CITY OF MOUNTAIN VIEW

Negative Declaration

Pursuant to Section 21000 et seq of the Public Resources Code and the City of Mountain View Environmental Review Guidelines and Procedures, a Negative Declaration is hereby adopted for the following Project:

1. Project Title and Number:	Castro Street Pedestrian Mall Study
2. Lead Agency Name and Address:	City of Mountain View 500 Castro Street, Mountain View, CA 94041
3. Contact Person and Phone Number:	Aruna Bodduna, Transportation Planner Aruna.Bodduna@mountainview.gov (650) 903-6311
4. Project Location and APN:	Three segments of Castro Street (1) between West Evelyn Avenue (east leg) and Villa Street; (2) between Villa Street and Dana Street; and (3) between Dana Street and California Street
5. Project Sponsor's Name & Address:	City of Mountain View Public Works Department 500 Castro Street, Mountain View, CA 94041 (650) 903-6311 Aruna.Bodduna@mountainview.gov
6. Land Use Designations:	The 100 to 300 blocks of Castro Street are designated as a Main Street in the General Plan and the Castro Street Historic Retail District within the Downtown Precise Plan
7. Zoning:	Downtown Precise Plan, Castro Street Historic Retail District

8. Description of Project:
   Following is a description of the Castro Street Pedestrian Mall (the Project) including a brief discussion of the Project background, existing conditions, and a description of the proposed improvements.

   Background
   In June 2020, the City Council adopted Resolution No. 18470 to temporarily close the 100 to 400[1] blocks of Castro Street to vehicular traffic with continued side-street access for motorists. With this action, the Castro StrEATs program was launched to support the recovery of Mountain View's downtown businesses as a response to the COVID-19 pandemic by allowing outdoor dining within the public right-of-way during the State of Emergency. The Castro StrEATs program has allowed businesses and the public the opportunity to experience a vehicle-free roadway on the 100 to 300 blocks of Castro Street.

   On October 12, 2021, a Council Study Session was held to review the Castro Pedestrian Mall Feasibility Study's high-level concept alternatives for the 100 block of Castro Street and the potential inclusion of the 200 and 300 blocks of Castro Street into the pedestrian mall concept. At the meeting, a Council majority indicated support to proceed with their preferred alternative for the 100 block of Castro Street and further directed staff to add the 200 and 300 blocks into the development of the pedestrian mall concept.

   On December 14, 2021, Council adopted Resolution No. 18470 to extend the temporary closure of the 100, 200, and 300 blocks of Castro Street until January 16, 2023, to continue to facilitate economic recovery during and after the COVID-19 states of emergency, with the understanding that the City would pursue a process in 2022 to consider adopting a pedestrian mall ordinance for a permanent closure of these blocks to vehicular traffic.

   This temporary street closure was approved under California Vehicle Code (CVC) Section 21101(e), which gives a local jurisdiction the authority to temporarily close a portion of any street to vehicles for celebrations, parades, local special events, or other purposes when the closing is necessary for the safety and protection of persons who are to use that portion of the street during the temporary closing.

   Over the course of the last two years, several engagement activities were conducted seeking feedback from the community and businesses on their experience of the open-street arrangement. Efforts included online surveys, business visits, public and business open houses, and presentations at the Downtown Committee and Bicycle/Pedestrian Advisory Committee. Feedback from committees, community, and businesses showed strong support for permanently closing the 100 to 300 blocks of Castro Street to motor vehicles to create a permanent pedestrian mall.

   On June 28, 2022, the City Council adopted a Resolution of Intent to Establish Pedestrian Malls on Castro Street Between West Evelyn Avenue (East Leg) and Villa Street, Villa Street and Dana Street,

[1] Council adopted resolution (Resolution No. 18576) to terminate the street closure for the 400-block due to lack of support from businesses in that block.

and Dana Street and California Street, as first formal step toward creating a permanent pedestrian mall/plaza.

Existing Conditions

Castro Street is Mountain View's oldest commercial corridor and is considered a central destination for commercial, office, and retail activity. The 100 to 300 blocks of Castro Street predominantly feature restaurant and retail establishments and then transition to more office, recreational, and municipal uses further south along the corridor.

Each of the Project intersections are currently signalized as a four-way intersection. The Project sections of Castro Street are currently developed with sidewalks, landscape planters with street trees, and a single lane of traffic in each direction with turning lanes added at each intersection. Street parking is also permitted on both sides of the street, although some spaces have been converted to outdoor dining through the City's Sidewalk Café Program.

Project Description

As shown in Figure 1, the City intends to establish a pedestrian mall on the following three segments of Castro Street: (1) between West Evelyn Avenue (east leg) and Villa Street; (2) between Villa Street and Dana Street; and (3) between Dana Street and California Street (Figure 2). Vehicular through-traffic access on the cross-streets along Evelyn Avenue, Villa Street, Dana Street, and California Street will continue to remain open similar to current conditions. The City plans to utilize the pedestrian mall for outdoor dining, public use areas, special events and enhanced pedestrian circulation. Motor vehicle traffic will be prohibited on the proposed pedestrian malls except for emergency and utility maintenance vehicles.

To facilitate the Project, the intersections of Castro/California, Castro/Dana and Castro/Villa will be modified to prohibit motor vehicles from accessing Castro Street and to improve the overall pedestrian experience. The proposed intersection improvements are summarized below:

Castro/Villa and Castro/Dana intersections:

- Modifying the intersection control from traffic signal to a stop sign
- Narrowing the intersection to one-lane each way and creating a single, wide raised crosswalk to align with the central pedestrian pathway
- Adding loading zones near the modified intersections

Castro/California

- Modifying the existing signal/roundabout intersection to operate as a single lane roundabout
- Narrowing the approaches to the intersection from two to one lane
- Adding pedestrian and bicycle crossing elements

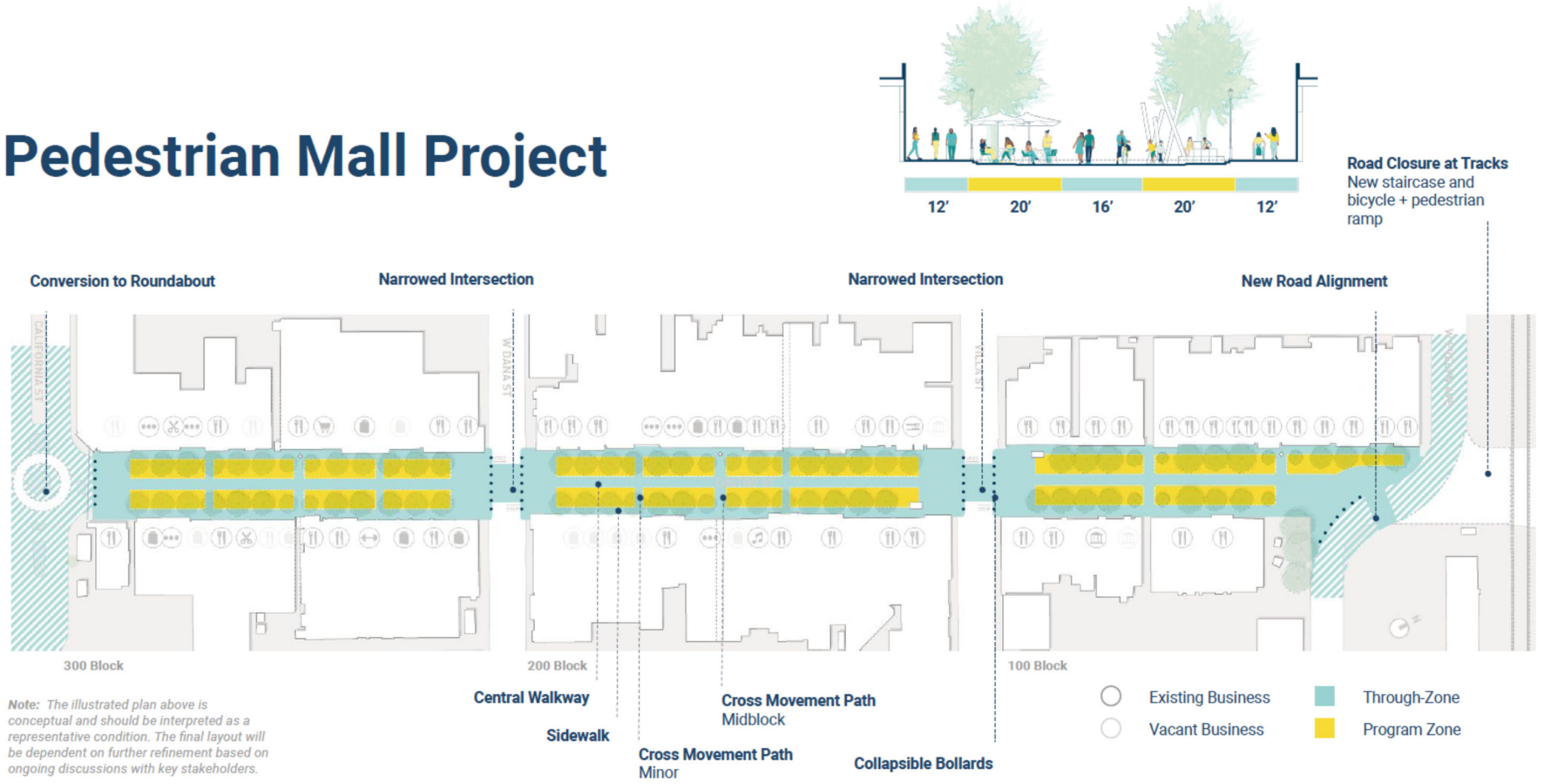

Figure 1 Extent of Castro Street Pedestrian Mall

The Project would result in a reduction of on street parking including seven spaces on the 100 block, 18 spaces on the 200 block, and 14 spaces on the 300 block, for a total of 39 on-street parking spaces.[2]

There is no new development proposed as part of this Project. The purpose of this analysis is to evaluate potential environmental impacts as a result of closing the above-described segments of Castro Street to vehicular traffic in order to create a pedestrian mall.

Surrounding Land Uses and Setting:

Surrounding land uses are predominantly restaurant and retail establishments.

Requested Applications:

A. Negative Declaration to assess environmental impacts; and
B. Adoption of Ordinance for Permanent Street Closure.

Other Public Agencies whose approval is Required: No other Agency approval is required.

Finding: Based on the attached Initial Study and the testimony received at a duly noticed public hearing, a Negative Declaration is granted, based on the judgment that:

__ The Project will not have a significant effect on the environment.

__ The significant effects of the Project noted in the Initial Study attached have been mitigated by modifications in the Project, or by imposition of required mitigation measures listed in the Initial Study, so that the potential adverse effects are reduced to a point where no significant effects would occur.

Dawn S. Cameron, Public Works Director _____ Date

Prepared by Charity Wagner, Consulting Planner _____ Date

[2] Kimley Horn. Castro Pedestrian Mall Feasibility Study – Traffic and Circulation Analysis. September 6 2022.

ENVIRONMENTAL ISSUES ASSESSMENT

Items identified in each section of the environmental checklist below are discussed following that section. Required mitigation measures are identified (if applicable) where necessary to reduce a projected impact to a level that is determined to be less than significant. The General Plan Environmental Impact Report (State Clearinghouse number 89100308) is herein incorporated by reference in accordance with Section 15150 of the CEQA Guidelines. Copies of this document and all other documents referenced herein are available for review at the City of Mountain View 500 Castro Street, Mountain View.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AESTHETICS *Except as provided in Public Resources Code 21099, would the project:*				
a) Have a substantial effect upon a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Findings of Fact: There will be no aesthetic impacts. The Project is the creation of pedestrian mall, including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project.

The pedestrian mall will not change the built environment thereby not resulting in impacts to scenic vistas, damage of scenic resources, degradation of visual character, nor will the street closure result in new sources or light or glare in the area.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AGRICULTURE AND FOREST RESOURCES Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Findings of Fact: There will be no agricultural or forest impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. Castro Street is in an urban built out area of downtown Mountain View. No impacts to agricultural lands, forest land, nor any other changes that would impair or convert agricultural or forest lands would result from approval of this pedestrian mall in downtown Mountain View.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AIR QUALITY Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations?	☐	☐	☐	☒
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

Findings of Fact: There will be no air quality impacts. There will be no air quality or forest impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No new development is proposed as part of this Project. Traffic signals will be removed and replaced with stop signs and enhanced pedestrian crossings.

Allowing for street closure to have improved pedestrian amenities would not result in significant air quality impacts. The pedestrian mall does not alleviate or modify compliance requirements with applicable air quality plans. The pedestrian mall does not promote or encourage development that would conflict with air quality plans or expose sensitive receptors to substantial pollutant concentrations. The pedestrian mall allows for improved pedestrian experience and expanded service for restaurants that are otherwise already permitted within the underlying zoning. Implementation of this pedestrian mall would not result in cumulative considerable net increases to criteria pollutants nor result in other emissions that affect substantial numbers of people.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
BIOLOGICAL RESOURCES 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,	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?				
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?	☐	☐	☐	☒
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	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Findings of Fact: There will be no biological impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project.

No impacts to a) protected species, b) riparian habitat, c) wetlands, d) wildlife corridors, e) tree preservation ordinances, or f) compliance with habitat conservation plans would occur as a result of this street closure.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
CULTURAL RESOURCES Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☐	☒
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Findings of Fact: There will be no cultural resource impacts. The Project is the creation of a pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. There is no removal nor modifications to existing buildings and no excavation nor substantial ground disturbance. The street closure would not result in adverse changes to historical resources, paleontological resources, nor disturbance of human remains.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
ENERGY Would the project:				
a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒
b) Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?	☐	☐	☐	☒
c) Result in a substantial increase in demand upon energy resources in relation to projected supplies?	☐	☐	☐	☒

Findings of Fact: There will be no energy impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project. The street closure would not result in increased use of energy consumption or conflict with plan for renewable energy efficiency.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS Would the project directly or indirectly:				
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?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Findings of Fact: There will be no geology and soil impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project. The street closure does not result in increased risk of loss, injury, or death involving earthquakes, seismic ground shaking, liquefaction, landslides or erosion of top soil.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GREENHOUSE GAS EMISSIONS Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☒
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Findings of Fact: There will be no impacts. Approval of this pedestrian mall will permanently close segments of Castro Street in downtown to through vehicular traffic. The pedestrian mall allows for implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project.

The street closure does not involve any new physical development and would not result in significant greenhouse gas impacts. Closing the street to vehicular traffic could conceivably result in more people walking to shops and businesses downtown thereby reducing car trips and associated car emissions.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?	☐	☐	☐	☒
d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter (1/4) mile of an existing or proposed school?	☐	☐	☐	☒
e) Be located on a site which is included on a list of hazardous materials sites compiled	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				

Findings of Fact: There will be no hazard or hazardous material impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project. The street closure does not cause nor increase the potential for transporting or disposing of hazardous materials, accidental release of hazardous waste materials, impair emergency plans, emit increased emissions near schools, nor cause of future projects to be located on hazardous materials sites.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Result in substantial erosion or siltation on-site or off-site?	☐	☐	☐	☒
e) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?	☐	☐	☐	☒
f) 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?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Impede or redirect flood flows?	☐	☐	☐	☒
h) In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?	☐	☐	☐	☒
i) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Findings of Fact: There will be no hydrology or water quality impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project.

Allowing for street closure to vehicular traffic does not violate or modify compliance requirements with applicable water quality standards or waste discharge requirements. The street closure does not decrease groundwater supplies, alter existing drainage patterns, result in substantial erosion, increase amount of surface runoff, contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems nor redirect flood flows. Implementation of this street closure will not change the requirements for all existing and future businesses to address hydrology and water quality issues.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
LAND USE/PLANNING Would the project:				
a) 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?	☐	☐	☐	☒
b) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?	☐	☐	☐	☒

Findings of Fact: There will be no land use impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project.

Improving the pedestrian experience in downtown does not conflict with land use plans and policies nor disrupt the physical arrangement of the community. In fact, the street closure promotes many of the City's land use policies for Downtown including:

LUD 7.6: Parking space flexibility. Encourage a portion of Downtown street parking spaces to be removed or reconfigured to accommodate pedestrian and bicycle amenities.

LUD 8.4: Pedestrian-oriented civic and public spaces. Create and encourage new pedestrian-oriented civic and public spaces throughout the city

LUD 7.1: Downtown. Promote Downtown as a daytime and nighttime center for social, entertainment, cultural, business and government activity.[3]

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
MINERAL RESOURCES Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Findings of Fact: There will be no mineral resource impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project. Creation of the pedestrian mall does not result in the loss of availability of a known mineral resource of local or regional value.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE 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?	☐	☐	☐	☒

[3] Mountain View 2030 General Plan, Land Use and Design Element, pages 51-52. July 2012

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Findings of Fact: There will be no noise impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project.

Any outdoor events or activities within the pedestrian mall will be required to comply with the City's Noise Ordinance. The street closure does not result in generation of a substantial temporary or permanent increase in ambient noise levels excessive groundborne vibration or groundborne noise. Rather, it is conceivable that eliminating vehicular traffic would result in decrease to ambient noise within the vicinity of the pedestrian mall.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
POPULATION AND HOUSING 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Findings of Fact: There will be no population or housing impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project. Approval of this pedestrian mall does not include construction of new

homes or businesses, nor does it include removal or any housing such that existing people would be displaced.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 following public services:				
1) Fire Services	☐	☐	☐	☒
2) Police Protection	☐	☐	☐	☒
3) Schools	☐	☐	☐	☒
4) Parks	☐	☐	☐	☒
5) Other Public Facilities	☐	☐	☐	☒

Findings of Fact: There will be no public service impacts. The Project is a street closure. No physical development is proposed as part of this Project. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project.
Public safety and emergency vehicles will maintain full access to the closed street segments via operable barricade located at each of the intersections along Castro Street. A 12-foot emergency travel lane will be maintained clear of impediments in the center of the closed street segments.

Creation of the pedestrian mall would not result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 public services.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
RECREATION Would the project:				
a) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

Findings of Fact: There will be no recreation impacts. The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project.

Approval of this pedestrian mall would not result in the need to construct or expand existing recreational facilities, nor increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration would occur.

Mitigation: No mitigation is required.

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

Findings of Fact: The Project is the creation of pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project. The City contracted with Kimley Horn to evaluate potential transportation impacts of the Project (see Attachment A for the Kimley Horn Traffic and Circulation Analysis Memo). The following findings rely upon the transportation analysis prepared by Kimley Horn.

Approval of this pedestrian mall does not conflict with plans or policies addressing circulation systems. In fact, the closure promotes goals for a walkable, pedestrian friendly downtown. The Project is consistent with City circulation policies because the Project will enhance pedestrian activity in the downtown area.

With respect to transportation impacts related to vehicle miles traveled, Section F of OPR guidelines states that a VMT analysis is not required if the transportation project is not likely to lead to substantial or measurable increase in vehicle travel because it is associated with the following items: 1) Reduction in number of through lanes; 2) Removal or relocation of on-street parking spaces; or 3) Addition of new or enhanced bike or pedestrian facilities on existing street. The Project meets all of these criteria and as such, no further analysis for VMT is required by CEQA.

The transportation analysis did evaluate the potential impacts of traffic diversion and found that implementing the Project is anticipated to divert a minor amount of traffic due to vehicles choosing alternate routes to travel through downtown. However, the amount of diverted traffic would be so minimal that any change in VMT is anticipated to be nominal and insignificant. It is also anticipated that the Project would result in an increase in pedestrian and bicycle activity in downtown and thus would result in either no change or a reduction in VMT.

There are no hazardous design changes to the geometry for the intersections or the overall roadway design proposed by the Project. The Project includes modifications to the intersections to increase pedestrian safety, including narrowing intersections and installing raised crosswalks. The Project includes maintenance of an emergency vehicle access lane and signage to address public awareness and safety.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
TRIBAL CULTURAL RESOURCES Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, or 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)?	☐	☐	☐	☒
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	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
shall consider the significance of the resource to a California Native American tribe.)				

Findings of Fact: There will be no tribal cultural resource impacts. The Project is the creation of a pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project. There is no removal nor modifications to existing buildings and no excavation nor substantial ground disturbance. Implementation of the pedestrian mall would not result in adverse changes to historical resources nor tribal resources.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITIES AND SERVICE SYSTEMS Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would cause significant environmental effects?	☐	☐	☐	☒
b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e) Be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Findings of Fact: There will be no utility or service system impacts. The Project is the creation of a pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project.

The street closure will not: a) result in the relocation or construction of new or expanded water, wastewater treatment, or storm water facilities; b) allow for future projects to have insufficient water supply; c) require construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities; d) allow for future projects to have insufficient wastewater treatment; nor e) generate solid waste in excess beyond existing capacity. Lastly, the street closure does not alleviate or modify compliance requirements with federal, state, and local management and reduction statutes and regulations related to solid waste.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
WILDFIRE If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Findings of Fact: There will be no wildfire impacts. The Project is the creation of a pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. Emergency access will be maintained to allow for continued access.

The Project is located in an urban developed portion of downtown Mountain View. The pedestrian mall would not result in wildfire impacts.

Mitigation: No mitigation is required.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE Does the Project:					
1.	Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒

Findings of Fact: The Project is the creation of a pedestrian mall including the closure of three blocks of Castro Street to vehicular traffic and implementation of pedestrian amenities including seating areas and improved paths of travel. No physical development is proposed as part of this Project. Implementation of the proposed Project would not substantially degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
2.	Have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects and probable future projects)?	☐	☐	☐	☒

Findings of Fact: The pedestrian mall does not have impacts which are individually limited, but cumulatively considerable.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.	Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Findings of Fact: The pedestrian mall would not result in environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly.

ATTACHMENT A

Kimley Horn Traffic and Circulation Analysis Memo

MEMORANDUM

To: Sofie Kvist, Gehl

From: Adam Dankberg, P.E., Kimley-Horn and Associates, Inc.

Date: September 6, 2022

Subject: Castro Pedestrian Mall Feasibility Study –Traffic and Circulation Analysis

Introduction

The City of Mountain View (City) and Gehl directed Kimley-Horn to evaluate the traffic and circulation impacts of the Castro Pedestrian Mall Feasibility Study, the 100 to 300 block closure of Castro Street (Project). The proposed geometry and operational changes are anticipated to impact traffic patterns for study intersections primarily along W. Evelyn Avenue, Villa Street, Dana Street, and California Street, between Shoreline Boulevard and Bush Street. This study also accounted for future proposed roadway and circulation modifications in the area, such as improvements from the Mountain View Transit Center Grade Separation and Access Project (GSAP). This memorandum has been prepared to document the circulation implications of the Project to vehicle, bicycle, pedestrian, and transit circulation. The sections below summarize the methodology, analysis, and results of the Project.

Background

Castro Street is Mountain View's oldest commercial corridor and is considered a central destination for commercial, office, and retail activity. The 100 to 300 blocks of Castro Street predominantly feature restaurant and retail establishments and then transitions to more office, recreational, and municipal uses progressing further south along the corridor. The northern end of Castro Street is situated adjacent to the Mountain View Transit Center.

The Grade Separation and Access Project (GSAP) is the first component of the Mountain View Transit Center Master Plan, approved by the City Council in May 2017. The GSAP, which is currently in the final design phase, includes improvements to improve safety, station capacity, and multimodal access and mobility in the vicinity of the Transit Center. Most relevant to this Project, the GSAP includes the closure of Castro Street at the rail tracks and the opening of connections along Evelyn Avenue across Castro Street. The City conducted a traffic impact analysis in April 2019 to evaluate the potential transportation impacts of the GSAP. This traffic study is a separate study but assumed future proposed roadway and circulation modifications included with the GSAP.

CASTRO PEDESTRIAN MALL FEASIBILITY STUDY

In 2020, Kimley-Horn began supporting Gehl and the City on the Castro Pedestrian Mall Feasibility Study to evaluate the impact of a full or partial closure of the 100 Block of Castro Street. The project was put on hold due to COVID-19 pandemic. During this time, the City shifted focus to Castro StrEATs program, which temporarily closed the 100 to 400 blocks of Castro Street to vehicle traffic

and created a pedestrian mall and outdoor seating area. The Castro StrEATs program was a success, but also highlighted opportunities for enhancing public spaces along Castro Street.

An initial feasibility study was completed in August 2021 to study the effects of the 100 block closure and found that all alternatives resulted in minimal changes to level of service within the downtown area. In October 2021, the City Council supported further development of 100 block pedestrian mall concept, expanded study efforts to include the 200 and 300 blocks, re-opened the 400 block of Castro Street to auto traffic, and continued temporary closure of 100-300 blocks through January 2023, and called for the development of a plan for low-cost improvements to be made for the interim closure period.

This analysis builds upon the initial evaluation, expanding it south to include the 200 and 300 blocks of Castro Street. With the additional closure of blocks 200 and 300 of Castro Street, all auto movements on Castro Street north of California Street would be diverted to nearby streets. Emergency and service vehicle access will be maintained.

Analysis Methodology and Scenarios

Table 1 lists the 20 study intersections that were selected. All study intersections were also analyzed in the GSAP TIA. The level of service (LOS) analysis was conducted using the Highway Capacity Manual 2000 (HCM 2000) or Highway Capacity Manual 6th Edition (HCM 6) methodology in *Synchro 11* software for all intersections except roundabouts that was done using Sidra software.

Table 1: Castro Pedestrian Mall Study Intersections

#[1]	Intersection	#[1]	Intersection
1	Shoreline Boulevard & Evelyn Avenue	11	View Street & Villa Street
2	Shoreline Boulevard & Villa Street	12	Bush Street& Evelyn Avenue
3	Franklin Street & Villa Street	13	Bush Street & Villa Street
4	Bryant Street & Evelyn Avenue	14	Shoreline Boulevard & Dana Street
5	Bryant Street & Villa Street	15	Castro Street & Dana Street
6	Castro Street & Evelyn Avenue	16	Bush Street & Dana Street
7	Castro Street & Villa Street	17	Shoreline Boulevard & California Street
8	Hope Street & Evelyn Avenue	18	Franklin Street & California Street
9	Hope Street & Villa Street	19	Bryant Street & California Street
10	View Street & Evelyn Avenue	20	Castro Street & California Street

[1]*Intersection numbering has been modified from the Mountain View Transit Center Grade Separation Traffic Impact Analysis (GSAP TIA), dated April 2019*

Traffic Volumes

Traffic counts along Castro Street at Evelyn Avenue, Villa Street, Dana Street, and California Street were collected in February 2022 and compared with existing condition volumes from the *Mountain View Transit Center Grade Separation Traffic Impact Analysis* (GSAP TIA) dated April 2019. The comparison of volumes is summarized in **Table 2**. Year 2022 traffic counts are included as **Attachment A**.

