# evised Study **Traffic**

# Saltese Apartments

Cedar & Sage Homes Eagle, Idaho

May, 2024



# TRAFFIC IMPACT ANALYSIS

#### **Tschirley Apartments**

Spokane Valley, WA

Prepared for: Cedar & Sage Homes Eagle, Idaho

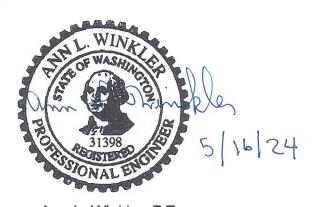
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#### 2nd REVISED

# Traffic Impact Analysis Saltese Apartments

Spokane Valley, Washington

#### **Executive Summary**

This executive summary includes the basic information which is presented in more detail in the body of this report. The Saltese Apartments is a multi-family housing complex of 320 units. It is located on both sides of 8th Avenue, a private street, at the southern end of Tschirley Road in Spokane Valley. The site is expected to generate 130 trips in the a.m. peak hour, 126 p.m. peak hour trips, and 1,480 trips on a daily basis.

The location of the site in relation to the surrounding transportation system is shown on Figure 1 in the technical appendix, and the layout of the complex, along with supporting infrastructure is shown on Figure 2. Note that Figure 2 has been updated from the previous submittals of this document. Development of this site into apartments is allowed under the existing zoning.

Due to the size of the development, a public meeting was required. This was well attended, and the items brought forward for discussion are included in the technical appendix, along with the sign in sheets. As a result of this input, the scope of the study was augmented from the usual a.m. peak hour and p.m. peak hour weekday analyses, to also include a truncated analysis of the early afternoon peak hour. The presence of Greenacres Middle School across from the Tschirley / Sprague intersection creates significant traffic volumes when school is dismissed in the afternoon. The traffic volumes collected during this time period are very similar to the p.m. peak hour condition.

This site lies within the South Barker Road Transportation Impact Fee area, and as such, is subject to a traffic impact fee of \$713.00 per multi-family unit. The total fee for this project will be \$228,160.00. The presence of this fee limits the scope of the this document to the intersections on Tschirley Road and other nearby intersections as needed. Eight intersections were included in this analysis, and all are found to be operating at acceptable levels of service under every condition examined in this report. Therefore, there is no additional off-site mitigation needed.

Two supplemental analyses were scoped for inclusion in this report; a safety analysis, and a sight distance analysis from the two access points. The safety analysis does not identify any intersections which have safety concerns. The sight distance analysis revealed a significant rocky outcropping on the northwest corner of Tschirley Road / 8th

Avenue which limits the sight distance at any driveway put in place for an apartment complex on the north side of 8th Avenue. This outcropping could be removed as part of the development of the site. The location of the access point for the apartment complex on the south side of 8th Avenue has been moved, and traffic exiting at this location easily has adequate site distance.

Lastly, due to the change in the site plan, the secondary (emergency) access location has changed. Originally, this access was gated off and went through the Turtle Creek South development. However, now the secondary access is required to be open to the traveling public full time, and it ties into the northern end of the greater Morningside / Belleaire subdivisions. Given this change, the traffic volumes on Tschirley are likely to increase by several thousand each day, most likely approximately 4,500 vehicles per day.

#### **General Project Description**

The Saltese Apartments is being developed under city of Spokane Valley file number SEP-2023-0002. They are located on Spokane County parcel 55195.9088, at the southern end of Tschirley Road on both sides of 8th Avenue. This portion of 8th Avenue is a private street. Please note that previous iterations of this document refer to this apartment complex as "Tschirley Apartments." Either name refers to the this project.

The apartments are not age restricted, or limited to low income residents. The buildings and supporting infrastructure will not fully occupy the 30.4 acre site. The site is rocky, especially on the south side of 8th Avenue, and begins the rise to the south to the hill where the Morningside / Belleaire residential developments are located. The parcel south of the Saltese Apartments parcel is being planned for single family houses, and a traffic study will be prepared separately for that subsequent development. A road through that parcel is planned which will provide connectivity between Sprague Avenue and the Morningside / Belleaire subdivision using Tschirley Road. A driveway from the Saltese Apartments is planned to this new road.

The Saltese Apartment complex consists of two parts. The portion south of 8th Avenue consists of 256 units in 8 buildings with supporting parking, etc, surrounding them. This portion is accessed by a driveway at the corner of Tschirley / 8th Avenue. A secondary access point is proposed to a new road extending south into the Morningside neighborhood, extending Manifold Road. The exact name of this road has not yet been determined.

The portion of the project north of 8th Avenue has 64 units in two buildings surrounded by supporting infrastructure. The current site plan (Figure 2) does not specify how this portion of the project will be access, but it is likely to form a fourth leg with the road extending to the south. Note that all the buildings in Saltese Apartments are four stories tall.

#### **Sight Distance**

A sight distance analysis was scoped for inclusion in this report. The main access point to the southern portion of the complex has been moved from Tschirley Road to the corner of Tschirley Road and 8th Avenue. Sight distance at this location is plentiful, both to 8th Avenue and to Tschirley Road.

A field visit to this site revealed that there is a rocky outcropping on the west side of Tschirley Road north of 8th Avenue. This outcropping is partly on public right-of-way and partly on the Saltese Apartments site. As such, it could be removed, and the site graded to ensure adequate sight distance for the driveway into the northern portion of the complex. The location of the driveway serving the northern portion of the apartment complex is also not easily determined in the field currently, and subject to change. This needs to be re-examined in more detail as a part of the grading plan for the overall site, and development of the public roadway extending south and located on the west side of the apartment complex.

#### **Existing Conditions**

Existing characteristics of the transportation system in the study area are summarized in this portion of the report. This includes information about each of the streets and each intersection included in the study area, as well as other characteristics of the system which are relevant to this report. Note that since this site is within the South Barker Road Transportation Impact Fee area, the scope of this study is limited to intersections close to the site, namely along Tschirley Road, and nearby intersections on the Sprague / Appleway corridor.

#### **Existing Roadways**

The site is served by Tschirley Road. Between 8th Avenue and Sprague Avenue, Tschirley serves a number of local access streets. Not all drivers want to access Sprague Avenue at the unsignalized intersection of Tschirley / Sprague Avenue. As such, some traffic will use a cross street to access Flora Road to use the signal at the Sprague Avenue / Flora Road intersection.

**Sprague Avenue / Appleway Avenue** is an east-west principal arterial through Spokane Valley. Within the study area, it has two through lanes in each direction with a center turn lane and is posted at 35 mph.

**Tschirley Road** is a two-way, two-lane local access road. South of Sprague Avenue, all cross streets are stop controlled to allow the traffic on Tschirley to have the right-of-way. This indicates that at one time, it was a collector. It is posted at 25 mph throughout its length. Tschirley Road tees into Sprague Avenue from the south, and accesses Sprague Avenue from the north at another tee intersection approximately 250' to the west.

**Flora Road** is a two-way, two-lane, north/south street with a speed limit of 25 mph south of Sprague Avenue, and 35 mph north from there. North of Sprague Avenue it is a minor arterial and provides a route across I-90, and as such provides a critical route for the surrounding areas and ties the neighborhoods on each side of I-90 together. South of Sprague Avenue, it is a local access street, and extends only to 5th Avenue due to the presence of a hill south of there. There are several local access streets which extend east to Tschirley or beyond and provide cross-access. These include 5th Avenue, 4th Avenue and 3rd Avenue.

Tschirley Wye is an east/west local access street linking Tschirley Road with Sprague Avenue east of Appleway Avenue. It has one lane in each direction and also has a 25 mph speed limit. Tschirley Wye provides an access between Sprague Avenue (the minor arterial) and Tschirley Road. However, the amount of traffic which uses this street for that purpose is very low. Most of the traffic using Tschirley Wye from Sprague have destinations on the eastern portion of Tschirley Wye. The traffic using Tschirley Wye from Tschirley Road have destinations on the western portion of Tschirley Wye. During the school dismissal hour, there were a number of parents who parked in the trail parking lot on the north side of Tschirley Wye in a pre-determined manner to pick up their children. These children crossed Sprague / Appleway using the signal at Appleway / Corbin with the other children who walk to / from school and meet their parents in this parking area. An additional characteristic of note is the location where Tschirley Wye intersects with Sprague Avenue is usually within the gueue of northbound vehicles on Sprague Avenue waiting at the signal at Appleway / Corbin. As such, it is nearly impossible for a left turning movement to occur. The drivers at this intersection seem well aware of the situation and rarely attempt this movement, turning right instead.

**3rd Avenue, 4th Avenue and 6th Avenue** are east/west local access streets where they intersect Tschirley Road, Flora Road, Long Road and other cross streets. Each has one lane in each direction and are posted at 25 mph as needed. 2nd Avenue / Coach Drive and 5th Avenue also access Tschirley Road.

**Sprague Avenue** east of Appleway Avenue is an east/west minor arterial with one lane in each direction and posted at 25 mph.

#### **Project Study Area Intersection and Traffic Control**

The scope of the traffic impact analysis was determined to be a weekday a.m. and p.m. peak hour analysis of the following intersections. The traffic control at each of the intersections is also shown on the following table. Lane usage is described in the existing roadways portion of the report.

Table 1 - Study Area Intersections and Traffic Control Summary

Intersection	Signal Control	E/W Stop Control	N/S Stop Control
Appleway Avenue / Corbin Road	Х		
Sprague Avenue / Tschirley Wye		Х	
Sprague Avenue / Tschirley Road			Х
Tschirley Road / Tschirley Wye		X	
Tschirley Road / 3rd Avenue		X	
Tschirley Road / 4th Avenue		X	
Tschirley Road / 6th Avenue		X	
Flora Road / Sprague Avenue	X		

As a result of input during a public meeting, a supplemental analysis is required to examine the level of service during the early afternoon time period. Greenacres Middle School is located on the north side of Sprague Avenue across from Tschirley Road. As such, when school lets out there is significant bus traffic, as well as parent pick-up / drop-off. The intersections included in this analysis are: Appleway / Corbin, Tschirley / Sprague, Tschirley / Tschirley Wye and Sprague / Tschirley Wye. Note that students within 1 mile of the school are not provided bus service. As such, all the students with houses accessed from Tschirley walk or bike to school or are dropped off. This will also be the case for the students residing at the Saltese Apartments. A summary of all the topics brought up at the public meeting, as well as the sign in sheets documenting the members of the public who attended, is included in the technical appendix.

#### **Crash Summary**

Crash summaries are available from Spokane Valley and were made available for the years 2018 - 2022. Generally, accidents are documented by type of occurrence, such as property damage only (PDO) or injury (INJ). Crashes are measured based on frequency of crashes per million entering vehicles (MEV). This ratio is a function of the average daily traffic entering the intersection and the annual frequency of crashes.

Of the crashes documented in the study area during this time period, there were no major injuries, nor injuries more serious than "Suspected Minor Injury" or "Possible Injury." As such, all crashes are classified as property damage only.

There were no crashes at the intersections in the study area which resulted in fatalities during the study period. Nor were there any reportable crashes during 2019. There were also no crashes reported on Tschirley from Coach Drive (2nd Avenue) south other than one at Tschirley / 5th.

Table 2 - Crash Summary for Study Area Intersections

Crash Statistics									
Intersection	2018		2020		2021		2022		Per
	PDO	INJ	PDO	PDO INJ PDO INJ PDO		INJ	MEV		
Appleway / Corbin	3	0	2	0	1	0	0	0	0.17
Sprague / Tschirley	0	0	0	0	1	0	1	0	0.06
Tschirley Road / 5th	1	0	0	0	0	0	0	0	0.73

It is generally accepted that a safety problem exists if the crash rate is more than 1.0 crashes per MEV. The intersections in the Sprague / Appleway corridor have crash rates below 1.0. The crash at the Tschirley / 5th intersection occurred due to a driver failing to grant right-of-way when controlled through the use of a stop sign. The streets are flat and of adequate width. Sight distance on the northwest corner is somewhat impeded by bushes and trees. This probably requires maintenance from time to time.

In addition to the crashes which occurred at the intersections, there were several which occurred mid-block. These were a mix of striking a fixed object, and turning left without an adequate gap. However, these were not grouped or otherwise had enough commonality that a safety concern could be identified.

#### **Traffic Counts and Ambient Growth Rates**

The turning movement counts at the study area intersections were collected partly in November 2022, and partly during the spring of 2023. The existing traffic counts at the study area intersections are shown on Figure 3. All traffic volumes collected, broken out into 15-minute intervals, are included in the technical appendix.

All of the intersections on Tschirley south of Sprague Avenue were counted, and the traffic volumes in the Tschirley corridor are also included in the technical appendix. However, the scope of the report did not include either Tschirley / 2nd / Coach or Tschirley / 5th. No approved but not completed projects were identified for inclusion in the report.

The Saltese Apartments is expected to be complete by the end of 2025, but the study looked at the conditions in 2028. The ambient growth rate to be used for this study is 1.0% for the next five years, adding a total of 5.1% to the existing traffic volumes. This growth is due to sources other than the Saltese Apartments.

Figure 4 displays the a.m. and p.m. peak hour traffic volumes for the future year (2028) traffic volumes including the existing traffic volumes increased by the ambient growth rate.

#### Pedestrian, Bicycle, and Public Transit Characteristics

Many pedestrians were observed along Tschirley Road. These were a combination of those traveling to the bus stop on Sprague / Appleway, school children going to and from Greenacres Middle School, and those who were exercising.

Sidewalks are available on Sprague Avenue, but not on Tschirley, or Flora. Sidewalks will be required along the entire site frontage but are otherwise not available. Pedestrians walked either in the street, or in the area immediately adjacent to the street.

Bicycles are allowed to use all streets, but no specific provisions have been made to accommodate them. The former Milwaukee rail line, which parallels and is south of Sprague Avenue in this area, has been designated a mixed use trail. The bike plan currently shows Flora and 4th Avenue as a "bike friendly" route.

Spokane Transit Authority (STA) has a public bus route serving this area,# 98 on Sprague Avenue. Observations showed consistent use of the bus system by residents on or near Tschirley Road.

This site will not affect either rail or air traffic.

#### **Trip Generation**

The trip generation characteristics of the site are expected to be represented by the characteristics found in the Institute of Transportation Engineers, *Trip Generation Manual, 11th Edition* for Multifamily Housing (Mid-Rise), Land Use Category (LUC) 221, the land use category for building of four to ten stories.

**Table 3 - Trip Generating Characteristics for Saltese Apartments** 

	Α	.M. Peak Ho	ur	P	ur	ADT					
Units	Total Volume	Directional Distribution						Total Volume		tional oution	Total Volume
		23% In 77% Out per Unit 61% In 39%		39% Out							
320	130	30	100	126	77	49	1,480				
Alt mode	3	1	2	3	2	1	30				
Vehicular	127	29	98	123	75	48	1,450				

ADT - Average daily traffic

Due to the presence of readily available alternate forms of transportation, including a shared use path, and the mass transit route, some trips are expected to be by non-motorized modes. In keeping with the traffic patterns in the greater Spokane area, 2% of the traffic was assigned to these modes.

#### Traffic Distribution

Distribution of vehicular traffic from the site was based on likely routes to and from it, but also on existing traffic patterns. Barker Road is expected to be the preferred interchange to I-90. Local services are mostly located to the west on Sprague Avenue. Overall distribution is expected to be 60% north on Tschirley Road with 40% taking a street west to Flora Road. Three of the streets connecting to Tschirley provide a route to Flora Road; 5th Avenue, 4th Avenue and 3rd Avenue. All three of these streets are used to access Flora. For purposes of this analysis, 24% is expected to use 3rd Avenue, 12% to use 4th Avenue and 6% to use 5th Avenue. The existing traffic counts show no northbound traffic turning right at any cross streets south of Tschirley Wye. As such, it is expected that access to Liberty Lake will occur at Sprague Avenue. This is shown pictorially on Figure 5. The traffic volumes generated by the Saltese Apartments is expected to distribute itself onto the surrounding transportation system as shown on Figure 6.

#### Level of Service Analysis

Intersection levels of service (LOS) are expressed by using letter designations from A to F, whereby LOS A represents the best operating conditions and LOS F the worst (saturated flow or over-capacity) conditions. The levels are designed to determine how well an intersection is functioning with respect to variables such as traffic flow and delay.

The level of service analysis for the signalized intersections were conducted according to the procedures outlined in the Transportation Research Board's *Highway Capacity Manual (HCM) - Special Report 209, 7th Edition* as implemented in the Highway Capacity Software, version 8.2. Signalized intersections are required to function at LOS D or better. Unsignalized intersections are required to function at LOS E or better.

Level of service (LOS) analyses were conducted at the study area intersections for existing conditions as shown on Figure 3, for the future year conditions with traffic growth from all known sources other than Saltese Apartments, as shown on Figure 4, and for the future year conditions with the additional traffic from Saltese Apartments. This last condition is determined by adding the traffic volumes shown on Figure 4 with the traffic volumes shown on Figure 6 and are shown on Figure 7.

#### **Existing Level of Service Analysis**

A summary of the LOS analysis results for the intersections under the existing conditions, using the traffic volumes shown on Figure 3 are summarized on the following table.

Table 4 - Existing Level of Service Summary

ruble 4 Existing Level of Gervice Gummary									
		EXISTING							
INTERSECTION	A.N	۸.	P.M.						
	DELAY	LOS	DELAY	LOS					
Appleway / Sprague / Corbin*	17.0	В	14.1	В					
Sprague / Tschirley Wye	9.7	А	11.6	В					
Sprague / Tschirley	15.1	С	20.2	С					
Tschirley / Tschirley Wye	8.8	А	9.0	А					
Tschirley / 3rd	9.0	А	9.7	Α					
Tschirley / 4th	8.9	А	8.8	Α					
Tschirley / 6th	9.0	А	9.4	Α					
Sprague / Flora*	13.7	В	20.6	С					

<sup>\*</sup> Signalized Intersection - others two-way, stop-controlled

All of the intersections in the study area currently meet agency standards. Note again, that two intersections on Tschirley were not included in the scope of the study; Tschirley / 2nd / Coach and Tschirley / 5th. Therefore levels of service were not determined for these two intersections.

#### Future Level of Service Analysis (no traffic from Project)

A summary of the LOS analysis results for the intersections under the future conditions with the background projects only, using the traffic volumes shown on Figure 4 are summarized on the following table.

Table 5 - Future Level of Service Summary

	2028							
INTERSECTION	A.M		P.M.					
	DELAY	LOS	DELAY	LOS				
Appleway / Sprague / Corbin*	17.5	В	14.7	В				
Sprague / Tschirley Wye	9.8	А	11.8	В				
Sprague / Tschirley	15.7	С	21.6	С				
Tschirley / Tschirley Wye	8.8	Α	9.0	Α				
Tschirley / 3rd	9.0	Α	9.7	Α				
Tschirley / 4th	8.9	Α	8.8	Α				
Tschirley / 6th	9.0	Α	9.4	Α				
Sprague / Flora*	14.1	В	22.4	С				

<sup>\*</sup> Signalized Intersection - others two-way, stop-controlled

All of the intersections in the study area meet agency standards under these conditions. Only small increases in delay are experienced with this increase in traffic.

#### Future Level of Service Analysis with Traffic from Project

A summary of the LOS analysis results for the intersections under the future conditions with the traffic from the project and using the traffic volumes shown on Figure 7 are summarized on the following table.

Table 6 - Future Level of Service Summary with Project Traffic

	2028 w/ Project							
INTERSECTION	A.M		P.M.					
	DELAY	LOS	DELAY	LOS				
Appleway / Sprague / Corbin*	17.4	В	14.7	В				
Sprague / Tschirley Wye	9.8	А	11.8	В				
Sprague / Tschirley	20.4	С	25.5	D				
Tschirley / Tschirley Wye	9.3	Α	9.4	Α				
Tschirley / 3rd	9.4	Α	9.7	Α				
Tschirley / 4th	9.5	Α	9.2	Α				
Tschirley / 6th	9.8	А	10.3	В				
Sprague / Flora*	15.5	В	24.0	С				

<sup>\*</sup> Signalized Intersection - others two-way, stop-controlled

All of the intersections in the study area meet agency standards using these traffic volumes. The delay increases slightly, and at Sprague / Tschirley the delay increased almost 4 seconds in the p.m. peak hour, causing the level of service to fall from LOS C to LOS D. Both LOS C and LOS D are within acceptable levels of service. LOS D is the lowest level of service observed in this study.

#### **School Dismissal Analysis**

As mentioned previously, Tschirley Road is directly across from Greenacres Middle School. As such, the traffic volumes when school is dismissed can be heavy and the field counts show they are very similar to the p.m. peak hour volumes. Due to the very high level of service at the intersections along Tschirley Road, it was determined these intersections did not need to be included in this analysis, nor did Sprague / Flora. As such, this analysis focused in the intersections of Sprague / Tschirley Road and Appleway / Corbin. The school dismissal traffic volumes are shown at the top of the attached Figure 9. Using the same ambient increase in traffic volumes over the next five years, the anticipated traffic volumes in 2028 are shown on the bottom of Figure 9.

Determining the traffic volumes generated by the Saltese Apartments during this time period is somewhat problematic, since there is no data available for this time period. However, in examining the traffic volume data available, it was determined that the traffic volumes for the "Peak Hour of the Generator" was similar to that used in the p.m.

peak hour, and would be a reasonable representation of traffic volumes generated by the site during the school dismissal hour. This information is shown on the following Table 7. Table 7 assumes the same percentage of trips using alternate modes of transportation (2%).

> **Table 7 - Trip Generating Characteristics for Saltese Apartments** during School Dismissal Hour

	P.M	. School Dismissal H	lour				
Units	Total Volume per	Directional Distribution					
	Unit	60% In	40% Out				
320	119	71	48				
Alt mode	2	1	1				
Vehicular	117	70	47				

The distribution of traffic is also expected to be the same as during the peak hour analyses. Using these characteristics, the traffic in the study area intersections generated by the project are shown at the top of the attached Figure 9.

Using all of these characteristics, the anticipated traffic volumes at the two intersections during the school dismissal hour with the traffic generated by the Saltese Apartments are shown on the bottom of Figure 9.

These volumes were used to complete the level of service analysis summarized on the following Table 8.

Table 8 - School Dismissal Hour Level of Service Summary

0 1141	Appleway /	Corbin	Sprague / Tschirley Road			
Condition	DELAY	LOS	DELAY	LOS		
Existing	14.0	В	23.5	С		
2028	14.6	В	26.1	D		
2028 with Project	14.5	В	29.0	D		

The information on Table 8 demonstrates that the two intersections will function within acceptable levels of service during this time period under all three conditions examined. The level of service during this time period is very similar to the p.m. peak hour condition.

#### Change in Traffic Due to Connection to Morningside / Belleaire

With the changes being made to the latest version of the site plan, the secondary access point, as required for safety concerns by the fire department, is now extending south into the Morningside / Belleaire neighborhood. When this connection is made, the traffic volumes on Tschirley Road will increase substantially. How much this increase will be is very difficult to estimate at the present time. There are a number of factors which must be taken into consideration when evaluating this situation, including:

- The willingness of existing Morningside residents to try a new route, after existing route choices have been established,
- The perceived benefits of the new route over the existing routes, and
- The knowledge that a new route is available.

For many years the only way to access Morningside was from Sullivan Road either at 24th Street or Saltese Road. A few years ago, Chapman Road was connected to Barker Road providing an entirely new way to access the area. Since that time, the traffic volumes on Sullivan have remained constant, while the traffic volumes have grown on Barker Road. Chapman Road has approximately 6,900 vehicles per day on it west of Barker Road. Currently Saltese Road has about 5,700 vehicles per day east of Sullivan Road.

There are approximately 400 lots yet to be developed, most of which are near 8th / Tschirley. These could generate approximately 4,000 trips per day. It is likely that anywhere from one-third to nearly all of these trips will use Tschirley to access the wider transportation system. To estimate travel time and distance between the three routes, Google Maps was used with various destinations put into the map, and the various routes evaluated. This tool established that reaching either of the nearest I-90 interchanges, the Tschirley route will be comparable to the existing routes when comparing both distance and time. Based on this information, it is likely Tschirley will experience 3,500 additional trips per day. If this happens, it should be reclassified as a collector or some other higher classification than a local access street.

A street with this level of traffic volume should have designated pedestrian facilities on it, especially given school children from this area are required to walk to and from Greenacres Middle School. It appears a pedestrian pathway / sidewalk could be constructed on the east side of Tschirley for most of the distance. This may need to be augmented with a painted walkway on the street for some parts.

The intersection of Sprague / Tschirley experiences the lowest level of service during the p.m. peak hour. Assuming 10% of the additional daily traffic volumes occur during the p.m. peak hour, as is typical, the anticipated ultimate traffic volumes added to the traffic volumes anticipated in 2028 with the Saltese Apts, and all other known sources of traffic are shown on Figure 10. Using the traffic volumes at the bottom of Figure 10 and assuming the same distribution of traffic using Tschirley and Flora as for the apartment complex, the level of service at the two intersections most likely to be affected by the increase in traffic are shown on Table 9 as follows.

Spokane Valley, WA

Table 9 - Level of Service Summary with Hypothetical Maximum Traffic

	2028 w/ Everything					
INTERSECTION	P.M.					
	DELAY	LOS				
Sprague / Tschirley	52.4	F				
Sprague / Flora*	27.8	С				

<sup>\*</sup> Signalized Intersection - others two-way, stop-controlled

It is clear Sprague / Flora will be able to accommodate the additional traffic. However, Sprague / Tschirley may be functioning at LOS F. This is a hypothetical situation given a number of assumptions which should be verified in the field. Items which may prevent this intersection from falling into LOS F include: more traffic using Flora, Chapman or Saltese than estimated, a change in the procedures used to calculate level of service, a decrease in p.m. peak hour traffic volumes as generated by single family homes and undoubtedly other factors.

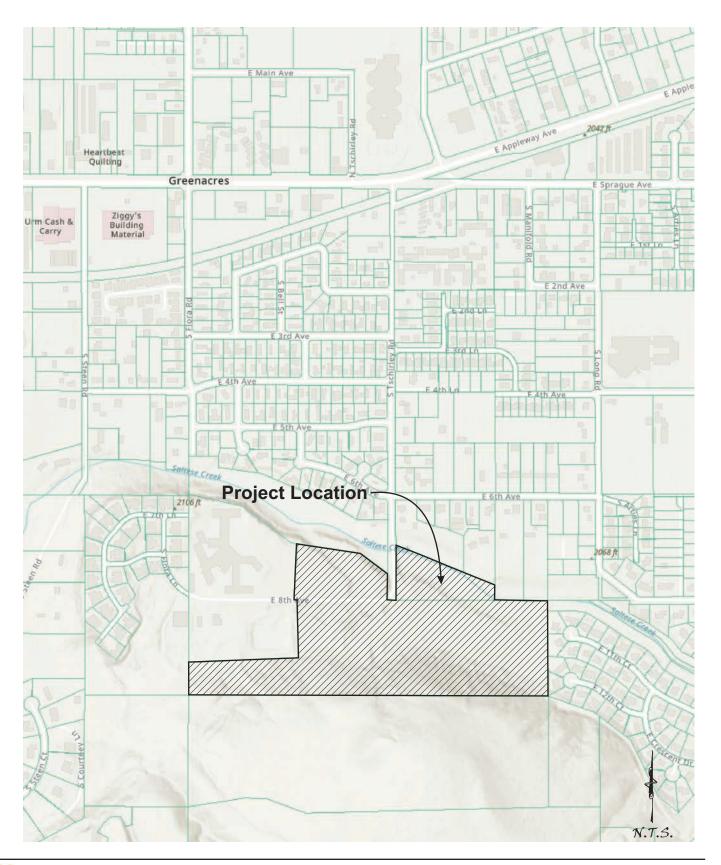
#### **Impact Summary and Recommendations**

The increase in traffic generated by the Saltese Apartments does not adversely impact the level of service at any of the intersections in the study area. Therefore, the recommendation for this project is for frontage improvements and payment of the South Barker Road Transportation Impact Fee of \$713.00 per multi-family unit.

A detailed review of the grading plan during preparation of the civil plan to ensure that adequate sight distance is met. Without the removal of the rocky outcropping at the northwest corner of Tschirley / 8th, and/or relocation of the access points, the sight distance criteria cannot be met, especially for the apartments on the north side of 8th Avenue.

