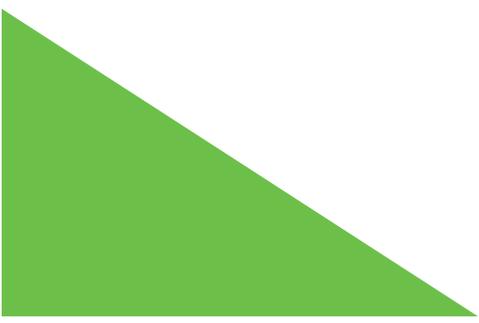


# Upriver Drive Public Road Vacation Traffic Impact Analysis



City of Spokane, Washington

Prepared for Avista Corporation

June 2019

**UPRIVER DRIVE PUBLIC ROAD VACATION  
TRAFFIC IMPACT ANALYSIS**

SUBMITTED TO:

**CITY OF SPOKANE**

June 2019

**PREPARED BY:**



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06/11/2019

AVISTA CONTRACT NO. R-40790 WA 6  
MMI PROJECT #: 4917.002.006

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## 1 INTRODUCTION

This report summarizes the Traffic Impact Analysis (TIA) performed for the vacation of Upriver Drive between Mission Avenue and N. Center Street in Spokane, Washington. The analysis identifies the transportation impacts of a proposed street vacation on City roadways and intersections. The vacation is proposed by officials with Avista Utilities in order to allow for the construction of Upriver Park adjacent to the Spokane River and the Centennial Trail. The proposed park and completion of the “Mission Gap” project will provide better connectivity for users of the Centennial Trail.

The scope and work program for this study was developed in coordination with technical guidance from staff from the City and was performed in accordance with City and standard industry TIA practices and guidelines. The TIA was performed to support and to quantify any impacts associated with the proposed street vacation, per the request of City transportation department officials.

### 1.1 PROJECT DESCRIPTION

The primary Avista Utilities campus is located at 1411 E. Mission Avenue bounded by Mission Avenue on the south, Perry Street on the west, N. Center Street on the north and Upriver Drive on the east. The Centennial Trail and Spokane River are aligned adjacent to Upriver Drive. Corporate officials with Avista are proposing to vacate approximately 1/3 of a mile (1,775 ft.) of Upriver Drive from Mission Avenue to N. Center Street. The right-of-way width varies between 60 feet in most places to 70 feet in some. Approximately 2.5 acres of public right-of-way is being requested to be vacated. However, it should be noted it is proposed to use the vacated property for public purposes with the development of Upriver Park and maintaining the Centennial Trail route adjacent to the river.

A street vacation is required by City statutes as Upriver Drive is a public roadway classified as a minor arterial per the City of Spokane Official Arterial Street Map (SMC 12.08.040). According to the same source, N. Center Street between Upriver Drive and Indiana Avenue is classified as a major collector. The intersection of Upriver Drive and N. Center Street would create a free movement for roadway users on this revised route, as well as a driveway approach to the east campus entry for Avista and for Upriver Park visitors. The driveway approach would have stop-control yielding the right-of-way to vehicles on the public roadway. The intersection of the existing Upriver Drive and Mission Avenue will be reconstructed into a typical driveway approach providing access to the main parking lot located on the southern portion of the campus.

Thus, in summary, the proposed vacation project includes the following actions:

- ◆ Full vacation of existing Upriver Drive between Mission Avenue and N. Center Street (approximately 1,775 ft.);
- ◆ Reconstruction of the N. Center Street/Upriver Drive intersection to provide free movement for public road users and a driveway extending south to the east campus entry and for Upriver Park visitors; and
- ◆ Reconstruction of the Mission Avenue/Upriver Drive intersection to provide a driveway to the south campus parking lot for employees and customers to access the main campus building, and for Upriver Park visitors.

This TIA supports administrative approvals that are necessary in order to begin the development of the proposed park. Figure 1 illustrates the project location and proposed vacation. Figure 2 provides a concept rendering of Upriver Park.

## **1.2 ANALYSIS SCOPE AND METHODOLOGY**

The purpose of this TIA is to review the traffic and transportation impacts of the proposed Upriver Drive vacation on adjacent arterials and recommend improvements and strategies to mitigate unacceptable impacts, if any, and assure adequate transportation capacity and connectivity. This section describes the primary scope and methods used to evaluate traffic conditions and determine potential impacts to the nearby roadways and intersections.

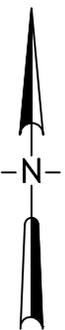
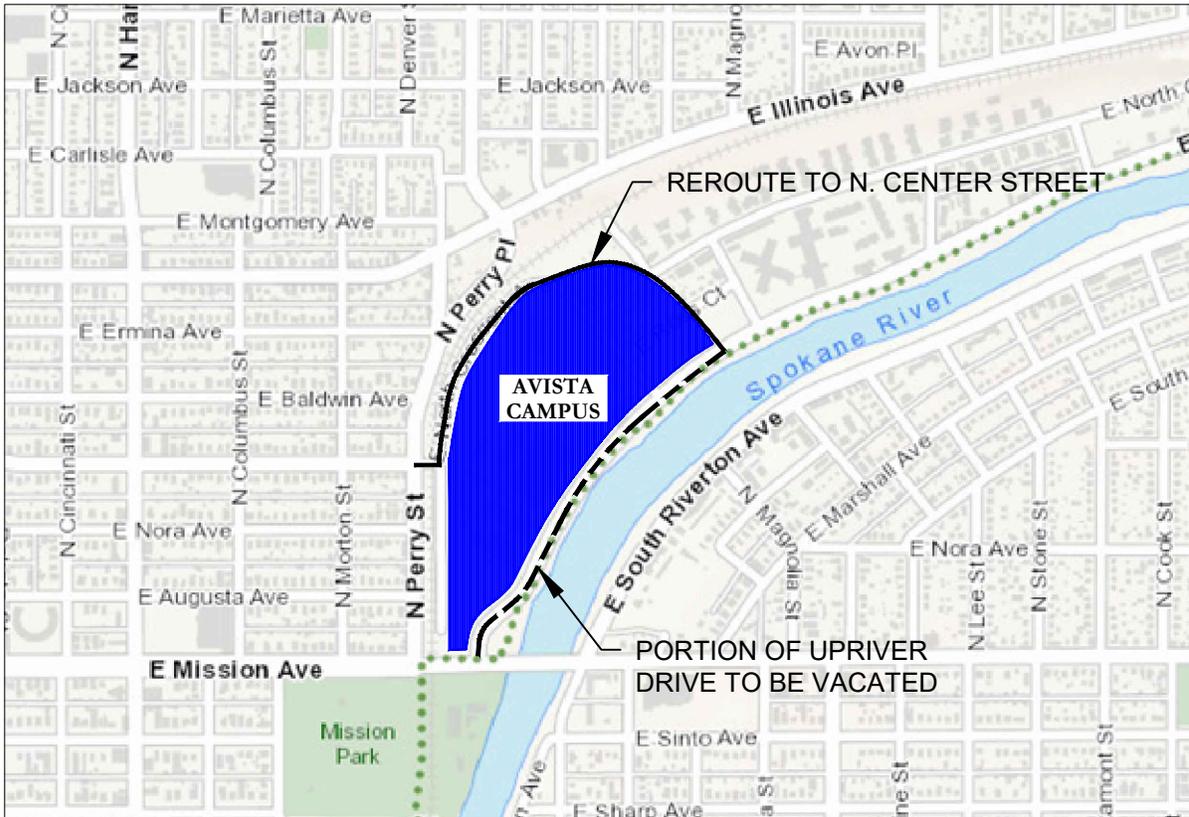
### **Project Scope**

A TIA evaluates transportation capacity primarily through an examination of intersection operations. Congestion and increased vehicle delays are experienced more rapidly at intersections versus road segments between intersections due to the number and frequency of conflicts (i.e. turning vehicles and stopping or slowing movements).

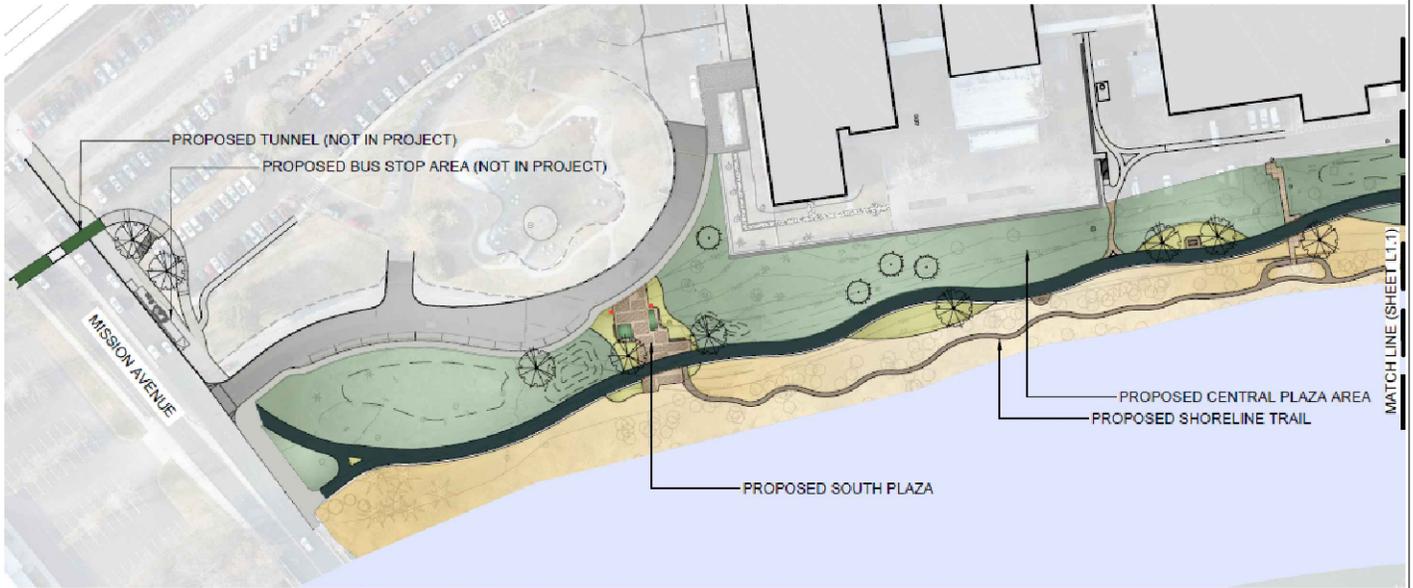
The scope for this study was established in coordination with City of Spokane transportation engineers. Per direction, this study quantifies traffic operations and capacity based on a review of level-of-service (LOS) performed for the following intersections:

- ◆ Mission Avenue/Perry Street
- ◆ Mission Avenue/Upriver Drive
- ◆ Indiana Avenue/ Perry Street
- ◆ North Center Street/ Upriver Drive

Per the direction of local agency staff, the analysis was performed for the AM and a PM peak hours of a typical weekday, which is the work bound and homebound employee commutes. This study looks at the impacts of traffic shifts due to re-routing arterial traffic using existing conditions. A future horizon year is not provided as the historical traffic data available from the City indicates a decline in overall traffic.



 <p>engineers ■ surveyors ■ planners ■ scientists</p>	<p>316 W. Boone Ave. Suite 360 Spokane WA 99201</p> <p>Phone: (509) 315-8505 m-m.net</p> <p><small>COPYRIGHT © MORRISON-MAIERLE, INC., 2019</small></p>	<p>DRAWN BY: <u>CJR</u></p> <p>CHK'D. BY: <u>WDW</u></p> <p>APPR. BY: <u>CJR</u></p> <p>DATE: <u>6/4/2019</u></p>	UPRIVER DRIVE VACATION		PROJECT NO. 4217.002
			SPOKANE		WA
Plotted by chris reich on 6/5/19			PROJECT LOCATION		



**SOUTH PORTION**  
NOT TO SCALE



**NORTH PORTION**  
NOT TO SCALE

## Methodology - Intersection Operations

Intersection capacity was evaluated using the level-of-service (LOS) methodologies of the *Highway Capacity Manual* (Transportation Research Board, 2010). The *Highway Capacity Manual* (HCM) is a nationally recognized and locally accepted method of measuring traffic flow and congestion for intersections. Criteria range from LOS A, indicating free-flow conditions with minimal vehicle delays, to LOS F, indicating congestion with significant vehicle delays (and operational failures).

LOS for a signalized intersection is defined in terms of the average control delay experienced by all vehicles at the intersection, as measured over a specific time period such as a peak hour. LOS for a one- or two-way stop-controlled intersection or driveway is the function of average control delays experienced by vehicles in a particular approach or approach movement over a timeframe such as a peak hour. Typically, the stopped approach or movement experiencing the worst LOS is reported. Finally, LOS at an all-way stop-controlled intersection is defined by the average control delays experienced by all vehicles at the intersection, as with signals, but the LOS thresholds are associated with delays for unsignalized intersections.

Table 1 outlines the LOS criteria for signalized and unsignalized intersections from the *Highway Capacity Manual*. As shown, LOS thresholds, as a function of delay, vary between signalized and unsignalized intersections. This is because driver tolerances for delay have been documented to be much higher at signalized versus unsignalized intersections.

Table 1. Intersection Level of Service Criteria		
Level of Service	Signalized: Control Delay (sec/veh)	Unsignalized: Control Delay (sec/veh)
A	≤10	≤10
B	>10 – 20	>10 - 15
C	>20 – 35	>15 - 25
D	>35 – 55	>25 - 35
E	>55 – 80	>35 - 50
F	> 80	>50

Source: *Highway Capacity Manual* (TRB, 2010)

LOS was determined for this study using Synchro Version 10.0, (Trafficware, 2017). This software tool can apply the analysis methodologies of HCM 2010 and is an industry standard software application. From the City of Spokane Comprehensive Plan, the following levels-of-service apply:

- LOS E at all other signalized arterial intersections along Principal arterials, Minor arterials, or Collector arterials.
- LOS E at all unsignalized intersections. Individual approach movements are analyzed at all unsignalized intersections with two-way stop controlled (TWSC). The average of all movements is analyzed at all-way stop-controlled (AWSC) intersections.

## 2 TRAFFIC ANALYSIS

This section describes the project study area and summarizes forecast traffic volumes and traffic operations following the project proposal. Described are study roadways, current and forecast traffic volumes, and existing operations and capacity conditions within the study area.

### 2.1 ROADWAY NETWORK

As indicated, the study focuses on traffic operations for four intersections between Mission Avenue, Perry Street, Upriver Drive, and N. Center Street. A description of study arterials is provided below. Average daily traffic (ADT) count information for arterials was obtained from Spokane 2012-2013 traffic flow maps, as available online through Street Department. As described in the next section, counts for local streets were collected specifically for this study as traffic flow maps do not provide ADT for local streets.

A description of study area arterials is provided as follows:

- ◆ **Mission Avenue.** Mission Avenue is a four-lane *principal arterial* adjacent to the Avista Campus. Curb, gutter, and sidewalk are aligned along both sides of the roadway. The posted speed limit is 30 mph. The arterial supports 15,050 ADT within the study area. Turn pockets are aligned at major intersections.
- ◆ **Perry Street.** This is a four-lane *minor arterial* within the vicinity of the Avista campus. Curb, gutter, and sidewalk are aligned along both sides of the roadway. The posted speed limit is 30 mph. The arterial supports 7,300 ADT within the study area. Turn pockets are aligned at major intersections.
- ◆ **Upriver Drive.** This is a *minor arterial* with a two-lane cross section. There are no dedicated sidewalks along the arterial, but the roadway has five-foot bike lanes and the Centennial Trail is aligned between Upriver Drive and the Spokane River directly adjacent to the roadway. The posted speed limit is 30 mph. The roadway supports about 4,300 ADT within the study area.
- ◆ **North Center Street.** This is a two-lane *major arterial* with curb, gutter, and sidewalk located along both sides of the roadway. No speed limit is posted along the roadway; thus, the speed limit is 30 mph per City statutes.

A summary of existing intersection traffic control conditions (signal, one-way, two way, or all way stops) and exclusive turn lane presence is provided in [Table 2](#). Shown are different traffic movements at intersections and whether a turn lane is provided. If no specific lane is shown, then turns are performed from adjacent, shared through-lane. Also indicated are traffic control conditions for the intersection. Controls and lanes are denoted with an “X”.

Marked crosswalks are located within the study area at the Indiana Avenue/Perry Street and Mission Avenue/Perry Street intersections.

