TRAFFIC IMPACT ANALYSIS

FOR THE PROPOSED

TEMECULA VALLEY K-8 STEAM SCHOOL

Prepared for

TEMECULA VALLEY UNIFIED SCHOOL DISTRICT
&
PLACEWORKS

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I.
INTRODUCTION AND PROJECT DESCRIPTION

This report summarizes the results of a traffic impact analysis that was conducted for a new K-8 STEAM (science, technology, engineering, arts, and mathematics) school that is proposed by the Temecula Valley Unified School District on a vacant parcel of land in southwest Riverside County. The school site is located on the northwest quadrant of Abelia Street and Washington Street approximately 1¼ mile east of State Route 79 (Winchester Road). The project site is in an unincorporated area of Riverside County east of Murrieta and north of Temecula. Figure 1 in the Appendix is a vicinity map that shows the location of the proposed school.

Project Description

The STEAM school would be constructed on a 23-acre site and would provide the capacity to accommodate up to 1,191 students, comprised of 678 students in grades K through 5 and 513 students in grades 6 through 8. It is anticipated that the 6 through 8 component would be operational in 2021 and that the elementary component would be operational in 2025.

The school campus would consist of classroom buildings, an administration building, a library, a multipurpose building, sports fields, hardcourts, locker rooms/showers, and parking lots. Access to the school would be provided by three driveways on the north side of Abelia Street west of Washington Street. The driveways would provide access to the school's parking lots, drop-off/pick-up zones, and bus loading zones. The parking lots would provide approximately 133 parking spaces.

The site plan for the school is shown on Figure 2 in the Appendix. The three access driveways on Abelia Street are already in place because the school site was previously graded and prepared for the development of a school as a component of the Winchester Specific Plan. That formerly proposed school, however, was not constructed.

Analysis Methodology

An analysis has been prepared to evaluate the traffic impacts of the proposed K-8 school. The objective of the analysis was to quantify the impacts of the proposed school on traffic conditions on the roadways and intersections in the vicinity of the project site. The methodology for the traffic study, in general, was to:

1. Establish the existing baseline traffic conditions on the roads and intersections that provide access to the project site,
2. Project the future baseline traffic conditions for the target year of operation for the completed school (year 2025),
3. Estimate the levels of project-related traffic on a typical day of operation and geographically distribute this traffic onto the study area roadway network,
4. Conduct a comparative analysis of traffic conditions with and without the school, and
5. Identify improvements if significant impacts would occur.

The traffic analysis is based on the morning (AM) and afternoon (PM) peak hour traffic volumes on the roadways and intersections in the vicinity of the project site. The following analysis scenarios were addressed:

- Existing (year 2019) conditions
- Existing plus project conditions
- Future (year 2025) conditions without the school
- Future conditions with the school

The analysis was conducted by calculating the levels of service (LOS) at the study area intersections for each analysis scenario. The levels of service were calculated by using the Highway Capacity Manual (HCM) methodology, which uses average vehicular delay to determine the levels of service.

The traffic analysis addresses the impacts at 10 intersections in the vicinity of the school site. The study area intersections and the type of traffic control at each intersection are listed below in Table 1. All of the intersections are in the jurisdiction of Riverside County except for the intersection of Winchester Road (SR 79) at Pourroy Road/Abelia Street, which is a Caltrans intersection.

TABLE 1
STUDY AREA INTERSECTIONS

Intersection	*Traffic Control*
Washington Street at Fields Drive	Traffic Signal
Washington Street at Cottonwood Road	Traffic Signal
Winchester Road (SR 79) at Pourroy Road/Abelia Street	Traffic Signal
Pourroy Road at Benton Road	Traffic Signal
Washington Street at Abelia Street	Stop Sign on Abelia Street
Washington Street at Benton Road	4-Way Stop Signs
Washington Street at Auld Road	3-Way Stop Signs
Abelia Street at Geranium Street	4-Way Stop Signs
Abelia Street at Charlois Street/Ginger Tree Drive	4-Way Stop Signs
Pourroy Road at Thompson Road	4-Way Stop Signs

II.
EXISTING AND FUTURE BASELINE TRAFFIC CONDITIONS

The roadway network in the project vicinity, the existing traffic volumes, and the levels of service at the affected study area intersections are described below.

Study Area Roadway Network

The roads that provide access to the project area include Washington Street, Abelia Street, Fields Drive, Cottonwood Road, Benton Road, Auld Road, Charlois Street, Ginger Tree Drive, Geranium Street, Winchester Road (State Route 79), Pourroy Road, and Thompson Road. The following paragraphs provide a brief description of the characteristics of these roadways. Figure 3 in the Appendix shows the study area roadway network, including the type of traffic control at the intersections, the lane configuration at the intersections, and the speed limits.

Washington Street

Washington Street is a two to six lane north-south road that abuts the east side of the school site. It has two lanes south of Cottonwood Road, which includes the segment adjacent to the school site, and six lanes north of Cottonwood Road. The Circulation Plan of Specific Plan No. 286, Amendment No. 6 (Winchester 1800 Plan) indicates that Washington Street is classified as an arterial roadway. The speed limit on Washington Street is 55 miles per hour (mph).

Abelia Street

Abelia Street is a four lane road that abuts the south side of the school site. It runs in an east-west direction along the school site west of Washington Street, then curves to the northwest to intersect with Winchester Road. It is classified as a secondary road and has a speed limit of 45 mph.

Fields Drive

Fields Drive is a two lane east-west road that is located approximately one mile north of the school site. It is classified as a local road and has a speed limit of 25 mph.

Cottonwood Road

Cottonwood Road is a two lane east-west road that is located approximately three-quarters of a mile north of the school site. It is classified as a local road and has a speed limit of 25 mph.

Benton Road

Benton Road Avenue is a two to six lane east-west road that is located approximately one mile south of the school site. It has two lanes east and west of Washington Street, six lanes east of Pourroy Road, and two lanes west of Pourroy Road. Benton Road is classified as an urban arterial roadway and the speed limit is 55 mph.

Auld Road

Auld Road is a two lane east-west road that is located approximately 1½ mile south of the school site. It is classified as a secondary road and has a speed limit of 50 mph.

Charlois Street

Charlois Street is a two lane north-south road that intersects with Abelia Street near the southwest corner of the school site. It is classified as a local road and the speed limit is 25 mph.

Ginger Tree Drive

Ginger Tree Drive is a two lane north-south road that is a continuation of Charlois Street on the north side of Abelia Street near the southwest corner of the school site. It is classified as a local road and has a speed limit of 25 mph.

Geranium Street

Geranium Street is a two lane east-west road that is located approximately one-half mile northwest of the school site. It is classified as a local road and the speed limit is 35 mph.

Winchester Road (State Route 79)

Winchester Road is a four lane State highway that runs in a southwest to northeast direction. It is located approximately 1¼ mile northwest of the school site. Winchester Road is classified as an urban arterial roadway and has a speed limit of 55 mph.

Pourray Road

There are two distinct segments of Pourroy Road in the study area. The southern segment is a two lane north-south road located approximately three-quarters of a mile west of the school site. The southern segment is a continuation of Abelia Street that extends northwest of Winchester Road. Pourroy Road is classified as a secondary road and the speed limit is 45 mph.

Thompson Road

Thompson Road is an east-west road that intersects with Pourroy Road approximately one mile southwest of the school site. It has four lanes and a speed limit of 45 mph west of Pourroy Road and two lanes with a speed limit of 45 mph east of Pourroy Road. Thompson Road is classified as a secondary road.

Existing Traffic Volumes

Manual traffic counts were taken at the 10 study area intersections during the AM and PM peak periods on Thursday, May 30, 2019. The morning traffic counts were taken from 7:00 to 9:00 AM and the afternoon counts were taken from 2:00 to 6:00 PM. The peak hour traffic counts that were used for the analysis represent the highest one-hour interval of traffic flow within these two monitoring periods.

The afternoon counts extended over a four-hour monitoring period to ensure that the counts reflected the early afternoon school dismissal peak as well as the late afternoon commuter peak. In the morning, the school peak and the commuter peak both generally occur at the some time. Figure 4 in the Appendix illustrates the existing peak hour traffic volumes and turning movements at each intersection for the AM and PM peak hours.

Existing Intersection Levels of Service

To quantify the existing baseline traffic conditions, the study area intersections were analyzed to determine their operating conditions during the AM and PM peak hours. The traffic conditions

were quantified by calculating the levels of service at each intersection. Level of service (LOS) an industry standard by which the operating conditions of a roadway segment or an intersection are measured.

LOS is defined on a scale of A through F with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS A is characterized as having free flowing traffic conditions with minimal vehicle delay and no restrictions on maneuvering or operating speeds, where traffic volumes are low and travel speeds are high. LOS F is characterized as having forced flow with many stoppages, high levels of delay, and low operating speeds.

According to Riverside County standards, LOS A through D represents acceptable conditions, while LOS E and F represent congested, over-capacity conditions. According to the Riverside County Congestion Management Program, LOS A through E represents acceptable conditions while LOS F represents unacceptable conditions. The levels of service at the study area intersections were determined by using the Highway Capacity Manual (HCM) methodology, which is consistent with the guidelines for traffic impact studies from the Riverside County Transportation Department's "Traffic Impact Analysis Preparation Guide."

Levels of service are based on the average amount of vehicular delay that occurs at an intersection. The average levels of vehicle delay at each intersection and the resulting levels of service were determined using the Highway Capacity Software (HCS). The relationship between delay values and the corresponding levels of service is shown in Table 2.

TABLE 2
RELATIONSHIP BETWEEN DELAY VALUES & LEVELS OF SERVICE

Level of Service	*Delay Value (seconds) Signalized Intersections*	*Delay Value (seconds) Unsignalized Intersections*
A	0.0 to 10.0	0.0 to 10.0
B	> 10.0 to 20.0	> 10.0 to 15.0
C	> 20.0 to 35.0	> 15.0 to 25.0
D	> 35.0 to 55.0	> 25.0 to 35.0
E	> 55.0 to 80.0	> 35.0 to 50.0
F	> 80.0	> 50.0

Based on the hourly traffic volumes, the turning movement counts, and the existing number of lanes at each intersection, the average vehicle delay values and corresponding levels of service have been determined at each intersection for the existing conditions scenario, as summarized in Table 3.

Table 3 indicates that all 10 of the study area intersections currently operate at acceptable levels of service (LOS A through D). During the AM peak hour, four intersections operate at LOS A, two intersections operate at LOS B, and four intersections operate at LOS C. During the PM peak hour, three intersections operate at LOS A, five intersections operate at LOS B, and two intersections operate at LOS C.

TABLE 3 EXISTING INTERSECTION LEVELS OF SERVICE		
Intersection	***Delay Value (seconds/vehicle) & Level of Service***	
	AM Peak Hour	***PM Peak Hour***
SIGNALIZED INTERSECTIONS		
Washington Street at Fields Drive	9.9 – A	10.1 – B
Washington Street at Cottonwood Road	6.4 – A	6.0 – A
Winchester Road at Abelia Street/Pourroy Road	20.3 – C	18.9 – B
Pourroy Road at Benton Road	23.1 – C	30.8 – C
INTERSECTIONS WITH STOP SIGNS		
Washington Street at Abelia Street	18.1 – C	11.3 – B
Washington Street at Benton Road	22.8 – C	15.3 – C
Washington Street at Auld Road	11.1 – B	14.0 – B
Abelia Street at Geranium Street	8.5 – A	8.3 – A
Abelia Street at Charlois Street/Ginger Tree Drive	8.9 – A	8.0 – A
Pourroy Road at Thompson Road	11.2 – B	12.6 – B

Future Baseline Traffic Conditions

As the proposed school is expected to be completed and occupied in the year 2025, the existing (2019) traffic volumes were expanded by an ambient growth factor of 6.2 percent to account for general regional growth and the cumulative impacts of traffic associated with other development projects in the area. This growth factor represents a one percent annual growth rate for six years, compounded annually. The projected traffic volumes for the year 2025 without the project are shown on Figure 5 in the Appendix.

Based on the projected peak hour traffic volumes, the turning movement counts, and the existing lane configuration, the future baseline levels of service were calculated for each study area intersection, as summarized in Table 4. The intersection of Washington Street at Abelia Street would be signalized by the year 2025 because a construction project is currently in progress that will widen Washington Street and install a traffic signal at this intersection.

TABLE 4 YEAR 2025 INTERSECTION LEVELS OF SERVICE		
Intersection	***Delay Value (seconds/vehicle) & Level of Service***	
	AM Peak Hour	***PM Peak Hour***
SIGNALIZED INTERSECTIONS		
Washington Street at Fields Drive	11.2 – B	11.5 – B
Washington Street at Cottonwood Road	7.4 – A	7.1 – A
Washington Street at Abelia Street*	19.3 – B	15.7 – B
Winchester Road at Abelia Street/Pourroy Road	21.4 – C	20.0 – C
Pourroy Road at Benton Road	25.1 – C	36.5 – D
INTERSECTIONS WITH STOP SIGNS		
Washington Street at Benton Road	32.2 – D	18.5 – C
Washington Street at Auld Road	11.7 – B	15.7 – C
Abelia Street at Geranium Street	8.7 – A	8.5 – A
Abelia Street at Charlois Street/Ginger Tree Drive	9.3 – A	8.2 – A

Pourroy Road at Thompson Road	11.8 – B	13.8 – B

*Signal will be installed prior to 2025

Table 4 indicates that all 10 of the study area intersections are projected to operate at acceptable levels of service (LOS A through D) for the target year of 2025. During the AM peak hour, three of the intersections would operate at LOS A, four intersections would operate at LOS B, two intersections would operate at LOS C, and one intersection would operate at LOS D. During the PM peak hour, three of the intersections would operate at LOS A, three intersections would operate at LOS B, three intersections would operate at LOS C, and one intersection would operate at LOS D.

III.
TRAFFIC IMPACT ANALYSIS

This section summarizes the analysis of the project's impacts on study area traffic conditions. First is a discussion of project-related traffic volumes. This is followed by an analysis of the impacts of the proposed school on traffic volumes and intersection levels of service. Then the impacts associated with site access, alternative transportation, and safety are presented.

Standards of Significance

According to Riverside County's "Traffic Impact Analysis Preparation Guide," a significant impact would occur at a study intersection:

1. When existing traffic conditions exceed the General Plan target LOS,
2. When project traffic will deteriorate the LOS to below the target LOS, or
3. When cumulative traffic exceeds the target LOS.

As the target LOS is D, the project would have a significant impact if an intersection is projected to operated at LOS E or F for the "with project" scenario.

Project-Related Traffic

The volume of traffic was determined in order to estimate the impacts of the project on the study area roadways and intersections. The trip rates and the anticipated volumes of traffic are shown in Table 5. The trip rates represent values from the Institute of Transportation Engineers *Trip Generation Manual* for the elementary school and middle school land use categories.

TABLE 5
PROJECT-RELATED TRAFFIC

Land Use	Daily Traffic	AM Peak Hour			PM Peak Hour (School)			PM Peak Hour (Streets)		
		Total Traffic	Trips In	Trips Out	Total Traffic	Trips In	Trips Out	Total Traffic	Trips In	Trips Out
TRIP RATES										
Elementary School (trips per student)	1.89	0.67	54%	46%	0.34	45%	55%	0.17	48%	52%
Middle School (trips per student)	2.13	0.58	54%	46%	0.35	46%	54%	0.17	49%	51%
TRAFFIC VOLUMES										
Elementary School (678 students)	1,280	454	245	209	231	104	127	115	55	60
Middle School (513 students)	1,090	298	161	137	180	83	97	87	43	44
Total (1191 students)	2,370	752	406	346	411	187	224	202	98	104

Table 5 indicates that the 1,191-student school would result in an estimated 752 vehicle trips during the AM peak hour (406 inbound and 346 outbound), 411 trips during the early PM peak

hour at school dismissal time (187 inbound and 224 outbound), 202 trips during the PM commuter peak hour (98 inbound and 104 outbound), and 2,370 trips per day.

It should be emphasized that the project-related traffic do not represent new traffic on the overall roadway network because the traffic would be re-directed to the new school from existing schools within the District. Students that would attend this proposed school would otherwise have attended an existing school.

To quantify the increases in traffic that would occur at each intersection as a result of the proposed school, the project traffic shown in Table 5 for the AM peak hour and the PM peak hour for the school was geographically distributed onto the roadway network using the directional percentages shown on Figure 6 in the Appendix. The distribution percentages are based on the layout of the street network, the existing travel patterns observed on the study area roadways, and the anticipated geographical distribution of the students' residences.

Using the traffic volumes shown in Table 5 and the geographical distribution assumptions outlined above, the volumes of project traffic on each access road and at each study area intersection were determined for the traffic impact analysis. The project traffic volumes are shown on Figure 6 in the Appendix for the AM and PM peak hours.

Projected Traffic Volumes

For purposes of evaluating the impacts of the proposed school, the traffic analysis considers two baseline scenarios. One is the project's impacts on existing conditions and the other is the project's impacts on the projected year 2025 conditions. To quantify the impacts on existing conditions, the project traffic volumes shown on Figure 6 were added to the existing traffic volumes. The resulting "existing plus project" traffic volumes are shown on Figure 7.

The total volumes of traffic projected for the year 2025 traffic conditions for the "with project" scenario were determined by adding the project traffic to the future year 2025 baseline traffic volumes. The "2025 with project" traffic volumes are shown on Figure 8.

Intersection Impact Analysis

An analysis of traffic impacts was conducted by quantifying the before-and-after traffic volumes, then determining the average delay values and levels of service at the study area intersections for the "without project" and "with project" scenarios. Two scenarios were used as the baseline conditions for the intersection impact analysis: existing year 2019 conditions and the projected year 2025 conditions. The year 2025 was used as the target year for future conditions as that is the first year that the elementary and middle school components would both be completed and operational. The impact analysis, therefore, addresses the following four scenarios.

- Existing Traffic Conditions
- Existing plus Project Traffic Conditions
- Year 2025 without Project
- Year 2025 with Project.

The before-and-after delay values and levels of service at each of the study area intersections are summarized in Table 6 for the existing conditions baseline scenario. The table shows the existing traffic conditions, the traffic conditions with the addition of the school traffic, and the increase in

delay values associated with the project. The final column in the table indicates if the intersection would be significantly impacted by the school traffic according to the significance criteria outlined above.

TABLE 6
PROJECT IMPACT ON INTERSECTION LEVELS OF SERVICE
EXISTING CONDITIONS AS BASELINE

Intersection	*Delay Value (seconds) & LOS*		*Increase In Delay (sec)*	*Significant Impact*
	Existing Conditions	*Existing Plus Project*		
SIGNALIZED INTERSECTIONS				
Washington Street at Fields Drive				
AM Peak Hour	9.9 – A	10.6 – B	0.7	No
PM Peak Hour	10.1 – B	10.6 – B	0.5	No
Washington Street at Cottonwood Road				
AM Peak Hour	6.4 – A	7.0 – A	0.6	No
PM Peak Hour	6.0 – A	6.4 – A	0.4	No
Winchester Road at Abelia Street/Pourroy Road				
AM Peak Hour	20.3 – C	20.5 – C	0.2	No
PM Peak Hour	18.9 – B	19.1 – B	0.2	No
Pourroy Road at Benton Road				
AM Peak Hour	23.1 – C	26.3 – C	3.2	No
PM Peak Hour	30.8 – C	34.4 – C	3.6	No
UNSIGNALIZED INTERSECTIONS				
Washington Street at Abelia Street				
AM Peak Hour	18.1 – C	149.2 – F	131.1	**Yes**
PM Peak Hour	11.3 – B	14.9 – B	3.6	No
Washington Street at Benton Road				
AM Peak Hour	22.8 – C	113.6 – F	90.8	**Yes**
PM Peak Hour	15.3 – C	26.1 – D	10.8	No
Washington Street at Auld Road				
AM Peak Hour	11.1 – B	14.1 – B	3.0	No
PM Peak Hour	14.0 – B	18.3 – C	4.3	No
Abelia Street at Geranium Street				
AM Peak Hour	8.5 – A	9.2 – A	0.7	No
PM Peak Hour	8.3 – A	8.8 – A	0.5	No
Abelia Street at Charlois Street/Ginger Tree Drive	8.9 – A	9.7 – A	0.8	No
AM Peak Hour	8.0 – A	8.4 – A	0.4	No
PM Peak Hour				
Pourroy Road at Thompson Road				
AM Peak Hour	11.2 – B	11.6 – B	0.4	No
PM Peak Hour	12.6 – B	13.0 – B	0.4	No

The intersection of Washington Street and Fields Drive, for example, currently operates with an average delay value of 9.9 seconds and LOS A for existing conditions during the AM peak hour and with an average delay value of 10.6 seconds and LOS B for the "existing plus project" scenario. The additional traffic by the school would increase the average delay at the intersection

by 0.7 seconds and the intersection would not be significantly impacted based on the criteria outlined previously.

Table 6 indicates that the proposed school would have a significant impact at two of the study area intersections based on the Riverside County significance criteria; i.e., the intersection of Washington Street at Abelia Street and the intersection of Washington Street at Benton Road. These two intersections would operate at an unacceptable LOS F during the AM peak hour for the "with project" scenario. None of the other intersections would be significantly impacted.

The comparative delay values and levels of service for the year 2025 analysis scenario are shown in Table 7.

TABLE 7
PROJECT IMPACT ON INTERSECTION LEVELS OF SERVICE
YEAR 2025 AS BASELINE

Intersection	*Delay Value (seconds) & LOS*		*Increase In Delay (sec)*	*Significant Impact*
	2025 Without Project	*2025 With Project*		
SIGNALIZED INTERSECTIONS				
Washington Street at Fields Drive				
AM Peak Hour	11.2 – B	11.8 – B	0.6	No
PM Peak Hour	11.5 – B	11.8 – B	0.3	No
Washington Street at Cottonwood Road				
AM Peak Hour	7.4 – A	7.9 – A	0.5	No
PM Peak Hour	7.1 – A	7.4 – A	0.3	No
Washington Street at Abelia Street				
AM Peak Hour	19.3 – B	29.5 – C	10.2	No
PM Peak Hour	15.7 – B	20.5 – C	4.8	No
Winchester Road at Abelia Street/Pourroy Road	21.4 – C	21.7 – C	0.3	No
AM Peak Hour	20.0 – C	20.2 – C	0.2	No
PM Peak Hour				
Pourroy Road at Benton Road				
AM Peak Hour	25.1 – C	29.2 – C	4.1	No
PM Peak Hour	36.5 – D	41.0 – D	4.5	No
UNSIGNALIZED INTERSECTIONS				
Washington Street at Benton Road				
AM Peak Hour	32.2 – D/11.4 - B	147.0 – F/17.3 - B	114.8	**Yes**/No*
PM Peak Hour	18.5 – C/10.3 - B	29.4 – D/11.6 - B	10.9	No/No
Washington Street at Auld Road				
AM Peak Hour	11.7 – B	16.5 – C	4.8	No
PM Peak Hour	15.7 – C	21.8 – C	6.1	No
Abelia Street at Geranium Street				
AM Peak Hour	8.7 – A	9.5 – A	0.8	No
PM Peak Hour	8.5 – A	8.9 – A	0.4	No
Abelia Street at Charlois Street/Ginger Tree Drive	9.3 – A	10.1 – B	0.8	No
AM Peak Hour	8.2 – A	8.5 – A	0.3	No

PM Peak Hour				
Pourroy Road at Thompson Road				
AM Peak Hour	11.8 – B	12.4 – B	0.6	No
PM Peak Hour	13.8 – B	14.3 – B	0.5	No

* If this intersection becomes signalized as planned in conjunction with private development.

Table 7 indicates that the proposed school would have a significant impact at one study area intersection for the year 2025 scenario; i.e., the intersection of Washington Street at Benton Road. This intersection would operate at an unacceptable LOS F during the AM peak hour for the "with project" scenario. None of the other intersections would be significantly impacted.

