

Technical Memorandum

Project# 28275

November 28, 2022

To: Craig Christensen, P.E.
City of Sherwood
22560 SW Pine Street
Sherwood, OR 97140

From: Matt Hughart, AICP, McKenna Milacek, and Julia Kuhn, PE

CC: John Russell, P.E.; Oregon Department of Transportation

RE: Chevron Convenience Market – Transportation Impact Analysis

SUMMARY

Chevron is proposing to raze and reconstruct the convenience store at its existing gas station located on the northeast corner of the 99W/SW Sherwood Boulevard intersection. This memorandum documents a transportation assessment of the proposed convenience store reconstruction. The following recommendations are identified for implementation in conjunction with site development, subject to City approval:

- Install two DO NOT ENTER (R5-1) signs on the westernmost access driveway to discourage exiting site traffic from accessing OR 99W using this driveway. Signs should be installed in accordance with City standards and the Manual on Uniform Traffic Control Devices (MUTCD).

INTRODUCTION

As proposed, the existing 968 square foot convenience store will be removed and replaced with a new 4,085 square foot convenience store to be located on the southwest corner of the site. The existing fueling stations and canopy will not change. Access to the site will remain unchanged with two driveways directly off 99W and one crossover easement to SW Langer Drive. The site location and vicinity are shown in Figure 1, and a site plan is shown in Figure 2.

Figure 1 - Site Vicinity Map

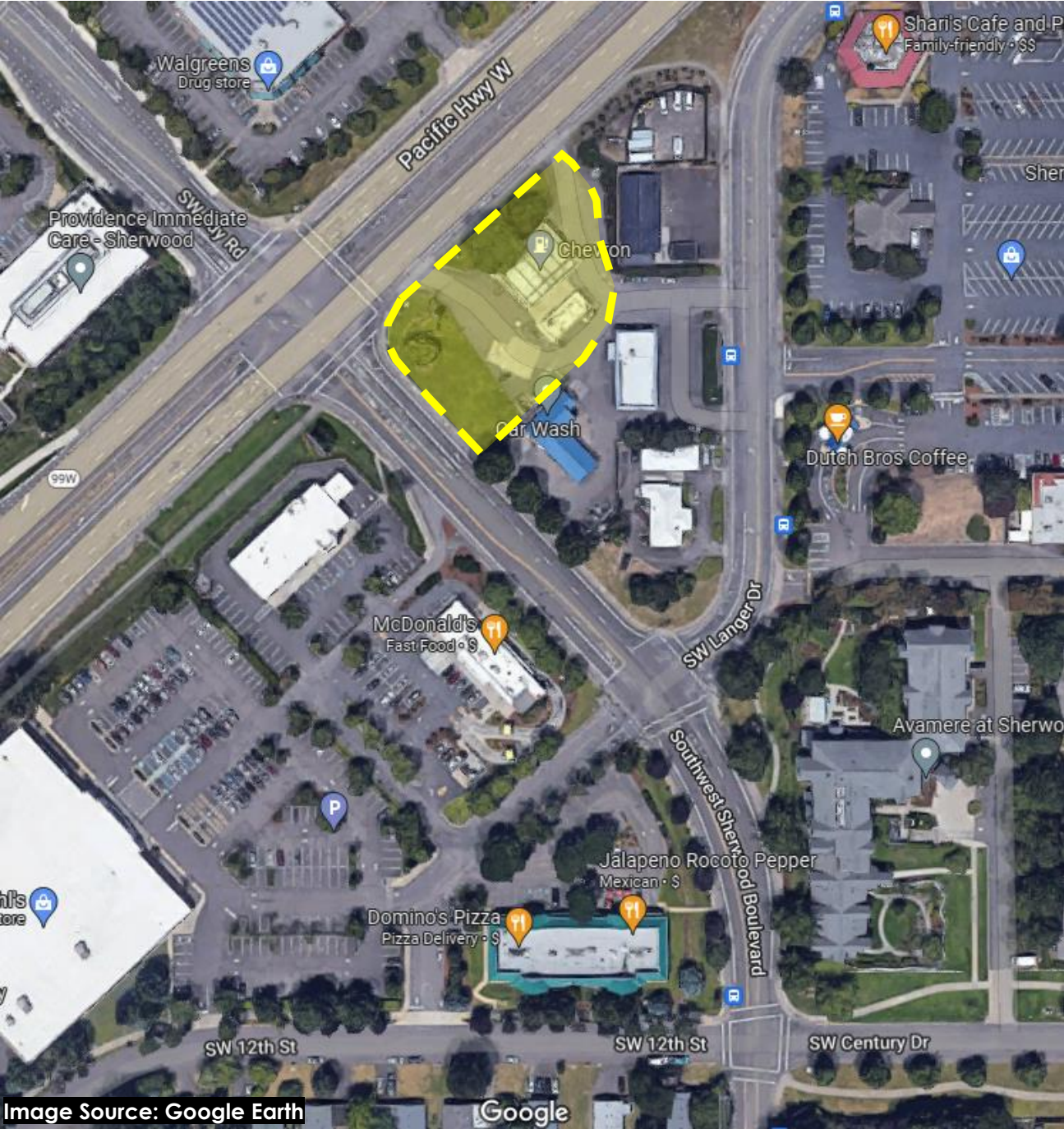
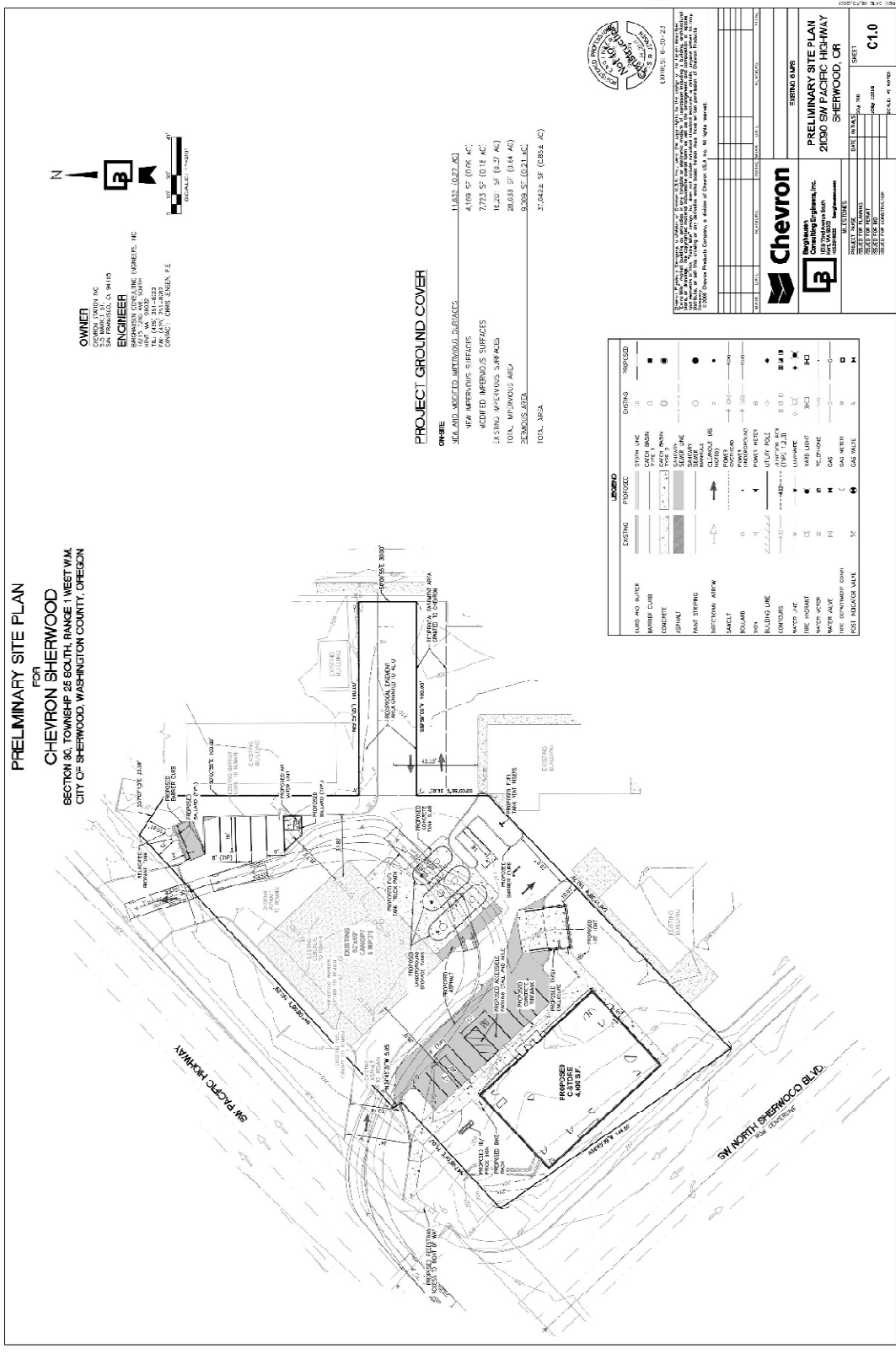


Figure 2: Proposed Site Plan



SCOPE OF THE REPORT

This report identifies the transportation-related impacts associated with the proposed Chevron convenience store reconstruction and was prepared in accordance with the City of Sherwood Transportation Impact Study requirements and Oregon Department of Transportation (ODOT) analysis procedures. Per discussions with City and ODOT staff, operational analyses were performed at the following study intersections:

- OR 99W/SW Sherwood Boulevard
- SW Sherwood Boulevard/SW Langer Drive
- SW Sherwood Boulevard/SW Century Drive/SW 12th Street
- The two OR 99W site access driveways

This report evaluates the following transportation issues:

- Existing 2022 land use and transportation system conditions within the site vicinity during the weekday AM and PM peak period;
- Forecast year 2023 background traffic conditions during the weekday AM and PM peak period, considering background growth and transportation improvements planned in the study area;
- Trip generation and distribution estimates for the proposed Chevron convenience store reconstruction;
- Forecast year 2023 total traffic conditions during the weekday AM and PM peak period with build-out of the convenience store; and
- Study recommendations.

Analysis Methodology

All operational analyses described in this report were performed in accordance with the procedures stated in the Highway Capacity Manual (HCM). The 6th Edition of the HCM was used to assess study intersection operations during the peak 15 minutes of the peak hour. The peak hour factor (PHF) was derived from the existing raw manual turning movement counts and applied uniformly over each scenario. The operations analysis presented in this report was completed using a combination of Synchro 10 and Vistro analysis software.

Applicable Mobility Standards

Intersection operating targets adopted by ODOT and the City of Sherwood are summarized below.

ODOT MOBILITY TARGETS

ODOT uses volume-to-capacity (v/c) ratios to assess intersection operations. Table 6 of the Oregon Highway Plan (OHP) provides maximum volume-to-capacity ratio mobility targets for all signalized/roundabout and unsignalized intersections located outside the Portland metropolitan area. Table 1 summarizes the v/c ratio applicable to the ODOT owned/maintained 99W/SW Sherwood Boulevard and 99W/existing Chevron gas station driveways.

Table 1 – ODOT Mobility Targets

Intersection	OHP Mobility Target
99W/SW Sherwood Boulevard	v/c = 0.99 during the 1 st and 2 nd hours
99W/existing Chevron gas state driveways	0.99 major approach/0.99 minor approach
<i>Note: 99W is a Statewide Highway (with a Freight Route designation) with a posted speed of 45 mph through the study intersections.</i>	

CITY OF SHERWOOD OPERATING STANDARDS

For intersections within the Sherwood Town Center boundary (all other identified study intersections in this report), adopted standards require a 1.1 v/c in the highest peak hour and 0.99 v/c in the second hour.

EXISTING CONDITIONS

This section summarizes the existing characteristics of the transportation system and adjacent land uses in the vicinity of the proposed development, including an inventory of the existing multimodal transportation facilities and options, a summary of recent crash history, and an evaluation of existing intersection operations for motor vehicles at the study intersections.

Site Conditions and Adjacent Land Uses

The proposed Chevron convenience store reconstruction will occur within the existing site footprint with no impacts to the overall site circulation patterns. Adjacent uses include a heating and cooling business, a car wash, and drive through oil change business. The convenience store reconstruction will have no circulation or parking impacts to these adjacent businesses.

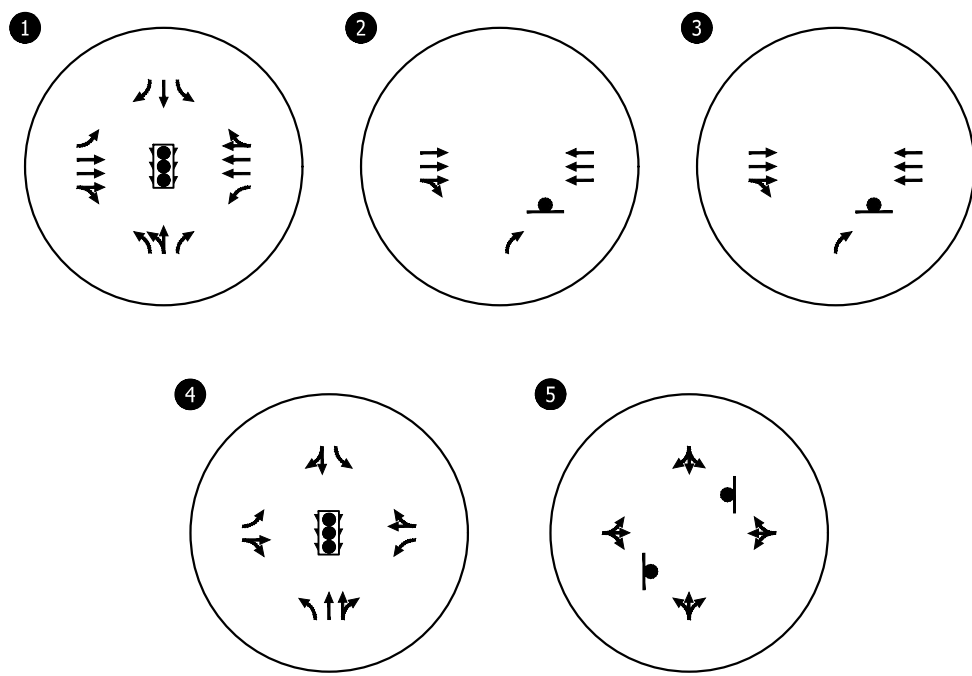
Transportation Facilities



Table 2 summarizes the characteristics of roadways within the site vicinity. **Figure 3** illustrates the existing lane configurations and traffic control devices at the study intersections.

