Transportation Impact Study for the Valley Ranch 3 Residential Subdivision

Prepared for the City of Williams

Submitted by
W-Trans

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Executive Summary

The proposed Valley Ranch 3 Residential Subdivision includes the development of 103 market-rate single-family residences on a vacant approximately 17.3-acre parcel east of I-5 and south of E Street in the City of Williams. The project site would be accessed from an extension of Marguerite Street to the southeast from its current terminus at Alta Lane and a new connection to E Street approximately 350 feet west of Husted Road. The project would be expected to generate an average of 963 trips per day, including 76 trips during the weekday a.m. peak hour and 102 trips during the weekday p.m. peak hour.

Analysis indicates that the study intersections that E Street forms with the I-5 North and South Ramps as well as Marguerite Street all operate acceptably per the applicable City standards under Existing Conditions and would continue to do so with the addition of project traffic. Under Baseline Conditions, with includes near-term traffic from the pending Valley Ranch Unit 4 Commercial Development, the E Street/Marguerite Street intersection is expected to continue operating at acceptable service levels, though both of the I-5 ramp intersections would deteriorate to LOS F operation. With the installation of traffic signals, both intersections would operate acceptably with traffic from the proposed project and the pending commercial project, though because the intersections would operate acceptably in their current configuration and controls without traffic from the commercial project, the proposed residential project's effect on operations would be considered acceptable and no off-site improvements would be the responsibility of this project.

As detailed in *City of Williams General Plan Update – Final Environmental Impact Report* (EIR), all three existing study intersections would need to be signalized in order to support buildout of the City's General Plan. With the planned installation of traffic signals and other geometric improvements, all study intersections would operate acceptably under the anticipated future volumes without and with project-related traffic. To offset the cumulative effects of project traffic and help fund the planned circulation improvements identified in the General Plan, the applicant should pay the required development impact fees to the City.

City staff has expressed interest in modern roundabouts as alternatives to the planned future installation of traffic signals at the study intersections; therefore, it is recommended that Intersection Control Evaluations (ICEs) be performed for the ramp terminals and a feasibility study be prepared for E Street/Vann Street to explore the suitability of roundabouts at these locations.

Since the City of Williams has not yet established thresholds of significance related to VMT nor is there a regional travel demand model that contains VMT information, the project-related VMT impacts were assessed qualitatively based on guidance provided by the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018. Under this guidance, residential developments that have a VMT per capita that is 15 percent or more below the existing countywide residential VMT per capita would have a less-than-significant transportation impact. The proposed project site is located within an acceptable walking and biking distance of Downtown and other points of interest and would reasonably be expected to have a less-than-significant transportation impact on VMT with implementation of appropriate TDM measures. It is recommended that the project incorporate the TDM measures identified in this report such as high-speed internet and establishment of a homeowner's association that would allow educational materials to be provided to residents.

Pedestrian facilities are expected to be adequate upon completion of the sidewalks along the project frontage and on the project streets to be constructed as part of the project. Project residents would be able to walk to surrounding areas and a nearby transit stop via the project's sidewalk connections to E Street and Marguerite Street. It is recommended that the E Street/Project Street intersection include a crosswalk with ADA-compliant curb ramps on the southern leg. All new curb ramps within the subdivision should comply with ADA standards.

The project would be accessible by bicycle and access for this mode would be further improved in the future with the planned installation of Class II bike lanes on E Street and Husted Road. It is recommended that the project frontages on E Street and Husted Road be designed to accommodate the planned future installation of Class II bike lanes and adequate right-of-way should be dedicated to the City for these future improvements, if not already available.

The intersections within the project site should be uncontrolled as is typical for neighborhood streets, though the intersection that the new project street would form with E Street should be stop-controlled on the northbound minor street approach. Sight lines were field measured at the location of the project street and determined to be adequate for the posted speed limit. To maintain existing adequate sight lines, any new signage or other structures such as sound walls to be located near the intersection should be placed outside of the vision triangle of a driver waiting on the minor street.

Introduction

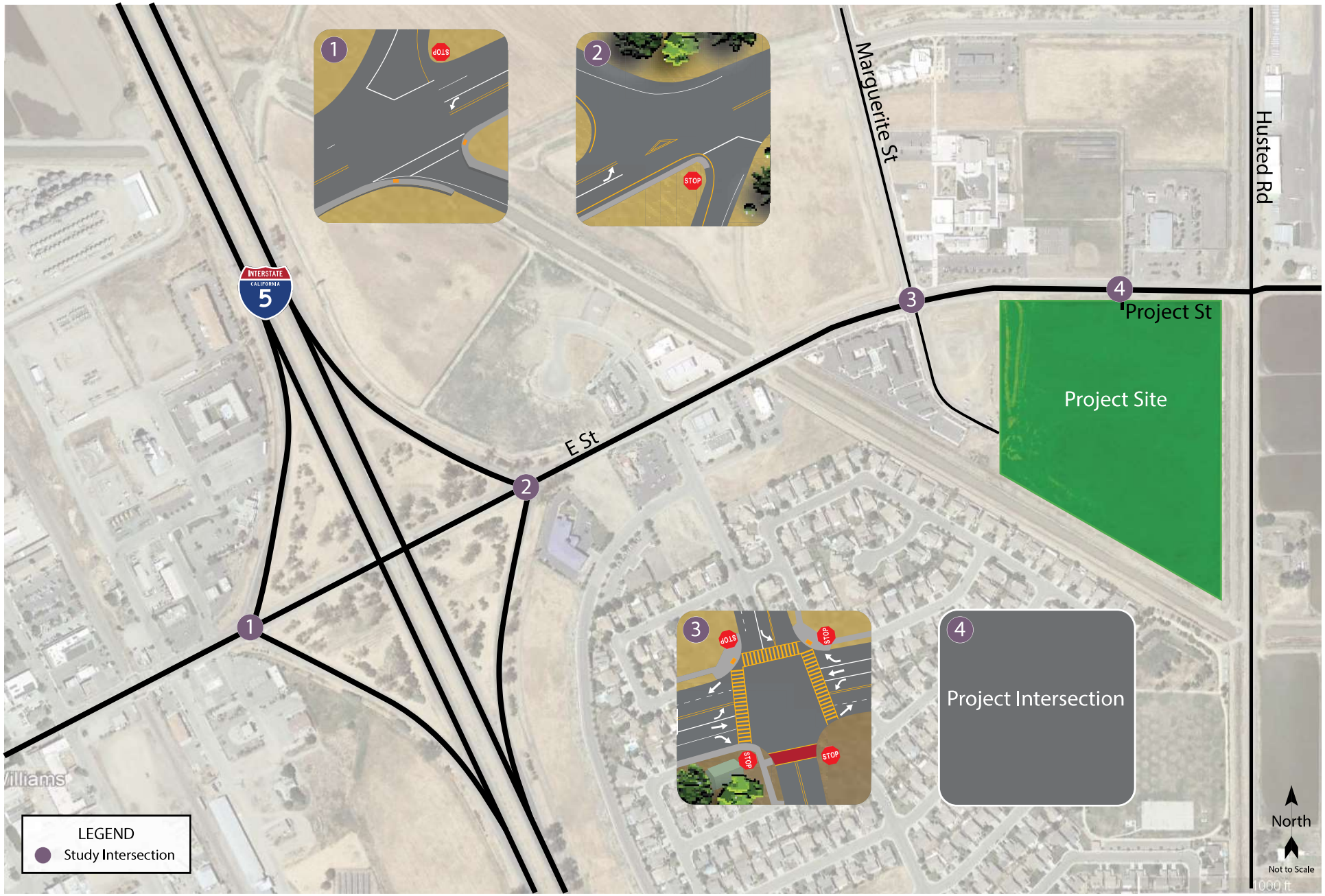
This report presents an analysis of the potential transportation impacts and traffic effects that would be associated with the proposed development of single-family housing on an empty parcel east of I-5 and south of E Street in the City of Williams. The traffic study was completed in accordance with the criteria established by the City of Williams, reflects a scope of work approved by City staff, and is consistent with standard traffic engineering techniques.

Prelude

The purpose of a transportation impact study (TIS) is to provide City staff and policy makers with data they can use to make an informed decision regarding the potential transportation impacts and adverse effects of a proposed project, and any associated improvements that would be required to mitigate these impacts to a level of insignificance under CEQA or reduce an adverse effect to an acceptable level under the City's General Plan, or other policies. Impacts relative to access for pedestrians, bicyclists, and to transit are addressed in the context of the CEQA criteria. Consistent with SB 743, the project's transportation impacts were analyzed using VMT. While no longer a part of the CEQA review process, vehicular traffic service levels at key intersections were evaluated for consistency with General Plan policies by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on anticipated travel patterns specific to the proposed project, then analyzing the effect the new traffic would be expected to have on the operation of the study intersections.

Project Profile

The proposed project includes the development of 103 market-rate single-family residences on an approximately 17.3-acre vacant parcel east of I-5 and south of E Street in the City of Williams. The project site would be accessed from an extension of Marguerite Street to the southeast from its current terminus at Alta Lane and a new connection to E Street approximately 350 feet west of Husted Road. The access on E Street would be restricted to right-turn movements only. The study area and location of the project site is shown in Figure 1.



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Traffic Impact Study for the Valley Ranch 3 Residential Subdivision

Figure 1 – Study Area and Existing Lane Configurations

Transportation Setting

Operational Analysis

Study Area and Periods

The study area for the operational analysis consists of the following intersections selected with input from City staff:

1. E Street/I-5 South Ramps
2. E Street/I-5 North Ramps
3. E Street/Marguerite Street
4. E Street/Project Street (Project Conditions only)

Operating conditions during the weekday a.m. and p.m. peak periods were evaluated to capture the highest potential volumes for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute.

Study Intersections

The orientation of the roadways in the study area are skewed from true north-south and east-west so for the purposes of this analysis E Street was considered to run east-west and the cross streets north-south.

E Street/I-5 South Ramps is stop-controlled on the southbound off-ramp approach, which is flared and provides additional space for vehicles attempting to make a right turn onto E Street to queue aside left-turning traffic. The south leg is an on-ramp to I-5 South. A crosswalk is marked on the south leg of the intersection.

E Street/I-5 North Ramps is stop-controlled on the northbound off-ramp approach, which is flared and provides additional space for vehicles attempting to make a right turn onto E Street to stack beside traffic turning left. The north leg is an on-ramp to I-5 North.

E Street/Marguerite Street is an all-way stop-controlled intersection with solar-powered blinking STOP signage on the E Street approaches. Crosswalks are striped on all four legs and curb ramps are present on all four street corners, including directional ramps on the southwest and southeast corners. Class II bike lanes are striped on the north leg.

The locations of the study intersections and the existing lane configurations and controls are shown in Figure 1.

Study Roadway

E Street runs mostly east-west between SR-20 on the west and Husted Road on the east. Along the project frontage E Street consists of two 12-foot travel lanes and there is a right-turn lane and an acceleration lane serving the Colusa County Office of Education driveway. The roadway has a posted speed limit of 25 miles per hour (mph). Based on traffic data collected on April 13, 2021, the section of E Street between Marguerite Street and Husted Road has an average daily traffic (ADT) volume of 2,260 vehicles.

Collision History

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California Highway Patrol (CHP) as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is January 1, 2016 through December 31, 2020.

As presented in Table 1, the calculated collision rates for the study intersections were compared to average collision rates for similar facilities statewide, as indicated in *2016 Collision Data on California State Highways*, California Department of Transportation (Caltrans). These average rates statewide are for intersections in the same environment (urban, suburban, or rural), with the same number of approaches (three or four), and the same controls (all-way stop, one- or two-way stop, or traffic signal). Given that the collision rates for E Street/I-5 South Ramps and E Street/Marguerite Street are less than the statewide averages for similar facilities, these intersections appear to be generally operating safely. The intersection of E Street/I-5 North Ramps had a calculated collision rate above the statewide average so the collisions that occurred at this location were further reviewed, as discussed below. The collision rate calculations are provided in Appendix A.

Table 1 – Collision Rates for the Study Intersections

Study Intersection	Number of Collisions (2016-2020)	Calculated Collision Rate (c/mve)	Statewide Average Collision Rate (c/mve)
1. E St/I-5 South Ramps	1	0.06	0.08
2. E St/I-5 North Ramps	2	0.13	0.08
3. E St/Marguerite St	0	0.00	0.13

Note: c/mve = collisions per million vehicles entering

Because it had an above-average collision rate, the intersection of E Street/I-5 North Ramps was evaluated further. The two crashes included a sideswipe and a rear end. With no clear pattern and a rate that is only nominally above the average, the intersection appears to be operating within accepted parameters.

Alternative Modes

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. A connected sidewalk network is provided on both sides of E Street between Marguerite Street and Vann Street. To the west of Vann Street, there is a sidewalk on the south side of E Street that connects to the Downtown area. The project frontage is currently unimproved, though a sidewalk was recently constructed on the south side of E Street along the Stony Creek Senior Apartments frontage to the west of the project site. Sidewalks are also provided on the north side of E Street between Marguerite Street and the California Highway Patrol (CHP) offices, the east side of Marguerite Street to the north of E Street, and on both sides of Marguerite Street to the south of E Street.

Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2017, classifies bikeways into four categories:

- **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.

- **Class II Bike Lane** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** – signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

There are existing Class II bike lanes on Marguerite Street between E Street and SR 20 and plans to provide future Class II bicycle lanes on E Street between 7th Street and Husted Road, which encompasses the project frontage, as well as on the section of Husted Road within City Limits, as identified in the City's General Plan.

Transit Facilities

Transit service in the City of Williams and throughout Colusa County is provided by the Colusa County Transit Agency (CCTA). CCTA is a dial-a-ride system with fixed time routes to eight cities and communities within Colusa County: Colusa, Williams, Arbuckle, Maxwell, Princeton, Grimes, Sites, and Stonyford. Six buses operate on multiple routes from Monday through Sunday. Reservations are required to use the service. Out-of-county medical transportation is also provided on an on-call basis. There is an existing transit stop on Marguerite Street just south of E Street, which is within walking distance of the project site. The transit stop is equipped with a bench and overhead shelter.

Capacity Analysis

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2018. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

The Levels of Service for the intersections with side street stop controls, or those which are unsignalized and have one approach stop controlled, were analyzed using the "Two-Way Stop-Controlled" intersection capacity method from the HCM. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall average delay for the intersection.

The study intersections with stop signs on all approaches were analyzed using the "All-Way Stop-Controlled" Intersection methodology from the HCM. This methodology evaluates delay for each approach based on turning movements, opposing and conflicting traffic volumes, and the number of lanes. Average vehicle delay is computed for the intersection as a whole and is then related to a Level of Service.

Three of the study intersections are planned to be controlled by a traffic signal, as identified in the City's General Plan, so were evaluated using the signalized methodology from the HCM under Future Conditions. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether the signals are coordinated or not, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology. For purposes of this study, delays were calculated using optimized signal timing.

The ranges of delay associated with the various levels of service are indicated in Table 2.

Table 2 – Intersection Level of Service Criteria			
LOS	**Two-Way Stop-Controlled**	**All-Way Stop-Controlled**	**Signalized**
A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.	Delay of 0 to 10 seconds. Upon stopping, drivers are immediately able to proceed.	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
B	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.	Delay of 10 to 15 seconds. Drivers may wait for one or two vehicles to clear the intersection before proceeding from a stop.	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
C	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.	Delay of 15 to 25 seconds. Drivers will enter a queue of one or two vehicles on the same approach and wait for vehicle to clear from one or more approaches prior to entering the intersection.	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.	Delay of 25 to 35 seconds. Queues of more than two vehicles are encountered on one or more approaches.	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.	Delay of 35 to 50 seconds. Longer queues are encountered on more than one approach to the intersection.	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.	Delay of more than 50 seconds. Drivers enter long queues on all approaches.	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Reference: *Highway Capacity Manual*, 6th Edition, Transportation Research Board, 2018

Traffic Operation Standards

City of Williams

As stated in Policy 8.p of the *City of Williams 2010 General Plan*, the City strives to maintain LOS D or better operation for all roadways and intersections, except within the Downtown area where LOS E is considered acceptable. Exceptions to the LOS standards may be considered by the City Council where a lower LOS would result in clear public benefit. Such circumstances include, but are not limited to, if improvements necessary to achieve the LOS standard result in an impact to a unique historic resource or a highly sensitive environmental area; require infeasible right-of-way acquisition; some other unusual physical constraint exists; or if there are overriding economic or social circumstances.

As clarified in the *City of Williams General Plan Update – Final Environmental Impact Report* (EIR), the City's LOS standard is applied to the overall operation of all-way stop-controlled and signalized intersections and to the

worst-case movement on the stop-controlled approach(es) at two-way stop-controlled intersections. A project would have an adverse effect on the surrounding transportation system if it would cause any study intersection to exceed the acceptable threshold for the facility.

Caltrans

Caltrans does not have a standard of significance relative to operation as this is no longer a CEQA issue. The new *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (TISG), published in May 2020, replaced the *Guide for the Preparation of Traffic Impact Studies*, 2002. As indicated in the TISG, the Department is transitioning away from requesting LOS or other vehicle operations analyses of land use projects and will instead focus on Vehicle Miles Traveled (VMT). The City's standard of LOS D for the worst-case movement was therefore applied to the intersections of E Street with the I-5 North and South Ramps since Caltrans no longer has a standard of significance for traffic operations.

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the weekday a.m. and p.m. peak periods. This condition does not include project-generated traffic volumes. Volume data was collected in April 2021 during a typical weekday. It should be noted that although the COVID-19 public health pandemic was ongoing in the state of California, there were no stay-at-home orders active in Colusa County when the counts were collected and City staff indicated that they believed that traffic volumes in the study area were at or near pre-pandemic levels. Peak hour factors (PHFs) were calculated based on the counts obtained and used in the analysis.