It should be noted, however, that the Washington Street/Benton Road intersection is proposed to be signalized according to the Winchester 1800 Specific Plan (No. 286), which would occur in conjunction with the development of Planning Area 36, which is on the northwest quadrant of the Washington Street/Benton Road intersection, or Planning Area 48, which is on the southwest quadrant of the intersection. Similar to the current construction project that is widening Washington Street and installing a traffic signal at the Washington Street/Abelia Street intersection, Washington Street and Benton Road will be improved at such time that the adjacent parcels are developed. If this development occurs prior to the completion of Phase 2 of the school in 2025, then the school's impact at the Washington Street/Benton Road intersection would be less than significant.

Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) program provides funds for transportation facilities of major regional significance, such as interchanges, roads and bridges. Under this program, several development types are exempt from the TUMF, including public and private schools (K-12 not for profit). Roadway improvements along Washington Street are either underway or planned, and are paid for by new trip-making land uses, such as residential development.

Construction Traffic Impacts

Construction of the proposed school would have various levels of truck and automobile traffic throughout the duration of the construction period. The construction-related traffic includes construction workers traveling to and from the site as well as trucks hauling construction materials to the site and demolition/excavation material away from the site. Truck trips would be spread out throughout the workday and would generally occur during non-peak traffic periods. Construction-related traffic would not result in a significant traffic impact on the study area roadway network as it would be negligible compared to the existing volumes of traffic on the roadway network.

Non-motorized Transportation and Transit

The proposed school would increase pedestrians or bicyclists. Some of the roadways in the site vicinity have sidewalks along the side of the road; i.e., the west side of Washington Street north of Abelia Street, both sides of Abelia Street, and both sides of Charlois Road and Ginger Tree Drive. There are no sidewalks on the east side of Washington Street north of Abelia Street or on either side of Washington Street south of Abelia Street, although the roadway improvement

project that is currently under construction on Washington Street includes a sidewalk along the east side of the street.

The intersections that are adjacent to the school site are equipped with painted crosswalks to accommodate pedestrian activity generated by the existing schools that are on the south side of Abelia Street west of Washington Street. The intersection of Abelia Street at Charlois Street/Ginger Tree Drive, which is a four-way stop, has crosswalks on all four legs of the intersection and the intersection of Washington Street and Abelia Street has a crosswalk on the west leg of the intersection. The roadway improvement project that is currently under construction on Washington Street includes a signalized intersection at the Washington Street/Abelia Street intersection with pedestrian crossing signals, pedestrian push buttons, and crosswalks on all four legs of the intersection.

Bike lanes are not currently provided in the project area, although the roadway improvement project that is currently under construction on Washington Street includes bike lanes along Washington Street. The proposed school project would provide bike racks for use by students and staff.

With regard to public transit routes, Riverside Transit Agency (RTA) operates Route 217 along Winchester Road and Route 79 along parts of Winchester Road, Pourroy Road, Thompson Road, and Benton Road. There are no transit routes adjacent to the school site.

The proposed school would not adversely affect the performance or safety of these transit or non-motorized transportation facilities and would not conflict with any plans or policies relative to these alternative transportation modes. The school is consistent with such plans and policies as a sidewalk will be in place along the streets abutting the school site and bike racks will be provided on site.

Congestion Management Program

According to the "Riverside County Congestion Management Program" (Riverside County Transportation Commission, December 14, 2011), the CMP arterial roadway nearest the project site is Winchester Road (SR 79), which is located approximately 1¼ mile northwest of the school site. The nearest freeway, which is also included in the CMP roadway network, is the Escondido Freeway (Interstate 215), which is located approximately five miles west of the school site.

The Congestion Management Program (CMP) indicates that a project may have a significant impact and that a traffic study would be required if the project would adversely affect the traffic conditions on a designated CMP arterial roadway or freeway. The proposed school would not have a substantial impact on traffic conditions on either of these CMP roadways because of the forecast distribution of project traffic. It is estimated that two percent of the project traffic would travel on Winchester Road, which runs along the western edge of the District boundaries. This equates to a maximum of 15 vehicle trips during the AM peak hour and 8 trips during the PM peak hour. Similarly, it is estimated that one percent of the project traffic would travel on any particular segment of Interstate 15, which is outside the District boundaries. This equates to a maximum of 8 vehicles during the AM peak hour and 4 vehicles during the PM peak hour. These levels of traffic would not result in a significant impact on these CMP roadways. The proposed project would not conflict with the congestion management program or exceed a level of service

standard established by the congestion management agency for designated roads or highways and the project's impacts on the CMP roadways would be less than significant.

Traffic Hazards and Incompatible Uses

Access to the school campus would be provided by three existing driveways on the north side of Abelia Street west of Washington Street. These driveways are already in place because the school site was previously graded and prepared for the development of a school as a component of the Winchester Specific Plan. That formerly proposed school, however, was not constructed.

The increased levels of traffic at the school, the increased number of pedestrians and bicyclists, and the increased number of vehicular turning movements at the school entrances and at the nearby intersections would result in an increased number of traffic conflicts and a corresponding increase in the probability of an accident occurring. These impacts would not be significant, however, because the streets, intersections, and driveways are designed and will be designed to accommodate the anticipated levels of vehicular and pedestrian activity and have historically been accommodating school-related traffic on a daily basis because of the existing schools on the south side of Abelia Street. There are no visibility constraints at the school's access driveways associated with curves or hills and the Winchester Specific Plan was developed with the concept of placing a school at this location. The proposed school would, therefore, be a compatible use in the area and would not substantially increase hazards due to a design feature.

Emergency Access

The proposed access and circulation features at the school, including the fire lanes, would accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. Site access would be provided via the three driveways on Abelia Street and an emergency access route would be provided on Washington Street. On-site emergency access lanes would be provided for access to the school buildings and athletic facilities, and all access features will be subject to and must satisfy the District and the Riverside County design requirements. The project would not, therefore, result in inadequate emergency access.

Improvements and Phasing

The following improvements are recommended to alleviate the traffic impacts for the full build-out of the school, which is anticipated to occur in 2025. The "existing plus project" scenario was analyzed as required by CEQA, improvements have been identified for the two intersections. The improvements are not needed for full buildout of the school in 2025 when roadway improvement projects will have been completed.

Existing Plus Project Scenario

Intersection Improvements

Washington Street/Abelia Street

- Install a traffic signal

Washington Street/Benton Road

- Install a traffic signal

Year 2025 With Project Scenario

Intersection Improvements

Washington Street/Benton Road

- Install a traffic signal

Although a traffic signal is needed, it would be installed when development projects associated with the Winchester 1800 Specific Plan and residential development east of Washington Street are constructed.

The phasing of the school project would be to initially develop the middle school with an anticipated opening in 2021, then develop the elementary school with an anticipated opening in 2025. The improvements listed above would not be required for the middle school component of the project because the two intersections would operate at acceptable levels of service (LOS C for the Washington/Abelia intersection and LOS D for the Washington/Benton intersection).

The California Manual on Uniform Traffic Control Devices (CA MUTCD) indicates that the traffic volumes at the two intersections for the AM peak hour would exceed the threshold values for the peak hour signal warrant (Warrant 3), which indicates that a traffic signal would be justified at the two locations. Figure 4C-4 from the CA MUTCD, which is a chart showing the threshold curve for peak hour signal warrants, is provided in the Appendix with the traffic volumes plotted for each intersection.

IV.
SUMMARY OF IMPACTS

The key findings of the traffic impact analysis are presented below.

- The proposed 1,191-student school would result in an estimated 752 vehicle trips during the AM peak hour (406 inbound and 346 outbound), 411 trips during the early PM peak hour at school dismissal time (187 inbound and 224 outbound), 202 trips during the PM commuter peak hour (98 inbound and 104 outbound), and 2,370 trips per day.
- An analysis of 10 intersections in the vicinity of the school site indicates that the traffic at two of the study area intersections would be significant for the "existing plus project" scenario according to Riverside County's significance criteria; i.e., the intersections of Washington Street at Abelia Street and Washington Street at Benton Road. This finding is based on the full build-out of the school, which is anticipated to be completed in 2025.
- As a construction project is currently in progress that will widen Washington Street and install a traffic signal at the intersection of Washington Street and Abelia Street, the analysis indicates that the project would result in a significant impact at only one intersection for the "2025 with project" scenario; i.e., the Washington Street/Benton Road intersection.
- The middle school is proposed to be completed and operational in 2021. That component of the school project would not result in any significant traffic impacts.
- The project would not conflict with the congestion management program or a level of service standard established by the congestion management agency and the impacts would be less than significant relative to CMP roads or highways.
- The school project would not substantially increase hazards due to a design feature or incompatible uses and would not result in inadequate emergency access.
- The proposed school would not adversely affect the performance of any transit or non-motorized transportation facilities (pedestrians and bicycles) and would not conflict with any adopted policies, plans, or programs supporting alternative transportation.
  - Improvements for the "existing plus project" scenario are as follows:

    <u>Washington Street/Abelia Street</u>

    - Install a traffic signal

    <u>Washington Street/Benton Road</u>

    - Install a traffic signal
  - Improvements for the "Year 2025 with project" scenario is as follows:

    <u>Washington Street/Benton Road</u>

    - Install a traffic signal

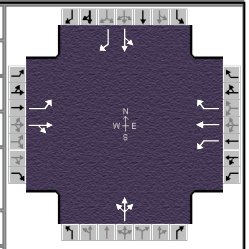
LEVEL OF SERVICE ANALYSIS

CALCULATION/OUTPUT SHEETS

SIGNALIZED INTERSECTIONS

HCS 2010 Signalized Intersection Results Summary

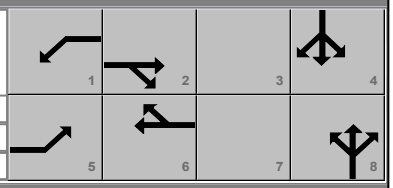
General Information				Intersection Information	
Agency	Temecula USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/19/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Pourroy Road/Benton Roa	Analysis Year	2019 Existing Without Project	Analysis Period	1> 7:00
File Name	Pourroy Benton 2019 Exist No Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	47	154	39	19	225	122	15	233	13	108	223	123

Signal Information			
Cycle, s	58.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.0	2.0	10.1	13.6	10.8	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	1.0	0.0	1.0	1.0	1.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	3.0		12.0		11.0
Phase Duration, s	9.0	17.1	7.0	15.1		15.8		18.6
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	2.9	2.9	2.9	2.9		2.9		3.0
Queue Clearance Time (g_s), s	3.6	8.0	2.7	9.2		10.5		12.7
Green Extension Time (g_e), s	0.0	0.9	0.0	0.9		0.4		0.8
Phase Call Probability	0.56	1.00	0.29	1.00		0.99		1.00
Max Out Probability	0.00	0.00	0.00	0.00		0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate *(v)*, veh/h	51	210		21	245	133		284			360	134
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1833		1810	1900	1610		1878			1870	1610
Queue Service Time (g_s), s	1.6	6.0		0.7	7.2	4.4		8.5			10.7	4.1
Cycle Queue Clearance Time (g_c), s	1.6	6.0		0.7	7.2	4.4		8.5			10.7	4.1
Capacity *(c)*, veh/h	123	379		62	329	279		348			434	374
Volume-to-Capacity Ratio *(X)*	0.416	0.553		0.331	0.743	0.475		0.814			0.829	0.358
Available Capacity (c_a), veh/h	463	938		463	972	824		961			956	824
Back of Queue *(Q)*, veh/ln (50th percentile)	0.6	2.2		0.3	2.8	1.4		3.3			4.0	1.3
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	26.2	20.8		27.6	23.0	21.8		22.9			21.4	18.9
Incremental Delay (d_2), s/veh	0.8	0.5		1.1	1.3	0.5		1.8			1.6	0.2
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Control Delay *(d)*, s/veh	27.0	21.3		28.8	24.2	22.3		24.7			23.0	19.1
Level of Service (LOS)	C	C		C	C	C		C			C	B
Approach Delay, s/veh / LOS	22.4	C		23.8	C		24.7	C		21.9	C	
Intersection Delay, s/veh / LOS	23.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.3	B	2.5	B	2.3	B
Bicycle LOS Score / LOS	0.9	A	1.1	A	1.0	A	1.3	A

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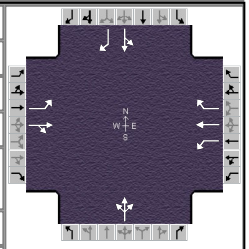
HCS 2010 Signalized Intersection Results Summary

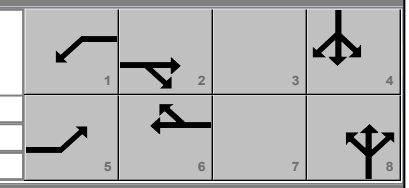
General Information				Intersection Information	
Agency	Temecula USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/19/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Pourroy Road/Benton Roa	Analysis Year	2019 Existing Without Project	Analysis Period	1> 7:00
File Name	Pourroy Benton 2019 Exist No Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	78	213	33	30	236	129	44	327	27	114	223	88

Signal Information			
Cycle, s	75.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.5	2.4	12.8	16.9	19.4	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	1.0	0.0	1.0	1.0	1.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	3.0		12.0		11.0
Phase Duration, s	10.8	20.1	8.5	17.8		24.4		21.9
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	2.9	2.9	2.9	2.9		2.9		2.9
Queue Clearance Time (g_s), s	5.4	12.1	3.3	11.7		18.8		16.2
Green Extension Time (g_e), s	0.1	1.0	0.0	1.0		0.6		0.7
Phase Call Probability	0.83	1.00	0.49	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate *(v)*, veh/h	85	267		33	257	140		433			366	96
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1855		1810	1900	1610		1867			1868	1610
Queue Service Time (g_s), s	3.4	10.1		1.3	9.7	5.9		16.8			14.2	3.7
Cycle Queue Clearance Time (g_c), s	3.4	10.1		1.3	9.7	5.9		16.8			14.2	3.7
Capacity *(c)*, veh/h	140	375		84	325	275		484			422	364
Volume-to-Capacity Ratio *(X)*	0.604	0.713		0.389	0.790	0.510		0.893			0.868	0.263
Available Capacity (c_a), veh/h	361	741		361	759	643		746			746	643
Back of Queue *(Q)*, veh/ln (50th percentile)	1.4	4.0		0.6	4.1	2.1		7.3			5.8	1.2
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	33.5	27.9		34.8	29.8	28.3		26.8			28.0	23.9
Incremental Delay (d_2), s/veh	1.6	0.9		1.1	1.6	0.5		6.3			2.2	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Control Delay *(d)*, s/veh	35.1	28.9		35.9	31.5	28.8		33.1			30.2	24.1
Level of Service (LOS)	D	C		D	C	C		C			C	C
Approach Delay, s/veh / LOS	30.4	C		31.0	C		33.1	C		28.9	C	
Intersection Delay, s/veh / LOS	30.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.3	B	2.5	B	2.3	B
Bicycle LOS Score / LOS	1.1	A	1.2	A	1.2	A	1.2	A

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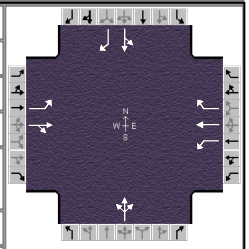
HCS 2010 Signalized Intersection Results Summary

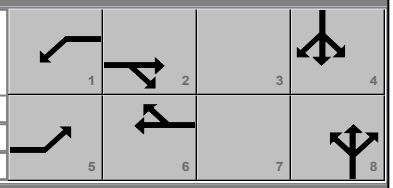
General Information				Intersection Information	
Agency	Temecula USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/19/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Pourroy Road/Benton Roa	Analysis Year	2019 Existing With Project	Analysis Period	1> 7:00
File Name	Pourroy Benton 2019 Exist w Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	47	174	39	54	242	143	15	233	54	132	223	123

Signal Information			
Cycle, s	65.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.3	0.4	11.4	15.9	13.8	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	1.0	0.0	1.0	1.0	1.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	3.0		12.0		11.0
Phase Duration, s	9.3	16.4	9.6	16.8		18.8		20.9
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	2.9	2.9	2.9	2.9		2.9		3.0
Queue Clearance Time (g_s), s	3.8	9.8	4.1	10.7		13.3		15.0
Green Extension Time (g_e), s	0.0	1.0	0.0	1.0		0.5		0.8
Phase Call Probability	0.61	1.00	0.66	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate *(v)*, veh/h	51	232		59	263	155		328			386	134
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1839		1810	1900	1610		1836			1865	1610
Queue Service Time (g_s), s	1.8	7.8		2.1	8.7	5.8		11.3			13.0	4.5
Cycle Queue Clearance Time (g_c), s	1.8	7.8		2.1	8.7	5.8		11.3			13.0	4.5
Capacity *(c)*, veh/h	117	320		127	340	289		387			452	390
Volume-to-Capacity Ratio *(X)*	0.435	0.724		0.461	0.773	0.539		0.849			0.855	0.343
Available Capacity (c_a), veh/h	412	837		412	864	732		835			848	732
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7	3.0		0.8	3.5	1.9		4.4			5.0	1.5
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	29.7	25.8		29.5	25.8	24.6		25.0			23.9	20.7
Incremental Delay (d_2), s/veh	0.9	1.2		1.0	1.4	0.6		2.0			1.8	0.2
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Control Delay *(d)*, s/veh	30.6	26.9		30.4	27.2	25.2		27.1			25.7	20.9
Level of Service (LOS)	C	C		C	C	C		C			C	C
Approach Delay, s/veh / LOS	27.6	C		26.9	C		27.1	C		24.5	C	
Intersection Delay, s/veh / LOS	26.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.3	B	2.5	B	2.3	B
Bicycle LOS Score / LOS	1.0	A	1.3	A	1.0	A	1.3	A

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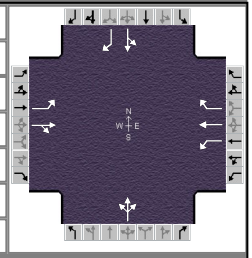
HCS 2010 Signalized Intersection Results Summary

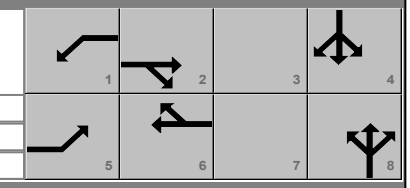
General Information				Intersection Information	
Agency	Temecula USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/19/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Pourroy Road/Benton Roa	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	Pourroy Benton 2019 Exist w Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	78	222	33	53	247	142	44	327	46	125	223	88

Signal Information			
Cycle, s	79.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.1	0.9	14.0	18.4	21.6	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	1.0	0.0	1.0	1.0	1.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	3.0		12.0		11.0
Phase Duration, s	10.9	19.9	10.1	19.0		26.6		23.4
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	2.9	2.9	2.9	2.9		2.9		2.9
Queue Clearance Time (g_s), s	5.6	13.4	4.5	12.9		20.9		17.7
Green Extension Time (g_e), s	0.1	1.1	0.0	1.1		0.6		0.7
Phase Call Probability	0.85	1.00	0.72	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		0.01		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate *(v)*, veh/h	85	277		58	268	154		453			378	96
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1857		1810	1900	1610		1853			1866	1610
Queue Service Time (g_s), s	3.6	11.4		2.5	10.9	7.0		18.9			15.7	3.9
Cycle Queue Clearance Time (g_c), s	3.6	11.4		2.5	10.9	7.0		18.9			15.7	3.9
Capacity *(c)*, veh/h	135	346		115	333	282		501			430	371
Volume-to-Capacity Ratio *(X)*	0.630	0.801		0.502	0.806	0.547		0.906			0.879	0.258
Available Capacity (c_a), veh/h	339	696		339	712	603		695			699	603
Back of Queue *(Q)*, veh/ln (50th percentile)	1.5	4.7		1.0	4.6	2.5		8.7			6.7	1.3
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	36.0	31.2		36.3	31.7	30.1		28.2			29.7	25.2
Incremental Delay (d_2), s/veh	1.8	1.7		1.3	1.8	0.6		10.1			4.4	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Control Delay *(d)*, s/veh	37.8	32.8		37.5	33.5	30.7		38.3			34.1	25.3
Level of Service (LOS)	D	C		D	C	C		D			C	C
Approach Delay, s/veh / LOS	34.0	C		33.1	C		38.3	D		32.3	C	
Intersection Delay, s/veh / LOS	34.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.3	B	2.5	B	2.3	B
Bicycle LOS Score / LOS	1.1	A	1.3	A	1.2	A	1.3	A

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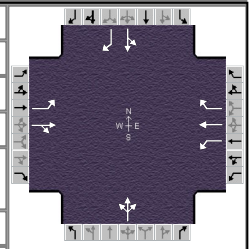
HCS 2010 Signalized Intersection Results Summary

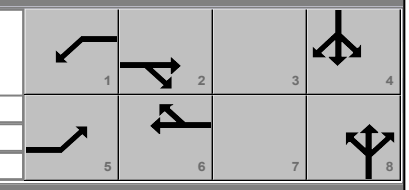
General Information				Intersection Information	
Agency	Temecula USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/19/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Pourroy Road/Benton Roa	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Pourroy Benton 2025 No Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	50	160	40	20	240	130	20	250	15	120	240	130

Signal Information			
Cycle, s	64.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.3	2.1	11.4	15.8	12.7	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	1.0	0.0	1.0	1.0	1.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	3.0		12.0		11.0
Phase Duration, s	9.4	18.5	7.3	16.4		17.7		20.8
Change Period, *(Y+Rc)*, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	2.9	2.9	2.9	2.9		2.9		2.9
Queue Clearance Time *(g_s)*, s	3.9	8.8	2.8	10.4		12.2		14.9
Green Extension Time *(g_e)*, s	0.0	1.0	0.0	1.0		0.4		0.8
Phase Call Probability	0.62	1.00	0.32	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate *(v)*, veh/h	54	217		22	261	141		310			391	141
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1834		1810	1900	1610		1876			1869	1610
Queue Service Time *(g_s)*, s	1.9	6.8		0.8	8.4	5.1		10.2			12.9	4.7
Cycle Queue Clearance Time *(g_c)*, s	1.9	6.8		0.8	8.4	5.1		10.2			12.9	4.7
Capacity *(c)*, veh/h	123	387		64	339	287		370			459	395
Volume-to-Capacity Ratio *(X)*	0.442	0.562		0.340	0.770	0.492		0.837			0.853	0.357
Available Capacity *(c_a)*, veh/h	422	854		422	885	750		874			871	750
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7	2.6		0.3	3.4	1.7		4.0			4.9	1.5
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	28.8	22.7		30.3	25.2	23.8		24.8			23.2	20.1
Incremental Delay *(d_2)*, s/veh	0.9	0.5		1.2	1.4	0.5		1.9			1.8	0.2
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Control Delay *(d)*, s/veh	29.8	23.2		31.5	26.6	24.3		26.8			24.9	20.3
Level of Service (LOS)	C	C		C	C	C		C			C	C
Approach Delay, s/veh / LOS	24.5	C		26.1	C		26.8	C		23.7	C	
Intersection Delay, s/veh / LOS	25.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.3	B	2.5	B	2.3	B
Bicycle LOS Score / LOS	0.9	A	1.2	A	1.0	A	1.4	A

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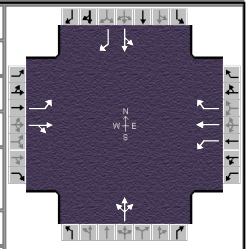
HCS 2010 Signalized Intersection Results Summary

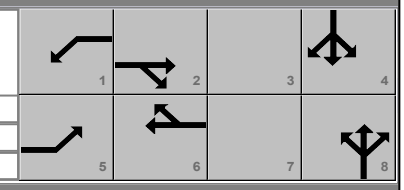
General Information				Intersection Information	
Agency	Temecula USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/19/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Pourroy Road/Benton Roa	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Pourroy Benton 2025 No Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	85	230	35	35	250	140	50	350	30	120	240	95