Table 2: Traffic Volume Comparison

Intersection	Peak	Vehicle			Bicycle			Pedestrian		
		2019 (EBT+WBT)[1]	2022 (EBT+WBT)[1]	% Change	2019 Total	2022 Total	% Change	2019 Total	2022 Total	% Change
Castro Street & Evelyn Avenue (east leg)	AM	242	110	-55%	56	18	-68%	300	47	-84%
	Midday	201	128	-36%	38	16	-58%	367	134	-63%
	PM	199	141	-29%	62	23	-63%	332	104	-69%
Castro Street & Villa Street	AM	411	352	-14%	56	13	-77%	958	149	-84%
	Midday	273	425	56%	18	16	-11%	889	692	-22%
	PM	435	520	20%	62	18	-71%	958	814	-15%
Castro Street & Dana Street	AM	136	93	-32%	47	12	-74%	228	122	-46%
	Midday	115	166	44%	21	11	-48%	827	554	-33%
	PM	219	209	-5%	58	18	-69%	1005	776	-23%
Castro Street & California Street	AM	265	184	-31%	66	22	-67%	211	84	-60%
	Midday	222	175	-21%	16	19	19%	813	318	-61%
	PM	403	251	-38%	53	18	-66%	607	458	-25%

[1] *Comparison evaluated the sum of eastbound through (EBT) and westbound through (WBT) volumes at each intersection, except at Castro Street & Evelyn Avenue, which compared westbound right volumes.*

The comparison showed that 2022 counts were commonly significantly less than volumes used in GSAP TIA for vehicular, bicycle, and pedestrian traffic. The decrease in volumes could be attributed to change in traffic patterns due to a combination of disruption due to COVID-19 and the Castro StrEATs program. The GSAP TIA vehicular and pedestrian volumes were utilized for this analysis instead of basing the future volume forecast on existing 2022 volumes for the following reasons in order to result in a more conservative analysis:

- It cannot be determined what the level of influence the Castro StrEATs program had on the change in traffic compared with the impact of the COVID-19 pandemic
- 2022 volumes reflect the continued impact of the COVID-19 pandemic on commuting patterns and commercial activity; it is anticipated that those effects will continue to subside over time
- Castro Street currently still connects to Central Expressway and Moffett Boulevard and the Evelyn Avenue ramp has not been constructed to Shoreline Boulevard. Traffic patterns are expected to shift once the GSAP has been constructed.

Analysis Scenarios

- Baseline Conditions: Based on the volumes from the *Cumulative (2030) Plus Project* scenario in the GSAP TIA
- Project Conditions: Redistributed volumes from the Baseline Conditions to account for the 100 – 300 block closure of Castro Street

To forecast future year conditions, the traffic analysis utilized AM, Midday, and PM peak hour volumes from the *Cumulative (2030) Plus Project* scenario in the GSAP TIA. **Figure 1** and **Figure 2** illustrates the *Cumulative (2030) Plus Project* scenario peak hour volumes from the GSAP that were used as a baseline for the Project analysis. It should be noted that these volumes account for the redistribution of trips associated with the closure of the at-grade crossing at Castro Street and Moffett Boulevard and the construction of the W. Evelyn Avenue ramp at Shoreline Boulevard.

Figure 3 and **Figure 4** illustrates the redistribution of traffic. The baseline volumes (Cumulative Plus Project scenario from the GSAP TIA) were redistributed to account for the closure of Castro Street from California Street to W Evelyn Avenue. The redistribution of trips was based on engineering judgement and consistent with the redistribution approach for GSAP. The turning movement volumes that were used for evaluations are presented in **Figure 5** and **Figure 6**.

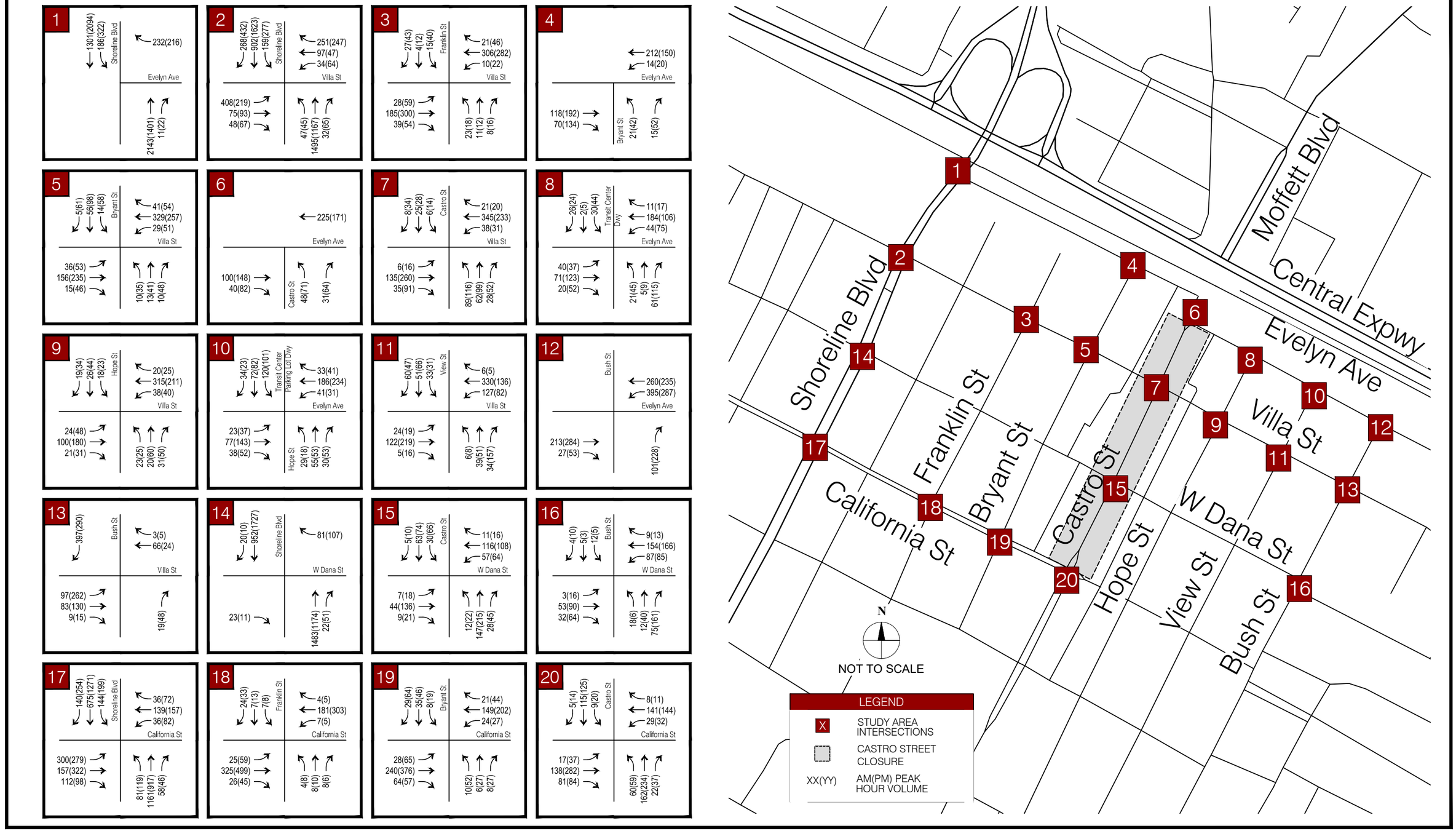

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FIGURE 1

BASELINE AM AND PM PEAK HOUR TURNING MOVEMENT VOLUMES

CASTRO PEDESTRIAN MALL FEASIBILITY STUDY

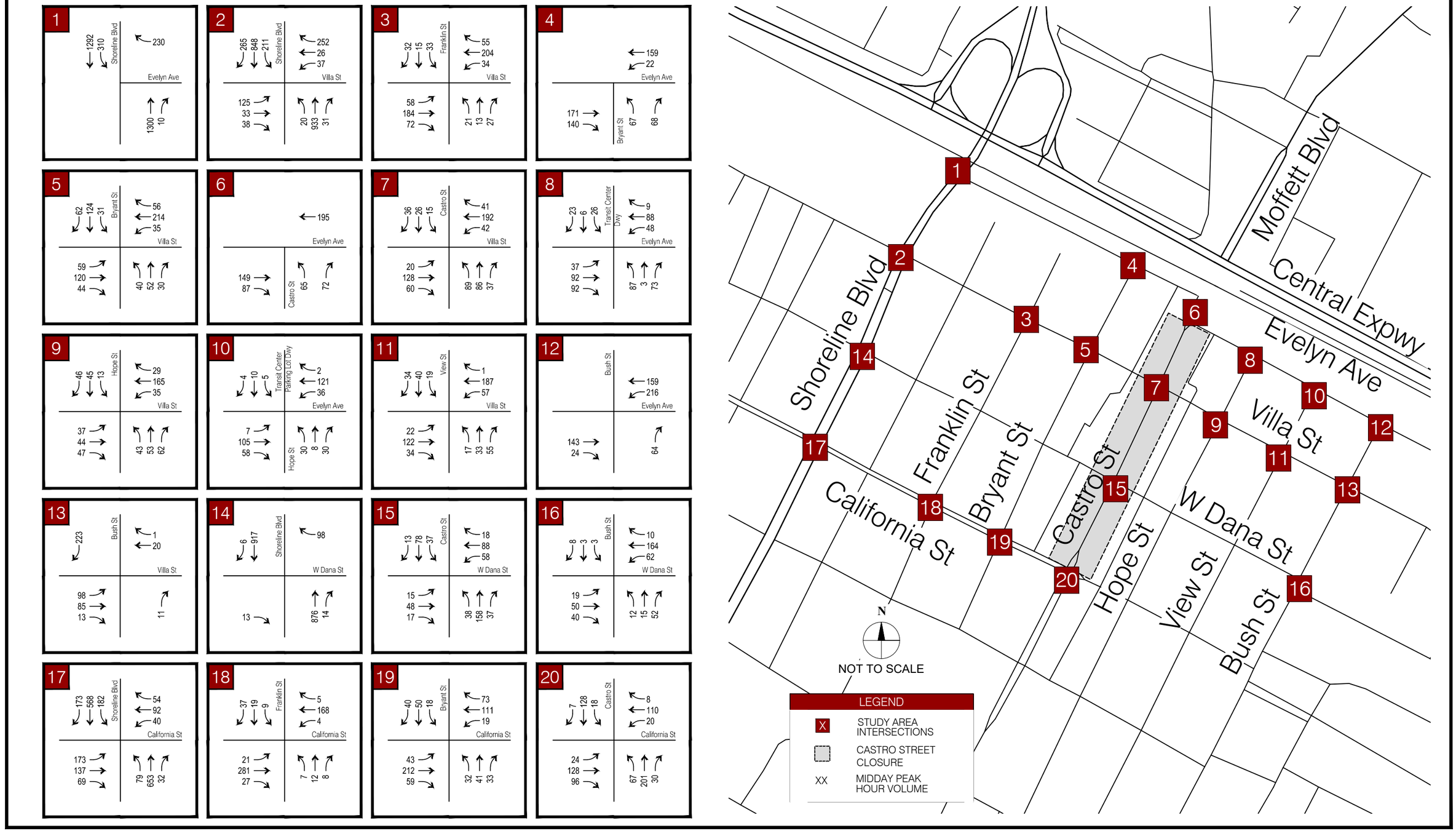

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FIGURE 2

BASELINE MIDDAY PEAK HOUR TURNING MOVEMENT VOLUMES

CASTRO PEDESTRIAN MALL FEASIBILITY STUDY

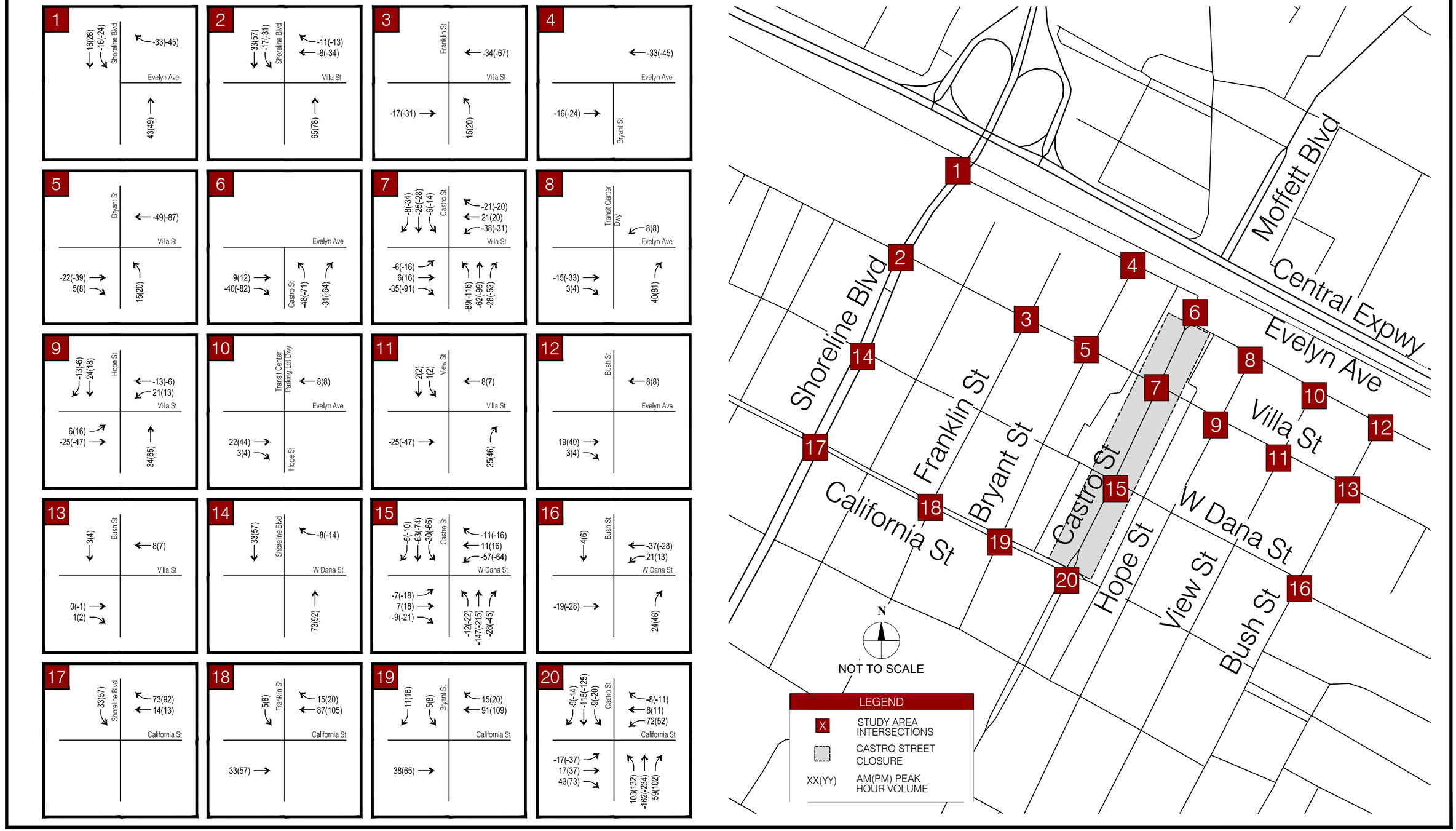

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FIGURE 3

REDISTRIBUTED AM AND PM PEAK HOUR TURNING MOVEMENT VOLUMES

CASTRO PEDESTRIAN MALL FEASIBILITY STUDY

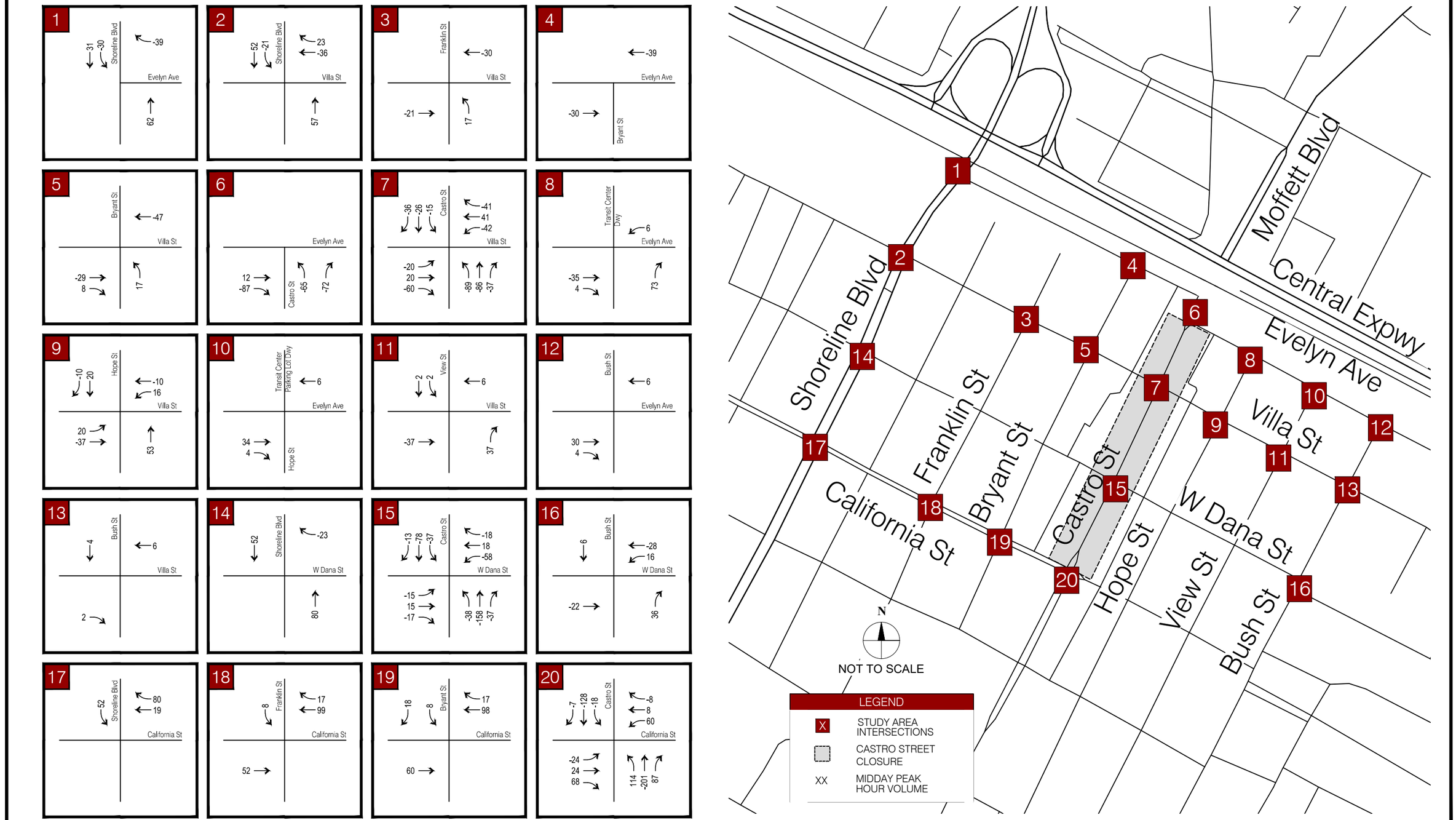

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FIGURE 4

REDISTRIBUTED MIDDAY PEAK HOUR TURNING MOVEMENT VOLUMES

CASTRO PEDESTRIAN MALL FEASIBILITY STUDY

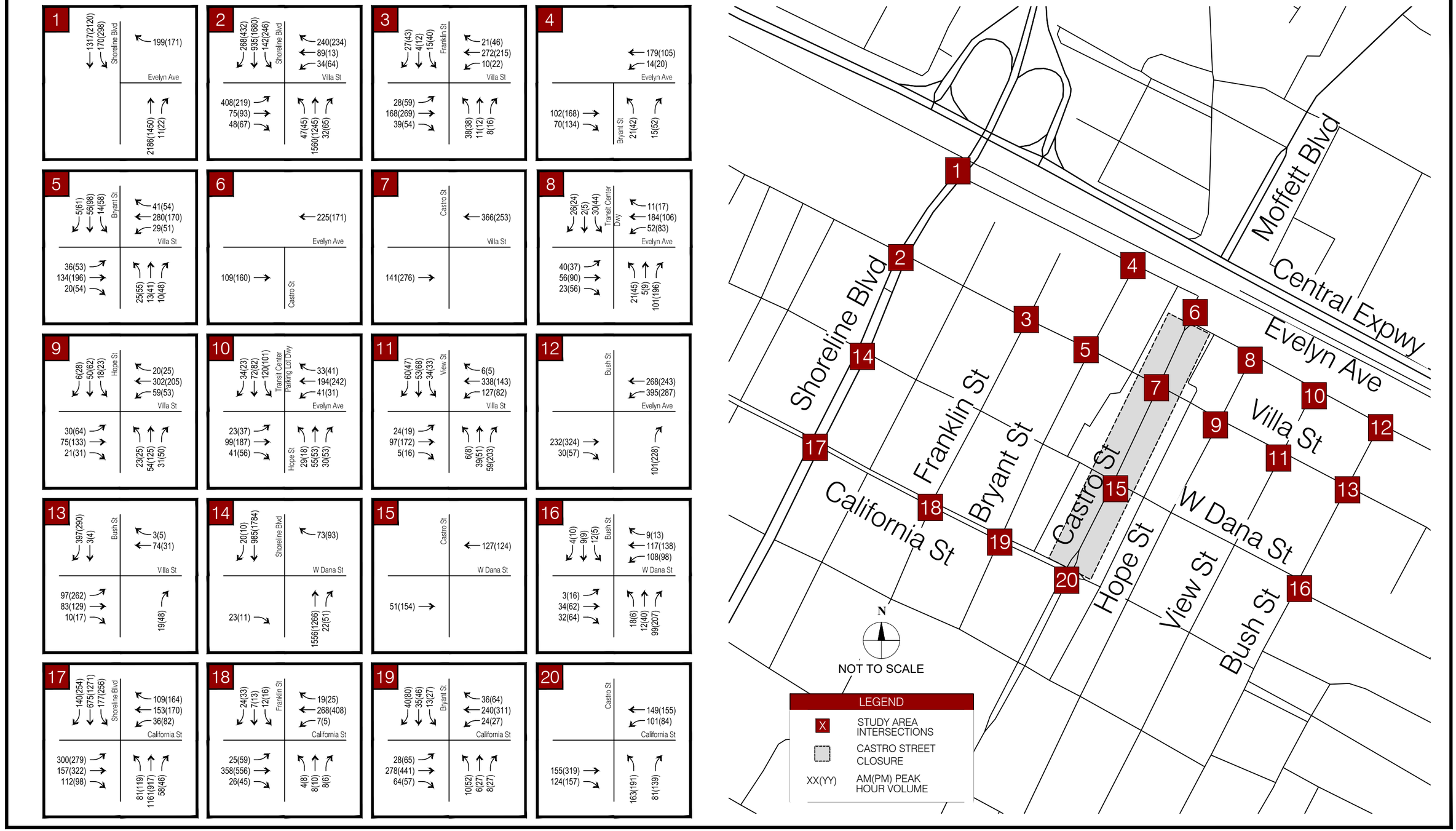

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FIGURE 5

PLUS PROJECT AM AND PM PEAK HOUR TURNING MOVEMENT VOLUMES

CASTRO PEDESTRIAN MALL FEASIBILITY STUDY

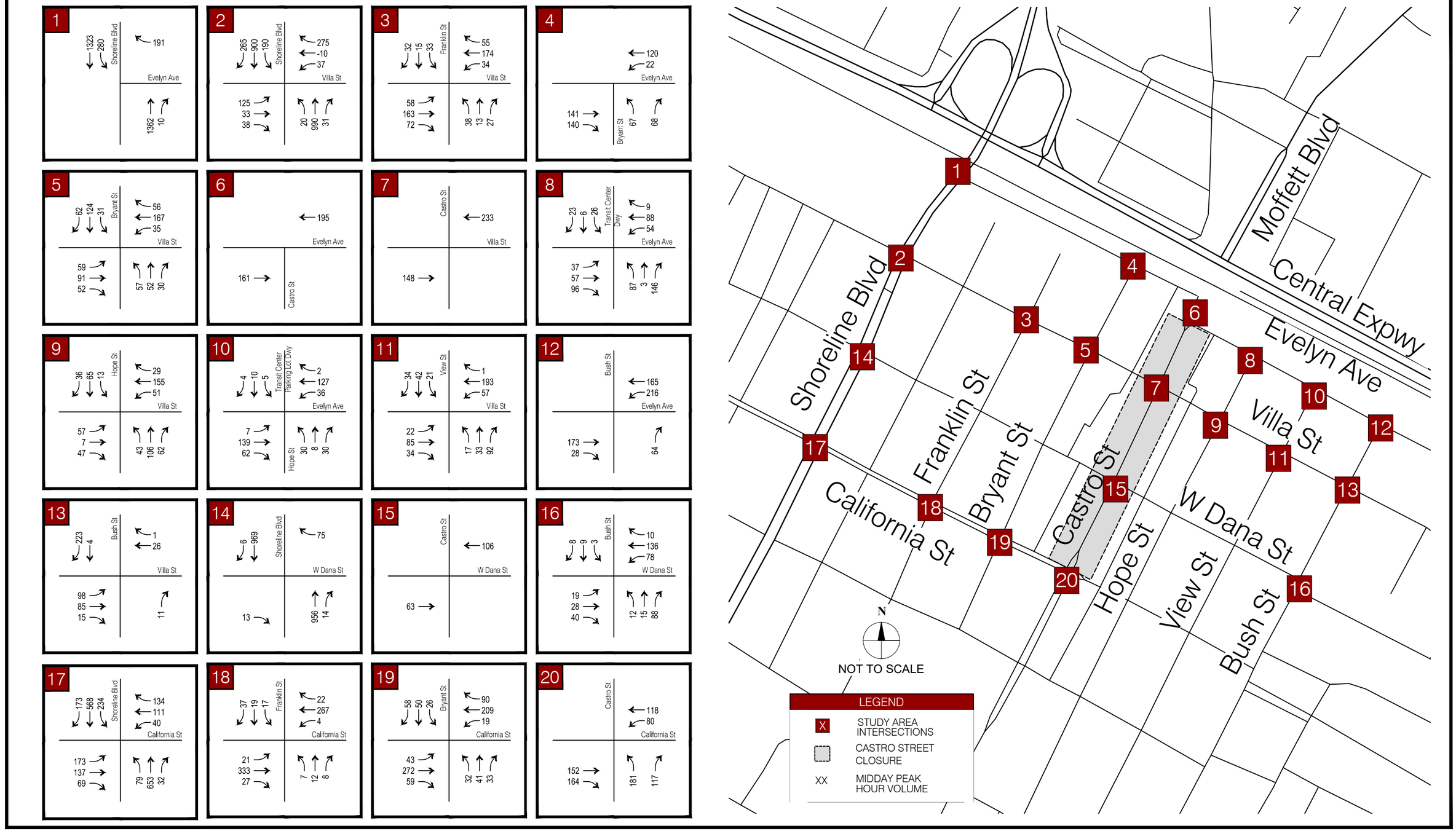

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FIGURE 6

PLUS PROJECT MIDDAY PEAK HOUR TURNING MOVEMENT VOLUMES

CASTRO PEDESTRIAN MALL FEASIBILITY STUDY

Lane Configuration

The traffic analysis assumed lane geometry from the *Cumulative (2030) Plus Project* conditions from the GSAP TIA, planned improvements at Shoreline Boulevard / Villa Street (#2), and the following improvements due to the Project:

- Intersection #6 – Castro Street & W Evelyn Avenue: Unsignalized uncontrolled intersection with vehicle yielding at pedestrian crossing
- Intersection #7 – Castro Street & Villa Street: Unsignalized stop-controlled intersection
- Intersection #15 – Castro Street & Dana Street: Unsignalized stop-controlled intersection
- Intersection #20 – Castro Street & California Street: Three-leg roundabout

The intersection concepts are included as **Attachment B**. Note that improvements at Castro Street & W Evelyn Avenue will be implemented by the GSAP and thus are not included with this memo.