Under Existing Conditions, all three study intersections operate acceptably based on the City standard applied. The existing traffic volumes are shown in Figure 2. A summary of the intersection Level of Service calculations is contained in Table 3 and copies of the Level of Service calculations for all scenarios are provided in Appendix B.

Table 3 – Existing Peak Hour Intersection Levels of Service

Study Intersection		**AM Peak**		**PM Peak**	
	Worst-Case Movement for Approach	**Delay**	**LOS**	**Delay**	**LOS**
1.	E St/I-5 South Ramps	1.7	A	2.2	A
	Southbound (I-5 South off-ramp) Left Turn	*15.4*	*C*	*19.4*	*C*
2.	E St/I-5 North Ramps	3.1	A	3.6	A
	Northbound (I-5 North off-ramp) Left Turn	*17.2*	*C*	*21.3*	*C*
3.	E St/Marguerite St	8.0	A	8.3	A

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for worst-case movements on minor approaches to two-way stop-controlled intersections are indicated in *italics*

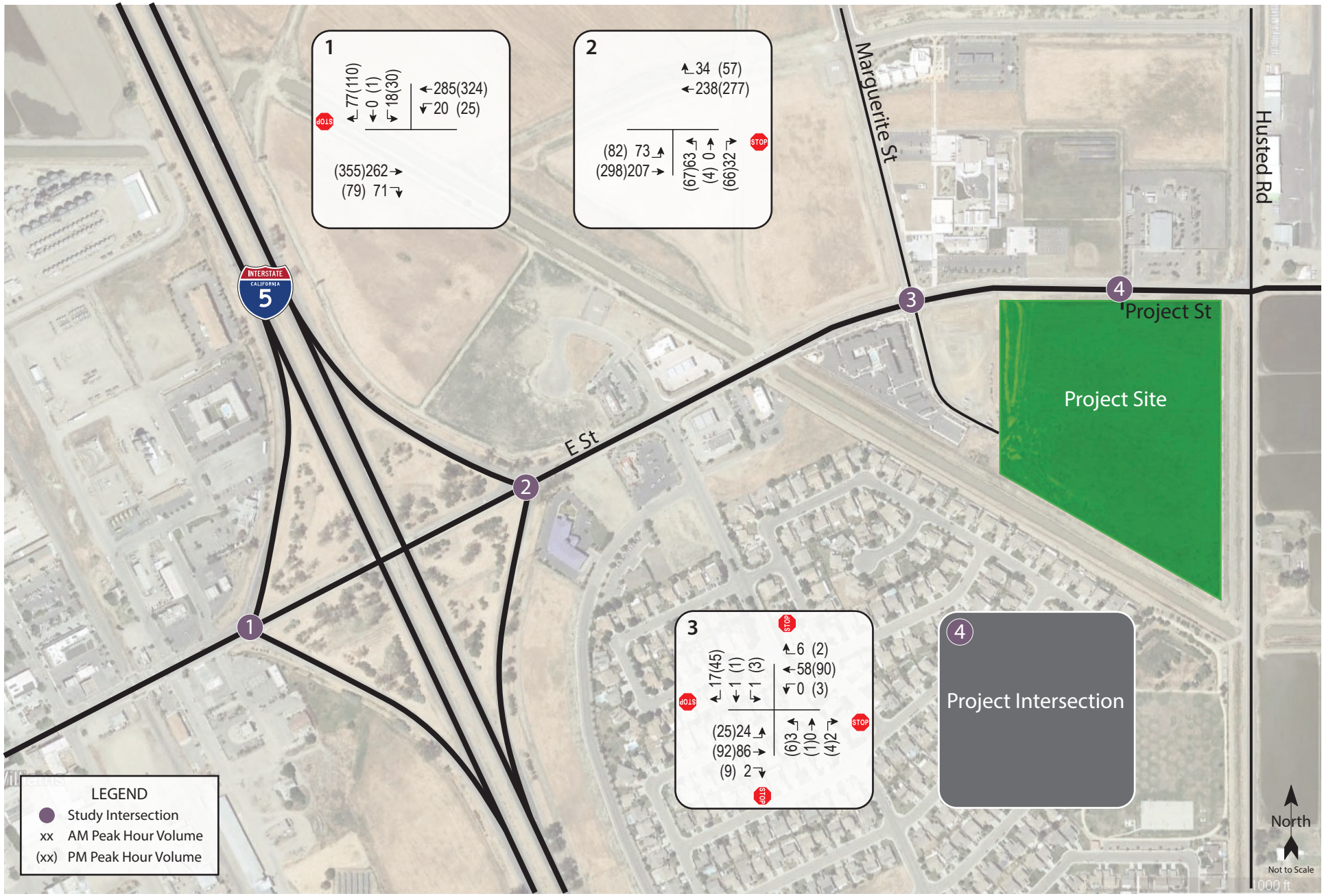

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Figure 2 – Existing Traffic Volumes

Baseline Conditions

Baseline operating conditions were assessed to determine conditions that could be expected in the next two to five years upon completion of pending projects in the study area added to the Existing volumes. As directed by staff, traffic from the pending Valley Ranch 4 Commercial Development was included in the evaluation of Baseline Conditions. This project includes development of 12 commercial lots that would be accessed from an extension of Vann Street on the north side of E Street and is envisioned to include 169,030 square feet of various commercial and retail uses. As documented in the *Transportation Impact Study for the Valley Ranch 4 Commercial Development*, W-Trans, 2021, the project is expected to generate an average of 11,142 new trips on local streets per day most of which would be diverted from I-5, including 1,052 trips during the a.m. peak hour and 724 trips during the p.m. peak hour.

Upon adding trips from the commercial development to Existing volumes, the E Street/Marguerite Street intersection is expected to continue operating at acceptable service levels. The southbound approach at E Street/I-5 South Ramps and northbound approach at E Street/I-5 North Ramps would experience increased delays and deteriorate to LOS F operation during both peak hours. The minor street delays at E Street/I-5 South Ramps would exceed the theoretical upper limit of the HCM methodology. These results are summarized in Table 4 and Baseline volumes are shown in Figure 3.

Table 4 – Baseline Peak Hour Intersection Levels of Service

Study Intersection		AM Peak		PM Peak	
	Worst-case Movement for Approach	**Delay**	**LOS**	**Delay**	**LOS**
1.	E St/I-5 South Ramps	**	**F**	**98.7**	**F**
	Southbound (I-5 South off-ramp) Left Turn	**	***F***	**	***F***
	With Traffic Signal	12.3	B	11.2	B
2.	E St/I-5 North Ramps	7.5	A	7.3	A
	Northbound (I-5 North off-ramp) Left Turn	***55.4***	***F***	***53.8***	***F***
	With Traffic Signal	13.1	B	10.4	B
3.	E St/Marguerite St	8.5	A	8.7	A

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for worst-case movements on minor approaches to two-way stop-controlled intersections are indicated in *italics;* ** = delay greater than 120 seconds; **Bold** text = deficient operation; Shaded cells = conditions with planned improvements per the General Plan

With the planned signalization of the I-5 North and South Ramps, as further discussed for Future Conditions, the intersections would operate acceptably.

Future Conditions (Without Project)

Future a.m. and p.m. peak hour volume projections were taken from the General Plan Buildout analysis contained in the *City of Williams General Plan Update – Final Environmental Impact Report* (EIR); this scenario represents cumulative traffic conditions that would be expected upon buildout of the land uses identified in the General Plan. Because the proposed project is consistent with the General Plan zoning for the project site, in order to avoid double counting project volumes, trips from the proposed project were subtracted from the anticipated buildout volumes in order to determine volumes and resulting operating conditions that would be expected without development of the proposed project. As identified in the General Plan EIR analysis, the following improvements would be needed to support the anticipated buildout volumes:

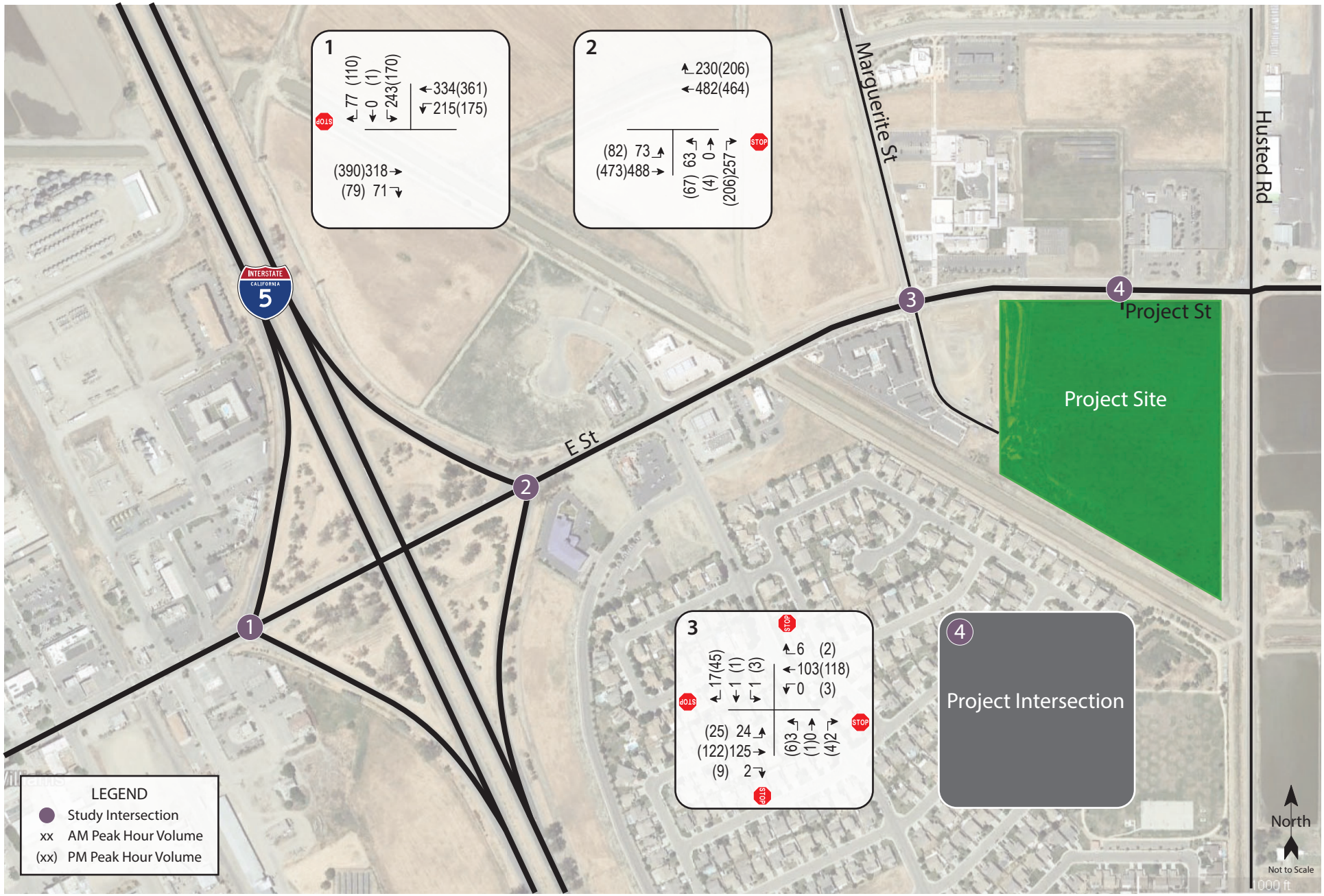

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Figure 3 – Baseline Traffic Volumes

W-Trans

E Street/I-5 South Ramps

- Signalize the intersection
- Widen E Street to provide two lanes in each direction plus a westbound left-turn lane

E Street/I-5 North Ramps

- Signalize the intersection
- Widen E Street to provide two lanes in each direction pus an eastbound left-turn lane

E Street/Marguerite Street

- Signalize the intersection
- Northbound Approach: One left and one shared through-right lane
- Southbound Approach: One left and one shared through-right lane
- Eastbound Approach: One left turn lane, one through lane, and one shared through-right lane
- Westbound Approach: One left turn lane, one through lane, and one shared through-right lane

With these planned improvements, all three study intersections would be expected to operate acceptably at LOS B during both peak hours. Future volumes are shown in Figure 4 and operating conditions with the planned intersection improvements are summarized in Table 5.

Table 5 – Future Peak Hour Intersection Levels of Service

Study Intersection	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. E St/I-5 South Ramps	15.6	B	15.3	B
2. E St/I-5 North Ramps	13.9	B	10.2	B
3. E St/Marguerite St	15.1	B	15.6	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Roundabout Consideration

It should be noted that while the City's General Plan has identified traffic signals for the intersections of E Street with the I-5 North and South Ramps, the General Plan was completed prior to the implementation of Caltrans' Traffic Operations Policy Directive 13-02, Intersection Control Evaluation (ICE) in 2013. This policy mandates that before controls can be changed for an intersection located on a State facility, an ICE must be performed to explore and evaluate various controls types, such as modern roundabouts, in additional to traffic signals. Therefore, before traffic signals could be installed at the ramp terminals, an ICE would need to be prepared.

City staff has also indicated interest in using a modern roundabout at the E Street/Marguerite Street intersection rather than a traffic signal. Single-lane modern roundabouts can outperform traffic signals in terms of the average delay per vehicle when installed at locations with a daily volume entering of up to about 20,000 vehicles and also provide the added benefit of reducing vehicle speeds and greenhouse gas emissions and improving safety. Drawbacks to roundabouts include being generally much more expensive to construct than a traffic signal and occupying more physical space, typically requiring some amount of right-of-way acquisition in urban settings. However, the cost differential between roundabouts and traffic signals does begin to narrow once construction is finished as traffic signals cost more money to maintain annually when considering the costs of materials, electricity, and labor for maintenance technicians.

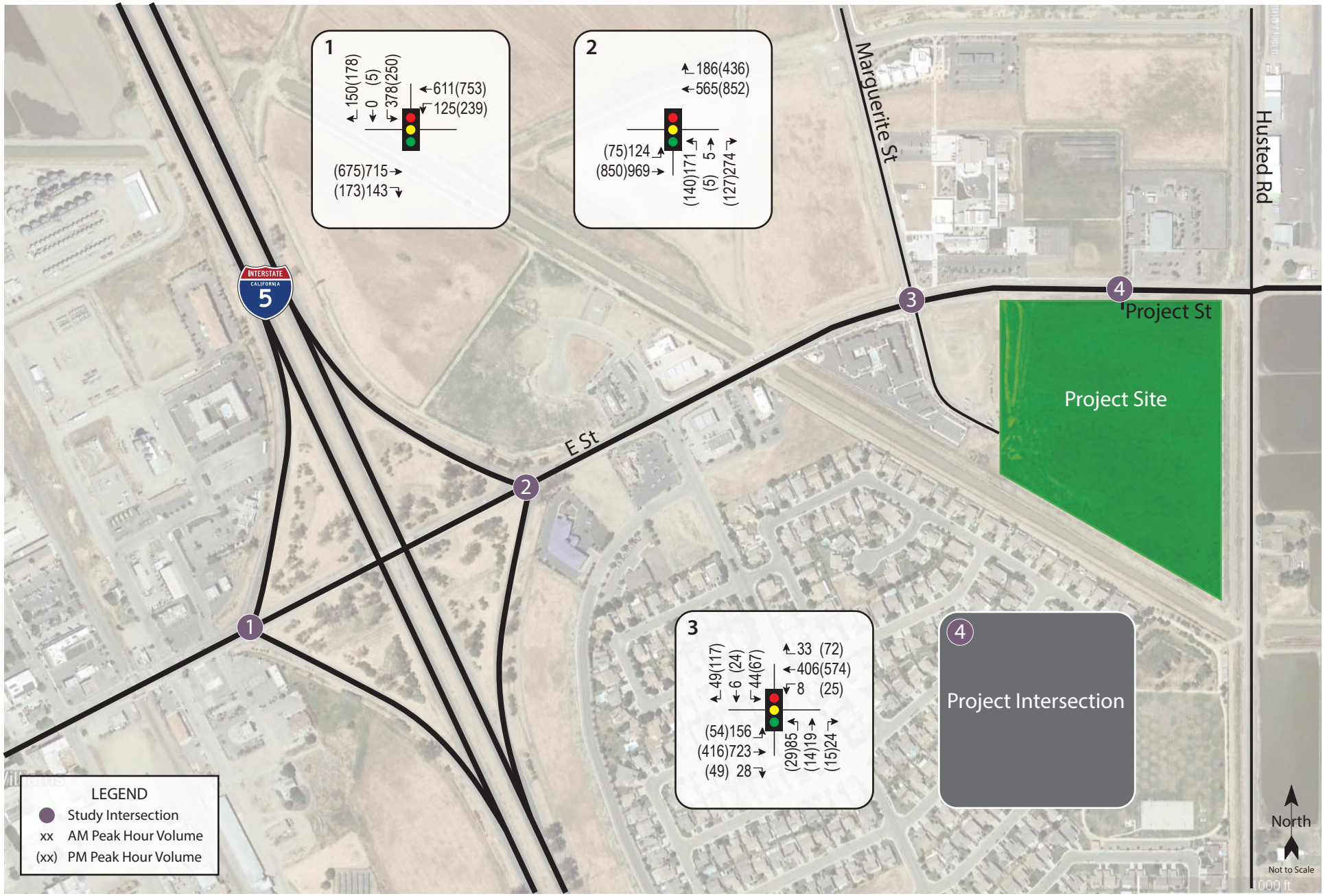

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Figure 4 – Future Traffic Volumes

W-Trans

There are no existing traffic signals in the City of Williams so there are no signal technicians on staff or budget for signal maintenance; therefore, staff would prefer to implement roundabouts wherever feasible. Based on a review of the cumulative volumes anticipated at each of the intersections slated for traffic signals, it is likely that roundabouts would also be able to provide acceptable traffic operations, though an ICE would need to be prepared for the I-5 Ramp intersections and a feasibility study should be prepared for E Street/Marguerite Street. To be consistent with the City's General Plan and the development impact fee program, traffic signals were assumed to be the future control types at the study intersections for the purposes of this analysis, though it is recommended that modern roundabouts also be considered before initiating the design of traffic signals.