# **TECHNICAL APPENDIX**

# **TRAFFIC FIGURES**





**Tschirley Apts** 

Traffic Study

Figure 1
Vicinity Map

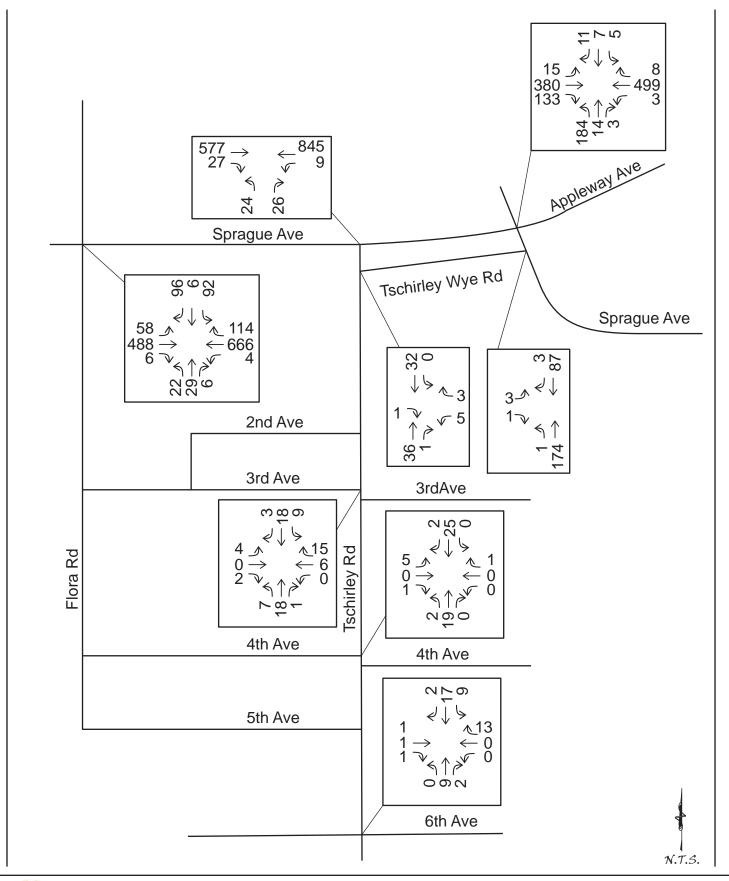




#### Saltese Apts

Traffic Impact Analysis

Figure 2 Site Plan



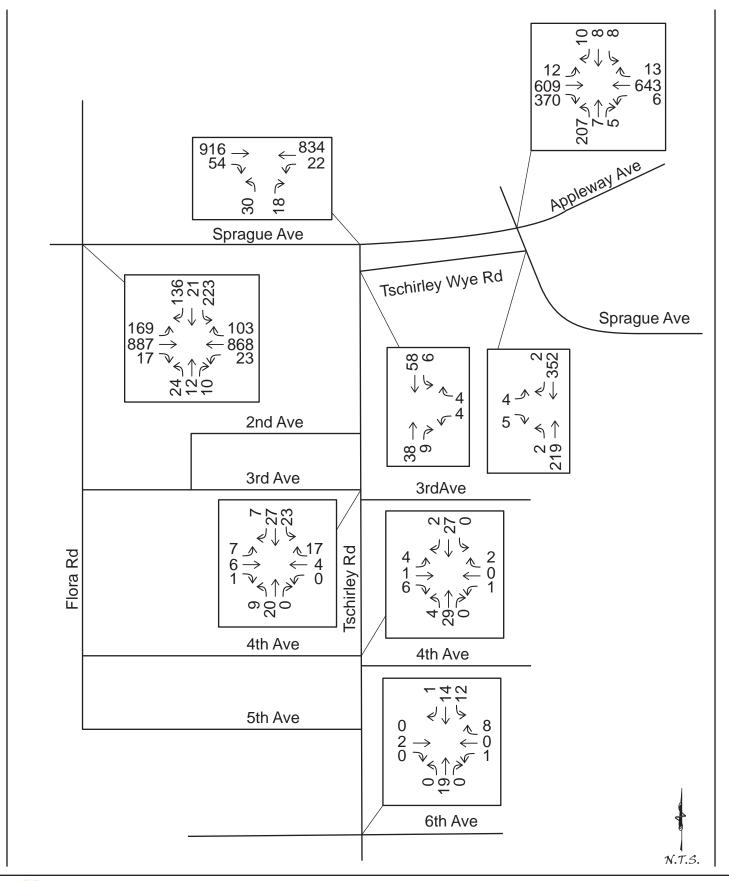


#### **Tschirley Apts**

Traffic Study

Figure 3a

Existing A.M. Peak Hour Traffic Volumes



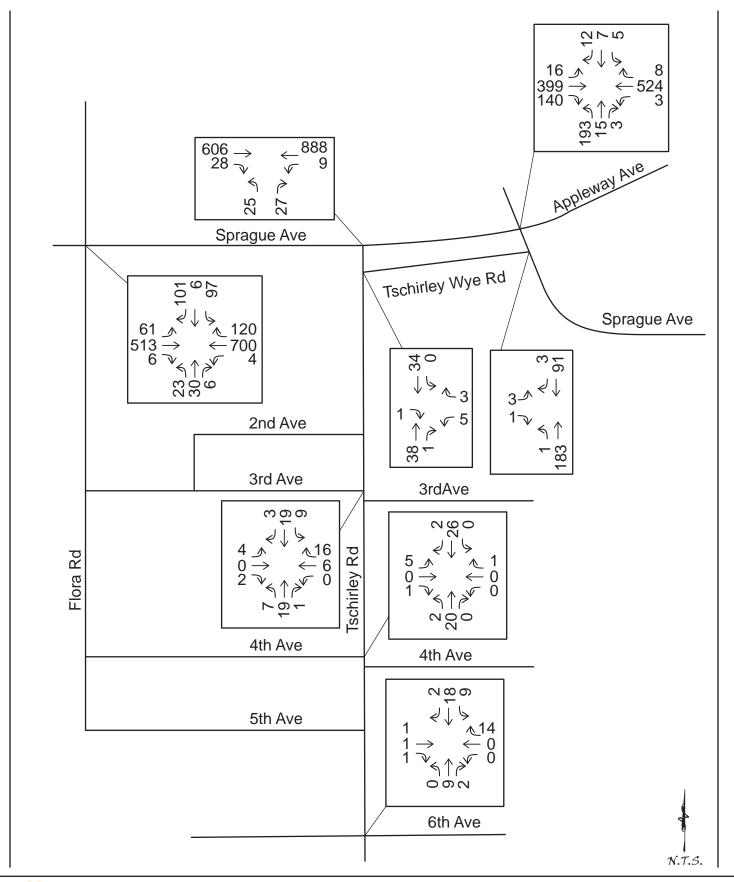


#### **Tschirley Apts**

Traffic Study

Figure 3b

Existing P.M. Peak Hour Traffic Volumes



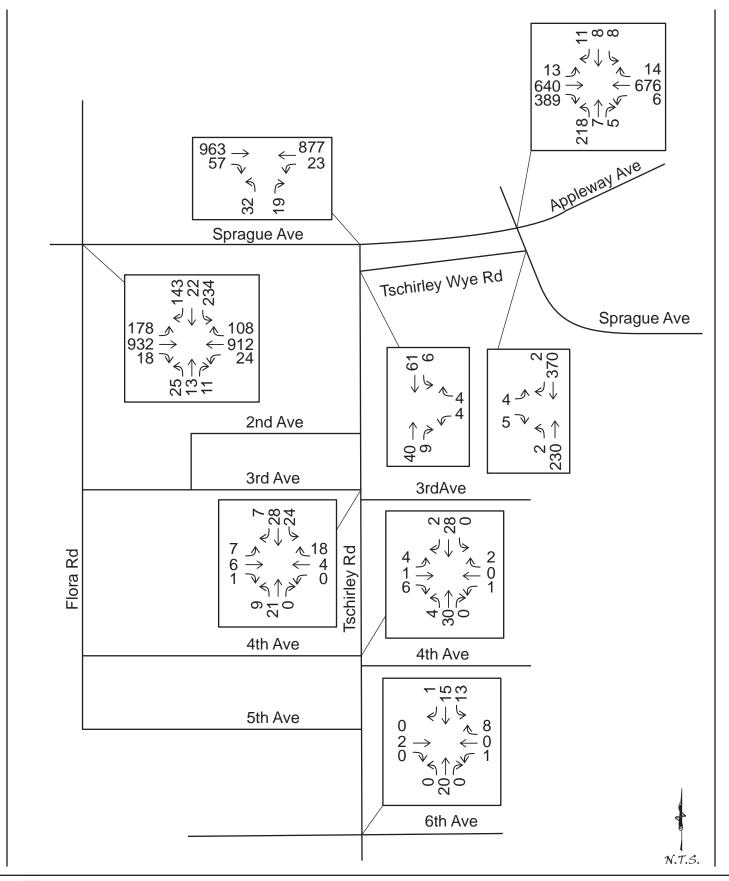


#### **Tschirley Apts**

Traffic Study

Figure 4a

2028 A.M. Peak Hour Traffic Volumes



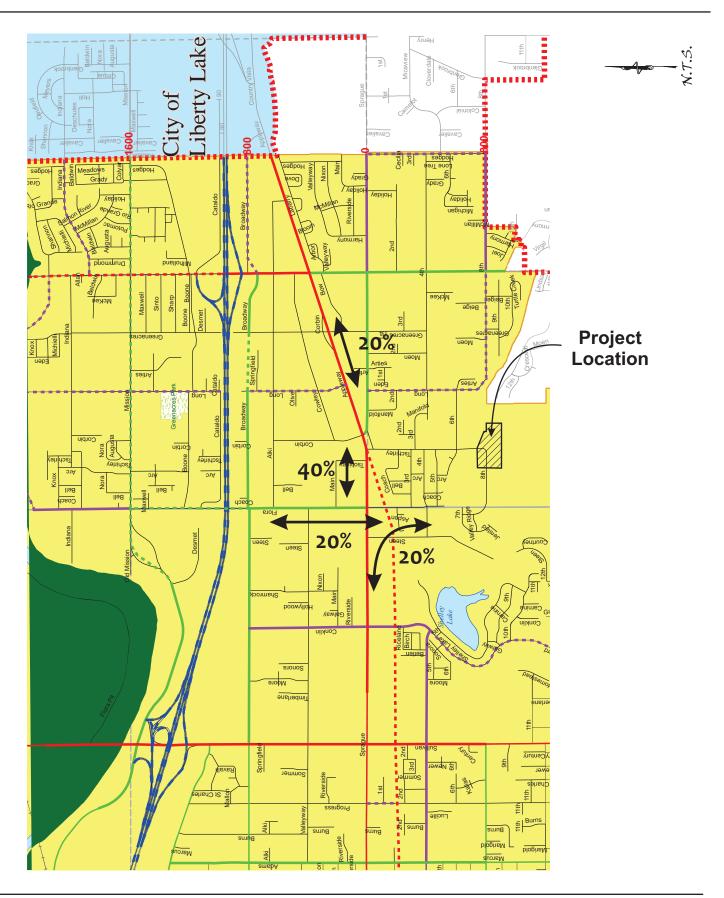


#### **Tschirley Apts**

Traffic Study

Figure 4b

2028 P.M. Peak Hour Traffic Volumes

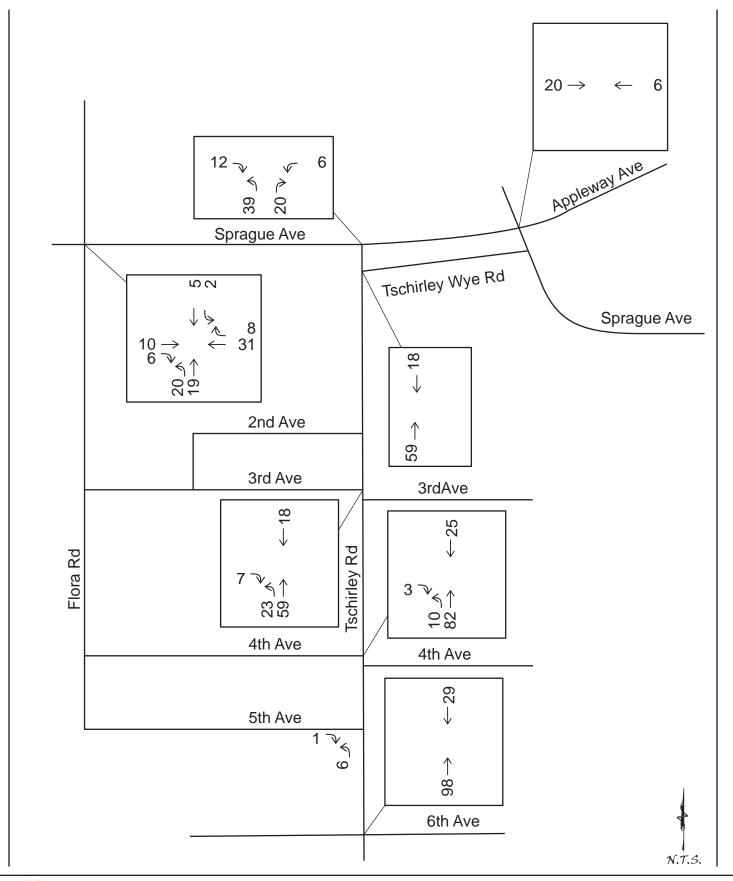




#### **Tschirley Apts**

Traffic Study

Figure 5
Distribution Map



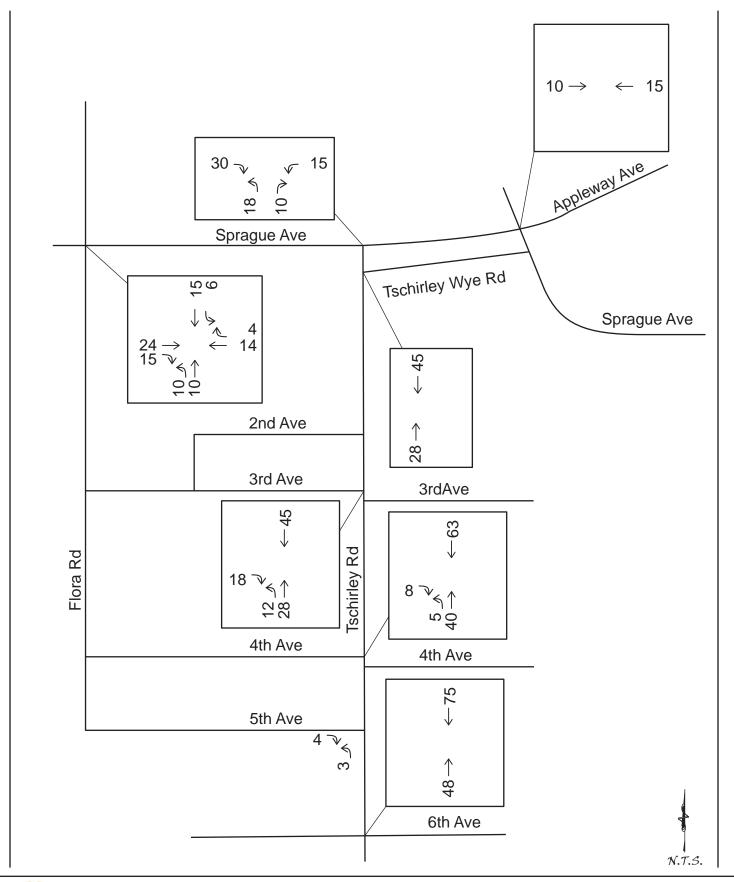


#### **Tschirley Apts**

Traffic Study

Figure 6a

Site Generated A.M. Peak Hour Traffic Volumes



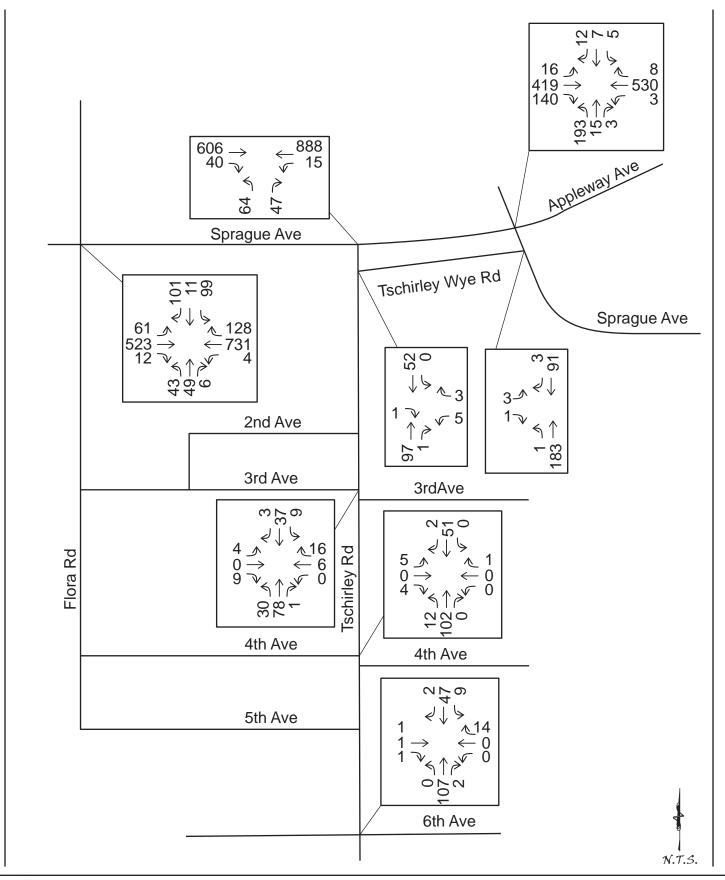


#### **Tschirley Apts**

Traffic Study

Figure 6b

Site Generated P.M. Peak Hour Traffic Volumes



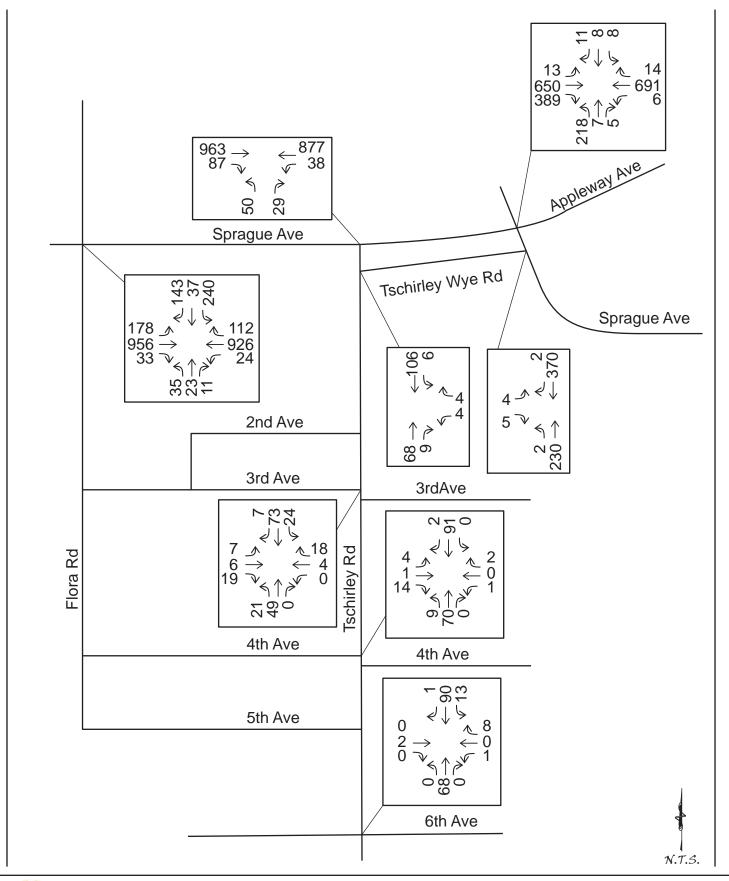


#### **Tschirley Apts**

Traffic Study

Figure 7a

Future A.M. Peak Hour Traffic Volumes with Project



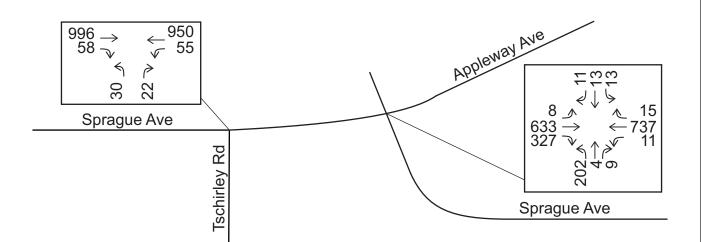


#### **Tschirley Apts**

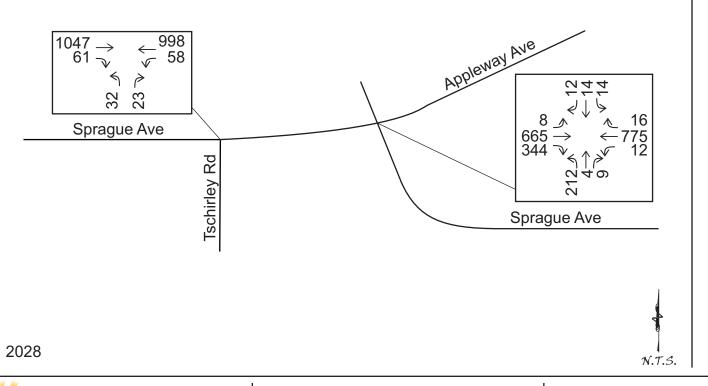
Traffic Study

Figure 7b

Future P.M. Peak Hour Traffic Volumes with Project



Existing





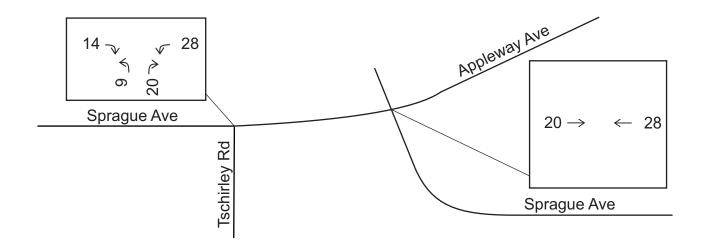
(509) 924-2155 www.sunburstengr.com

**Tschirley Apts** 

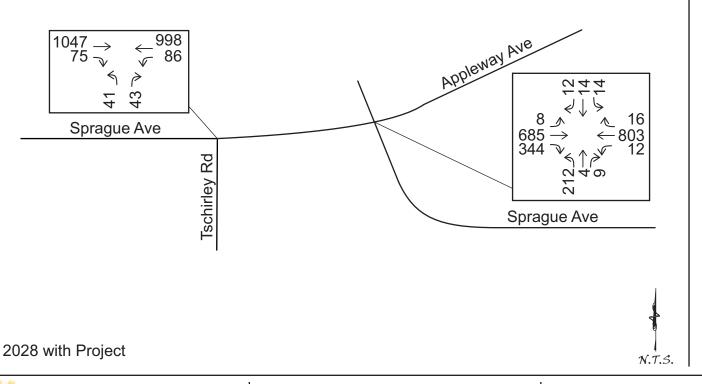
Traffic Study

Figure 8

School Dismissal Peak Hour Traffic Volumes (1/2)



Site Generated





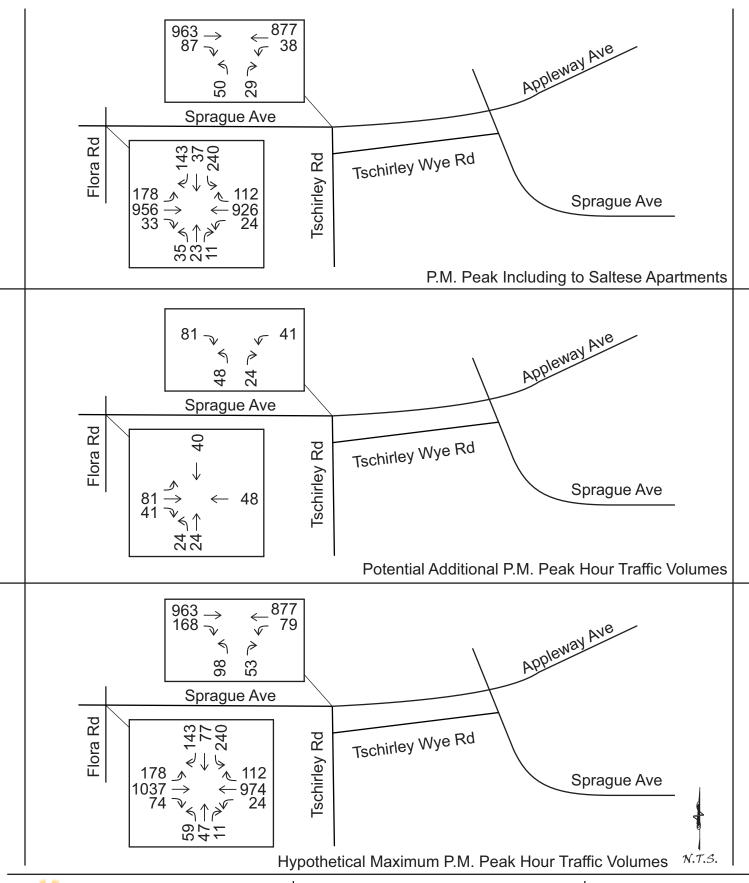
(509) 924-2155 www.sunburstengr.com

#### **Tschirley Apts**

Traffic Study

Figure 9

School Dismissal Peak Hour Traffic Volumes (2/2)





#### Saltese Apts

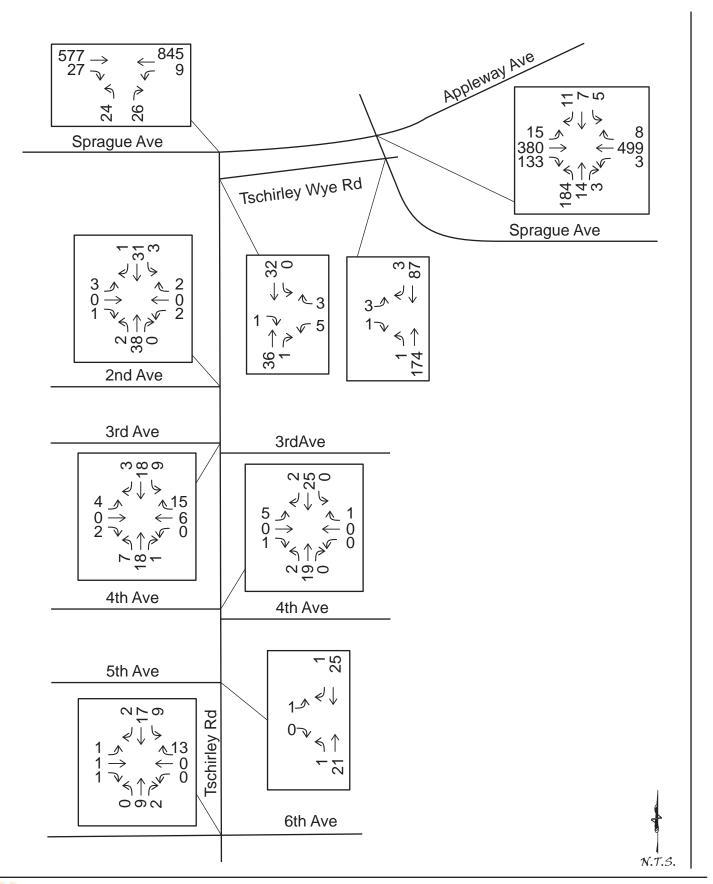
Traffic Study

Figure 10

Future P.M. Peak Hour Traffic Volumes with Project

# **TECHNICAL APPENDIX**

### **AM PEAK HOUR TRAFFIC COUNTS**





#### **Tschirley Apts**

Traffic Study

Figure 3a
Existing A.M. Peak

Hour Traffic Volumes

PROJECT: Tschirley Road

JOB NO. 2220

INTERSECTION: Appleway / Sprague / Corbin

DATE OF COUNT: 11/17/22

#### TRAFFIC COUNT REDUCTION WORKSI AM PEAK HOUR

	15 Minute Period Beginning @																
APPROACH	MOVEMENT		7:00		7:15		7:30		7:45		8:00		8:15		8:30		8:45
		pass	trk														
	Left	9		16		1		2		2		2		6		5	
Eastbound	Through	58		72		84		118		101		72		89		118	
	Right	11		15		15		31		26		29		26		52	
	App. Total	78	0	103		100	0	151	0	129	0	103	0	121	0	175	
	Pct Trucks		0%		0%		0%		0%		0%		0%		0%		0%
	Left	1		1		1		1		0		1		2		0	
Westbound	Through	56		91		101		107		133		119		99		148	
	Right	5		7		2		1		3		1		0		4	
	App. Total	62	0	99	0	104	0	109	0	136	0	121	0	101	0	152	0
	Pct Trucks		0%		0%		0%		0%		0%		0%		0%		0%
	Left	42		50		60		72		48		36		34		66	
Northbound	Through	2		0		0		1		0		0		1		13	
	Right	1		0		0		1		0		1		2		0	
	App. Total	45	0	50	0	60	0	74	0	48	0	37	0	37	0	79	0
	Pct Trucks		0%		0%		0%		0%		0%		0%		0%		0%
	Left	0		0		2		1		1		0		2		2	
Southbound	Through									1		1		1		4	
	Right	3		2		1		4		2		4		2		3	
	App. Total	3	0	2	0	3	0	5	0	4	0	5	0	5	0	9	0
	Pct Trucks		0%		0%		0%		0%		0%		0%		0%		0%
Total Intersec	tion Volume	188	0	254	0	267	0	339	0	317	0	266	0	264	0	415	
Intersection P	ct Trucks		0%		0%		0%		0%		0%		0%		0%		0%

Intersection To	Pct	
One Hour Volu	Trucks	
7:00	1048	0.00%
7:15	1177	0.00%
7:30	1189	0.00%
7:45	1186	0.00%
8:00	1262	0.00%

PROJECT: Tschirley Road JOB NO. 2220

INTERSECTION: Appleway / Sprague / Corbin

DATE OF COUNT: 11/17/22

### AM PEAK HOUR BREAKDOWN

Left   2   2   6   5	380 133 <b>528</b> 0% 3 499 8 <b>510</b>
Eastbound         Through Right         101 26 29 26 52         29 26 52           129 0 103 0 121 0 175 0 Pct Trucks           Westbound         Left 0 13 19 99 148 Right         133 119 99 148           Right         3 1 0 4 4	133 <b>528</b> 0% 3 499 8 <b>510</b>
Right         26         29         26         52           129         0         103         0         121         0         175         0           Pct Trucks         0%         0%         0%         0%         0%           Westbound         Eeft         0         1         2         0         0           Through         133         119         99         148         14	133 <b>528</b> 0% 3 499 8 <b>510</b>
129   0   103   0   121   0   175   0	528 0% 3 499 8 510
Pct Trucks         0%         0%         0%         0%           Westbound         Left         0         1         2         0         0           Through         133         119         99         148         0         4         0         4	0% 3 499 8 <b>510</b>
Westbound         Left         0         1         2         0           Through         133         119         99         148           Right         3         1         0         4	3 499 8 <b>510</b>
Westbound         Through         133         119         99         148           Right         3         1         0         4	499 8 <b>510</b>
Right 3 1 0 4	8 <b>510</b>
	510
App. Total   136   0   121   0   101   0   152   0	
Pct Trucks   0%   0%   0%   0%	0%
Left 48 36 34 66	184
Northbound Through 0 0 1 1 13	14
Right 0 1 2 0	3
App. Total 48 0 37 0 37 0 79 0	201
Pct Trucks         0%         0%         0%	0%
Left 1 0 2 2	5
Southbound Through 1 1 1 4	7
Right 2 4 2 3	11
App. Total 4 0 5 0 5 0 9 0	23
Pct Trucks         0%         0%         0%	0%
Total Intersection Volume         317         0         266         0         264         0         415         0	1262
Intersection Pct Trucks 0% 0% 0% 0%	0.76

P.H.F. 0.76

Location: Sprague Ave at Tschirley Wye, Spokane Valley, WA

**GPS Coordinates: Lat=47.656925, Lon=-117.168740** 

Date: 2023-04-04
Day of week: Tuesday
Weather: Overcast
Analyst: ALW

### **Total vehicle traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	iotai									
07:00	0	15	0	0	0	0	0	29	0	0	0	0	44
07:15	0	12	1	0	0	0	0	30	0	1	0	1	45
07:30	0	17	2	0	0	0	0	38	0	2	0	0	59
07:45	0	16	0	0	0	0	1	49	0	0	0	0	66
08:00	0	27	0	0	0	0	0	42	0	0	0	0	69
08:15	0	16	1	0	0	0	0	41	0	2	0	0	60
08:30	0	21	2	0	0	0	1	45	0	1	0	0	70
08:45	0	23	0	0	0	0	0	46	0	0	0	1	70
09:00	0	2	0	0	0	0	0	0	0	0	0	0	2

### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbou	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOtal
07:00	0	15	0	0	0	0	0	29	0	0	0	0	44
07:15	0	12	1	0	0	0	0	30	0	1	0	1	45
07:30	0	17	2	0	0	0	0	38	0	2	0	0	59
07:45	0	16	0	0	0	0	1	49	0	0	0	0	66
08:00	0	27	0	0	0	0	0	42	0	0	0	0	69
08:15	0	16	1	0	0	0	0	41	0	2	0	0	60
08:30	0	21	2	0	0	0	1	45	0	1	0	0	70
08:45	0	23	0	0	0	0	0	46	0	0	0	1	70
09:00	0	2	0	0	0	0	0	0	0	0	0	0	2

# Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	orthbour	nd	E	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

		NE			NW			SW			SE		
Interval starts	Left	Right	Total	Total									
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	1	1	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

08:00 - 09:00

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	0	87	3	0	0	0	1	174	0	3	0	1	269
Factor	0.00	0.81	0.38	0.00	0.00	0.00	0.25	0.95	0.00	0.38	0.00	0.25	0.96
Approach Factor		0.83			0.00			0.95			0.50		

# **Peak Hour Vehicle Summary**

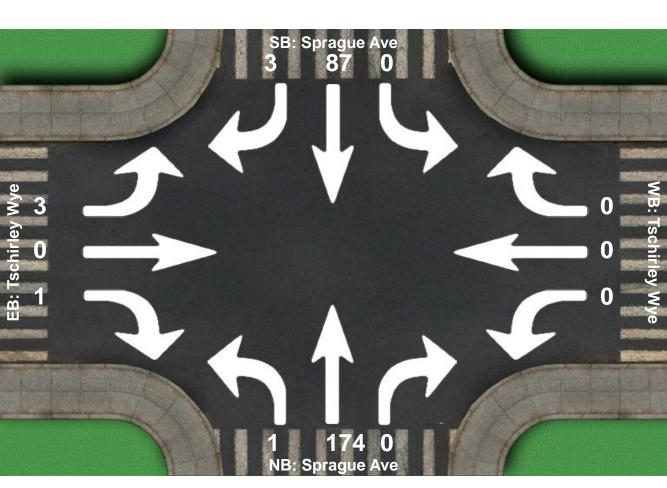
Vehicle	Sc	outhBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
verlicie	Left	Thru	Right										
Car	0	87	3	0	0	0	1	174	0	3	0	1	269
Truck	0	0	0	0	0	0	0	0	0	0	0	0	0

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0

Location: Sprague Ave at Tschirley Wye, Spokane Valley, WA

GPS Coordinates: Lat=47.656925, Lon=-117.168740

Date: 2023-04-04
Day of week: Tuesday
Weather: Overcast
Analyst: ALW



## **Intersection Peak Hour**

08:00 - 09:00

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	0	87	3	0	0	0	1	174	0	3	0	1	269
Factor	0.00	0.81	0.38	0.00	0.00	0.00	0.25	0.95	0.00	0.38	0.00	0.25	0.96
Approach Factor		0.83			0.00			0.95			0.50		

Location: Tschirley at Sprague, Spokane Valley, Wa

GPS Coordinates: Lat=47.660319, Lon=-117.183362

Date: 2022-11-16
Day of week: Wednesday
Weather: Low Clouds

Analyst: ALW

## Total vehicle traffic

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
07:00	0	0	0	1	125	0	2	0	2	0	72	2	204
07:15	0	0	0	1	160	1	6	0	6	0	114	4	292
07:30	0	0	0	3	223	0	5	0	7	0	138	6	382
07:45	0	0	0	4	260	0	6	0	7	0	166	9	452
08:00	0	0	0	1	201	0	7	0	6	0	159	8	382
08:15	0	0	0	3	120	0	2	0	5	0	114	4	248
08:30	0	0	0	2	154	0	4	0	8	0	146	7	321
08:45	0	0	0	5	199	0	7	0	2	0	145	5	363

### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
interval starts	Left	Thru	Right	TOtal									
07:00	0	0	0	1	120	0	2	0	2	0	70	2	197
07:15	0	0	0	1	155	1	6	0	6	0	113	3	285
07:30	0	0	0	3	219	0	5	0	7	0	138	6	378
07:45	0	0	0	4	259	0	6	0	7	0	163	9	448
08:00	0	0	0	1	200	0	7	0	6	0	156	8	378
08:15	0	0	0	3	118	0	2	0	5	0	112	4	244
08:30	0	0	0	2	150	0	4	0	8	0	145	7	316
08:45	0	0	0	5	197	0	7	0	2	0	139	5	355

## Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
interval starts	Left	Thru	Right	Total									
07:00	0	0	0	0	5	0	0	0	0	0	2	0	7
07:15	0	0	0	0	5	0	0	0	0	0	1	1	7
07:30	0	0	0	0	4	0	0	0	0	0	0	0	4
07:45	0	0	0	0	1	0	0	0	0	0	3	0	4
08:00	0	0	0	0	1	0	0	0	0	0	3	0	4
08:15	0	0	0	0	2	0	0	0	0	0	2	0	4
08:30	0	0	0	0	4	0	0	0	0	0	1	0	5
08:45	0	0	0	0	2	0	0	0	0	0	6	0	8

Interval starts		NE			NW	_		SW			SE		Total
interval starts	Left	Right	Total	IOtal									
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	2	0	2	2
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	2	2	0	0	0	2
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

07:15 - 08:15

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	0	0	0	9	844	1	24	0	26	0	577	27	1508
Factor	0.00	0.00	0.00	0.56	0.81	0.25	0.86	0.00	0.93	0.00	0.87	0.75	0.83
Approach Factor		0.00			0.81			0.96			0.86		

# **Peak Hour Vehicle Summary**

Vehicle	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
Verlicie	Left	Thru	Right	Total									
Car	0	0	0	9	833	1	24	0	26	0	570	26	1489
Truck	0	0	0	0	11	0	0	0	0	0	7	1	19

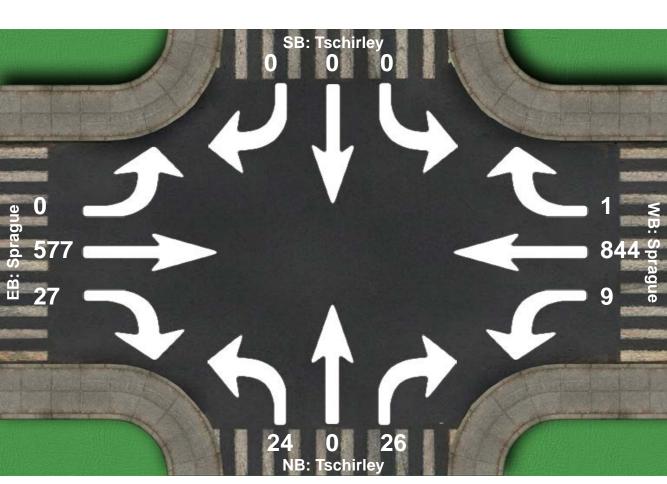
		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	0	0	0	2	0	2	2

Location: Tschirley at Sprague, Spokane Valley, Wa

GPS Coordinates: Lat=47.660319, Lon=-117.183362

Date: 2022-11-16
Day of week: Wednesday
Weather: Low Clouds

Analyst: ALW



## **Intersection Peak Hour**

07:15 - 08:15

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	IUlai									
Vehicle Total	0	0	0	9	844	1	24	0	26	0	577	27	1508
Factor	0.00	0.00	0.00	0.56	0.81	0.25	0.86	0.00	0.93	0.00	0.87	0.75	0.83
Approach Factor		0.00			0.81			0.96			0.86		

Location: Tschirley Ave at Tschirley Wye, Spokane Valley, WA

GPS Coordinates: Lat=47.656754, Lon=-117.168811

Date: 2023-04-05 Day of week: Wednesday

Weather: Sunny Analyst: ALW

## Total vehicle traffic

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
07:00	1	3	0	0	0	0	0	8	0	0	0	0	12
07:15	0	3	0	0	0	1	0	8	0	0	0	0	12
07:30	0	6	0	0	0	1	0	10	0	0	0	1	18
07:45	0	6	0	3	0	0	0	9	1	0	0	0	19
08:00	0	8	0	1	0	1	0	8	0	0	0	0	18
08:15	0	12	0	1	0	1	0	9	0	0	0	0	23
08:30	0	5	0	0	0	2	0	5	1	0	0	0	13
08:45	0	4	0	0	0	3	0	10	0	0	0	0	17

### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Total									
07:00	1	3	0	0	0	0	0	8	0	0	0	0	12
07:15	0	3	0	0	0	1	0	8	0	0	0	0	12
07:30	0	5	0	0	0	1	0	10	0	0	0	1	17
07:45	0	6	0	3	0	0	0	8	1	0	0	0	18
08:00	0	8	0	1	0	1	0	8	0	0	0	0	18
08:15	0	12	0	1	0	1	0	9	0	0	0	0	23
08:30	0	4	0	0	0	2	0	4	1	0	0	0	11
08:45	0	4	0	0	0	3	0	10	0	0	0	0	17

## Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
interval starts	Left	Thru	Right	TOtal									
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	1	0	0	0	0	0	1	0	0	0	0	2
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Interval starts		NE			NW			SW			SE		Total
interval starts	Left	Right	Total	Total									
07:00	1	0	1	0	0	0	0	0	0	0	1	1	2
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	1	0	1	0	0	0	1
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	1	1	1

07:30 - 08:30

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	0	32	0	5	0	3	0	36	1	0	0	1	78
Factor	0.00	0.67	0.00	0.42	0.00	0.75	0.00	0.90	0.25	0.00	0.00	0.25	0.85
Approach Factor		0.67			0.67			0.93			0.25		

# **Peak Hour Vehicle Summary**

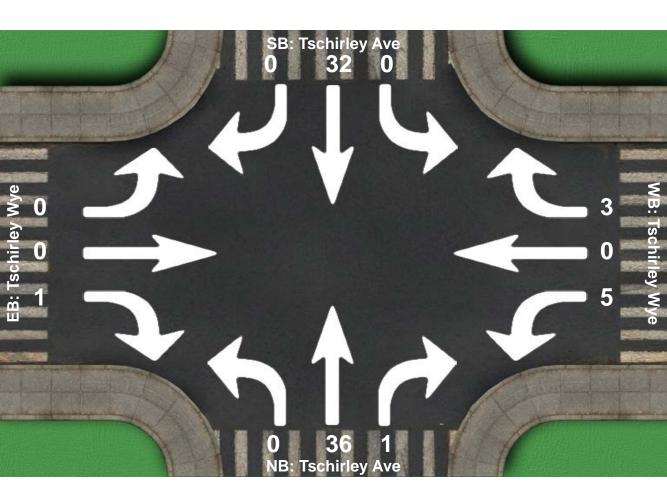
Vehicle	Sc	uthBou	nd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
Verlicie	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	0	31	0	5	0	3	0	35	1	0	0	1	76
Truck	0	1	0	0	0	0	0	1	0	0	0	0	2

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	1	0	1	0	0	0	1

Location: Tschirley Ave at Tschirley Wye, Spokane Valley, WA

GPS Coordinates: Lat=47.656754, Lon=-117.168811

Date: 2023-04-05
Day of week: Wednesday
Weather: Sunny
Analyst: ALW



## **Intersection Peak Hour**

07:30 - 08:30

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	IUlai									
Vehicle Total	0	32	0	5	0	3	0	36	1	0	0	1	78
Factor	0.00	0.67	0.00	0.42	0.00	0.75	0.00	0.90	0.25	0.00	0.00	0.25	0.85
Approach Factor		0.67			0.67			0.93			0.25		

Location: Tschirley Rd at 2nd Ave / Apt Dwy, Spokane Valley, WA

**GPS Coordinates: Lat=47.654533, Lon=-117.169545** 

Date: 2023-03-30
Day of week: Thursday
Weather: Overcast
Analyst: ALW

## Total vehicle traffic

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
07:00	0	1	0	0	0	0	0	10	0	1	0	0	12
07:15	0	9	0	0	0	1	1	16	0	0	0	1	28
07:30	1	5	0	1	0	0	0	7	0	1	0	0	15
07:45	1	8	0	0	0	0	1	8	0	1	0	0	19
08:00	1	9	1	1	0	1	0	7	0	1	0	0	21
08:15	0	6	0	0	0	2	0	7	0	0	0	0	15
08:30	3	8	0	0	0	0	1	8	0	1	0	1	22
08:45	0	5	3	0	0	0	0	9	0	2	0	0	19

### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	d	Total
interval starts	Left	Thru	Right	TOtal									
07:00	0	1	0	0	0	0	0	10	0	1	0	0	12
07:15	0	8	0	0	0	1	1	16	0	0	0	1	27
07:30	1	5	0	1	0	0	0	7	0	1	0	0	15
07:45	1	8	0	0	0	0	1	8	0	1	0	0	19
08:00	1	9	1	1	0	1	0	7	0	1	0	0	21
08:15	0	6	0	0	0	2	0	7	0	0	0	0	15
08:30	3	8	0	0	0	0	1	8	0	1	0	1	22
08:45	0	5	3	0	0	0	0	9	0	2	0	0	19

## Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	TOtal									
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	1	0	0	0	0	0	0	0	0	0	0	1
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Interval starts		NE			NW			SW			SE		Total
interval starts	Left	Right	Total	IOlai									
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	2	2	2
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	1	1	6	0	6	0	0	0	0	2	2	9

07:15 - 08:15

	Sc	outhBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	3	31	1	2	0	2	2	38	0	3	0	1	83
Factor	0.75	0.86	0.25	0.50	0.00	0.50	0.50	0.59	0.00	0.75	0.00	0.25	0.74
Approach Factor		0.80			0.50			0.59			1.00		

# **Peak Hour Vehicle Summary**

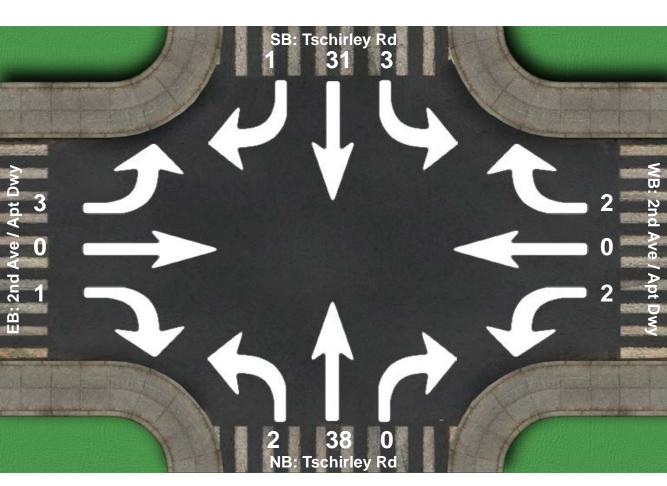
Vehicle	Sc	uthBou	nd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
Verlicie	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	3	30	1	2	0	2	2	38	0	3	0	1	82
Truck	0	1	0	0	0	0	0	0	0	0	0	0	1

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	0	0	0	0	2	2	2

Location: Tschirley Rd at 2nd Ave / Apt Dwy, Spokane Valley, WA

GPS Coordinates: Lat=47.654533, Lon=-117.169545

Date: 2023-03-30
Day of week: Thursday
Weather: Overcast
Analyst: ALW



## **Intersection Peak Hour**

07:15 - 08:15

	Sc	outhBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	3	31	1	2	0	2	2	38	0	3	0	1	83
Factor	0.75	0.86	0.25	0.50	0.00	0.50	0.50	0.59	0.00	0.75	0.00	0.25	0.74
Approach Factor		0.80			0.50			0.59			1.00		