VEHICLE MILES TRAVELED

As of July 1, 2020, the State of California fully adopted a change in the California Environmental Quality Act (CEQA) significant impact methodology for transportation impacts to use vehicle miles traveled (VMT) as opposed to level of service (LOS), as required by Senate Bill 743 (SB 743). To address this change, the Governor's Office of Planning and Research (OPR) developed *Technical Advisory on Evaluating Transportation Impacts in CEQA* which provides guidelines for application in evaluating the effect of development on VMT. The City of Mountain View also developed *Multi-Modal Transportation Analysis Handbook* (MTA), which includes the City's VMT guidelines.

Based on Section F of OPR guidelines, a VMT analysis is not required if the transportation project is not likely to lead to substantial or measurable increase in vehicle travel because it is associated with the following items:

- Reduction in number of through lanes
- Removal or relocation of on-street parking spaces
- Addition of new or enhanced bike or pedestrian facilities on existing street

The Project would result in the closure (reduction) in through lanes on Castro Street and remove on-street parking, while maintaining or enhancing bicycle and pedestrian facilities. While a small amount of traffic diversion may occur due to vehicles choosing alternate routes to travel through downtown, any change in VMT is anticipated to be nominal and insignificant. The Project is likely to result in an increase in pedestrian and bicycle activity in downtown Mountain View and thus would result in either no change or a reduction in VMT. Thus, no further analysis for VMT is required by CEQA.

VEHICLE CIRCULATION

Level of Service

Table 3 summarizes the level of service. All study intersections function within acceptable LOS standards. Analysis reports are provided in **Attachment C**.

Table 3: Intersection Level of Service Summary

#	Intersection	LOS Criteria	Control	With Project					
				AM Peak		PM Peak		Midday Peak	
				LOS	Delay (sec)[1]	LOS	Delay (sec)[1]	LOS	Delay (sec)[1]
1	Shoreline Boulevard & Evelyn Avenue[3]	D	Signal	B	13.0	B	10.9	B	11.7
2	Shoreline Boulevard & Villa Street	D	Signal	D	45.4	D	51.9	C	34.9
3	Franklin Street & Villa Street[4]	E	AWSC	A	10.0	B	12.0	B	10.3
4	Bryant Street & Evelyn Avenue[4]	E	SSSC	B	8.5	A	8.0	A	8.5
5	Bryant Street & Villa Street[4]	E	AWSC	B	10.5	B	13.2	B	11.3
6	Castro Street & Evelyn Avenue[3,4]	E	Uncontrolled	B	11.6	B	11.5	C	15.5
7	Castro Street & Villa Street[3,4]	E	AWSC[5]	B	10.9	A	9.4	A	8.6
8	Hope Street & Evelyn Avenue[3,4]	E	Signal	B	19.5	D	48.6	B	12.3
9	Hope Street & Villa Street[4]	E	AWSC	B	11.2	B	11.7	A	10.0
10	View Street & Evelyn Avenue[4]	E	AWSC	B	11.2	B	13.1	A	8.6
11	View Street & Villa Street[4]	E	AWSC	C	15.2	B	11.5	A	9.6
12	Bush Street& Evelyn Avenue[3]	D	Signal	B	14.2	B	16.1	B	10.4
13	Bush Street & Villa Street[3]	D	Signal	A	8.3	A	9.2	A	7.2
14	Shoreline Boulevard & Dana Street	D	SSSC	D	26.1	C	22.6	C	15.5
15	Castro Street & Dana Street[3,4]	E	AWSC[5]	A	7.7	A	8.0	A	7.6
16	Bush Street & Dana Street	D	AWSC	A	8.8	A	10.0	A	8.6
17	Shoreline Boulevard & California Street	D	Signal	D	40.5	D	43.8	C	27.4
18	Franklin Street & California Street[4]	E	SSSC	B	14.9	D	29.1	C	15.5
19	Bryant Street & California Street[4]	E	Signal	B	10.8	B	17.8	B	17.2
20	Castro Street & California Street[4]	E	Roundabout	A	5.1	A	7.6	A	6.1

1 AWSC = All-way stop controlled; SSSC = Side-street stop controlled

2 The average delay is reported for signal, AWSC and roundabout intersections. The delay for the worst movement is reported for SSSC intersection.

3 Intersection could not be analyzed in HCM 6 due to non-NEMA phasing or atypical control type and was analyzed in HCM 2000.

4 Intersection is within the Downtown Precise Plan boundary with a LOS E threshold.

5 Intersections #7 and 15 do not conflicting auto movements, but will have a stop sign at the pedestrian crossing at Castro Street and thus were analyzed as an all-way stop controlled intersection.

Parking Impacts

The closure of 100- 300 block of Castro Street would displace seven spaces on the 100 block, 18 spaces on the 200 block, and 14 spaces on the 300 block, for a total of 39 on-street parking spaces. Vehicles using those parking spaces today would need to find parking in other locations within the downtown area.

The City adopted the *Downtown Parking Strategy* in November 2021 which included a range of parking strategies to address parking needs in downtown area. This document considered the permanent closure of Castro Street and thus the parking impacts associated with the Project are fully accounted for and addressed in the Downtown Parking Strategy.

Existing parking inventory and utilization data were collected in November 2020 when 100-300 block of Castro Street was closed off to vehicular traffic. The existing parking data showed that even with the Castro Street closure, there was still off- and on-street parking available in the area.

Other Vehicle Circulation Concerns

Emergency Vehicle Access

Although motor vehicle traffic will be prohibited on the 100- 300 blocks of Castro Street, emergency and utility maintenance vehicle access will be maintained via the 12-foot central walkway along the three blocks by using collapsible bollards at the intersections.

Diverted Traffic

As shown **Figure 3**, a significant level of traffic is not anticipated to divert to residential streets. Traffic is expected to divert to downtown commercial streets such as Bryant Street and Hope Street that can accommodate the diverted traffic.

PEDESTRIAN CIRCULATION

A pedestrian mall environment will be created within the 100, 200, and 300 blocks of Castro Street. This eliminates potential conflicts between pedestrians and vehicles crossing Castro Street within these blocks and provides a substantial increase in public space and programmable area.

Pedestrian Crossing at Evelyn Avenue

At the Castro Street and Evelyn Avenue intersection, the Cumulative (2030) GSAP TIA pedestrian volumes range from 860 to 1,680 during the peak period. To accommodate this traffic, it is proposed that a Rapid Rectangular Flashing Beacon (RRFB) be installed and the single proposed crossing. Having a single crosswalk at this location will help both pedestrian and vehicle circulation and safety at this location. The RRFB and proposed crosswalk location will enhance pedestrian visibility, as well as create a more predicable environment for drivers' anticipating pedestrians crossing Castro Street. **Table 4** indicates the pedestrian volume anticipated to cross Evelyn Avenue, based on volumes included in the GSAP TIA (Cumulative scenario).

Table 4: Forecast Peak Period Pedestrian Volumes Crossing the Castro Street and Evelyn Avenue Intersection

Location	AM	Midday	PM
Evelyn Avenue	1,286	857	1,681

Pedestrian Crossing at Villa Street and Dana Street

Table 5 presents GSAP TIA (Cumulative scenario) pedestrian volumes at these crossings across the respective cross-streets. The pedestrian crossings at both Villa Street and Dana Street will be stop-controlled for autos. Stop-controlled crossings at these locations were proposed to prioritize pedestrian safety and convenience. Both locations will have a single, raised crossing, which would reduce the number of conflict zones in the existing condition from two to one and improve pedestrian visibility. In addition, the stop sign will require vehicles traveling along Villa Street and Dana Street to slow down when approaching the crossing, reducing crossing hazards.

Table 5: Forecast Peak Period Pedestrian Volumes Crossing Villa and Dana Streets

Location	AM	Midday	PM
Villa Street	298	76	840
Dana Street	131	501	565

Safety Considerations

It is recommended that all these pedestrian crossings provide new signage to inform drivers of these pedestrian crossings. In order to enhance the safety of the pedestrian crossing, it is recommended that the crosswalks across Dana Street and Villa Street be raised approximately three to five inches. The height of the raised crosswalk will be dependent on acceptable design standards for continued use of the roadways by trucks and buses.

BICYCLE CIRCULATION

The use of the Castro Street corridor by cyclists will be further considered in the design process for the permanent pedestrian mall. Similar to pedestrians, cyclists will face potential conflict points crossing Evelyn Avenue, Villa Street, and Dana Street. Bicycles are detoured to nearby parallel streets under Castro StrEATs temporary closure conditions, though that restriction may be reconsidered with implementation of permanent pedestrian mall.

TRANSIT IMPACTS

As indicated by the GSAP TIA (see Figure 29), there are no public transit vehicles anticipated to travel along Castro Street between Evelyn Avenue and Villa Street with the implementation of the GSAP. However, transit routes were anticipated to use Castro Street from the south to Villa Street. Transit vehicles instead will need to turn off of Castro Street at California Street to use Hope Street and View Street, along with Evelyn Avenue, to access the Transit Center. It should be noted that VTA routes have already been rerouted as part of the Castro StrEATs program and there are no current

transit routes on Castro Street in the proposed closure area; however, further coordination with VTA staff would be necessary to make the route adjustments permanent.

Conclusion

Kimley-Horn evaluated the traffic and circulation impacts of closure of the 100-300 blocks of Castro Street. This closure is intended to enhance public life, economic activity, and pedestrian safety in downtown Mountain View. The analysis found that the Project results in no deficiencies to level of service for the study intersections within the downtown area and is not anticipated to result in any significant congestion impacts to nearby streets. Parking impacts consisting of the loss of 39 on-street spaces, requiring vehicles to use nearby public parking lots or on-street parking options.

The pedestrian mall along the three blocks reduces the potential for vehicle-pedestrian conflicts, particularly for pedestrians crossing Castro Street to get from one side of the block to the other. Intersection configuration recommendations are currently being developed for the intersections of Castro Street with W. Evelyn Avenue, Villa Street, Dana Street, and California Street. These will include enhanced pedestrian crossings, such as raised crosswalks, RRFBs, and new signage, in certain locations.

Minimal impact to transit is expected since no public transit vehicles are anticipated to use this segment of Castro Street with the implementation of the grade separation and access project and all existing VTA routes have been adjusted to accommodate the Castro StrEATs program. However, any permanent route adjustments should be coordinated with VTA staff.

Attachment A: 2022 Traffic Counts

National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & Evelyn Ave
City: Mountain View
Control: 1-Way Stop(WB)

Project ID: 22-080047-001
Date: 2/9/2022

Data - Totals

AM

NS/EW Streets:	Castro St				Castro St				Evelyn Ave				Evelyn Ave				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	15
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	18
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	16
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0	31
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	25
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	34
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	16
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	27
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	23
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	21
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	25
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	271	0	271
APPROACH %'s :													0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0	110
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.809	0.000	0.809
															0.809		

NOON

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	25
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	33
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	26
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	23
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0	37
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	30
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	30
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0	31
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235	0	235
APPROACH %'s :													0.00%	0.00%	100.00%	0.00%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	128	0	128
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.865	0.000	0.865
															0.865		

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	30
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	33
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	27
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	0	39
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	0	39
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	0	36
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	24
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	30
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	33
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0	28
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	33
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	372	0	372
APPROACH %'s :													0.00%	0.00%	100.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141	0	141
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.904	0.000	0.904
															0.904		

National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & Evelyn Ave
City: Mountain View
Control: 1-Way Stop(WB)

Project ID: 22-080047-001
Date: 2/9/2022

Data - Bikes

AM

NS/EW Streets:	Castro St				Castro St				Evelyn Ave				Evelyn Ave				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
7:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	2	0	0	2	1	0	0	0	0	0	0	1	0	0	0	6
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	3
8:00 AM	0	4	0	0	3	0	0	0	0	0	0	0	0	0	1	0	8
8:15 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	4
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2
9:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
9:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	3
9:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	3
9:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	10	2	0	9	7	0	0	0	0	0	0	3	0	9	0	40
APPROACH %'s :	0.00%	83.33%	16.67%	0.00%	56.25%	43.75%	0.00%	0.00%					25.00%	0.00%	75.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	6	1	0	3	4	0	0	0	0	0	0	2	0	2	0	18
PEAK HR FACTOR :	0.000	0.375	0.250	0.000	0.250	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.563
	0.438				0.583								0.500				

NOON

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
12:00 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	2	0	5
12:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	3
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	4
12:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4
1:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
1:15 PM	0	1	0	0	2	0	0	0	0	0	0	0	0	0	3	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	6	1	0	7	0	0	0	0	0	0	0	0	0	12	0	26
APPROACH %'s :	0.00%	85.71%	14.29%	0.00%	100.00%	0.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	0	4	0	0	4	0	0	0	0	0	0	0	0	0	8	0	16
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.667
	0.500				0.500								0.667				

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	1	0	2	0	6
4:15 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	3	0	6
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	4
4:45 PM	0	0	1	0	1	0	0	1	0	0	0	0	3	0	2	0	8
5:00 PM	0	0	1	0	3	0	0	0	0	0	0	0	2	0	3	1	10
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	3	0	0	1	0	0	0	0	0	0	1	0	1	0	6
5:45 PM	0	2	0	0	1	0	0	2	0	0	0	0	1	0	2	0	8
6:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	1	0	2	0	7
6:15 PM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	1	0	4
6:30 PM	0	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	4
6:45 PM	0	0	0	0	2	1	0	0	0	0	0	0	0	0	1	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	7	10	0	14	2	0	3	0	0	0	0	10	0	21	1	68
APPROACH %'s :	0.00%	41.18%	58.82%	0.00%	73.68%	10.53%	0.00%	15.79%					31.25%	0.00%	65.63%	3.13%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	2	0	5	0	0	1	0	0	0	0	5	0	9	1	23
PEAK HR FACTOR :	0.000	0.000	0.500	0.000	0.417	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.417	0.000	0.750	0.250	0.575
	0.500				0.500								0.625				

National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & Evelyn Ave
City: Mountain View

Project ID: 22-080047-001
Date: 2/9/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Castro St		Castro St		Evelyn Ave		Evelyn Ave		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	1	0	1	0	1	0	0	0	3
7:15 AM	1	0	0	2	4	1	0	0	8
7:30 AM	1	0	1	0	2	0	0	0	4
7:45 AM	4	0	2	0	9	5	0	0	20
8:00 AM	2	0	1	1	2	4	0	0	10
8:15 AM	0	0	1	0	1	3	0	0	5
8:30 AM	0	0	0	3	5	4	0	0	12
8:45 AM	0	1	2	1	3	2	0	0	9
9:00 AM	0	1	0	1	4	8	0	0	14
9:15 AM	0	0	1	0	7	5	0	0	13
9:30 AM	0	0	0	0	5	1	0	0	6
9:45 AM	0	0	1	2	2	5	0	0	10
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	9	2	10	10	45	38	0	0	114
APPROACH %'s :	81.82%	18.18%	50.00%	50.00%	54.22%	45.78%			
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	6	0	4	4	17	16	0	0	47
PEAK HR FACTOR :	0.375		0.500	0.333	0.472	0.800			0.588
	0.375		0.667		0.589				

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:30 AM	0	0	1	3	2	4	0	0	10
11:45 AM	0	0	1	1	7	6	0	0	15
12:00 PM	4	3	0	6	7	5	0	0	25
12:15 PM	2	0	0	2	10	17	0	0	31
12:30 PM	0	1	0	6	10	11	0	0	28
12:45 PM	0	1	3	0	10	16	0	0	30
1:00 PM	1	0	1	4	18	3	0	0	27
1:15 PM	0	0	8	0	4	5	0	0	17
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	7	5	14	22	68	67	0	0	183
APPROACH %'s :	58.33%	41.67%	38.89%	61.11%	50.37%	49.63%			
PEAK HR :	12:30 PM - 01:30 PM								TOTAL
PEAK HR VOL :	1	2	12	10	42	35	0	0	102
PEAK HR FACTOR :	0.250	0.500	0.375	0.417	0.583	0.547			0.850
	0.750		0.688		0.740				

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	2	0	3	0	6	2	0	0	13
4:15 PM	0	0	3	5	10	9	0	0	27
4:30 PM	1	0	1	4	5	6	0	0	17
4:45 PM	1	1	2	2	14	9	0	0	29
5:00 PM	0	0	1	8	8	11	0	0	28
5:15 PM	0	6	3	1	13	7	0	0	30
5:30 PM	3	4	3	6	9	15	0	0	40
5:45 PM	0	2	0	6	17	14	0	0	39
6:00 PM	1	0	4	7	8	32	0	0	52
6:15 PM	0	2	3	2	17	21	0	0	45
6:30 PM	2	2	1	2	10	16	0	0	33
6:45 PM	0	0	2	7	6	20	0	0	35
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	10	17	26	50	123	162	0	0	388
APPROACH %'s :	37.04%	62.96%	34.21%	65.79%	43.16%	56.84%			
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	2	7	7	15	40	33	0	0	104
PEAK HR FACTOR :	0.500	0.292	0.583	0.469	0.714	0.750			0.867
	0.375		0.611		0.793				

Prepared by National Data & Surveying Services

Castro St & Evelyn Ave

Peak Hour Turning Movement Count

ID: 22-080047-001
City: Mountain View

Day: Wednesday
Date: 2/9/2022

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	12:30 PM - 01:30 PM
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	11:30 AM - 01:30 PM
PM	4:00 PM - 07:00 PM

SOUTHBOUND (Castro St)

AM	0	0	0	0	110	AM
NOON	0	0	0	0	128	NOON
PM	0	0	0	0	141	PM

EASTBOUND (Evelyn Ave)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (Evelyn Ave)

PM	NOON	AM	
141	128	110	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
PM	NOON	AM	

NORTHBOUND (Castro St)

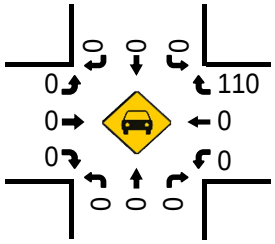
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

0 1 0 0 (SB turning movements)

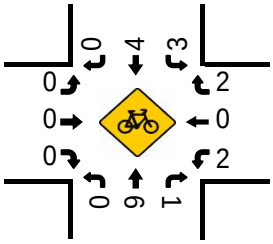
0 0 1 0 (NB turning movements)

CONTROL			
1-Way Stop(WB)			
TEV	110	128	141
	AM	NOON	PM
PHF	0.81	0.86	0.90

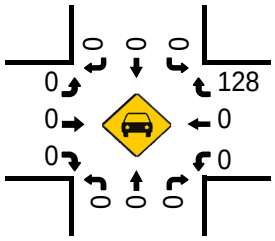
Totals (AM)



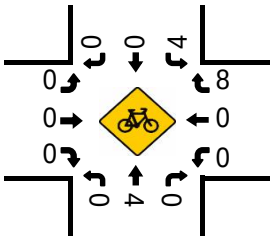
Total Bikes (AM)



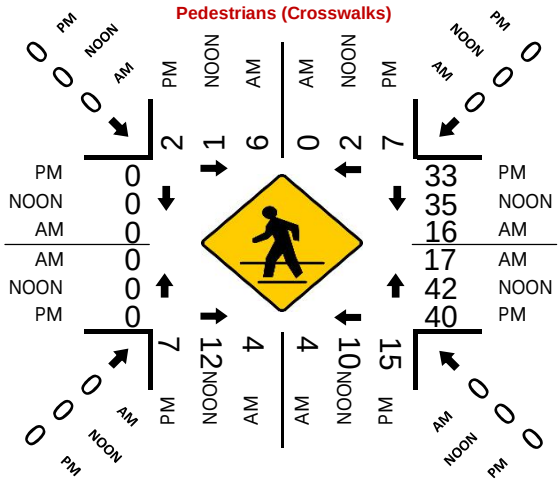
Totals (NOON)



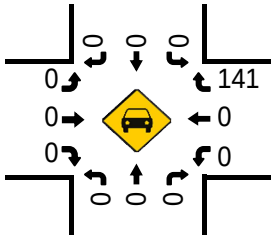
Total Bikes (NOON)



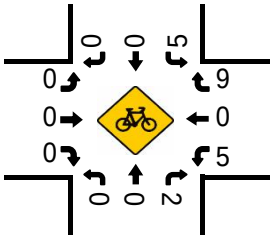
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & Villa St
City: Mountain View
Control: Signalized

Project ID: 22-080047-002
Date: 2/9/2022

Data - Totals

NS/EW Streets:	Castro St				Castro St				Villa St				Villa St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	17	0	0	0	10	0	0	27
7:15 AM	0	0	0	0	0	0	0	0	0	23	0	0	0	21	0	0	44
7:30 AM	0	0	0	0	0	0	0	0	0	31	0	0	0	28	0	0	59
7:45 AM	0	0	0	0	0	0	0	0	0	28	0	0	0	38	0	0	66
8:00 AM	0	0	0	0	0	0	0	0	0	43	0	1	0	31	0	1	76
8:15 AM	0	0	0	0	0	0	0	0	0	41	0	0	0	51	0	0	92
8:30 AM	0	0	0	0	0	0	0	0	0	47	0	0	0	54	0	0	101
8:45 AM	0	0	0	0	0	0	0	0	0	35	0	0	0	38	0	0	73
9:00 AM	0	0	0	0	0	0	0	0	0	34	0	0	0	52	0	0	86
9:15 AM	0	0	0	0	0	0	0	0	0	42	0	0	0	27	0	0	69
9:30 AM	0	0	0	0	0	0	0	0	0	34	0	0	0	47	0	0	81
9:45 AM	0	0	0	0	0	0	0	0	0	41	0	0	0	46	0	0	87
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	416	0	1	0	443	0	1	861
APPROACH %'s :									0.00%	99.76%	0.00%	0.24%	0.00%	99.77%	0.00%	0.23%	
PEAK HR :	08:15 AM - 09:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	157	0	0	0	195	0	0	352
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.835	0.000	0.000	0.000	0.903	0.000	0.000	0.871
										0.835				0.903			

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:30 AM	0	0	0	0	0	0	0	0	0	45	0	0	0	46	0	0	91
11:45 AM	0	0	0	0	0	0	0	0	0	54	0	0	0	60	0	0	114
12:00 PM	0	0	0	0	0	0	0	0	0	60	0	1	0	50	0	2	113
12:15 PM	0	0	0	0	0	0	0	0	0	54	0	0	0	47	0	0	101
12:30 PM	0	0	0	0	0	0	0	0	0	59	0	0	0	41	0	0	100
12:45 PM	0	0	0	0	0	0	0	0	0	53	0	0	0	42	0	1	96
1:00 PM	0	0	0	0	0	0	0	0	0	49	0	0	0	42	0	0	91
1:15 PM	0	0	0	0	0	0	0	0	0	43	0	0	0	36	0	0	79
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	417	0	1	0	364	0	3	785
APPROACH %'s :									0.00%	99.76%	0.00%	0.24%	0.00%	99.18%	0.00%	0.82%	
PEAK HR :	11:45 AM - 12:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	227	0	1	0	198	0	2	428
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.946	0.000	0.250	0.000	0.825	0.000	0.250	0.939
										0.934				0.833			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	57	0	0	0	46	0	0	103
4:15 PM	0	0	0	0	0	0	0	0	0	55	0	0	0	40	0	0	95
4:30 PM	0	0	0	0	0	0	0	0	0	53	0	0	0	53	0	0	106
4:45 PM	0	0	0	0	0	0	0	0	0	72	0	0	0	57	0	0	129
5:00 PM	0	0	0	0	0	0	0	0	0	59	0	0	0	70	0	0	129
5:15 PM	0	0	0	0	0	0	0	0	0	67	0	0	0	62	0	0	129
5:30 PM	0	0	0	0	0	0	0	0	0	61	0	0	0	64	0	0	125
5:45 PM	0	0	0	0	0	0	0	0	0	70	0	0	0	62	0	0	132
6:00 PM	0	0	0	0	0	0	0	0	0	66	0	0	0	62	0	0	128
6:15 PM	0	0	0	0	0	0	0	0	0	79	0	0	0	56	0	0	135
6:30 PM	0	0	0	0	0	0	0	0	0	59	0	0	0	63	0	0	122
6:45 PM	0	0	0	0	0	0	0	0	0	49	0	1	0	42	0	0	92
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	747	0	1	0	677	0	0	1425
APPROACH %'s :									0.00%	99.87%	0.00%	0.13%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	05:30 PM - 06:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	276	0	0	0	244	0	0	520
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.873	0.000	0.000	0.000	0.953	0.000	0.000	0.963
										0.873				0.953			

National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & Villa St
City: Mountain View
Control: Signalized

Project ID: 22-080047-002
Date: 2/9/2022

Data - Bikes

AM

NS/EW Streets:	Castro St				Castro St				Villa St				Villa St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
8:00 AM	0	2	0	0	0	0	0	0	1	2	0	0	0	1	0	0	6
8:15 AM	0	0	0	0	1	2	0	0	0	0	0	0	0	1	0	0	4
8:30 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0	0	4
8:45 AM	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	3
9:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
9:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	1	0	0	0	1	0	0	0	1	0	0	0	2	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	5	1	0	1	6	1	0	4	5	0	0	0	10	0	0	33
APPROACH %'s :	0.00%	83.33%	16.67%	0.00%	12.50%	75.00%	12.50%	0.00%	44.44%	55.56%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	08:15 AM - 09:15 AM																TOTAL
PEAK HR VOL :	0	0	1	0	1	3	0	0	2	1	0	0	0	5	0	0	13
PEAK HR FACTOR :	0.000	0.000	0.250	0.000	0.250	0.375	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.625	0.000	0.000	0.813
	0.250				0.333				0.750				0.625				

NOON

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
12:00 PM	0	2	1	1	1	0	0	0	3	0	0	0	0	0	1	1	10
12:15 PM	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
1:00 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	6	1	1	1	0	0	0	3	2	0	0	0	3	1	1	22
APPROACH %'s :	27.27%	54.55%	9.09%	9.09%	100.00%	0.00%	0.00%	0.00%	60.00%	40.00%	0.00%	0.00%	0.00%	60.00%	20.00%	20.00%	
PEAK HR :	11:45 AM - 12:45 PM																TOTAL
PEAK HR VOL :	3	5	1	1	1	0	0	0	3	0	0	0	0	0	1	1	16
PEAK HR FACTOR :	0.375	0.625	0.250	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.400
	0.625				0.250				0.250				0.250				

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	2	1	0	6
4:15 PM	1	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	5
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	4
4:45 PM	0	0	0	0	0	2	2	0	0	0	0	0	1	0	0	0	5
5:00 PM	0	2	0	0	0	0	1	0	0	0	0	0	0	1	0	0	4
5:15 PM	2	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	4
5:30 PM	1	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	4
5:45 PM	0	2	0	0	0	1	1	0	0	1	0	0	1	0	0	0	6
6:00 PM	0	2	0	0	0	2	1	0	0	1	0	0	0	1	0	0	7
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
6:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
6:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	10	0	0	0	8	7	0	0	6	0	0	3	11	1	0	50
APPROACH %'s :	28.57%	71.43%	0.00%	0.00%	0.00%	53.33%	46.67%	0.00%	0.00%	100.00%	0.00%	0.00%	20.00%	73.33%	6.67%	0.00%	
PEAK HR :	05:30 PM - 06:30 PM																TOTAL
PEAK HR VOL :	1	4	0	0	0	3	4	0	0	2	0	0	1	3	0	0	18
PEAK HR FACTOR :	0.250	0.500	0.000	0.000	0.000	0.375	0.500	0.000	0.000	0.500	0.000	0.000	0.250	0.750	0.000	0.000	0.643
	0.625				0.583				0.500				1.000				

National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & Villa St
City: Mountain View

