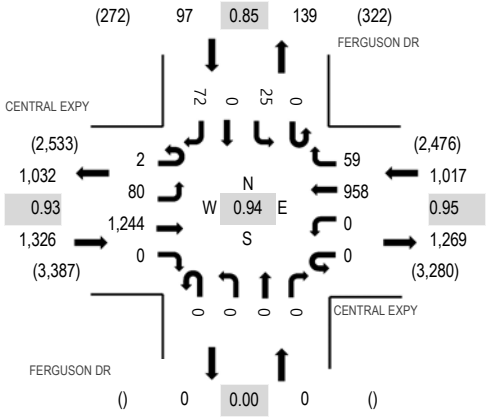
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4
Lights	13	45	1,376	398	23	323	829	38	0	163	91	405	3	132	130	74	4,043
Mediums	0	1	8	0	0	3	7	0	0	1	0	2	0	6	0	0	28
Total	13	46	1,386	398	23	326	838	38	0	164	91	407	3	138	130	74	4,075

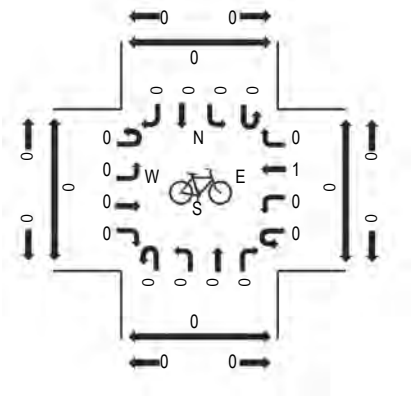
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 14 FERGUSON DR & CENTRAL EXPY PM
Date: Tuesday, November 15, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

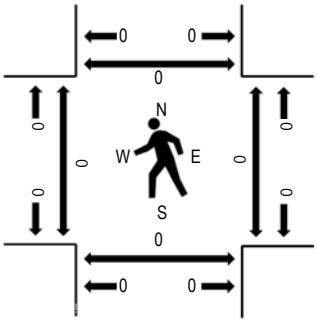
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	CENTRAL EXPY Eastbound				CENTRAL EXPY Westbound				FERGUSON DR Northbound				FERGUSON DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	13	268	0	0	0	158	6	0	0	0	0	0	7	0	8	460	2,027	0	0	0	0
4:15 PM	0	9	298	0	0	0	195	7	0	0	0	0	0	5	0	14	528	2,202	0	0	0	1
4:30 PM	0	11	280	0	0	0	210	6	0	0	0	0	0	14	0	11	532	2,284	0	0	0	0
4:45 PM	0	12	281	0	0	0	183	7	0	0	0	0	0	9	0	15	507	2,402	0	0	0	1
5:00 PM	0	15	339	0	0	0	244	9	0	0	0	0	0	5	0	23	635	2,440	0	0	0	0
5:15 PM	0	21	315	0	0	0	226	16	0	0	0	0	0	10	0	22	610	2,341	0	0	0	0
5:30 PM	1	28	335	0	0	0	250	17	0	0	0	0	0	6	0	13	650	2,161	0	0	0	0
5:45 PM	1	16	255	0	0	0	238	17	0	0	0	0	0	4	0	14	545	1,863	0	0	0	0
6:00 PM	1	26	268	0	0	0	203	11	0	0	0	0	1	7	0	19	536	1,668	0	0	0	0
6:15 PM	0	13	235	0	0	0	159	6	0	0	0	0	0	5	0	12	430		0	0	0	0
6:30 PM	0	17	147	0	0	0	149	15	0	0	0	0	0	11	0	13	352		0	0	0	0
6:45 PM	0	15	167	0	0	0	136	8	0	0	0	0	0	9	0	15	350		0	0	0	0

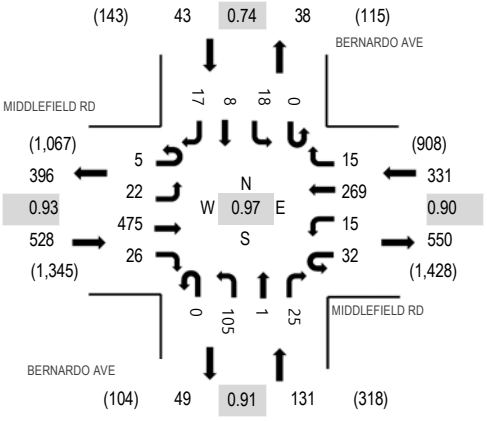
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	2	80	1,231	0	0	0	953	59	0	0	0	0	0	25	0	72	2,422
Mediums	0	0	12	0	0	0	5	0	0	0	0	0	0	0	0	0	17
Total	2	80	1,244	0	0	0	958	59	0	0	0	0	0	25	0	72	2,440

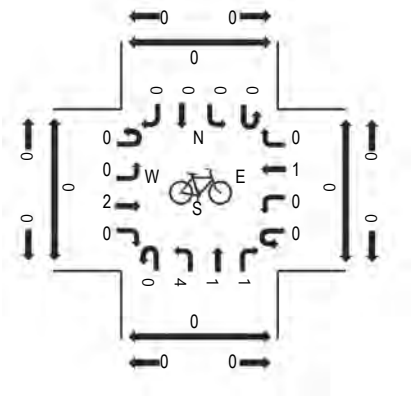
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 BERNARDO AVE & MIDDLEFIELD RD PM
Date: Tuesday, April 4, 2023
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

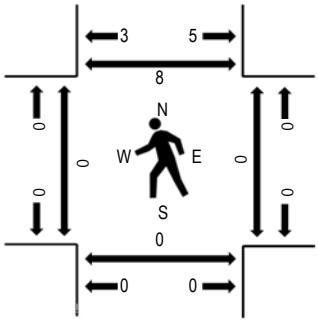
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				BERNARDO AVE Northbound				BERNARDO AVE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	5	95	2	2	1	54	1	0	23	0	1	0	3	1	4	192	912	0	3	0	2
4:15 PM	0	6	100	2	6	1	64	3	0	18	0	5	0	2	2	3	212	980	0	1	0	0
4:30 PM	0	8	114	8	5	2	64	3	0	17	0	11	0	6	0	4	242	1,019	0	2	0	1
4:45 PM	0	7	117	12	5	3	67	3	0	32	0	4	0	7	4	5	266	1,033	0	0	0	3
5:00 PM	1	7	128	6	9	6	59	5	0	22	1	6	0	4	1	5	260	1,001	0	0	0	1
5:15 PM	0	5	112	3	6	2	81	4	0	25	0	5	0	3	2	3	251	946	0	0	0	1
5:30 PM	4	3	118	5	12	4	62	3	0	26	0	10	0	4	1	4	256	891	0	0	0	3
5:45 PM	0	3	108	3	8	2	61	9	0	17	1	6	0	8	1	7	234	831	0	0	0	2
6:00 PM	0	4	90	4	8	2	57	3	0	11	0	9	0	7	0	10	205	801	0	1	0	4
6:15 PM	0	4	76	4	7	2	62	2	0	21	0	4	0	7	2	5	196		0	0	0	5
6:30 PM	0	8	88	6	3	1	58	1	0	16	0	7	0	7	0	1	196		0	0	1	1
6:45 PM	0	9	66	4	7	2	70	6	0	18	1	1	0	11	3	6	204		0	0	1	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	5	22	474	25	32	15	267	15	0	105	1	24	0	18	8	17	1,028
Mediums	0	0	1	0	0	0	2	0	0	0	0	1	0	0	0	0	4
Total	5	22	475	26	32	15	269	15	0	105	1	25	0	18	8	17	1,033

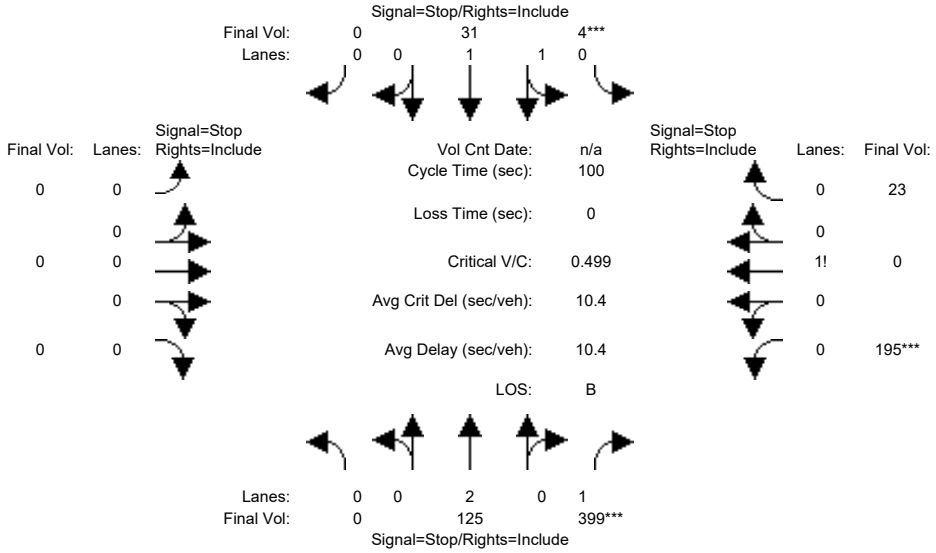
Appendix B

Level of Service Calculations

675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing AM

Intersection #1: Ellis Street and Manila Drive



Street Name:	Ellis Street						Manila Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	125	399	4	31	0	0	0	0	195	0	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	125	399	4	31	0	0	0	0	195	0	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	125	399	4	31	0	0	0	0	195	0	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	125	399	4	31	0	0	0	0	195	0	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	125	399	4	31	0	0	0	0	195	0	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	125	399	4	31	0	0	0	0	195	0	23
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.23	1.77	0.00	0.00	0.00	0.00	0.89	0.00	0.11
Final Sat.:	0	1384	800	139	1088	0	0	0	0	598	0	71
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.09	0.50	0.03	0.03	xxxx	xxxx	xxxx	xxxx	0.33	xxxx	0.33
Crit Moves:			****	****						****		
Delay/Veh:	0.0	8.3	11.3	8.5	8.4	0.0	0.0	0.0	0.0	10.4	0.0	10.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.3	11.3	8.5	8.4	0.0	0.0	0.0	0.0	10.4	0.0	10.4
LOS by Move:	*	A	B	A	A	*	*	*	*	B	*	B
ApproachDel:		10.6			8.5			xxxxxx			10.4	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		10.6			8.5			xxxxxx			10.4	
LOS by Appr:		B			A			*			B	
AllWayAvgQ:	0.0	0.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 Ellis Street and Manila Drive

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	0	0	2	0 1	0	1	1	0 0	0	0	0	0 0	0	0	1!	0 0
Initial Vol:	0	125	399		4	31	0		0	0	0		195	0	23	

Major Street Volume: 559
Minor Approach Volume: 218
Minor Approach Volume Threshold: 485

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

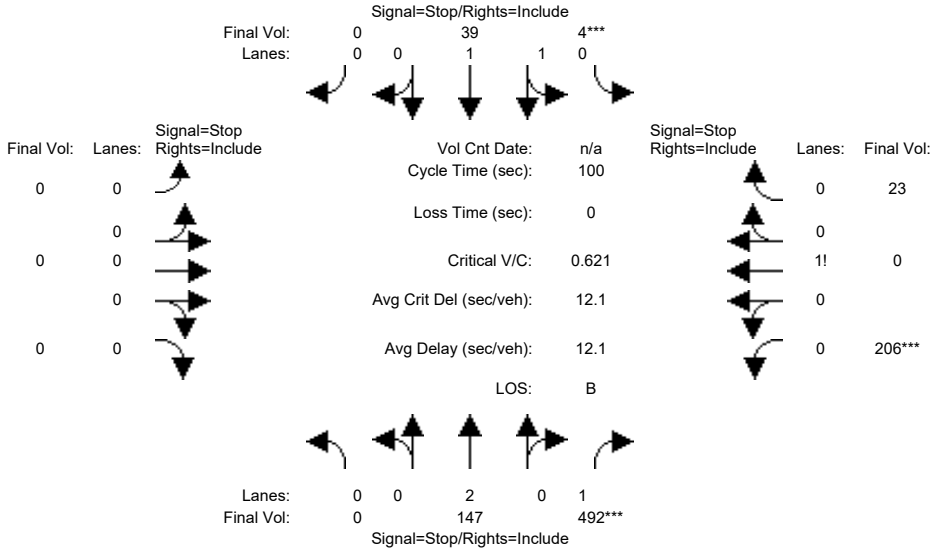
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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background AM

Intersection #1: Ellis Street and Manila Drive



Street Name:	Ellis Street						Manila Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	147	492	4	39	0	0	0	0	206	0	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	147	492	4	39	0	0	0	0	206	0	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	147	492	4	39	0	0	0	0	206	0	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	147	492	4	39	0	0	0	0	206	0	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	147	492	4	39	0	0	0	0	206	0	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	147	492	4	39	0	0	0	0	206	0	23
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.19	1.81	0.00	0.00	0.00	0.00	0.90	0.00	0.10
Final Sat.:	0	1371	792	110	1078	0	0	0	0	575	0	64
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.11	0.62	0.04	0.04	xxxx	xxxx	xxxx	xxxx	0.36	xxxx	0.36
Crit Moves:			****	****						****		
Delay/Veh:	0.0	8.5	14.0	8.7	8.7	0.0	0.0	0.0	0.0	11.1	0.0	11.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.5	14.0	8.7	8.7	0.0	0.0	0.0	0.0	11.1	0.0	11.1
LOS by Move:	*	A	B	A	A	*	*	*	*	B	*	B
ApproachDel:		12.7			8.7			xxxxxx			11.1	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		12.7			8.7			xxxxxx			11.1	
LOS by Appr:		B			A			*			B	
AllWayAvgQ:	0.0	0.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 Ellis Street and Manila Drive

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 2	0	1	0 1	1	0	0 0	0	0	0 0	1!	0
Initial Vol:	0	147	492	4	39	0	0	0	0	206	0	23

Major Street Volume: 682
Minor Approach Volume: 229
Minor Approach Volume Threshold: 417

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

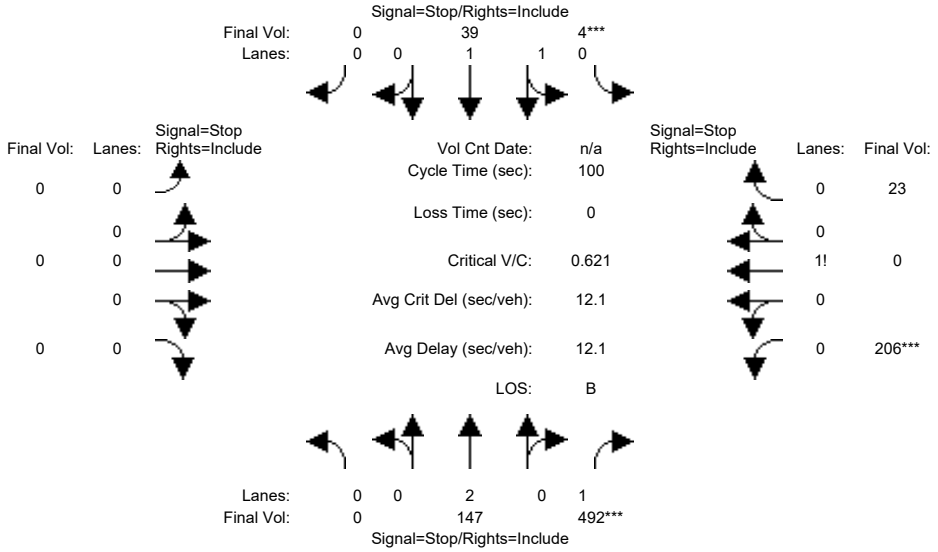
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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background + Prj AM

Intersection #1: Ellis Street and Manila Drive



Street Name:	Ellis Street						Manila Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	147	492	4	39	0	0	0	0	206	0	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	147	492	4	39	0	0	0	0	206	0	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	147	492	4	39	0	0	0	0	206	0	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	147	492	4	39	0	0	0	0	206	0	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	147	492	4	39	0	0	0	0	206	0	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	147	492	4	39	0	0	0	0	206	0	23
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.19	1.81	0.00	0.00	0.00	0.00	0.90	0.00	0.10
Final Sat.:	0	1371	792	110	1078	0	0	0	0	575	0	64
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.11	0.62	0.04	0.04	xxxx	xxxx	xxxx	xxxx	0.36	xxxx	0.36
Crit Moves:			****	****						****		
Delay/Veh:	0.0	8.5	14.0	8.7	8.7	0.0	0.0	0.0	0.0	11.1	0.0	11.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.5	14.0	8.7	8.7	0.0	0.0	0.0	0.0	11.1	0.0	11.1
LOS by Move:	*	A	B	A	A	*	*	*	*	B	*	B
ApproachDel:		12.7			8.7			xxxxxx			11.1	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		12.7			8.7			xxxxxx			11.1	
LOS by Appr:		B			A			*			B	
AllWayAvgQ:	0.0	0.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 Ellis Street and Manila Drive

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 2	0	1	0 1	1	0 0	0 0	0	0 0	0 0	1! 0	0
Initial Vol:	0	147	492	4	39	0	0	0	0	206	0	23

Major Street Volume: 682
Minor Approach Volume: 229
Minor Approach Volume Threshold: 417

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

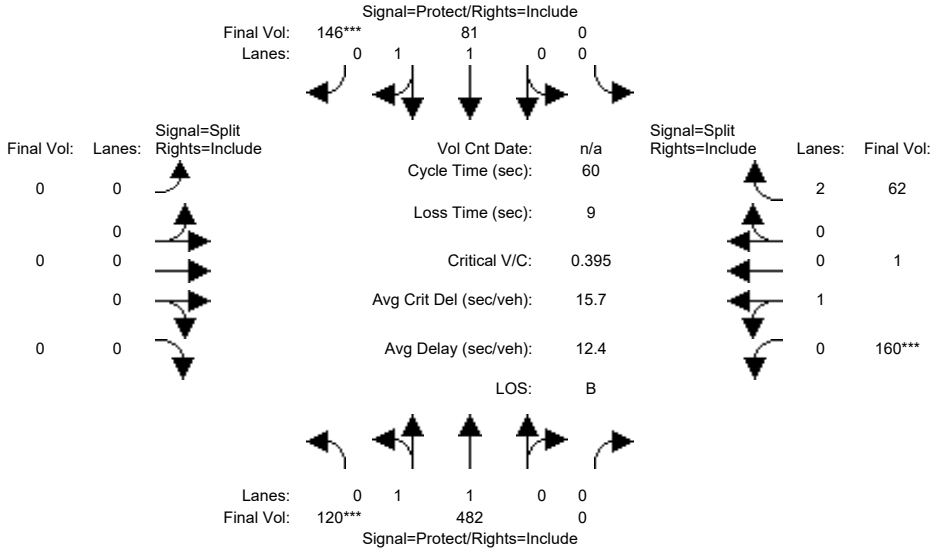
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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #2: Ellis Street and US-101 North Ramps



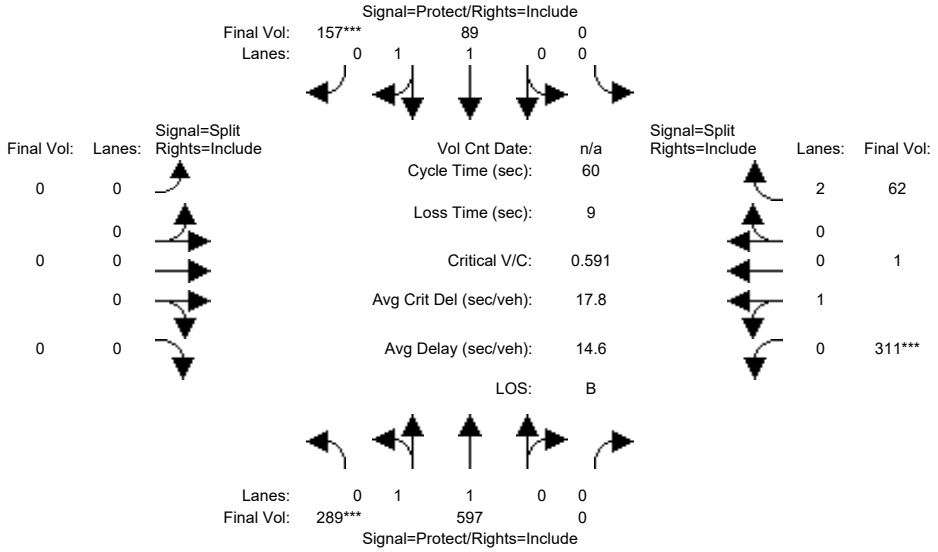

```
Street Name:            Ellis Street                    US-101 NB Ramps
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:    10   10    0     0   10   10     0    0    0     10    0   10
Y+R:          4.0  4.0   4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
------------|---------------||---------------||---------------||---------------|
Volume Module:12:00:00 AM
Base Vol:      120  482     0     0   81  146     0    0    0   160    1   62
Growth Adj:   1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:   120  482     0     0   81  146     0    0    0   160    1   62
Added Vol:       0    0     0     0    0    0     0    0    0     0    0    0
PasserByVol:     0    0     0     0    0    0     0    0    0     0    0    0
Initial Fut:   120  482     0     0   81  146     0    0    0   160    1   62
User Adj:     1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:    120  482     0     0   81  146     0    0    0   160    1   62
Reduct Vol:      0    0     0     0    0    0     0    0    0     0    0    0
Reduced Vol:   120  482     0     0   81  146     0    0    0   160    1   62
PCE Adj:      1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:   120  482     0     0   81  146     0    0    0   160    1   62
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900  1900  1900 1900 1900  1900 1900 1900  1900 1900 1900
Adjustment:   0.95 0.98  0.92  0.92 1.00 0.92  0.92 1.00 0.92  0.95 0.95 0.83
Lanes:        0.41 1.59  0.00  0.00 1.00 1.00  0.00 0.00 0.00  0.99 0.01 2.00
Final Sat.:    737 2962     0     0 1900 1750     0    0    0  1789   11 3150
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.16 0.16  0.00  0.00 0.04 0.08  0.00 0.00 0.00  0.09 0.09 0.02
Crit Moves:   ****                    ****                    ****
Green Time:   24.7 37.4   0.0   0.0 12.7 12.7   0.0  0.0  0.0  13.6 13.6 13.6
Volume/Cap:   0.39 0.26  0.00  0.00 0.20 0.39  0.00 0.00 0.00  0.39 0.39 0.09
Delay/Veh:    12.6  5.1   0.0   0.0 19.6 20.8   0.0  0.0  0.0  20.3 20.3 18.4
User DelAdj: 1.00 1.00  1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:   12.6  5.1   0.0   0.0 19.6 20.8   0.0  0.0  0.0  20.3 20.3 18.4
LOS by Move:     B    A     A     A    B    C     A    A    A     C    C    B
HCM2k95thQ:      8    5     0     0    3    6     0    0    0     6    6    1
Note: Queue reported is the number of cars per lane.
```


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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #2: Ellis Street and US-101 North Ramps



Street Name:	Ellis Street						US-101 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	0	0	10	10	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	289	597	0	0	89	157	0	0	0	311	1	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	289	597	0	0	89	157	0	0	0	311	1	62
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	289	597	0	0	89	157	0	0	0	311	1	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	289	597	0	0	89	157	0	0	0	311	1	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	289	597	0	0	89	157	0	0	0	311	1	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	289	597	0	0	89	157	0	0	0	311	1	62
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.99	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.95	0.95	0.83
Lanes:	0.67	1.33	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.99	0.01	2.00
Final Sat.:	1206	2492	0	0	1900	1750	0	0	0	1794	6	3150
Capacity Analysis Module:												
Vol/Sat:	0.24	0.24	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.17	0.17	0.02
Crit Moves:	****					****				****		
Green Time:	23.8	33.8	0.0	0.0	10.0	10.0	0.0	0.0	0.0	17.2	17.2	17.2
Volume/Cap:	0.60	0.43	0.00	0.00	0.28	0.54	0.00	0.00	0.00	0.60	0.60	0.07
Delay/Veh:	15.1	7.7	0.0	0.0	22.0	24.2	0.0	0.0	0.0	20.5	20.5	15.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.1	7.7	0.0	0.0	22.0	24.2	0.0	0.0	0.0	20.5	20.5	15.6
LOS by Move:	B	A	A	A	C	C	A	A	A	C	C	B
HCM2k95thQ:	13	9	0	0	3	7	0	0	0	12	12	1

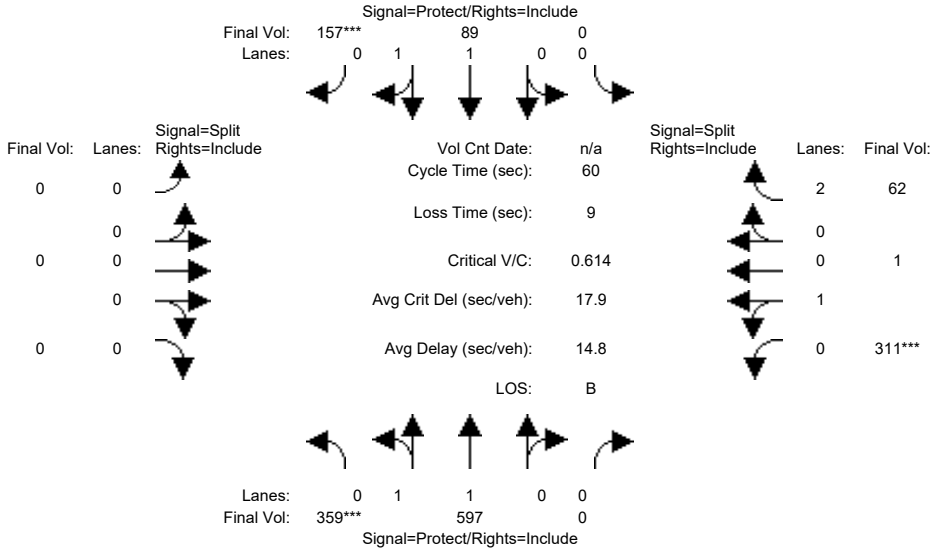
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #2: Ellis Street and US-101 North Ramps



Street Name:	Ellis Street						US-101 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	0	0	10	10	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	289	597	0	0	89	157	0	0	0	311	1	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	289	597	0	0	89	157	0	0	0	311	1	62
Added Vol:	70	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	359	597	0	0	89	157	0	0	0	311	1	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	359	597	0	0	89	157	0	0	0	311	1	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	359	597	0	0	89	157	0	0	0	311	1	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	359	597	0	0	89	157	0	0	0	311	1	62
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.99	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.95	0.95	0.83
Lanes:	0.77	1.23	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.99	0.01	2.00
Final Sat.:	1389	2310	0	0	1900	1750	0	0	0	1794	6	3150
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.17	0.17	0.02
Crit Moves:	****					****				****		
Green Time:	24.5	34.5	0.0	0.0	10.0	10.0	0.0	0.0	0.0	16.5	16.5	16.5
Volume/Cap:	0.63	0.45	0.00	0.00	0.28	0.54	0.00	0.00	0.00	0.63	0.63	0.07
Delay/Veh:	15.0	7.4	0.0	0.0	22.0	24.2	0.0	0.0	0.0	21.8	21.8	16.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.0	7.4	0.0	0.0	22.0	24.2	0.0	0.0	0.0	21.8	21.8	16.2
LOS by Move:	B	A	A	A	C	C	A	A	A	C	C	B
HCM2k95thQ:	13	10	0	0	3	7	0	0	0	12	12	1

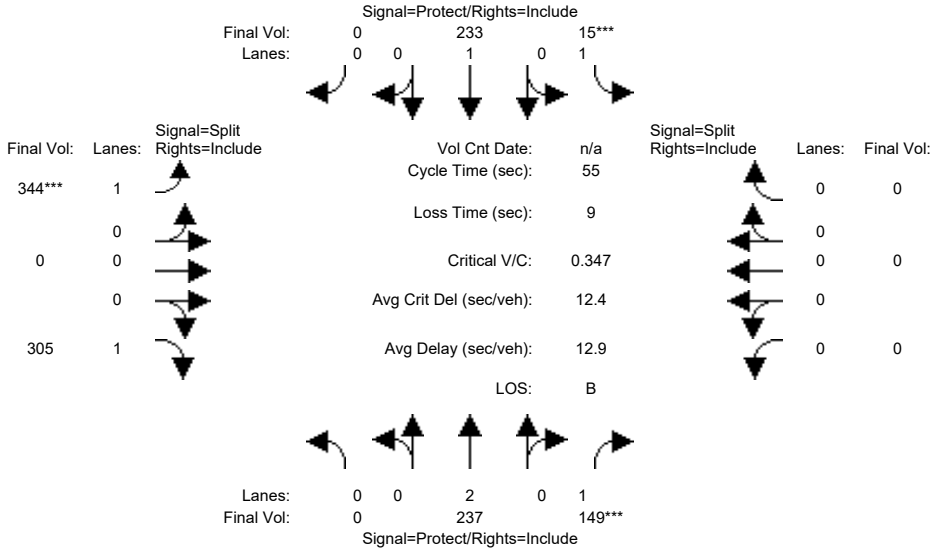
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #3: Ellis Street and US-101 South Ramps



Street Name:	Ellis Street						101 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	7	10	0	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	0	237	149	15	233	0	344	0	305	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	237	149	15	233	0	344	0	305	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	237	149	15	233	0	344	0	305	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	237	149	15	233	0	344	0	305	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	237	149	15	233	0	344	0	305	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	237	149	15	233	0	344	0	305	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	1750	1900	0	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.06	0.09	0.01	0.12	0.00	0.20	0.00	0.17	0.00	0.00	0.00
Crit Moves:			****	****			****					
Green Time:	0.0	11.8	11.8	7.0	18.8	0.0	27.2	0.0	27.2	0.0	0.0	0.0
Volume/Cap:	0.00	0.29	0.40	0.07	0.36	0.00	0.40	0.00	0.35	0.00	0.00	0.00
Delay/Veh:	0.0	18.3	19.3	21.3	13.9	0.0	9.0	0.0	8.7	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	18.3	19.3	21.3	13.9	0.0	9.0	0.0	8.7	0.0	0.0	0.0
LOS by Move:	A	B	B	C	B	A	A	A	A	A	A	A
HCM2k95thQ:	0	3	5	0	6	0	8	0	7	0	0	0

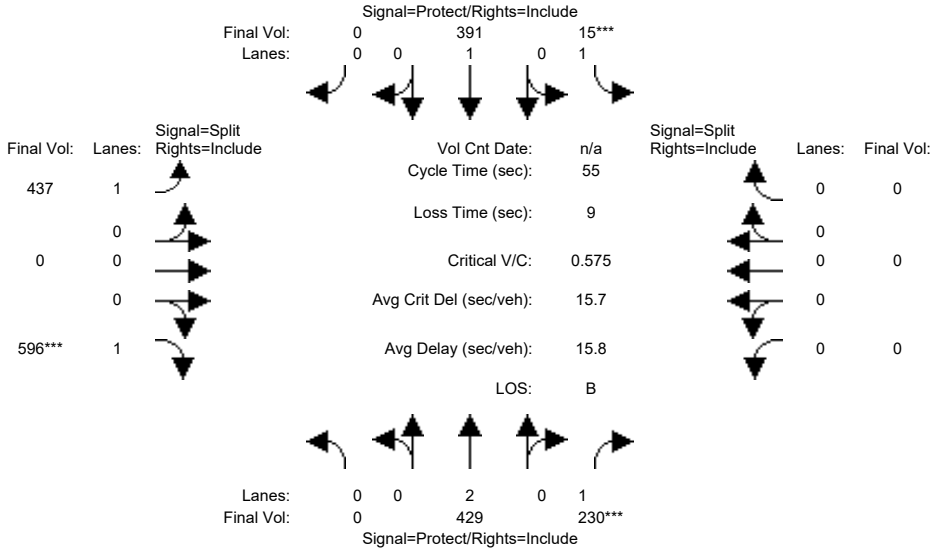
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #3: Ellis Street and US-101 South Ramps



Street Name:	Ellis Street						101 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	7	10	0	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	429	230	15	391	0	437	0	596	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	429	230	15	391	0	437	0	596	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	429	230	15	391	0	437	0	596	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	429	230	15	391	0	437	0	596	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	429	230	15	391	0	437	0	596	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	429	230	15	391	0	437	0	596	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	1750	1900	0	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.11	0.13	0.01	0.21	0.00	0.25	0.00	0.34	0.00	0.00	0.00
Crit Moves:			****	****					****			
Green Time:	0.0	10.9	10.9	7.0	17.9	0.0	28.1	0.0	28.1	0.0	0.0	0.0
Volume/Cap:	0.00	0.57	0.67	0.07	0.63	0.00	0.49	0.00	0.67	0.00	0.00	0.00
Delay/Veh:	0.0	21.0	25.3	21.3	18.0	0.0	9.2	0.0	11.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	21.0	25.3	21.3	18.0	0.0	9.2	0.0	11.9	0.0	0.0	0.0
LOS by Move:	A	C	C	C	B	A	A	A	B	A	A	A
HCM2k95thQ:	0	7	8	0	11	0	11	0	17	0	0	0

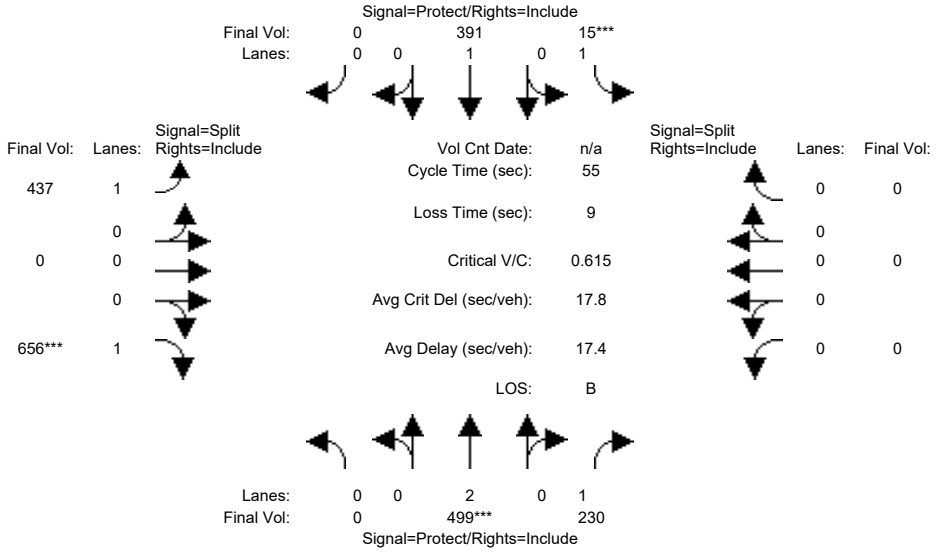
Note: Queue reported is the number of cars per lane.

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Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #3: Ellis Street and US-101 South Ramps



Street Name:	Ellis Street						101 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	7	10	0	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	429	230	15	391	0	437	0	596	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	429	230	15	391	0	437	0	596	0	0	0
Added Vol:	0	70	0	0	0	0	0	0	60	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	499	230	15	391	0	437	0	656	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	499	230	15	391	0	437	0	656	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	499	230	15	391	0	437	0	656	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	499	230	15	391	0	437	0	656	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	1750	1900	0	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.01	0.21	0.00	0.25	0.00	0.37	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green Time:	0.0	10.1	10.1	7.0	17.1	0.0	28.9	0.0	28.9	0.0	0.0	0.0
Volume/Cap:	0.00	0.71	0.71	0.07	0.66	0.00	0.48	0.00	0.71	0.00	0.00	0.00
Delay/Veh:	0.0	24.6	28.5	21.3	19.2	0.0	8.7	0.0	12.6	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	24.6	28.5	21.3	19.2	0.0	8.7	0.0	12.6	0.0	0.0	0.0
LOS by Move:	A	C	C	C	B	A	A	A	B	A	A	A
HCM2k95thQ:	0	8	8	0	11	0	11	0	19	0	0	0

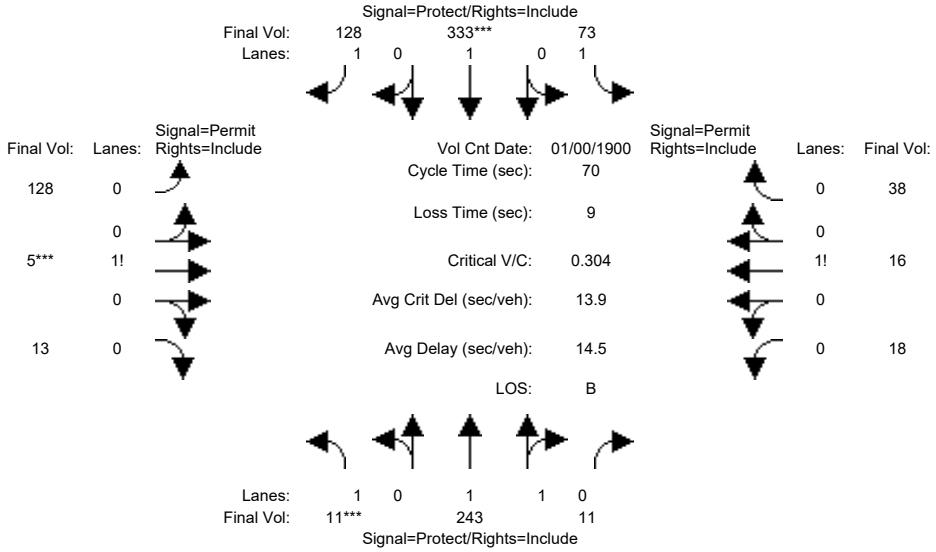
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #4: Ellis Street and Fairchild Drive



Street Name:	Ellis Street						Fairchild Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 0 Jan 1900 << 12:00:00 AM												
Base Vol:	11	243	11	73	333	128	128	5	13	18	16	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	243	11	73	333	128	128	5	13	18	16	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	243	11	73	333	128	128	5	13	18	16	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	243	11	73	333	128	128	5	13	18	16	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	243	11	73	333	128	128	5	13	18	16	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	243	11	73	333	128	128	5	13	18	16	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00	1.91	0.09	1.00	1.00	1.00	0.88	0.03	0.09	0.25	0.22	0.53
Final Sat.:	1750	3540	160	1750	1900	1750	1534	60	156	438	389	924
Capacity Analysis Module:												
Vol/Sat:	0.01	0.07	0.07	0.04	0.18	0.07	0.08	0.08	0.08	0.04	0.04	0.04
Crit Moves:	****				****			****				
Green Time:	7.0	25.6	25.6	17.9	36.6	36.6	17.4	17.4	17.4	17.4	17.4	17.4
Volume/Cap:	0.06	0.19	0.19	0.16	0.34	0.14	0.34	0.34	0.34	0.17	0.17	0.17
Delay/Veh:	28.7	15.2	15.2	20.4	9.9	8.7	22.0	22.0	22.0	20.8	20.8	20.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	15.2	15.2	20.4	9.9	8.7	22.0	22.0	22.0	20.8	20.8	20.8
LOS by Move:	C	B	B	C	A	A	C	C	C	C	C	C
HCM2k95thQ:	1	4	4	3	8	3	6	6	6	3	3	3

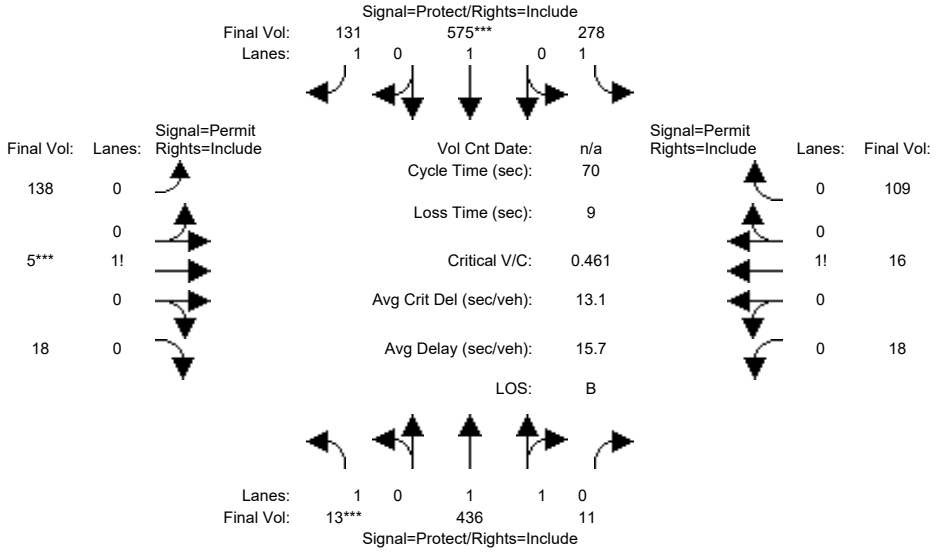
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #4: Ellis Street and Fairchild Drive



Street Name:	Ellis Street						Fairchild Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	13	436	11	278	575	131	138	5	18	18	16	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	436	11	278	575	131	138	5	18	18	16	109
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	436	11	278	575	131	138	5	18	18	16	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	436	11	278	575	131	138	5	18	18	16	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	436	11	278	575	131	138	5	18	18	16	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	436	11	278	575	131	138	5	18	18	16	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00	1.95	0.05	1.00	1.00	1.00	0.86	0.03	0.11	0.13	0.11	0.76
Final Sat.:	1750	3609	91	1750	1900	1750	1500	54	196	220	196	1334
Capacity Analysis Module:												
Vol/Sat:	0.01	0.12	0.12	0.16	0.30	0.07	0.09	0.09	0.09	0.08	0.08	0.08
Crit Moves:	****				****			****				
Green Time:	7.0	22.9	22.9	25.5	41.4	41.4	12.6	12.6	12.6	12.6	12.6	12.6
Volume/Cap:	0.07	0.37	0.37	0.44	0.51	0.13	0.51	0.51	0.51	0.45	0.45	0.45
Delay/Veh:	28.7	18.2	18.2	17.3	8.8	6.4	27.3	27.3	27.3	26.7	26.7	26.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	18.2	18.2	17.3	8.8	6.4	27.3	27.3	27.3	26.7	26.7	26.7
LOS by Move:	C	B	B	B	A	A	C	C	C	C	C	C
HCM2k95thQ:	1	8	8	9	13	3	8	8	8	7	7	7

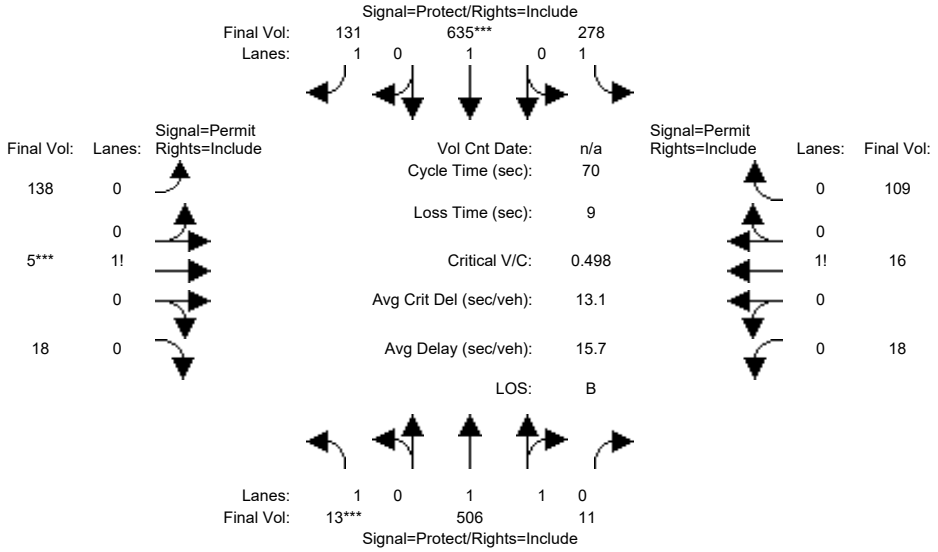
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #4: Ellis Street and Fairchild Drive



Street Name:	Ellis Street						Fairchild Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	13	436	11	278	575	131	138	5	18	18	16	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	436	11	278	575	131	138	5	18	18	16	109
Added Vol:	0	70	0	0	60	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	506	11	278	635	131	138	5	18	18	16	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	506	11	278	635	131	138	5	18	18	16	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	506	11	278	635	131	138	5	18	18	16	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	506	11	278	635	131	138	5	18	18	16	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00	1.96	0.04	1.00	1.00	1.00	0.86	0.03	0.11	0.13	0.11	0.76
Final Sat.:	1750	3621	79	1750	1900	1750	1500	54	196	220	196	1334
Capacity Analysis Module:												
Vol/Sat:	0.01	0.14	0.14	0.16	0.33	0.07	0.09	0.09	0.09	0.08	0.08	0.08
Crit Moves:	****				****			****				
Green Time:	7.0	23.4	23.4	26.0	42.3	42.3	11.7	11.7	11.7	11.7	11.7	11.7
Volume/Cap:	0.07	0.42	0.42	0.43	0.55	0.12	0.55	0.55	0.55	0.49	0.49	0.49
Delay/Veh:	28.7	18.3	18.3	16.9	8.8	6.0	29.1	29.1	29.1	27.8	27.8	27.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	18.3	18.3	16.9	8.8	6.0	29.1	29.1	29.1	27.8	27.8	27.8
LOS by Move:	C	B	B	B	A	A	C	C	C	C	C	C
HCM2k95thQ:	1	9	9	9	15	3	8	8	8	7	7	7

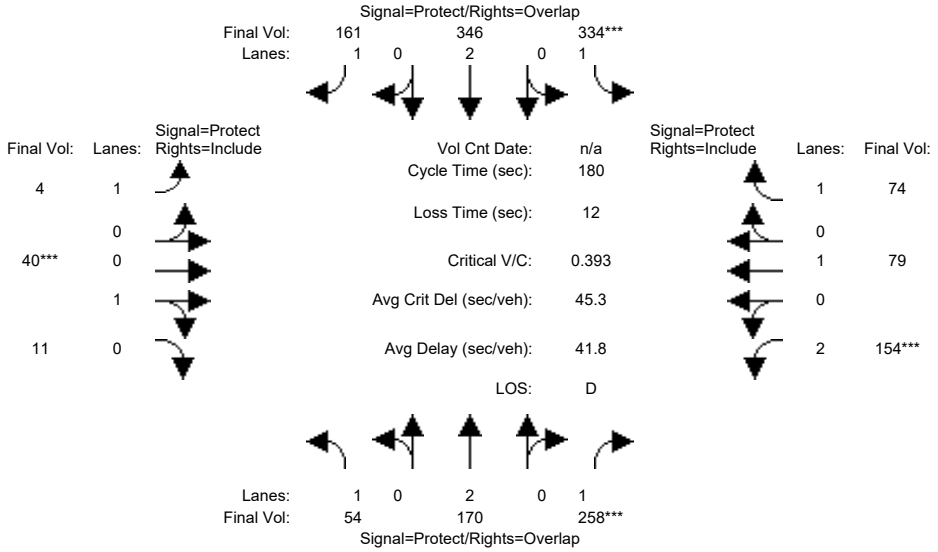
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #6: Maude Avenue and SR 237 Ramps



Street Name:	SR 237 Ramp Connectors						Maude Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	54	170	258	334	346	161	4	40	11	154	79	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	170	258	334	346	161	4	40	11	154	79	74
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	54	170	258	334	346	161	4	40	11	154	79	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	170	258	334	346	161	4	40	11	154	79	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	170	258	334	346	161	4	40	11	154	79	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	170	258	334	346	161	4	40	11	154	79	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.83	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.78	0.22	2.00	1.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1412	388	3150	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.04	0.15	0.19	0.09	0.09	0.00	0.03	0.03	0.05	0.04	0.04
Crit Moves:			****	****				****		****		
Green Time:	39.7	45.2	67.6	87.5	92.9	107.5	14.6	13.0	13.0	22.4	20.8	20.8
Volume/Cap:	0.14	0.18	0.39	0.39	0.18	0.15	0.03	0.39	0.39	0.39	0.36	0.37
Delay/Veh:	56.6	53.0	41.6	29.7	23.2	16.2	76.3	81.7	81.7	73.2	74.4	74.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.6	53.0	41.6	29.7	23.2	16.2	76.3	81.7	81.7	73.2	74.4	74.6
LOS by Move:	E	D	D	C	C	B	E	F	F	E	E	E
HCM2k95thQ:	5	7	20	22	9	8	0	6	6	10	8	8

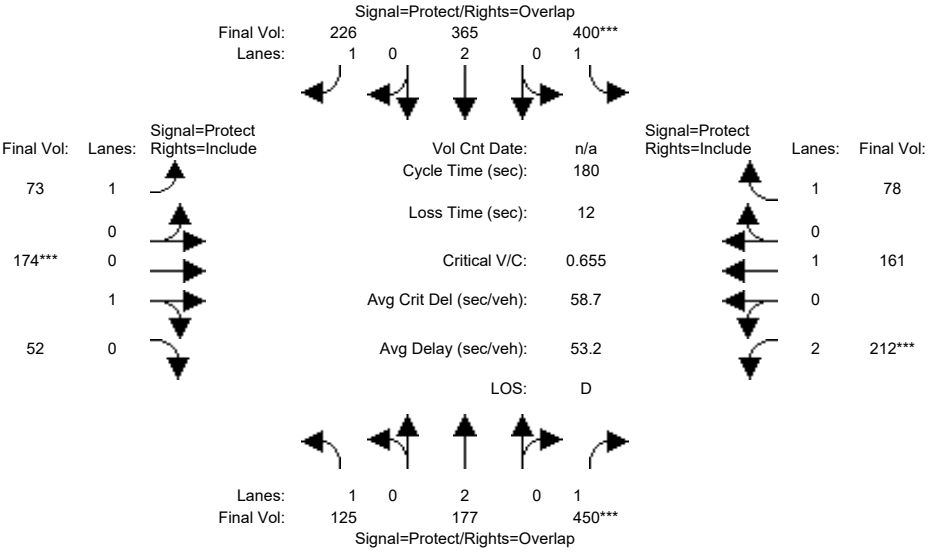
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #6: Maude Avenue and SR 237 Ramps



Street Name:	SR 237 Ramp Connectors						Maude Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	125	177	450	400	365	226	73	174	52	212	161	78
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	125	177	450	400	365	226	73	174	52	212	161	78
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	125	177	450	400	365	226	73	174	52	212	161	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	125	177	450	400	365	226	73	174	52	212	161	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	177	450	400	365	226	73	174	52	212	161	78
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	125	177	450	400	365	226	73	174	52	212	161	78
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.83	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.77	0.23	2.00	1.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1386	414	3150	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.05	0.26	0.23	0.10	0.13	0.04	0.13	0.13	0.07	0.08	0.04
Crit Moves:			****	****				****		****		
Green Time:	49.0	52.2	70.7	62.8	66.0	83.4	17.5	34.5	34.5	18.5	35.5	35.5
Volume/Cap:	0.26	0.16	0.65	0.65	0.26	0.28	0.43	0.65	0.65	0.65	0.43	0.23
Delay/Veh:	51.6	47.7	47.0	52.0	40.1	29.9	78.3	71.7	71.7	82.5	64.1	61.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.6	47.7	47.0	52.0	40.1	29.9	78.3	71.7	71.7	82.5	64.1	61.0
LOS by Move:	D	D	D	D	D	C	E	E	E	F	E	E
HCM2k95thQ:	11	7	37	34	13	15	9	23	23	15	15	8

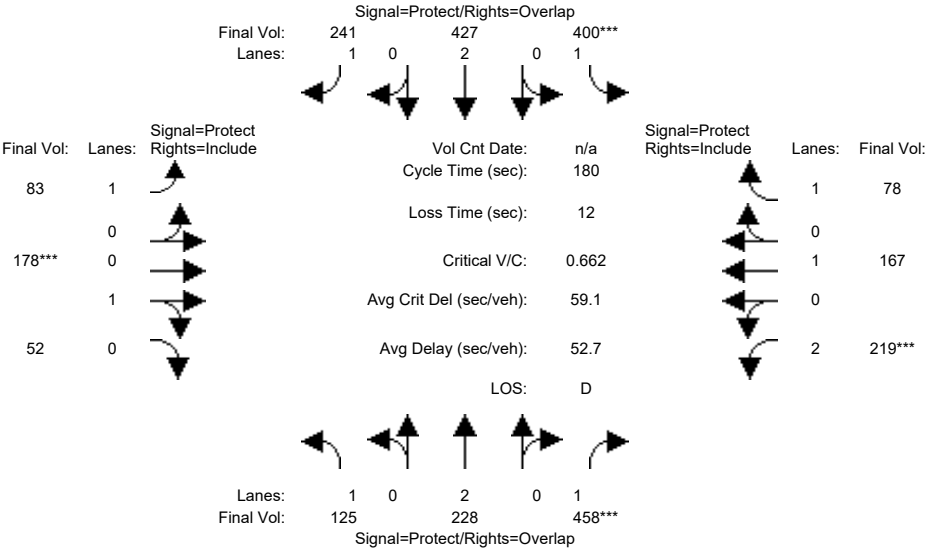
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #6: Maude Avenue and SR 237 Ramps



Street Name:	SR 237 Ramp Connectors						Maude Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	125	177	450	400	365	226	73	174	52	212	161	78
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	125	177	450	400	365	226	73	174	52	212	161	78
Added Vol:	0	51	8	0	62	15	10	4	0	7	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	125	228	458	400	427	241	83	178	52	219	167	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	125	228	458	400	427	241	83	178	52	219	167	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	228	458	400	427	241	83	178	52	219	167	78
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	125	228	458	400	427	241	83	178	52	219	167	78
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.83	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.77	0.23	2.00	1.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1393	407	3150	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.06	0.26	0.23	0.11	0.14	0.05	0.13	0.13	0.07	0.09	0.04
Crit Moves:			****	****				****		****		
Green Time:	44.4	52.2	71.1	62.1	69.9	88.7	18.8	34.7	34.7	18.9	34.8	34.8
Volume/Cap:	0.29	0.21	0.66	0.66	0.29	0.28	0.45	0.66	0.66	0.66	0.45	0.23
Delay/Veh:	55.3	48.3	47.0	52.8	38.0	27.0	77.6	71.9	71.9	82.4	65.1	61.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.3	48.3	47.0	52.8	38.0	27.0	77.6	71.9	71.9	82.4	65.1	61.6
LOS by Move:	E	D	D	D	D	C	E	E	E	F	E	E
HCM2k95thQ:	11	9	37	34	15	15	10	23	23	15	15	8

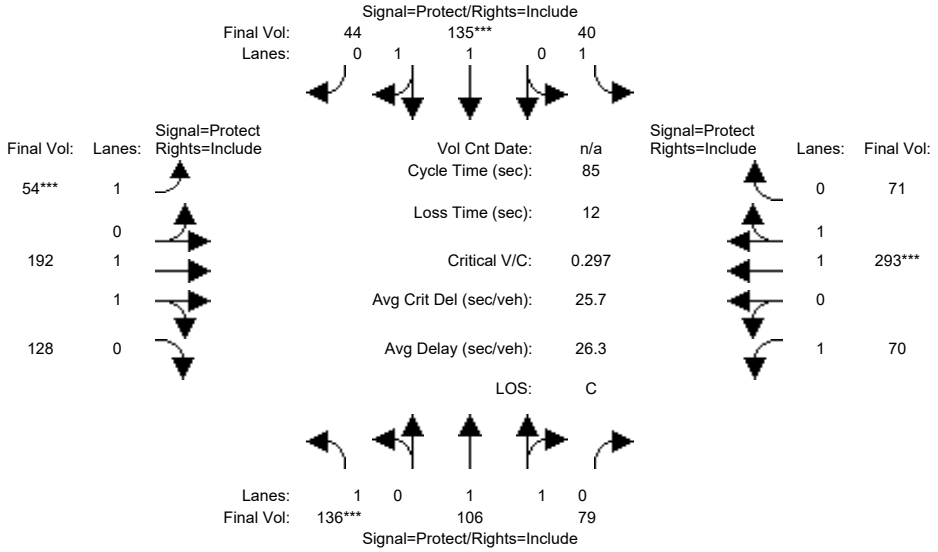
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #7: East Middlefield Road and Whisman Road



Street Name:	Whisman Road						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: 12:00:00 AM												
Base Vol:	136	106	79	40	135	44	54	192	128	70	293	71
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	136	106	79	40	135	44	54	192	128	70	293	71
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	136	106	79	40	135	44	54	192	128	70	293	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	136	106	79	40	135	44	54	192	128	70	293	71
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	136	106	79	40	135	44	54	192	128	70	293	71
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	136	106	79	40	135	44	54	192	128	70	293	71
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.95	0.92	0.98	0.95	0.92	0.99	0.95	0.92	0.98	0.95
Lanes:	1.00	1.12	0.88	1.00	1.49	0.51	1.00	1.18	0.82	1.00	1.60	0.40
Final Sat.:	1750	2119	1579	1750	2790	909	1750	2219	1479	1750	2978	722
Capacity Analysis Module:												
Vol/Sat:	0.08	0.05	0.05	0.02	0.05	0.05	0.03	0.09	0.09	0.04	0.10	0.10
Crit Moves:	****				****		****				****	
Green Time:	22.2	18.0	18.0	18.0	13.8	13.8	8.8	21.7	21.7	15.2	28.1	28.1
Volume/Cap:	0.30	0.24	0.24	0.11	0.30	0.30	0.30	0.34	0.34	0.22	0.30	0.30
Delay/Veh:	25.5	27.9	27.9	27.1	31.6	31.6	36.1	26.0	26.0	30.2	21.2	21.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.5	27.9	27.9	27.1	31.6	31.6	36.1	26.0	26.0	30.2	21.2	21.2
LOS by Move:	C	C	C	C	C	C	D	C	C	C	C	C
HCM2k95thQ:	6	4	4	2	5	5	3	7	7	3	7	7