Signal Information			
Cycle, s	83.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.1	2.1	14.6	19.6	22.9	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	1.0	0.0	1.0	1.0	1.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	3.0		12.0		11.0
Phase Duration, s	11.2	21.7	9.1	19.6		27.9		24.6
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	2.9	2.9	2.9	2.9		2.9		2.9
Queue Clearance Time (g_s), s	6.2	14.3	3.7	13.5		22.2		18.9
Green Extension Time (g_e), s	0.1	1.1	0.0	1.1		0.6		0.7
Phase Call Probability	0.88	1.00	0.59	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		0.03		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate *(v)*, veh/h	92	288		38	272	152		467			391	103
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1856		1810	1900	1610		1866			1869	1610
Queue Service Time (g_s), s	4.2	12.3		1.7	11.5	7.2		20.2			16.9	4.4
Cycle Queue Clearance Time (g_c), s	4.2	12.3		1.7	11.5	7.2		20.2			16.9	4.4
Capacity *(c)*, veh/h	134	372		89	334	283		512			441	380
Volume-to-Capacity Ratio *(X)*	0.688	0.774		0.426	0.814	0.538		0.913			0.888	0.272
Available Capacity (c_a), veh/h	325	667		325	683	579		671			672	579
Back of Queue *(Q)*, veh/ln (50th percentile)	1.8	5.1		0.7	4.9	2.6		9.7			7.6	1.5
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	37.7	31.6		38.5	33.1	31.3		29.3			30.8	26.0
Incremental Delay (d_2), s/veh	2.3	1.3		1.2	1.9	0.6		12.3			6.6	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Control Delay *(d)*, s/veh	40.0	32.9		39.7	34.9	31.9		41.6			37.4	26.2
Level of Service (LOS)	D	C		D	C	C		D			D	C
Approach Delay, s/veh / LOS	34.6	C		34.3	C		41.6	D		35.1	D	
Intersection Delay, s/veh / LOS	36.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.3	B	2.5	B	2.3	B
Bicycle LOS Score / LOS	1.1	A	1.2	A	1.3	A	1.3	A

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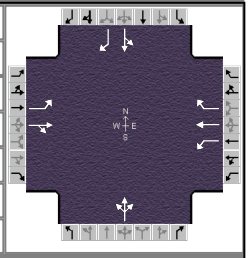
HCS 2010 Signalized Intersection Results Summary

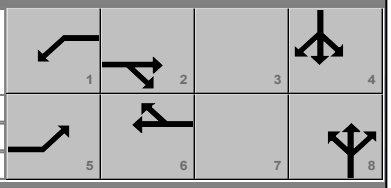
General Information				Intersection Information	
Agency	Temecula USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/19/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Pourroy Road/Benton Roa	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Pourroy Benton 2025 w Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	50	180	40	55	257	151	20	250	56	144	240	130

Signal Information			
Cycle, s	72.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.7	0.2	13.1	18.6	16.1	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	1.0	0.0	1.0	1.0	1.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	3.0		12.0		11.0
Phase Duration, s	9.7	18.1	9.9	18.4		21.1		23.6
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	2.9	2.9	2.9	2.9		2.9		2.9
Queue Clearance Time (g_s), s	4.1	10.9	4.3	12.3		15.6		17.7
Green Extension Time (g_e), s	0.0	1.1	0.0	1.1		0.5		0.8
Phase Call Probability	0.67	1.00	0.70	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate *(v)*, veh/h	54	239		60	279	164		354			417	141
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1840		1810	1900	1610		1838			1865	1610
Queue Service Time (g_s), s	2.1	8.9		2.3	10.3	6.8		13.6			15.7	5.2
Cycle Queue Clearance Time (g_c), s	2.1	8.9		2.3	10.3	6.8		13.6			15.7	5.2
Capacity *(c)*, veh/h	117	333		123	350	296		408			476	411
Volume-to-Capacity Ratio *(X)*	0.466	0.719		0.488	0.798	0.554		0.870			0.876	0.344
Available Capacity (c_a), veh/h	372	757		372	782	662		756			767	662
Back of Queue *(Q)*, veh/ln (50th percentile)	0.9	3.6		1.0	4.2	2.3		5.4			6.5	1.7
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	32.9	28.1		32.8	28.5	27.0		27.4			26.0	22.2
Incremental Delay (d_2), s/veh	1.1	1.1		1.1	1.6	0.6		2.3			4.0	0.2
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Control Delay *(d)*, s/veh	34.0	29.2		33.9	30.1	27.6		29.6			30.1	22.3
Level of Service (LOS)	C	C		C	C	C		C			C	C
Approach Delay, s/veh / LOS	30.1	C		29.7	C		29.6	C		28.1	C	
Intersection Delay, s/veh / LOS	29.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.3	B	2.5	B	2.3	B
Bicycle LOS Score / LOS	1.0	A	1.3	A	1.1	A	1.4	A

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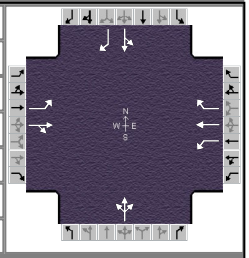
HCS 2010 Signalized Intersection Results Summary

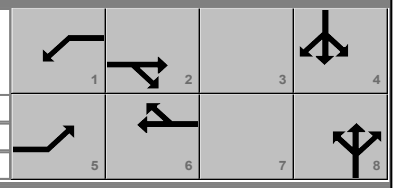
General Information				Intersection Information	
Agency	Temecula USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/19/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Pourroy Road/Benton Roa	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Pourroy Benton 2025 w Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	85	239	35	58	261	153	50	350	49	131	240	95

Signal Information			
Cycle, s	89.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.6	0.8	16.3	21.5	25.5	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	1.0	0.0	1.0	1.0	1.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	3.0		12.0		11.0
Phase Duration, s	11.3	22.1	10.6	21.3		30.5		26.5
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	2.9	2.9	2.9	2.9		2.9		2.9
Queue Clearance Time (g_s), s	6.5	15.9	5.0	14.9		25.0		20.8
Green Extension Time (g_e), s	0.1	1.1	0.0	1.2		0.5		0.7
Phase Call Probability	0.90	1.00	0.79	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		0.24		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate *(v)*, veh/h	92	298		63	284	166		488			403	103
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1857		1810	1900	1610		1853			1867	1610
Queue Service Time (g_s), s	4.5	13.9		3.0	12.9	8.5		23.0			18.8	4.7
Cycle Queue Clearance Time (g_c), s	4.5	13.9		3.0	12.9	8.5		23.0			18.8	4.7
Capacity *(c)*, veh/h	127	354		112	346	293		527			448	387
Volume-to-Capacity Ratio *(X)*	0.726	0.842		0.562	0.820	0.567		0.926			0.899	0.267
Available Capacity (c_a), veh/h	302	621		302	635	538		620			624	538
Back of Queue *(Q)*, veh/ln (50th percentile)	2.0	5.9		1.3	5.6	3.1		11.7			8.9	1.7
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	40.9	35.0		40.9	35.3	33.5		31.2			33.0	27.7
Incremental Delay (d_2), s/veh	2.9	2.1		1.6	1.9	0.6		17.1			10.2	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Control Delay *(d)*, s/veh	43.8	37.1		42.5	37.1	34.1		48.3			43.3	27.8
Level of Service (LOS)	D	D		D	D	C		D			D	C
Approach Delay, s/veh / LOS	38.7	D		36.8	D		48.3	D		40.1	D	
Intersection Delay, s/veh / LOS	41.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.3	B	2.5	B	2.3	B
Bicycle LOS Score / LOS	1.1	A	1.3	A	1.3	A	1.3	A

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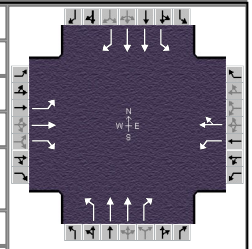
HCS 2010 Signalized Intersection Results Summary

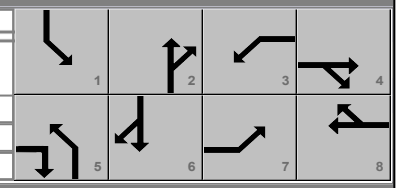
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Abelia S	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Wash Abelia 2025 No Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	65	10	340	20	20	20	280	220	10	10	340	90

Signal Information			
Cycle, s	55.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.1	5.1	10.0	2.0	2.7	10.0
Yellow	4.0	4.0	4.0	4.0	0.0	4.0
Red	1.0	1.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	9.7	17.7	7.0	15.0	16.2	25.1	6.1	15.0
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.5	3.3	3.5	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	4.1	11.5	2.7	3.2	11.0	4.5	2.3	7.2
Green Extension Time (g_e), s	0.1	0.8	0.0	1.0	0.2	1.4	0.0	1.4
Phase Call Probability	0.67	1.00	0.29	1.00	0.99	1.00	0.16	1.00
Max Out Probability	0.00	0.06	0.00	0.00	0.40	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	71	11	370	22	43		304	239	11	11	370	98
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1743		1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	2.1	0.2	9.5	0.7	1.2		9.0	2.5	0.2	0.3	5.2	3.0
Cycle Queue Clearance Time (g_c), s	2.1	0.2	9.5	0.7	1.2		9.0	2.5	0.2	0.3	5.2	3.0
Capacity *(c)*, veh/h	151	431	687	65	312		362	1301	579	35	648	288
Volume-to-Capacity Ratio *(X)*	0.467	0.025	0.538	0.334	0.139		0.841	0.184	0.019	0.307	0.570	0.339
Available Capacity (c_a), veh/h	486	681	899	486	624		486	3239	1442	486	3239	1442
Back of Queue *(Q)*, veh/ln (50th percentile)	0.9	0.1	3.0	0.3	0.5		3.8	0.8	0.1	0.1	1.8	0.9
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	24.4	16.8	11.9	26.3	19.3		21.5	12.3	11.5	27.0	21.0	20.0
Incremental Delay (d_2), s/veh	0.8	0.0	0.2	1.1	0.1		7.4	0.0	0.0	1.8	0.3	0.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	25.2	16.8	12.2	27.4	19.4		28.9	12.3	11.5	28.8	21.2	20.3
Level of Service (LOS)	C	B	B	C	B		C	B	B	C	C	C
Approach Delay, s/veh / LOS	14.3	B		22.0	C		21.4	C		21.2	C	
Intersection Delay, s/veh / LOS	19.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	2.4	B
Bicycle LOS Score / LOS	1.2	A	0.6	A	0.9	A	0.9	A

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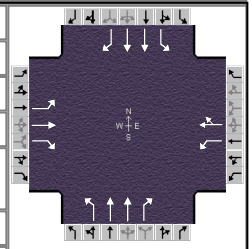
HCS 2010 Signalized Intersection Results Summary

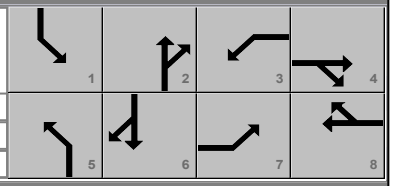
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Abelia S	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Wash Abelia 2025 No Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	10	25	10	10	10	60	600	20	20	240	20

Signal Information			
Cycle, s	59.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.1	2.5	20.0	1.2	13.8	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	1.0	0.0	1.0	1.0	1.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	6.2	18.8	6.2	18.8	9.6	27.5	7.1	25.0
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.4	2.8	2.4	2.6	4.1	10.2	2.7	5.1
Green Extension Time (g_e), s	0.0	0.1	0.0	0.1	0.0	2.0	0.0	2.0
Phase Call Probability	0.16	0.69	0.16	0.69	0.66	1.00	0.30	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	11	11	27	11	22		65	652	22	22	261	22
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1743		1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	0.4	0.3	0.8	0.4	0.6		2.1	8.2	0.5	0.7	3.1	0.5
Cycle Queue Clearance Time (g_c), s	0.4	0.3	0.8	0.4	0.6		2.1	8.2	0.5	0.7	3.1	0.5
Capacity *(c)*, veh/h	35	440	373	35	404		141	1366	608	64	1214	540
Volume-to-Capacity Ratio *(X)*	0.310	0.025	0.073	0.310	0.054		0.464	0.477	0.036	0.338	0.215	0.040
Available Capacity (c_a), veh/h	455	638	540	455	585		455	3035	1351	455	3035	1351
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2	0.1	0.3	0.2	0.2		0.8	2.5	0.1	0.3	1.0	0.2
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	28.8	17.7	17.9	28.8	17.8		26.3	14.1	11.7	28.1	14.2	13.3
Incremental Delay (d_2), s/veh	1.8	0.0	0.0	1.8	0.0		0.9	0.1	0.0	1.1	0.0	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	30.7	17.7	17.9	30.7	17.8		27.2	14.2	11.7	29.2	14.2	13.3
Level of Service (LOS)	C	B	B	C	B		C	B	B	C	B	B
Approach Delay, s/veh / LOS	20.7	C		22.1	C		15.2	B		15.2	B	
Intersection Delay, s/veh / LOS	15.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	2.4	B
Bicycle LOS Score / LOS	0.6	A	0.5	A	1.1	A	0.7	A

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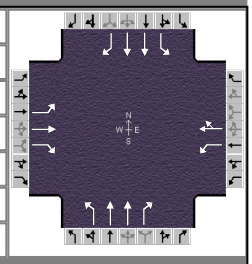
HCS 2010 Signalized Intersection Results Summary

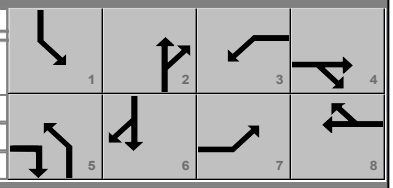
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Abelia S	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Wash Abelia 2025 w Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	120	10	551	20	20	20	528	220	10	10	340	155

Signal Information			
Cycle, s	82.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.5	21.2	11.8	2.7	4.8	15.2
Yellow	4.0	4.0	4.0	4.0	0.0	4.0
Red	1.0	1.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	12.5	25.0	7.7	20.2	32.8	43.0	6.5	16.8
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.5	3.3	3.5	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	7.8	22.0	3.0	3.7	27.3	5.1	2.5	10.2
Green Extension Time (g_e), s	0.1	0.0	0.0	1.7	0.4	1.6	0.0	1.6
Phase Call Probability	0.95	1.00	0.39	1.00	1.00	1.00	0.22	1.00
Max Out Probability	0.01	1.00	0.00	0.01	1.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	130	11	599	22	43		574	239	11	11	370	168
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1743		1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	5.8	0.4	20.0	1.0	1.7		25.3	3.1	0.3	0.5	8.0	8.2
Cycle Queue Clearance Time (g_c), s	5.8	0.4	20.0	1.0	1.7		25.3	3.1	0.3	0.5	8.0	8.2
Capacity *(c)*, veh/h	166	461	934	60	322		610	1672	744	34	520	231
Volume-to-Capacity Ratio *(X)*	0.787	0.024	0.641	0.360	0.135		0.940	0.143	0.015	0.320	0.711	0.729
Available Capacity (c_a), veh/h	330	461	934	330	423		659	2197	978	330	2197	978
Back of Queue *(Q)*, veh/ln (50th percentile)	2.7	0.2	6.9	0.4	0.7		12.8	1.1	0.1	0.2	3.3	3.0
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	36.6	23.7	11.6	38.9	28.1		26.5	12.8	12.0	39.9	33.6	33.7
Incremental Delay (d_2), s/veh	3.1	0.0	1.2	1.3	0.1		20.2	0.0	0.0	2.0	0.7	1.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	39.7	23.7	12.7	40.3	28.1		46.7	12.8	12.0	41.9	34.3	35.4
Level of Service (LOS)	D	C	B	D	C		D	B	B	D	C	D
Approach Delay, s/veh / LOS	17.6	B		32.2	C		36.4	D		34.8	C	
Intersection Delay, s/veh / LOS	29.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.0	C	2.3	B	2.4	B
Bicycle LOS Score / LOS	1.7	A	0.6	A	1.2	A	0.9	A

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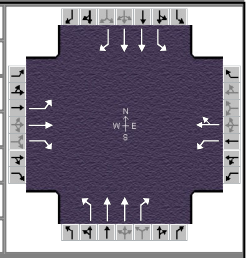
HCS 2010 Signalized Intersection Results Summary

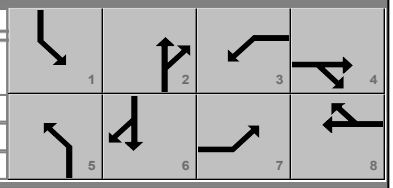
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Abelia S	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Wash Abelia 2025 w Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	46	20	161	10	10	10	174	600	20	20	240	50

Signal Information			
Cycle, s	64.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.3	1.2	15.0	1.2	2.9	16.9
Yellow	4.0	4.0	4.0	4.0	0.0	4.0
Red	1.0	1.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	3.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	9.1	24.8	6.2	21.9	13.4	26.2	7.3	20.0
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	3.7	7.4	2.4	2.6	8.5	11.5	2.8	5.8
Green Extension Time (g_e), s	0.0	0.4	0.0	0.4	0.2	2.1	0.0	2.1
Phase Call Probability	0.59	0.99	0.18	0.98	0.97	1.00	0.32	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	50	22	175	11	22		189	652	22	22	261	54
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1743		1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	1.7	0.5	5.4	0.4	0.6		6.5	9.5	0.6	0.8	3.8	1.7
Cycle Queue Clearance Time (g_c), s	1.7	0.5	5.4	0.4	0.6		6.5	9.5	0.6	0.8	3.8	1.7
Capacity *(c)*, veh/h	116	584	495	35	458		236	1187	528	63	841	375
Volume-to-Capacity Ratio *(X)*	0.430	0.037	0.353	0.312	0.047		0.801	0.550	0.041	0.343	0.310	0.145
Available Capacity (c_a), veh/h	421	589	499	421	541		421	2805	1248	421	2805	1248
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8	0.2	1.9	0.2	0.2		2.6	3.2	0.2	0.3	1.4	0.6
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	29.0	15.6	17.3	31.2	17.8		27.2	17.8	14.8	30.4	20.5	19.7
Incremental Delay (d_2), s/veh	0.9	0.0	0.2	1.9	0.0		2.4	0.1	0.0	1.2	0.1	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	30.0	15.6	17.5	33.1	17.8		29.6	17.9	14.8	31.6	20.5	19.7
Level of Service (LOS)	C	B	B	C	B		C	B	B	C	C	B
Approach Delay, s/veh / LOS	19.9	B		22.9	C		20.4	C		21.1	C	
Intersection Delay, s/veh / LOS	20.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	2.4	B
Bicycle LOS Score / LOS	0.9	A	0.5	A	1.2	A	0.8	A

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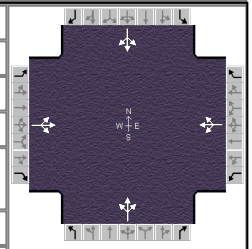
HCS 2010 Signalized Intersection Results Summary

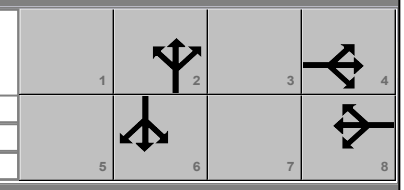
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Benton	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Wash Benton 2025 No Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	110	5	40	5	5	5	20	370	5	5	510	140

Signal Information			
Cycle, s	64.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	35.0	19.3	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		24.3		24.3		40.0		40.0
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.3		3.3		2.9		2.9
Queue Clearance Time *(g_s)*, s		11.0		2.4		10.6		20.6
Green Extension Time *(g_e)*, s		0.2		0.3		2.2		2.2
Phase Call Probability		0.96		0.96		1.00		1.00
Max Out Probability		0.00		0.00		0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h		168			16			429			712	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		969			1443			1793			1823	
Queue Service Time *(g_s)*, s		8.2			0.0			0.0			0.0	
Cycle Queue Clearance Time *(g_c)*, s		9.0			0.4			8.6			18.6	
Capacity *(c)*, veh/h		386			507			1035			1049	
Volume-to-Capacity Ratio *(X)*		0.436			0.032			0.415			0.679	
Available Capacity *(c_a)*, veh/h		397			521			1422			1470	
Back of Queue *(Q)*, veh/ln (50th percentile)		2.0			0.2			2.3			4.9	
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0			0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay *(d_1)*, s/veh		18.6			15.9			8.6			10.9	
Incremental Delay *(d_2)*, s/veh		0.3			0.0			0.1			0.3	
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0			0.0			0.0	
Control Delay *(d)*, s/veh		18.9			15.9			8.7			11.2	
Level of Service (LOS)		B			B			A			B	
Approach Delay, s/veh / LOS	18.9	B		15.9	B		8.7	A		11.2	B	
Intersection Delay, s/veh / LOS	11.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.8	A	0.5	A	1.2	A	1.7	A

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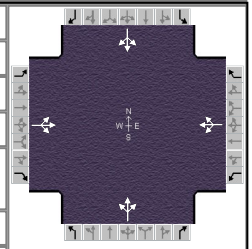
HCS 2010 Signalized Intersection Results Summary

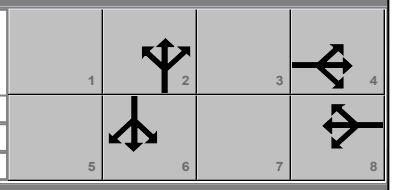
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Benton	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Wash Benton 2025 No Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	90	5	30	5	5	5	55	500	5	5	260	75

Signal Information			
Cycle, s	63.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	35.0	18.6	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		23.6		23.6		40.0		40.0
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.3		3.3		3.0		3.0
Queue Clearance Time *(g_s)*, s		8.9		2.4		15.9		9.3
Green Extension Time *(g_e)*, s		0.2		0.3		1.8		1.8
Phase Call Probability		0.93		0.93		1.00		1.00
Max Out Probability		0.00		0.00		0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h		136			16			609			370	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		964			1415			1694			1812	
Queue Service Time *(g_s)*, s		6.1			0.0			1.5			0.0	
Cycle Queue Clearance Time *(g_c)*, s		6.9			0.4			13.9			7.3	
Capacity *(c)*, veh/h		380			490			994			1054	
Volume-to-Capacity Ratio *(X)*		0.358			0.033			0.612			0.351	
Available Capacity *(c_a)*, veh/h		399			515			1367			1470	
Back of Queue *(Q)*, veh/ln (50th percentile)		1.6			0.2			3.6			1.8	
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0			0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay *(d_1)*, s/veh		18.1			16.1			9.5			8.1	
Incremental Delay *(d_2)*, s/veh		0.2			0.0			0.2			0.1	
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0			0.0			0.0	
Control Delay *(d)*, s/veh		18.3			16.1			9.7			8.2	
Level of Service (LOS)		B			B			A			A	
Approach Delay, s/veh / LOS	18.3	B		16.1	B		9.7	A		8.2	A	
Intersection Delay, s/veh / LOS	10.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.7	A	0.5	A	1.5	A	1.1	A

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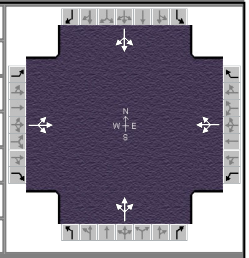
HCS 2010 Signalized Intersection Results Summary

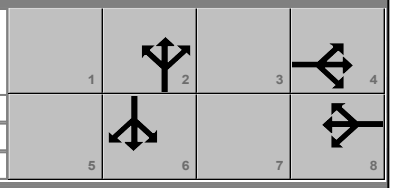
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Benton	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Wash Benton 2025 w Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	195	5	40	5	5	5	20	533	5	5	648	213

Signal Information			
Cycle, s	67.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	37.5	20.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		25.0		25.0		42.5		42.5
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.3		3.3		3.0		3.0
Queue Clearance Time *(g_s)*, s		21.4		2.4		16.1		34.3
Green Extension Time *(g_e)*, s		0.0		0.5		3.5		3.2
Phase Call Probability		0.99		0.99		1.00		1.00
Max Out Probability		1.00		0.00		0.00		0.07

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h		261			16			607			941	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		899			1751			1788			1813	
Queue Service Time *(g_s)*, s		18.9			0.0			0.0			3.7	
Cycle Queue Clearance Time *(g_c)*, s		19.4			0.4			14.1			32.3	
Capacity *(c)*, veh/h		363			590			1049			1061	
Volume-to-Capacity Ratio *(X)*		0.719			0.028			0.578			0.887	
Available Capacity *(c_a)*, veh/h		363			590			1360			1393	
Back of Queue *(Q)*, veh/ln (50th percentile)		4.5			0.2			3.9			9.9	
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0			0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay *(d_1)*, s/veh		23.3			16.9			9.8			13.8	
Incremental Delay *(d_2)*, s/veh		5.8			0.0			0.2			4.9	
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0			0.0			0.0	
Control Delay *(d)*, s/veh		29.1			16.9			10.0			18.7	
Level of Service (LOS)		C			B			A			B	
Approach Delay, s/veh / LOS	29.1	C		16.9	B		10.0	A		18.7	B	
Intersection Delay, s/veh / LOS	17.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.9	A	0.5	A	1.5	A	2.0	B