Project ID: 22-080047-002
Date: 2/9/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Castro St		Castro St		Villa St		Villa St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	1	0	0	0	1	1	1	0	4
7:15 AM	0	0	0	0	6	1	1	2	10
7:30 AM	0	0	2	1	1	3	2	6	15
7:45 AM	2	0	1	0	7	4	4	3	21
8:00 AM	0	2	3	1	7	5	3	2	23
8:15 AM	0	0	8	6	2	4	4	5	29
8:30 AM	1	0	3	5	3	9	2	8	31
8:45 AM	6	4	3	0	9	9	8	7	46
9:00 AM	3	3	7	7	4	10	3	6	43
9:15 AM	0	0	8	7	10	15	5	5	50
9:30 AM	1	2	6	2	6	4	3	4	28
9:45 AM	6	5	8	6	5	6	5	10	51
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	20	16	49	35	61	71	41	58	351
APPROACH %'s :	55.56%	44.44%	58.33%	41.67%	46.21%	53.79%	41.41%	58.59%	
PEAK HR :	08:15 AM - 09:15 AM								TOTAL
PEAK HR VOL :	10	7	21	18	18	32	17	26	149
PEAK HR FACTOR :	0.417	0.438	0.656	0.643	0.500	0.800	0.531	0.813	0.810
	0.425		0.696		0.694		0.717		

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:30 AM	5	4	6	10	26	13	22	12	98
11:45 AM	5	9	8	14	33	16	26	12	123
12:00 PM	19	29	16	8	25	18	40	22	177
12:15 PM	9	15	18	8	42	37	51	25	205
12:30 PM	15	17	9	18	32	33	32	31	187
12:45 PM	11	8	13	18	25	26	25	38	164
1:00 PM	13	12	26	19	37	31	18	50	206
1:15 PM	7	14	12	18	23	36	25	42	177
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	84	108	108	113	243	210	239	232	1337
APPROACH %'s :	43.75%	56.25%	48.87%	51.13%	53.64%	46.36%	50.74%	49.26%	
PEAK HR :	11:45 AM - 12:45 PM								TOTAL
PEAK HR VOL :	48	70	51	48	132	104	149	90	692
PEAK HR FACTOR :	0.632	0.603	0.708	0.667	0.786	0.703	0.730	0.726	0.844
	0.615		0.917		0.747		0.786		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	3	1	7	7	18	13	16	8	73
4:15 PM	5	9	11	16	23	20	19	8	111
4:30 PM	8	11	7	6	26	13	33	13	117
4:45 PM	11	9	5	20	15	27	31	23	141
5:00 PM	16	11	9	16	25	33	25	24	159
5:15 PM	16	18	13	11	44	36	50	26	214
5:30 PM	16	18	15	11	33	26	29	29	177
5:45 PM	6	11	13	12	39	29	42	45	197
6:00 PM	8	18	5	15	40	48	56	19	209
6:15 PM	4	13	9	21	47	44	57	36	231
6:30 PM	5	29	17	15	44	53	32	47	242
6:45 PM	11	27	14	14	58	49	51	49	273
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	109	175	125	164	412	391	441	327	2144
APPROACH %'s :	38.38%	61.62%	43.25%	56.75%	51.31%	48.69%	57.42%	42.58%	
PEAK HR :	05:30 PM - 06:30 PM								TOTAL
PEAK HR VOL :	34	60	42	59	159	147	184	129	814
PEAK HR FACTOR :	0.531	0.833	0.700	0.702	0.846	0.766	0.807	0.717	0.881
	0.691		0.842		0.841		0.841		

Prepared by National Data & Surveying Services

Castro St & Villa St

Peak Hour Turning Movement Count

ID: 22-080047-002
City: Mountain View

Day: Wednesday
Date: 2/9/2022

PEAK HOURS

AM	08:15 AM - 09:15 AM
NOON	11:45 AM - 12:45 PM
PM	05:30 PM - 06:30 PM

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	11:30 AM - 01:30 PM
PM	4:00 PM - 07:00 PM

SOUTHBOUND (Castro St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	0.5	0.5	1	0		

EASTBOUND (Villa St)

AM	NOON	PM		
195	199	244	⇦	
0	1	0	↶	0
0	0	0	↱	0
157	227	276	→	1
0	0	0	↷	0
AM	NOON	PM		

WESTBOUND (Villa St)

PM	NOON	AM		
0	0	0	↶	0
244	198	195	←	1
0	0	0	↰	0
0	2	0	↩	0
276	229	157	⇨	
PM	NOON	AM		

NORTHBOUND (Castro St)

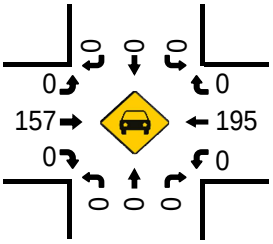
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM
	0	1	0.5	0.5		

CONTROL

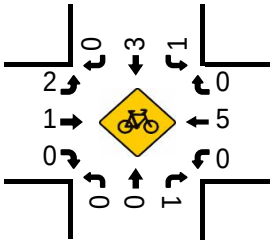
Signalized

TEV	352 AM	428 NOON	520 PM
PHF	0.87	0.94	0.96

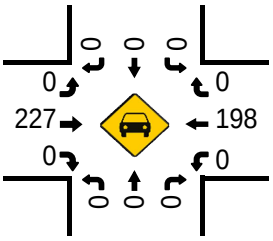
Totals (AM)



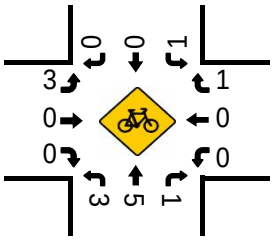
Total Bikes (AM)



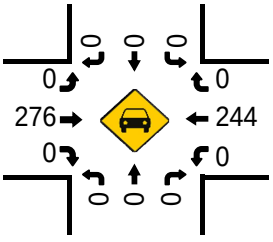
Totals (NOON)



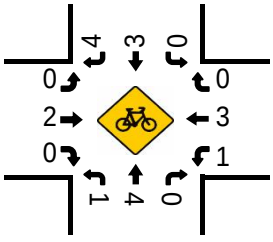
Total Bikes (NOON)



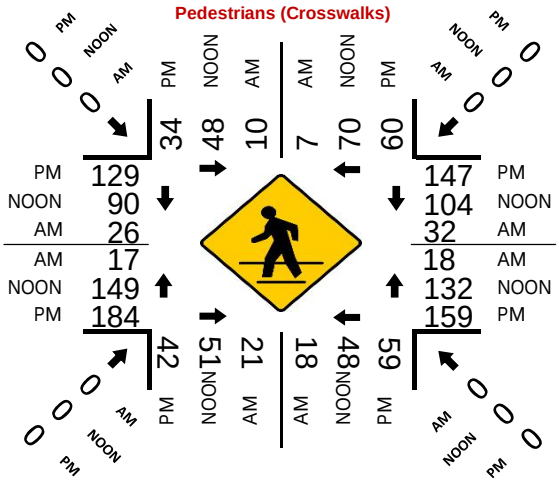
Totals (PM)



Total Bikes (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & Dana St
City: Mountain View
Control: Signalized

Project ID: 22-080047-003
Date: 2/9/2022

Data - Totals

AM

NS/EW Streets:	Castro St				Castro St				Dana St				Dana St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	8	0	0	9
7:15 AM	0	0	0	0	0	0	0	0	0	3	0	1	0	5	0	0	9
7:30 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	10	0	0	17
7:45 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	10	0	0	15
8:00 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	18	0	0	27
8:15 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	17	0	0	26
8:30 AM	0	0	0	0	0	0	0	0	0	10	0	0	0	13	0	0	23
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	2	0	16	0	0	19
9:00 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	14	0	0	23
9:15 AM	0	0	0	0	0	0	0	0	0	11	0	0	0	9	0	0	20
9:30 AM	0	0	0	0	0	0	0	0	0	7	0	1	0	17	0	0	25
9:45 AM	0	0	0	0	0	0	0	0	0	9	0	1	0	12	0	0	22
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	81	0	5	0	149	0	0	235
APPROACH %'s :									0.00%	94.19%	0.00%	5.81%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	29	0	2	0	64	0	0	95
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.725	0.000	0.250	0.000	0.889	0.000	0.000	0.880
										0.775				0.889			

NOON

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:30 AM	0	0	0	0	0	0	0	0	0	13	0	0	0	23	0	0	36
11:45 AM	0	0	0	0	0	0	0	0	0	15	0	0	0	23	0	0	38
12:00 PM	0	0	0	0	0	0	0	0	0	17	0	0	0	28	0	0	45
12:15 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	17	0	0	30
12:30 PM	0	0	0	0	0	0	0	0	0	22	0	0	0	27	0	0	49
12:45 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	29	0	0	42
1:00 PM	0	0	0	0	0	0	0	0	0	14	0	0	0	23	0	0	37
1:15 PM	0	0	0	0	0	0	0	0	0	17	0	0	0	20	0	0	37
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	124	0	0	0	190	0	0	314
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	65	0	0	0	101	0	0	166
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.739	0.000	0.000	0.000	0.871	0.000	0.000	0.847
										0.739				0.871			

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	23	0	0	33
4:15 PM	0	0	0	0	0	0	0	0	0	15	0	1	0	15	0	1	32
4:30 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	28	0	0	40
4:45 PM	0	0	0	0	0	0	0	0	0	18	0	0	0	28	0	3	49
5:00 PM	0	0	0	0	0	0	0	0	0	30	0	1	0	35	0	1	67
5:15 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	37	0	0	49
5:30 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	25	0	0	38
5:45 PM	0	0	0	0	0	0	0	0	0	24	0	0	0	23	0	0	47
6:00 PM	0	0	0	0	0	0	0	0	0	17	0	1	0	35	0	0	53
6:15 PM	0	0	0	0	0	0	0	0	0	28	0	0	0	30	0	0	58
6:30 PM	0	0	0	0	0	0	0	0	0	21	0	1	0	31	0	0	53
6:45 PM	0	0	0	0	0	0	0	0	0	14	0	0	0	16	0	0	30
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	214	0	4	0	326	0	5	549
APPROACH %'s :									0.00%	98.17%	0.00%	1.83%	0.00%	98.49%	0.00%	1.51%	
PEAK HR :	05:45 PM - 06:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	90	0	2	0	119	0	0	211
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.804	0.000	0.500	0.000	0.850	0.000	0.000	0.909
										0.821				0.850			

National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & Dana St
City: Mountain View
Control: Signalized

Project ID: 22-080047-003
Date: 2/9/2022

Data - Bikes

AM

NS/EW Streets:	Castro St				Castro St				Dana St				Dana St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	2	0	0	5
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
8:00 AM	0	1	0	0	0	0	0	0	0	3	0	0	0	2	1	0	7
8:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	3
8:30 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
9:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	4	0	0	0	4	1	0	0	6	0	0	1	7	1	0	24
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	80.00%	20.00%	0.00%	0.00%	100.00%	0.00%	0.00%	11.11%	77.78%	11.11%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	1	0	0	0	3	0	0	0	4	0	0	1	2	1	0	12
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.333	0.000	0.000	0.250	0.250	0.250	0.000	0.429
	0.250				0.375				0.333				0.333				

NOON

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:30 AM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
11:45 AM	0	3	0	0	0	0	0	0	1	0	0	0	1	0	0	0	5
12:00 PM	0	2	1	0	0	0	0	0	0	3	0	0	0	0	2	0	8
12:15 PM	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3
1:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	8	3	0	0	1	0	0	1	5	0	0	3	2	2	0	26
APPROACH %'s :	8.33%	66.67%	25.00%	0.00%	0.00%	100.00%	0.00%	0.00%	16.67%	83.33%	0.00%	0.00%	42.86%	28.57%	28.57%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	1	3	1	0	0	1	0	0	0	3	0	0	0	0	2	0	11
PEAK HR FACTOR :	0.250	0.375	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.344
	0.417				0.250				0.250				0.250				

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	3
4:15 PM	0	1	0	0	0	0	2	0	1	1	0	0	0	1	0	0	6
4:30 PM	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	3
4:45 PM	0	2	0	0	0	2	0	0	0	1	1	0	0	2	0	0	8
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
5:15 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	3	0	0	5
5:30 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	4
5:45 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
6:00 PM	0	1	0	0	0	2	0	0	0	0	0	0	1	0	0	0	4
6:15 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
6:30 PM	7	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	9
6:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	7	8	0	0	0	11	4	0	3	5	2	0	1	10	0	0	51
APPROACH %'s :	46.67%	53.33%	0.00%	0.00%	0.00%	73.33%	26.67%	0.00%	30.00%	50.00%	20.00%	0.00%	9.09%	90.91%	0.00%	0.00%	
PEAK HR :	05:45 PM - 06:45 PM																TOTAL
PEAK HR VOL :	7	3	0	0	0	4	2	0	1	0	0	0	1	0	0	0	18
PEAK HR FACTOR :	0.250	0.750	0.000	0.000	0.000	0.500	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.500
	0.313				0.750				0.250				0.250				

National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & Dana St
City: Mountain View

Project ID: 22-080047-003
Date: 2/9/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Castro St		Castro St		Dana St		Dana St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	1	1	3	0	3	2	2	0	12
7:15 AM	0	0	2	1	3	1	2	2	11
7:30 AM	0	1	1	2	6	5	1	4	20
7:45 AM	3	0	6	1	8	8	4	4	34
8:00 AM	0	4	2	4	6	4	3	5	28
8:15 AM	1	2	2	3	5	3	3	4	23
8:30 AM	1	0	1	4	5	5	6	8	30
8:45 AM	6	0	2	6	8	7	6	6	41
9:00 AM	0	3	1	4	7	5	2	5	27
9:15 AM	3	1	7	1	10	15	5	4	46
9:30 AM	1	1	6	9	6	8	5	9	45
9:45 AM	3	3	2	3	8	10	5	9	43
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	19	16	35	38	75	73	44	60	360
APPROACH %'s :	54.29%	45.71%	47.95%	52.05%	50.68%	49.32%	42.31%	57.69%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	8	6	7	17	24	19	18	23	122
PEAK HR FACTOR :	0.333	0.375	0.875	0.708	0.750	0.679	0.750	0.719	0.744
	0.583		0.750		0.717		0.732		

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:30 AM	1	7	5	13	15	8	21	19	89
11:45 AM	3	6	13	11	25	15	22	21	116
12:00 PM	2	6	15	8	20	17	39	23	130
12:15 PM	3	6	9	16	21	33	39	26	153
12:30 PM	4	5	12	6	31	19	19	33	129
12:45 PM	10	8	9	8	18	19	23	47	142
1:00 PM	2	5	9	11	37	19	14	34	131
1:15 PM	1	0	11	13	25	34	27	42	153
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	26	43	83	86	192	164	204	245	1043
APPROACH %'s :	37.68%	62.32%	49.11%	50.89%	53.93%	46.07%	45.43%	54.57%	
PEAK HR :	12:00 PM - 01:00 PM								TOTAL
PEAK HR VOL :	19	25	45	38	90	88	120	129	554
PEAK HR FACTOR :	0.475	0.781	0.750	0.594	0.726	0.667	0.769	0.686	0.905
	0.611		0.830		0.824		0.889		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	15	3	3	7	30	27	22	11	118
4:15 PM	2	20	9	13	22	17	21	9	113
4:30 PM	0	1	3	6	24	33	34	35	136
4:45 PM	5	4	8	1	23	27	32	36	136
5:00 PM	6	4	6	3	22	27	23	25	116
5:15 PM	4	5	19	4	39	32	34	19	156
5:30 PM	10	7	11	4	43	25	23	38	161
5:45 PM	5	6	11	23	39	26	48	39	197
6:00 PM	6	6	14	12	45	43	30	27	183
6:15 PM	6	4	10	8	55	31	39	40	193
6:30 PM	9	4	12	10	30	48	44	46	203
6:45 PM	3	4	24	14	66	49	44	49	253
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	71	68	130	105	438	385	394	374	1965
APPROACH %'s :	51.08%	48.92%	55.32%	44.68%	53.22%	46.78%	51.30%	48.70%	
PEAK HR :	05:45 PM - 06:45 PM								TOTAL
PEAK HR VOL :	26	20	47	53	169	148	161	152	776
PEAK HR FACTOR :	0.722	0.833	0.839	0.576	0.768	0.771	0.839	0.826	0.956
	0.885		0.735		0.901		0.869		

Prepared by National Data & Surveying Services

Castro St & Dana St

Peak Hour Turning Movement Count

ID: 22-080047-003
City: Mountain View

Day: Wednesday
Date: 2/9/2022

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	12:00 PM - 01:00 PM
PM	05:45 PM - 06:45 PM

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	11:30 AM - 01:30 PM
PM	4:00 PM - 07:00 PM

SOUTHBOUND (Castro St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	0.5	0.5	1	0		

EASTBOUND (Dana St)

AM	NOON	PM	
66	101	121	⇦
2	0	2	0 ↶
0	0	0	0 ↱
29	65	90	1 →
0	0	0	0 ↴
AM	NOON	PM	

WESTBOUND (Dana St)

	PM	NOON	AM
0 ↰	0	0	0
1 ←	119	101	64
0 ↶	0	0	0
0 ↶	0	0	0
⇨	90	65	29
	PM	NOON	AM

0	1	0.5	0.5	

NORTHBOUND (Castro St)

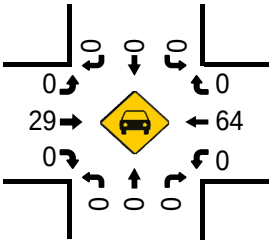
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL

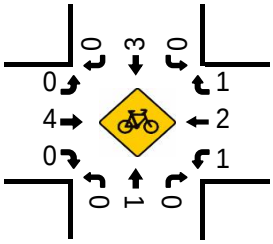
Signalized

TEV	95 AM	166 NOON	211 PM
PHF	0.88	0.85	0.91

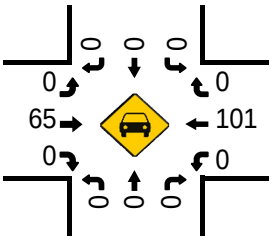
Totals (AM)



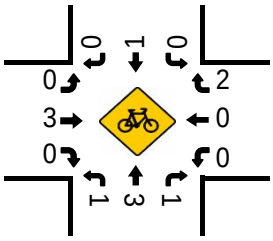
Total Bikes (AM)



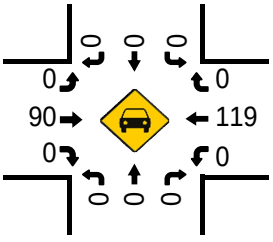
Totals (NOON)



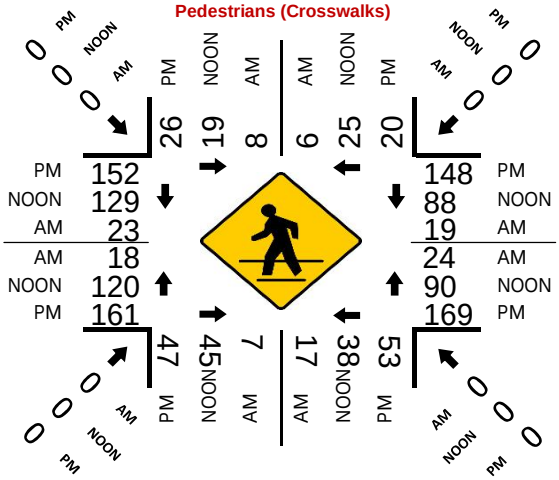
Total Bikes (NOON)



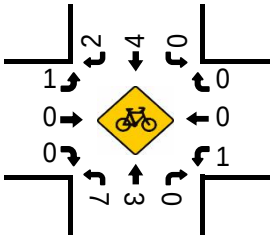
Totals (PM)



Pedestrians (Crosswalks)



Total Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & California St
City: Mountain View
Control: Signalized

Project ID: 22-080047-004
Date: 2/9/2022

Data - Totals

NS/EW Streets:	Castro St				Castro St				California St				California St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	0	1	1	0	0.5	0.5	1	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	0	2	3	0	1	0	0	0	7	3	0	3	5	0	0	27
7:15 AM	2	0	3	2	0	0	0	0	0	12	5	0	4	10	0	1	39
7:30 AM	1	0	6	2	0	0	0	0	1	14	6	1	5	7	0	0	43
7:45 AM	3	0	3	2	0	0	0	0	0	22	7	0	4	20	0	0	61
8:00 AM	6	0	7	2	0	0	0	0	0	44	12	1	13	31	0	0	116
8:15 AM	9	0	9	4	0	0	0	0	0	30	7	0	5	15	0	0	79
8:30 AM	7	0	15	2	0	0	0	0	0	18	5	0	4	9	0	0	60
8:45 AM	6	0	10	4	0	0	0	0	0	23	7	0	5	14	0	0	69
9:00 AM	10	0	9	3	0	0	0	0	0	21	9	0	5	17	0	0	74
9:15 AM	4	0	7	2	0	0	0	0	0	20	7	1	3	14	0	0	58
9:30 AM	4	0	10	1	0	0	0	0	0	27	14	0	9	15	0	0	80
9:45 AM	3	0	13	6	0	0	0	0	0	12	5	0	1	11	0	2	53
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	58	0	94	33	0	1	0	0	1	250	87	3	61	168	0	3	759
APPROACH %'s :	31.35%	0.00%	50.81%	17.84%	0.00%	100.00%	0.00%	0.00%	0.29%	73.31%	25.51%	0.88%	26.29%	72.41%	0.00%	1.29%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	28	0	41	12	0	0	0	0	0	115	31	1	27	69	0	0	324
PEAK HR FACTOR :	0.778	0.000	0.683	0.750	0.000	0.000	0.000	0.000	0.000	0.653	0.646	0.250	0.519	0.556	0.000	0.000	0.698
	0.844								0.645				0.545				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	0	1	1	0	0.5	0.5	1	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:30 AM	12	0	17	5	0	0	0	0	0	26	18	2	11	26	0	2	119
11:45 AM	11	0	16	3	0	0	0	0	0	23	10	0	8	21	0	0	92
12:00 PM	8	0	15	3	0	0	0	0	0	23	14	0	4	19	0	0	86
12:15 PM	10	0	13	4	0	0	0	0	0	19	17	0	6	18	0	0	87
12:30 PM	12	0	15	5	0	0	0	0	0	20	14	1	5	16	0	0	88
12:45 PM	6	0	14	6	0	0	0	0	0	21	13	1	6	20	0	0	87
1:00 PM	12	0	8	11	0	0	0	0	1	20	17	1	10	16	0	2	98
1:15 PM	20	0	11	5	0	0	0	0	0	25	17	1	5	13	0	1	98
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	91	0	109	42	0	0	0	0	1	177	120	6	55	149	0	5	755
APPROACH %'s :	37.60%	0.00%	45.04%	17.36%					0.33%	58.22%	39.47%	1.97%	26.32%	71.29%	0.00%	2.39%	
PEAK HR :	11:30 AM - 12:30 PM																TOTAL
PEAK HR VOL :	41	0	61	15	0	0	0	0	0	91	59	2	29	84	0	2	384
PEAK HR FACTOR :	0.854	0.000	0.897	0.750	0.000	0.000	0.000	0.000	0.000	0.875	0.819	0.250	0.659	0.808	0.000	0.250	0.807
	0.860								0.826				0.737				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	0	1	1	0	0.5	0.5	1	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	4	0	13	1	0	0	0	0	0	39	14	0	6	25	0	0	102
4:15 PM	8	0	14	6	0	0	0	0	0	38	17	0	5	15	0	0	103
4:30 PM	12	0	20	4	0	0	0	0	0	40	17	0	8	24	0	0	125
4:45 PM	11	0	14	0	0	0	0	0	0	49	15	0	8	25	0	0	122
5:00 PM	9	0	20	1	0	0	0	0	0	25	5	3	6	19	0	0	88
5:15 PM	12	0	15	3	0	0	0	0	0	39	8	0	4	17	0	0	98
5:30 PM	10	0	29	1	0	0	0	0	0	38	11	0	6	20	0	0	115
5:45 PM	13	0	18	2	0	0	0	0	0	38	13	2	8	19	0	0	113
6:00 PM	7	0	15	4	0	0	0	0	0	44	11	0	5	29	0	0	115
6:15 PM	12	0	18	2	0	0	0	0	0	37	15	2	4	26	0	0	116
6:30 PM	7	0	21	1	0	0	0	0	0	38	12	1	6	22	0	1	109
6:45 PM	11	0	14	4	0	0	0	0	0	30	6	2	5	19	0	0	91
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	116	0	211	29	0	0	0	0	0	455	144	10	71	260	0	1	1297
APPROACH %'s :	32.58%	0.00%	59.27%	8.15%					0.00%	74.71%	23.65%	1.64%	21.39%	78.31%	0.00%	0.30%	
PEAK HR :	05:30 PM - 06:30 PM																TOTAL
PEAK HR VOL :	42	0	80	9	0	0	0	0	0	157	50	4	23	94	0	0	459
PEAK HR FACTOR :	0.808	0.000	0.690	0.563	0.000	0.000	0.000	0.000	0.000	0.892	0.833	0.500	0.719	0.810	0.000	0.000	0.989
	0.819								0.959				0.860				

National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & California St
City: Mountain View
Control: Signalized

Project ID: 22-080047-004
Date: 2/9/2022

Data - Bikes

NS/EW Streets:	Castro St				Castro St				California St				California St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	0	1	1	0	0.5	0.5	1	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0	0	5
7:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3
8:15 AM	0	0	0	0	0	3	0	0	0	2	1	0	0	6	1	0	13
8:30 AM	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	3
9:00 AM	0	0	0	0	0	0	0	0	0	3	1	0	0	1	0	0	5
9:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	3
9:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
9:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	4	4	0	0	5	0	0	0	9	3	0	2	13	1	0	41
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	75.00%	25.00%	0.00%	12.50%	81.25%	6.25%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	1	1	0	0	4	0	0	0	4	2	0	1	8	1	0	22
PEAK HR FACTOR :	0.000	0.250	0.250	0.000	0.000	0.333	0.000	0.000	0.000	0.500	0.500	0.000	0.250	0.333	0.250	0.000	0.423
	0.500				0.333				0.500				0.357				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	0	1	1	0	0.5	0.5	1	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
11:45 AM	0	2	0	0	0	0	0	0	1	2	0	0	1	0	0	0	6
12:00 PM	0	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	4
12:15 PM	0	1	0	0	0	1	1	0	0	1	0	0	1	2	0	0	7
12:30 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	4
1:00 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:15 PM	0	2	0	0	0	2	0	0	0	0	1	0	0	1	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	9	1	0	0	4	1	0	2	6	2	0	2	5	0	0	33
APPROACH %'s :	9.09%	81.82%	9.09%	0.00%	0.00%	80.00%	20.00%	0.00%	20.00%	60.00%	20.00%	0.00%	28.57%	71.43%	0.00%	0.00%	
PEAK HR :	11:30 AM - 12:30 PM																TOTAL
PEAK HR VOL :	0	5	0	0	0	1	1	0	2	4	0	0	2	4	0	0	19
PEAK HR FACTOR :	0.000	0.625	0.000	0.000	0.000	0.250	0.250	0.000	0.500	0.500	0.000	0.000	0.500	0.500	0.000	0.000	0.679
	0.625				0.250				0.500				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	0	1	1	0	0.5	0.5	1	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	5
4:15 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
4:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	3
4:45 PM	3	1	2	0	0	1	2	0	1	3	1	0	1	0	0	0	15
5:00 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	5
5:15 PM	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	1	0	0	0	3	0	1	0	1	0	0	6
5:45 PM	0	2	1	0	0	1	0	0	0	1	0	0	0	0	0	0	5
6:00 PM	0	0	0	0	1	4	0	0	0	1	0	0	0	1	0	0	7
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	9
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	15	4	0	2	7	2	1	1	16	2	1	1	6	0	0	62
APPROACH %'s :	17.39%	65.22%	17.39%	0.00%	16.67%	58.33%	16.67%	8.33%	5.00%	80.00%	10.00%	5.00%	14.29%	85.71%	0.00%	0.00%	
PEAK HR :	05:30 PM - 06:30 PM																TOTAL
PEAK HR VOL :	0	2	1	0	1	6	0	0	0	5	0	1	0	2	0	0	18
PEAK HR FACTOR :	0.000	0.250	0.250	0.000	0.250	0.375	0.000	0.000	0.000	0.417	0.000	0.250	0.000	0.500	0.000	0.000	0.643
	0.250				0.350				0.375				0.500				