Table 2: Existing Transportation Facilities

Study Intersection	Functional Classification ¹	Number of Lanes	Posted Speed (mph)	Sidewalks	Striped Bicycle Lanes	On Street Parking
99W	Statewide Highway - ODOT Principal Arterial - City of Sherwood	5 lanes	35	Yes	No	No
SW Sherwood Boulevard	Arterial	3 lanes	25	Yes	No	No
SW Langer Drive	Collector	3 lanes	35	Yes	Yes	No
SW Century Drive	Collector	2 lanes	25	Yes	No	Yes

¹ Per the *City of Sherwood Transportation System Plan* (2014) or the *Oregon Highway Plan*.



-  - STOP SIGN
-  - TRAFFIC SIGNAL

Existing Lane Configurations
& Traffic Control Devices
Sherwood, OR

Figure
03

H:\28\28275 - Sherwood Chevron Expansion\report\figs\28275-FIGS 2.dwg Nov 21, 2022 - 8:29am - mmillecek Layout Tab: Fig 3. ELC & TCD

MULTI-USE FACILITIES

Within the immediate site vicinity, all of the study roadways have sidewalks. OR 99W and SW Langer Drive have bicycle lanes, but there are no bicycle facilities on SW Sherwood Boulevard or SW Century Drive.

TRANSIT FACILITIES

There are four transit stops that serve TriMet Bus number 94 to Portland within the study area. Two are located at the intersection of SW Sherwood Boulevard and SW Century Drive and two are located at the 16400 block of SW Langer Drive near the Langer Drive driveway. Both are located within a short walking distance from the site, providing convenient access to transit for employees.

Intersection Crash History

ODOT provided crash records for the study intersections for the five-year period from January 1, 2016 through December 31, 2020. Appendix A provides the ODOT crash reports which provides more details on the reported crashes. Table 3 summarizes the ODOT crash data.

Table 3 – Reported Crash History (January 1, 2016 – December 31, 2020)

Study Intersection	Crash Type					Severity			Total
	Angle	Turn	Read-End	Sideswipe	Other	PDO	Injury	Fatal	
99W/ SW Sherwood Boulevard	1	3	28	0	5	12	25	0	37
SW Sherwood Boulevard/ SW Langer Drive	0	4	4	0	1	5	4	0	9
SW Sherwood Boulevard/ SW Century Drive	7	7	2	0	0	9	7	0	16
99W/West Chevron Site Driveway ¹	0	0	0	0	0	0	0	0	0
99W/East Chevron Site Driveway ¹	0	0	0	0	0	0	0	0	0

¹Based on a review of ~300 feet of 99W segment data downstream from the 99W/SW Sherwood Boulevard intersection.

Intersection crash rates were calculated and compared to statewide crash rate performance thresholds. For this analysis, the critical crash rate was calculated and compared to the 90th percentile crash rates for urban intersections by traffic control and 3- versus 4-legged configurations (as appropriate). This is shown in Table 4.

Table 4 – Intersection Crash Rate Assessment

Study Intersection	Total Crashes	Observed Crash Rate	Lane Type/Traffic Control	90 th Percentile Rate by Lane Type and Traffic Control	Observed Crash Rate >90 th Percentile Crash Rate?
99W/ SW Sherwood Boulevard	37	0.50	4SG	0.62	No
SW Sherwood Boulevard/ SW Langer Drive	9	0.34	4SG	0.72	No
SW Sherwood Boulevard/SW Century Drive	16	0.74	4ST	0.38	Yes

CRASH DATA FINDINGS

As shown in Table 4, the observed crash rate at the SW Sherwood Boulevard/SW Century Drive intersection exceeds the critical crash rate based on intersection type. A detailed review of the intersection crash data revealed the following characteristics:

- With two rear end crashes, seven turning movement crashes, and seven angle collisions, there was no predominate crash type. However, of the seven angle crashes, five involved an eastbound side street movement interacting with a vehicle from either the north or south. There was no time of day correlation between these crashes.
- Of the turning crashes, all occurred at various times and were from different combinations of directions and movements.

While not identified as a safety-based mitigation measure, the SW Sherwood Boulevard/SW Century Drive intersection is planned for signalization (or a potential roundabout) in the Sherwood Transportation System Plan and Sherwood Town Center Plan. This project would be combined with the conversion of the SW Sherwood Boulevard/SW Langer Drive intersection to a right-in/right-out limited access intersection. Neither project is included in the City's Five-Year Capital Projects list of the *Sherwood Capital Improvement Plan*.

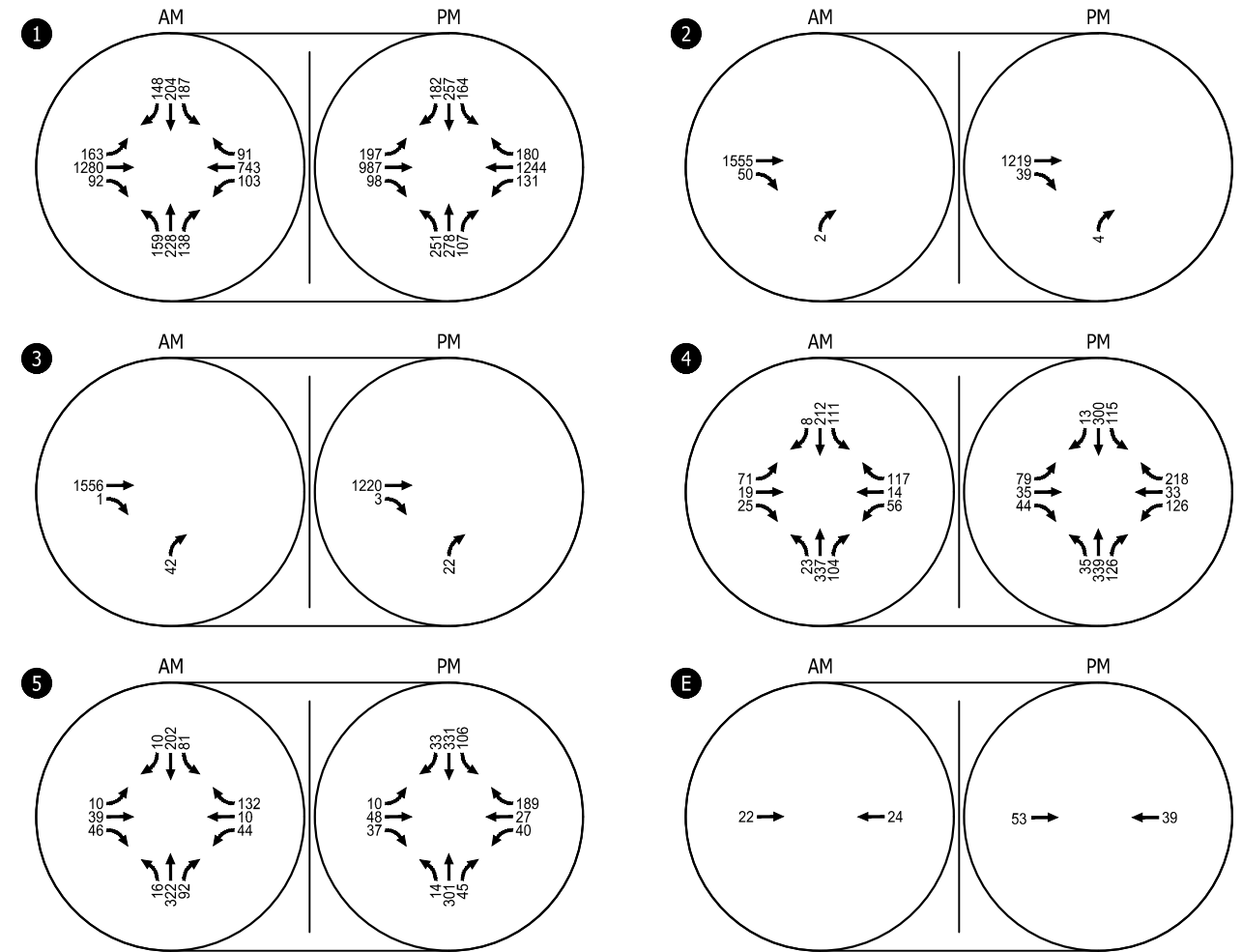
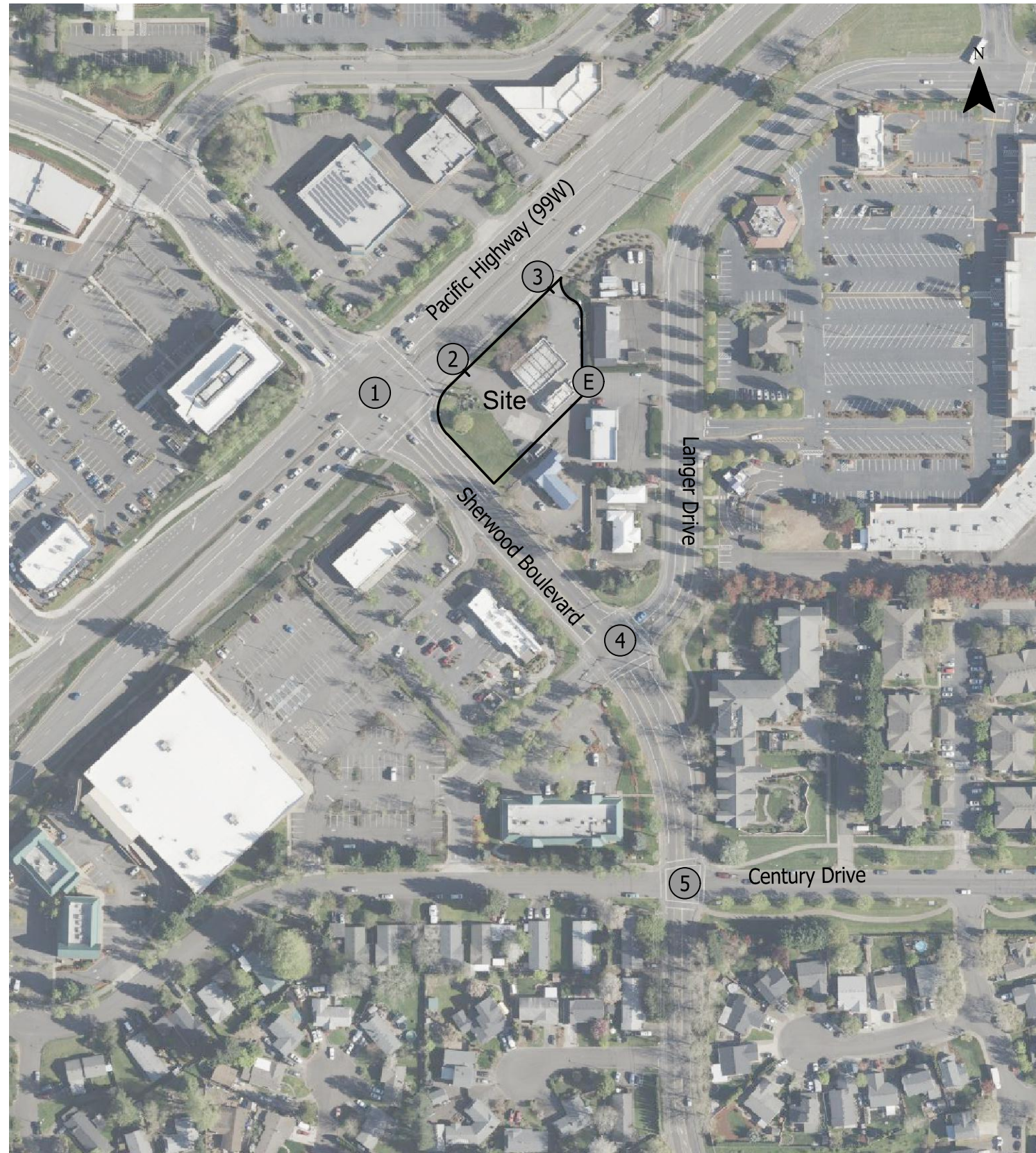
Existing Traffic Conditions

Turning movement counts at the study intersections were conducted in October 2022 on a typical mid-week date while local schools were in session.

Figure 4 illustrates the resulting 2022 existing traffic volumes at the study intersection while Table 5 summarizes the corresponding traffic operations. As shown in Table 5 and detailed in Appendix C (which includes the existing conditions operations analysis worksheets), the study intersection operations satisfy applicable ODOT performance targets and City v/c standards during both peak hours.