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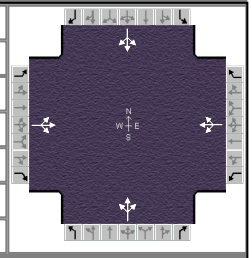
HCS 2010 Signalized Intersection Results Summary

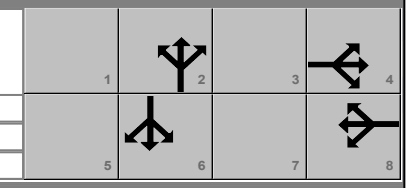
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Benton	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Wash Benton 2025 w Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	129	5	30	5	5	5	55	575	5	5	349	122

Signal Information			
Cycle, s	64.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	35.0	19.4	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		24.4		24.4		40.0		40.0
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.3		3.3		3.0		3.0
Queue Clearance Time *(g_s)*, s		12.5		2.4		20.4		13.7
Green Extension Time *(g_e)*, s		0.2		0.3		2.4		2.4
Phase Call Probability		0.97		0.97		1.00		1.00
Max Out Probability		0.02		0.00		0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h		178			16			690			517	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		917			1496			1690			1805	
Queue Service Time *(g_s)*, s		10.0			0.0			6.2			0.0	
Cycle Queue Clearance Time *(g_c)*, s		10.5			0.4			18.4			11.7	
Capacity *(c)*, veh/h		376			525			979			1037	
Volume-to-Capacity Ratio *(X)*		0.474			0.031			0.705			0.499	
Available Capacity *(c_a)*, veh/h		385			536			1347			1449	
Back of Queue *(Q)*, veh/ln (50th percentile)		2.2			0.2			4.6			3.0	
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0			0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay *(d_1)*, s/veh		19.2			15.9			10.6			9.4	
Incremental Delay *(d_2)*, s/veh		0.3			0.0			0.5			0.1	
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0			0.0			0.0	
Control Delay *(d)*, s/veh		19.5			15.9			11.1			9.5	
Level of Service (LOS)		B			B			B			A	
Approach Delay, s/veh / LOS	19.5	B		15.9	B		11.1	B		9.5	A	
Intersection Delay, s/veh / LOS	11.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.8	A	0.5	A	1.6	A	1.3	A

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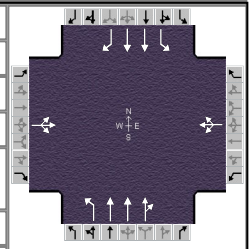
HCS 2010 Signalized Intersection Results Summary

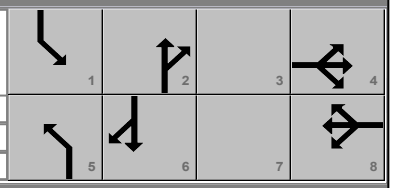
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Cottonw	Analysis Year	2019 Existing Without Project	Analysis Period	1> 7:00
File Name	Wash Cottonwood 2019 Exist No Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	1	22	2	1	11	3	251	1	8	337	13

Signal Information			
Cycle, s	62.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.4	0.6	40.0	6.2	0.0	0.0
Yellow	4.0	0.0	4.0	4.0	0.0	0.0
Red	1.0	0.0	1.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	2.0	4.0	2.0	3.0
Phase Duration, s		11.2		11.2	5.4	45.0	6.0	45.6
Change Period, $(Y+R_c)$, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.4		3.4	2.9	2.8	2.9	2.8
Queue Clearance Time (g_s), s		3.4		2.5	2.1	3.1	2.3	4.4
Green Extension Time (g_e), s		0.1		0.1	0.0	1.2	0.0	1.2
Phase Call Probability		0.62		0.62	0.05	1.00	0.14	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h		41			15		3	183	91	9	366	14
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1353			1557		1810	1900	1896	1810	1809	1610
Queue Service Time (g_s), s		0.0			0.0		0.1	1.1	1.1	0.3	2.4	0.2
Cycle Queue Clearance Time (g_c), s		1.4			0.5		0.1	1.1	1.1	0.3	2.4	0.2
Capacity *(c)*, veh/h		216			222		11	2443	1219	28	2360	1051
Volume-to-Capacity Ratio *(X)*		0.191			0.068		0.291	0.075	0.075	0.306	0.155	0.013
Available Capacity (c_a), veh/h		470			534		436	3054	1524	436	2907	1294
Back of Queue *(Q)*, veh/ln (50th percentile)		0.6			0.2		0.1	0.2	0.2	0.1	0.4	0.0
Overflow Queue (Q_3), veh/ln		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		25.8			25.4		30.8	4.2	4.2	30.3	4.2	3.8
Incremental Delay (d_2), s/veh		0.2			0.0		5.2	0.0	0.0	2.2	0.0	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		26.0			25.5		36.0	4.2	4.2	32.5	4.2	3.8
Level of Service (LOS)		C			C		D	A	A	C	A	A
Approach Delay, s/veh / LOS	26.0	C		25.5	C		4.5	A		4.8	A	
Intersection Delay, s/veh / LOS	6.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.3	C	2.0	B	2.0	B
Bicycle LOS Score / LOS	0.6	A	0.5	A	0.6	A	0.8	A

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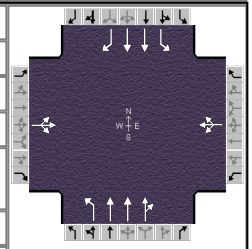
HCS 2010 Signalized Intersection Results Summary

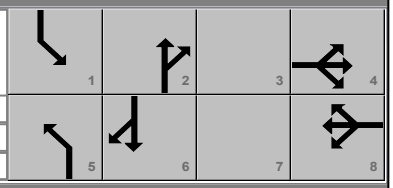
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Cottonw	Analysis Year	2019 Existing Without Project	Analysis Period	1> 7:00
File Name	Wash Cottonwood 2019 Exist No Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	17	1	10	3	1	6	20	569	1	9	240	14

Signal Information			
Cycle, s	62.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.1	1.1	40.0	5.1	0.0	0.0
Yellow	4.0	0.0	4.0	4.0	0.0	0.0
Red	1.0	0.0	1.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	2.0	4.0	2.0	3.0
Phase Duration, s		10.1		10.1	7.2	46.1	6.1	45.0
Change Period, $(Y+R_c)$, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.3	2.9	2.8	2.9	2.8
Queue Clearance Time (g_s), s		3.0		2.4	2.7	4.6	2.3	3.7
Green Extension Time (g_e), s		0.0		0.0	0.0	1.7	0.0	1.7
Phase Call Probability		0.51		0.51	0.31	1.00	0.16	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h		30			11		22	413	206	10	261	15
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1177			1466		1810	1900	1898	1810	1809	1610
Queue Service Time (g_s), s		0.0			0.0		0.7	2.6	2.6	0.3	1.7	0.2
Cycle Queue Clearance Time (g_c), s		1.0			0.4		0.7	2.6	2.6	0.3	1.7	0.2
Capacity *(c)*, veh/h		189			195		64	2507	1252	32	2322	1034
Volume-to-Capacity Ratio *(X)*		0.161			0.056		0.341	0.165	0.165	0.308	0.112	0.015
Available Capacity (c_a), veh/h		427			491		436	3049	1523	436	2903	1292
Back of Queue *(Q)*, veh/ln (50th percentile)		0.4			0.1		0.3	0.4	0.4	0.1	0.3	0.0
Overflow Queue (Q_3), veh/ln		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		26.7			26.4		29.3	4.0	4.0	30.2	4.3	4.0
Incremental Delay (d_2), s/veh		0.1			0.0		1.2	0.0	0.0	2.0	0.0	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		26.9			26.5		30.5	4.1	4.1	32.3	4.3	4.0
Level of Service (LOS)		C			C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	26.9	C		26.5	C		5.0	A		5.3	A	
Intersection Delay, s/veh / LOS	6.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.3	C	2.0	B	2.0	B
Bicycle LOS Score / LOS	0.5	A	0.5	A	0.8	A	0.7	A

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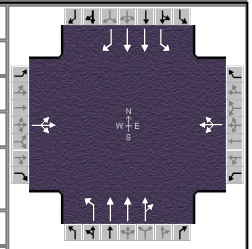
HCS 2010 Signalized Intersection Results Summary

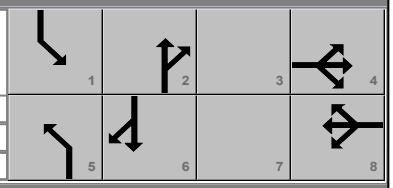
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Cottonw	Analysis Year	2019 Existing With Project	Analysis Period	1> 7:00
File Name	Wash Cottonwood 2019 Exist W Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	1	30	6	1	11	10	296	4	8	390	13

Signal Information			
Cycle, s	63.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.0	0.2	40.0	7.1	0.0	0.0
Yellow	4.0	0.0	4.0	4.0	0.0	0.0
Red	1.0	0.0	1.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	2.0	4.0	2.0	3.0
Phase Duration, s		12.1		12.1	6.2	45.2	6.0	45.0
Change Period, $(Y+R_c)$, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.4		3.4	2.9	2.8	2.9	2.8
Queue Clearance Time (g_s), s		3.7		2.7	2.4	3.4	2.3	5.1
Green Extension Time (g_e), s		0.1		0.1	0.0	1.5	0.0	1.5
Phase Call Probability		0.71		0.71	0.17	1.00	0.14	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		50			20		11	218	108	9	424	14
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1400			1416		1810	1900	1886	1810	1809	1610
Queue Service Time (g_s), s		0.0			0.0		0.4	1.4	1.4	0.3	3.1	0.2
Cycle Queue Clearance Time (g_c), s		1.7			0.7		0.4	1.4	1.4	0.3	3.1	0.2
Capacity (*c*), veh/h		232			234		35	2416	1199	28	2287	1018
Volume-to-Capacity Ratio (*X*)		0.216			0.084		0.312	0.090	0.090	0.306	0.185	0.014
Available Capacity (c_a), veh/h		478			478		429	3003	1491	429	2858	1272
Back of Queue (*Q*), veh/ln (50th percentile)		0.7			0.3		0.2	0.3	0.3	0.1	0.6	0.0
Overflow Queue (Q_3), veh/ln		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio (*RQ*) (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		25.7			25.3		30.6	4.5	4.5	30.8	4.8	4.3
Incremental Delay (d_2), s/veh		0.2			0.1		1.9	0.0	0.0	2.2	0.0	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		25.9			25.3		32.5	4.5	4.5	33.0	4.9	4.3
Level of Service (LOS)		C			C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	25.9	C		25.3	C		5.4	A		5.4	A	
Intersection Delay, s/veh / LOS	7.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.3	C	2.0	B	2.0	B
Bicycle LOS Score / LOS	0.6	A	0.5	A	0.7	A	0.9	A

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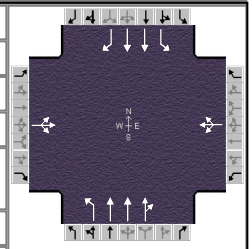
HCS 2010 Signalized Intersection Results Summary

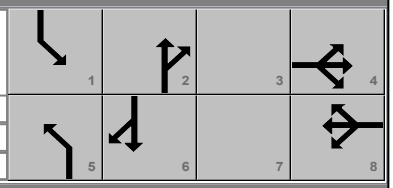
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Cottonw	Analysis Year	2019 Existing With Project	Analysis Period	1> 7:00
File Name	Wash Cottonwood 2019 Exist w Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	17	1	14	5	1	6	25	598	3	9	264	14

Signal Information			
Cycle, s	63.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.1	1.6	40.0	5.7	0.0	0.0
Yellow	4.0	0.0	4.0	4.0	0.0	0.0
Red	1.0	0.0	1.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	2.0	4.0	2.0	3.0
Phase Duration, s		10.7		10.7	7.7	46.6	6.1	45.0
Change Period, $(Y+R_c)$, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.3	2.9	2.8	2.9	2.8
Queue Clearance Time (g_s), s		3.2		2.4	2.9	4.8	2.3	4.0
Green Extension Time (g_e), s		0.1		0.1	0.0	1.8	0.0	1.8
Phase Call Probability		0.57		0.57	0.38	1.00	0.16	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		35			13		27	436	217	10	287	15
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1241			1365		1810	1900	1895	1810	1809	1610
Queue Service Time (g_s), s		0.0			0.0		0.9	2.8	2.8	0.3	2.0	0.2
Cycle Queue Clearance Time (g_c), s		1.2			0.4		0.9	2.8	2.8	0.3	2.0	0.2
Capacity (*c*), veh/h		199			203		76	2492	1243	32	2284	1017
Volume-to-Capacity Ratio (*X*)		0.175			0.064		0.357	0.175	0.175	0.309	0.126	0.015
Available Capacity (c_a), veh/h		434			458		428	2999	1495	428	2855	1271
Back of Queue (*Q*), veh/ln (50th percentile)		0.5			0.2		0.4	0.5	0.5	0.1	0.4	0.0
Overflow Queue (Q_3), veh/ln		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio (*RQ*) (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		26.8			26.4		29.5	4.2	4.2	30.7	4.7	4.3
Incremental Delay (d_2), s/veh		0.2			0.0		1.1	0.0	0.0	2.0	0.0	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		26.9			26.5		30.6	4.2	4.3	32.8	4.7	4.3
Level of Service (LOS)		C			C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	26.9	C		26.5	C		5.3	A		5.5	A	
Intersection Delay, s/veh / LOS	6.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.3	C	2.0	B	2.0	B
Bicycle LOS Score / LOS	0.5	A	0.5	A	0.9	A	0.7	A

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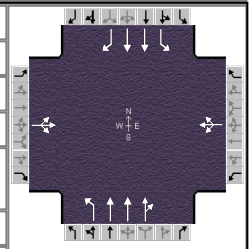
HCS 2010 Signalized Intersection Results Summary

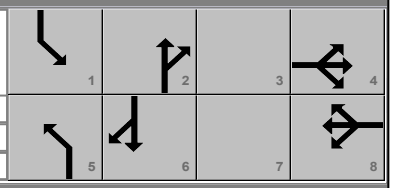
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Cottonw	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Wash Cottonwood 2025 No Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	5	25	5	5	15	5	270	5	10	360	15

Signal Information			
Cycle, s	63.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.6	0.6	40.0	7.6	0.0	0.0
Yellow	4.0	0.0	4.0	4.0	0.0	0.0
Red	1.0	0.0	1.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	2.0	4.0	2.0	3.0
Phase Duration, s		12.6		12.6	5.6	45.0	6.2	45.6
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.4		3.4	2.9	2.8	2.9	2.8
Queue Clearance Time *(g_s)*, s		3.8		2.9	2.2	3.3	2.4	4.8
Green Extension Time *(g_e)*, s		0.1		0.1	0.0	1.3	0.0	1.3
Phase Call Probability		0.76		0.76	0.09	1.00	0.18	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h		54			27		5	200	99	11	391	16
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1348			1557		1810	1900	1881	1810	1809	1610
Queue Service Time *(g_s)*, s		0.0			0.0		0.2	1.3	1.3	0.4	2.8	0.2
Cycle Queue Clearance Time *(g_c)*, s		1.8			0.9		0.2	1.3	1.3	0.4	2.8	0.2
Capacity *(c)*, veh/h		240			254		18	2380	1178	35	2298	1023
Volume-to-Capacity Ratio *(X)*		0.226			0.107		0.298	0.084	0.084	0.312	0.170	0.016
Available Capacity *(c_a)*, veh/h		462			517		425	2974	1473	425	2832	1260
Back of Queue *(Q)*, veh/ln (50th percentile)		0.7			0.4		0.1	0.3	0.3	0.2	0.5	0.0
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		25.5			25.1		31.4	4.7	4.7	30.9	4.8	4.3
Incremental Delay *(d_2)*, s/veh		0.2			0.1		3.3	0.0	0.0	1.9	0.0	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		25.7			25.2		34.7	4.7	4.7	32.8	4.8	4.3
Level of Service (LOS)		C			C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	25.7	C		25.2	C		5.3	A		5.5	A	
Intersection Delay, s/veh / LOS	7.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.3	C	2.0	B	2.0	B
Bicycle LOS Score / LOS	0.6	A	0.5	A	0.7	A	0.8	A

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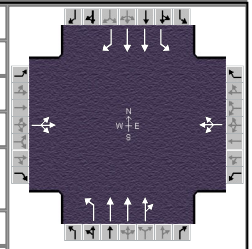
HCS 2010 Signalized Intersection Results Summary

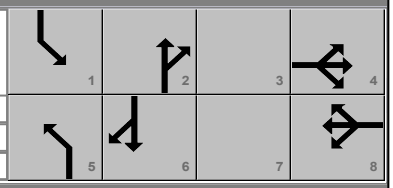
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Cottonw	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Wash Cottonwood 2025 No Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	5	15	5	5	10	25	600	5	10	250	15

Signal Information			
Cycle, s	64.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.2	1.5	40.0	6.9	0.0	0.0
Yellow	4.0	0.0	4.0	4.0	0.0	0.0
Red	1.0	0.0	1.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	2.0	4.0	2.0	3.0
Phase Duration, s		11.9		11.9	7.7	46.5	6.2	45.0
Change Period, $(Y+R_c)$, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.3	2.9	2.8	2.9	2.8
Queue Clearance Time (g_s), s		3.4		2.7	2.9	5.0	2.4	4.0
Green Extension Time (g_e), s		0.1		0.1	0.0	1.8	0.0	1.8
Phase Call Probability		0.69		0.69	0.39	1.00	0.18	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h		43			22		27	439	219	11	272	16
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1259			1540		1810	1900	1892	1810	1809	1610
Queue Service Time (g_s), s		0.0			0.0		0.9	3.0	3.0	0.4	2.0	0.3
Cycle Queue Clearance Time (g_c), s		1.4			0.7		0.9	3.0	3.0	0.4	2.0	0.3
Capacity *(c)*, veh/h		218			234		76	2439	1214	35	2240	997
Volume-to-Capacity Ratio *(X)*		0.199			0.093		0.359	0.180	0.180	0.312	0.121	0.016
Available Capacity (c_a), veh/h		436			500		420	2941	1464	420	2800	1246
Back of Queue *(Q)*, veh/ln (50th percentile)		0.6			0.3		0.4	0.6	0.6	0.2	0.4	0.0
Overflow Queue (Q_3), veh/ln		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		26.4			26.1		30.1	4.7	4.7	31.3	5.1	4.7
Incremental Delay (d_2), s/veh		0.2			0.1		1.1	0.0	0.0	1.9	0.0	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		26.6			26.2		31.2	4.7	4.7	33.1	5.1	4.7
Level of Service (LOS)		C			C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	26.6	C		26.2	C		5.8	A		6.1	A	
Intersection Delay, s/veh / LOS	7.1						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.3	C	2.0	B	2.1	B
Bicycle LOS Score / LOS	0.6	A	0.5	A	0.9	A	0.7	A

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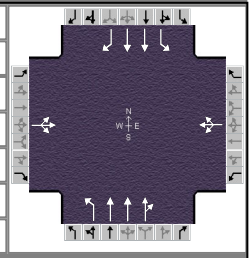
HCS 2010 Signalized Intersection Results Summary

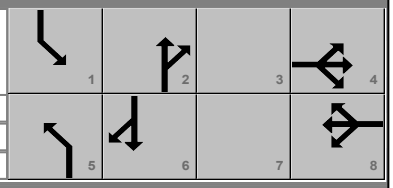
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Cottonw	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Wash Cottonwood 2025 w Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	5	33	9	5	15	12	315	8	10	413	15

Signal Information			
Cycle, s	64.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.2	0.2	40.0	8.2	0.0	0.0
Yellow	4.0	0.0	4.0	4.0	0.0	0.0
Red	1.0	0.0	1.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	2.0	4.0	2.0	3.0
Phase Duration, s		13.2		13.2	6.5	45.2	6.2	45.0
Change Period, $(Y+R_c)$, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.4		3.4	2.9	2.8	2.9	2.8
Queue Clearance Time (g_s), s		4.1		3.0	2.5	3.6	2.4	5.5
Green Extension Time (g_e), s		0.1		0.1	0.0	1.6	0.0	1.6
Phase Call Probability		0.82		0.82	0.21	1.00	0.18	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h		63			32		13	234	117	11	449	16
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1393			1444		1810	1900	1875	1810	1809	1610
Queue Service Time (g_s), s		0.0			0.0		0.5	1.6	1.6	0.4	3.5	0.3
Cycle Queue Clearance Time (g_c), s		2.1			1.0		0.5	1.6	1.6	0.4	3.5	0.3
Capacity *(c)*, veh/h		251			255		41	2365	1167	35	2239	996
Volume-to-Capacity Ratio *(X)*		0.251			0.123		0.318	0.099	0.100	0.312	0.201	0.016
Available Capacity (c_a), veh/h		469			480		420	2940	1450	420	2798	1246
Back of Queue *(Q)*, veh/ln (50th percentile)		0.9			0.4		0.2	0.3	0.3	0.2	0.7	0.0
Overflow Queue (Q_3), veh/ln		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		25.6			25.1		31.1	4.9	4.9	31.3	5.4	4.7
Incremental Delay (d_2), s/veh		0.2			0.1		1.6	0.0	0.0	1.9	0.0	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		25.8			25.2		32.7	4.9	4.9	33.2	5.4	4.7
Level of Service (LOS)		C			C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	25.8	C		25.2	C		5.9	A		6.0	A	
Intersection Delay, s/veh / LOS	7.9						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.3	C	2.0	B	2.1	B
Bicycle LOS Score / LOS	0.6	A	0.5	A	0.7	A	0.9	A

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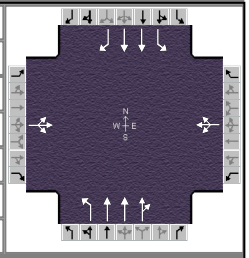
HCS 2010 Signalized Intersection Results Summary

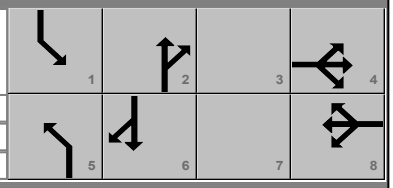
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Cottonw	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Wash Cottonwood 2025 w Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	5	19	7	5	10	30	629	7	10	274	15

Signal Information			
Cycle, s	65.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.3	1.9	40.0	7.3	0.0	0.0
Yellow	4.0	0.0	4.0	4.0	0.0	0.0
Red	1.0	0.0	1.0	1.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	2.0	4.0	2.0	3.0
Phase Duration, s		12.3		12.3	8.1	46.9	6.3	45.0
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.3	2.9	2.8	2.9	2.8
Queue Clearance Time *(g_s)*, s		3.6		2.8	3.1	5.3	2.4	4.3
Green Extension Time *(g_e)*, s		0.1		0.1	0.0	1.9	0.0	1.9
Phase Call Probability		0.73		0.73	0.45	1.00	0.18	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h		48			24		33	462	230	11	298	16
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1298			1464		1810	1900	1889	1810	1809	1610
Queue Service Time *(g_s)*, s		0.0			0.0		1.1	3.3	3.3	0.4	2.3	0.3
Cycle Queue Clearance Time *(g_c)*, s		1.6			0.8		1.1	3.3	3.3	0.4	2.3	0.3
Capacity *(c)*, veh/h		225			236		87	2432	1209	35	2212	985
Volume-to-Capacity Ratio *(X)*		0.213			0.101		0.376	0.190	0.190	0.313	0.135	0.017
Available Capacity *(c_a)*, veh/h		439			475		415	2904	1444	415	2765	1231
Back of Queue *(Q)*, veh/ln (50th percentile)		0.7			0.3		0.5	0.7	0.7	0.2	0.5	0.1
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		26.5			26.2		30.2	4.8	4.8	31.7	5.4	5.0
Incremental Delay *(d_2)*, s/veh		0.2			0.1		1.0	0.0	0.0	1.9	0.0	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		26.7			26.3		31.2	4.8	4.9	33.5	5.4	5.0
Level of Service (LOS)		C			C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	26.7	C		26.3	C		6.0	A		6.3	A	
Intersection Delay, s/veh / LOS	7.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.3	C	2.0	B	2.1	B
Bicycle LOS Score / LOS	0.6	A	0.5	A	0.9	A	0.8	A