Location: Tshirley at 3rd, Spokane Valley

**GPS Coordinates:** 

2022-11-16 Date: Day of week: Wednesday

Weather: Foggy

Analyst: Mike McCluskey

### **Total vehicle traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	TOtal									
07:00	0	1	0	0	0	1	0	2	0	0	0	0	4
07:15	1	2	1	0	3	5	2	4	0	1	0	0	19
07:30	2	4	1	0	1	3	3	6	0	2	0	0	22
07:45	5	6	0	0	1	5	2	4	1	1	0	0	25
08:00	1	6	1	0	1	2	0	4	0	0	0	2	17
08:15	0	4	0	0	0	1	1	4	0	0	0	2	12
08:30	5	8	0	0	2	1	0	5	0	1	1	1	24
08:45	1	8	1	0	2	2	3	6	0	2	0	0	25
09:00	0	0	0	0	0	0	0	1	0	0	0	0	1

### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	ıd	No	rthbour	nd	Ea	astbour	nd	Total
ililervai StartS	Left	Thru	Right	TOtal									
07:00	0	1	0	0	0	1	0	1	0	0	0	0	3
07:15	1	2	1	0	3	5	2	4	0	1	0	0	19
07:30	2	4	1	0	1	3	2	6	0	2	0	0	21
07:45	5	6	0	0	1	5	2	4	1	1	0	0	25
08:00	1	6	1	0	1	2	0	4	0	0	0	2	17
08:15	0	4	0	0	0	1	1	3	0	0	0	2	11
08:30	5	8	0	0	2	1	0	5	0	1	1	1	24
08:45	1	8	1	0	2	2	3	6	0	1	0	0	24
09:00	0	0	0	0	0	0	0	1	0	0	0	0	1

## **Truck traffic**

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	nd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

# **Bicycles traffic**

Interval starts	Sc	uthBou	nd	We	estboun	d	No	rthbour	nd	Ea	astbour	nd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOtal
07:00	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	1	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	1	0	0	0	0	1
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	1	0	0	1
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

# Pedestrian volumes

09:00

reuesina	ali V	Jiuii	162										
Interval starts		NE			NW			SW			SE		Total
interval starts	Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	TOtal
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

0

07:15 - 08:15

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
	Left	Thru	Right	Iotai									
Vehicle Total	9	18	3	0	6	15	7	18	1	4	0	2	83
Factor	0.45	0.75	0.75	0.00	0.50	0.75	0.58	0.75	0.25	0.50	0.00	0.25	0.83
Approach Factor		0.68			0.66			0.72			0.75		

# **Peak Hour Vehicle Summary**

Vehi	clo	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
Verii	CIC	Left	Thru	Right										
Ca	ır	9	18	3	0	6	15	6	18	1	4	0	2	82
Tru	ck	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicyc	cles	0	0	0	0	0	0	1	0	0	0	0	0	1

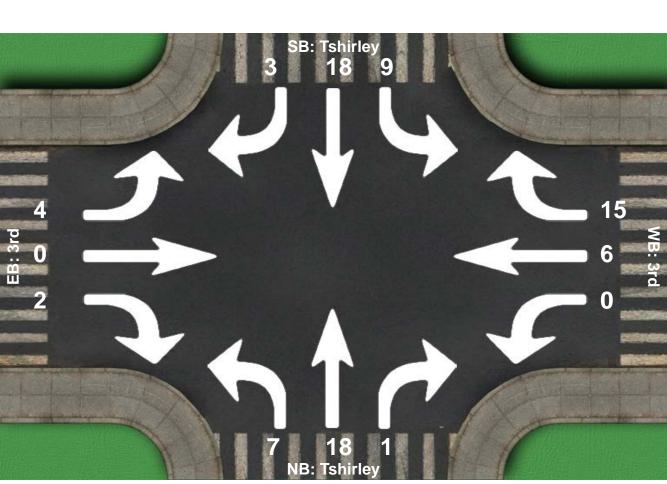
		NE			NW	_		SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0

Location: Tshirley at 3rd, Spokane Valley

**GPS Coordinates:** 

Date: 2022-11-16
Day of week: Wednesday
Weather: Foggy

Analyst: Mike McCluskey



# **Intersection Peak Hour**

07:15 - 08:15

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	IUlai									
Vehicle Total	9	18	3	0	6	15	7	18	1	4	0	2	83
Factor	0.45	0.75	0.75	0.00	0.50	0.75	0.58	0.75	0.25	0.50	0.00	0.25	0.83
Approach Factor		0.68			0.66			0.72			0.75		

Location: Tschirley Rd at 4th Ave , Spokane Valley, WA

**GPS Coordinates: Lat=47.659967, Lon=-117.184058** 

Date: 2023-04-06
Day of week: Thursday
Weather: Sunny
Analyst: ALW

## Total vehicle traffic

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
07:00	0	2	1	0	0	1	1	3	0	2	0	0	10
07:15	0	2	0	0	0	0	2	5	0	0	0	0	9
07:30	3	6	0	0	0	0	0	3	0	0	1	1	14
07:45	0	3	0	0	0	0	2	2	0	3	0	0	10
08:00	0	9	0	0	0	0	1	5	0	3	0	0	18
08:15	0	6	0	0	0	0	1	4	0	0	0	0	11
08:30	0	5	1	0	0	1	0	4	0	0	0	1	12
08:45	0	5	1	0	0	0	0	6	0	2	0	0	14

### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	d	Total
interval starts	Left	Thru	Right	TOtal									
07:00	0	2	1	0	0	1	1	3	0	2	0	0	10
07:15	0	2	0	0	0	0	2	5	0	0	0	0	9
07:30	3	6	0	0	0	0	0	3	0	0	1	1	14
07:45	0	3	0	0	0	0	2	2	0	3	0	0	10
08:00	0	9	0	0	0	0	1	5	0	3	0	0	18
08:15	0	6	0	0	0	0	1	4	0	0	0	0	11
08:30	0	5	1	0	0	1	0	4	0	0	0	1	12
08:45	0	5	1	0	0	0	0	6	0	2	0	0	14

## Truck traffic

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOtal
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Interval starts		NE			NW			SW			SE		Total
interval starts	Left	Right	Total	IOlai									
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	1	1	1
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

08:00 - 09:00

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	0	25	2	0	0	1	2	19	0	5	0	1	55
Factor	0.00	0.69	0.50	0.00	0.00	0.25	0.50	0.79	0.00	0.42	0.00	0.25	0.76
Approach Factor		0.75			0.25			0.88			0.50		

# **Peak Hour Vehicle Summary**

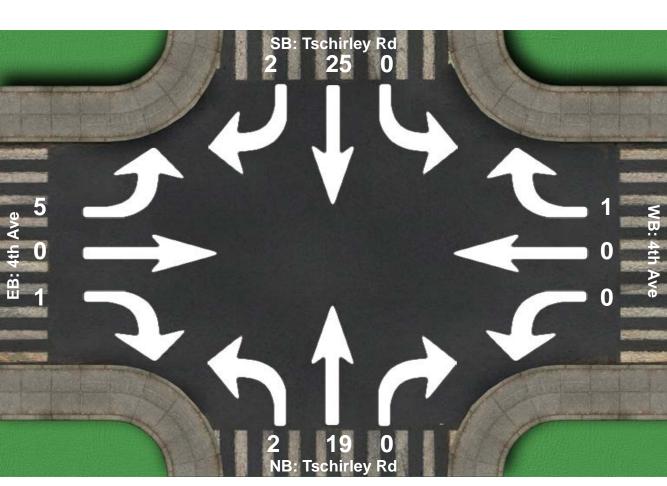
Vehicle	Sc	uthBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
Verlicie	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	0	25	2	0	0	1	2	19	0	5	0	1	55
Truck	0	0	0	0	0	0	0	0	0	0	0	0	0

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	0	0	0	0	1	1	1

Location: Tschirley Rd at 4th Ave , Spokane Valley, WA

GPS Coordinates: Lat=47.659967, Lon=-117.184058

Date: 2023-04-06
Day of week: Thursday
Weather: Sunny
Analyst: ALW



## **Intersection Peak Hour**

08:00 - 09:00

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	IUlai									
Vehicle Total	0	25	2	0	0	1	2	19	0	5	0	1	55
Factor	0.00	0.69	0.50	0.00	0.00	0.25	0.50	0.79	0.00	0.42	0.00	0.25	0.76
Approach Factor		0.75			0.25			0.88			0.50		

PROJECT: Tschirley Apts JOB NO. 2220 INTERSECTION: Tschirley / 5th

DATE OF COUNT: 4/6/23

# TRAFFIC COUNT REDUCTION WORKSHEET AM PEAK HOURS 15 Minute Period Beginning @

APPROACH	MOVEMENT		7:00		7:15		7:30		7:45		8:00		8:15		8:30		8:45
		pass	trk														
	Left							1								1	
Eastbound	Through																
	Right																
	App. Total	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
	Pct Trucks		#####		#####		#####		0%		#####		#####		#####		0%
	Left																
Westbound	Through																
	Right																
	App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pct Trucks		#####		#####		#####		#####		#####		#####		#####		#####
	Left	2				1		1								1	
Northbound	Through	4		7		3		4		6		5		4		6	
	Right																
	App. Total	6	0	7	0	4	0	5	0	6	0	5	0	4	0	7	0
	Pct Trucks		0%		0%		0%		0%		0%		0%		0%		0%
	Left																
Southbound	Through	2		2		6		3		9		6		5		5	
	Right							1						1			
	App. Total	2	0	2	0	6	0	4	0	9	0	6	0	6	0	5	0
	Pct Trucks		0%		0%		0%		0%		0%		0%		0%		0%
Total Intersection	n Volume	8	0	9	0	10	0	10	0	15	0	11	0	10		13	
Intersection Pct	Trucks		0%		0%		0%		0%		0%		0%		0%		0%

Intersection Total		Pct
One Hour Volumes		Trucks
7:00	37	0.00%
7:15	44	0.00%
7:30	46	0.00%
7:45	46	0.00%
8:00	49	0.00%

PROJECT: Tschirley Apts

JOB NO. 2220 INTERSECTION: Tschirley / 5th

DATE OF COUNT: 4/6/23

#### AM PEAK HOUR BREAKDOWN

APPROACH	MOVEMENT		8:00		8:15		8:30		8:45	
		pass	trk	pass	trk	pass	trk	pass	trk	TOTAL
	Left							1		1
Eastbound	Through									0
	Right									0
	App. Total	0	0	0	0	0	0	1	0	_
	Pct Trucks		#####		#####		#####		0%	0%
	Left									0
Westbound	Through									0
	Right									0
	App. Total	0	0	0	0	0	0	0	0	0
	Pct Trucks		#####		#####		#####		#####	#####
	Left							1		1
Northbound	Through	6		5		4		6		21
	Right									0
	App. Total	6	0	5	0	4	0	7	0	22
	Pct Trucks		0%		0%		0%		0%	0%
	Left									0
Southbound	Through	9		6		5		5		25
	Right					1				1
	App. Total	9	0	6	0	6	0	5	0	26
	Pct Trucks		0%		0%		0%		0%	0%
Total Intersection \	Total Intersection Volume			11	0	10	0	13	0	49
Intersection Pct Tre	ersection Pct Trucks				0%		0%		0%	

P.H.F. = 0.82

Location: Tschirley Rd at 6th Ave, Spokane Valley, WA

**GPS Coordinates: Lat=47.657271, Lon=-117.175203** 

Date: 2023-03-29 Day of week: Wednesday

Weather: Sunny Analyst: ALW

## Total vehicle traffic

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
07:00	4	3	0	0	0	2	0	0	0	0	0	0	9
07:15	0	1	0	0	0	4	0	2	0	1	0	0	8
07:30	0	5	1	0	0	5	0	2	0	0	0	0	13
07:45	1	4	0	0	0	6	1	4	0	0	0	1	17
08:00	3	3	0	0	0	2	0	0	0	0	0	0	8
08:15	4	4	1	0	0	1	0	3	1	0	0	0	14
08:30	2	5	0	0	0	4	0	3	0	0	0	0	14
08:45	0	5	1	0	0	6	0	3	1	1	1	1	19

### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	d	Total
interval starts	Left	Thru	Right	Total									
07:00	4	3	0	0	0	2	0	0	0	0	0	0	9
07:15	0	1	0	0	0	4	0	2	0	1	0	0	8
07:30	0	4	1	0	0	5	0	2	0	0	0	0	12
07:45	1	4	0	0	0	6	1	3	0	0	0	1	16
08:00	3	3	0	0	0	2	0	0	0	0	0	0	8
08:15	4	3	1	0	0	1	0	3	1	0	0	0	13
08:30	1	5	0	0	0	4	0	2	0	0	0	0	12
08:45	0	5	1	0	0	6	0	3	1	1	1	1	19

## Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	ıd	Total
interval starts	Left	Thru	Right	Total									
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	1	0	0	0	0	0	0	0	0	0	0	1
08:30	1	0	0	0	0	0	0	1	0	0	0	0	2
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Interval starts		NE			NW	_		SW			SE		Total
interval starts	Left	Right	Total	IOtal									
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	1	0	1	0	0	0	0	0	0	0	0	0	1
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

08:00 - 09:00

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	9	17	2	0	0	13	0	9	2	1	1	1	55
Factor	0.56	0.85	0.50	0.00	0.00	0.54	0.00	0.75	0.50	0.25	0.25	0.25	0.72
Approach Factor		0.78			0.54			0.69			0.25		

# **Peak Hour Vehicle Summary**

Vehicle	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
Verlicie	Left	Thru	Right										
Car	8	16	2	0	0	13	0	8	2	1	1	1	52
Truck	1	1	0	0	0	0	0	1	0	0	0	0	3

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	1	0	1	0	0	0	0	0	0	0	0	0	1

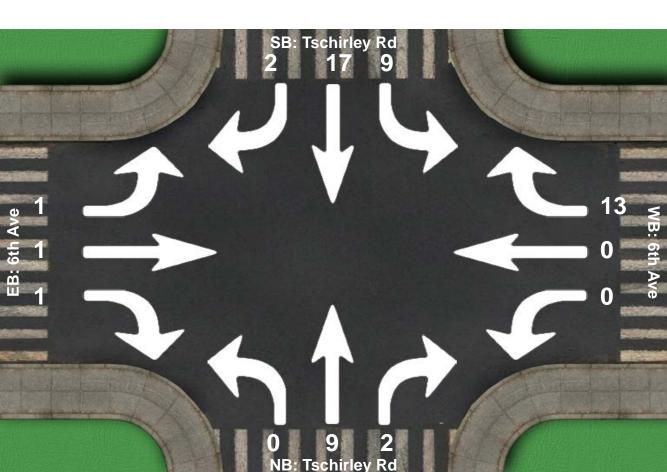
Location: Tschirley Rd at 6th Ave, Spokane Valley, WA

GPS Coordinates: Lat=47.657271, Lon=-117.175203

**ALW** 

Date: 2023-03-29
Day of week: Wednesday
Weather: Sunny

Analyst:



## **Intersection Peak Hour**

08:00 - 09:00

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	IUlai									
Vehicle Total	9	17	2	0	0	13	0	9	2	1	1	1	55
Factor	0.56	0.85	0.50	0.00	0.00	0.54	0.00	0.75	0.50	0.25	0.25	0.25	0.72
Approach Factor		0.78			0.54			0.69			0.25		

Location: Flora Rd at Sprague Ave , Spokane Valley, WA

**GPS Coordinates: Lat=47.660286, Lon=-117.184280** 

Date: 2023-05-16 Day of week: Tuesday

Weather: Overcast & Warm

Analyst: ALW

## **Total vehicle traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	d	Total
interval starts	Left	Thru	Right	Iotai									
06:59	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	15	0	15	0	97	20	8	3	0	12	81	0	251
07:15	22	2	10	2	140	16	3	7	2	12	107	2	325
07:30	24	3	23	0	184	32	5	10	3	11	120	2	417
07:45	23	2	29	1	199	38	8	6	1	22	145	1	475
08:00	25	0	24	1	145	19	7	4	1	14	112	2	354
08:15	20	1	20	2	138	25	2	9	1	11	111	1	341
08:30	25	1	21	0	156	20	4	1	1	19	121	4	373
08:45	31	2	29	0	199	34	7	4	1	11	141	6	465

### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	ıd	No	orthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
06:59	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	15	0	15	0	90	20	8	3	0	12	80	0	243
07:15	22	2	10	2	136	15	3	7	2	11	105	2	317
07:30	24	3	23	0	180	32	5	10	3	11	117	2	410
07:45	23	2	29	1	196	37	7	6	1	22	140	0	464
08:00	25	0	23	1	139	19	7	4	1	13	107	2	341
08:15	19	1	19	2	133	23	2	9	1	11	106	1	327
08:30	24	1	21	0	151	19	4	1	1	18	118	3	361
08:45	30	2	27	0	193	33	7	4	1	10	136	5	448

### Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	orthbour	nd	E	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
06:59	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	0	0	0	0	7	0	0	0	0	0	1	0	8
07:15	0	0	0	0	4	1	0	0	0	1	2	0	8
07:30	0	0	0	0	4	0	0	0	0	0	3	0	7
07:45	0	0	0	0	3	1	1	0	0	0	5	1	11
08:00	0	0	1	0	6	0	0	0	0	1	5	0	13
08:15	1	0	1	0	5	2	0	0	0	0	5	0	14
08:30	1	0	0	0	5	1	0	0	0	1	3	1	12
08:45	1	0	2	0	6	1	0	0	0	1	5	1	17

Interval starts		NE			NW			SW			SE		Total
interval starts	Left	Right	Total	TOtal									
06:59	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	3	0	3	2	0	2	0	0	0	5
07:45	0	1	1	1	0	1	1	0	1	0	1	1	4
08:00	0	0	0	0	1	1	0	1	1	0	0	0	2
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	1	0	1	0	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

07:30 - 08:30

	Sc	outhBou	nd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
	Left	Thru	Right										
Vehicle Total	92	6	96	4	666	114	22	29	6	58	488	6	1587
Factor	0.92	0.50	0.83	0.50	0.84	0.75	0.69	0.72	0.50	0.66	0.84	0.75	0.84
Approach Factor		0.90			0.82			0.79			0.82		

# **Peak Hour Vehicle Summary**

Vehicle	Sc	uthBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
Verlicie	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	91	6	94	4	648	111	21	29	6	57	470	5	1542
Truck	1	0	2	0	18	3	1	0	0	1	18	1	45

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	1	1	4	1	5	3	1	4	0	1	1	11

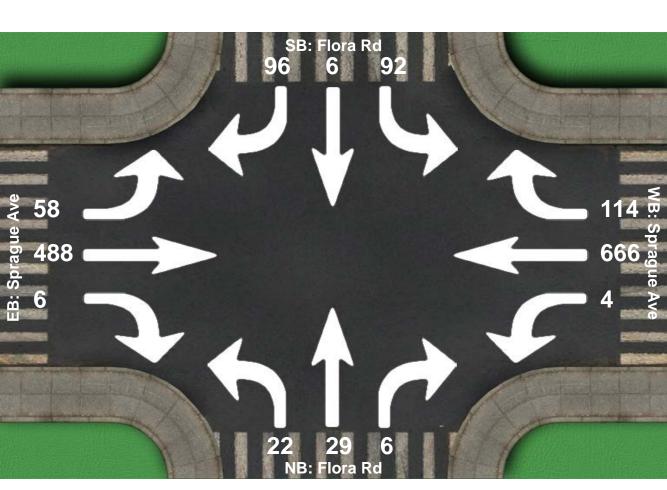
Location: Flora Rd at Sprague Ave , Spokane Valley, WA

GPS Coordinates: Lat=47.660286, Lon=-117.184280

Date: 2023-05-16 Day of week: Tuesday

Weather: Overcast & Warm

Analyst: ALW



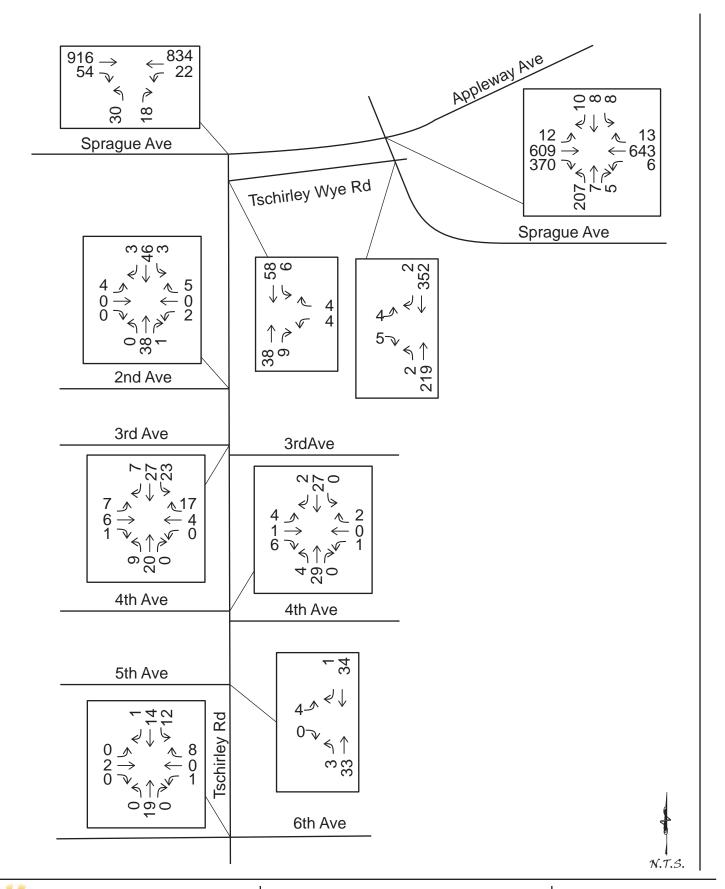
## **Intersection Peak Hour**

07:30 - 08:30

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	92	6	96	4	666	114	22	29	6	58	488	6	1587
Factor	0.92	0.50	0.83	0.50	0.84	0.75	0.69	0.72	0.50	0.66	0.84	0.75	0.84
Approach Factor		0.90			0.82			0.79			0.82		

# **TECHNICAL APPENDIX**

# **PM PEAK HOUR TRAFFIC COUNTS**





16402 E Valleyway Ave Spokane Valley, WA 99037 (509) 924-2155 www.sunburstengr.com

## **Tschirley Apts**

Traffic Study

Figure 3b

Existing P.M. Peak
Hour Traffic Volumes

PROJECT: Tschirley Road

JOB NO. 2220

INTERSECTION: Appleway / Sprague / Corbin

DATE OF COUNT: 11/17/22

#### TRAFFIC COUNT REDUCTION WORKSI PM PEAK HOURS

	_				15 Mir	nute Peri	od Beg	ginning	@								
APPROACH	MOVEMENT		4:00		4:15		4:30		4:45		5:00		5:15		5:30		5:45
		pass	trk	pass	trk	pass	trk	pass	trk	pass	trk	pass	trk	pass	trk	pass	trk
	Left	0		4		4		4		2		2		2		3	
Eastbound	Through	156	1	159		161		132		156		150		135	2		
	Right	78		78		101		113		66		77		72		70	
	App. Total	234	1	241	0	266	0	249	0		0	229	0	209		_	
	Pct Trucks		0%		0%		0%		0%		0%		0%		1%		0%
	Left	1		3		2		0		1		2		0		0	
Westbound	Through	158	0	163	2	174	1	144	1	151	0	143	1	114	1	132	1
	Right	3		5		3		2		1		1		1		7	
	App. Total	162	0	171	2	179	1	146	1	153		146	1	115		139	
	Pct Trucks		0%		1%		1%		1%		0%		1%		1%		1%
	Left	46		65		53		42	1	43		46		50		56	
Northbound	Through	1		3	1	0		2		0		0		1		1	
	Right	1		1		1		2		0		0		1		1	
	App. Total	48	0	69	1	54	0	46	1	43	0	46	0	52			
	Pct Trucks		0%		1%		0%		2%		0%		0%		0%		0%
	Left	2		2		1		3		0		0		0		3	
Southbound	Through	4		1		0		3		0		2		1		1	
	Right	4		2		2		2		5		2		2		5	
	App. Total	10	0	5	0	3	0	8	0	5	0	4	0	3	0	9	0
	Pct Trucks		0%		0%		0%		0%		0%		0%		0%		0%
Total Intersec	tion Volume	454	1	486		502	1	449	2	425		425	1	379			
Intersection P	ct Trucks		0%		1%		0%		0%		0%		0%		1%		0%

Intersection To	otal	Pct
One Hour Volu	ımes	Trucks
4:00	1898	0.37%
4:15	1868	0.32%
4:30	1805	0.22%
4:45	1684	0.36%
5:00	1622	0.31%

PROJECT: Tschirley Road JOB NO. 2220

INTERSECTION: Appleway / Sprague / Corbin

DATE OF COUNT: 11/17/22

#### PM PEAK HOUR BREAKDOWN

APPROACH	MOVEMENT		4:00		4:15		4:30		4:45	
		pass	trk	pass	trk	pass	trk	pass	trk	TOTAL
	Left	0		4		4		4		12
Eastbound	Through	156	1	159		161		132		609
	Right	78		78		101		113		370
		234	1	241	0	266	0	249	0	991
	Pct Trucks		0%		0%		0%		0%	0%
	Left	1		3		2		0		6
Westbound	Through	158	0	163	2	174	1	144	1	643
	Right	3		5		3		2		13
	App. Total	162	0	171	2	179	1	146	1	662
	Pct Trucks		0%		1%		1%		1%	1%
	Left	46		65		53		42	1	207
Northbound	Through	1		3	1	0		2		7
	Right	1		1		1		2		5
	App. Total	48	0	69	1	54	0	46	1	219
	Pct Trucks		0%		1%		0%		2%	1%
	Left	2		2		1		3		8
Southbound	Through	4		1		0		3		8
	Right	4		2		2		2		10
	App. Total	10	0	5	0	3	0	8	0	26
	Pct Trucks		0%		0%		0%		0%	0%
	•									
Total Intersec	tion Volume	454	1	486	3	502		449	2	1898
Intersection P	ct Trucks		0%		1%		0%		0%	

P.H.F. 0.94

Location: Tschirley Wye at Sprague, Spokane Valley, WA

**GPS Coordinates: Lat=47.657075, Lon=-117.168420** 

Date: 2023-03-29
Day of week: Wednesday
Weather: Overcast
Analyst: ALW

## Total vehicle traffic

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	86	2	0	0	0	0	43	0	0	0	5	136
16:15	0	86	0	0	0	0	2	54	0	0	0	1	143
16:30	1	79	1	0	0	0	1	47	0	0	0	2	131
16:45	0	83	0	0	0	0	0	69	0	1	0	1	154
17:00	0	96	0	0	0	0	1	57	0	0	0	1	155
17:15	0	96	1	0	0	0	1	53	7	2	0	1	161
17:30	1	76	1	0	0	0	0	50	0	1	0	2	131
17:45	0	76	0	0	0	0	2	52	0	2	0	3	135

### Car traffic

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	86	2	0	0	0	0	43	0	0	0	5	136
16:15	0	86	0	0	0	0	2	54	0	0	0	1	143
16:30	1	79	1	0	0	0	1	47	0	0	0	2	131
16:45	0	83	0	0	0	0	0	69	0	1	0	1	154
17:00	0	96	0	0	0	0	1	57	0	0	0	1	155
17:15	0	96	1	0	0	0	1	53	7	2	0	1	161
17:30	1	76	1	0	0	0	0	50	0	1	0	2	131
17:45	0	76	0	0	0	0	2	52	0	2	0	3	135

## Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	TOtal									
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Interval starts		NE			NW	_		SW			SE		Total
interval starts	Left	Right	Total	TOtal									
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	1	0	1	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	1	1	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

16:45 - 17:45

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	1	351	2	0	0	0	2	229	7	4	0	5	601
Factor	0.25	0.91	0.50	0.00	0.00	0.00	0.50	0.83	0.25	0.50	0.00	0.62	0.93
Approach Factor		0.91			0.00			0.86			0.75		

# **Peak Hour Vehicle Summary**

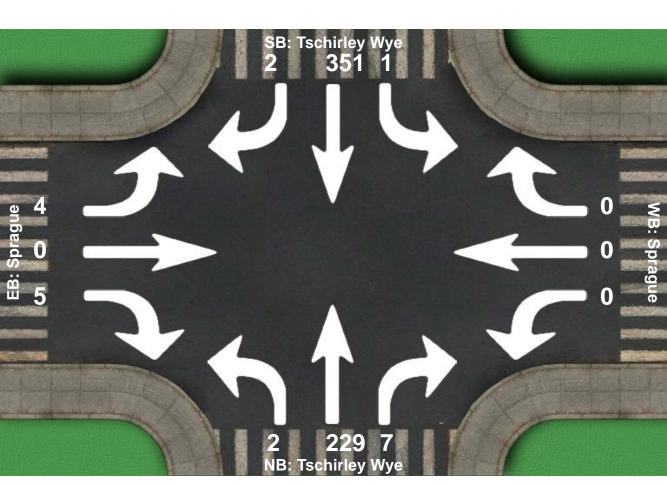
Vehicle	Sc	uthBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
verlicie	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	1	351	2	0	0	0	2	229	7	4	0	5	601
Truck	0	0	0	0	0	0	0	0	0	0	0	0	0

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	1	1	0	0	0	0	0	0	1

Location: Tschirley Wye at Sprague, Spokane Valley, WA

GPS Coordinates: Lat=47.657075, Lon=-117.168420

Date: 2023-03-29
Day of week: Wednesday
Weather: Overcast
Analyst: ALW



## **Intersection Peak Hour**

16:45 - 17:45

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	IUlai									
Vehicle Total	1	351	2	0	0	0	2	229	7	4	0	5	601
Factor	0.25	0.91	0.50	0.00	0.00	0.00	0.50	0.83	0.25	0.50	0.00	0.62	0.93
Approach Factor		0.91			0.00			0.86			0.75		

Location: Tschirley at Sprague, Spokane Valley, Wa

GPS Coordinates: Lat=47.656241, Lon=-117.169668

Date: 2022-11-15 Day of week: Tuesday

Weather: Cool, Partly Cloudy

Analyst: ALW

### **Total vehicle traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
interval starts	Left	Thru	Right	Total									
16:00	0	0	0	9	225	0	9	0	7	0	239	15	504
16:15	0	0	0	7	220	0	9	0	4	0	246	12	498
16:30	0	0	0	2	200	0	6	0	2	0	220	10	440
16:45	0	0	0	4	189	0	6	0	5	0	211	17	432
17:00	0	0	0	3	170	0	3	0	5	0	248	10	439
17:15	0	0	0	8	150	0	6	0	4	0	225	19	412
17:30	0	0	0	5	181	1	3	0	5	0	199	19	413
17:45	0	0	0	2	200	0	9	0	4	0	204	10	429
18:00	0	0	0	0	0	0	0	0	0	0	1	0	1

### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Total									
16:00	0	0	0	9	223	0	9	0	7	0	230	15	493
16:15	0	0	0	7	218	0	9	0	4	0	239	12	489
16:30	0	0	0	2	198	0	6	0	2	0	218	10	436
16:45	0	0	0	4	189	0	6	0	5	0	211	17	432
17:00	0	0	0	3	169	0	3	0	5	0	247	10	437
17:15	0	0	0	8	149	0	6	0	4	0	224	19	410
17:30	0	0	0	5	178	1	3	0	5	0	198	19	409
17:45	0	0	0	2	200	0	9	0	4	0	203	9	427
18:00	0	0	0	0	0	0	0	0	0	0	1	0	1

### Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	orthbour	nd	E	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	0	0	0	2	0	0	0	0	0	9	0	11
16:15	0	0	0	0	2	0	0	0	0	0	7	0	9
16:30	0	0	0	0	2	0	0	0	0	0	2	0	4
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	1	0	0	0	0	0	1	0	2
17:15	0	0	0	0	1	0	0	0	0	0	1	0	2
17:30	0	0	0	0	3	0	0	0	0	0	1	0	4
17:45	0	0	0	0	0	0	0	0	0	0	1	1	2
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

latem rel etemte		NE			NW			SW			SE		Tatal
Interval starts	Left	Right	Total	Total									
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	1	0	1	0	0	0	1	0	1	2
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

16:00 - 17:00

	SouthBound			Westbound			Northbound			Ea	Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	0	0	22	834	0	30	0	18	0	916	54	1874
Factor	0.00	0.00	0.00	0.61	0.93	0.00	0.83	0.00	0.64	0.00	0.93	0.79	0.93
Approach Factor		0.00			0.91			0.75			0.94		

# **Peak Hour Vehicle Summary**

Vehicle	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	0	0	0	22	828	0	30	0	18	0	898	54	1850
Truck	0	0	0	0	6	0	0	0	0	0	18	0	24

	NE .			NW			SW			SE			Total
	Left	Right	Total	Iotai									
Pedestrians	0	0	0	1	0	1	0	0	0	1	0	1	2

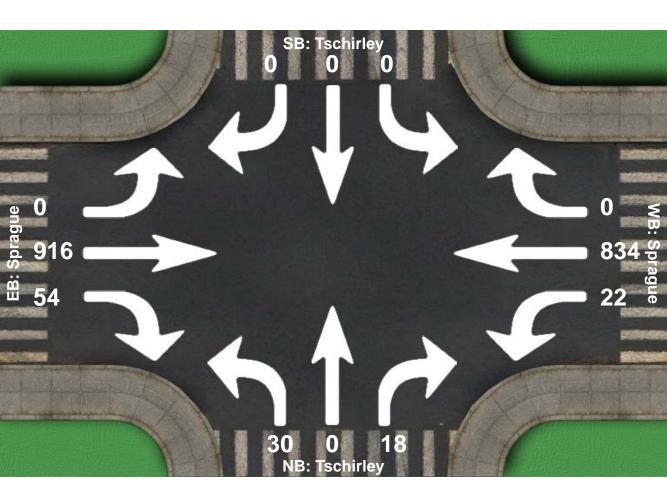
Location: Tschirley at Sprague, Spokane Valley, Wa

GPS Coordinates: Lat=47.656241, Lon=-117.169668

Date: 2022-11-15 Day of week: Tuesday

Weather: Cool, Partly Cloudy

Analyst: ALW



## **Intersection Peak Hour**

16:00 - 17:00

	SouthBound			Westbound			Northbound			Ea	Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	IUlai
Vehicle Total	0	0	0	22	834	0	30	0	18	0	916	54	1874
Factor	0.00	0.00	0.00	0.61	0.93	0.00	0.83	0.00	0.64	0.00	0.93	0.79	0.93
Approach Factor	0.00			0.91			0.75						

Location: Tschirley Ave at Tschirley Wye, Spokane Valley, WA

**GPS Coordinates: Lat=47.656960, Lon=-117.168645** 

Date: 2023-04-05 Day of week: Wednesday

Weather: Sunny Analyst: ALW

#### **Total vehicle traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Total									
15:59	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	2	16	0	1	0	2	0	14	3	0	0	0	38
16:15	1	11	0	1	0	0	0	10	0	0	0	0	23
16:30	1	11	0	2	0	1	0	8	3	0	0	0	26
16:45	2	20	0	0	0	1	0	6	3	0	0	0	32
17:00	0	17	1	0	0	0	0	16	0	0	0	0	34
17:15	0	14	0	1	0	0	0	4	0	0	0	0	19
17:30	1	17	0	2	0	1	0	11	0	0	0	0	32
17:45	0	11	0	0	0	1	0	10	0	0	0	0	22

#### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Total									
15:59	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	2	16	0	1	0	2	0	14	3	0	0	0	38
16:15	1	11	0	1	0	0	0	10	0	0	0	0	23
16:30	1	11	0	2	0	1	0	8	3	0	0	0	26
16:45	2	20	0	0	0	1	0	6	3	0	0	0	32
17:00	0	17	1	0	0	0	0	16	0	0	0	0	34
17:15	0	14	0	1	0	0	0	4	0	0	0	0	19
17:30	1	17	0	2	0	1	0	11	0	0	0	0	32
17:45	0	11	0	0	0	1	0	10	0	0	0	0	22

## **Truck traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	nd	Total
interval starts	Left	Thru	Right	Total									
15:59	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Interval starts		NE			NW			SW			SE		Total
interval starts	Left	Right	Total	TOtal									
15:59	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	2	2	0	0	0	1	0	1	0	0	0	3
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	2	0	2	0	0	0	0	0	0	2
17:30	0	0	0	1	0	1	0	0	0	0	0	0	1
17:45	0	0	0	0	1	1	0	0	0	0	0	0	1

16:00 - 17:00

	Sc	outhBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	6	58	0	4	0	4	0	38	9	0	0	0	119
Factor	0.75	0.72	0.00	0.50	0.00	0.50	0.00	0.68	0.75	0.00	0.00	0.00	0.78
Approach Factor		0.73			0.67			0.69			0.00		

# **Peak Hour Vehicle Summary**

Vehicle	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
verlicie	Left	Thru	Right										
Car	6	58	0	4	0	4	0	38	9	0	0	0	119
Truck	0	0	0	0	0	0	0	0	0	0	0	0	0

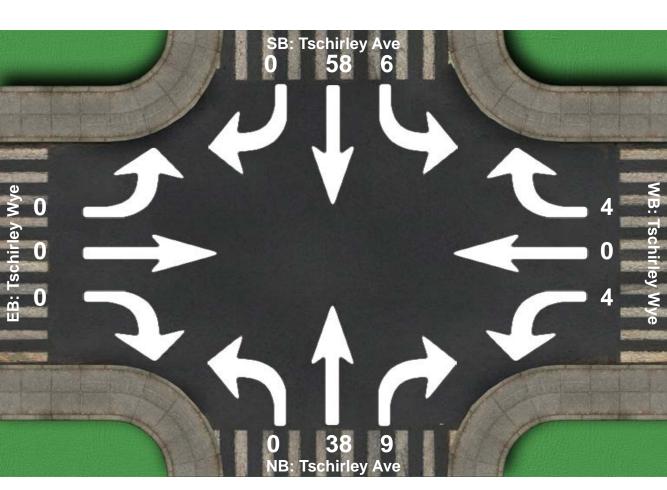
		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	2	2	0	0	0	1	0	1	0	0	0	3