Table 5 – Existing Traffic Conditions

Intersection	Critical Approach/Lane	Weekday AM Peak Hour			Weekday PM Peak Hour		
		V/C	Approach Delay (sec)	Approach LOS	V/C	Approach Delay (sec)	Approach LOS
99W/ SW Sherwood Blvd	-	0.69	38.2	D	0.79	47.8	D
SW Sherwood Blvd/ SW Langer Drive	-	0.39	17.8	B	0.48	20.3	C
SW Sherwood Blvd/ SW Century Drive	WB	0.84	58.8	F	0.70	33.3	D
99W/Chevron West Driveway	NBRT	0.01	23.9	C	0.03	22.9	C
99W/Chevron East Driveway	NBRT	0.37	41.2	E	0.22	30.9	D



Existing Traffic Volumes
AM & PM Peak Hours
Sherwood, OR

Figure
04

TRANSPORTATION ASSESSMENT

The transportation impact analysis identifies how the study area's transportation system will operate in the year 2023 upon buildout of the convenience store reconstruction. This section of the report includes analysis of 2023 background traffic volumes and operations, an estimate of site-generated trips, and analysis of 2023 total traffic volumes and operations with the proposed convenience store reconstruction.

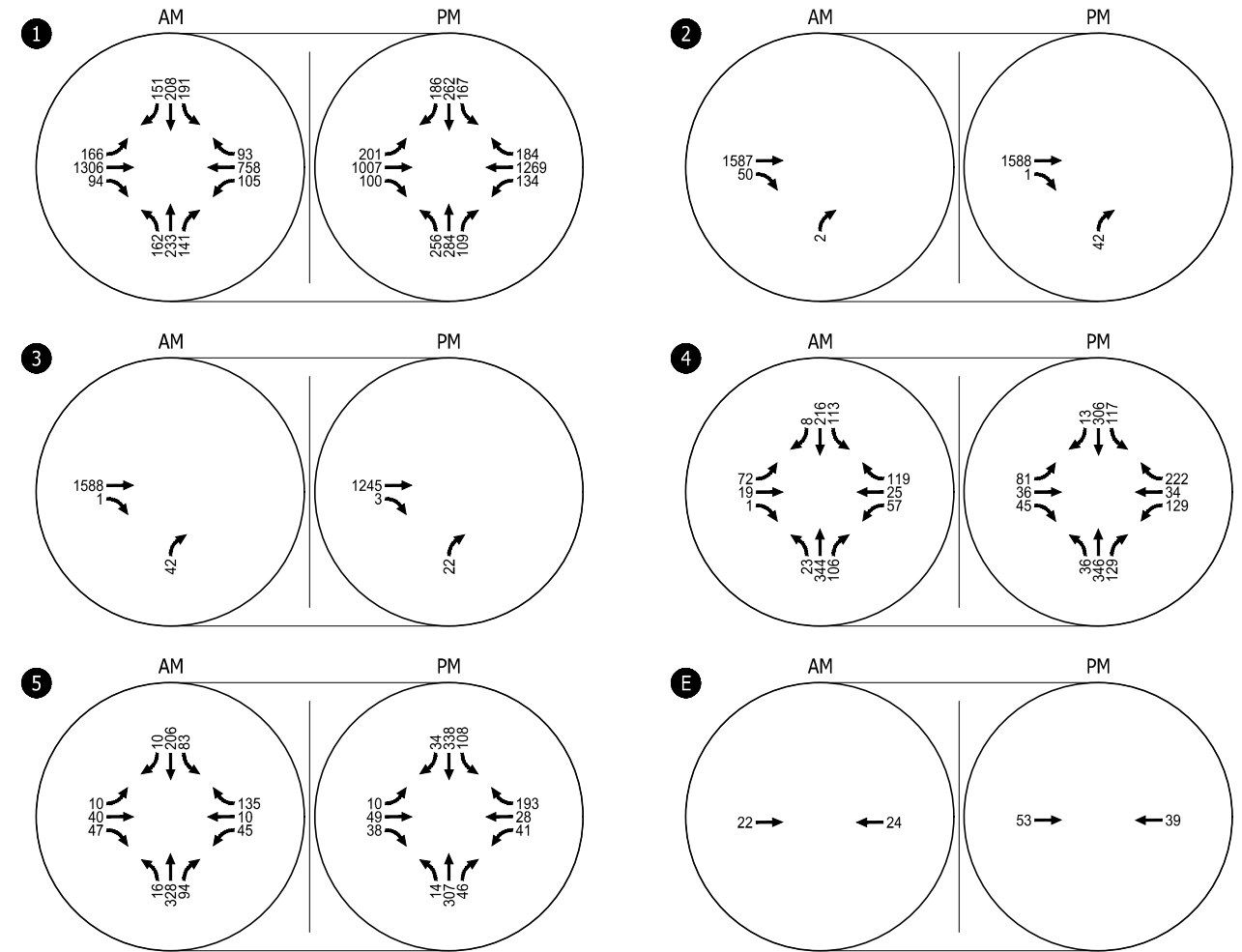
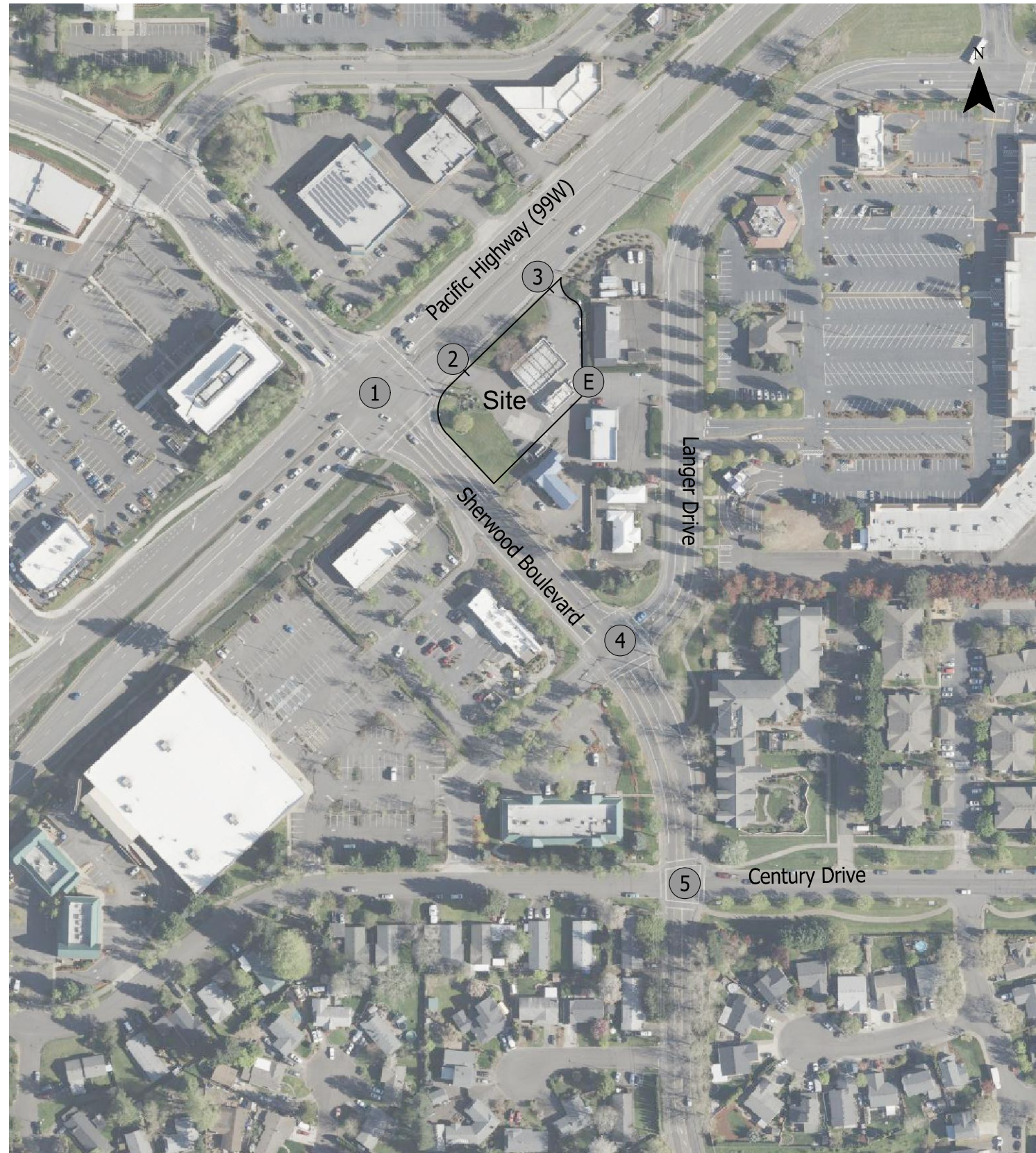
2023 Background Operational Analysis

A two percent annual growth rate (consistent with regional growth rates) was applied to the existing study intersection traffic volumes to reflect near-term growth on the local transportation network.

Figure 5 illustrates the resulting 2023 background traffic volumes while Table 6 summarizes the corresponding operational analysis for the weekday AM and PM peak hour. As shown, all of the study intersections are expected to continue to satisfy the respective City v/c standards and ODOT mobility target under background conditions. Appendix D includes the 2023 background conditions operations analysis worksheets.

Table 6 – 2023 Background Traffic Conditions

Intersection	Critical Approach/Lane	Weekday AM Peak Hour			Weekday PM Peak Hour		
		V/C	Approach Delay (sec)	Approach LOS	V/C	Approach Delay (sec)	Approach LOS
99W/ SW Sherwood Blvd	-	0.70	39.0	D	0.81	49.5	D
SW Sherwood Blvd/ SW Langer Drive	-	0.55	19.1	B	0.61	20.6	C
SW Sherwood Blvd/ SW Century Drive	WB	0.86	61.7	F	0.71	34.3	D
99W/Chevron West Driveway	NBR	0.01	24.5	C	0.03	23.4	C
99W/Chevron East Driveway	NBR	0.39	43.5	E	0.23	32.5	D



2023 Background Traffic Volumes
AM & PM Peak Hours
Sherwood, OR

Figure
05

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Proposed Development Plan

The proposed development will include the removal of the existing 968 square foot convenience store and the construction of a new 4,085 square foot convenience store to be located on the southwest corner of the site. The existing fueling canopy and dispensers will not change. The existing underground storage tanks (USTs) will be replaced with new tanks installed near the approximate location of the existing convenience store's footprint. The two existing vehicular access driveways to 99W and the crossover easement to SW Langer Drive will remain. A small modification to the westernmost 99W site driveway is proposed to better align inbound site vehicles to the proposed convenience store parking stalls and discourage use of the driveway for exiting maneuvers. With land use approval, construction is anticipated to begin in early 2023 and be completed by late 2023.

TRIP GENERATION ESTIMATE

A trip generation estimate was prepared for the proposed reconstruction based on information provided in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). While the number of vehicular fueling positions is not changing, the convenience store element is proposed to be increased in square footage. Based on these factors, the trip generation profile for the project was developed under the following methodology:

- The measured site trips were held constant due to the following reasons:
 - While field observations noted a few cars in the peak time periods purposely accessed the site for the convenience store, the overwhelming majority of convenience store business came from active fueling customers. This is likely due to the small size of the convenience store and the site's lack of dedicated convenience store parking.
 - The site's fueling component (number of fueling positions) is not proposed to change.
- Using ITE land use code 945 (Convenience Store/Gas Station – Vehicle Fueling Positions 9-15), the daily, weekday AM, and weekday PM peak hour trips were calculated using a 4,085 square foot convenience store size as the independent variable.
- The site's existing measured demand was then subtracted from the estimated ITE 945 land use trips to estimate the expected increase in trips specifically associated with the 4,085 square foot convenience store. The pass-by rates from the ITE 945 land use were subsequently applied to generate the net new trips from the convenience store reconstruction. Table 7 summarizes the estimates for the daily, weekday AM and weekday PM peak hours.

Table 7: Trip Generation Estimate

Land Use	ITE Code	Size (Sq. Ft.)	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Convenience Store/Gas Station-VFP (9-15)	945	4,085	2,861	232	116	116	224	112	112
Existing Measured Demand ¹			-	121	65	56	140	71	69
Trips Due to Convenience Store Upgrades			-	111	51	60	84	41	43
Pass-By (75% (AM), 76% (PM))			-	84	42	42	64	32	32
Total Net New Trips			-	27	9	18	20	9	11

¹Field observations noted approximately 10 peak hour trips passing through the site without stopping at the fueling stations or convenience store. As such, these trips have been removed from the noted measured demand totals for trip calculation purposes.

SITE TRIP DISTRIBUTION/TRIP ASSIGNMENT

The pass-by and net new site-generated trips shown in Table 7 were distributed onto the study area roadways based on a review of local and regional traffic patterns and existing site access. The trip distribution pattern and trip assignment is illustrated in Figure 6.