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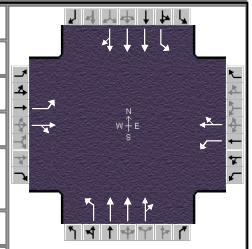
HCS 2010 Signalized Intersection Results Summary

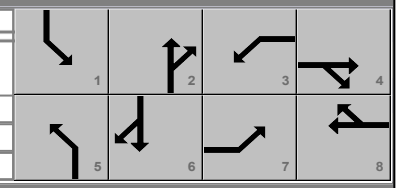
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Fields D	Analysis Year	2019 Existing Without Project	Analysis Period	1> 7:00
File Name	Wash Fields 2019 Exist No Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	17	0	20	8	0	16	12	240	10	9	304	11

Signal Information			
Cycle, s	64.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.1	0.3	35.0	1.0	1.0	5.7
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	7.0	11.7	6.0	10.7	6.5	40.3	6.1	40.0
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.5	3.3	3.5	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.6	2.8	2.3	2.6	2.5	3.5	2.3	3.9
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.1
Phase Call Probability	0.28	0.64	0.14	0.57	0.21	1.00	0.16	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	18	22		9	17		13	182	90	10	229	114
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1610		1810	1610		1810	1900	1860	1810	1900	1865
Queue Service Time (g_s), s	0.6	0.8		0.3	0.6		0.5	1.4	1.5	0.3	1.9	1.9
Cycle Queue Clearance Time (g_c), s	0.6	0.8		0.3	0.6		0.5	1.4	1.5	0.3	1.9	1.9
Capacity *(c)*, veh/h	55	168		28	144		41	2093	1024	32	2073	1017
Volume-to-Capacity Ratio *(X)*	0.333	0.129		0.306	0.121		0.318	0.087	0.088	0.309	0.110	0.112
Available Capacity (c_a), veh/h	423	502		423	502		423	2961	1449	423	2961	1453
Back of Queue *(Q)*, veh/ln (50th percentile)	0.3	0.3		0.1	0.2		0.2	0.4	0.4	0.2	0.5	0.5
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	30.5	26.1		31.2	26.9		30.9	6.8	6.8	31.1	7.1	7.1
Incremental Delay (d_2), s/veh	1.3	0.1		2.2	0.1		1.6	0.0	0.0	2.0	0.0	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	31.8	26.2		33.5	27.0		32.5	6.8	6.8	33.2	7.1	7.1
Level of Service (LOS)	C	C		C	C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	28.8	C		29.2	C		8.0	A		7.8	A	
Intersection Delay, s/veh / LOS	9.9						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.3	C	3.3	C	2.2	B	2.2	B
Bicycle LOS Score / LOS	0.6	A	0.5	A	0.6	A	0.7	A

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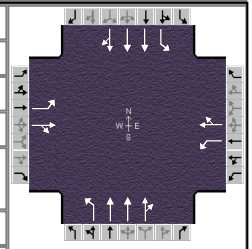
HCS 2010 Signalized Intersection Results Summary

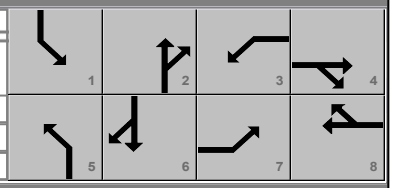
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Fields D	Analysis Year	2019 Existing Without Project	Analysis Period	1> 7:00
File Name	Wash Fields 2019 Exist No Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	2	13	20	0	8	17	480	70	29	215	18

Signal Information			
Cycle, s	65.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.0	1.1	35.0	1.3	1.0	4.8
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	6.3	9.8	7.3	10.8	7.0	40.0	8.0	41.1
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.5	3.3	3.5	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.4	2.6	2.8	2.3	2.7	5.7	3.1	3.4
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6
Phase Call Probability	0.18	0.48	0.33	0.57	0.28	1.00	0.43	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	11	16		22	9		18	404	193	32	170	84
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1644		1810	1610		1810	1900	1774	1810	1900	1823
Queue Service Time (g_s), s	0.4	0.6		0.8	0.3		0.7	3.6	3.7	1.1	1.4	1.4
Cycle Queue Clearance Time (g_c), s	0.4	0.6		0.8	0.3		0.7	3.6	3.7	1.1	1.4	1.4
Capacity *(c)*, veh/h	35	121		63	144		55	2043	954	85	2104	1010
Volume-to-Capacity Ratio *(X)*	0.312	0.135		0.343	0.061		0.334	0.198	0.203	0.372	0.081	0.083
Available Capacity (c_a), veh/h	417	505		417	495		417	2918	1363	417	2918	1400
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2	0.2		0.3	0.1		0.3	1.0	1.0	0.4	0.4	0.4
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	31.5	28.2		30.7	27.2		30.9	7.8	7.8	30.1	6.8	6.8
Incremental Delay (d_2), s/veh	1.9	0.2		1.2	0.1		1.3	0.0	0.0	1.0	0.0	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	33.4	28.4		31.9	27.2		32.2	7.8	7.8	31.1	6.8	6.8
Level of Service (LOS)	C	C		C	C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	30.4	C		30.5	C		8.6	A		9.5	A	
Intersection Delay, s/veh / LOS	10.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.3	C	3.3	C	2.2	B	2.2	B
Bicycle LOS Score / LOS	0.5	A	0.5	A	0.8	A	0.6	A

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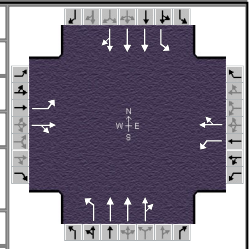
HCS 2010 Signalized Intersection Results Summary

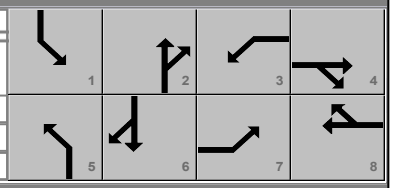
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Fields D	Analysis Year	2019 Existing With Project	Analysis Period	1> 7:00
File Name	Wash Fields 2019 Exist W Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	17	0	28	12	0	16	19	275	13	9	345	11

Signal Information			
Cycle, s	65.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.1	1.1	35.0	1.5	0.5	6.7
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	7.0	12.2	6.5	11.7	7.2	41.1	6.1	40.0
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.5	3.3	3.5	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.7	3.1	2.5	2.6	2.7	3.8	2.4	4.3
Green Extension Time (g_e), s	0.0	0.1	0.0	0.1	0.0	1.3	0.0	1.3
Phase Call Probability	0.29	0.70	0.21	0.67	0.31	1.00	0.16	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	18	30		13	17		21	209	104	10	259	128
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1610		1810	1610		1810	1900	1855	1810	1900	1869
Queue Service Time (g_s), s	0.7	1.1		0.5	0.6		0.7	1.7	1.8	0.4	2.3	2.3
Cycle Queue Clearance Time (g_c), s	0.7	1.1		0.5	0.6		0.7	1.7	1.8	0.4	2.3	2.3
Capacity *(c)*, veh/h	55	177		41	164		61	2078	1014	32	2017	992
Volume-to-Capacity Ratio *(X)*	0.335	0.172		0.319	0.106		0.341	0.101	0.102	0.310	0.128	0.129
Available Capacity (c_a), veh/h	412	488		412	488		412	2881	1406	412	2881	1417
Back of Queue *(Q)*, veh/ln (50th percentile)	0.3	0.4		0.2	0.2		0.3	0.5	0.5	0.2	0.6	0.6
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	31.3	26.6		31.7	26.9		31.2	7.2	7.2	32.0	7.8	7.8
Incremental Delay (d_2), s/veh	1.3	0.2		1.6	0.1		1.2	0.0	0.0	2.0	0.0	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	32.6	26.8		33.4	27.0		32.4	7.2	7.2	34.0	7.8	7.8
Level of Service (LOS)	C	C		C	C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	29.0	C		29.7	C		8.7	A		8.5	A	
Intersection Delay, s/veh / LOS	10.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.3	C	3.3	C	2.2	B	2.2	B
Bicycle LOS Score / LOS	0.6	A	0.5	A	0.7	A	0.7	A

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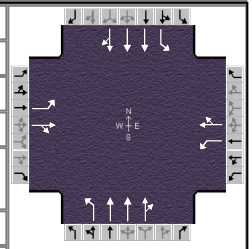
HCS 2010 Signalized Intersection Results Summary

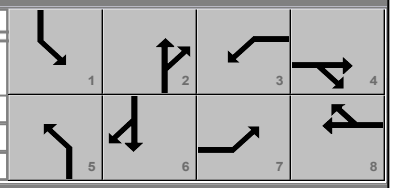
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Fields D	Analysis Year	2019 Existing With Project	Analysis Period	1> 7:00
File Name	Wash Fields 2019 Exist w Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	2	17	22	0	8	22	502	72	29	233	18

Signal Information			
Cycle, s	65.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.5	0.6	35.0	1.3	1.2	5.2
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	6.3	10.2	7.5	11.4	7.5	40.0	8.1	40.6
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.5	3.3	3.5	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.4	2.8	2.8	2.3	2.8	5.9	3.1	3.6
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7
Phase Call Probability	0.18	0.52	0.35	0.62	0.35	1.00	0.44	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	11	21		24	9		24	422	202	32	183	90
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1636		1810	1610		1810	1900	1776	1810	1900	1829
Queue Service Time (g_s), s	0.4	0.8		0.8	0.3		0.8	3.8	3.9	1.1	1.5	1.6
Cycle Queue Clearance Time (g_c), s	0.4	0.8		0.8	0.3		0.8	3.8	3.9	1.1	1.5	1.6
Capacity *(c)*, veh/h	35	130		68	157		68	2023	945	84	2057	990
Volume-to-Capacity Ratio *(X)*	0.313	0.159		0.350	0.055		0.350	0.209	0.213	0.373	0.089	0.091
Available Capacity (c_a), veh/h	413	498		413	490		413	2889	1350	413	2889	1390
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2	0.3		0.4	0.1		0.3	1.1	1.0	0.5	0.4	0.4
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	31.8	28.2		30.9	26.9		30.9	8.1	8.1	30.4	7.3	7.3
Incremental Delay (d_2), s/veh	1.9	0.2		1.1	0.1		1.1	0.0	0.0	1.0	0.0	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	33.7	28.4		32.0	27.0		32.0	8.1	8.2	31.4	7.3	7.3
Level of Service (LOS)	C	C		C	C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	30.3	C		30.6	C		9.0	A		9.8	A	
Intersection Delay, s/veh / LOS	10.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.3	C	3.3	C	2.2	B	2.2	B
Bicycle LOS Score / LOS	0.5	A	0.5	A	0.8	A	0.7	A

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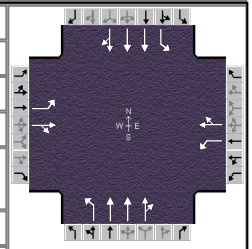
HCS 2010 Signalized Intersection Results Summary

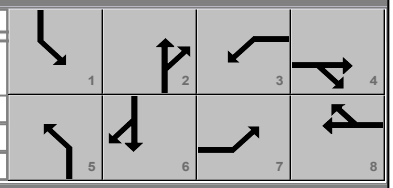
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Fields D	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Wash Fields 2025 No Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	5	25	10	5	20	15	250	15	10	320	15

Signal Information			
Cycle, s	66.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.3	0.5	35.0	1.3	1.0	7.3
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	7.3	13.3	6.3	12.3	6.8	40.5	6.3	40.0
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.8	3.2	2.4	3.0	2.6	3.7	2.4	4.2
Green Extension Time (g_e), s	0.0	0.1	0.0	0.1	0.0	1.2	0.0	1.2
Phase Call Probability	0.33	0.78	0.18	0.73	0.26	1.00	0.18	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	22	33		11	27		16	193	95	11	244	121
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1652		1810	1661		1810	1900	1843	1810	1900	1855
Queue Service Time (g_s), s	0.8	1.2		0.4	1.0		0.6	1.6	1.7	0.4	2.2	2.2
Cycle Queue Clearance Time (g_c), s	0.8	1.2		0.4	1.0		0.6	1.6	1.7	0.4	2.2	2.2
Capacity *(c)*, veh/h	63	207		35	182		50	2034	986	35	2002	977
Volume-to-Capacity Ratio *(X)*	0.345	0.157		0.313	0.149		0.329	0.095	0.097	0.313	0.122	0.123
Available Capacity (c_a), veh/h	409	497		409	500		409	2860	1387	409	2860	1396
Back of Queue *(Q)*, veh/ln (50th percentile)	0.4	0.5		0.2	0.4		0.2	0.5	0.5	0.2	0.6	0.6
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	31.3	25.9		32.1	26.8		31.7	7.6	7.6	32.1	7.9	8.0
Incremental Delay (d_2), s/veh	1.2	0.1		1.9	0.1		1.4	0.0	0.0	1.9	0.0	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	32.5	26.0		34.0	26.9		33.1	7.6	7.6	34.0	8.0	8.0
Level of Service (LOS)	C	C		C	C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	28.6	C		28.9	C		8.9	A		8.7	A	
Intersection Delay, s/veh / LOS	11.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.3	C	3.3	C	2.2	B	2.2	B
Bicycle LOS Score / LOS	0.6	A	0.6	A	0.7	A	0.7	A

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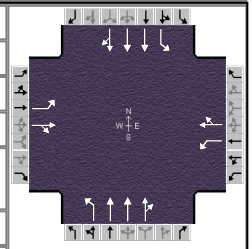
HCS 2010 Signalized Intersection Results Summary

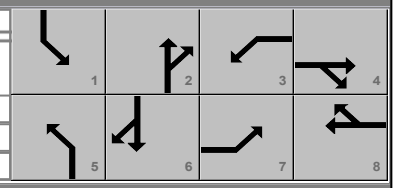
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Fields D	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Wash Fields 2025 No Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	5	15	25	5	10	20	510	75	30	230	20

Signal Information			
Cycle, s	67.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.3	0.9	35.0	1.8	1.0	6.4
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	6.8	11.4	7.8	12.3	7.3	40.0	8.2	40.9
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.6	2.8	3.0	2.6	2.8	6.2	3.2	3.6
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7
Phase Call Probability	0.26	0.64	0.40	0.70	0.33	1.00	0.46	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	16	22		27	16		22	431	205	33	182	90
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1674		1810	1696		1810	1900	1773	1810	1900	1821
Queue Service Time (g_s), s	0.6	0.8		1.0	0.6		0.8	4.1	4.2	1.2	1.6	1.6
Cycle Queue Clearance Time (g_c), s	0.6	0.8		1.0	0.6		0.8	4.1	4.2	1.2	1.6	1.6
Capacity *(c)*, veh/h	50	159		75	185		63	1974	921	86	2022	969
Volume-to-Capacity Ratio *(X)*	0.329	0.137		0.362	0.088		0.345	0.218	0.223	0.379	0.090	0.093
Available Capacity (c_a), veh/h	403	497		403	504		403	2820	1316	403	2820	1351
Back of Queue *(Q)*, veh/ln (50th percentile)	0.3	0.3		0.4	0.2		0.3	1.2	1.2	0.5	0.5	0.5
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	32.2	28.0		31.4	27.0		31.8	8.8	8.8	31.1	7.7	7.8
Incremental Delay (d_2), s/veh	1.4	0.1		1.1	0.1		1.2	0.0	0.0	1.0	0.0	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	33.6	28.1		32.5	27.1		33.0	8.8	8.8	32.2	7.8	7.8
Level of Service (LOS)	C	C		C	C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	30.5	C		30.5	C		9.6	A		10.4	B	
Intersection Delay, s/veh / LOS	11.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.3	C	3.3	C	2.2	B	2.2	B
Bicycle LOS Score / LOS	0.6	A	0.6	A	0.8	A	0.7	A

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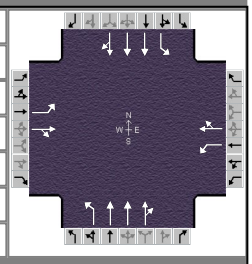
HCS 2010 Signalized Intersection Results Summary

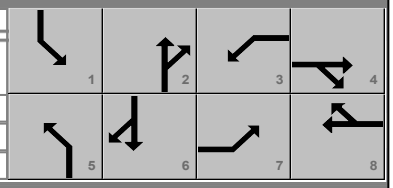
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	AM Peak Hour	PHF	0.92
Intersection	Washington Street/Fields D	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Wash Fields 2025 w Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	5	33	14	5	20	22	285	18	10	361	15

Signal Information			
Cycle, s	67.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.3	1.2	35.0	1.7	0.6	7.9
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	7.4	13.5	6.7	12.9	7.5	41.2	6.3	40.0
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.8	3.5	2.6	3.0	2.9	4.0	2.4	4.6
Green Extension Time (g_e), s	0.0	0.1	0.0	0.1	0.0	1.3	0.0	1.3
Phase Call Probability	0.34	0.82	0.25	0.79	0.36	1.00	0.19	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	22	41		15	27		24	221	109	11	273	135
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1643		1810	1661		1810	1900	1840	1810	1900	1860
Queue Service Time (g_s), s	0.8	1.5		0.6	1.0		0.9	1.9	2.0	0.4	2.5	2.6
Cycle Queue Clearance Time (g_c), s	0.8	1.5		0.6	1.0		0.9	1.9	2.0	0.4	2.5	2.6
Capacity *(c)*, veh/h	63	207		47	194		68	2030	983	35	1961	960
Volume-to-Capacity Ratio *(X)*	0.346	0.200		0.326	0.140		0.353	0.109	0.111	0.314	0.139	0.141
Available Capacity (c_a), veh/h	400	484		400	490		400	2801	1357	400	2801	1371
Back of Queue *(Q)*, veh/ln (50th percentile)	0.4	0.6		0.3	0.4		0.4	0.6	0.6	0.2	0.8	0.8
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	32.0	26.6		32.5	26.9		31.8	7.8	7.8	32.8	8.6	8.6
Incremental Delay (d_2), s/veh	1.2	0.2		1.5	0.1		1.2	0.0	0.0	1.9	0.0	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	33.2	26.8		34.0	27.0		33.0	7.8	7.8	34.7	8.6	8.6
Level of Service (LOS)	C	C		C	C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	29.0	C		29.5	C		9.5	A		9.3	A	
Intersection Delay, s/veh / LOS	11.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.3	C	3.3	C	2.2	B	2.2	B
Bicycle LOS Score / LOS	0.6	A	0.6	A	0.7	A	0.7	A

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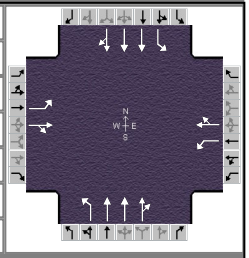
HCS 2010 Signalized Intersection Results Summary

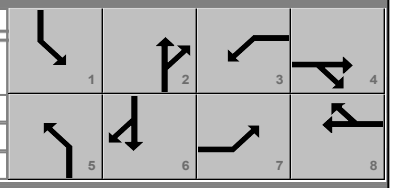
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Riverside County	Time Period	PM Peak Hour	PHF	0.92
Intersection	Washington Street/Fields D	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Wash Fields 2025 w Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	5	19	27	5	10	25	532	77	30	248	20

Signal Information			
Cycle, s	67.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.8	0.4	35.0	1.9	1.1	6.7
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	6.9	11.7	8.0	12.8	7.8	40.0	8.2	40.4
Change Period, *(Y+Rc)*, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time *(g_s)*, s	2.6	3.0	3.1	2.6	3.0	6.5	3.2	3.8
Green Extension Time *(g_e)*, s	0.0	0.0	0.0	0.0	0.0	1.8	0.0	1.8
Phase Call Probability	0.26	0.67	0.43	0.74	0.40	1.00	0.46	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	16	26		29	16		27	448	214	33	195	96
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1663		1810	1696		1810	1900	1775	1810	1900	1826
Queue Service Time *(g_s)*, s	0.6	1.0		1.1	0.6		1.0	4.4	4.5	1.2	1.8	1.8
Cycle Queue Clearance Time *(g_c)*, s	0.6	1.0		1.1	0.6		1.0	4.4	4.5	1.2	1.8	1.8
Capacity *(c)*, veh/h	49	164		79	195		75	1959	915	86	1982	952
Volume-to-Capacity Ratio *(X)*	0.330	0.159		0.370	0.083		0.363	0.229	0.233	0.380	0.098	0.101
Available Capacity *(c_a)*, veh/h	400	490		400	500		400	2798	1307	400	2798	1344
Back of Queue *(Q)*, veh/ln (50th percentile)	0.3	0.4		0.5	0.2		0.4	1.3	1.3	0.5	0.5	0.5
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh	32.4	28.0		31.5	26.8		31.7	9.0	9.1	31.4	8.2	8.2
Incremental Delay *(d_2)*, s/veh	1.4	0.2		1.1	0.1		1.1	0.0	0.0	1.0	0.0	0.0
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	33.8	28.2		32.6	26.9		32.8	9.1	9.1	32.4	8.2	8.2
Level of Service (LOS)	C	C		C	C		C	A	A	C	A	A
Approach Delay, s/veh / LOS	30.4	C		30.6	C		10.0	B		10.6	B	
Intersection Delay, s/veh / LOS	11.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.3	C	3.3	C	2.2	B	2.2	B
Bicycle LOS Score / LOS	0.6	A	0.6	A	0.9	A	0.7	A

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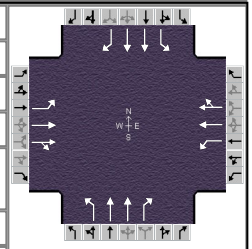
HCS 2010 Signalized Intersection Results Summary

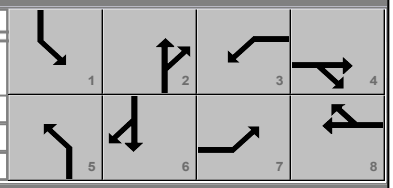
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Caltrans	Time Period	AM Peak Hour	PHF	0.92
Intersection	Winchester Road/Pourroy I	Analysis Year	2019 Existing Without Project	Analysis Period	1> 7:00
File Name	Winch Pourroy 2019 Exist No Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	66	21	35	187	13	73	22	635	171	59	1004	88

Signal Information			
Cycle, s	69.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.6	2.4	25.0	5.2	4.3	9.9
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	10.2	14.9	14.6	19.2	7.6	30.0	10.0	32.4
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	4.6	3.4	9.6	4.9	2.9	12.5	4.4	20.2
Green Extension Time (g_e), s	0.1	0.3	0.2	0.3	0.0	5.3	0.0	5.2
Phase Call Probability	0.75	0.99	0.98	1.00	0.37	1.00	0.71	1.00
Max Out Probability	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	72	23	38	203	14	79	24	690	186	64	1091	96
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	2.6	0.7	1.4	7.6	0.4	2.9	0.9	10.5	5.8	2.4	18.2	2.7
Cycle Queue Clearance Time (g_c), s	2.6	0.7	1.4	7.6	0.4	2.9	0.9	10.5	5.8	2.4	18.2	2.7
Capacity *(c)*, veh/h	137	270	229	250	389	329	68	1303	580	130	1427	635
Volume-to-Capacity Ratio *(X)*	0.524	0.084	0.166	0.814	0.036	0.241	0.354	0.530	0.321	0.495	0.765	0.151
Available Capacity (c_a), veh/h	391	547	464	391	547	464	391	2605	1160	391	2605	1160
Back of Queue *(Q)*, veh/ln (50th percentile)	1.2	0.3	0.5	3.4	0.2	1.1	0.4	3.6	1.8	1.0	6.1	0.8
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	30.9	25.9	26.2	29.1	22.1	23.1	32.6	17.6	16.1	31.0	18.2	13.5
Incremental Delay (d_2), s/veh	1.2	0.0	0.1	3.5	0.0	0.1	1.2	0.1	0.1	1.1	0.3	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	32.0	25.9	26.3	32.6	22.1	23.2	33.8	17.7	16.2	32.1	18.6	13.6
Level of Service (LOS)	C	C	C	C	C	C	C	B	B	C	B	B
Approach Delay, s/veh / LOS	29.3	C		29.6	C		17.8	B		18.9	B	
Intersection Delay, s/veh / LOS	20.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	2.9	C	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.6	A	0.7	A	1.2	A	1.5	A