**Table 2. Existing Intersection Geometrics and Traffic Controls**

Intersection	Traffic Control				Intersection Geometrics							
	Traffic Signal	One-Way Stop	Two-Way Stop	All-Way Stop	NB Left Turn Lane	NB Right Turn Lane	SB Left Turn Lane	SB Right Turn Lane	WB Left Turn Lane	WB Right Turn Lane	EB Left Turn Lane	EB Right Turn Lane
Mission Ave/Perry St	X	-	-	-	-	-	X	-	-	-	X	-
Mission Ave/Upriver Dr	-	-	X	-	-	-	-	-	-	-	-	-
Indiana Ave/Perry St	X	-	-	-	-	-	-	-	X	-	X	-
Center St/Upriver Dr	-	X	-	-	-	-	-	-	-	-	-	-

## 2.2 TRAFFIC COUNTS

Traffic counts were collected specifically for this study during June 2019. A summary of ADT counts performed for this project are provided as follows:

- ◆ North Center Street N/of Upriver Drive = 4,050 vpd
- ◆ Indiana Ave E/of Perry Street = 3,925 vpd
- ◆ Perry Street N/of Mission Avenue = 11,500 vpd
- ◆ Upriver Drive N/of Mission Avenue = 4,950 vpd

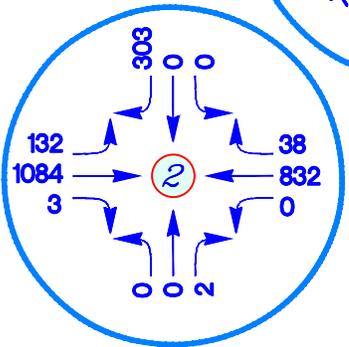
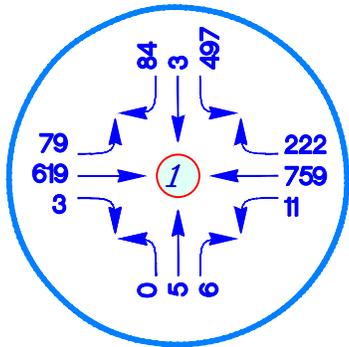
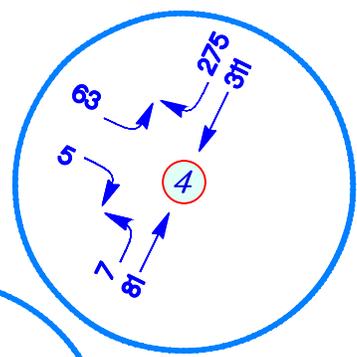
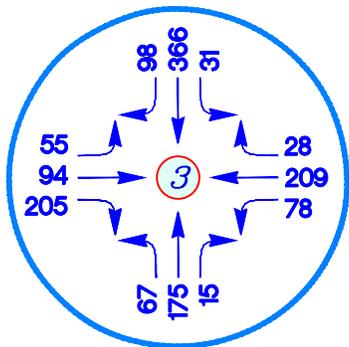
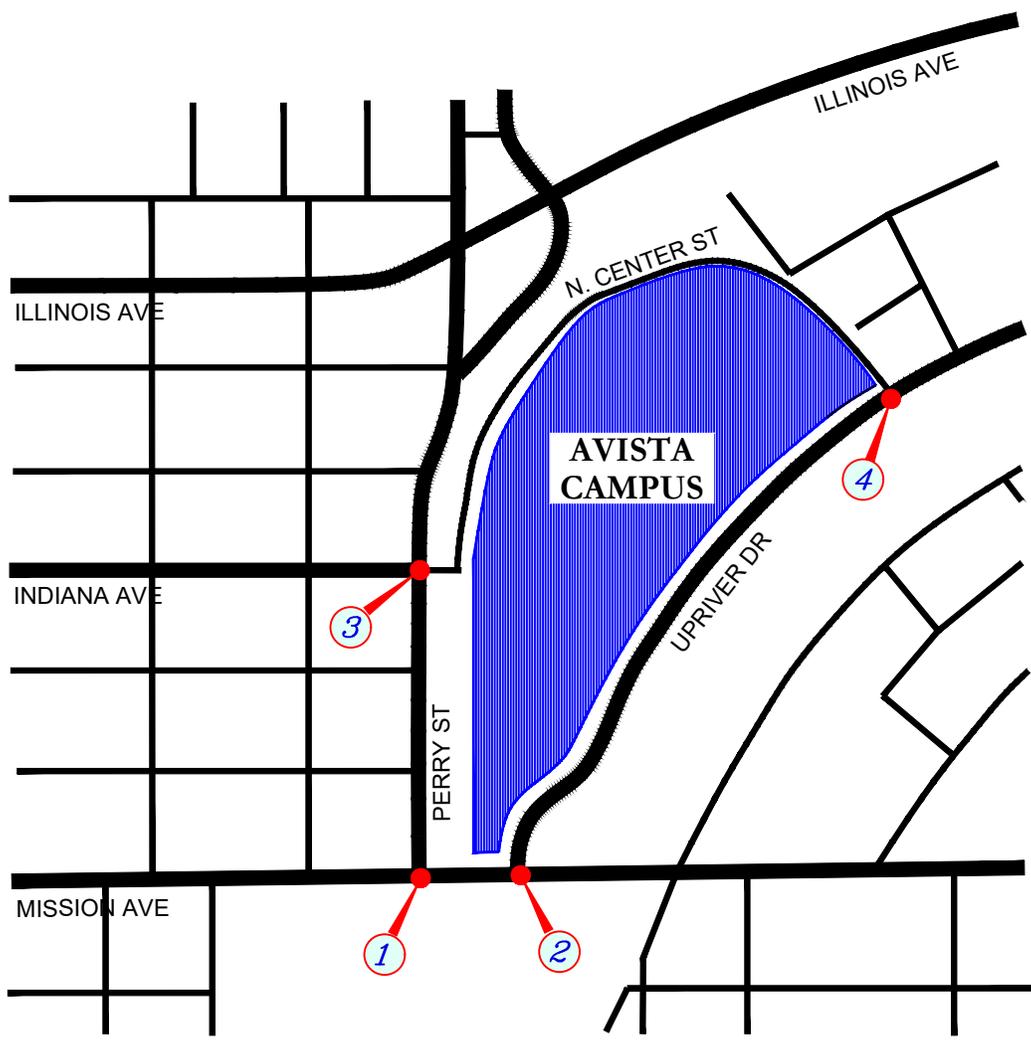
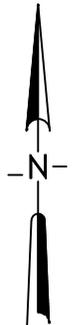
Turning movement counts were collected in May also to support the operations/LOS analyses of this TIA. Counts were performed between 7:00 to 9:00 AM and 4:00 to 6:00 PM to identify the AM and PM peak hours of commute traffic activity for study intersections. The individual peak morning and afternoon hours of traffic activity was used in operational analyses for each intersection, respectively, to assure a conservative analysis. [Figure 3](#) and [Figure 4](#) provide a summary of the AM and PM peak hour counts for the study intersections, respectively.

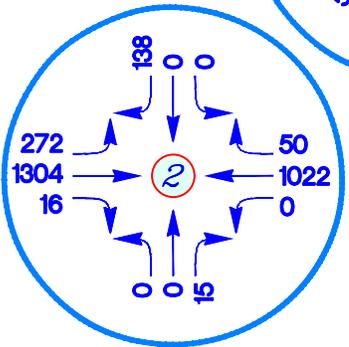
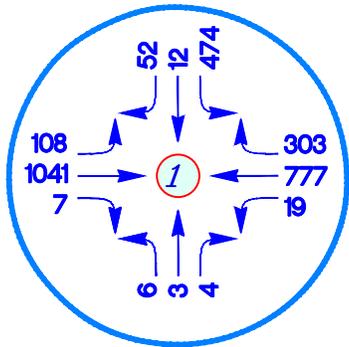
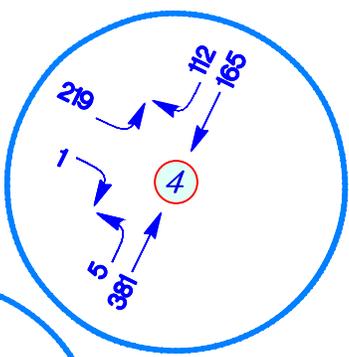
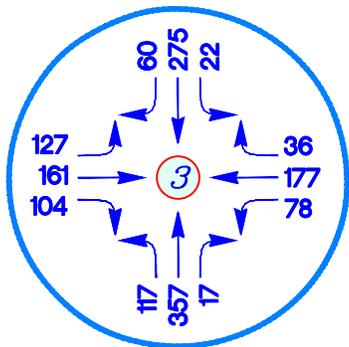
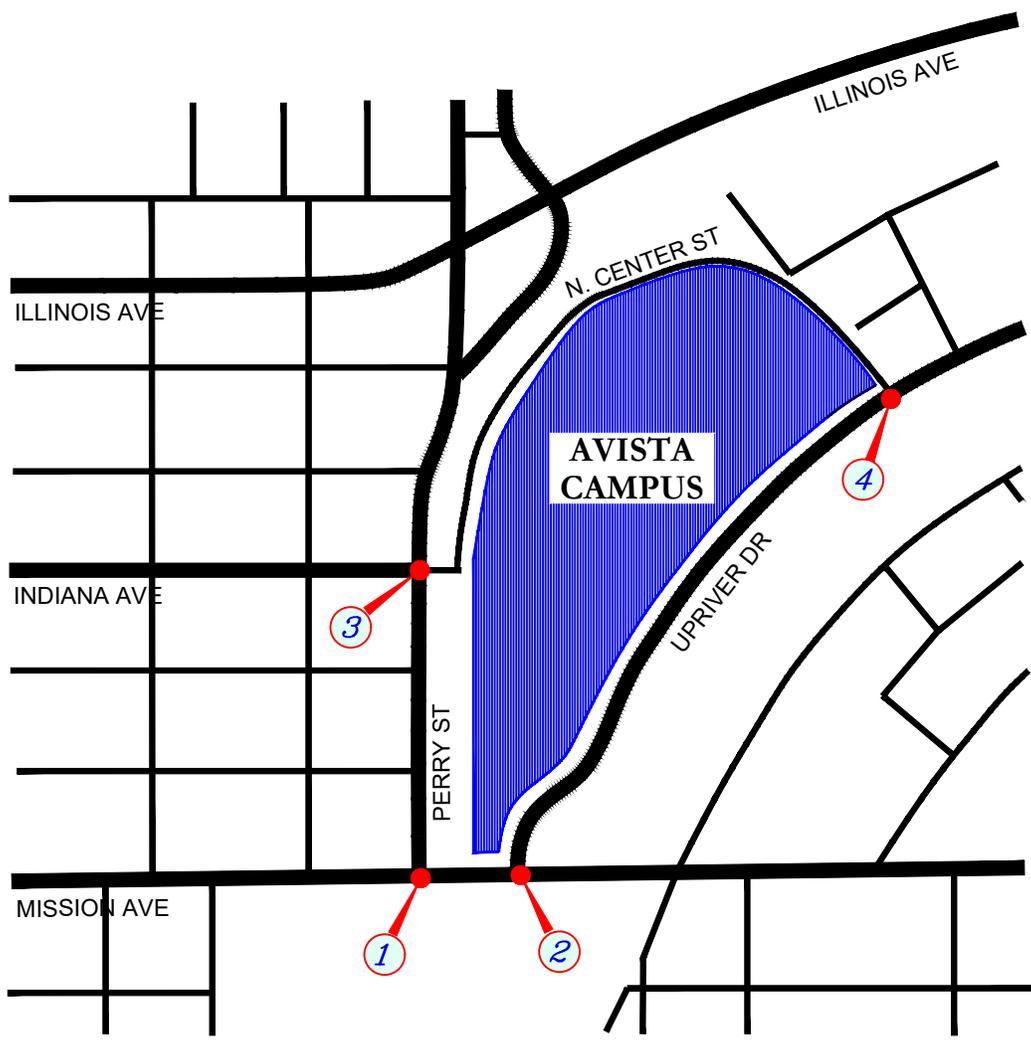
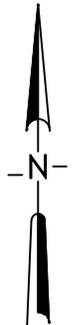
Original count worksheets are provided in Technical Appendix B for average daily traffic and turn movement counts.

## 2.3 TRAFFIC FORECASTS

Forecast turning movement data was developed to assess the transportation impacts of the vacation/realignment proposal. Using the existing turn movement counts and assumptions described later, turning movement information was determined for the future conditions at the study intersections.

As shown on the following chart there has been minimal traffic growth on adjacent streets as ADT volumes have remained relatively consistent, or even decreased, between 1992 and 2016. This is shown via the flat or descending trend lines. Therefore, no future horizon years were analyzed as there is no known change to the counts. And, if the present trends continue, the data used is actually conservative in nature.





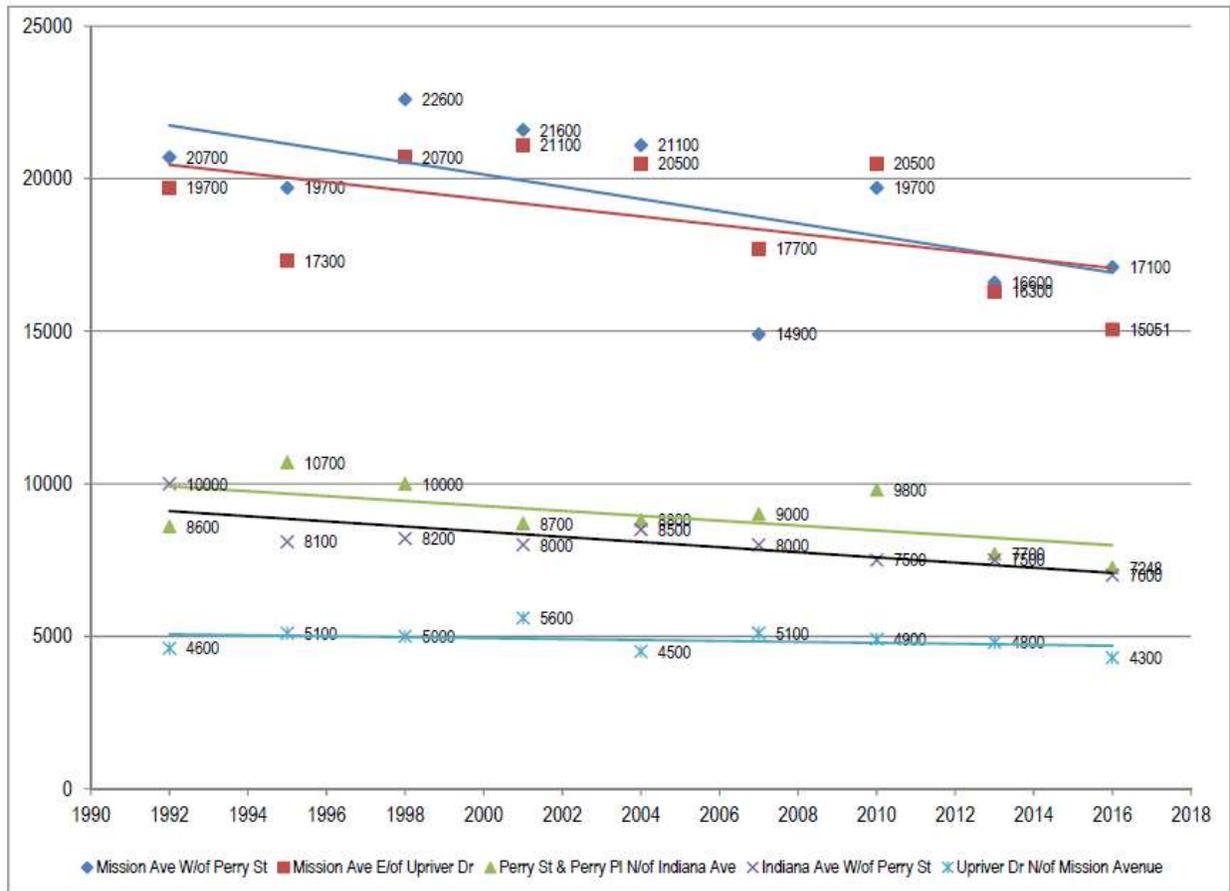
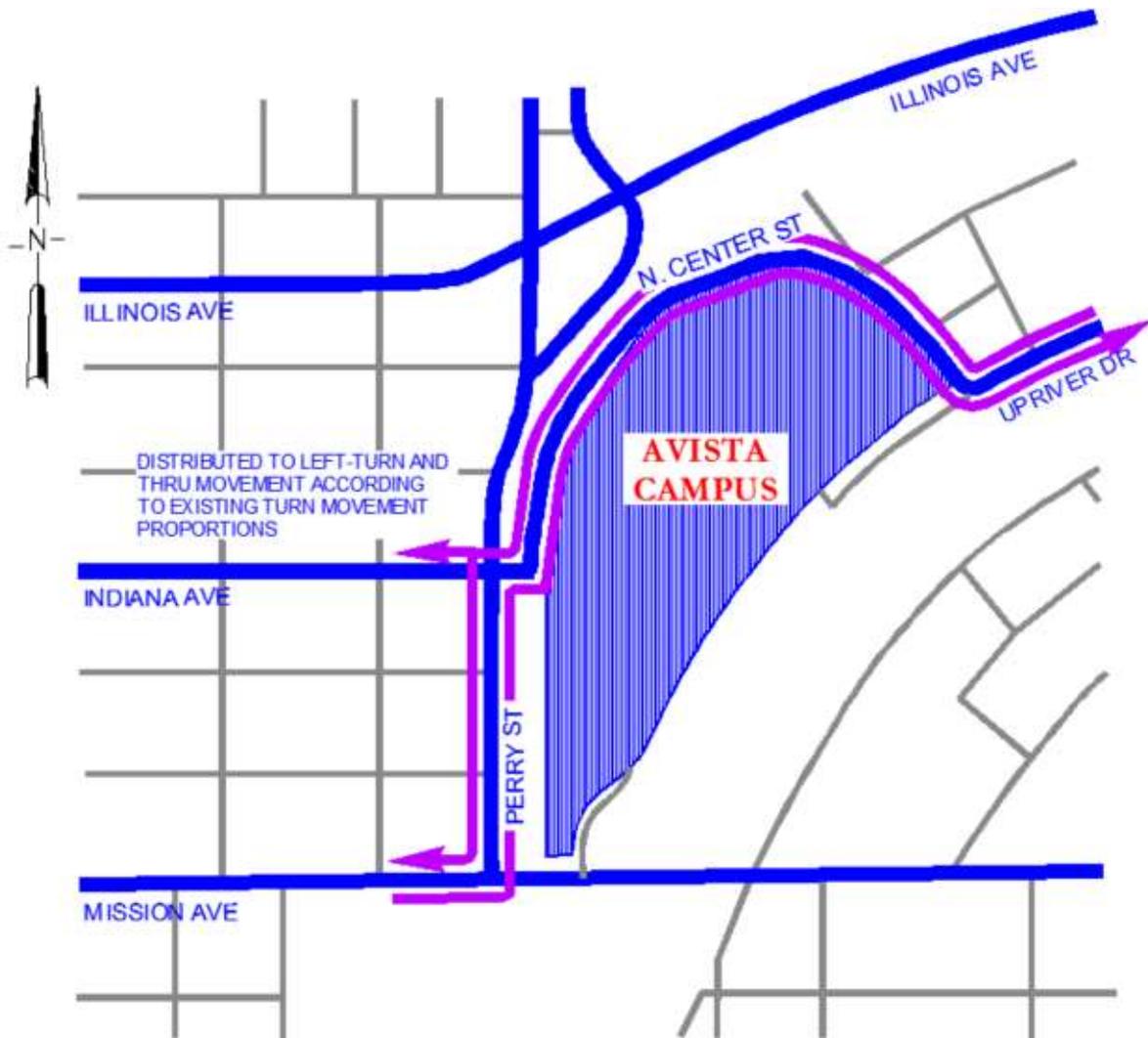


CHART 1: ADT VOLUMES (Y AXIS) VERSUS YEAR (X AXIS)

### Street Vacation/Realignment

The vacation of Upriver Drive between N. Center Street and Mission Avenue will shift through traffic to N. Center Street and Perry Street. Driveways at both ends of the vacated street will provide access to the Avista campus. Using the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition, 2017) to determine the approximate trips associated with the Avista campus, the remaining trips were assumed to be diverted trips due to the vacation of Upriver Drive.

Diverted trip were routed around the campus via Perry Street and N. Center Street. The following figure illustrates the assumptions used to determine where these trips ended up after being rerouted.



Using ADT counts performed specifically for this study on weekdays in June 2019 for adjacent public roadways, and in coordination with turning movement counts, traffic forecasts could be developed for the intersections to be impacted as a result of the proposed roadway vacation. The rationale behind forecasting ADT volume changes with the street vacation and realignment process is as follows.

- ◆ **Upriver Drive.** As indicated the portion of Upriver Drive between Mission Avenue on the south and N. Center Street on the north is proposed to be vacated. Access to the south portion of the campus will be maintained via an approach to/from Mission Avenue and access to the north portion of the campus will be maintained via an approach at the intersection of Upriver Drive and N. Center Street. Thus, the vehicular trips not associated with the Avista campus will have to be diverted as shown above. Bicyclists and pedestrians would continue to use the Centennial Trail as it will be available for non-motorized uses through the proposed Upriver Park.

For the purposes of this study, it is assumed any non-Avista trips presently utilizing the affected portion of Upriver Drive would be rerouted to Perry Street and N. Center Street in the most direct manner.