Project Description

The proposed project includes the development of 103 market-rate single-family residences on a vacant approximately 17.3-acre parcel east of I-5 and south of E Street in the City of Williams. The project site would be accessed from an extension of Marguerite Street to the southeast from its current terminus at Alta Lane and a new connection to E Street approximately 350 feet west of Husted Road. The proposed project site plan is shown in Figure 5.

Trip Generation

The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 10th Edition, 2017 for "Single-Family Detached Housing" (Land Use #210). Based on application of these rates, the project would be expected to generate an average of 963 trips per day, including 76 trips during the weekday a.m. peak hour and 102 trips during the weekday p.m. peak hour. These results are summarized in Table 6.

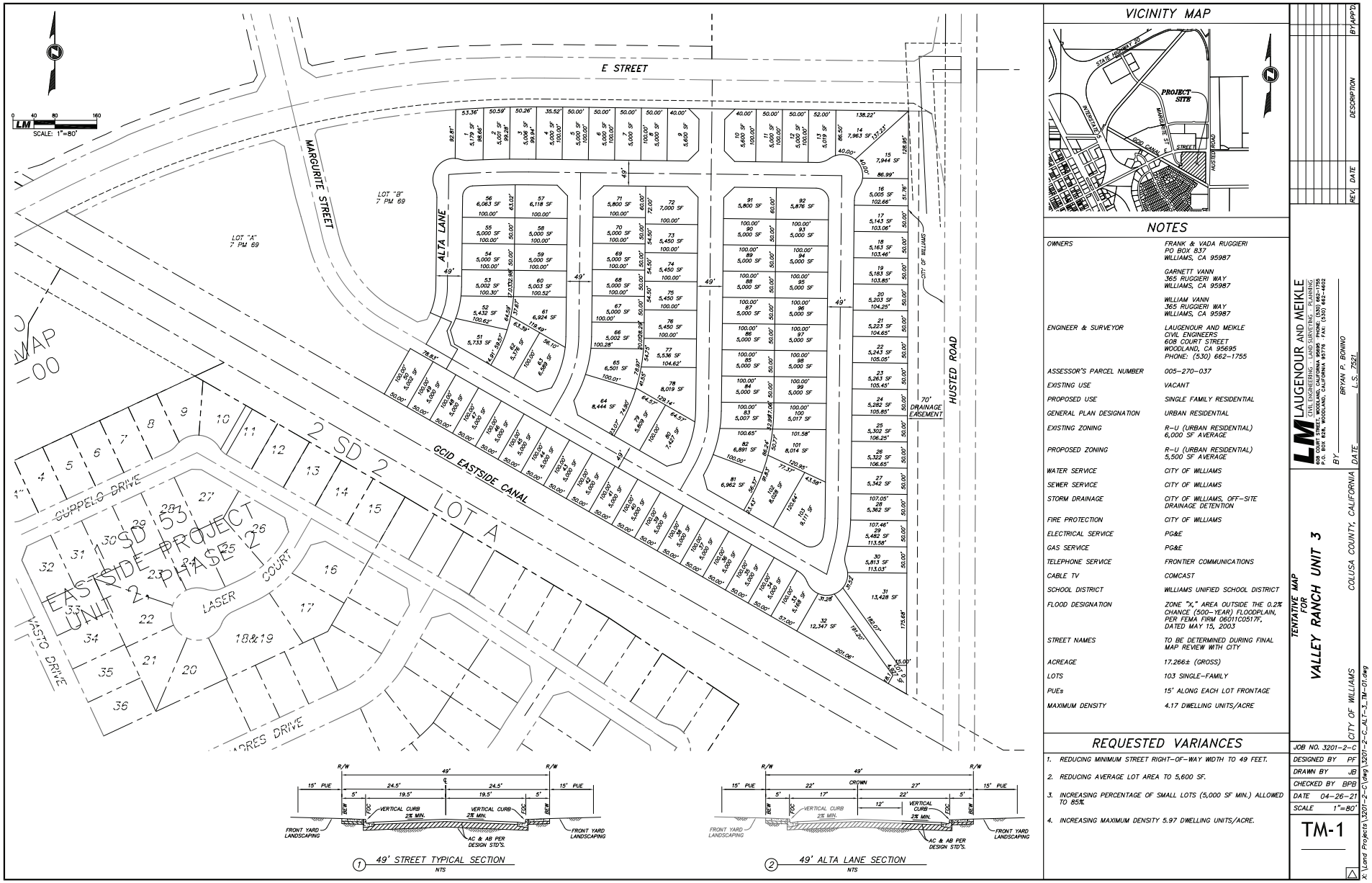
Table 6 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Single-Family Housing	103 du	9.44	972	0.74	76	19	57	0.99	102	64	38

Note: du = dwelling unit

Trip Distribution

The pattern used to allocate new project trips to the surrounding street network was determined based on familiarity with travel patterns in the area and likely origins and destinations for residents of the project. It is likely that many residents would work in Williams, Willows, Colusa, Yuba City, Woodland, and the surrounding agriculture lands. The applied trip distribution assumptions are shown in Table 7. Based on the proposed restriction of the access point on E Street to right turns only, all trips to the west and from the east were assumed to occur at the Marguerite Street intersection.



VICINITY MAP

NOTES

OWNERS	FRANK & VADA RUGGIERI PO BOX 837 WILLIAMS, CA 95987 GARNETT VANN 365 RUGGIERI WAY WILLIAMS, CA 95987 WILLIAM VANN 365 RUGGIERI WAY WILLIAMS, CA 95987
ENGINEER & SURVEYOR	LAUGENOUR AND MEIKLE CIVIL ENGINEERS 608 COURT STREET WOODLAND, CA 95695 PHONE: (530) 662-1755
ASSESSOR'S PARCEL NUMBER	005-270-037
EXISTING USE	VACANT
PROPOSED USE	SINGLE FAMILY RESIDENTIAL
GENERAL PLAN DESIGNATION	URBAN RESIDENTIAL
EXISTING ZONING	R-U (URBAN RESIDENTIAL) 6,000 SF AVERAGE
PROPOSED ZONING	R-U (URBAN RESIDENTIAL) 5,500 SF AVERAGE
WATER SERVICE	CITY OF WILLIAMS
SEWER SERVICE	CITY OF WILLIAMS
STORM DRAINAGE	CITY OF WILLIAMS, OFF-SITE DRAINAGE DETENTION
FIRE PROTECTION	CITY OF WILLIAMS
ELECTRICAL SERVICE	PG&E
GAS SERVICE	PG&E
TELEPHONE SERVICE	FRONTIER COMMUNICATIONS
CABLE TV	COMCAST
SCHOOL DISTRICT	WILLIAMS UNIFIED SCHOOL DISTRICT
FLOOD DESIGNATION	ZONE "X," AREA OUTSIDE THE 0.2% CHANCE (500-YEAR) FLOODPLAIN, PER FEMA FIRM 06011C0517F, DATED MAY 15, 2003
STREET NAMES	TO BE DETERMINED DURING FINAL MAP REVIEW WITH CITY
ACREAGE	17.266± (GROSS)
LOTS	103 SINGLE-FAMILY
PUEs	15' ALONG EACH LOT FRONTAGE
MAXIMUM DENSITY	4.17 DWELLING UNITS/ACRE

REQUESTED VARIANCES

1. REDUCING MINIMUM STREET RIGHT-OF-WAY WIDTH TO 49 FEET.
2. REDUCING AVERAGE LOT AREA TO 5,600 SF.
3. INCREASING PERCENTAGE OF SMALL LOTS (5,000 SF MIN.) ALLOWED TO 85%.
4. INCREASING MAXIMUM DENSITY 5.97 DWELLING UNITS/ACRE.

REV	DATE	DESCRIPTION	BY	APP'D

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 PHONE: (530) 662-1755
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BY _____ BRYAN P. BONINO
DATE _____ L.S. 7521

TENTATIVE MAP FOR
VALLEY RANCH UNIT 3
CITY OF WILLIAMS COLUSA COUNTY, CALIFORNIA

JOB NO.	3201-2-C
DESIGNED BY	PF
DRAWN BY	JB
CHECKED BY	BPB
DATE	04-26-21
SCALE	1"=80'

TM-1

X:\Land Projects\3201-2-C\dwg\3201-2-C_ALT-3_TM-01.dwg

Source: Laugenour and Meikle 11/8

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Traffic Impact Study for the Valley Ranch 3 Residential Subdivision

Figure 5 – Site Plan

Table 7 – Trip Distribution Assumptions	
Route	**Percent**
To/from I-5 North of E St	15
To/from I-5 South of E St	40
To/from E St West of I-5	25
To/from E St East of Project	20
TOTAL	**100%**

Intersection Operation

Existing plus Project Conditions

Upon the addition of project-related traffic to the Existing volumes, the study intersections are expected to continue operating acceptably at the same service levels during both peak hours as under Existing Conditions. These results are summarized in Table 8 and Project traffic volumes are shown in Figure 6.

Table 8 – Existing and Existing plus Project Peak Hour Intersection Levels of Service

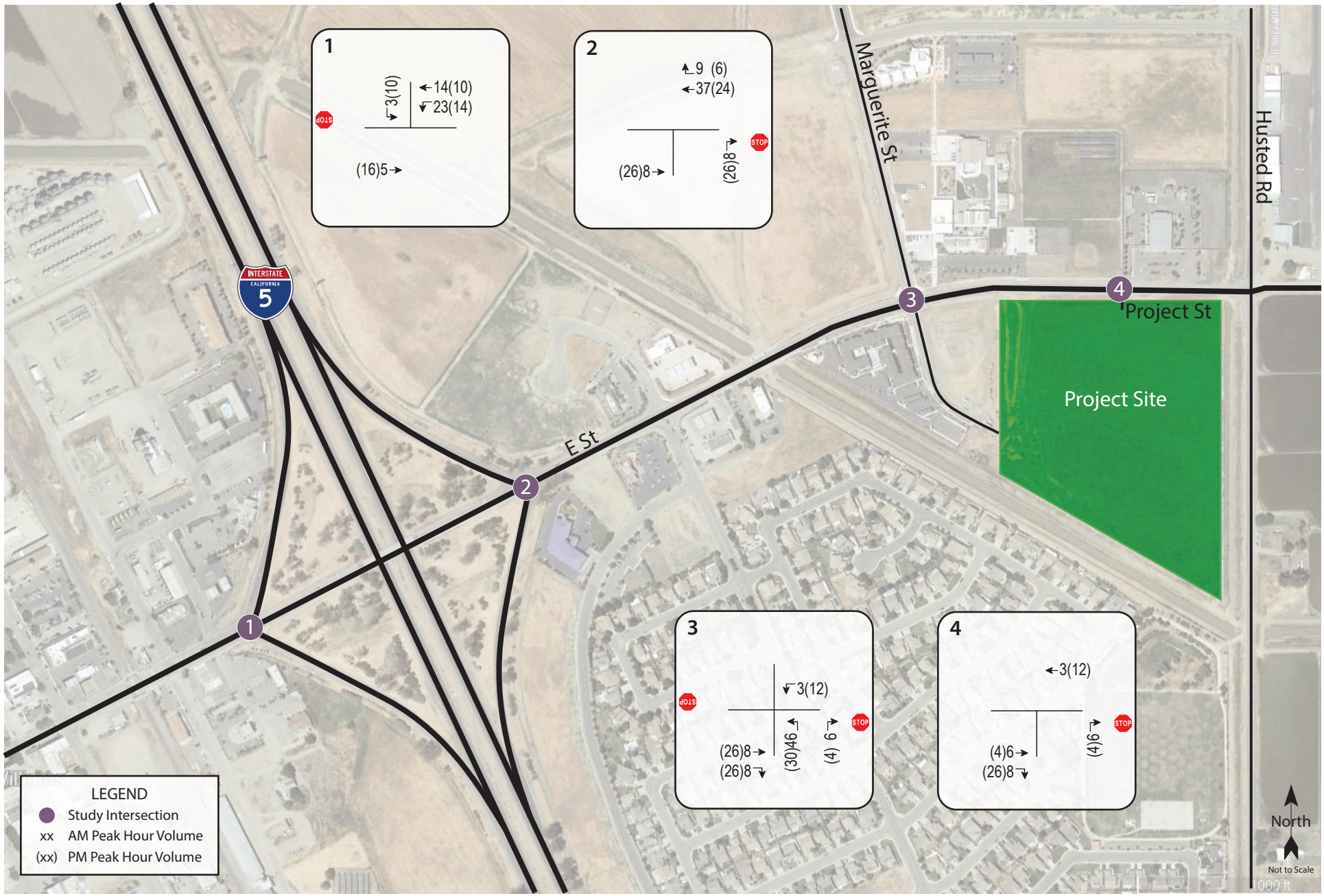
Study Intersection		**Existing Conditions**				**Existing plus Project**			
	Worst-case Movement for Approach	**AM Peak**		**PM Peak**		**AM Peak**		**PM Peak**	
		Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1.	E St/I-5 South Ramps	1.7	A	2.2	A	2.0	A	2.5	A
	SB (I-5 off-ramp) Left Turn	*15.4*	*C*	*19.4*	*C*	*16.8*	*C*	*21.0*	*C*
2.	E St/I-5 North Ramps	3.1	A	3.6	A	3.1	A	3.8	A
	NB (I-5 off-ramp) Left Turn	*17.2*	*C*	*21.3*	*C*	*18.4*	*C*	*22.8*	*C*
3.	E St/Marguerite St	8.0	A	8.3	A	8.4	A	8.6	A
4.	E St/Project St	-	-	-	-	0.3	A	0.2	A
	NB (Project St) Right Turn	-	-	-	-	*8.8*	*A*	*8.9*	*A*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for worst-case movements on minor approaches to two-way stop-controlled intersections are indicated in *italics*; NB = Northbound; SB = Southbound

Finding – Upon the addition of project-generated trips the Existing volumes, the study intersections are expected to continue operating acceptably at the same Levels of Service as without project trips; the project's effect on operation of the surrounding roadway network is therefore considered acceptable.

Baseline plus Project Conditions

With project-related traffic added to Baseline volumes, the study intersections are expected to continue operating at the same Levels of Service as without project traffic; both of the I-5 intersections would continue to operate unacceptably, and the Marguerite Street intersection would continue to operate acceptably. With the planned improvements outlined in the General Plan, including signalization and geometric modifications, both of the I-5 intersections would operate acceptably at LOS B during both peak hours. Because these intersections would operate acceptably with project traffic but without traffic from the pending commercial development, as



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Traffic Impact Study for the Valley Ranch 3 Residential Subdivision

Figure 6 – Project Traffic Volumes

shown under Existing plus Project Conditions, the project's effect on operation of the surrounding roadway network would be considered acceptable. The need for improvements at the I-5 intersections is due to the addition of traffic from the commercial development, not the proposed residential subdivision. These results are summarized in Table 9.

Table 9 – Baseline and Baseline plus Project Peak Hour Intersection Levels of Service

	Study Intersection	**Baseline Conditions**				**Baseline plus Project**			
	Worse-case Movement for Approach	**AM Peak**		**PM Peak**		**AM Peak**		**PM Peak**	
		Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1.	E St/I-5 South Ramps	**	**F**	**98.7**	**F**	**	**F**	**	**F**
	Southbound (I-5 off-ramp) Left Turn	**	***F***	**	***F***	**	***F***	**	***F***
	With Traffic Signal	12.3	B	11.2	B	12.5	B	11.5	B
2.	E St/I-5 North Ramps	7.5	A	7.3	A	8.9	A	9.0	A
	Northbound (I-5 off-ramp) Left Turn	***55.4***	***F***	***53.8***	***F***	***65.9***	***F***	***63.8***	***F***
	With Traffic Signal	13.1	B	10.4	B	14.0	B	11.1	B
3.	E St/Marguerite St	8.5	A	8.7	A	8.9	A	9.0	A
4.	E St/Project St	-	-	-	-	0.2	A	0.1	A
	Northbound (Project St) Right Turn	-	-	-	-	*9.0*	*A*	*9.0*	*A*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for worst-case movements on minor approaches to two-way stop-controlled intersections are indicated in *italics;* ** = delay greater than 120 seconds; **Bold** text = deficient operation; Shaded cells = conditions with General Plan improvements

Finding – The study intersections are expected to continue operating at the same Levels of Service upon the addition of project-generated traffic to Baseline volumes as without it. As identified in the General Plan, both of the I-5 intersections with E Street would need to be signalized, though because the intersections would operate acceptably without traffic from the pending Valley Ranch Unit 4 commercial project, the proposed project's effect on operation of the surrounding roadway network would be considered acceptable.

Future plus Project (Buildout) Conditions

Under volumes anticipated upon buildout of the City's General Plan which includes project traffic volumes, and with the planned intersection improvements including signalization, the study intersections are expected to operate acceptably. The Future plus Project operating conditions are summarized in Table 10.

Table 10 – Future and Future plus Project Peak Hour Intersection Levels of Service									
Study Intersection		**Future (Without Project)**				**Future plus Project (Buildout)**			
	Worst-case Movement for Approach	**AM Peak**		**PM Peak**		**AM Peak**		**PM Peak**	
		Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1.	E St/I-5 South Ramps	15.6	B	15.3	B	16.1	B	16.5	B
2.	E St/I-5 North Ramps	13.9	B	10.2	B	14.2	B	11.3	B
3.	E St/Marguerite St	15.1	B	15.6	B	15.1	B	15.6	B
4.	E St/Project St	-	-	-	-	0.1	A	0.1	A
	Northbound (Project St) Right Turn	-	-	-	-	*14.5*	*B*	*11.5*	*B*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for worst-case movement on minor approaches to two-way stop-controlled intersections are indicated in *italics*

Finding – Under the anticipated buildout volumes, and with the planned circulation improvements identified in the General Plan, the study intersections are expected to operate acceptably and the project's long-term effect on operation of the surrounding roadway network would be considered acceptable.