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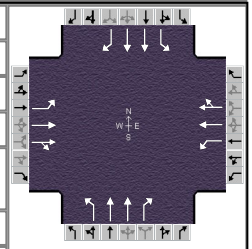
HCS 2010 Signalized Intersection Results Summary

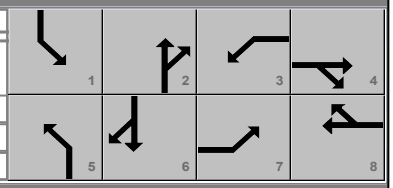
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Caltrans	Time Period	PM Peak Hour	PHF	0.92
Intersection	Winchester Road/Pourroy I	Analysis Year	2019 Existing Without Project	Analysis Period	1> 7:00
File Name	Winch Pourroy 2019 Exist No Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	8	20	17	115	21	77	21	1156	131	91	732	11

Signal Information			
Cycle, s	72.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.6	3.5	30.2	1.1	0.3	9.6
Yellow	4.0	0.0	4.0	4.0	4.0	4.0
Red	1.0	0.0	1.0	1.0	1.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	6.1	14.6	11.5	19.9	7.6	35.2	11.0	38.7
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.3	2.7	6.9	5.1	2.9	24.4	5.8	12.9
Green Extension Time (g_e), s	0.0	0.3	0.1	0.2	0.0	5.8	0.1	6.0
Phase Call Probability	0.16	0.96	0.92	1.00	0.37	1.00	0.86	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	9	22	18	125	23	84	23	1257	142	99	796	12
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	0.3	0.7	0.7	4.9	0.7	3.1	0.9	22.4	4.1	3.8	10.9	0.3
Cycle Queue Clearance Time (g_c), s	0.3	0.7	0.7	4.9	0.7	3.1	0.9	22.4	4.1	3.8	10.9	0.3
Capacity *(c)*, veh/h	28	251	213	162	391	332	65	1513	673	151	1686	751
Volume-to-Capacity Ratio *(X)*	0.308	0.087	0.087	0.773	0.058	0.252	0.353	0.830	0.211	0.654	0.472	0.016
Available Capacity (c_a), veh/h	375	525	445	375	525	445	375	2500	1113	375	2500	1113
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2	0.3	0.3	2.2	0.3	1.2	0.4	7.5	1.2	1.6	3.4	0.1
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	35.2	27.6	27.6	32.2	23.1	24.0	34.1	18.8	13.4	32.1	13.2	10.4
Incremental Delay (d_2), s/veh	2.3	0.1	0.1	3.0	0.0	0.1	1.2	0.5	0.1	1.8	0.1	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	37.5	27.6	27.6	35.2	23.1	24.2	35.3	19.2	13.5	33.9	13.3	10.4
Level of Service (LOS)	D	C	C	D	C	C	D	B	B	C	B	B
Approach Delay, s/veh / LOS	29.4	C		30.0	C		18.9	B		15.5	B	
Intersection Delay, s/veh / LOS	18.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	2.9	C	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.5	A	0.7	A	1.7	A	1.2	A

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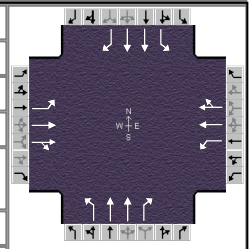
HCS 2010 Signalized Intersection Results Summary

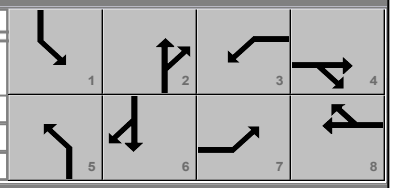
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Caltrans	Time Period	AM Peak Hour	PHF	0.92
Intersection	Winchester Road/Pourroy I	Analysis Year	2019 Existing With Project	Analysis Period	1> 7:00
File Name	Winch Pourroy 2019 Exist W Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	66	25	35	190	16	77	22	635	175	63	1004	88

Signal Information			
Cycle, s	69.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.6	2.5	25.0	5.3	4.5	9.9
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	10.3	14.9	14.8	19.4	7.6	30.0	10.1	32.5
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	4.7	3.4	9.7	5.0	2.9	12.6	4.5	20.3
Green Extension Time (g_e), s	0.1	0.3	0.2	0.3	0.0	5.3	0.0	5.2
Phase Call Probability	0.75	0.99	0.98	1.00	0.37	1.00	0.73	1.00
Max Out Probability	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	72	27	38	207	17	84	24	690	190	68	1091	96
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	2.7	0.9	1.4	7.7	0.5	3.0	0.9	10.6	6.0	2.5	18.3	2.7
Cycle Queue Clearance Time (g_c), s	2.7	0.9	1.4	7.7	0.5	3.0	0.9	10.6	6.0	2.5	18.3	2.7
Capacity *(c)*, veh/h	136	270	228	253	392	332	67	1296	577	133	1428	635
Volume-to-Capacity Ratio *(X)*	0.526	0.101	0.167	0.817	0.044	0.252	0.355	0.533	0.330	0.513	0.764	0.151
Available Capacity (c_a), veh/h	389	544	461	389	544	461	389	2591	1153	389	2591	1153
Back of Queue *(Q)*, veh/ln (50th percentile)	1.2	0.4	0.6	3.6	0.2	1.1	0.4	3.6	1.8	1.0	6.1	0.8
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	31.1	26.1	26.3	29.2	22.2	23.2	32.8	17.8	16.3	31.1	18.3	13.6
Incremental Delay (d_2), s/veh	1.2	0.1	0.1	4.2	0.0	0.1	1.2	0.1	0.1	1.1	0.3	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	32.2	26.1	26.5	33.3	22.2	23.3	34.0	17.9	16.4	32.3	18.6	13.6
Level of Service (LOS)	C	C	C	C	C	C	C	B	B	C	B	B
Approach Delay, s/veh / LOS	29.4	C		30.0	C		18.0	B		19.0	B	
Intersection Delay, s/veh / LOS	20.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	2.9	C	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.6	A	0.7	A	1.2	A	1.5	A

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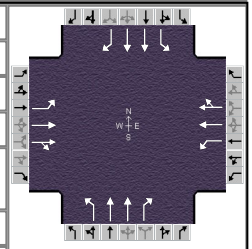
HCS 2010 Signalized Intersection Results Summary

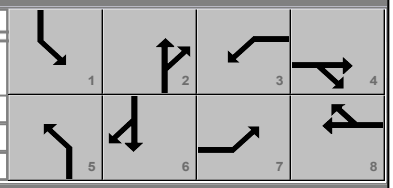
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Caltrans	Time Period	PM Peak Hour	PHF	0.92
Intersection	Winchester Road/Pourroy I	Analysis Year	2019 Existing With Project	Analysis Period	1> 7:00
File Name	Winch Pourroy 2019 Exist w Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	8	22	17	117	23	80	21	1156	133	93	732	11

Signal Information			
Cycle, s	72.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.6	3.5	30.4	1.1	0.5	9.6
Yellow	4.0	0.0	4.0	4.0	4.0	4.0
Red	1.0	0.0	1.0	1.0	1.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	6.1	14.6	11.6	20.1	7.6	35.4	11.1	38.9
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.3	2.8	7.0	5.3	2.9	24.5	5.9	12.9
Green Extension Time (g_e), s	0.0	0.3	0.1	0.3	0.0	5.8	0.1	6.0
Phase Call Probability	0.16	0.96	0.92	1.00	0.37	1.00	0.87	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	9	24	18	127	25	87	23	1257	145	101	796	12
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	0.3	0.8	0.7	5.0	0.8	3.3	0.9	22.5	4.2	3.9	10.9	0.3
Cycle Queue Clearance Time (g_c), s	0.3	0.8	0.7	5.0	0.8	3.3	0.9	22.5	4.2	3.9	10.9	0.3
Capacity *(c)*, veh/h	28	252	213	164	395	334	65	1512	673	152	1686	750
Volume-to-Capacity Ratio *(X)*	0.308	0.095	0.087	0.774	0.063	0.260	0.353	0.831	0.215	0.666	0.472	0.016
Available Capacity (c_a), veh/h	373	522	443	373	522	443	373	2487	1107	373	2487	1107
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2	0.4	0.3	2.3	0.3	1.2	0.4	7.6	1.2	1.6	3.5	0.1
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	35.4	27.7	27.7	32.3	23.1	24.1	34.2	18.9	13.5	32.3	13.3	10.4
Incremental Delay (d_2), s/veh	2.3	0.1	0.1	2.9	0.0	0.2	1.2	0.5	0.1	1.9	0.1	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	37.7	27.8	27.8	35.3	23.2	24.3	35.5	19.4	13.6	34.2	13.4	10.4
Level of Service (LOS)	D	C	C	D	C	C	D	B	B	C	B	B
Approach Delay, s/veh / LOS	29.5	C		30.0	C		19.1	B		15.6	B	
Intersection Delay, s/veh / LOS	19.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	2.9	C	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.5	A	0.7	A	1.7	A	1.2	A

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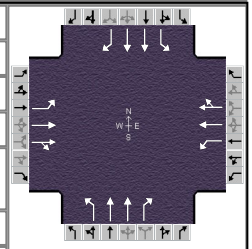
HCS 2010 Signalized Intersection Results Summary

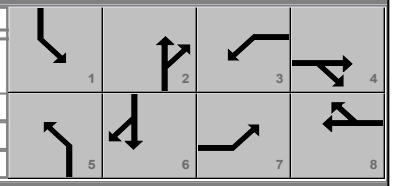
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Caltrans	Time Period	AM Peak Hour	PHF	0.92
Intersection	Winchester Road/Pourroy I	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Winch Pourroy 2025 No Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	70	25	40	200	15	80	25	670	180	65	1070	95

Signal Information			
Cycle, s	71.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.9	2.4	25.9	5.5	4.9	9.9
Yellow	4.0	0.0	4.0	4.0	0.0	4.0
Red	1.0	0.0	1.0	1.0	0.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	10.5	14.9	15.4	19.9	7.9	30.9	10.3	33.2
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	4.9	3.7	10.3	5.2	3.0	13.5	4.7	22.5
Green Extension Time (g_e), s	0.1	0.3	0.2	0.3	0.0	5.8	0.1	5.7
Phase Call Probability	0.78	0.99	0.99	1.00	0.42	1.00	0.75	1.00
Max Out Probability	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	76	27	43	217	16	87	27	728	196	71	1163	103
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	2.9	0.9	1.7	8.3	0.5	3.2	1.0	11.5	6.3	2.7	20.5	3.0
Cycle Queue Clearance Time (g_c), s	2.9	0.9	1.7	8.3	0.5	3.2	1.0	11.5	6.3	2.7	20.5	3.0
Capacity *(c)*, veh/h	138	264	224	264	395	335	74	1309	583	134	1428	636
Volume-to-Capacity Ratio *(X)*	0.550	0.103	0.194	0.824	0.041	0.259	0.366	0.556	0.336	0.528	0.814	0.162
Available Capacity (c_a), veh/h	379	531	450	379	531	450	379	2528	1125	379	2528	1125
Back of Queue *(Q)*, veh/ln (50th percentile)	1.3	0.4	0.7	4.0	0.2	1.2	0.4	4.0	1.9	1.1	6.9	0.9
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	31.8	26.9	27.3	29.7	22.6	23.7	33.4	18.2	16.6	31.9	19.3	14.0
Incremental Delay (d_2), s/veh	1.3	0.1	0.2	6.4	0.0	0.2	1.1	0.1	0.1	1.2	0.4	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	33.1	27.0	27.4	36.0	22.6	23.9	34.5	18.4	16.7	33.1	19.7	14.0
Level of Service (LOS)	C	C	C	D	C	C	C	B	B	C	B	B
Approach Delay, s/veh / LOS	30.3	C		32.0	C		18.5	B		20.0	C	
Intersection Delay, s/veh / LOS	21.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	2.9	C	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.6	A	0.8	A	1.3	A	1.6	A

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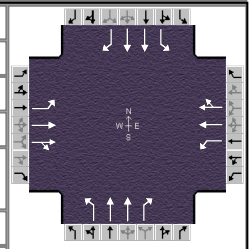
HCS 2010 Signalized Intersection Results Summary

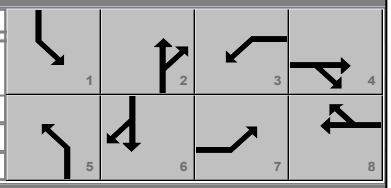
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Caltrans	Time Period	PM Peak Hour	PHF	0.92
Intersection	Winchester Road/Pourroy I	Analysis Year	2025 Without Project	Analysis Period	1> 7:00
File Name	Winch Pourroy 2025 No Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	25	20	120	25	80	25	1230	140	100	780	15

Signal Information			
Cycle, s	76.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.1	3.2	33.6	1.5	0.6	9.8
Yellow	4.0	0.0	4.0	4.0	4.0	4.0
Red	1.0	0.0	1.0	1.0	1.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	6.5	14.8	12.1	20.4	8.1	38.6	11.3	41.8
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.5	3.0	7.4	5.5	3.1	27.3	6.5	14.2
Green Extension Time (g_e), s	0.0	0.3	0.1	0.3	0.0	6.3	0.1	6.7
Phase Call Probability	0.21	0.98	0.94	1.00	0.44	1.00	0.90	1.00
Max Out Probability	0.00	0.00	0.01	0.00	0.00	0.06	0.00	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	11	27	22	130	27	87	27	1337	152	109	848	16
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	0.5	1.0	0.9	5.4	0.9	3.5	1.1	25.3	4.5	4.5	12.2	0.4
Cycle Queue Clearance Time (g_c), s	0.5	1.0	0.9	5.4	0.9	3.5	1.1	25.3	4.5	4.5	12.2	0.4
Capacity *(c)*, veh/h	34	241	205	167	381	323	73	1584	705	149	1736	773
Volume-to-Capacity Ratio *(X)*	0.317	0.113	0.106	0.780	0.071	0.269	0.373	0.844	0.216	0.730	0.488	0.021
Available Capacity (c_a), veh/h	353	495	419	353	495	419	353	2355	1048	353	2355	1048
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2	0.4	0.4	2.5	0.4	1.3	0.5	8.7	1.4	1.9	3.9	0.1
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	37.2	29.7	29.7	34.1	24.9	25.9	35.9	19.2	13.4	34.4	13.6	10.5
Incremental Delay (d_2), s/veh	1.9	0.1	0.1	3.0	0.0	0.2	1.2	1.2	0.1	2.6	0.1	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	39.1	29.8	29.8	37.1	24.9	26.1	37.1	20.5	13.5	37.0	13.6	10.5
Level of Service (LOS)	D	C	C	D	C	C	D	C	B	D	B	B
Approach Delay, s/veh / LOS	31.5	C		31.8	C		20.1	C		16.2	B	
Intersection Delay, s/veh / LOS	20.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.0	C	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.5	A	0.7	A	1.7	A	1.3	A

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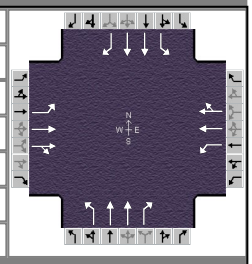
HCS 2010 Signalized Intersection Results Summary

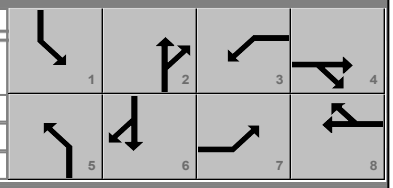
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Caltrans	Time Period	AM Peak Hour	PHF	0.92
Intersection	Winchester Road/Pourroy I	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Winch Pourroy 2025 w Proj AM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	70	29	40	203	18	84	25	670	184	69	1070	95

Signal Information			
Cycle, s	71.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.9	2.5	25.8	5.5	0.1	9.9
Yellow	4.0	0.0	4.0	4.0	4.0	4.0
Red	1.0	0.0	1.0	1.0	1.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	10.5	14.9	15.6	20.1	7.9	30.8	10.4	33.3
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	4.9	3.7	10.5	5.4	3.1	13.6	4.9	22.6
Green Extension Time (g_e), s	0.1	0.3	0.2	0.3	0.0	5.8	0.1	5.7
Phase Call Probability	0.78	0.99	0.99	1.00	0.42	1.00	0.78	1.00
Max Out Probability	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	76	32	43	221	20	91	27	728	200	75	1163	103
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	2.9	1.0	1.7	8.5	0.6	3.4	1.1	11.6	6.5	2.9	20.6	3.0
Cycle Queue Clearance Time (g_c), s	2.9	1.0	1.7	8.5	0.6	3.4	1.1	11.6	6.5	2.9	20.6	3.0
Capacity *(c)*, veh/h	138	263	223	267	398	338	74	1302	579	137	1428	635
Volume-to-Capacity Ratio *(X)*	0.551	0.120	0.195	0.827	0.049	0.270	0.367	0.559	0.345	0.547	0.815	0.162
Available Capacity (c_a), veh/h	378	529	448	378	529	448	378	2518	1121	378	2518	1121
Back of Queue *(Q)*, veh/ln (50th percentile)	1.3	0.5	0.7	4.1	0.3	1.3	0.4	4.0	2.0	1.2	7.0	0.9
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	32.0	27.1	27.4	29.7	22.7	23.8	33.5	18.4	16.8	32.0	19.4	14.1
Incremental Delay (d_2), s/veh	1.3	0.1	0.2	6.9	0.0	0.2	1.1	0.1	0.1	1.3	0.4	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	33.3	27.2	27.6	36.7	22.7	23.9	34.7	18.6	16.9	33.3	19.8	14.1
Level of Service (LOS)	C	C	C	D	C	C	C	B	B	C	B	B
Approach Delay, s/veh / LOS	30.4	C		32.3	C		18.7	B		20.1	C	
Intersection Delay, s/veh / LOS	21.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	2.9	C	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.6	A	0.8	A	1.3	A	1.6	A

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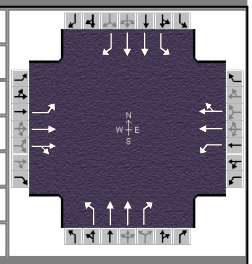
HCS 2010 Signalized Intersection Results Summary

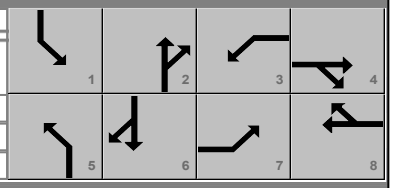
General Information				Intersection Information	
Agency	Temecula Valley USD			Duration, h	0.25
Analyst	R Garland	Analysis Date	7/17/2019	Area Type	Other
Jurisdiction	Caltrans	Time Period	PM Peak Hour	PHF	0.92
Intersection	Winchester Road/Pourroy I	Analysis Year	2025 With Project	Analysis Period	1> 7:00
File Name	Winch Pourroy 2025 w Proj PM.xus				
Project Description	Temecula Valley K-8 STEAM School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	27	20	122	27	83	25	1230	142	102	780	15

Signal Information			
Cycle, s	77.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.1	3.3	33.7	1.5	0.8	9.8
Yellow	4.0	0.0	4.0	4.0	4.0	4.0
Red	1.0	0.0	1.0	1.0	1.0	1.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	6.5	14.8	12.2	20.6	8.1	38.7	11.4	42.0
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.3	3.4	3.3	3.4	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	2.5	3.1	7.5	5.7	3.1	27.4	6.6	14.3
Green Extension Time (g_e), s	0.0	0.3	0.1	0.3	0.0	6.3	0.1	6.7
Phase Call Probability	0.21	0.98	0.94	1.00	0.44	1.00	0.91	1.00
Max Out Probability	0.00	0.00	0.01	0.00	0.00	0.06	0.00	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate *(v)*, veh/h	11	29	22	133	29	90	27	1337	154	111	848	16
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	0.5	1.1	0.9	5.5	1.0	3.7	1.1	25.4	4.6	4.6	12.3	0.4
Cycle Queue Clearance Time (g_c), s	0.5	1.1	0.9	5.5	1.0	3.7	1.1	25.4	4.6	4.6	12.3	0.4
Capacity *(c)*, veh/h	34	241	205	170	384	325	73	1583	705	149	1736	773
Volume-to-Capacity Ratio *(X)*	0.317	0.122	0.106	0.782	0.077	0.278	0.374	0.845	0.219	0.744	0.488	0.021
Available Capacity (c_a), veh/h	352	493	417	352	493	417	352	2344	1043	352	2344	1043
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2	0.5	0.4	2.5	0.4	1.4	0.5	8.8	1.4	2.0	4.0	0.1
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	37.4	29.9	29.8	34.2	25.0	26.0	36.1	19.4	13.5	34.6	13.6	10.5
Incremental Delay (d_2), s/veh	1.9	0.1	0.1	3.0	0.0	0.2	1.2	1.3	0.1	2.7	0.1	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh	39.3	29.9	29.9	37.1	25.0	26.2	37.3	20.6	13.6	37.3	13.7	10.5
Level of Service (LOS)	D	C	C	D	C	C	D	C	B	D	B	B
Approach Delay, s/veh / LOS	31.6	C		31.8	C		20.2	C		16.3	B	
Intersection Delay, s/veh / LOS	20.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.0	C	3.0	C	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.5	A	0.7	A	1.7	A	1.3	A

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UNSIGNALIZED INTERSECTIONS

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Abelia St/Geranium St*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Geranium Street* North/South Street: *Abelia Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	14	3	76	10	8	11
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	49	128	8	8	192	22
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.95		0.95		0.95	0.95	0.95	0.95
Flow Rate (veh/h)	97		29		118	75	109	124
% Heavy Vehicles	0		0		0	0	0	0
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.3		0.4	0.0	0.1	0.0
Prop. Right-Turns	0.8		0.4		0.0	0.1	0.0	0.2
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.5		-0.2		0.2	-0.1	0.0	-0.1

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.09		0.03		0.10	0.07	0.10	0.11
hd, final value (s)	4.44		4.84		5.23	4.94	5.02	4.86
x, final value	0.12		0.04		0.17	0.10	0.15	0.17
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	2.4		2.8		2.9	2.6	2.7	2.6

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	347		279		368	325	359	374
Delay (s/veh)	8.04		8.03		9.02	8.21	8.62	8.53
LOS	A		A		A	A	A	A
Approach: Delay (s/veh)	8.04		8.03		8.70		8.57	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.50							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Abelia St/Geranium St*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Geranium Street* North/South Street: *Abelia Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	65	23	32	4	21	14
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	58	84	11	10	65	56
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.95		0.95		0.95	0.95	0.95	0.95
Flow Rate (veh/h)	125		40		105	55	43	92
% Heavy Vehicles	0		0		0	0	0	0
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.5		0.1		0.6	0.0	0.2	0.0
Prop. Right-Turns	0.3		0.3		0.0	0.2	0.0	0.6
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.0		-0.2		0.3	-0.1	0.1	-0.4

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.11		0.04		0.09	0.05	0.04	0.08
hd, final value (s)	4.59		4.56		5.32	4.89	5.18	4.62
x, final value	0.16		0.05		0.16	0.07	0.06	0.12
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	2.6		2.6		3.0	2.6	2.9	2.3

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	375		290		355	305	293	342
Delay (s/veh)	8.46		7.81		9.00	7.98	8.22	7.94
LOS	A		A		A	A	A	A
Approach: Delay (s/veh)	8.46		7.81		8.65		8.03	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.34							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Abelia St/Geranium St*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With Project*

Project ID *K-8 STEAM School*

East/West Street: *Geranium Street* North/South Street: *Abelia Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	14	3	137	14	8	11
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	101	138	12	8	204	22
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.95		0.95		0.95	0.95	0.95	0.95
Flow Rate (veh/h)	161		33		178	84	115	130
% Heavy Vehicles	0		0		0	0	0	0
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.4		0.6	0.0	0.1	0.0
Prop. Right-Turns	0.9		0.3		0.0	0.1	0.0	0.2
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.5		-0.1		0.3	-0.1	0.0	-0.1