**Turning Movements.** As indicated, turning movement counts were performed in May 2019 for identified intersections to support this study. ADT counts and turning movement counts were compared at each intersection. Table 3 summarizes the proportion of peak hour trips for a typical weekday.

Intersection	ADT	AM Peak TEV	% of Weekday	PM Peak TEV	% of Weekday
Mission Ave at Perry St	19,725	2,288	11.5%	2,806	14.2%
Mission Ave at Upriver Dr	17,200	2,394	13.9%	2,817	16.4%
Indiana Ave at Perry St	14,300	1,421	9.9%	1,531	10.7%
N. Center St at Upriver Dr	6,000	742	12.4%	883	14.7%

It was determined that AM peak hour trips comprise approximately 10% - 14% and PM peak hour is approximately 11% - 16% of ADT on a typical weekday.

Figure 5 and Figure 6 show the diverted/rerouted trips for the study intersections during the AM and PM peak hours, respectively, as based on the assumptions described above. Figure 7 and Figure 8 show existing year traffic projections for the AM and PM peak hours, respectively, following the proposed vacation of Upriver Drive and rerouting of traffic to N. Center Street and Perry Street.

## 2.4 TRAFFIC OPERATIONS

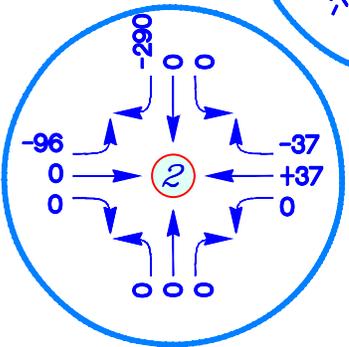
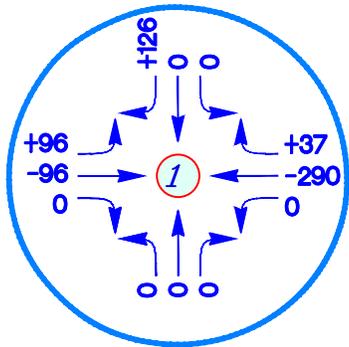
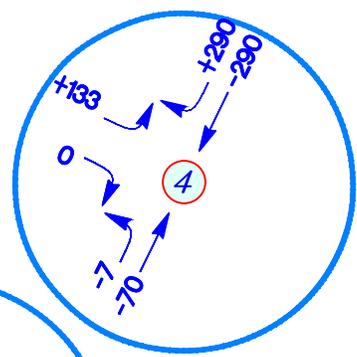
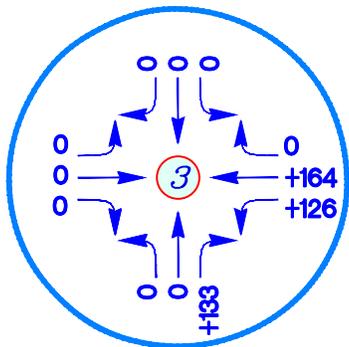
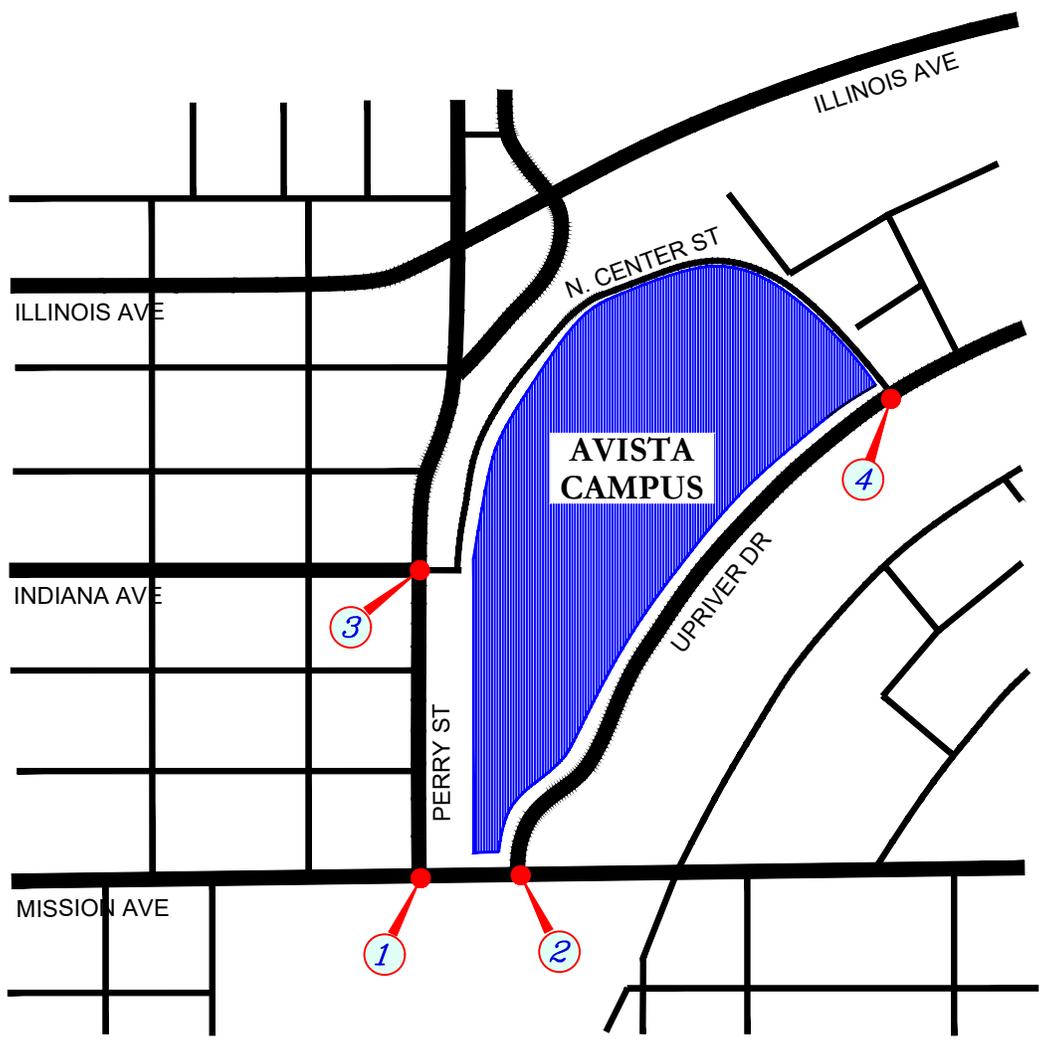
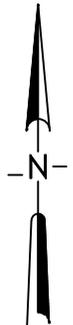
The LOS and capacity analyses were performed based on a review of the traffic volumes summarized in Section 2.2 and 2.3, and the geometric conditions described in Section 2.1. The City provided signal timing cards to establish cycle lengths and phase splits for the Indiana Avenue and Mission Avenue with Perry Street intersections traffic signals.

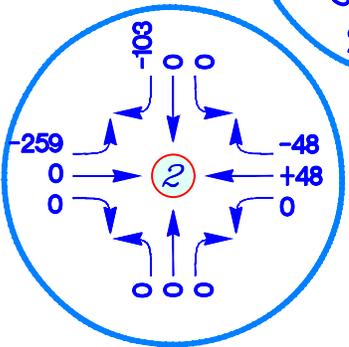
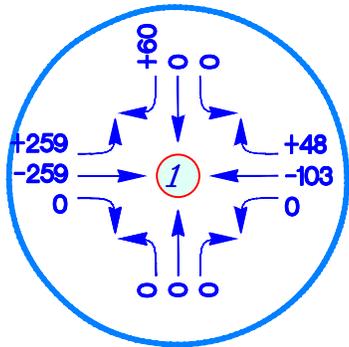
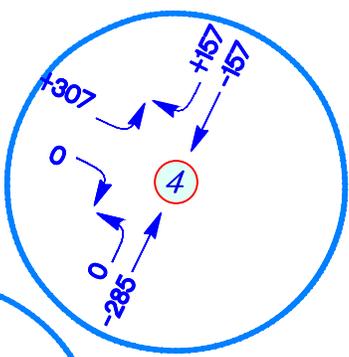
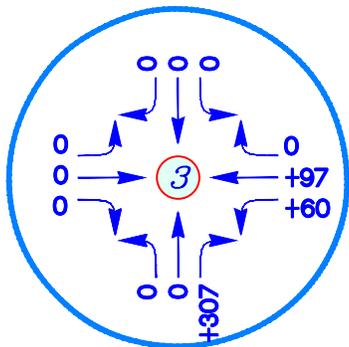
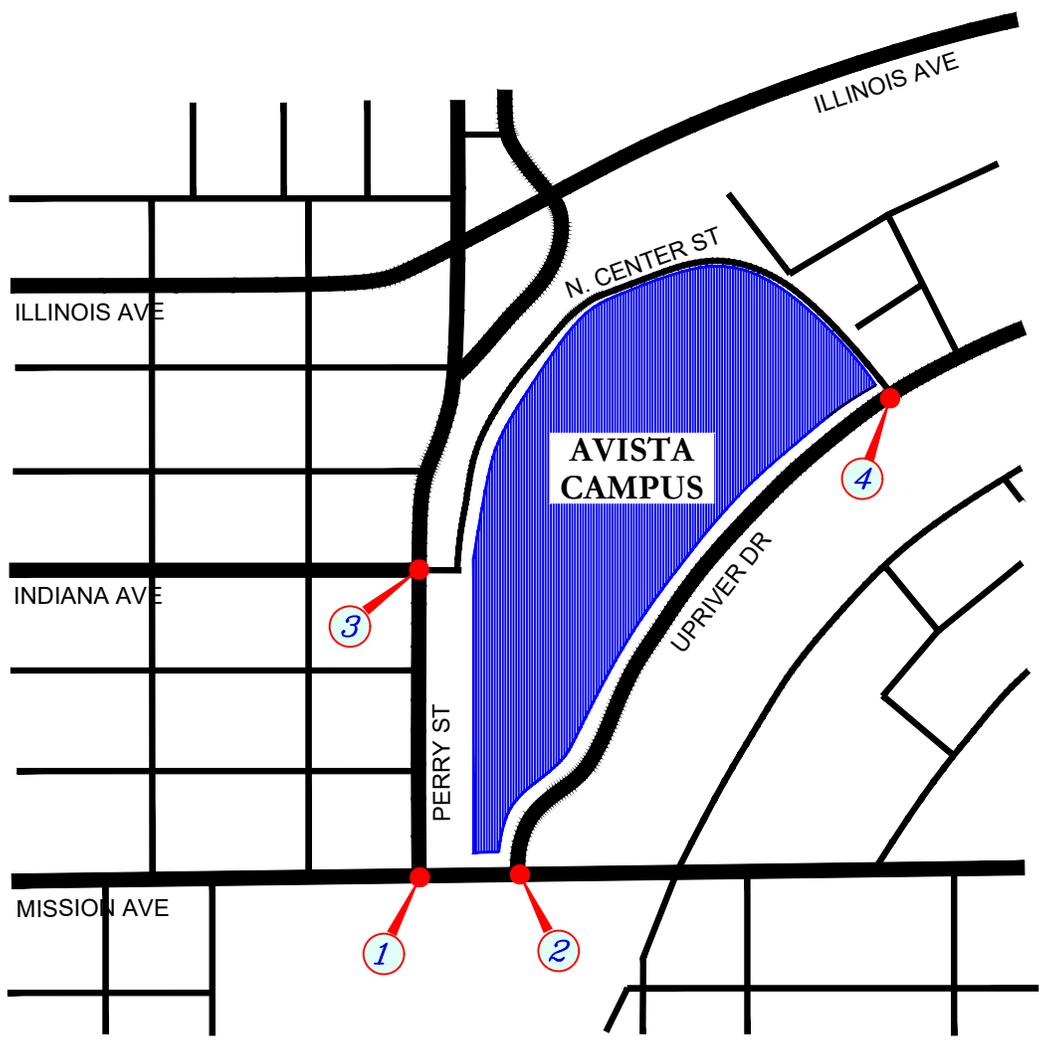
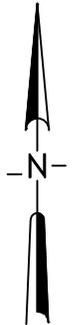
Table 4 provides a summary of LOS for the AM and PM peak generator hours. Also shown are average control vehicle delays for each intersection. Again note LOS and control delays are the function of the worse approach or movement for stop controlled intersections.

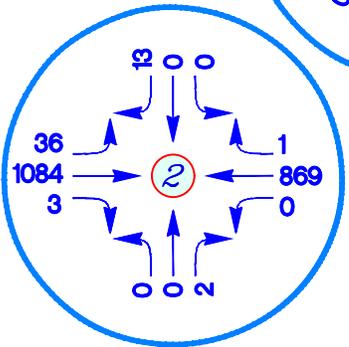
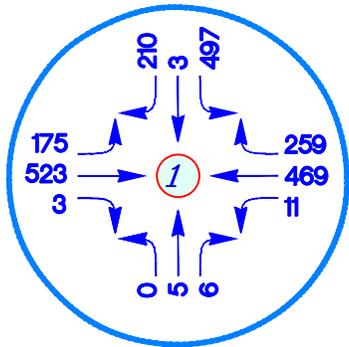
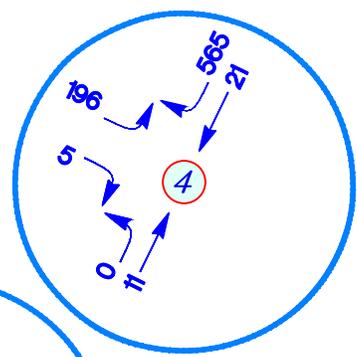
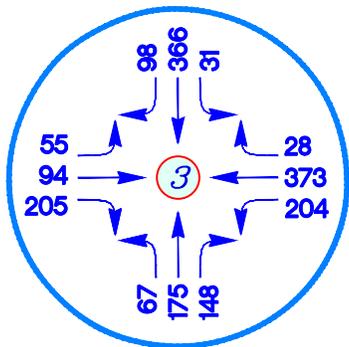
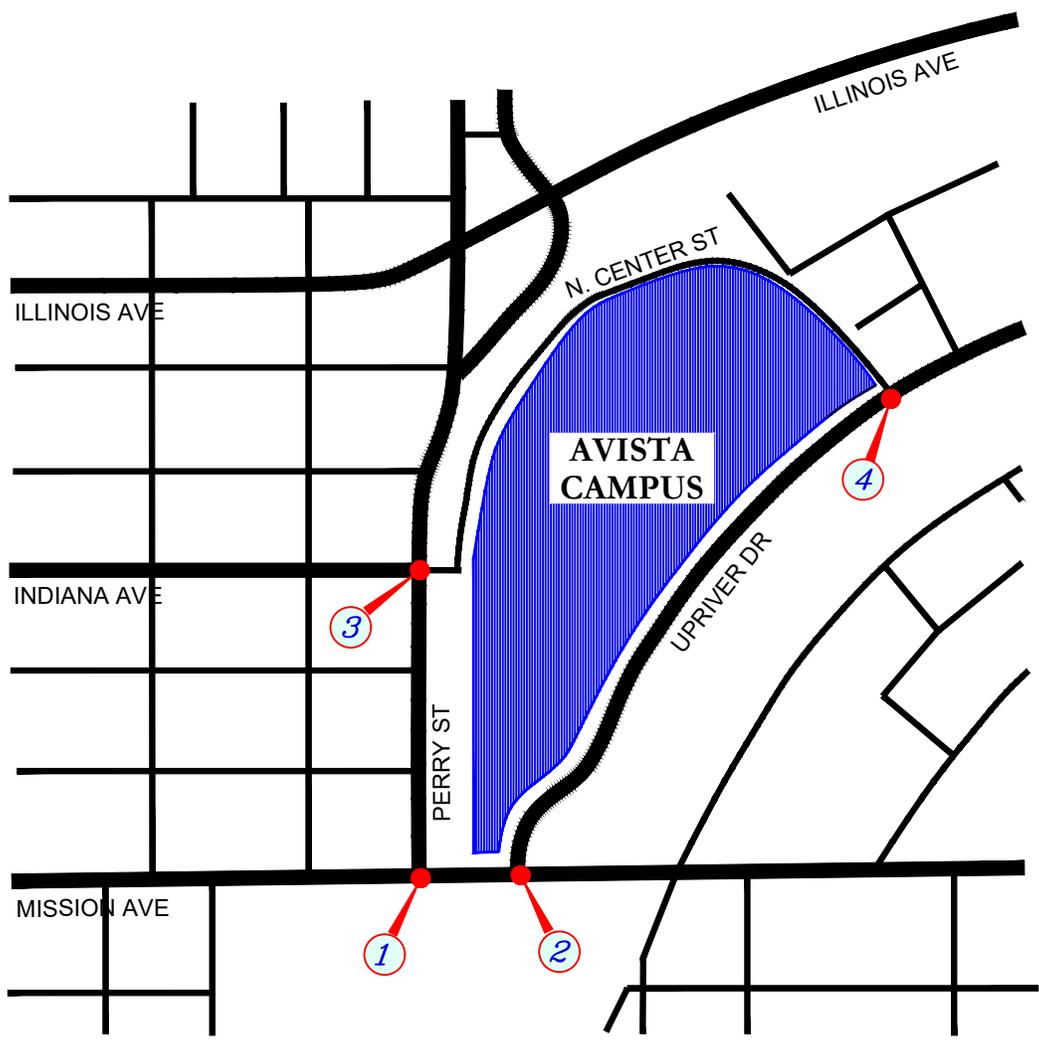
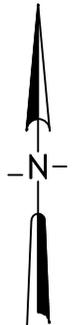
Table 4. Year 2019 Existing and With Vacation LOS and Delay - AM and PM Peak Hours								
Condition	Existing				Year 2019 with Vacation (Rerouted Existing)			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Signalized Intersections	LOS <sup>1</sup>	Delay	LOS <sup>1</sup>	Delay	LOS <sup>1</sup>	Delay	LOS <sup>1</sup>	Delay
Mission Ave/Perry St	C	33.7 sec.	C	30.7 sec.	E	67.2 sec.	E	79.8 sec.
Indiana Ave/Perry St	B	13.7 sec.	B	11.5 sec.	B	17.7 sec.	B	13.2 sec.
Stop-Controlled Intersections	AM Peak		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	LOS <sup>1</sup>	Delay	LOS <sup>1</sup>	Delay	LOS <sup>1</sup>	Delay	LOS <sup>1</sup>	Delay
Mission Ave/Upriver Dr	C	22.3 sec.	C	15.6 sec.	B	13.1 sec.	B	14.4 sec.
N. Center St/Upriver Dr	B	14.6 sec.	C	23.8 sec.	B	13.8 sec.	D	26.8 sec.
LOS = Levels-of-Service								

All study intersections will operate at levels-of-service that meet City of Spokane thresholds as identified with the City's Comprehensive Plan with the proposed vacation of Upriver Drive. The proposed vacation will have minimal impact upon traffic operations within the study area. Average control delay gains are within allowable standards. The intersection of Mission Avenue at Perry Street does drop to a LOS E which meets the allowable threshold; however, it may be beneficial to revisit the signal timing plan once the traffic revision occurs.