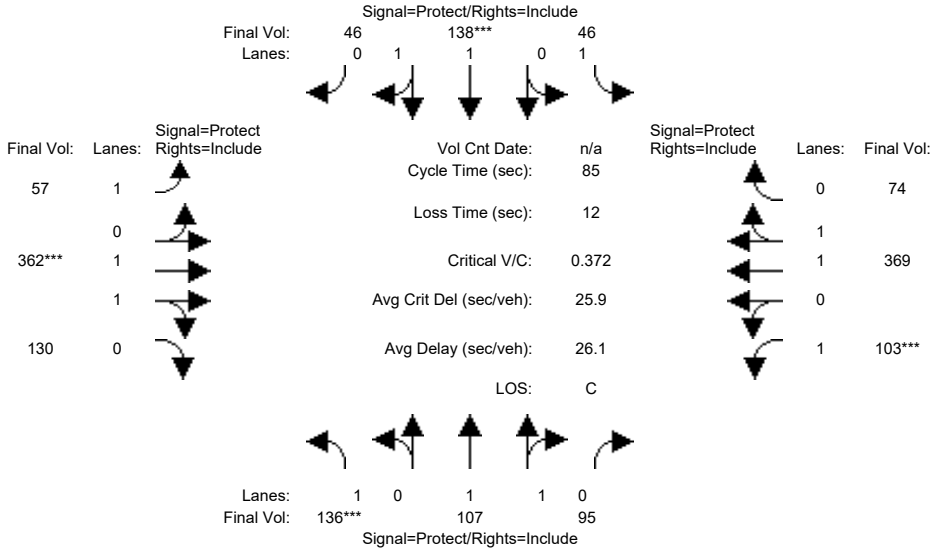
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #7: East Middlefield Road and Whisman Road



Street Name:	Whisman Road						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	136	107	95	46	138	46	57	362	130	103	369	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	136	107	95	46	138	46	57	362	130	103	369	74
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	136	107	95	46	138	46	57	362	130	103	369	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	136	107	95	46	138	46	57	362	130	103	369	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	136	107	95	46	138	46	57	362	130	103	369	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	136	107	95	46	138	46	57	362	130	103	369	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.95	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	1.00	1.03	0.97	1.00	1.49	0.51	1.00	1.46	0.54	1.00	1.66	0.34
Final Sat.:	1750	1959	1739	1750	2774	925	1750	2722	977	1750	3081	618
Capacity Analysis Module:												
Vol/Sat:	0.08	0.05	0.05	0.03	0.05	0.05	0.03	0.13	0.13	0.06	0.12	0.12
Crit Moves:	****				****			****			****	
Green Time:	17.8	14.6	14.6	14.6	11.4	11.4	17.9	30.4	30.4	13.5	26.0	26.0
Volume/Cap:	0.37	0.32	0.32	0.15	0.37	0.37	0.15	0.37	0.37	0.37	0.39	0.39
Delay/Veh:	29.5	31.2	31.2	30.2	34.0	34.0	27.6	20.4	20.4	32.8	23.5	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.5	31.2	31.2	30.2	34.0	34.0	27.6	20.4	20.4	32.8	23.5	23.5
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C
HCM2k95thQ:	7	5	5	2	5	5	3	10	10	5	9	9

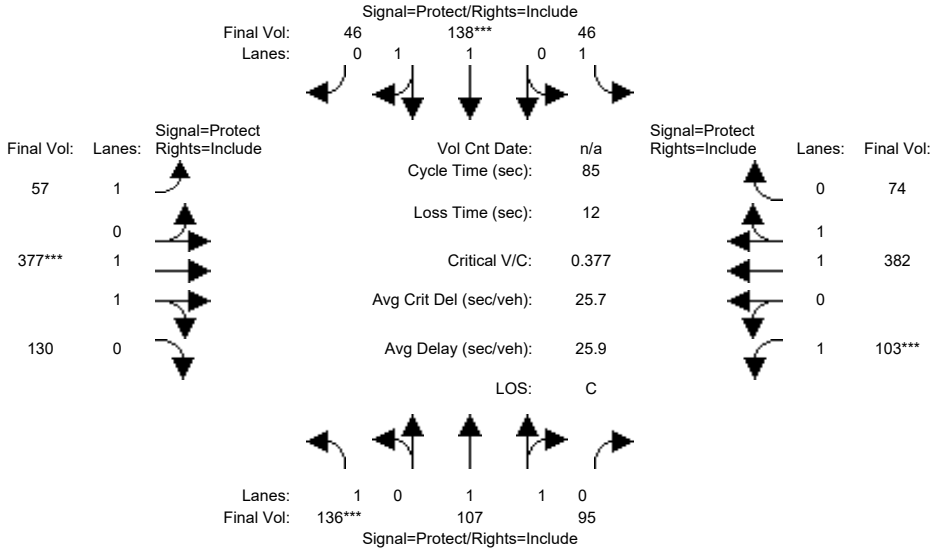
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #7: East Middlefield Road and Whisman Road



Street Name:	Whisman Road						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	136	107	95	46	138	46	57	362	130	103	369	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	136	107	95	46	138	46	57	362	130	103	369	74
Added Vol:	0	0	0	0	0	0	0	15	0	0	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	136	107	95	46	138	46	57	377	130	103	382	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	136	107	95	46	138	46	57	377	130	103	382	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	136	107	95	46	138	46	57	377	130	103	382	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	136	107	95	46	138	46	57	377	130	103	382	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.95	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	1.00	1.03	0.97	1.00	1.49	0.51	1.00	1.47	0.53	1.00	1.67	0.33
Final Sat.:	1750	1959	1739	1750	2774	925	1750	2751	948	1750	3099	600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.05	0.05	0.03	0.05	0.05	0.03	0.14	0.14	0.06	0.12	0.12
Crit Moves:	****				****			****			****	
Green Time:	17.5	14.4	14.4	14.4	11.2	11.2	17.7	30.9	30.9	13.3	26.5	26.5
Volume/Cap:	0.38	0.32	0.32	0.16	0.38	0.38	0.16	0.38	0.38	0.38	0.40	0.40
Delay/Veh:	29.7	31.3	31.3	30.4	34.2	34.2	27.7	20.1	20.1	33.0	23.2	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.7	31.3	31.3	30.4	34.2	34.2	27.7	20.1	20.1	33.0	23.2	23.2
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C
HCM2k95thQ:	7	5	5	2	5	5	3	10	10	5	9	9

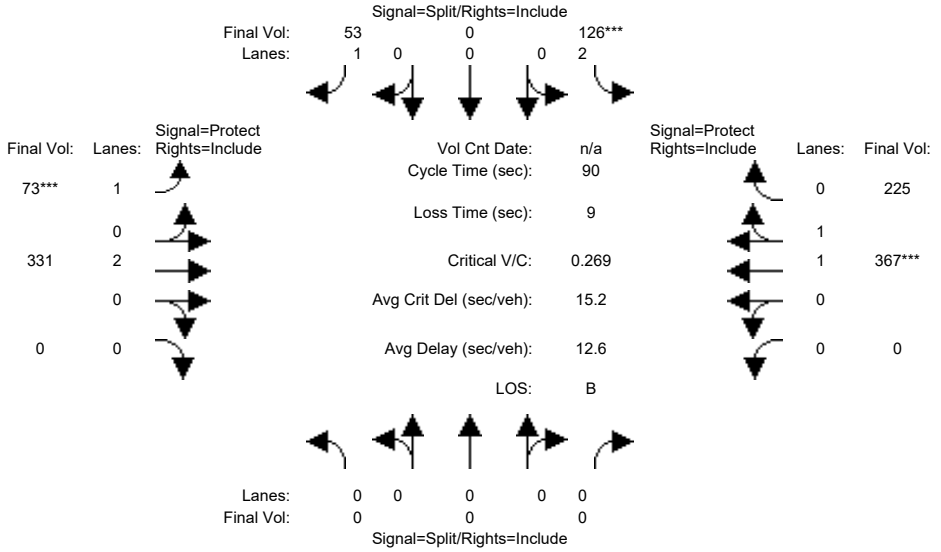
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #8: East Middlefield Road and Ellis Street



Street Name:	Ellis Street						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	0	10	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	0	0	0	126	0	53	73	331	0	0	367	225
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	126	0	53	73	331	0	0	367	225
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	126	0	53	73	331	0	0	367	225
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	126	0	53	73	331	0	0	367	225
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	126	0	53	73	331	0	0	367	225
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	126	0	53	73	331	0	0	367	225
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92	0.92	0.99	0.95
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.22	0.78
Final Sat.:	0	0	0	3150	0	1750	1750	3800	0	0	2293	1406
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.03	0.04	0.09	0.00	0.00	0.16	0.16
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	13.4	0.0	13.4	14.0	67.6	0.0	0.0	53.6	53.6
Volume/Cap:	0.00	0.00	0.00	0.27	0.00	0.20	0.27	0.12	0.00	0.00	0.27	0.27
Delay/Veh:	0.0	0.0	0.0	34.3	0.0	34.0	34.0	3.1	0.0	0.0	8.8	8.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	34.3	0.0	34.0	34.0	3.1	0.0	0.0	8.8	8.8
LOS by Move:	A	A	A	C	A	C	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	4	0	3	4	3	0	0	8	8

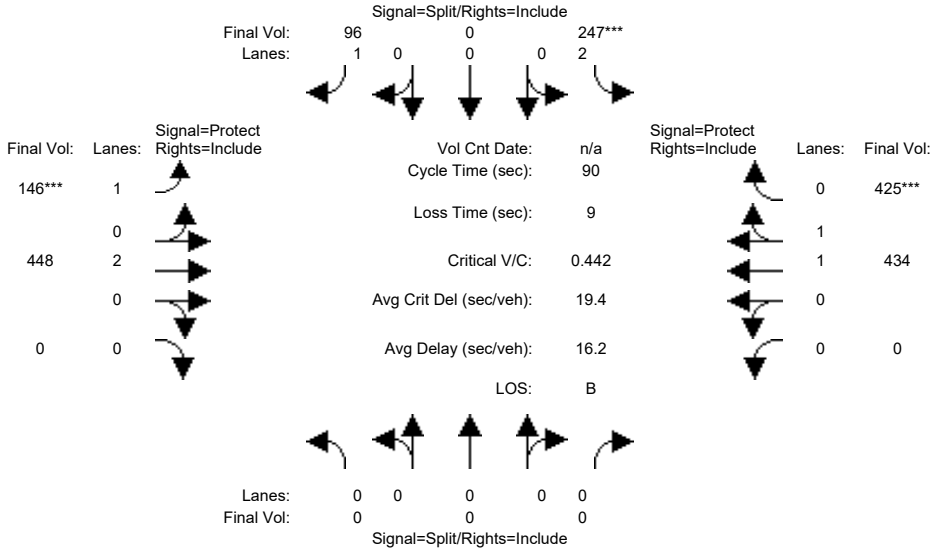
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #8: East Middlefield Road and Ellis Street



Street Name:	Ellis Street						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	0	10	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	247	0	96	146	448	0	0	434	425
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	247	0	96	146	448	0	0	434	425
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	247	0	96	146	448	0	0	434	425
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	247	0	96	146	448	0	0	434	425
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	247	0	96	146	448	0	0	434	425
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	247	0	96	146	448	0	0	434	425
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.95
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3150	0	1750	1750	3800	0	0	1899	1800
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.05	0.08	0.12	0.00	0.00	0.23	0.24
Crit Moves:				****			****					****
Green Time:	0.0	0.0	0.0	16.0	0.0	16.0	17.0	65.0	0.0	0.0	48.1	48.1
Volume/Cap:	0.00	0.00	0.00	0.44	0.00	0.31	0.44	0.16	0.00	0.00	0.43	0.44
Delay/Veh:	0.0	0.0	0.0	33.6	0.0	32.8	33.3	4.0	0.0	0.0	12.8	13.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	33.6	0.0	32.8	33.3	4.0	0.0	0.0	12.8	13.0
LOS by Move:	A	A	A	C	A	C	C	A	A	A	B	B
HCM2k95thQ:	0	0	0	8	0	5	8	4	0	0	13	14

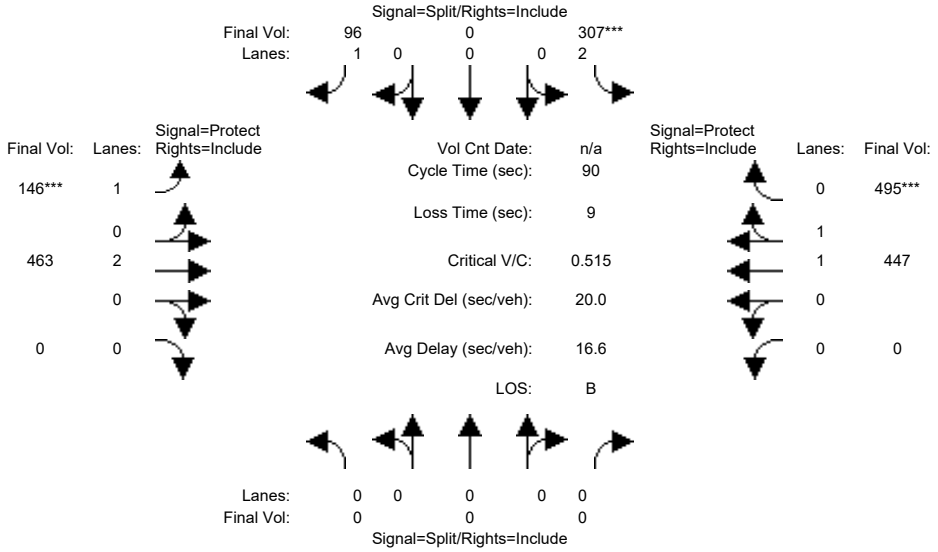
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #8: East Middlefield Road and Ellis Street



Street Name:	Ellis Street						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	0	10	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	247	0	96	146	448	0	0	434	425
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	247	0	96	146	448	0	0	434	425
Added Vol:	0	0	0	60	0	0	0	15	0	0	13	70
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	307	0	96	146	463	0	0	447	495
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	307	0	96	146	463	0	0	447	495
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	307	0	96	146	463	0	0	447	495
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	307	0	96	146	463	0	0	447	495
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3150	0	1750	1750	3800	0	0	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.05	0.08	0.12	0.00	0.00	0.24	0.28
Crit Moves:				****			****					****
Green Time:	0.0	0.0	0.0	17.0	0.0	17.0	14.6	64.0	0.0	0.0	49.4	49.4
Volume/Cap:	0.00	0.00	0.00	0.52	0.00	0.29	0.52	0.17	0.00	0.00	0.43	0.52
Delay/Veh:	0.0	0.0	0.0	33.6	0.0	31.8	36.1	4.3	0.0	0.0	12.1	13.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	33.6	0.0	31.8	36.1	4.3	0.0	0.0	12.1	13.0
LOS by Move:	A	A	A	C	A	C	D	A	A	A	B	B
HCM2k95thQ:	0	0	0	10	0	5	8	4	0	0	13	17

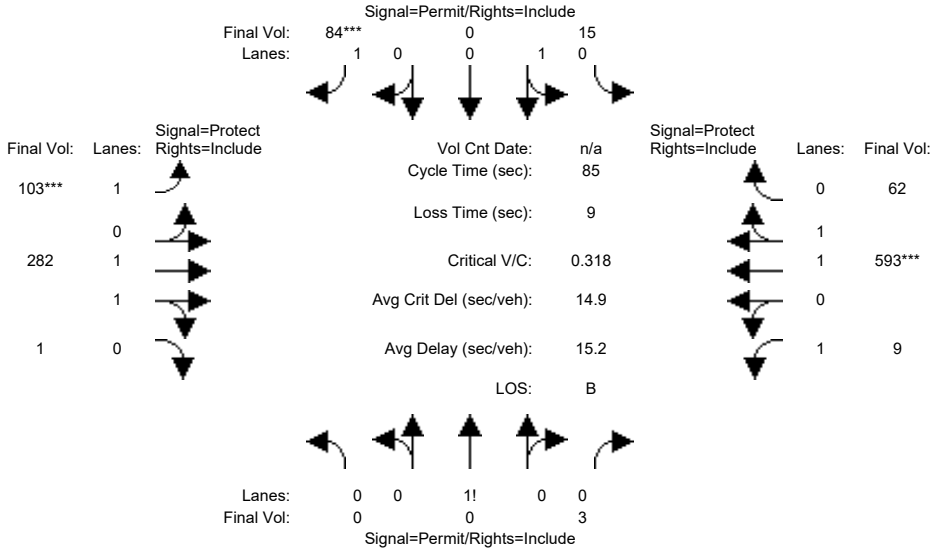
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #9: East Middlefield Road and Logue Avenue



Street Name:	Logue Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	7	10	0	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	0	0	3	15	0	84	103	282	1	9	593	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	3	15	0	84	103	282	1	9	593	62
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	3	15	0	84	103	282	1	9	593	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	3	15	0	84	103	282	1	9	593	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	3	15	0	84	103	282	1	9	593	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	3	15	0	84	103	282	1	9	593	62
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.95	0.95	0.92	0.92	0.97	0.95	0.92	0.98	0.95
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.99	0.01	1.00	1.81	0.19
Final Sat.:	0	0	1750	1800	0	1750	1750	3687	13	1750	3350	350
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.01	0.00	0.05	0.06	0.08	0.08	0.01	0.18	0.18
Crit Moves:						****	****				****	
Green Time:	0.0	0.0	12.8	12.8	0.0	12.8	15.8	37.1	37.1	26.0	47.4	47.4
Volume/Cap:	0.00	0.00	0.01	0.06	0.00	0.32	0.32	0.18	0.18	0.02	0.32	0.32
Delay/Veh:	0.0	0.0	30.7	31.0	0.0	32.9	30.5	14.6	14.6	20.6	10.2	10.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	30.7	31.0	0.0	32.9	30.5	14.6	14.6	20.6	10.2	10.2
LOS by Move:	A	A	C	C	A	C	C	B	B	C	B	B
HCM2k95thQ:	0	0	0	1	0	5	5	5	5	0	9	9

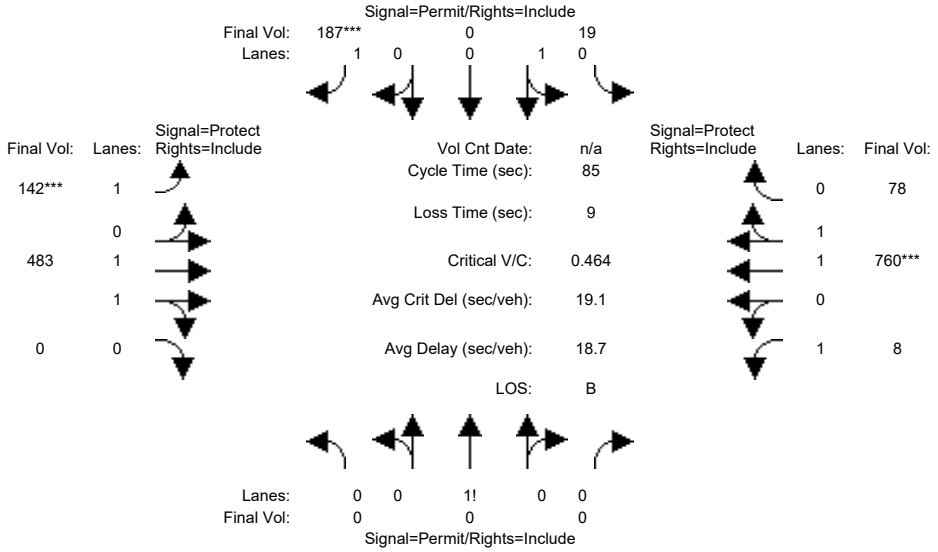
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #9: East Middlefield Road and Logue Avenue



Street Name:	Logue Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	0	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	19	0	187	142	483	0	8	760	78
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	19	0	187	142	483	0	8	760	78
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	19	0	187	142	483	0	8	760	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	19	0	187	142	483	0	8	760	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	19	0	187	142	483	0	8	760	78
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	19	0	187	142	483	0	8	760	78
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.97	0.92	0.92	0.98	0.95
Lanes:	0.00	1.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	1.00	1.81	0.19
Final Sat.:	0	1750	0	1800	0	1750	1750	3700	0	1750	3355	344
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.01	0.00	0.11	0.08	0.13	0.00	0.00	0.23	0.23
Crit Moves:						****	****				****	
Green Time:	0.0	0.0	0.0	19.6	0.0	19.6	14.9	34.6	0.0	21.8	41.5	41.5
Volume/Cap:	0.00	0.00	0.00	0.05	0.00	0.46	0.46	0.32	0.00	0.02	0.46	0.46
Delay/Veh:	0.0	0.0	0.0	25.5	0.0	29.0	32.6	17.3	0.0	23.6	14.6	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.5	0.0	29.0	32.6	17.3	0.0	23.6	14.6	14.6
LOS by Move:	A	A	A	C	A	C	C	B	A	C	B	B
HCM2k95thQ:	0	0	0	1	0	10	7	8	0	0	14	14

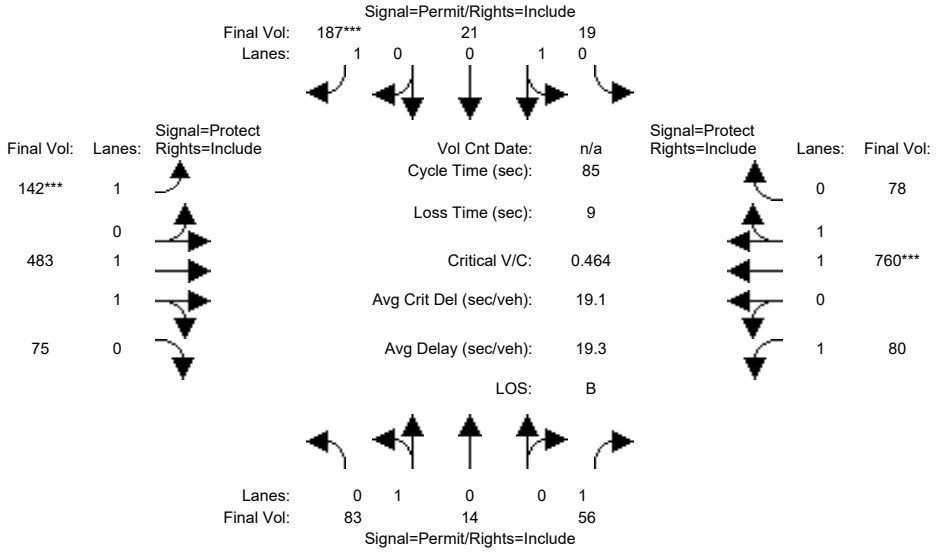
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #9: East Middlefield Road and Logue Avenue



Street Name:	Logue Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	0	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	19	0	187	142	483	0	8	760	78
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	19	0	187	142	483	0	8	760	78
Added Vol:	83	14	56	0	21	0	0	0	75	72	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	83	14	56	19	21	187	142	483	75	80	760	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	83	14	56	19	21	187	142	483	75	80	760	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	14	56	19	21	187	142	483	75	80	760	78
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	83	14	56	19	21	187	142	483	75	80	760	78
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.92	0.95	0.95	0.92	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	0.86	0.14	1.00	0.47	0.53	1.00	1.00	1.72	0.28	1.00	1.81	0.19
Final Sat.:	1540	260	1750	855	945	1750	1750	3202	497	1750	3355	344
Capacity Analysis Module:												
Vol/Sat:	0.05	0.05	0.03	0.02	0.02	0.11	0.08	0.15	0.15	0.05	0.23	0.23
Crit Moves:						****	****				****	
Green Time:	19.6	19.6	19.6	19.6	19.6	19.6	14.9	36.5	36.5	19.9	41.5	41.5
Volume/Cap:	0.23	0.23	0.14	0.10	0.10	0.46	0.46	0.35	0.35	0.20	0.46	0.46
Delay/Veh:	26.9	26.9	26.2	25.8	25.8	29.0	32.6	16.4	16.4	26.3	14.6	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.9	26.9	26.2	25.8	25.8	29.0	32.6	16.4	16.4	26.3	14.6	14.6
LOS by Move:	C	C	C	C	C	C	C	B	B	C	B	B
HCM2k95thQ:	5	5	3	2	2	10	7	10	10	4	14	14

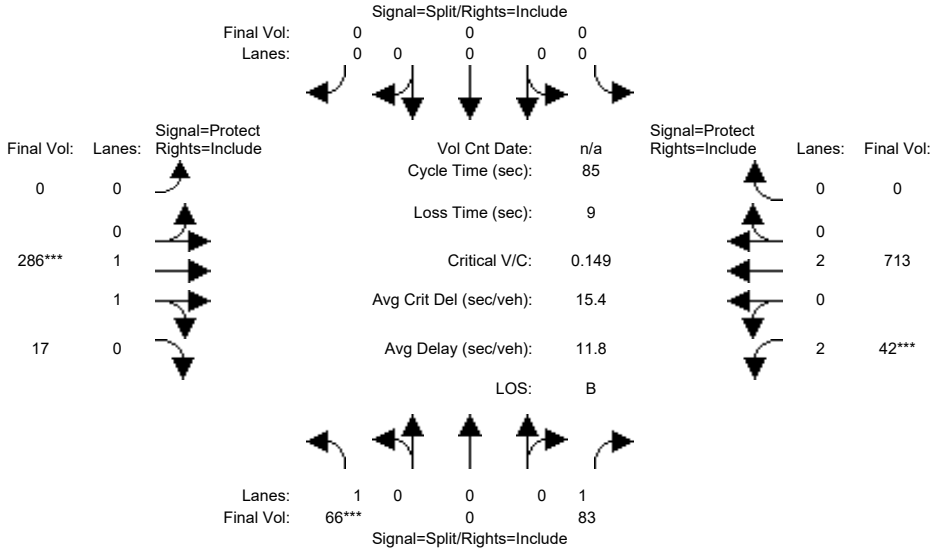
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #10: Ferguson Drive and East Middlefield Road



Street Name:	Ferguson Drive						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	66	0	83	0	0	0	0	286	17	42	713	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	66	0	83	0	0	0	0	286	17	42	713	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	66	0	83	0	0	0	0	286	17	42	713	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	66	0	83	0	0	0	0	286	17	42	713	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	0	83	0	0	0	0	286	17	42	713	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	66	0	83	0	0	0	0	286	17	42	713	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.83	1.00	0.92
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.88	0.12	2.00	2.00	0.00
Final Sat.:	1750	0	1750	0	0	0	0	3492	208	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.05	0.00	0.00	0.00	0.00	0.08	0.08	0.01	0.19	0.00
Crit Moves:	****							****		****		
Green Time:	25.3	0.0	25.3	0.0	0.0	0.0	0.0	43.6	43.6	7.1	50.7	0.0
Volume/Cap:	0.13	0.00	0.16	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.31	0.00
Delay/Veh:	21.9	0.0	22.2	0.0	0.0	0.0	0.0	11.0	11.0	36.5	8.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.9	0.0	22.2	0.0	0.0	0.0	0.0	11.0	11.0	36.5	8.6	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	D	A	A
HCM2k95thQ:	3	0	3	0	0	0	0	4	4	1	9	0

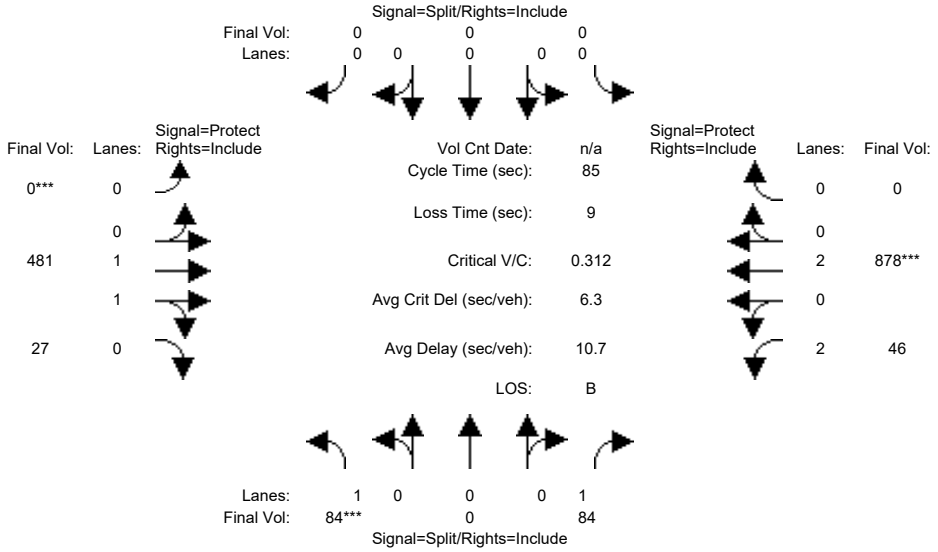
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #10: Ferguson Drive and East Middlefield Road



Street Name:	Ferguson Drive						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	84	0	84	0	0	0	0	481	27	46	878	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	84	0	84	0	0	0	0	481	27	46	878	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	84	0	84	0	0	0	0	481	27	46	878	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	84	0	84	0	0	0	0	481	27	46	878	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	0	84	0	0	0	0	481	27	46	878	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	84	0	84	0	0	0	0	481	27	46	878	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.83	1.00	0.92
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.89	0.11	2.00	2.00	0.00
Final Sat.:	1750	0	1750	0	0	0	0	3503	197	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.14	0.14	0.01	0.23	0.00
Crit Moves:	****						****				****	
Green Time:	13.1	0.0	13.1	0.0	0.0	0.0	0.0	39.3	39.3	23.6	62.9	0.0
Volume/Cap:	0.31	0.00	0.31	0.00	0.00	0.00	0.00	0.30	0.30	0.05	0.31	0.00
Delay/Veh:	32.6	0.0	32.6	0.0	0.0	0.0	0.0	14.3	14.3	22.5	3.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.6	0.0	32.6	0.0	0.0	0.0	0.0	14.3	14.3	22.5	3.8	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	C	A	A
HCM2k95thQ:	4	0	4	0	0	0	0	8	8	1	8	0

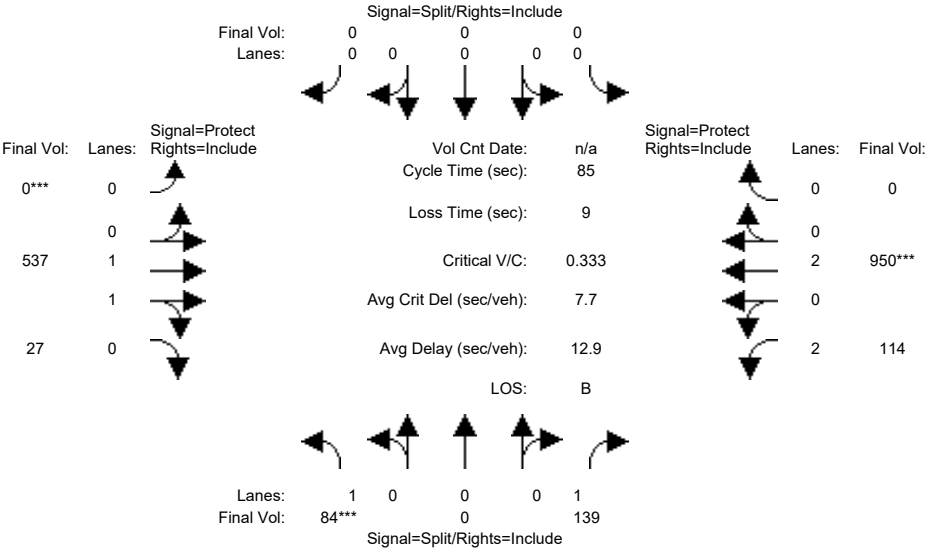
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #10: Ferguson Drive and East Middlefield Road



Street Name:	Ferguson Drive						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	84	0	84	0	0	0	0	481	27	46	878	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	84	0	84	0	0	0	0	481	27	46	878	0
Added Vol:	0	0	55	0	0	0	0	56	0	68	72	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	84	0	139	0	0	0	0	537	27	114	950	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	84	0	139	0	0	0	0	537	27	114	950	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	0	139	0	0	0	0	537	27	114	950	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	84	0	139	0	0	0	0	537	27	114	950	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.83	1.00	0.92
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.90	0.10	2.00	2.00	0.00
Final Sat.:	1750	0	1750	0	0	0	0	3523	177	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.08	0.00	0.00	0.00	0.00	0.15	0.15	0.04	0.25	0.00
Crit Moves:	****						****				****	
Green Time:	18.3	0.0	18.3	0.0	0.0	0.0	0.0	37.4	37.4	20.2	57.7	0.0
Volume/Cap:	0.22	0.00	0.37	0.00	0.00	0.00	0.00	0.35	0.35	0.15	0.37	0.00
Delay/Veh:	27.8	0.0	29.0	0.0	0.0	0.0	0.0	15.8	15.8	25.7	5.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.8	0.0	29.0	0.0	0.0	0.0	0.0	15.8	15.8	25.7	5.9	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	C	A	A
HCM2k95thQ:	4	0	7	0	0	0	0	9	9	3	10	0

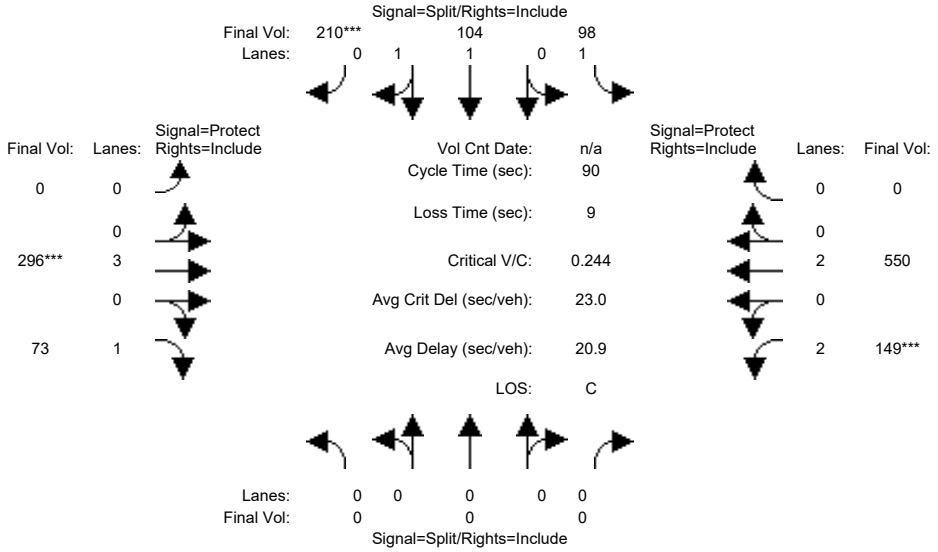
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #11: East Middlefield Road and SR237 Westbound On-Ramp



Street Name:	SR 237 On-Ramps						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	0	0	0	98	104	210	0	296	73	149	550	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	98	104	210	0	296	73	149	550	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	98	104	210	0	296	73	149	550	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	98	104	210	0	296	73	149	550	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	98	104	210	0	296	73	149	550	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	98	104	210	0	296	73	149	550	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	3.00	1.00	2.00	2.00	0.00
Final Sat.:	0	0	0	1750	1900	1750	0	5700	1750	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.05	0.12	0.00	0.05	0.04	0.05	0.14	0.00
Crit Moves:						****		****		****		
Green Time:	0.0	0.0	0.0	44.3	44.3	44.3	0.0	19.2	19.2	17.5	36.7	0.0
Volume/Cap:	0.00	0.00	0.00	0.11	0.11	0.24	0.00	0.24	0.20	0.24	0.36	0.00
Delay/Veh:	0.0	0.0	0.0	12.3	12.3	13.3	0.0	29.5	29.3	30.9	18.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	12.3	12.3	13.3	0.0	29.5	29.3	30.9	18.6	0.0
LOS by Move:	A	A	A	B	B	B	A	C	C	C	B	A
HCM2k95thQ:	0	0	0	3	3	7	0	4	4	4	10	0

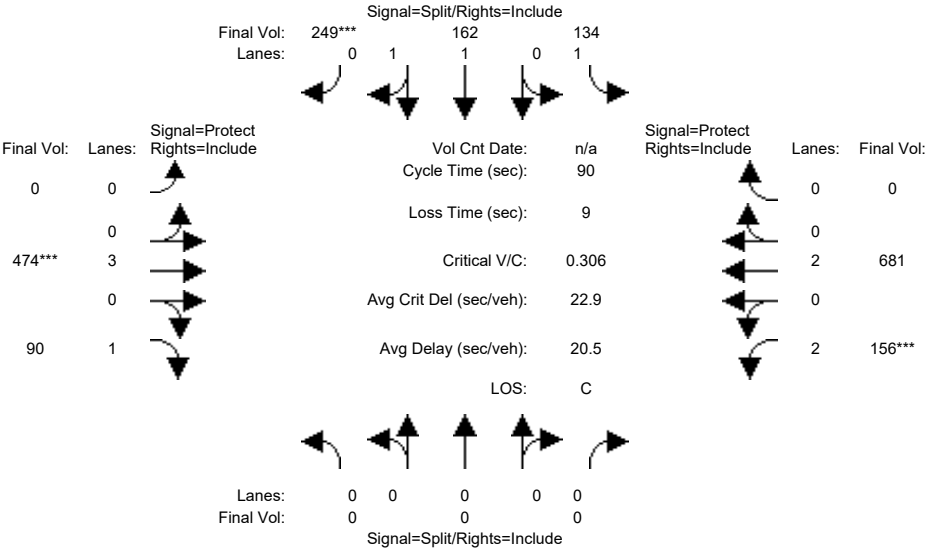
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #11: East Middlefield Road and SR237 Westbound On-Ramp



Street Name:	SR 237 On-Ramps						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	134	162	249	0	474	90	156	681	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	134	162	249	0	474	90	156	681	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	134	162	249	0	474	90	156	681	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	134	162	249	0	474	90	156	681	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	134	162	249	0	474	90	156	681	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	134	162	249	0	474	90	156	681	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	3.00	1.00	2.00	2.00	0.00
Final Sat.:	0	0	0	1750	1900	1750	0	5700	1750	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.09	0.14	0.00	0.08	0.05	0.05	0.18	0.00
Crit Moves:						****		****		****		
Green Time:	0.0	0.0	0.0	41.9	41.9	41.9	0.0	24.5	24.5	14.6	39.1	0.0
Volume/Cap:	0.00	0.00	0.00	0.16	0.18	0.31	0.00	0.31	0.19	0.31	0.41	0.00
Delay/Veh:	0.0	0.0	0.0	14.0	14.1	15.1	0.0	26.1	25.3	33.6	17.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	14.0	14.1	15.1	0.0	26.1	25.3	33.6	17.7	0.0
LOS by Move:	A	A	A	B	B	B	A	C	C	C	B	A
HCM2k95thQ:	0	0	0	5	5	9	0	7	4	4	12	0

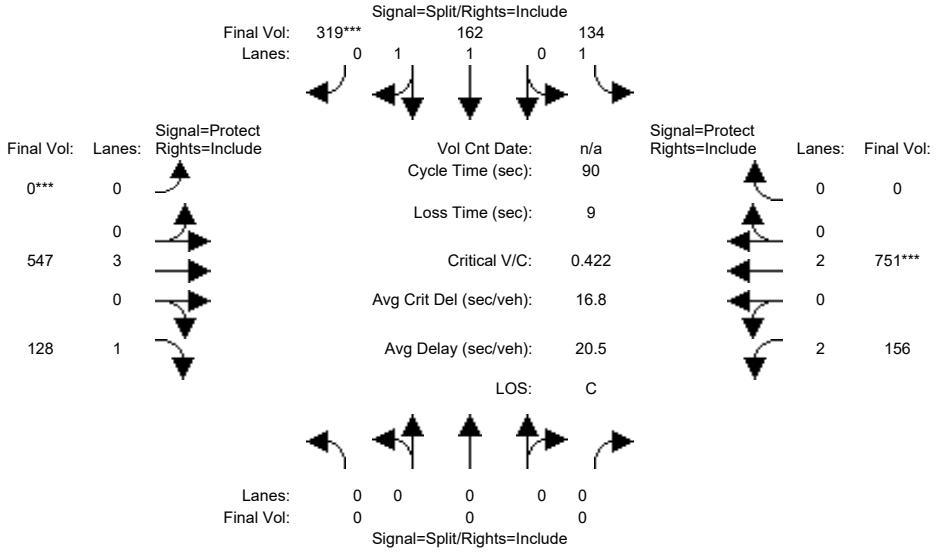
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #11: East Middlefield Road and SR237 Westbound On-Ramp



Street Name:	SR 237 On-Ramps						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	134	162	249	0	474	90	156	681	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	134	162	249	0	474	90	156	681	0
Added Vol:	0	0	0	0	0	70	0	73	38	0	70	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	134	162	319	0	547	128	156	751	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	134	162	319	0	547	128	156	751	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	134	162	319	0	547	128	156	751	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	134	162	319	0	547	128	156	751	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	3.00	1.00	2.00	2.00	0.00
Final Sat.:	0	0	0	1750	1900	1750	0	5700	1750	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.09	0.18	0.00	0.10	0.07	0.05	0.20	0.00
Crit Moves:						****	****				****	
Green Time:	0.0	0.0	0.0	38.9	38.9	38.9	0.0	24.8	24.8	17.4	42.1	0.0
Volume/Cap:	0.00	0.00	0.00	0.18	0.20	0.42	0.00	0.35	0.27	0.26	0.42	0.00
Delay/Veh:	0.0	0.0	0.0	15.8	15.9	18.0	0.0	26.3	25.8	31.1	16.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	15.8	15.9	18.0	0.0	26.3	25.8	31.1	16.0	0.0
LOS by Move:	A	A	A	B	B	B	A	C	C	C	B	A
HCM2k95thQ:	0	0	0	5	5	12	0	8	6	4	13	0

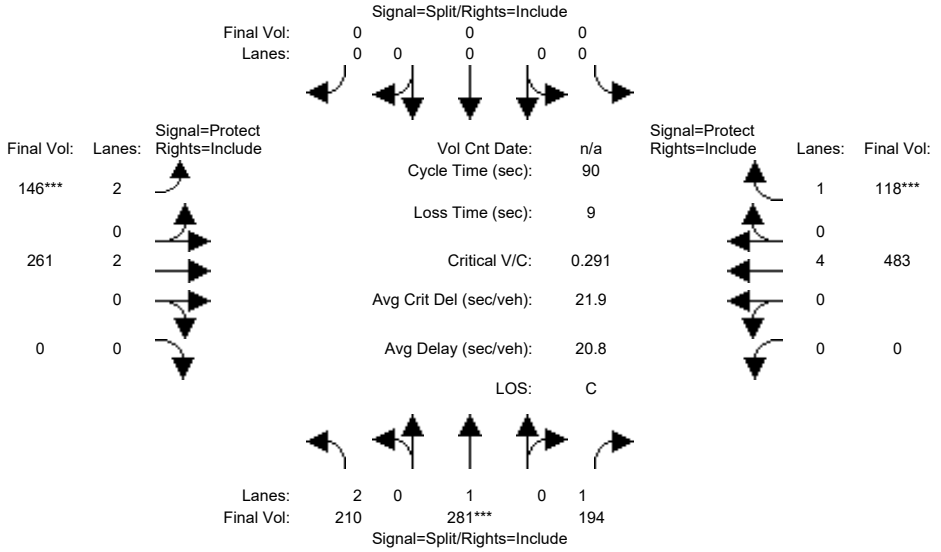
Note: Queue reported is the number of cars per lane.

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Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #12: East Middlefield Road and SR 237 Eastbound Off-Ramp



Street Name:237 Eastbound Off-Ramp and Connec East Middlefield Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	0	0	0	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	210	281	194	0	0	0	146	261	0	0	483	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	210	281	194	0	0	0	146	261	0	0	483	118
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	210	281	194	0	0	0	146	261	0	0	483	118
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	210	281	194	0	0	0	146	261	0	0	483	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	210	281	194	0	0	0	146	261	0	0	483	118
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	210	281	194	0	0	0	146	261	0	0	483	118
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	4.00	1.00
Final Sat.:	3150	1900	1750	0	0	0	3150	3800	0	0	7600	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.15	0.11	0.00	0.00	0.00	0.05	0.07	0.00	0.00	0.06	0.07
Crit Moves:		****					****					****
Green Time:	45.8	45.8	45.8	0.0	0.0	0.0	14.3	35.2	0.0	0.0	20.9	20.9
Volume/Cap:	0.13	0.29	0.22	0.00	0.00	0.00	0.29	0.18	0.00	0.00	0.27	0.29
Delay/Veh:	11.7	12.9	12.3	0.0	0.0	0.0	33.7	18.0	0.0	0.0	28.4	28.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.7	12.9	12.3	0.0	0.0	0.0	33.7	18.0	0.0	0.0	28.4	28.9
LOS by Move:	B	B	B	A	A	A	C	B	A	A	C	C
HCM2k95thQ:	4	9	6	0	0	0	4	5	0	0	5	6

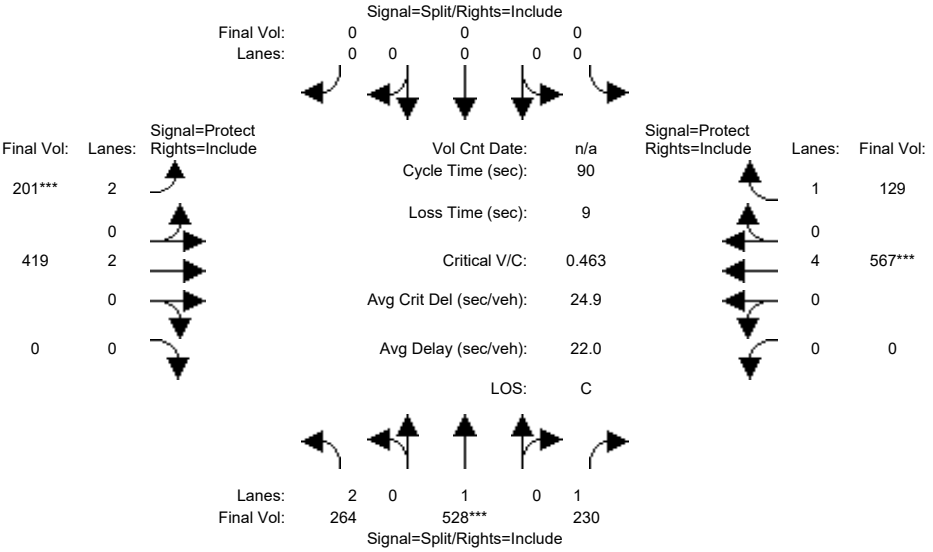
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #12: East Middlefield Road and SR 237 Eastbound Off-Ramp