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.14		0.03		0.16	0.07	0.10	0.12
hd, final value (s)	4.62		5.22		5.55	5.15	5.31	5.15
x, final value	0.21		0.05		0.27	0.12	0.17	0.19
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	2.6		3.2		3.3	2.8	3.0	2.9

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	411		283		428	334	365	380
Delay (s/veh)	8.82		8.48		10.34	8.55	9.10	9.03
LOS	A		A		B	A	A	A
Approach: Delay (s/veh)	8.82		8.48		9.76		9.06	
LOS	A		A		A		A	
Intersection Delay (s/veh)	9.24							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Abelia St/Geranium St*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With Project*

Project ID *K-8 STEAM School*

East/West Street: *Geranium Street* North/South Street: *Abelia Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	65	23	60	6	21	14
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	92	91	13	10	71	56
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.95		0.95		0.95	0.95	0.95	0.95
Flow Rate (veh/h)	155		42		143	61	46	95
% Heavy Vehicles	0		0		0	0	0	0
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.4		0.1		0.7	0.0	0.2	0.0
Prop. Right-Turns	0.4		0.3		0.0	0.2	0.0	0.6
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.2		-0.2		0.3	-0.1	0.1	-0.4

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.14		0.04		0.13	0.05	0.04	0.08
hd, final value (s)	4.63		4.77		5.47	4.98	5.32	4.78
x, final value	0.20		0.06		0.22	0.08	0.07	0.13
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	2.6		2.8		3.2	2.7	3.0	2.5

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	405		292		393	311	296	345
Delay (s/veh)	8.77		8.05		9.68	8.14	8.41	8.17
LOS	A		A		A	A	A	A
Approach: Delay (s/veh)	8.77		8.05		9.22		8.24	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.75							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Abelia St/Geranium St*
Jurisdiction	*Riverside County*
Analysis Year	*2025 Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Geranium Street* North/South Street: *Abelia Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	15	5	80	15	10	15
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	55	140	10	10	200	25
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.95		0.95		0.95	0.95	0.95	0.95
Flow Rate (veh/h)	104		40		130	83	115	131
% Heavy Vehicles	0		0		0	0	0	0
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.4		0.4	0.0	0.1	0.0
Prop. Right-Turns	0.8		0.4		0.0	0.1	0.0	0.2
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.5		-0.2		0.2	-0.1	0.0	-0.1

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.09		0.04		0.12	0.07	0.10	0.12
hd, final value (s)	4.55		4.94		5.31	5.01	5.11	4.93
x, final value	0.13		0.05		0.19	0.12	0.16	0.18
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	2.5		2.9		3.0	2.7	2.8	2.6

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	354		290		380	333	365	381
Delay (s/veh)	8.23		8.23		9.27	8.36	8.81	8.70
LOS	A		A		A	A	A	A
Approach: Delay (s/veh)	8.23		8.23		8.91		8.75	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.68							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Abelia St/Geranium St*
Jurisdiction	*Riverside County*
Analysis Year	*2025 Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Geranium Street* North/South Street: *Abelia Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	70	25	35	5	25	15
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	60	90	15	15	70	60
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.95		0.95		0.95	0.95	0.95	0.95
Flow Rate (veh/h)	135		46		110	62	51	99
% Heavy Vehicles	0		0		0	0	0	0
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.5		0.1		0.6	0.0	0.3	0.0
Prop. Right-Turns	0.3		0.3		0.0	0.2	0.0	0.6
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		-0.2		0.3	-0.2	0.1	-0.4

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.12		0.04		0.10	0.06	0.05	0.09
hd, final value (s)	4.67		4.66		5.38	4.93	5.28	4.68
x, final value	0.17		0.06		0.16	0.08	0.07	0.13
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	2.7		2.7		3.1	2.6	3.0	2.4

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	385		296		360	312	301	349
Delay (s/veh)	8.65		7.96		9.14	8.08	8.40	8.07
LOS	A		A		A	A	A	A
Approach: Delay (s/veh)	8.65		7.96		8.76		8.18	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.49							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Abelia St/Geranium St*
Jurisdiction	*Riverside County*
Analysis Year	*2025 With Project*

Project ID *K-8 STEAM School*

East/West Street: *Geranium Street* North/South Street: *Abelia Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	15	5	141	19	10	15
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	107	150	14	10	212	25
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.95		0.95		0.95	0.95	0.95	0.95
Flow Rate (veh/h)	168		45		190	92	121	137
% Heavy Vehicles	0		0		0	0	0	0
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.4		0.6	0.0	0.1	0.0
Prop. Right-Turns	0.9		0.3		0.0	0.2	0.0	0.2
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.5		-0.1		0.3	-0.1	0.0	-0.1

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.15		0.04		0.17	0.08	0.11	0.12
hd, final value (s)	4.74		5.33		5.64	5.23	5.42	5.24
x, final value	0.22		0.07		0.30	0.13	0.18	0.20
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	2.7		3.3		3.3	2.9	3.1	2.9

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	418		295		440	342	371	387
Delay (s/veh)	9.08		8.71		10.71	8.74	9.32	9.24
LOS	A		A		B	A	A	A
Approach: Delay (s/veh)	9.08		8.71		10.06		9.28	
LOS	A		A		B		A	
Intersection Delay (s/veh)	9.49							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Abelia St/Geranium St*
Jurisdiction	*Riverside County*
Analysis Year	*2025 With Project*

Project ID *K-8 STEAM School*

East/West Street: *Geranium Street* North/South Street: *Abelia Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	70	25	63	7	25	15
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	94	97	17	15	76	60
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.95		0.95		0.95	0.95	0.95	0.95
Flow Rate (veh/h)	165		48		148	68	55	103
% Heavy Vehicles	0		0		0	0	0	0
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.4		0.1		0.7	0.0	0.3	0.0
Prop. Right-Turns	0.4		0.3		0.0	0.3	0.0	0.6
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.2		-0.2		0.3	-0.2	0.1	-0.4

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.15		0.04		0.13	0.06	0.05	0.09
hd, final value (s)	4.71		4.87		5.54	5.03	5.42	4.85
x, final value	0.22		0.06		0.23	0.09	0.08	0.14
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	2.7		2.9		3.2	2.7	3.1	2.5

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	415		298		398	318	305	353
Delay (s/veh)	9.01		8.21		9.86	8.26	8.60	8.33
LOS	A		A		A	A	A	A
Approach: Delay (s/veh)	9.01		8.21		9.36		8.42	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.91							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Abelia St/Charlois St/GingerTr*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Abelia Street* North/South Street: *Charlois St/Ginger Tree Dr*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	0	296	8	47	164	3
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	5	0	108	4	0	1
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	155	163	135	89	118		5	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes	2		2		1		1	
Geometry Group	5		5		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0	0.0	0.4	0.0	0.0		0.8	
Prop. Right-Turns	0.0	0.0	0.0	0.0	1.0		0.2	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.0	0.2	-0.0	-0.6		0.0	

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
x, initial	0.14	0.14	0.12	0.08	0.10		0.00	
hd, final value (s)	5.02	4.98	5.28	5.07	4.53		5.31	
x, final value	0.22	0.23	0.20	0.13	0.15		0.01	
Move-up time, m (s)	2.3		2.3		2.0		2.0	
Service Time, t_s (s)	2.7	2.7	3.0	2.8	2.5		3.3	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	405	413	385	339	368		255	
Delay (s/veh)	9.09	9.13	9.28	8.50	8.32		8.35	
LOS	A	A	A	A	A		A	
Approach: Delay (s/veh)	9.11		8.97		8.32		8.35	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.92							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Abelia St/Charlois St/GingerTr*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Abelia Street* North/South Street: *Charlois St/Ginger Tree Dr*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	5	117	14	35	139	5
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	14	1	34	7	4	6
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	66	76	108	78	50		17	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes	2		2		1		1	
Geometry Group	5		5		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1	0.0	0.3	0.0	0.3		0.4	
Prop. Right-Turns	0.0	0.2	0.0	0.1	0.7		0.4	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.1	0.2	-0.0	-0.4		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
x, initial	0.06	0.07	0.10	0.07	0.04		0.02	
hd, final value (s)	4.84	4.68	4.94	4.72	4.29		4.56	
x, final value	0.09	0.10	0.15	0.10	0.06		0.02	
Move-up time, m (s)	2.3		2.3		2.0		2.0	
Service Time, t_s (s)	2.5	2.4	2.6	2.4	2.3		2.6	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	316	326	358	328	300		267	
Delay (s/veh)	8.02	7.89	8.49	7.96	7.56		7.66	
LOS	A	A	A	A	A		A	
Approach: Delay (s/veh)	7.95		8.27		7.56		7.66	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.04							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Abelia St/Charlois St/GingerTr*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With Project*

Project ID *K-8 STEAM School*

East/West Street: *Abelia Street* North/South Street: *Charlois St/Ginger Tree Dr*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	0	373	8	57	230	7
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	5	0	120	8	0	1
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	195	204	181	128	131		9	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes	2		2		1		1	
Geometry Group	5		5		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0	0.0	0.3	0.0	0.0		0.9	
Prop. Right-Turns	0.0	0.0	0.0	0.1	1.0		0.1	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.0	0.2	-0.0	-0.6		0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
x, initial	0.17	0.18	0.16	0.11	0.12		0.01	
hd, final value (s)	5.19	5.16	5.44	5.24	4.88		5.79	
x, final value	0.28	0.29	0.27	0.19	0.18		0.01	
Move-up time, m (s)	2.3		2.3		2.0		2.0	
Service Time, t_s (s)	2.9	2.9	3.1	2.9	2.9		3.8	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	445	454	431	378	381		259	
Delay (s/veh)	9.91	9.98	10.18	9.13	8.92		8.87	
LOS	A	A	B	A	A		A	
Approach: Delay (s/veh)	9.95		9.75		8.92		8.87	
LOS	A		A		A		A	
Intersection Delay (s/veh)	9.70							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Abelia St/Charlois St/GingerTr*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With Project*

Project ID *K-8 STEAM School*

East/West Street: *Abelia Street* North/South Street: *Charlois St/Ginger Tree Dr*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	5	153	14	42	182	7
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	14	1	39	9	4	6
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	85	95	139	102	56		19	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes	2		2		1		1	
Geometry Group	5		5		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1	0.0	0.3	0.0	0.3		0.5	
Prop. Right-Turns	0.0	0.1	0.0	0.1	0.7		0.3	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.1	0.2	-0.0	-0.4		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
x, initial	0.08	0.08	0.12	0.09	0.05		0.02	
hd, final value (s)	4.92	4.78	4.99	4.78	4.46		4.81	
x, final value	0.12	0.13	0.19	0.14	0.07		0.03	
Move-up time, m (s)	2.3		2.3		2.0		2.0	
Service Time, t_s (s)	2.6	2.5	2.7	2.5	2.5		2.8	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	335	345	389	352	306		269	
Delay (s/veh)	8.26	8.17	8.88	8.23	7.80		7.93	
LOS	A	A	A	A	A		A	
Approach: Delay (s/veh)	8.21		8.60		7.80		7.93	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.35							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Abelia St/Charlois St/GingerTr*
Jurisdiction	*Riverside County*
Analysis Year	*2025 Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Abelia Street* North/South Street: *Charlois St/Ginger Tree Dr*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	10	310	10	50	170	5
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	10	5	120	5	5	5
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	173	173	141	94	141		15	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes	2		2		1		1	
Geometry Group	5		5		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1	0.0	0.4	0.0	0.1		0.3	
Prop. Right-Turns	0.0	0.1	0.0	0.1	0.9		0.3	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.0	0.2	-0.0	-0.5		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
x, initial	0.15	0.15	0.13	0.08	0.13		0.01	
hd, final value (s)	5.17	5.10	5.43	5.21	4.70		5.29	
x, final value	0.25	0.25	0.21	0.14	0.18		0.02	
Move-up time, m (s)	2.3		2.3		2.0		2.0	
Service Time, t_s (s)	2.9	2.8	3.1	2.9	2.7		3.3	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	423	423	391	344	391		265	
Delay (s/veh)	9.57	9.45	9.60	8.73	8.75		8.41	
LOS	A	A	A	A	A		A	
Approach: Delay (s/veh)	9.51		9.25		8.75		8.41	
LOS	A		A		A		A	
Intersection Delay (s/veh)	9.26							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Abelia St/Charlois St/GingerTr*
Jurisdiction	*Riverside County*
Analysis Year	*2025 Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Abelia Street* North/South Street: *Charlois St/Ginger Tree Dr*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	10	120	15	40	150	5
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	15	5	40	10	5	10
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	73	78	120	83	62		25	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes	2		2		1		1	
Geometry Group	5		5		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1	0.0	0.3	0.0	0.2		0.4	
Prop. Right-Turns	0.0	0.2	0.0	0.1	0.7		0.4	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.1	-0.1	0.2	-0.0	-0.4		-0.2	

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
x, initial	0.06	0.07	0.11	0.07	0.06		0.02	
hd, final value (s)	4.95	4.74	5.01	4.79	4.37		4.61	
x, final value	0.10	0.10	0.17	0.11	0.08		0.03	
Move-up time, m (s)	2.3		2.3		2.0		2.0	
Service Time, t_s (s)	2.6	2.4	2.7	2.5	2.4		2.6	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	323	328	370	333	312		275	
Delay (s/veh)	8.20	7.99	8.71	8.08	7.73		7.77	
LOS	A	A	A	A	A		A	
Approach: Delay (s/veh)	8.09		8.45		7.73		7.77	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.19							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Abelia St/Charlois St/GingerTr*
Jurisdiction	*Riverside County*
Analysis Year	*2025 With Project*

Project ID *K-8 STEAM School*

East/West Street: *Abelia Street* North/South Street: *Charlois St/Ginger Tree Dr*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	10	387	10	60	236	9
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	10	5	132	9	5	5
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	213	214	187	133	153		19	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes	2		2		1		1	
Geometry Group	5		5		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0	0.0	0.3	0.0	0.1		0.5	
Prop. Right-Turns	0.0	0.0	0.0	0.1	0.9		0.3	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.0	0.2	-0.0	-0.5		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
x, initial	0.19	0.19	0.17	0.12	0.14		0.02	
hd, final value (s)	5.35	5.30	5.61	5.39	5.04		5.77	
x, final value	0.32	0.31	0.29	0.20	0.21		0.03	
Move-up time, m (s)	2.3		2.3		2.0		2.0	
Service Time, t_s (s)	3.1	3.0	3.3	3.1	3.0		3.8	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	463	464	437	383	403		269	
Delay (s/veh)	10.52	10.41	10.60	9.43	9.41		8.95	
LOS	B	B	B	A	A		A	
Approach: Delay (s/veh)	10.46		10.11		9.41		8.95	
LOS	B		B		A		A	
Intersection Delay (s/veh)	10.13							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Abelia St/Charlois St/GingerTr*
Jurisdiction	*Riverside County*
Analysis Year	*2025 With Project*

Project ID *K-8 STEAM School*

East/West Street: *Abelia Street* North/South Street: *Charlois St/Ginger Tree Dr*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	10	156	15	47	193	7
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	15	5	45	12	5	10
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	92	97	150	109	67		27	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes	2		2		1		1	
Geometry Group	5		5		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1	0.0	0.3	0.0	0.2		0.4	
Prop. Right-Turns	0.0	0.2	0.0	0.1	0.7		0.4	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.1	-0.1	0.2	-0.0	-0.4		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
x, initial	0.08	0.09	0.13	0.10	0.06		0.02	
hd, final value (s)	5.02	4.85	5.06	4.85	4.56		4.85	
x, final value	0.13	0.13	0.21	0.15	0.08		0.04	
Move-up time, m (s)	2.3		2.3		2.0		2.0	
Service Time, t_s (s)	2.7	2.6	2.8	2.6	2.6		2.9	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	342	347	400	359	317		277	
Delay (s/veh)	8.45	8.28	9.11	8.39	7.98		8.04	
LOS	A	A	A	A	A		A	
Approach: Delay (s/veh)	8.37		8.80		7.98		8.04	
LOS	A		A		A		A	
Intersection Delay (s/veh)	8.51							
Intersection LOS	A							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Pourroy Rd/Thompson Rd*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Thompson Road* North/South Street: *Pourroy Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	57	6	120	14	14	2
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	171	194	3	2	308	73
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LT	TR	LT	TR
PHF	0.95	0.95	0.95	1.00	0.95	1.00	0.95	1.00
Flow Rate (veh/h)	63	129	21	9	282	100	164	227
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes	2		2		2		2	
Geometry Group	5		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	1.0	0.0	0.7	0.0	0.6	0.0	0.0	0.0
Prop. Right-Turns	0.0	1.0	0.0	0.2	0.0	0.0	0.0	0.3
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.5	-0.7	0.3	-0.2	0.3	-0.0	0.0	-0.2

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.06	0.11	0.02	0.01	0.25	0.09	0.15	0.20
hd, final value (s)	6.86	5.70	6.99	6.50	5.91	5.57	5.61	5.38
x, final value	0.12	0.20	0.04	0.02	0.46	0.15	0.26	0.34
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t_s (s)	4.6	3.4	4.7	4.2	3.6	3.3	3.3	3.1

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	313	379	271	259	532	350	414	477
Delay (s/veh)	10.49	9.85	9.99	9.31	13.60	9.29	10.22	10.81
LOS	B	A	A	A	B	A	B	B
Approach: Delay (s/veh)	10.06		9.78		12.47		10.57	
LOS	B		A		B		B	
Intersection Delay (s/veh)	11.18							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Pourroy Rd/Thompson Rd*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Thompson Road* North/South Street: *Pourroy Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	103	10	156	11	11	4
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	168	316	11	2	229	79
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LT	TR	LT	TR
PHF	0.95	0.95	0.95	1.00	0.95	1.00	0.95	1.00
Flow Rate (veh/h)	113	169	16	10	342	169	122	194
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes	2		2		2		2	
Geometry Group	5		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	1.0	0.0	0.7	0.0	0.5	0.0	0.0	0.0
Prop. Right-Turns	0.0	1.0	0.0	0.4	0.0	0.1	0.0	0.4
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.5	-0.7	0.3	-0.3	0.3	-0.0	0.0	-0.3

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.10	0.15	0.01	0.01	0.30	0.15	0.11	0.17
hd, final value (s)	7.03	5.87	7.36	6.73	6.08	5.77	6.08	5.79
x, final value	0.22	0.28	0.03	0.02	0.58	0.27	0.21	0.31
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t_s (s)	4.7	3.6	5.1	4.4	3.8	3.5	3.8	3.5

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	363	419	266	260	583	419	372	444
Delay (s/veh)	11.71	10.79	10.31	9.56	16.74	10.61	10.35	11.08
LOS	B	B	B	A	C	B	B	B
Approach: Delay (s/veh)	11.16		10.02		14.71		10.80	
LOS	B		B		B		B	
Intersection Delay (s/veh)	12.63							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Pourroy Rd/Thompson Rd*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With Project*

Project ID *K-8 STEAM School*

East/West Street: *Thompson Road* North/South Street: *Pourroy Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	57	6	140	18	14	2
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	188	194	7	2	308	73
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LT	TR	LT	TR
PHF	0.95	0.95	0.95	1.00	0.95	1.00	0.95	1.00
Flow Rate (veh/h)	63	150	25	9	299	104	164	227
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes	2		2		2		2	
Geometry Group	5		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	1.0	0.0	0.7	0.0	0.7	0.0	0.0	0.0
Prop. Right-Turns	0.0	1.0	0.0	0.2	0.0	0.1	0.0	0.3
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.5	-0.7	0.4	-0.2	0.3	-0.0	0.0	-0.2

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.06	0.13	0.02	0.01	0.27	0.09	0.15	0.20
hd, final value (s)	6.94	5.77	7.13	6.62	6.02	5.64	5.73	5.50
x, final value	0.12	0.24	0.05	0.02	0.50	0.16	0.26	0.35
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t_s (s)	4.6	3.5	4.8	4.3	3.7	3.3	3.4	3.2

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	313	400	275	259	549	354	414	477
Delay (s/veh)	10.59	10.29	10.21	9.43	14.57	9.43	10.44	11.09
LOS	B	B	B	A	B	A	B	B
Approach: Delay (s/veh)	10.38		10.00		13.25		10.82	
LOS	B		A		B		B	
Intersection Delay (s/veh)	11.64							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Pourroy Rd/Thompson Rd*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Thompson Road* North/South Street: *Pourroy Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	103	10	165	13	11	4
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	179	316	13	2	229	79
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LT	TR	LT	TR
PHF	0.95	0.95	0.95	1.00	0.95	1.00	0.95	1.00
Flow Rate (veh/h)	113	178	18	10	354	171	122	194
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes	2		2		2		2	
Geometry Group	5		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	1.0	0.0	0.7	0.0	0.5	0.0	0.0	0.0
Prop. Right-Turns	0.0	1.0	0.0	0.4	0.0	0.1	0.0	0.4
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.5	-0.7	0.4	-0.3	0.3	-0.1	0.0	-0.3

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.10	0.16	0.02	0.01	0.31	0.15	0.11	0.17
hd, final value (s)	7.08	5.92	7.44	6.80	6.13	5.81	6.14	5.85
x, final value	0.22	0.29	0.04	0.02	0.60	0.28	0.21	0.32
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t_s (s)	4.8	3.6	5.1	4.5	3.8	3.5	3.8	3.5

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	363	428	268	260	578	421	372	444
Delay (s/veh)	11.79	11.05	10.43	9.63	17.68	10.71	10.45	11.22
LOS	B	B	B	A	C	B	B	B
Approach: Delay (s/veh)	11.34		10.14		15.41		10.92	
LOS	B		B		C		B	
Intersection Delay (s/veh)	13.04							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Pourroy Rd/Thompson Rd*
Jurisdiction	*Riverside County*
Analysis Year	*2025 Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Thompson Road* North/South Street: *Pourroy Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	60	10	130	15	15	5
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	180	210	5	5	330	80
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LT	TR	LT	TR
PHF	0.95	0.95	0.95	1.00	0.95	1.00	0.95	1.00
Flow Rate (veh/h)	68	141	22	13	299	110	178	245
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes	2		2		2		2	
Geometry Group	5		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.9	0.0	0.7	0.0	0.6	0.0	0.0	0.0
Prop. Right-Turns	0.0	1.0	0.0	0.4	0.0	0.0	0.0	0.3
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.5	-0.7	0.3	-0.3	0.3	-0.0	0.0	-0.2

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.06	0.13	0.02	0.01	0.27	0.10	0.16	0.22
hd, final value (s)	7.00	5.86	7.19	6.58	6.04	5.69	5.75	5.51
x, final value	0.13	0.23	0.04	0.02	0.50	0.17	0.28	0.37
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t_s (s)	4.7	3.6	4.9	4.3	3.7	3.4	3.4	3.2

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	318	391	272	263	549	360	428	495
Delay (s/veh)	10.76	10.29	10.22	9.44	14.67	9.59	10.72	11.47
LOS	B	B	B	A	B	A	B	B
Approach: Delay (s/veh)	10.44		9.93		13.30		11.15	
LOS	B		A		B		B	
Intersection Delay (s/veh)	11.79							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Pourroy Rd/Thompson Rd*
Jurisdiction	*Riverside County*
Analysis Year	*2025 Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Thompson Road* North/South Street: *Pourroy Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	110	15	170	15	15	5
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	180	340	15	5	240	85
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LT	TR	LT	TR
PHF	0.95	0.95	0.95	1.00	0.95	1.00	0.95	1.00
Flow Rate (veh/h)	122	186	22	13	367	185	131	205
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes	2		2		2		2	
Geometry Group	5		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.9	0.0	0.7	0.0	0.5	0.0	0.0	0.0
Prop. Right-Turns	0.0	1.0	0.0	0.4	0.0	0.1	0.0	0.4
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.5	-0.7	0.3	-0.3	0.3	-0.1	0.0	-0.3