Year 2023 Total Traffic Conditions

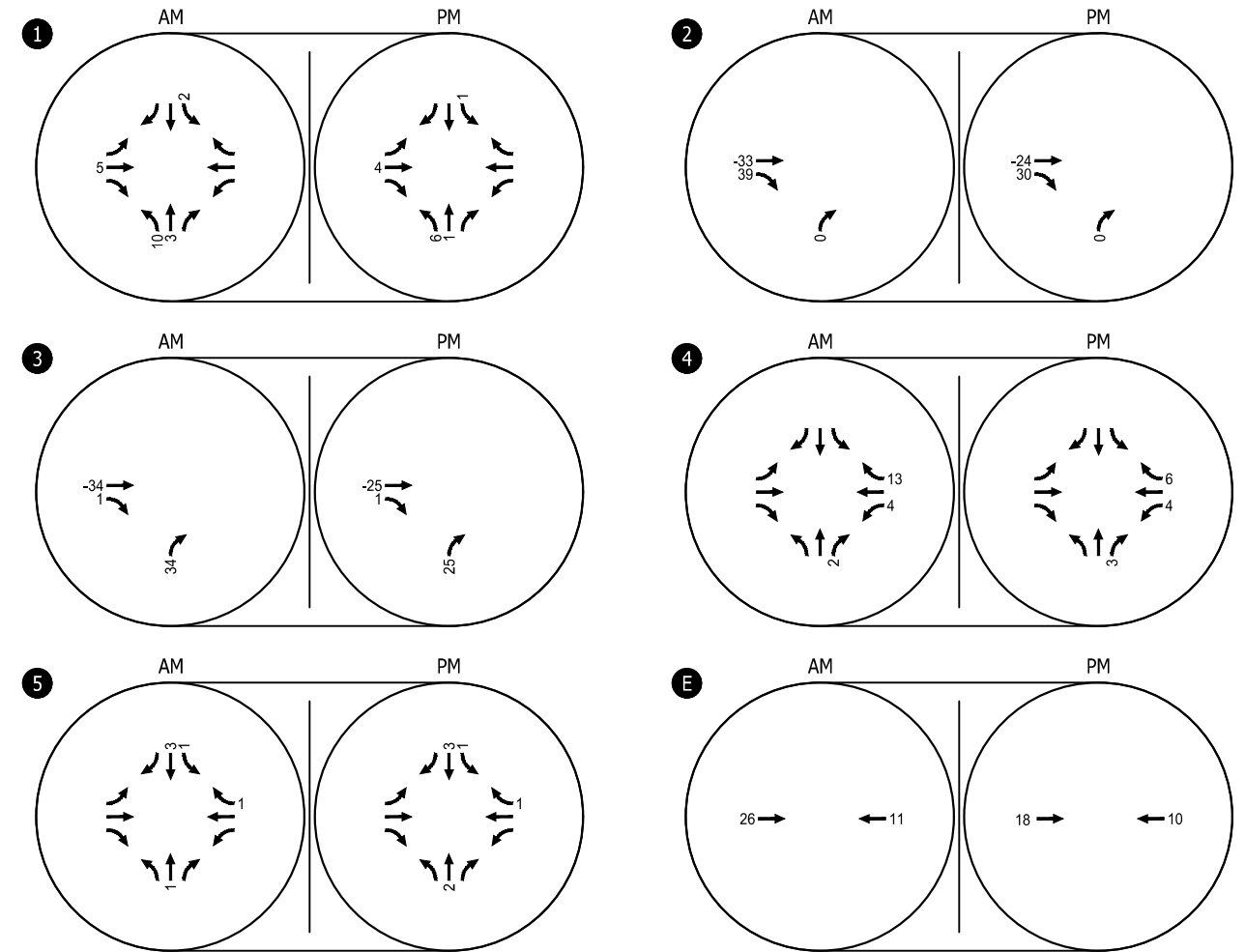
The total traffic conditions analysis forecasts the operation of the study intersections with the inclusion of traffic generated by the proposed convenience store reconstruction. Total traffic conditions were determined by adding the estimated site-generated trips to the year 2022 background volumes for the AM and PM peak hours. The resulting total traffic volumes are shown in

Figure 7.

Table 8 summarizes the corresponding operational analysis for the weekday AM and PM peak hours. As shown, all of the study intersections are expected to continue to satisfy the respective City v/c standards and ODOT mobility target under background conditions. Appendix E includes the 2023 total traffic volumes and operations analysis worksheets.

Table 8: 2023 Total Traffic Conditions

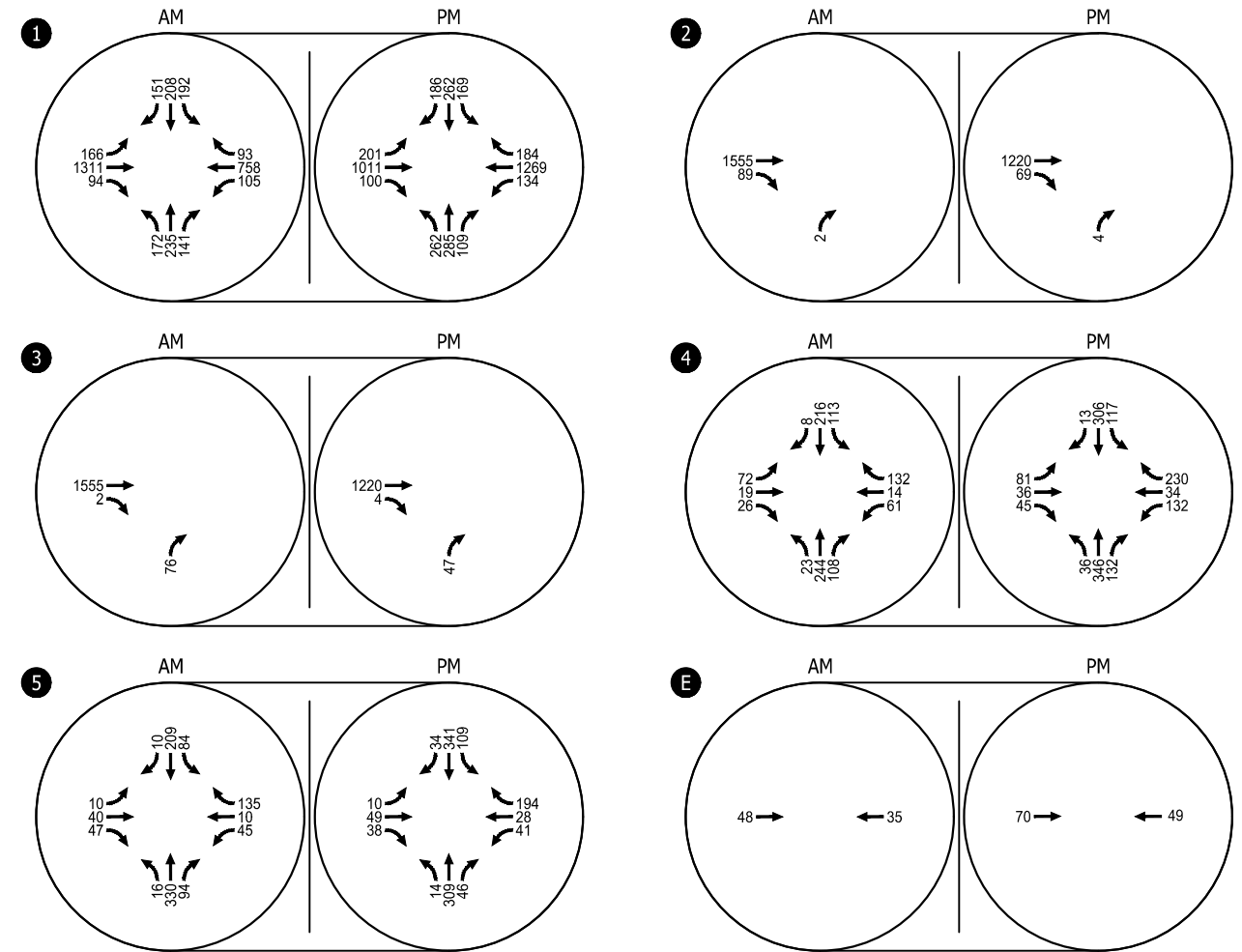
Intersection	Critical Approach/Lane	Weekday AM Peak Hour			Weekday PM Peak Hour		
		V/C	Approach Delay (sec)	Approach LOS	V/C	Approach Delay (sec)	Approach LOS
99W/ SW Sherwood Blvd	-	0.71	39.1	D	0.81	49.6	D
SW Sherwood Blvd/ SW Langer Drive	-	0.57	18.0	B	0.64	20.5	C
SW Sherwood Blvd/ SW Century Drive	WB	0.86	61.7	F	0.71	34.3	D
99W/Chevron West Driveway	NBRT	0.01	22.7	C	0.02	19.1	C
99W/Chevron East Driveway	NBRT	0.57	47.1	E	0.23	21.7	C



Trip Distribution and Site-Generated Trips
AM & PM Peak Hours
Sherwood, OR

Figure
06

H:\28\28275 - Sherwood Chevron Expansion\report\Figs\28275-FIGS 2 - UPDATED VOLUMES.dwg Nov 23, 2022 - 10:25am - mmilback Layout Tab: Fig 6, Trip Dist



2023 Total Traffic Volumes
AM & PM Peak Hours
Sherwood, OR

Figure
07

On-Site Circulation/Site-Access Operations

Figure 2 illustrates the proposed site plan. The existing site includes two driveways on OR 99W and access to SW Langer Drive via a shared easement with adjacent parcels. Access to the Chevron gas station and convenience store is expected to remain the same under the proposed convenience store reconstruction. To better align inbound site vehicles to the proposed convenience store parking stalls and to discourage use of the driveway for exiting maneuvers back to OR 99W, a small curb adjustment is proposed in the westernmost driveway throat. To further discourage exiting trips to OR 99W via this driveway, two DO NOT ENTER (R5-1) signs are recommended on the westernmost driveway throat. Signs should be installed in accordance with City standards and the Manual on Uniform Traffic Control Devices (MUTCD).

FINDINGS AND RECOMMENDATIONS

The primary findings and recommendations of this study are summarized below.

- The study intersections are forecast to satisfy the City of Sherwood and ODOT mobility standards during the weekday AM and PM peak hours under existing and future traffic conditions.
- No capacity-based mitigation needs were identified at the study intersections.
- To address the expected increase in site-generated trips, the following improvement is recommended:
 - Install two DO NOT ENTER (R5-1) signs on the westernmost access driveway throat to discourage exiting site traffic from accessing OR 99W using this driveway. Signs should be installed in accordance with City standards and the Manual on Uniform Traffic Control Devices (MUTCD).

We trust this memorandum adequately addresses the traffic and circulation impacts associated with the proposed convenience store reconstruction. Please let us know if you have any questions regarding our analyses or need additional information.

APPENDIX

- A. Crash Summary Worksheets
- B. Traffic Count Data
- C. Existing Traffic Conditions Worksheets
- D. 2023 Background Traffic Conditions Worksheets
- E. 2023 Total Traffic Conditions Worksheets

Appendix A
Crash Summary Worksheets

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

091 PACIFIC HIGHWAY WEST
 D
 R
 S
 U
 P G S W

Intersectional Crashes at OR-99W, Pacific Hwy (#091) & SW Sherwood Blvd / SW Edy Rd in Sherwood, OR.
 January 1, 2016 through December 31, 2020

SER#	E A / C O DATE	COUNTY	RD# FC CONN #	INT-TYP	SPCL USE	MOVE	A S	PED	CAUSE
INVEST E L M H R DAY/TIME	CITY	CITY	MILEPNT SECOND STREET	RD CHAR DIRECT LEGS TRAF-	TRLR QTY OWNER	FROM	G E	LOC	
UNLOC? D C J L K LAT/LONG	URBAN AREA	URBAN AREA	LRS INTERSECTION SEQ#	LOCTN (#LANES) CNTL	V# VEH TYPE	TO	E X RES	ERROR	ACTN EVENT
00867	N N N N N 02/18/2018	WASHINGTON	2 14	INTER CROSS N	01 NONE 0	STRGHT			04
CITY N Sun 8P	SHERWOOD	SHERWOOD	MN 0 SW PACIFIC HY 99W	NE TRF SIGNAL N WET PED	PRVTE SW NE			000	00
No 45 21 59.28 -122 50 54.04	PORTLAND UA	PORTLAND UA	15.35 N SHERWOOD BLVD	05 0 N DLIT INJ	PSNGR CAR	01 DRVR NONE	51 M OR-Y	000	000
			009100200S00 1				OR<25		
						STRGHT 01 PED INJB 17 M		01 020	035
						NW SE			04
02903	N N N N N 06/08/2018	WASHINGTON	2 14	INTER CROSS N	01 NONE 0	TURN-R			02
CITY N Fri 3P	SHERWOOD	SHERWOOD	MN 0 SW PACIFIC HY 99W	NE TRF SIGNAL N WET PED	PRVTE SE NE			000	00
No 45 21 59.28 -122 50 54.04	PORTLAND UA	PORTLAND UA	15.35 N SHERWOOD BLVD	05 1 N DAY INJ	PSNGR CAR	01 DRVR NONE	29 F OR-Y	029	000
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01269	N N N 01/17/2016	WASHINGTON	2 14	INTER CROSS N	01 NONE 0	STRGHT			29
NONE N Sun 9P	SHERWOOD	SHERWOOD	MN 0 SW PACIFIC HY 99W	NE TRF SIGNAL N DRY REAR	PRVTE NE SW			000	00
No 45 21 59.28 -122 50 54.04	PORTLAND UA	PORTLAND UA	15.35 N SHERWOOD BLVD	06 0 N DLIT INJ	PSNGR CAR	01 DRVR NONE	29 F OR-Y	026	000
			009100200S00 1				OR<25		29
						02 NONE 0 STOP			
						PRVTE NE SW		012	00
						PSNGR CAR	01 DRVR INJC 49 F OR-Y	000	000
							OR<25		00
03750	N N N 06/08/2016	WASHINGTON	1 14	INTER CROSS N	01 NONE 9	STRGHT			29
NO RPT N Wed 7P	SHERWOOD	SHERWOOD	MN 0 SW EDY RD	NE TRF SIGNAL N DRY REAR	N/A NE SW			000	00
No 45 21 59.71 -122 50 54.60	PORTLAND UA	PORTLAND UA	15.35 SW PACIFIC HY 99W	06 0 N DAY PDO	PSNGR CAR	01 DRVR NONE	00 U UNK	000	000
			009100100S00 1				UNK		00
						02 NONE 9 STOP			
						N/A NE SW		013	00
						PSNGR CAR	01 DRVR NONE	00 U UNK	000
							UNK		00
04830	N N N 07/22/2016	WASHINGTON	2 14	INTER CROSS N	01 NONE 9	STRGHT			29
NONE N Fri 9A	SHERWOOD	SHERWOOD	MN 0 SW EDY RD	NE TRF SIGNAL N WET REAR	N/A NE SW			000	00
No 45 21 59.28 -122 50 54.04	PORTLAND UA	PORTLAND UA	15.35 SW PACIFIC HY 99W	06 0 N DAY PDO	PSNGR CAR	01 DRVR NONE	00 U UNK	000	000
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							UNK		00