Recommendation – To offset the cumulative effects of project traffic and help fund the planned circulation improvements identified in the General Plan, the applicant should pay the required development impact fees. Before traffic signals can be installed at the I-5 ramp terminals, an ICE needs to be performed, as required by Caltrans, to confirm the appropriate control type. Additionally, a feasibility study should be performed if staff wants to pursue a roundabout at E Street/Marguerite Street.

Alternative Modes

Pedestrian Facilities

As shown on the site plan, sidewalks would be provided on all project streets within the site and along the project frontage on E Street, which would effectively link the project site to the surrounding pedestrian network. Residents would be able to walk between the site and transit access, the surrounding commercial uses to the west, the Downtown area, the nearby Colusa County Office of Education, and other residential neighborhoods. To facilitate access along the project frontage, it is recommended that a marked crosswalk be provided on the southern leg of the new intersection created by the project street at E Street. Additionally, all new curb ramps should comply with current Americans with Disability Act (ADA) design standards.

Finding – As proposed, access for pedestrians would be adequate.

Recommendation – The E Street/Project Street intersection should include a crosswalk with ADA-compliant curb ramps on the southern leg. All new curb ramps within the subdivision should comply with ADA standards.

Bicycle Facilities

Existing and planned bicycle facilities together with shared use of minor streets provide adequate access for bicyclists. The project frontages on E Street and Husted Road should be designed to accommodate the planned future installation of Class II bike lanes on these roadways and adequate right-of-way should be dedicated to the City for these improvements, if not already available. No dedicated bicycle parking would need to be provided for the project since each residence would have a private garage.

Finding – Bicycle facilities serving the project site are adequate and would be further improved upon completion of planned bicycle improvements in the vicinity.

Recommendation – The project frontages on E Street and Husted Road should be designed to accommodate the planned future installation of Class II bike lanes and adequate right-of-way should be dedicated to the City for these improvements, if not already available.

Transit

Existing transit facilities are adequate considering the existing transit stop near the Marguerite Street/E Street intersection is within walking distance of the project site, though the project is not anticipated to generate many transit trips given the vehicle-centric travel patterns of Colusa County.

Finding – Access to transit is adequate.

Vehicle Miles Traveled

Background and Threshold of Significance

Senate Bill (SB) 743 established a change in the metric to be applied for determining transportation impacts associated with development projects. Rather than the delay-based criteria associated with a Level of Service analysis, the increase in Vehicle Miles Traveled (VMT) as a result of a project is now the basis for determining California Environmental Quality Act (CEQA) impacts with respect to transportation and traffic. As of the date of this analysis, the City of Williams has not yet established thresholds of significance related to VMT nor is there a regional travel demand model that contains VMT information. As a result, the project-related VMT impacts were assessed qualitatively based on guidance provided by the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018. Under this guidance, residential developments that have a VMT per capita that is 15 percent or more below the existing countywide residential VMT per capita would have a less-than-significant transportation impact.

Project Assessment

The project site is within a walkable distance to surrounding commercial, residential, retail, and school land uses, being less than one-quarter of a mile from fast food restaurants and grocery stores and approximately one-half mile from the Downtown core. Further, there is a bus stop near the intersection of E Street/ Marguerite Street which is within one-quarter of a mile of the project site and there are plans to construct Class II bike lanes on E Street and Husted Road, which would link the project site to the surrounding bicycle network. Given the general rural nature of the land use pattern throughout Colusa County, it is reasonable to expect the project to have a VMT that is below the countywide average per capita based on the proximity of the project site to other land uses and employment opportunities, access for bicyclists, and connectivity to public transit.

To minimize the potential for the project to have an impact on VMT, transportation demand management (TDM) measures can be implemented to further reduce the need for vehicle travel by residents of the proposed project. The VMT associated with a development project is influenced by numerous factors, including proximity to other land uses. The publication *Quantifying Greenhouse Gas Mitigation Measures*, California Air Pollution Control Officers Association (CAPCOA), 2010 includes a review of TDM strategies that can be expected to reduce VMT in comparison with typical development practices in the area. The TDM measures described below are potential measures that would be expected to reduce VMT and are recommended for the proposed project.

Transportation Demand Management (TDM) Measures

The following section describes the recommended resident TDM program. It should be noted that although the great majority of VMT reduction can be achieved by focusing on residents alone, some TDM measures can be used by guests or visitors and can contribute in reducing impacts.

High Speed Internet to Support Remote Work

There are various terms used to describe non-standard working hours, but they all involve decreasing the number of vehicle trips to and from work. Telework (i.e. working from home) and compressed schedules (i.e. working more than eight hours each day and shortening the work week) are two of the most commonly employed. They are both effective at reducing vehicle trips to work and particularly so during peak commute hours, but it is uncertain whether they decrease the overall number of vehicle trips. In order to support telework opportunities for residents, it is recommended that the project provide infrastructure that supports high-speed internet access.

Homeowners' Association to Conduct Education, Outreach, and Marketing

Homeowners' Association

The establishment of a homeowners' association (HOA) would enable the project to include a program to provide information to encourage the use of alternative modes of transportation such as bicycling, walking, carpooling, remote work, and other strategies that would reduce vehicle trips. The HOA could setup a website where this information is posted and shared.

Welcome Packet for New Residents

New homeowners should be provided with a welcome packet containing relevant transportation information. The packet could include maps and information from Colusa County Transit Agency as well as points of interest in the vicinity that could be walked or biked to.

Monitor Performance

It is important to continually monitor the performance of a TDM program and adjust measures as necessary to ensure its success. The resident management organization should conduct mode split and vehicle miles traveled (VMT) surveys every other year to determine if adjustments are needed and to use as marketing material. Resident satisfaction surveys are also an effective way of ensuring a quality TDM program.

Finding – The proposed project site is located within an acceptable walking and biking distance of Downtown and other points of interest and would reasonably be expected to have a less-than-significant transportation impact on VMT with implementation of appropriate TDM measures.

Recommendation – The project should incorporate TDM measures identified in this report such as high-speed internet, a homeowner's association, and educational materials.

Access and Circulation

Site Access

The project would be accessed from an extension of Marguerite Street to the southeast from its current terminus at Alta Lane and a new connection to E Street approximately 350 feet west of Husted Road. The connection to E Street would be restricted to right-turn movements only both entering and exiting, which means that outbound trips to the west and inbound trips from the east would have to occur at the Marguerite Street intersection. Residents would be expected to use the access point closest to their home for inbound trips from the west and outbound trips to the east. The new project streets are proposed to have a typical width of 34 feet with on-street parking and five-foot sidewalks on both sides. It is recommended that the new project street approach to E Street be stop-controlled; the other intersections within the site could be uncontrolled as is typical for intersections of neighborhood streets with low speeds and volumes.

Recommendation – The intersections within the project site should be uncontrolled as is typical for neighborhood streets, though the intersection that the new project street would form with E Street should be stop-controlled on the northbound minor street approach.

Sight Distance

At unsignalized intersections a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time should be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed. Sight distances along E Street at the proposed location of the project street were evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distance at intersections of public streets is based on corner sight distances, with approach travel speed used as the basis for determining the recommended sight distance. For the posted speed limit of 25 mph on E Street, the minimum corner sight distance needed is 275 feet. Based on a review of field conditions, sight lines extend more than 275 feet to both the west and east, which is adequate for the posted speed limit, though it should be noted that only sight distance looking west is applicable since left turns would be prohibited. Additionally, as E Street is straight and flat adjacent to the site, sight lines are adequate for a following driver to notice and react to a preceding motorist slowing to turn right into the project site. Any new signage installed as part of the project should be placed outside of the vision triangles, which are denoted graphically in Plate 1. The Intersection Sight Distance (ISD) length should be a minimum of 275 feet.

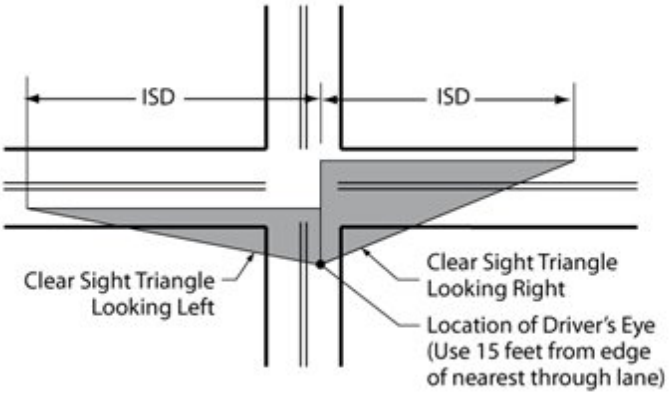

Plate 1 Vision Triangle Graphic

Finding – Sight lines on E Street at the project street are adequate to accommodate all turns into and out of the project site.

Recommendation – To maintain existing adequate sight lines, any new signage to be located near the intersection should be placed outside of the vision triangle of a driver waiting on the minor street.

Emergency Access

Emergency response vehicles would be able to access the site via either of the access points at the E Street/Marguerite Street intersection or the E Street/Project Street intersection so should one location be compromised in an emergency situation, responders could use the other location to access the property. All internal project streets are anticipated to be designed in accordance with City design standards; therefore, emergency access is expected to function acceptably.

Finding – Emergency access is expected to function acceptably.

Parking

The project site plan is still preliminary and as such no parking information is provided so the number of parking spaces that would be required per City Code was calculated. Jurisdiction parking supply requirements are based on the City of Williams Zoning Ordinance 17.02.090; Required Parking and Loading for Residential Uses. The Code requires single-family detached housing to provide parking at a rate of two spaces per dwelling unit. Based on this rate, a total of 206 parking spaces would be required for the project. Each residence is expected to have a two-car garage, which would satisfy City requirements and additional parking would be available on the neighborhood streets.

Recommendation – A minimum of two parking spaces should be provided per residence in order to meet the City's parking requirements.

Conclusions and Recommendations

Conclusions

- Two of the three study intersections have calculated collision rates that are lower than the statewide average. The remaining study intersection did not have any defined trend of collisions that would indicate a safety concern.

- The proposed project would be expected to generate an average of 963 trips per day, including 76 trips during the weekday a.m. peak hour and 102 trips during the weekday p.m. peak hour.

- Upon the addition of project-generated trips the Existing volumes, the study intersections are expected to continue operating acceptably at the same Levels of Service as without project trips and the project's effect on the surrounding roadway network is therefore considered acceptable.

- Under Baseline Conditions, which includes traffic from the pending Valley Ranch Unit 4 Commercial Development, the I-5 Ramp intersections would deteriorate to unacceptable service levels and the planned circulation improvements identified in the City's General Plan would be necessary to achieve acceptable operations. However, because the I-5 intersections would operate acceptably without traffic from the pending commercial project, the proposed project's effect on operation of the surrounding roadway network would be considered acceptable.

- Upon the addition of project-generated traffic to the anticipated Future volumes, and with the planned installation of traffic signals, the study intersections are expected to continue operating acceptably; therefore, the project's long-term effect on operation of the surrounding roadway network is considered acceptable.

- The project street intersection with E Street would operate acceptably during all evaluated scenarios with side-street stop controls.

- As shown on the site plan, sidewalks would be provided on all project streets within the site and along the project frontage on E Street, so pedestrian facilities would be adequate.

- Bicycle facilities serving the project site are adequate and would be further improved upon completion of planned bicycle improvements in the vicinity, including Class II bike lanes on E Street and Husted Road.

- The existing transit stop on Marguerite Street south of E Street is within walking distance of the project site and access for transit riders is therefore considered acceptable, though demand is expected to be minimal.

- The proposed project site is located within an acceptable walking and biking distance of Downtown and other points of interest and would reasonably be expected to have a less-than-significant transportation impact on VMT with implementation of the TDM measures identified in this report.

- Sight lines on E Street at the project street are adequate to accommodate right turns into and out of the project site.

- Emergency access is expected to function acceptably.

Recommendations

- To offset the cumulative effects of project traffic and help fund the planned circulation improvements identified in the General Plan, the applicant should pay the required development impact fees.

- City staff has expressed interest in modern roundabouts as alternatives to the planned future installation of traffic signals at the study intersections to support buildout of the General Plan; therefore, it is recommended that Intersection Control Evaluations (ICEs) be performed for the I-5 ramp terminals and a feasibility study be prepared for E Street/Marguerite Street to explore the suitability of roundabouts at these locations.

- The project should incorporate TDM measures identified in this report such as high-speed internet, a homeowner's association, and educational materials.

- The intersections within the project site should be uncontrolled as is typical for neighborhood streets, though the intersection that the new project street would form with E Street should be stop-controlled on the northbound minor street approach.

- To maintain existing adequate sight lines, any new signage, or other structures to be located near the intersection should be placed outside of the vision triangle of a driver waiting on the minor street.

- The E Street/Project Street intersection should include a crosswalk with ADA-compliant curb ramps on the southern leg. All new curb ramps within the subdivision should comply with ADA standards.

- The project frontages on E Street and Husted Road should be designed to accommodate the planned future installation of Class II bike lanes on these roadways and adequate right-of-way should be dedicated to the City for these improvements, if not already available.

- A minimum of two parking spaces should be provided per residence in order to meet the City's parking requirements.

Study Participants and References

Study Participants

Principal in Charge	Dalene J. Whitlock, PE, PTOE
Associate Engineer	Cameron Nye, EIT
Graphics	Cameron Wong
Editing/Formatting	Cameron Wong, Hannah Yung-Boxdell
Quality Control	Dalene J. Whitlock, PE, PTOE

References

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Appendix A

Collision Rate Calculations

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Intersection Collision Rate Worksheet

Valley Ranch Subdivision

Intersection # 1: E Street & I-5 South Ramps
Date of Count: Tuesday, April 13, 2021

Number of Collisions: 1
Number of Injuries: 0
Number of Fatalities: 0
Average Daily Traffic (ADT): 9200
Start Date: January 1, 2016
End Date: December 31, 2020
Number of Years: 5

Intersection Type: Tee
Control Type: Stop & Yield Controls
Area: Urban

$$\text{Collision Rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x Days per Year x Number of Years}}$$

$$\text{Collision Rate} = \frac{1 \times 1{,}000{,}000}{9{,}200 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.06 c/mve**	**0.0%**	**0.0%**
Statewide Average*	**0.08 c/mve**	**1.0%**	**45.1%**

Notes
ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2016 Collision Data on California State Highways, Caltrans

Intersection # 2: E Street & I-North Ramps
Date of Count: Tuesday, April 13, 2021

Number of Collisions: 2
Number of Injuries: 1
Number of Fatalities: 0
Average Daily Traffic (ADT): 8500
Start Date: January 1, 2016
End Date: December 31, 2020
Number of Years: 5

Intersection Type: Tee
Control Type: Stop & Yield Controls
Area: Urban

$$\text{Collision Rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x Days per Year x Number of Years}}$$

$$\text{Collision Rate} = \frac{2 \times 1{,}000{,}000}{8{,}500 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.13 c/mve**	**0.0%**	**50.0%**
Statewide Average*	**0.08 c/mve**	**1.0%**	**45.1%**

Notes
ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2016 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Worksheet

Valley Ranch Subdivision

Intersection # 3: E Street & Marguerite Street
Date of Count: Tuesday, April 13, 2021

Number of Collisions: 0
Number of Injuries: 0
Number of Fatalities: 0
Average Daily Traffic (ADT): 2800
Start Date: January 1, 2016
End Date: December 31, 2020
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Stop & Yield Controls
Area: Urban

$$\text{Collision Rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x Days per Year x Number of Years}}$$

$$\text{Collision Rate} = \frac{0 \times 1{,}000{,}000}{2{,}800 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.00 c/mve**	**0.0%**	**0.0%**
Statewide Average*	**0.13 c/mve**	**1.1%**	**43.8%**

Notes
ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2016 Collision Data on California State Highways, Caltrans

Appendix B

Intersection Level of Service Calculations

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Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	5	0	21	0	70	19	5	77	0
Total Analysis Volume [veh/h]	0	0	0	19	0	83	0	282	76	22	306	0
Pedestrian Volume [ped/h]	3			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.05	0.00	0.11	0.00	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.40	15.78	10.41	0.00	0.00	0.00	8.07	0.00	0.00
Movement LOS				C	C	B		A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.38	0.38	0.38	0.00	0.00	0.00	0.06	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	9.53	9.53	9.53	0.00	0.00	0.00	1.41	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			11.34			0.00			0.54		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	1.69											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Two-way stop	Delay (sec / veh):	17.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.203

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	9	0	0	0	20	58	0	0	66	9
Total Analysis Volume [veh/h]	70	0	36	0	0	0	81	230	0	0	264	38
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.00	0.04	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.22	17.26	11.20	0.00	0.00	0.00	8.06	0.00	0.00	0.00	0.00	0.00
Movement LOS	C	C	B				A	A			A	A
95th-Percentile Queue Length [veh/ln]	0.76	0.76	0.76	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	18.88	18.88	18.88	0.00	0.00	0.00	5.15	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.17			0.00			2.10			0.00		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	3.14											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	All-way stop	Delay (sec / veh):	8.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.132

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	3	0	2	1	1	17	24	86	2	0	58	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	0	2	1	1	17	24	86	2	0	58	6
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	0	0	5	7	25	1	0	17	2
Total Analysis Volume [veh/h]	3	0	2	1	1	20	28	100	2	0	67	7
Pedestrian Volume [ped/h]	2			2			3			0		