National Data & Surveying Services Intersection Turning Movement Count

Location: Castro St & California St
City: Mountain View

Project ID: 22-080047-004
Date: 2/9/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Castro St		Castro St		California St		California St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	1	0	1	2	2	2	0	8
7:15 AM	0	2	2	0	6	1	4	3	18
7:30 AM	0	1	2	0	1	2	1	4	11
7:45 AM	5	1	1	1	2	5	8	6	29
8:00 AM	2	0	1	1	3	5	5	3	20
8:15 AM	1	2	0	0	2	1	8	5	19
8:30 AM	1	3	2	1	1	2	10	7	27
8:45 AM	0	1	1	3	1	2	9	9	26
9:00 AM	4	3	2	1	9	6	6	11	42
9:15 AM	1	1	2	3	6	8	10	8	39
9:30 AM	4	4	2	0	3	1	5	7	26
9:45 AM	2	1	0	3	4	2	5	6	23
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	20	20	15	14	40	37	73	69	288
APPROACH %'s :	50.00%	50.00%	51.72%	48.28%	51.95%	48.05%	51.41%	48.59%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	4	6	4	5	7	10	32	24	92
PEAK HR FACTOR :	0.500	0.500	0.500	0.417	0.583	0.500	0.800	0.667	0.852
	0.625		0.563		0.531		0.778		

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:30 AM	4	3	0	1	8	4	25	9	54
11:45 AM	5	3	1	1	16	8	27	8	69
12:00 PM	5	9	1	6	22	9	33	16	101
12:15 PM	2	5	2	5	19	11	29	21	94
12:30 PM	3	7	4	4	17	2	22	34	93
12:45 PM	14	5	2	0	18	18	17	32	106
1:00 PM	6	3	3	2	13	10	17	32	86
1:15 PM	11	2	1	3	8	22	19	24	90
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	50	37	14	22	121	84	189	176	693
APPROACH %'s :	57.47%	42.53%	38.89%	61.11%	59.02%	40.98%	51.78%	48.22%	
PEAK HR :	11:30 AM - 12:30 PM								TOTAL
PEAK HR VOL :	16	20	4	13	65	32	114	54	318
PEAK HR FACTOR :	0.800	0.556	0.500	0.542	0.739	0.727	0.864	0.643	0.787
	0.643		0.607		0.782		0.840		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	6	9	0	2	18	8	16	15	74
4:15 PM	0	4	4	1	14	13	15	19	70
4:30 PM	6	3	1	4	13	8	28	26	89
4:45 PM	5	11	2	2	17	8	10	18	73
5:00 PM	6	15	4	5	14	13	16	20	93
5:15 PM	2	6	2	7	15	9	25	27	93
5:30 PM	16	11	11	3	14	8	28	14	105
5:45 PM	11	12	5	7	19	17	36	24	131
6:00 PM	3	4	8	10	16	19	45	24	129
6:15 PM	6	6	7	5	15	5	27	22	93
6:30 PM	10	15	8	5	10	17	19	43	127
6:45 PM	10	10	1	6	20	23	35	29	134
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	81	106	53	57	185	148	300	281	1211
APPROACH %'s :	43.32%	56.68%	48.18%	51.82%	55.56%	44.44%	51.64%	48.36%	
PEAK HR :	05:30 PM - 06:30 PM								TOTAL
PEAK HR VOL :	36	33	31	25	64	49	136	84	458
PEAK HR FACTOR :	0.563	0.688	0.705	0.625	0.842	0.645	0.756	0.875	0.874
	0.639		0.778		0.785		0.797		

Prepared by National Data & Surveying Services

Castro St & California St

Peak Hour Turning Movement Count

ID: 22-080047-004
City: Mountain View

Day: Wednesday
Date: 2/9/2022

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	11:30 AM - 12:30 PM
PM	05:30 PM - 06:30 PM

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	11:30 AM - 01:30 PM
PM	4:00 PM - 07:00 PM

SOUTHBOUND (Castro St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (California St)

AM	NOON	PM		
98	127	140	⇦	
1	2	4	↶	0
0	0	0	↱	0.5
115	91	157	→	0.5
31	59	50	↴	1
AM	NOON	PM		

WESTBOUND (California St)

PM	NOON	AM		
0	0	0	↰	1
94	84	69	←	1
23	29	27	↶	0
0	2	0	↶	0
237	154	156	⇨	
PM	NOON	AM		

NORTHBOUND (Castro St)

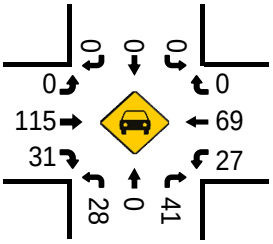
PM	82	9	42	0	80	PM
NOON	103	15	41	0	61	NOON
AM	70	12	28	0	41	AM

CONTROL

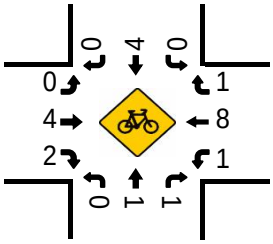
Signalized

	AM	NOON	PM
TEV	324	384	459
PHF	0.70	0.81	0.99

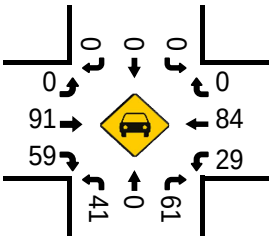
Totals (AM)



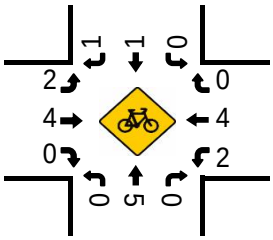
Total Bikes (AM)



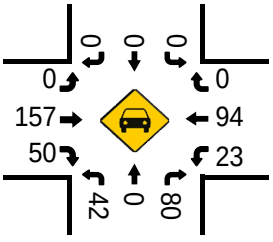
Totals (NOON)



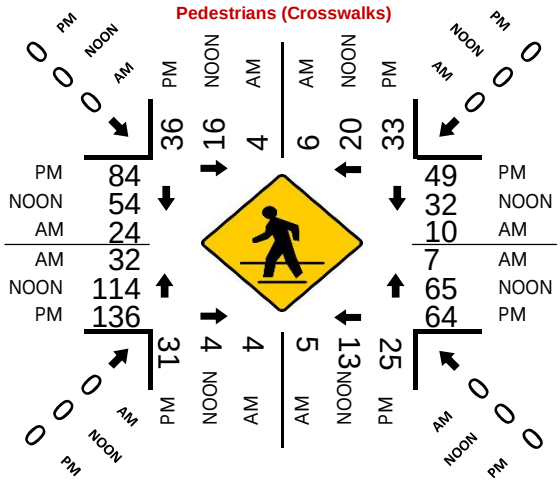
Total Bikes (NOON)



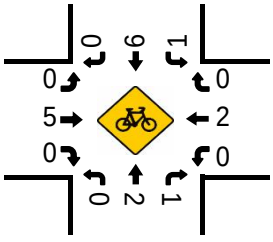
Totals (PM)



Pedestrians (Crosswalks)

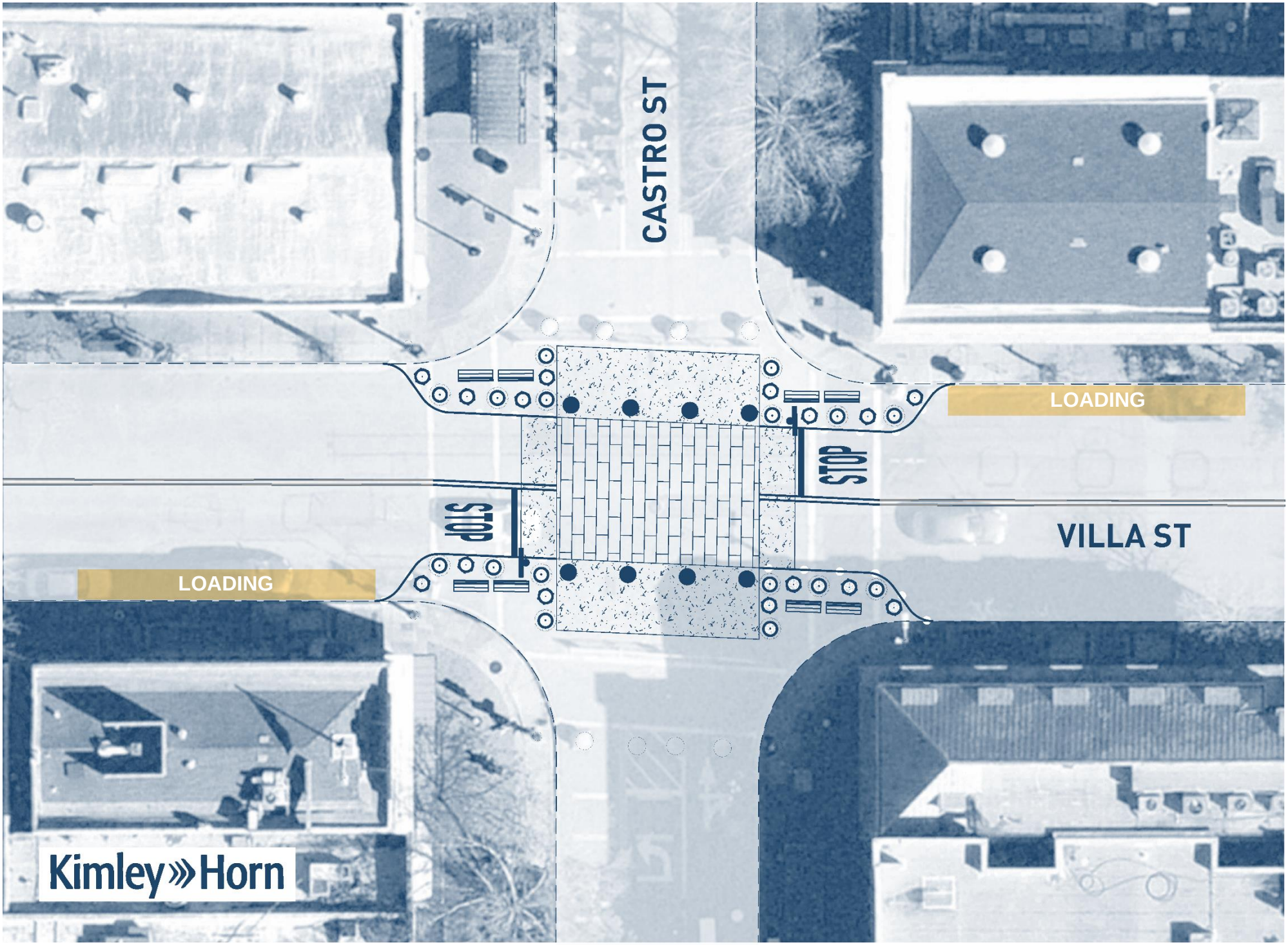


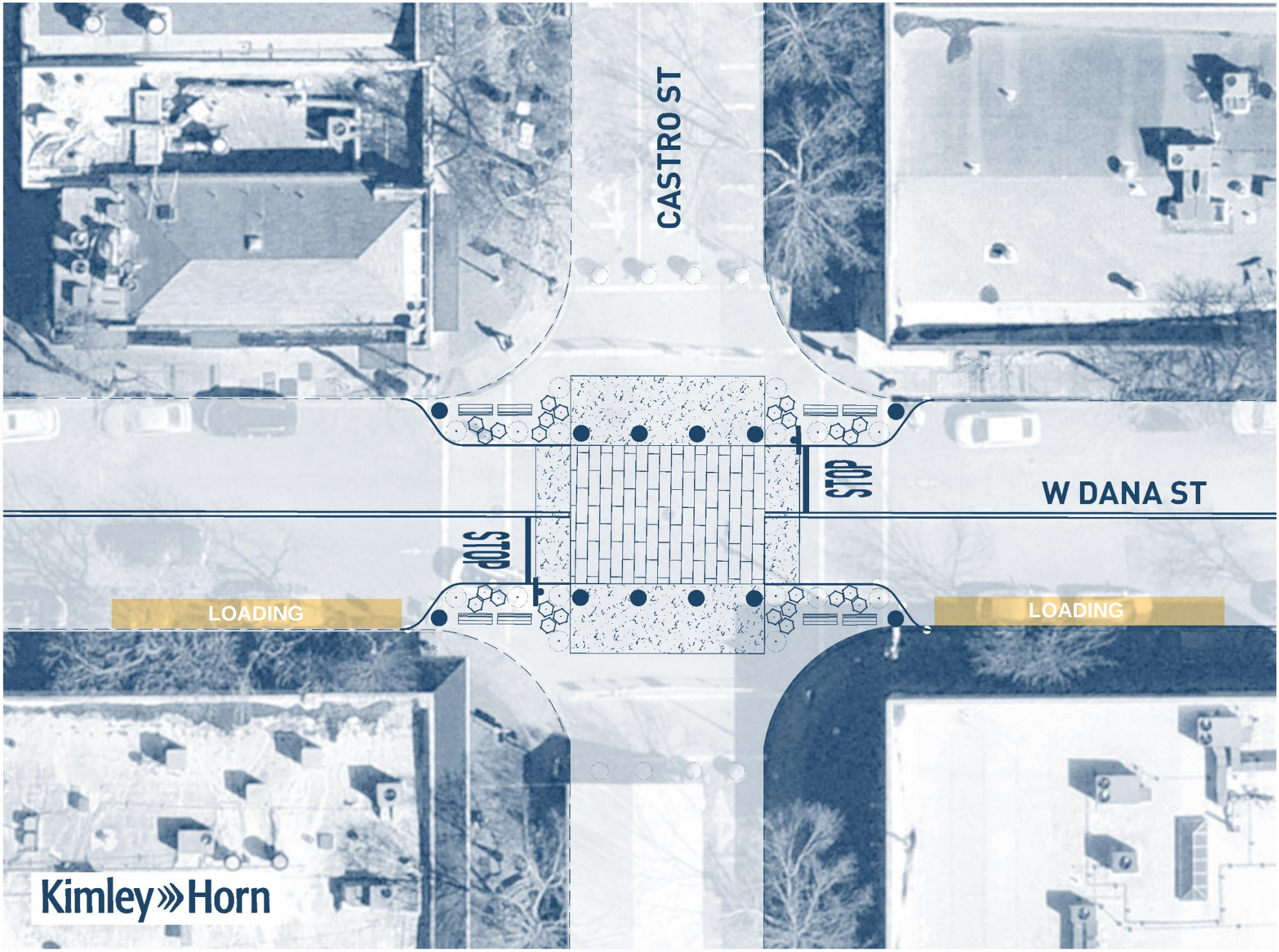
Total Bikes (PM)

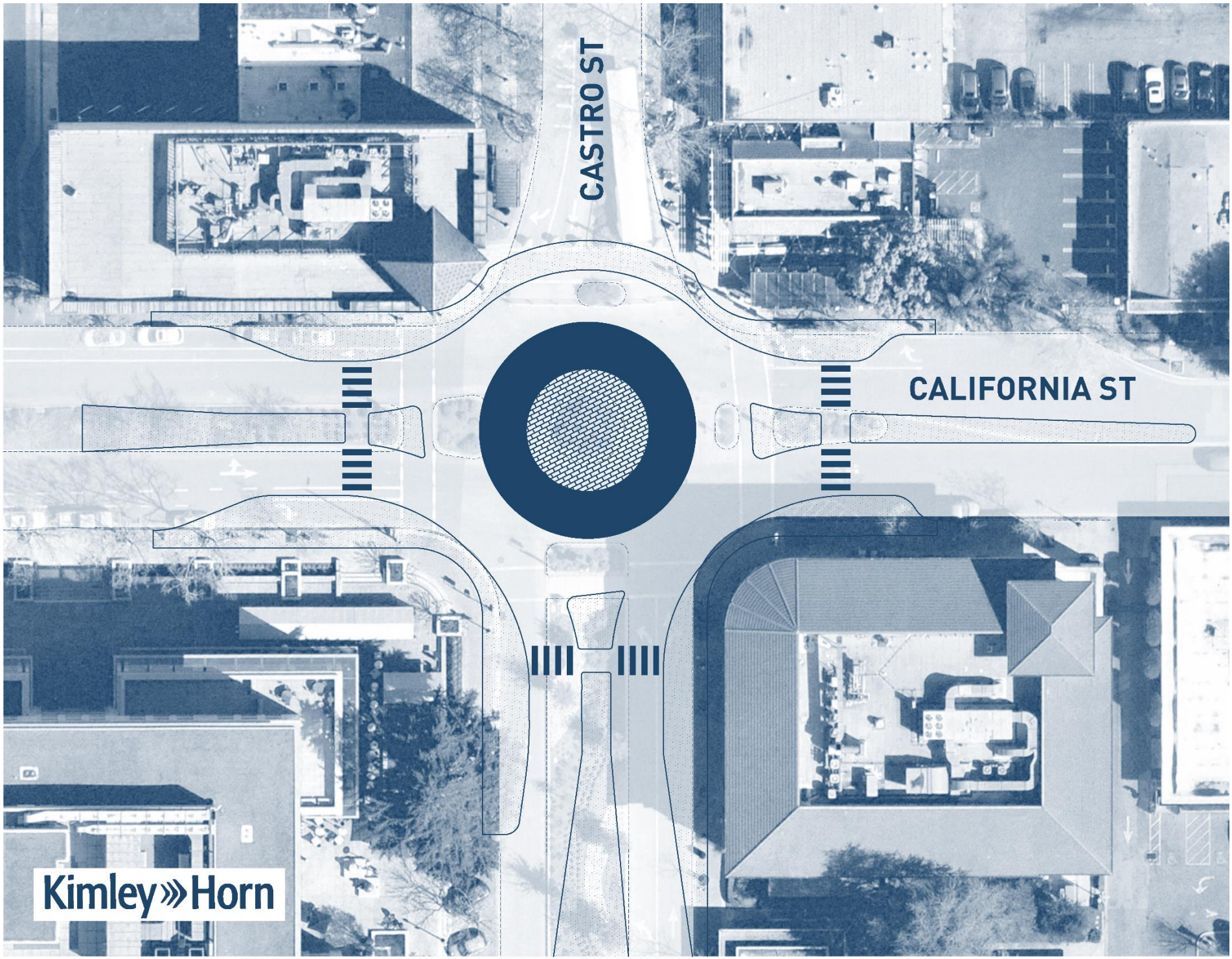


Kimley»Horn

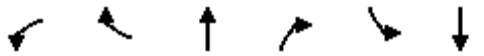
Attachment B: Intersection Concepts


CASTRO ST
LOADING
STOP
STOP
VILLA ST
LOADING
Kimley»Horn
0 5 10 20ft
N


CASTRO ST
W DANA ST
STOP
STOP
LOADING
LOADING
Kimley»Horn
0 5 10 20ft
N


CASTRO ST
CALIFORNIA ST
Kimley»Horn
0 10 20 40ft
N

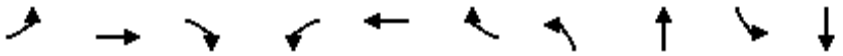
Attachment C: Synchro Analysis Sheets



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	199	2186	11	170	1317
Future Volume (vph)	0	199	2186	11	170	1317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		1.00	0.91		1.00	0.91
Frt		0.86	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1611	5081		1770	5085
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1611	5081		1770	5085
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	216	2376	12	185	1432
RTOR Reduction (vph)	0	199	0	0	0	0
Lane Group Flow (vph)	0	17	2388	0	185	1432
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		1	6
Permitted Phases		8				
Actuated Green, G (s)		7.1	54.6		14.8	73.9
Effective Green, g (s)		7.1	54.6		14.8	73.9
Actuated g/C Ratio		0.08	0.61		0.16	0.82
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		127	3082		291	4175
v/s Ratio Prot			c0.47		c0.10	0.28
v/s Ratio Perm		c0.01				
v/c Ratio		0.13	0.77		0.64	0.34
Uniform Delay, d1		38.6	13.1		35.1	2.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5	2.0		4.5	0.2
Delay (s)		39.1	15.1		39.6	2.2
Level of Service		D	B		D	A
Approach Delay (s)	39.1		15.1			6.5
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

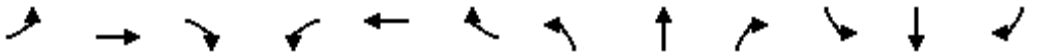


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	443	82	52	37	97	261	51	1731	154	1307
v/c Ratio	1.04	0.18	0.12	0.08	0.31	0.56	0.26	0.87	0.77	0.57
Control Delay	82.7	29.5	1.1	19.1	33.5	10.1	43.9	32.4	67.0	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	29.5	1.1	19.1	33.5	10.1	43.9	32.4	67.0	21.5
Queue Length 50th (ft)	~263	40	0	14	48	10	25	284	79	183
Queue Length 95th (ft)	308	75	4	32	87	66	77	#653	#257	386
Internal Link Dist (ft)		353			637			450		453
Turn Bay Length (ft)										
Base Capacity (vph)	427	975	833	452	966	924	199	1994	199	2277
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.08	0.06	0.08	0.10	0.28	0.26	0.87	0.77	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	408	75	48	34	89	240	47	1560	32	142	935	268
Future Volume (veh/h)	408	75	48	34	89	240	47	1560	32	142	935	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.94	0.97		0.95	1.00		0.94	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	443	82	52	37	97	261	51	1696	35	154	1016	291
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	489	595	476	534	532	428	133	1747	36	173	1417	405
Arrive On Green	0.10	0.32	0.32	0.06	0.28	0.28	0.07	0.34	0.34	0.10	0.36	0.36
Sat Flow, veh/h	1781	1870	1496	1781	1870	1505	1781	5142	106	1781	3908	1118
Grp Volume(v), veh/h	443	82	52	37	97	261	51	1123	608	154	885	422
Grp Sat Flow(s),veh/h/ln	1781	1870	1496	1781	1870	1505	1781	1702	1844	1781	1702	1621
Q Serve(g_s), s	10.0	3.2	2.5	1.3	4.0	15.4	2.8	33.4	33.4	8.8	23.0	23.0
Cycle Q Clear(g_c), s	10.0	3.2	2.5	1.3	4.0	15.4	2.8	33.4	33.4	8.8	23.0	23.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		0.69
Lane Grp Cap(c), veh/h	489	595	476	534	532	428	133	1157	627	173	1234	588
V/C Ratio(X)	0.91	0.14	0.11	0.07	0.18	0.61	0.38	0.97	0.97	0.89	0.72	0.72
Avail Cap(c_a), veh/h	489	845	676	594	838	674	173	1157	627	173	1234	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	25.0	24.7	20.1	27.7	31.8	45.3	33.4	33.4	45.8	28.2	28.2
Incr Delay (d2), s/veh	20.3	0.1	0.1	0.1	0.2	1.4	1.8	19.7	28.7	38.4	2.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	1.4	0.9	0.6	1.8	5.7	1.3	16.5	19.5	5.7	9.5	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	25.1	24.8	20.2	27.9	33.2	47.1	53.1	62.1	84.2	30.2	32.4
LnGrp LOS	D	C	C	C	C	C	D	D	E	F	C	C
Approach Vol, veh/h		577			395			1782			1461	
Approach Delay, s/veh		45.2			30.7			56.0			36.6	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	42.3	11.0	37.7	14.0	40.0	14.5	34.2
Change Period (Y+Rc), s	4.0	5.1	4.5	* 5	4.0	5.1	4.5	5.0
Max Green Setting (Gmax), s	10.0	34.9	10.0	* 46	10.0	34.9	10.0	46.0
Max Q Clear Time (g_c+I1), s	4.8	25.0	3.3	5.2	10.8	35.4	12.0	17.4
Green Ext Time (p_c), s	0.0	6.0	0.0	0.6	0.0	0.0	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	45.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	168	39	10	272	21	38	11	8	15	4	27
Future Vol, veh/h	28	168	39	10	272	21	38	11	8	15	4	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	183	42	11	296	23	41	12	9	16	4	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	10.6	9	8.5
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	12%	3%	33%
Vol Thru, %	19%	71%	90%	9%
Vol Right, %	14%	17%	7%	59%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	235	303	46
LT Vol	38	28	10	15
Through Vol	11	168	272	4
RT Vol	8	39	21	27
Lane Flow Rate	62	255	329	50
Geometry Grp	1	1	1	1
Degree of Util (X)	0.092	0.32	0.409	0.07
Departure Headway (Hd)	5.353	4.505	4.468	5.039
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	666	797	804	707
Service Time	3.412	2.543	2.503	3.1
HCM Lane V/C Ratio	0.093	0.32	0.409	0.071
HCM Control Delay	9	9.7	10.6	8.5
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.3	1.4	2	0.2

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	102	70	14	179	21	15
Future Vol, veh/h	102	70	14	179	21	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	111	76	15	195	23	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	187	0	374	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	225	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1387	-	627	898
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	812	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1387	-	619	898
Mov Cap-2 Maneuver	-	-	-	-	619	-
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	802	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1061	-	-	1387	-
HCM Lane V/C Ratio	0.037	-	-	0.011	-
HCM Control Delay (s)	8.5	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	134	20	29	280	41	25	13	10	14	56	5
Future Vol, veh/h	36	134	20	29	280	41	25	13	10	14	56	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	146	22	32	304	45	27	14	11	15	61	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

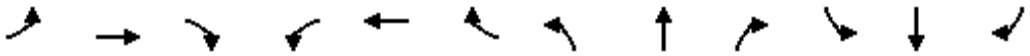
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	11.5	8.9	9.1
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	52%	19%	8%	19%
Vol Thru, %	27%	71%	80%	75%
Vol Right, %	21%	11%	12%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	190	350	75
LT Vol	25	36	29	14
Through Vol	13	134	280	56
RT Vol	10	20	41	5
Lane Flow Rate	52	207	380	82
Geometry Grp	1	1	1	1
Degree of Util (X)	0.078	0.268	0.472	0.121
Departure Headway (Hd)	5.358	4.679	4.47	5.326
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	664	764	803	668
Service Time	3.431	2.731	2.512	3.394
HCM Lane V/C Ratio	0.078	0.271	0.473	0.123
HCM Control Delay	8.9	9.5	11.5	9.1
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.3	1.1	2.6	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	109	0	0	225	0	0
Future Volume (Veh/h)	109	0	0	225	0	0
Sign Control	Yield			Yield	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	133	0	0	274	0	0
Pedestrians	40				14	
Lane Width (ft)	12.0				0.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	4				0	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	40	54	80	40	40	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	40	54	80	40	40	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	84	100	100	67	100	
cM capacity (veh/h)	820	975	772	820	1510	