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
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091 PACIFIC HIGHWAY WEST

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SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE	MOVE	A S	P E	LICNS	PED	ACTN	EVENT	CAUSE					
INVEST	E L M H R	DAY/TIME	CITY	MILEPNT	FIRST	STREET	RD CHAR	TRLR QTY	OWNER	FROM	PRTC	INJ	G E	LOC	ERROR						
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	LRS	INTERSECTION	SEQ#	DIRECT	V#	VEH TYPE	TO	P#	TYPE	SVRTY	E X	RES	LOC	ERROR	ACTN	EVENT	CAUSE	
07095	N N N	10/07/2016	WASHINGTON	1	14		INTER	CROSS	N	N RAIN	S-STRGHT	01	NONE	0	STRGHT					29	
NONE	N	Fri 4P	SHERWOOD	MN	0	SW EDY RD	NE		PRVTE	NE SW									000	00	
No	45 21	59.71 -122 50 54.60	PORTLAND UA	15.35	SW PACIFIC HY 99W	06	0		PSNGR CAR		01	DRVR	NONE	46	M	OR-Y	042	000	000	29	
				009100100S00		1															OR<25
									02	NONE	0	STRGHT							000	00	
									PRVTE	NE SW									000	00	
									PSNGR CAR		01	DRVR	NONE	48	M	OR-Y	000	000	000	00	
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01643	N N N N N	03/23/2017	WASHINGTON	1	14		INTER	CROSS	N	N RAIN	S-1STOP	01	NONE	0	STRGHT					29	
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No	45 21	59.71 -122 50 54.60	PORTLAND UA	15.35	SW PACIFIC HY 99W	06	0		PSNGR CAR		01	DRVR	NONE	00	U	UNK	026	000	000	29	
				009100100S00		1															UNK
									02	NONE	0	STOP							011	00	
									PRVTE	NE SW									000	00	
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02779	N N N	05/08/2017	WASHINGTON	1	14		INTER	CROSS	N	N CLR	S-1STOP	01	NONE	9	STRGHT					29	
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No	45 21	59.71 -122 50 54.60	PORTLAND UA	15.35	SW PACIFIC HY 99W	06	0		PSNGR CAR		01	DRVR	NONE	00	U	UNK	000	000	000	00	
				009100100S00		1															UNK
									02	NONE	9	STOP							011	00	
									N/A	NE SW									000	00	
									PSNGR CAR		01	DRVR	NONE	00	U	UNK	000	000	000	00	
																					UNK
02100	N N N N N	04/27/2018	WASHINGTON	1	14		INTER	CROSS	N	N CLD	S-1STOP	01	NONE	0	STRGHT					093,087	
CITY	N	Fri 1P	SHERWOOD	MN	0	SW EDY RD	NE		PRVTE	NE SW									000	087	00
No	45 21	59.71 -122 50 54.60	PORTLAND UA	15.35	SW PACIFIC HY 99W	06	0		PSNGR CAR		01	DRVR	NONE	27	F	OR-Y	016,026	038	093	000	27,29
				009100100S00		1															OR<25
									02	NONE	0	STOP							011	087	00
									PRVTE	NE SW									000	000	00
									PSNGR CAR		01	DRVR	INJC	48	F	OR-Y	000	000	000	00	
																					OR<25
05783	N N N N N	10/28/2018	WASHINGTON	1	14		INTER	CROSS	N	N CLR	S-1STOP	01	NONE	0	STRGHT					29	
CITY	N	Sun 11A	SHERWOOD	MN	0	SW PACIFIC HY 99W	NE		PRVTE	NE SW									000	00	
No	45 21	59.71 -122 50 54.61	PORTLAND UA	15.35	N SHERWOOD BLVD	06	0		PSNGR CAR		01	DRVR	NONE	60	F	OR-Y	026	000	000	29	
				009100100S00		1															OR>25
											02	PSNG	NONE	20	F		000	000	000	00	

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

091 PACIFIC HIGHWAY WEST Intersectional Crashes at OR-99W, Pacific Hwy (#091) & SW Sherwood Blvd / SW Edy Rd in Sherwood, OR.
D
R
S U
P G S W
January 1, 2016 through December 31, 2020

Table with columns: SER#, INVEST UNLOC?, E A D C J L K, P G S W, / C O DATE, COUNTY CITY URBAN AREA, RD# FC CMPT/MLG MILEPNT LRS, CONN # FIRST STREET SECOND STREET INTERSECTION SEQ#, RD CHAR DIRECT LOCTN, INT-TYP (MEDIAN) INT-REL TRAF- CNTL, OFFRD RNDDBT SURF DRVVY, WTHR COLL TYP LIGHT SVRTY, CRASH TYP, SPC USE TRLR QTY OWNER VE# VEH TYPE, MOVE FROM TO, A S G E LICNS PED, INJ SVRTY E X RES LOC ERROR, ACTN EVENT, CAUSE.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

091 PACIFIC HIGHWAY WEST

Intersectional Crashes at OR-99W, Pacific Hwy (#091) & SW Sherwood Blvd / SW Edy Rd in Sherwood, OR.
 January 1, 2016 through December 31, 2020

SER#	EA / C O DATE	COUNTY	RD# FC	CONN #	INT-TYP	SPCL USE	TRLR QTY	MOVE	A S	PRTC INJ	G E	LICNS	PED	ACTN	EVENT	CAUSE			
UNLOC?	D C J L K LAT/LONG	URBAN AREA	CMPT/MLG	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD WTHR	CRASH TYP	OWNER	FROM	P#	TYPE SVRTRY	E X	RES	LOC ERROR			
03903	N N N 05/09/2016	WASHINGTON	1 14		INTER	CROSS	N	N CLR	S-1TURN	01	NONE	0	STRGHT				29		
NONE	N Mon 12P	SHERWOOD	MN 0	SW EDY RD	CN		TRF SIGNAL	N DRY	TURN	UNKN	NE SW					000	00		
No	45 21 59.71 -122 50 54.60	PORTLAND UA	15.35	SW PACIFIC HY 99W	01	0		N DAY	INJ	PSNGR CAR		01	DRVR NONE	38	M	OR-Y	042	000	29
			009100100S00			1											OR<25		
										02	NONE	0	TURN-R					000	00
										PRVTE	NE NW								
										PSNGR CAR		01	DRVR INJC	50	M	OR-Y	000	000	00
																	OR<25		
02520	N N N N N 05/19/2019	WASHINGTON	2 14		INTER	CROSS	N	N RAIN	ANGL-OTH	01	NONE	0	TURN-L				087	04,32	
CITY	N Sun 12A	SHERWOOD	MN 0	SW EDY RD	CN		TRF SIGNAL	N WET	TURN	PRVTE	NE SE						000	087	00
No	45 21 59.28 -122 50 54.04	PORTLAND UA	15.35	SW PACIFIC HY 99W	01	0		N DLIT	INJ	PSNGR CAR		01	DRVR INJC	56	M	OR-Y	020,052	000	04,32
			009100200S00			1											OR<25		
										02	NONE	0	STRGHT					000	00
										PRVTE	SE NW								
										PSNGR CAR		01	DRVR NONE	58	M	OR-Y	000	000	00
																	OR<25		
												02	PSNG INJC	60	F		000	000	00
01681	N N N N N 04/05/2018	WASHINGTON	2 14		INTER	CROSS	N	N CLD	ANGL-OTH	01	NONE	9	STRGHT					12	
CITY	N Thu 4P	SHERWOOD	MN 0	SW PACIFIC HY 99W	CN		TRF SIGNAL	N DRY	ANGL	N/A	SE NW						000	00	
No	45 21 59.28 -122 50 54.04	PORTLAND UA	15.35	N SHERWOOD BLVD	02	0		N DAY	PDO	PSNGR CAR		01	DRVR NONE	00	U	UNK	000	000	00
			009100200S00			1											UNK		
										02	NONE	9	STRGHT					000	00
										N/A	SW NE								
										PSNGR CAR		01	DRVR NONE	00	U	UNK	000	000	00
																	UNK		
06970	N N N 12/17/2018	WASHINGTON	1 14		INTER	CROSS	N	N CLR	S-1STOP	01	NONE	0	STRGHT					29	
NONE	N Mon 8P	SHERWOOD	FR 0	SW EDY RD	NW		TRF SIGNAL	N DRY	REAR	PRVTE	NW SE						000	00	
No	45 21 59.72 -122 50 54.62	PORTLAND UA	15.36	SW PACIFIC HY 99W	06	0		N DLIT	INJ	PSNGR CAR		01	DRVR NONE	28	M	OR-Y	026	000	29
			0091CT100S00			1											OR<25		
										02	NONE	0	STOP					011	00
										PRVTE	NW SE								
										PSNGR CAR		01	DRVR INJC	47	M	OR-Y	000	000	00
																	OR<25		

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
011	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
012	STP/L TRN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
014	EMR V PKD	EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNED ON RED AFTER STOPPING
017	LOSTCTRL	LOST CONTROL OF VEHICLE
018	EXIT DWY	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DWY	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED OR DISABLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSUING OR ATTEMPTING TO STOP A VEHICLE
031	PASSING	PASSING SITUATION
032	PRKOFFRD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
035	X W/ SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
036	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BTWN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY OR ALONG SHOULDER
046	W/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC
047	A/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD
052	MERGING	MERGING

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
055	SPRAY	BLINDED BY WATER SPRAY
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS SIG	DISREGARDED TRAFFIC SIGNAL
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
17	ILLNESS	PHYSICAL ILLNESS
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHIN
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHFT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
28	NM INATT	NON-MOTORIST INATTENTION
29	F AVOID	FAILED TO AVOID VEHICLE AHEAD
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (PER PAR)
33	RECKLESS	RECKLESS DRIVING (PER PAR)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)
40	VIEW OBS	VIEW OBSCURED
50	USED MDN	IMPROPER USE OF MEDIAN OR SHOULDER
51	FAIL LN	FAILED TO MAINTAIN LANE
52	OFF RD	RAN OFF ROAD

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PEDALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1 L-TURN	FROM OPPOSITE DIRECTION-ONE LEFT TURN,ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

DRIVER LICENSE CODE TRANSLATION LIST

LIC CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NOT LICENSED (HAD NEVER BEEN LICENSED)
1	OR-Y	VALID OREGON LICENSE
2	OTH-Y	VALID LICENSE, OTHER STATE OR COUNTRY
3	SUSP	SUSPENDED/REVOKED
4	EXP	EXPIRED
8	N-VAL	OTHER NON-VALID LICENSE
9	UNK	UNKNOWN IF DRIVER WAS LICENSED AT TIME OF CRASH

DRIVER RESIDENCE CODE TRANSLATION LIST

RES CODE	SHORT DESC	LONG DESCRIPTION
1	OR<25	OREGON RESIDENT WITHIN 25 MILE OF HOME
2	OR>25	OREGON RESIDENT 25 OR MORE MILES FROM HOME
3	OR-?	OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME
4	N-RES	NON-RESIDENT
9	UNK	UNKNOWN IF OREGON RESIDENT

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
000	NONE	NO ERROR
001	WIDE TRN	WIDE TURN
002	CUT CORN	CUT CORNER ON TURN
003	FAIL TRN	FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS
004	L IN TRF	LEFT TURN IN FRONT OF ONCOMING TRAFFIC
005	L PROHIB	LEFT TURN WHERE PROHIBITED
006	FRM WRNG	TURNE D FROM WRONG LANE
007	TO WRONG	TURNE D INTO WRONG LANE
008	ILLEG U	U-TURNE D ILLEGALLY
009	IMP STOP	IMPROPERLY STOPPE D IN TRAFFIC LANE
010	IMP SIG	IMPROPER SIGNAL OR FAILURE TO SIGNAL
011	IMP BACK	BACKING IMPROPERLY (NOT PARKING)
012	IMP PARK	IMPROPERLY PARKED
013	UNPARK	IMPROPER START LEAVING PARKED POSITION
014	IMP STRT	IMPROPER START FROM STOPPE D POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATTENT	INATTENTION (FAILURE TO DIM LIGHTS PRIOR TO 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING/EXITING PARKED POSITION W/ INSUFFICIENT CLEARANCE; OTHER IMPROPER PARKING MANEUVER
019	DIS DRIV	DISREGARDE D OTHER DRIVER'S SIGNAL
020	DIS SGNL	DISREGARDE D TRAFFIC SIGNAL
021	RAN STOP	DISREGARDE D STOP SIGN OR FLASHING RED
022	DIS SIGN	DISREGARDE D WARNING SIGN, FLARES OR FLASHING AMBER
023	DIS OFCR	DISREGARDE D POLICE OFFICER OR FLAGMAN
024	DIS EMER	DISREGARDE D SIREN OR WARNING OF EMERGENCY VEHICLE
025	DIS RR	DISREGARDE D RR SIGNAL, RR SIGN, OR RR FLAGMAN
026	REAR-END	FAILED TO AVOID STOPPE D OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS
027	BIKE ROW	DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST
028	NO ROW	DID NOT HAVE RIGHT-OF-WAY
029	PED ROW	FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN
030	PAS CURV	PASSING ON A CURVE
031	PAS WRNG	PASSING ON THE WRONG SIDE
032	PAS TANG	PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS
033	PAS X-WK	PASSE D VEHICLE STOPPE D AT CROSSWALK FOR PEDESTRIAN
034	PAS INTR	PASSING AT INTERSECTION
035	PAS HILL	PASSING ON CREST OF HILL
036	N/PAS ZN	PASSING IN "NO PASSING" ZONE
037	PAS TRAF	PASSING IN FRONT OF ONCOMING TRAFFIC
038	CUT-IN	CUTTING IN (TWO LANES - TWO WAY ONLY)
039	WRNGSIDE	DRIVING ON WRONG SIDE OF THE ROAD (2-WAY UNDIVIDE D ROADWAYS)