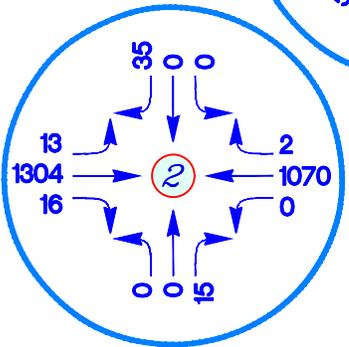
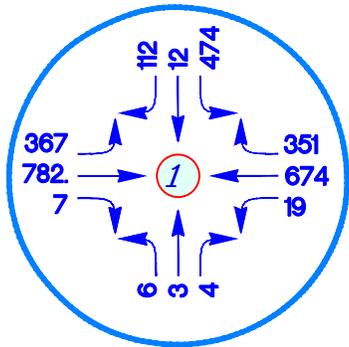
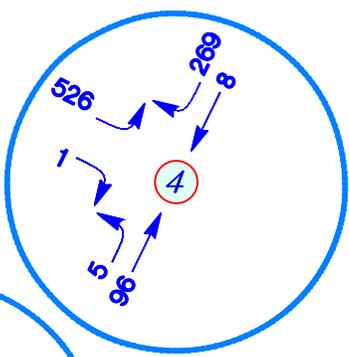
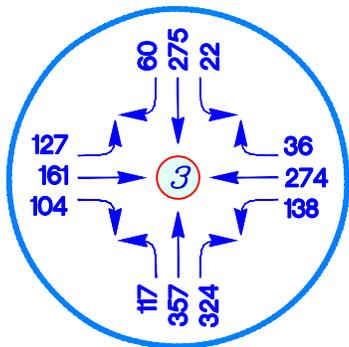
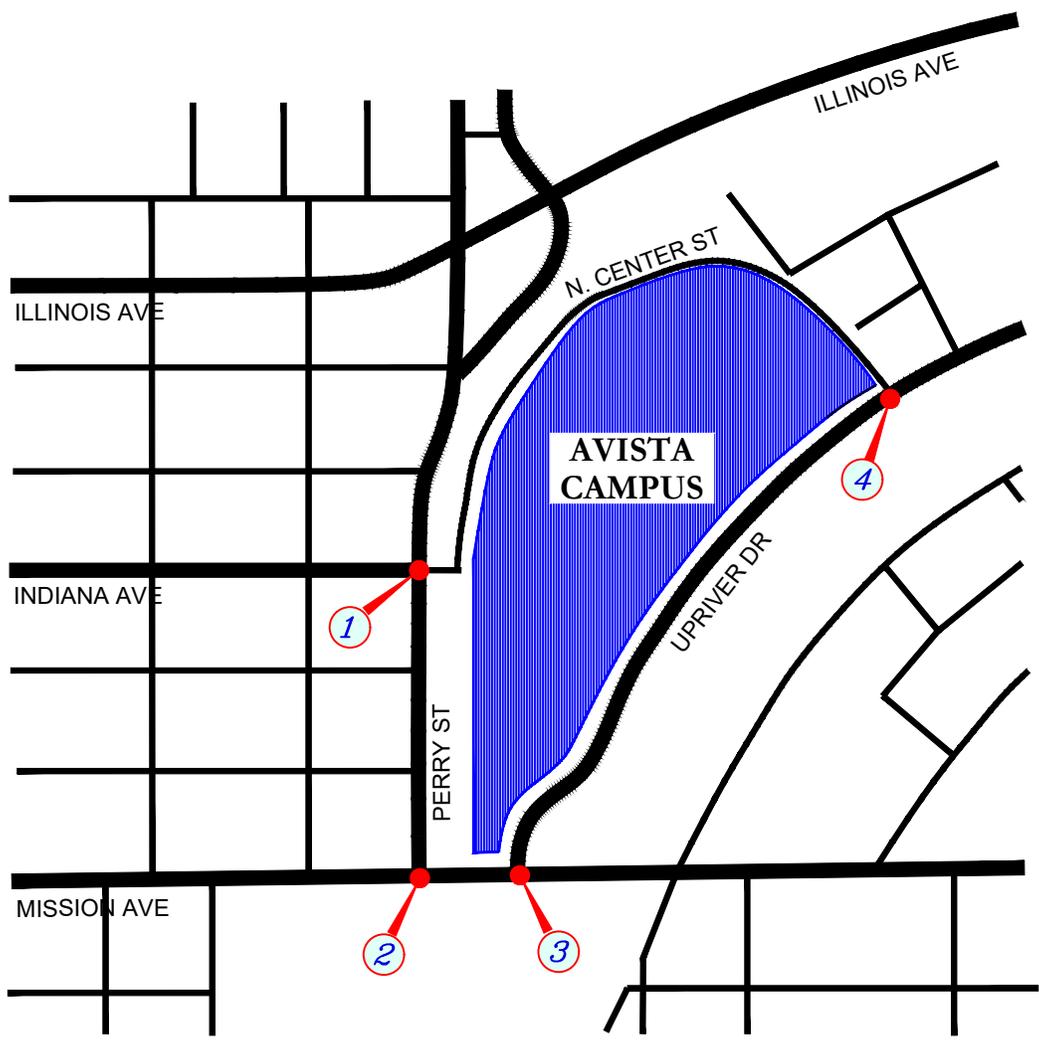
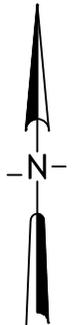
No improvement or modifications are recommended to address the vacation of Upriver Drive given the results of this analysis.







Plotted by chris reich on 6/5/19



### 3 SUMMARY AND CONCLUSIONS

Avista Utilities is proposing the vacation of Upriver Drive between Mission Avenue and N. Center Street in order to proceed with the design and construction of Upriver Park to improve non-motorized users of the Centennial Trail. Driveway approaches would be constructed at each terminus of the proposed vacation in order to provide access to the Avista campus. Through traffic would be rerouted to use N. Center Street and Perry Street for arterial connectivity.

#### 3.1 TRAFFIC FORECASTS AND CAPACITY

Traffic counts were collected specifically for this study and used to forecast the diversion or rerouting of trips following the proposed street vacation. In general, it is anticipated that non-Avista trips would be rerouted to the N. Center Street and Perry Street route. Trips associated with the Avista campus would continue to use driveways for access.

A traffic operations/levels-of-service (LOS) analysis indicates the proposed Upriver Drive vacation would have minimal impact upon traffic operations within the study area, as evidenced by the study intersections functioning within acceptable LOS. The analysis does identify a potential degradation in LOS for the intersection of Mission Avenue and Perry Street that might require some signal timing modifications once the vacation takes place.

The table below summarizes the LOS with signal optimization used to improve the delay experienced at this intersection.

Condition	Year 2019 with Vacation (Rerouted Existing)				Year 2019 with Vacation (Signal Optimization)				Improvement	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM
	LOS <sup>1</sup>	Delay	LOS <sup>1</sup>	Delay	LOS <sup>1</sup>	Delay	LOS <sup>1</sup>	Delay	Delay	Delay
Mission Ave/Perry St	E	67.2 sec.	E	79.8 sec.	D	42.2 sec.	C	65.4 sec.	-37.6 sec.	-14.4 sec.
Indiana Ave/Perry St	B	17.7 sec.	B	13.2 sec.	B	17.7 sec.	B	13.2 sec.	-	-

LOS = Levels-of-Service

Although this signal optimization information is provided, it should be noted that the proposed vacation does meet City of Spokane requirements without any required mitigation.

#### 3.2 SUMMARY

The Upriver Drive vacation will not unacceptably impact traffic conditions within the study area defined by City of Spokane officials. As such, no improvements are required or recommended on the basis of capacity or operational requirements meeting agency standards. This study could be used to support the proposed vacation. No further recommendations are provided by this TIA.

## Appendix A

### Glossary of Terms

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This section of the Technical Appendix provides a glossary of terms. The *Highway Capacity Manual* (TRB, 2010) and the *Transportation Impact Analyses for Site Development* (ITE, 2005) were used to help with the development of the following definitions:

- ◆ **Access point** – An intersection, driveway, or opening on a roadway that provides access to a land use or facility.
- ◆ **All-way stop-controlled** – An intersection with stop signs located on all approaches.
- ◆ **Arterial** – (General Definition) A signalized street that primarily serves through-traffic and secondarily provides access to abutting properties.
- ◆ **Average daily traffic (ADT)** – The average 24 hour traffic volume at a given location on a roadway.
- ◆ **Capacity** – The number of vehicles or persons that can be accommodated on a roadway, roadway section, or at an intersection over a specified period of time. Capacity is also a term used to define limits for transit, pedestrian, and bicycle facilities. Concept typically expressed as vehicles per hour, vehicles per day, or persons per hour or per day.
- ◆ **Collector street** – (General Definition) A surface street providing land access and traffic circulation within residential, commercial, and industrial areas.
- ◆ **Cycle** – A complete sequence of cycle indicators.
- ◆ **Cycle length** – The total time for a signal to complete one cycle.
- ◆ **Delay** – The additional travel time experienced by a driver, passenger, or pedestrian.
- ◆ **Demand** – The number of users desiring service on a highway system or street over a specified time period. Concept typically expressed as vehicles per hour, vehicles per day, or persons per hour or per day.
- ◆ **Departing sight distance** – The length of road required for a vehicle to turn from a stopped position at an intersection (or driveway) and accelerate to travel speed.
- ◆ **Downstream** – The direction of traffic flow.
- ◆ **Functional class** – A transportation facility defined by the traffic service it provides.
- ◆ **Growth factor** – A percentage increase applied to current traffic demands or counts to estimate future demands/volumes.
- ◆ **Level of Service** – The standard used to evaluate traffic operating conditions of the transportation system. This is a qualitative assessment of the quantitative effect of factors such as speed, volume of traffic, geometric features, traffic interruptions, delays and freedom to maneuver. Operating conditions are categorized as LOS A through LOS “F”. LOS A generally represents the most favorable driving conditions and LOS F represents the least favorable conditions.
- ◆ **Mainline** – The primary through roadway as distinct from ramps, auxiliary lanes, and collector-distributor roads.
- ◆ **Major Street** – The street not controlled by stop signs at a two-way stop-controlled intersection.
- ◆ **Minor arterial** – (General Definition) A functional category of a street allowing trips of moderate length within a relatively small geographical area.

- ◆ **Operational analysis** – A use of capacity analysis to determine the level of service on an existing or projected facility, with known or projected traffic, roadway, and control conditions.
- ◆ **Peak Generator Hour** – The single hour (or hours) in a day during which trip generation for a development or land use is highest.
- ◆ **Peak hour** – Single hour (or hours) in a day during which the maximum traffic volume occurs on a given facility (roadway, intersection, etc.). Typically the peak hour is known as the “rush” hour that occurs during the AM or PM work commutes of the typical weekday. The absolute peak hour of the day can also be referred to as the design hour.
- ◆ **Peak Generator Hour** – The peak hourly volume generated by a particular development or land use. In the context of traffic reports, the generator hour can occur in the morning and afternoon, described as AM and PM peak generator hours, respectively.
- ◆ **Peak hour factor** – The hourly volume during the maximum-volume hour of the day divided by the peak 15-minute flow rate within the peak hour; a measure of traffic demand fluctuation within the peak hour.
- ◆ **Principal Arterial** - (General Definition) A major surface street with relatively long trips between major points, and with through-trips entering, leaving, and passing through the urban area.
- ◆ **Queue** – A line of vehicles, bicycles, or persons waiting to be served by the system in which the flow rate from the front of the queue determines the average speed within the queue. Slower moving vehicles or people joining the rear of the queue are usually considered a part of the queue.
- ◆ **Roadside obstruction** – An object or barrier along a roadside or median that affects traffic flow, whether continuous (e.g., a retaining wall) or not continuous (e.g., light supports or a bridge abutment).
- ◆ **Road characteristic** – A geometric characteristic of a street or highway, including the type of facility, number and width of lanes, shoulder widths and lateral clearances, design speed, and horizontal and vertical alignment.
- ◆ **Roundabout** – An unsignalized intersection with a circulatory roadway around a central island with all entering vehicles yielding to the circulating traffic.
- ◆ **Shoulder** – A portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, emergency use, and lateral support of the subbase, base, and surface courses.
- ◆ **Stopping sight distance** – The length of road needed for a moving vehicle to come to a complete stop prior to an obstruction sighted on the road.
- ◆ **Traffic conditions** – A characteristic of traffic flow, including distribution of vehicle types in the traffic stream, directional distribution of traffic, lane use distribution of traffic, and type of driver population on a given facility.
- ◆ **Travel speed** – The average speed, in miles per hour, of a traffic computed as the length of roadway segment divided by the average travel time of the vehicles traversing the segment.
- ◆ **Travel time** – The average time spent by vehicles traversing a highway segment, including control delay, in seconds per vehicle or minutes per vehicle.

- ◆ **Trip Distribution and Assignment** – The predicted travel patterns of vehicle trips as they approach and depart a land use. Distribution refers to the travel pattern, usually defined in percentages or fractions, and assignment refers to vehicle trip ends.
- ◆ **Traffic forecast** – The predicted traffic volume of the analysis horizon year or time period. Most typically predicted for the weekday, AM peak hour, PM peak hour, or AM or PM peak generator hours of the typical weekday.
- ◆ **Traffic impact analysis** – A *traffic impact analysis* (TIA) is an engineering and planning study that forecasts the potential traffic and transportation impacts of a proposed development on an area, neighborhood, or community. Reports can also be referred to as a traffic impact study (TIS).
- ◆ **Trip generation** – The number of vehicle trips generated by a development or land use. Most typically predicted for the weekday, AM peak hour, PM peak hour, or AM or PM peak generator hours of the typical weekday.
- ◆ **Two-way left-turn lane** – A lane in the median area that extends continuously along a street or highway and is marked to provide a deceleration and storage area, out of the through-traffic stream, for vehicles traveling in either direction to use in marking left turns at intersections and driveways.
- ◆ **Two-way stop-controlled** – The type of traffic control at an intersection where drivers on the minor street or driver turning left from the major street wait for a gap in the major-street traffic to complete a maneuver. Typically the minor approaches are stop-controlled.
- ◆ **Unsignalized intersection** – An intersection not controlled by traffic signals.
- ◆ **Upstream** – The direction from which traffic is flowing.
- ◆ **Volume** – The number of persons or vehicles passing a point on a lane, roadway, or other traffic-way during some time interval, often one hour, expressed in vehicles, bicycles, or persons per hour.
- ◆ **Volume-to-capacity ratio** – The ratio of flow rate to capacity for a transportation facility.
- ◆ **Walkway** – A facility provided for pedestrian movement and segregated from vehicle traffic by a curb, or provide for on a separate right-of-way.

## Appendix B

### Summary Traffic Counts

---

Roadway	Location	TIME	Date	NB	SB
N. Center Street	N. of Upriver Dr.	AM	6/4/2019	1,133	457
		PM	6/4/2019	1,354	1,092
		Daily Count		2,487	1,549
N. Center Street	N. of Upriver Dr.	NB	6/5/2019	1,099	411
		SB	6/5/2019	1,405	1,113
		Daily Count		2,504	1,524

<b>24-HOUR AVG.</b>	<b>2,496</b>	<b>1,537</b>
<b>AADT</b>	<b>4,032</b>	

Roadway	Location	TIME	Date	EB	WB
E. Indiana Ave	E. of Perry St	AM	6/4/2019	605	632
		PM	6/4/2019	1,293	1,301
		Daily Count		1,898	1,933
E. Indiana Ave	E. of Perry St	AM	6/5/2019	559	823
		PM	6/5/2019	1,306	1,300
		Daily Count		1,865	2,123

<b>24-HOUR AVG.</b>	<b>1,882</b>	<b>2,028</b>
<b>AADT</b>	<b>3,910</b>	

Roadway	Location	TIME	Date	NB	SB
Perry St	N. of Augusta	AM	6/4/2019	1,679	2,983
		PM	6/4/2019	3,160	3,793
		Daily Count		4,839	6,776
Perry St	N. of Augusta	AM	6/5/2019	1,526	2,977
		PM	6/5/2019	3,103	3,755
		Daily Count		4,629	6,732

<b>24-HOUR AVG.</b>	<b>4,734</b>	<b>6,754</b>
<b>AADT</b>	<b>11,488</b>	

## ADT COUNT SUMMARY

**Project:** Upriver Drive Vacation Traffic Impact Analysis  
**Client:** Avista Utilities  
**Date:** 6/11/2019

**Prepared by:** CJR



Roadway	Location	TIME	Date	NB	SB
E. Upriver Dr	N. of Mission Av	AM	6/4/2019	1,007	994
		PM	6/4/2019	1,791	1,215
		Daily Count		2,798	2,209
E. Upriver Dr	N. of Mission Av	NB	6/5/2019	1,020	1,016
		SB	6/5/2019	1,772	1,051
		Daily Count		2,792	2,067