Direction, Lane #	EB 1	WB 1
Volume Total	133	274
Volume Left	0	0
Volume Right	0	0
cSH	820	820
Volume to Capacity	0.16	0.33
Queue Length 95th (ft)	14	37
Control Delay (s)	10.2	11.6
Lane LOS	B	B
Approach Delay (s)	10.2	11.6
Approach LOS	B	B

Intersection Summary			
Average Delay	11.1		
Intersection Capacity Utilization	15.2%	ICU Level of Service	A
Analysis Period (min)	15		



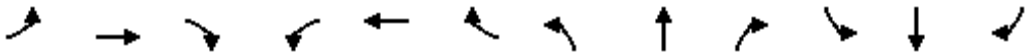
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Yield			Yield	
Traffic Volume (vph)	0	141	0	0	366	0	0	0	0	0	0	0
Future Volume (vph)	0	141	0	0	366	0	0	0	0	0	0	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.92
Hourly flow rate (vph)	0	164	0	0	426	0	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1
Volume Total (vph)	164	426
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.03	0.03
Departure Headway (s)	4.3	4.1
Degree Utilization, x	0.20	0.48
Capacity (veh/h)	810	864
Control Delay (s)	8.4	10.9
Approach Delay (s)	8.4	10.9
Approach LOS	A	B

Intersection Summary			
Delay	10.2		
Level of Service	B		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	104	25	257	12	23	115	33	30
v/c Ratio	0.20	0.04	0.44	0.02	0.05	0.22	0.11	0.05
Control Delay	13.4	0.1	16.9	0.1	17.3	6.6	25.5	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.4	0.1	16.9	0.1	17.3	6.6	25.5	5.6
Queue Length 50th (ft)	17	0	50	0	3	1	7	0
Queue Length 95th (ft)	57	0	137	0	26	39	38	15
Internal Link Dist (ft)	286		264			327		4
Turn Bay Length (ft)								
Base Capacity (vph)	892	940	937	912	614	706	745	1176
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.03	0.27	0.01	0.04	0.16	0.04	0.03

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	56	23	52	184	11	21	5	101	30	2	26
Future Volume (veh/h)	40	56	23	52	184	11	21	5	101	30	2	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.94	0.98		0.93	0.88		0.86	1.00		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	61	25	57	200	12	23	5	110	33	2	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	109	583	89	247	577	387	12	267	65	33	458
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.20	0.20	0.20	0.04	0.34	0.34
Sat Flow, veh/h	9	278	1487	8	631	1473	1220	60	1317	1781	97	1360
Grp Volume(v), veh/h	104	0	25	257	0	12	23	0	115	33	0	30
Grp Sat Flow(s),veh/h/ln	287	0	1487	638	0	1473	1220	0	1377	1781	0	1457
Q Serve(g_s), s	0.3	0.0	0.5	0.4	0.0	0.3	0.8	0.0	3.7	0.9	0.0	0.7
Cycle Q Clear(g_c), s	19.9	0.0	0.5	19.9	0.0	0.3	0.8	0.0	3.7	0.9	0.0	0.7
Prop In Lane	0.41		1.00	0.22		1.00	1.00		0.96	1.00		0.93
Lane Grp Cap(c), veh/h	212	0	583	336	0	577	387	0	279	65	0	491
V/C Ratio(X)	0.49	0.00	0.04	0.76	0.00	0.02	0.06	0.00	0.41	0.51	0.00	0.06
Avail Cap(c_a), veh/h	212	0	583	338	0	579	500	0	406	525	0	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.8	0.0	9.6	12.7	0.0	9.5	16.5	0.0	17.7	24.1	0.0	11.4
Incr Delay (d2), s/veh	1.7	0.0	0.0	10.5	0.0	0.0	0.1	0.0	1.0	6.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.1	2.7	0.0	0.1	0.2	0.0	1.1	0.5	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	0.0	9.6	23.2	0.0	9.5	16.6	0.0	18.6	30.1	0.0	11.5
LnGrp LOS	B	A	A	C	A	A	B	A	B	C	A	B
Approach Vol, veh/h		129			269			138			63	
Approach Delay, s/veh		13.6			22.6			18.3			21.3	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	6.9	17.2		26.9		24.1		26.9				
Change Period (Y+Rc), s	5.0	* 6.9		* 6.9		6.9		6.9				
Max Green Setting (Gmax), s	15.0	* 15		* 15		20.0		20.0				
Max Q Clear Time (g_c+I1), s	2.9	5.7		21.9		2.7		21.9				
Green Ext Time (p_c), s	0.0	0.5		0.0		0.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			19.5									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	75	21	59	302	20	23	54	31	18	50	6
Future Vol, veh/h	30	75	21	59	302	20	23	54	31	18	50	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	82	23	64	328	22	25	59	34	20	54	7
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	12.8	9.4	9.2
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	24%	15%	24%
Vol Thru, %	50%	60%	79%	68%
Vol Right, %	29%	17%	5%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	108	126	381	74
LT Vol	23	30	59	18
Through Vol	54	75	302	50
RT Vol	31	21	20	6
Lane Flow Rate	117	137	414	80
Geometry Grp	1	1	1	1
Degree of Util (X)	0.17	0.186	0.531	0.12
Departure Headway (Hd)	5.204	4.882	4.614	5.391
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	682	729	779	658
Service Time	3.289	2.955	2.67	3.482
HCM Lane V/C Ratio	0.172	0.188	0.531	0.122
HCM Control Delay	9.4	9.1	12.8	9.2
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.6	0.7	3.2	0.4

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	99	41	41	194	33	29	55	30	120	72	34
Future Vol, veh/h	23	99	41	41	194	33	29	55	30	120	72	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	108	45	45	211	36	32	60	33	130	78	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	12	9.8	11.6
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	14%	15%	53%
Vol Thru, %	48%	61%	72%	32%
Vol Right, %	26%	25%	12%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	114	163	268	226
LT Vol	29	23	41	120
Through Vol	55	99	194	72
RT Vol	30	41	33	34
Lane Flow Rate	124	177	291	246
Geometry Grp	1	1	1	1
Degree of Util (X)	0.189	0.261	0.421	0.369
Departure Headway (Hd)	5.497	5.296	5.199	5.407
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	652	677	693	666
Service Time	3.543	3.337	3.234	3.445
HCM Lane V/C Ratio	0.19	0.261	0.42	0.369
HCM Control Delay	9.8	10.2	12	11.6
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.7	1	2.1	1.7

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	97	5	127	338	6	6	39	59	34	53	60
Future Vol, veh/h	24	97	5	127	338	6	6	39	59	34	53	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	105	5	138	367	7	7	42	64	37	58	65
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

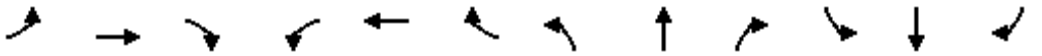
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	19.2	9.8	10.5
HCM LOS	A	C	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	19%	27%	23%
Vol Thru, %	38%	77%	72%	36%
Vol Right, %	57%	4%	1%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	104	126	471	147
LT Vol	6	24	127	34
Through Vol	39	97	338	53
RT Vol	59	5	6	60
Lane Flow Rate	113	137	512	160
Geometry Grp	1	1	1	1
Degree of Util (X)	0.175	0.208	0.708	0.25
Departure Headway (Hd)	5.587	5.462	4.977	5.622
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	640	656	727	638
Service Time	3.637	3.502	3.004	3.667
HCM Lane V/C Ratio	0.177	0.209	0.704	0.251
HCM Control Delay	9.8	9.9	19.2	10.5
HCM Lane LOS	A	A	C	B
HCM 95th-tile Q	0.6	0.8	5.9	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	232	30	395	268	0	101
Future Volume (vph)	232	30	395	268	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9		4.0	5.9		4.0
Lane Util. Factor	1.00		1.00	1.00		1.00
Frpb, ped/bikes	0.99		1.00	1.00		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	1.00		0.86
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	1809		1770	1863		1611
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	1809		1770	1863		1611
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	264	34	449	305	0	115
RTOR Reduction (vph)	4	0	0	0	0	106
Lane Group Flow (vph)	294	0	449	305	0	9
Confl. Peds. (#/hr)		41	41		9	
Confl. Bikes (#/hr)		28				
Turn Type	NA		Prot	NA		Perm
Protected Phases	2		1	6		
Permitted Phases						4
Actuated Green, G (s)	16.1		25.2	45.3		4.5
Effective Green, g (s)	16.1		25.2	45.3		4.5
Actuated g/C Ratio	0.27		0.42	0.76		0.08
Clearance Time (s)	5.9		4.0	5.9		4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	487		747	1413		121
v/s Ratio Prot	c0.16		c0.25	0.16		
v/s Ratio Perm						c0.01
v/c Ratio	0.60		0.60	0.22		0.07
Uniform Delay, d1	19.0		13.4	2.1		25.7
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	2.1		1.4	0.1		0.3
Delay (s)	21.1		14.7	2.2		25.9
Level of Service	C		B	A		C
Approach Delay (s)	21.1			9.6	25.9	
Approach LOS	C			A	C	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	13.9
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	83	10	0	74	3	0	0	19	0	0	400
Future Volume (vph)	97	83	10	0	74	3	0	0	19	0	0	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0				4.0			4.0
Lane Util. Factor	1.00	1.00			1.00				1.00			1.00
Frpb, ped/bikes	1.00	1.00			1.00				0.97			0.97
Flpb, ped/bikes	1.00	1.00			1.00				1.00			1.00
Frt	1.00	0.98			1.00				0.86			0.86
Flt Protected	0.95	1.00			1.00				1.00			1.00
Satd. Flow (prot)	1770	1824			1850				1567			1570
Flt Permitted	0.95	1.00			1.00				1.00			1.00
Satd. Flow (perm)	1770	1824			1850				1567			1570
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	103	88	11	0	79	3	0	0	20	0	0	426
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	14	0	0	309
Lane Group Flow (vph)	103	96	0	0	80	0	0	0	6	0	0	117
Confl. Peds. (#/hr)	5		12	12		5	8		9	9		8
Confl. Bikes (#/hr)			2			3			1			
Turn Type	Prot	NA			NA				Perm			Perm
Protected Phases	1	6			2							
Permitted Phases									4			4
Actuated Green, G (s)	3.6	11.2			3.6				7.3			7.3
Effective Green, g (s)	3.6	11.2			3.6				7.3			7.3
Actuated g/C Ratio	0.14	0.42			0.14				0.28			0.28
Clearance Time (s)	4.0	4.0			4.0				4.0			4.0
Vehicle Extension (s)	3.0	3.0			3.0				3.0			3.0
Lane Grp Cap (vph)	240	770			251				431			432
v/s Ratio Prot	c0.06	0.05			c0.04							
v/s Ratio Perm									0.00			c0.07
v/c Ratio	0.43	0.12			0.32				0.01			0.27
Uniform Delay, d1	10.5	4.7			10.3				7.0			7.5
Progression Factor	1.00	1.00			1.00				1.00			1.00
Incremental Delay, d2	1.2	0.1			0.7				0.0			0.3
Delay (s)	11.7	4.7			11.1				7.0			7.9
Level of Service	B	A			B				A			A
Approach Delay (s)		8.3			11.1			7.0			7.9	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	26.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

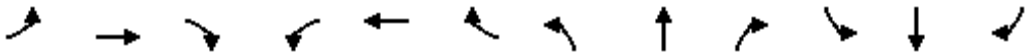
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	23	0	0	73	0	1556	22	0	985	20
Future Vol, veh/h	0	0	23	0	0	73	0	1556	22	0	985	20
Conflicting Peds, #/hr	0	0	21	21	0	0	5	0	14	14	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	25	0	0	79	0	1691	24	0	1071	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	573	-	-	872	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	396	0	0	252	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	386	-	-	249	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15	26.1	0	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	386	249	-	-
HCM Lane V/C Ratio	-	-	0.065	0.319	-	-
HCM Control Delay (s)	-	-	15	26.1	-	-
HCM Lane LOS	-	-	C	D	-	-
HCM 95th %tile Q(veh)	-	-	0.2	1.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Yield			Yield	
Traffic Volume (vph)	0	51	0	0	127	0	0	0	0	0	0	0
Future Volume (vph)	0	51	0	0	127	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	55	0	0	138	0	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1
Volume Total (vph)	55	138
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.03	0.03
Departure Headway (s)	4.1	4.0
Degree Utilization, x	0.06	0.15
Capacity (veh/h)	869	897
Control Delay (s)	7.3	7.7
Approach Delay (s)	7.3	7.7
Approach LOS	A	A

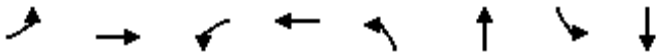
Intersection Summary				
Delay	7.6			
Level of Service	A			
Intersection Capacity Utilization	13.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	34	35	108	117	9	18	12	99	12	6	4
Future Vol, veh/h	3	34	35	108	117	9	18	12	99	12	6	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	37	38	117	127	10	20	13	108	13	7	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	9.5	8.2	8
HCM LOS	A	A	A	A

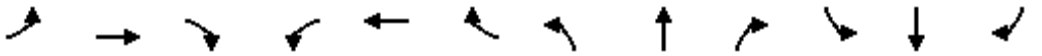
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	4%	46%	55%
Vol Thru, %	9%	47%	50%	27%
Vol Right, %	77%	49%	4%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	129	72	234	22
LT Vol	18	3	108	12
Through Vol	12	34	117	6
RT Vol	99	35	9	4
Lane Flow Rate	140	78	254	24
Geometry Grp	1	1	1	1
Degree of Util (X)	0.167	0.093	0.315	0.032
Departure Headway (Hd)	4.29	4.301	4.455	4.857
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	837	833	809	737
Service Time	2.311	2.327	2.476	2.887
HCM Lane V/C Ratio	0.167	0.094	0.314	0.033
HCM Control Delay	8.2	7.8	9.5	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.3	1.4	0.1



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	326	293	39	284	88	1325	192	886
v/c Ratio	0.84	0.23	0.24	0.39	0.46	0.97	0.69	0.51
Control Delay	65.0	15.7	59.3	25.1	61.0	61.7	61.3	33.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	15.7	59.3	25.1	61.0	61.7	61.3	33.0
Queue Length 50th (ft)	206	46	25	54	58	320	125	169
Queue Length 95th (ft)	#455	89	73	106	133	#646	244	299
Internal Link Dist (ft)		230		640		268		414
Turn Bay Length (ft)								
Base Capacity (vph)	476	1298	476	1006	476	1360	476	1739
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.23	0.08	0.28	0.18	0.97	0.40	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	157	112	36	153	109	81	1161	58	177	675	140
Future Volume (veh/h)	300	157	112	36	153	109	81	1161	58	177	675	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.94	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	326	171	122	39	166	118	88	1262	63	192	734	152
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	364	687	455	116	407	267	159	1423	71	229	1376	282
Arrive On Green	0.20	0.34	0.34	0.07	0.20	0.20	0.09	0.29	0.29	0.13	0.33	0.33
Sat Flow, veh/h	1781	2007	1329	1781	2005	1314	1781	4970	248	1781	4228	865
Grp Volume(v), veh/h	326	150	143	39	146	138	88	864	461	192	589	297
Grp Sat Flow(s),veh/h/ln	1781	1777	1559	1781	1777	1543	1781	1702	1814	1781	1702	1689
Q Serve(g_s), s	18.3	6.2	6.8	2.1	7.3	8.1	4.9	24.9	24.9	10.8	14.5	14.8
Cycle Q Clear(g_c), s	18.3	6.2	6.8	2.1	7.3	8.1	4.9	24.9	24.9	10.8	14.5	14.8
Prop In Lane	1.00		0.85	1.00		0.85	1.00		0.14	1.00		0.51
Lane Grp Cap(c), veh/h	364	608	534	116	361	313	159	974	519	229	1108	550
V/C Ratio(X)	0.89	0.25	0.27	0.33	0.40	0.44	0.55	0.89	0.89	0.84	0.53	0.54
Avail Cap(c_a), veh/h	521	608	534	521	519	451	521	995	530	521	1108	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	24.2	24.4	45.8	35.5	35.8	44.8	35.1	35.1	43.7	28.2	28.3
Incr Delay (d2), s/veh	13.5	0.2	0.3	1.7	0.7	1.0	3.0	9.7	16.4	7.9	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	2.6	2.5	1.0	3.2	3.1	2.3	11.4	13.2	5.2	5.9	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	24.5	24.7	47.5	36.2	36.8	47.7	44.7	51.4	51.5	28.7	29.4
LnGrp LOS	D	C	C	D	D	D	D	D	D	D	C	C
Approach Vol, veh/h		619			323			1413			1078	
Approach Delay, s/veh		39.7			37.8			47.1			33.0	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	38.5	10.7	40.2	17.2	34.5	25.0	26.0
Change Period (Y+Rc), s	4.0	5.1	4.0	5.1	4.0	5.1	4.0	5.1
Max Green Setting (Gmax), s	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	6.9	16.8	4.1	8.8	12.8	26.9	20.3	10.1
Green Ext Time (p_c), s	0.2	4.9	0.1	1.7	0.5	2.2	0.7	1.6

Intersection Summary	
HCM 6th Ctrl Delay	40.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	358	26	7	268	19	4	8	8	12	7	24
Future Vol, veh/h	25	358	26	7	268	19	4	8	8	12	7	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	389	28	8	291	21	4	9	9	13	8	26

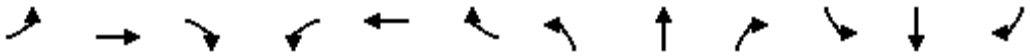
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	312	0	0	417	0	0	792	785	403	784	789	302
Stage 1	-	-	-	-	-	-	457	457	-	318	318	-
Stage 2	-	-	-	-	-	-	335	328	-	466	471	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1248	-	-	1142	-	-	307	325	647	311	323	738
Stage 1	-	-	-	-	-	-	583	568	-	693	654	-
Stage 2	-	-	-	-	-	-	679	647	-	577	560	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1248	-	-	1142	-	-	284	316	647	294	314	738
Mov Cap-2 Maneuver	-	-	-	-	-	-	284	316	-	294	314	-
Stage 1	-	-	-	-	-	-	570	556	-	678	649	-
Stage 2	-	-	-	-	-	-	643	642	-	548	548	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	14.9	13.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	386	1248	-	-	1142	-	-	450
HCM Lane V/C Ratio	0.056	0.022	-	-	0.007	-	-	0.104
HCM Control Delay (s)	14.9	7.9	-	-	8.2	-	-	13.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.3

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	30	372	26	300	27	95
v/c Ratio	0.10	0.38	0.09	0.31	0.08	0.24
Control Delay	22.6	12.4	22.9	11.9	12.8	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	12.4	22.9	11.9	12.8	11.9
Queue Length 50th (ft)	3	32	3	25	2	6
Queue Length 95th (ft)	36	215	33	172	21	48
Internal Link Dist (ft)		299		284	48	414
Turn Bay Length (ft)						
Base Capacity (vph)	1383	1565	1383	1570	1179	1291
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.24	0.02	0.19	0.02	0.07

Intersection Summary



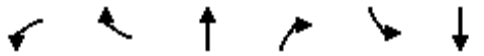
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	278	64	24	240	36	10	6	8	13	35	40
Future Volume (veh/h)	28	278	64	24	240	36	10	6	8	13	35	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.92	0.98		0.96	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	302	70	26	261	39	11	7	9	14	38	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	504	117	57	541	81	242	146	120	145	184	173
Arrive On Green	0.04	0.35	0.35	0.03	0.35	0.35	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	1442	334	1781	1569	234	411	631	521	111	795	749
Grp Volume(v), veh/h	30	0	372	26	0	300	27	0	0	95	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1776	1781	0	1803	1563	0	0	1654	0	0
Q Serve(g_s), s	0.6	0.0	6.0	0.5	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	6.0	0.5	0.0	4.5	0.4	0.0	0.0	1.6	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.13	0.41		0.33	0.15		0.45
Lane Grp Cap(c), veh/h	64	0	620	57	0	622	508	0	0	502	0	0
V/C Ratio(X)	0.47	0.00	0.60	0.46	0.00	0.48	0.05	0.00	0.00	0.19	0.00	0.00
Avail Cap(c_a), veh/h	1545	0	2054	1545	0	2085	1450	0	0	1526	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.3	0.0	9.3	16.4	0.0	8.9	10.4	0.0	0.0	10.8	0.0	0.0
Incr Delay (d2), s/veh	5.1	0.0	0.9	5.6	0.0	0.6	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.8	0.3	0.0	1.3	0.1	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	0.0	10.2	22.1	0.0	9.5	10.4	0.0	0.0	11.0	0.0	0.0
LnGrp LOS	C	A	B	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h		402			326			27			95	
Approach Delay, s/veh		11.0			10.5			10.4			11.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	16.7		12.6	5.5	16.5		12.6				
Change Period (Y+Rc), s	* 4.2	4.6		4.6	* 4.2	4.6		4.6				
Max Green Setting (Gmax), s	* 30	40.0		30.0	* 30	40.0		30.0				
Max Q Clear Time (g_c+I1), s	2.5	8.0		3.6	2.6	6.5		2.4				
Green Ext Time (p_c), s	0.0	2.6		0.5	0.0	2.0		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		10.8	
HCM 6th LOS		B	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



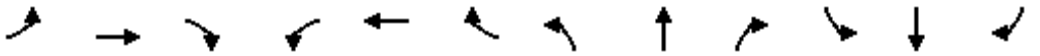
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	191	1362	10	280	1323
Future Volume (vph)	0	191	1362	10	280	1323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		1.00	0.91		1.00	0.91
Frt		0.86	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1611	5080		1770	5085
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1611	5080		1770	5085
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	208	1480	11	304	1438
RTOR Reduction (vph)	0	192	1	0	0	0
Lane Group Flow (vph)	0	16	1490	0	304	1438
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		1	6
Permitted Phases		8				
Actuated Green, G (s)		5.5	33.4		17.6	55.5
Effective Green, g (s)		5.5	33.4		17.6	55.5
Actuated g/C Ratio		0.08	0.48		0.25	0.79
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		126	2423		445	4031
v/s Ratio Prot			c0.29		c0.17	0.28
v/s Ratio Perm		c0.01				
v/c Ratio		0.13	0.61		0.68	0.36
Uniform Delay, d1		30.0	13.5		23.7	2.1
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5	1.2		4.3	0.2
Delay (s)		30.5	14.7		28.0	2.3
Level of Service		C	B		C	A
Approach Delay (s)	30.5		14.7			6.8
Approach LOS	C		B			A

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	36	41	40	299	22	1110	207	1266
v/c Ratio	0.27	0.06	0.08	0.08	0.39	0.11	0.75	0.66	0.54
Control Delay	22.6	29.5	0.3	20.7	1.5	51.9	37.5	50.8	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	29.5	0.3	20.7	1.5	51.9	37.5	50.8	22.0
Queue Length 50th (ft)	52	17	0	14	0	10	171	99	117
Queue Length 95th (ft)	117	48	0	43	0	47	395	246	363
Internal Link Dist (ft)		353					450		453
Turn Bay Length (ft)									
Base Capacity (vph)	504	696	637	524	926	589	1717	589	2329
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.05	0.06	0.08	0.32	0.04	0.65	0.35	0.54

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	33	38	37	0	275	20	990	31	190	900	265
Future Volume (veh/h)	125	33	38	37	0	275	20	990	31	190	900	265
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	36	41	40	0	299	22	1076	34	207	978	288
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	498	400	327	491	303	246	88	1582	50	258	1591	468
Arrive On Green	0.13	0.21	0.21	0.08	0.00	0.16	0.05	0.31	0.31	0.14	0.41	0.41
Sat Flow, veh/h	1781	1870	1528	1781	1870	1518	1781	5083	161	1781	3910	1149
Grp Volume(v), veh/h	136	36	41	40	0	299	22	720	390	207	851	415
Grp Sat Flow(s),veh/h/ln	1781	1870	1528	1781	1870	1518	1781	1702	1840	1781	1702	1655
Q Serve(g_s), s	4.3	1.1	1.6	1.2	0.0	11.8	0.9	13.5	13.6	8.2	14.5	14.5
Cycle Q Clear(g_c), s	4.3	1.1	1.6	1.2	0.0	11.8	0.9	13.5	13.6	8.2	14.5	14.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.69
Lane Grp Cap(c), veh/h	498	400	327	491	303	246	88	1059	573	258	1385	673
V/C Ratio(X)	0.27	0.09	0.13	0.08	0.00	1.22	0.25	0.68	0.68	0.80	0.61	0.62
Avail Cap(c_a), veh/h	513	766	626	599	303	246	730	1395	754	730	1395	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	23.1	23.3	18.9	0.0	30.7	33.5	22.0	22.0	30.3	17.2	17.2
Incr Delay (d2), s/veh	0.3	0.1	0.2	0.1	0.0	129.0	1.5	0.9	1.6	5.7	0.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.5	0.6	0.5	0.0	12.9	0.4	5.2	5.8	3.8	5.4	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	23.2	23.4	19.0	0.0	159.7	35.0	22.9	23.6	36.0	18.0	18.8
LnGrp LOS	C	C	C	B	A	F	C	C	C	D	B	B
Approach Vol, veh/h		213			339			1132			1473	
Approach Delay, s/veh		21.4			143.1			23.4			20.8	
Approach LOS		C			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	34.9	10.1	20.6	14.6	27.9	13.9	16.8
Change Period (Y+Rc), s	4.0	5.1	4.5	* 5	4.0	5.1	4.5	5.0
Max Green Setting (Gmax), s	30.0	30.0	10.0	* 30	30.0	30.0	10.0	10.0
Max Q Clear Time (g_c+I1), s	2.9	16.5	3.2	3.6	10.2	15.6	6.3	13.8
Green Ext Time (p_c), s	0.0	7.2	0.0	0.3	0.5	6.4	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	163	72	34	174	55	38	13	27	33	15	32
Future Vol, veh/h	58	163	72	34	174	55	38	13	27	33	15	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	177	78	37	189	60	41	14	29	36	16	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.8	10.4	9.2	9.1
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	49%	20%	13%	41%
Vol Thru, %	17%	56%	66%	19%
Vol Right, %	35%	25%	21%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	78	293	263	80
LT Vol	38	58	34	33
Through Vol	13	163	174	15
RT Vol	27	72	55	32
Lane Flow Rate	85	318	286	87
Geometry Grp	1	1	1	1
Degree of Util (X)	0.125	0.407	0.369	0.127
Departure Headway (Hd)	5.317	4.603	4.646	5.268
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	667	777	769	673
Service Time	3.407	2.662	2.707	3.356
HCM Lane V/C Ratio	0.127	0.409	0.372	0.129
HCM Control Delay	9.2	10.8	10.4	9.1
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	2	1.7	0.4

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	141	140	22	120	67	68
Future Vol, veh/h	141	140	22	120	67	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	153	152	24	130	73	74

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	305	0	407	229
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	178	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1256	-	600	810
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	853	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1256	-	587	810
Mov Cap-2 Maneuver	-	-	-	-	587	-
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	835	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1183	-	-	1256	-
HCM Lane V/C Ratio	0.124	-	-	0.019	-
HCM Control Delay (s)	8.5	-	-	7.9	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	59	91	52	35	167	56	57	52	30	31	124	62
Future Vol, veh/h	59	91	52	35	167	56	57	52	30	31	124	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	99	57	38	182	61	62	57	33	34	135	67
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