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS
042	F/SLO MV	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TOO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDL LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD
047	BASCRULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
050	SPEED	DRIVING IN EXCESS OF POSTED SPEED
051	RECKLESS	RECKLESS DRIVING (PER PAR)
052	CARELESS	CARELESS DRIVING (PER PAR)
053	RACING	SPEED RACING (PER PAR)
054	X N/SGNL	CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT
055	X W/SGNL	CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT
056	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
057	BTWN INT	CROSSING BETWEEN INTERSECTIONS
059	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
060	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
061	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
062	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
063	PLAYINRD	PLAYING IN STREET OR ROAD
064	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
065	WORK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAY ON RD	STANDING OR LYING IN ROADWAY
071	NM IMP USE	IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST
073	ELUDING	ELUDING / ATTEMPT TO ELUDE
079	F NEG CURV	FAILED TO NEGOTIATE A CURVE
080	FAIL LN	FAILED TO MAINTAIN LANE
081	OFF RD	RAN OFF ROAD
082	NO CLEAR	DRIVER MISJUDGED CLEARANCE
083	OVRSTEER	OVER-CORRECTING
084	NOT USED	CODE NOT IN USE
085	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
097	UNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
001	FEL/JUMP	OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE
002	INTERFER	PASSENGER INTERFERED WITH DRIVER
003	BUG INTF	ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER
004	INDRCT PED	PEDESTRIAN INDIRECTLY INVOLVED (NOT STRUCK)
005	SUB-PED	"SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	INDRCT BIK	PEDALCYCLIST INDIRECTLY INVOLVED (NOT STRUCK)
007	HITCHIKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOW	PASSENGER OR NON-MOTORIST BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON/OFF STOPPED/PARKED VEHICLE (OCCUPANTS ONLY; MUST HAVE PHYSICAL CONTACT W/ VEHICLE)
010	SUB OTRN	OVERTURNED AFTER FIRST HARMFUL EVENT
011	MV PUSHD	VEHICLE BEING PUSHED
012	MV TOWED	VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE
013	FORCED	VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN
014	SET MOTN	VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)
015	RR ROW	AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)
016	LT RL ROW	AT OR ON LIGHT-RAIL RIGHT-OF-WAY
017	RR HIT V	TRAIN STRUCK VEHICLE
018	V HIT RR	VEHICLE STRUCK TRAIN
019	HIT RR CAR	VEHICLE STRUCK RAILROAD CAR ON ROADWAY
020	JACKKNIFE	JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE
021	TRL OTRN	TRAILER OR TOWED VEHICLE OVERTURNED
022	CN BROKE	TRAILER CONNECTION BROKE
023	DETACH TRL	DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT
024	V DOOR OPN	VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE
025	WHEELOFF	WHEEL CAME OFF
026	HOOD UP	HOOD FLEW UP
028	LOAD SHIFT	LOST LOAD, LOAD MOVED OR SHIFTED
029	TIREFAIL	TIRE FAILURE
030	PET	PET: CAT, DOG AND SIMILAR
031	LVSTOCK	STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.
032	HORSE	HORSE, MULE, OR DONKEY
033	HRSE&RID	HORSE AND RIDER
034	GAME	WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)
035	DEER ELK	DEER OR ELK, WAPITI
036	ANML VEH	ANIMAL-DRAWN VEHICLE
037	CULVERT	CULVERT, OPEN LOW OR HIGH MANHOLE
038	ATENUATN	IMPACT ATTENUATOR
039	PK METER	PARKING METER
040	CURB	CURB (ALSO NARROW SIDEWALKS ON BRIDGES)
041	JIGGLE	JIGGLE BAR OR TRAFFIC SNAKE FOR CHANNELIZATION
042	GDRL END	LEADING EDGE OF GUARDRAIL
043	GARDRAIL	GUARD RAIL (NOT METAL MEDIAN BARRIER)
044	BARRIER	MEDIAN BARRIER (RAISED OR METAL)
045	WALL	RETAINING WALL OR TUNNEL WALL
046	BR RAIL	BRIDGE RAILING OR PARAPET (ON BRIDGE OR APPROACH)
047	BR ABUTMNT	BRIDGE ABUTMENT (INCLUDED "APPROACH END" THRU 2013)
048	BR COLMN	BRIDGE PILLAR OR COLUMN
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL BRIDGE STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	POLE UNK	POLE - TYPE UNKNOWN
053	POLE UTL	POLE - POWER OR TELEPHONE
054	ST LIGHT	POLE - STREET LIGHT ONLY
055	TRF SGNL	POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY
056	SGN BRDG	POLE - SIGN BRIDGE
057	STOPSIGN	STOP OR YIELD SIGN

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT
060	MARKER	DELINEATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, FALLEN OR FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
074	OVERHD OBJ	OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	LO-HI EDGE	LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ FRM MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTHR CRASH	CRASH RELATED TO ANOTHER SEPARATE CRASH
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
091	BUILDING	BUILDING OR OTHER STRUCTURE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE
093	CELL PHONE	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABR EDGE	ABRUPT EDGE
099	CELL WTNSD	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	FIXED OBJECT, UNKNOWN TYPE.
101	OTHER OBJ	NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE
102	TEXTING	TEXTING
103	WZ WORKER	WORK ZONE WORKER
104	ON VEHICLE	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
108	OFFICER	LAW ENFORCEMENT / POLICE OFFICER
109	SUB-BIKE	"SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
115	DSTRCT GPS	DISTRACTED BY NAVIGATION SYSTEM OR GPS DEVICE
116	DSTRCT OTH	DISTRACTED BY OTHER ELECTRONIC DEVICE
117	RR GATE	RAIL CROSSING DROP-ARM GATE
118	EXPNSN JNT	EXPANSION JOINT
119	JERSEY BAR	JERSEY BARRIER
120	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
121	FENCE	FENCE
123	OBJ IN VEH	LOOSE OBJECT IN VEHICLE STRUCK OCCUPANT
124	SLIPPERY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE (NOT GRAVEL)
125	SHLDR	SHOULDER GAVE WAY
126	BOULDER	ROCK(S), BOULDER (NOT GRAVEL; NOT ROCK SLIDE)
127	LAND SLIDE	ROCK SLIDE OR LAND SLIDE
128	CURVE INV	CURVE PRESENT AT CRASH LOCATION
129	HILL INV	VERTICAL GRADE / HILL PRESENT AT CRASH LOCATION
130	CURVE HID	VIEW OBSCURED BY CURVE
131	HILL HID	VIEW OBSCURED BY VERTICAL GRADE / HILL
132	WINDOW HID	VIEW OBSCURED BY VEHICLE WINDOW CONDITIONS
133	SPRAY HID	VIEW OBSCURED BY WATER SPRAY
134	TORRENTIAL	TORRENTIAL RAIN (EXCEPTIONALLY HEAVY RAIN)
135	RAIL OCC	INJURED OCCUPANT OF RAILWAY TRAIN, LIGHT RAIL, STREET CAR OR CABLE CAR

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN MAJOR COLLECTOR
18	URBAN MINOR COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINLINE STATE HIGHWAY
1	COUplet
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY (K)
2	INJA	SUSPECTED SERIOUS INJURY (A)
3	INJB	SUSPECTED MINOR INJURY (B)
4	INJC	POSSIBLE INJURY (C)
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE
9	NONE	NO APPARENT INJURY (O)

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DLIT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DAWN	DAWN (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSDMD	SOLID MEDIAN BARRIER
2	DIVMD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

MOVEMENT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	STRGHT	STRAIGHT AHEAD
2	TURN-R	TURNING RIGHT
3	TURN-L	TURNING LEFT
4	U-TURN	MAKING A U-TURN
5	BACK	BACKING
6	STOP	STOPPED IN TRAFFIC
7	PRKD-P	PARKED - PROPERLY
8	PRKD-I	PARKED - IMPROPERLY
9	PARKNG	PARKING MANEUVER

NON-MOTORIST LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH OR PARKING LANE
09	NOT-AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
13	AT INTERSECTION - IN BIKE LANE
14	NOT AT INTERSECTION - IN BIKE LANE
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
16	NOT AT INTERSECTION - IN PARKING LANE
18	OTHER, NOT IN ROADWAY
99	UNKNOWN LOCATION

ROAD CHARACTER CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	INTER	INTERSECTION
2	ALLEY	DRIVEWAY OR ALLEY
3	STRGHT	STRAIGHT ROADWAY
4	TRANS	TRANSITION
5	CURVE	CURVE (HORIZONTAL CURVE)
6	OPENAC	OPEN ACCESS OR TURNOUT
7	GRADE	GRADE (VERTICAL CURVE)
8	BRIDGE	BRIDGE STRUCTURE
9	TUNNEL	TUNNEL

PARTICIPANT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	OCC	UNKNOWN OCCUPANT TYPE
1	DRVR	DRIVER
2	PSNG	PASSENGER
3	PED	PEDESTRIAN
4	CONV	PEDESTRIAN USING A PEDESTRIAN CONVEYAL
5	PTOW	PEDESTRIAN TOWING OR TRAILERING AN OB
6	BIKE	PEDALCYCLIST
7	BTOW	PEDALCYCLIST TOWING OR TRAILERING AN (
8	PRKD	OCCUPANT OF A PARKED MOTOR VEHICLE
9	OTHR	OTHER TYPE OF NON-MOTORIST

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
000	NONE	NO CONTROL
001	TRF SIGNAL	TRAFFIC SIGNALS
002	FLASHBCN-R	FLASHING BEACON - RED (STOP)
003	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
004	STOP SIGN	STOP SIGN
005	SLOW SIGN	SLOW SIGN
006	REG-SIGN	REGULATORY SIGN
007	YIELD	YIELD SIGN
008	WARNING	WARNING SIGN
009	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFGR/FLAG	POLICE OFFICER, FLAGMAN - SCHOOL PATROL
012	BRDG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-ZN	NO PASSING ZONE
015	ONE-WAY	ONE-WAY STREET
016	CHANNEL	CHANNELIZATION
017	MEDIAN BAR	MEDIAN BARRIER
018	PILOT CAR	PILOT CAR
019	SP PED SIG	SPECIAL PEDESTRIAN SIGNAL
020	X-BUCK	CROSSBUCK
021	THR-GN-SIG	THROUGH GREEN ARROW OR SIGNAL
022	L-GRN-SIG	LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
023	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
024	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
025	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
026	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
028	SP RR STOP	SPECIAL RR STOP SIGN
029	ILUM GRD X	ILLUMINATED GRADE CROSSING
037	RAMP METER	METERED RAMPS
038	RUMBLE STR	RUMBLE STRIP
040	AUTO. FLAG	AUTOMATED FLAGGER ASSISTANCE DEVICE
090	L-TURN REF	LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)
091	R-TURN ALL	RIGHT TURN AT ALL TIMES SIGN, ETC.
092	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
093	ACCEL LANE	ACCELERATION OR DECELERATION LANES
094	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING
095	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS

VEHICLE TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
00	PDO	NOT COLLECTED FOR PDO CRASHES
01	PSNGR CAR	PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, SEATED MOTOR SCOOTER, MOTOR BIKE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE, DIRT BIKE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER (STANDING)
15	SNOWMOBILE	SNOWMOBILE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
011	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
012	STP/L TRN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
014	EMR V PKD	EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNED ON RED AFTER STOPPING
017	LOSTCTRL	LOST CONTROL OF VEHICLE
018	EXIT DWY	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DWY	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED OR DISABLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSUING OR ATTEMPTING TO STOP A VEHICLE
031	PASSING	PASSING SITUATION
032	PRKOFFRD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
035	X W/ SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
036	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BTWN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY OR ALONG SHOULDER
046	W/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC
047	A/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD
052	MERGING	MERGING

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
055	SPRAY	BLINDED BY WATER SPRAY
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS SIG	DISREGARDED TRAFFIC SIGNAL
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
17	ILLNESS	PHYSICAL ILLNESS
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHIN
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHFT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
28	NM INATT	NON-MOTORIST INATTENTION
29	F AVOID	FAILED TO AVOID VEHICLE AHEAD
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (PER PAR)
33	RECKLESS	RECKLESS DRIVING (PER PAR)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)
40	VIEW OBS	VIEW OBSCURED
50	USED MDN	IMPROPER USE OF MEDIAN OR SHOULDER
51	FAIL LN	FAILED TO MAINTAIN LANE
52	OFF RD	RAN OFF ROAD

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PEDALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1 L-TURN	FROM OPPOSITE DIRECTION-ONE LEFT TURN, ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

DRIVER LICENSE CODE TRANSLATION LIST

LIC CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NOT LICENSED (HAD NEVER BEEN LICENSED)
1	OR-Y	VALID OREGON LICENSE
2	OTH-Y	VALID LICENSE, OTHER STATE OR COUNTRY
3	SUSP	SUSPENDED/REVOKED
4	EXP	EXPIRED
8	N-VAL	OTHER NON-VALID LICENSE
9	UNK	UNKNOWN IF DRIVER WAS LICENSED AT TIME OF CRASH