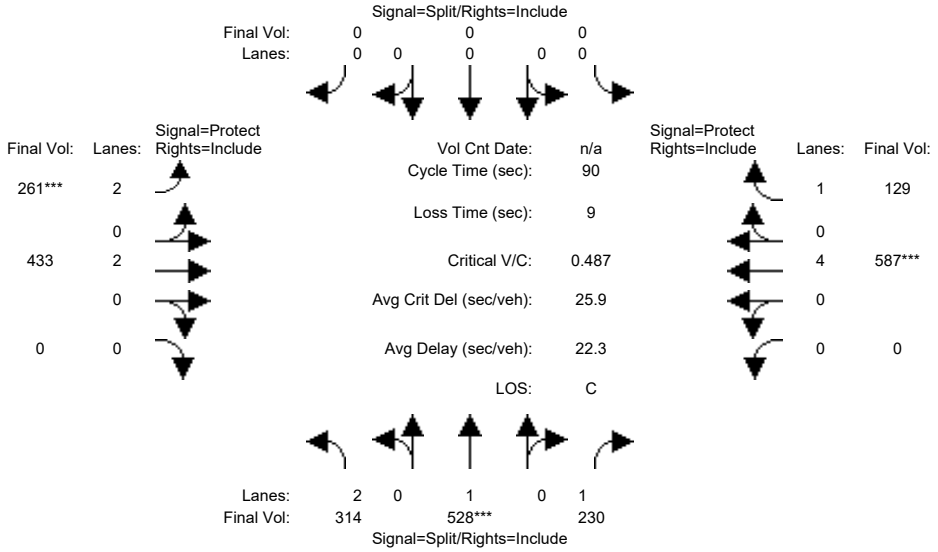

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Street Name:237 Eastbound Off-Ramp and Connec       East Middlefield Road
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:    10   10   10     0    0    0     7   10    0     0   10   10
Y+R:          4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     264  528  230     0    0    0   201  419    0     0  567  129
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:  264  528  230     0    0    0   201  419    0     0  567  129
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:  264  528  230     0    0    0   201  419    0     0  567  129
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:   264  528  230     0    0    0   201  419    0     0  567  129
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  264  528  230     0    0    0   201  419    0     0  567  129
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:  264  528  230     0    0    0   201  419    0     0  567  129
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900
Adjustment:  0.83 1.00 0.92  0.92 1.00 0.92  0.83 1.00 0.92  0.92 1.00 0.92
Lanes:       2.00 1.00 1.00  0.00 0.00 0.00  2.00 2.00 0.00  0.00 4.00 1.00
Final Sat.:  3150 1900 1750     0    0    0  3150 3800    0     0 7600 1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.28 0.13  0.00 0.00 0.00  0.06 0.11 0.00  0.00 0.07 0.07
Crit Moves:       ****                      ****                ****
Green Time:  54.1 54.1 54.1   0.0  0.0  0.0  12.4 26.9  0.0   0.0 14.5 14.5
Volume/Cap:  0.14 0.46 0.22  0.00 0.00 0.00  0.46 0.37 0.00  0.00 0.46 0.46
Delay/Veh:    7.9 10.2  8.4   0.0  0.0  0.0  36.5 25.0  0.0   0.0 34.5 35.3
User DelAdj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:   7.9 10.2  8.4   0.0  0.0  0.0  36.5 25.0  0.0   0.0 34.5 35.3
LOS by Move:    A    B    A     A    A    A     D    C    A     A    C    D
HCM2k95thQ:     4   15    6     0    0    0     6    9    0     0    7    7
Note: Queue reported is the number of cars per lane.
```


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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #12: East Middlefield Road and SR 237 Eastbound Off-Ramp



Street Name:237 Eastbound Off-Ramp and Connec East Middlefield Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	0	0	0	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	264	528	230	0	0	0	201	419	0	0	567	129
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	264	528	230	0	0	0	201	419	0	0	567	129
Added Vol:	50	0	0	0	0	0	60	14	0	0	20	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	314	528	230	0	0	0	261	433	0	0	587	129
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	314	528	230	0	0	0	261	433	0	0	587	129
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	314	528	230	0	0	0	261	433	0	0	587	129
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	314	528	230	0	0	0	261	433	0	0	587	129
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	4.00	1.00
Final Sat.:	3150	1900	1750	0	0	0	3150	3800	0	0	7600	1750
Capacity Analysis Module:												
Vol/Sat:	0.10	0.28	0.13	0.00	0.00	0.00	0.08	0.11	0.00	0.00	0.08	0.07
Crit Moves:		****					****				****	
Green Time:	51.4	51.4	51.4	0.0	0.0	0.0	15.3	29.6	0.0	0.0	14.3	14.3
Volume/Cap:	0.17	0.49	0.23	0.00	0.00	0.00	0.49	0.35	0.00	0.00	0.49	0.46
Delay/Veh:	9.2	11.8	9.7	0.0	0.0	0.0	34.5	23.0	0.0	0.0	34.8	35.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.2	11.8	9.7	0.0	0.0	0.0	34.5	23.0	0.0	0.0	34.8	35.6
LOS by Move:	A	B	A	A	A	A	C	C	A	A	C	D
HCM2k95thQ:	5	16	7	0	0	0	8	9	0	0	7	7

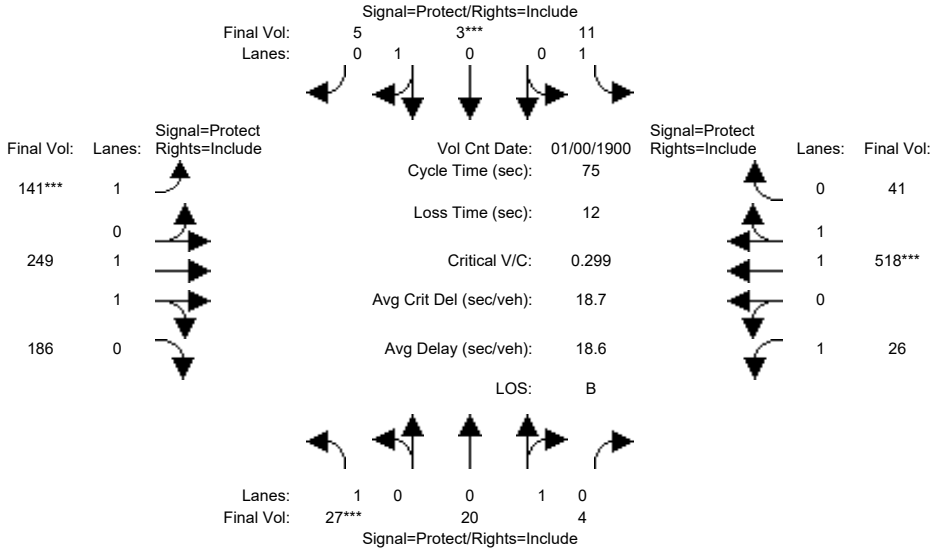
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #13: East Middlefield Road and Bernardo Avenue



Street Name:	Bernardo Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 0 Jan 1900 << 12:00:00 AM												
Base Vol:	27	20	4	11	3	5	141	249	186	26	518	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	20	4	11	3	5	141	249	186	26	518	41
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	20	4	11	3	5	141	249	186	26	518	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	20	4	11	3	5	141	249	186	26	518	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	20	4	11	3	5	141	249	186	26	518	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	20	4	11	3	5	141	249	186	26	518	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.92	0.95	0.95	0.92	0.99	0.95	0.92	0.98	0.95
Lanes:	1.00	0.83	0.17	1.00	0.37	0.63	1.00	1.12	0.88	1.00	1.85	0.15
Final Sat.:	1750	1500	300	1750	675	1125	1750	2117	1581	1750	3428	271
Capacity Analysis Module:												
Vol/Sat:	0.02	0.01	0.01	0.01	0.00	0.00	0.08	0.12	0.12	0.01	0.15	0.15
Crit Moves:	****				****		****				****	
Green Time:	7.0	10.0	10.0	7.0	10.0	10.0	16.0	27.1	27.1	18.9	30.0	30.0
Volume/Cap:	0.17	0.10	0.10	0.07	0.03	0.03	0.38	0.33	0.33	0.06	0.38	0.38
Delay/Veh:	31.8	28.7	28.7	31.2	28.3	28.3	25.9	17.5	17.5	21.3	16.1	16.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.8	28.7	28.7	31.2	28.3	28.3	25.9	17.5	17.5	21.3	16.1	16.1
LOS by Move:	C	C	C	C	C	C	C	B	B	C	B	B
HCM2k95thQ:	2	1	1	1	0	0	6	7	7	1	9	9

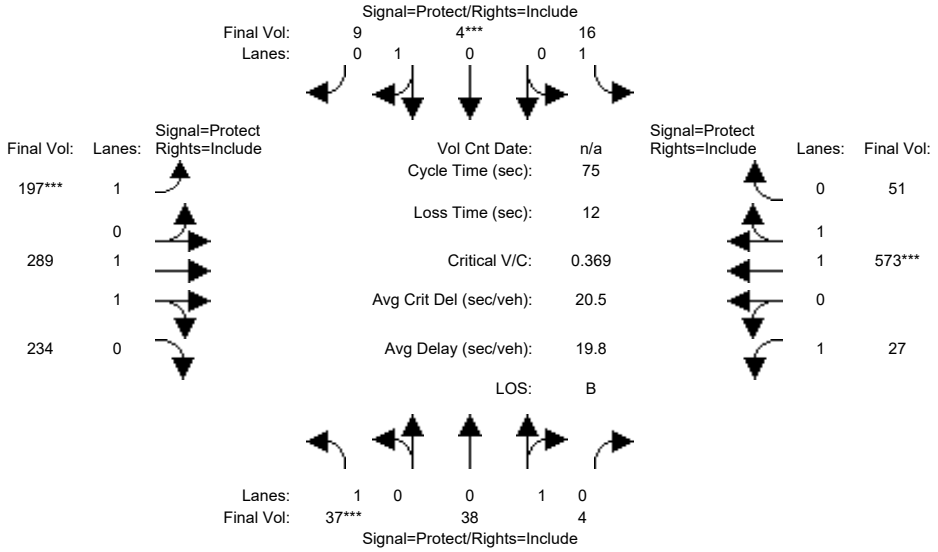
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #13: East Middlefield Road and Bernardo Avenue



Street Name:	Bernardo Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	37	38	4	16	4	9	197	289	234	27	573	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	38	4	16	4	9	197	289	234	27	573	51
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	38	4	16	4	9	197	289	234	27	573	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	38	4	16	4	9	197	289	234	27	573	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	38	4	16	4	9	197	289	234	27	573	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	37	38	4	16	4	9	197	289	234	27	573	51
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.92	0.95	0.95	0.92	0.99	0.95	0.92	0.98	0.95
Lanes:	1.00	0.90	0.10	1.00	0.31	0.69	1.00	1.08	0.92	1.00	1.83	0.17
Final Sat.:	1750	1629	171	1750	554	1246	1750	2043	1654	1750	3397	302
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.01	0.01	0.11	0.14	0.14	0.02	0.17	0.17
Crit Moves:	****				****		****				****	
Green Time:	7.0	10.0	10.0	7.0	10.0	10.0	18.4	27.7	27.7	18.3	27.6	27.6
Volume/Cap:	0.23	0.18	0.18	0.10	0.05	0.05	0.46	0.38	0.38	0.06	0.46	0.46
Delay/Veh:	32.2	29.2	29.2	31.4	28.5	28.5	24.8	17.5	17.5	21.8	18.3	18.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.2	29.2	29.2	31.4	28.5	28.5	24.8	17.5	17.5	21.8	18.3	18.3
LOS by Move:	C	C	C	C	C	C	C	B	B	C	B	B
HCM2k95thQ:	2	2	2	1	1	1	8	9	9	1	11	11

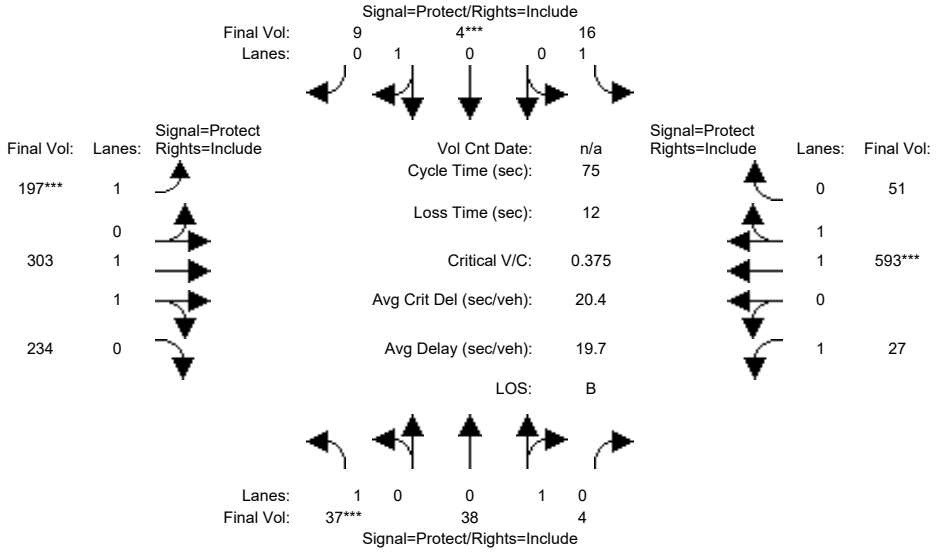
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #13: East Middlefield Road and Bernardo Avenue



Street Name:	Bernardo Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	37	38	4	16	4	9	197	289	234	27	573	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	38	4	16	4	9	197	289	234	27	573	51
Added Vol:	0	0	0	0	0	0	0	14	0	0	20	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	38	4	16	4	9	197	303	234	27	593	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	38	4	16	4	9	197	303	234	27	593	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	38	4	16	4	9	197	303	234	27	593	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	37	38	4	16	4	9	197	303	234	27	593	51
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.92	0.95	0.95	0.92	0.99	0.95	0.92	0.98	0.95
Lanes:	1.00	0.90	0.10	1.00	0.31	0.69	1.00	1.10	0.90	1.00	1.84	0.16
Final Sat.:	1750	1629	171	1750	554	1246	1750	2087	1611	1750	3407	293
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.01	0.01	0.11	0.15	0.15	0.02	0.17	0.17
Crit Moves:	****				****		****				****	
Green Time:	7.0	10.0	10.0	7.0	10.0	10.0	18.1	28.0	28.0	18.0	27.9	27.9
Volume/Cap:	0.23	0.18	0.18	0.10	0.05	0.05	0.47	0.39	0.39	0.06	0.47	0.47
Delay/Veh:	32.2	29.2	29.2	31.4	28.5	28.5	25.2	17.4	17.4	22.1	18.1	18.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.2	29.2	29.2	31.4	28.5	28.5	25.2	17.4	17.4	22.1	18.1	18.1
LOS by Move:	C	C	C	C	C	C	C	B	B	C	B	B
HCM2k95thQ:	2	2	2	1	1	1	8	9	9	1	12	12

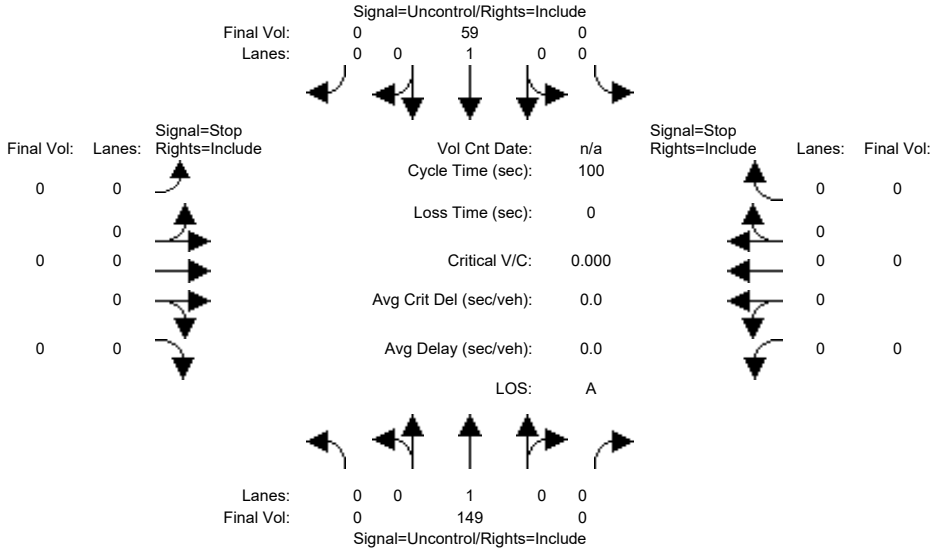
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #101: Ferguson Dr/Project Dwy



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	149	0	0	59	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	149	0	0	59	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	149	0	0	59	0	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	149	0	0	59	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	149	0	0	59	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #101 Ferguson Dr/Project Dwy

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Copyright (c) 2008 Dowling Associates, Inc.

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 0	0	0	0 0 0	0	0
Initial Vol:	0	149	0	0	59	0	0	0	0	0	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #101 Ferguson Dr/Project Dwy

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 0	0	0	0 0 0	0	0
Initial Vol:	0	149	0	0	59	0	0	0	0	0	0	0

Major Street Volume: 208
Minor Approach Volume: 0
Minor Approach Volume Threshold: 638

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

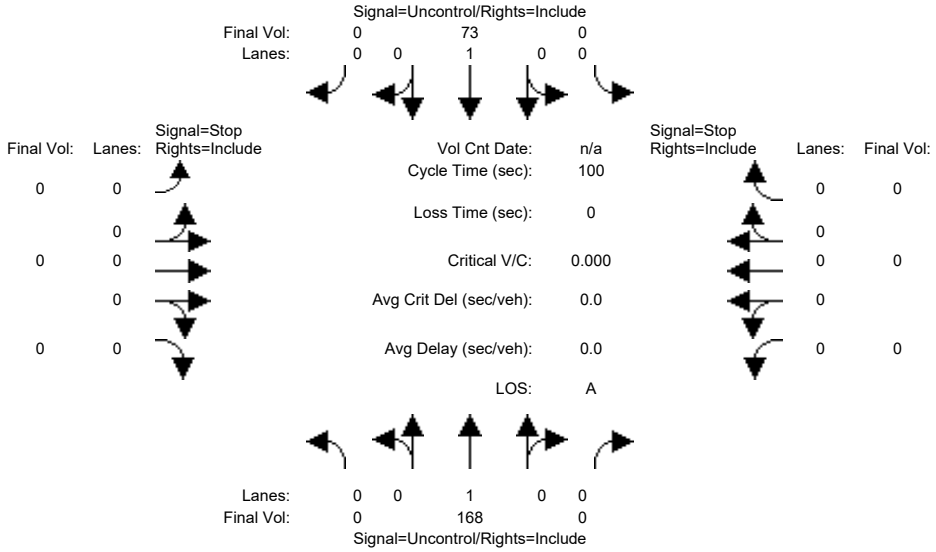
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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background AM

Intersection #101: Ferguson Dr/Project Dwy



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	168	0	0	73	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	168	0	0	73	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	168	0	0	73	0	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	168	0	0	73	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	168	0	0	73	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #101 Ferguson Dr/Project Dwy

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 0	0	0	0 0 0	0	0
Initial Vol:	0	168	0	0	73	0	0	0	0	0	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

Intersection #101 Ferguson Dr/Project Dwy

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 0	0	0	0 0 0	0	0
Initial Vol:	0	168	0	0	73	0	0	0	0	0	0	0

Major Street Volume: 241
Minor Approach Volume: 0
Minor Approach Volume Threshold: 599

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

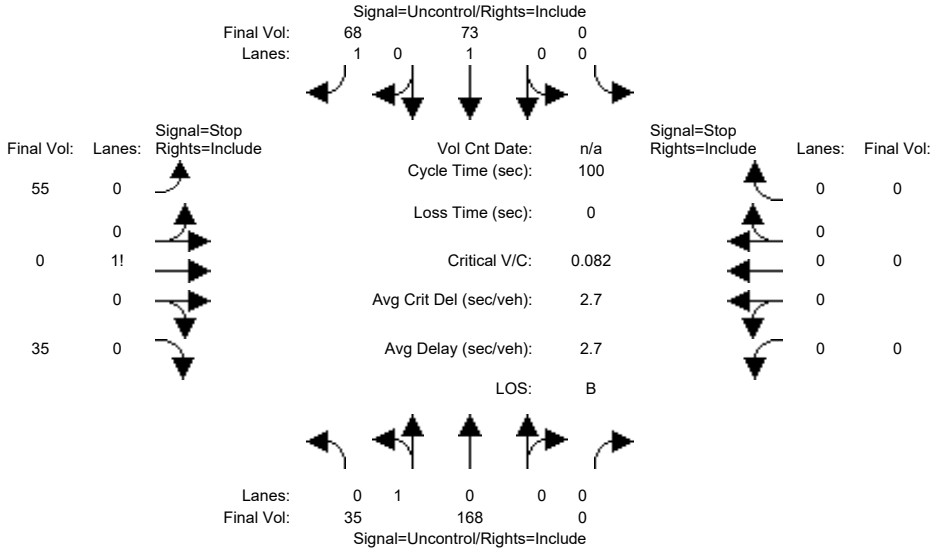
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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Prj AM

Intersection #101: Ferguson Dr/Project Dwy



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	168	0	0	73	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	168	0	0	73	0	0	0	0	0	0	0
Added Vol:	35	0	0	0	0	68	55	0	35	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	35	168	0	0	73	68	55	0	35	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	35	168	0	0	73	68	55	0	35	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	35	168	0	0	73	68	55	0	35	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	141	xxxx	xxxxx	xxxx	xxxx	xxxxx	311	311	73	xxxx	xxxx	xxxxx
Potent Cap.:	1455	xxxx	xxxxx	xxxx	xxxx	xxxxx	686	607	995	xxxx	xxxx	xxxxx
Move Cap.:	1455	xxxx	xxxxx	xxxx	xxxx	xxxxx	673	592	995	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	0.08	0.00	0.04	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	770	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.3			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #101 Ferguson Dr/Project Dwy

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0	0 0	0	0 1	0 1	0	0 1!	0 0	0	0 0	0 0 0
Initial Vol:	35 168	0		0	73	68	55	0	35	0	0	0
ApproachDel:	xxxxxx			xxxxxx			10.3			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=90]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=434]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #101 Ferguson Dr/Project Dwy

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0	0 0	0	0 1	0 1	0	0 1!	0 0	0	0 0	0 0 0
Initial Vol:	35 168	0		0	73	68	55	0	35	0	0	0

Major Street Volume: 344
Minor Approach Volume: 90
Minor Approach Volume Threshold: 652

SIGNAL WARRANT DISCLAIMER
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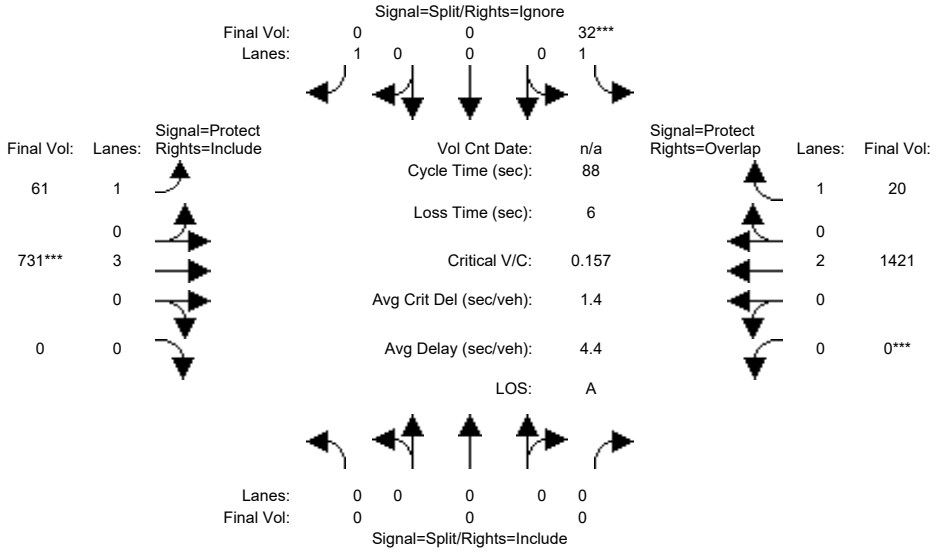
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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #5315: CENTRAL EXPWY/HWY 237-FERGUSON



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	12	0	12	12	65	0	0	48	48
Y+R:	4.0	4.0	4.0	4.6	4.0	4.6	4.8	5.8	4.0	4.0	5.8	5.8
Volume Module:12:00:00 AM												
Base Vol:	0	0	0	32	0	85	61	731	0	0	1421	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	32	0	85	61	731	0	0	1421	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	32	0	85	61	731	0	0	1421	20
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	32	0	0	61	731	0	0	1421	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	32	0	0	61	731	0	0	1421	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	32	0	0	61	731	0	0	1421	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1750	0	1750	1750	5700	0	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.00	0.03	0.13	0.00	0.00	0.37	0.01
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	12.0	0.0	0.0	14.0	70.0	0.0	0.0	56.0	68.0
Volume/Cap:	0.00	0.00	0.00	0.13	0.00	0.00	0.22	0.16	0.00	0.00	0.59	0.01
Delay/Veh:	0.0	0.0	0.0	33.7	0.0	0.0	32.6	0.0	0.0	0.0	4.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	33.7	0.0	0.0	32.6	0.0	0.0	0.0	4.8	0.0
LOS by Move:	A	A	A	C	A	A	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	2	0	0	3	0	0	0	13	0

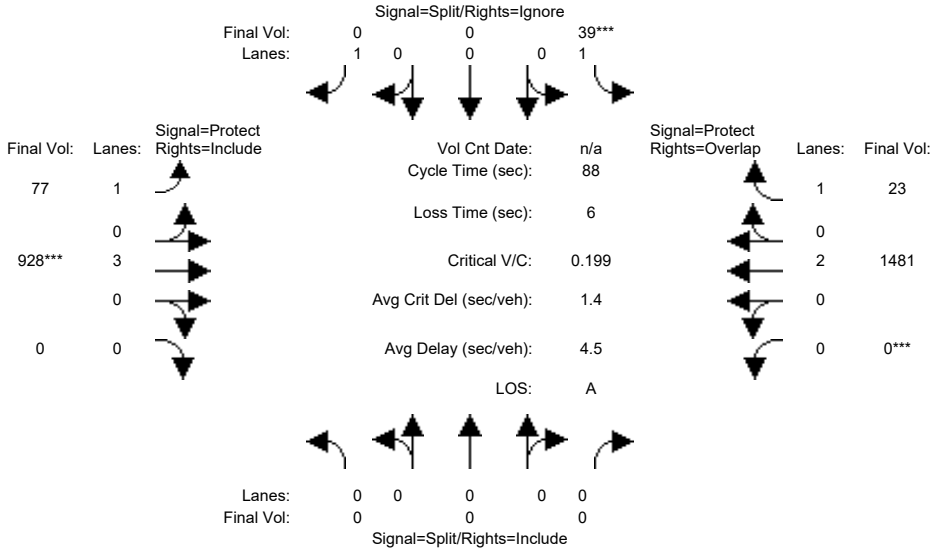
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #5315: CENTRAL EXPWY/HWY 237-FERGUSON



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	12	0	12	12	65	0	0	48	48
Y+R:	4.0	4.0	4.0	4.6	4.0	4.6	4.8	5.8	4.0	4.0	5.8	5.8
Volume Module:												
Base Vol:	0	0	0	39	0	96	77	928	0	0	1481	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	39	0	96	77	928	0	0	1481	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	39	0	96	77	928	0	0	1481	23
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	39	0	0	77	928	0	0	1481	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	39	0	0	77	928	0	0	1481	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	39	0	0	77	928	0	0	1481	23
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1750	0	1750	1750	5700	0	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.00	0.04	0.16	0.00	0.00	0.39	0.01
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	12.0	0.0	0.0	14.0	70.0	0.0	0.0	56.0	68.0
Volume/Cap:	0.00	0.00	0.00	0.16	0.00	0.00	0.28	0.20	0.00	0.00	0.61	0.02
Delay/Veh:	0.0	0.0	0.0	33.9	0.0	0.0	33.1	0.0	0.0	0.0	5.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	33.9	0.0	0.0	33.1	0.0	0.0	0.0	5.0	0.0
LOS by Move:	A	A	A	C	A	A	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	2	0	0	4	1	0	0	14	0

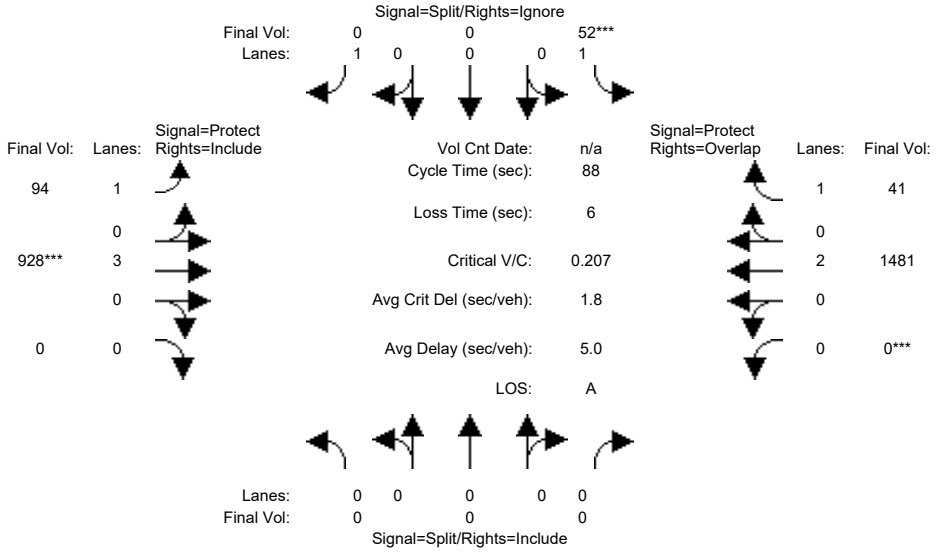
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #5315: CENTRAL EXPWY/HWY 237-FERGUSON



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	12	0	12	12	65	0	0	48	48
Y+R:	4.0	4.0	4.0	4.6	4.0	4.6	4.8	5.8	4.0	4.0	5.8	5.8
Volume Module:												
Base Vol:	0	0	0	39	0	96	77	928	0	0	1481	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	39	0	96	77	928	0	0	1481	23
Added Vol:	0	0	0	13	0	23	17	0	0	0	0	18
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	52	0	119	94	928	0	0	1481	41
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	52	0	0	94	928	0	0	1481	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	52	0	0	94	928	0	0	1481	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	52	0	0	94	928	0	0	1481	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1750	0	1750	1750	5700	0	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.00	0.05	0.16	0.00	0.00	0.39	0.02
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	12.7	0.0	0.0	13.9	69.3	0.0	0.0	55.5	68.1
Volume/Cap:	0.00	0.00	0.00	0.21	0.00	0.00	0.34	0.21	0.00	0.00	0.62	0.03
Delay/Veh:	0.0	0.0	0.0	33.7	0.0	0.0	33.7	0.0	0.0	0.0	5.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	33.7	0.0	0.0	33.7	0.0	0.0	0.0	5.4	0.0
LOS by Move:	A	A	A	C	A	A	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	3	0	0	5	1	0	0	14	0

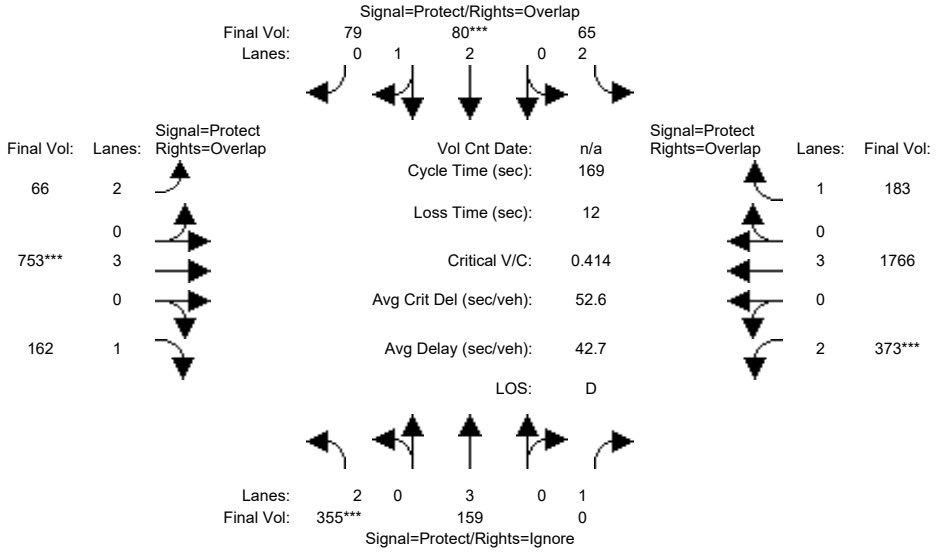
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #5320: CENTRAL EXPWY/MARY AVE



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	27	37	37	12	22	22	12	67	67	28	83	83
Y+R:	6.1	6.0	6.0	6.2	5.9	5.9	6.2	6.2	6.2	6.3	6.2	6.2
Volume Module:12:00:00 AM												
Base Vol:	355	159	361	65	80	79	66	753	162	373	1766	183
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	355	159	361	65	80	79	66	753	162	373	1766	183
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	355	159	361	65	80	79	66	753	162	373	1766	183
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	355	159	0	65	80	79	66	753	162	373	1766	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	355	159	0	65	80	79	66	753	162	373	1766	183
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	355	159	0	65	80	79	66	753	162	373	1766	183
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	3800	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.03	0.00	0.02	0.02	0.05	0.02	0.13	0.09	0.12	0.31	0.10
Crit Moves:	****				****			****		****		
Green Time:	33.2	41.7	0.0	13.5	22.0	34.9	12.9	67.0	100.2	34.8	89.0	102.5
Volume/Cap:	0.57	0.11	0.00	0.26	0.16	0.22	0.28	0.33	0.16	0.57	0.59	0.17
Delay/Veh:	62.9	49.4	0.0	73.6	65.4	55.9	74.3	40.3	21.4	62.3	35.3	20.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.9	49.4	0.0	73.6	65.4	55.9	74.3	40.3	21.4	62.3	35.3	20.7
LOS by Move:	E	D	A	E	E	E	E	D	C	E	D	C
HCM2k95thQ:	19	4	0	4	4	7	4	18	11	20	40	12

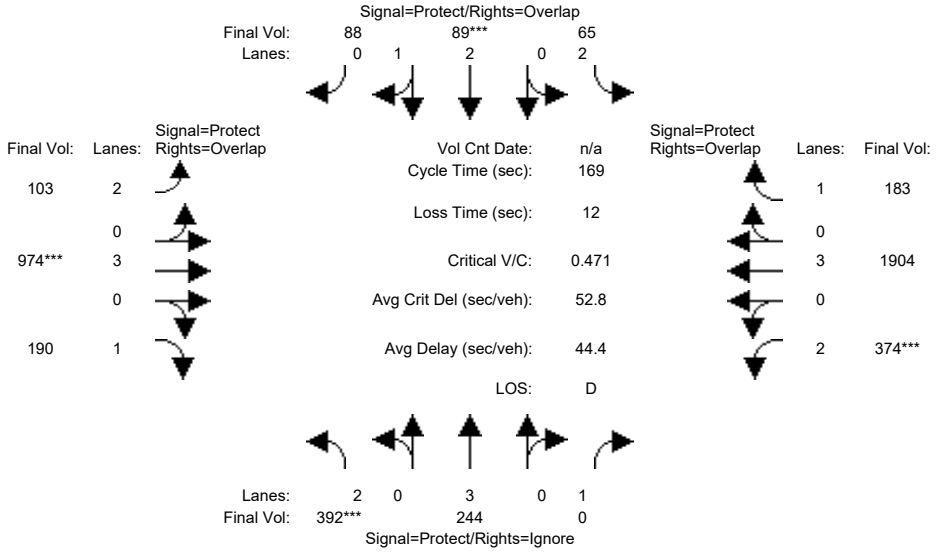
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #5320: CENTRAL EXPWY/MARY AVE



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	27	37	37	12	22	22	12	67	67	28	83	83
Y+R:	6.1	6.0	6.0	6.2	5.9	5.9	6.2	6.2	6.2	6.3	6.2	6.2
Volume Module:												
Base Vol:	392	244	366	65	89	88	103	974	190	374	1904	183
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	392	244	366	65	89	88	103	974	190	374	1904	183
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	392	244	366	65	89	88	103	974	190	374	1904	183
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	392	244	0	65	89	88	103	974	190	374	1904	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	392	244	0	65	89	88	103	974	190	374	1904	183
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	392	244	0	65	89	88	103	974	190	374	1904	183
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	3800	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.04	0.00	0.02	0.02	0.05	0.03	0.17	0.11	0.12	0.33	0.10
Crit Moves:	****				****			****		****		
Green Time:	34.8	42.9	0.0	13.9	22.0	34.7	12.7	67.0	101.8	33.2	87.5	101.5
Volume/Cap:	0.60	0.17	0.00	0.25	0.18	0.25	0.44	0.43	0.18	0.60	0.64	0.17
Delay/Veh:	62.5	49.2	0.0	73.2	65.6	56.4	76.1	42.2	21.1	64.0	37.7	21.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.5	49.2	0.0	73.2	65.6	56.4	76.1	42.2	21.1	64.0	37.7	21.1
LOS by Move:	E	D	A	E	E	E	E	D	C	E	D	C
HCM2k95thQ:	21	6	0	4	4	8	7	24	12	21	44	12

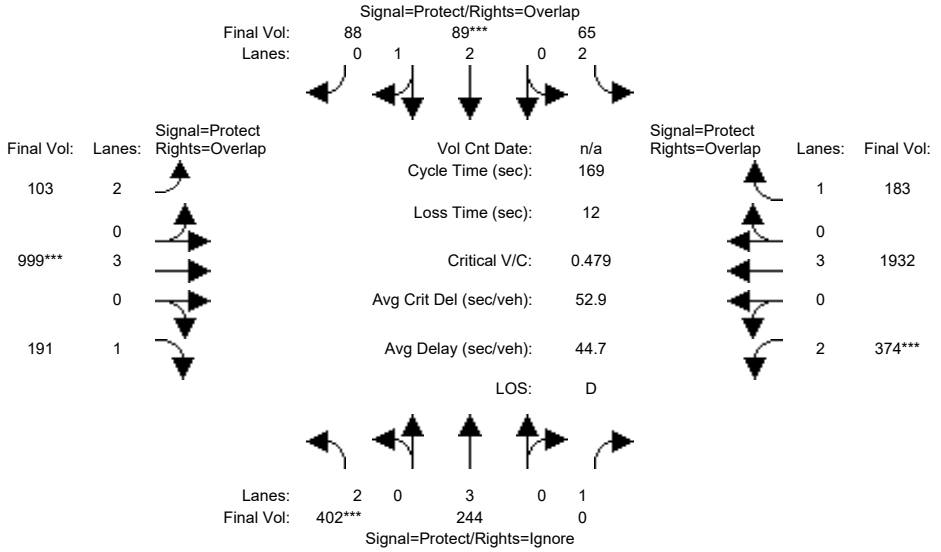
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj AM

Intersection #5320: CENTRAL EXPWY/MARY AVE



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	27	37	37	12	22	22	12	67	67	28	83	83
Y+R:	6.1	6.0	6.0	6.2	5.9	5.9	6.2	6.2	6.2	6.3	6.2	6.2
Volume Module:												
Base Vol:	392	244	366	65	89	88	103	974	190	374	1904	183
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	392	244	366	65	89	88	103	974	190	374	1904	183
Added Vol:	10	0	0	0	0	0	0	25	1	0	28	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	402	244	366	65	89	88	103	999	191	374	1932	183
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	402	244	0	65	89	88	103	999	191	374	1932	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	402	244	0	65	89	88	103	999	191	374	1932	183
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	402	244	0	65	89	88	103	999	191	374	1932	183
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	3800	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.13	0.04	0.00	0.02	0.02	0.05	0.03	0.18	0.11	0.12	0.34	0.10
Crit Moves:	****				****			****			****	
Green Time:	35.2	43.2	0.0	14.0	22.0	34.6	12.6	67.0	102.2	32.8	87.2	101.2
Volume/Cap:	0.61	0.17	0.00	0.25	0.18	0.25	0.44	0.44	0.18	0.61	0.66	0.17
Delay/Veh:	62.4	49.0	0.0	73.1	65.6	56.4	76.1	42.4	20.9	64.4	38.3	21.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.4	49.0	0.0	73.1	65.6	56.4	76.1	42.4	20.9	64.4	38.3	21.2
LOS by Move:	E	D	A	E	E	E	E	D	C	E	D	C
HCM2k95thQ:	21	6	0	4	4	8	7	25	12	21	45	12

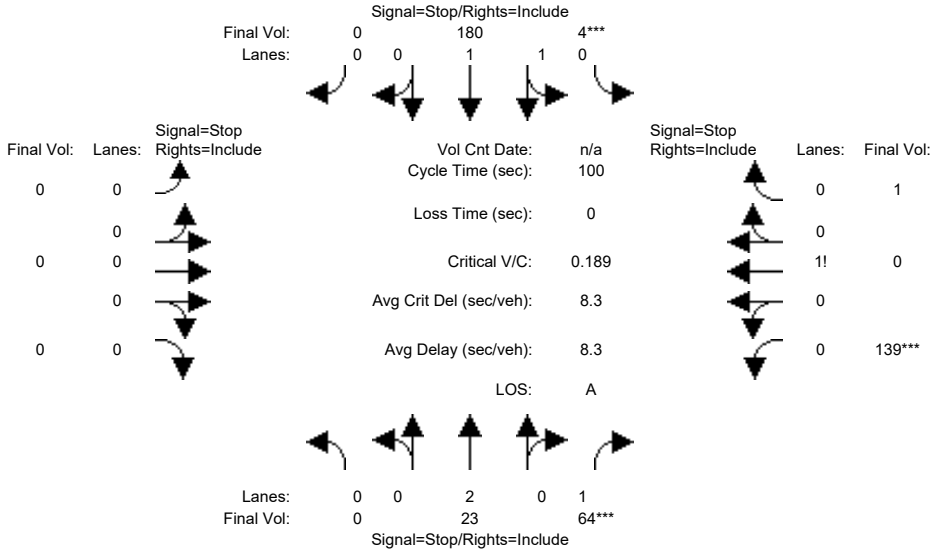
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing PM

Intersection #1: Ellis Street and Manila Drive



Street Name:	Ellis Street						Manila Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:12:00:00 AM												
Base Vol:	0	23	64	4	180	0	0	0	0	139	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	23	64	4	180	0	0	0	0	139	0	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	23	64	4	180	0	0	0	0	139	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	23	64	4	180	0	0	0	0	139	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	23	64	4	180	0	0	0	0	139	0	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	23	64	4	180	0	0	0	0	139	0	1
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.04	1.96	0.00	0.00	0.00	0.00	0.99	0.00	0.01
Final Sat.:	0	1403	812	31	1401	0	0	0	0	734	0	5
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.02	0.08	0.13	0.13	xxxx	xxxx	xxxx	xxxx	0.19	xxxx	0.19
Crit Moves:			****	****						****		
Delay/Veh:	0.0	7.8	7.3	8.3	8.3	0.0	0.0	0.0	0.0	8.7	0.0	8.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	7.8	7.3	8.3	8.3	0.0	0.0	0.0	0.0	8.7	0.0	8.7
LOS by Move:	*	A	A	A	A	*	*	*	*	A	*	A
ApproachDel:		7.5			8.3			xxxxx			8.7	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		7.5			8.3			xxxxx			8.7	
LOS by Appr:		A			A			*			A	
AllWayAvgQ:	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 Ellis Street and Manila Drive

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	0	0	2	0 1	0	1	1	0 0	0	0	0	0 0	0	0	1!	0 0
Initial Vol:	0	23	64		4	180	0		0	0	0		139	0	1	

Major Street Volume: 271
Minor Approach Volume: 140
Minor Approach Volume Threshold: 735

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

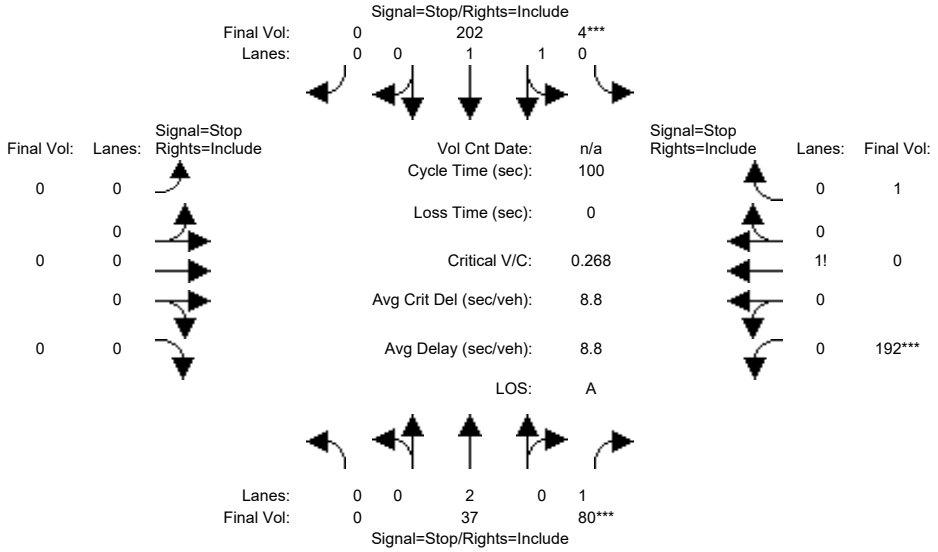
The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background PM

Intersection #1: Ellis Street and Manila Drive



Street Name:	Ellis Street						Manila Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	37	80	4	202	0	0	0	0	192	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	37	80	4	202	0	0	0	0	192	0	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	37	80	4	202	0	0	0	0	192	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	37	80	4	202	0	0	0	0	192	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	37	80	4	202	0	0	0	0	192	0	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	37	80	4	202	0	0	0	0	192	0	1
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.04	1.96	0.00	0.00	0.00	0.00	0.99	0.00	0.01
Final Sat.:	0	1344	774	27	1348	0	0	0	0	716	0	4
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.03	0.10	0.15	0.15	xxxx	xxxx	xxxx	xxxx	0.27	xxxx	0.27
Crit Moves:			****	****						****		
Delay/Veh:	0.0	8.0	7.7	8.7	8.7	0.0	0.0	0.0	0.0	9.5	0.0	9.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.0	7.7	8.7	8.7	0.0	0.0	0.0	0.0	9.5	0.0	9.5
LOS by Move:	*	A	A	A	A	*	*	*	*	A	*	A
ApproachDel:		7.8			8.7			xxxxxx			9.5	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		7.8			8.7			xxxxxx			9.5	
LOS by Appr:		A			A			*			A	
AllWayAvgQ:	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 Ellis Street and Manila Drive

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 2	0	1	0 1 1	0	0	0 0 0	0	0	0 0 1!	0	0
Initial Vol:	0	37	80	4	202	0	0	0	0	192	0	1

Major Street Volume: 323
Minor Approach Volume: 193
Minor Approach Volume Threshold: 674

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

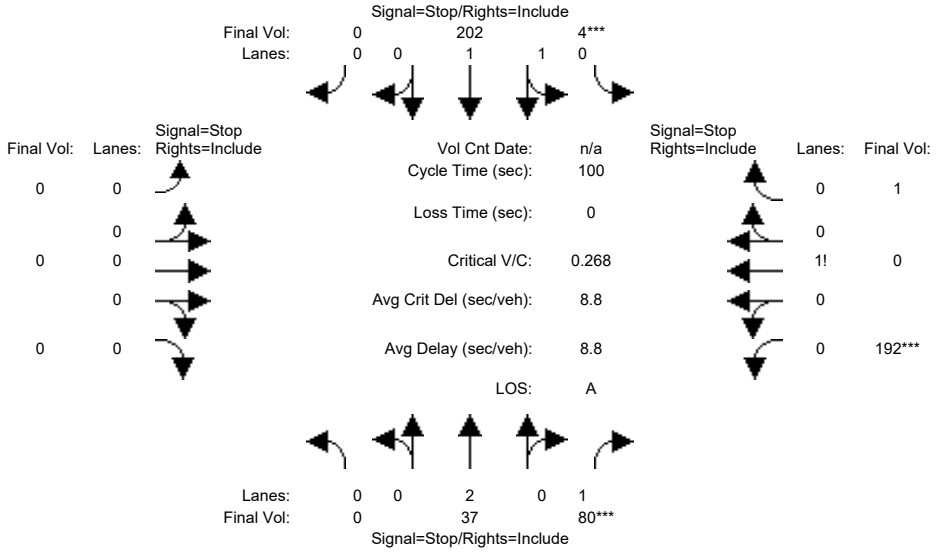
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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background + Prj PM

Intersection #1: Ellis Street and Manila Drive



Street Name:	Ellis Street						Manila Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	37	80	4	202	0	0	0	0	192	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	37	80	4	202	0	0	0	0	192	0	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	37	80	4	202	0	0	0	0	192	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	37	80	4	202	0	0	0	0	192	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	37	80	4	202	0	0	0	0	192	0	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	37	80	4	202	0	0	0	0	192	0	1
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.04	1.96	0.00	0.00	0.00	0.00	0.99	0.00	0.01
Final Sat.:	0	1344	774	27	1348	0	0	0	0	716	0	4
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.03	0.10	0.15	0.15	xxxx	xxxx	xxxx	xxxx	0.27	xxxx	0.27
Crit Moves:			****	****						****		
Delay/Veh:	0.0	8.0	7.7	8.7	8.7	0.0	0.0	0.0	0.0	9.5	0.0	9.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.0	7.7	8.7	8.7	0.0	0.0	0.0	0.0	9.5	0.0	9.5
LOS by Move:	*	A	A	A	A	*	*	*	*	A	*	A
ApproachDel:		7.8			8.7			xxxxxx			9.5	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		7.8			8.7			xxxxxx			9.5	
LOS by Appr:		A			A			*			A	
AllWayAvgQ:	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 Ellis Street and Manila Drive

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 2	0	1	0 1 1	0	0	0 0 0	0	0	0 0 1!	0	0
Initial Vol:	0	37	80	4	202	0	0	0	0	192	0	1

Major Street Volume: 323
Minor Approach Volume: 193
Minor Approach Volume Threshold: 674

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

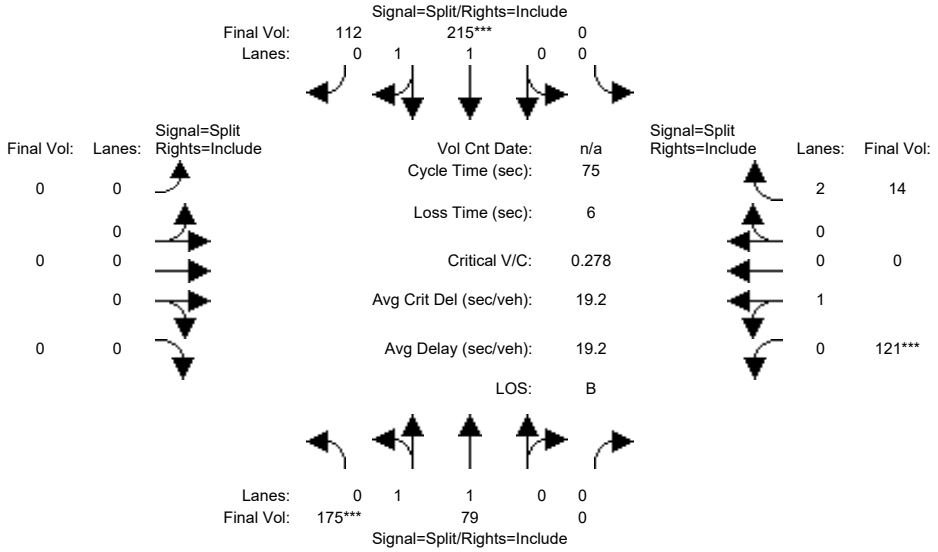
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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #2: Ellis Street and US-101 North Ramps



Street Name:	Ellis Street						US-101 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	0	0	10	10	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	175	79	0	0	215	112	0	0	0	121	0	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	175	79	0	0	215	112	0	0	0	121	0	14
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	175	79	0	0	215	112	0	0	0	121	0	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	175	79	0	0	215	112	0	0	0	121	0	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	175	79	0	0	215	112	0	0	0	121	0	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	175	79	0	0	215	112	0	0	0	121	0	14
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.95	0.95	0.83
Lanes:	1.00	1.00	0.00	0.00	1.30	0.70	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	1750	1900	0	0	2432	1267	0	0	0	1800	0	3150
Capacity Analysis Module:												
Vol/Sat:	0.10	0.04	0.00	0.00	0.09	0.09	0.00	0.00	0.00	0.07	0.00	0.00
Crit Moves:	****				****					****		
Green Time:	27.0	27.0	0.0	0.0	23.9	23.9	0.0	0.0	0.0	18.1	0.0	18.1
Volume/Cap:	0.28	0.12	0.00	0.00	0.28	0.28	0.00	0.00	0.00	0.28	0.00	0.02
Delay/Veh:	17.2	16.1	0.0	0.0	19.3	19.3	0.0	0.0	0.0	23.5	0.0	21.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.2	16.1	0.0	0.0	19.3	19.3	0.0	0.0	0.0	23.5	0.0	21.7
LOS by Move:	B	B	A	A	B	B	A	A	A	C	A	C
HCM2k95thQ:	6	2	0	0	6	6	0	0	0	5	0	0

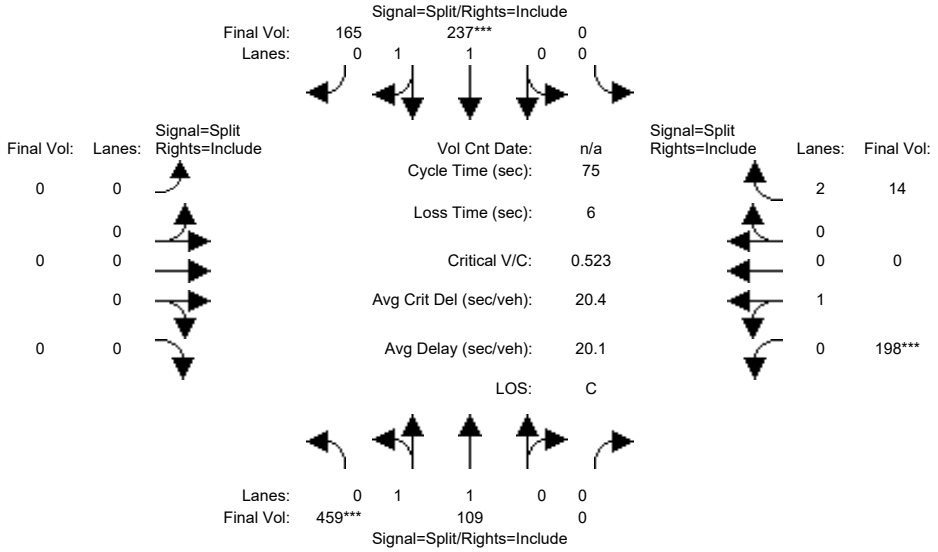
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #2: Ellis Street and US-101 North Ramps



Street Name:	Ellis Street						US-101 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	0	0	10	10	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	459	109	0	0	237	165	0	0	0	198	0	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	459	109	0	0	237	165	0	0	0	198	0	14
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	459	109	0	0	237	165	0	0	0	198	0	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	459	109	0	0	237	165	0	0	0	198	0	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	459	109	0	0	237	165	0	0	0	198	0	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	459	109	0	0	237	165	0	0	0	198	0	14
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.95	0.95	0.83
Lanes:	1.00	1.00	0.00	0.00	1.16	0.84	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	1750	1900	0	0	2180	1518	0	0	0	1800	0	3150
Capacity Analysis Module:												
Vol/Sat:	0.26	0.06	0.00	0.00	0.11	0.11	0.00	0.00	0.00	0.11	0.00	0.00
Crit Moves:	****				****					****		
Green Time:	37.6	37.6	0.0	0.0	15.6	15.6	0.0	0.0	0.0	15.8	0.0	15.8
Volume/Cap:	0.52	0.11	0.00	0.00	0.52	0.52	0.00	0.00	0.00	0.52	0.00	0.02
Delay/Veh:	13.1	9.9	0.0	0.0	27.1	27.1	0.0	0.0	0.0	27.6	0.0	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.1	9.9	0.0	0.0	27.1	27.1	0.0	0.0	0.0	27.6	0.0	23.5
LOS by Move:	B	A	A	A	C	C	A	A	A	C	A	C
HCM2k95thQ:	14	3	0	0	10	10	0	0	0	10	0	0

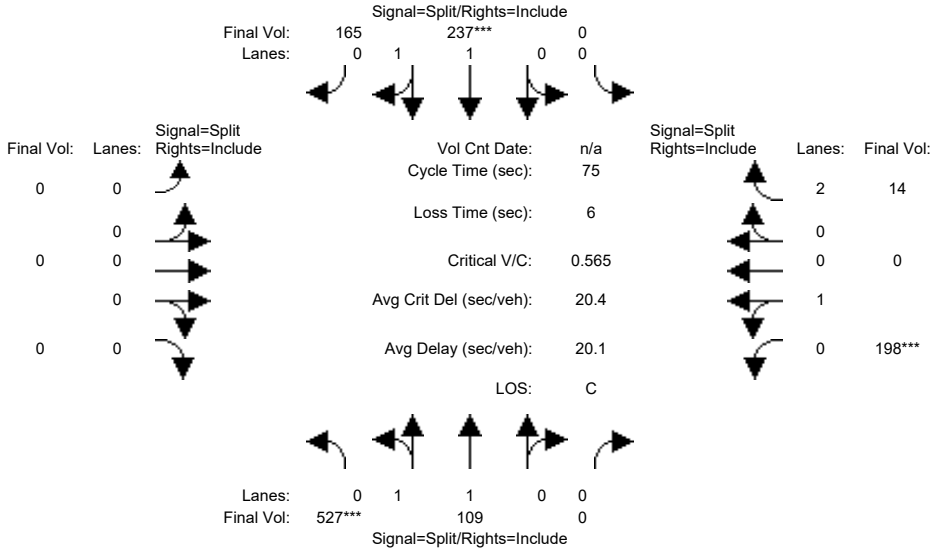
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #2: Ellis Street and US-101 North Ramps



Street Name:	Ellis Street						US-101 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	0	0	10	10	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	459	109	0	0	237	165	0	0	0	198	0	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	459	109	0	0	237	165	0	0	0	198	0	14
Added Vol:	68	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	527	109	0	0	237	165	0	0	0	198	0	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	527	109	0	0	237	165	0	0	0	198	0	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	527	109	0	0	237	165	0	0	0	198	0	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	527	109	0	0	237	165	0	0	0	198	0	14
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.95	0.95	0.83
Lanes:	1.00	1.00	0.00	0.00	1.16	0.84	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	1750	1900	0	0	2180	1518	0	0	0	1800	0	3150
Capacity Analysis Module:												
Vol/Sat:	0.30	0.06	0.00	0.00	0.11	0.11	0.00	0.00	0.00	0.11	0.00	0.00
Crit Moves:	****				****					****		
Green Time:	40.0	40.0	0.0	0.0	14.4	14.4	0.0	0.0	0.0	14.6	0.0	14.6
Volume/Cap:	0.57	0.11	0.00	0.00	0.57	0.57	0.00	0.00	0.00	0.57	0.00	0.02
Delay/Veh:	12.4	8.7	0.0	0.0	28.5	28.5	0.0	0.0	0.0	29.5	0.0	24.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.4	8.7	0.0	0.0	28.5	28.5	0.0	0.0	0.0	29.5	0.0	24.4
LOS by Move:	B	A	A	A	C	C	A	A	A	C	A	C
HCM2k95thQ:	16	2	0	0	10	10	0	0	0	10	0	0

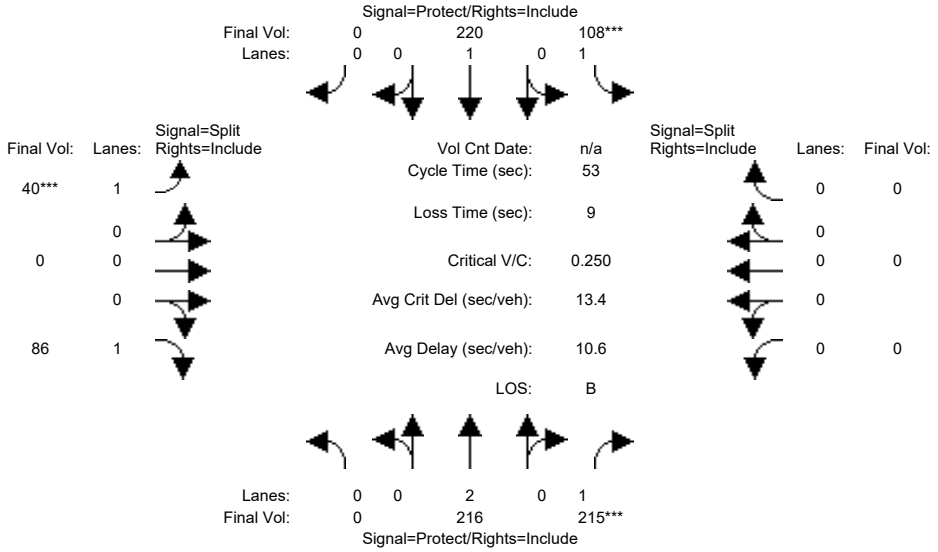
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #3: Ellis Street and US-101 South Ramps



Street Name:	Ellis Street						101 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	7	10	0	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	0	216	215	108	220	0	40	0	86	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	216	215	108	220	0	40	0	86	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	216	215	108	220	0	40	0	86	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	216	215	108	220	0	40	0	86	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	216	215	108	220	0	40	0	86	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	216	215	108	220	0	40	0	86	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	1750	1900	0	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.06	0.12	0.06	0.12	0.00	0.02	0.00	0.05	0.00	0.00	0.00
Crit Moves:			****	****			****					
Green Time:	0.0	22.3	22.3	11.2	33.6	0.0	10.4	0.0	10.4	0.0	0.0	0.0
Volume/Cap:	0.00	0.13	0.29	0.29	0.18	0.00	0.12	0.00	0.25	0.00	0.00	0.00
Delay/Veh:	0.0	9.4	10.3	18.0	4.1	0.0	17.7	0.0	18.4	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.4	10.3	18.0	4.1	0.0	17.7	0.0	18.4	0.0	0.0	0.0
LOS by Move:	A	A	B	B	A	A	B	A	B	A	A	A
HCM2k95thQ:	0	2	5	3	3	0	1	0	3	0	0	0

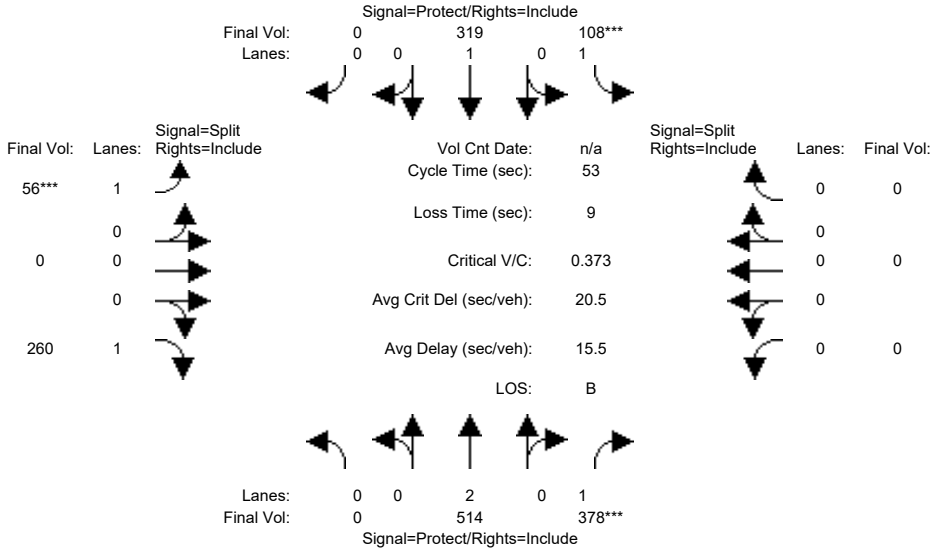
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #3: Ellis Street and US-101 South Ramps



Street Name:	Ellis Street						101 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	7	10	0	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	514	378	108	319	0	56	0	260	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	514	378	108	319	0	56	0	260	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	514	378	108	319	0	56	0	260	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	514	378	108	319	0	56	0	260	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	514	378	108	319	0	56	0	260	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	514	378	108	319	0	56	0	260	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	1750	1900	0	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.14	0.22	0.06	0.17	0.00	0.03	0.00	0.15	0.00	0.00	0.00
Crit Moves:			****	****			****					
Green Time:	0.0	15.9	15.9	7.0	22.9	0.0	21.1	0.0	21.1	0.0	0.0	0.0
Volume/Cap:	0.00	0.45	0.72	0.47	0.39	0.00	0.08	0.00	0.37	0.00	0.00	0.00
Delay/Veh:	0.0	15.3	21.4	22.8	10.6	0.0	10.0	0.0	11.6	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	15.3	21.4	22.8	10.6	0.0	10.0	0.0	11.6	0.0	0.0	0.0
LOS by Move:	A	B	C	C	B	A	A	A	B	A	A	A
HCM2k95thQ:	0	7	12	4	7	0	1	0	7	0	0	0

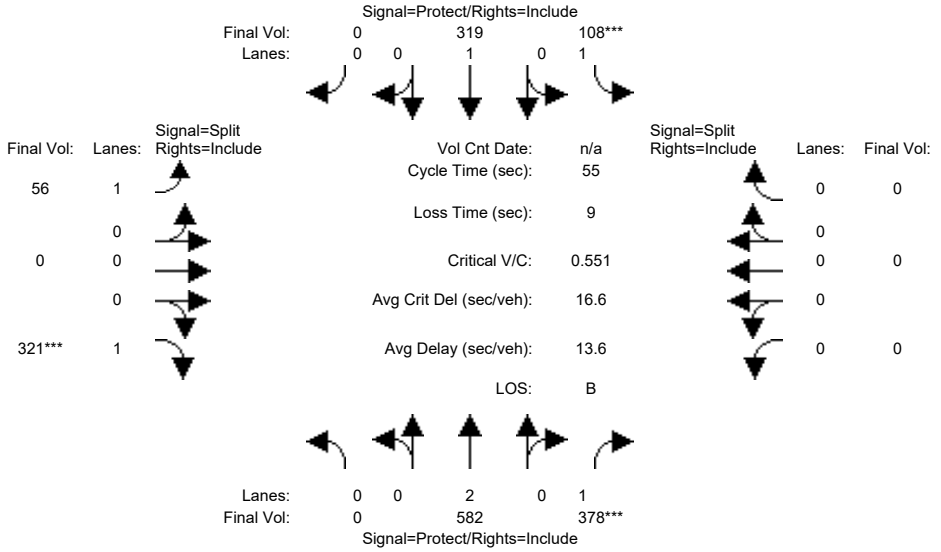
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #3: Ellis Street and US-101 South Ramps



Street Name:	Ellis Street						101 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	7	10	0	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	514	378	108	319	0	56	0	260	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	514	378	108	319	0	56	0	260	0	0	0
Added Vol:	0	68	0	0	0	0	0	0	61	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	582	378	108	319	0	56	0	321	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	582	378	108	319	0	56	0	321	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	582	378	108	319	0	56	0	321	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	582	378	108	319	0	56	0	321	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	1750	1900	0	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.22	0.06	0.17	0.00	0.03	0.00	0.18	0.00	0.00	0.00
Crit Moves:			****	****					****			
Green Time:	0.0	21.1	21.1	7.0	28.1	0.0	17.9	0.0	17.9	0.0	0.0	0.0
Volume/Cap:	0.00	0.40	0.56	0.48	0.33	0.00	0.10	0.00	0.56	0.00	0.00	0.00
Delay/Veh:	0.0	12.5	14.4	24.0	8.1	0.0	13.0	0.0	16.6	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	12.5	14.4	24.0	8.1	0.0	13.0	0.0	16.6	0.0	0.0	0.0
LOS by Move:	A	B	B	C	A	A	B	A	B	A	A	A
HCM2k95thQ:	0	7	10	4	6	0	2	0	11	0	0	0

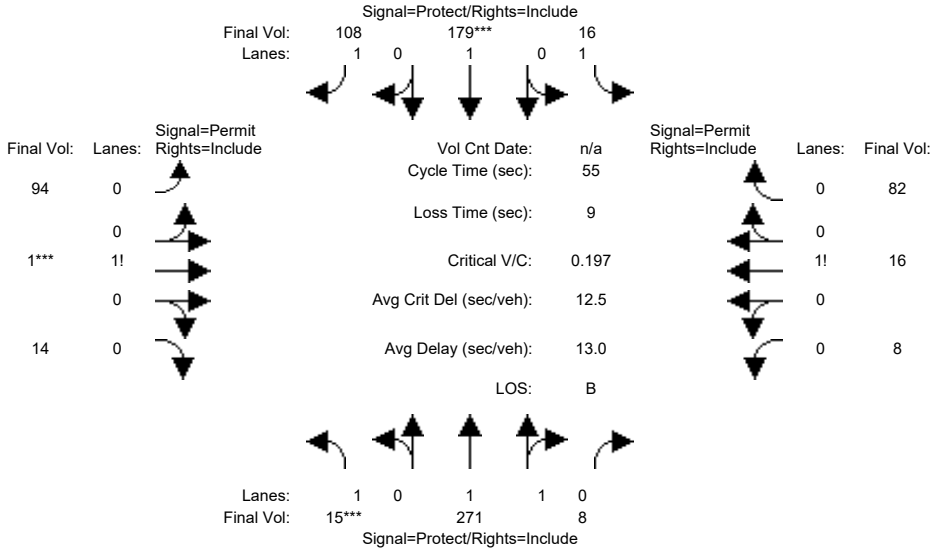
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #4: Ellis Street and Fairchild Drive



Street Name:	Ellis Street						Fairchild Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	15	271	8	16	179	108	94	1	14	8	16	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	271	8	16	179	108	94	1	14	8	16	82
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	271	8	16	179	108	94	1	14	8	16	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	271	8	16	179	108	94	1	14	8	16	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	271	8	16	179	108	94	1	14	8	16	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	271	8	16	179	108	94	1	14	8	16	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00	1.94	0.06	1.00	1.00	1.00	0.86	0.01	0.13	0.08	0.15	0.77
Final Sat.:	1750	3594	106	1750	1900	1750	1509	16	225	132	264	1354
Capacity Analysis Module:												
Vol/Sat:	0.01	0.08	0.08	0.01	0.09	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Crit Moves:	****				****			****				
Green Time:	7.0	17.9	17.9	12.5	23.5	23.5	15.5	15.5	15.5	15.5	15.5	15.5
Volume/Cap:	0.07	0.23	0.23	0.04	0.22	0.14	0.22	0.22	0.22	0.21	0.21	0.21