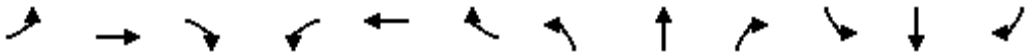
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	12	10.5	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	29%	14%	14%
Vol Thru, %	37%	45%	65%	57%
Vol Right, %	22%	26%	22%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	139	202	258	217
LT Vol	57	59	35	31
Through Vol	52	91	167	124
RT Vol	30	52	56	62
Lane Flow Rate	151	220	280	236
Geometry Grp	1	1	1	1
Degree of Util (X)	0.237	0.328	0.411	0.354
Departure Headway (Hd)	5.644	5.371	5.27	5.402
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	635	667	681	665
Service Time	3.696	3.419	3.314	3.449
HCM Lane V/C Ratio	0.238	0.33	0.411	0.355
HCM Control Delay	10.5	11	12	11.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.9	1.4	2	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	161	0	0	195	0	0
Future Volume (Veh/h)	161	0	0	195	0	0
Sign Control	Yield			Yield	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.92
Hourly flow rate (vph)	164	0	0	199	0	0
Pedestrians	68			153	143	
Lane Width (ft)	12.0			12.0	0.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	6			15	0	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	221	211	378	221	68	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	221	211	378	221	68	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	70	100	100	63	100	
cM capacity (veh/h)	541	775	323	541	1434	

Direction, Lane #	EB 1	WB 1
Volume Total	164	199
Volume Left	0	0
Volume Right	0	0
cSH	541	541
Volume to Capacity	0.30	0.37
Queue Length 95th (ft)	32	42
Control Delay (s)	14.5	15.5
Lane LOS	B	C
Approach Delay (s)	14.5	15.5
Approach LOS	B	C

Intersection Summary			
Average Delay	15.0		
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		



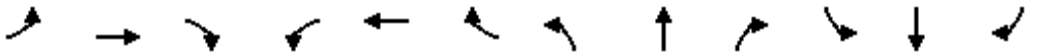
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Yield			Yield	
Traffic Volume (vph)	0	148	0	0	233	0	0	0	0	0	0	0
Future Volume (vph)	0	148	0	0	233	0	0	0	0	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.92
Hourly flow rate (vph)	0	153	0	0	240	0	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1
Volume Total (vph)	153	240
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.03	0.03
Departure Headway (s)	4.2	4.1
Degree Utilization, x	0.18	0.27
Capacity (veh/h)	848	874
Control Delay (s)	8.0	8.6
Approach Delay (s)	8.0	8.6
Approach LOS	A	A

Intersection Summary				
Delay	8.4			
Level of Service	A			
Intersection Capacity Utilization	16.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	102	104	155	10	95	162	28	32
v/c Ratio	0.19	0.16	0.30	0.02	0.23	0.28	0.08	0.06
Control Delay	10.5	2.3	13.0	0.0	13.5	4.8	16.1	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.5	2.3	13.0	0.0	13.5	4.8	16.1	5.3
Queue Length 50th (ft)	11	0	19	0	11	0	4	1
Queue Length 95th (ft)	52	16	80	0	57	37	26	12
Internal Link Dist (ft)	286		264			327		4
Turn Bay Length (ft)								
Base Capacity (vph)	1079	1149	1014	1087	696	885	900	1514
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.09	0.15	0.01	0.14	0.18	0.03	0.02

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	57	96	54	88	9	87	3	146	26	6	23
Future Volume (veh/h)	37	57	96	54	88	9	87	3	146	26	6	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	62	104	59	96	10	95	3	159	28	7	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	297	369	245	289	369	447	5	261	61	126	451
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.17	0.17	0.17	0.03	0.35	0.35
Sat Flow, veh/h	410	1275	1585	410	1241	1585	1377	29	1560	1781	359	1281
Grp Volume(v), veh/h	102	0	104	155	0	10	95	0	162	28	0	32
Grp Sat Flow(s),veh/h/ln	1685	0	1585	1651	0	1585	1377	0	1590	1781	0	1640
Q Serve(g_s), s	0.0	0.0	1.8	0.0	0.0	0.2	2.1	0.0	3.1	0.5	0.0	0.4
Cycle Q Clear(g_c), s	1.5	0.0	1.8	2.3	0.0	0.2	2.1	0.0	3.1	0.5	0.0	0.4
Prop In Lane	0.39		1.00	0.38		1.00	1.00		0.98	1.00		0.78
Lane Grp Cap(c), veh/h	543	0	369	534	0	369	447	0	266	61	0	578
V/C Ratio(X)	0.19	0.00	0.28	0.29	0.00	0.03	0.21	0.00	0.61	0.46	0.00	0.06
Avail Cap(c_a), veh/h	890	0	715	1107	0	953	838	0	717	804	0	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.4	0.0	10.5	10.7	0.0	9.8	12.4	0.0	12.8	15.8	0.0	7.1
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.4	0.0	0.0	0.2	0.0	2.2	5.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.5	0.8	0.0	0.0	0.5	0.0	1.0	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	0.0	10.9	11.1	0.0	9.9	12.6	0.0	15.1	21.0	0.0	7.2
LnGrp LOS	B	A	B	B	A	A	B	A	B	C	A	A
Approach Vol, veh/h		206			165			257			60	
Approach Delay, s/veh		10.7			11.0			14.2			13.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	6.1	12.5		14.6		18.6		14.6				
Change Period (Y+Rc), s	5.0	* 6.9		* 6.9		6.9		6.9				
Max Green Setting (Gmax), s	15.0	* 15		* 15		20.0		20.0				
Max Q Clear Time (g_c+I1), s	2.5	5.1		3.8		2.4		4.3				
Green Ext Time (p_c), s	0.0	0.8		0.6		0.1		1.0				

Intersection Summary			
HCM 6th Ctrl Delay		12.3	
HCM 6th LOS		B	

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	7	47	51	155	29	43	106	62	13	65	36
Future Vol, veh/h	57	7	47	51	155	29	43	106	62	13	65	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	8	51	55	168	32	47	115	67	14	71	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	10.7	10.2	9.1
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	51%	22%	11%
Vol Thru, %	50%	6%	66%	57%
Vol Right, %	29%	42%	12%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	111	235	114
LT Vol	43	57	51	13
Through Vol	106	7	155	65
RT Vol	62	47	29	36
Lane Flow Rate	229	121	255	124
Geometry Grp	1	1	1	1
Degree of Util (X)	0.311	0.167	0.349	0.172
Departure Headway (Hd)	4.879	4.98	4.917	4.99
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	729	712	725	710
Service Time	2.96	3.073	2.996	3.083
HCM Lane V/C Ratio	0.314	0.17	0.352	0.175
HCM Control Delay	10.2	9.1	10.7	9.1
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	1.3	0.6	1.6	0.6

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	139	62	36	127	2	30	8	30	5	10	4
Future Vol, veh/h	7	139	62	36	127	2	30	8	30	5	10	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	151	67	39	138	2	33	9	33	5	11	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.7	8.2	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	3%	22%	26%
Vol Thru, %	12%	67%	77%	53%
Vol Right, %	44%	30%	1%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	208	165	19
LT Vol	30	7	36	5
Through Vol	8	139	127	10
RT Vol	30	62	2	4
Lane Flow Rate	74	226	179	21
Geometry Grp	1	1	1	1
Degree of Util (X)	0.096	0.263	0.22	0.028
Departure Headway (Hd)	4.668	4.181	4.426	4.844
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	768	861	812	739
Service Time	2.694	2.198	2.446	2.872
HCM Lane V/C Ratio	0.096	0.262	0.22	0.028
HCM Control Delay	8.2	8.7	8.7	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	1.1	0.8	0.1

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	85	34	57	193	1	17	33	92	21	42	34
Future Vol, veh/h	22	85	34	57	193	1	17	33	92	21	42	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	92	37	62	210	1	18	36	100	23	46	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

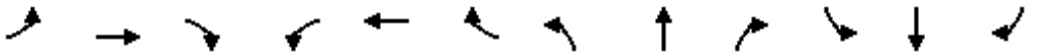
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	10.6	9	8.9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	16%	23%	22%
Vol Thru, %	23%	60%	77%	43%
Vol Right, %	65%	24%	0%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	142	141	251	97
LT Vol	17	22	57	21
Through Vol	33	85	193	42
RT Vol	92	34	1	34
Lane Flow Rate	154	153	273	105
Geometry Grp	1	1	1	1
Degree of Util (X)	0.203	0.204	0.363	0.146
Departure Headway (Hd)	4.724	4.782	4.786	4.983
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	753	745	748	713
Service Time	2.794	2.851	2.848	3.059
HCM Lane V/C Ratio	0.205	0.205	0.365	0.147
HCM Control Delay	9	9.1	10.6	8.9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.8	0.8	1.7	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	173	28	216	165	0	64
Future Volume (vph)	173	28	216	165	0	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9		4.0	5.9		4.0
Lane Util. Factor	1.00		1.00	1.00		1.00
Frpb, ped/bikes	0.99		1.00	1.00		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	1.00		0.86
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	1818		1770	1863		1611
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	1818		1770	1863		1611
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	188	30	235	179	0	70
RTOR Reduction (vph)	5	0	0	0	0	65
Lane Group Flow (vph)	213	0	235	179	0	5
Confl. Peds. (#/hr)		14	14		1	
Confl. Bikes (#/hr)		5				
Turn Type	NA		Prot	NA		Perm
Protected Phases	2		1	6		
Permitted Phases						4
Actuated Green, G (s)	13.0		11.5	28.5		3.1
Effective Green, g (s)	13.0		11.5	28.5		3.1
Actuated g/C Ratio	0.31		0.28	0.69		0.07
Clearance Time (s)	5.9		4.0	5.9		4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	569		490	1279		120
v/s Ratio Prot	c0.12		c0.13	0.10		
v/s Ratio Perm						c0.00
v/c Ratio	0.37		0.48	0.14		0.04
Uniform Delay, d1	11.1		12.5	2.3		17.8
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.4		0.7	0.1		0.2
Delay (s)	11.5		13.2	2.3		18.0
Level of Service	B		B	A		B
Approach Delay (s)	11.5			8.5	18.0	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	41.5	Sum of lost time (s)	13.9
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	85	15	0	26	1	0	0	11	0	0	227
Future Volume (vph)	98	85	15	0	26	1	0	0	11	0	0	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0				4.0			4.0
Lane Util. Factor	1.00	1.00			1.00				1.00			1.00
Frpb, ped/bikes	1.00	0.99			0.99				1.00			0.97
Flpb, ped/bikes	1.00	1.00			1.00				1.00			1.00
Frt	1.00	0.98			1.00				0.86			0.86
Flt Protected	0.95	1.00			1.00				1.00			1.00
Satd. Flow (prot)	1770	1810			1841				1611			1569
Flt Permitted	0.95	1.00			1.00				1.00			1.00
Satd. Flow (perm)	1770	1810			1841				1611			1569
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	105	91	16	0	28	1	0	0	12	0	0	244
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	9	0	0	180
Lane Group Flow (vph)	105	102	0	0	28	0	0	0	3	0	0	64
Confl. Peds. (#/hr)	14		16	16		14	10					10
Confl. Bikes (#/hr)						4						
Turn Type	Prot	NA			NA				Perm			Perm
Protected Phases	1	6			2							
Permitted Phases									4			4
Actuated Green, G (s)	4.3	9.3			1.0				6.1			6.1
Effective Green, g (s)	4.3	9.3			1.0				6.1			6.1
Actuated g/C Ratio	0.18	0.40			0.04				0.26			0.26
Clearance Time (s)	4.0	4.0			4.0				4.0			4.0
Vehicle Extension (s)	3.0	3.0			3.0				3.0			3.0
Lane Grp Cap (vph)	325	719			78				419			409
v/s Ratio Prot	c0.06	c0.06			0.02							
v/s Ratio Perm									0.00			c0.04
v/c Ratio	0.32	0.14			0.36				0.01			0.16
Uniform Delay, d1	8.3	4.5			10.9				6.4			6.7
Progression Factor	1.00	1.00			1.00				1.00			1.00
Incremental Delay, d2	0.6	0.1			2.8				0.0			0.2
Delay (s)	8.9	4.6			13.7				6.4			6.8
Level of Service	A	A			B				A			A
Approach Delay (s)		6.7			13.7			6.4			6.8	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	23.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

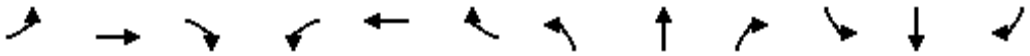
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	13	0	0	75	0	956	14	0	969	6
Future Vol, veh/h	0	0	13	0	0	75	0	956	14	0	969	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	14	0	0	82	0	1039	15	0	1053	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	530	-	-	527	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	422	0	0	424	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	422	-	-	424	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.8	15.5	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	422	424	-	-
HCM Lane V/C Ratio	-	-	0.033	0.192	-	-
HCM Control Delay (s)	-	-	13.8	15.5	-	-
HCM Lane LOS	-	-	B	C	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.7	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Yield			Yield	
Traffic Volume (vph)	0	63	0	0	106	0	0	0	0	0	0	0
Future Volume (vph)	0	63	0	0	106	0	0	0	0	0	0	0
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.93	0.92	0.93
Hourly flow rate (vph)	0	68	0	0	114	0	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1
Volume Total (vph)	68	114
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.03	0.03
Departure Headway (s)	4.0	4.0
Degree Utilization, x	0.08	0.13
Capacity (veh/h)	875	894
Control Delay (s)	7.4	7.6
Approach Delay (s)	7.4	7.6
Approach LOS	A	A

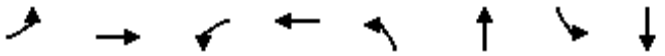
Intersection Summary				
Delay	7.5			
Level of Service	A			
Intersection Capacity Utilization	16.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	28	44	78	136	10	12	15	88	3	5	8
Future Vol, veh/h	19	28	44	78	136	10	12	15	88	3	5	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	30	48	85	148	11	13	16	96	3	5	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	9.3	8.1	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	21%	35%	19%
Vol Thru, %	13%	31%	61%	31%
Vol Right, %	77%	48%	4%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	91	224	16
LT Vol	12	19	78	3
Through Vol	15	28	136	5
RT Vol	88	44	10	8
Lane Flow Rate	125	99	243	17
Geometry Grp	1	1	1	1
Degree of Util (X)	0.149	0.117	0.299	0.022
Departure Headway (Hd)	4.284	4.266	4.417	4.586
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	838	841	818	780
Service Time	2.307	2.289	2.417	2.617
HCM Lane V/C Ratio	0.149	0.118	0.297	0.022
HCM Control Delay	8.1	7.9	9.3	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.4	1.3	0.1



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	188	224	43	267	86	745	254	805
v/c Ratio	0.61	0.21	0.21	0.38	0.39	0.63	0.68	0.45
Control Delay	47.0	21.4	46.8	19.3	47.7	35.3	45.6	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	21.4	46.8	19.3	47.7	35.3	45.6	23.5
Queue Length 50th (ft)	98	39	22	31	46	136	131	120
Queue Length 95th (ft)	214	87	71	85	117	238	271	206
Internal Link Dist (ft)		230		640		268		414
Turn Bay Length (ft)								
Base Capacity (vph)	596	1196	596	1181	596	1703	596	1857
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.19	0.07	0.23	0.14	0.44	0.43	0.43

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	137	69	40	111	134	79	653	32	234	568	173
Future Volume (veh/h)	173	137	69	40	111	134	79	653	32	234	568	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	188	149	75	43	121	146	86	710	35	254	617	188
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	656	311	140	408	354	197	1122	55	307	1115	332
Arrive On Green	0.13	0.28	0.28	0.08	0.23	0.23	0.11	0.23	0.23	0.17	0.29	0.29
Sat Flow, veh/h	1781	2314	1099	1781	1777	1544	1781	4981	245	1781	3887	1159
Grp Volume(v), veh/h	188	112	112	43	121	146	86	484	261	254	539	266
Grp Sat Flow(s),veh/h/ln	1781	1777	1636	1781	1777	1544	1781	1702	1822	1781	1702	1641
Q Serve(g_s), s	7.7	3.7	4.0	1.7	4.3	6.1	3.4	9.7	9.8	10.4	10.1	10.4
Cycle Q Clear(g_c), s	7.7	3.7	4.0	1.7	4.3	6.1	3.4	9.7	9.8	10.4	10.1	10.4
Prop In Lane	1.00		0.67	1.00		1.00	1.00		0.13	1.00		0.71
Lane Grp Cap(c), veh/h	236	504	464	140	408	354	197	766	410	307	976	471
V/C Ratio(X)	0.80	0.22	0.24	0.31	0.30	0.41	0.44	0.63	0.64	0.83	0.55	0.57
Avail Cap(c_a), veh/h	706	705	649	706	705	612	706	1350	722	706	1350	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	20.7	20.8	32.9	24.1	24.8	31.4	26.5	26.5	30.2	22.9	23.0
Incr Delay (d2), s/veh	6.0	0.2	0.3	1.2	0.4	0.8	1.5	0.9	1.6	5.7	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	1.5	1.5	0.8	1.8	2.2	1.5	3.9	4.3	4.8	3.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	21.0	21.1	34.1	24.5	25.6	33.0	27.3	28.1	35.9	23.3	24.0
LnGrp LOS	D	C	C	C	C	C	C	C	C	D	C	C
Approach Vol, veh/h		412			310			831			1059	
Approach Delay, s/veh		28.7			26.3			28.2			26.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	26.8	9.9	26.5	17.0	22.1	14.0	22.5
Change Period (Y+Rc), s	4.0	5.1	4.0	5.1	4.0	5.1	4.0	5.1
Max Green Setting (Gmax), s	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	5.4	12.4	3.7	6.0	12.4	11.8	9.7	8.1
Green Ext Time (p_c), s	0.2	5.1	0.1	1.3	0.7	4.7	0.5	1.6

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	333	27	4	267	22	7	12	8	17	19	37
Future Vol, veh/h	21	333	27	4	267	22	7	12	8	17	19	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	362	29	4	290	24	8	13	9	18	21	40

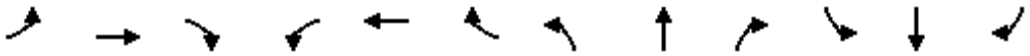
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	314	0	0	391	0	0	764	745	377	744	747	302
Stage 1	-	-	-	-	-	-	423	423	-	310	310	-
Stage 2	-	-	-	-	-	-	341	322	-	434	437	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1246	-	-	1168	-	-	321	342	670	331	341	738
Stage 1	-	-	-	-	-	-	609	588	-	700	659	-
Stage 2	-	-	-	-	-	-	674	651	-	600	579	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1246	-	-	1168	-	-	284	335	670	312	334	738
Mov Cap-2 Maneuver	-	-	-	-	-	-	284	335	-	312	334	-
Stage 1	-	-	-	-	-	-	598	577	-	687	657	-
Stage 2	-	-	-	-	-	-	615	649	-	568	569	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	15.5	14.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	1246	-	-	1168	-	-	452
HCM Lane V/C Ratio	0.079	0.018	-	-	0.004	-	-	0.176
HCM Control Delay (s)	15.5	7.9	-	-	8.1	-	-	14.7
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.6

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	47	360	21	325	116	145
v/c Ratio	0.20	0.39	0.10	0.41	0.22	0.26
Control Delay	29.4	14.8	29.8	19.2	13.7	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	14.8	29.8	19.2	13.7	13.1
Queue Length 50th (ft)	18	89	8	106	24	28
Queue Length 95th (ft)	48	209	29	192	66	75
Internal Link Dist (ft)		299		284	48	414
Turn Bay Length (ft)						
Base Capacity (vph)	1018	1204	1018	1174	848	898
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.30	0.02	0.28	0.14	0.16

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	272	59	19	209	90	32	41	33	26	50	58
Future Volume (veh/h)	43	272	59	19	209	90	32	41	33	26	50	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.80	1.00		0.79	0.92		0.89	0.92		0.89
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	296	64	21	227	98	35	45	36	28	54	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	467	101	44	350	151	229	283	193	156	280	277
Arrive On Green	0.05	0.33	0.33	0.02	0.31	0.31	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1781	1420	307	1781	1137	491	357	684	469	196	679	672
Grp Volume(v), veh/h	47	0	360	21	0	325	116	0	0	145	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1727	1781	0	1628	1510	0	0	1547	0	0
Q Serve(g_s), s	1.5	0.0	10.1	0.7	0.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	0.0	10.1	0.7	0.0	9.9	2.5	0.0	0.0	3.3	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.30	0.30		0.31	0.19		0.43
Lane Grp Cap(c), veh/h	82	0	568	44	0	501	705	0	0	713	0	0
V/C Ratio(X)	0.57	0.00	0.63	0.48	0.00	0.65	0.16	0.00	0.00	0.20	0.00	0.00
Avail Cap(c_a), veh/h	931	0	1203	931	0	1134	865	0	0	878	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.8	0.0	16.3	27.6	0.0	17.2	10.6	0.0	0.0	10.9	0.0	0.0
Incr Delay (d2), s/veh	6.2	0.0	1.2	7.7	0.0	1.4	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	3.7	0.4	0.0	3.5	0.8	0.0	0.0	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	0.0	17.5	35.4	0.0	18.6	10.7	0.0	0.0	11.0	0.0	0.0
LnGrp LOS	C	A	B	D	A	B	B	A	A	B	A	A
Approach Vol, veh/h		407			346			116			145	
Approach Delay, s/veh		19.3			19.6			10.7			11.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	23.5		28.3	6.8	22.3		28.3				
Change Period (Y+Rc), s	* 4.2	4.6		4.6	* 4.2	4.6		4.6				
Max Green Setting (Gmax), s	* 30	40.0		30.0	* 30	40.0		30.0				
Max Q Clear Time (g_c+I1), s	2.7	12.1		5.3	3.5	11.9		4.5				
Green Ext Time (p_c), s	0.0	2.4		0.9	0.1	2.3		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		17.2	
HCM 6th LOS		B	

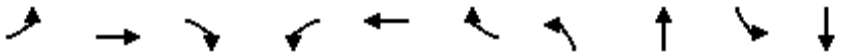
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	171	1450	22	298	2120
Future Volume (vph)	0	171	1450	22	298	2120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		1.00	0.91		1.00	0.91
Frt		0.86	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1611	5074		1770	5085
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1611	5074		1770	5085
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	186	1576	24	324	2304
RTOR Reduction (vph)	0	172	2	0	0	0
Lane Group Flow (vph)	0	14	1598	0	324	2304
Turn Type		Perm	NA		Prot	NA
Protected Phases			2		1	6
Permitted Phases		8				
Actuated Green, G (s)		5.5	36.7		19.3	60.5
Effective Green, g (s)		5.5	36.7		19.3	60.5
Actuated g/C Ratio		0.07	0.49		0.26	0.81
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		118	2482		455	4101
v/s Ratio Prot			c0.32		c0.18	0.45
v/s Ratio Perm		c0.01				
v/c Ratio		0.12	0.64		0.71	0.56
Uniform Delay, d1		32.5	14.3		25.3	2.6
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.4	1.3		5.2	0.6
Delay (s)		32.9	15.6		30.5	3.1
Level of Service		C	B		C	A
Approach Delay (s)	32.9		15.6			6.5
Approach LOS	C		B			A

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

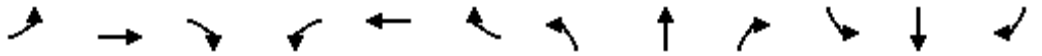


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	238	101	73	70	14	254	49	1424	267	2296
v/c Ratio	0.51	0.21	0.15	0.16	0.03	0.47	0.33	0.78	0.86	0.96
Control Delay	34.8	37.8	2.1	27.2	34.7	7.1	66.6	40.9	77.2	43.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.5
Total Delay	34.8	37.8	2.1	27.2	34.7	7.1	66.6	40.9	77.2	87.0
Queue Length 50th (ft)	145	67	0	38	9	0	43	443	241	~858
Queue Length 95th (ft)	214	115	10	71	26	63	88	507	#410	#950
Internal Link Dist (ft)		353			637			450		453
Turn Bay Length (ft)										
Base Capacity (vph)	464	669	614	435	662	714	147	1917	339	2398
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	328
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.15	0.12	0.16	0.02	0.36	0.33	0.74	0.79	1.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	93	67	64	13	234	45	1245	65	246	1680	432
Future Volume (veh/h)	219	93	67	64	13	234	45	1245	65	246	1680	432
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.95	0.97		0.94	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	238	101	73	70	14	254	49	1353	71	267	1826	470
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	466	489	392	442	477	380	115	1767	93	293	1843	458
Arrive On Green	0.08	0.26	0.26	0.07	0.25	0.25	0.06	0.36	0.36	0.16	0.46	0.46
Sat Flow, veh/h	1781	1870	1499	1781	1870	1490	1781	4958	260	1781	4039	1004
Grp Volume(v), veh/h	238	101	73	70	14	254	49	929	495	267	1529	767
Grp Sat Flow(s),veh/h/ln	1781	1870	1499	1781	1870	1490	1781	1702	1814	1781	1702	1640
Q Serve(g_s), s	10.0	5.4	4.8	3.5	0.7	19.5	3.4	30.8	30.8	18.8	56.5	58.2
Cycle Q Clear(g_c), s	10.0	5.4	4.8	3.5	0.7	19.5	3.4	30.8	30.8	18.8	56.5	58.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.61
Lane Grp Cap(c), veh/h	466	489	392	442	477	380	115	1213	647	293	1553	748
V/C Ratio(X)	0.51	0.21	0.19	0.16	0.03	0.67	0.43	0.77	0.77	0.91	0.98	1.03
Avail Cap(c_a), veh/h	466	632	507	454	626	499	140	1213	647	321	1553	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	36.8	36.6	29.6	35.7	42.7	57.4	36.3	36.3	52.4	34.2	34.7
Incr Delay (d2), s/veh	0.9	0.2	0.2	0.2	0.0	2.2	2.5	3.0	5.5	27.5	19.1	39.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	2.5	1.8	1.5	0.3	7.4	1.6	13.2	14.5	10.6	26.8	30.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	37.0	36.8	29.8	35.7	44.9	59.9	39.3	41.8	79.9	53.3	74.3
LnGrp LOS	C	D	D	C	D	D	E	D	D	E	D	F
Approach Vol, veh/h		412			338			1473			2563	
Approach Delay, s/veh		35.2			41.4			40.8			62.3	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	63.3	13.7	38.3	25.0	50.6	14.5	37.5
Change Period (Y+Rc), s	4.0	5.1	4.5	* 5	4.0	5.1	4.5	5.0
Max Green Setting (Gmax), s	10.0	58.2	10.0	* 43	23.0	45.2	10.0	42.7
Max Q Clear Time (g_c+I1), s	5.4	60.2	5.5	7.4	20.8	32.8	12.0	21.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.2	7.5	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	51.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	59	269	54	22	215	46	38	12	16	40	12	43
Future Vol, veh/h	59	269	54	22	215	46	38	12	16	40	12	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	292	59	24	234	50	41	13	17	43	13	47
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.4	11.3	9.6	9.7
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	58%	15%	8%	42%
Vol Thru, %	18%	70%	76%	13%
Vol Right, %	24%	14%	16%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	382	283	95
LT Vol	38	59	22	40
Through Vol	12	269	215	12
RT Vol	16	54	46	43
Lane Flow Rate	72	415	308	103
Geometry Grp	1	1	1	1
Degree of Util (X)	0.117	0.545	0.411	0.161
Departure Headway (Hd)	5.854	4.721	4.815	5.63
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	616	756	738	640
Service Time	3.859	2.811	2.913	3.634
HCM Lane V/C Ratio	0.117	0.549	0.417	0.161
HCM Control Delay	9.6	13.4	11.3	9.7
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	3.3	2	0.6