<b>24-HOUR AVG.</b>	<b>2,795</b>	<b>2,138</b>
<b>AADT</b>	<b>4,933</b>	

## ADT COUNT SUMMARY

**Project:** Upriver Drive Vacation Traffic Impact Analysis  
**Client:** Avista Utilities  
**Date:** 6/11/2019

**Prepared by:** CJR





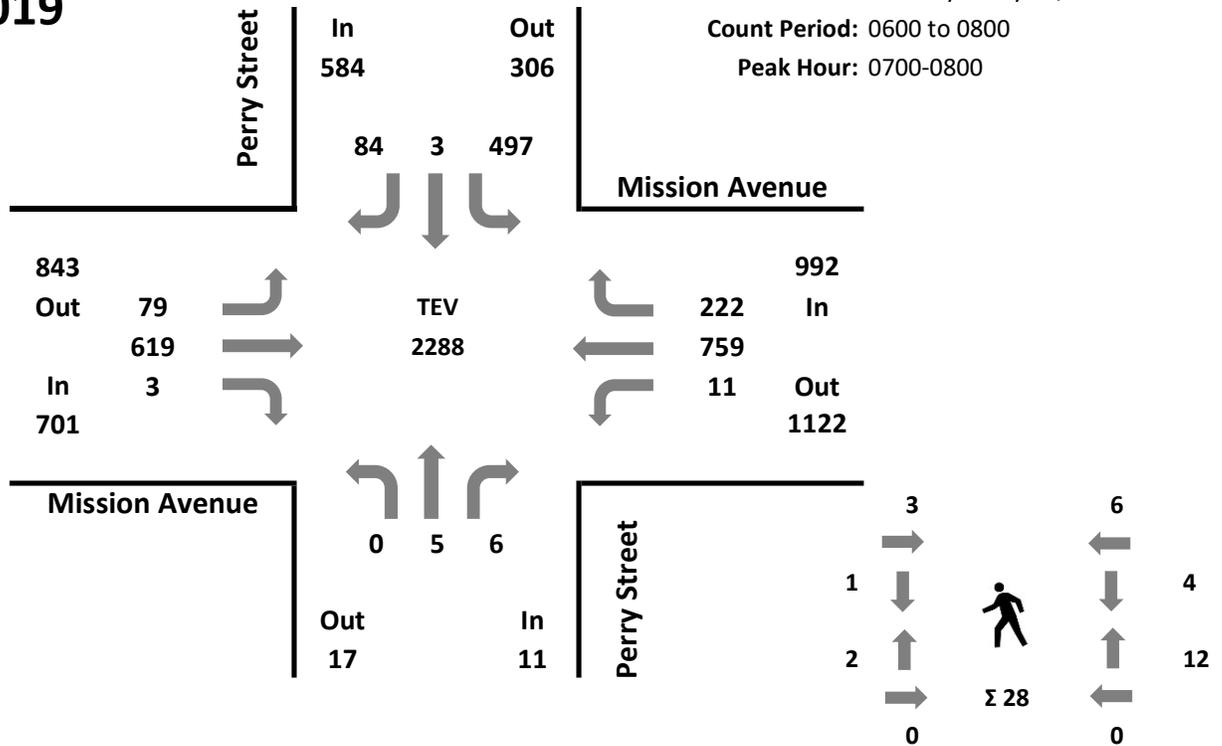
2019

Intersection: Perry Street at Mission Avenue

Date: Tuesday - May 14, 2019

Count Period: 0600 to 0800

Peak Hour: 0700-0800



**TWO-HOUR COUNT SUMMARY**

Interval Start	Eastbound			Northbound			Westbound			Southbound			15-Min Total	Rolling Total
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
6:15 AM	6	84	2	0	0	1	2	80	16	50	1	5	247	
6:30 AM	12	133	3	0	1	1	5	102	29	85	3	10	384	
6:45 AM	18	168	3	0	3	4	2	114	42	119	1	10	484	
7:00 AM	18	131	1	0	0	1	7	166	41	82	2	13	462	1577
7:15 AM	19	158	0	0	4	2	1	168	57	112	0	18	539	1869
7:30 AM	23	169	0	0	1	1	1	200	71	141	0	22	629	2114
7:45 AM	19	161	2	0	0	2	2	225	53	162	1	31	658	2288
8:00 AM	12	74	0	0	0	1	0	112	35	64	0	10	308	2134
Total	127	1078	11	0	9	13	20	1167	344	815	8	119	3711	
Peak Hr	79	619	3	0	5	6	11	759	222	497	3	84	2288	

Interval Start	Heavy Vehicles				
	EB	NB	WB	SB	Total
6:15 AM	0	0	0	0	0
6:30 AM	3	0	5	1	9
6:45 AM	4	0	4	4	12
7:00 AM	3	0	5	2	10
7:15 AM	4	0	7	1	12
7:30 AM	1	0	10	2	13
7:45 AM	5	0	7	4	16
8:00 AM	0	0	0	1	1
Total	20	0	38	15	73
Peak Hr	13	0	29	9	51
%HV	1.9%	0.0%	2.9%	1.5%	2.2%

App	Peak Total	15-Min Peak	PHF
EB	701	192	0.91
NB	11	6	0.46
WB	992	280	0.89
SB	584	194	0.75
<b>Total</b>	<b>2288</b>	<b>658</b>	<b>0.87</b>

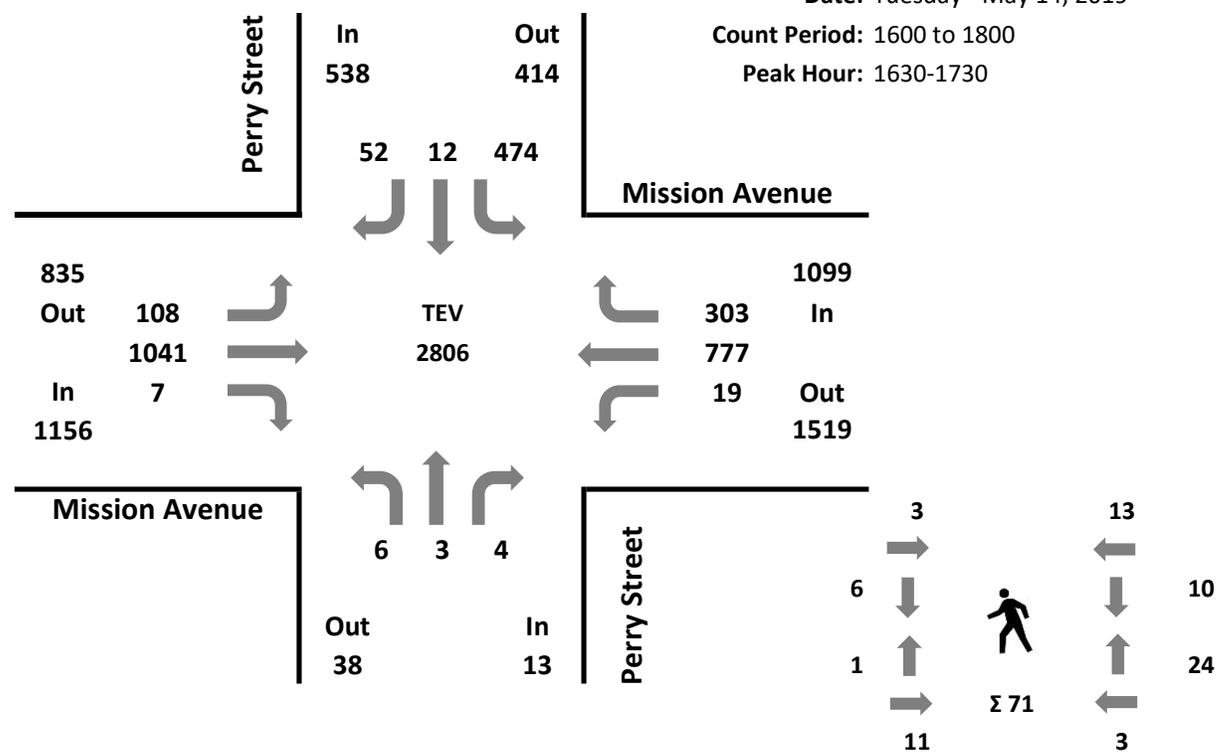


**Intersection: Perry Street at Mission Avenue**

**Date: Tuesday - May 14, 2019**

**Count Period: 1600 to 1800**

**Peak Hour: 1630-1730**



**TWO-HOUR COUNT SUMMARY**

Interval Start	Eastbound			Northbound			Westbound			Southbound			15-Min Total	Rolling Total
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	18	154	9	0	1	1	4	159	59	86	2	9	502	
4:15 PM	26	228	1	0	0	1	1	213	82	122	1	10	685	
4:30 PM	26	237	4	0	0	2	4	177	76	134	5	11	676	
4:45 PM	27	221	1	5	0	1	5	175	60	90	2	9	596	2459
5:00 PM	27	263	2	0	2	0	3	235	72	144	2	18	768	2725
5:15 PM	28	320	0	1	1	1	7	190	95	106	3	14	766	2806
5:30 PM	19	245	1	2	2	3	6	173	57	100	0	13	621	2751
5:45 PM	6	54	9	0	0	0	2	52	20	7	0	1	151	2306
<b>Total</b>	177	1722	27	8	6	9	32	1374	521	789	15	85	4765	
<b>Peak Hr</b>	108	1041	7	6	3	4	19	777	303	474	12	52	2806	

Interval Start	Heavy Vehicles				
	EB	NB	WB	SB	Total
4:00 PM	1	0	2	1	4
4:15 PM	6	0	4	3	13
4:30 PM	3	0	7	3	13
4:45 PM	4	0	4	1	9
5:00 PM	2	0	1	2	5
5:15 PM	3	0	1	2	6
5:30 PM	0	0	3	0	3
5:45 PM	1	0	0	0	1
<b>Total</b>	20	0	22	12	54
<b>Peak Hr</b>	12	0	13	8	33
<b>%HV</b>	1.0%	0.0%	1.2%	1.5%	1.2%

App	Peak Total	15-Min Peak	PHF
<b>EB</b>	1156	348	0.83
<b>NB</b>	13	6	0.54
<b>WB</b>	1099	310	0.89
<b>SB</b>	538	164	0.82
<b>Total</b>	2806	768	0.91



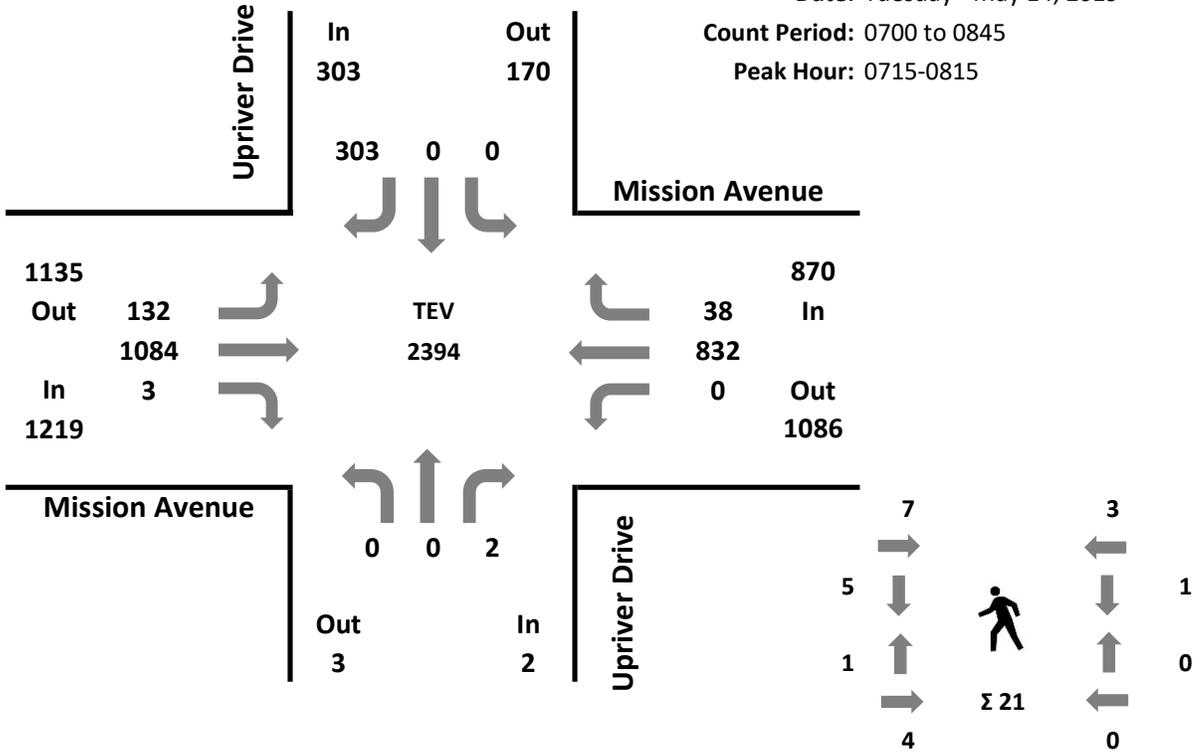


Intersection: Upriver Drive at Mission Avenue

Date: Tuesday - May 14, 2019

Count Period: 0700 to 0845

Peak Hour: 0715-0815



**TWO-HOUR COUNT SUMMARY**

Interval Start	Eastbound			Northbound			Westbound			Southbound			15-Min Total	Rolling Total
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00	36	192	0	0	1	0	0	164	22	0	0	50	465	465
7:15	32	252	2	0	0	1	0	183	10	0	0	80	560	1025
7:30	37	287	0	0	0	1	0	219	9	0	0	57	610	1635
7:45	31	302	0	0	0	0	0	241	7	0	0	80	661	2296
8:00	32	243	1	0	0	0	0	189	12	0	0	86	563	2394
8:15	28	232	0	0	0	0	0	216	9	0	0	61	546	2380
8:30	21	201	0	0	0	0	0	183	5	0	0	39	449	2219
Total	217	1709	3	0	1	2	0	1395	74	0	0	453		
Peak Hr	132	1084	3	0	0	2	0	832	38	0	0	303	2394	

Interval Start	Heavy Vehicles				
	EB	NB	WB	SB	Total
7:00	4	0	3	0	7
7:15	4	0	4	0	8
7:30	3	0	2	0	5
7:45	2	0	7	0	9
8:00	1	0	0	1	2
8:15	5	0	3	1	9
8:30	0	0	0	0	0
Total	19	0	19	2	40
Peak Hr	10	0	13	1	24
%HV	0.8%	0.0%	1.5%	0.3%	1.0%

App	Peak Total	15-Min Peak	PHF
EB	1219	333	0.92
NB	2	1	0.50
WB	870	248	0.88
SB	303	86	0.88
Total	2394	661	0.91



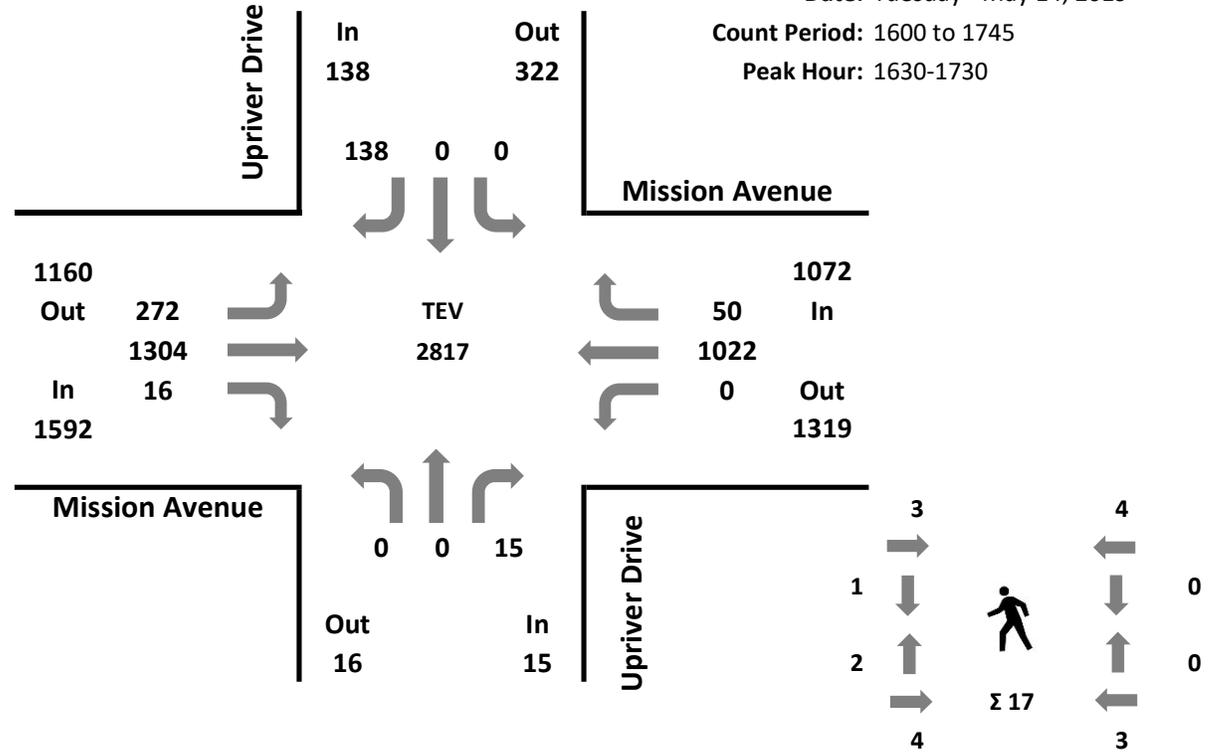


Intersection: Upriver Drive at Mission Avenue

Date: Tuesday - May 14, 2019

Count Period: 1600 to 1745

Peak Hour: 1630-1730



**TWO-HOUR COUNT SUMMARY**

Interval Start	Eastbound			Northbound			Westbound			Southbound			15-Min Total	Rolling Total
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
16:00	44	285	4	1	1	7	0	257	9	0	0	47	655	655
16:15	52	327	13	0	0	5	0	281	11	0	0	44	733	1388
16:30	61	327	6	0	0	2	0	227	15	0	0	40	678	2066
16:45	65	256	3	0	0	4	0	232	7	0	0	34	601	2667
17:00	76	347	3	0	0	4	0	303	14	0	0	31	778	2790
17:15	70	374	4	0	0	5	0	260	14	0	0	33	760	2817
17:30	82	289	7	0	0	11	0	224	11	0	0	39	663	2802
Total	450	2205	40	1	1	38	0	1784	81	0	0	268		
Peak Hr	272	1304	16	0	0	15	0	1022	50	0	0	138	2817	

Interval Start	Heavy Vehicles				
	EB	NB	WB	SB	Total
6:45 AM	2	0	0	0	2
7:00 AM	4	0	3	0	7
7:15 AM	4	0	4	0	8
7:30 AM	3	0	2	0	5
7:45 AM	2	0	7	0	9
8:00 AM	1	0	0	1	2
8:15 AM	5	0	3	1	9
Total	21	0	19	2	42
Peak Hr	10	0	13	1	24
%HV	0.6%	0.0%	1.2%	0.7%	0.9%

App	Peak Total	15-Min Peak	PHF
EB	1592	426	0.93
NB	15	5	0.75
WB	1072	317	0.85
SB	138	44	0.78
Total	2817	778	0.91