Delay/Veh:	21.3	13.6	13.6	16.6	10.1	9.7	15.3	15.3	15.3	15.3	15.3	15.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.3	13.6	13.6	16.6	10.1	9.7	15.3	15.3	15.3	15.3	15.3	15.3
LOS by Move:	C	B	B	B	B	A	B	B	B	B	B	B
HCM2k95thQ:	1	4	4	0	4	2	3	3	3	3	3	3

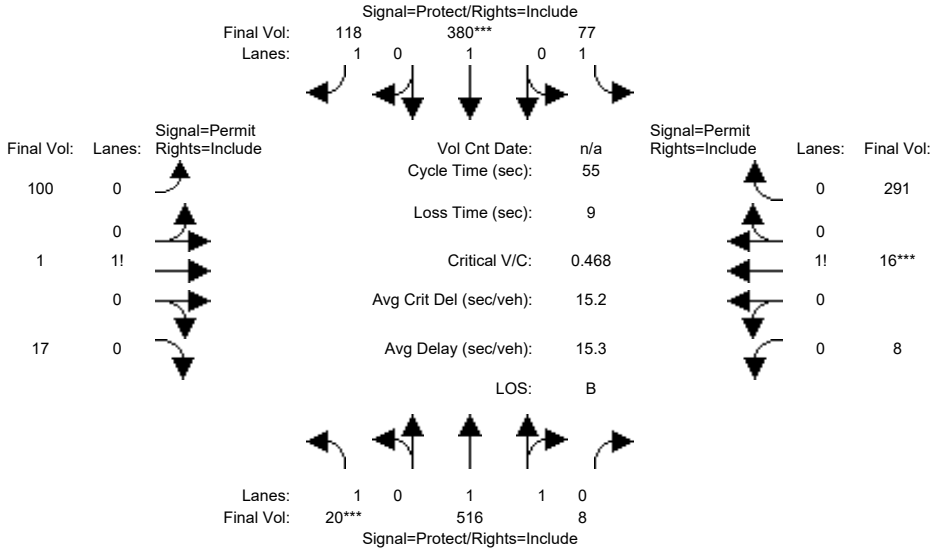
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #4: Ellis Street and Fairchild Drive



Street Name:	Ellis Street						Fairchild Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	516	8	77	380	118	100	1	17	8	16	291
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	516	8	77	380	118	100	1	17	8	16	291
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	516	8	77	380	118	100	1	17	8	16	291
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	516	8	77	380	118	100	1	17	8	16	291
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	516	8	77	380	118	100	1	17	8	16	291
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	516	8	77	380	118	100	1	17	8	16	291
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00	1.97	0.03	1.00	1.00	1.00	0.85	0.01	0.14	0.03	0.05	0.92
Final Sat.:	1750	3643	56	1750	1900	1750	1483	15	252	44	89	1617
Capacity Analysis Module:												
Vol/Sat:	0.01	0.14	0.14	0.04	0.20	0.07	0.07	0.07	0.07	0.18	0.18	0.18
Crit Moves:	****				****						****	
Green Time:	7.0	16.2	16.2	11.3	20.5	20.5	18.5	18.5	18.5	18.5	18.5	18.5
Volume/Cap:	0.09	0.48	0.48	0.21	0.54	0.18	0.20	0.20	0.20	0.54	0.54	0.54
Delay/Veh:	21.4	16.3	16.3	18.4	14.3	11.7	13.2	13.2	13.2	15.8	15.8	15.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.4	16.3	16.3	18.4	14.3	11.7	13.2	13.2	13.2	15.8	15.8	15.8
LOS by Move:	C	B	B	B	B	B	B	B	B	B	B	B
HCM2k95thQ:	1	8	8	2	10	3	3	3	3	10	10	10

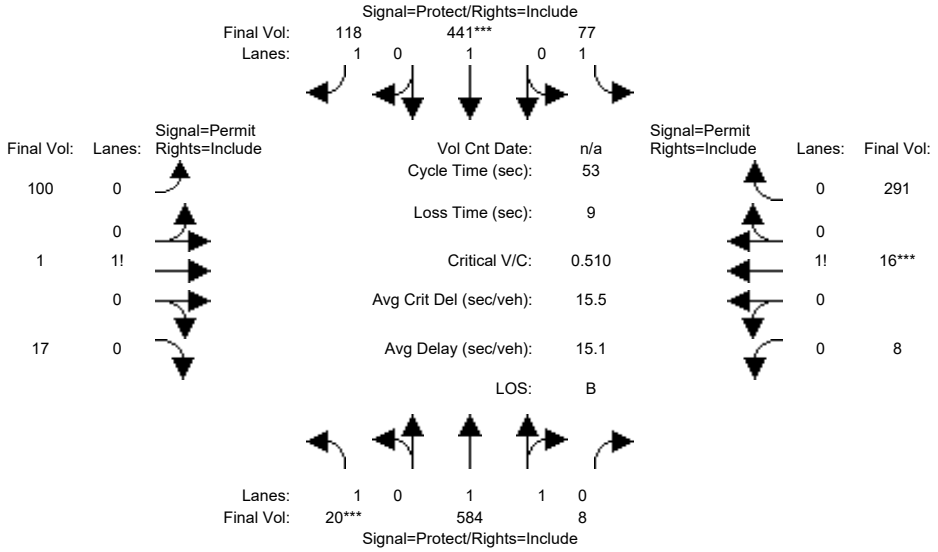
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #4: Ellis Street and Fairchild Drive



Street Name:	Ellis Street						Fairchild Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	516	8	77	380	118	100	1	17	8	16	291
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	516	8	77	380	118	100	1	17	8	16	291
Added Vol:	0	68	0	0	61	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	584	8	77	441	118	100	1	17	8	16	291
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	584	8	77	441	118	100	1	17	8	16	291
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	584	8	77	441	118	100	1	17	8	16	291
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	584	8	77	441	118	100	1	17	8	16	291
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00	1.97	0.03	1.00	1.00	1.00	0.85	0.01	0.14	0.03	0.05	0.92
Final Sat.:	1750	3650	50	1750	1900	1750	1483	15	252	44	89	1617
Capacity Analysis Module:												
Vol/Sat:	0.01	0.16	0.16	0.04	0.23	0.07	0.07	0.07	0.07	0.18	0.18	0.18
Crit Moves:	****				****						****	
Green Time:	7.0	16.4	16.4	11.5	20.8	20.8	16.2	16.2	16.2	16.2	16.2	16.2
Volume/Cap:	0.09	0.52	0.52	0.20	0.59	0.17	0.22	0.22	0.22	0.59	0.59	0.59
Delay/Veh:	20.4	15.5	15.5	17.3	14.0	10.6	13.9	13.9	13.9	17.4	17.4	17.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.4	15.5	15.5	17.3	14.0	10.6	13.9	13.9	13.9	17.4	17.4	17.4
LOS by Move:	C	B	B	B	B	B	B	B	B	B	B	B
HCM2k95thQ:	1	9	9	2	11	3	3	3	3	11	11	11

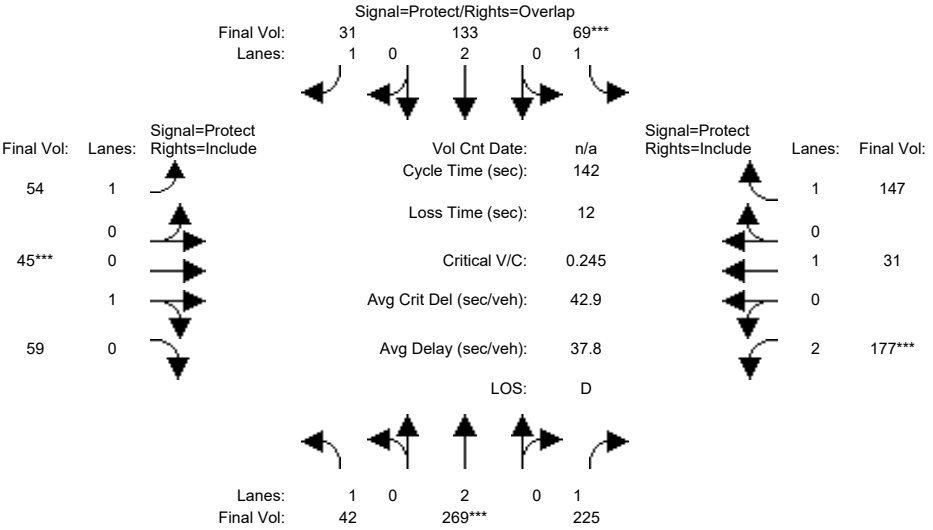
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #6: Maude Avenue and SR 237 Ramps



Street Name:	SR 237 Ramp Connectors						Maude Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	42	269	225	69	133	31	54	45	59	177	31	147
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	42	269	225	69	133	31	54	45	59	177	31	147
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	42	269	225	69	133	31	54	45	59	177	31	147
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	42	269	225	69	133	31	54	45	59	177	31	147
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	269	225	69	133	31	54	45	59	177	31	147
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	42	269	225	69	133	31	54	45	59	177	31	147
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.83	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.43	0.57	2.00	1.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	779	1021	3150	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.07	0.13	0.04	0.04	0.02	0.03	0.06	0.06	0.06	0.02	0.08
Crit Moves:		****		****				****		****		
Green Time:	26.3	41.0	73.6	22.9	37.6	62.0	24.4	33.5	33.5	32.6	41.6	41.6
Volume/Cap:	0.13	0.24	0.25	0.24	0.13	0.04	0.18	0.24	0.24	0.24	0.06	0.29
Delay/Veh:	48.5	38.7	19.0	52.5	39.8	22.9	50.5	44.3	44.3	44.8	36.1	39.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.5	38.7	19.0	52.5	39.8	22.9	50.5	44.3	44.3	44.8	36.1	39.0
LOS by Move:	D	D	B	D	D	C	D	D	D	D	D	D
HCM2k95thQ:	3	9	11	6	4	2	4	8	8	7	2	10

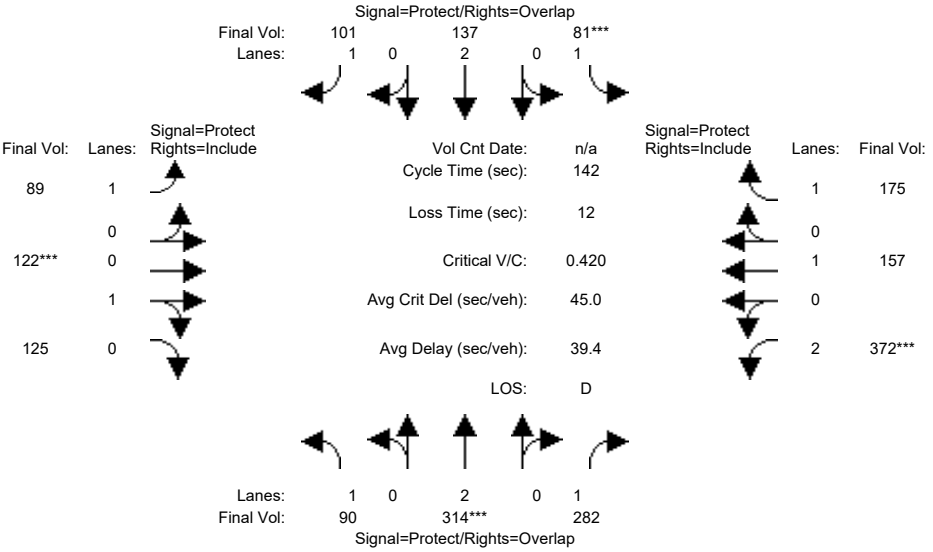
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #6: Maude Avenue and SR 237 Ramps



Street Name:	SR 237 Ramp Connectors						Maude Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	90	314	282	81	137	101	89	122	125	372	157	175
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	314	282	81	137	101	89	122	125	372	157	175
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	90	314	282	81	137	101	89	122	125	372	157	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	314	282	81	137	101	89	122	125	372	157	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	314	282	81	137	101	89	122	125	372	157	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	314	282	81	137	101	89	122	125	372	157	175
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.83	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.49	0.51	2.00	1.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	889	911	3150	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.08	0.16	0.05	0.04	0.06	0.05	0.14	0.14	0.12	0.08	0.10
Crit Moves:		****		****				****		****		
Green Time:	18.4	28.0	67.9	15.7	25.2	54.3	29.1	46.4	46.4	40.0	57.3	57.3
Volume/Cap:	0.40	0.42	0.34	0.42	0.20	0.15	0.25	0.42	0.42	0.42	0.20	0.25
Delay/Veh:	57.8	50.3	23.3	60.4	50.0	28.8	47.6	37.8	37.8	41.9	27.7	28.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.8	50.3	23.3	60.4	50.0	28.8	47.6	37.8	37.8	41.9	27.7	28.3
LOS by Move:	E	D	C	E	D	C	D	D	D	D	C	C
HCM2k95thQ:	8	12	15	8	5	6	7	16	16	15	8	10

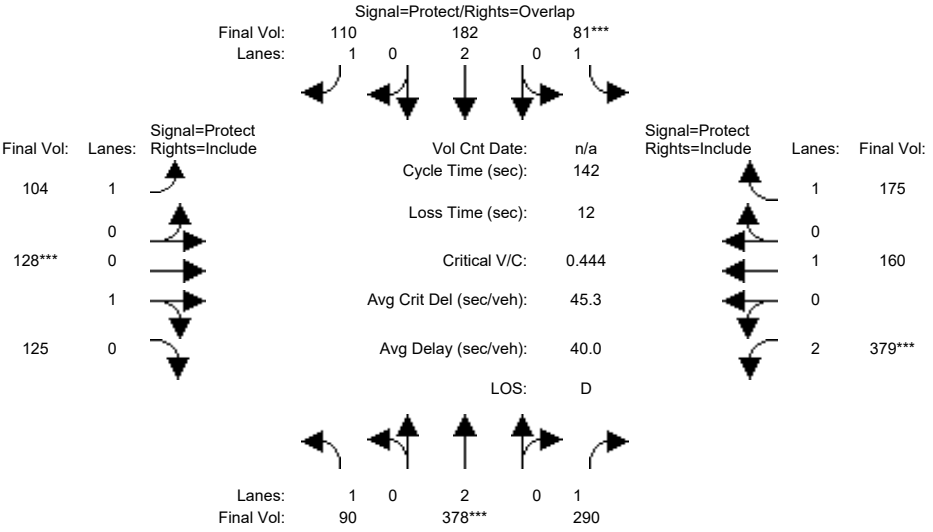
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #6: Maude Avenue and SR 237 Ramps



Street Name:	SR 237 Ramp Connectors						Maude Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	90	314	282	81	137	101	89	122	125	372	157	175
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	314	282	81	137	101	89	122	125	372	157	175
Added Vol:	0	64	8	0	45	9	15	6	0	7	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	90	378	290	81	182	110	104	128	125	379	160	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	378	290	81	182	110	104	128	125	379	160	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	378	290	81	182	110	104	128	125	379	160	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	378	290	81	182	110	104	128	125	379	160	175
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.83	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.51	0.49	2.00	1.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	911	889	3150	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.10	0.17	0.05	0.05	0.06	0.06	0.14	0.14	0.12	0.08	0.10
Crit Moves:		****		****				****		****		
Green Time:	19.7	31.8	70.3	14.8	26.9	58.0	31.1	44.9	44.9	38.5	52.3	52.3
Volume/Cap:	0.37	0.44	0.33	0.44	0.25	0.15	0.27	0.44	0.44	0.44	0.23	0.27
Delay/Veh:	56.5	47.9	21.9	61.5	49.2	26.6	46.4	39.2	39.2	43.3	31.1	31.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.5	47.9	21.9	61.5	49.2	26.6	46.4	39.2	39.2	43.3	31.1	31.7
LOS by Move:	E	D	C	E	D	C	D	D	D	D	C	C
HCM2k95thQ:	8	14	15	8	7	6	8	17	17	16	9	11

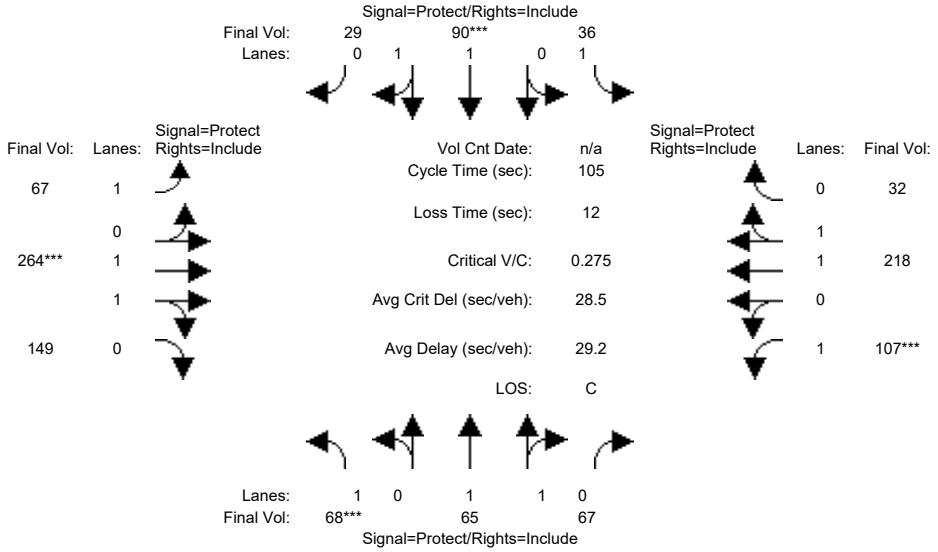
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #7: East Middlefield Road and Whisman Road



Street Name:	Whisman Road						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	68	65	67	36	90	29	67	264	149	107	218	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	65	67	36	90	29	67	264	149	107	218	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	68	65	67	36	90	29	67	264	149	107	218	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	68	65	67	36	90	29	67	264	149	107	218	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	65	67	36	90	29	67	264	149	107	218	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	68	65	67	36	90	29	67	264	149	107	218	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	0.99	0.95	0.92	0.98	0.95
Lanes:	1.00	1.00	1.00	1.00	1.50	0.50	1.00	1.26	0.74	1.00	1.74	0.26
Final Sat.:	1750	1900	1750	1750	2798	901	1750	2364	1334	1750	3226	474
Capacity Analysis Module:												
Vol/Sat:	0.04	0.03	0.04	0.02	0.03	0.03	0.04	0.11	0.11	0.06	0.07	0.07
Crit Moves:	****				****			****			****	
Green Time:	14.8	13.5	13.5	13.5	12.3	12.3	27.1	42.6	42.6	23.3	38.8	38.8
Volume/Cap:	0.28	0.27	0.30	0.16	0.28	0.28	0.15	0.28	0.28	0.28	0.18	0.18
Delay/Veh:	40.9	41.5	41.8	41.0	42.7	42.7	30.2	21.0	21.0	34.2	22.5	22.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.9	41.5	41.8	41.0	42.7	42.7	30.2	21.0	21.0	34.2	22.5	22.5
LOS by Move:	D	D	D	D	D	D	C	C	C	C	C	C
HCM2k95thQ:	5	4	5	2	4	4	4	9	9	6	5	5

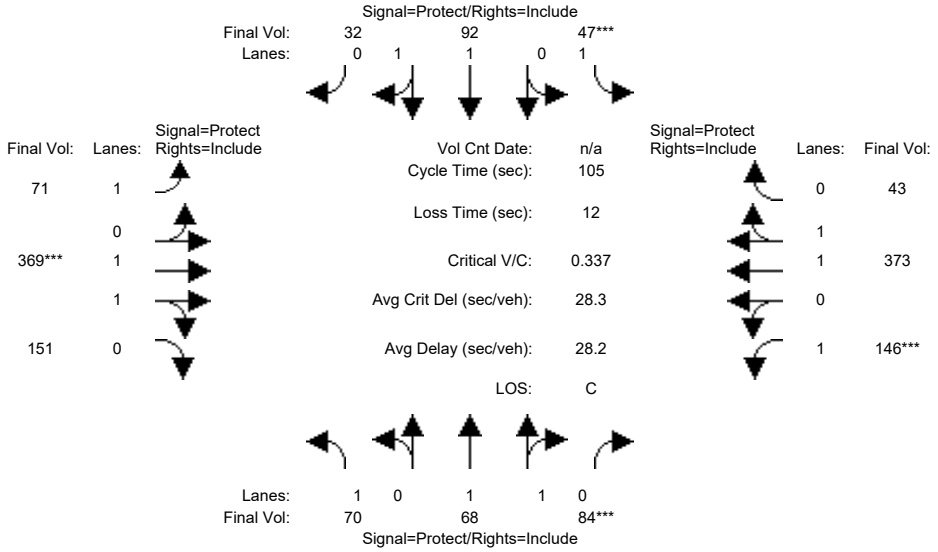
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #7: East Middlefield Road and Whisman Road



Street Name:	Whisman Road						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	70	68	84	47	92	32	71	369	151	146	373	43
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	70	68	84	47	92	32	71	369	151	146	373	43
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	68	84	47	92	32	71	369	151	146	373	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	68	84	47	92	32	71	369	151	146	373	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	68	84	47	92	32	71	369	151	146	373	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	68	84	47	92	32	71	369	151	146	373	43
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	1.00	1.00	1.00	1.00	1.47	0.53	1.00	1.40	0.60	1.00	1.79	0.21
Final Sat.:	1750	1900	1750	1750	2744	955	1750	2625	1074	1750	3317	382
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.05	0.03	0.03	0.03	0.04	0.14	0.14	0.08	0.11	0.11
Crit Moves:			****	****				****		****		
Green Time:	12.3	14.6	14.6	10.0	12.3	12.3	25.4	42.9	42.9	25.5	42.9	42.9
Volume/Cap:	0.34	0.26	0.34	0.28	0.29	0.29	0.17	0.34	0.34	0.34	0.28	0.28
Delay/Veh:	43.6	40.5	41.3	45.1	42.7	42.7	31.6	21.5	21.5	33.4	20.8	20.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.6	40.5	41.3	45.1	42.7	42.7	31.6	21.5	21.5	33.4	20.8	20.8
LOS by Move:	D	D	D	D	D	D	C	C	C	C	C	C
HCM2k95thQ:	5	4	6	4	4	4	4	11	11	8	9	9

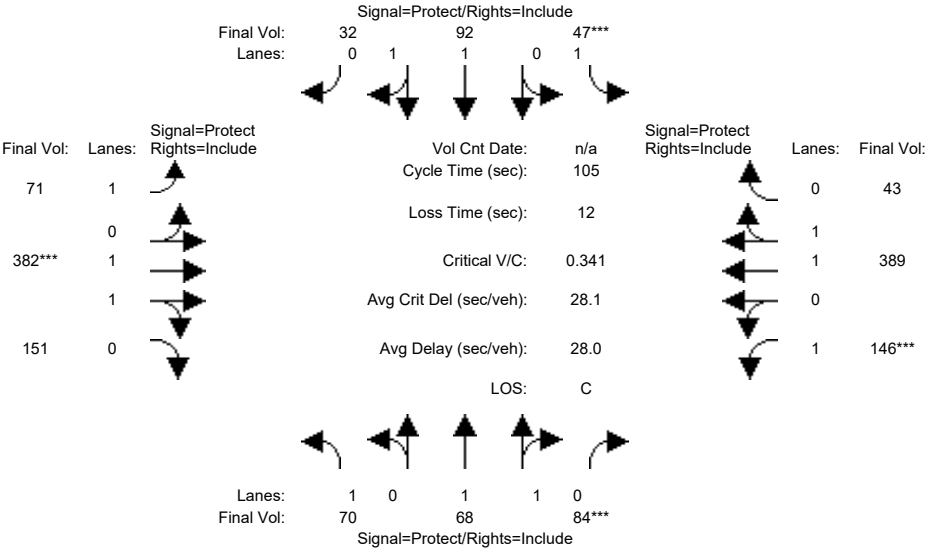
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #7: East Middlefield Road and Whisman Road



Street Name:	Whisman Road						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	70	68	84	47	92	32	71	369	151	146	373	43
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	70	68	84	47	92	32	71	369	151	146	373	43
Added Vol:	0	0	0	0	0	0	0	13	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	68	84	47	92	32	71	382	151	146	389	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	68	84	47	92	32	71	382	151	146	389	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	68	84	47	92	32	71	382	151	146	389	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	68	84	47	92	32	71	382	151	146	389	43
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	1.00	1.00	1.00	1.00	1.47	0.53	1.00	1.42	0.58	1.00	1.80	0.20
Final Sat.:	1750	1900	1750	1750	2744	955	1750	2651	1048	1750	3331	368
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.05	0.03	0.03	0.03	0.04	0.14	0.14	0.08	0.12	0.12
Crit Moves:			****	****				****		****		
Green Time:	12.2	14.5	14.5	10.0	12.2	12.2	24.9	43.4	43.4	25.1	43.6	43.6
Volume/Cap:	0.34	0.26	0.35	0.28	0.29	0.29	0.17	0.35	0.35	0.35	0.28	0.28
Delay/Veh:	43.7	40.7	41.5	45.1	42.8	42.8	32.0	21.2	21.2	33.6	20.4	20.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.7	40.7	41.5	45.1	42.8	42.8	32.0	21.2	21.2	33.6	20.4	20.4
LOS by Move:	D	D	D	D	D	D	C	C	C	C	C	C
HCM2k95thQ:	5	4	6	4	4	4	4	12	12	8	9	9

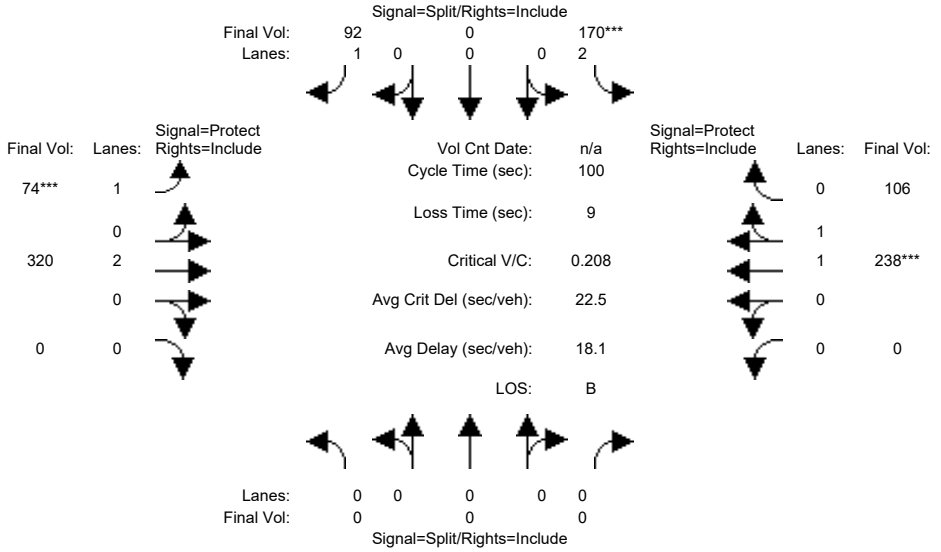
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #8: East Middlefield Road and Ellis Street



Street Name:	Ellis Street						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	0	10	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	0	0	0	170	0	92	74	320	0	0	238	106
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	170	0	92	74	320	0	0	238	106
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	170	0	92	74	320	0	0	238	106
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	170	0	92	74	320	0	0	238	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	170	0	92	74	320	0	0	238	106
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	170	0	92	74	320	0	0	238	106
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92	0.92	0.99	0.95
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.37	0.63
Final Sat.:	0	0	0	3150	0	1750	1750	3800	0	0	2559	1140
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.05	0.04	0.08	0.00	0.00	0.09	0.09
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	25.9	0.0	25.9	20.3	65.1	0.0	0.0	44.7	44.7
Volume/Cap:	0.00	0.00	0.00	0.21	0.00	0.20	0.21	0.13	0.00	0.00	0.21	0.21
Delay/Veh:	0.0	0.0	0.0	29.1	0.0	29.2	33.4	6.7	0.0	0.0	16.9	16.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	29.1	0.0	29.2	33.4	6.7	0.0	0.0	16.9	16.9
LOS by Move:	A	A	A	C	A	C	C	A	A	A	B	B
HCM2k95thQ:	0	0	0	5	0	5	4	4	0	0	6	6

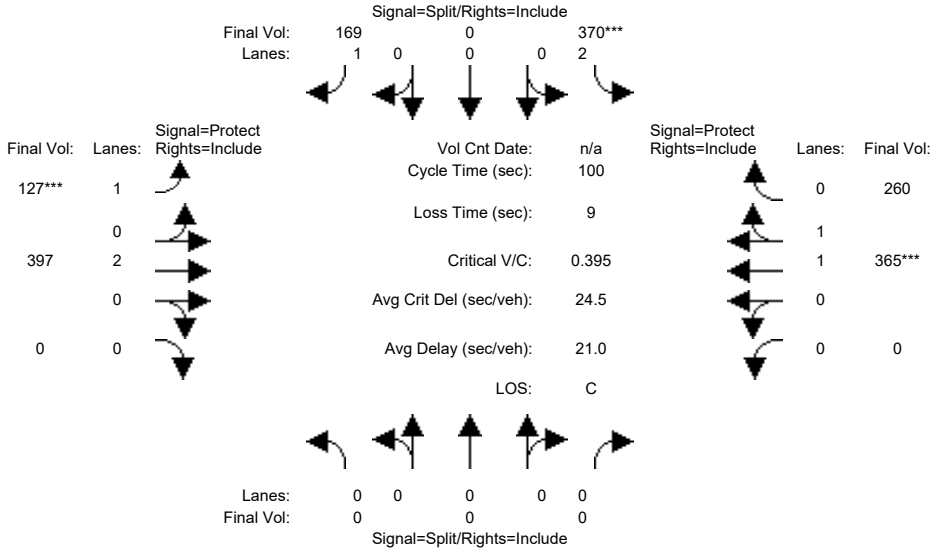
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Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #8: East Middlefield Road and Ellis Street



Street Name:	Ellis Street						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	0	10	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	370	0	169	127	397	0	0	365	260
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	370	0	169	127	397	0	0	365	260
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	370	0	169	127	397	0	0	365	260
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	370	0	169	127	397	0	0	365	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	370	0	169	127	397	0	0	365	260
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	370	0	169	127	397	0	0	365	260
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92	0.92	0.99	0.95
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.15	0.85
Final Sat.:	0	0	0	3150	0	1750	1750	3800	0	0	2160	1538
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.12	0.00	0.10	0.07	0.10	0.00	0.00	0.17	0.17
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	29.8	0.0	29.8	18.4	61.2	0.0	0.0	42.8	42.8
Volume/Cap:	0.00	0.00	0.00	0.39	0.00	0.32	0.39	0.17	0.00	0.00	0.39	0.39
Delay/Veh:	0.0	0.0	0.0	28.2	0.0	27.7	36.7	8.4	0.0	0.0	19.8	19.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	28.2	0.0	27.7	36.7	8.4	0.0	0.0	19.8	19.8
LOS by Move:	A	A	A	C	A	C	D	A	A	A	B	B
HCM2k95thQ:	0	0	0	11	0	9	7	5	0	0	13	13

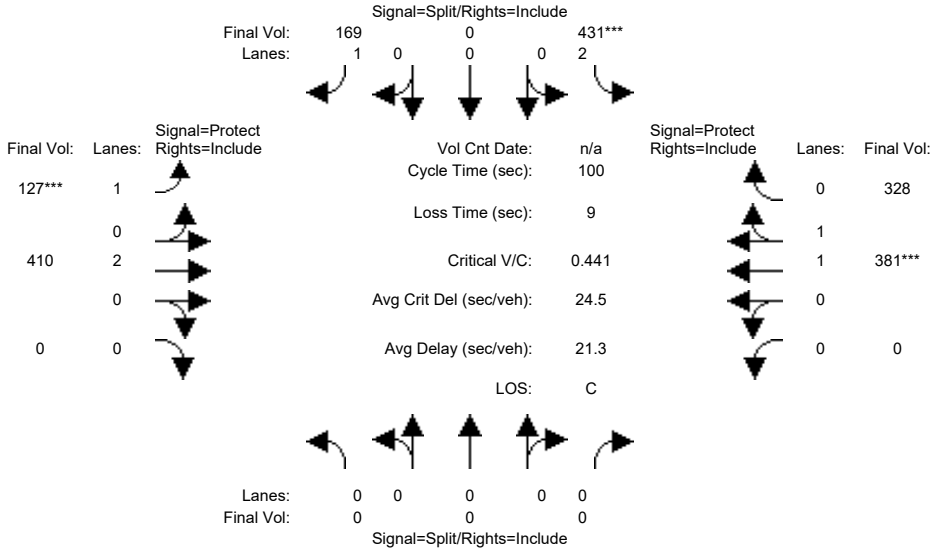
Note: Queue reported is the number of cars per lane.

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Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #8: East Middlefield Road and Ellis Street



Street Name:	Ellis Street						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	0	10	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	370	0	169	127	397	0	0	365	260
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	370	0	169	127	397	0	0	365	260
Added Vol:	0	0	0	61	0	0	0	13	0	0	16	68
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	431	0	169	127	410	0	0	381	328
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	431	0	169	127	410	0	0	381	328
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	431	0	169	127	410	0	0	381	328
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	431	0	169	127	410	0	0	381	328
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.95
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.05	0.95
Final Sat.:	0	0	0	3150	0	1750	1750	3800	0	0	1987	1711
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.14	0.00	0.10	0.07	0.11	0.00	0.00	0.19	0.19
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	31.0	0.0	31.0	16.5	60.0	0.0	0.0	43.5	43.5
Volume/Cap:	0.00	0.00	0.00	0.44	0.00	0.31	0.44	0.18	0.00	0.00	0.44	0.44
Delay/Veh:	0.0	0.0	0.0	27.9	0.0	26.6	38.7	9.0	0.0	0.0	19.9	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	27.9	0.0	26.6	38.7	9.0	0.0	0.0	19.9	19.9
LOS by Move:	A	A	A	C	A	C	D	A	A	A	B	B
HCM2k95thQ:	0	0	0	13	0	9	7	5	0	0	14	14

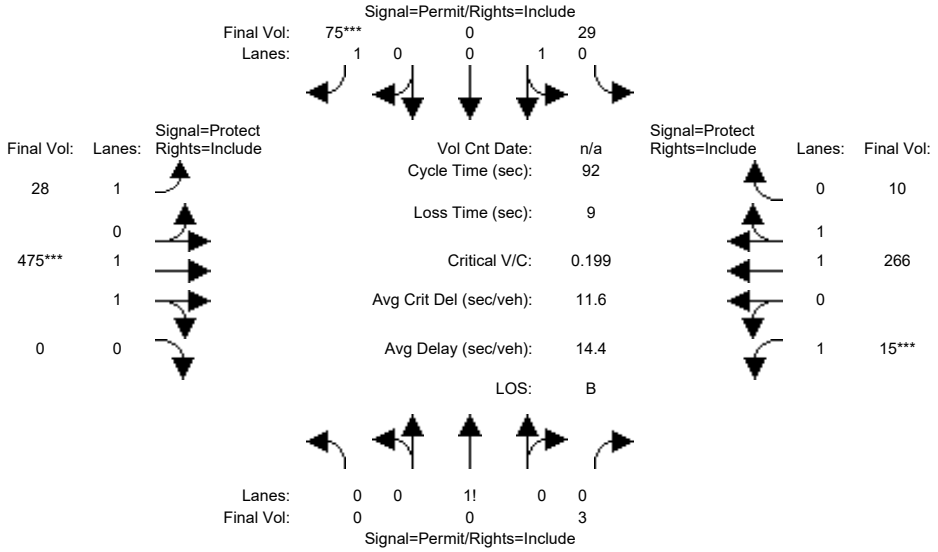
Note: Queue reported is the number of cars per lane.

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Mountain View
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Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
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Intersection #9: East Middlefield Road and Logue Avenue



Street Name:	Logue Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	0	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	0	0	3	29	0	75	28	475	0	15	266	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	3	29	0	75	28	475	0	15	266	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	3	29	0	75	28	475	0	15	266	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	3	29	0	75	28	475	0	15	266	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	3	29	0	75	28	475	0	15	266	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	3	29	0	75	28	475	0	15	266	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.95	0.95	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	1.00	2.00	0.00	1.00	1.93	0.07
Final Sat.:	0	0	1750	1800	0	1750	1750	3700	0	1750	3566	134
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.04	0.02	0.13	0.00	0.01	0.07	0.07
Crit Moves:						****		****		****		
Green Time:	0.0	0.0	19.0	19.0	0.0	19.0	26.3	57.0	0.0	7.0	37.6	37.6
Volume/Cap:	0.00	0.00	0.01	0.08	0.00	0.21	0.06	0.21	0.00	0.11	0.18	0.18
Delay/Veh:	0.0	0.0	29.0	29.5	0.0	30.5	23.9	7.7	0.0	40.0	17.4	17.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	29.0	29.5	0.0	30.5	23.9	7.7	0.0	40.0	17.4	17.4
LOS by Move:	A	A	C	C	A	C	C	A	A	D	B	B
HCM2k95thQ:	0	0	0	1	0	4	1	6	0	1	5	5

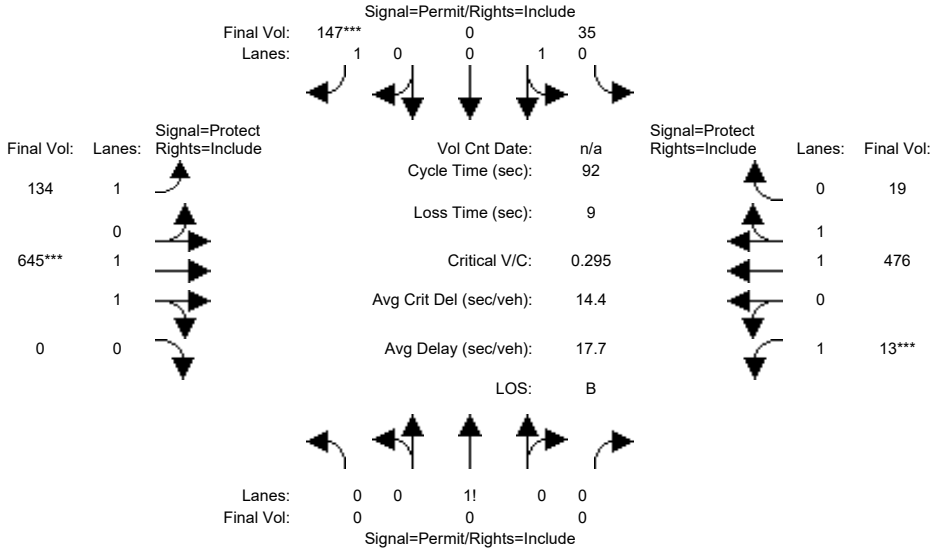
Note: Queue reported is the number of cars per lane.

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Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #9: East Middlefield Road and Logue Avenue



Street Name:	Logue Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	0	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	35	0	147	134	645	0	13	476	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	35	0	147	134	645	0	13	476	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	35	0	147	134	645	0	13	476	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	35	0	147	134	645	0	13	476	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	35	0	147	134	645	0	13	476	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	35	0	147	134	645	0	13	476	19
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	1.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	1.00	1.92	0.08
Final Sat.:	0	1750	0	1800	0	1750	1750	3700	0	1750	3558	142
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.08	0.08	0.17	0.00	0.01	0.13	0.13
Crit Moves:						****		****		****		
Green Time:	0.0	0.0	0.0	24.7	0.0	24.7	21.2	51.3	0.0	7.0	37.1	37.1
Volume/Cap:	0.00	0.00	0.00	0.07	0.00	0.31	0.33	0.31	0.00	0.10	0.33	0.33
Delay/Veh:	0.0	0.0	0.0	25.2	0.0	27.2	30.0	11.0	0.0	39.9	19.1	19.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.2	0.0	27.2	30.0	11.0	0.0	39.9	19.1	19.1
LOS by Move:	A	A	A	C	A	C	C	B	A	D	B	B
HCM2k95thQ:	0	0	0	2	0	7	7	10	0	1	9	9

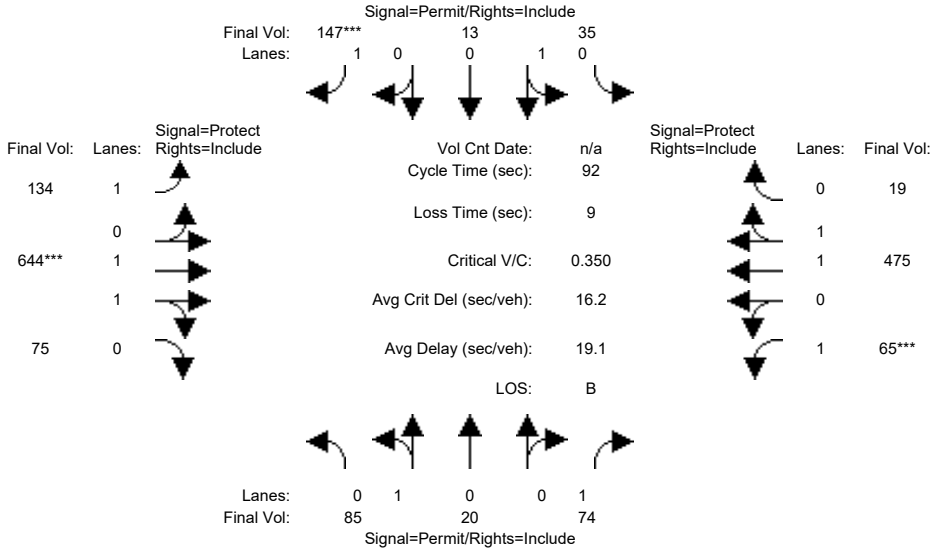
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
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Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #9: East Middlefield Road and Logue Avenue



Street Name:	Logue Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	0	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	35	0	147	134	645	0	13	476	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	35	0	147	134	645	0	13	476	19
Added Vol:	84	20	73	0	13	0	0	0	74	51	0	0
Retail Pass:	1	0	1	0	0	0	0	-1	1	1	-1	0
Initial Fut:	85	20	74	35	13	147	134	644	75	65	475	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	20	74	35	13	147	134	644	75	65	475	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	20	74	35	13	147	134	644	75	65	475	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	20	74	35	13	147	134	644	75	65	475	19
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.92	0.95	0.95	0.92	0.92	0.98	0.95	0.92	0.97	0.95
Lanes:	0.81	0.19	1.00	0.73	0.27	1.00	1.00	1.79	0.21	1.00	1.92	0.08
Final Sat.:	1457	343	1750	1312	487	1750	1750	3314	386	1750	3558	142
Capacity Analysis Module:												
Vol/Sat:	0.06	0.06	0.04	0.03	0.03	0.08	0.08	0.19	0.19	0.04	0.13	0.13
Crit Moves:						****		****		****		
Green Time:	22.1	22.1	22.1	22.1	22.1	22.1	22.2	51.1	51.1	9.8	38.7	38.7
Volume/Cap:	0.24	0.24	0.18	0.11	0.11	0.35	0.32	0.35	0.35	0.35	0.32	0.32
Delay/Veh:	28.5	28.5	27.9	27.4	27.4	29.5	29.1	11.4	11.4	39.3	17.9	17.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.5	28.5	27.9	27.4	27.4	29.5	29.1	11.4	11.4	39.3	17.9	17.9
LOS by Move:	C	C	C	C	C	C	C	B	B	D	B	B
HCM2k95thQ:	5	5	4	2	2	8	7	11	11	4	9	9

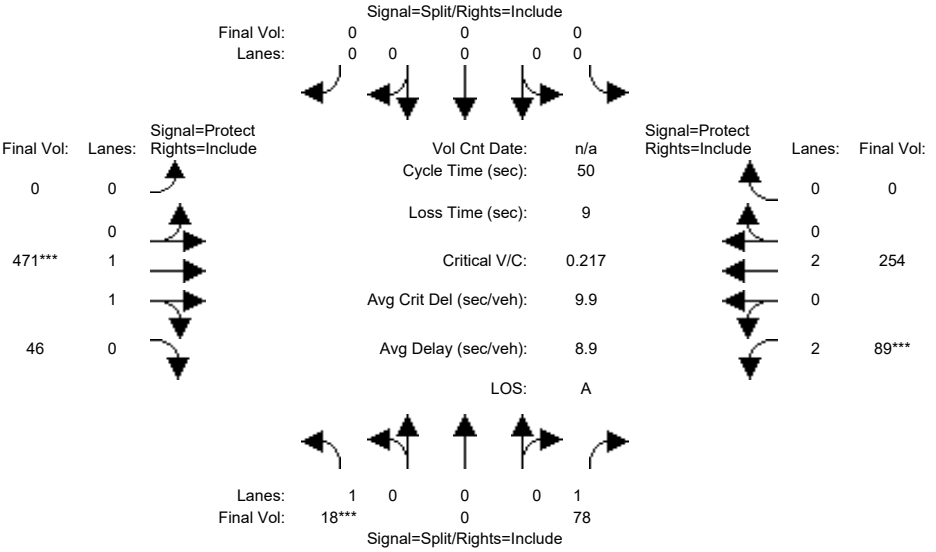
Note: Queue reported is the number of cars per lane.

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Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #10: Ferguson Drive and East Middlefield Road



Street Name:	Ferguson Drive						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	18	0	78	0	0	0	0	471	46	89	254	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	0	78	0	0	0	0	471	46	89	254	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	0	78	0	0	0	0	471	46	89	254	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	0	78	0	0	0	0	471	46	89	254	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	0	78	0	0	0	0	471	46	89	254	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	18	0	78	0	0	0	0	471	46	89	254	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.83	1.00	0.92
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.82	0.18	2.00	2.00	0.00
Final Sat.:	1750	0	1750	0	0	0	0	3371	329	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.04	0.00	0.00	0.00	0.00	0.14	0.14	0.03	0.07	0.00
Crit Moves:	****							****		****		
Green Time:	10.3	0.0	10.3	0.0	0.0	0.0	0.0	23.7	23.7	7.0	30.7	0.0
Volume/Cap:	0.05	0.00	0.22	0.00	0.00	0.00	0.00	0.29	0.29	0.20	0.11	0.00
Delay/Veh:	16.0	0.0	16.8	0.0	0.0	0.0	0.0	8.1	8.1	19.3	4.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.0	0.0	16.8	0.0	0.0	0.0	0.0	8.1	8.1	19.3	4.0	0.0
LOS by Move:	B	A	B	A	A	A	A	A	A	B	A	A
HCM2k95thQ:	0	0	2	0	0	0	0	5	5	1	2	0

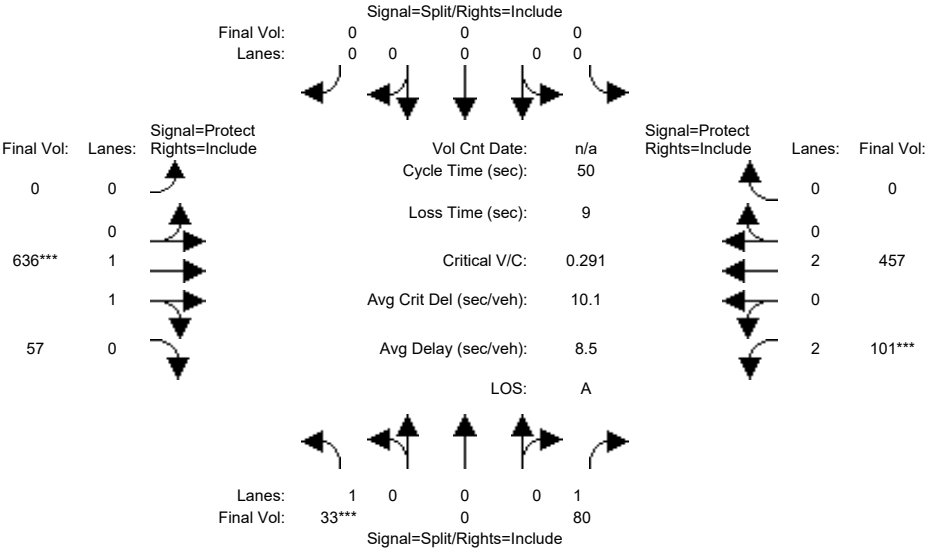
Note: Queue reported is the number of cars per lane.

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Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #10: Ferguson Drive and East Middlefield Road



Street Name:	Ferguson Drive						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	33	0	80	0	0	0	0	636	57	101	457	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	33	0	80	0	0	0	0	636	57	101	457	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	0	80	0	0	0	0	636	57	101	457	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	33	0	80	0	0	0	0	636	57	101	457	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	0	80	0	0	0	0	636	57	101	457	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	33	0	80	0	0	0	0	636	57	101	457	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.83	1.00	0.92
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.83	0.17	2.00	2.00	0.00
Final Sat.:	1750	0	1750	0	0	0	0	3395	304	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.05	0.00	0.00	0.00	0.00	0.19	0.19	0.03	0.12	0.00
Crit Moves:	****							****		****		
Green Time:	10.0	0.0	10.0	0.0	0.0	0.0	0.0	24.0	24.0	7.0	31.0	0.0
Volume/Cap:	0.09	0.00	0.23	0.00	0.00	0.00	0.00	0.39	0.39	0.23	0.19	0.00
Delay/Veh:	16.4	0.0	17.1	0.0	0.0	0.0	0.0	8.5	8.5	19.4	4.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.4	0.0	17.1	0.0	0.0	0.0	0.0	8.5	8.5	19.4	4.1	0.0
LOS by Move:	B	A	B	A	A	A	A	A	A	B	A	A
HCM2k95thQ:	1	0	2	0	0	0	0	7	7	2	3	0

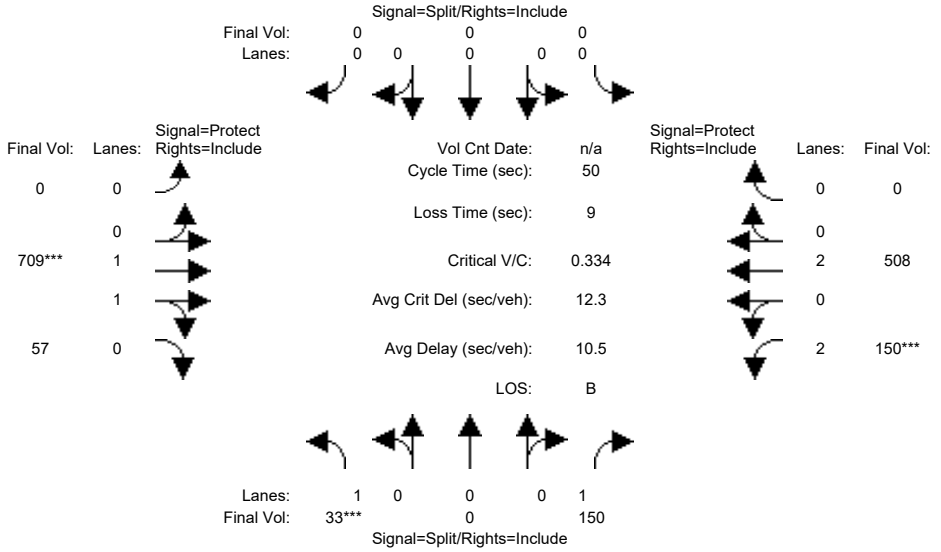
Note: Queue reported is the number of cars per lane.

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Mountain View
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2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #10: Ferguson Drive and East Middlefield Road



Street Name:	Ferguson Drive						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	33	0	80	0	0	0	0	636	57	101	457	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	33	0	80	0	0	0	0	636	57	101	457	0
Added Vol:	0	0	70	0	0	0	0	73	0	49	51	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	0	150	0	0	0	0	709	57	150	508	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	33	0	150	0	0	0	0	709	57	150	508	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	0	150	0	0	0	0	709	57	150	508	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	33	0	150	0	0	0	0	709	57	150	508	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.83	1.00	0.92
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.85	0.15	2.00	2.00	0.00
Final Sat.:	1750	0	1750	0	0	0	0	3424	275	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.09	0.00	0.00	0.00	0.00	0.21	0.21	0.05	0.13	0.00
Crit Moves:	****							****		****		
Green Time:	12.8	0.0	12.8	0.0	0.0	0.0	0.0	21.2	21.2	7.0	28.2	0.0
Volume/Cap:	0.07	0.00	0.33	0.00	0.00	0.00	0.00	0.49	0.49	0.34	0.24	0.00
Delay/Veh:	14.1	0.0	15.5	0.0	0.0	0.0	0.0	10.7	10.7	19.9	5.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.1	0.0	15.5	0.0	0.0	0.0	0.0	10.7	10.7	19.9	5.6	0.0
LOS by Move:	B	A	B	A	A	A	A	B	B	B	A	A
HCM2k95thQ:	1	0	4	0	0	0	0	9	9	3	4	0

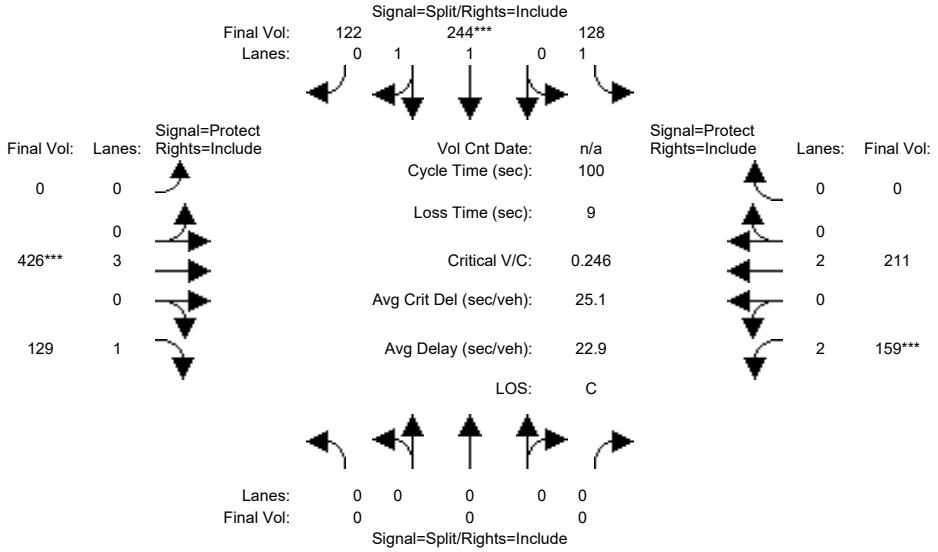
Note: Queue reported is the number of cars per lane.

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Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #11: East Middlefield Road and SR237 Westbound On-Ramp



Street Name:	SR 237 On-Ramps						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	0	0	0	128	244	122	0	426	129	159	211	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	128	244	122	0	426	129	159	211	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	128	244	122	0	426	129	159	211	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	128	244	122	0	426	129	159	211	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	128	244	122	0	426	129	159	211	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	128	244	122	0	426	129	159	211	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	1.32	0.68	0.00	3.00	1.00	2.00	2.00	0.00
Final Sat.:	0	0	0	1750	2466	1233	0	5700	1750	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.10	0.10	0.00	0.07	0.07	0.05	0.06	0.00
Crit Moves:					****			****		****		
Green Time:	0.0	0.0	0.0	40.2	40.2	40.2	0.0	30.3	30.3	20.5	50.8	0.0
Volume/Cap:	0.00	0.00	0.00	0.18	0.25	0.25	0.00	0.25	0.24	0.25	0.11	0.00
Delay/Veh:	0.0	0.0	0.0	19.4	20.0	20.0	0.0	26.3	26.4	33.5	12.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	19.4	20.0	20.0	0.0	26.3	26.4	33.5	12.8	0.0
LOS by Move:	A	A	A	B	B	B	A	C	C	C	B	A
HCM2k95thQ:	0	0	0	5	7	7	0	6	6	5	3	0

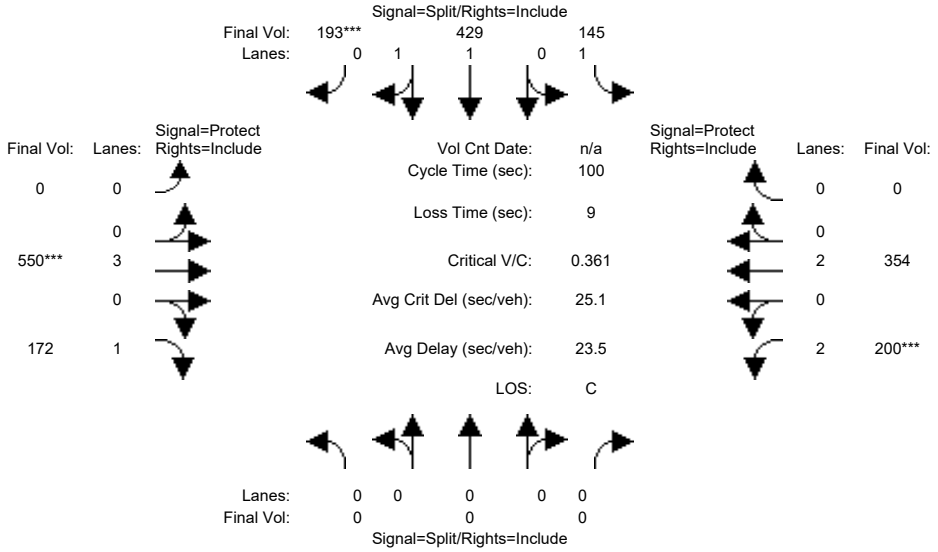
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #11: East Middlefield Road and SR237 Westbound On-Ramp



Street Name:	SR 237 On-Ramps						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	145	429	193	0	550	172	200	354	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	145	429	193	0	550	172	200	354	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	145	429	193	0	550	172	200	354	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	145	429	193	0	550	172	200	354	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	145	429	193	0	550	172	200	354	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	145	429	193	0	550	172	200	354	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	1.36	0.64	0.00	3.00	1.00	2.00	2.00	0.00
Final Sat.:	0	0	0	1750	2551	1148	0	5700	1750	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.17	0.17	0.00	0.10	0.10	0.06	0.09	0.00
Crit Moves:						****		****		****		
Green Time:	0.0	0.0	0.0	46.6	46.6	46.6	0.0	26.8	26.8	17.6	44.4	0.0
Volume/Cap:	0.00	0.00	0.00	0.18	0.36	0.36	0.00	0.36	0.37	0.36	0.21	0.00
Delay/Veh:	0.0	0.0	0.0	15.6	17.2	17.2	0.0	29.8	30.2	36.6	17.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	15.6	17.2	17.2	0.0	29.8	30.2	36.6	17.1	0.0
LOS by Move:	A	A	A	B	B	B	A	C	C	D	B	A
HCM2k95thQ:	0	0	0	5	12	12	0	9	9	6	6	0

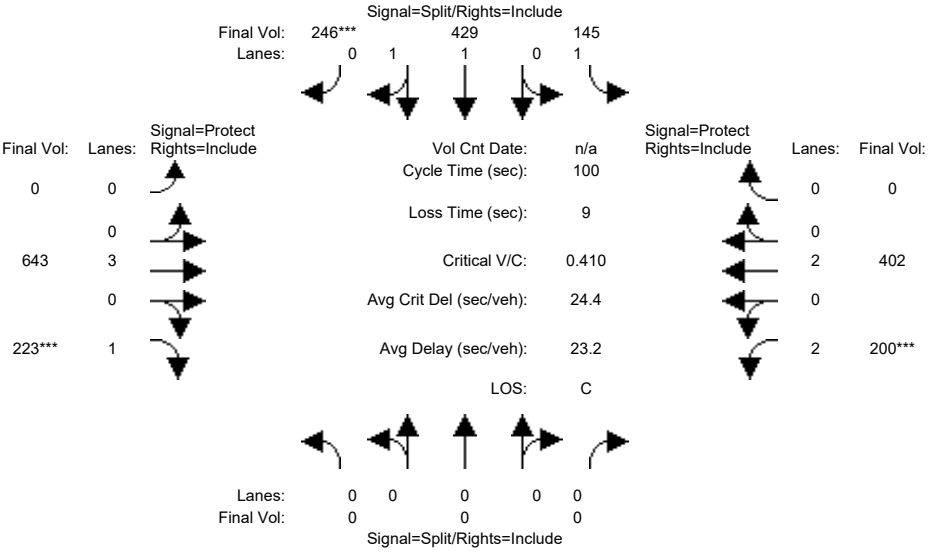
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #11: East Middlefield Road and SR237 Westbound On-Ramp



Street Name:	SR 237 On-Ramps						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	145	429	193	0	550	172	200	354	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	145	429	193	0	550	172	200	354	0
Added Vol:	0	0	0	0	0	53	0	93	51	0	48	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	145	429	246	0	643	223	200	402	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	145	429	246	0	643	223	200	402	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	145	429	246	0	643	223	200	402	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	145	429	246	0	643	223	200	402	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	1.25	0.75	0.00	3.00	1.00	2.00	2.00	0.00
Final Sat.:	0	0	0	1750	2351	1348	0	5700	1750	3150	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.18	0.18	0.00	0.11	0.13	0.06	0.11	0.00
Crit Moves:						****			****	****		
Green Time:	0.0	0.0	0.0	44.5	44.5	44.5	0.0	31.1	31.1	15.5	46.5	0.0
Volume/Cap:	0.00	0.00	0.00	0.19	0.41	0.41	0.00	0.36	0.41	0.41	0.23	0.00
Delay/Veh:	0.0	0.0	0.0	16.9	19.0	19.0	0.0	26.9	27.7	38.7	16.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	16.9	19.0	19.0	0.0	26.9	27.7	38.7	16.1	0.0
LOS by Move:	A	A	A	B	B	B	A	C	C	D	B	A
HCM2k95thQ:	0	0	0	6	13	13	0	10	11	7	7	0

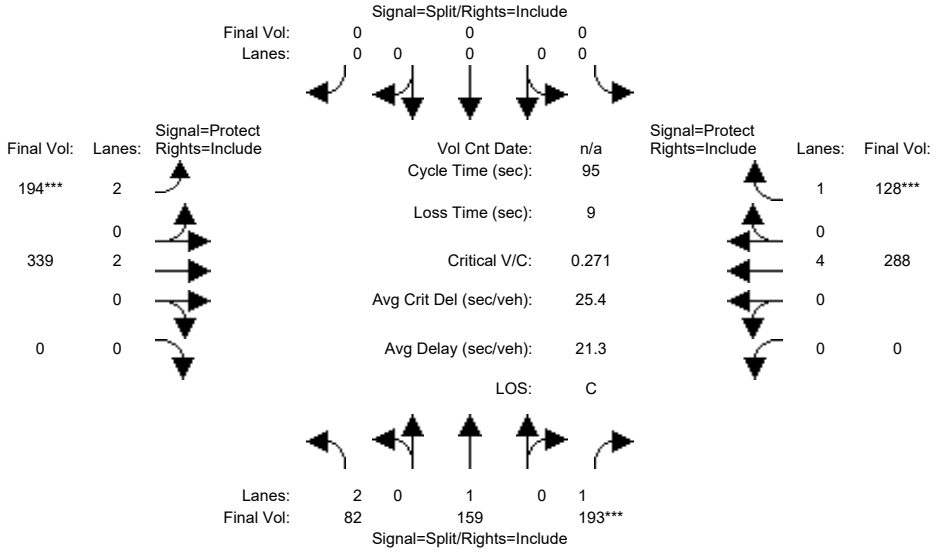
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #12: East Middlefield Road and SR 237 Eastbound Off-Ramp



Street Name:237 Eastbound Off-Ramp and Connec East Middlefield Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	0	0	0	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:12:00:00 AM												
Base Vol:	82	159	193	0	0	0	194	339	0	0	288	128
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	82	159	193	0	0	0	194	339	0	0	288	128
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	82	159	193	0	0	0	194	339	0	0	288	128
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	82	159	193	0	0	0	194	339	0	0	288	128
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	159	193	0	0	0	194	339	0	0	288	128
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	82	159	193	0	0	0	194	339	0	0	288	128
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	4.00	1.00
Final Sat.:	3150	1900	1750	0	0	0	3150	3800	0	0	7600	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.08	0.11	0.00	0.00	0.00	0.06	0.09	0.00	0.00	0.04	0.07
Crit Moves:			****				****					****
Green Time:	38.7	38.7	38.7	0.0	0.0	0.0	21.6	47.3	0.0	0.0	25.7	25.7
Volume/Cap:	0.06	0.21	0.27	0.00	0.00	0.00	0.27	0.18	0.00	0.00	0.14	0.27
Delay/Veh:	17.1	18.3	18.9	0.0	0.0	0.0	30.4	13.2	0.0	0.0	26.3	27.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.1	18.3	18.9	0.0	0.0	0.0	30.4	13.2	0.0	0.0	26.3	27.6
LOS by Move:	B	B	B	A	A	A	C	B	A	A	C	C
HCM2k95thQ:	2	6	8	0	0	0	5	5	0	0	3	6

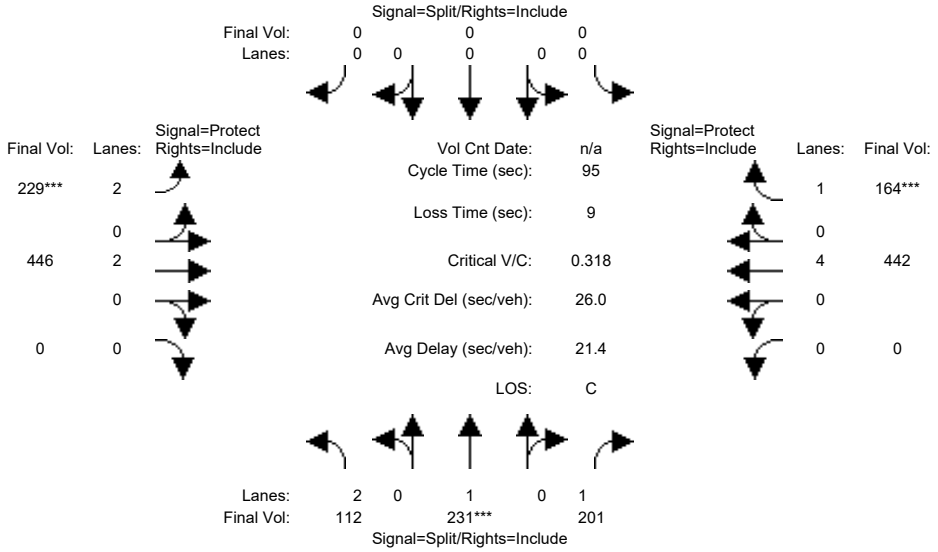
Note: Queue reported is the number of cars per lane.

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Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #12: East Middlefield Road and SR 237 Eastbound Off-Ramp



Street Name: 237 Eastbound Off-Ramp and Connec | East Middlefield Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	0	0	0	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	112	231	201	0	0	0	229	446	0	0	442	164
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	112	231	201	0	0	0	229	446	0	0	442	164
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	112	231	201	0	0	0	229	446	0	0	442	164
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	112	231	201	0	0	0	229	446	0	0	442	164
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	231	201	0	0	0	229	446	0	0	442	164
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	112	231	201	0	0	0	229	446	0	0	442	164
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	4.00	1.00
Final Sat.:	3150	1900	1750	0	0	0	3150	3800	0	0	7600	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.11	0.00	0.00	0.00	0.07	0.12	0.00	0.00	0.06	0.09
Crit Moves:		****					****					****
Green Time:	36.3	36.3	36.3	0.0	0.0	0.0	21.7	49.7	0.0	0.0	28.0	28.0
Volume/Cap:	0.09	0.32	0.30	0.00	0.00	0.00	0.32	0.22	0.00	0.00	0.20	0.32
Delay/Veh:	18.8	20.9	20.7	0.0	0.0	0.0	30.7	12.3	0.0	0.0	25.1	26.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.8	20.9	20.7	0.0	0.0	0.0	30.7	12.3	0.0	0.0	25.1	26.4
LOS by Move:	B	C	C	A	A	A	C	B	A	A	C	C
HCM2k95thQ:	3	9	9	0	0	0	6	7	0	0	5	8

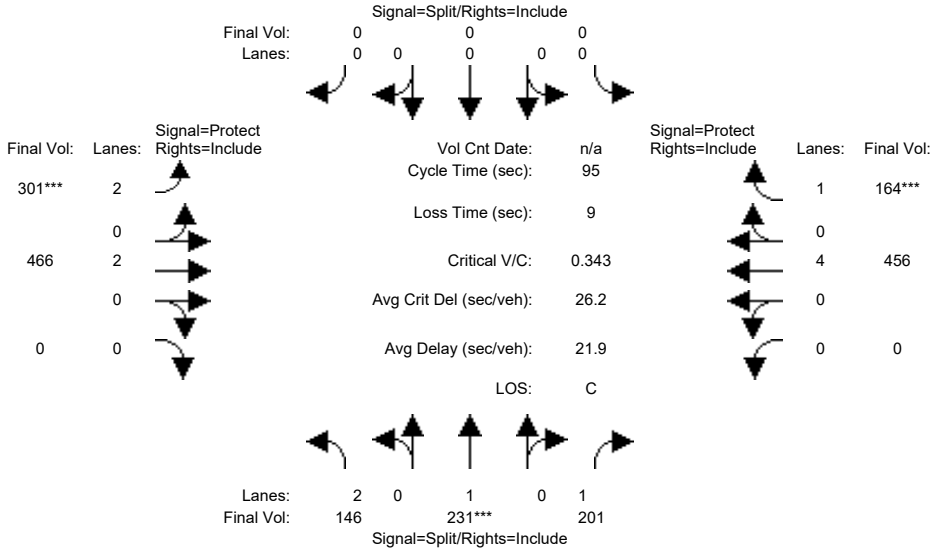
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #12: East Middlefield Road and SR 237 Eastbound Off-Ramp



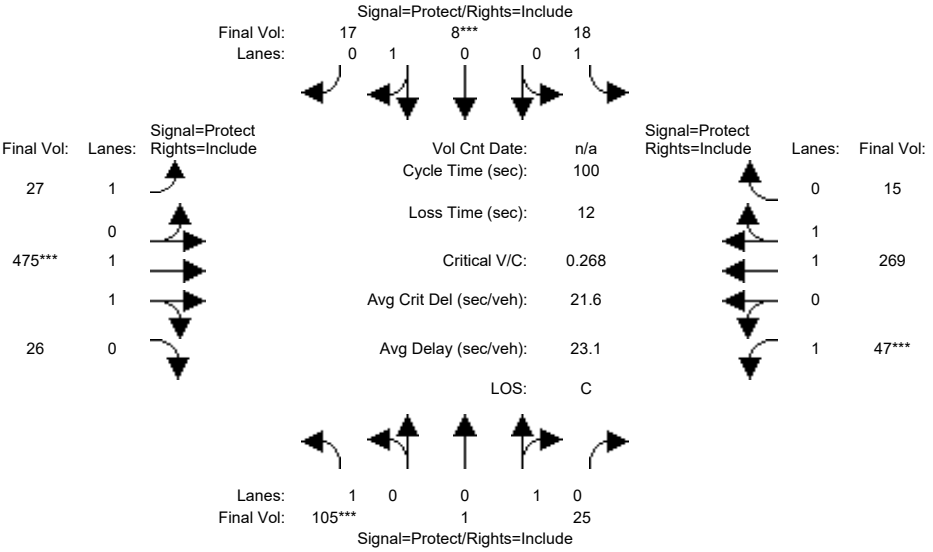

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Street Name:237 Eastbound Off-Ramp and Connec       East Middlefield Road
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:    10   10   10     0    0    0     7   10    0     0   10   10
Y+R:          4.0  4.0  4.0    4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     112  231  201     0    0    0   229  446    0     0  442  164
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:  112  231  201     0    0    0   229  446    0     0  442  164
Added Vol:     34    0    0     0    0    0    72   20    0     0   14    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:  146  231  201     0    0    0   301  466    0     0  456  164
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:   146  231  201     0    0    0   301  466    0     0  456  164
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  146  231  201     0    0    0   301  466    0     0  456  164
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:  146  231  201     0    0    0   301  466    0     0  456  164
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900
Adjustment:  0.83 1.00 0.92  0.92 1.00 0.92  0.83 1.00 0.92  0.92 1.00 0.92
Lanes:       2.00 1.00 1.00  0.00 0.00 0.00  2.00 2.00 0.00  0.00 4.00 1.00
Final Sat.:  3150 1900 1750     0    0    0  3150 3800    0     0 7600 1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.12 0.11  0.00 0.00 0.00  0.10 0.12 0.00  0.00 0.06 0.09
Crit Moves:       ****                       ****                      ****
Green Time:  33.6 33.6 33.6   0.0  0.0  0.0  26.4 52.4  0.0   0.0 25.9 25.9
Volume/Cap:  0.13 0.34 0.32  0.00 0.00 0.00  0.34 0.22 0.00  0.00 0.22 0.34
Delay/Veh:   20.8 22.9 22.7   0.0  0.0  0.0  27.6 11.0  0.0   0.0 26.8 28.1
User DelAdj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:  20.8 22.9 22.7   0.0  0.0  0.0  27.6 11.0  0.0   0.0 26.8 28.1
LOS by Move:    C    C    C     A    A    A     C    B    A     A    C    C
HCM2k95thQ:     4   10    9     0    0    0     8    7    0     0    5    8
Note: Queue reported is the number of cars per lane.
```