Location: Tschirley Ave at Tschirley Wye, Spokane Valley, WA

GPS Coordinates: Lat=47.656960, Lon=-117.168645

Date: 2023-04-05
Day of week: Wednesday
Weather: Sunny

Analyst: ALW



## **Intersection Peak Hour**

16:00 - 17:00

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	6	58	0	4	0	4	0	38	9	0	0	0	119
Factor	0.75	0.72	0.00	0.50	0.00	0.50	0.00	0.68	0.75	0.00	0.00	0.00	0.78
Approach Factor		0.73			0.67			0.69			0.00		

Location: Tschirley Rd at 2nd Ave , Spokane Valley, WA

**GPS Coordinates: Lat=47.657041, Lon=-117.174976** 

Date: 2023-03-30
Day of week: Thursday
Weather: P Cloudy
Analyst: ALW

### **Total vehicle traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Total									
16:00	2	16	4	0	0	0	0	11	0	0	0	0	33
16:15	0	6	2	0	0	1	0	6	0	1	0	0	16
16:30	0	9	1	0	0	0	0	4	0	1	0	0	15
16:45	0	11	0	0	0	2	0	10	1	1	0	0	25
17:00	3	15	0	0	0	1	0	10	0	1	0	0	30
17:15	0	7	2	2	0	0	0	10	0	0	0	0	21
17:30	0	13	1	0	0	2	0	8	0	2	0	0	26
17:45	0	8	1	0	0	0	1	8	0	1	0	0	19

#### Car traffic

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	2	16	4	0	0	0	0	11	0	0	0	0	33
16:15	0	6	2	0	0	1	0	6	0	1	0	0	16
16:30	0	9	1	0	0	0	0	4	0	1	0	0	15
16:45	0	11	0	0	0	2	0	10	1	1	0	0	25
17:00	3	15	0	0	0	1	0	10	0	1	0	0	30
17:15	0	7	2	2	0	0	0	10	0	0	0	0	21
17:30	0	13	1	0	0	2	0	7	0	2	0	0	25
17:45	0	8	1	0	0	0	1	8	0	1	0	0	19

### Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	ıd	Total
interval starts	Left	Thru	Right	TOtal									
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Interval starts		NE			NW	_		SW			SE		Total
interval starts	Left	Right	Total	TOtal									
16:00	0	1	1	0	0	0	0	0	0	0	0	0	1
16:15	0	1	1	0	0	0	0	0	0	1	0	1	2
16:30	0	0	0	0	0	0	0	1	1	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	2	2	2

16:45 - 17:45

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	3	46	3	2	0	5	0	38	1	4	0	0	102
Factor	0.25	0.77	0.38	0.25	0.00	0.62	0.00	0.95	0.25	0.50	0.00	0.00	0.85
Approach Factor		0.72			0.88			0.89			0.50		

# **Peak Hour Vehicle Summary**

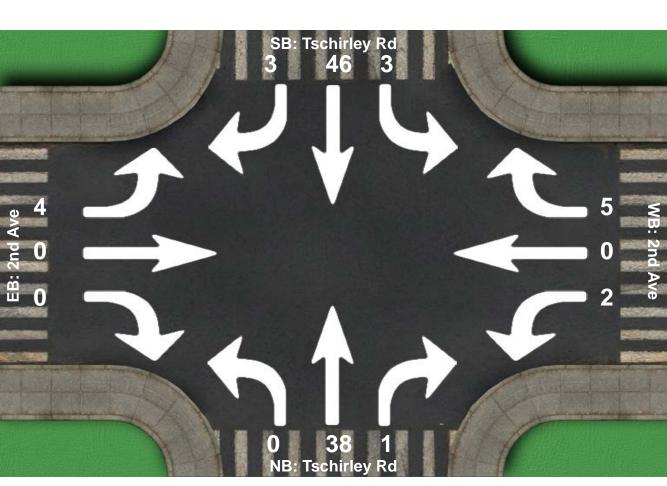
Vehicle	Sc	uthBou	nd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
Verlicie	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	3	46	3	2	0	5	0	37	1	4	0	0	101
Truck	0	0	0	0	0	0	0	1	0	0	0	0	1

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0

Location: Tschirley Rd at 2nd Ave , Spokane Valley, WA

GPS Coordinates: Lat=47.657041, Lon=-117.174976

Date: 2023-03-30
Day of week: Thursday
Weather: P Cloudy
Analyst: ALW



## **Intersection Peak Hour**

16:45 - 17:45

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	IUlai									
Vehicle Total	3	46	3	2	0	5	0	38	1	4	0	0	102
Factor	0.25	0.77	0.38	0.25	0.00	0.62	0.00	0.95	0.25	0.50	0.00	0.00	0.85
Approach Factor		0.72			0.88			0.89			0.50		

Location: Tschirley at 3rd, Spokane Valley GPS Coordinates: Lat=47.541017, Lon=-117.393284

Date: 2022-11-16
Day of week: Wednesday
Weather: Overcast

Analyst: Mike McCluskey

#### **Total vehicle traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	orthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	iolai
16:00	9	1	3	0	1	6	4	8	0	0	2	0	34
16:15	4	5	2	0	1	3	3	4	0	1	3	1	27
16:30	6	12	1	0	1	3	0	5	0	1	1	0	30
16:45	4	9	1	0	1	5	2	3	0	5	0	0	30
17:00	0	5	2	0	0	2	2	5	1	0	0	0	17
17:15	8	12	2	0	0	2	1	1	0	2	1	1	30
17:30	1	9	0	0	0	3	1	5	0	0	0	0	19
17:45	3	4	0	0	2	2	0	5	0	1	0	1	18

#### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	orthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	IOlai
16:00	9	1	3	0	1	6	4	7	0	0	2	0	33
16:15	4	5	2	0	1	3	3	4	0	1	3	1	27
16:30	6	12	1	0	1	3	0	5	0	1	1	0	30
16:45	4	9	1	0	1	5	2	3	0	5	0	0	30
17:00	0	5	2	0	0	2	2	5	1	0	0	0	17
17:15	8	12	2	0	0	2	1	1	0	2	1	1	30
17:30	1	9	0	0	0	3	1	5	0	0	0	0	19
17:45	3	4	0	0	2	2	0	5	0	1	0	1	18

## Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Total									
16:00	0	0	0	0	0	0	0	1	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

## **Bicycles traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	TOtal									
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

reuesiiid	all V	Jiuii	163										
Interval starts		NE			NW			SW			SE		Total
interval starts	Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	IUIAI
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	n	0	0	n	0	0	0	0	0

16:00 - 17:00

	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Vehicle Total	23	27	7	0	4	17	9	20	0	7	6	1	121
Factor	0.64	0.56	0.58	0.00	1.00	0.71	0.56	0.62	0.00	0.35	0.50	0.25	0.89
Approach Factor		0.75			0.75			0.60			0.70		

# **Peak Hour Vehicle Summary**

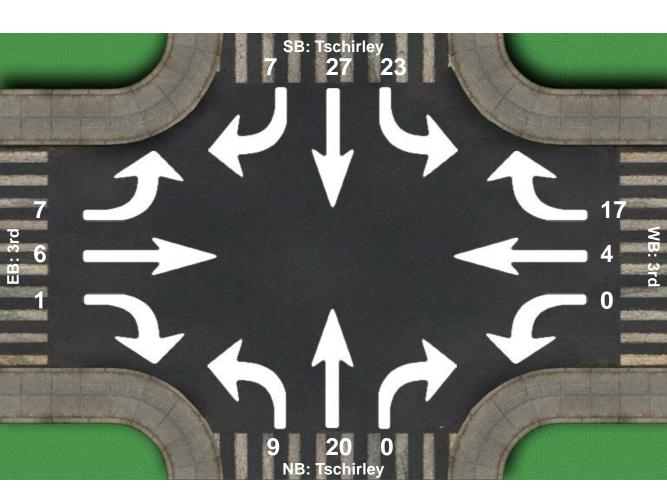
Vehicle	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
verlicie	Left	Thru	Right										
Car	23	27	7	0	4	17	9	19	0	7	6	1	120
Truck	0	0	0	0	0	0	0	1	0	0	0	0	1
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

		NE			NW	_		SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0

Location: Tschirley at 3rd, Spokane Valley GPS Coordinates: Lat=47.541017, Lon=-117.393284

Date: 2022-11-16
Day of week: Wednesday
Weather: Overcast

Analyst: Mike McCluskey



# **Intersection Peak Hour**

16:00 - 17:00

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	Total									
Vehicle Total	23	27	7	0	4	17	9	20	0	7	6	1	121
Factor	0.64	0.56	0.58	0.00	1.00	0.71	0.56	0.62	0.00	0.35	0.50	0.25	0.89
Approach Factor		0.75			0.75			0.60			0.70		

Location: Tschirley Rd at 4th Ave, Spokane Valley, WA

**GPS Coordinates: Lat=47.660389, Lon=-117.183993** 

Date: 2023-04-06
Day of week: Thursday
Weather: P Cloudy
Analyst: ALW

### **Total vehicle traffic**

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	13	1	0	0	0	1	8	0	1	0	0	24
16:15	0	8	1	0	0	0	0	4	0	0	0	2	15
16:30	0	4	0	0	0	0	0	8	0	1	0	1	14
16:45	0	5	1	0	0	1	1	7	0	1	0	1	17
17:00	0	7	0	0	0	1	0	8	0	0	0	2	18
17:15	0	9	0	0	0	0	2	7	0	1	0	0	19
17:30	0	6	1	1	0	0	1	7	0	2	1	3	22
17:45	2	3	3	0	0	0	0	1	0	2	0	0	11

#### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	d	Total
interval starts	Left	Thru	Right	Total									
16:00	0	13	1	0	0	0	1	8	0	1	0	0	24
16:15	0	8	1	0	0	0	0	4	0	0	0	2	15
16:30	0	4	0	0	0	0	0	8	0	1	0	1	14
16:45	0	5	1	0	0	1	1	7	0	1	0	1	17
17:00	0	7	0	0	0	1	0	8	0	0	0	2	18
17:15	0	9	0	0	0	0	2	7	0	1	0	0	19
17:30	0	6	1	1	0	0	1	7	0	2	1	3	22
17:45	2	3	3	0	0	0	0	1	0	2	0	0	11

### Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	ıd	Total
interval starts	Left	Thru	Right	TOtal									
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Interval starts		NE			NW	_		SW			SE		Total
interval starts	Left	Right	Total	IOtal									
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	2	0	2	0	0	0	1	0	1	0	0	0	3
16:30	2	0	2	0	0	0	0	0	0	2	0	2	4
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	2	0	2	0	0	0	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	1	1	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

16:45 - 17:45

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	0	27	2	1	0	2	4	29	0	4	1	6	76
Factor	0.00	0.75	0.50	0.25	0.00	0.50	0.50	0.91	0.00	0.50	0.25	0.50	0.86
Approach Factor		0.81			0.75			0.92			0.46		

# **Peak Hour Vehicle Summary**

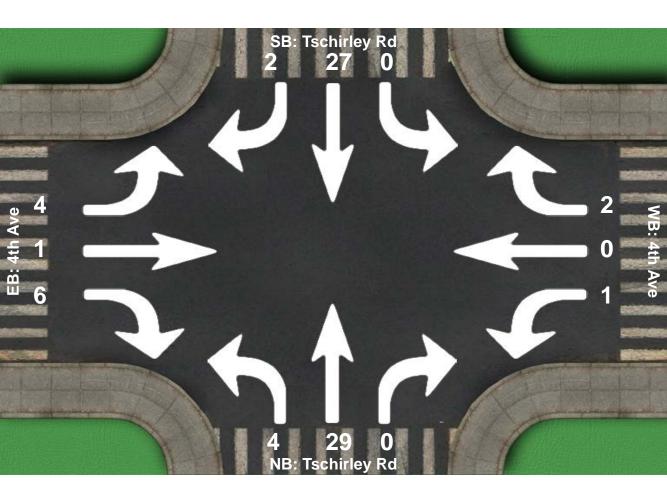
Vehicle	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
Verlicie	Left	Thru	Right										
Car	0	27	2	1	0	2	4	29	0	4	1	6	76
Truck	0	0	0	0	0	0	0	0	0	0	0	0	0

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	1	1	0	0	0	2	0	2	0	0	0	3

Location: Tschirley Rd at 4th Ave, Spokane Valley, WA

GPS Coordinates: Lat=47.660389, Lon=-117.183993

Date: 2023-04-06
Day of week: Thursday
Weather: P Cloudy
Analyst: ALW



## **Intersection Peak Hour**

16:45 - 17:45

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	IUlai									
Vehicle Total	0	27	2	1	0	2	4	29	0	4	1	6	76
Factor	0.00	0.75	0.50	0.25	0.00	0.50	0.50	0.91	0.00	0.50	0.25	0.50	0.86
Approach Factor		0.81			0.75			0.92			0.46		

PROJECT: Tschirley Apts JOB NO. 2220 INTERSECTION: Tschirley / 5th

DATE OF COUNT: 4/6/23

# TRAFFIC COUNT REDUCTION WORKSHEET PM PEAK HOURS 15 Minute Period Beginning @

						10 1 0110		9 -									
APPROACH	MOVEMENT		4:00		4:15		4:30		4:45		5:00		5:15		5:30		5:45
		pass	trk	pass	trk	pass	trk	pass	trk	pass	trk	pass	trk	pass	trk	pass	trk
	Left	1		1								2		2			
Eastbound	Through																
	Right	1															
	App. Total	2	0	1	0	0	0	0	0	0	0	2	0	2	0	0	0
	Pct Trucks		0%		0%		#####		#####		#####		0%		0%		#####
	Left																
Westbound	Through																
	Right																
	App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pct Trucks		#####		#####		#####		#####		#####		#####		#####		#####
	Left					2		1		1		1					
Northbound	Through	9		4		8		8		8		9		8		1	
	Right																
	App. Total	9	0	4	0	10	0	9	0	9	0	10	0	8	0	1	0
	Pct Trucks		0%		0%		0%		0%		0%		0%		0%		0%
	Left																
Southbound	Through	13		10		5		6		9		9		10		3	
	Right			1								1					
	App. Total	13	0	11	0	5	0	6	0	9	0	10	0	10	0	3	0
	Pct Trucks		0%		0%		0%		0%		0%		0%		0%		0%
Total Intersection	Volume	24	0	16	0	15	0	15	0	18	0	22	0	20	0	4	0
Intersection Pct T	rucks		0%		0%		0%		0%		0%		0%		0%		0%

Intersection Total		Pct
One Hour Volumes		Trucks
4:00	70	0.00%
4:15	64	0.00%
4:30	70	0.00%
4:45	75	0.00%
5:00	64	0.00%

PROJECT: Tschirley Apts JOB NO. 2220 INTERSECTION: Tschirley / 5th

DATE OF COUNT: 4/6/23

#### PM PEAK HOUR BREAKDOWN

APPROACH	MOVEMENT		4:45		5:00		5:15		5:30	
		pass	trk	pass	trk	pass	trk	pass	trk	TOTAL
	Left					2		2		4
Eastbound	Through									0
	Right									0
	App. Total	0	0	0	0	2	0	2	0	4
	Pct Trucks		#####		#####		0%		0%	0%
	Left									0
Westbound	Through									0
	Right									0
	App. Total	0	0	0	0	0	0	0	0	0
	Pct Trucks		#####		#####		#####		#####	#####
	Left	1		1		1				3
Northbound	Through	8		8		9		8		33
	Right									0
	App. Total	9	0	9	0	10	0	8	0	36
	Pct Trucks		0%		0%		0%		0%	0%
	Left									0
Southbound	Through	6		9		9		10		34
	Right					1				1
	App. Total	6	0	9	0	10	0	10	0	35
	Pct Trucks		0%		0%		0%		0%	0%
Total Intersection	n Volume	15	0	18	0	22	0	20	0	75
Intersection Pct	Trucks		0%		0%		0%		0%	

P.H.F.: 0.85

Location: Tschirley at 6th Ave, Spokane Valley, WA

GPS Coordinates: Lat=47.652285, Lon=-117.169807

Date: 2022-11-16
Day of week: Wednesday
Weather: Overcast
Analyst: ALW

### Total vehicle traffic

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	2	2	0	0	0	3	0	8	0	0	0	0	15
16:15	5	3	0	0	0	2	0	5	0	0	1	0	16
16:30	2	6	1	1	0	2	0	3	0	0	0	0	15
16:45	3	3	0	0	0	1	0	3	0	0	1	0	11
17:00	3	1	0	0	0	1	0	6	1	0	1	1	14
17:15	7	2	0	0	0	1	0	0	0	0	1	0	11
17:30	4	1	0	1	1	2	0	4	0	0	0	0	13
17:45	0	4	0	0	0	0	0	3	0	0	0	0	7

#### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	d	Total
interval starts	Left	Thru	Right	Total									
16:00	2	2	0	0	0	3	0	7	0	0	0	0	14
16:15	5	3	0	0	0	2	0	5	0	0	1	0	16
16:30	2	6	1	1	0	2	0	3	0	0	0	0	15
16:45	3	2	0	0	0	1	0	3	0	0	1	0	10
17:00	3	1	0	0	0	1	0	6	1	0	1	1	14
17:15	7	2	0	0	0	1	0	0	0	0	1	0	11
17:30	4	1	0	1	1	2	0	3	0	0	0	0	12
17:45	0	4	0	0	0	0	0	3	0	0	0	0	7

### Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
interval starts	Left	Thru	Right	TOtal									
16:00	0	0	0	0	0	0	0	1	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Interval starts		NE			NW			SW			SE		Total
interval starts	Left	Right	Total	IOtal									
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

16:00 - 17:00

	Sc	outhBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	12	14	1	1	0	8	0	19	0	0	2	0	57
Factor	0.60	0.58	0.25	0.25	0.00	0.67	0.00	0.59	0.00	0.00	0.50	0.00	0.89
Approach Factor		0.75			0.75			0.59			0.50		

# **Peak Hour Vehicle Summary**

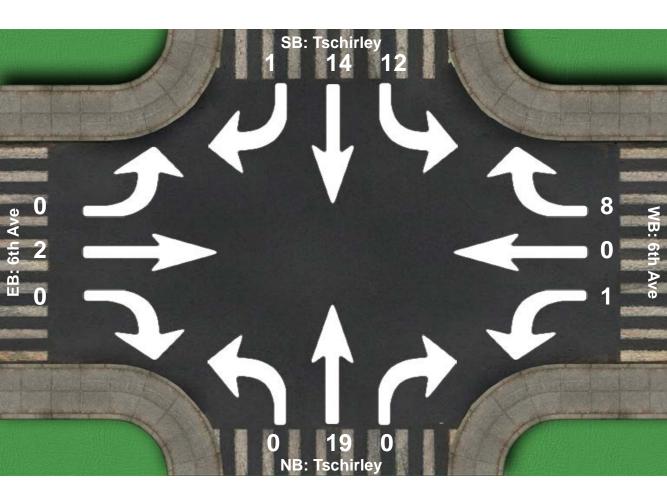
Vehicle	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
Verlicie	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	12	13	1	1	0	8	0	18	0	0	2	0	55
Truck	0	1	0	0	0	0	0	1	0	0	0	0	2

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0

Location: Tschirley at 6th Ave, Spokane Valley, WA

GPS Coordinates: Lat=47.652285, Lon=-117.169807

Date: 2022-11-16
Day of week: Wednesday
Weather: Overcast
Analyst: ALW



## **Intersection Peak Hour**

16:00 - 17:00

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	IUlai									
Vehicle Total	12	14	1	1	0	8	0	19	0	0	2	0	57
Factor	0.60	0.58	0.25	0.25	0.00	0.67	0.00	0.59	0.00	0.00	0.50	0.00	0.89
Approach Factor		0.75			0.75			0.59			0.50		

Location: Flora at Sprague, Spokane Valley, WA GPS Coordinates: Lat=47.657009, Lon=-117.168575

Date: 2023-05-16
Day of week: Tuesday
Weather: Sunny
Analyst: ALW

#### **Total vehicle traffic**

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	iotai
16:00	71	6	36	3	213	34	6	7	1	38	189	6	610
16:15	43	4	29	2	220	35	8	4	0	25	210	4	584
16:30	46	2	33	5	218	23	10	2	2	34	232	4	611
16:45	58	8	28	6	223	24	6	2	3	51	197	8	614
17:00	46	8	37	5	203	23	3	3	4	41	230	3	606
17:15	73	3	38	7	224	33	5	5	1	43	228	2	662
17:30	51	3	26	5	171	24	2	3	2	29	209	10	535
17:45	42	12	22	3	166	20	9	6	1	27	179	10	497
18:00	0	0	0	0	0	0	0	0	0	1	0	0	1

## Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astbour	d	Total
interval starts	Left	Thru	Right	iotai									
16:00	70	6	35	3	205	34	6	7	1	38	182	6	593
16:15	41	4	28	2	219	35	8	4	0	25	203	4	573
16:30	46	2	33	5	214	23	10	2	2	34	232	4	607
16:45	57	8	28	6	221	23	6	2	3	51	194	8	607
17:00	46	8	37	5	202	23	3	3	4	41	230	3	605
17:15	73	3	38	7	223	33	5	5	1	43	227	2	660
17:30	51	3	26	5	171	24	2	3	2	29	207	10	533
17:45	42	12	22	3	165	20	9	6	1	27	178	10	495
18:00	0	0	0	0	0	0	0	0	0	1	0	0	1

## Truck traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	E	astbour	ıd	Total
interval starts	Left	Thru	Right	Total									
16:00	1	0	1	0	8	0	0	0	0	0	7	0	17
16:15	2	0	1	0	1	0	0	0	0	0	7	0	11
16:30	0	0	0	0	4	0	0	0	0	0	0	0	4
16:45	1	0	0	0	2	1	0	0	0	0	3	0	7
17:00	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15	0	0	0	0	1	0	0	0	0	0	1	0	2
17:30	0	0	0	0	0	0	0	0	0	0	2	0	2
17:45	0	0	0	0	1	0	0	0	0	0	1	0	2
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

later el etente		NE			NW			SW			SE		T-4-1
Interval starts	Left	Right	Total	Total									
16:00	0	0	0	0	0	0	0	0	0	1	0	1	1
16:15	0	0	0	0	0	0	0	0	0	1	2	3	3
16:30	0	0	0	1	0	1	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	1	1	0	1	1	0	1	1	0	0	0	3
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	1	0	1	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	1	1	0	1	1	2
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

16:30 - 17:30

	Sc	outhBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	223	21	136	23	868	103	24	12	10	169	887	17	2493
Factor	0.76	0.66	0.89	0.82	0.97	0.78	0.60	0.60	0.62	0.83	0.96	0.53	0.94
Approach Factor		0.83			0.94			0.82			0.98		

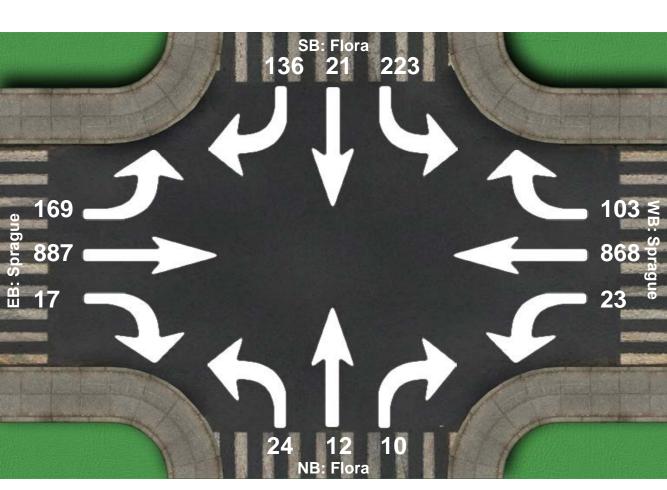
# **Peak Hour Vehicle Summary**

Vehicle	Sc	outhBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
Verlicie	Left	Thru	Right										
Car	222	21	136	23	860	102	24	12	10	169	883	17	2479
Truck	1	0	0	0	8	1	0	0	0	0	4	0	14

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	1	1	1	1	2	0	1	1	0	0	0	4

Location: Flora at Sprague, Spokane Valley, WA GPS Coordinates: Lat=47.657009, Lon=-117.168575

Date: 2023-05-16
Day of week: Tuesday
Weather: Sunny
Analyst: ALW



## **Intersection Peak Hour**

16:30 - 17:30

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	- J		Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	223	21	136	23	868	103	24	12	10	169	887	17	2493
Factor	0.76	0.66	0.89	0.82	0.97	0.78	0.60	0.60	0.62	0.83	0.96	0.53	0.94
Approach Factor		0.83			0.94			0.82			0.98		

# **TECHNICAL APPENDIX**

# SCHOOL DISMISSAL TRAFFIC COUNTS

Location: Corbin Rd at Appleway, Spokane Valley, WA

**GPS Coordinates: Lat=47.656996, Lon=-117.168598** 

Date: 2023-05-16
Day of week: Tuesday
Weather: Sunny
Analyst: ALW

#### **Total vehicle traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	ıd	Total
interval starts	Left	Thru	Right	Total									
14:00	4	1	3	1	157	1	40	1	0	5	145	57	415
14:15	1	1	4	4	177	3	50	1	2	1	148	64	456
14:30	2	2	1	3	212	5	48	2	3	4	155	78	515
14:45	6	8	5	3	166	5	52	1	1	1	188	92	528
15:00	4	2	1	1	182	2	52	0	3	2	142	93	484

### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
interval starts	Left	Thru	Right	iotai									
14:00	0	1	2	1	149	1	40	0	0	3	145	56	398
14:15	1	1	4	4	169	3	50	1	2	1	144	63	443
14:30	1	2	1	3	210	3	48	2	3	1	153	78	505
14:45	4	5	2	3	163	1	52	1	1	1	186	89	508
15:00	3	2	1	1	180	2	52	0	3	2	140	89	475

### **Truck traffic**

Interval starts	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	ıd	Total
interval starts	Left	Thru	Right	iotai									
14:00	4	0	1	0	8	0	0	1	0	2	0	1	17
14:15	0	0	0	0	8	0	0	0	0	0	4	1	13
14:30	1	0	0	0	2	2	0	0	0	3	2	0	10
14:45	2	3	3	0	3	4	0	0	0	0	2	3	20
15:00	1	0	0	0	2	0	0	0	0	0	2	4	9

Interval starts		NE			NW			SW			SE		Total
interval starts	Left	Right	Total	TOtal									
14:00	0	0	0	0	0	0	0	1	1	0	0	0	1
14:15	0	0	0	0	0	0	0	0	0	1	1	2	2
14:30	0	0	0	1	24	25	1	0	1	0	0	0	26
14:45	0	0	0	0	30	30	1	1	2	0	0	0	32
15:00	0	1	1	0	3	3	3	0	3	0	0	0	7

14:15 - 15:15

	Sc	outhBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right										
Vehicle Total	13	13	11	11	737	15	202	4	9	8	633	327	1983
Factor	0.54	0.41	0.55	0.69	0.87	0.75	0.97	0.50	0.75	0.50	0.84	0.88	0.94
Approach Factor		0.49			0.87			0.98			0.86		

# **Peak Hour Vehicle Summary**

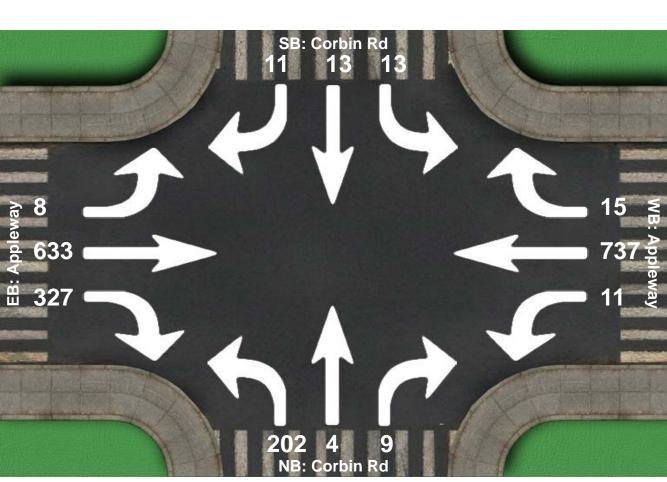
Vehicle	Sc	outhBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
Verlicie	Left	Thru	Right										
Car	9	10	8	11	722	9	202	4	9	5	623	319	1931
Truck	4	3	3	0	15	6	0	0	0	3	10	8	52

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	1	1	1	57	58	5	1	6	1	1	2	67

Location: Corbin Rd at Appleway, Spokane Valley, WA

GPS Coordinates: Lat=47.656996, Lon=-117.168598

Date: 2023-05-16
Day of week: Tuesday
Weather: Sunny
Analyst: ALW



## **Intersection Peak Hour**

14:15 - 15:15

	Sc	outhBou	ınd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
	Left	3		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Vehicle Total	13	13	11	11	737	15	202	4	9	8	633	327	1983
Factor	0.54	0.41	0.55	0.69	0.87	0.75	0.97	0.50	0.75	0.50	0.84	0.88	0.94
Approach Factor		0.49			0.87			0.98			0.86		

Location: Tschirley Rd at Sprague Ave, Spokane Valley, WA

**GPS Coordinates: Lat=47.656833, Lon=-117.171745** 

Date: 2023-05-11
Day of week: Thursday
Weather: Sunny
Analyst: ALW

#### **Total vehicle traffic**

Interval starts	Sc	uthBou	ınd	We	estboun	d	No	rthbour	nd	E	astboun	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	IUIAI
14:00	0	0	0	5	168	1	8	0	10	0	196	10	398
14:15	0	0	0	7	190	0	5	0	9	0	213	14	438
14:30	0	0	0	10	244	0	6	0	9	0	230	12	511
14:45	0	0	0	15	230	4	9	0	5	0	251	14	528
15:00	0	0	0	6	235	4	7	0	5	0	225	18	500
15:15	0	0	0	24	232	1	8	0	3	0	290	14	572
15:30	0	0	0	0	0	0	1	0	0	0	0	0	1

#### Car traffic

Interval starts	Sc	outhBou	ınd	We	estboun	ıd	No	orthbour	nd	Ea	astboun	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	IOlai
14:00	0	0	0	5	157	1	8	0	10	0	195	10	386
14:15	0	0	0	6	189	0	5	0	7	0	207	14	428
14:30	0	0	0	10	241	0	6	0	9	0	228	12	506
14:45	0	0	0	15	228	4	9	0	5	0	249	14	524
15:00	0	0	0	6	231	4	7	0	5	0	223	18	494
15:15	0	0	0	24	228	1	7	0	3	0	286	14	563
15:30	0	0	0	0	0	0	1	0	0	0	0	0	1

### Truck traffic

Interval starts	Sc	uthBou	nd	We	estboun	d	No	rthbour	nd	E	astbour	ıd	Total
interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOtal
14:00	0	0	0	0	11	0	0	0	0	0	1	0	12
14:15	0	0	0	1	1	0	0	0	2	0	6	0	10
14:30	0	0	0	0	3	0	0	0	0	0	2	0	5
14:45	0	0	0	0	2	0	0	0	0	0	2	0	4
15:00	0	0	0	0	4	0	0	0	0	0	2	0	6
15:15	0	0	0	0	4	0	1	0	0	0	4	0	9
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0

Interval starts		NE			NW			SW			SE		Total
interval starts	Left	Right	Total	TOtal									
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	1	1	0	0	0	0	1	1	0	0	0	2
15:00	0	0	0	0	0	0	0	0	0	1	0	1	1
15:15	0	0	0	0	0	0	0	1	1	0	0	0	1
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0

14:30 - 15:30

	SouthBound		We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	0	0	55	941	9	30	0	22	0	996	58	2111
Factor	0.00	0.00	0.00	0.57	0.96	0.56	0.83	0.00	0.61	0.00	0.86	0.81	0.92
Approach Factor	0.00			0.98			0.87			0.87			

# **Peak Hour Vehicle Summary**

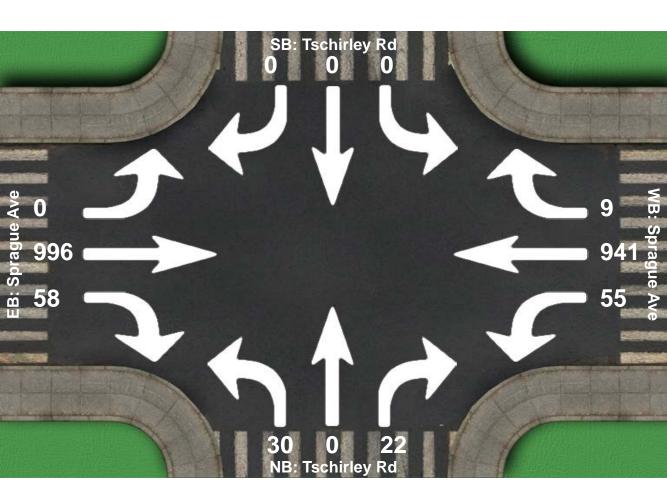
Vehicle	Sc	uthBou	nd	We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total
verlicie	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	0	0	0	55	928	9	29	0	22	0	986	58	2087
Truck	0	0	0	0	13	0	1	0	0	0	10	0	24

		NE			NW			SW			SE		Total
	Left	Right	Total	Total									
Pedestrians	0	1	1	0	0	0	0	2	2	1	0	1	4

Location: Tschirley Rd at Sprague Ave, Spokane Valley, WA

GPS Coordinates: Lat=47.656833, Lon=-117.171745

Date: 2023-05-11
Day of week: Thursday
Weather: Sunny
Analyst: ALW



## **Intersection Peak Hour**

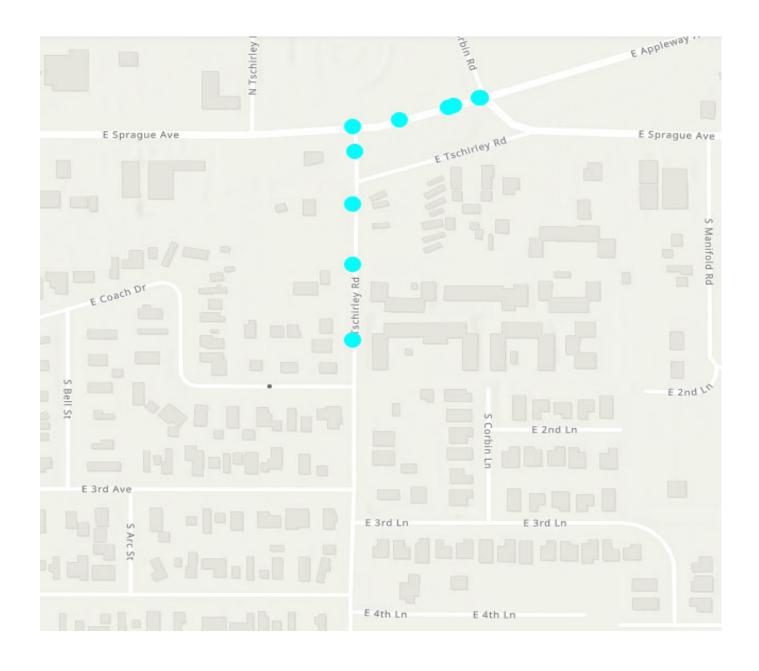
14:30 - 15:30

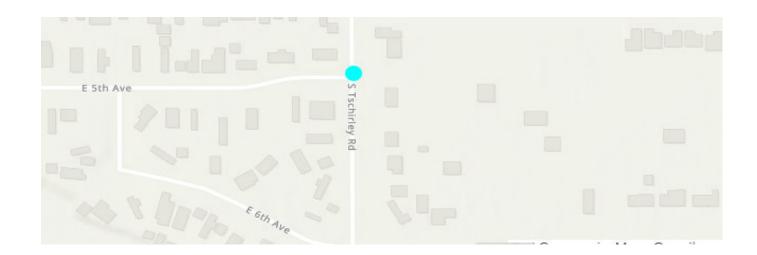
	SouthBound		We	estboun	d	No	rthbour	nd	Ea	astboun	d	Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	0	0	55	941	9	30	0	22	0	996	58	2111
Factor	0.00	0.00	0.00	0.57	0.96	0.56	0.83	0.00	0.61	0.00	0.86	0.81	0.92
Approach Factor		0.00			0.98			0.87			0.87		

# **TECHNICAL APPENDIX**

# **Crash Data**

Shape	NON-REPO TARGET	ZE \	WA STATE	WA STATE	Latitude	Longitude	JURISDICTICO	OUNTY	CITY
	Reportable	1	2461296	864844.4	47.65721	-117.169	City Street Sp	pokane	Spokane Va
	Reportable	1	2461050	863210.9	47.65277	-117.17	City Street Sp	pokane	Spokane Va
	Reportable	1	2461220	864815.9	47.65714	-117.169	City Street Sp	pokane	Spokane Va
	Reportable	1	2461296	864844.4	47.65721	-117.169	City Street Sp	pokane	Spokane Va
	Reportable	1	2461098	864776.6	47.65705	-117.169	City Street Sp	pokane	Spokane Va
	Reportable	1	2461296	864844.4	47.65721	-117.169	City Street Sp	pokane	Spokane Va
	Reportable	1	2461296	864845.5	47.65721	-117.169	City Street Sp	pokane	Spokane Va
	Reportable	1	2460993	864538.3	47.65641	-117.17	City Street Sp	pokane	Spokane Va
	Reportable	1	2461010	864165.3	47.65538	-117.17	City Street Sp	pokane	Spokane Va
	Reportable	1	2460991	864682.9	47.6568	-117.17	City Street Sp	pokane	Spokane Va
	Reportable	1	2461232	864820.3	47.65715	-117.169	City Street Sp	pokane	Spokane Va
	Reportable	1	2461001	864372.4	47.65595	-117.17	City Street Sp	pokane	Spokane Va
	NED	0	2460983	864753.4	47.657	-117.17	City Street Sp	ookane	Spokane Va