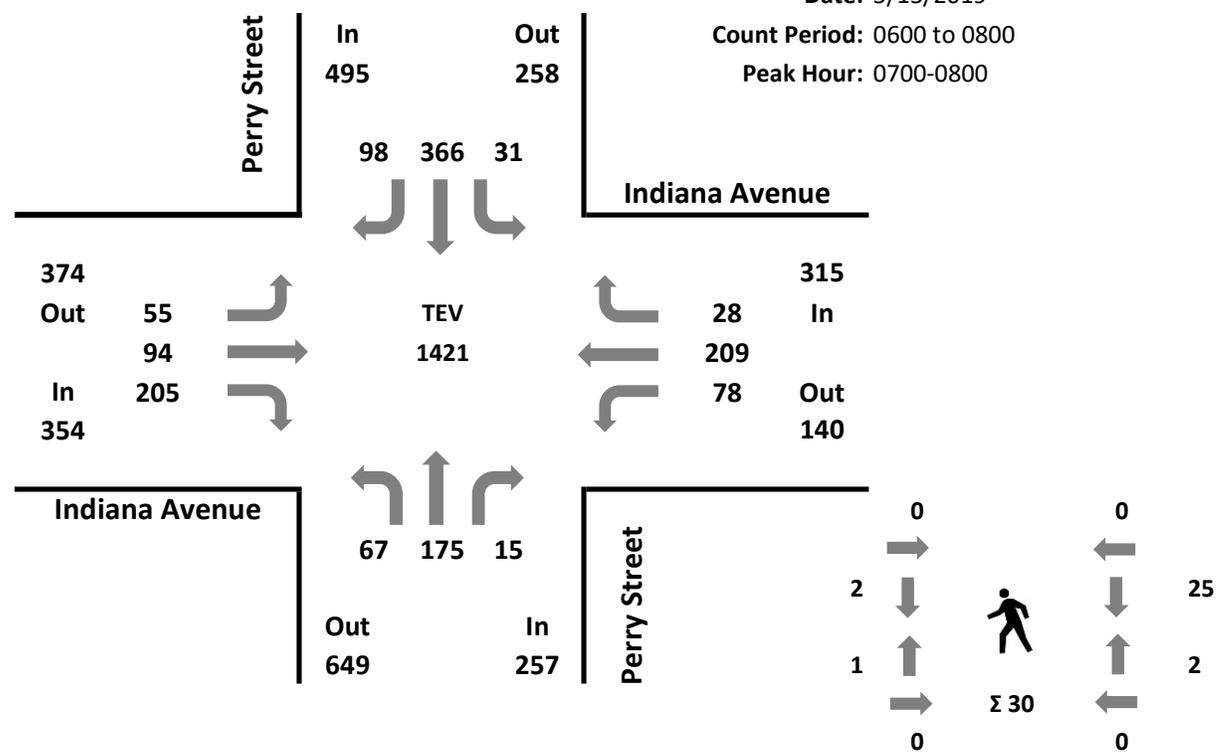


Intersection: Perry Street at Indiana Avenue

Date: 5/15/2019

Count Period: 0600 to 0800

Peak Hour: 0700-0800



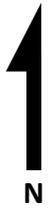
**TWO-HOUR COUNT SUMMARY**

Interval Start	Eastbound			Northbound			Westbound			Southbound			15-Min Total	Rolling Total
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
6:15 AM	3	29	35	5	14	4	8	14	2	6	38	12	170	
6:30 AM	3	41	41	12	15	7	5	23	3	4	62	21	237	
6:45 AM	5	49	50	10	28	10	14	30	6	11	68	10	291	
7:00 AM	7	28	46	10	24	3	3	33	3	9	48	20	234	932
7:15 AM	15	17	50	21	43	2	19	51	9	8	72	18	325	1087
7:30 AM	14	21	61	15	48	3	27	47	8	5	107	30	386	1236
7:45 AM	19	28	48	21	60	7	29	78	8	9	139	30	476	1421
8:00 AM	10	16	25	11	38	4	12	31	4	6	54	12	223	1410
Total	76	229	356	105	270	40	117	307	43	58	588	153		
Peak Hr	55	94	205	67	175	15	78	209	28	31	366	98	1421	

Interval Start	Heavy Vehicles				
	EB	NB	WB	SB	Total
6:15 AM	0	0	0	0	0
6:30 AM	3	0	5	1	9
6:45 AM	4	0	4	4	12
7:00 AM	3	0	5	2	10
7:15 AM	4	0	7	1	12
7:30 AM	1	0	10	2	13
7:45 AM	5	0	7	4	16
8:00 AM	0	0	0	1	1
Total	20	0	38	15	73
Peak Hr	13	0	29	9	51
%HV	3.7%	0.0%	9.2%	1.8%	3.6%

App	Peak Total	15-Min Peak	PHF
EB	354	96	0.92
NB	257	88	0.73
WB	315	115	0.68
SB	495	178	0.70
Total	1421	476	0.75



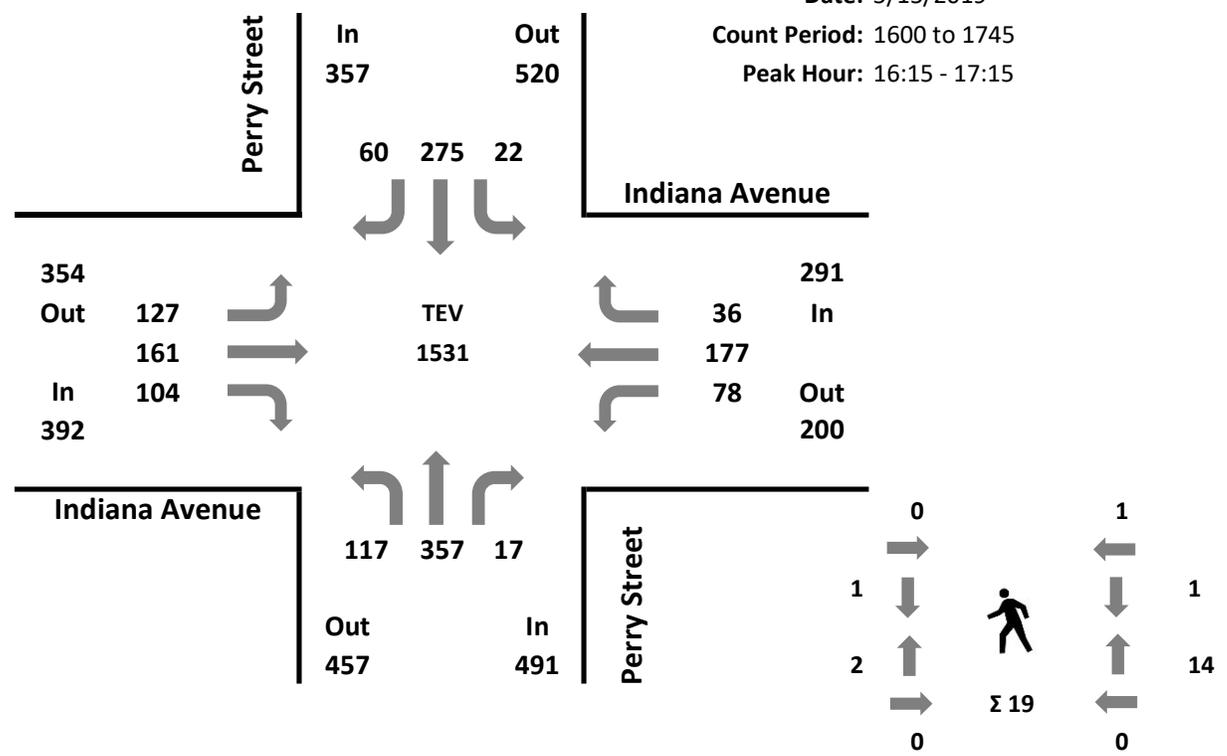


**Intersection: Perry Street at Indiana Avenue**

**Date: 5/15/2019**

**Count Period: 1600 to 1745**

**Peak Hour: 16:15 - 17:15**



**TWO-HOUR COUNT SUMMARY**

Interval Start	Eastbound			Northbound			Westbound			Southbound			15-Min Total	Rolling Total
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	15	24	22	26	43	3	17	41	8	2	42	5	248	
4:15 PM	39	32	25	23	94	4	25	41	10	5	75	15	388	
4:30 PM	28	38	31	32	86	6	18	38	10	2	75	16	380	
4:45 PM	32	39	24	32	100	4	18	50	6	4	49	13	371	1387
5:00 PM	28	52	24	30	77	3	17	48	10	11	76	16	392	1531
5:15 PM	35	37	33	33	86	9	18	33	9	3	51	10	357	1500
5:30 PM	25	34	33	32	84	1	12	24	9	7	63	10	334	1454
<b>Total</b>	202	256	192	208	570	30	125	275	62	34	431	85		
<b>Peak Hr</b>	127	161	104	117	357	17	78	177	36	22	275	60	1531	

Interval Start	Heavy Vehicles				
	EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0
4:15 PM	3	0	5	1	9
4:30 PM	4	0	4	4	12
4:45 PM	3	0	5	2	10
5:00 PM	4	0	7	1	12
5:15 PM	1	0	10	2	13
5:30 PM	5	0	7	4	16
<b>Total</b>	20	0	38	14	72
<b>Peak Hr</b>	14	0	21	8	43
<b>%HV</b>	3.6%	0.0%	7.2%	2.2%	2.8%

App	Peak Total	15-Min Peak	PHF
<b>EB</b>	392	104	0.94
<b>NB</b>	491	136	0.90
<b>WB</b>	291	76	0.96
<b>SB</b>	357	103	0.87
<b>Total</b>	1531	392	0.98



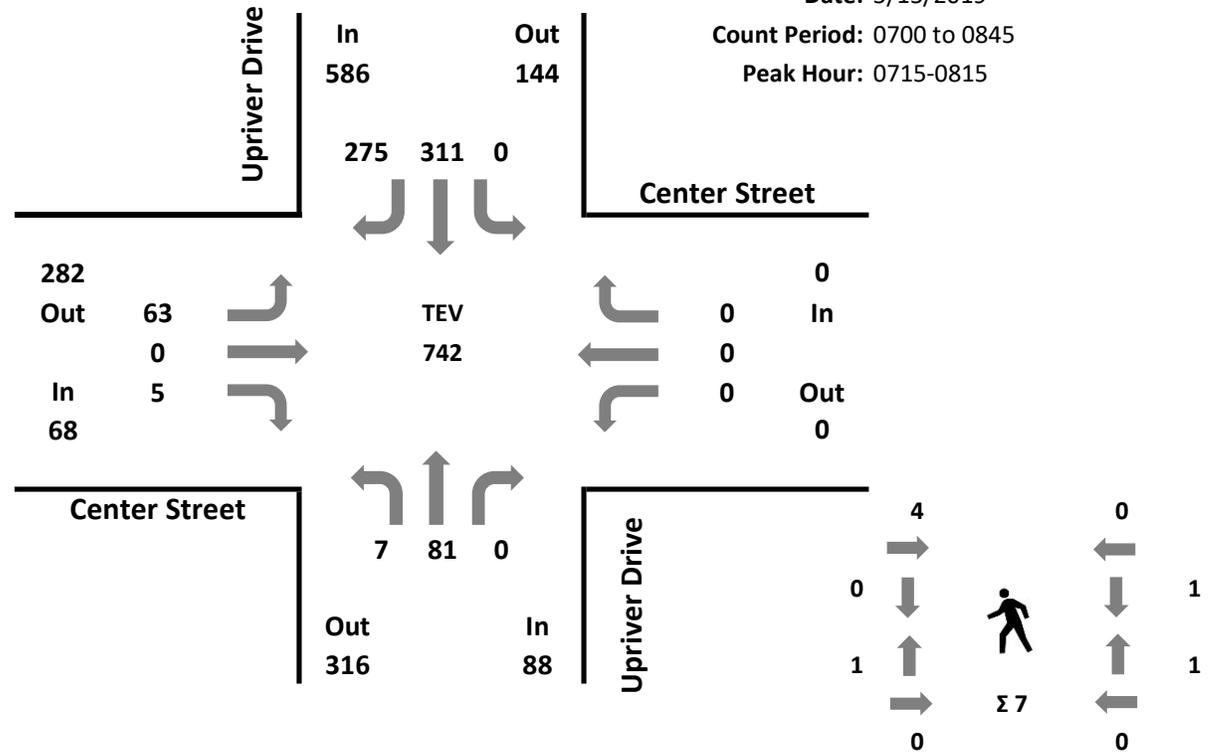


**Intersection: Upriver Drive at Center Street**

Date: 5/15/2019

Count Period: 0700 to 0845

Peak Hour: 0715-0815



**TWO-HOUR COUNT SUMMARY**

Interval Start	Eastbound			Northbound			Westbound			Southbound			15-Min Total	Rolling Total
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	12	0	0	0	16	0	0	0	0	0	49	28	105	
7:15 AM	13	0	1	1	19	0	0	0	0	0	85	71	190	
7:30 AM	13	0	2	5	15	0	0	0	0	0	82	76	193	
7:45 AM	19	0	0	1	28	0	0	0	0	0	81	85	214	
8:00 AM	18	0	2	0	19	0	0	0	0	0	63	43	145	742
8:15 AM	20	0	1	0	23	0	0	0	0	0	56	38	138	690
8:30 AM	11	0	0	3	20	0	0	0	0	0	43	31	108	605
<b>Total</b>	106	0	6	10	140	0	0	0	0	0	459	372	847	
<b>Peak Hr</b>	63	0	5	7	81	0	0	0	0	0	311	275	742	

Interval Start	Heavy Vehicles				
	EB	NB	WB	SB	Total
7:00 AM	0	0	0	2	2
7:15 AM	0	1	0	1	2
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	1	1
8:00 AM	0	0	0	2	2
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
<b>Total</b>	0	1	0	6	7
<b>Peak Hr</b>	0	1	0	4	5
<b>%HV</b>	0.0%	1.1%	0.0%	0.7%	0.7%

	Peak Total	15-Min Peak	PHF
<b>App</b>			
<b>EB</b>	68	20	0.85
<b>NB</b>	88	29	0.76
<b>WB</b>	0	0	N/A
<b>SB</b>	586	166	0.88
<b>Total</b>	742	214	0.87



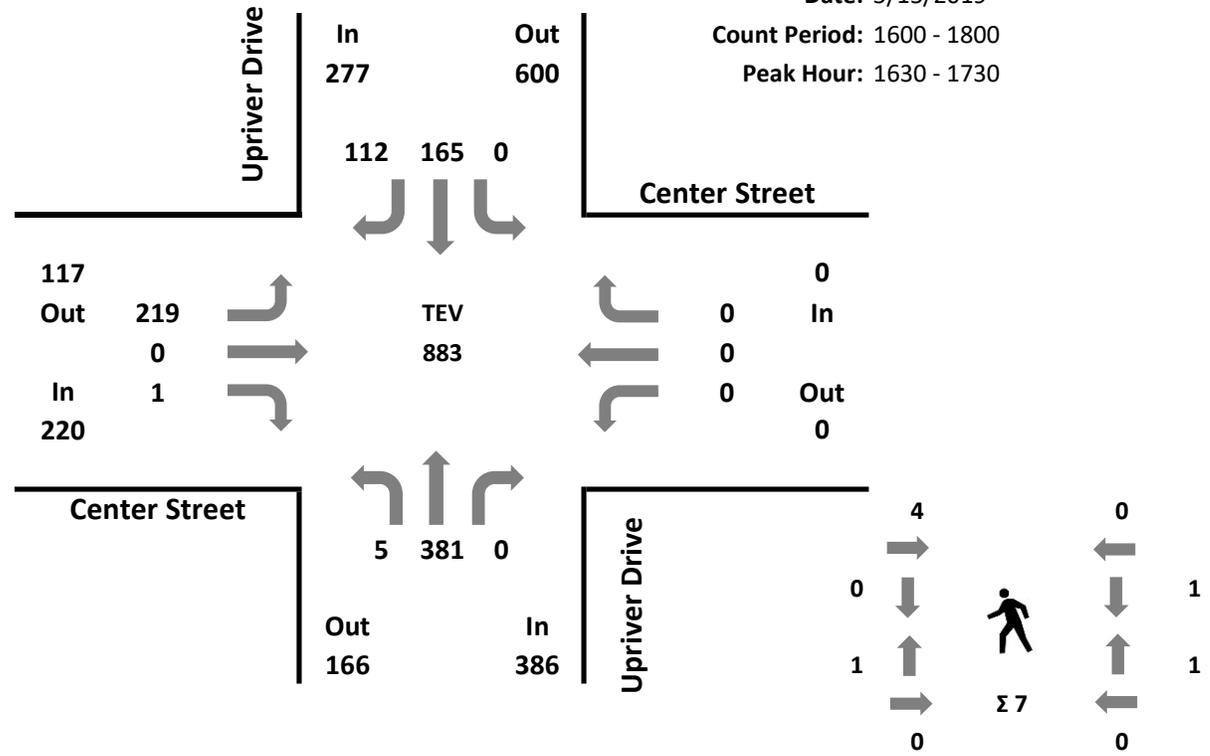


**Intersection: Upriver Drive at Center Street**

Date: 5/15/2019

Count Period: 1600 - 1800

Peak Hour: 1630 - 1730



**TWO-HOUR COUNT SUMMARY**

Interval Start	Eastbound			Northbound			Westbound			Southbound			15-Min Total	Rolling Total
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	43	0	2	5	82	0	0	0	0	0	39	25	196	
4:15 PM	39	0	1	1	81	0	0	0	0	0	28	32	182	
4:30 PM	40	0	0	1	97	0	0	0	0	0	28	34	200	
4:45 PM	48	0	1	3	84	0	0	0	0	0	44	30	210	
5:00 PM	68	0	0	0	98	0	0	0	0	0	45	23	234	826
5:15 PM	63	0	0	1	102	0	0	0	0	0	48	25	239	883
5:30 PM	47	0	1	1	66	0	0	0	0	0	46	31	192	875
5:45 PM	10	0	1	1	13	0	0	0	0	0	18	6	49	714
Total	348	0	5	12	610	0	0	0	0	0	278	200		
Peak Hr	219	0	1	5	381	0	0	0	0	0	165	112	883	

Interval Start	Heavy Vehicles				
	EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	1	0	0	1	2
4:45 PM	0	1	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
Total	1	1	0	2	4
Peak Hr	1	1	0	1	3
%HV	0.5%	0.3%	0.0%	0.4%	0.3%

App	Peak Total	15-Min Peak	PHF
EB	220	68	0.81
NB	386	103	0.94
WB	0	0	N/A
SB	277	74	0.94
<b>Total</b>	<b>883</b>	<b>239</b>	<b>0.92</b>



## Appendix C

### LOS Summary Worksheets

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Avista Utilities - Upriver Drive Street Vacation TIA

1: Park Access/Perry Street & Mission Ave

Existing - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	619	3	11	759	222	0	5	6	497	3	84
Future Volume (veh/h)	79	619	3	11	759	222	0	5	6	497	3	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	711	3	13	872	255	0	6	7	664	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1821	8	43	1066	309	0	117	136	706	371	0
Arrive On Green	0.06	0.50	0.50	0.40	0.40	0.40	0.00	0.15	0.15	0.20	0.00	0.00
Sat Flow, veh/h	1781	3629	15	15	2634	763	0	787	918	3563	1870	0
Grp Volume(v), veh/h	91	348	366	617	0	523	0	0	13	664	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1868	1847	0	1565	0	0	1705	1781	1870	0
Q Serve(g_s), s	2.8	12.2	12.2	5.1	0.0	30.0	0.0	0.0	0.7	18.4	0.0	0.0
Cycle Q Clear(g_c), s	2.8	12.2	12.2	29.6	0.0	30.0	0.0	0.0	0.7	18.4	0.0	0.0
Prop In Lane	1.00		0.01	0.02		0.49	0.00		0.54	1.00		0.00
Lane Grp Cap(c), veh/h	223	892	937	785	0	634	0	0	253	706	371	0
V/C Ratio(X)	0.41	0.39	0.39	0.79	0.00	0.83	0.00	0.00	0.05	0.94	0.00	0.00
Avail Cap(c_a), veh/h	316	974	1023	1044	0	857	0	0	253	706	371	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	15.5	15.5	26.5	0.0	26.7	0.0	0.0	36.7	39.6	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.3	0.3	2.9	0.0	4.9	0.0	0.0	0.4	20.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.8	5.1	13.3	0.0	11.6	0.0	0.0	0.3	10.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	15.8	15.8	29.5	0.0	31.6	0.0	0.0	37.1	60.2	0.0	0.0
LnGrp LOS	C	B	B	C	A	C	A	A	D	E	A	A
Approach Vol, veh/h		805			1140			13			664	
Approach Delay, s/veh		16.4			30.5			37.1			60.2	
Approach LOS		B			C			D			E	
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		20.0		55.4		25.0	9.7	45.6				
Change Period (Y+Rc), s		5.1		* 5		5.1	* 4.2	* 5				
Max Green Setting (Gmax), s		14.9		* 55		19.9	* 11	* 55				
Max Q Clear Time (g_c+I1), s		2.7		14.2		20.4	4.8	32.0				
Green Ext Time (p_c), s		0.0		5.1		0.0	0.1	8.6				