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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #13: East Middlefield Road and Bernardo Avenue



Street Name:	Bernardo Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:	12:00:00 AM											
Base Vol:	105	1	25	18	8	17	27	475	26	47	269	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	105	1	25	18	8	17	27	475	26	47	269	15
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	105	1	25	18	8	17	27	475	26	47	269	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	105	1	25	18	8	17	27	475	26	47	269	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	1	25	18	8	17	27	475	26	47	269	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	105	1	25	18	8	17	27	475	26	47	269	15
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.92	0.95	0.95	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	1.00	0.04	0.96	1.00	0.32	0.68	1.00	1.89	0.11	1.00	1.89	0.11
Final Sat.:	1750	69	1731	1750	576	1224	1750	3508	192	1750	3504	195
Capacity Analysis Module:												
Vol/Sat:	0.06	0.01	0.01	0.01	0.01	0.01	0.02	0.14	0.14	0.03	0.08	0.08
Crit Moves:	****				****			****			****	
Green Time:	21.1	18.3	18.3	12.8	10.0	10.0	23.4	47.5	47.5	9.4	33.5	33.5
Volume/Cap:	0.28	0.08	0.08	0.08	0.14	0.14	0.07	0.28	0.28	0.28	0.23	0.23
Delay/Veh:	33.6	34.0	34.0	38.6	41.4	41.4	29.8	16.0	16.0	43.1	24.0	24.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.6	34.0	34.0	38.6	41.4	41.4	29.8	16.0	16.0	43.1	24.0	24.0
LOS by Move:	C	C	C	D	D	D	C	B	B	D	C	C
HCM2k95thQ:	6	1	1	1	2	2	1	9	9	3	6	6

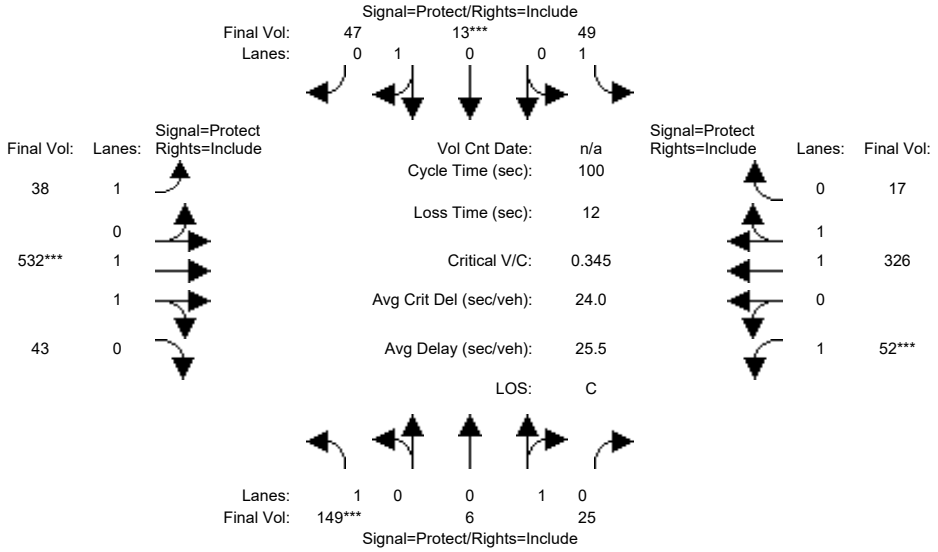
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #13: East Middlefield Road and Bernardo Avenue



Street Name:	Bernardo Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	149	6	25	49	13	47	38	532	43	52	326	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	149	6	25	49	13	47	38	532	43	52	326	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	149	6	25	49	13	47	38	532	43	52	326	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	149	6	25	49	13	47	38	532	43	52	326	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	149	6	25	49	13	47	38	532	43	52	326	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	149	6	25	49	13	47	38	532	43	52	326	17
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.92	0.95	0.95	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	1.00	0.19	0.81	1.00	0.22	0.78	1.00	1.85	0.15	1.00	1.90	0.10
Final Sat.:	1750	348	1452	1750	390	1410	1750	3423	277	1750	3516	183
Capacity Analysis Module:												
Vol/Sat:	0.09	0.02	0.02	0.03	0.03	0.03	0.02	0.16	0.16	0.03	0.09	0.09
Crit Moves:	****				****			****			****	
Green Time:	24.6	20.3	20.3	14.2	10.0	10.0	22.0	44.9	44.9	8.6	31.4	31.4
Volume/Cap:	0.35	0.08	0.08	0.20	0.33	0.33	0.10	0.35	0.35	0.35	0.29	0.29
Delay/Veh:	31.6	32.4	32.4	38.2	43.0	43.0	31.2	18.1	18.1	44.5	26.1	26.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.6	32.4	32.4	38.2	43.0	43.0	31.2	18.1	18.1	44.5	26.1	26.1
LOS by Move:	C	C	C	D	D	D	C	B	B	D	C	C
HCM2k95thQ:	8	2	2	3	4	4	2	11	11	4	8	8

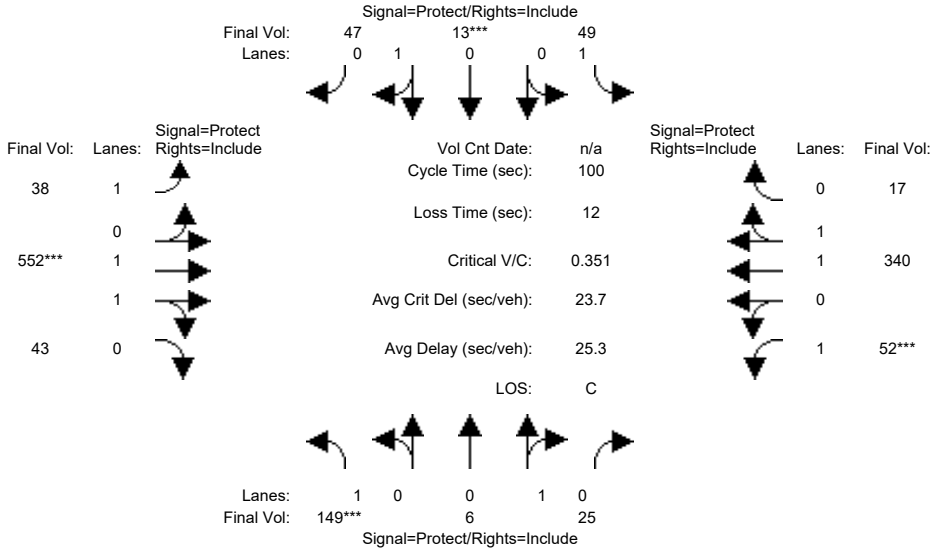
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #13: East Middlefield Road and Bernardo Avenue



Street Name:	Bernardo Avenue						East Middlefield Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	149	6	25	49	13	47	38	532	43	52	326	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	149	6	25	49	13	47	38	532	43	52	326	17
Added Vol:	0	0	0	0	0	0	0	20	0	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	149	6	25	49	13	47	38	552	43	52	340	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	149	6	25	49	13	47	38	552	43	52	340	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	149	6	25	49	13	47	38	552	43	52	340	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	149	6	25	49	13	47	38	552	43	52	340	17
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.92	0.95	0.95	0.92	0.98	0.95	0.92	0.97	0.95
Lanes:	1.00	0.19	0.81	1.00	0.22	0.78	1.00	1.85	0.15	1.00	1.90	0.10
Final Sat.:	1750	348	1452	1750	390	1410	1750	3432	267	1750	3524	176
Capacity Analysis Module:												
Vol/Sat:	0.09	0.02	0.02	0.03	0.03	0.03	0.02	0.16	0.16	0.03	0.10	0.10
Crit Moves:	****				****			****			****	
Green Time:	24.1	20.1	20.1	14.0	10.0	10.0	22.2	45.5	45.5	8.4	31.7	31.7
Volume/Cap:	0.35	0.09	0.09	0.20	0.33	0.33	0.10	0.35	0.35	0.35	0.30	0.30
Delay/Veh:	32.0	32.6	32.6	38.4	43.0	43.0	31.0	17.8	17.8	44.7	26.0	26.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.0	32.6	32.6	38.4	43.0	43.0	31.0	17.8	17.8	44.7	26.0	26.0
LOS by Move:	C	C	C	D	D	D	C	B	B	D	C	C
HCM2k95thQ:	8	2	2	3	4	4	2	11	11	4	8	8

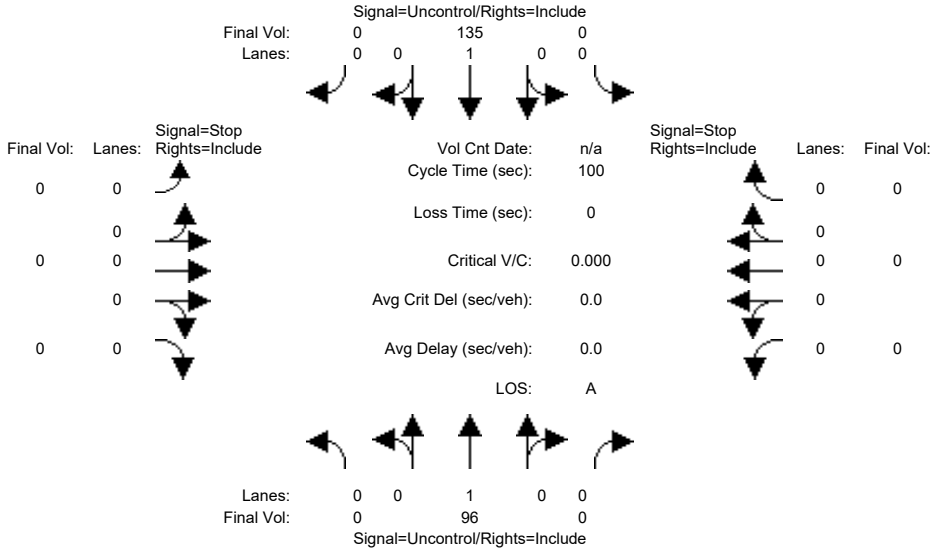
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #101: Ferguson Dr/Project Dwy



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	96	0	0	135	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	96	0	0	135	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	96	0	0	135	0	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	96	0	0	135	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	96	0	0	135	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #101 Ferguson Dr/Project Dwy

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 0	0	0	0 0 0	0	0
Initial Vol:	0	96	0	0	135	0	0	0	0	0	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #101 Ferguson Dr/Project Dwy

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 0	0	0	0 0 0	0	0
Initial Vol:	0	96	0	0	135	0	0	0	0	0	0	0

Major Street Volume: 231
Minor Approach Volume: 0
Minor Approach Volume Threshold: 610

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

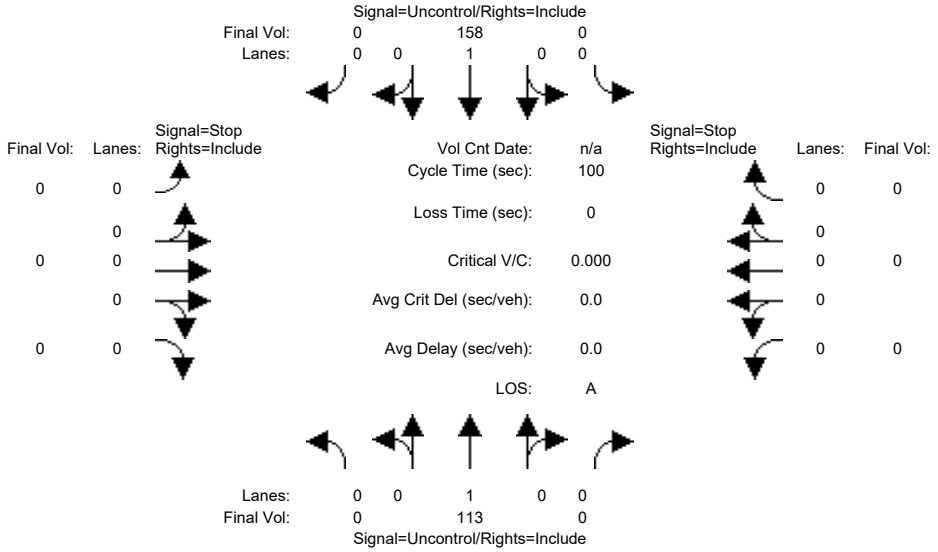
The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background PM

Intersection #101: Ferguson Dr/Project Dwy



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	113	0	0	158	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	113	0	0	158	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	113	0	0	158	0	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	113	0	0	158	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	113	0	0	158	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #101 Ferguson Dr/Project Dwy

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 0	0	0	0 0 0	0	0
Initial Vol:	0	113	0	0	158	0	0	0	0	0	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #101 Ferguson Dr/Project Dwy

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 0	0	0	0 0 0	0	0
Initial Vol:	0	113	0	0	158	0	0	0	0	0	0	0

Major Street Volume: 271
Minor Approach Volume: 0
Minor Approach Volume Threshold: 568

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

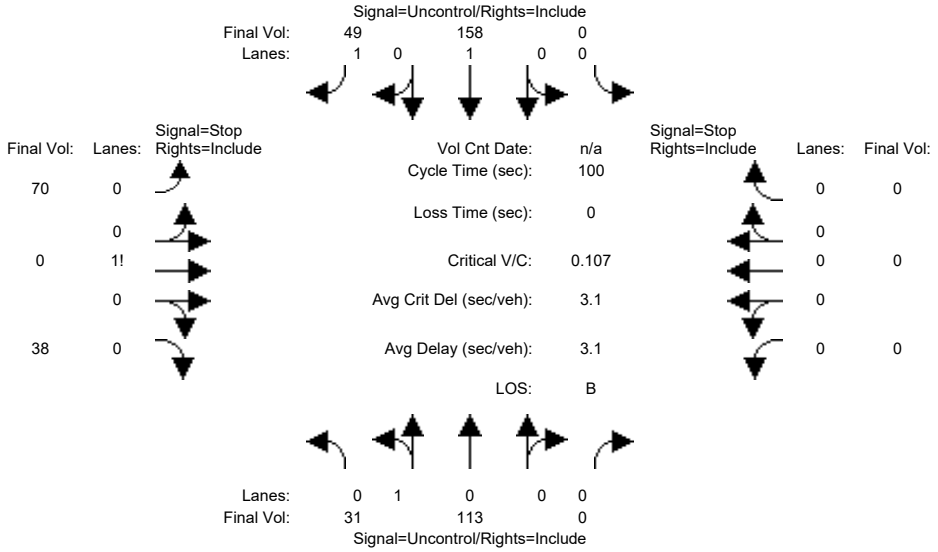
The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Prj PM

Intersection #101: Ferguson Dr/Project Dwy



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	113	0	0	158	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	113	0	0	158	0	0	0	0	0	0	0
Added Vol:	31	0	0	0	0	49	70	0	38	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	31	113	0	0	158	49	70	0	38	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	31	113	0	0	158	49	70	0	38	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	31	113	0	0	158	49	70	0	38	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	207	xxxx	xxxxx	xxxx	xxxx	xxxxx	333	333	158	xxxx	xxxx	xxxxx
Potent Cap.:	1376	xxxx	xxxxx	xxxx	xxxx	xxxxx	666	590	893	xxxx	xxxx	xxxxx
Move Cap.:	1376	xxxx	xxxxx	xxxx	xxxx	xxxxx	654	577	893	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	0.11	0.00	0.04	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	722	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.9	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.9			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #101 Ferguson Dr/Project Dwy

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  1  0  0  0    0  0  1  0  1    0  0  1! 0  0    0  0  0  0  0
Initial Vol:   31  113     0     0  158    49    70    0    38     0    0     0
ApproachDel:    xxxxxx           xxxxxx             10.9           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=108]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=459]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #101 Ferguson Dr/Project Dwy
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  1  0  0  0    0  0  1  0  1    0  0  1! 0  0    0  0  0  0  0
Initial Vol:   31  113     0     0  158    49    70    0    38     0    0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              351
Minor Approach Volume:            108
Minor Approach Volume Threshold: 646
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

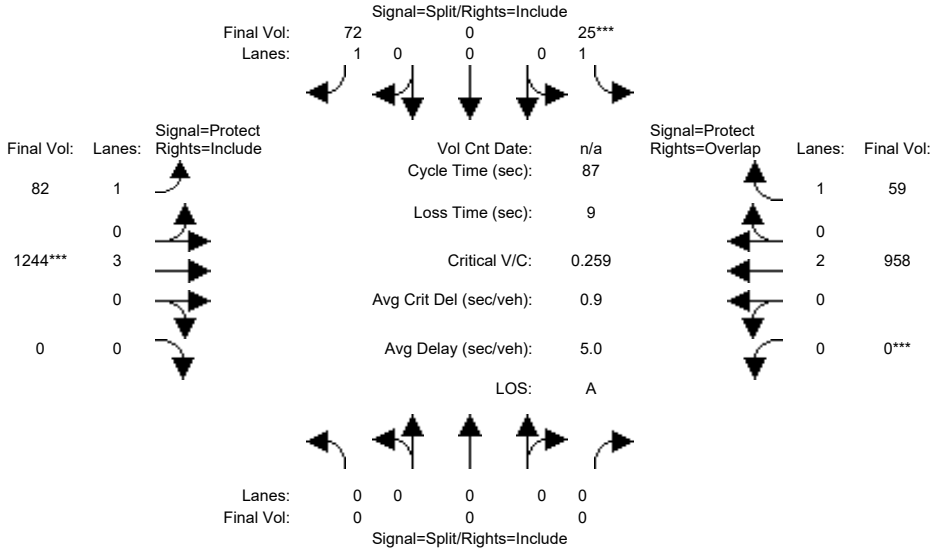
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jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #5315: CENTRAL EXPWY/HWY 237-FERGUSON



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	12	0	12	12	64	0	0	47	47
Y+R:	0.0	0.0	0.0	4.6	0.0	4.6	4.8	5.8	0.0	0.0	5.8	5.8
Volume Module:4:30 - 5:30 PM												
Base Vol:	0	0	0	25	0	72	82	1244	0	0	958	59
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	25	0	72	82	1244	0	0	958	59
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	25	0	72	82	1244	0	0	958	59
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	25	0	72	82	1244	0	0	958	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	25	0	72	82	1244	0	0	958	59
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	25	0	72	82	1244	0	0	958	59
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1750	0	1750	1750	5700	0	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.01	0.00	0.04	0.05	0.22	0.00	0.00	0.25	0.03
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	13.8	0.0	13.8	13.1	64.2	0.0	0.0	51.1	64.9
Volume/Cap:	0.00	0.00	0.00	0.09	0.00	0.26	0.31	0.30	0.00	0.00	0.43	0.05
Delay/Veh:	0.0	0.0	0.0	31.4	0.0	32.6	33.7	0.3	0.0	0.0	6.1	0.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	31.4	0.0	32.6	33.7	0.3	0.0	0.0	6.1	0.1
LOS by Move:	A	A	A	C	A	C	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	1	0	4	5	1	0	0	9	0

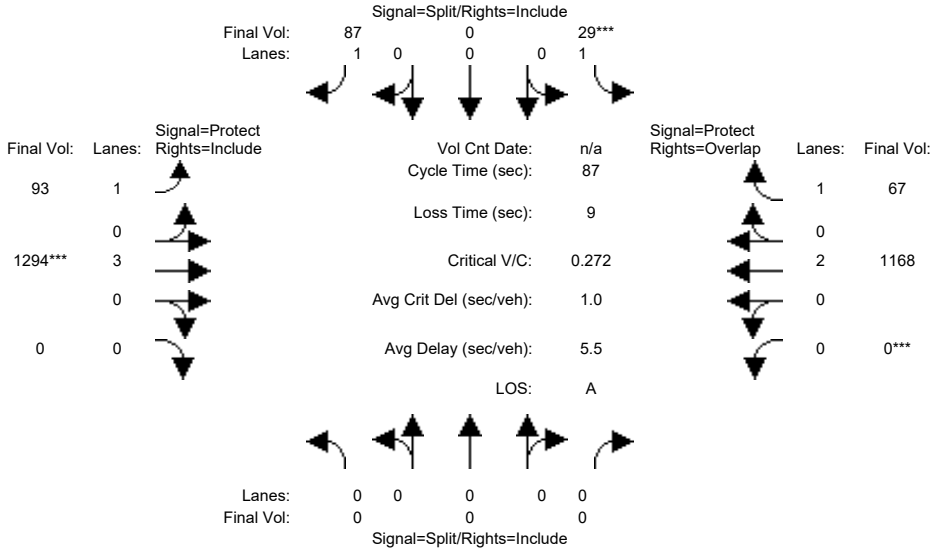
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #5315: CENTRAL EXPWY/HWY 237-FERGUSON



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	12	0	12	12	64	0	0	47	47
Y+R:	0.0	0.0	0.0	4.6	0.0	4.6	4.8	5.8	0.0	0.0	5.8	5.8
Volume Module:												
Base Vol:	0	0	0	29	0	87	93	1294	0	0	1168	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	29	0	87	93	1294	0	0	1168	67
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	29	0	87	93	1294	0	0	1168	67
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	29	0	87	93	1294	0	0	1168	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	29	0	87	93	1294	0	0	1168	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	29	0	87	93	1294	0	0	1168	67
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1750	0	1750	1750	5700	0	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.05	0.05	0.23	0.00	0.00	0.31	0.04
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	15.9	0.0	15.9	13.0	64.0	0.0	0.0	51.0	66.9
Volume/Cap:	0.00	0.00	0.00	0.09	0.00	0.27	0.36	0.31	0.00	0.00	0.52	0.05
Delay/Veh:	0.0	0.0	0.0	29.6	0.0	31.0	34.1	0.4	0.0	0.0	6.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	29.6	0.0	31.0	34.1	0.4	0.0	0.0	6.8	0.0
LOS by Move:	A	A	A	C	A	C	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	1	0	4	5	2	0	0	12	0

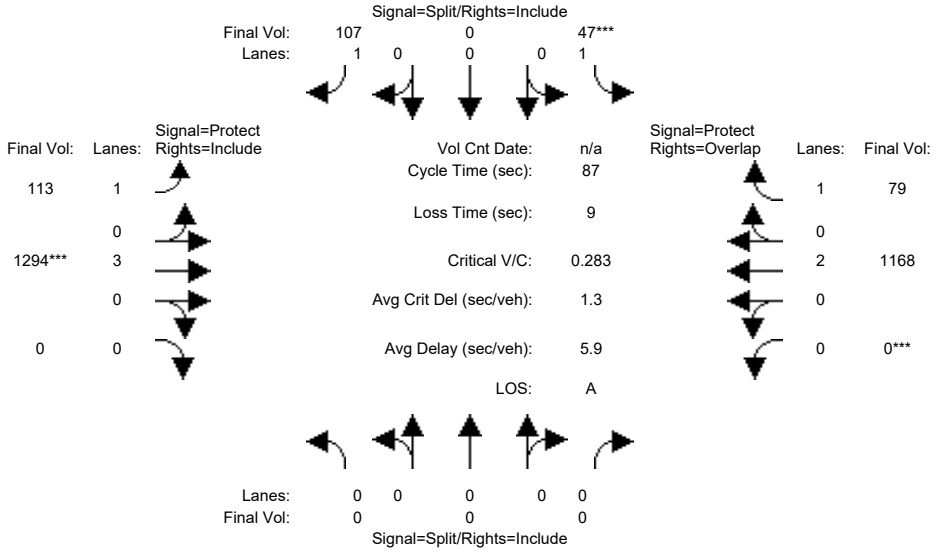
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #5315: CENTRAL EXPWY/HWY 237-FERGUSON



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	12	0	12	12	64	0	0	47	47
Y+R:	0.0	0.0	0.0	4.6	0.0	4.6	4.8	5.8	0.0	0.0	5.8	5.8
Volume Module:												
Base Vol:	0	0	0	29	0	87	93	1294	0	0	1168	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	29	0	87	93	1294	0	0	1168	67
Added Vol:	0	0	0	18	0	20	20	0	0	0	0	12
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	47	0	107	113	1294	0	0	1168	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	47	0	107	113	1294	0	0	1168	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	47	0	107	113	1294	0	0	1168	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	47	0	107	113	1294	0	0	1168	79
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1750	0	1750	1750	5700	0	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.06	0.06	0.23	0.00	0.00	0.31	0.05
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	18.8	0.0	18.8	13.0	64.0	0.0	0.0	51.0	69.8
Volume/Cap:	0.00	0.00	0.00	0.12	0.00	0.28	0.43	0.31	0.00	0.00	0.52	0.06
Delay/Veh:	0.0	0.0	0.0	27.6	0.0	28.9	34.8	0.4	0.0	0.0	6.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	27.6	0.0	28.9	34.8	0.4	0.0	0.0	6.8	0.0
LOS by Move:	A	A	A	C	A	C	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	2	0	5	7	2	0	0	12	0

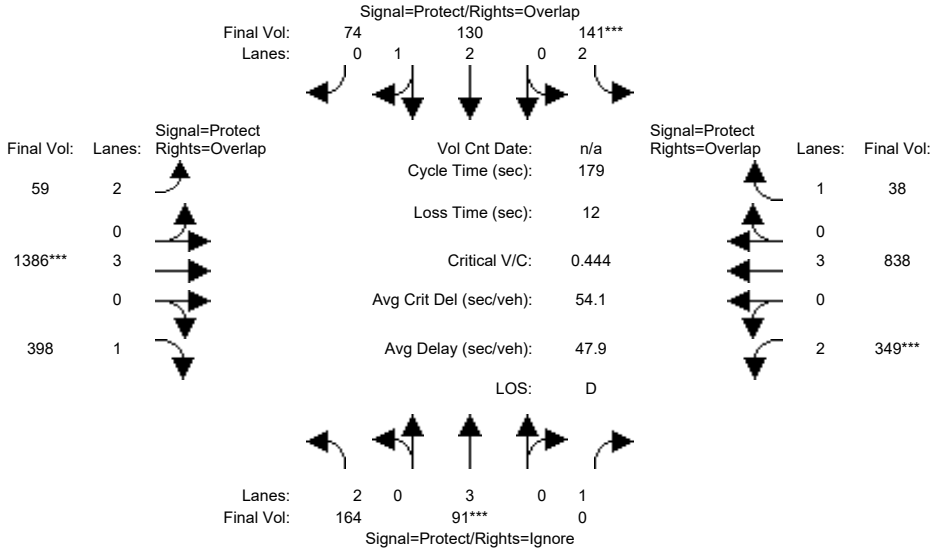
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #5320: CENTRAL EXPWY/MARY AVE



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	16	31	31	30	44	44	12	60	60	35	82	82
Y+R:	6.1	6.0	6.0	6.2	5.9	5.9	6.2	6.2	6.2	6.3	6.2	6.2
Volume Module:4:45 - 5:45 PM												
Base Vol:	164	91	407	141	130	74	59	1386	398	349	838	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	164	91	407	141	130	74	59	1386	398	349	838	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	164	91	407	141	130	74	59	1386	398	349	838	38
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	164	91	0	141	130	74	59	1386	398	349	838	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	164	91	0	141	130	74	59	1386	398	349	838	38
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	164	91	0	141	130	74	59	1386	398	349	838	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	3800	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.02	0.00	0.04	0.03	0.04	0.02	0.24	0.23	0.11	0.15	0.02
Crit Moves:		****		****				****		****		
Green Time:	16.3	31.0	0.0	30.0	44.7	58.3	13.5	71.0	87.3	35.0	92.5	122.5
Volume/Cap:	0.57	0.09	0.00	0.27	0.14	0.13	0.25	0.61	0.47	0.57	0.28	0.03
Delay/Veh:	80.8	62.2	0.0	65.2	52.2	42.6	78.5	49.3	37.7	66.7	31.0	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	80.8	62.2	0.0	65.2	52.2	42.6	78.5	49.3	37.7	66.7	31.0	14.6
LOS by Move:	F	E	A	E	D	D	E	D	D	E	C	B
HCM2k95thQ:	11	3	0	8	5	6	4	36	31	20	19	2

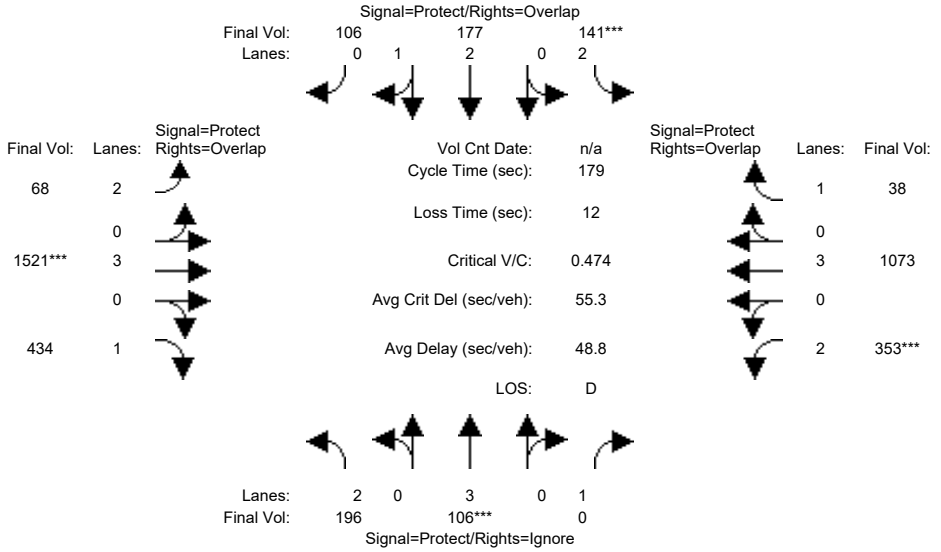
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #5320: CENTRAL EXPWY/MARY AVE



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	16	31	31	30	44	44	12	60	60	35	82	82
Y+R:	6.1	6.0	6.0	6.2	5.9	5.9	6.2	6.2	6.2	6.3	6.2	6.2
Volume Module:												
Base Vol:	196	106	408	141	177	106	68	1521	434	353	1073	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	196	106	408	141	177	106	68	1521	434	353	1073	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	196	106	408	141	177	106	68	1521	434	353	1073	38
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	196	106	0	141	177	106	68	1521	434	353	1073	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	196	106	0	141	177	106	68	1521	434	353	1073	38
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	196	106	0	141	177	106	68	1521	434	353	1073	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	3800	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.02	0.00	0.04	0.05	0.06	0.02	0.27	0.25	0.11	0.19	0.02
Crit Moves:		****		****				****		****		
Green Time:	16.3	31.0	0.0	30.0	44.7	58.3	13.5	71.0	87.3	35.0	92.5	122.5
Volume/Cap:	0.68	0.11	0.00	0.27	0.19	0.19	0.29	0.67	0.51	0.57	0.36	0.03
Delay/Veh:	85.6	62.4	0.0	65.2	52.9	43.4	78.8	51.2	38.8	66.9	32.6	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	85.6	62.4	0.0	65.2	52.9	43.4	78.8	51.2	38.8	66.9	32.6	14.6
LOS by Move:	F	E	A	E	D	D	E	D	D	E	C	B
HCM2k95thQ:	14	3	0	8	7	9	5	41	34	20	25	2

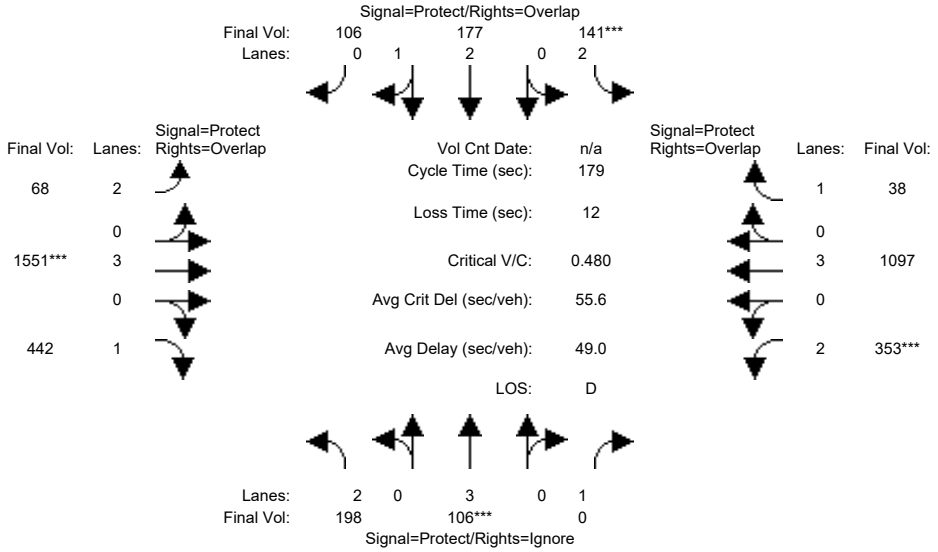
Note: Queue reported is the number of cars per lane.

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675 E Middlefield Rd Mixed-Use Project
Mountain View
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Prj PM

Intersection #5320: CENTRAL EXPWY/MARY AVE



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	16	31	31	30	44	44	12	60	60	35	82	82
Y+R:	6.1	6.0	6.0	6.2	5.9	5.9	6.2	6.2	6.2	6.3	6.2	6.2
Volume Module:												
Base Vol:	196	106	408	141	177	106	68	1521	434	353	1073	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	196	106	408	141	177	106	68	1521	434	353	1073	38
Added Vol:	2	0	0	0	0	0	0	30	8	0	24	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	198	106	408	141	177	106	68	1551	442	353	1097	38
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	198	106	0	141	177	106	68	1551	442	353	1097	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	198	106	0	141	177	106	68	1551	442	353	1097	38
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	198	106	0	141	177	106	68	1551	442	353	1097	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	3800	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.02	0.00	0.04	0.05	0.06	0.02	0.27	0.25	0.11	0.19	0.02
Crit Moves:		****		****				****		****		
Green Time:	16.3	31.0	0.0	30.0	44.7	58.3	13.5	71.0	87.3	35.0	92.5	122.5
Volume/Cap:	0.69	0.11	0.00	0.27	0.19	0.19	0.29	0.69	0.52	0.57	0.37	0.03
Delay/Veh:	86.0	62.4	0.0	65.2	52.9	43.4	78.8	51.6	39.1	66.9	32.7	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	86.0	62.4	0.0	65.2	52.9	43.4	78.8	51.6	39.1	66.9	32.7	14.6
LOS by Move:	F	E	A	E	D	D	E	D	D	E	C	B
HCM2k95thQ:	14	3	0	8	7	9	5	41	35	20	25	2

Note: Queue reported is the number of cars per lane.