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.11	0.17	0.02	0.01	0.33	0.16	0.12	0.18
hd, final value (s)	7.21	6.06	7.59	6.98	6.25	5.94	6.30	5.99
x, final value	0.24	0.31	0.05	0.03	0.64	0.31	0.23	0.34
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t_s (s)	4.9	3.8	5.3	4.7	4.0	3.6	4.0	3.7

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	372	436	272	263	567	435	381	455
Delay (s/veh)	12.22	11.51	10.66	9.86	19.28	11.22	10.86	11.76
LOS	B	B	B	A	C	B	B	B
Approach: Delay (s/veh)	11.79		10.36		16.58		11.41	
LOS	B		B		C		B	
Intersection Delay (s/veh)	13.79							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Pourroy Rd/Thompson Rd*
Jurisdiction	*Riverside County*
Analysis Year	*2025 With Project*

Project ID *K-8 STEAM School*

East/West Street: *Thompson Road* North/South Street: *Pourroy Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	60	10	150	19	15	5
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	197	210	9	5	330	80
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LT	TR	LT	TR
PHF	0.95	0.95	0.95	1.00	0.95	1.00	0.95	1.00
Flow Rate (veh/h)	68	162	27	13	317	114	178	245
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes	2		2		2		2	
Geometry Group	5		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.9	0.0	0.7	0.0	0.7	0.0	0.0	0.0
Prop. Right-Turns	0.0	1.0	0.0	0.4	0.0	0.1	0.0	0.3
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.5	-0.7	0.4	-0.3	0.3	-0.1	0.0	-0.2

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.06	0.14	0.02	0.01	0.28	0.10	0.16	0.22
hd, final value (s)	7.09	5.95	7.35	6.71	6.16	5.78	5.88	5.64
x, final value	0.13	0.27	0.06	0.02	0.54	0.18	0.29	0.38
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t_s (s)	4.8	3.6	5.0	4.4	3.9	3.5	3.6	3.3

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	318	412	277	263	567	364	428	495
Delay (s/veh)	10.88	10.80	10.47	9.57	15.92	9.77	10.98	11.81
LOS	B	B	B	A	C	A	B	B
Approach: Delay (s/veh)	10.83		10.18		14.29		11.46	
LOS	B		B		B		B	
Intersection Delay (s/veh)	12.37							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Pourroy Rd/Thompson Rd*
Jurisdiction	*Riverside County*
Analysis Year	*2025 With Project*

Project ID *K-8 STEAM School*

East/West Street: *Thompson Road* North/South Street: *Pourroy Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	110	15	179	17	15	5
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	191	340	17	5	240	85
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LT	TR	LT	TR
PHF	0.95	0.95	0.95	1.00	0.95	1.00	0.95	1.00
Flow Rate (veh/h)	122	196	24	13	379	187	131	205
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes	2		2		2		2	
Geometry Group	5		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.9	0.0	0.7	0.0	0.5	0.0	0.0	0.0
Prop. Right-Turns	0.0	1.0	0.0	0.4	0.0	0.1	0.0	0.4
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.5	-0.7	0.4	-0.3	0.3	-0.1	0.0	-0.3

Departure Headway and Service Time

hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.11	0.17	0.02	0.01	0.34	0.17	0.12	0.18
hd, final value (s)	7.25	6.11	7.67	7.05	6.31	5.98	6.37	6.06
x, final value	0.25	0.33	0.05	0.03	0.66	0.31	0.23	0.35
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t_s (s)	5.0	3.8	5.4	4.7	4.0	3.7	4.1	3.8

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	372	446	274	263	563	437	381	455
Delay (s/veh)	12.30	11.83	10.79	9.93	20.59	11.35	10.98	11.92
LOS	B	B	B	A	C	B	B	B
Approach: Delay (s/veh)	12.01		10.49		17.53		11.55	
LOS	B		B		C		B	
Intersection Delay (s/veh)	14.33							
Intersection LOS	B							

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Abelia St*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project Description *K-8 STEAM School*

East/West Street: *Abelia Street* | North/South Street: *Washington Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*268*	*208*			*318*	*83*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*282*	*218*	*0*	*0*	*334*	*87*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*62*		*317*			
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*65*	*0*	*333*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*282*					*65*		*333*
C (m) (veh/h)	*1149*					*175*		*712*
v/c	*0.25*					*0.37*		*0.47*
95% queue length	*0.97*					*1.59*		*2.50*
Control Delay (s/veh)	*9.1*					*37.2*		*14.4*
LOS	*A*					*E*		*B*
Approach Delay (s/veh)	--	--				*18.1*		
Approach LOS	--	--				*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Washington St/Abelia St*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project Description *K-8 STEAM School*

East/West Street: *Abelia Street* | North/South Street: *Washington Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*54*	*566*			*226*	*16*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*56*	*595*	*0*	*0*	*237*	*16*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*6*		*23*			
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*6*	*0*	*24*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*56*					*6*		*24*
C (m) (veh/h)	*1324*					*281*		*807*
v/c	*0.04*					*0.02*		*0.03*
95% queue length	*0.13*					*0.07*		*0.09*
Control Delay (s/veh)	*7.8*					*18.1*		*9.6*
LOS	*A*					*C*		*A*
Approach Delay (s/veh)	--	--				*11.3*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Washington St/Abelia St*
Agency/Co.	*Temecula Valley USD*	Jurisdiction	*Riverside County*
Date Performed	*7/19/2019*	Analysis Year	*2019 Existing With MS Only*
Analysis Time Period	*AM Peak Hour*		

Project Description *K-8 STEAM School*

East/West Street: *Abelia Street* | North/South Street: *Washington Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*366*	*208*			*318*	*109*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*385*	*218*	*0*	*0*	*334*	*114*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*84*		*401*			
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*88*	*0*	*422*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*385*					*88*		*422*
C (m) (veh/h)	*1123*					*114*		*712*
v/c	*0.34*					*0.77*		*0.59*
95% queue length	*1.54*					*4.34*		*3.94*
Control Delay (s/veh)	*9.9*					*101.9*		*17.1*
LOS	*A*					*F*		*C*
Approach Delay (s/veh)	--	--				*31.8*		
Approach LOS	--	--				*D*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Washington St/Abelia St*
Agency/Co.	*Temecula Valley USD*	Jurisdiction	*Riverside County*
Date Performed	*7/19/2019*	Analysis Year	*2019 Existing With Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *K-8 STEAM School*

East/West Street: *Abelia Street* | North/South Street: *Washington Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*516*	*208*			*318*	*148*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*543*	*218*	*0*	*0*	*334*	*155*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*117*		*528*			
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*123*	*0*	*555*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*543*					*123*		*555*
C (m) (veh/h)	*1085*					*56*		*712*
v/c	*0.50*					*2.20*		*0.78*
95% queue length	*2.88*					*12.17*		*7.63*
Control Delay (s/veh)	*11.6*					*707.3*		*25.5*
LOS	*B*					*F*		*D*
Approach Delay (s/veh)	--	--	*149.2*					
Approach LOS	--	--	*F*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Washington St/Abelia St*
Agency/Co.	*Temecula Valley USD*	Jurisdiction	*Riverside County*
Date Performed	*7/19/2019*	Analysis Year	*2019 Existing With Project*
Analysis Time Period	*PM Peak Hour*		

Project Description *K-8 STEAM School*

East/West Street: *Abelia Street* | North/South Street: *Washington Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*168*	*566*			*226*	*46*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*176*	*595*	*0*	*0*	*237*	*48*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*42*		*159*			
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*44*	*0*	*167*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*176*					*44*		*167*
C (m) (veh/h)	*1289*					*182*		*807*
v/c	*0.14*					*0.24*		*0.21*
95% queue length	*0.47*					*0.91*		*0.78*
Control Delay (s/veh)	*8.2*					*31.0*		*10.6*
LOS	*A*					*D*		*B*
Approach Delay (s/veh)	--	--				*14.9*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Washington St/Abelia St*
Agency/Co.	*Temecula Valley USD*	Jurisdiction	*Riverside County*
Date Performed	*7/19/2019*	Analysis Year	*2021 With MS Only*
Analysis Time Period	*AM Peak Hour*		

Project Description *K-8 STEAM School*

East/West Street: *Abelia Street* | North/South Street: *Washington Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*371*	*212*			*324*	*111*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*390*	*223*	*0*	*0*	*341*	*116*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*85*		*407*			
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*89*	*0*	*428*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*390*					*89*		*428*
C (m) (veh/h)	*1114*					*110*		*706*
v/c	*0.35*					*0.81*		*0.61*
95% queue length	*1.59*					*4.61*		*4.13*
Control Delay (s/veh)	*10.0*					*112.1*		*17.6*
LOS	*A*					*F*		*C*
Approach Delay (s/veh)	--	--				*33.9*		
Approach LOS	--	--				*D*		

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Auld Road*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Auld Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	224	0	46	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	47	140	0	0	269	254
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		T	
PHF	0.95				0.95		0.95	
Flow Rate (veh/h)	283				196		283	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8				0.3		0.0	
Prop. Right-Turns	0.2				0.0		0.0	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	0.1				0.1		0.0	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.25				0.17		0.25	
hd, final value (s)	5.19				5.15		4.98	
x, final value	0.41				0.28		0.39	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t_s (s)	3.2				3.1		3.0	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	533				446		533	
Delay (s/veh)	11.71				10.14		11.15	
LOS	B				B		B	
Approach: Delay (s/veh)	11.71				10.14		11.15	
LOS	B				B		B	
Intersection Delay (s/veh)	11.10							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Washington St/Auld Road*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Auld Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	157	0	46	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	81	362	0	0	166	112
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		TR	
PHF	0.95				0.95		0.95	
Flow Rate (veh/h)	213				466		291	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8				0.2		0.0	
Prop. Right-Turns	0.2				0.0		0.4	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	0.0				0.0		-0.2	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.19				0.41		0.26	
hd, final value (s)	5.77				5.00		4.96	
x, final value	0.34				0.65		0.40	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t_s (s)	3.8				3.0		3.0	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	463				704		541	
Delay (s/veh)	11.73				16.68		11.23	
LOS	B				C		B	
Approach: Delay (s/veh)	11.73				16.68		11.23	
LOS	B				C		B	
Intersection Delay (s/veh)	13.96							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Auld Road*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With Project*

Project ID *K-8 STEAM School*

East/West Street: *Auld Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	285	0	46	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	47	242	0	0	353	306
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		T	
PHF	1.00				1.00		1.00	
Flow Rate (veh/h)	331				289		353	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.9				0.2		0.0	
Prop. Right-Turns	0.1				0.0		0.0	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	0.1				0.0		0.0	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.29				0.26		0.31	
hd, final value (s)	5.71				5.53		5.40	
x, final value	0.53				0.44		0.53	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t_s (s)	3.7				3.5		3.4	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	581				539		603	
Delay (s/veh)	14.85				12.86		14.32	
LOS	B				B		B	
Approach: Delay (s/veh)	14.85				12.86		14.32	
LOS	B				B		B	
Intersection Delay (s/veh)	14.07							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Washington St/Auld Road*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With Project*

Project ID *K-8 STEAM School*

East/West Street: *Auld Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	185	0	46	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	81	409	0	0	222	145
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		TR	
PHF	0.95				0.95		0.95	
Flow Rate (veh/h)	242				515		385	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8				0.2		0.0	
Prop. Right-Turns	0.2				0.0		0.4	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	0.0				0.0		-0.2	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.22				0.46		0.34	
hd, final value (s)	6.22				5.32		5.25	
x, final value	0.42				0.76		0.56	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t_s (s)	4.2				3.3		3.3	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	492				665		635	
Delay (s/veh)	13.60				23.23		14.76	
LOS	B				C		B	
Approach: Delay (s/veh)	13.60				23.23		14.76	
LOS	B				C		B	
Intersection Delay (s/veh)	18.33							
Intersection LOS	C							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Auld Road*
Jurisdiction	*Riverside County*
Analysis Year	*2025 Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Auld Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	240	0	50	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	50	150	0	0	280	270
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		T	
PHF	0.95				0.95		0.95	
Flow Rate (veh/h)	304				209		294	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8				0.2		0.0	
Prop. Right-Turns	0.2				0.0		0.0	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	0.1				0.0		0.0	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.27				0.19		0.26	
hd, final value (s)	5.27				5.25		5.08	
x, final value	0.44				0.30		0.42	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t_s (s)	3.3				3.2		3.1	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	554				459		544	
Delay (s/veh)	12.42				10.53		11.65	
LOS	B				B		B	
Approach: Delay (s/veh)	12.42				10.53		11.65	
LOS	B				B		B	
Intersection Delay (s/veh)	11.65							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Washington St/Auld Road*
Jurisdiction	*Riverside County*
Analysis Year	*2025 Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Auld Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	170	0	50	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	90	380	0	0	180	120
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		TR	
PHF	0.95				0.95		0.95	
Flow Rate (veh/h)	230				494		315	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8				0.2		0.0	
Prop. Right-Turns	0.2				0.0		0.4	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	0.0				0.0		-0.2	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.20				0.44		0.28	
hd, final value (s)	5.93				5.13		5.10	
x, final value	0.38				0.70		0.45	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t_s (s)	3.9				3.1		3.1	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	480				688		565	
Delay (s/veh)	12.51				19.35		12.15	
LOS	B				C		B	
Approach: Delay (s/veh)	12.51				19.35		12.15	
LOS	B				C		B	
Intersection Delay (s/veh)	15.65							
Intersection LOS	C							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Auld Road*
Jurisdiction	*Riverside County*
Analysis Year	*2025 With Project*

Project ID *K-8 STEAM School*

East/West Street: *Auld Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	301	0	50	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	50	252	0	0	366	322
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		T	
PHF	0.95				0.95		0.95	
Flow Rate (veh/h)	368				317		385	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.9				0.2		0.0	
Prop. Right-Turns	0.1				0.0		0.0	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	0.1				0.0		0.0	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.33				0.28		0.34	
hd, final value (s)	5.93				5.79		5.65	
x, final value	0.61				0.51		0.60	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t_s (s)	3.9				3.8		3.6	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	578				567		614	
Delay (s/veh)	17.65				14.65		16.89	
LOS	C				B		C	
Approach: Delay (s/veh)	17.65				14.65		16.89	
LOS	C				B		C	
Intersection Delay (s/veh)	16.49							
Intersection LOS	C							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Washington St/Auld Road*
Jurisdiction	*Riverside County*
Analysis Year	*2025 With Project*

Project ID *K-8 STEAM School*

East/West Street: *Auld Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	198	0	50	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	90	427	0	0	236	153
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		TR	
PHF	0.95				0.95		0.95	
Flow Rate (veh/h)	260				543		409	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8				0.2		0.0	
Prop. Right-Turns	0.2				0.0		0.4	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	0.0				0.0		-0.2	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.23				0.48		0.36	
hd, final value (s)	6.39				5.48		5.42	
x, final value	0.46				0.83		0.62	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t_s (s)	4.4				3.5		3.4	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	510				649		642	
Delay (s/veh)	14.75				29.05		16.69	
LOS	B				D		C	
Approach: Delay (s/veh)	14.75				29.05		16.69	
LOS	B				D		C	
Intersection Delay (s/veh)	21.81							
Intersection LOS	C							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Benton Road*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Benton Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	107	1	38	1	1	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	17	353	0	0	476	135
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.95		0.95		0.95		0.95	
Flow Rate (veh/h)	153		2		388		643	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.7		0.5		0.0		0.0	
Prop. Right-Turns	0.3		0.0		0.0		0.2	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.0		0.1		0.0		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.14		0.00		0.34		0.57	
hd, final value (s)	6.35		6.98		5.26		4.83	
x, final value	0.27		0.00		0.57		0.86	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t_s (s)	4.3		5.0		3.3		2.8	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	403		252		638		739	
Delay (s/veh)	11.67		10.00		14.91		30.21	
LOS	B		B		B		D	
Approach: Delay (s/veh)	11.67		10.00		14.91		30.21	
LOS	B		B		B		D	
Intersection Delay (s/veh)	22.78							
Intersection LOS	C							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Washington St/Benton Road*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Benton Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	81	0	27	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	53	472	0	0	244	71
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.95		0.95		0.95		0.95	
Flow Rate (veh/h)	113		0		551		330	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8		0.0		0.1		0.0	
Prop. Right-Turns	0.2		0.0		0.0		0.2	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0		0.0		0.0		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.10		0.00		0.49		0.29	
hd, final value (s)	5.93		6.24		4.68		4.77	
x, final value	0.19		0.00		0.72		0.44	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t_s (s)	3.9		4.2		2.7		2.8	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	363		0		760		580	
Delay (s/veh)	10.28		9.24		18.54		11.44	
LOS	B		A		C		B	
Approach: Delay (s/veh)	10.28		9.24		18.54		11.44	
LOS	B		A		C		B	
Intersection Delay (s/veh)	15.25							
Intersection LOS	C							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Benton Road*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With MS Only*

Project ID *K-8 STEAM School*

East/West Street: *Benton Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	141	1	38	1	1	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	17	417	0	0	531	164
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate (veh/h)	180		2		434		695	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8		0.5		0.0		0.0	
Prop. Right-Turns	0.2		0.0		0.0		0.2	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0		0.1		0.0		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.16		0.00		0.39		0.62	
hd, final value (s)	6.70		7.50		5.52		5.06	
x, final value	0.33		0.00		0.67		0.98	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t_s (s)	4.7		5.5		3.5		3.1	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	430		252		643		710	
Delay (s/veh)	13.03		10.53		18.82		50.54	
LOS	B		B		C		F	
Approach: Delay (s/veh)	13.03		10.53		18.82		50.54	
LOS	B		B		C		F	
Intersection Delay (s/veh)	34.83							
Intersection LOS	D							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Benton Road*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With Project*

Project ID *K-8 STEAM School*

East/West Street: *Benton Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	192	1	38	1	1	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	17	516	0	0	614	208
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.95		0.95		0.95		0.95	
Flow Rate (veh/h)	243		2		560		864	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8		0.5		0.0		0.0	
Prop. Right-Turns	0.2		0.0		0.0		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.1		0.1		0.0		-0.2	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.22		0.00		0.50		0.77	
hd, final value (s)	7.09		8.35		5.89		5.64	
x, final value	0.48		0.00		0.92		1.35	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t_s (s)	5.1		6.4		3.9		3.6	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	493		252		610		864	
Delay (s/veh)	16.44		11.39		42.78		187.11	
LOS	C		B		E		F	
Approach: Delay (s/veh)	16.44		11.39		42.78		187.11	
LOS	C		B		E		F	
Intersection Delay (s/veh)	113.63							
Intersection LOS	F							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Washington St/Benton Road*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With Project*

Project ID *K-8 STEAM School*

East/West Street: *Benton Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	120	0	27	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	53	547	0	0	333	118
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.95		0.95		0.95		0.95	
Flow Rate (veh/h)	154		0		630		474	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8		0.0		0.1		0.0	
Prop. Right-Turns	0.2		0.0		0.0		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.1		0.0		0.0		-0.2	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.14		0.00		0.56		0.42	
hd, final value (s)	6.60		7.14		5.11		5.14	
x, final value	0.28		0.00		0.89		0.68	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t_s (s)	4.6		5.1		3.1		3.1	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	404		0		701		686	
Delay (s/veh)	12.18		10.14		35.49		18.20	
LOS	B		B		E		C	
Approach: Delay (s/veh)	12.18		10.14		35.49		18.20	
LOS	B		B		E		C	
Intersection Delay (s/veh)	26.12							
Intersection LOS	D							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Benton Road*
Jurisdiction	*Riverside County*
Analysis Year	*2019 Existing With MS Only*

Project ID *K-8 STEAM School*

East/West Street: *Benton Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	143	1	38	1	1	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	17	424	0	0	541	167
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate (veh/h)	182		2		441		708	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8		0.5		0.0		0.0	
Prop. Right-Turns	0.2		0.0		0.0		0.2	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0		0.1		0.0		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.16		0.00		0.39		0.63	
hd, final value (s)	6.75		7.58		5.56		5.10	
x, final value	0.34		0.00		0.68		1.00	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t_s (s)	4.8		5.6		3.6		3.1	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	432		252		642		708	
Delay (s/veh)	13.21		10.61		19.59		56.49	
LOS	B		B		C		F	
Approach: Delay (s/veh)	13.21		10.61		19.59		56.49	
LOS	B		B		C		F	
Intersection Delay (s/veh)	38.30							
Intersection LOS	E							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Benton Road*
Jurisdiction	*Riverside County*
Analysis Year	*2025 Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Benton Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	110	5	40	5	5	5
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	20	370	5	5	510	140
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.95		0.95		0.95		0.95	
Flow Rate (veh/h)	162		15		415		688	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.7		0.3		0.1		0.0	
Prop. Right-Turns	0.3		0.3		0.0		0.2	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.0		-0.1		0.0		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.14		0.01		0.37		0.61	
hd, final value (s)	6.63		7.08		5.47		5.02	
x, final value	0.30		0.03		0.63		0.96	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t_s (s)	4.6		5.1		3.5		3.0	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	412		265		645		716	
Delay (s/veh)	12.43		10.29		17.36		46.32	
LOS	B		B		C		E	
Approach: Delay (s/veh)	12.43		10.29		17.36		46.32	
LOS	B		B		C		E	
Intersection Delay (s/veh)	32.22							
Intersection LOS	D							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Washington St/Benton Road*
Jurisdiction	*Riverside County*
Analysis Year	*2025 Without Project*

Project ID *K-8 STEAM School*

East/West Street: *Benton Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	90	5	30	5	5	5
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	55	500	5	5	260	75
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.95		0.95		0.95		0.95	
Flow Rate (veh/h)	130		15		588		356	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.7		0.3		0.1		0.0	
Prop. Right-Turns	0.2		0.3		0.0		0.2	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0		-0.1		0.0		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.12		0.01		0.52		0.32	
hd, final value (s)	6.19		6.40		4.86		5.00	
x, final value	0.22		0.03		0.79		0.49	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t_s (s)	4.2		4.4		2.9		3.0	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	380		265		733		606	
Delay (s/veh)	10.96		9.58		23.84		12.79	
LOS	B		A		C		B	
Approach: Delay (s/veh)	10.96		9.58		23.84		12.79	
LOS	B		A		C		B	
Intersection Delay (s/veh)	18.49							
Intersection LOS	C							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington St/Benton Road*
Jurisdiction	*Riverside County*
Analysis Year	*2025 With Project*

Project ID *K-8 STEAM School*

East/West Street: *Benton Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	195	5	40	5	5	5
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	20	533	5	5	648	213
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.95		0.95		0.95		0.95	
Flow Rate (veh/h)	252		15		587		911	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8		0.3		0.0		0.0	
Prop. Right-Turns	0.2		0.3		0.0		0.2	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.1		-0.1		0.0		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.22		0.01		0.52		0.81	
hd, final value (s)	7.26		8.32		6.03		5.86	
x, final value	0.51		0.03		0.98		1.48	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t_s (s)	5.3		6.3		4.0		3.9	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	494		265		597		911	
Delay (s/veh)	17.51		11.61		57.10		243.04	
LOS	C		B		F		F	
Approach: Delay (s/veh)	17.51		11.61		57.10		243.04	
LOS	C		B		F		F	
Intersection Delay (s/veh)	147.03							
Intersection LOS	F							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Temecula Valley USD*
Date Performed	*7/19/2019*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Washington St/Benton Road*
Jurisdiction	*Riverside County*
Analysis Year	*2025 With Project*

Project ID *K-8 STEAM School*

East/West Street: *Benton Road* North/South Street: *Washington Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	129	5	30	5	5	5
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	55	575	5	5	349	122
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate (veh/h)	164		15		635		476	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.8		0.3		0.1		0.0	
Prop. Right-Turns	0.2		0.3		0.0		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.0		-0.1		0.0		-0.2	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.15		0.01		0.56		0.42	
hd, final value (s)	6.74		7.16		5.25		5.31	
x, final value	0.31		0.03		0.93		0.70	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t_s (s)	4.7		5.2		3.3		3.3	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	414		265		683		663	
Delay (s/veh)	12.70		10.38		41.31		19.80	
LOS	B		B		E		C	
Approach: Delay (s/veh)	12.70		10.38		41.31		19.80	
LOS	B		B		E		C	
Intersection Delay (s/veh)	29.38							
Intersection LOS	D							

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