REPORT N	LINDEXED P PRIMARY T B	LOCK NUI MILEPO	ST A/B	INTERSECT DIST	FROM MI or FT	COMP DIR
E812576	E APPLEW! E APPLEW!	0		N CORBIN LN		
E837126	S TSCHIRLE S TSCHIRLE	0		E 5TH AVE		
E847705	E SPRAGUE E SPRAGUE	17400			80 F	W
E854644	E SPRAGUE E SPRAGUE	0		N CORBIN LN		
EA39907	E SPRAGUE E SPRAGUE	17400			118 F	E
EA55712	E SPRAGUE E SPRAGUE	17461		N CORBIN LN		
EA83435	E SPRAGUE E SPRAGUE	17481		N CORBIN LN		
EB01620	S TSCHIRLE S TSCHIRLE	100			0.09 M	N
EB26173	S TSCHIRLE S TSCHIRLE	100			127 F	N
EB35633	S TSCHIRLE S TSCHIRLE	0		E SPRAGUE AVE		
EB38901	E SPRAGUE E SPRAGUE	17400		N CORBIN LN		
EC10155	S TSCHIRLE S TSCHIRLE	100			381 F	S
EC46791	S TSCHIRLE S TSCHIRLE	80		E SPRAGUE AVE		



REFERENCELAST TRAN DAT	TE YEAR	QTR#	MONTH	MOST SEVE	MOST SEVETOTAL C	RA FATAL C	RA
31-Aug-18 27	'-Jun-18 2018	Q2	Jun	HBD - Abili	Suspected	1	0
12-Sep-18 11-	-Sep-18 2018	Q3	Sep	Had NOT B	Possible Inj	1	0
E APPLEW/ 14-Nov-18 10-	-Oct-18 2018	Q4	Oct	Had NOT B	No Appare	1	0
7-Dec-18 29-	-Oct-18 2018	Q4	Oct	Unknown	Suspected	1	0
S TSCHIRLE 10-Jul-20 4	l-Jun-20 2020	Q2	Jun		No Appare	1	0
28-Aug-20 12-	-Aug-20 2020	Q3	Aug		No Appare	1	0
15-Dec-20 22-	-Nov-20 2020	Q4	Nov		Possible Inj	1	0
E COACH D 25-Feb-21 27	7-Jan-21 2021	Q1	Jan		Suspected	1	0
E COACH D 3-Jun-21 29-	-Apr-21 2021	Q2	Apr		No Appare	1	0
13-Jul-21 2	!-Jun-21 2021	Q2	Jun		No Appare	1	0
21-Jul-21 10	)-Jun-21 2021	Q2	Jun		No Appare	1	0
E SPRAGUE 21-Apr-22 5	5-Jan-22 2022	Q1	Jan		No Appare	1	0
26-Jul-22 1-	-Apr-22 2022	Q2	Apr		No Appare	1	0

SERIOUS IN EV	VIDENT IN POSS	SIBLE II PDO	- NO IITOT	AL FAT. TOT	AL SER TOT	AL EVII TOT	AL POS TOT	AL VEHTOT	AL PED
0	1	0	0	0	0	1	0	1	0
0	0	1	0	0	0	0	1	2	0
0	0	0	1	0	0	0	0	3	0
0	1	0	0	0	0	1	0	1	1
0	0	0	1	0	0	0	0	1	0
0	0	0	1	0	0	0	0	2	0
0	0	1	0	0	0	0	1	2	0
0	1	0	0	0	0	1	0	1	1
0	0	0	1	0	0	0	0	2	0
0	0	0	1	0	0	0	0	2	0
0	0	0	1	0	0	0	0	2	0
0	0	0	1	0	0	0	0	2	0
0	0	0	1	0	0	0	0	2	0

#### TOTAL BIC\ WORKZON FIRST COLL SECOND C(JUNCTION WEATHER ROAD SURILIGHTING (ROADWAY LOCATION

1	Within Wo	Vehicle Strikes Pedalcy	At Intersec	Clear or Pa	Dry	Daylight	Straight & Level
0		Entering at angle	At Intersec	Overcast	Dry	Daylight	Straight & Level
0		From same From same	Intersectio	Clear or Pa	Dry	Daylight	Straight & Level
0		Vehicle going straight	At Intersec	Clear or Pa	Wet	Dark-Street	Straight & Level
0		Linear Curk Fence	Not at Inte	Clear	Dry	Dark-Street	Straight & Level
0		From opposite direction	At Intersec	Clear or Pa	Dry	Dark-Street	Straight & Level
0		From same direction -	At Intersec	Clear or Pa	Dry	Daylight	Straight & Level
0		Vehicle going straight	Not at Inte	Overcast	Dry	Dark-No St	Straight & Level
0		One parkedone movi	Not at Inte	Clear	Dry	Dusk	Straight & Level
0		From same direction -	At Intersec	Clear or Pa	Dry	Daylight	Straight & Level
0		From same direction -	At Intersec	Clear or Pa	Dry	Daylight	Straight & Level
0		From opposite direction	At Drivewa	Overcast	Snow/Slush	Daylight	Straight & Level
0		Entering at angle	At Intersec	Clear	Dry	Daylight	Curve & Level

MISC TRAF COUNTY RI ARM

History/Sus FIRST IMPA SECOND IN SR ONLY, V SR ONLY, V SR ONLY, V SR ONLY, V

No Lane of Primary Trafficway
No Lane of Primary Trafficway

No Lane of Printane of Primary Trafficway

No Lane of Primary Trafficway

No Outside Sh Past the Outside Shoulder of Primary Trafficway

No Lane of Primary Trafficway
No Lane of Primary Trafficway

No Outside Shoulder of Primary Trafficway
No Outside Shoulder of Primary Trafficway

No Lane of Primary Trafficway
No Lane of Primary Trafficway
No Lane of Primary Trafficway
No Lane of Primary Trafficway

VEH 1 TYPE VEH 1 MAI	KVEH 1 MO	[ VEH 1 STYI	VEH 1 ACTI VEH 1 CON	VEH 1 CON	VEH 1 USA: VEH 1 TRA: VEH 1	POS <sup>-</sup>
Not Stated			Going Strai East	West	Signals	35
Pickup,Pan DODGE	RAM 1500	Pickup	Making Lef West	Northeast	Stop Sign	25
Passenger (GEO	PRIZM	Sedan	Going Strai West	East	Signals	35
Not Stated			Going Strai West	East	Signals	35
Pickup,Pan DODGE	RAM 1500	Pickup	Changing L West	East	No Traffic Control	
Pickup,Pan DODGE	GRAND CA	VAN PASSE	Making Lef South	West	Vanette Ur Signals	35
Passenger (MAZDA	3	Sedan	Going Strai West	East	Signals	35
Pickup,Pan DODGE	GRAND CA	VAN PASSE	Going Strai North	South	Vanette Ur No Traffic Control	
Not Stated			Going Straight Ahead		No Traffic Control	
Passenger (MAZDA	6	Sedan	Starting in South	North	Stop Sign	
Passenger   DODGE	AVENGER	Sedan	Going Strai West	East	Signals	35
Passenger (HYUNDAI	ELANTRA	Sedan	Making Lef North	East	No Traffic (	25
Pickup,Pan GMC	ACADIA	UTILITY	Making Lef South	West	Vanette Ur Stop Sign	

### VEH 1 CON VEH 1 CON VEH 1 CON VEH 1 CLAS VEH 1 CON VEH 1 CON VEH 1 CON VEH 2 TYPE VEH 2 MAK VEH 2 MOI

No Defects

No Defects Pickup,Pan CHEVROLE EXPRESS G:
No Defects Passenger (HYUNDAI ELANTRA

No Defects

No Defects

No Defects Pickup,Pan TOYOTA SIENNA No Defects Pickup,Pan ACURA MDX

No Defects

No Defects

No Defects

No Defects

No Defects

No Defects

Pickup,Pan NISSAN

ROGUE

No Defects

Pickup,Pan JEEP

GRAND CH

No Defects

Passenger (SUBARU LEGACY

### VEH 2 STYL VEH 2 ACTI VEH 2 CON VEH 2 CON VEH 2 USA(VEH 2 TRA) VEH 2 POST VEH 2 CON VE

CARGO VA Sedan	ol Going Strai North Stopped fo Vehicle St	South o Vehicle St	Vanette Ur No Traffic ( opped Signals	25 35
VAN PASS UTILITY	E Going Strai North Stopped at Vehicle St	South o Vehicle St	Vanette Ur Signals o Vanette Ur Signals	35 35
Sedan	Legally Parked, Unocc	upied		
Truck	Stopped at South	North	Stop Sign	
UTILITY	Stopped at Vehicle St	o Vehicle St	o Vanette Ur Signals	35
UTILITY	Going Strai South	North	Vanette Ur No Traffic (	25
Sedan	Going Strai East	East	No Traffic Cor	itrol

### VEH 2 CLAS VEH 2 CON VEH 2 CON VEH 2 CON VEH 3 TYPE VEH 3 MAK VEH 3 STYL VEH 3 MOI VEH 3 ACTI VEH 3 CON

No Defects
Pickup,Pan GMC
UTILITY
YUKON
Stopped at Vehicle Sto

No Defects

### VEH 3 CON VEH 3 USA(VEH 3 TRAIVEH 3 POST VEH 3 CON VEH 3 CON VEH 3 CON VEHICLE 3 (VEH 3 CON VEH 3 CON VEH

Vehicle Sto Vanette Ur Signals

35

No Defects

### VEH 3 CON VEH 1 MV IVEH 1 MOIVEH 1 MOIVEH 1 MOIVEH 1 MOI

Unknown Other Contributing Circ Not Listed

43 Male No Appare Did Not Grant RW to Vehicle

32 Male No Appare Follow Too Closely

Unknown Other Contributing Circ Not Listed

46 No Appare Under Influence of Alcohol

16 Female No Appare Improper Turn/Merge30 Female Possible Inj Follow Too Closely

54 Female No Appare None

Unknown Unknown Distraction

47 Male No Appare Distracted by Adjusting Vehicle Cntrls

16 Female No Appare Follow Too Closely

40 Female No Appare Did Not Grant RW to Vehicle

40 Female No Appare Improper Turn/Merge

VEH 1 MV IVEH 1 MV IVEH 1 MV IVEH 1 MV IVEH 1 MV	IVEH 1 MV IVEH 1 MV IVEH 1 MV IVEH 1 MV IVEH 2 M	/IV I
Unknown Unknown i Hit and run	Collision Involving Pedalcyclist	
Lap & Shou Not Ejected Turn after stopping at red flashin	g Collision Involving Motor Vehicle in Transport	43
Lap & Shou Not Ejected	Collision Involving Motor Vehicle in Transport	64
Unknown Unknown i Hit and run	Collision Involving Pedestrian	
Unknown Not Ejected		
Lap & Shou Not Ejected		38
Lap & Shou Not Ejected		44
Lap & Shou Not Ejected		
Unknown Unknown if Ejected		
Lap & Shou Not Ejected		43
Unknown Not Ejected		16
Lap & Shou Not Ejected		69
Lap & Shou Not Ejected		23

### VEH 2 MV IVEH 2 MOIVEH 2 MOIVEH 2 MOIVEH 2 MOIVEH 2 MV IVEH 2 MV I

Male	Possible Inj Driver Not Distracted	Lap & Shou Not Ejectec
Male	No Appare None	Lap & Shou Not Ejected
Female	No Appare None	Lap & Shoս Not Ejectec
Male	No Appare None	Lap & Shou Not Ejectec
	None	
Male	No Appare None	Lap & Shou Not Ejectec
Female	No Appare None	Unknown Not Ejectec
Female	No Appare None	Lap & Shou Not Ejectec
Male	No Appare None	Lap & Shou Not Ejectec

### VEH 2 MV IVEH 3 MV I

Stopped for another vehicle Collision Involving Motor Vehicle in Transport

Collision In Collision Involving Motor Vehicle i 43 Female No Appare

VFH 3 MV IVFH 3 MV IVFH 3	MV IVEH 3 MOTVEH 3 MOTVEH	3 MOTVEH 3 MV/ IVEH 3	M/V/ IV/FH 3 M/V/ IV/FH 3 M/V

None

Lap & Shou Not Ejected

### VEH 3 MV IVEH 3 MV IVEH 3 MV IVEH 3 MV IVEH 3 MV IUNIT 2 PEC UNIT 2 PEC UNIT 2 PEC UNIT 2 PEC UNIT 2 PEC

## Collision Involving Motor Vehicle in Transport

Xing at Inte 49 Mixed Female Suspected

Walking on 26 Dark Male Suspected

None Marked X v Person on Foot

Non Motorist on Wrong Side of RcShoulder Person on Foot

UNIT 3 PEC UNIT 1 BIC' UNIT 1 BIC' UNIT 1 BIC' UNIT 1 BIC' UNIT 1 BIC'

UNIT 1 BIC' UNIT 1 BIC' UNIT 1 BIC' UNIT 2 BIC' UNIT 2

UNIT 2 BIC' UNIT 2 BIC' UNIT 3 BIC' UNIT 3

UNIT 3 BIC' UNIT 3 BIC' HIT & RUN	TZ Work Zc TZ Ir	ntersec TZ \	Wrong \TZ V	Vrong \TZ A	lcohol TZ A	lcohol TZ D	rug Im
Yes	1	1	0	0	1	1	0
No	0	1	0	0	0	0	0
No	0	1	0	0	0	0	0
Yes	0	1	0	0	0	0	0
Yes	0	0	0	0	1	1	1
No	0	1	0	0	0	0	0
No	0	1	0	0	0	0	0
No	0	0	0	0	0	0	0
Yes	0	0	0	0	0	0	0
No	0	1	0	0	0	0	0
No	0	1	0	0	0	0	0
No	0	0	0	0	0	0	0

No

TZ Drug Im TZ Ir	mpaire (TZ Ir	mpaire TZ D	rinking TZ D	rinking TZ S	peedin TZ S	peedin TZ D	istract(TZ D	istract <sub>(</sub> TZ U	nrestra
0	1	1	1	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	1	0
0	0	0	0	0	0	0	1	1	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

TZ Unrestra T	Z Drowsy	TZ Drowsy	TZ Run Off	TZ Non Jun	TZ Lane De	TZ MV Driv	TZ MV Driv	TZ MV Driv	TZ MV Driv
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	1	0	1	0	0	0	0
0	0	0	0	0	0	1	1	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	1	0	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	2	0	0
0	0	0	0	0	0	0	0	1	1
0	0	0	0	0	0	1	1	0	0

TZ MV Driv TZ M	V Driv TZ V	Vildlife TZ N	lotorcyTZ To	otal McTZ S	chool ETZ So	chool ETZ H	eavy V TZ H	eavy V TZ V	ehicle <sup>*</sup>
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	1	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

TZ Catostrc TZ Po	edestri TZ Pe	edacyc x		У
0	0	1	2543252	261231.8
0	0	0	2543015	259597.3
0	0	0	2543176	261202.9
0	1	0	2543252	261231.8
0	0	0	2543055	261163
0	0	0	2543252	261231.8
0	0	0	2543252	261232.9
0	1	0	2542951	260924.1
0	0	0	2542969	260551.3
0	0	0	2542947	261068.7
0	0	0	2543188	261207.4
0	0	0	2542959	260758.3
0	0	0	2542940	261139.2

## **TECHNICAL APPENDIX**

# **Public Meeting Information**

Issue	TIA Scope of Work	Data / Discussion
Additional Intersections Considered for Inclusion in Level of Service Analysis: Sprague / Flora	This intersection was included in the TIA.	
Additional Time Period Considered for Inclusion in Level of Service Analysis at:  Sprague / Tschirley Appleway / Corbin	This analysis was included.	There is concern that the traffic volumes and characteristics when Greenacres Middle School dismisses class could exceed p.m. peak hour conditions.
Internal Circulation / Effect of Additional East/West Connection Linking Site to Turtle Creek South	This is planned as an emergency access only and will be chained off.	The circulation plan is still preliminary and the status of this access point could change.
Sight Distance Analysis of Project Entrance Points to Tschirley Road	Included in Designated Section in TIA.	Significant grading will be required to establish adequate sight distance under the current layout.
Alternate Forms of Transportation  O Sidewalks	Sidewalks will be constructed along site frontage.	Off-site sidewalks will not be required.
The residents at the Good Sam facility often need assistance from the fire department. The fire truck, often the very large ladder truck, needs to have access past this site. Concerned with on street parking and fire truck cornering at Tschirley / 8th.		The frontage improvements need to meet agency standards. Parking could be restricted. The ladder truck can make very tight turns.
There is a problem with sight distance for westbound traffic on 6th observing northbound traffic		Tschirley is going through a vertical curve here, and vehicles are hidden from view within the sight triangle. This is an existing problem.
Think the density of housing is too great		Explained zoning
Concern for school pedestrian traffic		Pedestrian traffic uses the roadway and margins of the roads to complete their trips. These pedestrian trips occur now, and will increase with the Tschirley Apts

N/4	MIS S. F-LOILA	Towi & Doug GradT
	17908 E. 12 th Ct	8
	17421 E St ANC	€.
	17421E St Ave	Frey O'Sullivan
	704 s. Tschirley Rd.	Paul Craps
breama crapo 6	704 S. Tschirley Rd.	Breama Coupo
Chalcomp @	17502 E. Com Ave	The learn for burde
	705 S. Tendral Ly	Robert Wests
	705 S. Jersted ky.	Lieda Henry
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airsust a aplicom	16925 E The land 99016	John Susers
	Def .	Cardyn Giltu
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E-mail	Address	Name
Apts 2220	April 11, 2023 Traffic Meeting for Tschirley	Ap

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harbrece Motmol.com	17516 E 6th Ave	Chase Barbre
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	4	Parla Jugal
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E-mail	Address	Name
pts 2220	April 11, 2023 Traffic Meeting for Tschirley Apts	Ap

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				6	19705 elot Am 99016	122 5 Toutail 996/6	7395. Jerstad	7075, Jerstad	199016 3M 7th, 20016	11 1 1/1/21 99016	708 S. KLORA LN SPOVAL	602	17418 E 6th	17117 FSBA ALUE apt 110	17117 E8th Ave 99206	Address	April 11, 2023 Traffic Meeting for Tschirley
													50	( ) yest 1500 outlook		E-mail	Apts 2220

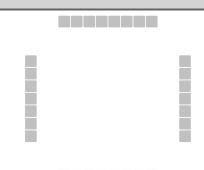
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## **TECHNICAL APPENDIX**

# EXISTING LEVEL OF SERVICE CALCULATIONS

HCS Sig	nalize	d Inte	rsect	ion R	esul	ts Sum	nmary	1					
General Information						Intersect	tion Inf	ormatic	\n		4 74+	یا دا	
					$\rightarrow$			0.250			4		
5 .	A = = 1, rs	ia Data	E/04/0	000		Duration,				4		K.	
Analyst ALW			5/24/2			Area Typ	e	Other			w∮s		
Jurisdiction Application	Time F		AM Pe	еак		PHF	D!!	0.76	20		";"		
Urban Street Appleway		sis Year				Analysis	Period	1> 7:0	)()	7			
Intersection Appleway / Corbin	File Na	ame	EX AN	/I Apple	way.xu	IS				_ [	*		
Project Description Tschirley Apts											1 1 1 4 17	7 1	
Demand Information	T	EB		1	WE	3		NB		T	SB		
Approach Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R	
Demand ( v ), veh/h	15	380	133	3	499	_	184	14	3	5	7	11	
												_	
Signal Information		- 2	- 2			Su L			_			$\mathbf{L}$	
Cycle, s 120.0 Reference Phase 2	_	L. 6	Ħ	= 3	62	17.		×		₹.	2	stz (	
Offset, s 0 Reference Point End	Green	0.7	2.2	79.1	24.	5 0.0	0.0			K	3	**	
Uncoordinated No Simult. Gap E/W On	Yellow		0.0	3.5	3.5		0.0		<b>&gt;</b>	<b>←</b>		惁	
Force Mode Fixed Simult. Gap N/S On	Red	1.0	0.0	1.0	1.0	0.0	0.0		5	6	7	8	
				WB									
Timer Results	EBI	-	EBT 2		<u> </u>	WBT	NBI	_	NBT	SBI	<u> </u>	SBT	
Assigned Phase	5	_		1	_	6	_	_	8	-	_	4	
Case Number	2.0	_	4.0	2.0		4.0		_	8.0	-	_	8.0	
Phase Duration, s	7.4	_	85.8	5.2	_	83.6		_	29.0	₩	_	29.0	
Change Period, ( Y+R c ), s	4.5	_	4.5	4.5	_	4.5		_	4.5	-		4.5	
Max Allow Headway ( MAH ), s	3.1	_	0.0	3.1	_	0.0		_	3.2	-	_	3.2	
Queue Clearance Time ( g s ), s	3.3	_		2.3	_			_	24.4	-	-	3.7	
Green Extension Time ( g e ), s	0.0	_	0.0	0.0	_	0.0		_	0.1	-	-	0.5	
Phase Call Probability	0.48	_		0.12	_				1.00	-		1.00	
Max Out Probability	0.00	)		0.00	)			_	1.00		_	0.00	
Movement Group Results		EB			WB			NB			SB		
Approach Movement		Т	R	L	Т	R	L	Т	R		Т	R	
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( <i>v</i> ), veh/h	20	353	322	4	336	331		264			30		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1950	1762	1810	1950	_		1475			1882		
Queue Service Time ( g s ), s	1.3	8.6	8.7	0.3	8.5	8.5		20.8			0.0		
Cycle Queue Clearance Time ( $g_c$ ), s	1.3	8.6	8.7	0.3	8.5	8.5		22.4			1.7		
Green Ratio ( g/C )	0.02	0.68	0.68	0.01	0.66			0.20			0.20		
Capacity ( c ), veh/h	44	1320	1193	11	1286	-		359			421		
Volume-to-Capacity Ratio ( X )	0.452	0.267	0.270	0.353	0.261			0.738			0.072		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	27.9	157	143.9	6.3	158.2			325.2			32.6		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.1	6.3	5.8	0.3	6.3	6.2		13.0			1.3		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	_		0.00			0.00		
Uniform Delay ( d 1 ), s/veh	57.8	7.6	7.7	59.4	8.4	8.4		46.9			38.7		
Incremental Delay ( d 2 ), s/veh	2.7	0.5	0.6	6.9	0.5	0.5		6.4			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		
Control Delay ( d ), s/veh	60.5	8.1	8.2	66.3	8.9	8.9		53.3			38.7		
Level of Service (LOS)	E	Α	Α	E	Α	A		D			D		
Approach Delay, s/veh / LOS	9.7		Α	9.3		Α	53.3		D	38.7		D	
Intersection Delay, s/veh / LOS										B 38.7 D			
				17.0					В				
Multimodal Results		EB		WB			NB				SB		
Pedestrian LOS Score / LOS	1.65	5	В	1.65	5	В	2.30	)	В	2.30	)	В	
Bicycle LOS Score / LOS	1.06	6	Α	1.04	4	Α	0.92	2	Α	0.54	1	Α	

	HCS Two-Way Stop	o-Control Report							
General Information		Site Information							
Analyst	ALW	Intersection	Sprague / Tschirley Wye						
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA						
Date Performed	5/24/2023	East/West Street	Tschirley Wye						
Analysis Year	2023	North/South Street	Sprague Ave						
Time Analyzed	AM Peak	Peak Hour Factor	0.96						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description	Tschirley Apts								



Major Street: North-South

Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		3		1						1	174				87	3
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)			0													
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Raco Follow-Lip Hoadway (coc)		2 5		2.2		Ì				2.2	Ì			Ì		

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			4							1						
Capacity, c (veh/h)			768							1513						
v/c Ratio			0.01							0.00						
95% Queue Length, Q <sub>95</sub> (veh)			0.0							0.0						

9.7

Α

9.7

Α

Control Delay (s/veh)

Level of Service (LOS)

Approach Delay (s/veh)

Approach LOS

7.4

Α

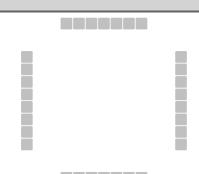
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	HCS Two-Way Stop	p-Control Report							
General Information		Site Information							
Analyst	ALW	Intersection	Sprague / Flora						
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA						
Date Performed	5/24/2023	East/West Street	Sprague Ave						
Analysis Year	2023	North/South Street	Flora Rd						
Time Analyzed	AM Peak	Peak Hour Factor	0.83						
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25						
Project Description	Tschirley Apts								

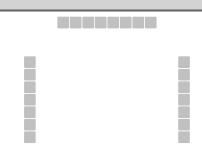


Major Street: East-West

venicie volume	s and Adjustments
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Approach		Eastb	ound		Westbound				Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			Т	TR		L	Т				LR					
Volume (veh/h)			577	27	0	9	845			24		26				
Percent Heavy Vehicles (%)					0	0				0		0				
Proportion Time Blocked																
Percent Grade (%)										(	)					
Right Turn Channelized																
Median Type   Storage	Storage Le												1			
Critical and Follow-up Ho	eadwa	ys														
Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.10				6.80		6.90				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				
Delay, Queue Length, and	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)						11					60					
Capacity, c (veh/h)						885					417					
v/c Ratio						0.01					0.14					
95% Queue Length, Q <sub>95</sub> (veh)						0.0					0.5					
Control Delay (s/veh)						9.1					15.1					
Level of Service (LOS)						А					С					
Approach Delay (s/veh)						0	.1			15	5.1					
Approach LOS					А				С							

	HCS Two-Way Stop	o-Control Report							
General Information		Site Information							
Analyst	ALW	Intersection	Tschirley / Tschirley Wye						
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA						
Date Performed	5/24/2023	East/West Street	Tschirley Wye						
Analysis Year	2023	North/South Street	Tschirley Rd						
Time Analyzed	AM Peak	Peak Hour Factor	0.85						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description	Tschirley Apts								



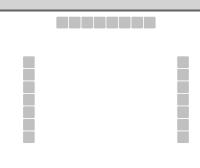
Major Street: North-South

	venicie	voiumes	and	Adjustment	S
ı					

Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	1		5	0	3		0	36	1		0	32	0
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)			0				0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20			2.20		
Delay, Queue Length, and Level of Service															
Flow Rate, v (veh/h)			1				9			0			0		
Capacity, c (veh/h)			1040				953			1586			1578		
v/c Ratio			0.00				0.01			0.00			0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0			0.0		
Control Delay (s/veh)			8.5				8.8			7.3	0.0	0.0	7.3	0.0	0.0
Level of Service (LOS)			Α				Α			А	А	Α	А	Α	А
Approach Delay (s/veh)		8	.5			8	.8			0.	0		0.	.0	
Approach LOS		A	4			A	4			P	\		P	4	

HCS Two-Way Stop-Control Report									
General Information		Site Information							
Analyst	ALW	Intersection	Tschirley / 3rd						
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA						
Date Performed	5/25/2023	East/West Street	3rd Ave						
Analysis Year	2023	North/South Street	Tschirley Rd						
Time Analyzed	AM Peak	Peak Hour Factor	0.83						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description	Tschirley Apts								



Major Street: North-South

Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	oound			Westbound			Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		4	0	2		0	6	15		7	18	1		9	18	3
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				(	0									
Right Turn Channelized																
Median Type   Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, and	d Leve	l of S	ervice													
Flow Rate, v (veh/h)			7				25			8				11		
Capacity, c (veh/h)			907				962			1583				1586		
v/c Ratio			0.01				0.03			0.01				0.01		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.1			0.0				0.0		
Control Delay (s/veh)			9.0				8.8			7.3	0.0	0.0		7.3	0.1	0.1
Level of Service (LOS)			А				А			А	А	А		А	А	А
Approach Delay (s/veh)		9	0.0			8	.8		2.0			2.2				
									11							

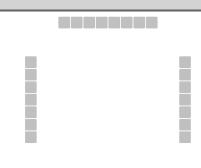
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Approach LOS

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HCS Two-Way Stop-Control Report									
General Information		Site Information							
Analyst	ALW	Intersection	Tschirley / 4th						
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA						
Date Performed	5/25/2023	East/West Street	4th Ave						
Analysis Year	2023	North/South Street	Tschirley Rd						
Time Analyzed	AM Peak	Peak Hour Factor	0.76						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description	Tschirley Apts								



Major Street: North-South

Vehicle Volumes and Adju	ıstme	nts
Approach		Ea

Approach		Eastb	ound		Westbound			Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	T	R
Priority	T	10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration	T		LTR				LTR				LTR				LTR	
Volume (veh/h)		5	0	1		0	0	1		2	19	0		0	25	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0					0										
Right Turn Channelized																
Median Type   Storage	T	Undivided														
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Т	7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)	T	3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	Т		8				1			3				0		
Capacity, c (veh/h)			940				1048			1569				1583		
v/c Ratio			0.01				0.00			0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			8.9				8.4			7.3	0.0	0.0		7.3	0.0	0.0
Level of Service (LOS)			А				А			А	А	А		А	А	А
Approach Delay (s/veh)		8	.9		8.4			0.7			0.0					

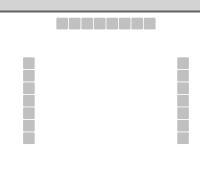
Α

Approach LOS

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HCS Two-Way Stop-Control Report									
General Information		Site Information							
Analyst	ALW	Intersection	Tschirley / 6th						
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA						
Date Performed	5/25/2023	East/West Street	6th Ave						
Analysis Year	2023	North/South Street	Tschirley Rd						
Time Analyzed	AM Peak	Peak Hour Factor	0.72						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description	Tschirley Apts								



Major Street: North-South

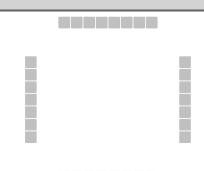
Vehicle Volumes ar	nd Adjustments
A	

Approach		Eastb	ound		Westbound			Northbound				Southbound					
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		1	1	1		0	0	13		0	9	2		9	17	2	
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3			
Proportion Time Blocked																	
Percent Grade (%)	0				(	)											
Right Turn Channelized																	
Median Type   Storage				Undi	vided												
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23			
Delay, Queue Length, and	l Leve	of Se	ervice														
Flow Rate, v (veh/h)			4				18			0				13			
Capacity, c (veh/h)			910				1063			1581				1596			
v/c Ratio			0.00				0.02			0.00				0.01			
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.1			0.0				0.0			
Control Delay (s/veh)			9.0				8.4			7.3	0.0	0.0		7.3	0.1	0.1	
Level of Service (LOS)			А				А			А	Α	А		А	А	А	
Approach Delay (s/veh)	9.0			8.4			0.0			2.4							
Approach LOS		А				,	4		А			A					

### **HCS Signalized Intersection Results Summary** Intersection Information **General Information** Agency Sunburst Engineering Duration, h 0.250 Analyst ALW Analysis Date 5/24/2023 Area Type Other PHF Spokane Valley, WA 0.84 Jurisdiction Time Period AM Peak Urban Street Sprague Ave Analysis Year 2023 **Analysis Period** 1> 7:00 Sprague / Flora File Name EX AM Flora.xus Intersection **Project Description** Tschirley Apts **Demand Information** EB **WB** NB SB Approach Movement L R R L R R 488 666 6 Demand (v), veh/h 58 6 4 114 22 29 6 92 96 **Signal Information** 110 Cycle, s 120.0 Reference Phase 2 517 Offset, s 0 Reference Point End 0.5 88.9 13.7 0.0 Green 0.9 0.0 Uncoordinated No Simult. Gap E/W On Yellow 3.5 3.5 3.5 3.5 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.5 0.5 0.5 0.0 0.0 **Timer Results** FBI **EBT WBL WBT** NBL **NBT** SBL SBT **Assigned Phase** 5 2 6 8 4 1 Case Number 1.1 3.0 1.1 3.0 5.0 5.0 Phase Duration, s 9.4 97.5 4.9 92.9 17.7 17.7 Change Period, (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 Max Allow Headway ( MAH ), s 3.1 0.0 3.1 0.0 3.3 3.3 Queue Clearance Time ( $g_s$ ), s 2.9 2.1 4.3 13.1 Green Extension Time ( $g_e$ ), s 0.1 0.0 0.0 0.0 0.6 0.5 Phase Call Probability 0.90 0.15 1.00 1.00 0.00 0.00 0.00 0.00 Max Out Probability SB **Movement Group Results** ΕB WB NB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 6 16 3 8 18 7 4 14 Adjusted Flow Rate ( v ), veh/h 69 581 7 5 793 136 26 35 7 110 7 114 Adjusted Saturation Flow Rate ( s ), veh/h/ln 1810 1950 1597 1810 1950 1597 1517 1950 1610 1480 1950 1610 0.9 11.3 0.1 0.1 21.3 2.9 2.0 0.5 9.2 0.4 8.1 Queue Service Time ( $g_s$ ), s 1.9 Cycle Queue Clearance Time ( q c ), s 0.9 11.3 0.1 0.1 21.3 2.9 2.3 1.9 0.5 11.1 0.4 8.1 0.78 0.78 0.75 0.74 0.74 0.11 Green Ratio (g/C) 0.80 0.11 0.11 0.11 0.11 0.11 206 Capacity (c), veh/h 532 1518 1244 638 1445 1183 229 223 184 223 184 Volume-to-Capacity Ratio (X) 0.130 0.383 0.006 0.007 0.549 0.115 0.115 0.155 0.039 0.533 0.032 0.622 Back of Queue (Q), ft/ln (95 th percentile) 11.9 172.9 1.5 315.4 39.7 32.6 42.8 8.7 148.4 8.7 151.5 1.1 Back of Queue (Q), veh/ln (95 th percentile) 0.5 6.9 0.1 0.0 12.6 1.6 1.3 1.7 0.3 5.9 0.3 6.1 Queue Storage Ratio (RQ) (95 th 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 47.9 47.3 52.9 Uniform Delay ( d 1 ), s/veh 5.0 4.2 3.0 4.1 6.8 4.4 48.3 47.3 50.7 Incremental Delay ( d 2 ), s/veh 0.0 0.7 0.0 0.0 1.5 0.2 0.1 0.1 0.0 8.0 0.0 1.3 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 0.0 Control Delay ( d ), s/veh 5.0 4.9 3.0 4.1 8.3 4.6 48.4 48.1 47.3 53.7 47.3 52.0 Level of Service (LOS) Α Α Α Α Α Α D D D D D D 4.9 Α 7.7 Α 48.1 D 52.7 Approach Delay, s/veh / LOS D Intersection Delay, s/veh / LOS 13.7 В **Multimodal Results** ΕB WB NB SR Pedestrian LOS Score / LOS 2.03 В 2.04 В 2.14 2.14 В В Bicycle LOS Score / LOS 1.57 В 2.03 0.60 Α 0.87

HCS Sig	nalize	d Inte	ersect	ion R	esul	ts Sum	mary	1				
General Information						ion Inf	ormatio	\n		4 744 1	Ja l <u>a</u>	
					$\rightarrow$			0.250			4	
Agency Sunburst Engineering	A l	-i- D-1-	E/04/6	2000		Duration,				4		E. A.
Analyst ALW			5/24/2			Area Typ	Other			w∳£		
Jurisdiction Spokane Valley, WA		Period	PM P	еак		PHF	DiI	0.94	20		";"	-
Urban Street Appleway		Analysis Year 2023 Analysis Period 1> 7:00  File Name EX PM Appleway.xus										, and a
Intersection Appleway / Corbin	File N	ame	EX PI	vi Apple	way.xı	IS				_ [	*	
Project Description Tschirley Apts											ነ ተ ተቀም	7 1
Demand Information	Т	EB		T	WI	3	T	NB		T	SB	
Approach Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand ( v ), veh/h	12	609	370	6	64	_	207	7	5	8	8	10
Signal Information		- 7	- 2			30			_			$\mathbf{L}$
Cycle, s 120.0 Reference Phase 2	_	P, 8	R	<b>≓</b> 3	(5)	12		×		₹.	2	stz (
Offset, s 0 Reference Point End	Green	1.2	0.9	83.1	21.	4 0.0	0.0	- 1		K	3	
Uncoordinated No Simult. Gap E/W On	Yellow		0.0	3.5	3.5		0.0		<b>&gt;</b>	<b>←</b>		松
Force Mode Fixed Simult. Gap N/S On	Red	1.0	0.0	1.0	1.0		0.0		5	6	7	8
Timer Results	EB	L	EBT	WB	L	WBT	NBI	_	NBT	SBI	L	SBT
Assigned Phase	5	_	2	1		6		_	8	-	_	4
Case Number	2.0		4.0	2.0		4.0			8.0	-		8.0
Phase Duration, s	6.6		88.5		5.7 87.6			_	25.9	₩	_	25.9
Change Period, (Y+Rc), s			4.5	4.5 4.5		4.5			-		4.5	
Max Allow Headway ( MAH ), s	3.1		0.0	3.1 0.0				3.1	-	_	3.1	
Queue Clearance Time ( g s ), s	2.8	_		2.4	_				21.2	-		3.5
Green Extension Time ( g e ), s	0.0		0.0	0.0	_	0.0		_	0.2	-	_	0.4
Phase Call Probability	0.3			0.19				1.00		-		1.00
Max Out Probability	0.00	0	_	0.00	0				0.32			0.00
Movement Group Results	$\overline{}$	EB			WB			NB			SB	
Approach Movement		Т	R	L	Т	R	L	Т	R		Т	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	13	558	483	6	351	346		233			28	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1950	1687	1810	1950	_		1519			1861	
Queue Service Time ( g s ), s	0.8	14.4	14.5	0.4	8.1	8.1		17.6			0.0	
Cycle Queue Clearance Time ( g c ), s	0.8	14.4	14.5	0.4	8.1	8.1		19.2			1.5	
Green Ratio ( g/C )	0.02	0.70	0.70	0.01	0.69			0.18			0.18	
Capacity ( c ), veh/h	31	1365	1181	17	1350			329			370	
Volume-to-Capacity Ratio ( X )	0.407	0.409	_	0.368	0.260	_		0.709			0.075	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	18.4	241.8	_	9.7	145.9			286.9			30.8	
Back of Queue (Q), veh/ln (95 th percentile)	0.7	9.7	8.7	0.4	5.8	5.8		11.5			1.2	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	_		0.00			0.00	
Uniform Delay ( $d_1$ ), s/veh	58.3	7.6	7.6	59.1	6.9	6.9		48.4			41.2	
Incremental Delay ( d 2 ), s/veh	3.1	0.9	1.1	4.8	0.5	0.5		3.8			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	61.5	8.5	8.6	63.8	7.4	7.4		52.2			41.2	
Level of Service (LOS)	E	Α	Α	E	Α	A		D			D	
Approach Delay, s/veh / LOS	9.2		Α	7.9		Α	52.2		D	41.2		D
Intersection Delay, s/veh / LOS				1.1						В		
	17.1											
Multimodal Results		EB			WB			NB			SB	
Pedestrian LOS Score / LOS	1.64	4	В	1.64	4	В	2.31	1	В	2.3	1	В
Bicycle LOS Score / LOS	1.30	6	Α	1.07	7	Α	0.87	7	Α	0.53	3	Α