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Appendix C

Volume Summary

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: Ellis Street and Manila Dr
Peak Hour: AM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	31	4	23	0	195	399	125	0	0	0	0	*777*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	0	11	93	0	0	0	0	0	*104*
777 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
600 Ellis St (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Google Middlefield Park Master Plan (MV)	0	8	0	0	0	0	0	22	0	0	0	0	*30*
555 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Downtown Specific Plan (SV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*0*	*8*	*0*	*0*	*0*	*11*	*93*	*22*	*0*	*0*	*0*	*0*	*134*
Background Conditions	0	39	4	23	0	206	492	147	0	0	0	0	*911*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Background + Project Conditions	0	39	4	23	0	206	492	147	0	0	0	0	*911*
													0

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Ellis Street and US 101 NB Ramps
Peak Hour: AM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	146	81	0	62	1	160	0	482	120	0	0	0	*1052*
Approved Project Trips													
EWPP List of Approved Project Trips	11	0	0	0	0	3	0	93	19	0	0	0	*126*
777 W Middlefield Rd (MV)	0	0	0	0	0	1	0	0	0	0	0	0	*1*
600 Ellis St (MV)	0	0	0	0	0	66	0	0	9	0	0	0	*75*
Google Middlefield Park Master Plan (MV)	0	8	0	0	0	79	0	22	140	0	0	0	*249*
555 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	0	1	0	0	0	*1*
Downtown Specific Plan (SV)	0	0	0	0	0	2	0	0	0	0	0	0	*2*
Total Approved Trips	*11*	*8*	*0*	*0*	*0*	*151*	*0*	*115*	*169*	*0*	*0*	*0*	*454*
Background Conditions	157	89	0	62	1	311	0	597	289	0	0	0	*1506*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*70*	*0*	*0*	*0*	*70*
Background + Project Conditions	157	89	0	62	1	311	0	597	359	0	0	0	*1576*
													0

Intersection Number: 3
Traffix Node Number: 3
Intersection Name: Ellis Street and US 101 SB Ramps
Peak Hour: AM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	233	15	0	0	0	149	237	0	305	0	344	*1283*
Approved Project Trips													
EWPP List of Approved Project Trips	0	3	0	0	0	0	10	19	0	119	0	93	*244*
777 W Middlefield Rd (MV)	0	1	0	0	0	0	2	0	0	0	0	0	*3*
600 Ellis St (MV)	0	66	0	0	0	0	9	9	0	66	0	0	*150*
Google Middlefield Park Master Plan (MV)	0	86	0	0	0	0	59	163	0	92	0	0	*400*
555 W Middlefield Rd (MV)	0	0	0	0	0	0	1	0	0	0	0	0	*1*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	1	0	11	0	0	*12*
Downtown Specific Plan (SV)	0	2	0	0	0	0	0	0	0	3	0	0	*5*
Total Approved Trips	*0*	*158*	*0*	*0*	*0*	*0*	*81*	*192*	*0*	*291*	*0*	*93*	*815*
Background Conditions	0	391	15	0	0	0	230	429	0	596	0	437	*2098*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*70*	*0*	*60*	*0*	*0*	*130*
Background + Project Conditions	0	391	15	0	0	0	230	499	0	656	0	437	*2228*
													0

Intersection Number: 4
Traffix Node Number: 4
Intersection Name: Ellis Street and Fairchild Drive
Peak Hour: AM
Count Date: 11/15/22
Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	128	333	73	38	16	18	11	243	11	13	5	128	*1017*
Approved Project Trips													
EWPP List of Approved Project Trips	3	33	87	15	0	0	0	5	2	5	0	10	*160*
777 W Middlefield Rd (MV)	0	1	0	0	0	0	0	2	0	0	0	0	*3*
600 Ellis St (MV)	0	131	0	0	0	0	0	18	0	0	0	0	*149*
Google Middlefield Park Master Plan (MV)	0	61	118	56	0	0	0	166	0	0	0	0	*401*
555 W Middlefield Rd (MV)	0	0	0	0	0	0	0	1	0	0	0	0	*1*
189 Bernardo Ave (MV)	0	11	0	0	0	0	0	1	0	0	0	0	*12*
Downtown Specific Plan (SV)	0	5	0	0	0	0	0	0	0	0	0	0	*5*
Total Approved Trips	*3*	*242*	*205*	*71*	*0*	*0*	*0*	*193*	*2*	*5*	*0*	*10*	*731*
Background Conditions	131	575	278	109	16	18	11	436	13	18	5	138	*1748*
Proposed Project Trips	*0*	*60*	*0*	*0*	*0*	*0*	*0*	*70*	*0*	*0*	*0*	*0*	*130*
Background + Project Conditions	131	635	278	109	16	18	11	506	13	18	5	138	*1878*
													0

Intersection Number: 5
Traffix Node Number: 6
Intersection Name: SR 237 Ramps and Maude Ave
Peak Hour: AM
Count Date: 11/15/22
Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	161	346	334	74	79	154	258	170	54	11	40	4	*1685*
Approved Project Trips													
EWPP List of Approved Project Trips	0	3	66	4	15	32	180	5	0	0	87	0	*392*
777 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
600 Ellis St (MV)	0	0	0	0	0	13	2	0	0	0	0	0	*15*
Google Middlefield Park Master Plan (MV)	65	0	0	0	67	13	10	0	71	41	47	69	*383*
555 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
189 Bernardo Ave (MV)	0	16	0	0	0	0	0	2	0	0	0	0	*18*
Downtown Specific Plan (SV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*65*	*19*	*66*	*4*	*82*	*58*	*192*	*7*	*71*	*41*	*134*	*69*	*808*
Background Conditions	226	365	400	78	161	212	450	177	125	52	174	73	*2493*
Proposed Project Trips	*15*	*62*	*0*	*0*	*6*	*7*	*8*	*51*	*0*	*0*	*4*	*10*	*163*
Background + Project Conditions	241	427	400	78	167	219	458	228	125	52	178	83	*2656*
													0

Intersection Number: 6
Traffix Node Number: 7
Intersection Name: Whisman Rd and Middlefield Rd
Peak Hour: AM
Count Date: 11/15/22
Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	44	135	40	71	293	70	79	106	136	128	192	54	*1348*
Approved Project Trips													
EWPP List of Approved Project Trips	2	3	1	0	7	0	0	1	0	0	48	1	*63*
777 W Middlefield Rd (MV)	0	0	0	0	2	0	0	0	0	1	8	1	*12*
600 Ellis St (MV)	0	0	0	0	4	2	13	0	0	0	26	0	*45*
Google Middlefield Park Master Plan (MV)	0	0	5	3	49	31	3	0	0	0	40	0	*131*
555 W Middlefield Rd (MV)	0	0	0	0	2	0	0	0	0	1	22	1	*26*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	0	0	0	3	0	*3*
Downtown Specific Plan (SV)	0	0	0	0	12	0	0	0	0	0	23	0	*35*
Total Approved Trips	*2*	*3*	*6*	*3*	*76*	*33*	*16*	*1*	*0*	*2*	*170*	*3*	*315*
Background Conditions	46	138	46	74	369	103	95	107	136	130	362	57	*1663*
Proposed Project Trips	*0*	*0*	*0*	*0*	*13*	*0*	*0*	*0*	*0*	*0*	*15*	*0*	*28*
Background + Project Conditions	46	138	46	74	382	103	95	107	136	130	377	57	*1691*
													0

Intersection Number: 7
Traffix Node Number: 8
Intersection Name: Ellis Street and Middlefield Rd
Peak Hour: AM
Count Date: 11/15/22

Date of Analysis: 10/18/23

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	53	0	126	225	367	0	0	0	0	0	331	73	*1175*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	37	6	7	0	0	0	0	0	49	0	*99*
777 W Middlefield Rd (MV)	1	0	0	0	1	0	0	0	0	0	5	2	*9*
600 Ellis St (MV)	5	0	13	92	0	0	0	0	0	0	0	39	*149*
Google Middlefield Park Master Plan (MV)	36	0	55	99	46	0	0	0	0	0	29	18	*283*
555 W Middlefield Rd (MV)	1	0	0	0	1	0	0	0	0	0	8	14	*24*
189 Bernardo Ave (MV)	0	0	11	1	0	0	0	0	0	0	3	0	*15*
Downtown Specific Plan (SV)	0	0	5	2	12	0	0	0	0	0	23	0	*42*
Total Approved Trips	*43*	*0*	*121*	*200*	*67*	*0*	*0*	*0*	*0*	*0*	*117*	*73*	*621*
Background Conditions	96	0	247	425	434	0	0	0	0	0	448	146	*1796*
Proposed Project Trips	*0*	*0*	*60*	*70*	*13*	*0*	*0*	*0*	*0*	*0*	*15*	*0*	*158*
Background + Project Conditions	96	0	307	495	447	0	0	0	0	0	463	146	*1954*
													0

Intersection Number: 8
Traffix Node Number: 9
Intersection Name: Logue Ave and Middlefield Rd
Peak Hour: AM
Count Date: 11/15/22

Date of Analysis: 10/18/23

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	84	0	15	62	593	9	3	0	0	1	282	103	*1152*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	14	0	0	0	0	0	87	0	*101*
777 W Middlefield Rd (MV)	1	0	0	0	0	0	0	0	0	0	3	2	*6*
600 Ellis St (MV)	0	0	0	0	92	0	0	0	0	0	13	0	*105*
Google Middlefield Park Master Plan (MV)	102	0	4	16	44	0	0	0	0	0	48	37	*251*
555 W Middlefield Rd (MV)	0	0	0	0	1	0	0	0	0	0	8	0	*9*
189 Bernardo Ave (MV)	0	0	0	0	2	0	0	0	0	0	14	0	*16*
Downtown Specific Plan (SV)	0	0	0	0	14	0	0	0	0	0	28	0	*42*
Total Approved Trips	*103*	*0*	*4*	*16*	*167*	*0*	*0*	*0*	*0*	*0*	*201*	*39*	*530*
Background Conditions	187	0	19	78	760	8	0	0	0	0	483	142	*1677*
Proposed Project Trips	*0*	*21*	*0*	*0*	*0*	*72*	*56*	*14*	*83*	*75*	*0*	*0*	*321*
Background + Project Conditions	187	21	19	78	760	80	56	14	83	75	483	142	*1998*
													0

Intersection Number: 9
Traffix Node Number: 10
Intersection Name: Ferguson Dr and Middlefield Rd
Peak Hour: AM
Count Date: 11/15/22

Date of Analysis: 10/18/23

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	0	0	713	42	83	0	66	17	286	0	*1207*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	14	0	0	0	0	0	87	0	*101*
777 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	3	0	*3*
600 Ellis St (MV)	0	0	0	0	92	0	0	0	0	0	13	0	*105*
Google Middlefield Park Master Plan (MV)	0	0	0	0	42	4	1	0	18	9	43	0	*117*
555 W Middlefield Rd (MV)	0	0	0	0	1	0	0	0	0	0	8	0	*9*
189 Bernardo Ave (MV)	0	0	0	0	2	0	0	0	0	0	14	0	*16*
Downtown Specific Plan (SV)	0	0	0	0	14	0	0	0	0	1	27	0	*42*
Total Approved Trips	*0*	*0*	*0*	*0*	*165*	*4*	*1*	*0*	*18*	*10*	*195*	*0*	*393*
Background Conditions	0	0	0	0	878	46	84	0	84	27	481	0	*1600*
Proposed Project Trips	*0*	*0*	*0*	*0*	*72*	*68*	*55*	*0*	*0*	*0*	*56*	*0*	*251*
Background + Project Conditions	0	0	0	0	950	114	139	0	84	27	537	0	*1851*
													0

Intersection Number: 10
Traffix Node Number: 11
Intersection Name: SR 237 WB Ramps and Middlefield Rd
Peak Hour: AM
Count Date: 11/15/22
Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	210	104	98	0	550	149	0	0	0	73	296	0	*1480*
Approved Project Trips													
EWPP List of Approved Project Trips	7	25	3	0	7	4	0	0	0	0	87	0	*133*
777 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	3	0	*3*
600 Ellis St (MV)	13	0	0	0	79	0	0	0	0	5	7	0	*104*
Google Middlefield Park Master Plan (MV)	19	33	1	0	28	0	0	0	0	12	32	0	*125*
555 W Middlefield Rd (MV)	0	0	0	0	1	0	0	0	0	0	8	0	*9*
189 Bernardo Ave (MV)	0	0	16	0	2	1	0	0	0	0	14	0	*33*
Downtown Specific Plan (SV)	0	0	16	0	14	2	0	0	0	0	27	0	*59*
Total Approved Trips	*39*	*58*	*36*	*0*	*131*	*7*	*0*	*0*	*0*	*17*	*178*	*0*	*466*
Background Conditions	249	162	134	0	681	156	0	0	0	90	474	0	*1946*
Proposed Project Trips	*70*	*0*	*0*	*0*	*70*	*0*	*0*	*0*	*0*	*38*	*73*	*0*	*251*
Background + Project Conditions	319	162	134	0	751	156	0	0	0	128	547	0	*2197*
													0

Intersection Number: 11
Traffix Node Number: 12
Intersection Name: SR 237 EB Ramps and Middlefield Rd
Peak Hour: AM
Count Date: 11/15/22
Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	0	118	483	0	194	281	210	0	261	146	*1693*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	11	0	17	178	0	0	48	42	*296*
777 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	3	0	*3*
600 Ellis St (MV)	0	0	0	0	39	0	0	0	39	0	5	2	*85*
Google Middlefield Park Master Plan (MV)	0	0	0	2	13	0	0	69	15	0	22	11	*132*
555 W Middlefield Rd (MV)	0	0	0	0	1	0	0	0	0	0	8	0	*9*
189 Bernardo Ave (MV)	0	0	0	2	3	0	13	0	0	0	29	0	*47*
Downtown Specific Plan (SV)	0	0	0	7	17	0	6	0	0	0	43	0	*73*
Total Approved Trips	*0*	*0*	*0*	*11*	*84*	*0*	*36*	*247*	*54*	*0*	*158*	*55*	*645*
Background Conditions	0	0	0	129	567	0	230	528	264	0	419	201	*2338*
Proposed Project Trips	*0*	*0*	*0*	*0*	*20*	*0*	*0*	*0*	*50*	*0*	*14*	*60*	*144*
Background + Project Conditions	0	0	0	129	587	0	230	528	314	0	433	261	*2482*
													0

Intersection Number: 12
Traffix Node Number: 13
Intersection Name: Bernardo Ave and Middlefield Rd
Peak Hour: AM
Count Date: 04/04/23
Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	5	3	11	41	518	26	4	20	27	186	249	141	*1231*
Approved Project Trips													
EWPP List of Approved Project Trips	4	1	5	10	6	1	0	12	0	0	9	55	*103*
777 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	2	0	1	*3*
600 Ellis St (MV)	0	0	0	0	39	0	0	0	0	0	5	0	*44*
Google Middlefield Park Master Plan (MV)	0	0	0	0	9	0	0	0	5	3	18	0	*35*
555 W Middlefield Rd (MV)	0	0	0	0	1	0	0	0	0	0	8	0	*9*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	0	5	43	0	0	*48*
Downtown Specific Plan (SV)	0	0	0	0	0	0	0	6	0	0	0	0	*6*
Total Approved Trips	*4*	*1*	*5*	*10*	*55*	*1*	*0*	*18*	*10*	*48*	*40*	*56*	*248*
Background Conditions	9	4	16	51	573	27	4	38	37	234	289	197	*1479*
Proposed Project Trips	*0*	*0*	*0*	*0*	*20*	*0*	*0*	*0*	*0*	*0*	*14*	*0*	*34*
Background + Project Conditions	9	4	16	51	593	27	4	38	37	234	303	197	*1513*
													0

Intersection Number: 13
Traffix Node Number: 5320
Intersection Name: Mary Ave and Central Expy*
Peak Hour: AM
Count Date: 11/15/22
Date of Analysis: 10/18/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	79	80	65	183	1766	373	361	159	355	162	753	66	*4402*
Approved Project Trips													
EWPP List of Approved Project Trips	6	7	0	0	47	1	5	73	8	3	107	37	*294*
777 W Middlefield Rd (MV)	0	0	0	0	4	0	0	0	0	0	0	0	*4*
600 Ellis St (MV)	0	0	0	0	26	0	0	0	13	2	4	0	*45*
Google Middlefield Park Master Plan (MV)	0	2	0	0	6	0	0	12	3	0	18	0	*41*
555 W Middlefield Rd (MV)	0	0	0	0	12	0	0	0	0	0	9	0	*21*
189 Bernardo Ave (MV)	3	0	0	0	6	0	0	0	3	0	1	0	*13*
Downtown Specific Plan (SV)	0	0	0	0	37	0	0	0	10	23	82	0	*152*
Total Approved Trips	*9*	*9*	*0*	*0*	*138*	*1*	*5*	*85*	*37*	*28*	*221*	*37*	*570*
Background Conditions	88	89	65	183	1904	374	366	244	392	190	974	103	*4972*
Proposed Project Trips	*0*	*0*	*0*	*0*	*28*	*0*	*0*	*0*	*10*	*1*	*25*	*0*	*64*
Background + Project Conditions	88	89	65	183	1932	374	366	244	402	191	999	103	*5036*
													0

Intersection Number: 14
Traffix Node Number: 5315
Intersection Name: Ferguson Dr and Central Expy*
Peak Hour: AM
Count Date: 11/15/22
Date of Analysis: 10/18/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	85	0	32	20	1421	0	0	0	0	0	731	61	*2350*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	26	0	0	0	0	0	145	0	*171*
777 W Middlefield Rd (MV)	0	0	0	0	4	0	0	0	0	0	0	0	*4*
600 Ellis St (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Google Middlefield Park Master Plan (MV)	11	0	0	0	0	0	0	0	0	0	0	16	*27*
555 W Middlefield Rd (MV)	0	0	0	0	11	0	0	0	0	0	1	0	*12*
189 Bernardo Ave (MV)	0	0	0	0	1	0	0	0	0	0	8	0	*9*
Downtown Specific Plan (SV)	0	0	7	3	18	0	0	0	0	0	43	0	*71*
Total Approved Trips	*11*	*0*	*7*	*3*	*60*	*0*	*0*	*0*	*0*	*0*	*197*	*16*	*294*
Background Conditions	96	0	39	23	1481	0	0	0	0	0	928	77	*2644*
Proposed Project Trips	*23*	*0*	*13*	*18*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*17*	*71*
Background + Project Conditions	119	0	52	41	1481	0	0	0	0	0	928	94	*2715*
													0

Intersection Number: 15
Traffix Node Number: 101
Intersection Name: Ferguson Dr and Internal Road
Peak Hour: AM
Count Date: 01/00/00
Date of Analysis: 10/18/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	59	0	0	0	0	0	149	0	0	0	0	*208*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	0	0	0	0	0	0	0	0	*0*
777 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
600 Ellis St (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Google Middlefield Park Master Plan (MV)	0	13	0	0	0	0	0	19	0	0	0	0	*32*
555 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Downtown Specific Plan (SV)	0	1	0	0	0	0	0	0	0	0	0	0	*1*
Total Approved Trips	*0*	*14*	*0*	*0*	*0*	*0*	*0*	*19*	*0*	*0*	*0*	*0*	*33*
Background Conditions	0	73	0	0	0	0	0	168	0	0	0	0	*241*
Proposed Project Trips	*68*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*35*	*35*	*0*	*55*	*193*
Background + Project Conditions	68	73	0	0	0	0	0	168	35	35	0	55	*434*
													0

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: Ellis Street and Manila Dr
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	180	4	1	0	139	64	23	0	0	0	0	*411*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	0	53	16	0	0	0	0	0	*69*
777 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
600 Ellis St (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Google Middlefield Park Master Plan (MV)	0	22	0	0	0	0	0	14	0	0	0	0	*36*
555 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Downtown Specific Plan (SV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*0*	*22*	*0*	*0*	*0*	*53*	*16*	*14*	*0*	*0*	*0*	*0*	*105*
Background Conditions	0	202	4	1	0	192	80	37	0	0	0	0	*516*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Background + Project Conditions	0	202	4	1	0	192	80	37	0	0	0	0	*516*
													0

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Ellis Street and US 101 NB Ramps
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	112	215	0	14	0	121	0	79	175	0	0	0	*716*
Approved Project Trips													
EWPP List of Approved Project Trips	53	0	0	0	0	10	0	16	106	0	0	0	*185*
777 W Middlefield Rd (MV)	0	0	0	0	0	1	0	0	0	0	0	0	*1*
600 Ellis St (MV)	0	0	0	0	0	12	0	0	59	0	0	0	*71*
Google Middlefield Park Master Plan (MV)	0	22	0	0	0	52	0	14	110	0	0	0	*198*
555 W Middlefield Rd (MV)	0	0	0	0	0	1	0	0	0	0	0	0	*1*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	0	9	0	0	0	*9*
Downtown Specific Plan (SV)	0	0	0	0	0	1	0	0	0	0	0	0	*1*
Total Approved Trips	*53*	*22*	*0*	*0*	*0*	*77*	*0*	*30*	*284*	*0*	*0*	*0*	*466*
Background Conditions	165	237	0	14	0	198	0	109	459	0	0	0	*1182*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*68*	*0*	*0*	*0*	*68*
Background + Project Conditions	165	237	0	14	0	198	0	109	527	0	0	0	*1250*
													0

Intersection Number: 3
Traffix Node Number: 3
Intersection Name: Ellis Street and US 101 SB Ramps
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	220	108	0	0	0	215	216	0	86	0	40	*885*
Approved Project Trips													
EWPP List of Approved Project Trips	0	10	0	0	0	0	6	106	0	21	0	16	*159*
777 W Middlefield Rd (MV)	0	1	0	0	0	0	1	0	0	0	0	0	*2*
600 Ellis St (MV)	0	12	0	0	0	0	59	59	0	12	0	0	*142*
Google Middlefield Park Master Plan (MV)	0	74	0	0	0	0	96	124	0	137	0	0	*431*
555 W Middlefield Rd (MV)	0	1	0	0	0	0	1	0	0	0	0	0	*2*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	9	0	2	0	0	*11*
Downtown Specific Plan (SV)	0	1	0	0	0	0	0	0	0	2	0	0	*3*
Total Approved Trips	*0*	*99*	*0*	*0*	*0*	*0*	*163*	*298*	*0*	*174*	*0*	*16*	*750*
Background Conditions	0	319	108	0	0	0	378	514	0	260	0	56	*1635*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*68*	*0*	*61*	*0*	*0*	*129*
Background + Project Conditions	0	319	108	0	0	0	378	582	0	321	0	56	*1764*
													0

Intersection Number: 4
Traffix Node Number: 4
Intersection Name: Ellis Street and Fairchild Drive
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	108	179	16	82	16	8	8	271	15	14	1	94	*812*
Approved Project Trips													
EWPP List of Approved Project Trips	10	6	14	76	0	0	0	30	5	3	0	6	*150*
777 W Middlefield Rd (MV)	0	1	0	0	0	0	0	1	0	0	0	0	*2*
600 Ellis St (MV)	0	24	0	0	0	0	0	117	0	0	0	0	*141*
Google Middlefield Park Master Plan (MV)	0	164	47	133	0	0	0	87	0	0	0	0	*431*
555 W Middlefield Rd (MV)	0	1	0	0	0	0	0	1	0	0	0	0	*2*
189 Bernardo Ave (MV)	0	2	0	0	0	0	0	9	0	0	0	0	*11*
Downtown Specific Plan (SV)	0	3	0	0	0	0	0	0	0	0	0	0	*3*
Total Approved Trips	*10*	*201*	*61*	*209*	*0*	*0*	*0*	*245*	*5*	*3*	*0*	*6*	*740*
Background Conditions	118	380	77	291	16	8	8	516	20	17	1	100	*1552*
Proposed Project Trips	*0*	*61*	*0*	*0*	*0*	*0*	*0*	*68*	*0*	*0*	*0*	*0*	*129*
Background + Project Conditions	118	441	77	291	16	8	8	584	20	17	1	100	*1681*
													0

Intersection Number: 5
Traffix Node Number: 6
Intersection Name: SR 237 Ramps and Maude Ave
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	31	133	69	147	31	177	225	269	42	59	45	54	*1282*
Approved Project Trips													
EWPP List of Approved Project Trips	0	2	12	28	76	174	32	32	0	0	14	0	*370*
777 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
600 Ellis St (MV)	0	0	0	0	0	2	12	0	0	0	0	0	*14*
Google Middlefield Park Master Plan (MV)	70	0	0	0	50	19	13	0	48	66	63	35	*364*
555 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
189 Bernardo Ave (MV)	0	2	0	0	0	0	0	13	0	0	0	0	*15*
Downtown Specific Plan (SV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*70*	*4*	*12*	*28*	*126*	*195*	*57*	*45*	*48*	*66*	*77*	*35*	*763*
Background Conditions	101	137	81	175	157	372	282	314	90	125	122	89	*2045*
Proposed Project Trips	*9*	*45*	*0*	*0*	*3*	*7*	*8*	*64*	*0*	*0*	*6*	*15*	*157*
Background + Project Conditions	110	182	81	175	160	379	290	378	90	125	128	104	*2202*
													0

Intersection Number: 6
Traffix Node Number: 7
Intersection Name: Whisman Rd and Middlefield Rd
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	29	90	36	32	218	107	67	65	68	149	264	67	*1192*
Approved Project Trips													
EWPP List of Approved Project Trips	1	2	1	1	42	0	0	3	0	0	8	2	*60*
777 W Middlefield Rd (MV)	1	0	0	0	6	0	0	0	1	1	6	1	*16*
600 Ellis St (MV)	0	0	0	0	23	12	2	0	0	0	5	0	*42*
Google Middlefield Park Master Plan (MV)	0	0	10	10	51	27	15	0	0	0	58	0	*171*
555 W Middlefield Rd (MV)	1	0	0	0	5	0	0	0	1	1	15	1	*24*
189 Bernardo Ave (MV)	0	0	0	0	2	0	0	0	0	0	0	0	*2*
Downtown Specific Plan (SV)	0	0	0	0	26	0	0	0	0	0	13	0	*39*
Total Approved Trips	*3*	*2*	*11*	*11*	*155*	*39*	*17*	*3*	*2*	*2*	*105*	*4*	*354*
Background Conditions	32	92	47	43	373	146	84	68	70	151	369	71	*1546*
Proposed Project Trips	*0*	*0*	*0*	*0*	*16*	*0*	*0*	*0*	*0*	*0*	*13*	*0*	*29*
Background + Project Conditions	32	92	47	43	389	146	84	68	70	151	382	71	*1575*
													0

Intersection Number: 7
Traffix Node Number: 8
Intersection Name: Ellis Street and Middlefield Rd
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	92	0	170	106	238	0	0	0	0	0	320	74	*1000*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	9	34	43	0	0	0	0	0	9	0	*95*
777 W Middlefield Rd (MV)	2	0	0	0	3	0	0	0	0	0	4	1	*10*
600 Ellis St (MV)	35	0	82	17	0	0	0	0	0	0	0	7	*141*
Google Middlefield Park Master Plan (MV)	38	0	104	89	51	0	0	0	0	0	46	36	*364*
555 W Middlefield Rd (MV)	2	0	0	0	2	0	0	0	0	0	5	9	*18*
189 Bernardo Ave (MV)	0	0	2	9	2	0	0	0	0	0	0	0	*13*
Downtown Specific Plan (SV)	0	0	3	5	26	0	0	0	0	0	13	0	*47*
Total Approved Trips	*77*	*0*	*200*	*154*	*127*	*0*	*0*	*0*	*0*	*0*	*77*	*53*	*688*
Background Conditions	169	0	370	260	365	0	0	0	0	0	397	127	*1688*
Proposed Project Trips	*0*	*0*	*61*	*68*	*16*	*0*	*0*	*0*	*0*	*0*	*13*	*0*	*158*
Background + Project Conditions	169	0	431	328	381	0	0	0	0	0	410	127	*1846*
													0

Intersection Number: 8
Traffix Node Number: 9
Intersection Name: Logue Ave and Middlefield Rd
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	75	0	29	10	266	15	3	0	0	0	475	28	*901*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	77	0	0	0	0	0	18	0	*95*
777 W Middlefield Rd (MV)	2	0	0	0	1	0	0	0	0	0	2	1	*6*
600 Ellis St (MV)	0	0	0	0	17	0	0	0	0	0	82	0	*99*
Google Middlefield Park Master Plan (MV)	70	0	6	9	71	0	0	0	0	0	45	105	*306*
555 W Middlefield Rd (MV)	0	0	0	0	2	0	0	0	0	0	5	0	*7*
189 Bernardo Ave (MV)	0	0	0	0	11	0	0	0	0	0	2	0	*13*
Downtown Specific Plan (SV)	0	0	0	0	31	0	0	0	0	0	16	0	*47*
Total Approved Trips	*72*	*0*	*6*	*9*	*210*	*0*	*0*	*0*	*0*	*0*	*170*	*106*	*573*
Background Conditions	147	0	35	19	476	13	0	0	0	0	645	134	*1469*
Proposed Project Trips	*0*	*13*	*0*	*0*	*0*	*51*	*73*	*20*	*84*	*74*	*0*	*0*	*315*
Retail Pass-by	*0*	*0*	*0*	*0*	*-1*	*1*	*1*	*0*	*1*	*1*	*-1*	*0*	
Background + Project Conditions	147	13	35	19	475	65	74	20	85	75	644	134	*1786*
													0

Intersection Number: 9
Traffix Node Number: 10
Intersection Name: Ferguson Dr and Middlefield Rd
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	0	0	254	89	78	0	18	46	471	0	*956*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	77	0	0	0	0	0	18	0	*95*
777 W Middlefield Rd (MV)	0	0	0	0	1	0	0	0	0	0	2	0	*3*
600 Ellis St (MV)	0	0	0	0	17	0	0	0	0	0	82	0	*99*
Google Middlefield Park Master Plan (MV)	0	0	0	0	64	12	2	0	15	10	41	0	*144*
555 W Middlefield Rd (MV)	0	0	0	0	2	0	0	0	0	0	5	0	*7*
189 Bernardo Ave (MV)	0	0	0	0	11	0	0	0	0	0	2	0	*13*
Downtown Specific Plan (SV)	0	0	0	0	31	0	0	0	0	1	15	0	*47*
Total Approved Trips	*0*	*0*	*0*	*0*	*203*	*12*	*2*	*0*	*15*	*11*	*165*	*0*	*408*
Background Conditions	0	0	0	0	457	101	80	0	33	57	636	0	*1364*
Proposed Project Trips	*0*	*0*	*0*	*0*	*51*	*49*	*70*	*0*	*0*	*0*	*73*	*0*	*243*
Background + Project Conditions	0	0	0	0	508	150	150	0	33	57	709	0	*1607*
													0

Intersection Number: 10
Traffix Node Number: 11
Intersection Name: SR 237 WB Ramps and Middlefield Rd
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	122	244	128	0	211	159	0	0	0	129	426	0	*1419*
Approved Project Trips													
EWPP List of Approved Project Trips	37	137	2	0	40	23	0	0	0	0	18	0	*257*
777 W Middlefield Rd (MV)	0	0	0	0	1	0	0	0	0	0	2	0	*3*
600 Ellis St (MV)	2	0	0	0	14	0	0	0	0	35	47	0	*98*
Google Middlefield Park Master Plan (MV)	32	48	5	0	44	0	0	0	0	8	35	0	*172*
555 W Middlefield Rd (MV)	0	0	0	0	2	0	0	0	0	0	5	0	*7*
189 Bernardo Ave (MV)	0	0	2	0	11	11	0	0	0	0	2	0	*26*
Downtown Specific Plan (SV)	0	0	8	0	31	7	0	0	0	0	15	0	*61*
Total Approved Trips	*71*	*185*	*17*	*0*	*143*	*41*	*0*	*0*	*0*	*43*	*124*	*0*	*624*
Background Conditions	193	429	145	0	354	200	0	0	0	172	550	0	*2043*
Proposed Project Trips	*53*	*0*	*0*	*0*	*48*	*0*	*0*	*0*	*0*	*51*	*93*	*0*	*245*
Background + Project Conditions	246	429	145	0	402	200	0	0	0	223	643	0	*2288*
													0

Intersection Number: 11
Traffix Node Number: 12
Intersection Name: SR 237 EB Ramps and Middlefield Rd
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	0	128	288	0	193	159	82	0	339	194	*1383*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	64	0	3	30	0	0	12	8	*117*
777 W Middlefield Rd (MV)	0	0	0	0	1	0	0	0	0	0	2	0	*3*
600 Ellis St (MV)	0	0	0	0	7	0	0	0	7	0	35	12	*61*
Google Middlefield Park Master Plan (MV)	0	0	0	5	21	0	0	42	23	0	25	15	*131*
555 W Middlefield Rd (MV)	0	0	0	0	2	0	0	0	0	0	5	0	*7*
189 Bernardo Ave (MV)	0	0	0	13	22	0	2	0	0	0	4	0	*41*
Downtown Specific Plan (SV)	0	0	0	18	37	0	3	0	0	0	24	0	*82*
Total Approved Trips	*0*	*0*	*0*	*36*	*154*	*0*	*8*	*72*	*30*	*0*	*107*	*35*	*442*
Background Conditions	0	0	0	164	442	0	201	231	112	0	446	229	*1825*
Proposed Project Trips	*0*	*0*	*0*	*0*	*14*	*0*	*0*	*0*	*34*	*0*	*20*	*72*	*140*
Background + Project Conditions	0	0	0	164	456	0	201	231	146	0	466	301	*1965*
													0

Intersection Number: 12
Traffix Node Number: 13
Intersection Name: Bernardo Ave and Middlefield Rd
Peak Hour: PM
Count Date: 04/04/23

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	17	8	18	15	269	47	25	1	105	26	475	27	*1033*
Approved Project Trips													
EWPP List of Approved Project Trips	29	5	31	2	35	5	0	2	0	0	5	10	*124*
777 W Middlefield Rd (MV)	1	0	0	0	0	0	0	0	0	1	0	1	*3*
600 Ellis St (MV)	0	0	0	0	7	0	0	0	0	0	35	0	*42*
Google Middlefield Park Master Plan (MV)	0	0	0	0	13	0	0	0	10	10	12	0	*45*
555 W Middlefield Rd (MV)	0	0	0	0	2	0	0	0	0	0	5	0	*7*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	0	34	6	0	0	*40*
Downtown Specific Plan (SV)	0	0	0	0	0	0	0	3	0	0	0	0	*3*
Total Approved Trips	*30*	*5*	*31*	*2*	*57*	*5*	*0*	*5*	*44*	*17*	*57*	*11*	*264*
Background Conditions	47	13	49	17	326	52	25	6	149	43	532	38	*1297*
Proposed Project Trips	*0*	*0*	*0*	*0*	*14*	*0*	*0*	*0*	*0*	*0*	*20*	*0*	*34*
Background + Project Conditions	47	13	49	17	340	52	25	6	149	43	552	38	*1331*
													0

Intersection Number: 13
Traffix Node Number: 5320
Intersection Name: Mary Ave and Central Expy*
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	74	130	141	38	838	349	407	91	164	398	1386	59	*4075*
Approved Project Trips													
EWPP List of Approved Project Trips	32	39	0	0	96	4	1	13	4	8	45	6	*248*
777 W Middlefield Rd (MV)	0	0	0	0	10	0	0	0	0	0	0	0	*10*
600 Ellis St (MV)	0	0	0	0	5	0	0	0	2	12	23	0	*42*
Google Middlefield Park Master Plan (MV)	0	8	0	0	13	0	0	2	0	1	11	0	*35*
555 W Middlefield Rd (MV)	0	0	0	0	16	0	0	0	0	0	6	0	*22*
189 Bernardo Ave (MV)	0	0	0	0	1	0	0	0	0	3	5	3	*12*
Downtown Specific Plan (SV)	0	0	0	0	94	0	0	0	26	12	45	0	*177*
Total Approved Trips	*32*	*47*	*0*	*0*	*235*	*4*	*1*	*15*	*32*	*36*	*135*	*9*	*546*
Background Conditions	106	177	141	38	1073	353	408	106	196	434	1521	68	*4621*
Proposed Project Trips	*0*	*0*	*0*	*0*	*24*	*0*	*0*	*0*	*2*	*8*	*30*	*0*	*64*
Background + Project Conditions	106	177	141	38	1097	353	408	106	198	442	1551	68	*4685*
													0

Intersection Number: 14
Traffix Node Number: 5315
Intersection Name: Ferguson Dr and Central Expy*
Peak Hour: PM
Count Date: 11/15/22

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	72	0	25	59	958	0	0	0	0	0	1244	82	*2440*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	131	0	0	0	0	0	25	0	*156*
777 W Middlefield Rd (MV)	0	0	0	0	10	0	0	0	0	0	0	0	*10*
600 Ellis St (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Google Middlefield Park Master Plan (MV)	15	0	0	0	0	0	0	0	0	0	0	11	*26*
555 W Middlefield Rd (MV)	0	0	0	0	14	0	0	0	0	0	1	0	*15*
189 Bernardo Ave (MV)	0	0	0	0	6	0	0	0	0	0	1	0	*7*
Downtown Specific Plan (SV)	0	0	4	8	49	0	0	0	0	0	23	0	*84*
Total Approved Trips	*15*	*0*	*4*	*8*	*210*	*0*	*0*	*0*	*0*	*0*	*50*	*11*	*298*
Background Conditions	87	0	29	67	1168	0	0	0	0	0	1294	93	*2738*
Proposed Project Trips	*20*	*0*	*18*	*12*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*20*	*70*
Background + Project Conditions	107	0	47	79	1168	0	0	0	0	0	1294	113	*2808*
													0

Intersection Number: 15
Traffix Node Number: 101
Intersection Name: Ferguson Dr and Internal Road
Peak Hour: PM
Count Date: 01/00/00

Date of Analysis: 10/18/23

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	135	0	0	0	0	0	96	0	0	0	0	*231*
Approved Project Trips													
EWPP List of Approved Project Trips	0	0	0	0	0	0	0	0	0	0	0	0	*0*
777 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
600 Ellis St (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Google Middlefield Park Master Plan (MV)	0	22	0	0	0	0	0	17	0	0	0	0	*39*
555 W Middlefield Rd (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
189 Bernardo Ave (MV)	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Downtown Specific Plan (SV)	0	1	0	0	0	0	0	0	0	0	0	0	*1*
Total Approved Trips	*0*	*23*	*0*	*0*	*0*	*0*	*0*	*17*	*0*	*0*	*0*	*0*	*40*
Background Conditions	0	158	0	0	0	0	0	113	0	0	0	0	*271*
Proposed Project Trips	*49*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*31*	*38*	*0*	*70*	*188*
Background + Project Conditions	49	158	0	0	0	0	0	113	31	38	0	70	*459*
													0

Appendix D

Signal and Stop Warrant Analysis

FOUR WAY STOP SIGN WARRANT

FOR

Ferguson Drive & Internal Road (Background Plus Project Condition)

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *highest 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.

OR

Min. **300 vph** on ALL APPROACHES for *highest 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.

*If intersection is located in residential area, then decrease above volumes by 40%

Time [hr]	8	9	10	15	16	17	18	19
Major Street	367	392	230	286	300	397	318	301
Minor Street	34	30	62	71	75	108	78	74
Total	461	482	292	357	375	505	396	375
Meet Warrant?	No	No	No	No	No	Yes	No	No
Pedestrian Counts	<100	<100	<100	<100	<100	<100	<100	<100
Meet Ped. Warrant?	No	No	No	No	No	No	No	No

WARRANT MET? No. Project trips were added to each peak hour based on the hourly proportion of volumes on Ferguson Drive. The Internal Road volumes for the highest 8 hours would only be greater than 100 vph for only one hour. The total intersection pedestrian volumes would be fewer than 100 pedestrians per hour based on the peak-hour pedestrian counts at Ferguson Drive/Middlefield Road. (The intersection does not qualify as a residential area.)

II. ACCIDENT WARRANT:

3 or more reported accidents in *last one (1) year*

Number of actual correctable accidents in the last year: 0 on Ferguson or at Ferguson/Middlefield (1/01/2022 - 12/31/2022)

WARRANT MET? No

III. LINE OF SIGHT WARRANT:

150 feet or less on one or more approaches of the MAJOR STREET

Actual field conditions: Vehicles on the internal road would have at least 150 feet looking both ways on Ferguson Drive.

WARRANT MET? No

An intersection qualifies as a residential one, if ALL of the following conditions exist:

- Both streets have residential frontage and have a 25 mph speed limit.
- Neither street is an adopted through street as defined in the CVC.
- Neither street has more than one travel lane in each direction.
- No existing stop sign or traffic signal within 500' along the major street.
- The installation of a 4-way stop sign is compatible with overall traffic circulation. No, Ferguson Drive is considered a collector street connecting Middlefield Road and Central Expressway and provides access to developments on the street, while the side street is just a private internal road for the project.

CONCLUSION: The intersection does not meet any warrant.

Date: October 18, 2023 Study done by: Hexagon Transportation Consultants

675-685 E Middlefield Rd

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 4/15/24

Major Street: Ferguson Dr — Critical Approach Speed* (mph) 25

Minor Street: Internal Road — Critical Approach Speed* (mph) 20

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)…….…..…..…..…….. ☐

In built up area of isolated community of < 10,000 population…….…..…….. ☐

or } **Rural (R)**

☑ **Urban (U)**

AM PEAK PERIOD

Warrant 3 - Peak Hour

The need for a traffic control signal should be considered if an engineering study finds that the criteria in either of the following two categories (Parts A and B) are met:

PART A

(All parts 1, 2, and 3 below must be satisfied)

	AM PEAK PERIOD							
	Background+Prj							
Minor Street Approach Direction w/ Highest Delay	EB							
Highest Minor Street Average Delay (sec/veh)	10.2							
Corresponding Minor Street Approach Volume (veh/hr)	90							
Minor Street Total Delay (veh-hrs)	0.3							
Total Entering Volume (veh/hr)	434							
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No							
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	No							
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	No							
Signal Warranted based on Part A?	**No**							

PART B

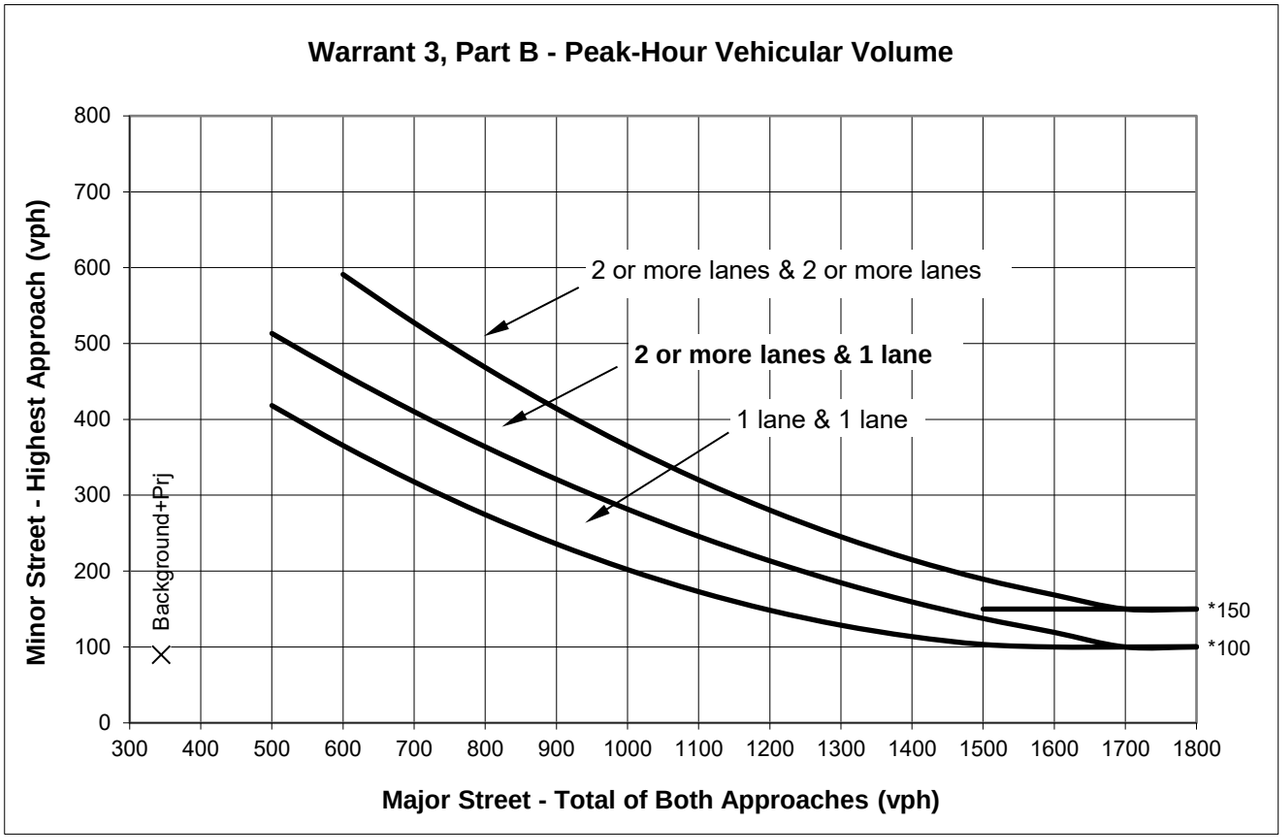
		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Background+Prj							
Major Street - Both Approaches	Ferguson Dr	X		344							
Minor Street - Highest Approach	Internal Road	X		90							
Signal Warranted based on Part B?				**No**							

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California).

675-685 E Middlefield Rd

Ferguson Dr & Internal Road **AM PEAK PERIOD**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Background+Prj							
Major Street - Both Approaches	Ferguson Dr	X		344							
Minor Street - Highest Approach	Internal Road	X		90							
Signal Warranted Based on Part B - Peak-Hour Volumes?				No							

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

675-685 E Middlefield Rd

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 4/15/24

Major Street: Ferguson Dr — Critical Approach Speed* (mph) 25

Minor Street: Internal Road — Critical Approach Speed* (mph) 20

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)……..…..…..…….. ☐

In built up area of isolated community of < 10,000 population……..…….. ☐

or → **Rural (R)**

☑ **Urban (U)**

PM PEAK HOUR

Warrant 3 - Peak Hour

The need for a traffic control signal should be considered if an engineering study finds that the criteria in either of the following two categories (Parts A and B) are met:

PART A

(All parts 1, 2, and 3 below must be satisfied)

	PM PEAK HOUR							
	Background+Prj							
Minor Street Approach Direction w/ Highest Delay	EB							
Highest Minor Street Average Delay (sec/veh)	10.9							
Corresponding Minor Street Approach Volume (veh/hr)	108							
Minor Street Total Delay (veh-hrs)	0.3							
Total Entering Volume (veh/hr)	459							
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No							
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	No							
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	No							
Signal Warranted based on Part A?	**No**							

PART B

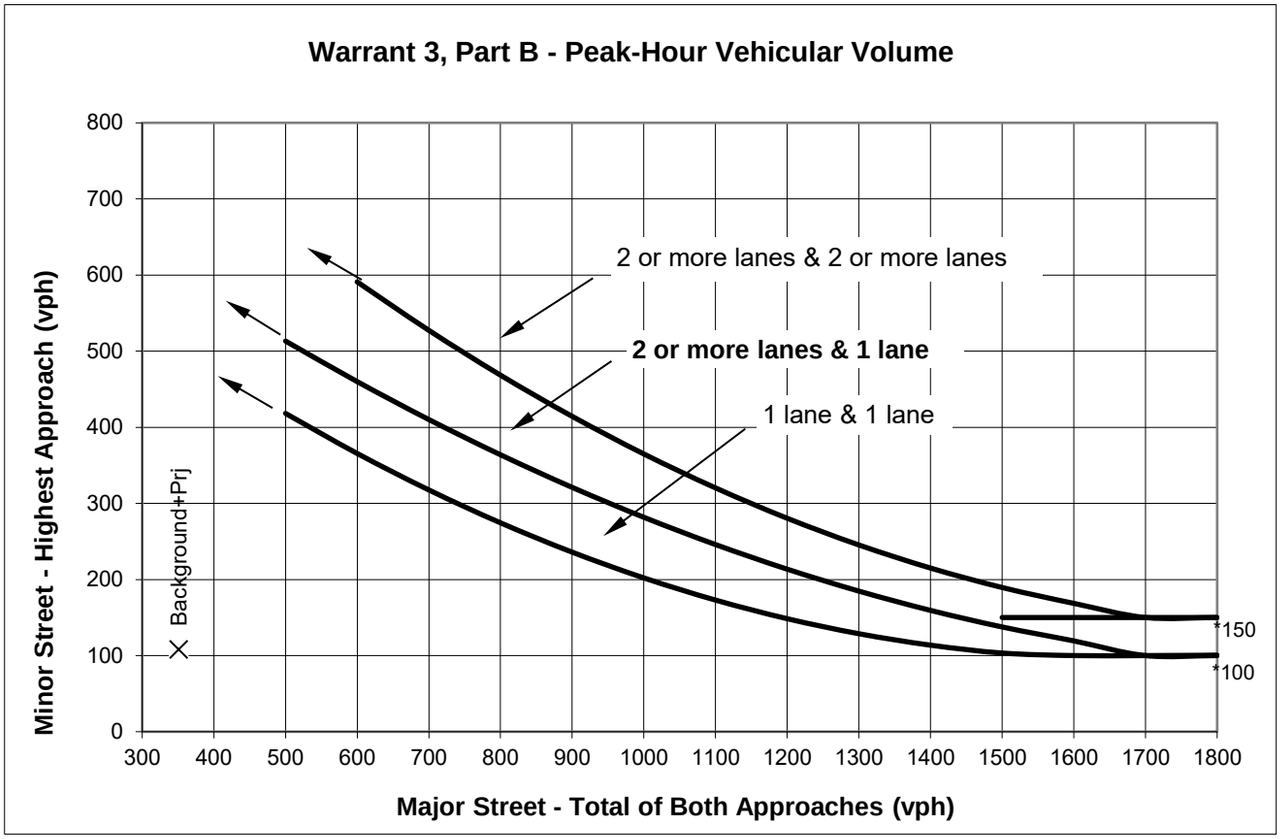
		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Background+Prj							
Major Street - Both Approaches	Ferguson Dr	X		351							
Minor Street - Highest Approach	Internal Road	X		108							
Signal Warranted based on Part B?				**No**							

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California).

675-685 E Middlefield Rd

Ferguson Dr & Internal Road **PM PEAK HOUR**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Background+Prj							
Major Street - Both Approaches	Ferguson Dr	X		351							
Minor Street - Highest Approach	Internal Road	X		108							
Signal Warranted Based on Part B - Peak-Hour Volumes?				No							

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

Appendix E

Local Parking Surveys

Office Building Parking Counts

Building Address	City	TOD features	Parking Count Date[1]	Building Floor Area (s.f.)[2]	Peak Parking Demand	Parking Ratio (spaces/ksf)
TOD Buildings						
3050 S. Delaware St (Station 4)	San Mateo	Next to Hillsdale Caltrain Station	February 2018	216,428	456	2.11
Franklin Templeton Campus	San Mateo	0.6 mile to Hillsdale Caltrain Station and shuttles between station and campus	November 2016	380,843	862	2.26
200 & 250 S. Mathilda Ave (Nokia & Apple)[3]	Sunnyvale	1,800 feet to Sunnyvale Caltrain Station	February 2018	291,145	482	1.66
					Average	***2.03***

1. Parking survey for each site was conducted on regular weekdays between 10 AM and 2 PM, when office parking demand peaks.
2. Building floor area for buildings in Sunnyvale and Fremont and at 181 2nd Avenue in San Mateo was estimated based on Google Earth. Building area for Franklin Templeton was estimated based on 67% occupancy of total existing 568,423 s.f. The parking count was conducted for the Franklin Templeton Campus Expansion TIA, when the existing Franklin Templeton buildings were 67% occupied.
3. Only employee parking, excludes visitor parking.

Mountain View Apartment Parking Counts on Wednesday March 15, 2022

Building Names	Street Address	Mixed Use	Parking Spaces	Parking Residential	Shared Retail Parking	Occupied Spaces	Parking Unbundled	Parking Cost Monthly	Available Parking Per Unit	Available Parking Per Bdrm	Occupied Parking Per Unit	Occupied Parking Per Bdrm	Units	Bedrooms
Park Place	851 Church St	Yes	561	493	68	343	unknown	unknown	1.50	0.98	0.92	0.60	373	571
The Dean	458 San Antonio Rd	Yes	837	668	169	507	1st space included with rent	$100	1.44	1.01	0.87	0.61	583	830
Madrone	111 Rengstorff Ave	No	415	415		284	1st space included with rent	unknown	1.53	1.04	1.04	0.71	272	398
Elan	801 W El Camino Real	Yes	303	248	55	187	1st space included with rent	$75	1.85	1.46	1.14	0.90	164	208
Eaves	555 W Middlefield Rd	No	670	670		385	Bundled		1.67	1.39	0.96	0.80	402	483
											Average Parking Demand Rate			
											0.99	**0.72**		

APPENDIX F

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
4699 Old Ironsides Dr, Ste 350
Santa Clara, CA 95054-1860
(408) 246-4848

September 19, 2024

Nick Towstopiat
Project Manager
David J Powers & Associates, Inc.
1871 The Alameda, Suite 200
San Jose, CA 95126

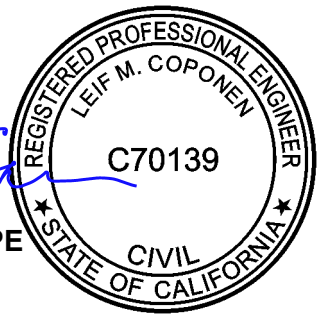
Subject: 675-685 East Middlefield Road Utility Impact Study

Dear Mr. Towstopiat:

Schaaf & Wheeler (S&W) acknowledges the project description revisions for the 675-685 East Middlefield Road Project. Schaaf & Wheeler has received the Revision 6 Project Data Comparison dated 9/11/2024 and the Revision 6 Project Drawings dated 8/22/2024. S&W compared the updated project information to the project description used as a basis for S&W's Utility Impact Study dated April 2024; total office space square footage does not change, total retail space does not change, and residential dwelling units decrease by 22 dwelling units. The overall square footage of the project increases by 39,000 square feet.

Based on the provided information in Revision 6, the findings of the 675 and 685 E Middlefield Road Utility Impact Study (Schaaf & Wheeler, April 2024) do not change. The Project revisions result in a decrease in total water demand and sewer generation. In addition, the changes in square footage do not result in an increase in required fire flows per the California Fire Code. The findings of the study are there for conservative and do not require revisions due to the Project changes outlined in Revision 6.

Sincerely,
Schaaf & Wheeler



Leif M. Coponen, PE
Vice President

675 and 685 E Middlefield Road
Utility Impact Study

Prepared for
David J. Powers and Associates

and

City of Mountain View
500 Castro Street
Mountain View, CA 94041

City of Mountain View



Leif M. Coponen, California RCE No. 70139

April 4, 2024

Schaaf & Wheeler
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(408) 246-4848
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Executive Summary

Schaaf & Wheeler has been retained by David J. Powers and Associates to determine impacts from the 675 and 685 E Middlefield Road Project (Project) on the City of Mountain View's (City) water and sanitary sewer systems. The Project site at 675 and 685 E Middlefield Road is currently developed with 163,638 square feet of office/R&D space. The site encompasses one existing parcel, APN 160-60-013. The Project proposes to demolish the existing office buildings and construct one new office building totaling 277,600 square feet and three new multi-family residential buildings totaling 858 dwelling units with 2,344 square feet of retail space.

Project impacts are analyzed for both Existing and Future Cumulative Conditions for the water system. Hydraulic models simulating pre- and post-Project development scenarios are performed to examine hydraulic deficiencies. The Existing Condition and Future Condition are based on the *2022 Water Master Plan* (WMP; HydroScience, August 2022) models. The Future Cumulative Condition model includes capital improvement projects identified in the 2022 WMP and future water demand projections based on the City's 2020 Urban Water Management Plan, Year 2030.

Project impacts are analyzed for both Existing and Future Cumulative for the sewer system. Hydraulic models simulating pre- and post-Project development scenarios are performed to examine hydraulic deficiencies. The Existing Condition and Future Condition are based on the *2022 Sewer Master Plan* (SMP; HydroScience, August 2022). The Future Cumulative Condition sewer model includes capital improvement projects identified in the 2022 SMP and sewer flow projections based on adjusted water demands from the City's 2020 Urban Water Management Plan, Year 2030.

Water System Project Impacts

The Project development does not significantly impact the water system under peak hour demand (PHD) at Existing Condition. Under the Future Cumulative Condition assuming all of the recommended CIPs in the 2022 WMP have been constructed, the system meets performance criteria under PHD. There are no new deficiencies resulting from the additional demands associated with the Project.

The Project specific fire flow requirement is based on the California Fire Code, 2022; the Project-specific fire flows range from 1,625 to 3,000 gpm and are met during Existing Condition and during Future Cumulative Condition. There are some deficient fire nodes within Pressure Zone 2; including multiple nodes near the Project; however, the demands at the Project site do not impact the fire flows at those nodes. No new deficiencies are created as a result of adding the incremental Project-specific water demands.

The actual fire flow requirement may change as the planning process continues and Project specific requirements are determined by the City Fire Marshal. If Project conditions require higher fire flow than what is analyzed, revised modeling should be conducted.

Sewer System Project Impacts

The Project development does not significantly impact the sanitary sewer system under peak wet weather flow conditions for Existing Conditions and Future Cumulative Conditions. The Project is served by the City's East Trunk sewer which has capacity to serve the new development. There are no projected CIPs along the sewer conveyance path.

Chapter 1. Introduction

1.1. Project Description

The 675 and 685 E Middlefield Road Project (Project) is located on a 10.58-acre site on E Middlefield Road, between Ferguson Drive and the VTA light rail as shown on Figure B-1. The Project is located within the East Whisman Precise Plan area. The Project proposes to construct one new office building, totaling about 277,600 square feet and three new multi-family residential apartment buildings totaling 858 dwelling units and 2,344 square feet of retail space. The Project also includes demolition of an existing office/R&D building totaling 163,638 square feet.

1.2. Water System Analysis Approach

Project impacts are analyzed using the City's water models for two conditions: Existing and Future Cumulative. As a baseline for system performance, each condition is evaluated pre-Project for existing hydraulic deficiencies. The estimated incremental water demand resulting from Project development is added to the model and post-Project deficiencies are examined. In total, four model simulations of the water system are performed, as shown in Figure 1.

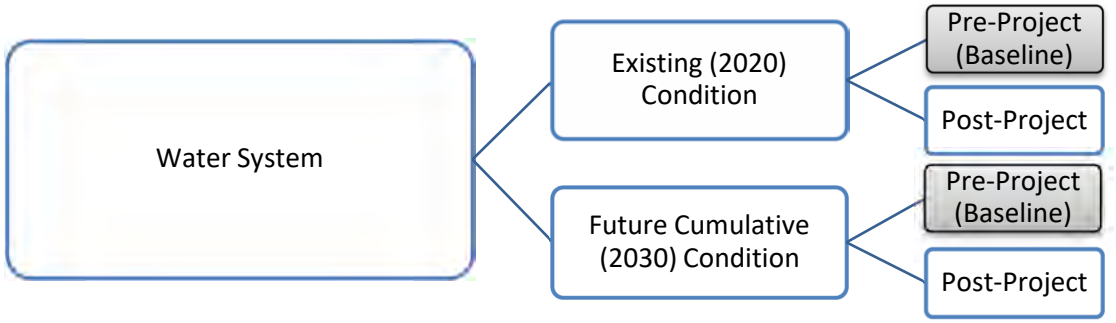


Figure 1. Water System Model Simulations

The Existing Condition model consists of the existing distribution system and operating parameters along with water demands based on existing land use from the *2022 Water Master Plan* (WMP; HydroScience, August 2022). The Future Cumulative Condition model includes capital improvement projects identified in the 2022 WMP and future water demand projections based on the City's 2020 Urban Water Management Plan, Year 2030.

1.3. Sewer System Analysis Approach

Project impacts to the sewer system are analyzed using the City's sewer models for two conditions: Existing and Future Cumulative. As a baseline for system performance, each condition is evaluated pre-Project for existing hydraulic deficiencies. The estimated net-change in sewer flow resulting from Project development is added to the model and post-Project deficiencies are examined. In total, four model simulations of the sewer system are performed, as shown in Figure 2.

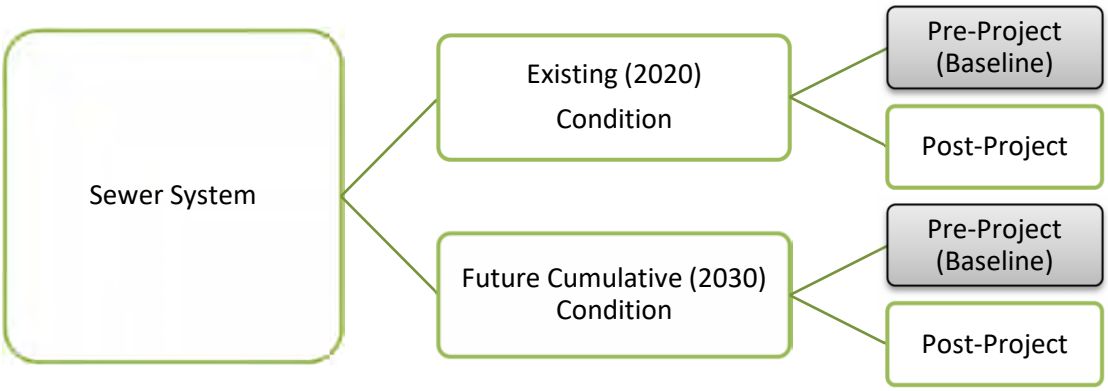


Figure 2. Sewer System Model Simulations

The Existing Condition model consists of the existing collection system and operating parameters along with sewer flow based on existing land use from the *2022 Sewer Master Plan* (SMP; HydroScience, August 2022). The Future Cumulative Condition sewer model includes capital improvement projects identified in the 2022 SMP and sewer flow projections based on adjusted water demands from the City's 2020 Urban Water Management Plan, Year 2030.