Intersection Summary

HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Avista Utilities - Upriver Drive Street Vacation TIA

3: Perry Street & Indiana Ave

Existing - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	94	205	78	209	28	67	175	15	31	366	98
Future Volume (veh/h)	55	94	205	78	209	28	67	175	15	31	366	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	125	273	104	279	37	89	233	20	41	488	131
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	373	188	412	289	583	77	306	871	80	124	1185	307
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1064	523	1142	987	1617	214	441	1907	175	110	2595	673
Grp Volume(v), veh/h	73	0	398	104	0	316	151	0	191	352	0	308
Grp Sat Flow(s),veh/h/ln	1064	0	1665	987	0	1832	852	0	1671	1797	0	1581
Q Serve(g_s), s	3.1	0.0	11.0	5.4	0.0	7.3	3.3	0.0	3.8	0.0	0.0	7.2
Cycle Q Clear(g_c), s	10.4	0.0	11.0	16.4	0.0	7.3	10.5	0.0	3.8	6.9	0.0	7.2
Prop In Lane	1.00		0.69	1.00		0.12	0.59		0.10	0.12		0.43
Lane Grp Cap(c), veh/h	373	0	600	289	0	660	494	0	763	895	0	722
V/C Ratio(X)	0.20	0.00	0.66	0.36	0.00	0.48	0.31	0.00	0.25	0.39	0.00	0.43
Avail Cap(c_a), veh/h	476	0	761	384	0	837	494	0	763	895	0	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	14.7	21.6	0.0	13.5	11.0	0.0	9.1	9.9	0.0	10.0
Incr Delay (d2), s/veh	0.3	0.0	1.5	0.8	0.0	0.5	1.6	0.0	0.8	1.3	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	3.8	1.2	0.0	2.7	1.4	0.0	1.3	2.7	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	0.0	16.2	22.4	0.0	14.1	12.6	0.0	9.9	11.2	0.0	11.9
LnGrp LOS	B	A	B	C	A	B	B	A	A	B	A	B
Approach Vol, veh/h		471			420			342			660	
Approach Delay, s/veh		16.4			16.1			11.1			11.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		24.7		30.0		24.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		25.0		25.0		25.0		25.0				
Max Q Clear Time (g_c+I1), s		12.5		13.0		9.2		18.4				
Green Ext Time (p_c), s		1.8		2.3		3.8		1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				13.7								
HCM 6th LOS				B								

Avista Utilities - Upriver Drive Street Vacation TIA  
 2: Mission Ave & Upriver Drive

Existing - AM Peak Hour

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖↗			↔			↔	
Traffic Vol, veh/h	132	1084	3	0	832	38	0	0	2	0	0	303
Future Vol, veh/h	132	1084	3	0	832	38	0	0	2	0	0	303
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	145	1191	3	0	914	42	0	0	2	0	0	333

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	956	0	0	1194	0	0	1940	2439	597	1821	2419	478
Stage 1	-	-	-	-	-	-	1483	1483	-	935	935	-
Stage 2	-	-	-	-	-	-	457	956	-	886	1484	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	715	-	-	580	-	-	39	31	446	48	32	534
Stage 1	-	-	-	-	-	-	131	187	-	285	342	-
Stage 2	-	-	-	-	-	-	553	335	-	306	187	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	715	-	-	580	-	-	12	25	446	40	26	534
Mov Cap-2 Maneuver	-	-	-	-	-	-	12	25	-	40	26	-
Stage 1	-	-	-	-	-	-	104	149	-	227	342	-
Stage 2	-	-	-	-	-	-	208	335	-	243	149	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			0			13.1			22.3		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	446	715	-	-	580	-	-	534
HCM Lane V/C Ratio	0.005	0.203	-	-	-	-	-	0.624
HCM Control Delay (s)	13.1	11.3	-	-	0	-	-	22.3
HCM Lane LOS		B	B	-	-	A	-	C
HCM 95th %tile Q(veh)		0	0.8	-	-	0	-	4.2

Avista Utilities - Upriver Drive Street Vacation TIA  
 4: Upriver Drive & Center St

Existing - AM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	63	5	7	81	311	275
Future Vol, veh/h	63	5	7	81	311	275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	6	8	93	357	316

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	624	515	673	0	-	0
Stage 1	515	-	-	-	-	-
Stage 2	109	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	449	560	918	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	445	560	918	-	-	-
Mov Cap-2 Maneuver	445	-	-	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	916	-	-	-	-	-

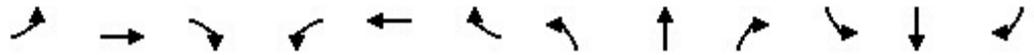
Approach	SE	NE	SW
HCM Control Delay, s	14.6	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	918	-	452	-	-
HCM Lane V/C Ratio	0.009	-	0.173	-	-
HCM Control Delay (s)	9	0	14.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Avista Utilities - Upriver Drive Street Vacation TIA

1: Park Access/Perry Street & Mission Ave

Existing - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	1041	7	19	777	303	6	3	4	474	12	52
Future Volume (veh/h)	108	1041	7	19	777	303	6	3	4	474	12	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	1144	8	21	854	333	7	3	4	583	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	1904	13	48	1024	394	125	54	71	651	342	0
Arrive On Green	0.06	0.53	0.53	0.43	0.43	0.43	0.14	0.14	0.14	0.18	0.00	0.00
Sat Flow, veh/h	1781	3617	25	28	2384	917	869	372	496	3563	1870	0
Grp Volume(v), veh/h	119	562	590	650	0	558	14	0	0	583	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1866	1791	0	1537	1738	0	0	1781	1870	0
Q Serve(g_s), s	3.7	22.7	22.7	10.7	0.0	33.7	0.7	0.0	0.0	16.5	0.0	0.0
Cycle Q Clear(g_c), s	3.7	22.7	22.7	32.8	0.0	33.7	0.7	0.0	0.0	16.5	0.0	0.0
Prop In Lane	1.00		0.01	0.03		0.60	0.50		0.29	1.00		0.00
Lane Grp Cap(c), veh/h	219	935	982	805	0	660	250	0	0	651	342	0
V/C Ratio(X)	0.54	0.60	0.60	0.81	0.00	0.85	0.06	0.00	0.00	0.90	0.00	0.00
Avail Cap(c_a), veh/h	305	945	992	980	0	817	250	0	0	685	360	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.8	17.0	17.0	25.9	0.0	26.4	38.2	0.0	0.0	41.3	0.0	0.0
Incr Delay (d2), s/veh	2.1	1.1	1.0	4.2	0.0	6.8	0.4	0.0	0.0	14.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	9.1	9.6	14.5	0.0	13.1	0.3	0.0	0.0	8.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	18.0	18.0	30.1	0.0	33.3	38.6	0.0	0.0	55.3	0.0	0.0
LnGrp LOS	C	B	B	C	A	C	D	A	A	E	A	A
Approach Vol, veh/h		1271			1208			14			583	
Approach Delay, s/veh		18.6			31.6			38.6			55.3	
Approach LOS		B			C			D			E	
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		20.0		59.4		24.0	10.0	49.4				
Change Period (Y+Rc), s		5.1		* 5		5.1	* 4.2	* 5				
Max Green Setting (Gmax), s		14.9		* 55		19.9	* 11	* 55				
Max Q Clear Time (g_c+I1), s		2.7		24.7		18.5	5.7	35.7				
Green Ext Time (p_c), s		0.0		9.3		0.4	0.1	8.8				

Intersection Summary

HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Avista Utilities - Upriver Drive Street Vacation TIA

3: Perry Street & Indiana Ave

Existing - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	161	104	78	177	36	117	357	17	22	275	60
Future Volume (veh/h)	127	161	104	78	177	36	117	357	17	22	275	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	166	107	80	182	37	121	368	18	23	284	62
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	359	298	192	311	423	86	412	1188	59	137	1389	293
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1162	1062	685	1106	1508	307	586	2313	115	105	2703	569
Grp Volume(v), veh/h	131	0	273	80	0	219	244	0	263	195	0	174
Grp Sat Flow(s),veh/h/ln	1162	0	1747	1106	0	1815	1332	0	1681	1778	0	1600
Q Serve(g_s), s	5.1	0.0	6.5	3.2	0.0	4.8	2.5	0.0	4.4	0.0	0.0	2.9
Cycle Q Clear(g_c), s	9.9	0.0	6.5	9.7	0.0	4.8	5.3	0.0	4.4	2.7	0.0	2.9
Prop In Lane	1.00		0.39	1.00		0.17	0.50		0.07	0.12		0.36
Lane Grp Cap(c), veh/h	359	0	490	311	0	509	796	0	864	997	0	822
V/C Ratio(X)	0.36	0.00	0.56	0.26	0.00	0.43	0.31	0.00	0.30	0.20	0.00	0.21
Avail Cap(c_a), veh/h	631	0	898	569	0	933	796	0	864	997	0	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.4	0.0	14.9	19.1	0.0	14.3	6.9	0.0	6.8	6.4	0.0	6.4
Incr Delay (d2), s/veh	0.6	0.0	1.0	0.4	0.0	0.6	1.0	0.0	0.9	0.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	2.3	0.8	0.0	1.8	1.2	0.0	1.4	0.9	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	15.9	19.5	0.0	14.9	7.9	0.0	7.7	6.9	0.0	7.0
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		404			299			507			369	
Approach Delay, s/veh		16.9			16.1			7.8			6.9	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		18.6		30.0		18.6				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		25.0		25.0		25.0		25.0				
Max Q Clear Time (g_c+I1), s		7.3		11.9		4.9		11.7				
Green Ext Time (p_c), s		3.1		1.8		2.1		1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.5								
HCM 6th LOS				B								

Avista Utilities - Upriver Drive Street Vacation TIA  
 2: Mission Ave & Upriver Drive

Existing - PM Peak Hour

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗				↖ ↗		↖ ↗				↖ ↗	
Traffic Vol, veh/h	272	1304	16	0	1022	50	0	0	15	0	0	138
Future Vol, veh/h	272	1304	16	0	1022	50	0	0	15	0	0	138
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	278	1331	16	0	1043	51	0	0	15	0	0	141

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1094	0	0	1347	0	0	2417	2989	674	2291	2972	547
Stage 1	-	-	-	-	-	-	1895	1895	-	1069	1069	-
Stage 2	-	-	-	-	-	-	522	1094	-	1222	1903	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	634	-	-	507	-	-	17	14	397	21	14	481
Stage 1	-	-	-	-	-	-	72	117	-	236	296	-
Stage 2	-	-	-	-	-	-	506	288	-	190	116	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	634	-	-	507	-	-	8	8	397	13	8	481
Mov Cap-2 Maneuver	-	-	-	-	-	-	8	8	-	13	8	-
Stage 1	-	-	-	-	-	-	40	66	-	133	296	-
Stage 2	-	-	-	-	-	-	358	288	-	103	65	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.6			0			14.4			15.6		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	397	634	-	-	507	-	-	481
HCM Lane V/C Ratio	0.039	0.438	-	-	-	-	-	0.293
HCM Control Delay (s)	14.4	15	-	-	0	-	-	15.6
HCM Lane LOS	B	C	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	2.2	-	-	0	-	-	1.2

Avista Utilities - Upriver Drive Street Vacation TIA  
 4: Upriver Drive & Center St

Existing - PM Peak Hour

Intersection						
Int Delay, s/veh	6					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↔			↔		↔
Traffic Vol, veh/h	219	1	5	381	165	112
Future Vol, veh/h	219	1	5	381	165	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	238	1	5	414	179	122

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	664	240	301	0	0
Stage 1	240	-	-	-	-
Stage 2	424	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	426	799	1260	-	-
Stage 1	800	-	-	-	-
Stage 2	660	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	424	799	1260	-	-
Mov Cap-2 Maneuver	424	-	-	-	-
Stage 1	796	-	-	-	-
Stage 2	660	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	23.8	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1260	-	425	-	-
HCM Lane V/C Ratio	0.004	-	0.563	-	-
HCM Control Delay (s)	7.9	0	23.8	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	3.4	-	-

Avista Utilities - Upriver Drive Street Vacation TIA

1: Park Access/Perry Street & Mission Ave

Existing W/Vacation - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	523	3	11	469	259	0	5	6	497	3	210
Future Volume (veh/h)	175	523	3	11	469	259	0	5	6	497	3	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	201	601	3	13	539	298	0	6	7	408	232	241
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	305	1676	8	46	694	378	0	126	147	381	180	187
Arrive On Green	0.09	0.46	0.46	0.32	0.32	0.32	0.00	0.16	0.16	0.21	0.21	0.21
Sat Flow, veh/h	1781	3626	18	20	2147	1170	0	787	918	1781	840	873
Grp Volume(v), veh/h	201	294	310	470	0	380	0	0	13	408	0	473
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	1845	0	1491	0	0	1705	1781	0	1713
Q Serve(g_s), s	6.6	9.9	9.9	3.2	0.0	21.5	0.0	0.0	0.6	19.9	0.0	19.9
Cycle Q Clear(g_c), s	6.6	9.9	9.9	21.3	0.0	21.5	0.0	0.0	0.6	19.9	0.0	19.9
Prop In Lane	1.00		0.01	0.03		0.78	0.00		0.54	1.00		0.51
Lane Grp Cap(c), veh/h	305	821	863	636	0	482	0	0	273	381	0	367
V/C Ratio(X)	0.66	0.36	0.36	0.74	0.00	0.79	0.00	0.00	0.05	1.07	0.00	1.29
Avail Cap(c_a), veh/h	345	1051	1104	1121	0	882	0	0	273	381	0	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.8	16.1	16.1	28.4	0.0	28.6	0.0	0.0	33.0	36.5	0.0	36.5
Incr Delay (d2), s/veh	3.9	0.3	0.3	1.7	0.0	2.9	0.0	0.0	0.3	66.0	0.0	149.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.9	4.1	9.5	0.0	7.8	0.0	0.0	0.3	15.4	0.0	23.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	16.4	16.4	30.1	0.0	31.5	0.0	0.0	33.4	102.6	0.0	186.1
LnGrp LOS	C	B	B	C	A	C	A	A	C	F	A	F
Approach Vol, veh/h		805			850			13			881	
Approach Delay, s/veh		18.4			30.7			33.4			147.4	
Approach LOS		B			C			C			F	
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		20.0		48.0		25.0	12.9	35.1				
Change Period (Y+Rc), s		5.1		* 5		5.1	* 4.2	* 5				
Max Green Setting (Gmax), s		14.9		* 55		19.9	* 11	* 55				
Max Q Clear Time (g_c+I1), s		2.6		11.9		21.9	8.6	23.5				
Green Ext Time (p_c), s		0.0		4.1		0.0	0.1	6.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				67.2								
HCM 6th LOS				E								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Avista Utilities - Upriver Drive Street Vacation TIA

3: Perry Street & Indiana Ave

Existing W/Vacation - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	94	205	204	373	28	67	175	148	31	366	98
Future Volume (veh/h)	55	94	205	204	373	28	67	175	148	31	366	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	125	273	272	497	37	89	233	197	41	488	131
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	218	476	350	716	53	205	504	461	114	1069	278
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	870	523	1142	987	1719	128	296	1209	1108	112	2566	667
Grp Volume(v), veh/h	73	0	398	272	0	534	252	0	267	349	0	311
Grp Sat Flow(s),veh/h/ln	870	0	1665	987	0	1847	1110	0	1503	1763	0	1582
Q Serve(g_s), s	4.5	0.0	11.0	14.0	0.0	14.2	4.1	0.0	7.6	0.0	0.0	8.6
Cycle Q Clear(g_c), s	18.7	0.0	11.0	25.0	0.0	14.2	12.6	0.0	7.6	8.0	0.0	8.6
Prop In Lane	1.00		0.69	1.00		0.07	0.35		0.74	0.12		0.42
Lane Grp Cap(c), veh/h	276	0	694	350	0	770	544	0	626	802	0	659
V/C Ratio(X)	0.26	0.00	0.57	0.78	0.00	0.69	0.46	0.00	0.43	0.44	0.00	0.47
Avail Cap(c_a), veh/h	276	0	694	350	0	770	544	0	626	802	0	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	13.4	24.1	0.0	14.4	13.3	0.0	12.4	12.6	0.0	12.7
Incr Delay (d2), s/veh	0.5	0.0	1.2	10.5	0.0	2.7	2.8	0.0	2.1	1.7	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	3.8	4.7	0.0	5.7	2.8	0.0	2.6	3.3	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	0.0	14.6	34.6	0.0	17.1	16.1	0.0	14.5	14.3	0.0	15.1
LnGrp LOS	C	A	B	C	A	B	B	A	B	B	A	B
Approach Vol, veh/h		471			806			519			660	
Approach Delay, s/veh		15.8			23.0			15.3			14.7	
Approach LOS		B			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		25.0		25.0		25.0		25.0				
Max Q Clear Time (g_c+I1), s		14.6		20.7		10.6		27.0				
Green Ext Time (p_c), s		2.6		1.2		3.7		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.7								
HCM 6th LOS				B								

Avista Utilities - Upriver Drive Street Vacation TIA  
 2: Mission Ave & Upriver Drive

Existing W/Vacation - AM Peak Hour

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↗			↖↗			↕			↕	
Traffic Vol, veh/h	36	1084	3	0	869	1	0	0	2	0	0	13
Future Vol, veh/h	36	1084	3	0	869	1	0	0	2	0	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	1191	3	0	955	1	0	0	2	0	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	956	0	0	1194	0	0	1751	2229	597	1632	2230	478
Stage 1	-	-	-	-	-	-	1273	1273	-	956	956	-
Stage 2	-	-	-	-	-	-	478	956	-	676	1274	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	715	-	-	580	-	-	55	42	446	67	42	534
Stage 1	-	-	-	-	-	-	177	237	-	277	335	-
Stage 2	-	-	-	-	-	-	537	335	-	409	236	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	715	-	-	580	-	-	51	40	446	64	40	534
Mov Cap-2 Maneuver	-	-	-	-	-	-	51	40	-	64	40	-
Stage 1	-	-	-	-	-	-	167	224	-	261	335	-
Stage 2	-	-	-	-	-	-	523	335	-	384	223	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			13.1			11.9		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	446	715	-	-	580	-	-	534
HCM Lane V/C Ratio	0.005	0.055	-	-	-	-	-	0.027
HCM Control Delay (s)	13.1	10.3	-	-	0	-	-	11.9
HCM Lane LOS		B	B	-	-	A	-	B
HCM 95th %tile Q(veh)		0	0.2	-	-	0	-	0.1