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Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	721	647	817	685	757	889	741	741	866
Degree of Utilization, x	0.01	0.00	0.03	0.04	0.13	0.00	0.00	0.09	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.02	0.00	0.08	0.13	0.45	0.01	0.00	0.30	0.02
95th-Percentile Queue Length [ft]	0.52	0.12	1.98	3.19	11.34	0.17	0.00	7.43	0.61
Approach Delay [s/veh]	8.03	7.27		8.15			7.93		
Approach LOS	A	A		A			A		
Intersection Delay [s/veh]	7.99								
Intersection LOS	A								

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Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Two-way stop	Delay (sec / veh):	19.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	8	0	31	0	100	22	7	91	0
Total Analysis Volume [veh/h]	0	0	0	34	1	124	0	399	89	28	364	0
Pedestrian Volume [ped/h]	2			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.13	0.00	0.18	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	19.38	19.41	11.20	0.00	0.00	0.00	8.45	0.00	0.00
Movement LOS				C	C	B		A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.66	0.66	0.66	0.00	0.00	0.00	0.08	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	16.58	16.58	16.58	0.00	0.00	0.00	2.01	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			13.00			0.00			0.60		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	2.22											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Two-way stop	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.274

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Peak Hour Factor	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	1	18	0	0	0	22	81	0	0	75	15
Total Analysis Volume [veh/h]	73	4	72	0	0	0	89	324	0	0	301	62
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.01	0.10	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	21.34	21.15	12.84	0.00	0.00	0.00	8.25	0.00	0.00	0.00	0.00	0.00
Movement LOS	C	C	B				A	A			A	A
95th-Percentile Queue Length [veh/ln]	1.19	1.19	1.19	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	29.73	29.73	29.73	0.00	0.00	0.00	6.02	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.23			0.00			1.78			0.00		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	3.57											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	All-way stop	Delay (sec / veh):	8.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.144

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	6	1	4	3	1	45	25	92	9	3	90	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	1	4	3	1	45	25	92	9	3	90	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	1	1	0	13	7	26	3	1	26	1
Total Analysis Volume [veh/h]	7	1	5	3	1	51	28	105	10	3	102	2
Pedestrian Volume [ped/h]	0			0			0			0		

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Version 7.00-05

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	697	632	797	662	729	850	654	720	837
Degree of Utilization, x	0.02	0.00	0.07	0.04	0.14	0.01	0.00	0.14	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.06	0.01	0.21	0.13	0.50	0.04	0.01	0.49	0.01
95th-Percentile Queue Length [ft]	1.43	0.36	5.23	3.31	12.54	0.89	0.35	12.31	0.18
Approach Delay [s/veh]	8.27	7.58		8.35			8.49		
Approach LOS	A	A		A			A		
Intersection Delay [s/veh]	8.26								
Intersection LOS	A								

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Two-way stop	Delay (sec / veh):	585.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.027

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	225	0	0	0	56	0	195	49	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	243	0	77	0	318	71	215	334	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	65	0	21	0	85	19	58	90	0
Total Analysis Volume [veh/h]	0	0	0	261	0	83	0	342	76	231	359	0
Pedestrian Volume [ped/h]	3			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	2.03	0.00	0.12	0.00	0.00	0.00	0.20	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	585.86	583.85	563.15	0.00	0.00	0.00	8.98	0.00	0.00
Movement LOS				F	F	F		A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	27.60	27.60	27.60	0.00	0.00	0.00	0.76	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	689.95	689.95	689.95	0.00	0.00	0.00	19.04	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			580.38			0.00			3.52		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	149.20											
Intersection LOS	F											

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Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Two-way stop	Delay (sec / veh):	55.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.626

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	225	0	0	0	0	281	0	0	244	196
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	0	257	0	0	0	73	488	0	0	482	230
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	71	0	0	0	20	136	0	0	134	64
Total Analysis Volume [veh/h]	70	0	286	0	0	0	81	542	0	0	536	256
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.63	0.00	0.53	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	55.44	55.78	29.92	0.00	0.00	0.00	9.81	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	D				A	A			A	A
95th-Percentile Queue Length [veh/ln]	6.11	6.11	6.11	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	152.66	152.66	152.66	0.00	0.00	0.00	8.10	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	34.94			0.00			1.28			0.00		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	7.47											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	All-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.196

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	3	0	2	1	1	17	24	86	2	0	58	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	39	0	0	45	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	0	2	1	1	17	24	125	2	0	103	6
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	0	0	5	7	36	1	0	30	2
Total Analysis Volume [veh/h]	3	0	2	1	1	20	28	145	2	0	120	7
Pedestrian Volume [ped/h]	2			2			3			0		

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Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	685	617	772	671	739	864	727	727	846
Degree of Utilization, x	0.01	0.00	0.03	0.04	0.20	0.00	0.00	0.17	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.02	0.00	0.08	0.13	0.72	0.01	0.00	0.59	0.03
95th-Percentile Queue Length [ft]	0.55	0.12	2.10	3.26	18.11	0.17	0.00	14.72	0.63
Approach Delay [s/veh]	8.30	7.55		8.66			8.54		
Approach LOS	A	A		A			A		
Intersection Delay [s/veh]	8.53								
Intersection LOS	A								

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.486

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
Speed [mph]		30.00			45.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			No			No			No	

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	225	0	0	0	56	0	195	49	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	243	0	77	0	318	71	215	334	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	65	0	21	0	85	19	58	90	0
Total Analysis Volume [veh/h]	0	0	0	261	0	83	0	342	76	231	359	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street [		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stree		2			0			1			0	
v_ci, Inbound Pedestrian Volume crossing minor street [		1			0			2			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

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Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	19	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	C	C	L	C
C, Cycle Length [s]		60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		15	37	37	37	37
g / C, Green / Cycle		0.25	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate		0.22	0.12	0.13	0.27	0.11
s, saturation flow rate [veh/h]		1558	1683	1580	871	3204
c, Capacity [veh/h]		387	1041	977	575	1982
d1, Uniform Delay [s]		21.79	5.00	5.04	9.33	4.93
k, delay calibration		0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		7.04	0.43	0.50	2.09	0.20
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.89	0.20	0.21	0.40	0.18
d, Delay for Lane Group [s/veh]		28.83	5.43	5.54	11.42	5.13
Lane Group LOS		C	A	A	B	A
Critical Lane Group		Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		4.73	1.01	1.03	1.93	0.76
50th-Percentile Queue Length [ft/ln]		118.15	25.16	25.63	48.18	18.90
95th-Percentile Queue Length [veh/ln]		8.29	1.81	1.85	3.47	1.36
95th-Percentile Queue Length [ft/ln]		207.29	45.30	46.13	86.73	34.02

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.83	28.83	28.83	0.00	5.48	5.54	11.42	5.13	0.00
Movement LOS				C	C	C		A	A	B	A	
d_A, Approach Delay [s/veh]	0.00			28.83			5.49			7.59		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	12.34											
Intersection LOS	B											
Intersection V/C	0.486											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.032	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	500	1233	1233
d_b, Bicycle Delay [s]	30.00	16.88	4.41	4.41
I_b,int, Bicycle LOS Score for Intersection	4.132	2.127	1.904	2.046
Bicycle LOS	D	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.506

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	225	0	0	0	0	281	0	0	244	196
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	0	257	0	0	0	73	488	0	0	482	230
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	71	0	0	0	20	136	0	0	134	64
Total Analysis Volume [veh/h]	70	0	286	0	0	0	81	542	0	0	536	256
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C		L	C	C	C
C, Cycle Length [s]	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15		37	37	37	37
g / C, Green / Cycle	0.25		0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.24		0.13	0.17	0.24	0.26
s, saturation flow rate [veh/h]	1461		616	3204	1683	1511
c, Capacity [veh/h]	368		391	1971	1035	929
d1, Uniform Delay [s]	22.23		10.86	5.35	5.82	6.03
k, delay calibration	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.41		1.20	0.35	1.07	1.43
d3, Initial Queue Delay [s]	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.97		0.21	0.27	0.38	0.43
d, Delay for Lane Group [s/veh]	37.64		12.06	5.70	6.89	7.46
Lane Group LOS	D		B	A	A	A
Critical Lane Group	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.78		0.75	1.32	2.13	2.26
50th-Percentile Queue Length [ft/ln]	144.41		18.82	32.92	53.30	56.47
95th-Percentile Queue Length [veh/ln]	9.72		1.36	2.37	3.84	4.07
95th-Percentile Queue Length [ft/ln]	242.94		33.88	59.26	95.93	101.65

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.64	37.64	37.64	0.00	0.00	0.00	12.06	5.70	0.00	0.00	7.04	7.46
Movement LOS	D	D	D				B	A			A	A
d_A, Approach Delay [s/veh]	37.64			0.00			6.53			7.18		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	13.07											
Intersection LOS	B											
Intersection V/C	0.506											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	0	1233	1233
d_b, Bicycle Delay [s]	16.88	30.00	4.41	4.41
I_b,int, Bicycle LOS Score for Intersection	2.147	4.132	2.074	2.213
Bicycle LOS	B	D	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	3	0	2	1	1	17	24	86	2	0	58	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	39	0	0	45	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	0	2	1	1	17	24	125	2	0	103	6
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	0	0	5	7	36	1	0	30	2
Total Analysis Volume [veh/h]	3	0	2	1	1	20	28	145	2	0	120	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			1			1			1		
v_di, Inbound Pedestrian Volume crossing major street [	1			1			1			1		
v_co, Outbound Pedestrian Volume crossing minor stree	0			1			2			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			2			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	36	0	0	24	0	0	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	44	44	8	8	8	8	8	8
g / C, Green / Cycle	0.74	0.74	0.74	0.74	0.13	0.13	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.00	0.01	0.02	0.04	0.04	0.00	0.04	0.04
s, saturation flow rate [veh/h]	1250	1431	1273	1439	1132	1683	1675	1117	1683	1649
c, Capacity [veh/h]	1001	1056	1022	1063	184	216	215	177	216	212
d1, Uniform Delay [s]	2.62	2.06	2.55	2.08	27.39	23.84	23.84	0.00	23.69	23.71
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.00	0.00	0.03	0.38	0.93	0.94	0.00	0.75	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.00	0.00	0.02	0.15	0.34	0.34	0.00	0.29	0.30
d, Delay for Lane Group [s/veh]	2.62	2.06	2.55	2.12	27.77	24.77	24.78	0.00	24.44	24.49
Lane Group LOS	A	A	A	A	C	C	C	A	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.05	0.39	0.97	0.97	0.00	0.83	0.83
50th-Percentile Queue Length [ft/ln]	0.21	0.11	0.07	1.16	9.86	24.21	24.18	0.00	20.75	20.69
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.08	0.71	1.74	1.74	0.00	1.49	1.49
95th-Percentile Queue Length [ft/ln]	0.37	0.20	0.12	2.09	17.75	43.58	43.53	0.00	37.35	37.25

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.62	2.06	2.06	2.55	2.12	2.12	27.77	24.77	24.78	0.00	24.47	24.49
Movement LOS	A	A	A	A	A	A	C	C	C	A	C	C
d_A, Approach Delay [s/veh]	2.40			2.14			25.25			24.47		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	23.06											
Intersection LOS	C											
Intersection V/C	0.058											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	1.923	1.976	2.336	2.327
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1067	1067	667	667
d_b, Bicycle Delay [s]	6.53	6.53	13.33	13.33
I_b,int, Bicycle LOS Score for Intersection	1.568	1.596	1.704	1.664
Bicycle LOS	A	A	A	A

Sequence

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

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Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Two-way stop	Delay (sec / veh):	456.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.660

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	140	0	0	0	35	0	150	37	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	170	1	110	0	390	79	175	361	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	48	0	31	0	110	22	49	101	0
Total Analysis Volume [veh/h]	0	0	0	191	1	124	0	438	89	197	406	0
Pedestrian Volume [ped/h]	2			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	1.66	0.01	0.19	0.00	0.00	0.00	0.19	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	456.11	453.58	430.40	0.00	0.00	0.00	9.29	0.00	0.00
Movement LOS				F	F	F		A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	23.16	23.16	23.16	0.00	0.00	0.00	0.70	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	579.01	579.01	579.01	0.00	0.00	0.00	17.49	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			446.01			0.00			3.03		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	98.73											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Two-way stop	Delay (sec / veh):	53.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	140	0	0	0	0	175	0	0	187	149
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	4	206	0	0	0	82	473	0	0	464	206
Peak Hour Factor	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	1	56	0	0	0	22	129	0	0	126	56
Total Analysis Volume [veh/h]	73	4	224	0	0	0	89	514	0	0	504	224
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.60	0.03	0.40	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	53.77	53.76	30.82	0.00	0.00	0.00	9.58	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	D				A	A			A	A
95th-Percentile Queue Length [veh/ln]	5.61	5.61	5.61	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	140.30	140.30	140.30	0.00	0.00	0.00	8.46	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	36.69			0.00			1.41			0.00		
Approach LOS	E			A			A			A		
d_I, Intersection Delay [s/veh]	7.29											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	All-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.194

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	6	1	4	3	1	45	25	92	9	3	90	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	30	0	0	28	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	1	4	3	1	45	25	122	9	3	118	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	1	1	0	13	7	35	3	1	34	1
Total Analysis Volume [veh/h]	7	1	5	3	1	51	28	139	10	3	134	2
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	673	612	766	653	718	835	645	709	822
Degree of Utilization, x	0.02	0.00	0.07	0.04	0.19	0.01	0.00	0.19	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.06	0.01	0.22	0.13	0.71	0.04	0.01	0.69	0.01
95th-Percentile Queue Length [ft]	1.48	0.37	5.45	3.36	17.83	0.91	0.35	17.31	0.18
Approach Delay [s/veh]	8.46	7.79		8.74			8.92		
Approach LOS	A	A		A			A		
Intersection Delay [s/veh]	8.66								
Intersection LOS	A								

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.456

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
Speed [mph]		30.00			45.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			No			No			No	

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	140	0	0	0	35	0	150	37	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	170	1	110	0	390	79	175	361	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	48	0	31	0	110	22	49	101	0
Total Analysis Volume [veh/h]	0	0	0	191	1	124	0	438	89	197	406	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street [		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stree		1			0			1			0	
v_ci, Inbound Pedestrian Volume crossing minor street [		1			0			1			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

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Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	19	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	C	C	L	C
C, Cycle Length [s]		60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		14	38	38	38	38
g / C, Green / Cycle		0.23	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate		0.21	0.16	0.17	0.25	0.13
s, saturation flow rate [veh/h]		1531	1683	1587	788	3204
c, Capacity [veh/h]		360	1063	1003	529	2024
d1, Uniform Delay [s]		22.15	4.84	4.89	9.27	4.67
k, delay calibration		0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.85	0.56	0.64	2.01	0.22
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.88	0.25	0.26	0.37	0.20
d, Delay for Lane Group [s/veh]		29.00	5.40	5.53	11.28	4.90
Lane Group LOS		C	A	A	B	A
Critical Lane Group		Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		4.35	1.25	1.28	1.64	0.82
50th-Percentile Queue Length [ft/ln]		108.83	31.23	31.88	41.03	20.43
95th-Percentile Queue Length [veh/ln]		7.77	2.25	2.30	2.95	1.47
95th-Percentile Queue Length [ft/ln]		194.37	56.22	57.38	73.85	36.78

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	29.00	29.00	29.00	0.00	5.45	5.53	11.28	4.90	0.00
Movement LOS				C	C	C		A	A	B	A	
d_A, Approach Delay [s/veh]	0.00			29.00			5.46			6.98		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	11.24											
Intersection LOS	B											
Intersection V/C	0.456											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	1.964	0.000	0.000	0.000
Crosswalk LOS	A	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	500	1233	1233
d_b, Bicycle Delay [s]	30.00	16.88	4.41	4.41
I_b,int, Bicycle LOS Score for Intersection	4.132	2.081	1.994	2.057
Bicycle LOS	D	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.444

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	140	0	0	0	0	175	0	0	187	149
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	4	206	0	0	0	82	473	0	0	464	206
Peak Hour Factor	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	1	56	0	0	0	22	129	0	0	126	56
Total Analysis Volume [veh/h]	73	4	224	0	0	0	89	514	0	0	504	224
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C		L	C	C	C
C, Cycle Length [s]	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14		38	38	38	38
g / C, Green / Cycle	0.23		0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.20		0.14	0.16	0.22	0.24
s, saturation flow rate [veh/h]	1472		654	3204	1683	1518
c, Capacity [veh/h]	343		432	2030	1066	962
d1, Uniform Delay [s]	22.21		9.51	4.81	5.15	5.31
k, delay calibration	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.11		1.08	0.30	0.87	1.13
d3, Initial Queue Delay [s]	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88		0.21	0.25	0.34	0.38
d, Delay for Lane Group [s/veh]	29.32		10.59	5.11	6.02	6.44
Lane Group LOS	C		B	A	A	A
Critical Lane Group	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.18		0.75	1.14	1.75	1.84
50th-Percentile Queue Length [ft/ln]	104.41		18.82	28.43	43.76	46.03
95th-Percentile Queue Length [veh/ln]	7.52		1.35	2.05	3.15	3.31
95th-Percentile Queue Length [ft/ln]	187.94		33.87	51.17	78.77	82.86

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.32	29.32	29.32	0.00	0.00	0.00	10.59	5.11	0.00	0.00	6.14	6.44
Movement LOS	C	C	C				B	A			A	A
d_A, Approach Delay [s/veh]	29.32			0.00			5.92			6.23		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	10.37											
Intersection LOS	B											
Intersection V/C	0.444											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	0	1233	1233
d_b, Bicycle Delay [s]	16.88	30.00	4.41	4.41
I_b,int, Bicycle LOS Score for Intersection	2.056	4.132	2.057	2.160
Bicycle LOS	B	D	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.081