1.4. Report Organization

This report is organized into four following sections. Chapter 2 discusses the water demand estimates for the Project and Chapter 3 covers the impacts and capital improvement recommendations for the water system. Chapter 4 discusses the sewer flow estimates and Chapter 5 covers the capital improvements recommendations for the sewer system.

Chapter 2. Water Demand Projections

This chapter discusses the estimated water demand and required fire flow for the Project development. Water demand in this section represents Average Daily Demand (ADD). The ADD is an estimated daily average of water use patterns that varies by season and customer type.

Project impact is evaluated by adding the incremental increase in water demand at the Project site post-Project and comparing to the pre-Project baseline demand. The pre-Project baseline demand in the Existing and Future Cumulative Condition follows the methodology described in the 2022 WMP. The water unit duty factor for estimating total Project demand is taken from previous technical studies where detailed factors are not available in the 2022 WMP.

2.1. Project Water Demand

Project water demand is estimated from square footage of the proposed office building, retail, and number of multi-family residential dwelling units in the Project Plans and water unit duty factors developed for the City. Water unit duty factors used in this report were developed as part of the North Bayshore Precise Plan Phase II (Table 2-2, NBSPPII) from water meter records of recent developments throughout the City. The duty factors applied are representative of multi-family residential, retail, and office/R&D demands for the proposed Project. Table 2-1 provides the Project specific demand.

Table 2-1: Project Estimated Water Demand

Project	Building	DU / sq. ft.	Land Use Type	Water Duty Factor (gpd/DU or gpd/1000 sf)	Water Demand (gpd)
675 & 685 E. Middlefield	MFR	858	MFR	100	85,800
	Office/R&D	277,600	R&D	130	36,088
	Retail	2,344	Retail	130	305
	Total	-	-	-	***122,193***

2.1.1. Project Required Fire Flow

The anticipated Project-specific fire flow requirement at the site is based on the 2022 California Fire Code (CFC) Appendix B, which gives the minimum fire flow requirement based on fire-flow area and building construction type. Construction type and estimated floor area for the Project and existing buildings are taken from the Project Plan Sets received by Mountain View November 7, 2023. The proposed residential buildings are identified as mixed Construction Type I-A and Type III-A. Based on the California State Fire Marshal Code Interpretation 11-015 for mixed use construction, the fire flow requirement for the proposed buildings is estimated using a percentage approach between Type I-A construction proposed for the lower floors and Type III-A for the upper floors. Using this method, the residential building fire-flows range from 4,624 to 5,838 gpm. The proposed office building is identified as Construction Type IIIA, resulting in a fire flow of 6,000 gpm. The proposed parking garage is identified as Construction Type IIA, resulting in a fire flow of 3,250 gpm.

Building-specific fire flow requirements based on the CFC are presented in Table 2-2. Because the proposed buildings will have fire sprinklers, a 50 percent reduction is applied to the required fire flow rates from the CFC. Therefore, the required fire flow at the residential buildings ranges from 2,312 gpm to 2,863 gpm, the required fire flow at the office building is 3,000 gpm, and the required fire flow at the parking garage is 1,625 gpm. This is a conservative assumption since a 75 percent reduction is allowed upon approval on an approved automatic sprinkler system according to CFC Section B105.2.

Existing fire flow requirements for the adjacent properties planning level fire flows in the Project area are 3,500 gpm based on the model and are higher than the project specific fire flows and therefore, the existing required fire flow governs at the hydrant junctions and will remain in the hydraulic models.

Table 2-2 – Anticipated New Building Project Fire Flow (FF) Requirement

Building	FF Calculation Area (sq ft)	Construction Type	CFC Required FF (gpm)	FF with 50% Reduction (gpm)	FF with 75% Reduction (gpm)
Residential North	548,124	IA/IIIA	5,723	2,861	1,431
Residential South	530,329	IA/IIIA	5,727	2,863	1,432
Residential BMR	158,607	IA/IIIA	4,624	2,312	1,500
Office	260,000	IIIA	6,000	3,000	1,500
Parking	82,200	IIA	3,250	1,625	1,500

**Based on 2022 CFC minimum reduced Fire Flow requirement*

2.2. Existing Condition

2.2.1. Pre-Project (Baseline) Land Use and Demand

The pre-Project (baseline) condition includes parcel-level demand adopted from the City's hydraulic model, developed as part of the 2022 WMP. The demand in the model is calibrated against water billing records from 2015 through 2020, as further explained in the 2022 WMP. Table 2-3 details the model's existing demand at the parcels, which were designated as Office/R&D land use.

Table 2-3: Baseline Demand for Existing Condition (Based on Model)

Address	APN	2022 Master Plan Existing Land Use Designation	Acreage	Water Demand (gpd)
675 & 685 E. Middlefield	160-60-013	R&D	10.58	8,698
			TOTAL	**8,698**

**Water Demand allocated to the specific parcels in the Existing Condition hydraulic model*

2.2.2. Post-Project Incremental Demand

For the Project impact analysis in the Existing Condition, total post-Project demand is added to the Existing Condition model as an incremental increase in demand to the pre-Project demand. The incremental increase in demand in the Existing Condition is given in Table 2-4.

Table 2-4: Incremental Project Demand for Existing Condition

	Water Demand (gpd)
Pre-Project (Baseline) Demand	8,698
Total Post-Project Demand	122,193
Incremental Increase in Demand	***+ 113,495***

2.3. Future Cumulative Condition

2.3.1. Pre-Project (Baseline) Land Use and Demand

Future Cumulative (baseline) demand for the Project is adopted from the City's hydraulic model developed as part of the 2022 WMP. In the 2022 WMP model, water demands are based on the 2020 Urban Water Management Plan (UWMP) water projections for future years. Table 2-5 presents the parcel level pre-project demand from the model. Whereas the Existing Condition model was populated with demand based on billing records, the Future Cumulative Condition model has a higher projected future demand for the parcels based on the water duty factors developed as part of the 2022 WMP.

Table 2-5 – Baseline Demand for Future Cumulative Condition (Based on Model)

Address	APN	Future Land Use Designation	Acreage	Water Demand (gpd)
675 & 685 E. Middlefield	160-60-013	Mixed-Use	10.58	63,014
			TOTAL	**63,014**

**Water Demand allocated to the specific parcel in the Future Cumulative hydraulic model*

2.3.2. Post-Project Incremental Demand

Total post-Project demand is added to the model as an additional increase in water demand to the pre-Project demand. The incremental increase in demand in the Future Cumulative Condition is given in Table 2-6.

Table 2-6: Incremental Project Demand for Future Cumulative Condition

	Water Demand (gpd)
Pre-Project (Baseline) Demand	63,014
Total Post-Project Demand	122,193
Incremental Increase in Demand	***+59,178***

Chapter 3. Water System Impact

Project impacts to water supply, water storage, hydraulic conveyance, and fire flow requirements are evaluated in this chapter to ensure the Project demand can be adequately met. Hydraulic conveyance and available fire flow are assessed for both Existing and Future Cumulative Condition. Water supply and water storage are evaluated for the Future Cumulative Condition.

3.1. Demand Scenarios and Performance Criteria

Hydraulic performance within the water system are evaluated under two demand scenarios: Peak Hour Demand (PHD) and Maximum Day Demand with Fire Flow (MDD + FF). The MDD and PHD peaking factors from the 2022 Water Mater Plan (WMP) are used for this analysis. As detailed in the 2022 WMP, MDD peaking factors are developed using SCADA data from peak usage months in 2015 and 2020. PHD is determined based on the diurnal curve of each representative zone developed based on SCADA data. The peak hour of each zone's diurnal pattern is applied to the MDD as outlined in the 2022 WMP. The calculated peaking factors, presented in Table 3-1, are applied to Average Day Demand (ADD). Established system performance criteria used to evaluate the Project impact for all scenarios are summarized in Table 3-2.

Table 3-1: Peaking Factors

Category	Peaking Factor
Maximum Day	1.25
Peak Hour Z1 & Z2	1.72
Peak Hour Z3	2.39

Table 3-2: Water System Performance Criteria

Criteria	PHD	MDD + FF
Minimum Allowable Pressure (psi)	40	20
Maximum Allowable Velocity (fps)	7	15

3.2. Water Supply Analysis

The increased water demand from Project development in the Future Cumulative Condition is compared with the City's supply turnouts and groundwater well capacities to ensure demand can be met. The Mountain View water system is divided into three pressure zones to maintain reasonable pressures throughout the City's rising topography moving south, further from the Bay.

Water demand versus supply capacity of the turnouts by Pressure Zone is given in Table 3-3. Total capacity for Pressure Zone 1 includes peak hour turnout capacity from SFPUC Turnout #5 and can be supplements by additional supply supplemented from Wells #21, #22, and #23, if needed. Demand in Pressure Zone 1 can be sufficiently supplied by the current supply operation; however, as discussed in the 2022 WMP, surplus supply in Pressure Zone 2 could be routed to Pressure Zone 1. A pressure reducing valve (PRV) moving water from Pressure Zone 2 (Turnout #14) to Pressure Zone 1 at North Whisman Road and Evandale Avenue is currently planned as

a portion of the Annual Water and Sewer Replacements, Project 19-21. Demand in Pressure Zone 2 can be sufficiently supplied by SFPUC Turnouts #7 and #14 based on the supply capacity provided in Table 3-1 of the 2022 WMP. Total capacity for Pressure Zone 2 includes peak hour turnout capacity from SFPUC Turnouts #7 and #14 and can be supplemented with additional supply from Wells #19, Well #22 and #23, if needed. Demand in Pressure Zone 3 can be sufficiently supplied by the VW Turnouts based on the supply capacity provided in Table 3-1 of the 2022 WMP.

The Project site is located in Pressure Zone 2, which is, at this time, supplied by two San Francisco Public Utilities Commission (SFPUC) turnouts (Turnout #7 and #14). The additional Project demand does not impact the City's ability to meet total system demand.

Table 3-3: Future Cumulative Condition Demand Versus Supply

Pressure Zone	Future Cumulative Demand			Total Capacity (mgd)*
	Pre-Project		Post-Project	
	ADD (mgd)	PHD (mgd)	PHD (mgd)	
1	4.29	7.40	7.40	10.08
2	5.83	10.07	10.17	30.24
3	0.69	1.64	1.64	5.04
Total	**10.80**	**19.11**	**19.21**	**45.36**

** Total Capacity from Table 3-1 in the Water Master Plan (HydroScience Engineers, Inc., 2022)*

3.3. Water Storage Analysis

Project impact to water storage volume requirements is evaluated according to the 2022 WMP storage analysis. The 2022 WMP requires storage based on California Waterworks Standards requiring a public water system to have the capacity to meet the systems MDD + FF and separately it must meet four hours of PHD. The system shall meet these requirements in each individual pressure zone. MDD + FF is the most conservative approach to analyzing system storage. The 2022 WMP outlined four scenarios to analyze the system with various supply sources offline, Base Scenario all sources are online, Scenario 1 Valley Water is offline, Scenario 2 SFPUC is offline, and Scenario 3 all wholesale supply sources are offline. For the purposes of this Study, Scenario 2 is analyzed as it has the largest impact on Zones 1 and 2. The required storage versus active storage in the City is detailed in Table 3-4 pre- and post-Project. The minimum required storage pre- and post- Project is shown in Table 3-4 as Storage Consumed. The maximum active storage in the City is 17.3 MG.

The fire flow in Table 3-4 outlines the requirement in the 2022 WMP and is estimated from the largest fire flow requirement in each pressure zone. Based on CFC requirements the fire flow volume is calculated as 5,000 gpm for 4 hours. Pressure Zone 3 has a reduced fire flow since the controlling fire flow requirement is the hospital along Grant Road, which has a planning-level fire flow requirement of 3,500 for 3 hours. Pressure Zone 1 and 2 have many shared sources and were considered together in the 2022 WMP. To maintain consistency, this report considers Zone 1 and 2 together. Volumes for the MDD demands are considered for a full day (24 hours) in the analysis and fire flow volumes are based on their CFC duration.

Since the City has the storage volume available to meet CA-WW requirements in the Future Cumulative Condition pre- and post-Project, no additional storage improvements are recommended.

Table 3-4: Water Storage Requirements

Pressure Zone	Max Active Storage* (MG)	Max Flow from Storage* (gpm)	Available Supply (gpm)	Fire Flow (gpm)	Future Cumulative Condition Demand					
					Pre-Project			Post-Project		
					MDD (gpm)	Storage Pumped (gpm)	Storage Consumed (MG)	MDD (gpm)	Storage Pumped (gpm)	Storage Consumed (MG)
1 & 2	14.00	13,700	3,235	5,000	8,768	10,533	9.17	8,788	10,553	9.20
3	3.30	3,769	729	3,500	599	3,370	0.65	599	3,370	0.65
Total	**17.30**	**17,469**	**3,964**	**-**	**9,367**	**13,903**	**9.82**	**9,387**	**13,923**	**9.85**

** Maximum Active Storage and Maximum Flow from Storage from Table 6-3 and Appendix C in the 2022 WMP (HydroScience Engineers, Inc., 2022)*

3.4. Existing Condition Results

3.4.1. Hydraulic Model Information

Existing water system performance is analyzed with the demands and land use type in the City's hydraulic model developed for the City's 2022 WMP. Domestic and fire services for the Project will connect to the existing 12-inch water mains in Ferguson Drive and E Middlefield Road. For this analysis, only City-owned utilities are modeled; interior site piping is not evaluated.

The Existing Condition pre-Project fire flow requirement is based on the planning level fire flow of 3,500 gpm governed by adjacent parcels. The proposed fire flow requirements for the Project's new buildings are identified in Table 2-2, but the existing required planning level fire flows of 3,500 gpm are controlling as discussed in Section 2.1.1.

3.4.2. Peak Hour Demand (PHD) – Pre and Post Project

System pressures are evaluated under Peak Hour Demand (PHD) pre-Project (Figure B-2) and post-Project (Figure B-3). At Existing Condition the system meets performance criteria system-wide. The Project development does not impact the system hydraulic performance under PHD.

3.4.3. Maximum Day Demand with Fire Flow (MDD+FF) – Pre and Post Project

The pre-Project planning-level required fire flows of 3,500 gpm are met at the existing hydrant locations at the proposed Project site (Figure B-4).

After Project development, the anticipated project-specific fire flow requirements, outlined in Table 2-2, and the existing fire flow of the adjacent properties, 3,500 gpm, are met at the site as illustrated in Figure B-5 and detailed in Table 3-5. The other existing deficiencies in Pressure Zone 2 shown on Figures B-4 and B-5 are not near the Project site and are independent of the Project.

Table 3-5: Existing Condition Evaluated Project Fire Flow Nodes

Node ID	Location	Required Fire Flow Rate (gpm)*	Available Flow Pre-Project (gpm)	Available Flow Post-Project (gpm)
J-4362	Project Location – Ferguson Drive	Pre-Project: 3,500 Post-Project: 3,500	8,319	8,267
J-4386	Project Location – E Middlefield Road	Pre-Project: 3,500 Post-Project: 3,500	8,742	8,681

**Existing fire flows govern at the project site due to adjacent buildings required fire flows as discussed in Section 2.1.1.*

3.4.4. Deficiencies – Pre and Post Project

With Existing Condition demand, the water system meets system design criteria at PHD and is able to adequately supply the increased Project demand.

Existing fire flow nodes are evaluated within the Project Pressure Zone (Zone 2) for Project impact. There are several deficient fire nodes within Pressure Zone 2 near the Project site. The increase in water demand results in less than a 1% decrease in available fire flow at the nearest deficient nodes; therefore, the impact is not considered significant. The existing deficiencies in National Avenue and Circuit Way are due to an artificial model constraint limiting velocity to 15 ft/s. Due to modeling nuance, the further away from a larger water main, the higher the available fire flow due to how the model handles reducing flows to reduce pipe velocities. The deficiencies along W Evelyn Avenue are due to flows being on a dead-end pipe.

Table 3-6: Selected Existing Condition Fire Flow Deficient Nodes Pre- and Post-Project

Node ID	Location	Required Fire Flow Rate (gpm)	Available Flow Pre-Project (gpm)	Available Flow Post-Project (gpm)
J-4461	National Avenue	3,500	2,760*	2,760*
J372	Circuit Way	3,500	3,057*	3,057*
J-4277	W Evelyn Avenue	3,500	2,345	2,345

Note: Red font indicates available fire flow that does not meet the required fire flow rate.
**Velocity constraints due to modeling nuance, does not reflect actual available fire flow.*

3.5. Future Cumulative Condition Results

3.5.1. Hydraulic Model Information

The Future Cumulative Condition model is created using water demand based on the 2020 Urban Water Management Plan (UWMP) water demand projections for future years. System performance is analyzed under the assumption that all recommended CIPs in the 2022 *WMP* been constructed. Domestic and fire services for the Project will connect to the 12-inch water mains in Ferguson Drive and E Middlefield Road.

The Future Cumulative Condition pre-Project fire flow requirement is not changed from the updated Existing Condition pre-Project fire flow requirement. The pre-Project fire flow requirements of 3,500 gpm are based on planning level fire flow requirements governed by adjacent parcels. The proposed fire flow requirements for

Project's new buildings are identified in Table 2-2, but the existing required fire flows, 3,500 gpm, are controlling as discussed in Section 2.1.1.

3.5.2. Peak Hour Demand (PHD) – Pre and Post Project

The system has adequate pressures pre-Project (Figure B-6) under Peak Hour Demand (PHD) conditions. At Future Condition the system meets performance criteria system-wide. The Project development does not impact the system hydraulic performance under PHD.

3.5.3. Maximum Day Demand with Fire Flow (MDD+FF) – Pre and Post Project

The pre-Project planning-level required fire flows of 3,500 gpm are met at the existing hydrant locations at the proposed Project site. The adjacent properties have fire flows of 3,500 gpm, which govern the fire flows at the Project site nodes, that are met (Figure B-8).

In the Future Cumulative Condition, the system is able to meet the project-specific fire flow requirements at the site post-Project as shown on Figure B-9. The other existing deficiencies in Pressure Zone 2 shown on Figures B-4 and B-5 are not near the Project site and are independent of the Project.

Table 3-7: Future Cumulative Condition Evaluated Project Fire Flow Nodes

Node ID	Location	Required Fire Flow Rate (gpm)	Available Flow Pre-Project (gpm)	Available Flow Post-Project (gpm)
J-4362	Project Location – Ferguson Drive	Pre-Project: 3,500 Post-Project: 3,500	8,189	8,173
J-4386	Project Location – E Middlefield Road	Pre-Project: 3,500 Post-Project: 3,500	8,812	8,794

3.5.4. Deficiencies – Pre and Post Project

With Future Cumulative Condition demand, the water system meets system design criteria at PHD and is able to adequately supply the increased Project demand.

Future Condition fire flow nodes are evaluated within the Project Pressure Zone (Zone 2) for Project impact. There are several deficient fire nodes within Pressure Zone 2 near the Project site. The increase in water demand results in less than a 1% decrease in available fire flow at the nearest deficient nodes; therefore, the impact is not considered significant. The City is currently evaluating approaches to water CIPs to prioritize which water mains are upgraded as a result of new developments while also considering existing non-sprinklered buildings that do not meet the 4,000 gpm threshold throughout the City. The existing deficiencies in National Avenue and Circuit Way are due to an artificial model constraint limiting velocity to 15 ft/s. Due to modeling nuance, the further away from a larger water main, the higher the available fire flow due to how the model handles reducing flows to reduce pipe velocities. The deficiencies along W Evelyn Avenue are due to flows being on a dead-end pipe.

East Whisman Precise Plan (EWPP) proposed additional roads through the Precise Plan area. Additional piping was proposed throughout the EWPP in the proposed right-of-ways to create a more networked pipe system. The City should continue looking into the ability to install additional piping as discussed in the EWPP UIS.

Table 3-8: Selected Future Condition Fire Flow Deficient Nodes Pre- and Post-Project

Node ID	Location	Required Fire Flow Rate (gpm)	Available Flow Pre-Project (gpm)	Available Flow Post-Project (gpm)
J-4461	National Avenue	3,500	2,763*	2,763*
J372	Circuit Way	3,500	3,054*	3,054*
J-4277	W Evelyn Avenue	3,500	2,344	2,344

Note: Red font indicates available fire flow that does not meet the required fire flow rate.
**Velocity constraints due to modeling nuance, does not reflect actual available fire flow.*

Chapter 4. Sewer Flow Projections

This chapter discusses the sewer flow estimate for Project development and provides a comparison to pre-Project baseline conditions. The incremental Project flow is determined for both Existing and Future Cumulative Condition, as discussed in the following sections. The sewer generation factor for estimating Project sewer flow is taken from previous technical studies (2022 SMP and NBPPII) to remain consistent with the City-wide flow projections used in the hydraulic models.

Three types of sewer flow loading are used to model the sewer system: base wastewater flow, groundwater infiltration (GWI), and rainfall-dependent infiltration/inflow (RDI/I). GWI includes base infiltration (BI) and pumped groundwater discharged to the sewer system. RDI/I is stormwater that enters the sewer system. GWI and RDI/I values are modeled as constant flows.

Base wastewater flow (BWF) is from residential, commercial, institutional, office, and industrial sources. As described in the 2022 SMP, BWF is developed on an individual parcel level using water billing records from 2015 through 2020 and applying a return-to-sewer (RTS) ratio calculated for land use type. Change in BWF throughout the day due to daily use patterns is known as diurnal variation and is accounted for by applying residential and non-residential diurnal curves. BWF and diurnal curves used in this analysis are taken from the 2022 SMP to remain consistent with previous City-wide modeling. The sewer flows discussed in this section are the BWF values representing average daily flows and are not peaked.

4.1. Project Sewer Flow

Project generated sewer flow is estimated from the square footage of office space, retail space and number of multi-family residential dwelling units provided in the Project Plan Set. A return-to-sewer (RTS) ratio is applied to the water duty factors from Table 2-1 to estimate sewer flow. An RTS ratio of 0.75 was used for multi-family residential use and 0.77 was used for Office/R&D and Retail land uses based on the NBPPII UIS water and sewer demand analysis. Table 4-1 provides the sewer flow estimation for each building.

Table 4-1: Project Estimated Sewer Flow

Project	Building	DU/sf	Land Use Type	Sewer Duty Factor (gpd/DU or gpd/1000 sf)	Water Demand (gpd)
675 & 685 E. Middlefield	MFR	858	MFR	75	64,350
	Office/R&D	277,600	R&D	100	27,760
	Retail	2,344	Retail	100	234
	Total	-	-	-	***92,344***

4.2. Existing Condition

4.2.1. Pre-Project (Baseline)

The pre-Project (baseline) condition includes parcel-level sewer flow adopted from the City's hydraulic model, developed as part of the 2022 SMP. Table 4-2 details the parcel-level sewer flow in the model; the model's sewer flows are based on the sewer generation rates used in the 2022 SMP. The parcel specific demand is based on

the weighted contribution to a specific model node and may be lower than the actual parcel sewer generation rate.

Table 4-2: Baseline Flow for Existing Condition (Based on Model)

Address	APN	2022 Master Plan Existing Land Use Designation	Acreage	Sewer Flow (gpd)
675 & 685 E. Middlefield	160-60-013	R&D	10.58	5,976
			TOTAL	**5,976**

**Flow allocated to specific parcel within the Existing Condition hydraulic model*

4.2.2. Post-Project Incremental Demand

For the Project impact analysis in the Existing Condition, total post-Project sewer flow is added to the Existing model pre-Project flow as an additional increase in sewer flow. The incremental increase in flow is given in Table 4-3.

Table 4-3: Incremental Project Flow for Existing Condition

	Sewer Flow (gpd)
Pre-Project (Baseline) Flow	5,976
Total Post-Project Flow	92,344
Incremental Increase in Flow	***+ 86,368***

4.3. Future Cumulative Condition

4.3.1. Pre-Project (Baseline)

Future Cumulative (baseline) flow for the Project is adopted from the City's hydraulic model, developed as part of the 2022 SMP. In the Future Condition model, sewer flows are based on factored 2020 Urban Water Management Plan (UWMP) water demand projections.

Table 4-4 presents the parcel-level pre-project flow from the Future Cumulative hydraulic model. The specific parcel demand is based on the weighted contribution to a specific model node in the hydraulic model.

Table 4-4: Baseline Flow for Future Cumulative Condition (Based on Model)

Address	APN	Future Land Use Designation	Acreage	Sewer Flow (gpd)
675 & 685 E. Middlefield	160-60-013	Mixed-Use	10.58	41,290
			TOTAL	**41,290**

**Flow allocated to specific parcel within the Future Cumulative hydraulic model*

4.3.2. Post-Project Incremental Demand

Total post-Project flow from Table 4-1 is added to the Future Cumulative Condition model as a net change in sewer flow from pre-Project flow. The incremental increase in sewer flow in the Future Cumulative Condition is given in Table 4-5.

Table 4-5: Incremental Project Flow for Future Cumulative Condition

	Sewer Flow (gpd)
Pre-Project (Baseline) Flow	41,290
Total Post-Project Flow	92,344
Incremental Increase in Flow	***+ 51,054***

Chapter 5. Sewer System Impact

The impact of Project development on the sewer system is analyzed under Existing and Future Cumulative conditions. The specific affected area of the gravity system evaluated for Project impact begins at the Project site along East Middlefield Road. The sewer system then flows west along East Middlefield Road, then turns north into Ellis Street, then west into Fairchild Drive, then north at Leong Drive to cross Hwy 101 and continues north to the Shoreline Sewer Pump Station (SPS) via the East Trunk. The City's SPS conveys flow to the Palo Alto Regional Water Quality Control Plant (RWQCP).

5.1. Scenarios and Performance Criteria

Sewer capacity is analyzed under Peak Wet Weather Flow (PWWF) and Average Dry Weather Flow (ADWF). PWWF is used to determine hydraulic deficiencies according to the performance criteria outlined in the 2022 SMP. The sewer system is considered to have sufficient capacity if the freeboard in the upstream manhole is greater than 5 feet below the ground surface outlined in Table 5-1. Once pipes are considered deficient, the design criteria outlined in Table 5-2 shall be used to size the improvements necessary to correct the deficiency. ADWF is used to determine adequacy of wastewater treatment capacity.

The ADWF is developed in the model by adding BWF and GWI. Since the ADWF models average daily flows, BWF is not peaked. The PWWF condition applies the diurnal peaking curves for residential and non-residential flows and simulates system response to rainfall dependent inflow and infiltration. The diurnal peaking curves are adopted from the City's 2022 SMP. Groundwater Infiltration (GWI) and rainfall-dependent infiltration/inflow (RDI/I) are included, but are not peaked.

Table 5-1: Sewer System Performance Criteria

Criteria	Min Depth BGS (ft)
Minimum Freeboard in Each Manhole	5.0

Table 5-2: Sewer System Design Criteria

Criteria	Pipe Diameter ≤ 12 inch	Pipe Diameter > 12 inch
Maximum Flow Depth/Pipe Diameter (d/D)	0.50	0.75

5.2. Sewer Treatment, Joint Interceptor, and San Antonio Interceptor Capacity

Sewage generated within the City is treated at the RWQCP in Palo Alto. The sewer collection system is a gravity system with most of the flow discharging into three main trunk lines that convey flow from the south to the north and terminate at the SPS located within the City's Shoreline Park. Flow is then pumped to the gravity Joint Interceptor Sewer that conveys flow to the RWQCP. The remaining flow not received at the SPS is discharged to the Los Altos' San Antonio Interceptor that also conveys flow into the Joint Interceptor.

The City entered into a joint agreement, referred to as the Basic Agreement, with the cities of Palo Alto and Los Altos in 1968 for the construction and maintenance of the joint sewer system addressing the need for conveyance, treatment, and disposal of wastewater to meet Regional Board requirements. In accordance with the Basic Agreement, Palo Alto owns the RWQCP and administers the Basic Agreement with the partnering agencies purchasing individual capacity rights in terms of an average annual flow that can be discharged to the RWQCP. Capacity rights of the three cities can be rented or purchased from other neighboring agencies and each partnering agency can sell their capacity to others. Contractual capacity is based upon the 1985 Addendum No. 3 of the 1968 Joint Sewer System agreement that revised capacity rates in relationship to facility expansion and is based upon Average Annual Flow (defined as 1.05 times Average Dry Weather Flow). Separate service agreements with the RWQCP have since reallocated current capacity rights to include six partnering agencies. Table 5-3 presents the current capacity rights for each agency.

Table 5-3: RWQCP Joint Facilities Capacity Rights

Partner Agency	Treatment Capacity	72-inch Joint Interceptor Capacity
	Average Annual Flow (MGD)	Peak Wet Weather Flow (MGD)
Palo Alto	15.3	14.59
East Palo Alto Sanitary District	3.06	0
Los Altos Hills	0.63	3.41
Stanford University	2.11	0
Mountain View	15.1	50
Los Altos	3.8	12
Total	***40***	***80***

Source: Long Range Facilities Plan for the Regional Water Quality Control Plant (City of Palo Alto, May 2012)

The City's total capacity rights include flow leaving the City through the SPS and the amount of flow that the City discharges into the Los Altos' San Antonio Interceptor, per the 1970 Los Altos San Antonio Trunk Sewer Capacity Agreement between the two cities. The total system-wide contractual capacity for Mountain View is evaluated in the Existing and Future Cumulative Conditions with increased Project flow. Table 5-4 shows the City's projected flows compared to the RWQCP Joint Facilities capacity rights.

Per the Basic Agreement, the partnering agencies agree to conduct an engineering study when their respective service area reaches 80% of their contractual capacity rights. The Future Cumulative Condition estimates that the projected demand pre-Project and post-Project will not exceed the 80% capacity threshold. The required engineering study when the City reaches 80% of their capacity shall redefine the anticipated future needs of the treatment plant.

Table 5-4: Capacity Rights Comparison

RWQCP Joint Facility	Mountain View Contractual Capacity (MGD)	Pre-Project		Post-Project	
		2020 Existing (MGD)	2030 Future Cumulative (MGD)	2020 Existing (MGD)	2030 Future Cumulative (MGD)
Treatment	15.1	6.64	7.86	6.73	7.91
Joint	50	17.84	20.93	17.99	21.02

** Treatment = Average Annual Flow (AAF), Joint Interceptor = PWWF*

5.3. Existing Condition Results

5.3.1. Hydraulic Model Information

The Existing Condition sewer system is modeled using the City's hydraulic model developed as part of the 2022 SMP. The Project connects to an existing 16-inch HDPE pipe within East Middlefield Road and drains west to Ellis Street sewer main. A MH on East Middlefield Road is the nearest MH to the Project site, and sewer flows are assumed to discharge into this existing manhole in the hydraulic models. The flow from the project site reaches the SPS approximately 4.3 miles downstream via the Eastern Trunk Sewer System.

5.3.2. Peak Wet Weather Flow (PWWF) Scenario – Pre and Post Project

The sewer system meets the City's performance criteria along the Project flow path. All pipes along the flow path remain below surcharged-pipe conditions. Pre-Project and post-Project system performance along the flow path in the Existing Condition are shown in Figures B-10a, B-10b, B-11a, and B-11b.

5.3.3. Deficiencies – Pre and Post Project

Existing Condition model results comparing pre- and post-Project d/D are presented in Table 5-5. The system meets City performance criteria in all pipes downstream of the Project.

5.4. Future Cumulative Condition Results

5.4.1. Hydraulic Model Information

The Future Cumulative Condition model is modeled using sewer flows based on the 2022 SMP projections for future years. System performance is analyzed under the assumption that all recommended CIPs in the 2022 SMP have been constructed. The Project connects to the City's sewer system similar to the Existing Condition and the downstream flow path remains the same as the Existing Condition. No CIPs or portions thereof in the 2022 SWMP are downstream of the Project.

5.4.2. Peak Wet Weather Flow (PWWF) Scenario – Pre and Post Project

The sewer system meets the City's performance criteria along the Project flow path. All pipes along the flow path remain below surcharged-pipe conditions. Pre-Project and post-Project system performance along the flow path in the Future Cumulative Condition are shown in Figures B-12a, B-12b, B-13a, and B-13b.

5.4.3. Deficiencies – Pre and Post Project

Future Cumulative Condition model results comparing pre- and post-Project d/D are presented in Table 5-6. The system meets City performance criteria in all pipes downstream of the Project.

5.5. Project Contribution to Deficient Sewer Pipes

When deficient sewer mains are identified and a capital improvement project is recommended, the percentage of project contribution to the recommended CIPs is determined. Typically, this is considered by the City when determining the development impact fees for fair share impact to the sewer system. The City has determined contributions of less than 1% fall within the City's margin of error for variability within the hydraulic model.

There are no sewer projects identified for capacity improvement downstream of the Project site. There are no pipes downstream along project sewer flow path that are recommended to be upsized as part of the 2022 SMP. Therefore, a fair share analysis is not performed.

Table 5-5: Existing Condition Model Results – Pre and Post Project

ID	U/S MH	D/S MH	Existing Diameter (inch)	Length (ft)	Slope (%)	ADWF		PWWF					
						Pre-Project	Post-Project	Pre-Project			Post-Project		
						Max Flow (MGD)	Max Flow (MGD)	Max Flow (MGD)	d/D	FB U/S (ft)	Max Flow (MGD)	d/D	FB U/S (ft)
H6-026.1	H6-026	H6-024	16	280	0.31	0.213	0.338	0.531	0.34	-	0.676	0.40	-
H6-024.1	H6-024	H6-012	10	340	0.45	0.220	0.342	0.543	0.55	-	0.688	0.64	-
H6-012.1	H6-012	H6-010	12	366	1.47	0.220	0.342	0.544	0.42	-	0.688	0.47	-
H6-010.1	H6-010	G6-039	16	306	0.36	0.255	0.368	0.634	0.42	-	0.779	0.46	-
G6-039.1	G6-039	G6-021	16	378	0.15	0.270	0.380	0.675	0.42	-	0.821	0.46	-
G6-021.1	G6-021	G6-019	12	394	0.39	0.282	0.390	0.708	0.50	-	0.854	0.56	-
G6-019.1	G6-019	G6-040	12	490	1.71	0.287	0.394	0.721	0.55	-	0.868	0.60	-
G6-040.1	G6-040	G6-016	15	344	0.37	0.403	0.490	1.017	0.44	-	1.164	0.48	-
G6-016.1	G6-016	G6-014	15	365	0.41	0.408	0.496	1.031	0.44	-	1.178	0.47	-
G6-014.1	G6-014	F6-039	15	426	0.40	0.415	0.502	1.046	0.44	-	1.194	0.47	-
F6-039.1	F6-039	F6-037	15	80	4.97	0.420	0.507	1.055	0.49	-	1.203	0.53	-
F6-037.1	F6-037	F6-035	18	231	0.24	0.466	0.553	1.159	0.41	-	1.307	0.44	-
F6-035.1	F6-035	F6-033	18	242	0.26	0.470	0.557	1.169	0.52	-	1.317	0.56	-
F6-033.1	F6-033	F6-031	18	228	0.12	0.470	0.557	1.168	0.56	-	1.316	0.60	-
F6-031.1	F6-031	F6-029	18	384	0.09	0.500	0.587	1.228	0.56	-	1.376	0.59	-
F6-029.1	F6-029	F6-027	18	196	0.13	0.500	0.587	1.228	0.51	-	1.375	0.55	-
F6-027.1	F6-027	F6-025	18	123	0.12	0.500	0.587	1.227	0.51	-	1.375	0.55	-
F6-025.1	F6-025	F6-023	18	293	0.12	0.500	0.587	1.227	0.50	-	1.375	0.53	-
F6-023.1	F6-023	F6-019	21	81	1.33	0.500	0.587	1.227	0.55	-	1.375	0.57	-
F6-019.1	F6-019	F6-010	24	360	0.12	0.902	1.036	2.314	0.50	-	2.462	0.51	-
F6-010.1	F6-010	F6-008	24	189	0.11	0.907	1.041	2.320	0.50	-	2.468	0.52	-
F6-008.1	F6-008	F6-006	24	498	0.09	0.907	1.041	2.318	0.50	-	2.466	0.52	-
F6-006.1	F6-006	F6-002	24	502	0.15	0.909	1.044	2.320	0.46	-	2.469	0.47	-
F6-002.1	F6-002	F5-038	27	401	0.25	1.366	1.515	3.458	0.41	-	3.607	0.42	-
F5-038.1	F5-038	F5-036	27	391	0.42	1.366	1.515	3.458	0.41	-	3.606	0.42	-

Table 5-5 (Continued): Existing Condition Model Results – Pre and Post Project

ID	U/S MH	D/S MH	Existing Diameter (inch)	Length (ft)	Slope (%)	ADWF		PWWF					
						Pre-Project	Post-Project	Pre-Project			Post-Project		
						Max Flow (MGD)	Max Flow (MGD)	Max Flow (MGD)	d/D	FB U/S (ft)	Max Flow (MGD)	d/D	FB U/S (ft)
F5-036.1	F5-036	F5-012	27	317	0.45	2.091	2.240	4.716	0.45	-	4.865	0.46	-
F5-012.1	F5-012	E5-005	27	536	0.32	2.091	2.240	4.716	0.45	-	4.864	0.46	-
E5-005.1	E5-005	E5-003	27	492	0.41	2.102	2.251	4.745	0.42	-	4.893	0.43	-
E5-003.1	E5-003	E5-001	27	263	0.43	2.102	2.251	4.745	0.42	-	4.893	0.43	-
E5-001.1	E5-001	E5-016	27	493	0.43	2.102	2.251	4.744	0.43	-	4.893	0.43	-
E5-016.1	E5-016	E5-014	27	498	0.41	2.102	2.251	4.744	0.42	-	4.892	0.43	-
E5-014.1	E5-014	D5-015	27	489	0.57	2.102	2.251	4.744	0.39	-	4.892	0.40	-
D5-015.1	D5-015	D5-027	30	304	0.48	2.103	2.252	4.759	0.42	-	4.907	0.42	-
D5-027.1	D5-027	D5-025	30	213	0.24	2.103	2.252	4.759	0.41	-	4.907	0.42	-
D5-025.1	D5-025	D5-029	30	212	0.47	2.103	2.252	4.758	0.39	-	4.907	0.39	-
D5-029.1	D5-029	D5-008	33	346	0.29	2.103	2.252	4.758	0.40	-	4.906	0.41	-
D5-008.1	D5-008	D5-016	33	459	0.18	2.103	2.252	4.756	0.40	-	4.905	0.41	-
D5-016.1	D5-016	D5-014	33	549	0.21	2.103	2.252	4.755	0.39	-	4.903	0.40	-
D5-014.1	D5-014	C5-013	33	389	0.20	2.103	2.252	4.753	0.40	-	4.902	0.40	-
C5-013.1	C5-013	C5-011	33	463	0.18	2.103	2.252	4.752	0.42	-	4.900	0.43	-
C5-011.1	C5-011	C5-004	33	502	0.17	2.333	2.482	5.123	0.43	-	5.271	0.43	-
C5-004.1	C5-004	C5-002	33	495	0.16	2.333	2.482	5.121	0.43	-	5.269	0.43	-
C5-002.1	C5-002	B5-009	33	511	0.19	2.333	2.482	5.119	0.41	-	5.268	0.41	-
B5-009.1	B5-009	B5-005	36	417	0.18	2.333	2.482	5.118	0.37	-	5.267	0.37	-
B5-005.1	B5-005	B5-003	36	421	0.20	2.332	2.482	5.117	0.36	-	5.266	0.37	-
B5-003.1	B5-003	B5-011	36	156	0.19	2.332	2.482	5.117	0.36	-	5.265	0.37	-
B5-011.1	B5-011	B5-001	36	478	0.19	2.332	2.481	5.115	0.36	-	5.264	0.37	-
B5-001.1	B5-001	B5-008	36	549	0.19	2.332	2.481	5.114	0.36	-	5.262	0.37	-
B5-008.1	B5-008	B5-006	36	496	0.18	2.332	2.481	5.112	0.36	-	5.261	0.37	-
B5-006.1	B5-006	B5-004	36	500	0.31	2.332	2.481	5.110	0.48	-	5.258	0.48	-

Table 5-5 (Continued): Existing Condition Model Results – Pre and Post Project

ID	U/S MH	D/S MH	Existing Diameter (inch)	Length (ft)	Slope (%)	ADWF		PWWF					
						Pre-Project	Post-Project	Pre-Project			Post-Project		
						Max Flow (MGD)	Max Flow (MGD)	Max Flow (MGD)	d/D	FB U/S (ft)	Max Flow (MGD)	d/D	FB U/S (ft)
B5-004.1	B5-004	B5-002	36	573	0.05	2.332	2.481	5.106	0.48	-	5.254	0.48	-
B5-002.1	B5-002	B4-020	39	426	0.10	2.331	2.481	5.105	0.37	-	5.253	0.37	-
B4-020.1	B4-020	B4-018	39	418	0.26	2.331	2.480	5.104	0.31	-	5.252	0.32	-
B4-018.1	B4-018	B4-016	39	573	0.24	2.330	2.479	5.106	0.54	-	5.253	0.55	-
B4-016.1	B4-016	B4-014	42	594	0.06	4.149	4.298	8.565	0.50	-	8.717	0.51	-
B4-014.1	B4-014	B4-012	42	368	0.04	4.149	4.297	8.563	0.48	-	8.715	0.48	-
B4-012.1	B4-012	B4-010	42	450	0.17	4.149	4.297	8.562	0.39	-	8.714	0.39	-
B4-010.1	B4-010	B4-006	42	474	0.46	4.149	4.297	8.560	0.54	-	8.712	0.54	-
B4-006.1	B4-006	B4-004	39	155	-0.14	4.149	4.297	8.560	0.58	-	8.712	0.58	-

Table 5-6: Future Cumulative Condition Model Results – Pre and Post Project

ID	CIP ID	Modeled Diameter (inch)	Length (ft)	Slope (%)	ADWF		PWWF					
					Pre-Project	Post-Project	Pre-Project			Post-Project		
					Max Flow (MGD)	Max Flow (MGD)	Max Flow (MGD)	d/D	FB U/S (ft)	Max Flow (MGD)	d/D	FB U/S (ft)
H6-026.1		16	280	0.31	0.269	0.351	0.598	0.37	-	0.688	0.41	-
H6-024.1		10	340	0.45	0.274	0.355	0.611	0.59	-	0.701	0.65	-
H6-012.1		12	366	1.47	0.274	0.355	0.611	0.49	-	0.701	0.51	-
H6-010.1		16	306	0.36	0.425	0.509	0.830	0.48	-	0.921	0.51	-
G6-039.1		16	378	0.15	0.451	0.535	0.888	0.48	-	0.980	0.51	-
G6-021.1		12	394	0.39	0.458	0.542	0.922	0.59	-	1.014	0.63	-
G6-019.1		12	490	1.71	0.474	0.558	0.948	0.67	-	1.040	0.69	-
G6-040.1		15	344	0.37	0.692	0.776	1.391	0.53	-	1.483	0.55	-
G6-016.1		15	365	0.41	0.695	0.779	1.405	0.53	-	1.497	0.55	-
G6-014.1		15	426	0.40	0.699	0.783	1.421	0.53	-	1.513	0.54	-
F6-039.1		15	80	4.97	0.703	0.787	1.430	0.58	-	1.522	0.60	-
F6-037.1		18	231	0.24	0.727	0.815	1.536	0.48	-	1.628	0.50	-
F6-035.1		18	242	0.26	0.731	0.820	1.548	0.62	-	1.639	0.65	-
F6-033.1		18	228	0.12	0.731	0.819	1.547	0.66	-	1.638	0.68	-
F6-031.1		18	384	0.09	0.749	0.839	1.608	0.66	-	1.699	0.68	-
F6-029.1		18	196	0.13	0.749	0.839	1.607	0.60	-	1.699	0.62	-
F6-027.1		18	123	0.12	0.749	0.839	1.607	0.60	-	1.698	0.62	-
F6-025.1		18	293	0.12	0.749	0.839	1.607	0.58	-	1.698	0.60	-
F6-023.1		21	81	1.33	0.749	0.839	1.606	0.61	-	1.698	0.63	-
F6-019.1		24	360	0.12	1.312	1.400	2.742	0.55	-	2.833	0.56	-
F6-010.1		24	189	0.11	1.318	1.406	2.748	0.56	-	2.839	0.57	-
F6-008.1		24	498	0.09	1.319	1.407	2.746	0.56	-	2.837	0.57	-
F6-006.1		24	502	0.15	1.322	1.410	2.749	0.50	-	2.840	0.50	-
F6-002.1		27	401	0.25	1.887	1.972	3.964	0.44	-	4.056	0.45	-
F5-038.1		27	391	0.42	1.887	1.972	3.964	0.44	-	4.055	0.44	-

Note: Model Diameter in green text represents a 2022 SMP CIP pipe diameter.

Table 5-6 (Continued): Future Cumulative Condition Model Results – Pre and Post Project

ID	CIP ID	Modeled Diameter (inch)	Length (ft)	Slope (%)	ADWF		PWWF					
					Pre-Project	Post-Project	Pre-Project			Post-Project		
					Max Flow (MGD)	Max Flow (MGD)	Max Flow (MGD)	d/D	FB U/S (ft)	Max Flow (MGD)	d/D	FB U/S (ft)
F5-036.1		27	317	0.45	2.696	2.781	5.285	0.48	-	5.376	0.49	-
F5-012.1		27	536	0.32	2.696	2.781	5.284	0.48	-	5.376	0.49	-
E5-005.1		27	492	0.41	2.707	2.792	5.314	0.45	-	5.405	0.46	-
E5-003.1		27	263	0.43	2.707	2.792	5.314	0.45	-	5.405	0.45	-
E5-001.1		27	493	0.43	2.707	2.792	5.313	0.45	-	5.405	0.46	-
E5-016.1		27	498	0.41	2.707	2.792	5.313	0.45	-	5.404	0.46	-
E5-014.1		27	489	0.57	2.707	2.792	5.313	0.42	-	5.404	0.42	-
D5-015.1		30	304	0.48	2.718	2.803	5.340	0.44	-	5.431	0.44	-
D5-027.1		30	213	0.24	2.718	2.803	5.339	0.44	-	5.431	0.44	-
D5-025.1		30	212	0.47	2.718	2.803	5.339	0.41	-	5.430	0.42	-
D5-029.1		33	346	0.29	2.718	2.803	5.338	0.42	-	5.429	0.43	-
D5-008.1		33	459	0.18	2.718	2.803	5.337	0.42	-	5.428	0.43	-
D5-016.1		33	549	0.21	2.718	2.803	5.335	0.41	-	5.426	0.42	-
D5-014.1		33	389	0.20	2.718	2.803	5.334	0.42	-	5.425	0.43	-
C5-013.1		33	463	0.18	2.718	2.803	5.334	0.46	-	5.425	0.46	-
C5-011.1		33	502	0.17	2.951	3.036	5.929	0.46	-	6.020	0.47	-
C5-004.1		33	495	0.16	2.951	3.036	5.927	0.46	-	6.018	0.46	-
C5-002.1		33	511	0.19	2.951	3.036	5.925	0.44	-	6.016	0.44	-
B5-009.1		36	417	0.18	2.951	3.036	5.924	0.40	-	6.015	0.40	-
B5-005.1		36	421	0.20	2.951	3.035	5.923	0.40	-	6.014	0.40	-
B5-003.1		36	156	0.19	3.010	3.096	6.052	0.40	-	6.143	0.40	-
B5-011.1		36	478	0.19	3.010	3.095	6.050	0.40	-	6.141	0.40	-
B5-001.1		36	549	0.19	3.010	3.095	6.049	0.40	-	6.140	0.40	-
B5-008.1		36	496	0.18	3.010	3.095	6.048	0.40	-	6.139	0.40	-
B5-006.1		36	500	0.31	3.010	3.095	6.044	0.52	-	6.136	0.52	-

*Note: Model Diameter in **green** text represents a 2022 SMP CIP pipe diameter*

Table 5-6 (Continued): Future Cumulative Condition Model Results – Pre and Post Project

ID	CIP ID	Modeled Diameter (inch)	Length (ft)	Slope (%)	ADWF		PWWF					
					Pre-Project	Post-Project	Pre-Project			Post-Project		
					Max Flow (MGD)	Max Flow (MGD)	Max Flow (MGD)	d/D	FB U/S (ft)	Max Flow (MGD)	d/D	FB U/S (ft)
B5-004.1		36	573	0.05	3.009	3.094	6.041	0.52	-	6.132	0.52	-
B5-002.1		39	426	0.10	3.009	3.094	6.039	0.40	-	6.131	0.40	-
B4-020.1		39	418	0.26	3.009	3.094	6.038	0.34	-	6.129	0.35	-
B4-018.1		39	573	0.24	3.011	3.096	6.041	0.59	-	6.132	0.59	-
B4-016.1		42	594	0.06	5.441	5.525	10.085	0.55	-	10.177	0.55	-
B4-014.1		42	368	0.04	5.441	5.525	10.083	0.52	-	10.175	0.52	-
B4-012.1		42	450	0.17	5.441	5.524	10.082	0.42	-	10.174	0.42	-
B4-010.1		42	474	0.46	5.440	5.524	10.080	0.59	-	10.172	0.59	-
B4-006.1		37	155	-0.14	5.440	5.524	10.080	0.67	-	10.172	0.67	-

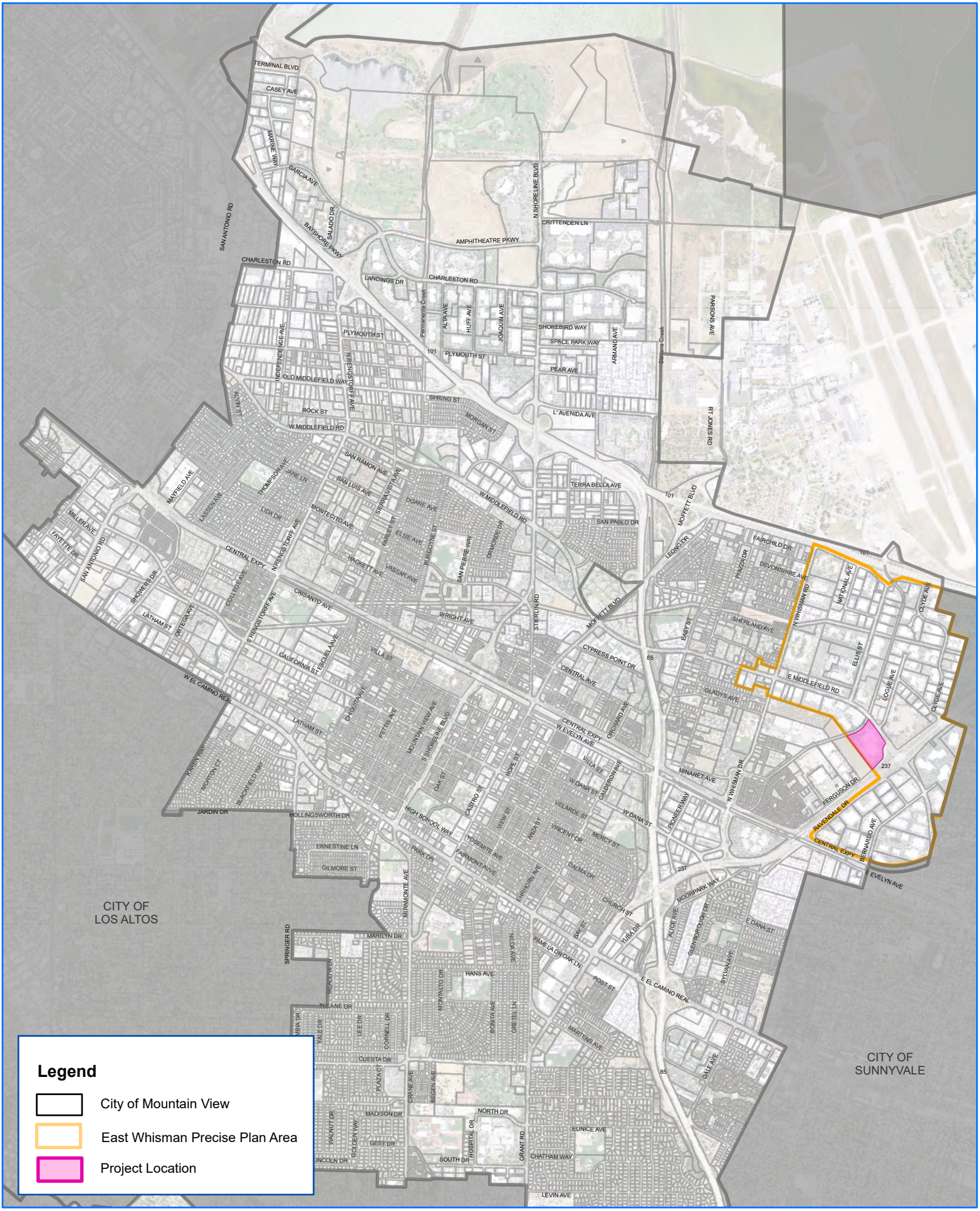
Note: Model Diameter in green text represents a 2022 SMP CIP pipe diameter

APPENDIX A:

(NOT USED)

APPENDIX B:

Figures



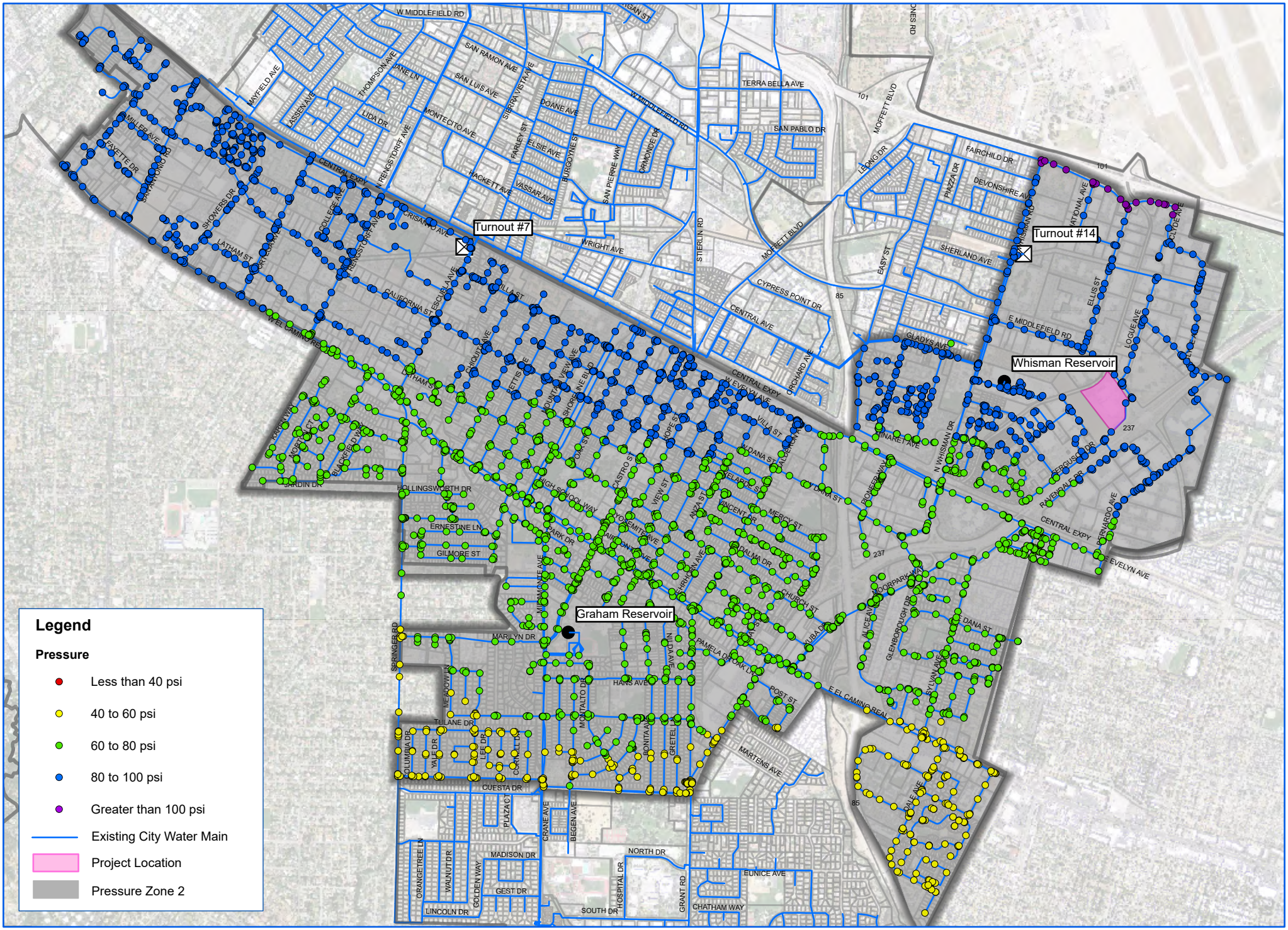
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0 1,000 2,000 Feet