HCS Two-Way Stop-Control Report									
General Information		Site Information							
Analyst	ALW	Intersection	Sprague / Tschirley Wye						
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA						
Date Performed	5/24/2023	East/West Street	Tschirley Wye						
Analysis Year	2023	North/South Street	Sprague Ave						
Time Analyzed	PM Peak	Peak Hour Factor	0.93						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description	Tschirley Apts								



Major Street: North-South

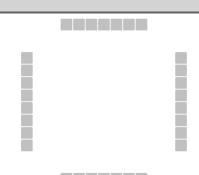
Vehicle	Volumes	and A	djustments	;
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Approach	Eastbound			Westbound				Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		4		5						2	219				352	2
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type   Storage		Undivided							·							
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, and	l Leve	l of Se	ervice													
Flow Rate, v (veh/h)			10							2						
Capacity, c (veh/h)			554							1189						
v/c Ratio			0.02							0.00						
95% Queue Length, Q <sub>95</sub> (veh)			0.1							0.0						
Control Delay (s/veh)			11.6							8.0	0.0					
Level of Service (LOS)			В							Α	Α					
Approach Delay (s/veh)	11.6						0.1									

Approach LOS

Α

HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Sprague / Flora							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/24/2023	East/West Street	Sprague Ave							
Analysis Year	2023	North/South Street	Flora Rd							
Time Analyzed	PM Peak	Peak Hour Factor	0.93							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	Tschirley Apts									

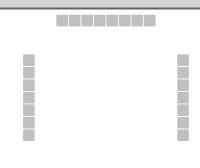


Major Street: East-West

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Approach	Eastbound			Westbound				Northbound				Southbound				
Movement	U	L	Т	R	U	L	T	R	U	L	T	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			Т	TR		L	T				LR					
Volume (veh/h)			916	54	0	22	834			30		18				
Percent Heavy Vehicles (%)					0	0				0		0				
Proportion Time Blocked																
Percent Grade (%)								0								
Right Turn Channelized																
Median Type   Storage	Left Only							1								
Critical and Follow-up Headways																
Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.10				6.80		6.90				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				
Delay, Queue Length, and	l Leve	of Se	ervice													
Flow Rate, v (veh/h)						24					52					
Capacity, c (veh/h)						675					288					
v/c Ratio						0.04					0.18					
95% Queue Length, Q <sub>95</sub> (veh)						0.1					0.6					
Control Delay (s/veh)						10.5					20.2					
Level of Service (LOS)						В					С					
Approach Delay (s/veh)				0.3			20.2									
Approach LOS				A			С									

HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Tschirley / Tschirley Wye							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/24/2023	East/West Street	Tschirley Wye							
Analysis Year	2023	North/South Street	Tschirley Rd							
Time Analyzed	PM Peak	Peak Hour Factor	0.78							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Tschirley Apts									



Major Street: North-South

Vehicle Volumes and Adju	Vehicle Volumes and Adjustments										
Approach Eastboun											
Movement	U	L	Т								

Approach	Eastbound Westbound					Northbound				Southbound						
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	0		4	0	4		0	38	9		6	58	0
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)			0			(	0									
Right Turn Channelized																
Median Type   Storage		Undivided														
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		
Delay, Queue Length, and	l Leve	l of Se	ervice													
Flow Rate, v (veh/h)			0				10			0				8		
Capacity, c (veh/h)			0				912			1538				1556		
v/c Ratio							0.01			0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)							0.0			0.0				0.0		
Control Delay (s/veh)							9.0			7.3	0.0	0.0		7.3	0.0	0.0
Level of Service (LOS)							Α			Α	Α	Α		Α	Α	А

Approach Delay (s/veh)

Approach LOS

9.0

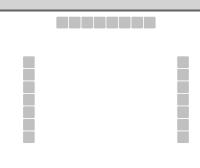
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HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Tschirley / 3rd							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/25/2023	East/West Street	3rd Ave							
Analysis Year	2023	North/South Street	Tschirley Rd							
Time Analyzed	PM Peak	Peak Hour Factor	0.89							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Tschirley Apts									



Major Street: North-South

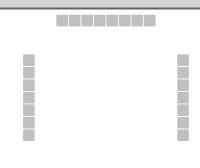
Vehicle Volumes and Adju	Т					\A/				NI - allal				C - 11-1		
Approach		Eastb	ound			Westk				North				South		
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		7	6	1		0	4	17		9	20	0		23	27	7
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0					(	)									
Right Turn Channelized																
Median Type   Storage		Undivided														
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, and	l Leve	of Se	ervice													
Flow Rate, v (veh/h)			16				24			10				26		
Capacity, c (veh/h)			781				973			1566				1586		
v/c Ratio			0.02				0.02			0.01				0.02		
95% Queue Length, Q <sub>95</sub> (veh)			0.1				0.1			0.0				0.0		
Control Delay (s/veh)			9.7				8.8			7.3	0.0	0.0		7.3	0.1	0.1
Level of Service (LOS)			А				Α			Α	А	А		Α	Α	Α
Approach Delay (s/veh)	9.7			8.8			2.3			3.0						

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Approach LOS

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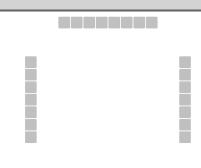
HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Tschirley / 4th							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/25/2023	East/West Street	4th Ave							
Analysis Year	2023	North/South Street	Tschirley Rd							
Time Analyzed	PM Peak	Peak Hour Factor	0.86							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Tschirley Apts									



Major Street: North-South

<b>Vehicle Volumes and Adj</b>	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound		Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		4	1	6		1	0	2		4	29	0		0	27	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0 0														
Right Turn Channelized																
Median Type   Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, and	d Leve	l of S	ervice													
Flow Rate, v (veh/h)			13				3			5				0		
Capacity, c (veh/h)			962				985			1571				1571		
v/c Ratio			0.01				0.00			0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			8.8				8.7			7.3	0.0	0.0		7.3	0.0	0.0
Level of Service (LOS)			А				А			А	А	Α		А	А	А
Approach Delay (s/veh)		8.8			8.7			0.9			0.0					
Approach LOS		А			A			А			А					

HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Tschirley / 6th							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/25/2023	East/West Street	6th Ave							
Analysis Year	2023	North/South Street	Tschirley Rd							
Time Analyzed	PM Peak	Peak Hour Factor	0.89							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Tschirley Apts									



Major Street: North-South

Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	2	0		1	0	8		0	19	0		12	14	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0					(	)									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, and	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)			2				10			0				13		
Capacity, c (veh/h)			817				1036			1594				1588		
v/c Ratio			0.00				0.01			0.00				0.01		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			9.4				8.5			7.3	0.0	0.0		7.3	0.1	0.1
Level of Service (LOS)			А				Α			Α	Α	А		А	Α	Α
Approach Delay (s/veh)		9.4			8.5			0.0			3.3					

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Approach LOS

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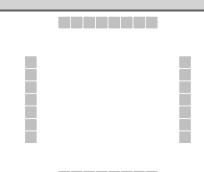
#### **HCS Signalized Intersection Results Summary** Intersection Information **General Information** Agency Sunburst Engineering Duration, h 0.250 Analyst ALW Analysis Date 5/24/2023 Area Type Other PHF Spokane Valley, WA 0.94 Jurisdiction Time Period PM Peak Urban Street Sprague Ave Analysis Year 2023 **Analysis Period** 1> 7:00 Sprague / Flora File Name EX PM Flora.xus Intersection **Project Description** Tschirley Apts **Demand Information** EB **WB** NB SB Approach Movement L R L R L R L R 868 10 Demand (v), veh/h 169 887 17 23 103 24 12 223 21 136 **Signal Information** 110 Cycle, s 120.0 Reference Phase 2 517 Offset, s 0 Reference Point End 2.6 79.4 22.7 0.0 Green 3.3 0.0 Uncoordinated No Simult. Gap E/W On Yellow 3.5 0.0 3.5 3.5 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.5 0.0 0.5 0.0 0.0 **Timer Results EBL EBT WBL WBT** NBL **NBT** SBL SBT **Assigned Phase** 5 2 6 8 4 1 Case Number 1.1 3.0 1.1 3.0 5.0 5.0 Phase Duration, s 10.0 86.0 7.3 83.4 26.7 26.7 Change Period, (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 Max Allow Headway ( MAH ), s 3.1 0.0 3.1 0.0 3.3 3.3 Queue Clearance Time ( $g_s$ ), s 5.8 2.5 4.9 22.2 Green Extension Time ( $g_e$ ), s 0.3 0.0 0.0 0.0 0.9 0.4 Phase Call Probability 1.00 0.56 1.00 1.00 0.00 0.00 0.00 0.75 Max Out Probability SB **Movement Group Results** ΕB WB NB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 6 16 3 8 18 7 4 14 Adjusted Flow Rate (v), veh/h 180 944 18 24 923 110 26 13 11 237 22 145 Adjusted Saturation Flow Rate ( s ), veh/h/ln 1810 1950 1597 1810 1950 1597 1496 1950 1610 1509 1950 1610 3.8 35.6 0.5 36.6 3.0 1.8 0.6 0.6 19.6 1.1 9.6 Queue Service Time ( $g_s$ ), s 0.4 Cycle Queue Clearance Time ( q c ), s 3.8 35.6 0.4 0.5 36.6 3.0 2.9 0.6 0.6 20.2 1.1 9.6 0.72 0.68 0.19 0.19 Green Ratio (g/C) 0.68 0.69 0.66 0.66 0.19 0.19 0.19 0.19 Capacity (c), veh/h 369 1332 1091 333 1289 1056 329 368 304 337 368 304 Volume-to-Capacity Ratio (X) 0.487 0.708 0.017 0.073 0.716 0.104 0.078 0.035 0.035 0.704 0.061 0.476 Back of Queue (Q), ft/ln (95 th percentile) 84.4 529 6.5 8.2 551.7 45.9 29 14.2 11.8 295 24.9 175.9 Back of Queue (Q), veh/ln (95 th percentile) 3.4 21.2 0.3 0.3 22.1 1.8 1.2 0.6 0.5 11.8 1.0 7.0 Queue Storage Ratio (RQ) (95 th 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 39.7 48.0 Uniform Delay ( d 1 ), s/veh 13.5 11.7 6.1 11.2 13.1 7.4 41.1 39.7 39.9 43.4 Incremental Delay ( d 2 ), s/veh 0.4 3.2 0.0 0.0 3.4 0.2 0.0 0.0 0.0 3.9 0.0 0.4 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 13.9 14.9 6.1 11.2 16.5 7.6 41.2 39.8 39.8 51.9 40.0 43.8 Level of Service (LOS) В В Α В В Α D D D D D D 14.6 В 15.5 В 40.5 D 48.4 Approach Delay, s/veh / LOS D Intersection Delay, s/veh / LOS 20.6 С **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 2.06 В 2.07 В 2.14 2.14 В В Bicycle LOS Score / LOS 2.37 В 2.23 0.57 Α 1.15 Α

# **TECHNICAL APPENDIX**

# YEAR 2028 LEVEL OF SERVICE CALCULATIONS

		HCS	S Sigr	nalize	d Inte	ersect	ion R	esu	Its S	um	mary	,						
General Inforn	nation								Inters	secti	on Info	ormatio			Y 4 Y 4 Y 1 P 7			
Agency		Sunburst Engineeri	ng						Durat	· ·		0.250				0		
Analyst		ALW		Analys	is Date	e 5/24/2	2023		Area	Туре	;	Other				<u>∆</u> -		
Jurisdiction		Spokane Valley, W	4	Time F	Period	AM P	eak		PHF			0.76			W.‡E	± ⊒		
Urban Street		Appleway		Analys	is Yea	r 2028			Analy	ysis F	Period	1> 7:0	00	7		4 2		
Intersection		Appleway / Corbin		File Na	ame	FO Al	M Apple	way.x	us						*			
Project Descrip	tion	Tschirley Apts													ነቀተቀጥ	<sup>क</sup> । न		
Demand Inform	mation				EB		7	W	'B			NB			SB			
Approach Move	ement			L	Т	R		Т	гТ	R	L	Т	R	L	Т	R		
Demand ( v ), v				16	399	140	3	52	_	8	193	15	3	5	7	12		
2011101112 (17),	J,																	
Signal Informa	ation						10		J.		T					1		
Cycle, s	120.0	Reference Phase	2	1	7 8	$\exists$	1/2/		542			×	<u>_</u> _	→		<b>4</b>		
Offset, s	0	Reference Point	End		0.7		70.0		:11				1	2	3	4		
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		2.3 0.0	78.0 3.5	25 3.5		0.0	0.0		,	4		rt x		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0		0.0	0.0		5	6	7	Y		
1 0100 Midde	T IXCU	Cimalia Gap 14/G	011		1.0	10.0	1.0	11.		0.0	10.0							
Timer Results				EBL	-	EBT	WB	L	WBT	Т	NBL	-	NBT	SB	L	SBT		
Assigned Phas	е			5		2	1	$\Box$	6	П			8			4		
Case Number				2.0		4.0	2.0		4.0				8.0			8.0		
Phase Duration	າ, s			7.5		84.8	5.2		82.5	5			30.0			30.0		
Change Period	, ( Y+R	c ), s		4.5		4.5	4.5		4.5				4.5			4.5		
Max Allow Headway ( <i>MAH</i> ), s				3.1	$\neg$	0.0	3.1		0.0	$\neg$			3.2			3.2		
Queue Clearance Time ( g s ), s				3.4			2.3			$\neg$			25.5			3.7		
Green Extension Time ( g e ), s			0.0	$\neg$	0.0	0.0	$\neg$	0.0	$\neg$			0.0		$\overline{}$	0.6			
Phase Call Probability				0.50			0.12			_			1.00			1.00		
Max Out Proba				0.00			0.00	5		$\neg$		1.00			$\neg$	0.00		
Movement Gro	oup Res	sults			EB			WE	3			NB			SB			
Approach Move	ement			L	Т	R	L	Т	F	₹	L	Т	R	L	Т	R		
Assigned Move	ement			5	2	12	1	6	1	6	3	8	18	7	4	14		
Adjusted Flow I	Rate ( v	), veh/h		21	371	338	4	352	2 34	48		278			32			
Adjusted Satura	ation Flo	ow Rate ( s ), veh/h/l	ln	1810	1950	1761	1810	195	0 19	24		1476			1885			
Queue Service	Time (	g s ), s		1.4	9.4	9.4	0.3	9.3	9.	.3		21.8			0.0			
Cycle Queue C	learanc	e Time ( <i>g c</i> ), s		1.4	9.4	9.4	0.3	9.3	9.	.3		23.5			1.7			
Green Ratio ( g	g/C )			0.03	0.67	0.67	0.01	0.6	5 0.6	65		0.21			0.21			
Capacity ( c ), v	veh/h			46	1304	1178	11	126	7 12	250		371			437			
Volume-to-Cap	acity Ra	atio (X)		0.461	0.285	0.287	0.353	0.27	8 0.2	278		0.748			0.072			
Back of Queue	(Q), f	t/ln ( 95 th percentile	<del>;</del> )	29.7	172.8	158.1	6.3	174.	7 172	2.5		340.7			33.6			
Back of Queue	( Q ), v	eh/In ( 95 th percent	ile)	1.2	6.9	6.3	0.3	7.0	6.	.9		13.6			1.3			
		RQ) (95 th percen		0.00	0.00	0.00	0.00	0.00	0.0	00		0.00			0.00			
Uniform Delay	( d 1 ), s	/veh		57.7	8.1	8.1	59.4	9.0	9.	.0		46.5			37.9			
Incremental De				2.7	0.5	0.6	6.9	0.5	0.	.6		7.3			0.0			
Initial Queue D				0.0	0.0	0.0	0.0	0.0	0.	.0		0.0			0.0			
	Control Delay ( d ), s/veh			60.4	8.7	8.8	66.3	9.5	9.	.5		53.8			37.9			
	evel of Service (LOS)		E	Α	Α	E	А	A	A		D			D				
	Approach Delay, s/veh / LOS		10.2	2	В	9.9		Α		53.8	3	D	37.9	9	D			
	ntersection Delay, s/veh / LOS				1	7.5						В						
Multimadal Da	Authors del Descrite			ED			۱۸/۶				ND			CD				
Multimodal Re		/1.08		4.05	EB	D	4.01	WE		-	2.20	NB	D	0.0	SB	D		
Pedestrian LOS				1.65	_	В	1.65		В	-	2.30	-	В	2.3		В		
Bicycle LOS So	core / LC	JS		1.09	,	Α	1.07	/	Α		0.95	)	Α	0.5	4	Α		

HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Sprague / Tschirley Wye							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/24/2023	East/West Street	Tschirley Wye							
Analysis Year	2028	North/South Street	Sprague Ave							
Time Analyzed	AM Peak	Peak Hour Factor	0.96							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Tschirley Apts									



Major Street: North-South

Vehicle	Volumes	and A	Adjust	tments
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Approach		Eastb	ound		Westbound				North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	T	10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration	T		LR							LT						TR
Volume (veh/h)		3		1						1	183				91	3
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)			0													
Right Turn Channelized																
Median Type   Storage	T			Undi	vided											
Critical and Follow-up Ho	eadwa	ys														
Base Critical Headway (sec)	$\Box$	7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)	T	3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	Т		4							1						
Capacity, c (veh/h)			756							1508						
v/c Ratio			0.01							0.00						
95% Queue Length, Q <sub>95</sub> (veh)			0.0							0.0						
	_					-			-							

Control Delay (s/veh)

Level of Service (LOS)

Approach LOS

Approach Delay (s/veh)

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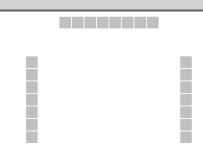
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HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Tschirley / Tschirley Wye							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/24/2023	East/West Street	Tschirley Wye							
Analysis Year	2028	North/South Street	Tschirley Rd							
Time Analyzed	AM Peak	Peak Hour Factor	0.85							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Tschirley Apts									



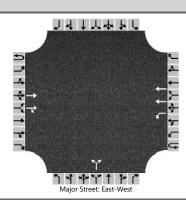
Major Street: North-South

	venicie	voiumes	and	Adjustment	S
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Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	T	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	1		5	0	3		0	38	1		0	34	0
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)		(	)			(	0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

1 0 1 0 1 1 0 d d 1 1		0.50		0.00		0.50		0.00	2.20					
Delay, Queue Length, and Level of Service														
Flow Rate, v (veh/h)			1				9		0			0		
Capacity, c (veh/h)			1037				948		1583			1575		
v/c Ratio			0.00				0.01		0.00			0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0		0.0			0.0		
Control Delay (s/veh)			8.5				8.8		7.3	0.0	0.0	7.3	0.0	0.0
Level of Service (LOS)			Α				А		Α	А	Α	Α	Α	Α
Approach Delay (s/veh)		8.	5			8	.8		0.	.0		0	.0	
Approach LOS		Д	١			,	4		A	4		,	4	

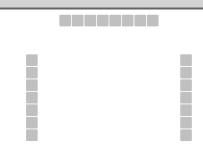
HCS Two-Way Stop-Control Report											
General Information		Site Information									
Analyst	ALW	Intersection	Sprague / Tschirley								
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA								
Date Performed	5/24/2023	East/West Street	Sprague Ave								
Analysis Year	2028	North/South Street	Tschirley Rd								
Time Analyzed	AM Peak	Peak Hour Factor	0.83								
Intersection Orientation	East-West Analysis Time Period (hrs) 0.25										
Project Description	Tschirley Apts										



Vehicle Volumes and Adj	justme	nts														
Approach	T	Eastk	oound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			Т	TR		L	Т				LR					
Volume (veh/h)			606	28	0	9	888			25		27				
Percent Heavy Vehicles (%)					0	0				0		0				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized																
Median Type   Storage				Left	Only								1			
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.10				6.80		6.90				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	Т					11					63					
Capacity, c (veh/h)						858					399					
v/c Ratio						0.01					0.16					
95% Queue Length, Q <sub>95</sub> (veh)						0.0					0.6					
Control Delay (s/veh)						9.2					15.7					
Level of Service (LOS)						Α					С					
Approach Delay (s/veh)		0.1						15	5.7							
Approach LOS					A					(	С					

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HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Tschirley / 3rd							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/25/2023	East/West Street	3rd Ave							
Analysis Year	2028	North/South Street	Tschirley Rd							
Time Analyzed	AM Peak	Peak Hour Factor	0.83							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Tschirley Apts									

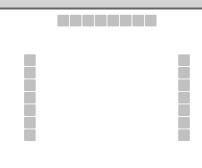


Major Street: North-South

Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		4	0	2		0	6	16		7	19	1		9	19	3
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)			0				0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and	Leve	l of Se	rvice										
Flow Rate, v (veh/h)			7			27		8			11		
Capacity, c (veh/h)			903			964		1581			1584		
v/c Ratio			0.01			0.03		0.01			0.01		
95% Queue Length, Q <sub>95</sub> (veh)			0.0			0.1		0.0			0.0		
Control Delay (s/veh)			9.0			8.8		7.3	0.0	0.0	7.3	0.1	0.1
Level of Service (LOS)			Α			Α		Α	А	А	Α	А	А
Approach Delay (s/veh)		9.	0		8	.8		1	.9		2	.2	
Approach LOS		Δ	1	A A				A	4				

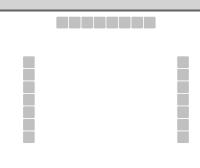
HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Tschirley / 4th							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/25/2023	East/West Street	4th Ave							
Analysis Year	2028	North/South Street	Tschirley Rd							
Time Analyzed	AM Peak	Peak Hour Factor	0.76							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Tschirley Apts									



Major Street: North-South

Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		5	0	1		0	0	1		2	20	0		0	26	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)			0			(	)									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, and	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	Π		8				1			3				0		
Capacity, c (veh/h)			937				1047			1567				1581		
v/c Ratio			0.01				0.00			0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			8.9				8.4			7.3	0.0	0.0		7.3	0.0	0.0
Level of Service (LOS)			А				А			А	А	А		А	А	Α
Approach Delay (s/veh)		8.9				8	.4		0.7				0.0			
Approach LOS			A			,	4		A				А			

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Tschirley / 6th
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/25/2023	East/West Street	6th Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	AM Peak	Peak Hour Factor	0.72
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



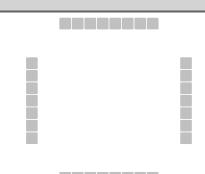
Major Street: North-South

Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		1	1	1		0	0	14		0	9	2		9	18	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)			0			(	0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up Ho	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	T		4				19			0				13		
Capacity, c (veh/h)			907				1063			1579				1596		
v/c Ratio			0.00				0.02			0.00				0.01		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.1			0.0				0.0		
Control Delay (s/veh)			9.0				8.4			7.3	0.0	0.0		7.3	0.1	0.1
Level of Service (LOS)			А				А			А	А	Α		А	А	Α
Approach Delay (s/veh)		9.0				8	.4	-	0.0				2.3			
Approach LOS			A			,	Α		A				А			

#### **HCS Signalized Intersection Results Summary** Intersection Information **General Information** Agency Sunburst Engineering Duration, h 0.250 Analyst ALW Analysis Date 5/24/2023 Area Type Other PHF Spokane Valley, WA 0.84 Jurisdiction Time Period AM Peak Urban Street Sprague Ave Analysis Year 2028 **Analysis Period** 1> 7:00 Sprague / Flora File Name FO AM Flora.xus Intersection **Project Description** Tschirley Apts **Demand Information** EB **WB** NB SB Approach Movement L R L R L R R 61 700 Demand (v), veh/h 513 6 4 120 23 30 6 97 6 101 **Signal Information** 11. Cycle, s 120.0 Reference Phase 2 517 Offset, s 0 Reference Point End 0.6 88.3 0.0 Green 0.9 14.2 0.0 Uncoordinated No Simult. Gap E/W On Yellow 3.5 3.5 3.5 0.0 3.5 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.5 0.5 0.5 0.0 0.0 **Timer Results** FBI **EBT WBL WBT** NBL **NBT** SBL SBT **Assigned Phase** 5 2 6 8 4 1 Case Number 1.1 3.0 1.1 3.0 5.0 5.0 Phase Duration, s 9.5 96.9 4.9 92.3 18.2 18.2 Change Period, (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 Max Allow Headway ( MAH ), s 3.1 0.0 3.1 0.0 3.3 3.3 Queue Clearance Time ( $g_s$ ), s 3.0 2.1 4.4 13.7 Green Extension Time ( $g_e$ ), s 0.1 0.0 0.0 0.0 0.6 0.5 Phase Call Probability 0.91 0.15 1.00 1.00 0.00 0.00 0.00 0.00 Max Out Probability SB **Movement Group Results** ΕB WB NB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 6 16 3 8 18 7 4 14 Adjusted Flow Rate ( v ), veh/h 73 611 7 5 833 143 27 36 7 115 7 120 1810 1950 1597 1810 1950 1597 1517 1950 1610 1478 1950 1610 Adjusted Saturation Flow Rate ( s ), veh/h/ln 1.0 12.4 0.1 0.1 23.7 2.1 2.0 0.5 9.7 0.4 8.5 Queue Service Time ( $g_s$ ), s 3.1 11.7 Cycle Queue Clearance Time ( q c ), s 1.0 12.4 0.1 0.1 23.7 3.1 2.4 2.0 0.5 0.4 8.5 0.77 0.77 0.74 0.74 0.12 Green Ratio (g/C) 0.80 0.74 0.12 0.12 0.12 0.12 0.12 Capacity (c), veh/h 502 1509 1236 611 1434 1175 236 232 192 212 232 192 Volume-to-Capacity Ratio (X) 0.145 0.405 0.006 0.008 0.581 0.122 0.116 0.154 0.037 0.545 0.031 0.628 Back of Queue (Q), ft/ln (95 th percentile) 15.1 191.6 1.6 1.2 347.9 43.5 33.9 44 8.7 156.5 8.7 159.1 Back of Queue (Q), veh/ln (95 th percentile) 0.6 7.7 0.1 0.0 13.9 1.7 1.4 1.8 0.3 6.3 0.3 6.4 Queue Storage Ratio (RQ) (95 th 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 47.4 46.8 Uniform Delay ( d 1 ), s/veh 5.7 4.5 3.1 4.4 7.3 4.6 47.8 52.7 46.7 50.3 Incremental Delay ( d 2 ), s/veh 0.0 8.0 0.0 0.0 1.7 0.2 0.1 0.1 0.0 8.0 0.0 1.3 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 0.0 Control Delay ( d ), s/veh 5.7 5.3 3.1 4.4 9.1 4.8 47.9 47.6 46.8 53.5 46.8 51.6 Level of Service (LOS) Α Α Α Α Α Α D D D D D D 5.3 Α 8.4 Α 47.6 D 52.3 D Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS В 14.1 **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 2.03 В 2.05 В 2.14 2.14 В В Bicycle LOS Score / LOS 1.63 В 2.11 0.60 Α 0.89 Α

Intersection Information			HCS Sign		nalized Intersection Results Summary												
Sumburst Engineering					Intersection Inform										Ų.		
Agency   Sunburst Engineering   Alw   Analysis Date   5/24/2023   Analysis Date   5/		nation								_			-			THE RESERVE TO STATE OF THE PARTY.	Ja la
			Sunburst Engineeri	ng							·		0.250		9		
Urban Street	Analyst		1		Analys	is Date	5/24/2	2023				<del>)</del>					<u>^</u>
Intersection	Jurisdiction		Spokane Valley, WA	4				eak					0.94		*	W∳E	<b>—</b>
Project Description   Tachrifey Apts	Urban Street				Analys	is Yea					lysis F	Period	1> 7:0	00	7		4
Demand Information	Intersection		Appleway / Corbin		File Na	ame	FO PI	M Apple	way.x	us						*	
Approach Movement	Project Descrip	tion	Tschirley Apts	_	_	_	_	_				_	_	_		14147	7 4
Signal Information	Demand Inform	nation				EB		T	W	'B		Ī	NB		T	SB	
Signal Information	Approach Move	ement			L	Т	R	L	T 7	Г	R	L	Т	R	L	Т	R
Cycle, s   120,0   Reference Phase   2   2   2   3   4   3   5   0   0   0   0   0   0   0   0   0	Demand ( v ), v	eh/h			13	640	389	6	67	76	14	218	7	5	8	8	11
Cycle, s   120,0   Reference Phase   2   2   2   3   4   3   5   0   0   0   0   0   0   0   0   0	Signal Informa	ation				Т				:		7					
Offset, s	_	_	Poforonco Phasa	2	1	70	-2	107							200		◮▮
Uncoordinated   No   Simult, Gap EW   On   Yellow 3,5   0.0   0.0   3.5   0.0   0						-				311			200	1	<b>7</b> 2	3	4
Fixed   Simult. Gap N/S   On   Red   1.0   0.0   1.0   1.0   0.0				_										_			
Timer Results		_	<u> </u>			-								<b>^</b>	6	7	Ψ.
Assigned Phase	Force Mode	rixed	Simult. Gap 19/5	On	Reu	1.0	0.0	1.0	1.0	J    '	0.0	10.0		5	б	7	8
Case Number       2.0       4.0       2.0       4.0       8.0       8.0       8.0         Phase Duration, s       6.7       87.5       5.7       86.5       26.8       26.8         Change Period, (Y+R c), s       4.5       4.5       4.5       4.5       4.5       4.5       4.5         Max Allow Headway (MAH), s       3.1       0.0       3.1       0.0       3.1       0.0       3.1       3.1         Queue Clearance Time (g e), s       2.9       2.4       2.2       2.2       3.6         Green Extension Time (g e), s       0.0	Timer Results				EBL	-	EBT	WB	L	WB	ВТ	NBL	-	NBT	SB	L	SBT
Phase Duration, s         6.7         87.5         5.7         86.5         26.8         26.8           Change Period, (Y+Re), s         4.5         4.4         5         8.8         8         8         8         3.1         3.2         3.6         3.0         <	Assigned Phas	е			5		2	1	$\Box$	6				8			4
Change Period, (Y+R c), s         4.5 </td <td>Case Number</td> <td></td> <td></td> <td></td> <td>2.0</td> <td></td> <td>4.0</td> <td>2.0</td> <td></td> <td>4.0</td> <td>)</td> <td></td> <td></td> <td>8.0</td> <td></td> <td></td> <td>8.0</td>	Case Number				2.0		4.0	2.0		4.0	)			8.0			8.0
Max Allow Headway ( MAH ), s       3.1       0.0       3.1       0.0       3.1       3.1         Queue Clearance Time ( g ∘ ), s       2.9       2.4       22.2       3.6         Green Extension Time ( g ∘ ), s       0.0       0.0       0.0       0.0       0.2       0.5         Phase Call Probability       0.00       0.00       0.00       0.00       1.00       0.80       0.00         Max Out Probability       0.00       0.00       0.00       0.80       0.00       0.00         Movement Group Results         Approach Movement       L       T       R       L       T <td>Phase Duration</td> <td>າ, s</td> <td></td> <td></td> <td>6.7</td> <td></td> <td>87.5</td> <td>5.7</td> <td></td> <td>86.5</td> <td>5</td> <td></td> <td></td> <td>26.8</td> <td></td> <td></td> <td>26.8</td>	Phase Duration	າ, s			6.7		87.5	5.7		86.5	5			26.8			26.8
Queue Clearance Time (g s), s         2.9         2.4         2.2         3.6           Green Extension Time (g e), s         0.0         0.0         0.0         0.0         0.0         0.5           Phase Call Probability         0.37         0.19         1.00         1.00         1.00           Max Out Probability         0.00         0.00         0.00         0.80         0.00           Movement Group Results         EB         WB         NB         NB         SB           Assigned Movement         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         T         R         L         J         T         R         L         J         L	Change Period	, ( Y+R	c ), S		4.5		4.5	4.5		4.5	5			4.5			4.5
Caren Extension Time ( g ∘ ), s   0.0	Max Allow Hea	dway ( /	<i>MAH</i> ), s		3.1		0.0	3.1		0.0				3.1			3.1
Phase Call Probability	Queue Clearan	ce Time	e ( g s ), s		2.9			2.4						22.2			3.6
Max Out Probability   0.00   0.00   0.00   0.80   0.00   0.00   0.00   0.00	Green Extension	n Time	( g e ), s		0.0		0.0	0.0		0.0				0.2			0.5
Movement Group Results	Phase Call Pro	bability	\ <u>-</u>		0.37	,		0.19	9					1.00			1.00
Approach Movement	Max Out Proba	bility			0.00	)		0.00	)					0.80			0.00
Approach Movement	Movement Gre	un Bos	aulto			ED			۱۸/۵	)			ND			C D	
Assigned Movement    5			suits			_	Гр		_				_	Ь	<b>.</b>	_	В
Adjusted Flow Rate ( v ), veh/h  Adjusted Flow Rate ( s ), veh/h  Adjusted Saturation Flow Rate ( s ), veh/h/ln  Bate  Bate					5		_		_	$\rightarrow$	$\overline{}$			_	_	-	_
Adjusted Saturation Flow Rate ( s ), veh/h/ln	_		) voh/h				_				$\rightarrow$	J	-	10			14
Queue Service Time (g s), s       0.9       15.9       15.9       15.9       0.4       8.9       8.9       18.6       0.0         Cycle Queue Clearance Time (g c), s       0.9       15.9       15.9       0.4       8.9       8.9       20.2       1.6         Green Ratio (g/C)       0.02       0.69       0.69       0.01       0.68       0.68       0.19       0.19         Capacity (c), veh/h       33       1349       1167       17       1332       1312       341       386         Volume-to-Capacity Ratio (X)       0.414       0.435       0.435       0.368       0.278       0.278       0.718       0.074         Back of Queue (Q), th/ln (95 th percentile)       19.8       262.9       236.8       9.7       161.6       159.4       300.4       31.7         Back of Queue (Q), veh/ln (95 th percentile)       0.8       10.5       9.5       0.4       6.5       6.4       12.0       1.3         Queue Storage Ratio (RQ) (95 th percentile)       0.0       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00 <td></td> <td></td> <td>, .</td> <td>n</td> <td></td> <td>_</td> <td>+</td> <td></td> <td></td> <td>_</td> <td><math>\overline{}</math></td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td>			, .	n		_	+			_	$\overline{}$					_	
Cycle Queue Clearance Time ( g c ), s       0.9       15.9       15.9       0.4       8.9       8.9       20.2       1.6       1.6       Ratio ( g/C )       0.02       0.69       0.69       0.01       0.68       0.68       0.19       0.20       0.278       0.278       0.278       0.718       0.718       0.074       0.074       0.074       0.07       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00				11						_	-				-		
Green Ratio ( g/C )       0.02       0.69       0.69       0.01       0.68       0.68       0.19       0.19       0.19         Capacity ( c ), veh/h       33       1349       1167       17       1332       1312       341       386         Volume-to-Capacity Ratio ( X )       0.414       0.435       0.435       0.368       0.278       0.278       0.718       0.074         Back of Queue ( Q ), ft/ln ( 95 th percentile)       19.8       262.9       236.8       9.7       161.6       159.4       300.4       31.7         Back of Queue ( Q ), veh/ln ( 95 th percentile)       0.8       10.5       9.5       0.4       6.5       6.4       12.0       1.3         Queue Storage Ratio ( RQ ) ( 95 th percentile)       0.00       0.0       0.0       0.0       0.0       0.0       0.0			- ,			-	_		_	$\rightarrow$	$\rightarrow$		_				
Capacity ( c ), veh/h       33       1349       1167       17       1332       1312       341       386         Volume-to-Capacity Ratio ( X )       0.414       0.435       0.435       0.368       0.278       0.278       0.718       0.074         Back of Queue ( Q ), ft/ln ( 95 th percentile)       19.8       262.9       236.8       9.7       161.6       159.4       300.4       31.7         Back of Queue ( Q ), veh/ln ( 95 th percentile)       0.8       10.5       9.5       0.4       6.5       6.4       12.0       1.3         Queue Storage Ratio ( RQ ) ( 95 th percentile)       0.00			c IIIIc ( g t ), 3			_				_	$\overline{}$				-		
Volume-to-Capacity Ratio ( X )       0.414       0.435       0.435       0.368       0.278       0.278       0.718       0.074         Back of Queue ( Q ), ft/ln (95 th percentile)       19.8       262.9       236.8       9.7       161.6       159.4       300.4       31.7         Back of Queue ( Q ), veh/ln (95 th percentile)       0.8       10.5       9.5       0.4       6.5       6.4       12.0       1.3         Queue Storage Ratio ( RQ ) ( 95 th percentile)       0.00       0		•					_	_		_	$\overline{}$						
Back of Queue ( Q ), ft/ln ( 95 th percentile)       19.8       262.9       236.8       9.7       161.6       159.4       300.4       31.7         Back of Queue ( Q ), veh/ln ( 95 th percentile)       0.8       10.5       9.5       0.4       6.5       6.4       12.0       1.3         Queue Storage Ratio ( RQ ) ( 95 th percentile)       0.00			atio (X)			_	_			_	-					_	
Back of Queue ( Q ), veh/ln ( 95 th percentile)       0.8       10.5       9.5       0.4       6.5       6.4       12.0       1.3         Queue Storage Ratio ( RQ ) ( 95 th percentile)       0.00				:)		_	+	_	_	_	_					_	
Queue Storage Ratio ( RQ ) ( 95 th percentile)       0.00		` ,	· · · · · · · · · · · · · · · · · · ·			_				_	-						
Incremental Delay ( d 2 ), s/veh   3.0   1.0   1.2   4.8   0.5   0.5   4.6   0.0						_				$\rightarrow$	$\overline{}$						
Initial Queue Delay ( d ₃ ), s/veh         0.0	Uniform Delay	( <b>d</b> 1 ), s	/veh		58.2	8.1	8.2	59.1	7.4	. 7	7.4		48.0			40.4	
Control Delay ( d ), s/veh       61.3       9.2       9.3       63.8       8.0       8.0       52.5       40.4       Level of Service (LOS)       E       A       A       E       A       A       D       D       D       D         Approach Delay, s/veh / LOS       9.9       A       8.4       A       52.5       D       40.4       D         Intersection Delay, s/veh / LOS       14.7       B       B       8       NB       SB         Multimodal Results       EB       WB       NB       SB       SB         Pedestrian LOS Score / LOS       1.64       B       1.64       B       2.30       B       2.30       B	Incremental De	lay ( <i>d</i> 2	), s/veh		3.0	1.0	1.2	4.8	0.5	0	).5		4.6			0.0	
Level of Service (LOS)         E         A         A         E         A         A         D         D         D           Approach Delay, s/veh / LOS         9.9         A         8.4         A         52.5         D         40.4         D           Intersection Delay, s/veh / LOS         14.7         B         B         SB           Multimodal Results         EB         WB         NB         SB           Pedestrian LOS Score / LOS         1.64         B         1.64         B         2.30         B         2.30         B	Initial Queue De	elay ( <i>d</i>	з ), s/veh		0.0	0.0	0.0	0.0	0.0	0	0.0		0.0			0.0	
Approach Delay, s/veh / LOS         9.9         A         8.4         A         52.5         D         40.4         D           Intersection Delay, s/veh / LOS         14.7         B             Multimodal Results         EB         WB         NB         SB           Pedestrian LOS Score / LOS         1.64         B         1.64         B         2.30         B         2.30         B	Control Delay (	d ), s/v	eh		61.3	9.2	9.3	63.8	8.0	8	3.0		52.5			40.4	
Multimodal Results         EB         WB         NB         SB           Pedestrian LOS Score / LOS         1.64         B         1.64         B         2.30         B         2.30         B	Level of Service	e (LOS)			Е	А	Α	Е	Α		Α		D			D	
Multimodal Results         EB         WB         NB         SB           Pedestrian LOS Score / LOS         1.64         B         1.64         B         2.30         B         2.30         B	Approach Delay	y, s/veh	/LOS		9.9		Α	8.4		Α		52.5	5	D	40.4	1	D
Pedestrian LOS Score / LOS         1.64         B         1.64         B         2.30         B         2.30         B	Intersection De	lay, s/ve	eh / LOS				14	1.7							В		
Pedestrian LOS Score / LOS         1.64         B         1.64         B         2.30         B         2.30         B	Multimodal Po	eulte				FR			\//	3			NR			SR	
			/I OS		1 64		В	1 64	_			2.30		В	2.30		В
						-			_		$\rightarrow$				_	-	