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	6	1	4	3	1	45	25	92	9	3	90	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	30	0	0	28	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	1	4	3	1	45	25	122	9	3	118	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	1	1	0	13	7	35	3	1	34	1
Total Analysis Volume [veh/h]	7	1	5	3	1	51	28	139	10	3	134	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	36	0	0	24	0	0	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	44	44	8	8	8	8	8	8
g / C, Green / Cycle	0.74	0.74	0.74	0.74	0.13	0.13	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.00	0.04	0.02	0.04	0.05	0.00	0.04	0.04
s, saturation flow rate [veh/h]	1217	1467	1269	1435	1128	1683	1644	1114	1683	1674
c, Capacity [veh/h]	970	1082	1017	1058	182	217	212	176	217	216
d1, Uniform Delay [s]	2.74	2.07	2.58	2.14	27.49	23.82	23.84	27.12	23.72	23.72
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.01	0.01	0.09	0.39	0.94	0.98	0.04	0.82	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.01	0.00	0.05	0.15	0.34	0.35	0.02	0.31	0.31
d, Delay for Lane Group [s/veh]	2.75	2.08	2.58	2.23	27.87	24.76	24.82	27.16	24.54	24.55
Lane Group LOS	A	A	A	A	C	C	C	C	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.02	0.01	0.01	0.12	0.40	0.98	0.98	0.04	0.89	0.89
50th-Percentile Queue Length [ft/ln]	0.51	0.33	0.20	2.96	9.89	24.62	24.49	1.04	22.25	22.23
95th-Percentile Queue Length [veh/ln]	0.04	0.02	0.01	0.21	0.71	1.77	1.76	0.07	1.60	1.60
95th-Percentile Queue Length [ft/ln]	0.91	0.59	0.37	5.33	17.80	44.31	44.08	1.87	40.05	40.02

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.75	2.08	2.08	2.58	2.23	2.23	27.87	24.79	24.82	27.16	24.54	24.55
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	2.44			2.25			25.28			24.60		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	20.96											
Intersection LOS	C											
Intersection V/C	0.081											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	1.932	1.984	2.350	2.331
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1067	1067	667	667
d_b, Bicycle Delay [s]	6.53	6.53	13.33	13.33
I_b,int, Bicycle LOS Score for Intersection	1.581	1.650	1.706	1.674
Bicycle LOS	A	A	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.611

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
Speed [mph]		30.00			45.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			No			No			No	

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	378	0	150	0	715	143	125	611	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	378	0	150	0	715	143	125	611	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	95	0	38	0	179	36	31	153	0
Total Analysis Volume [veh/h]	0	0	0	378	0	150	0	715	143	125	611	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street [		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stree		2			0			1			0	
v_ci, Inbound Pedestrian Volume crossing minor street [		1			0			2			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	48	0	0	12	0	0	12	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	C	C	L	C
C, Cycle Length [s]		60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		23	29	29	29	29
g / C, Green / Cycle		0.38	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate		0.34	0.25	0.27	0.22	0.19
s, saturation flow rate [veh/h]		1550	1683	1588	579	3204
c, Capacity [veh/h]		587	821	775	273	1564
d1, Uniform Delay [s]		17.59	10.57	10.80	20.71	9.73
k, delay calibration		0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.29	2.37	2.84	5.43	0.74
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.90	0.52	0.55	0.46	0.39
d, Delay for Lane Group [s/veh]		22.88	12.94	13.64	26.14	10.47
Lane Group LOS		C	B	B	C	B
Critical Lane Group		Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		6.31	3.92	4.07	1.91	2.29
50th-Percentile Queue Length [ft/ln]		157.86	98.10	101.64	47.67	57.31
95th-Percentile Queue Length [veh/ln]		10.44	7.06	7.32	3.43	4.13
95th-Percentile Queue Length [ft/ln]		260.89	176.57	182.95	85.81	103.17

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Movement, Approach, & Intersection Results

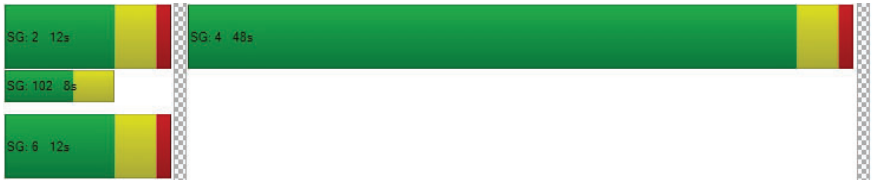
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	22.88	22.88	22.88	0.00	13.22	13.64	26.14	10.47	0.00
Movement LOS				C	C	C		B	B	C	B	
d_A, Approach Delay [s/veh]	0.00			22.88			13.29			13.13		
Approach LOS	A			C			B			B		
d_I, Intersection Delay [s/veh]	15.62											
Intersection LOS	B											
Intersection V/C	0.611											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	1.843	0.000	0.000	0.000
Crosswalk LOS	A	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1467	267	267
d_b, Bicycle Delay [s]	30.00	2.13	22.53	22.53
I_b,int, Bicycle LOS Score for Intersection	4.132	2.431	2.267	2.167
Bicycle LOS	D	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.604

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	171	5	274	0	0	0	124	969	0	0	565	186
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	171	5	274	0	0	0	124	969	0	0	565	186
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	1	69	0	0	0	31	242	0	0	141	47
Total Analysis Volume [veh/h]	171	5	274	0	0	0	124	969	0	0	565	186
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	51	0	0	0	0	0	9	0	0	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C		L	C	C	C
C, Cycle Length [s]	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20		32	32	32	32
g / C, Green / Cycle	0.34		0.53	0.53	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.30		0.19	0.30	0.22	0.24
s, saturation flow rate [veh/h]	1494		640	3204	1683	1548
c, Capacity [veh/h]	508		337	1689	887	816
d1, Uniform Delay [s]	18.76		16.24	9.63	8.65	8.87
k, delay calibration	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.42		3.07	1.42	1.48	1.87
d3, Initial Queue Delay [s]	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89		0.37	0.57	0.42	0.46
d, Delay for Lane Group [s/veh]	24.17		19.31	11.05	10.13	10.74
Lane Group LOS	C		B	B	B	B
Critical Lane Group	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.57		1.57	3.96	2.78	2.90
50th-Percentile Queue Length [ft/ln]	139.20		39.29	99.02	69.49	72.50
95th-Percentile Queue Length [veh/ln]	9.44		2.83	7.13	5.00	5.22
95th-Percentile Queue Length [ft/ln]	235.94		70.72	178.23	125.08	130.50

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.17	24.17	24.17	0.00	0.00	0.00	19.31	11.05	0.00	0.00	10.33	10.74
Movement LOS	C	C	C				B	B			B	B
d_A, Approach Delay [s/veh]	24.17			0.00			11.99			10.43		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	13.87											
Intersection LOS	B											
Intersection V/C	0.604											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1567	0	167	167
d_b, Bicycle Delay [s]	1.41	30.00	25.21	25.21
I_b,int, Bicycle LOS Score for Intersection	2.302	4.132	2.461	2.179
Bicycle LOS	B	D	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.295

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	85	19	24	44	6	49	156	723	28	8	406	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	19	24	44	6	49	156	723	28	8	406	33
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	5	6	11	2	12	39	181	7	2	102	8
Total Analysis Volume [veh/h]	85	19	24	44	6	49	156	723	28	8	406	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			1			1			1		
v_di, Inbound Pedestrian Volume crossing major street [	1			1			1			1		
v_co, Outbound Pedestrian Volume crossing minor stree	0			1			2			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			2			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	23	23	23	23	23	23
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.07	0.03	0.04	0.04	0.18	0.22	0.22	0.01	0.13	0.13
s, saturation flow rate [veh/h]	1212	1532	1227	1452	854	1683	1661	640	1683	1638
c, Capacity [veh/h]	659	752	672	712	324	633	625	217	633	616
d1, Uniform Delay [s]	9.94	8.01	9.41	8.09	21.24	15.07	15.07	21.85	13.45	13.47
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.15	0.19	0.21	1.10	0.91	0.92	0.07	0.33	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.06	0.07	0.08	0.48	0.60	0.60	0.04	0.35	0.35
d, Delay for Lane Group [s/veh]	10.35	8.16	9.60	8.31	22.35	15.97	15.99	21.92	13.78	13.81
Lane Group LOS	B	A	A	A	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.68	0.29	0.33	0.37	2.01	3.94	3.89	0.10	2.04	2.00
50th-Percentile Queue Length [ft/ln]	16.89	7.20	8.29	9.36	50.37	98.49	97.27	2.43	50.92	50.08
95th-Percentile Queue Length [veh/ln]	1.22	0.52	0.60	0.67	3.63	7.09	7.00	0.17	3.67	3.61
95th-Percentile Queue Length [ft/ln]	30.41	12.95	14.92	16.86	90.66	177.28	175.09	4.37	91.66	90.15

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Movement, Approach, & Intersection Results

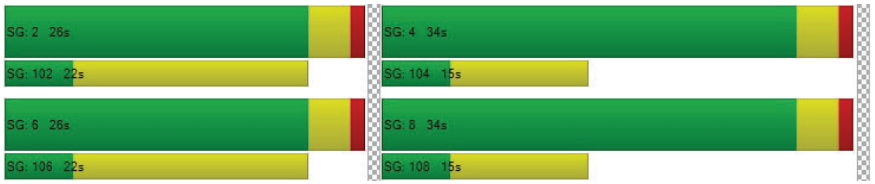
d_M, Delay for Movement [s/veh]	10.35	8.16	8.16	9.60	8.31	8.31	22.35	15.98	15.99	21.92	13.80	13.81
Movement LOS	B	A	A	A	A	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	9.61			8.88			17.07			13.94		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	15.07											
Intersection LOS	B											
Intersection V/C	0.295											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	1.978	2.226	2.637	2.544
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	12.03	12.03	7.50	7.50
I_b,int, Bicycle LOS Score for Intersection	1.771	1.723	2.308	1.928
Bicycle LOS	A	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.692

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
Speed [mph]		30.00			45.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			No			No			No	

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	250	5	178	0	675	173	239	753	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	250	5	178	0	675	173	239	753	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	63	1	45	0	169	43	60	188	0
Total Analysis Volume [veh/h]	0	0	0	250	5	178	0	675	173	239	753	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street [		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stree		1			0			1			0	
v_ci, Inbound Pedestrian Volume crossing minor street [		1			0			1			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

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Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	48	0	0	12	0	0	12	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	C	C	L	C
C, Cycle Length [s]		60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		19	33	33	33	33
g / C, Green / Cycle		0.32	0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate		0.28	0.25	0.27	0.41	0.23
s, saturation flow rate [veh/h]		1528	1683	1569	585	3204
c, Capacity [veh/h]		491	918	855	318	1747
d1, Uniform Delay [s]		19.30	8.31	8.52	21.60	8.13
k, delay calibration		0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.33	1.67	2.05	15.07	0.78
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.88	0.46	0.50	0.75	0.43
d, Delay for Lane Group [s/veh]		24.63	9.98	10.57	36.67	8.90
Lane Group LOS		C	A	B	D	A
Critical Lane Group		Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		5.42	3.22	3.35	4.62	2.50
50th-Percentile Queue Length [ft/ln]		135.44	80.38	83.65	115.50	62.48
95th-Percentile Queue Length [veh/ln]		9.23	5.79	6.02	8.15	4.50
95th-Percentile Queue Length [ft/ln]		230.87	144.69	150.57	203.63	112.46

Movement, Approach, & Intersection Results

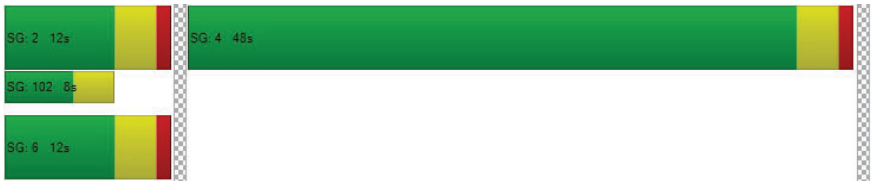
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.63	24.63	24.63	0.00	10.20	10.57	36.67	8.90	0.00
Movement LOS				C	C	C		B	B	D	A	
d_A, Approach Delay [s/veh]	0.00			24.63			10.27			15.59		
Approach LOS	A			C			B			B		
d_I, Intersection Delay [s/veh]	15.33											
Intersection LOS	B											
Intersection V/C	0.692											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.151	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1467	267	267
d_b, Bicycle Delay [s]	30.00	2.13	22.53	22.53
I_b,int, Bicycle LOS Score for Intersection	4.132	2.274	2.259	2.378
Bicycle LOS	D	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.607

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	140	5	127	0	0	0	75	850	0	0	852	436
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	5	127	0	0	0	75	850	0	0	852	436
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	1	32	0	0	0	19	213	0	0	213	109
Total Analysis Volume [veh/h]	140	5	127	0	0	0	75	850	0	0	852	436
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	51	0	0	0	0	0	9	0	0	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C		L	C	C	C
C, Cycle Length [s]	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13		39	39	39	39
g / C, Green / Cycle	0.21		0.65	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.18		0.19	0.27	0.38	0.43
s, saturation flow rate [veh/h]	1519		386	3204	1683	1503
c, Capacity [veh/h]	327		253	2087	1096	979
d1, Uniform Delay [s]	22.53		15.97	4.97	5.92	6.39
k, delay calibration	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.44		2.96	0.59	2.31	3.45
d3, Initial Queue Delay [s]	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83		0.30	0.41	0.59	0.66
d, Delay for Lane Group [s/veh]	27.98		18.93	5.56	8.23	9.85
Lane Group LOS	C		B	A	A	A
Critical Lane Group	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.66		0.98	1.99	3.75	4.23
50th-Percentile Queue Length [ft/ln]	91.38		24.41	49.77	93.71	105.70
95th-Percentile Queue Length [veh/ln]	6.58		1.76	3.58	6.75	7.60
95th-Percentile Queue Length [ft/ln]	164.49		43.93	89.58	168.68	190.01

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.98	27.98	27.98	0.00	0.00	0.00	18.93	5.56	0.00	0.00	8.62	9.85
Movement LOS	C	C	C				B	A			A	A
d_A, Approach Delay [s/veh]	27.98			0.00			6.65			9.04		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	10.22											
Intersection LOS	B											
Intersection V/C	0.607											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1567	0	167	167
d_b, Bicycle Delay [s]	1.41	30.00	25.21	25.21
I_b,int, Bicycle LOS Score for Intersection	2.008	4.132	2.323	2.622
Bicycle LOS	B	D	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.292

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	29	14	15	67	24	117	54	416	49	25	574	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	14	15	67	24	117	54	416	49	25	574	72
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	4	4	17	6	29	14	104	12	6	144	18
Total Analysis Volume [veh/h]	29	14	15	67	24	117	54	416	49	25	574	72
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	32	32	32	32	20	20	20	20	20	20
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.03	0.02	0.05	0.10	0.08	0.14	0.14	0.03	0.20	0.20
s, saturation flow rate [veh/h]	1123	1542	1243	1468	706	1683	1622	835	1683	1618
c, Capacity [veh/h]	638	818	742	779	208	566	545	270	566	544
d1, Uniform Delay [s]	8.93	6.74	7.91	7.31	24.89	15.39	15.41	20.84	16.44	16.46
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.08	0.24	0.51	0.65	0.49	0.52	0.15	0.95	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.04	0.09	0.18	0.26	0.42	0.42	0.09	0.58	0.58
d, Delay for Lane Group [s/veh]	9.07	6.82	8.15	7.82	25.55	15.88	15.93	20.98	17.39	17.46
Lane Group LOS	A	A	A	A	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.21	0.17	0.45	0.92	0.74	2.38	2.32	0.30	3.58	3.47
50th-Percentile Queue Length [ft/ln]	5.30	4.28	11.28	22.91	18.38	59.60	58.05	7.38	89.62	86.72
95th-Percentile Queue Length [veh/ln]	0.38	0.31	0.81	1.65	1.32	4.29	4.18	0.53	6.45	6.24
95th-Percentile Queue Length [ft/ln]	9.54	7.70	20.30	41.24	33.09	107.28	104.48	13.28	161.31	156.10

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Movement, Approach, & Intersection Results

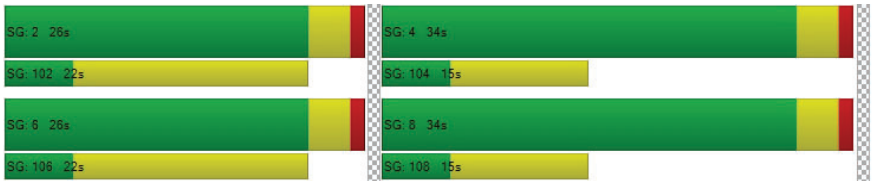
d_M, Delay for Movement [s/veh]	9.07	6.82	6.82	8.15	7.82	7.82	25.55	15.90	15.93	20.98	17.42	17.46
Movement LOS	A	A	A	A	A	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	7.94			7.93			16.91			17.56		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	15.57											
Intersection LOS	B											
Intersection V/C	0.292											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	1.999	2.092	2.523	2.566
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	12.03	12.03	7.50	7.50
I_b,int, Bicycle LOS Score for Intersection	1.655	1.903	1.988	2.113
Bicycle LOS	A	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Two-way stop	Delay (sec / veh):	16.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.072

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	0	0	5	0	23	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	21	0	77	0	267	71	43	299	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	6	0	21	0	72	19	12	80	0
Total Analysis Volume [veh/h]	0	0	0	23	0	83	0	287	76	46	322	0
Pedestrian Volume [ped/h]	3			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.07	0.00	0.12	0.00	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	16.75	17.01	10.52	0.00	0.00	0.00	8.15	0.00	0.00
Movement LOS				C	C	B		A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.39	0.39	0.39	0.00	0.00	0.00	0.12	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	9.75	9.75	9.75	0.00	0.00	0.00	3.02	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			11.87			0.00			1.02		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	1.95											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Two-way stop	Delay (sec / veh):	18.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.222