N

FIGURE B-1: **Project Location**

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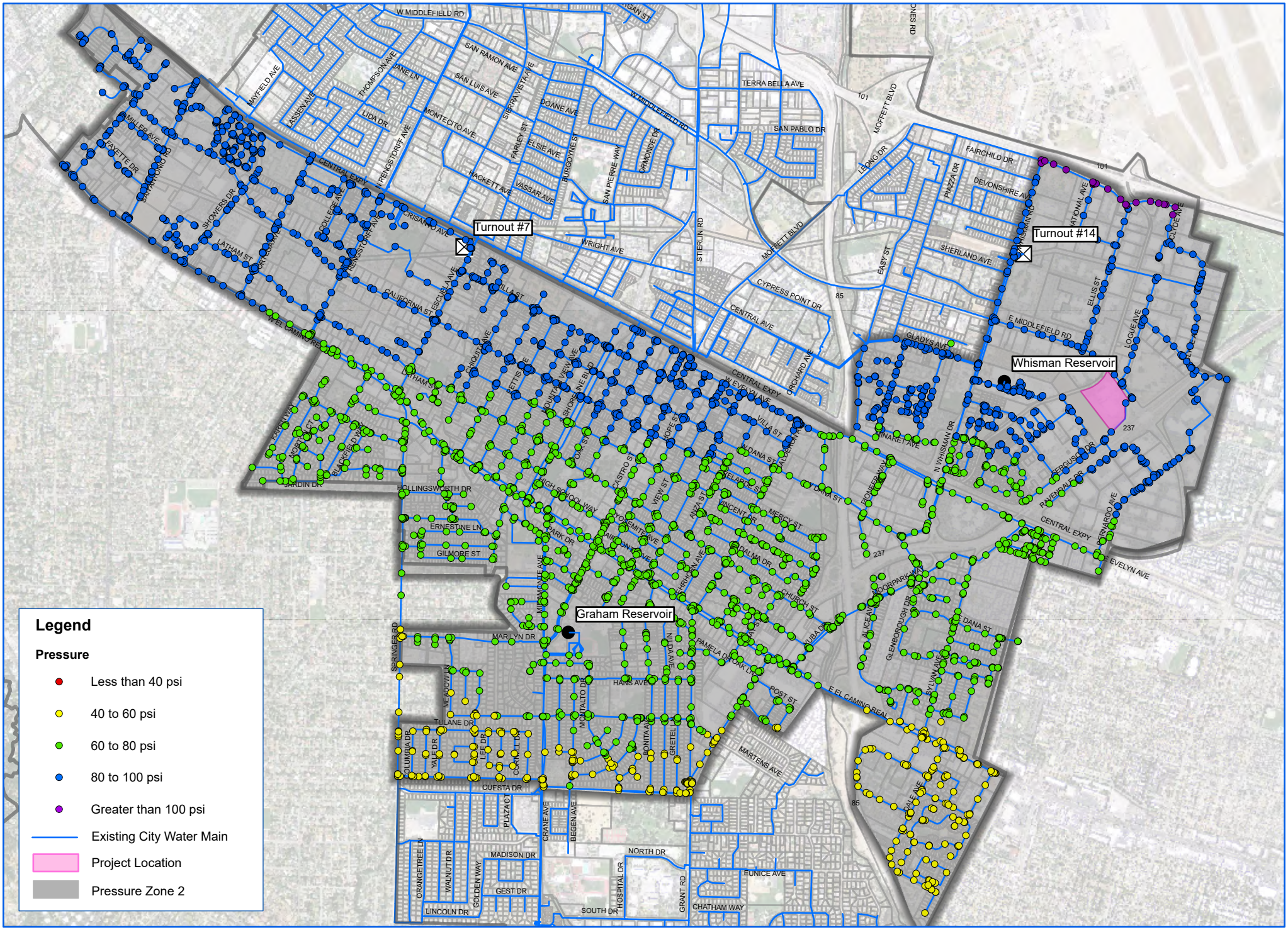


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FIGURE B-2:

Peak Hour Demand (PHD) - Without Project

Water System Model - Existing Condition

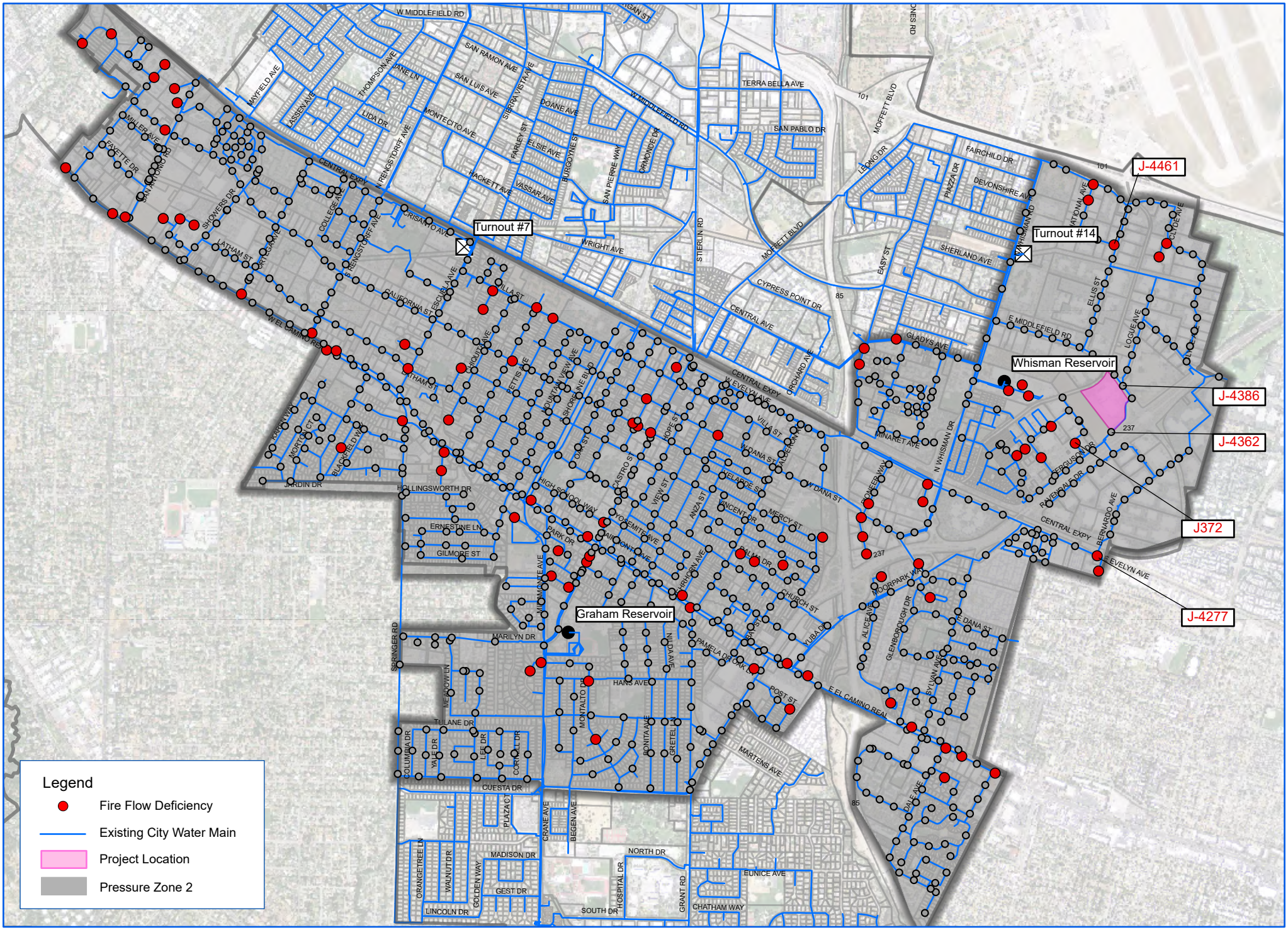


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FIGURE B-3:

Peak Hour Demand (PHD) - With Project

Water System Model - Existing Condition

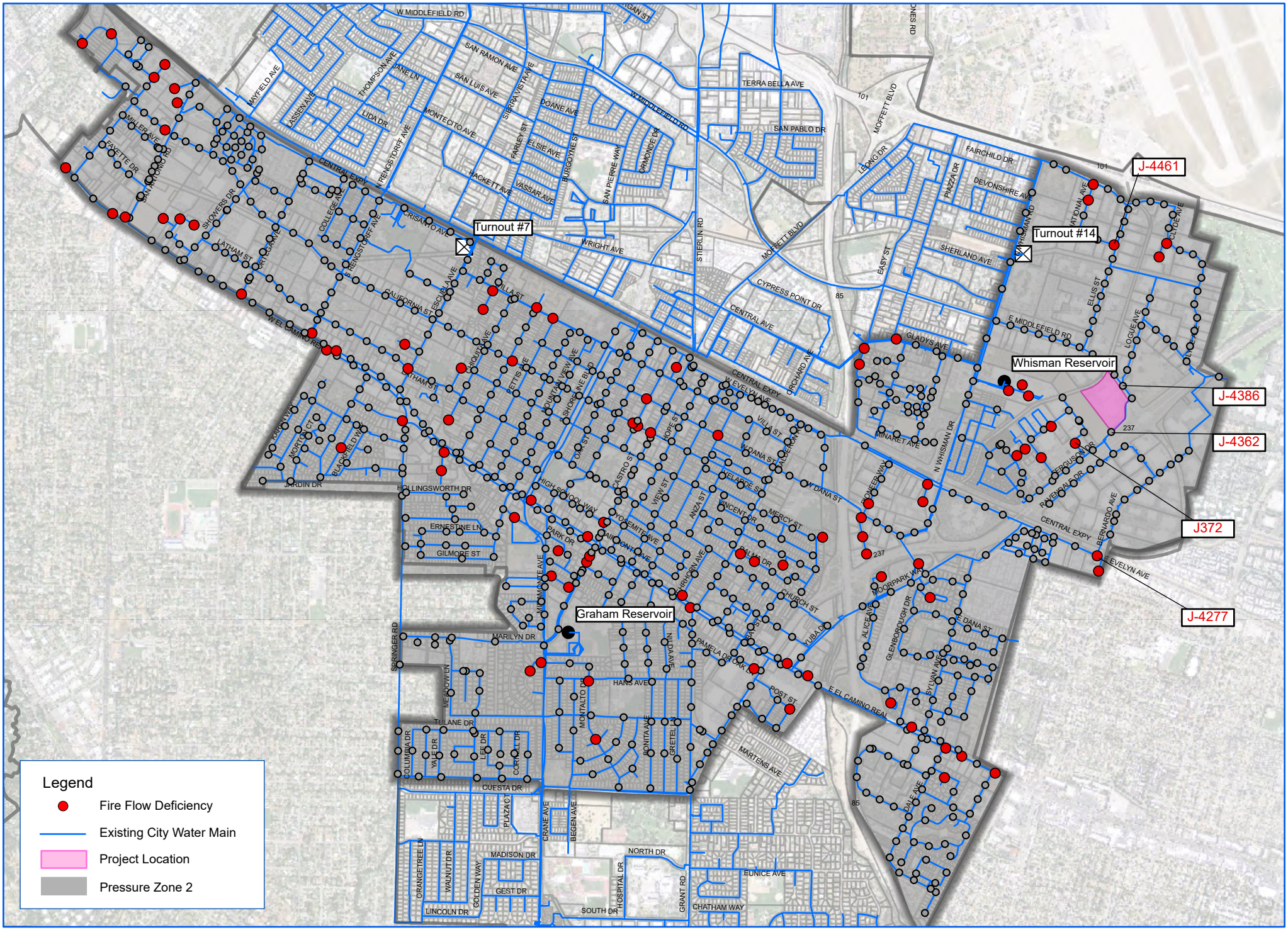


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FIGURE B-4:

Fire Flow Analysis - Without Project

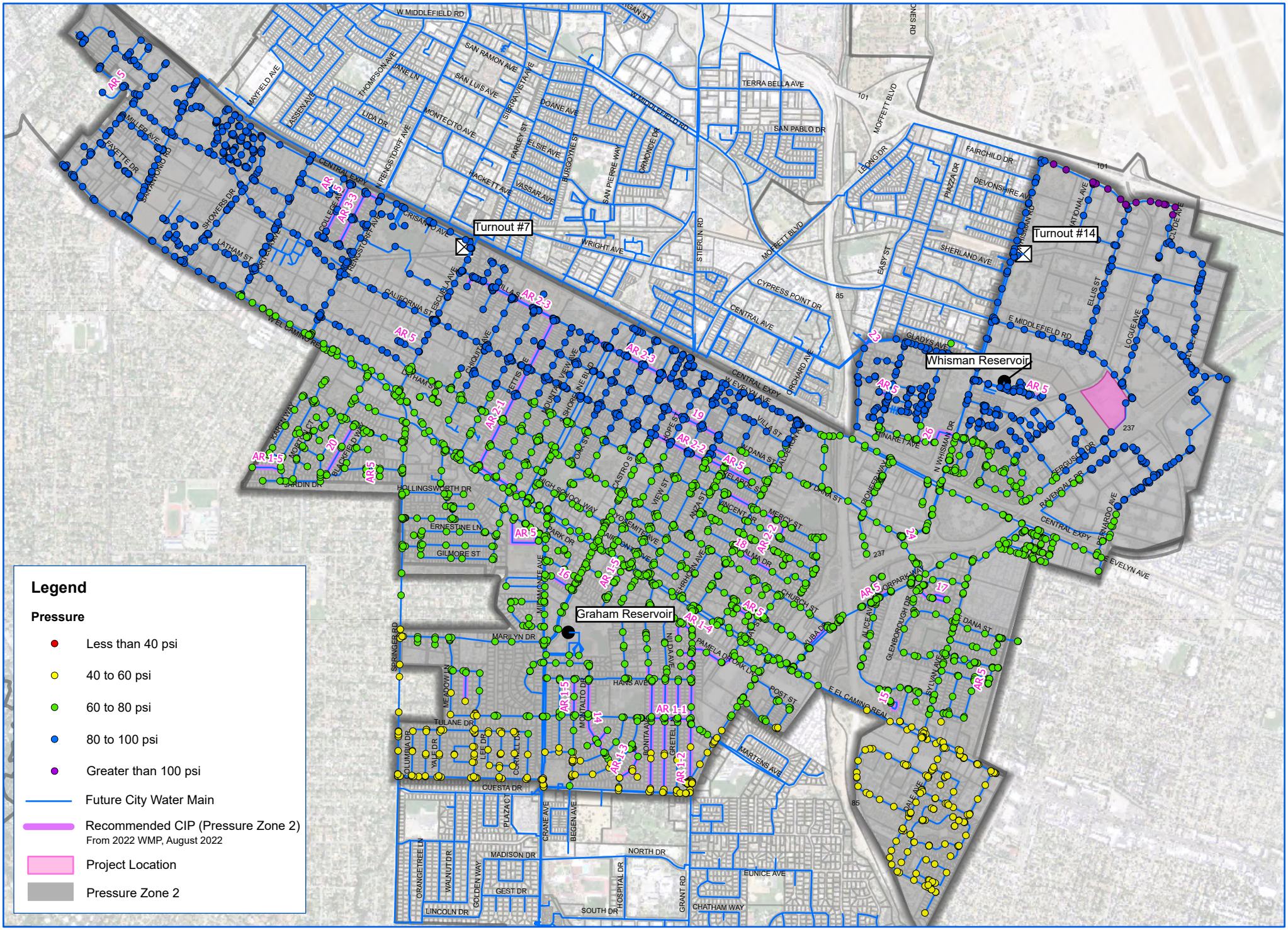
Water System Model - Existing Condition



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FIGURE B-5:

Fire Flow Analysis - With Project
Water System Model - Existing Condition

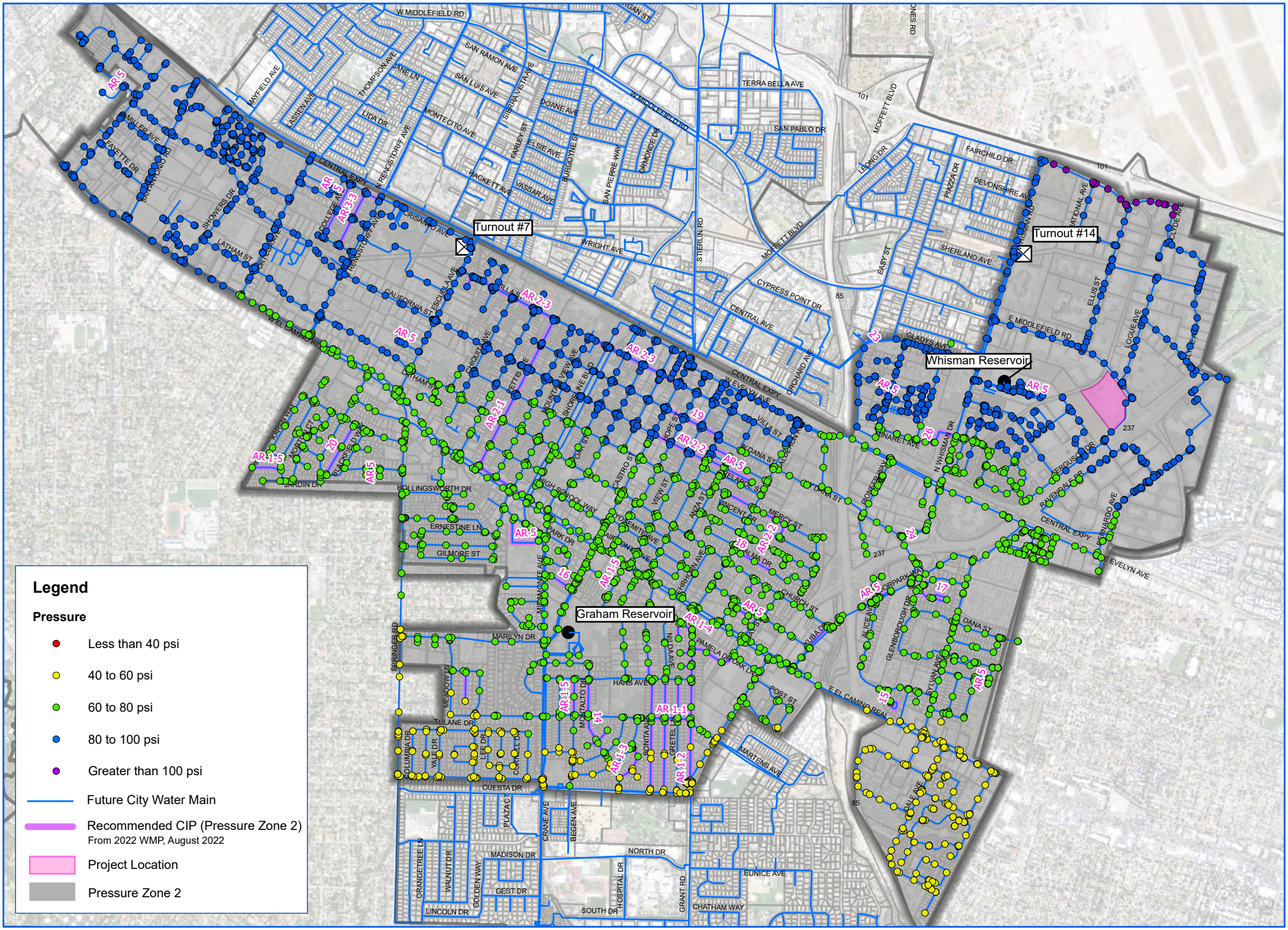


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FIGURE B-6:

Peak Hour Demand (PHD) - Without Project

Water System Model - Future Cumulative Condition

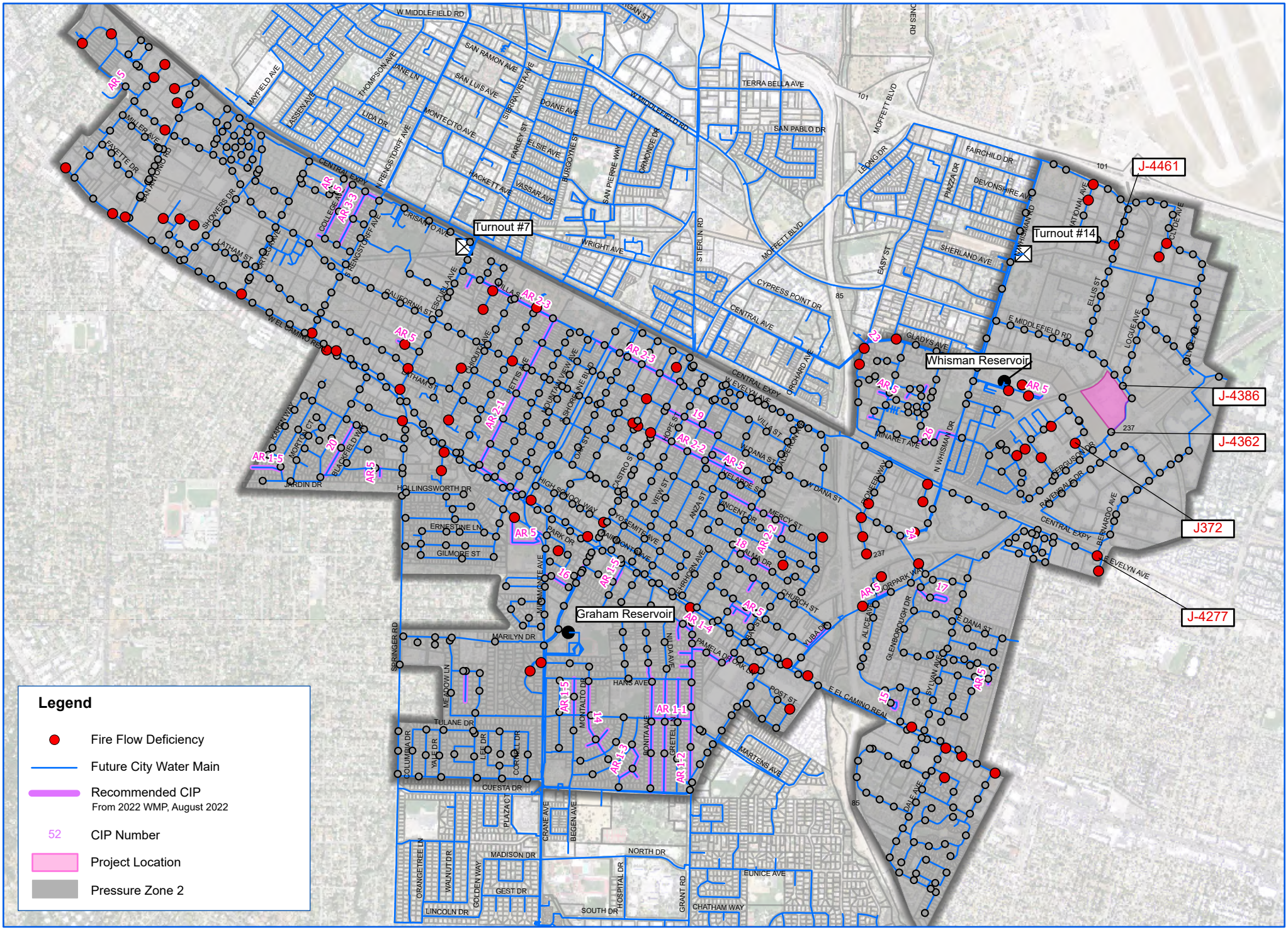


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FIGURE B-7:

Peak Hour Demand (PHD) - With Project

Water System Model - Future Cumulative Condition

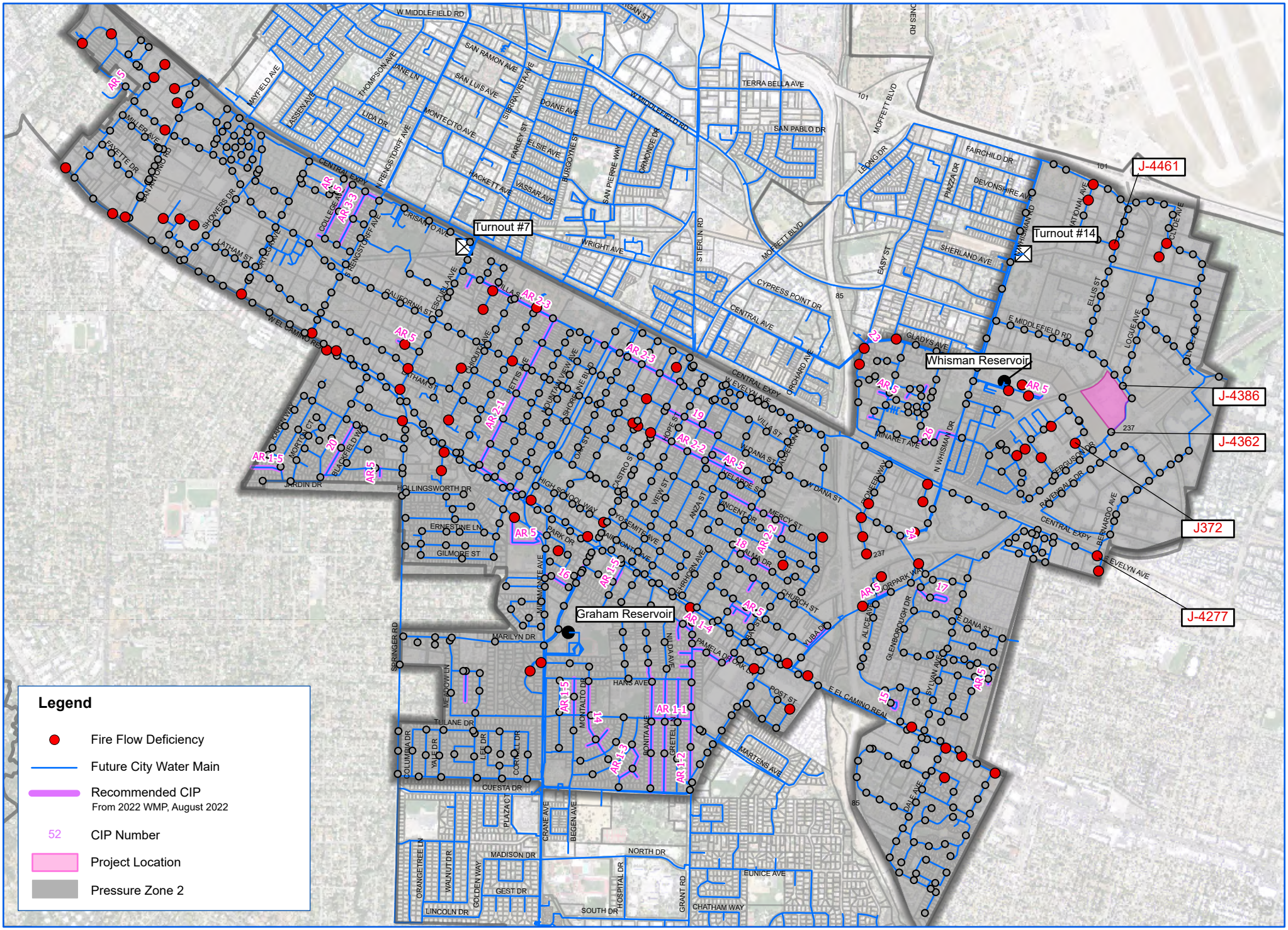


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FIGURE B-8:

Fire Flow Analysis - Without Project

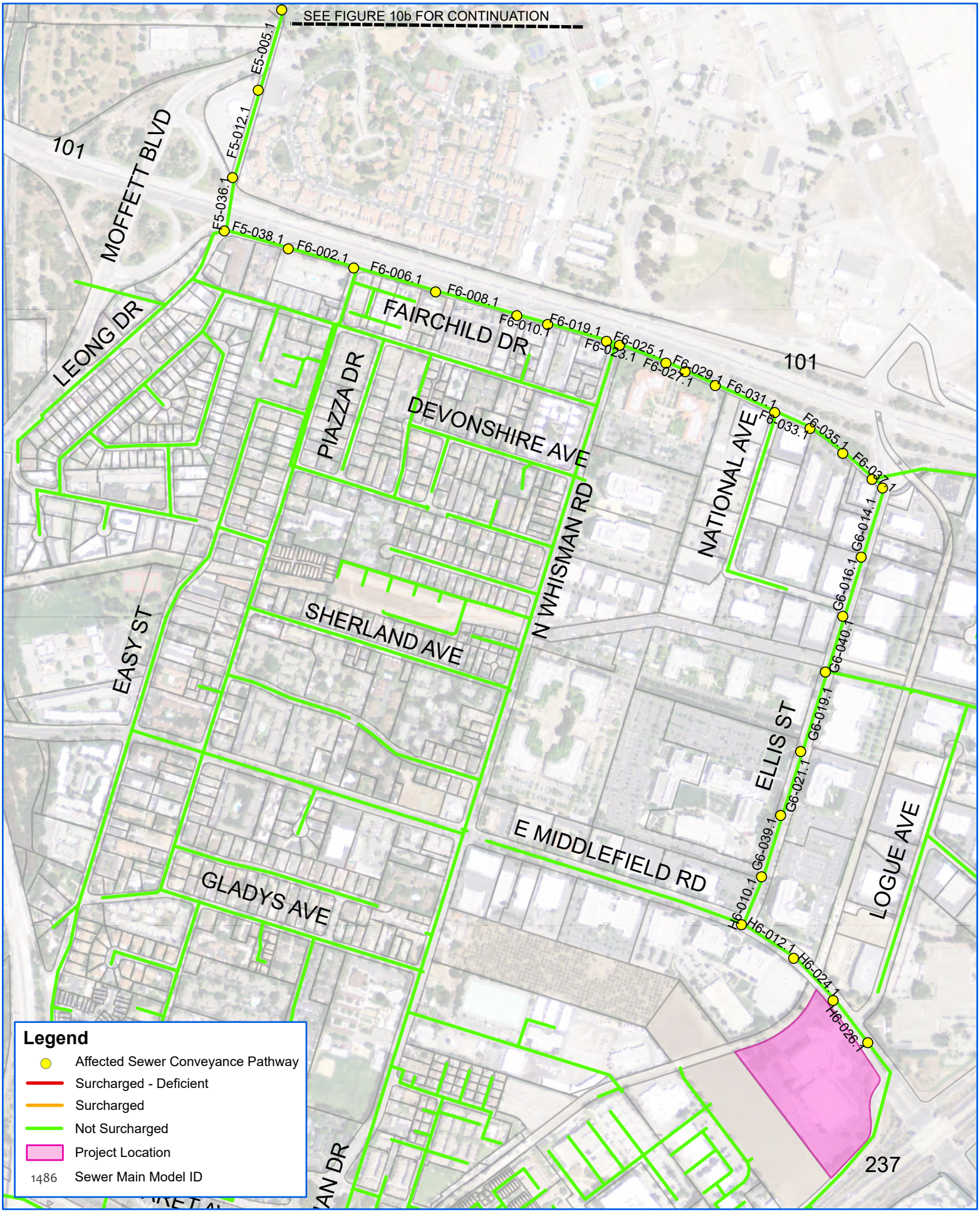
Water System Model - Future Cumulative Condition



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FIGURE B-9:

Fire Flow Analysis - With Project
Water System Model - Future Cumulative Condition



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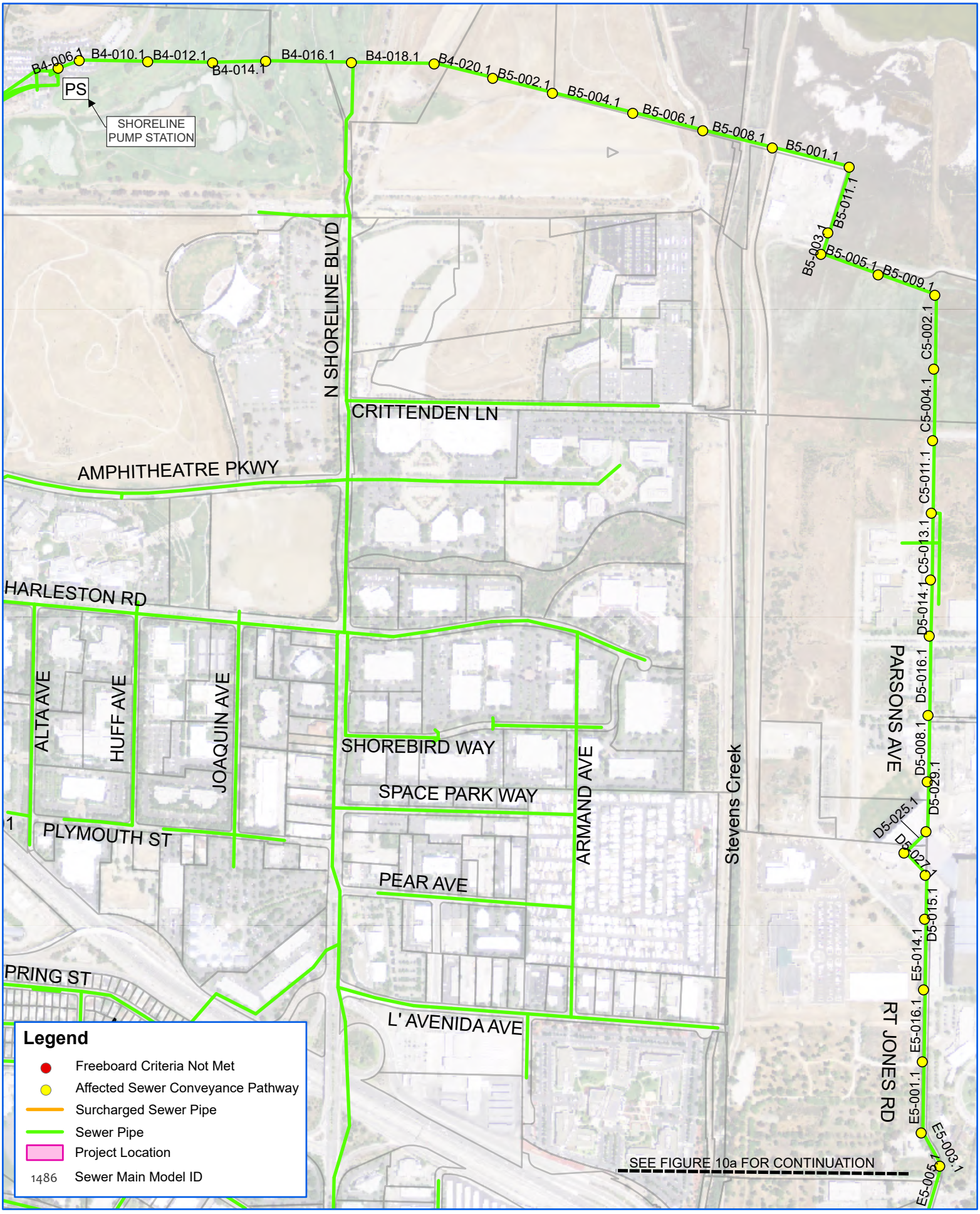
0 300 600 Feet

FIGURE B-10a:

PWWF - Without Project

Sewer System Model - Existing Condition

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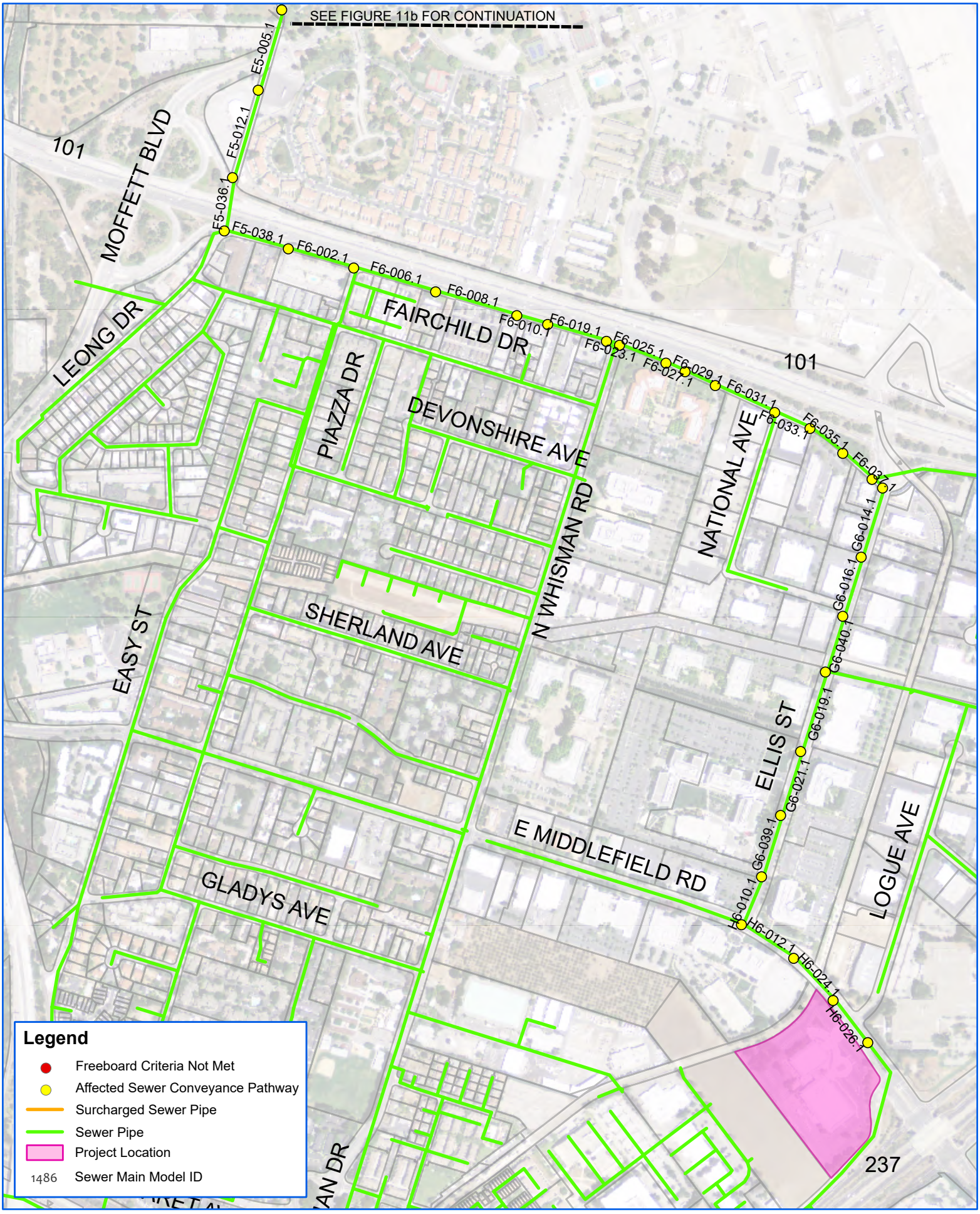
0 360 720 Feet

FIGURE B-10b:

PWWF - Without Project

Sewer System Model - Existing Condition

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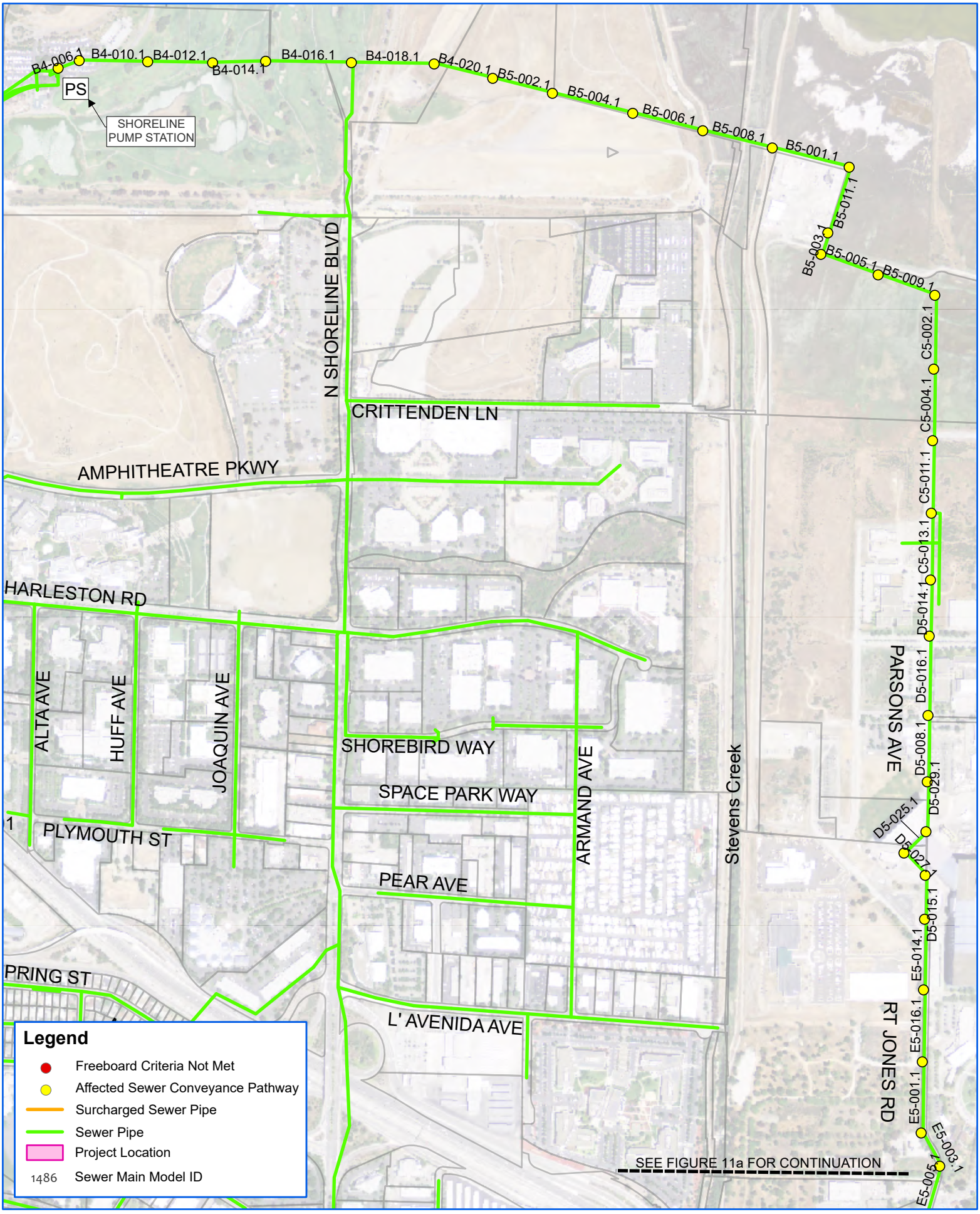
0 300 600 Feet

FIGURE B-11a:

PWWF - With Project

Sewer System Model - Existing Condition

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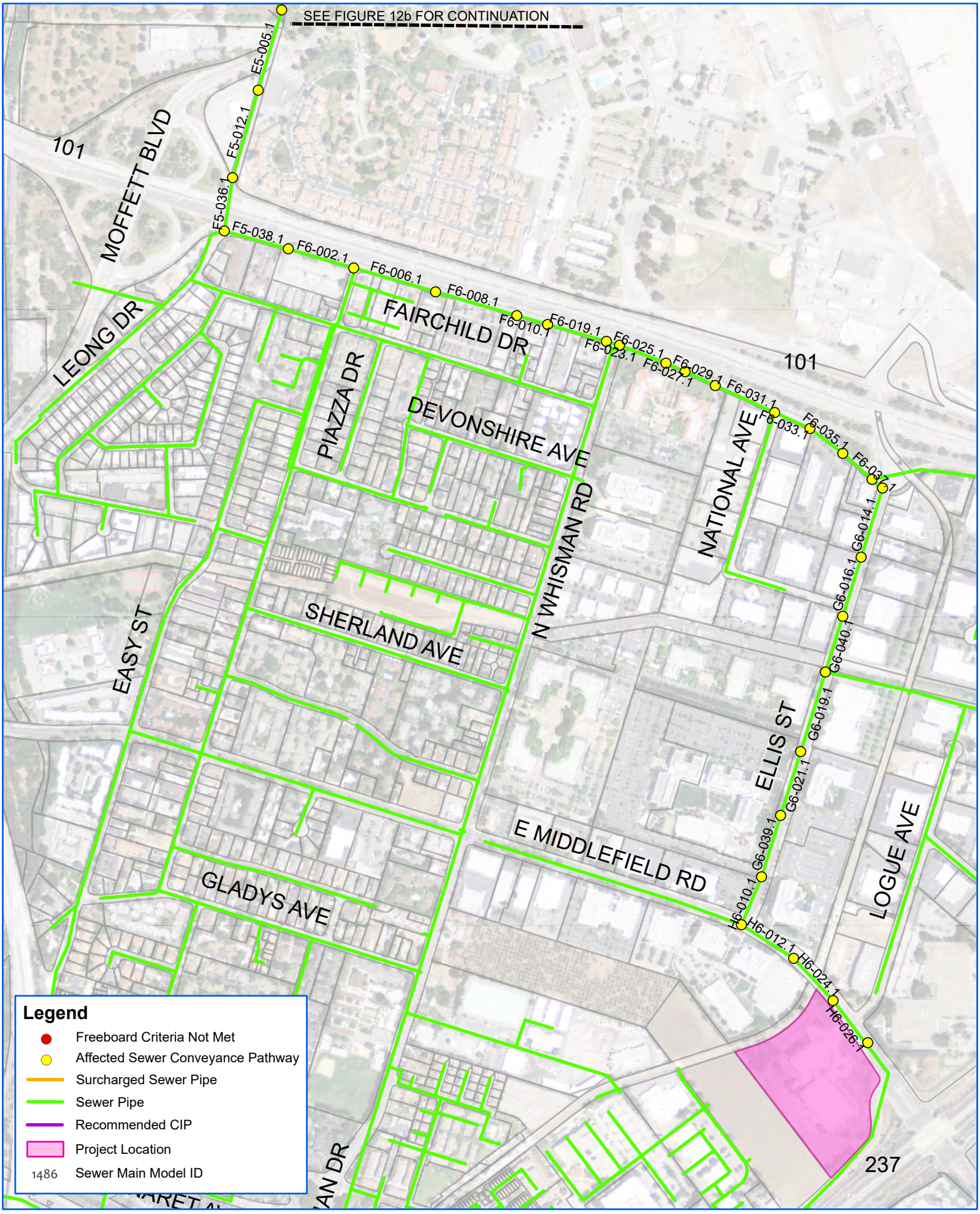
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0 360 720 Feet

FIGURE B-11b:

PWWF - With Project

Sewer System Model - Existing Condition



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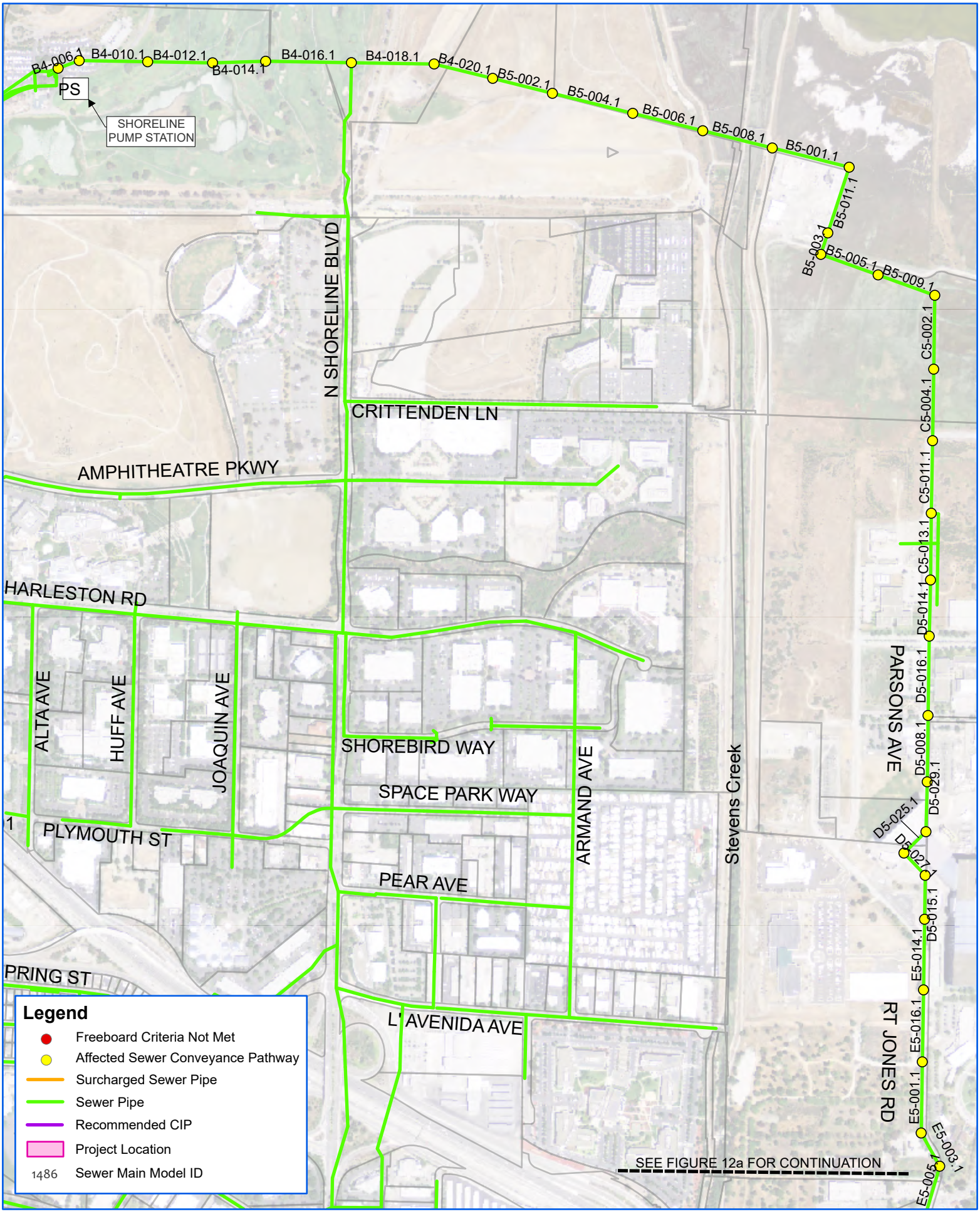
0 300 600 Feet

FIGURE B-12a:

PWWF - Without Project

Sewer System Model - Future Condition

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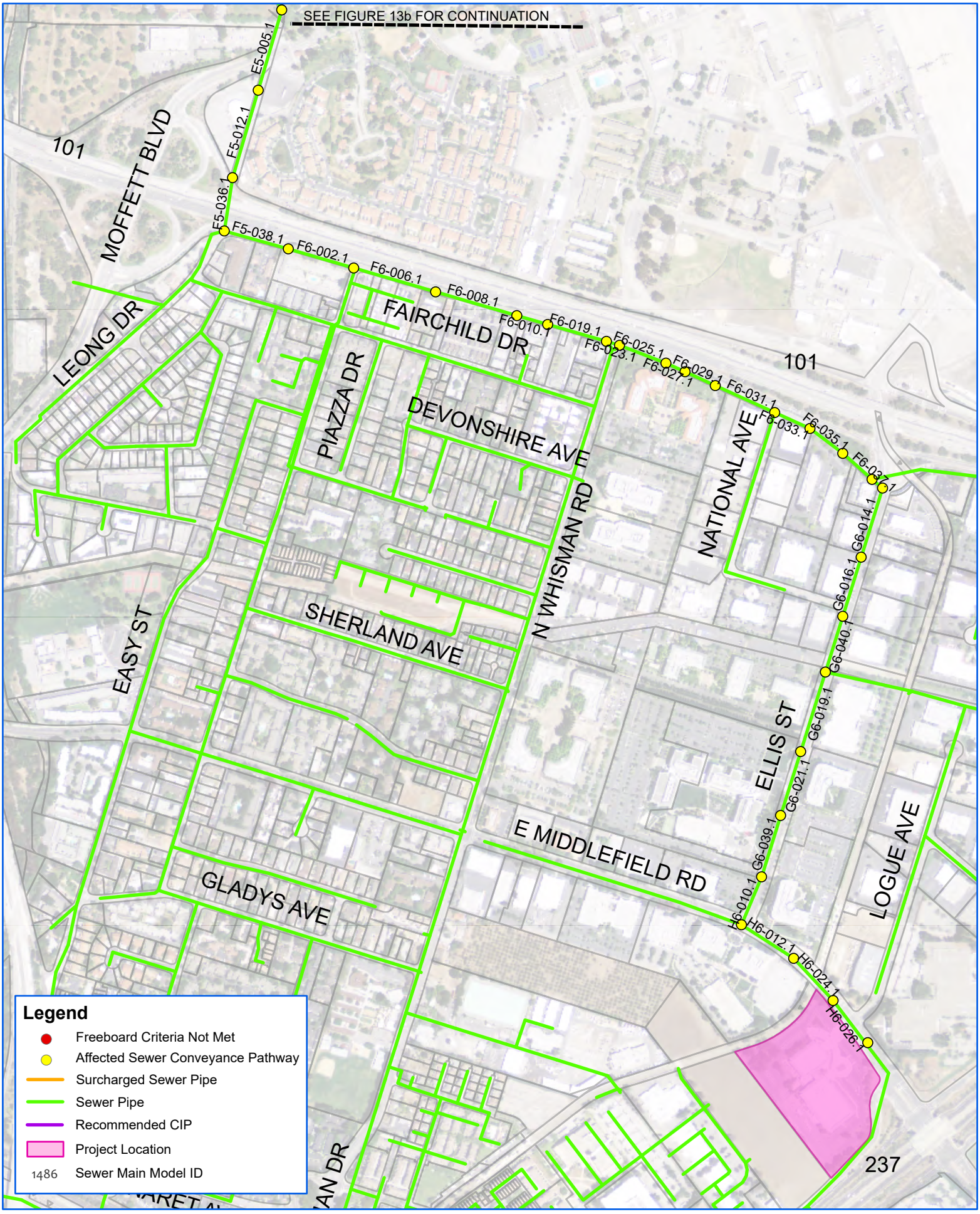
0 360 720 Feet

FIGURE B-12b:

PWWF - Without Project

Sewer System Model - Future Condition

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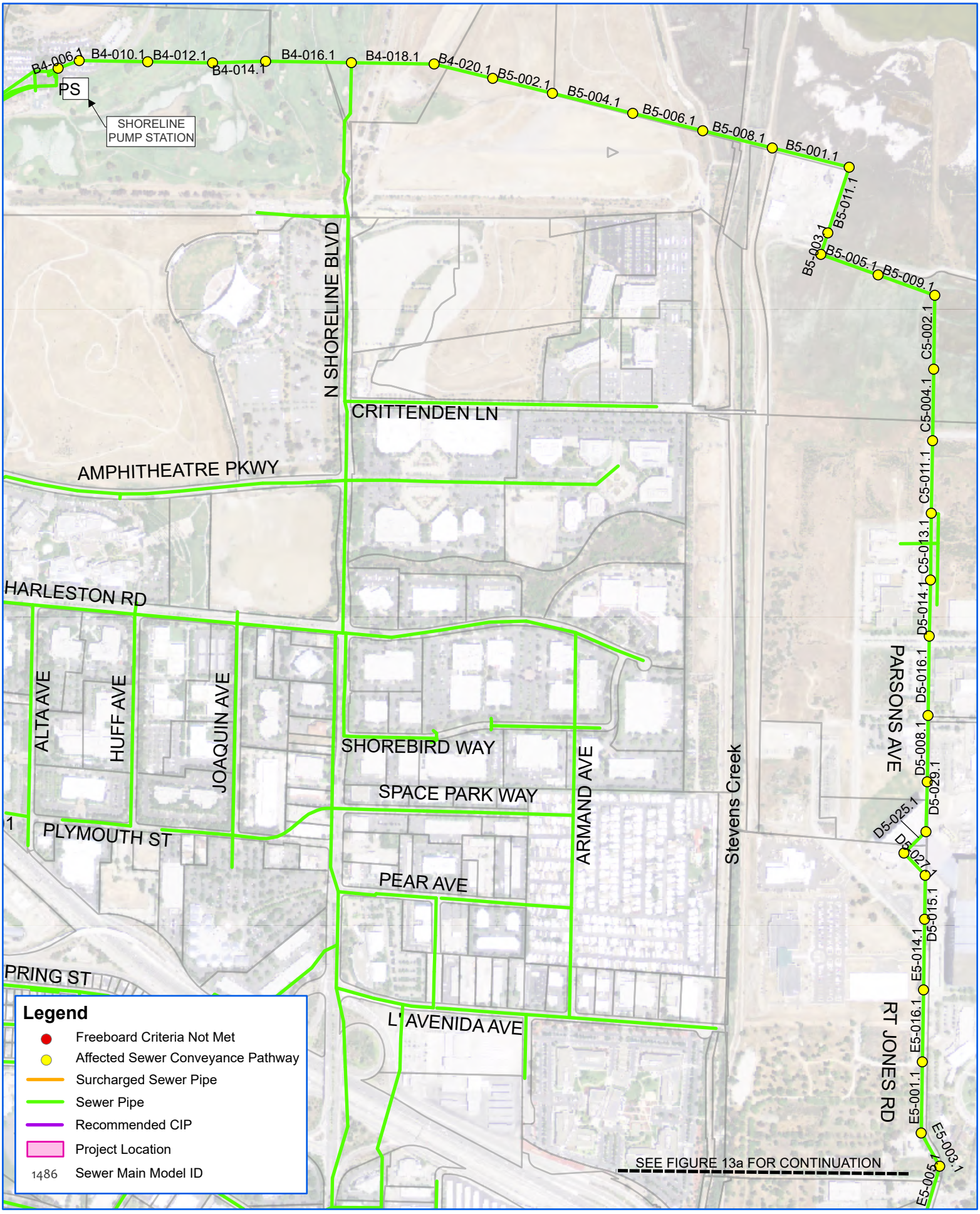
0 300 600 Feet

FIGURE B-13a:

PWWF - With Project

Sewer System Model - Future Condition

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0 360 720 Feet

FIGURE B-13b:

PWWF - With Project

Sewer System Model - Future Condition