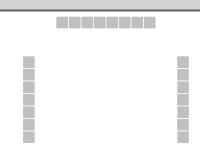
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Sprague / Tschirley Wye
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/24/2023	East/West Street	Tschirley Wye
Analysis Year	2028	North/South Street	Sprague Ave
Time Analyzed	PM Peak	Peak Hour Factor	0.93
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: North-South

Vehicle Volumes and Adj	ustme	nts														
Approach	T		oound			Westl	oound			North	bound		Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		4		5						2	230				370	2
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)			0													
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Τ	7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	Т		10							2						
Capacity, c (veh/h)			535							1170						
v/c Ratio			0.02							0.00						
95% Queue Length, Q <sub>95</sub> (veh)			0.1						Ì	0.0						
Control Delay (s/veh)			11.8							8.1	0.0					
Level of Service (LOS)			В							А	А					
Approach Delay (s/veh)		11.8							0.1							
Approach LOS			В							A	4					

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Tschirley / Tschirley Wye
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/24/2023	East/West Street	Tschirley Wye
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	PM Peak	Peak Hour Factor	0.78
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: North-South

Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	0		4	0	4		0	40	9		6	61	0
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)		(	)			(	0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		
Delay, Queue Length, and	Leve	of Se	ervice													
Flow Rate, v (veh/h)			0				10			0				8		
Capacity, c (veh/h)			0				905			1533				1553		
v/c Ratio							0.01			0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)							0.0			0.0				0.0		
Control Delay (s/veh)							9.0			7.3	0.0	0.0		7.3	0.0	0.0

Level of Service (LOS)

Approach Delay (s/veh)

Approach LOS

**Vehicle Volumes and Adjustments** 

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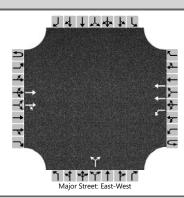
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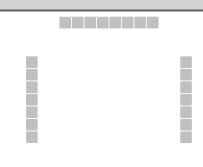
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Sprague / Tschirley
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/24/2023	East/West Street	Sprague Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	PM Peak	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Vehicle Volumes and Adj	ustme	nts														
Approach		Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			T	TR		L	Т				LR					
Volume (veh/h)			963	57	0	23	877			32		19				
Percent Heavy Vehicles (%)					0	0				0		0				
Proportion Time Blocked																
Percent Grade (%)										(	)					
Right Turn Channelized																
Median Type   Storage				Left	Only								1			
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Т					4.1				7.5		6.9				
Critical Headway (sec)						4.10				6.80		6.90				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	T					25					55					
Capacity, c (veh/h)						644					271					
v/c Ratio						0.04					0.20					
95% Queue Length, Q <sub>95</sub> (veh)					Ì	0.1			Ì		0.7					
Control Delay (s/veh)						10.8					21.6					
Level of Service (LOS)					Ì	В			Ì		С					
Approach Delay (s/veh)		•				0	.3			21	.6	•		•		
Approach LOS						,	4		С							

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	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Tschirley / 3rd
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/25/2023	East/West Street	3rd Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	PM Peak	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: North-South

-	venicle volui	mes and	Adjustments
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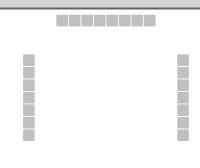
Approach		Eastb	ound			Westl	oound			North	bound		Southbound					
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0		
Configuration			LTR				LTR				LTR				LTR			
Volume (veh/h)		7	6	1		0	4	18		9	21	0		24	28	7		
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3				
Proportion Time Blocked																		
Percent Grade (%)			0			(	0											
Right Turn Channelized																		
Median Type   Storage				Undi	vided													
Critical and Follow-up H	eadwa	ys																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1				
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13				
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2				
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23				
Delay, Queue Length, an	d Leve	l of Se	ervice															
Flow Rate, v (veh/h)			16				25			10				27				
Capacity, c (veh/h)			775				974			1564				1585				
v/c Ratio			0.02				0.03			0.01				0.02				
95% Queue Length, Q <sub>95</sub> (veh)			0.1				0.1			0.0				0.1				
Control Delay (s/veh)			9.7				8.8			7.3	0.0	0.0		7.3	0.1	0.1		
Level of Service (LOS)			Α				Α			А	А	Α		А	А	А		
Approach Delay (s/veh)		9.7				8.8				2.2				3.0				
	_										+							

Α

Approach LOS

Α

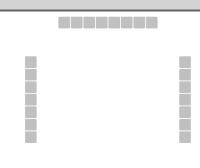
HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Tschirley / 4th							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/25/2023	East/West Street	4th Ave							
Analysis Year	2028	North/South Street	Tschirley Rd							
Time Analyzed	PM Peak	Peak Hour Factor	0.86							
Intersection Orientation North-South Analysis Time Period (hrs) 0.25										
Project Description	Tschirley Apts									



Major Street: North-South

Vehicle Volumes and Adj	ustme	nts															
Approach		Eastb	ound			Westl	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		4	1	6		1	0	2		4	30	0		0	28	2	
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3			
Proportion Time Blocked																	
Percent Grade (%)			0			(	0										
Right Turn Channelized																	
Median Type   Storage				Undi	vided												
Critical and Follow-up He	eadwa	dways															
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23			
Delay, Queue Length, and	d Leve	l of S	ervice														
Flow Rate, v (veh/h)			13				3			5				0			
Capacity, c (veh/h)			960				983			1570				1570			
v/c Ratio			0.01				0.00			0.00				0.00			
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0			
Control Delay (s/veh)		8.8					8.7			7.3	0.0	0.0		7.3	0.0	0.0	
Level of Service (LOS)		A					А		A A A					А	Α	А	
Approach Delay (s/veh)		8.8				8.7				0.9				0.0			
Approach LOS		А				A				А				A			

HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Tschirley / 6th							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/25/2023	East/West Street	6th Ave							
Analysis Year	2028	North/South Street	Tschirley Rd							
Time Analyzed	PM Peak	Peak Hour Factor	0.89							
Intersection Orientation North-South Analysis Time Period (hrs) 0.25										
Project Description	Tschirley Apts									



Major Street: North-South

Vehicle Volumes a	and Adjustments
Approach	E-

Approach		Eastb	ound		Westbound				North	oound		Southbound						
Movement	U	L	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0		
Configuration			LTR				LTR				LTR				LTR			
Volume (veh/h)		0	2	0		1	0	8		0	20	0		13	15	1		
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3				
Proportion Time Blocked																		
Percent Grade (%)		(	)			(	)											
Right Turn Channelized																		
Median Type   Storage				Undi	vided													
Critical and Follow-up He	adwa	ys																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1				
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13				
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2				
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23				
Delay, Queue Length, and	Leve	of Se	rvice															
Flow Rate, v (veh/h)			2				10			0				15				
Capacity, c (veh/h)			812				1033			1592				1586				
v/c Ratio			0.00				0.01			0.00				0.01				
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0				
Control Delay (s/veh)			9.4				8.5			7.3	0.0	0.0		7.3	0.1	0.1		
Level of Service (LOS)		A			A			A A A					Α	А	Α			
Approach Delay (s/veh)	9.4			8.5				0.0				3.3						
Approach LOS	А			A				A				А						

#### **HCS Signalized Intersection Results Summary** Intersection Information **General Information** Agency Sunburst Engineering Duration, h 0.250 Analyst ALW Analysis Date 5/24/2023 Area Type Other PHF Spokane Valley, WA 0.94 Jurisdiction Time Period PM Peak Urban Street Sprague Ave Analysis Year 2028 **Analysis Period** 1> 7:00 Intersection Sprague / Flora File Name FO PM Flora.xus **Project Description** Tschirley Apts **Demand Information** EB **WB** NB SB Approach Movement L R L R L R L R 18 143 Demand (v), veh/h 178 932 24 912 108 25 13 11 234 22 **Signal Information** 110 Cycle, s 120.0 Reference Phase 2 517 Offset, s 0 Reference Point End 2.9 78.1 0.0 Green 3.4 23.6 0.0 Uncoordinated No Simult. Gap E/W On Yellow 3.5 0.0 3.5 3.5 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.5 0.0 0.5 0.0 0.0 **Timer Results EBL EBT WBL WBT** NBL **NBT** SBL SBT **Assigned Phase** 5 2 6 8 4 1 Case Number 1.1 3.0 1.1 3.0 5.0 5.0 Phase Duration, s 10.3 84.9 7.4 82.1 27.6 27.6 Change Period, (Y+Rc), s 4.0 4.0 4.0 4.0 4.0 4.0 Max Allow Headway ( MAH ), s 3.1 0.0 3.1 0.0 3.3 3.3 Queue Clearance Time ( $g_s$ ), s 6.1 2.6 5.0 23.3 Green Extension Time ( $g_e$ ), s 0.3 0.0 0.0 0.0 1.0 0.4 Phase Call Probability 1.00 0.57 1.00 1.00 0.00 0.00 0.00 1.00 Max Out Probability SB **Movement Group Results** ΕB WB NB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 6 16 3 8 18 7 4 14 Adjusted Flow Rate ( v ), veh/h 189 991 19 26 970 115 27 14 12 249 23 152 Adjusted Saturation Flow Rate ( s ), veh/h/ln 1810 1950 1597 1810 1950 1597 1494 1950 1610 1507 1950 1610 4.1 40.4 0.6 41.5 1.9 0.7 0.7 20.6 1.2 10.1 Queue Service Time ( $g_s$ ), s 0.5 3.3 40.4 1.2 Cycle Queue Clearance Time ( q c ), s 4.1 0.5 0.6 41.5 3.3 3.0 0.7 0.7 21.3 10.1 0.71 0.20 0.20 0.20 0.20 0.20 Green Ratio (g/C) 0.67 0.67 0.68 0.65 0.65 0.20 384 Capacity (c), veh/h 334 1315 1077 297 1268 1039 340 317 348 384 317 Volume-to-Capacity Ratio (X) 0.567 0.754 0.018 0.086 0.765 0.111 0.078 0.036 0.037 0.715 0.061 0.480 Back of Queue (Q), ft/ln (95 th percentile) 111.5 596.9 7.2 9.6 625.6 50.3 29.9 15.2 12.8 309 25.8 183.8 Back of Queue (Q), veh/ln (95 th percentile) 4.5 23.9 0.3 0.4 25.0 2.0 1.2 0.6 0.5 12.4 1.0 7.4 Queue Storage Ratio (RQ) (95 th 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 39.0 47.6 Uniform Delay ( d 1 ), s/veh 16.7 12.9 6.4 13.1 14.6 7.9 40.4 39.0 39.2 42.7 Incremental Delay ( d 2 ), s/veh 0.6 4.0 0.0 0.0 4.4 0.2 0.0 0.0 0.0 4.7 0.0 0.4 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 17.3 17.0 6.5 13.1 19.0 8.1 40.4 39.0 39.0 52.3 39.2 43.1 Level of Service (LOS) В В Α В В Α D D D D D D 16.9 В 17.8 В 39.7 D 48.3 Approach Delay, s/veh / LOS D Intersection Delay, s/veh / LOS 22.4 С **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 2.06 В 2.07 В 2.13 2.13 В В Bicycle LOS Score / LOS 2.47 В 2.32 0.57 Α 1.19 Α

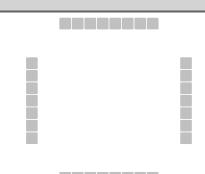
# **TECHNICAL APPENDIX**

# YEAR 2028 LEVEL OF SERVICE CALCULATIONS WITH PROJECT

	HCS Signalized Intersection Results Summary															
Company Inform	4!								lestana	4	an lufi	4! -			4 744	Ja I.
General Inform	nation	0 1 15										ormatic			4	
Agency		Sunburst Engineeri	ng	1		I=10.414			Durati			0.250				2
Analyst		ALW				5/24/2			Area	Туре	:	Other	•		₩ ₩ <b>‡</b> E	.×. ∰
Jurisdiction		Spokane Valley, WA	<b>-</b>	Time F	Period	AM Po Project	eak w/ ct		PHF			0.76		₩ ₩ ₩	W + E 8	, <u>, , , , , , , , , , , , , , , , , , </u>
Urban Street		Appleway		Analys	is Yea	2028	2028				Period	1> 7:0	00	4	4	-
Intersection		Appleway / Corbin		File Na	ame	FW A	M Apple	way.x	cus						1147	20
Project Descrip																
Damand Info	4!							10	'D			ND			CD	
Demand Inform					EB	T 5		W	-	_		NB	T 5	+ -	SB	
Approach Move				L	T	R	L	1	_	R	L	T	R	L	T	R
Demand ( v ), v	en/h			16	419	140	3	53	30	8	193	15	3	5	7	12
Signal Informa	ition				T	Ī			i.		Т					1
Cycle, s	120.0	Reference Phase	2	1	7 8	=3	<b>→</b> '	- 24	24.2			K		_		<b>4</b>
Offset, s	0	Reference Point	End	<u> </u>	0.7	3	70.0			_			1	2	3	4
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		2.3 0.0	78.0 3.5	25 3.5		0.0	0.0	_	, l	<b>←</b>		-4-
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0		0.0	0.0		5	6	7	Y
T GIGG MIGGE	Тіхоч	Cirruit. Cup 14/C	0.1	<u> </u>	1.0	0.0	1.0		, ,		10.0					
Timer Results				EBI		EBT	WB	L	WBT	- T	NBL	. T	NBT	SBI		SBT
Assigned Phase	<u> </u>			5		2	1	$\neg$	6	$\neg$		$\neg$	8		$\neg$	4
Case Number				2.0		4.0	2.0		4.0	7			8.0			8.0
Phase Duration	1, S			7.5		84.8	5.2	$\neg$	82.5	7			30.0		$\neg$	30.0
Change Period		c ), S		4.5		4.5	4.5	$\neg$	4.5	7			4.5			4.5
Max Allow Head				3.1		0.0	3.1	_	0.0	7			3.2			3.2
Queue Clearan		·		3.4			2.3						25.5			3.7
Green Extension		, - ,		0.0		0.0	0.0		0.0	7		0.0				0.6
Phase Call Pro		(3 - //		0.50	)		0.12	$\rightarrow$		7		1.00				1.00
Max Out Proba				0.00	_		0.00	-		_		工	1.00		工	0.00
Movement Gro	un Res	ults			EB			WE	3	7		NB			SB	
Approach Move				L	T	R	L	Т	R		L	T	R	L	Т	R
Assigned Move				5	2	12	1	6	16	_	3	8	18	7	4	14
Adjusted Flow I		), veh/h		21	385	351	4	356	_	_		278			32	+
		ow Rate ( s ), veh/h/l	n	1810	1950	1767	1810	195		_		1476			1885	$\vdash$
Queue Service				1.4	9.8	9.8	0.3	9.4		_		21.8			0.0	$\vdash$
Cycle Queue C				1.4	9.8	9.8	0.3	9.4		$\rightarrow$		23.5			1.7	
Green Ratio ( g		(3 ),		0.03	0.67	0.67	0.01	0.6		_		0.21			0.21	$\overline{}$
Capacity ( c ), v				46	1304	1182	11	126	$\rightarrow$	$\rightarrow$		371			437	
Volume-to-Capa		itio (X)		0.461	0.295	0.297	0.353	0.28	_	_		0.748			0.072	$\Box$
		t/ln ( 95 th percentile	:)	29.7	180.7	165.5	6.3	177.	_	_		340.7			33.6	
	· ,	eh/ln ( 95 th percenti		1.2	7.2	6.6	0.3	7.1	_	_		13.6			1.3	
<u> </u>	<u> </u>	RQ) (95 th percent		0.00	0.00	0.00	0.00	0.00	_	_		0.00			0.00	
Uniform Delay (				57.7	8.2	8.2	59.4	9.0		$\rightarrow$		46.5			37.9	$\Box$
Incremental De	, ,			2.7	0.6	0.6	6.9	0.6	_	_		7.3			0.0	
	Initial Queue Delay ( d 2 ), s/veh				0.0	0.0	0.0	0.0		-		0.0			0.0	$\Box$
Control Delay ( d ), s/veh				60.4	8.8	8.9	66.3	9.6	_	_		53.8			37.9	
Level of Service (LOS)				E	Α	Α	E	Α	A			D			D	
Approach Delay, s/veh / LOS				10.2	2	В	9.9		Α		53.8		D	37.9		D
	ntersection Delay, s/veh / LOS					17	7.4							В		
Multimodal Ba	Multimodal Results				EB			\//	2		ND			SB		
	Pedestrian LOS Score / LOS			1.65		В	1.65		В	-	2.30		В	2.30		В
Bicycle LOS Sc				1.03	_		1.03	_		-		_		0.54		
Dicycle LOS SC	ole / LC	<i>J</i> 3		1.11		Α	1.07		A		0.95		Α	<b>■</b> 0.5 <sup>2</sup>	•	Α

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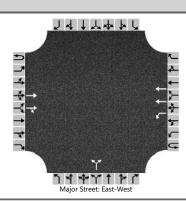
HCS Two-Way Stop-Control Report											
General Information		Site Information									
Analyst	ALW	Intersection	Sprague / Tschirley Wye								
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA								
Date Performed	5/24/2023	East/West Street	Tschirley Wye								
Analysis Year	2028	North/South Street	Sprague Ave								
Time Analyzed	AM Peak w/ Project	Peak Hour Factor	0.96								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Tschirley Apts										



Major Street: North-South

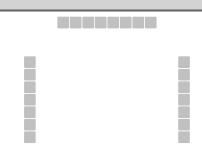
Vehicle Volumes and Adj	justme	nts																
Approach	T		oound			Westl	oound			North	bound		Southbound					
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0		
Configuration			LR							LT						TR		
Volume (veh/h)		3		1						1	183				91	3		
Percent Heavy Vehicles (%)		0		0						0								
Proportion Time Blocked																		
Percent Grade (%)			0															
Right Turn Channelized																		
Median Type   Storage				Undi	vided													
Critical and Follow-up H	eadwa	ys																
Base Critical Headway (sec)		7.1		6.2						4.1								
Critical Headway (sec)		6.40		6.20						4.10								
Base Follow-Up Headway (sec)		3.5		3.3						2.2								
Follow-Up Headway (sec)		3.50		3.30						2.20								
Delay, Queue Length, an	d Leve	l of S	ervice															
Flow Rate, v (veh/h)	Т		4							1								
Capacity, c (veh/h)			756							1508								
v/c Ratio			0.01							0.00								
95% Queue Length, Q <sub>95</sub> (veh)			0.0							0.0								
Control Delay (s/veh)			9.8							7.4	0.0							
Level of Service (LOS)			А						A A									
Approach Delay (s/veh)		9.8								0.0								
Approach LOS		А							A									

HCS Two-Way Stop-Control Report											
General Information		Site Information									
Analyst	ALW	Intersection	Sprague / Tschirley								
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA								
Date Performed	5/24/2023	East/West Street	Sprague Ave								
Analysis Year	2028	North/South Street	Tschirley Rd								
Time Analyzed	AM Peak w/ Project	Peak Hour Factor	0.83								
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25								
Project Description	Tschirley Apts										



Approach	T	Fasth	ound			Westl	oound			North	bound		Southbound				
							_										
Movement	U	L	T	R	U	L	Т	R	U	L	Т	R	U	L	T	R	
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0	
Configuration			Т	TR		L	T				LR						
Volume (veh/h)			606	40	0	15	888			64		47					
Percent Heavy Vehicles (%)					0	0				0		0					
Proportion Time Blocked																	
Percent Grade (%)										(	)						
Right Turn Channelized																	
Median Type   Storage				Left	Only								1				
Critical and Follow-up H	Headways																
Base Critical Headway (sec)						4.1				7.5		6.9					
Critical Headway (sec)						4.10				6.80		6.90					
Base Follow-Up Headway (sec)						2.2				3.5		3.3					
Follow-Up Headway (sec)						2.20				3.50		3.30					
Delay, Queue Length, an	d Leve	l of S	ervice														
Flow Rate, v (veh/h)						18					134						
Capacity, c (veh/h)						847					365						
v/c Ratio						0.02					0.37						
95% Queue Length, Q <sub>95</sub> (veh)						0.1					1.6						
Control Delay (s/veh)						9.3					20.4						
Level of Service (LOS)						А			С								
Approach Delay (s/veh)		0.2						20.4									
Approach LOS					A					(	2						

HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	ALW	Intersection	Tschirley / Tschirley Wye							
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA							
Date Performed	5/24/2023	East/West Street	Tschirley Wye							
Analysis Year	2028	North/South Street	Tschirley Rd							
Time Analyzed	AM Peak w/ Project	Peak Hour Factor	0.85							
Intersection Orientation North-South Analysis Time Period (hrs) 0.25										
Project Description	Tschirley Apts									



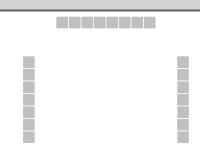
Major Street: North-South

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ı					

Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	1		5	0	3		0	97	1		0	52	0
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)		(	0				0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Lin Headway (sec)		3 50	4.00	3 30		3 50	4.00	3 30		2 20				2 20		Ì

Follow-Up Headway (sec)		3.50	4.00	3.30	3.50	4.00	3.30	2.20			2.20		
Delay, Queue Length, and	Leve	of Se	ervice										
Flow Rate, v (veh/h)			1			9		0			0		
Capacity, c (veh/h)			1010			841		1555			1486		
v/c Ratio			0.00			0.01		0.00			0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0			0.0		0.0			0.0		
Control Delay (s/veh)			8.6			9.3		7.3	0.0	0.0	7.4	0.0	0.0
Level of Service (LOS)			Α			Α		Α	А	Α	А	А	А
Approach Delay (s/veh)		8	.6		9	.3		0	.0		0	.0	
Approach LOS		A	4		,	4		A	4		A	4	

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Tschirley / 3rd
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/25/2023	East/West Street	3rd Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	AM Peak w/ Project	Peak Hour Factor	0.83
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: North-South

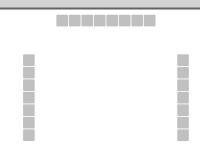
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		4	0	9		0	6	16		30	78	1		9	37	3
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		(	0			(	)									
Right Turn Channelized																
Median Type   Storage	Undivided															
Critical and Follow-up Ho	eadwa	ys														
Base Critical Headway (sec)	T	7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)			16				27			36				11		
Capacity, c (veh/h)			873 845 1552 145							1492						
v/c Ratio			0.02				0.03			0.02				0.01		
95% Queue Length, Q <sub>95</sub> (veh)			0.1				0.1			0.1				0.0		
Control Delay (s/veh)			9.2				9.4			7.4	0.2	0.2		7.4	0.1	0.1
Level of Service (LOS)			А				А			А	А	А		Α	Α	Α
Approach Delay (s/veh)		9	.2			9	.4			2	.2		1.4			

Α

Approach LOS

Α

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Tschirley / 4th
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/25/2023	East/West Street	4th Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	AM Peak w/ Project	Peak Hour Factor	0.76
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: North-South

Vehicle Volumes and Adju	ıstments
Approach	E-

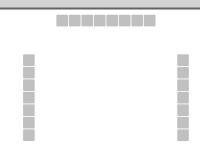
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		5	0	4		0	0	1		12	102	0		0	51	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)			0			(	)									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)			12				1			16				0		
Capacity, c (veh/h)			812				912			1525				1444		
v/c Ratio			0.01				0.00			0.01				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			9.5				9.0			7.4	0.1	0.1		7.5	0.0	0.0
Level of Service (LOS)			А				А			А	А	Α		А	А	А
Approach Delay (s/veh)		9	.5			9	.0			0	.9		0.0			

Α

Approach LOS

Α

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Tschirley / 6th
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/25/2023	East/West Street	6th Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	AM Peak w/ Project	Peak Hour Factor	0.72
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: North-South

Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		1	1	1		0	0	14		0	107	2		9	47	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)			0			(	0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	T	7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		

Critical Headway (sec) 7.13 6.53 6.23 7.13 6.53 6.23 4.13 4.13 4.13 8  Base Follow-Up Headway (sec) 3.5 4.0 3.3 3.5 4.0 3.3 2.2 2.2 2.2 2.2 5  Follow-Up Headway (sec) 3.53 4.03 3.33 3.53 4.03 3.33 2.23 2.23 2.23 2.23 2.23 2.23 2																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23			
Delay, Queue Length, and																	
Flow Rate, v (veh/h)			4				19			0				13			
Capacity, c (veh/h)			747				894			1527				1423			
v/c Ratio			0.01				0.02			0.00				0.01			
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.1			0.0				0.0			
Control Delay (s/veh)			9.8				9.1			7.4	0.0	0.0		7.6	0.1	0.1	
Level of Service (LOS)			А				Α			А	А	А		А	Α	А	
Approach Delay (s/veh)	roach Delay (s/veh) 9.8						9.1						1.2				
Approach LOS	oach LOS A							А					A A				

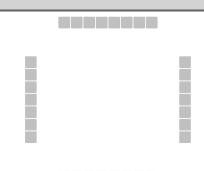
		HCS	S Sigr	nalize	d Inte	ersect	ion R	esu	Its Sun	nmarv	7						
			2 3.							· · · · · · ·							
General Inforn	nation								Intersec	tion Inf	ormatio	on	L.	4741	ի և		
Agency		Sunburst Engineeri	ng						Duration	, h	0.250			711			
Analyst		ALW	- 3	Analys	sis Date	5/24/2	2023		Area Typ		Other		25		*- &-		
Jurisdiction		Spokane Valley, WA	<u> </u>	Time F			eak w/		PHF	,,,	0.84		→ - <sup>1</sup>	w‡ε	\		
						Projec									· •		
Urban Street		Sprague Ave				2028			Analysis	Period	1> 7:0	00		ጎተኛ			
Intersection		Sprague / Flora		File Na	ame	FW A	M Flora.	xus					1	4144	7 (		
Project Descrip	tion	Tschirley Apts							_								
Demand Inform	nation				EB		T	W	/B		NB			SB			
Approach Move	ement			L	Т	R	L	T	ГВ	L	Т	R	L	Т	R		
Demand ( v ), v				61	523	12	4	73	31 128	43	49	6	99	11	101		
,																	
Signal Informa	ition					T			<u></u>						1		
Cycle, s	120.0	Reference Phase	2		P 8	$\exists \in$	Ħ		512		×	<b>-</b>	4	1	stz.		
Offset, s	0	Reference Point	End	Green	0.9	0.6	86.6	15	5.9 0.0	0.0		1	<b>X</b> 2	3	4		
Uncoordinated	No	Simult. Gap E/W	On	Yellow		3.5	3.5	3.		0.0		7	<b>→</b>		κtz		
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.5	0.5	0.	5 0.0	0.0		5	6	7	8		
Times Deculto		EDI	-	EDT	WD		WDT	NDI	_	NDT	CDI	_	CDT				
Timer Results Assigned Phase				EBI 5	-	EBT 2	WBI	+	WBT 6	NBI	-	NBT 8	SBI	-	SBT 4		
Case Number		1.1		3.0	1.1	$\rightarrow$	3.0				-	_	5.0				
Phase Duration				9.5	-	95.2	4.9	-	90.6		5.0		_	_	19.9		
		\ 0		_	_		4.9	-	4.0		19.9 4.0		_	_			
Change Period				4.0 3.1	-	4.0	3.1	-		_	_		-	-	3.3		
Max Allow Head Queue Clearan		· · · · · · · · · · · · · · · · · · ·		3.1		0.0	2.1	_	0.0			3.3 6.6	_		15.3		
Green Extension		, - ,		0.1	_	0.0	0.0	-	0.0		_	0.7	_	_	0.6		
Phase Call Pro		( <del>g e</del> ), 3		0.91		0.0	0.15	_	0.0			1.00		_	1.00		
Max Out Proba				0.00	_		0.00	_			_	0.00		_	0.01		
Max Out 1 105a	unity			0.00			0.00					0.00			0.01		
Movement Gro	oup Res	ults			EB			WE	3		NB			SB			
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R		
Assigned Move	ment			5	2	12	1	6	16	3	8	18	7	4	14		
Adjusted Flow I	Rate ( v	), veh/h		73	623	14	5	870	152	51	58	7	118	13	120		
Adjusted Satura	ation Flo	ow Rate ( <i>s</i> ), veh/h/l	n	1810	1950	1597	1810	195	0 1597	1508	1950	1610	1448	1950	1610		
Queue Service	Time ( g	g s ), s		1.1	13.5	0.3	0.1	26.	9 3.5	3.9	3.2	0.5	10.1	0.7	8.4		
Cycle Queue C		e Time ( g c ), s		1.1	13.5	0.3	0.1	26.	_	4.6	3.2	0.5	13.3	0.7	8.4		
Green Ratio ( g				0.78	0.76	0.76	0.73	0.7	_	0.13	0.13	0.13	0.13	0.13	0.13		
Capacity ( c ), v				463	1481	1213	586	140	_	252	259	214	214	259	214		
Volume-to-Cap				0.157	0.420	0.012	0.008	0.61	_	0.203	0.225	0.033	0.550	0.051	0.562		
	• ,	t/ln ( 95 th percentile		18.6	211.8	3.4	1.3	395.	_	63.6	71.5	8.5	159.5	15.7	155.7		
	<u> </u>	eh/ln ( 95 th percenti		0.7	8.5	0.1	0.1	15.	_	2.5	2.9	0.3	6.4	0.6	6.2		
		RQ) (95 th percent	tile)	0.00	0.00	0.00	0.00	0.0	_	0.00	0.00	0.00	0.00	0.00	0.00		
Uniform Delay		6.9	5.1	3.5	4.9	8.4	_	47.4	46.5	45.3	52.4	45.4	48.7				
Incremental De		0.1	0.9	0.0	0.0	2.1		0.1	0.2	0.0	0.8	0.0	0.9				
Initial Queue Do		0.0	0.0	0.0	0.0	0.0	_	0.0	0.0	0.0	0.0	0.0	0.0				
Control Delay (		7.0	6.0	3.5	4.9	10.		47.5	46.7	45.3	53.2	45.4	49.6				
Level of Service		A 6.0	A	A	A	В	A	D 47.6	D	D	D 51.4	D	D				
Approach Delay, s/veh / LOS						Α	9.7		Α	47.0	)	D	51.1		D		
Intersection Delay, s/veh / LOS					15.5									В			
Multimodal Re	sults				EB			WE	3		NB			SB			
		/ LOS		2.04		В	2.05		В	2.14		В	2.14		В		
Pedestrian LOS Score / LOS Bicycle LOS Score / LOS				1.66	_	B 2.05		В	0.68	_	A	0.90		A			

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HCS Signalized Intersection Results Summary																
General Information Intersection Information																Ja L
	nation	Sunburst Engineeri						Intersection Information						4		
Agency	Analysis Date 5/24/2023						tion,		0.250			E				
Analyst ALW									Area PHF	Туре	:	Other			₩ ₩ <b>†</b> E	<u> </u>
Jurisdiction		Spokane Valley, WA	<b>4</b>	Time F	Period		PM Peak w/ Project					0.94		4 ×	W † E	7
Urban Street		Appleway		Analys	sis Yea	r 2028			Analy	ysis F	Period	1> 7:0	00	-	4	,
Intersection		Appleway / Corbin		File Na	ame	FW P	M Apple	way.	(us						1147	11
Project Descrip	tion	Tschirley Apts														
Demand Inform	nation				EB			V	(D			NB			SB	
						Т Б	+ .		Г			_	Τ Β	+ -	_	
Approach Move				L 12	T	R	L	-	_	R	L	T	R	L	T	R
Demand ( v ), v	en/n		_	13	650	389	6	69	11	14	218	7	5	8	8	11
Signal Informa	ition				T	T			J.		Т					1
Cycle, s	120.0	Reference Phase	2	1	7 6	$\exists \exists$	<b>→</b> 1		542			K	<u>_</u> _	→		<b>4</b>
Offset, s	0	Reference Point	End		1.0	1.1	82.0	200		0.0			1	2	3	4
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		0.0	3.5	3.		0.0	0.0		, l	<b>←</b>		κ <b>†</b> ≥
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0		0.0	0.0		5	6	7	8
				.IP												
Timer Results				EBI	- T	EBT	WB	L	WB	Т	NBL	.	NBT	SBI		SBT
Assigned Phase	е			5		2	1		6				8			4
Case Number				2.0		4.0	2.0		4.0				8.0			8.0
Phase Duration	ı, s			6.7		87.5	5.7		86.5	5			26.8			26.8
Change Period	, ( Y+R	c ), S		4.5		4.5	4.5	4.5 4.5		5			4.5			4.5
Max Allow Head	dway ( /	<i>MAH</i> ), s		3.1		0.0	3.1	3.1					3.1			3.1
Queue Clearan	ce Time	e ( g s ), S		2.9			2.4				22.2				3.6	
Green Extension Time ( g e ), s						0.0	0.0		0.0			0.2				0.5
Phase Call Prol	bability			0.37			0.19	0.19					1.00			1.00
Max Out Proba	bility			0.00	)		0.00	)					0.80			0.00
Movement Gro	oup Res	sults			EB		WB			П		NB			SB	
Approach Move				L	Т	R	L	Т	-1	R	L	Т	R	L	Т	R
Assigned Move				5	2	12	1	6	$\rightarrow$	16	3	8	18	7	4	14
Adjusted Flow I		), veh/h		14	592	514	6	378	_	72		245			29	$\Box$
		ow Rate ( s ), veh/h/l	n	1810	1950	1689	1810	195	_	921		1517			1865	
Queue Service				0.9	16.1	16.2	0.4	9.1	_	0.1		18.6			0.0	
Cycle Queue C				0.9	16.1	16.2	0.4	9.1	$\rightarrow$	0.1		20.2			1.6	
Green Ratio ( g		(3 )		0.02	0.69	0.69	0.01	0.6	3 0.	.68		0.19			0.19	$\overline{}$
Capacity ( c ), v				33	1349	1169	17	133	2 13	312		341			386	
Volume-to-Cap	acity Ra	itio (X)		0.414	0.438	0.440	0.368	0.28	_	284		0.718			0.074	$\Box$
		t/ln ( 95 th percentile	:)	19.8	266	239.4	9.7	166	_	3.8		300.4			31.7	
	· ,	eh/ln ( 95 th percenti		0.8	10.6	9.6	0.4	6.6	_	6.6		12.0			1.3	
<u> </u>	<u> </u>	RQ) (95 th percent		0.00	0.00	0.00	0.00	0.0	0.	.00		0.00			0.00	
Uniform Delay (				58.2	8.2	8.2	59.1	7.5	_	'.5		48.0			40.4	
Incremental Delay ( d / ), s/veh					1.0	1.2	4.8	0.5	_	0.5		4.6			0.0	
Initial Queue Delay ( d 3 ), s/veh					0.0	0.0	0.0	0.0	_	0.0		0.0			0.0	
Control Delay ( d ), s/veh					9.2	9.4	63.8	8.0	_	3.0		52.5			40.4	
Level of Service (LOS)					Α	А	E	Α	/	A		D			D	
Approach Delay, s/veh / LOS						Α	8.5		Α		52.5		D	40.4	1	D
Intersection De						14	4.7							В		
Multimodal Re	sults				EB			WE	2			NB			SB	
Pedestrian LOS		/1.08		164		D	1.6		в В	-	2 20	_	D	2.20		B
				1.64 1.41	-	В	1.6 <sup>2</sup>	_		-	2.30	_	В	2.30 0.53	_	В
Bicycle LOS Score / LOS						Α	1.1		A		0.89		Α	0.53	,	Α