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	8	0	0	0	0	8	0	0	37	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	0	40	0	0	0	73	215	0	0	275	43
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	11	0	0	0	20	60	0	0	76	12
Total Analysis Volume [veh/h]	70	0	44	0	0	0	81	239	0	0	306	48
Pedestrian Volume [ped/h]	0			0			0			0		

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Version 2021 (SP 0-4)

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.00	0.06	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	18.44	18.42	11.50	0.00	0.00	0.00	8.20	0.00	0.00	0.00	0.00	0.00
Movement LOS	C	C	B				A	A			A	A
95th-Percentile Queue Length [veh/ln]	0.84	0.84	0.84	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	21.10	21.10	21.10	0.00	0.00	0.00	5.40	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.76			0.00			2.08			0.00		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	3.12											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	All-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.150

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	3	0	2	1	1	17	24	86	2	0	58	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	46	0	6	0	0	0	0	8	8	3	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	0	8	1	1	17	24	94	10	3	58	6
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	2	0	0	5	7	27	3	1	17	2
Total Analysis Volume [veh/h]	57	0	9	1	1	20	28	109	12	3	67	7
Pedestrian Volume [ped/h]	2			2			3			0		

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Version 2021 (SP 0-4)

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	685	626	784	659	726	845	643	706	819
Degree of Utilization, x	0.10	0.00	0.03	0.04	0.15	0.01	0.00	0.09	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	0.00	0.08	0.13	0.53	0.04	0.01	0.31	0.03
95th-Percentile Queue Length [ft]	7.96	0.12	2.06	3.32	13.17	1.08	0.35	7.83	0.65
Approach Delay [s/veh]	8.81	7.47		8.39			8.22		
Approach LOS	A	A		A			A		
Intersection Delay [s/veh]	8.37								
Intersection LOS	A								

Intersection Level Of Service Report
Intersection 4: E Street/Project Street

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Project Street		E Street			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Street		E Street			
Base Volume Input [veh/h]	0	0	89	0	0	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	6	8	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	6	95	8	0	67
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	24	2	0	17
Total Analysis Volume [veh/h]	0	6	95	8	0	67
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.39	8.79	0.00	0.00	7.42	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.47	0.47	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.79		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.30					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Two-way stop	Delay (sec / veh):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.188

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	10	0	0	0	16	0	14	10	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	40	1	110	0	371	79	39	334	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	11	0	31	0	104	22	11	94	0
Total Analysis Volume [veh/h]	0	0	0	45	1	124	0	417	89	44	375	0
Pedestrian Volume [ped/h]	2			0			0			0		

Generated with PTV VISTRO
Version 2021 (SP 0-4)

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.19	0.00	0.18	0.00	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	21.01	20.85	11.33	0.00	0.00	0.00	8.56	0.00	0.00
Movement LOS				C	C	B		A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.13	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	17.70	17.70	17.70	0.00	0.00	0.00	3.26	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			13.95			0.00			0.90		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	2.51											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Two-way stop	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.300

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	26	0	0	0	0	26	0	0	24	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	4	92	0	0	0	82	324	0	0	301	63
Peak Hour Factor	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	1	25	0	0	0	22	88	0	0	82	17
Total Analysis Volume [veh/h]	73	4	100	0	0	0	89	352	0	0	327	68
Pedestrian Volume [ped/h]	0			0			0			0		

Generated with PTV VISTRO
Version 2021 (SP 0-4)

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.30	0.02	0.14	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	22.77	22.44	13.16	0.00	0.00	0.00	8.35	0.00	0.00	0.00	0.00	0.00
Movement LOS	C	C	B				A	A			A	A
95th-Percentile Queue Length [veh/ln]	1.35	1.35	1.35	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	33.78	33.78	33.78	0.00	0.00	0.00	6.20	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.33			0.00			1.69			0.00		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	3.76											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	All-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.190

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	6	1	4	3	1	45	25	92	9	3	90	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	0	4	0	0	0	0	26	26	12	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	1	8	3	1	45	25	118	35	15	90	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	2	1	0	13	7	34	10	4	26	1
Total Analysis Volume [veh/h]	41	1	9	3	1	51	28	134	40	17	102	2
Pedestrian Volume [ped/h]	0			0			0			0		

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Version 2021 (SP 0-4)

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	652	604	753	641	703	815	626	686	791
Degree of Utilization, x	0.08	0.00	0.07	0.04	0.19	0.05	0.03	0.15	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.25	0.01	0.22	0.14	0.70	0.15	0.08	0.52	0.01
95th-Percentile Queue Length [ft]	6.34	0.37	5.55	3.42	17.47	3.86	2.09	13.01	0.19
Approach Delay [s/veh]	8.99	7.88		8.62			8.80		
Approach LOS	A	A		A			A		
Intersection Delay [s/veh]	8.62								
Intersection LOS	A								

Intersection Level Of Service Report
Intersection 4: E Street/Project Street

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Project Street		E Street			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Street		E Street			
Base Volume Input [veh/h]	0	0	99	0	0	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	4	26	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	4	103	26	0	107
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	26	7	0	27
Total Analysis Volume [veh/h]	0	4	103	26	0	107
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.72	8.86	0.00	0.00	7.47	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.32	0.32	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.86		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.15					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Two-way stop	Delay (sec / veh):	746.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.368

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	228	0	0	0	61	0	218	63	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	246	0	77	0	323	71	238	348	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	66	0	21	0	87	19	64	94	0
Total Analysis Volume [veh/h]	0	0	0	265	0	83	0	347	76	256	374	0
Pedestrian Volume [ped/h]	3			0			0			0		

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Version 2021 (SP 0-4)

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	2.37	0.00	0.12	0.00	0.00	0.00	0.23	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	746.65	743.93	719.84	0.00	0.00	0.00	9.12	0.00	0.00
Movement LOS				F	F	F		A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	30.31	30.31	30.31	0.00	0.00	0.00	0.87	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	757.77	757.77	757.77	0.00	0.00	0.00	21.79	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			740.26			0.00			3.70		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	185.54											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Two-way stop	Delay (sec / veh):	65.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.687

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	233	0	0	0	0	289	0	0	281	205
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	0	265	0	0	0	73	496	0	0	519	239
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	74	0	0	0	20	138	0	0	144	66
Total Analysis Volume [veh/h]	70	0	294	0	0	0	81	551	0	0	577	266
Pedestrian Volume [ped/h]	0			0			0			0		

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Version 2021 (SP 0-4)

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.69	0.00	0.55	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	65.92	66.17	37.36	0.00	0.00	0.00	10.06	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	E				B	A			A	A
95th-Percentile Queue Length [veh/ln]	7.43	7.43	7.43	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	185.72	185.72	185.72	0.00	0.00	0.00	8.50	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	42.85			0.00			1.29			0.00		
Approach LOS	E			A			A			A		
d_I, Intersection Delay [s/veh]	8.92											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	All-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.219

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	3	0	2	1	1	17	24	86	2	0	58	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	46	0	6	0	0	0	0	47	8	3	45	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	0	8	1	1	17	24	133	10	3	103	6
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	2	0	0	5	7	39	3	1	30	2
Total Analysis Volume [veh/h]	57	0	9	1	1	20	28	155	12	3	120	7
Pedestrian Volume [ped/h]	2			2			3			0		

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Version 2021 (SP 0-4)

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	651	598	740	644	708	821	631	691	799
Degree of Utilization, x	0.10	0.00	0.03	0.04	0.22	0.01	0.00	0.17	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.34	0.01	0.09	0.14	0.83	0.04	0.01	0.62	0.03
95th-Percentile Queue Length [ft]	8.41	0.13	2.19	3.40	20.78	1.11	0.36	15.61	0.66
Approach Delay [s/veh]	9.15	7.76		8.99			8.89		
Approach LOS	A	A		A			A		
Intersection Delay [s/veh]	8.92								
Intersection LOS	A								

Intersection Level Of Service Report
Intersection 4: E Street/Project Street

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Project Street		E Street			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Street		E Street			
Base Volume Input [veh/h]	0	0	89	0	0	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	45	8	0	48
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	6	134	8	0	112
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	34	2	0	28
Total Analysis Volume [veh/h]	0	6	134	8	0	112
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.90	8.98	0.00	0.00	7.50	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.50	0.50	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.98		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.21					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			No			No			No		

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Version 2021 (SP 0-4)

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	228	0	0	0	61	0	218	63	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	246	0	77	0	323	71	238	348	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	66	0	21	0	87	19	64	94	0
Total Analysis Volume [veh/h]	0	0	0	265	0	83	0	347	76	256	374	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	2			0			1			0		
v_ci, Inbound Pedestrian Volume crossing minor street	1			0			2			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	19	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Version 2021 (SP 0-4)

Lane Group Calculations

Lane Group		C	C	C	L	C
C, Cycle Length [s]		60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		15	37	37	37	37
g / C, Green / Cycle		0.25	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate		0.22	0.13	0.13	0.30	0.12
s, saturation flow rate [veh/h]		1558	1683	1581	867	3204
c, Capacity [veh/h]		391	1037	974	570	1975
d1, Uniform Delay [s]		21.73	5.06	5.11	9.86	5.01
k, delay calibration		0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		7.10	0.44	0.51	2.55	0.21
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.89	0.20	0.22	0.45	0.19
d, Delay for Lane Group [s/veh]		28.83	5.51	5.62	12.41	5.23
Lane Group LOS		C	A	A	B	A
Critical Lane Group		Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		4.78	1.03	1.05	2.26	0.80
50th-Percentile Queue Length [ft/ln]		119.56	25.75	26.23	56.62	20.00
95th-Percentile Queue Length [veh/ln]		8.37	1.85	1.89	4.08	1.44
95th-Percentile Queue Length [ft/ln]		209.22	46.35	47.21	101.92	36.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.83	28.83	28.83	0.00	5.55	5.62	12.41	5.23	0.00
Movement LOS				C	C	C		A	A	B	A	
d_A, Approach Delay [s/veh]	0.00			28.83			5.57			8.15		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	12.50											
Intersection LOS	B											
Intersection V/C	0.519											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.092	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	499	1232	1232
d_b, Bicycle Delay [s]	30.03	16.90	4.43	4.43
I_b,int, Bicycle LOS Score for Intersection	4.132	2.134	1.909	2.079
Bicycle LOS	D	B	A	B

Sequence

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

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Version 2021 (SP 0-4)

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	233	0	0	0	0	289	0	0	281	205
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	0	265	0	0	0	73	496	0	0	519	239
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	74	0	0	0	20	138	0	0	144	66
Total Analysis Volume [veh/h]	70	0	294	0	0	0	81	551	0	0	577	266
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Version 2021 (SP 0-4)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C		L	C	C	C
C, Cycle Length [s]	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15		37	37	37	37
g / C, Green / Cycle	0.25		0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.25		0.14	0.17	0.25	0.28
s, saturation flow rate [veh/h]	1461		587	3204	1683	1514
c, Capacity [veh/h]	368		371	1971	1035	931
d1, Uniform Delay [s]	22.40		11.41	5.37	5.94	6.16
k, delay calibration	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.59		1.35	0.35	1.19	1.59
d3, Initial Queue Delay [s]	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.99		0.22	0.28	0.41	0.45
d, Delay for Lane Group [s/veh]	41.99		12.76	5.73	7.12	7.75
Lane Group LOS	D		B	A	A	A
Critical Lane Group	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.33		0.79	1.34	2.32	2.47
50th-Percentile Queue Length [ft/ln]	158.21		19.63	33.59	58.05	61.68
95th-Percentile Queue Length [veh/ln]	10.45		1.41	2.42	4.18	4.44
95th-Percentile Queue Length [ft/ln]	261.35		35.33	60.46	104.48	111.02

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Version 2021 (SP 0-4)

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.99	41.99	41.99	0.00	0.00	0.00	12.76	5.73	0.00	0.00	7.29	7.75
Movement LOS	D	D	D				B	A			A	A
d_A, Approach Delay [s/veh]	41.99			0.00			6.63			7.44		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	14.00											
Intersection LOS	B											
Intersection V/C	0.528											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	0	1233	1233
d_b, Bicycle Delay [s]	16.89	30.02	4.42	4.42
I_b,int, Bicycle LOS Score for Intersection	2.160	4.132	2.081	2.255
Bicycle LOS	B	D	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Two-way stop	Delay (sec / veh):	604.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.971

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	150	0	0	0	51	0	164	47	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	180	1	110	0	406	79	189	371	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	51	0	31	0	114	22	53	104	0
Total Analysis Volume [veh/h]	0	0	0	202	1	124	0	456	89	212	417	0
Pedestrian Volume [ped/h]	2			0			0			0		

Generated with PTV VISTRO
Version 2021 (SP 0-4)

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	1.97	0.01	0.20	0.00	0.00	0.00	0.21	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	604.04	600.82	574.57	0.00	0.00	0.00	9.45	0.00	0.00
Movement LOS				F	F	F		A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	26.58	26.58	26.58	0.00	0.00	0.00	0.78	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	664.53	664.53	664.53	0.00	0.00	0.00	19.52	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			592.86			0.00			3.19		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	130.49											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Two-way stop	Delay (sec / veh):	63.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	166	0	0	0	0	201	0	0	211	155
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	4	232	0	0	0	82	499	0	0	488	212
Peak Hour Factor	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	1	63	0	0	0	22	136	0	0	133	58
Total Analysis Volume [veh/h]	73	4	252	0	0	0	89	542	0	0	530	230
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.65	0.04	0.47	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	63.81	63.58	38.20	0.00	0.00	0.00	9.72	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	E				A	A			A	A
95th-Percentile Queue Length [veh/ln]	7.04	7.04	7.04	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	176.10	176.10	176.10	0.00	0.00	0.00	8.72	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	44.19			0.00			1.37			0.00		
Approach LOS	E			A			A			A		
d_I, Intersection Delay [s/veh]	8.96											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	All-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.243

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	6	1	4	3	1	45	25	92	9	3	90	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	0	4	0	0	0	0	56	26	12	28	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	1	8	3	1	45	25	148	35	15	118	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	2	1	0	13	7	42	10	4	34	1
Total Analysis Volume [veh/h]	41	1	9	3	1	51	28	168	40	17	134	2
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	631	586	725	632	693	801	617	675	777
Degree of Utilization, x	0.08	0.01	0.07	0.04	0.24	0.05	0.03	0.20	0.00

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.26	0.02	0.23	0.14	0.95	0.16	0.08	0.73	0.01
95th-Percentile Queue Length [ft]	6.57	0.39	5.78	3.47	23.67	3.94	2.12	18.37	0.19
Approach Delay [s/veh]	9.21	8.09		9.09			9.25		
Approach LOS	A	A		A			A		
Intersection Delay [s/veh]	9.04								
Intersection LOS	A								

Intersection Level Of Service Report
Intersection 4: E Street/Project Street

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Project Street		E Street			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Street		E Street			
Base Volume Input [veh/h]	0	0	99	0	0	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	34	26	0	40
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	4	133	26	0	135
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	33	7	0	34
Total Analysis Volume [veh/h]	0	4	133	26	0	135
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.10	9.01	0.00	0.00	7.53	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.33	0.33	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.01		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			No			No			No		

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Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	150	0	0	0	51	0	164	47	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	180	1	110	0	406	79	189	371	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	51	0	31	0	114	22	53	104	0
Total Analysis Volume [veh/h]	0	0	0	202	1	124	0	456	89	212	417	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			1			0		
v_ci, Inbound Pedestrian Volume crossing minor street	1			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	19	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Version 2021 (SP 0-4)

Lane Group Calculations

Lane Group		C	C	C	L	C
C, Cycle Length [s]		60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		14	38	38	38	38
g / C, Green / Cycle		0.24	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate		0.21	0.16	0.17	0.27	0.13
s, saturation flow rate [veh/h]		1533	1683	1590	775	3204
c, Capacity [veh/h]		370	1052	994	514	2004
d1, Uniform Delay [s]		21.98	5.04	5.09	9.98	4.85
k, delay calibration		0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.98	0.60	0.68	2.43	0.24
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.88	0.26	0.27	0.41	0.21
d, Delay for Lane Group [s/veh]		28.95	5.63	5.78	12.42	5.09
Lane Group LOS		C	A	A	B	A
Critical Lane Group		Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		4.50	1.34	1.36	1.89	0.87
50th-Percentile Queue Length [ft/ln]		112.57	33.44	34.12	47.33	21.72
95th-Percentile Queue Length [veh/ln]		7.98	2.41	2.46	3.41	1.56
95th-Percentile Queue Length [ft/ln]		199.57	60.19	61.41	85.19	39.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.95	28.95	28.95	0.00	5.69	5.78	12.42	5.09	0.00
Movement LOS				C	C	C		A	A	B	A	
d_A, Approach Delay [s/veh]	0.00			28.95			5.70			7.56		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	11.55											
Intersection LOS	B											
Intersection V/C	0.487											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.000	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	499	1232	1232
d_b, Bicycle Delay [s]	30.03	16.90	4.43	4.43
I_b,int, Bicycle LOS Score for Intersection	4.132	2.099	2.009	2.079
Bicycle LOS	D	B	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	166	0	0	0	0	201	0	0	211	155
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	4	232	0	0	0	82	499	0	0	488	212
Peak Hour Factor	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	1	63	0	0	0	22	136	0	0	133	58
Total Analysis Volume [veh/h]	73	4	252	0	0	0	89	542	0	0	530	230
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C		L	C	C	C
C, Cycle Length [s]	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15		37	37	37	37
g / C, Green / Cycle	0.25		0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.22		0.14	0.17	0.23	0.25
s, saturation flow rate [veh/h]	1468		635	3204	1683	1521
c, Capacity [veh/h]	369		404	1973	1036	936
d1, Uniform Delay [s]	21.73		10.66	5.34	5.73	5.92
k, delay calibration	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.56		1.25	0.35	1.00	1.31
d3, Initial Queue Delay [s]	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89		0.22	0.27	0.37	0.41
d, Delay for Lane Group [s/veh]	29.29		11.91	5.69	6.73	7.22
Lane Group LOS	C		B	A	A	A
Critical Lane Group	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.57		0.82	1.31	2.01	2.12
50th-Percentile Queue Length [ft/ln]	114.19		20.44	32.83	50.29	52.95
95th-Percentile Queue Length [veh/ln]	8.07		1.47	2.36	3.62	3.81
95th-Percentile Queue Length [ft/ln]	201.81		36.80	59.10	90.51	95.32