Avista Utilities - Upriver Drive Street Vacation TIA  
 4: Upriver Drive & Center St

Existing W/Vacation - AM Peak Hour

Intersection						
Int Delay, s/veh	3.5					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	196	5	0	11	21	565
Future Vol, veh/h	196	5	0	11	21	565
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	225	6	0	13	24	649

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	362	349	673	0	-	0
Stage 1	349	-	-	-	-	-
Stage 2	13	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	637	694	918	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	637	694	918	-	-	-
Mov Cap-2 Maneuver	637	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	1010	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	13.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	918	-	638	-	-
HCM Lane V/C Ratio	-	-	0.362	-	-
HCM Control Delay (s)	0	-	13.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	1.6	-	-

Avista Utilities - Upriver Drive Street Vacation TIA

1: Park Access/Perry Street & Mission Ave

Existing W/Vacation - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	367	782	7	19	674	351	6	3	4	474	12	112
Future Volume (veh/h)	367	782	7	19	674	351	6	3	4	474	12	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	403	859	8	21	741	386	7	3	4	328	282	123
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	287	1961	18	46	882	453	118	51	68	324	224	98
Arrive On Green	0.10	0.54	0.54	0.41	0.41	0.41	0.14	0.14	0.14	0.18	0.18	0.18
Sat Flow, veh/h	1781	3608	34	30	2170	1113	869	372	496	1781	1235	539
Grp Volume(v), veh/h	403	423	444	627	0	521	14	0	0	328	0	405
Grp Sat Flow(s),veh/h/ln	1781	1777	1864	1812	0	1502	1738	0	0	1781	0	1773
Q Serve(g_s), s	10.8	15.6	15.6	12.4	0.0	34.5	0.8	0.0	0.0	19.9	0.0	19.9
Cycle Q Clear(g_c), s	10.8	15.6	15.6	33.9	0.0	34.5	0.8	0.0	0.0	19.9	0.0	19.9
Prop In Lane	1.00		0.02	0.03		0.74	0.50		0.29	1.00		0.30
Lane Grp Cap(c), veh/h	287	966	1013	771	0	611	236	0	0	324	0	322
V/C Ratio(X)	1.40	0.44	0.44	0.81	0.00	0.85	0.06	0.00	0.00	1.01	0.00	1.26
Avail Cap(c_a), veh/h	287	966	1013	938	0	754	236	0	0	324	0	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	15.0	15.0	29.1	0.0	29.5	41.2	0.0	0.0	44.8	0.0	44.8
Incr Delay (d2), s/veh	201.2	0.3	0.3	4.7	0.0	7.9	0.5	0.0	0.0	53.5	0.0	138.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.4	6.2	6.5	15.4	0.0	13.4	0.4	0.0	0.0	13.5	0.0	21.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	227.4	15.3	15.3	33.8	0.0	37.4	41.7	0.0	0.0	98.3	0.0	183.3
LnGrp LOS	F	B	B	C	A	D	D	A	A	F	A	F
Approach Vol, veh/h		1270			1148			14				733
Approach Delay, s/veh		82.6			35.4			41.7				145.3
Approach LOS		F			D			D				F
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		20.0		64.5		25.0	15.0	49.5				
Change Period (Y+Rc), s		5.1		* 5		5.1	* 4.2	* 5				
Max Green Setting (Gmax), s		14.9		* 55		19.9	* 11	* 55				
Max Q Clear Time (g_c+I1), s		2.8		17.6		21.9	12.8	36.5				
Green Ext Time (p_c), s		0.0		6.5		0.0	0.0	8.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				79.8								
HCM 6th LOS				E								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Avista Utilities - Upriver Drive Street Vacation TIA

3: Perry Street & Indiana Ave

Existing W/Vacation - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	161	104	138	274	36	117	357	324	22	275	60
Future Volume (veh/h)	127	161	104	138	274	36	117	357	324	22	275	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	166	107	142	282	37	121	368	334	23	284	62
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	346	223	361	528	69	255	701	609	126	1279	271
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1061	1062	685	1106	1620	213	346	1455	1265	100	2656	563
Grp Volume(v), veh/h	131	0	273	142	0	319	434	0	389	193	0	176
Grp Sat Flow(s),veh/h/ln	1061	0	1747	1106	0	1832	1591	0	1474	1719	0	1601
Q Serve(g_s), s	6.0	0.0	6.5	6.1	0.0	7.4	4.5	0.0	9.7	0.0	0.0	3.3
Cycle Q Clear(g_c), s	13.4	0.0	6.5	12.6	0.0	7.4	9.2	0.0	9.7	3.1	0.0	3.3
Prop In Lane	1.00		0.39	1.00		0.12	0.28		0.86	0.12		0.35
Lane Grp Cap(c), veh/h	334	0	569	361	0	597	855	0	710	905	0	771
V/C Ratio(X)	0.39	0.00	0.48	0.39	0.00	0.53	0.51	0.00	0.55	0.21	0.00	0.23
Avail Cap(c_a), veh/h	499	0	841	533	0	882	855	0	710	905	0	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	0.0	14.0	19.0	0.0	14.3	9.2	0.0	9.5	7.8	0.0	7.8
Incr Delay (d2), s/veh	0.8	0.0	0.6	0.7	0.0	0.7	2.1	0.0	3.0	0.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	2.3	1.5	0.0	2.8	3.1	0.0	3.0	1.1	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	0.0	14.6	19.7	0.0	15.0	11.3	0.0	12.5	8.3	0.0	8.5
LnGrp LOS	C	A	B	B	A	B	B	A	B	A	A	A
Approach Vol, veh/h		404			461			823			369	
Approach Delay, s/veh		16.5			16.5			11.9			8.4	
Approach LOS		B			B			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		21.9		30.0		21.9				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		25.0		25.0		25.0		25.0				
Max Q Clear Time (g_c+I1), s		11.7		15.4		5.3		14.6				
Green Ext Time (p_c), s		4.7		1.6		2.2		1.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				13.2								
HCM 6th LOS				B								

Avista Utilities - Upriver Drive Street Vacation TIA  
 2: Mission Ave & Upriver Drive

Existing W/Vacation - PM Peak Hour

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖↗			↕			↕	
Traffic Vol, veh/h	13	1304	16	0	1070	2	0	0	15	0	0	35
Future Vol, veh/h	13	1304	16	0	1070	2	0	0	15	0	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1331	16	0	1092	2	0	0	15	0	0	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1094	0	0	1347	0	0	1911	2459	674	1785	2466	547
Stage 1	-	-	-	-	-	-	1365	1365	-	1093	1093	-
Stage 2	-	-	-	-	-	-	546	1094	-	692	1373	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	634	-	-	507	-	-	41	30	397	51	30	481
Stage 1	-	-	-	-	-	-	155	214	-	229	288	-
Stage 2	-	-	-	-	-	-	490	288	-	400	212	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	634	-	-	507	-	-	37	29	397	48	29	481
Mov Cap-2 Maneuver	-	-	-	-	-	-	37	29	-	48	29	-
Stage 1	-	-	-	-	-	-	152	210	-	224	288	-
Stage 2	-	-	-	-	-	-	454	288	-	377	208	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			14.4			13.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	397	634	-	-	507	-	-	481
HCM Lane V/C Ratio	0.039	0.021	-	-	-	-	-	0.074
HCM Control Delay (s)	14.4	10.8	-	-	0	-	-	13.1
HCM Lane LOS	B	B	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

Avista Utilities - Upriver Drive Street Vacation TIA  
 4: Upriver Drive & Center St

Existing W/Vacation - PM Peak Hour

Intersection						
Int Delay, s/veh	15.7					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	526	1	5	96	8	269
Future Vol, veh/h	526	1	5	96	8	269
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	572	1	5	104	9	292

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	269	155	301	0	0
Stage 1	155	-	-	-	-
Stage 2	114	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	720	891	1260	-	-
Stage 1	873	-	-	-	-
Stage 2	911	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	717	891	1260	-	-
Mov Cap-2 Maneuver	717	-	-	-	-
Stage 1	870	-	-	-	-
Stage 2	911	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	26.8	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1260	-	717	-	-
HCM Lane V/C Ratio	0.004	-	0.799	-	-
HCM Control Delay (s)	7.9	0	26.8	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	8.2	-	-

Avista Utilities - Upriver Drive Street Vacation TIA

1: Park Access/Perry Street & Mission Ave

Existing W/Vacation - AM Peak Hour - Mitigated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	523	3	11	469	259	0	5	6	497	3	210
Future Volume (veh/h)	175	523	3	11	469	259	0	5	6	497	3	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	201	601	3	13	539	298	0	6	7	408	232	241
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	282	1609	8	41	671	366	0	109	127	494	233	242
Arrive On Green	0.09	0.44	0.44	0.31	0.31	0.31	0.00	0.14	0.14	0.28	0.28	0.28
Sat Flow, veh/h	1781	3626	18	21	2145	1169	0	787	918	1781	840	873
Grp Volume(v), veh/h	201	294	310	470	0	380	0	0	13	408	0	473
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	1843	0	1492	0	0	1705	1781	0	1713
Q Serve(g_s), s	7.9	11.9	11.9	5.6	0.0	25.4	0.0	0.0	0.7	23.2	0.0	29.7
Cycle Q Clear(g_c), s	7.9	11.9	11.9	25.1	0.0	25.4	0.0	0.0	0.7	23.2	0.0	29.7
Prop In Lane	1.00		0.01	0.03		0.78	0.00		0.54	1.00		0.51
Lane Grp Cap(c), veh/h	282	789	829	611	0	466	0	0	236	494	0	475
V/C Ratio(X)	0.71	0.37	0.37	0.77	0.00	0.82	0.00	0.00	0.06	0.83	0.00	1.00
Avail Cap(c_a), veh/h	296	1153	1212	967	0	761	0	0	236	494	0	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.1	20.0	20.0	34.0	0.0	34.2	0.0	0.0	40.4	36.6	0.0	38.9
Incr Delay (d2), s/veh	7.5	0.3	0.3	2.1	0.0	3.5	0.0	0.0	0.4	11.1	0.0	40.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.9	5.2	11.5	0.0	9.5	0.0	0.0	0.3	11.4	0.0	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	20.3	20.3	36.1	0.0	37.7	0.0	0.0	40.8	47.6	0.0	79.1
LnGrp LOS	C	C	C	D	A	D	A	A	D	D	A	E
Approach Vol, veh/h		805			850			13				881
Approach Delay, s/veh		23.3			36.8			40.8				64.5
Approach LOS		C			D			D				E
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		20.0		52.9		35.0	14.1	38.7				
Change Period (Y+Rc), s		5.1		* 5		5.1	* 4.2	* 5				
Max Green Setting (Gmax), s		14.9		* 70		29.9	* 11	* 55				
Max Q Clear Time (g_c+I1), s		2.7		13.9		31.7	9.9	27.4				
Green Ext Time (p_c), s		0.0		4.2		0.0	0.1	6.4				

Intersection Summary

HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Avista Utilities - Upriver Drive Street Vacation TIA

3: Perry Street & Indiana Ave

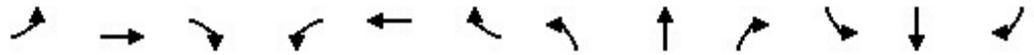
Existing W/Vacation - AM Peak Hour - Mitigated

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	94	205	204	373	28	67	175	148	31	366	98
Future Volume (veh/h)	55	94	205	204	373	28	67	175	148	31	366	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	125	273	272	497	37	89	233	197	41	488	131
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	218	476	350	716	53	205	504	461	114	1069	278
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	870	523	1142	987	1719	128	296	1209	1108	112	2566	667
Grp Volume(v), veh/h	73	0	398	272	0	534	252	0	267	349	0	311
Grp Sat Flow(s),veh/h/ln	870	0	1665	987	0	1847	1110	0	1503	1763	0	1582
Q Serve(g_s), s	4.5	0.0	11.0	14.0	0.0	14.2	4.1	0.0	7.6	0.0	0.0	8.6
Cycle Q Clear(g_c), s	18.7	0.0	11.0	25.0	0.0	14.2	12.6	0.0	7.6	8.0	0.0	8.6
Prop In Lane	1.00		0.69	1.00		0.07	0.35		0.74	0.12		0.42
Lane Grp Cap(c), veh/h	276	0	694	350	0	770	544	0	626	802	0	659
V/C Ratio(X)	0.26	0.00	0.57	0.78	0.00	0.69	0.46	0.00	0.43	0.44	0.00	0.47
Avail Cap(c_a), veh/h	276	0	694	350	0	770	544	0	626	802	0	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	13.4	24.1	0.0	14.4	13.3	0.0	12.4	12.6	0.0	12.7
Incr Delay (d2), s/veh	0.5	0.0	1.2	10.5	0.0	2.7	2.8	0.0	2.1	1.7	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	3.8	4.7	0.0	5.7	2.8	0.0	2.6	3.3	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	0.0	14.6	34.6	0.0	17.1	16.1	0.0	14.5	14.3	0.0	15.1
LnGrp LOS	C	A	B	C	A	B	B	A	B	B	A	B
Approach Vol, veh/h		471			806			519			660	
Approach Delay, s/veh		15.8			23.0			15.3			14.7	
Approach LOS		B			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		25.0		25.0		25.0		25.0				
Max Q Clear Time (g_c+I1), s		14.6		20.7		10.6		27.0				
Green Ext Time (p_c), s		2.6		1.2		3.7		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.7								
HCM 6th LOS				B								

Avista Utilities - Upriver Drive Street Vacation TIA

1: Park Access/Perry Street & Mission Ave

Existing W/Vacation - PM Peak Hour - Mitigated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	367	782	7	19	674	351	6	3	4	474	12	112
Future Volume (veh/h)	367	782	7	19	674	351	6	3	4	474	12	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	403	859	8	21	741	386	7	3	4	328	282	123
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	378	2094	20	40	826	424	95	41	54	353	244	107
Arrive On Green	0.17	0.58	0.58	0.38	0.38	0.38	0.11	0.11	0.11	0.20	0.20	0.20
Sat Flow, veh/h	1781	3608	34	33	2163	1111	869	372	496	1781	1235	539
Grp Volume(v), veh/h	403	423	444	626	0	522	14	0	0	328	0	405
Grp Sat Flow(s),veh/h/ln	1781	1777	1864	1806	0	1502	1738	0	0	1781	0	1773
Q Serve(g_s), s	22.8	17.8	17.8	21.7	0.0	44.7	1.0	0.0	0.0	24.6	0.0	26.9
Cycle Q Clear(g_c), s	22.8	17.8	17.8	44.3	0.0	44.7	1.0	0.0	0.0	24.6	0.0	26.9
Prop In Lane	1.00		0.02	0.03		0.74	0.50		0.29	1.00		0.30
Lane Grp Cap(c), veh/h	378	1032	1082	717	0	574	191	0	0	353	0	351
V/C Ratio(X)	1.07	0.41	0.41	0.87	0.00	0.91	0.07	0.00	0.00	0.93	0.00	1.15
Avail Cap(c_a), veh/h	378	1085	1139	770	0	619	191	0	0	353	0	351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.5	15.7	15.7	39.3	0.0	39.8	54.3	0.0	0.0	53.6	0.0	54.5
Incr Delay (d2), s/veh	64.6	0.3	0.2	10.4	0.0	16.8	0.7	0.0	0.0	30.7	0.0	96.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.7	7.3	7.6	21.6	0.0	19.0	0.5	0.0	0.0	14.0	0.0	21.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.1	16.0	15.9	49.7	0.0	56.6	55.0	0.0	0.0	84.2	0.0	151.2
LnGrp LOS	F	B	B	D	A	E	E	A	A	F	A	F
Approach Vol, veh/h		1270			1148			14			733	
Approach Delay, s/veh		44.6			52.8			55.0			121.2	
Approach LOS		D			D			E			F	
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		20.0		83.9		32.0	27.0	56.9				
Change Period (Y+Rc), s		5.1		* 5		5.1	* 4.2	* 5				
Max Green Setting (Gmax), s		14.9		* 83		26.9	* 23	* 56				
Max Q Clear Time (g_c+I1), s		3.0		19.8		28.9	24.8	46.7				
Green Ext Time (p_c), s		0.0		6.8		0.0	0.0	5.2				

Intersection Summary

HCM 6th Ctrl Delay	65.4
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Avista Utilities - Upriver Drive Street Vacation TIA

3: Perry Street & Indiana Ave

Existing W/Vacation - PM Peak Hour - Mitigated

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	161	104	138	274	36	117	357	324	22	275	60
Future Volume (veh/h)	127	161	104	138	274	36	117	357	324	22	275	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	166	107	142	282	37	121	368	334	23	284	62
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	346	223	361	528	69	255	701	609	126	1279	271
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1061	1062	685	1106	1620	213	346	1455	1265	100	2656	563
Grp Volume(v), veh/h	131	0	273	142	0	319	434	0	389	193	0	176
Grp Sat Flow(s),veh/h/ln	1061	0	1747	1106	0	1832	1591	0	1474	1719	0	1601
Q Serve(g_s), s	6.0	0.0	6.5	6.1	0.0	7.4	4.5	0.0	9.7	0.0	0.0	3.3
Cycle Q Clear(g_c), s	13.4	0.0	6.5	12.6	0.0	7.4	9.2	0.0	9.7	3.1	0.0	3.3
Prop In Lane	1.00		0.39	1.00		0.12	0.28		0.86	0.12		0.35
Lane Grp Cap(c), veh/h	334	0	569	361	0	597	855	0	710	905	0	771
V/C Ratio(X)	0.39	0.00	0.48	0.39	0.00	0.53	0.51	0.00	0.55	0.21	0.00	0.23
Avail Cap(c_a), veh/h	499	0	841	533	0	882	855	0	710	905	0	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	0.0	14.0	19.0	0.0	14.3	9.2	0.0	9.5	7.8	0.0	7.8
Incr Delay (d2), s/veh	0.8	0.0	0.6	0.7	0.0	0.7	2.1	0.0	3.0	0.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	2.3	1.5	0.0	2.8	3.1	0.0	3.0	1.1	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	0.0	14.6	19.7	0.0	15.0	11.3	0.0	12.5	8.3	0.0	8.5
LnGrp LOS	C	A	B	B	A	B	B	A	B	A	A	A
Approach Vol, veh/h		404			461			823			369	
Approach Delay, s/veh		16.5			16.5			11.9			8.4	
Approach LOS		B			B			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		21.9		30.0		21.9				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		25.0		25.0		25.0		25.0				
Max Q Clear Time (g_c+I1), s		11.7		15.4		5.3		14.6				
Green Ext Time (p_c), s		4.7		1.6		2.2		1.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				13.2								
HCM 6th LOS				B								