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HCS Two-Way Stop-Control Report											
General Information		Site Information									
Analyst	ALW	Intersection	Sprague / Tschirley Wye								
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA								
Date Performed	5/24/2023	East/West Street	Tschirley Wye								
Analysis Year	2028	North/South Street	Sprague Ave								
Time Analyzed	PM Peak w/ Project	Peak Hour Factor	0.93								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Tschirley Apts										



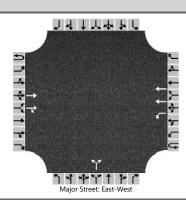
Major Street: North-South

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Temere retaines and rage																		
Approach	Eastbound					Westl	oound			North	bound			Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0		
Configuration			LR							LT						TR		
Volume (veh/h)		4		5						2	230				370	2		
Percent Heavy Vehicles (%)		0		0						0								
Proportion Time Blocked																		
Percent Grade (%)	0																	
Right Turn Channelized																		
Median Type   Storage				Undi	vided													
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1		6.2						4.1								
Critical Headway (sec)		6.40		6.20						4.10								
Base Follow-Up Headway (sec)		3.5		3.3						2.2								
Follow-Up Headway (sec)		3.50		3.30						2.20								

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			10							2						
Capacity, c (veh/h)			535							1170						
v/c Ratio			0.02							0.00						
95% Queue Length, Q <sub>95</sub> (veh)			0.1							0.0						
Control Delay (s/veh)			11.8							8.1	0.0					
Level of Service (LOS)			В							Α	А					
Approach Delay (s/veh)	Approach Delay (s/veh) 11.8								0	.1						
Approach LOS	В							,	4							

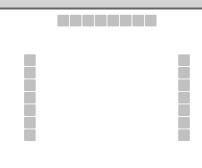
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Sprague / Tschirley
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/24/2023	East/West Street	Sprague Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	PM Peak w/ Project	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Vehicle Volumes and Adj	justme	nts															
Approach	T	Eastk	oound			Westl	bound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0	
Configuration			Т	TR		L	Т				LR						
Volume (veh/h)			963	87	0	38	877			50		29					
Percent Heavy Vehicles (%)					0	0				0		0					
Proportion Time Blocked																	
Percent Grade (%)											0						
Right Turn Channelized																	
Median Type   Storage				Left	Only								1				
Critical and Follow-up H	eadwa	ys															
Base Critical Headway (sec)						4.1				7.5		6.9					
Critical Headway (sec)						4.10				6.80		6.90					
Base Follow-Up Headway (sec)						2.2				3.5		3.3					
Follow-Up Headway (sec)						2.20				3.50		3.30					
Delay, Queue Length, an	d Leve	l of S	ervice														
Flow Rate, v (veh/h)	Т					41					85						
Capacity, c (veh/h)						626					259						
v/c Ratio						0.07					0.33						
95% Queue Length, Q <sub>95</sub> (veh)						0.2					1.4						
Control Delay (s/veh)						11.2					25.5						
Level of Service (LOS)					В						D						
Approach Delay (s/veh)					0.5					25.5							
Approach LOS						,	A				D D						

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	HCS Two-Way Stop	-Control Report					
General Information		Site Information					
Analyst	ALW	Intersection	Tschirley / Tschirley Wye				
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA				
Date Performed	5/24/2023	East/West Street	Tschirley Wye				
Analysis Year	2028	North/South Street	Tschirley Rd				
Time Analyzed	PM Peak w/ Project	Peak Hour Factor	0.78				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	Tschirley Apts						



Major Street: North-South

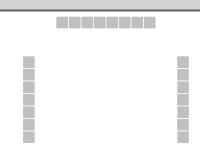
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	0		4	0	4		0	68	9		6	106	0
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)			0			(	0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)			0				10			0				8		
Capacity, c (veh/h)			0				820			1461				1507		
v/c Ratio							0.01			0.00				0.01		
95% Queue Length, Q <sub>95</sub> (veh)							0.0			0.0				0.0		
Control Delay (s/veh)							9.4			7.5	0.0	0.0		7.4	0.0	0.0
Level of Service (LOS)							А			А	Α	А		А	А	Α
Approach Delay (s/veh)						9	.4		0.0				0.4			

Approach LOS

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	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Tschirley / 3rd
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/25/2023	East/West Street	3rd Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	PM Peak w/ Project	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: North-South

Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	oound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		7	6	19		0	4	18		21	49	0		24	73	7
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)			0			(	0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)			36				25			24				27		
Capacity, c (veh/h)			806				910			1499				1544		
v/c Ratio			0.04				0.03			0.02				0.02		
95% Queue Length, Q <sub>95</sub> (veh)			0.1				0.1			0.0				0.1		
Control Delay (s/veh)			9.7				9.1			7.4	0.1	0.1		7.4	0.1	0.1
Level of Service (LOS)			А		A			A A A				A A A				
Approach Delay (s/veh)		9	.7			9	.1		2.3				1.8			

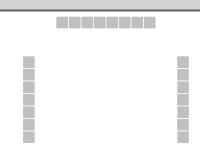
Α

Approach LOS

Α

Α

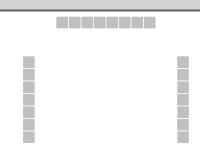
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Tschirley / 4th
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/25/2023	East/West Street	4th Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	PM Peak w/ Project	Peak Hour Factor	0.86
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: North-South

Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		4	1	14		1	0	2		9	70	0		0	91	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)			0			(	0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, and	d Leve	l of S	ervice													
Flow Rate, v (veh/h)			22				3			10				0		
Capacity, c (veh/h)			875				871			1476				1510		
v/c Ratio			0.03				0.00			0.01				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.1				0.0			0.0				0.0		
Control Delay (s/veh)			9.2				9.2			7.5	0.1	0.1		7.4	0.0	0.0
Level of Service (LOS)			А		A					A A A				А	А	А
Approach Delay (s/veh)		9	.2		9.2				0.9				0.0			
Approach LOS			A		A				A				А			

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Tschirley / 6th
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/25/2023	East/West Street	6th Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	PM Peak w/ Project	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: North-South

Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	2	0		1	0	8		0	68	0		13	90	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)			0			(	0									
Right Turn Channelized																
Median Type   Storage				Undi	vided											
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, and	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)			2				10			0				15		
Capacity, c (veh/h)			681				947			1484				1516		
v/c Ratio			0.00				0.01			0.00				0.01		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			10.3				8.8			7.4	0.0	0.0		7.4	0.1	0.1
Level of Service (LOS)			В		A				A A A					А	Α	А
Approach Delay (s/veh)		10	0.3		8.8				0.0				1.0			
Approach LOS			В		A				А				А			

		HCS	S Siar	nalize	d Inte	ersect	ion R	esu	Its Su	nmarv	,				
			J. 5'						341	y					
General Inforn	nation								Interse	ction Inf	ormatio	on	k	4741	له لي
Agency		Sunburst Engineeri	na						Duration		0.250			بالملا	
Analyst		ALW	9	Analys	sis Date	e 5/24/2	2023		Area Ty	·	Other		_3 _5		E.
Jurisdiction		Spokane Valley, W	<u> </u>	Time F			eak w/		PHF	<u> </u>	0.94		→	w∳E	<u>`</u>
Caricalottori		Sportano vanoy, vvi	•	111110 1	Onou	Projec					0.01		4		· -
Urban Street		Sprague Ave		Analys	sis Yea	r 2028			Analysis	Period	1> 7:	00		542	-
Intersection		Sprague / Flora		File Na	ame	FW P	M Flora	.xus						13133	24
Project Descrip	tion	Tschirley Apts													
Demand Inforr					EB		-	W		-	NB		-	SB	
Approach Move				L	T	R		_	Γ R		T	R	1-	T	R
Demand ( v ), v	eh/h			178	956	33	24	92	26   112	35	23	11	240	37	143
Cianal Inform	tion				Т	Ţ.			:	_					
Signal Informa		Reference Phase		1	7 0	جها	7		is a			_	,	1	本
Cycle, s	120.0		2	ł		=	₹ *	- 1	\$\partial 2		- S	1	<b>♀</b> 2	3	4
Offset, s	0 No	Reference Point	End	Green		3.0	76.8	24							
Uncoordinated Force Mode	No Fixed	Simult. Gap E/W Simult. Gap N/S	On On	Yellow Red	3.5 0.5	0.0	3.5 0.5	3.9				<b>/</b>	Y		Ψ
Force Mode	Fixed Simult. Gap 14/3					0.0	0.5	0.	5   0.0	[0.0	_	5	ь	1	8
Timer Results		EBI		EBT	WB		WBT	NBI		NBT	SBI		SBT		
		5	-	2	1	-	6	IVDI	-	8	OBI		4		
Case Number	Assigned Phase					3.0	1.1	$\rightarrow$	3.0	-	_	5.0	-	_	5.0
Phase Duration				1.1 10.4	_	83.8	7.4	-	80.8	_	_	28.8	-	_	28.8
Change Period	<u> </u>	- \ c		4.0	_	4.0	4.0	$\rightarrow$	4.0		_	4.0			4.0
Max Allow Hea					_	0.0		-	0.0	_	-			_	3.3
Queue Clearan		·		3.1 6.2		0.0	3.1 2.6		0.0	-		3.3 6.6		_	24.6
Green Extension		, - ,		0.2		0.0	0.0	-	0.0		_	1.1		_	0.2
Phase Call Pro		( g e ), s		1.00		0.0	0.57	$\rightarrow$	0.0			1.00			1.00
Max Out Proba				0.00	_		0.00	_		-		0.00		_	1.00
Wida Odt i Toba	Dility			0.00			0.00					0.00			1.00
Movement Gro	oup Res	sults			EB			WE	3		NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow I	Rate ( v	), veh/h		189	1017	35	26	985	119	37	24	12	255	39	152
		ow Rate ( s ), veh/h/l	n	1810	1950	1597	1810	195	0 1597	1473	1950	1610	1493	1950	1610
Queue Service		, ,		4.2	43.9	0.9	0.6	44.	1 3.5	2.7	1.2	0.7	21.3	2.0	9.9
Cycle Queue C	learanc	e Time ( <i>g c</i> ), s		4.2	43.9	0.9	0.6	44.		4.6	1.2	0.7	22.6	2.0	9.9
Green Ratio ( g				0.70	0.66	0.66	0.67	0.6	4 0.64	0.21	0.21	0.21	0.21	0.21	0.21
Capacity ( c ), v	/eh/h			315	1296	1062	271	124	8 1022	340	403	333	353	403	333
Volume-to-Cap	acity Ra	itio (X)		0.602	0.785	0.033	0.094	0.78	9 0.117	0.109	0.061	0.035	0.722	0.098	0.457
Back of Queue	(Q), f	t/ln ( 95 th percentile	)	122	651.1	13.8	10.8	668.	9 54.5	42.1	26.6	12.7	318.2	43.2	181.2
Back of Queue	( Q ), ve	eh/ln ( 95 th percent	le)	4.9	26.0	0.6	0.4	26.	3 2.2	1.7	1.1	0.5	12.7	1.7	7.2
Queue Storage	Ratio (	RQ) (95 th percent	tile)	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay	( d 1 ), s	/veh		18.6	14.1	6.9	14.7	15.	7 8.4	40.4	38.2	38.0	47.3	38.5	41.7
Incremental De	lay ( d 2	), s/veh		0.7	4.8	0.1	0.1	5.1	0.2	0.1	0.0	0.0	5.6	0.0	0.4
Initial Queue D	nitial Queue Delay ( d ȝ ), s/veh					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (	Control Delay ( <i>d</i> ), s/veh					7.0	14.8	20.9	9 8.6	40.5	38.3	38.1	52.9	38.6	42.1
Level of Service	e (LOS)			В	В	А	В	С	Α	D	D	D	D	D	D
Approach Dela		18.6	3	В	19.4	1	В	39.4	1	D	47.9	)	D		
Intersection De			24	1.0											
Multimodal Re		2.06	EB			WE			NB			SB			
	edestrian LOS Score / LOS					B 2.07		В	2.13		В	2.13	3	В	
Bicycle LOS So	vcle LOS Score / LOS					С	2.35	5	В	0.61		Α	1.22	2	Α

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## **TECHNICAL APPENDIX**

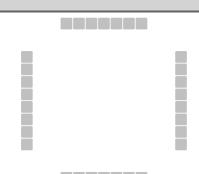
# SCHOOL DISMISSAL HOUR LEVEL OF SERVICE CALCULATIONS

(EXISTING, FUTURE AND FUTURE WITH PROJECT SCENARIOS)

		HCS	Sigr	nalize	d Inte	ersect	ion R	esu	lts	Sum	mary					
O a manual lanfa ma	4!								14	4:	!	4! .			4 744	b.T.
General Inform	nation	0 1 15							-	ersecti					4	
Agency		Sunburst Engineeri	ng	1		- 10 1 11				ration,		0.250				2
Analyst		ALW				e 5/24/2			-	ea Type		Other			₩ ₩ <b>†</b> E	<u>~</u> }
Jurisdiction		Spokane Valley, WA	<b>-</b>	Time F	Period	School Peak	ol Dismi:	ssal	PH	łF 		0.94		- X	W # E 8	, <u>, , , , , , , , , , , , , , , , , , </u>
Urban Street		Appleway		Analys	sis Yea	r 2023			An	alysis F	Period	1> 7:0	00	*	4	-
Intersection		Appleway / Corbin		File Na	ame	EX SI	O Apple	way.x	us						1144	20
Project Descrip	tion	Tschirley Apts														
Daman dilufam	4!				ED			14	<b>'</b> D			ND			O.D.	
Demand Inform					EB	T 5	+ -	_	√B -			NB	Τ.		SB	
Approach Move				L	T	R	L	-	T	R	L	T	R	L	T	R
Demand ( v ), v	en/n			8	633	327	11	7	37	15	202	4	9	13	13	11
Signal Informa	ition				T	15		J	Ju	T	T					1
Cycle, s	120.0	Reference Phase	2	1	7 6				レコ	,		K	<u> </u>			<b>4</b>
Offset, s	0	Reference Point	End	<b>1</b>	4.5	0.5		-	<u> </u>	0.0			1	2	3	4
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		0.5	83.4 21 3.5 3.5			0.0	0.0		я 📗	<b>←</b>		rt z
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0			1.0 0.0		0.0		5	6	7	8
				.IP												
Timer Results						EBT	WB	L	W	/BT	NBL	-	NBT	SBI	-	SBT
Assigned Phase		5		2	1			6			8			4		
Case Number	2.0		4.0	2.0		4	1.0			8.0			8.0			
Phase Duration		6.0		87.9	6.4		88	8.4			25.6			25.6		
Change Period				4.5		4.5	4.5	$\overline{}$		1.5		_	4.5			4.5
Max Allow Head		· · · · · · · · · · · · · · · · · · ·		3.1	_	0.0	3.1	$\rightarrow$	0	0.0		_	3.1			3.1
Queue Clearan		, - ,		2.6			2.8		2.2			_	20.9			4.1
Green Extension		( g e ), s				0.0	0.0			0.0			0.2			0.5
Phase Call Pro				0.25			0.32	$\rightarrow$		_		_	1.00			1.00
Max Out Proba	bility			0.00	)		0.00	)					0.27			0.00
Movement Gro	up Res	sults			EB			WI				NB			SB	
Approach Move	ement			L	Т	R	L	Т		R	L	Т	R	L	Т	R
Assigned Move	ment			5	2	12	1	6		16	3	8	18	7	4	14
Adjusted Flow I	Rate ( v	), veh/h		9	544	477	12	40	3	397		229			39	
Adjusted Satura	ation Flo	ow Rate ( s ), veh/h/l	n	1810	1950	1710	1810	195	0	1921		1510			1843	
Queue Service				0.6	14.2	14.2	0.8	9.4	$\rightarrow$	9.4		16.8			0.0	
Cycle Queue C		e Time ( <i>g c</i> ), s		0.6	14.2	14.2	0.8	9.4	1	9.4		18.9			2.1	
Green Ratio ( g				0.01	0.70	0.70	0.02	0.7	0	0.70		0.18			0.18	
Capacity ( c ), v				22	1356	1189	29	136	_	1343		324			365	
Volume-to-Cap				0.381	0.401	0.401	0.400	0.29	_	0.296		0.706			0.108	$\perp$
		t/ln ( 95 th percentile		12.6	238.8	-	16.9	168	_	165.7		282.2		_	44.3	+
<u> </u>	<u> </u>	eh/ln (95 th percenti		0.5	9.6	8.7	0.7	6.7	_	6.6		11.3			1.8	
Uniform Delay (		RQ) (95 th percent	uie)	0.00 58.8	7.7	7.7	0.00 58.5	0.0 6.9	_	0.00 6.9		0.00 48.5			0.00 41.6	+
Incremental De	, , ,			3.9	0.9	1.0	3.3	0.6	-	0.6		3.6			0.0	
	• •	<u> </u>		0.0	0.9	0.0	0.0	0.0	_	0.0		0.0			0.0	
	nitial Queue Delay ( d ȝ ), s/veh Control Delay ( d ), s/veh					8.7	61.7	7.4	$\rightarrow$	7.4		52.1			41.7	
Level of Service				62.7 E	8.6 A	A	E	/ A	-	A A		D D			D D	-
	Approach Delay, s/veh / LOS					A	8.2	_	_	A	52.1		D	41.7		D
	ntersection Delay, s/veh / LOS						4.0							В		
	Multimodal Results							WI				NB			SB	
	edestrian LOS Score / LOS						B 1.64			В	2.31	-	В	2.31	_	В
Bicycle LOS So	ore / LC	JS		1.34	+	Α	1.16	)	1	Α	0.86		Α	0.55	)	Α

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	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Sprague / Flora
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	6/7/2023	East/West Street	Sprague Ave
Analysis Year	2023	North/South Street	Flora Rd
Time Analyzed	School Dismissal	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: East-West

Approach		Eastb	ound			Westk	oound			North	oound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	Т	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			Т	TR		L	Т				LR					
Volume (veh/h)			996	58	0	55	950			30		22				
Percent Heavy Vehicles (%)					0	0				0		0				
Proportion Time Blocked																
Percent Grade (%)										(	)					
Right Turn Channelized																
Median Type   Storage				Left	Only								1			
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.10				6.80		6.90				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				
Delay, Queue Length, and	Leve	l of Se	ervice													
Flow Rate, v (veh/h)	П					60					57					
Capacity, c (veh/h)						617					251					
v/c Ratio						0.10					0.23					
95% Queue Length, Q <sub>95</sub> (veh)						0.3					0.8					
Control Delay (s/veh)						11.5					23.5					
Level of Service (LOS)						В					С					

Approach Delay (s/veh)

Approach LOS

**Vehicle Volumes and Adjustments** 

0.6

Α

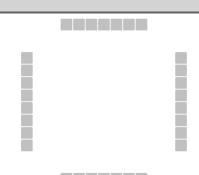
23.5

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		HCS	S Sigr	nalize	d Inte	ersect	ion R	esu	lts	Sum	mary					
Company Inform	4!								14	4!	an lufi	4! -			4 사하 l	Ja I.
General Inform	nation	0 1 15							<u> </u>	ersecti					*	
Agency		Sunburst Engineeri	ng	1		- 10 1 11			$\vdash$	ıration, l		0.250				2
Analyst		ALW				5/24/2			-	ea Type	:	Other			₩ ₩ <b>†</b> E	<u>~</u> }
Jurisdiction		Spokane Valley, WA	4	Time F	Period	School Peak	ol Dismi:	ssal	PH	11-		0.94		X - X	W † E	
Urban Street		Appleway		Analys	sis Yea	r 2028			An	alysis F	Period	1> 7:0	00	4	4	-
Intersection		Appleway / Corbin		File Na	ame	FO S	D Apple	way.x	cus						4147	20
Project Descrip	tion	Tschirley Apts														
	41				- ED				<u> </u>			ND			0.0	
Demand Inform					EB			_	/B			NB			SB	
Approach Move				L	T	R	L	-	T	R	L	T	R	L	T	R
Demand ( v ), v	en/n			8	665	344	12	/	75	16	212	4	9	14	14	12
Signal Informa	ition				1	15		J	Ju		Т					
Cycle, s	120.0	Reference Phase	2	1	7 6		<b>-</b>  , ¹	- 2	V 31 ГА2	,		K	<u> </u>	_		<b>4</b>
Offset, s	0	Reference Point	End	<u> </u>	4.5		20.4	-		2 0 0			1	2	3	4
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		0.6	82.4 3.5	3.	2.0	0.0	0.0		,	<b>←</b>		-4-
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.		0.0	0.0		5	6	7	<b>Y</b> 8
				JP.	, -					<u>,</u>						
Timer Results				EBI	- T	EBT	WB	L	W	/BT	NBL	.	NBT	SBI	-	SBT
Assigned Phase	e			5	$\neg$	2	1	$\neg$		6		$\neg$	8			4
Case Number				2.0		4.0	2.0		4	1.0			8.0			8.0
Phase Duration	i			6.0		86.9	6.6		87	7.5			26.5			26.5
Change Period	hange Period, ( Y+R c ), s			4.5		4.5	4.5	$\overline{}$	4	1.5			4.5			4.5
Max Allow Head		· · · · · · · · · · · · · · · · · · ·		3.1	3.1 0		3.1	$\rightarrow$	0.0			3.1				3.1
Queue Clearan	ce Time	e ( g s ), s		2.6				2.8				21.8				4.3
Green Extension		( g e ), s				0.0	0.0		0.0			0.2				0.5
Phase Call Pro				0.25	0.25		0.3	5		_		1.00				1.00
Max Out Proba	bility			0.00		_	0.00	)	_		_	0.62				0.00
Movement Gro	up Res	sults			EB			WI	 В	т		NB			SB	
Approach Move	ement			L	Т	R	L	Т	$\Box$	R	L	Т	R	L	Т	R
Assigned Move	ment			5	2	12	1	6		16	3	8	18	7	4	14
Adjusted Flow I	Rate ( v	), veh/h		9	572	502	13	424	4	418		239			43	
Adjusted Satura	ation Flo	ow Rate ( s ), veh/h/l	n	1810	1950	1710	1810	195	0	1920		1506			1843	
Queue Service				0.6	15.6	15.6	0.8	10.	$\rightarrow$	10.3		17.5			0.0	
Cycle Queue C		e Time ( <i>g c</i> ), s		0.6	15.6	15.6	0.8	10.	$\rightarrow$	10.3		19.8			2.3	
Green Ratio ( g				0.01	0.69	0.69	0.02	0.6	9	0.69		0.18			0.18	
Capacity ( c ), v				22	1339	1174	31	134	-	1328		335			379	
Volume-to-Capa				0.381	0.427	0.428	0.407	0.3	$\rightarrow$	0.314		0.715			0.112	$\perp$
		t/ln ( 95 th percentile	_	12.6	260.7	237	18.4	185	_	182.5		294.5			47.5	
	, ,	eh/ln (95 th percenti		0.5	10.4	9.5	0.7	7.4	_	7.3		11.8			1.9	
Uniform Delay (		RQ) (95 th percent	iiie)	0.00 58.8	8.3	0.00	0.00	7.3	$\rightarrow$	7.3		0.00 48.1			0.00 40.9	
Incremental De	, , ,			3.9	1.0	1.1	3.1	0.6	-	0.6		4.3			0.0	
Initial Queue De		<u> </u>		0.0	0.0	0.0	0.0	0.0	_	0.0		0.0			0.0	$\vdash$
		,		62.7	9.3	9.5	61.5	7.9	$\rightarrow$	7.9		52.4			41.0	+
	Control Delay ( d ), s/veh Level of Service (LOS)			E	A	A	E	A	_	Α		D			D	$\overline{}$
				9.8		Α	8.7	_		A	52.4		D	41.0		D
	Approach Delay, s/veh / LOS ntersection Delay, s/veh / LOS						4.6							В		
AA 10 =								,				h 15			25	
Multimodal Re		/1.00		4.0	EB		4.0	WI		_	0.04	NB	D	0.0	SB	
				1.64	_	В	1.64	_		В	2.31	_	В	2.31	-	В
Dicycle LOS SC	destrian LOS Score / LOS ycle LOS Score / LOS			1.38	)	Α	1.19	ן כ	-	Α	0.88		Α	0.56	,	Α

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	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Sprague / Flora
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	6/7/2023	East/West Street	Sprague Ave
Analysis Year	2028	North/South Street	Flora Rd
Time Analyzed	School Dismissal Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: East-West

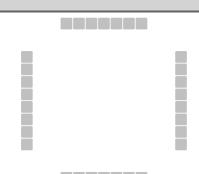
V	ehi	icle	V	olum	es	and	Ad	jus	tment	ts
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Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	T	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			Т	TR		L	Т				LR					
Volume (veh/h)			1047	61	0	68	998			32		23				
Percent Heavy Vehicles (%)					0	0				0		0				
Proportion Time Blocked																
Percent Grade (%)										(	)					
Right Turn Channelized																
Median Type   Storage				Left	Only								1			
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.10				6.80		6.90				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				
Delay, Queue Length, and	Leve	of Se	ervice													
Flow Rate, v (veh/h)						74					60					
Capacity, c (veh/h)						586					229					
v/c Ratio						0.13					0.26					
95% Queue Length, Q <sub>95</sub> (veh)						0.4					1.0					
Control Delay (s/veh)						12.0					26.1					
Level of Service (LOS)						В					D					
Approach Delay (s/veh)					0.8			26.1								
Approach LOS						A	4				)					

		HCS	S Sigr	nalize	d Inte	ersect	ion R	esu	lts	Sum	mary					
Canaval Inform	4!								l se 4	4 - u 4 <sup>1</sup>	an Indi	4! -			시시하	Ja. L.
General Inforn	nation	0 1 15							-	tersecti					4	
Agency		Sunburst Engineeri	ng	1		I=10.11			-	uration,		0.250		-		
Analyst		ALW				5/24/2			-	ea Type		Other	•		w <b>†</b> E	<u></u> ~ €
Jurisdiction		Spokane Valley, WA	<b>4</b>	Time F		Peak	ol Dismi: - w/ Pro		PH	<del></del>		0.94		4 4 7	W + E	
Urban Street		Appleway		Analys	sis Yea	2028			An	nalysis F	Period	1> 7:0	00	-	4	
Intersection		Appleway / Corbin		File Na	ame	FW S	D Apple	way.x	kus						1147	110
Project Descrip	tion	Tschirley Apts														
	41								<u>'</u>							
Demand Inform					EB				/B			NB		-	SB	
Approach Move				L	T	R	L	_	T	R	L	T	R	L	T	R
Demand ( v ), v	en/n			8	685	344	12	18	03	16	212	4	9	14	14	12
Signal Informa	ition					- 5		J	Ju I	T	T					
Cycle, s	120.0	Reference Phase	2	1	7 6	- 5	₹, 1	2	DO DO	2		K	<u>_</u> _	<b>→</b>		<b>4</b>
Offset, s	0	Reference Point	End		4.5	0.0	00.4	-		0.0			1	2	3	4
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		0.6	82.4 3.5	3.	2.0	0.0	0.0		٦ .	<b>←</b>		ε <b>†</b> ≥
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.		0.0	0.0		5	6	7	8
				JP												
Timer Results				EBI	-	EBT	WB	L	V	VBT	NBL	-	NBT	SBI	-	SBT
Assigned Phas	е			5		2	1			6			8			4
Case Number				2.0		4.0	2.0		4	4.0			8.0			8.0
Phase Duration	·			6.0		86.9	6.6		8	7.5			26.5			26.5
Change Period	hange Period, ( Y+R c ), s			4.5		4.5	4.5		4	4.5			4.5			4.5
Max Allow Head	Max Allow Headway ( MAH ), s			3.1		0.0	3.1		C	0.0			3.1			3.1
Queue Clearan	ce Time	e ( g s ), s		2.6				2.8				21.8				4.3
Green Extension	n Time	( g <sub>e</sub> ), s		0.0		0.0	0.0		0.0			0.2				0.5
Phase Call Pro	bability			0.25	5		0.35	5				1.00				1.00
Max Out Proba	bility			0.00	)		0.00		_				0.62			0.00
Movement Gro	oup Res	sults			EB			WI	В	т		NB			SB	
Approach Move	ement			L	Т	R	L	Т	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			5	2	12	1	6		16	3	8	18	7	4	14
Adjusted Flow I	Rate ( v	), veh/h		9	582	513	13	439	9	432		239			43	
Adjusted Satura	ation Flo	ow Rate ( s ), veh/h/l	n	1810	1950	1714	1810	195	0	1921		1506			1843	
Queue Service	Time ( g	g s ), s		0.6	16.0	16.1	0.8	10.	8	10.8		17.5			0.0	
Cycle Queue C	learanc	e Time ( $g_c$ ), s		0.6	16.0	16.1	0.8	10.	8	10.8		19.8			2.3	
Green Ratio ( g	/C )			0.01	0.69	0.69	0.02	0.6	9	0.69		0.18			0.18	
Capacity ( c ), v				22	1339	1177	31	134	$\rightarrow$	1328		335			379	
Volume-to-Cap				0.381	0.435	_	0.407	0.32	$\rightarrow$	0.326		0.715			0.112	
		t/ln ( 95 th percentile		12.6	266.3	242.6	18.4	193	_	190.9		294.5			47.5	
		eh/ln ( 95 th percent		0.5	10.7	9.7	0.7	7.7	$\rightarrow$	7.6		11.8			1.9	
		RQ) (95 th percent	tile)	0.00	0.00	0.00	0.00	0.0	_	0.00		0.00			0.00	
Uniform Delay	, ,			58.8	8.4	8.4	58.3	7.4	_	7.4		48.1			40.9	
Incremental De		<u> </u>		3.9	1.0	1.2	3.1	0.6	_	0.7		4.3			0.0	
Initial Queue De		,		0.0	0.0	0.0	0.0	0.0	$\rightarrow$	0.0		0.0			0.0	
	Control Delay ( d ), s/veh			62.7	9.4	9.6	61.5	8.0	_	8.0		52.4			41.0	
	Level of Service (LOS)			E	A	A	E	A		A		D			D	
Approach Delay				9.9		Α	8.8			A	52.4		D	41.0	)	D
Intersection De	ntersection Delay, s/veh / LOS					14	1.5							В		
Multimodal Re	sults				EB			WI	В			NB			SB	
Pedestrian LOS		/LOS		1.64		В	1.64	_		В	2.31		В	2.31		В
Bicycle LOS So				1.40	_	A	1.22	_		A	0.88	-	A	0.56	-	A
,00	J. J , LC	-									0.00		•	J.50		• •

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	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Sprague / Flora
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	6/7/2023	East/West Street	Sprague Ave
Analysis Year	2028	North/South Street	Flora Rd
Time Analyzed	School Dismissal w/ Proje	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



Major Street: East-West

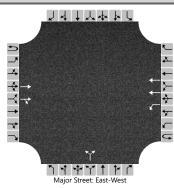
venicie	voiumes	and A	ajustments
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Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			Т	TR		L	Т				LR					
Volume (veh/h)			1047	75	0	86	998			41		43				
Percent Heavy Vehicles (%)					0	0				0		0				
Proportion Time Blocked																
Percent Grade (%)										(	)					
Right Turn Channelized																
Median Type   Storage				Left	Only								1			
Critical and Follow-up Ho	eadwa	adways														
Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.10				6.80		6.90				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				
Delay, Queue Length, and	d Leve	l of S	ervice													
Flow Rate, v (veh/h)						93					91					
Capacity, c (veh/h)						579					240					
v/c Ratio						0.16					0.38					
95% Queue Length, Q <sub>95</sub> (veh)						0.6					1.7					
Control Delay (s/veh)						12.4					29.0					
Level of Service (LOS)						В					D					
Approach Delay (s/veh)						1	.0			29	9.0					
Approach LOS						,	4			[	)					

# **TECHNICAL APPENDIX**

# P. M. PEAK HOUR LEVEL OF SERVICE CALCULATIONS

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	ALW	Intersection	Sprague / Tschirley
Agency/Co.	Sunburst Engineering	Jurisdiction	Spokane Valley, WA
Date Performed	5/16/24	East/West Street	Sprague Ave
Analysis Year	2028	North/South Street	Tschirley Rd
Time Analyzed	PM Peak w/ Project	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Tschirley Apts		



					iviaj	or street. La	31 ************************************									
Vehicle Volumes and Adj	justme	nts														
Approach		Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			Т	TR		L	Т				LR					
Volume (veh/h)			963	168	0	79	877			98		53				
Percent Heavy Vehicles (%)					0	0				0		0				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized																
Median Type   Storage				Left	Only								1			
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.10				6.80		6.90				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)						85					162					
Capacity, c (veh/h)						580					228					
v/c Ratio						0.15					0.71					
95% Queue Length, Q <sub>95</sub> (veh)						0.5					4.7					
95% Queue Length, Q <sub>95</sub> (ft)						12.5					117.5					
Control Delay (s/veh)						12.3					52.4					
Level of Service (LOS)						В					F					
Approach Delay (s/veh)						1	.0			52	2.4		Ì			
Approach LOS	A F															

HCS Signalized Intersection Results Summary																
General Information Intersection Information														b. I.		
General Information									Intersection Information  Duration, h 0.250					JĮĮ		
Agency Sunburst Engineering				Analysis Date 5/24/202							0.250		_9		E.	
Analyst ALW		<u> </u>			5/24/2023 PM Peak w/			Area Type			Other		w <b>.</b> €	- E		
Jurisdiction Spokane Valley, WA		Time Period		Every	Everything			PHF			0.94		***	¥ *		
Urban Street Sprague Ave			Analys		_				is Pe	s Period 1> 7:00				ጎ † ፖ		
Intersection Sprague / Flora			File Na	ame	GW P	GW PM Flora.xus								4144	7 4	
Project Description Tschirley Apts																
Demand Information			EB					VB NE				B SB				
Approach Movement			L	Т	R	L	T	Г Г	2	L	Т	R	L	Т	R	
Demand ( v ), veh/h			178	1037	74	24	97	74 11	2	59	47	11	240	77	143	
Signal Information				Т		<u> </u>		Ja I							1	
Cycle, s 120.0 Reference Phase 2			1	P 6	∄								$\leftrightarrow \Box$		<b>4</b>	
Offset, s 0 Refere	Reference Point End		Green 3.4		3.1	3.1 75.5		26.0 0.0		0.0		1	2	3	4	
Uncoordinated No Simul	t. Gap E/W	On	Yellow		0.0	3.5	3.5			0.0		<b>7</b>	$\rightarrow$		KÎZ	
Force Mode Fixed Simul	t. Gap N/S	On	Red	0.5	0.0	0.5	0.5			0.0		5	6	7	8	
Timer Results			EBL	-	EBT	WB	L	WBT		NBL		NBT	SBI	-	SBT	
Assigned Phase		5		2	1		6				8			4		
Case Number		1.1		3.0	1.1	3.0					5.0			5.0		
Phase Duration, s			10.5	5	82.6	7.4	79.5					30.0			30.0	
Change Period, (Y+Rc), s			4.0		4.0	4.0		4.0				4.0	4.0		4.0	
Max Allow Headway ( MAH ), s			3.1		0.0	0 3.1		0.0		3.3		3.3		3.3		
Queue Clearance Time ( g s ), s			6.3			2.6				11.0		26.4		26.4		
Green Extension Time ( g e ), s					0.0			0.0		1.2		0.0		0.0		
Phase Call Probability		1.00			0.57						1.00			1.00		
Max Out Probability			0.00			0.00		_		0.00			_	1.00		
Movement Group Results			EB			WB			Т	NB			SB			
Approach Movement		L	Т	R	L	Т	R		L	Т	R	L	Т	R		
Assigned Movement		5	2	12	1	6	16		3	8	18	7	4	14		
Adjusted Flow Rate ( v ), veh/h		189	1103	79	26	103	6 119		63	50	12	255	82	152		
Adjusted Saturation Flow Rate ( s ), veh/h/ln		1810	1950	1597	1810	195	_	7 14	417	1950	1610	1459	1950	1610		
Queue Service Time ( g s ), s		4.3	54.0	2.1	0.6	50.		_	4.8	2.5	0.7	22.0	4.1	9.8		
Cycle Queue Clearance Time ( g c ), s			4.3	54.0	2.1	0.6	50.	_	_	9.0	2.5	0.7	24.4	4.1	9.8	
Green Ratio ( g/C )			0.69	0.65	0.65	0.66	0.6	_	_	).22	0.22	0.22	0.22	0.22	0.22	
Capacity ( c ), veh/h			274	1277	1046	209	122	_	_	318	423	349	346	423	349	
Volume-to-Capacity Ratio (X)			0.692	0.864	_	0.122	0.84	_	_	.197	0.118	0.034	0.738	0.194	0.436	
Back of Queue (Q), ft/ln (95 th percentile)			150	806	33	14	770		_	73	54	12	324	91	179	
Back of Queue ( Q ), veh/ln ( 95 th percentile)  Queue Storage Ratio ( RQ ) ( 95 th percentile)			6.0	32.2	1.3	0.6	30.8		_	2.9	2.2	0.5	13.0	3.6	7.1	
Uniform Delay ( d 1 ), s/veh			0.00	0.00	0.00	0.00	0.00	_	_	0.00	0.00	0.00	0.00	0.00	0.00	
Incremental Delay ( d 2 ), s/veh			23.2	16.5	7.5	19.4	17.0	_	$\rightarrow$	2.1	37.8	37.1	47.6	38.4	40.7	
Initial Queue Delay ( d 2 ), s/ve			0.0	7.9	0.1	0.1	7.2	_	_	0.1	0.0	0.0	7.1	0.1	0.3	
Control Delay ( d ), s/veh	C11		24.4	24.4	7.7	0.0	24.9	_	_	2.2	37.8	0.0 37.1	54.8	38.5	0.0 41.0	
Level of Service (LOS)			C 24.4	24.4 C	A	19.5 B	24.3 C	9 9.2 A		D.	D D	37.1 D	D D	36.5 D	41.0 D	
Approach Delay, s/veh / LOS			23.4 C				23.2 C			40.0 D				47.8 D		
Intersection Delay, s/veh / LOS			27.8						-	40.0 D						
microconon Dolay, 3/Ven / LO	21.0															
Multimodal Results			EB			WB				NB			SB			
Pedestrian LOS Score / LOS			2.07		В	2.07	7	В		2.13		В	2.13	3	В	
Bicycle LOS Score / LOS			2.75	5	С	2.44	1	В		0.69		Α	1.30	)	Α	