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.29	29.29	29.29	0.00	0.00	0.00	11.91	5.69	0.00	0.00	6.87	7.22
Movement LOS	C	C	C				B	A			A	A
d_A, Approach Delay [s/veh]	29.29			0.00			6.56			6.98		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	11.09											
Intersection LOS	B											
Intersection V/C	0.474											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	0	1232	1232
d_b, Bicycle Delay [s]	16.90	30.03	4.43	4.43
I_b,int, Bicycle LOS Score for Intersection	2.102	4.132	2.080	2.187
Bicycle LOS	B	D	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			No			No			No		

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Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	378	0	150	0	715	143	125	611	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	0	0	5	0	23	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	381	0	150	0	720	143	148	625	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	95	0	38	0	180	36	37	156	0
Total Analysis Volume [veh/h]	0	0	0	381	0	150	0	720	143	148	625	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	2			0			1			0		
v_ci, Inbound Pedestrian Volume crossing minor street	1			0			2			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	48	0	0	12	0	0	12	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Version 2021 (SP 0-4)

Lane Group Calculations

Lane Group		C	C	C	L	C
C, Cycle Length [s]		60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		23	29	29	29	29
g / C, Green / Cycle		0.38	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate		0.34	0.26	0.27	0.26	0.20
s, saturation flow rate [veh/h]		1550	1683	1588	577	3204
c, Capacity [veh/h]		590	818	772	270	1558
d1, Uniform Delay [s]		17.54	10.67	10.90	22.07	9.86
k, delay calibration		0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.29	2.43	2.91	7.76	0.77
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.90	0.53	0.56	0.55	0.40
d, Delay for Lane Group [s/veh]		22.83	13.10	13.81	29.83	10.63
Lane Group LOS		C	B	B	C	B
Critical Lane Group		Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		6.34	3.98	4.12	2.46	2.37
50th-Percentile Queue Length [ft/ln]		158.51	99.48	103.10	61.55	59.31
95th-Percentile Queue Length [veh/ln]		10.47	7.16	7.42	4.43	4.27
95th-Percentile Queue Length [ft/ln]		261.75	179.07	185.57	110.78	106.76

Movement, Approach, & Intersection Results

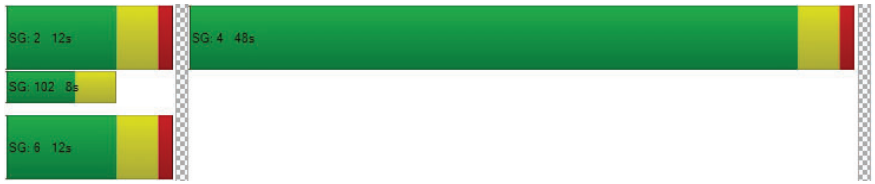
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	22.83	22.83	22.83	0.00	13.38	13.81	29.83	10.63	0.00
Movement LOS				C	C	C		B	B	C	B	
d_A, Approach Delay [s/veh]	0.00			22.83			13.45			14.31		
Approach LOS	A			C			B			B		
d_I, Intersection Delay [s/veh]	16.05											
Intersection LOS	B											
Intersection V/C	0.614											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.898	0.000	0.000	0.000
Crosswalk LOS	A	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1465	266	266
d_b, Bicycle Delay [s]	30.03	2.15	22.56	22.56
l_b,int, Bicycle LOS Score for Intersection	4.132	2.436	2.272	2.197
Bicycle LOS	D	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.612

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			No			No		

Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	171	5	274	0	0	0	124	969	0	0	565	186
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	8	0	0	0	0	8	0	0	37	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	171	5	282	0	0	0	124	977	0	0	602	195
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	1	71	0	0	0	31	244	0	0	151	49
Total Analysis Volume [veh/h]	171	5	282	0	0	0	124	977	0	0	602	195
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	51	0	0	0	0	0	9	0	0	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C		L	C	C	C
C, Cycle Length [s]	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00		2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21		31	31	31	31
g / C, Green / Cycle	0.34		0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.31		0.20	0.30	0.24	0.26
s, saturation flow rate [veh/h]	1493		613	3204	1683	1549
c, Capacity [veh/h]	516		317	1671	878	808
d1, Uniform Delay [s]	18.59		17.38	9.90	9.01	9.26
k, delay calibration	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.42		3.61	1.50	1.69	2.15
d3, Initial Queue Delay [s]	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89		0.39	0.58	0.45	0.49
d, Delay for Lane Group [s/veh]	24.01		20.99	11.40	10.71	11.41
Lane Group LOS	C		C	B	B	B
Critical Lane Group	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.64		1.66	4.08	3.07	3.21
50th-Percentile Queue Length [ft/ln]	141.09		41.62	102.12	76.76	80.32
95th-Percentile Queue Length [veh/ln]	9.54		3.00	7.35	5.53	5.78
95th-Percentile Queue Length [ft/ln]	238.49		74.92	183.81	138.17	144.57

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.01	24.01	24.01	0.00	0.00	0.00	20.99	11.40	0.00	0.00	10.94	11.41
Movement LOS	C	C	C				C	B			B	B
d_A, Approach Delay [s/veh]	24.01			0.00			12.48			11.06		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	14.24											
Intersection LOS	B											
Intersection V/C	0.612											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1565	0	166	166
d_b, Bicycle Delay [s]	1.42	30.03	25.24	25.24
I_b,int, Bicycle LOS Score for Intersection	2.315	4.132	2.468	2.217
Bicycle LOS	B	D	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.338

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	85	19	24	44	6	49	156	723	28	8	406	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	46	0	6	0	0	0	0	8	8	3	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	131	19	30	44	6	49	156	731	36	11	406	33
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	5	8	11	2	12	39	183	9	3	102	8
Total Analysis Volume [veh/h]	131	19	30	44	6	49	156	731	36	11	406	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			1			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			1			1		
v_co, Outbound Pedestrian Volume crossing minor stree	0			1			2			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			2			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Version 2021 (SP 0-4)

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	23	23	23	23	23	23
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.11	0.03	0.04	0.04	0.18	0.23	0.23	0.02	0.13	0.13
s, saturation flow rate [veh/h]	1212	1519	1220	1452	854	1683	1655	631	1683	1638
c, Capacity [veh/h]	659	745	666	712	325	634	623	213	634	617
d1, Uniform Delay [s]	10.39	8.06	9.51	8.11	21.21	15.15	15.15	22.21	13.44	13.45
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	0.17	0.19	0.21	1.10	0.96	0.97	0.10	0.33	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.07	0.07	0.08	0.48	0.61	0.61	0.05	0.35	0.35
d, Delay for Lane Group [s/veh]	11.06	8.23	9.70	8.32	22.31	16.10	16.12	22.31	13.77	13.80
Lane Group LOS	B	A	A	A	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.09	0.33	0.33	0.38	2.01	4.06	3.99	0.14	2.04	2.00
50th-Percentile Queue Length [ft/ln]	27.30	8.26	8.35	9.38	50.32	101.45	99.87	3.39	50.88	50.03
95th-Percentile Queue Length [veh/ln]	1.97	0.59	0.60	0.68	3.62	7.30	7.19	0.24	3.66	3.60
95th-Percentile Queue Length [ft/ln]	49.14	14.86	15.03	16.88	90.57	182.61	179.76	6.09	91.58	90.06

Movement, Approach, & Intersection Results

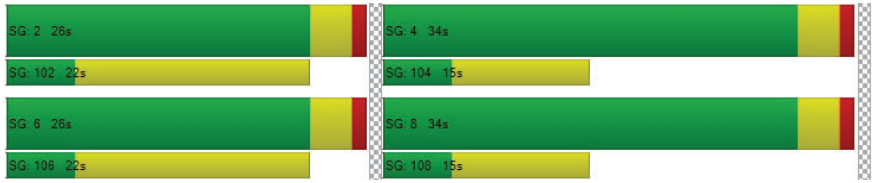
d_M, Delay for Movement [s/veh]	11.06	8.23	8.23	9.70	8.32	8.32	22.31	16.11	16.12	22.31	13.78	13.80
Movement LOS	B	A	A	A	A	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	10.29			8.93			17.16			13.99		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	15.06											
Intersection LOS	B											
Intersection V/C	0.338											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.000	2.226	2.712	2.547
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	12.04	12.04	7.51	7.51
l_b,int, Bicycle LOS Score for Intersection	1.857	1.723	2.321	1.931
Bicycle LOS	A	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: E Street/Project Street

Control Type:	Two-way stop	Delay (sec / veh):	14.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	Project Street		E Street			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Street		E Street			
Base Volume Input [veh/h]	0	0	791	0	0	447
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	6	8	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	6	797	8	0	450
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	199	2	0	113
Total Analysis Volume [veh/h]	0	6	797	8	0	450
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	24.05	14.51	0.00	0.00	9.39	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.19	1.19	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.51		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.729

Intersection Setup

Name				I-5 South Ramps			E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			No			No			No		

Volumes

Name				I-5 South Ramps			E Street			E Street		
Base Volume Input [veh/h]	0	0	0	250	5	178	0	675	173	239	753	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	10	0	0	0	16	0	14	10	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	260	5	178	0	691	173	253	763	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	65	1	45	0	173	43	63	191	0
Total Analysis Volume [veh/h]	0	0	0	260	5	178	0	691	173	253	763	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			1			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	1			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	48	0	0	12	0	0	12	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	C	C	L	C
C, Cycle Length [s]		60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		20	32	32	32	32
g / C, Green / Cycle		0.33	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate		0.29	0.26	0.28	0.44	0.24
s, saturation flow rate [veh/h]		1530	1683	1571	576	3204
c, Capacity [veh/h]		502	907	847	308	1727
d1, Uniform Delay [s]		19.12	8.59	8.81	22.75	8.38
k, delay calibration		0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.32	1.79	2.19	21.23	0.82
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.88	0.48	0.51	0.82	0.44
d, Delay for Lane Group [s/veh]		24.44	10.38	11.01	43.97	9.21
Lane Group LOS		C	B	B	D	A
Critical Lane Group		Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		5.52	3.37	3.51	5.31	2.60
50th-Percentile Queue Length [ft/ln]		137.93	84.29	87.75	132.71	65.00
95th-Percentile Queue Length [veh/ln]		9.37	6.07	6.32	9.09	4.68
95th-Percentile Queue Length [ft/ln]		234.24	151.72	157.96	227.17	117.01

Movement, Approach, & Intersection Results

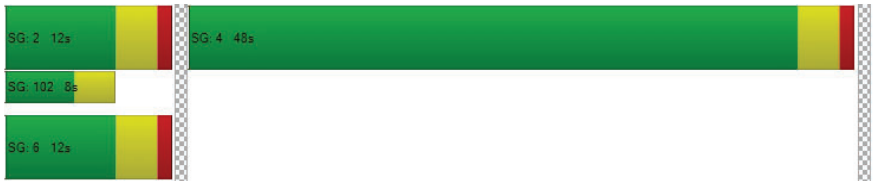
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.44	24.44	24.44	0.00	10.62	11.01	43.97	9.21	0.00
Movement LOS				C	C	C		B	B	D	A	
d_A, Approach Delay [s/veh]	0.00			24.44			10.69			17.86		
Approach LOS	A			C			B			B		
d_I, Intersection Delay [s/veh]	16.45											
Intersection LOS	B											
Intersection V/C	0.729											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.184	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1465	266	266
d_b, Bicycle Delay [s]	30.03	2.15	22.56	22.56
I_b,int, Bicycle LOS Score for Intersection	4.132	2.291	2.272	2.398
Bicycle LOS	D	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: E Street/I-5 North Ramps

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

Intersection Setup

Name	I-5 North Ramps						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			25.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			No			No		

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Volumes

Name	I-5 North Ramps						E Street			E Street		
Base Volume Input [veh/h]	140	5	127	0	0	0	75	850	0	0	852	436
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	26	0	0	0	0	26	0	0	24	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	5	153	0	0	0	75	876	0	0	876	442
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	1	38	0	0	0	19	219	0	0	219	111
Total Analysis Volume [veh/h]	140	5	153	0	0	0	75	876	0	0	876	442
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	51	0	0	0	0	0	9	0	0	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	C		L	C	C	C
C, Cycle Length [s]	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00		2.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14		38	38	38	38
g / C, Green / Cycle	0.23		0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.20		0.20	0.27	0.39	0.44
s, saturation flow rate [veh/h]	1511		375	3204	1683	1505
c, Capacity [veh/h]	354		234	2027	1065	952
d1, Uniform Delay [s]	21.95		18.17	5.59	6.67	7.22
k, delay calibration	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.43		3.59	0.67	2.70	4.13
d3, Initial Queue Delay [s]	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84		0.32	0.43	0.62	0.69
d, Delay for Lane Group [s/veh]	27.38		21.75	6.26	9.37	11.35
Lane Group LOS	C		C	A	A	B
Critical Lane Group	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.96		1.07	2.28	4.30	4.88
50th-Percentile Queue Length [ft/ln]	98.94		26.77	56.89	107.58	122.11
95th-Percentile Queue Length [veh/ln]	7.12		1.93	4.10	7.71	8.51
95th-Percentile Queue Length [ft/ln]	178.09		48.19	102.41	192.63	212.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.38	27.38	27.38	0.00	0.00	0.00	21.75	6.26	0.00	0.00	9.86	11.35
Movement LOS	C	C	C				C	A			A	B
d_A, Approach Delay [s/veh]	27.38			0.00			7.48			10.36		
Approach LOS	C			A			A			B		
d_I, Intersection Delay [s/veh]	11.27											
Intersection LOS	B											
Intersection V/C	0.635											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1565	0	166	166
d_b, Bicycle Delay [s]	1.42	30.03	25.24	25.24
l_b,int, Bicycle LOS Score for Intersection	2.051	4.132	2.344	2.647
Bicycle LOS	B	D	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 3: E Street/Marguerite Street

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.292

Intersection Setup

Name	Marguerite Street						E Street			E Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marguerite Street						E Street			E Street		
Base Volume Input [veh/h]	29	14	15	67	24	117	54	416	49	25	574	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	0	4	0	0	0	0	26	26	12	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	14	19	67	24	117	54	442	75	37	574	72
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	4	5	17	6	29	14	111	19	9	144	18
Total Analysis Volume [veh/h]	59	14	19	67	24	117	54	442	75	37	574	72
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	32	32	32	32	20	20	20	20	20	20
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.05	0.02	0.05	0.10	0.08	0.16	0.16	0.05	0.20	0.20
s, saturation flow rate [veh/h]	1123	1528	1238	1468	706	1683	1599	796	1683	1618
c, Capacity [veh/h]	636	808	736	777	210	568	540	252	568	547
d1, Uniform Delay [s]	9.25	6.81	8.01	7.37	24.76	15.61	15.64	21.93	16.36	16.37
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.09	0.24	0.51	0.64	0.59	0.63	0.27	0.93	0.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.04	0.09	0.18	0.26	0.46	0.47	0.15	0.58	0.58
d, Delay for Lane Group [s/veh]	9.54	6.90	8.26	7.88	25.41	16.20	16.27	22.19	17.29	17.35
Lane Group LOS	A	A	A	A	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.45	0.20	0.46	0.92	0.73	2.72	2.61	0.46	3.57	3.46
50th-Percentile Queue Length [ft/ln]	11.17	4.91	11.38	23.03	18.32	67.95	65.36	11.38	89.31	86.40
95th-Percentile Queue Length [veh/ln]	0.80	0.35	0.82	1.66	1.32	4.89	4.71	0.82	6.43	6.22
95th-Percentile Queue Length [ft/ln]	20.10	8.84	20.49	41.45	32.98	122.30	117.64	20.49	160.76	155.51

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Version 2021 (SP 0-4)

Movement, Approach, & Intersection Results

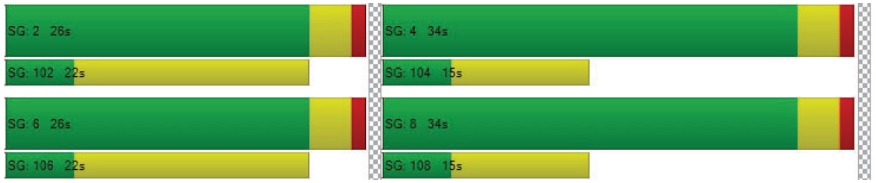
d_M, Delay for Movement [s/veh]	9.54	6.90	6.90	8.26	7.88	7.88	25.41	16.23	16.27	22.19	17.32	17.35
Movement LOS	A	A	A	A	A	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	8.60			8.00			17.10			17.59		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	15.59											
Intersection LOS	B											
Intersection V/C	0.292											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	2.035	2.092	2.579	2.573
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	12.04	12.04	7.51	7.51
I_b,int, Bicycle LOS Score for Intersection	1.711	1.903	2.031	2.123
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: E Street/Project Street

Control Type:	Two-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Project Street		E Street			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Street		E Street			
Base Volume Input [veh/h]	0	0	498	0	0	671
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	4	26	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	4	502	26	0	683
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	126	7	0	171
Total Analysis Volume [veh/h]	0	4	502	26	0	683
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	22.60	11.48	0.00	0.00	8.46	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.54	0.54	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.48		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	B					