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	168	134	20	105	42	52
Future Vol, veh/h	168	134	20	105	42	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	183	146	22	114	46	57

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	329	0	414	256
Stage 1	-	-	-	-	256	-
Stage 2	-	-	-	-	158	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1231	-	595	783
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1231	-	584	783
Mov Cap-2 Maneuver	-	-	-	-	584	-
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	854	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1307	-	-	1231	-
HCM Lane V/C Ratio	0.078	-	-	0.018	-
HCM Control Delay (s)	8	-	-	8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	196	54	51	170	54	55	41	48	58	98	61
Future Vol, veh/h	53	196	54	51	170	54	55	41	48	58	98	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	58	213	59	55	185	59	60	45	52	63	107	66
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

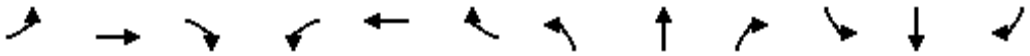
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.3	13.5	11.3	12.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	17%	19%	27%
Vol Thru, %	28%	65%	62%	45%
Vol Right, %	33%	18%	20%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	144	303	275	217
LT Vol	55	53	51	58
Through Vol	41	196	170	98
RT Vol	48	54	54	61
Lane Flow Rate	157	329	299	236
Geometry Grp	1	1	1	1
Degree of Util (X)	0.262	0.508	0.464	0.384
Departure Headway (Hd)	6.029	5.548	5.589	5.865
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	590	646	640	609
Service Time	4.12	3.62	3.664	3.948
HCM Lane V/C Ratio	0.266	0.509	0.467	0.388
HCM Control Delay	11.3	14.3	13.5	12.6
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1	2.9	2.5	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	160	0	0	171	0	0
Future Volume (Veh/h)	160	0	0	171	0	0
Sign Control	Yield			Yield	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	174	0	0	186	0	0
Pedestrians	86				8	
Lane Width (ft)	12.0				0.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	8				0	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	86	94	95	86	86	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	86	94	95	86	86	
tC, single (s)	6.5	6.2	7.1	6.5	4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.3	3.5	4.0	2.2	
p0 queue free %	76	100	100	75	100	
cM capacity (veh/h)	738	884	683	738	1387	

Direction, Lane #	EB 1	WB 1
Volume Total	174	186
Volume Left	0	0
Volume Right	0	0
cSH	738	738
Volume to Capacity	0.24	0.25
Queue Length 95th (ft)	23	25
Control Delay (s)	11.4	11.5
Lane LOS	B	B
Approach Delay (s)	11.4	11.5
Approach LOS	B	B

Intersection Summary			
Average Delay	11.4		
Intersection Capacity Utilization	12.9%	ICU Level of Service	A
Analysis Period (min)	15		



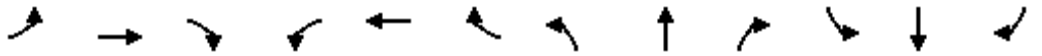
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Yield			Yield	
Traffic Volume (vph)	0	276	0	0	253	0	0	0	0	0	0	0
Future Volume (vph)	0	276	0	0	253	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	300	0	0	275	0	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1
Volume Total (vph)	300	275
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.03	0.03
Departure Headway (s)	4.2	4.2
Degree Utilization, x	0.35	0.32
Capacity (veh/h)	843	833
Control Delay (s)	9.4	9.2
Approach Delay (s)	9.4	9.2
Approach LOS	A	A

Intersection Summary				
Delay	9.3			
Level of Service	A			
Intersection Capacity Utilization	17.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	138	61	205	18	49	223	48	31
v/c Ratio	0.21	0.09	0.35	0.03	0.12	0.39	0.14	0.05
Control Delay	12.9	0.3	15.6	0.1	19.7	6.9	27.0	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.9	0.3	15.6	0.1	19.7	6.9	27.0	6.8
Queue Length 50th (ft)	23	0	40	0	7	1	11	1
Queue Length 95th (ft)	74	0	116	0	45	56	50	16
Internal Link Dist (ft)	286		264			327		4
Turn Bay Length (ft)								
Base Capacity (vph)	984	925	838	918	626	737	784	1137
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.07	0.24	0.02	0.08	0.30	0.06	0.03

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	90	56	83	106	17	45	9	196	44	5	24
Future Volume (veh/h)	37	90	56	83	106	17	45	9	196	44	5	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.91	0.97		0.91	0.83		0.83	1.00		0.87
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	98	61	90	115	18	49	10	213	48	5	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	160	519	94	86	519	420	15	320	84	90	470
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.25	0.25	0.25	0.05	0.39	0.39
Sat Flow, veh/h	0	443	1438	0	238	1438	1148	59	1267	1781	232	1205
Grp Volume(v), veh/h	138	0	61	205	0	18	49	0	223	48	0	31
Grp Sat Flow(s),veh/h/ln	443	0	1438	238	0	1438	1148	0	1327	1781	0	1437
Q Serve(g_s), s	0.0	0.0	1.6	0.0	0.0	0.4	1.8	0.0	8.4	1.5	0.0	0.7
Cycle Q Clear(g_c), s	20.0	0.0	1.6	20.0	0.0	0.4	1.8	0.0	8.4	1.5	0.0	0.7
Prop In Lane	0.29		1.00	0.44		1.00	1.00		0.96	1.00		0.84
Lane Grp Cap(c), veh/h	244	0	519	180	0	519	420	0	335	84	0	560
V/C Ratio(X)	0.57	0.00	0.12	1.14	0.00	0.03	0.12	0.00	0.67	0.57	0.00	0.06
Avail Cap(c_a), veh/h	244	0	519	180	0	519	441	0	359	482	0	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	11.8	18.7	0.0	11.5	16.2	0.0	18.6	25.8	0.0	10.5
Incr Delay (d2), s/veh	3.0	0.0	0.1	110.4	0.0	0.0	0.1	0.0	4.2	6.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.5	7.7	0.0	0.1	0.5	0.0	2.7	0.7	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.3	0.0	11.9	129.2	0.0	11.5	16.3	0.0	22.8	31.8	0.0	10.6
LnGrp LOS	B	A	B	F	A	B	B	A	C	C	A	B
Approach Vol, veh/h		199			223			272			79	
Approach Delay, s/veh		15.7			119.7			21.7			23.5	
Approach LOS		B			F			C			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.6	20.9		26.9		28.5		26.9				
Change Period (Y+Rc), s	5.0	* 6.9		* 6.9		6.9		6.9				
Max Green Setting (Gmax), s	15.0	* 15		* 15		20.0		20.0				
Max Q Clear Time (g_c+I1), s	3.5	10.4		22.0		2.7		22.0				
Green Ext Time (p_c), s	0.1	0.7		0.0		0.1		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		48.6	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	133	31	53	205	25	25	125	50	23	62	28
Future Vol, veh/h	64	133	31	53	205	25	25	125	50	23	62	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	145	34	58	223	27	27	136	54	25	67	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.5	12.6	11.3	10.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	28%	19%	20%
Vol Thru, %	62%	58%	72%	55%
Vol Right, %	25%	14%	9%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	228	283	113
LT Vol	25	64	53	23
Through Vol	125	133	205	62
RT Vol	50	31	25	28
Lane Flow Rate	217	248	308	123
Geometry Grp	1	1	1	1
Degree of Util (X)	0.333	0.369	0.451	0.195
Departure Headway (Hd)	5.516	5.363	5.282	5.714
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	650	669	680	626
Service Time	3.563	3.406	3.324	3.767
HCM Lane V/C Ratio	0.334	0.371	0.453	0.196
HCM Control Delay	11.3	11.5	12.6	10.2
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.5	1.7	2.3	0.7

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	187	56	31	242	41	18	53	53	101	82	23
Future Vol, veh/h	37	187	56	31	242	41	18	53	53	101	82	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	203	61	34	263	45	20	58	58	110	89	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.3	14.3	10.7	12.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	13%	10%	49%
Vol Thru, %	43%	67%	77%	40%
Vol Right, %	43%	20%	13%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	124	280	314	206
LT Vol	18	37	31	101
Through Vol	53	187	242	82
RT Vol	53	56	41	23
Lane Flow Rate	135	304	341	224
Geometry Grp	1	1	1	1
Degree of Util (X)	0.222	0.464	0.518	0.372
Departure Headway (Hd)	5.931	5.486	5.461	5.981
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	600	654	655	598
Service Time	4.016	3.553	3.526	4.056
HCM Lane V/C Ratio	0.225	0.465	0.521	0.375
HCM Control Delay	10.7	13.3	14.3	12.6
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.8	2.5	3	1.7

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	172	16	82	143	5	8	51	203	33	68	47
Future Vol, veh/h	19	172	16	82	143	5	8	51	203	33	68	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	187	17	89	155	5	9	55	221	36	74	51
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

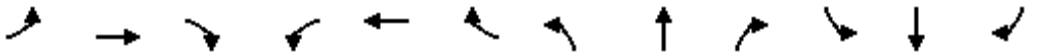
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.5	12.1	11.5	10.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	9%	36%	22%
Vol Thru, %	19%	83%	62%	46%
Vol Right, %	77%	8%	2%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	262	207	230	148
LT Vol	8	19	82	33
Through Vol	51	172	143	68
RT Vol	203	16	5	47
Lane Flow Rate	285	225	250	161
Geometry Grp	1	1	1	1
Degree of Util (X)	0.402	0.346	0.387	0.25
Departure Headway (Hd)	5.079	5.529	5.569	5.584
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	706	648	645	640
Service Time	3.133	3.584	3.622	3.645
HCM Lane V/C Ratio	0.404	0.347	0.388	0.252
HCM Control Delay	11.5	11.5	12.1	10.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.9	1.5	1.8	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	324	57	287	243	0	228
Future Volume (vph)	324	57	287	243	0	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9		4.0	5.9		4.0
Lane Util. Factor	1.00		1.00	1.00		1.00
Frpb, ped/bikes	0.98		1.00	1.00		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	1.00		0.86
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	1788		1770	1863		1611
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	1788		1770	1863		1611
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	352	62	312	264	0	248
RTOR Reduction (vph)	6	0	0	0	0	221
Lane Group Flow (vph)	408	0	312	264	0	27
Confl. Peds. (#/hr)		61	61		3	
Confl. Bikes (#/hr)		26				
Turn Type	NA		Prot	NA		Perm
Protected Phases	2		1	6		
Permitted Phases						4
Actuated Green, G (s)	20.2		16.8	41.0		6.3
Effective Green, g (s)	20.2		16.8	41.0		6.3
Actuated g/C Ratio	0.35		0.29	0.72		0.11
Clearance Time (s)	5.9		4.0	5.9		4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	631		519	1335		177
v/s Ratio Prot	c0.23		c0.18	0.14		
v/s Ratio Perm						c0.02
v/c Ratio	0.65		0.60	0.20		0.15
Uniform Delay, d1	15.5		17.3	2.7		23.0
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	2.3		2.0	0.1		0.4
Delay (s)	17.8		19.3	2.7		23.4
Level of Service	B		B	A		C
Approach Delay (s)	17.8			11.7	23.4	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	57.2	Sum of lost time (s)	13.9
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	262	129	17	0	31	5	0	0	48	0	0	294
Future Volume (vph)	262	129	17	0	31	5	0	0	48	0	0	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0				4.0			4.0
Lane Util. Factor	1.00	1.00			1.00				1.00			1.00
Frpb, ped/bikes	1.00	1.00			0.97				1.00			0.97
Flpb, ped/bikes	1.00	1.00			1.00				1.00			1.00
Frt	1.00	0.98			0.98				0.86			0.86
Flt Protected	0.95	1.00			1.00				1.00			1.00
Satd. Flow (prot)	1770	1821			1765				1611			1559
Flt Permitted	0.95	1.00			1.00				1.00			1.00
Satd. Flow (perm)	1770	1821			1765				1611			1559
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	273	134	18	0	32	5	0	0	50	0	0	306
RTOR Reduction (vph)	0	3	0	0	5	0	0	0	42	0	0	255
Lane Group Flow (vph)	273	149	0	0	32	0	0	0	8	0	0	51
Confl. Peds. (#/hr)	16		21	21		16	14					14
Confl. Bikes (#/hr)			2			2						
Turn Type	Prot	NA			NA				Perm			Perm
Protected Phases	1	6			2							
Permitted Phases									4			4
Actuated Green, G (s)	15.1	20.3			1.2				5.6			5.6
Effective Green, g (s)	15.1	20.3			1.2				5.6			5.6
Actuated g/C Ratio	0.45	0.60			0.04				0.17			0.17
Clearance Time (s)	4.0	4.0			4.0				4.0			4.0
Vehicle Extension (s)	3.0	3.0			3.0				3.0			3.0
Lane Grp Cap (vph)	788	1090			62				266			257
v/s Ratio Prot	c0.15	0.08			c0.02							
v/s Ratio Perm									0.01			c0.03
v/c Ratio	0.35	0.14			0.52				0.03			0.20
Uniform Delay, d1	6.2	3.0			16.1				11.9			12.2
Progression Factor	1.00	1.00			1.00				1.00			1.00
Incremental Delay, d2	0.3	0.1			7.2				0.0			0.4
Delay (s)	6.4	3.0			23.2				11.9			12.6
Level of Service	A	A			C				B			B
Approach Delay (s)		5.2			23.2			11.9			12.6	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	33.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

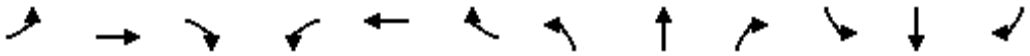
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	11	0	0	93	0	1266	51	0	1784	10
Future Vol, veh/h	0	0	11	0	0	93	0	1266	51	0	1784	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	12	0	0	101	0	1376	55	0	1939	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	975	-	-	716	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	216	0	0	320	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	216	-	-	320	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.6	21.4	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	216	320	-	-
HCM Lane V/C Ratio	-	-	0.055	0.316	-	-
HCM Control Delay (s)	-	-	22.6	21.4	-	-
HCM Lane LOS	-	-	C	C	-	-
HCM 95th %tile Q(veh)	-	-	0.2	1.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Yield			Yield	
Traffic Volume (vph)	0	154	0	0	124	0	0	0	0	0	0	0
Future Volume (vph)	0	154	0	0	124	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	167	0	0	135	0	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1
Volume Total (vph)	167	135
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.03	0.03
Departure Headway (s)	4.1	4.1
Degree Utilization, x	0.19	0.15
Capacity (veh/h)	872	871
Control Delay (s)	8.0	7.8
Approach Delay (s)	8.0	7.8
Approach LOS	A	A

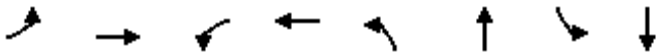
Intersection Summary				
Delay	7.9			
Level of Service	A			
Intersection Capacity Utilization	16.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	62	68	98	138	13	6	40	207	5	5	10
Future Vol, veh/h	16	62	68	98	138	13	6	40	207	5	5	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	67	74	107	150	14	7	43	225	5	5	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	10.7	9.9	8.3
HCM LOS	A	B	A	A

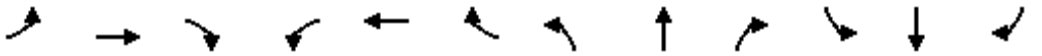
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	11%	39%	25%
Vol Thru, %	16%	42%	55%	25%
Vol Right, %	82%	47%	5%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	253	146	249	20
LT Vol	6	16	98	5
Through Vol	40	62	138	5
RT Vol	207	68	13	10
Lane Flow Rate	275	159	271	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.343	0.207	0.365	0.031
Departure Headway (Hd)	4.493	4.696	4.852	5.062
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	795	757	736	700
Service Time	2.548	2.767	2.916	3.146
HCM Lane V/C Ratio	0.346	0.21	0.368	0.031
HCM Control Delay	9.9	9	10.7	8.3
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	1.5	0.8	1.7	0.1



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	303	457	89	363	129	1047	278	1658
v/c Ratio	0.80	0.44	0.47	0.55	0.58	0.79	0.79	1.00
Control Delay	60.8	33.4	60.0	28.1	60.3	45.9	62.3	60.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.8	33.4	60.0	28.1	60.3	45.9	62.3	60.5
Queue Length 50th (ft)	204	138	61	72	89	252	189	413
Queue Length 95th (ft)	#419	213	136	130	182	#461	#357	#795
Internal Link Dist (ft)		230		640		268		414
Turn Bay Length (ft)								
Base Capacity (vph)	478	1070	478	1007	478	1368	478	1655
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.43	0.19	0.36	0.27	0.77	0.58	1.00

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	279	322	98	82	170	164	119	917	46	256	1271	254
Future Volume (veh/h)	279	322	98	82	170	164	119	917	46	256	1271	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	303	350	107	89	185	178	129	997	50	278	1382	276
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	344	749	225	166	320	272	177	1301	65	319	1451	289
Arrive On Green	0.19	0.28	0.28	0.09	0.18	0.18	0.10	0.26	0.26	0.18	0.34	0.34
Sat Flow, veh/h	1781	2673	803	1781	1777	1508	1781	4974	249	1781	4251	848
Grp Volume(v), veh/h	303	231	226	89	185	178	129	682	365	278	1106	552
Grp Sat Flow(s),veh/h/ln	1781	1777	1700	1781	1777	1508	1781	1702	1819	1781	1702	1694
Q Serve(g_s), s	16.2	10.5	10.8	4.7	9.3	10.7	6.9	18.1	18.1	14.9	31.0	31.1
Cycle Q Clear(g_c), s	16.2	10.5	10.8	4.7	9.3	10.7	6.9	18.1	18.1	14.9	31.0	31.1
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.14	1.00		0.50
Lane Grp Cap(c), veh/h	344	498	477	166	320	272	177	890	476	319	1162	579
V/C Ratio(X)	0.88	0.46	0.48	0.54	0.58	0.65	0.73	0.77	0.77	0.87	0.95	0.95
Avail Cap(c_a), veh/h	546	545	521	546	545	462	546	1044	558	546	1162	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	29.1	29.2	42.4	36.7	37.3	42.8	33.4	33.4	39.1	31.4	31.5
Incr Delay (d2), s/veh	9.9	0.7	0.7	2.7	1.6	2.7	5.7	2.9	5.4	7.8	16.2	26.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	4.5	4.5	2.2	4.1	4.1	3.3	7.7	8.6	7.1	14.9	16.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	29.8	30.0	45.0	38.3	39.9	48.5	36.3	38.8	46.8	47.6	57.7
LnGrp LOS	D	C	C	D	D	D	D	D	D	D	D	E
Approach Vol, veh/h		760			452			1176			1936	
Approach Delay, s/veh		37.2			40.3			38.4			50.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	38.5	13.1	32.5	21.5	30.7	22.9	22.7
Change Period (Y+Rc), s	4.0	5.1	4.0	5.1	4.0	5.1	4.0	5.1
Max Green Setting (Gmax), s	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	8.9	33.1	6.7	12.8	16.9	20.1	18.2	12.7
Green Ext Time (p_c), s	0.3	0.0	0.2	2.6	0.7	4.8	0.7	2.1

Intersection Summary	
HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	59	556	45	5	408	25	8	10	6	16	13	33
Future Vol, veh/h	59	556	45	5	408	25	8	10	6	16	13	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	604	49	5	443	27	9	11	7	17	14	36

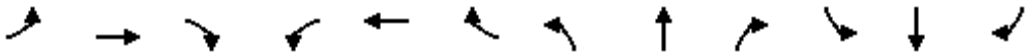
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	470	0	0	653	0	0	1249	1237	629	1233	1248	457
Stage 1	-	-	-	-	-	-	757	757	-	467	467	-
Stage 2	-	-	-	-	-	-	492	480	-	766	781	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1092	-	-	934	-	-	150	176	482	154	173	604
Stage 1	-	-	-	-	-	-	400	416	-	576	562	-
Stage 2	-	-	-	-	-	-	558	554	-	395	405	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1092	-	-	934	-	-	125	165	482	137	162	604
Mov Cap-2 Maneuver	-	-	-	-	-	-	125	165	-	137	162	-
Stage 1	-	-	-	-	-	-	376	391	-	542	559	-
Stage 2	-	-	-	-	-	-	509	551	-	357	381	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.1	29.1	25.1
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	175	1092	-	-	934	-	-	246
HCM Lane V/C Ratio	0.149	0.059	-	-	0.006	-	-	0.274
HCM Control Delay (s)	29.1	8.5	-	-	8.9	-	-	25.1
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0	-	-	1.1

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	71	541	29	408	115	166
v/c Ratio	0.24	0.61	0.12	0.53	0.34	0.42
Control Delay	28.0	15.2	30.2	16.3	21.3	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	15.2	30.2	16.3	21.3	18.9
Queue Length 50th (ft)	17	70	7	90	24	28
Queue Length 95th (ft)	76	341	41	253	86	103
Internal Link Dist (ft)		299		284	48	414
Turn Bay Length (ft)						
Base Capacity (vph)	1173	1405	1173	1391	936	1038
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.39	0.02	0.29	0.12	0.16

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	441	57	27	311	64	52	27	27	27	46	80
Future Volume (veh/h)	65	441	57	27	311	64	52	27	27	27	46	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.86	1.00		0.85	0.95		0.92	0.95		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	479	62	29	338	70	57	29	29	29	50	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	599	78	58	510	106	321	162	131	131	209	292
Arrive On Green	0.06	0.38	0.38	0.03	0.35	0.35	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1781	1588	206	1781	1454	301	638	456	369	160	587	822
Grp Volume(v), veh/h	71	0	541	29	0	408	115	0	0	166	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1794	1781	0	1756	1463	0	0	1569	0	0
Q Serve(g_s), s	2.2	0.0	15.3	0.9	0.0	11.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	15.3	0.9	0.0	11.2	2.6	0.0	0.0	4.2	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.17	0.50		0.25	0.17		0.52
Lane Grp Cap(c), veh/h	105	0	677	58	0	615	614	0	0	632	0	0
V/C Ratio(X)	0.67	0.00	0.80	0.50	0.00	0.66	0.19	0.00	0.00	0.26	0.00	0.00
Avail Cap(c_a), veh/h	937	0	1258	937	0	1231	851	0	0	892	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.3	0.0	15.8	27.1	0.0	15.7	12.7	0.0	0.0	13.2	0.0	0.0
Incr Delay (d2), s/veh	7.2	0.0	2.2	6.7	0.0	1.2	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	5.8	0.5	0.0	4.1	0.9	0.0	0.0	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	0.0	18.1	33.8	0.0	16.9	12.8	0.0	0.0	13.4	0.0	0.0
LnGrp LOS	C	A	B	C	A	B	B	A	A	B	A	A
Approach Vol, veh/h		612			437			115			166	
Approach Delay, s/veh		19.9			18.0			12.8			13.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	26.1		24.9	7.6	24.6		24.9				
Change Period (Y+Rc), s	* 4.2	4.6		4.6	* 4.2	4.6		4.6				
Max Green Setting (Gmax), s	* 30	40.0		30.0	* 30	40.0		30.0				
Max Q Clear Time (g_c+I1), s	2.9	17.3		6.2	4.2	13.2		4.6				
Green Ext Time (p_c), s	0.0	3.8		1.0	0.2	2.8		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		17.8
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Kimley»Horn

Attachment D: Sidra Analysis Sheets

MOVEMENT SUMMARY

Site: 101 [Int 20 AM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Castro St														
3	L2	163	3.0	177	3.0	0.236	5.4	LOS A	1.2	29.7	0.37	0.23	0.37	33.1
18	R2	81	3.0	88	3.0	0.236	5.4	LOS A	1.2	29.7	0.37	0.23	0.37	32.2
Approach		244	3.0	265	3.0	0.236	5.4	LOS A	1.2	29.7	0.37	0.23	0.37	32.8
East: California Street														
1	L2	101	3.0	110	3.0	0.244	5.5	LOS A	1.2	30.9	0.38	0.25	0.38	33.9
6	T1	149	3.0	162	3.0	0.244	5.5	LOS A	1.2	30.9	0.38	0.25	0.38	33.8
Approach		250	3.0	272	3.0	0.244	5.5	LOS A	1.2	30.9	0.38	0.25	0.38	33.8
West: California Street														
2	T1	155	3.0	168	3.0	0.254	5.3	LOS A	1.3	33.4	0.30	0.16	0.30	35.0
12	R2	124	3.0	135	3.0	0.254	5.3	LOS A	1.3	33.4	0.30	0.16	0.30	34.0
Approach		279	3.0	303	3.0	0.254	5.3	LOS A	1.3	33.4	0.30	0.16	0.30	34.6
All Vehicles		773	3.0	840	3.0	0.254	5.4	LOS A	1.3	33.4	0.35	0.21	0.35	33.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Int 20 PM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Castro St														
3	L2	191	3.0	208	3.0	0.385	8.2	LOS A	2.0	51.4	0.58	0.50	0.58	32.1
18	R2	139	3.0	151	3.0	0.385	8.2	LOS A	2.0	51.4	0.58	0.50	0.58	31.1
Approach		330	3.0	359	3.0	0.385	8.2	LOS A	2.0	51.4	0.58	0.50	0.58	31.7
East: California Street														
1	L2	84	3.0	91	3.0	0.241	5.6	LOS A	1.2	30.0	0.41	0.28	0.41	34.0
6	T1	155	3.0	168	3.0	0.241	5.6	LOS A	1.2	30.0	0.41	0.28	0.41	33.9
Approach		239	3.0	260	3.0	0.241	5.6	LOS A	1.2	30.0	0.41	0.28	0.41	33.9
West: California Street														
2	T1	319	3.0	347	3.0	0.425	7.3	LOS A	2.7	70.0	0.34	0.18	0.34	34.0
12	R2	157	3.0	171	3.0	0.425	7.3	LOS A	2.7	70.0	0.34	0.18	0.34	33.0
Approach		476	3.0	517	3.0	0.425	7.3	LOS A	2.7	70.0	0.34	0.18	0.34	33.7
All Vehicles		1045	3.0	1136	3.0	0.425	7.2	LOS A	2.7	70.0	0.43	0.31	0.43	33.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Int 20 Mid-day (Site Folder: General)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Castro St														
3	L2	181	3.0	197	3.0	0.288	5.9	LOS A	1.5	38.2	0.38	0.25	0.38	33.0
18	R2	117	3.0	127	3.0	0.288	5.9	LOS A	1.5	38.2	0.38	0.25	0.38	32.1
Approach		298	3.0	324	3.0	0.288	5.9	LOS A	1.5	38.2	0.38	0.25	0.38	32.7
East: California Street														
1	L2	80	3.0	87	3.0	0.198	5.1	LOS A	0.9	23.7	0.38	0.25	0.38	34.1
6	T1	118	3.0	128	3.0	0.198	5.1	LOS A	0.9	23.7	0.38	0.25	0.38	34.0
Approach		198	3.0	215	3.0	0.198	5.1	LOS A	0.9	23.7	0.38	0.25	0.38	34.0
West: California Street														
2	T1	152	3.0	165	3.0	0.281	5.5	LOS A	1.5	38.5	0.27	0.14	0.27	34.9
12	R2	164	3.0	178	3.0	0.281	5.5	LOS A	1.5	38.5	0.27	0.14	0.27	33.9
Approach		316	3.0	343	3.0	0.281	5.5	LOS A	1.5	38.5	0.27	0.14	0.27	34.4
All Vehicles		812	3.0	883	3.0	0.288	5.6	LOS A	1.5	38.5	0.34	0.21	0.34	33.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
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LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
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Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.