DRIVER RESIDENCE CODE TRANSLATION LIST

RES CODE	SHORT DESC	LONG DESCRIPTION
1	OR<25	OREGON RESIDENT WITHIN 25 MILE OF HOME
2	OR>25	OREGON RESIDENT 25 OR MORE MILES FROM HOME
3	OR-?	OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME
4	N-RES	NON-RESIDENT
9	UNK	UNKNOWN IF OREGON RESIDENT

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
000	NONE	NO ERROR
001	WIDE TRN	WIDE TURN
002	CUT CORN	CUT CORNER ON TURN
003	FAIL TRN	FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS
004	L IN TRF	LEFT TURN IN FRONT OF ONCOMING TRAFFIC
005	L PROHIB	LEFT TURN WHERE PROHIBITED
006	FRM WRNG	TURNEED FROM WRONG LANE
007	TO WRONG	TURNEED INTO WRONG LANE
008	ILLEG U	U-TURNEED ILLEGALLY
009	IMP STOP	IMPROPERLY STOPPED IN TRAFFIC LANE
010	IMP SIG	IMPROPER SIGNAL OR FAILURE TO SIGNAL
011	IMP BACK	BACKING IMPROPERLY (NOT PARKING)
012	IMP PARK	IMPROPERLY PARKED
013	UNPARK	IMPROPER START LEAVING PARKED POSITION
014	IMP STRT	IMPROPER START FROM STOPPED POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATTENT	INATTENTION (FAILURE TO DIM LIGHTS PRIOR TO 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING/EXITING PARKED POSITION W/ INSUFFICIENT CLEARANCE; OTHER IMPROPER PARKING MANEUVER
019	DIS DRIV	DISREGARDED OTHER DRIVER'S SIGNAL
020	DIS SGNL	DISREGARDED TRAFFIC SIGNAL
021	RAN STOP	DISREGARDED STOP SIGN OR FLASHING RED
022	DIS SIGN	DISREGARDED WARNING SIGN, FLARES OR FLASHING AMBER
023	DIS OFCR	DISREGARDED POLICE OFFICER OR FLAGMAN
024	DIS EMER	DISREGARDED SIREN OR WARNING OF EMERGENCY VEHICLE
025	DIS RR	DISREGARDED RR SIGNAL, RR SIGN, OR RR FLAGMAN
026	REAR-END	FAILED TO AVOID STOPPED OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS
027	BIKE ROW	DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST
028	NO ROW	DID NOT HAVE RIGHT-OF-WAY
029	PED ROW	FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN
030	PAS CURV	PASSING ON A CURVE
031	PAS WRNG	PASSING ON THE WRONG SIDE
032	PAS TANG	PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS
033	PAS X-WK	PASSED VEHICLE STOPPED AT CROSSWALK FOR PEDESTRIAN
034	PAS INTR	PASSING AT INTERSECTION
035	PAS HILL	PASSING ON CREST OF HILL
036	N/PAS ZN	PASSING IN "NO PASSING" ZONE
037	PAS TRAF	PASSING IN FRONT OF ONCOMING TRAFFIC
038	CUT-IN	CUTTING IN (TWO LANES - TWO WAY ONLY)
039	WRNGSIDE	DRIVING ON WRONG SIDE OF THE ROAD (2-WAY UNDIVIDED ROADWAYS)

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS
042	F/SLO MV	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TOO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDL LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD
047	BASCRULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
050	SPEED	DRIVING IN EXCESS OF POSTED SPEED
051	RECKLESS	RECKLESS DRIVING (PER PAR)
052	CARELESS	CARELESS DRIVING (PER PAR)
053	RACING	SPEED RACING (PER PAR)
054	X N/SGNL	CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT
055	X W/SGNL	CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT
056	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
057	BTWN INT	CROSSING BETWEEN INTERSECTIONS
059	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
060	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
061	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
062	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
063	PLAYINRD	PLAYING IN STREET OR ROAD
064	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
065	WORK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAY ON RD	STANDING OR LYING IN ROADWAY
071	NM IMP USE	IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST
073	ELUDING	ELUDING / ATTEMPT TO ELUDE
079	F NEG CURV	FAILED TO NEGOTIATE A CURVE
080	FAIL LN	FAILED TO MAINTAIN LANE
081	OFF RD	RAN OFF ROAD
082	NO CLEAR	DRIVER MISJUDGED CLEARANCE
083	OVRSTEER	OVER-CORRECTING
084	NOT USED	CODE NOT IN USE
085	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
097	UNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
001	FEL/JUMP	OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE
002	INTERFER	PASSENGER INTERFERED WITH DRIVER
003	BUG INTF	ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER
004	INDRCT PED	PEDESTRIAN INDIRECTLY INVOLVED (NOT STRUCK)
005	SUB-PED	"SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	INDRCT BIK	PEDALCYCLIST INDIRECTLY INVOLVED (NOT STRUCK)
007	HITCHIKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOW	PASSENGER OR NON-MOTORIST BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON/OFF STOPPED/PARKED VEHICLE (OCCUPANTS ONLY; MUST HAVE PHYSICAL CONTACT W/ VEHICLE)
010	SUB OTRN	OVERTURNED AFTER FIRST HARMFUL EVENT
011	MV PUSHD	VEHICLE BEING PUSHED
012	MV TOWED	VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE
013	FORCED	VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN
014	SET MOTN	VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)
015	RR ROW	AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)
016	LT RL ROW	AT OR ON LIGHT-RAIL RIGHT-OF-WAY
017	RR HIT V	TRAIN STRUCK VEHICLE
018	V HIT RR	VEHICLE STRUCK TRAIN
019	HIT RR CAR	VEHICLE STRUCK RAILROAD CAR ON ROADWAY
020	JACKKNIFE	JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE
021	TRL OTRN	TRAILER OR TOWED VEHICLE OVERTURNED
022	CN BROKE	TRAILER CONNECTION BROKE
023	DETACH TRL	DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT
024	V DOOR OPN	VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE
025	WHEELOFF	WHEEL CAME OFF
026	HOOD UP	HOOD FLEW UP
028	LOAD SHIFT	LOST LOAD, LOAD MOVED OR SHIFTED
029	TIREFAIL	TIRE FAILURE
030	PET	PET: CAT, DOG AND SIMILAR
031	LVSTOCK	STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.
032	HORSE	HORSE, MULE, OR DONKEY
033	HRSE&RID	HORSE AND RIDER
034	GAME	WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)
035	DEER ELK	DEER OR ELK, WAPITI
036	ANML VEH	ANIMAL-DRAWN VEHICLE
037	CULVERT	CULVERT, OPEN LOW OR HIGH MANHOLE
038	ATENUATN	IMPACT ATTENUATOR
039	PK METER	PARKING METER
040	CURB	CURB (ALSO NARROW SIDEWALKS ON BRIDGES)
041	JIGGLE	JIGGLE BAR OR TRAFFIC SNAKE FOR CHANNELIZATION
042	GDRL END	LEADING EDGE OF GUARDRAIL
043	GARDRAIL	GUARD RAIL (NOT METAL MEDIAN BARRIER)
044	BARRIER	MEDIAN BARRIER (RAISED OR METAL)
045	WALL	RETAINING WALL OR TUNNEL WALL
046	BR RAIL	BRIDGE RAILING OR PARAPET (ON BRIDGE OR APPROACH)
047	BR ABUTMNT	BRIDGE ABUTMENT (INCLUDED "APPROACH END" THRU 2013)
048	BR COLMN	BRIDGE PILLAR OR COLUMN
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL BRIDGE STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	POLE UNK	POLE - TYPE UNKNOWN
053	POLE UTL	POLE - POWER OR TELEPHONE
054	ST LIGHT	POLE - STREET LIGHT ONLY
055	TRF SGNL	POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY
056	SGN BRDG	POLE - SIGN BRIDGE
057	STOPSIGN	STOP OR YIELD SIGN

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT
060	MARKER	DELINEATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, FALLEN OR FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
074	OVERHD OBJ	OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	LO-HI EDGE	LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ FRM MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTHR CRASH	CRASH RELATED TO ANOTHER SEPARATE CRASH
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
091	BUILDING	BUILDING OR OTHER STRUCTURE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE
093	CELL PHONE	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABR EDGE	ABRUPT EDGE
099	CELL WTNSD	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	FIXED OBJECT, UNKNOWN TYPE.
101	OTHER OBJ	NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE
102	TEXTING	TEXTING
103	WZ WORKER	WORK ZONE WORKER
104	ON VEHICLE	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
108	OFFICER	LAW ENFORCEMENT / POLICE OFFICER
109	SUB-BIKE	"SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
115	DSTRCT GPS	DISTRACTED BY NAVIGATION SYSTEM OR GPS DEVICE
116	DSTRCT OTH	DISTRACTED BY OTHER ELECTRONIC DEVICE
117	RR GATE	RAIL CROSSING DROP-ARM GATE
118	EXPNSN JNT	EXPANSION JOINT
119	JERSEY BAR	JERSEY BARRIER
120	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
121	FENCE	FENCE
123	OBJ IN VEH	LOOSE OBJECT IN VEHICLE STRUCK OCCUPANT
124	SLIPPERY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE (NOT GRAVEL)
125	SHLDR	SHOULDER GAVE WAY
126	BOULDER	ROCK(S), BOULDER (NOT GRAVEL; NOT ROCK SLIDE)
127	LAND SLIDE	ROCK SLIDE OR LAND SLIDE
128	CURVE INV	CURVE PRESENT AT CRASH LOCATION
129	HILL INV	VERTICAL GRADE / HILL PRESENT AT CRASH LOCATION
130	CURVE HID	VIEW OBSCURED BY CURVE
131	HILL HID	VIEW OBSCURED BY VERTICAL GRADE / HILL
132	WINDOW HID	VIEW OBSCURED BY VEHICLE WINDOW CONDITIONS
133	SPRAY HID	VIEW OBSCURED BY WATER SPRAY
134	TORRENTIAL	TORRENTIAL RAIN (EXCEPTIONALLY HEAVY RAIN)
135	RAIL OCC	INJURED OCCUPANT OF RAILWAY TRAIN, LIGHT RAIL, STREET CAR OR CABLE CAR

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN MAJOR COLLECTOR
18	URBAN MINOR COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINLINE STATE HIGHWAY
1	COUplet
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY (K)
2	INJA	SUSPECTED SERIOUS INJURY (A)
3	INJB	SUSPECTED MINOR INJURY (B)
4	INJC	POSSIBLE INJURY (C)
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE
9	NONE	NO APPARENT INJURY (O)

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DLIT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DAWN	DAWN (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSDMD	SOLID MEDIAN BARRIER
2	DIVMD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

MOVEMENT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	STRGHT	STRAIGHT AHEAD
2	TURN-R	TURNING RIGHT
3	TURN-L	TURNING LEFT
4	U-TURN	MAKING A U-TURN
5	BACK	BACKING
6	STOP	STOPPED IN TRAFFIC
7	PRKD-P	PARKED - PROPERLY
8	PRKD-I	PARKED - IMPROPERLY
9	PARKNG	PARKING MANEUVER

NON-MOTORIST LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH OR PARKING LANE
09	NOT-AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
13	AT INTERSECTION - IN BIKE LANE
14	NOT AT INTERSECTION - IN BIKE LANE
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
16	NOT AT INTERSECTION - IN PARKING LANE
18	OTHER, NOT IN ROADWAY
99	UNKNOWN LOCATION

ROAD CHARACTER CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	INTER	INTERSECTION
2	ALLEY	DRIVEWAY OR ALLEY
3	STRGHT	STRAIGHT ROADWAY
4	TRANS	TRANSITION
5	CURVE	CURVE (HORIZONTAL CURVE)
6	OPENAC	OPEN ACCESS OR TURNOUT
7	GRADE	GRADE (VERTICAL CURVE)
8	BRIDGE	BRIDGE STRUCTURE
9	TUNNEL	TUNNEL

PARTICIPANT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	OCC	UNKNOWN OCCUPANT TYPE
1	DRVR	DRIVER
2	PSNG	PASSENGER
3	PED	PEDESTRIAN
4	CONV	PEDESTRIAN USING A PEDESTRIAN CONVEYAL
5	PTOW	PEDESTRIAN TOWING OR TRAILERING AN OB
6	BIKE	PEDALCYCLIST
7	BTOW	PEDALCYCLIST TOWING OR TRAILERING AN (
8	PRKD	OCCUPANT OF A PARKED MOTOR VEHICLE
9	OTHR	OTHER TYPE OF NON-MOTORIST

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
000	NONE	NO CONTROL
001	TRF SIGNAL	TRAFFIC SIGNALS
002	FLASHBCN-R	FLASHING BEACON - RED (STOP)
003	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
004	STOP SIGN	STOP SIGN
005	SLOW SIGN	SLOW SIGN
006	REG-SIGN	REGULATORY SIGN
007	YIELD	YIELD SIGN
008	WARNING	WARNING SIGN
009	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFGR/FLAG	POLICE OFFICER, FLAGMAN - SCHOOL PATROL
012	BRDG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-ZN	NO PASSING ZONE
015	ONE-WAY	ONE-WAY STREET
016	CHANNEL	CHANNELIZATION
017	MEDIAN BAR	MEDIAN BARRIER
018	PILOT CAR	PILOT CAR
019	SP PED SIG	SPECIAL PEDESTRIAN SIGNAL
020	X-BUCK	CROSSBUCK
021	THR-GN-SIG	THROUGH GREEN ARROW OR SIGNAL
022	L-GRN-SIG	LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
023	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
024	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
025	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
026	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
028	SP RR STOP	SPECIAL RR STOP SIGN
029	ILUM GRD X	ILLUMINATED GRADE CROSSING
037	RAMP METER	METERED RAMPS
038	RUMBLE STR	RUMBLE STRIP
040	AUTO. FLAG	AUTOMATED FLAGGER ASSISTANCE DEVICE
090	L-TURN REF	LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)
091	R-TURN ALL	RIGHT TURN AT ALL TIMES SIGN, ETC.
092	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
093	ACCEL LANE	ACCELERATION OR DECELERATION LANES
094	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING
095	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS

VEHICLE TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
00	PDO	NOT COLLECTED FOR PDO CRASHES
01	PSNGR CAR	PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, SEATED MOTOR SCOOTER, MOTOR BIKE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE, DIRT BIKE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER (STANDING)
15	SNOWMOBILE	SNOWMOBILE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING

CITY OF SHERWOOD, WASHINGTON COUNTY
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Intersectional Crashes at SW Sherwood Blvd & SW Langer Dr in Sherwood, OR.
 January 1, 2016 through December 31, 2020

SER#	P E A / C O	G S W	DATE	FC	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	SPCL	MOVE	A S	PED	ACTN	EVENT	CAUSE			
INVEST	E L M H R	DAY/TIME			FIRST STREET	DIRECT	(MEDIAN)	TRAF-	RNDBT	SURF	COLL TYP	USE	FROM	G E	LICNS						
UNLOC?	D C J L K	LAT/LONG		DISTNC	SECOND STREET	LOCTN	#LANES)	CONTL	DRVWY	LIGHT	SVRTY	TRLR QTY	TO	P#	TYPE	INJ SVR	X RES	LOC ERROR			
01732	N N N	03/27/2017	16	16	SW LANGER DR	INTER	3-LEG	N	N CLR	S-STRGHT	01 NONE	9	STRGHT					27,29			
NONE	N	Mon 5P	0	0	N SHERWOOD BLVD	NE		TRF SIGNAL	N DRY	REAR	N/A		NE SW				000	00			
No	45 21 55.76	-122 50 49.13		1	1	06	0		N DAY	PDO	PSNGR CAR			01	DRVR	NONE	00 U UNK	000	000	00	
																			UNK		
																			000	000	00
																			000	000	00
03885	N N N	07/27/2018	16	16	SW LANGER DR	INTER	3-LEG	N	N CLR	S-1STOP	01 NONE	9	STRGHT					29			
NO RPT	N	Fri 10A	0	0	N SHERWOOD BLVD	NE		TRF SIGNAL	N DRY	REAR	N/A		NE SW				000	00			
No	45 21 55.76	-122 50 49.13		1	1	06	0		N DAY	PDO	PSNGR CAR			01	DRVR	NONE	00 U UNK	000	000	00	
																			UNK		
																			000	000	00
																			000	000	00
																			000	000	00
04148	N N N	06/24/2016	16	16	SW LANGER DR	INTER	3-LEG	N	N CLD	O-1STOP	01 NONE	9	BACK					10			
CITY	N	Fri 1P	0	0	N SHERWOOD BLVD	SE		TRF SIGNAL	N DRY	BACK	N/A		NW SE				000	00			
No	45 21 55.76	-122 50 49.13		1	1	06	0		N DAY	PDO	PSNGR CAR			01	DRVR	NONE	00 U UNK	000	000	00	
																			UNK		
																			000	000	00
																			011	000	00
																			000	000	00
05627	N N N N N	09/13/2017	16	16	SW LANGER DR	INTER	3-LEG	N	N CLR	S-1STOP	01 NONE	9	STRGHT					07			
CITY	N	Wed 1P	0	0	N SHERWOOD BLVD	SE		TRF SIGNAL	N DRY	REAR	N/A		SE NW				000	00			
No	45 21 55.76	-122 50 49.13		1	1	06	0		N DAY	PDO	PSNGR CAR			01	DRVR	NONE	00 U UNK	000	000	00	
																			UNK		
																			000	000	00
																			011	000	00
																			000	000	00
00769	N N N	02/03/2016	16	16	SW LANGER DR	INTER	3-LEG	N	Y RAIN	ANGL-STP	01 NONE	0	TURN-L					08			
NO RPT	N	Wed 12P	0	0	N SHERWOOD BLVD	SW		TRF SIGNAL	N WET	TURN		0	PRVTE	SE SW			019	00			
No	45 21 55.76	-122 50 49.13		1	1	06	0		Y DAY	INJ	PSNGR CAR			01	DRVR	NONE	31 F OR-Y	002	000	00	
																			OR<25		
																			000	000	00
																			012	000	00
																			000	000	00
																			OR<25		

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
011	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
012	STP/L TRN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
014	EMR V PKD	EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNED ON RED AFTER STOPPING
017	LOSTCTRL	LOST CONTROL OF VEHICLE
018	EXIT DWY	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DWY	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED OR DISABLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSUING OR ATTEMPTING TO STOP A VEHICLE
031	PASSING	PASSING SITUATION
032	PRKOFFRD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
035	X W/ SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
036	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BTWN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY OR ALONG SHOULDER
046	W/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC
047	A/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD
052	MERGING	MERGING

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
055	SPRAY	BLINDED BY WATER SPRAY
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS SIG	DISREGARDED TRAFFIC SIGNAL
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
17	ILLNESS	PHYSICAL ILLNESS
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHIN
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHFT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
28	NM INATT	NON-MOTORIST INATTENTION
29	F AVOID	FAILED TO AVOID VEHICLE AHEAD
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (PER PAR)
33	RECKLESS	RECKLESS DRIVING (PER PAR)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)
40	VIEW OBS	VIEW OBSCURED
50	USED MDN	IMPROPER USE OF MEDIAN OR SHOULDER
51	FAIL LN	FAILED TO MAINTAIN LANE
52	OFF RD	RAN OFF ROAD

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PEDALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1 L-TURN	FROM OPPOSITE DIRECTION-ONE LEFT TURN, ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

DRIVER LICENSE CODE TRANSLATION LIST

LIC CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NOT LICENSED (HAD NEVER BEEN LICENSED)
1	OR-Y	VALID OREGON LICENSE
2	OTH-Y	VALID LICENSE, OTHER STATE OR COUNTRY
3	SUSP	SUSPENDED/REVOKED
4	EXP	EXPIRED
8	N-VAL	OTHER NON-VALID LICENSE
9	UNK	UNKNOWN IF DRIVER WAS LICENSED AT TIME OF CRASH

DRIVER RESIDENCE CODE TRANSLATION LIST

RES CODE	SHORT DESC	LONG DESCRIPTION
1	OR<25	OREGON RESIDENT WITHIN 25 MILE OF HOME
2	OR>25	OREGON RESIDENT 25 OR MORE MILES FROM HOME
3	OR-?	OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME
4	N-RES	NON-RESIDENT
9	UNK	UNKNOWN IF OREGON RESIDENT

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
000	NONE	NO ERROR
001	WIDE TRN	WIDE TURN
002	CUT CORN	CUT CORNER ON TURN
003	FAIL TRN	FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS
004	L IN TRF	LEFT TURN IN FRONT OF ONCOMING TRAFFIC
005	L PROHIB	LEFT TURN WHERE PROHIBITED
006	FRM WRNG	TURNUED FROM WRONG LANE
007	TO WRONG	TURNUED INTO WRONG LANE
008	ILLEG U	U-TURNUED ILLEGALLY
009	IMP STOP	IMPROPERLY STOPPED IN TRAFFIC LANE
010	IMP SIG	IMPROPER SIGNAL OR FAILURE TO SIGNAL
011	IMP BACK	BACKING IMPROPERLY (NOT PARKING)
012	IMP PARK	IMPROPERLY PARKED
013	UNPARK	IMPROPER START LEAVING PARKED POSITION
014	IMP STRT	IMPROPER START FROM STOPPED POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATTENT	INATTENTION (FAILURE TO DIM LIGHTS PRIOR TO 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING/EXITING PARKED POSITION W/ INSUFFICIENT CLEARANCE; OTHER IMPROPER PARKING MANEUVER
019	DIS DRIV	DISREGARDED OTHER DRIVER'S SIGNAL
020	DIS SGNL	DISREGARDED TRAFFIC SIGNAL
021	RAN STOP	DISREGARDED STOP SIGN OR FLASHING RED
022	DIS SIGN	DISREGARDED WARNING SIGN, FLARES OR FLASHING AMBER
023	DIS OFCR	DISREGARDED POLICE OFFICER OR FLAGMAN
024	DIS EMER	DISREGARDED SIREN OR WARNING OF EMERGENCY VEHICLE
025	DIS RR	DISREGARDED RR SIGNAL, RR SIGN, OR RR FLAGMAN
026	REAR-END	FAILED TO AVOID STOPPED OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS
027	BIKE ROW	DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST
028	NO ROW	DID NOT HAVE RIGHT-OF-WAY
029	PED ROW	FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN
030	PAS CURV	PASSING ON A CURVE
031	PAS WRNG	PASSING ON THE WRONG SIDE
032	PAS TANG	PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS
033	PAS X-WK	PASSED VEHICLE STOPPED AT CROSSWALK FOR PEDESTRIAN
034	PAS INTR	PASSING AT INTERSECTION
035	PAS HILL	PASSING ON CREST OF HILL
036	N/PAS ZN	PASSING IN "NO PASSING" ZONE
037	PAS TRAF	PASSING IN FRONT OF ONCOMING TRAFFIC
038	CUT-IN	CUTTING IN (TWO LANES - TWO WAY ONLY)
039	WRNGSIDE	DRIVING ON WRONG SIDE OF THE ROAD (2-WAY UNDIVIDED ROADWAYS)

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS
042	F/SLO MV	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TOO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDL LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD
047	BASCRULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
050	SPEED	DRIVING IN EXCESS OF POSTED SPEED
051	RECKLESS	RECKLESS DRIVING (PER PAR)
052	CARELESS	CARELESS DRIVING (PER PAR)
053	RACING	SPEED RACING (PER PAR)
054	X N/SGNL	CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT
055	X W/SGNL	CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT
056	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
057	BTWN INT	CROSSING BETWEEN INTERSECTIONS
059	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
060	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
061	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
062	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
063	PLAYINRD	PLAYING IN STREET OR ROAD
064	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
065	WORK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAY ON RD	STANDING OR LYING IN ROADWAY
071	NM IMP USE	IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST
073	ELUDING	ELUDING / ATTEMPT TO ELUDE
079	F NEG CURV	FAILED TO NEGOTIATE A CURVE
080	FAIL LN	FAILED TO MAINTAIN LANE
081	OFF RD	RAN OFF ROAD
082	NO CLEAR	DRIVER MISJUDGED CLEARANCE
083	OVRSTEER	OVER-CORRECTING
084	NOT USED	CODE NOT IN USE
085	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
097	UNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
001	FEL/JUMP	OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE
002	INTERFER	PASSENGER INTERFERED WITH DRIVER
003	BUG INTF	ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER
004	INDRCT PED	PEDESTRIAN INDIRECTLY INVOLVED (NOT STRUCK)
005	SUB-PED	"SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	INDRCT BIK	PEDALCYCLIST INDIRECTLY INVOLVED (NOT STRUCK)
007	HITCHIKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOW	PASSENGER OR NON-MOTORIST BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON/OFF STOPPED/PARKED VEHICLE (OCCUPANTS ONLY; MUST HAVE PHYSICAL CONTACT W/ VEHICLE)
010	SUB OTRN	OVERTURNED AFTER FIRST HARMFUL EVENT
011	MV PUSHD	VEHICLE BEING PUSHED
012	MV TOWED	VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE
013	FORCED	VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN
014	SET MOTN	VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)
015	RR ROW	AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)
016	LT RL ROW	AT OR ON LIGHT-RAIL RIGHT-OF-WAY
017	RR HIT V	TRAIN STRUCK VEHICLE
018	V HIT RR	VEHICLE STRUCK TRAIN
019	HIT RR CAR	VEHICLE STRUCK RAILROAD CAR ON ROADWAY
020	JACKKNIFE	JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE
021	TRL OTRN	TRAILER OR TOWED VEHICLE OVERTURNED
022	CN BROKE	TRAILER CONNECTION BROKE
023	DETACH TRL	DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT
024	V DOOR OPN	VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE
025	WHEELOFF	WHEEL CAME OFF
026	HOOD UP	HOOD FLEW UP
028	LOAD SHIFT	LOST LOAD, LOAD MOVED OR SHIFTED
029	TIREFAIL	TIRE FAILURE
030	PET	PET: CAT, DOG AND SIMILAR
031	LVSTOCK	STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.
032	HORSE	HORSE, MULE, OR DONKEY
033	HRSE&RID	HORSE AND RIDER
034	GAME	WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)
035	DEER ELK	DEER OR ELK, WAPITI
036	ANML VEH	ANIMAL-DRAWN VEHICLE
037	CULVERT	CULVERT, OPEN LOW OR HIGH MANHOLE
038	ATENUATN	IMPACT ATTENUATOR
039	PK METER	PARKING METER
040	CURB	CURB (ALSO NARROW SIDEWALKS ON BRIDGES)
041	JIGGLE	JIGGLE BAR OR TRAFFIC SNAKE FOR CHANNELIZATION
042	GDRL END	LEADING EDGE OF GUARDRAIL
043	GARDRAIL	GUARD RAIL (NOT METAL MEDIAN BARRIER)
044	BARRIER	MEDIAN BARRIER (RAISED OR METAL)
045	WALL	RETAINING WALL OR TUNNEL WALL
046	BR RAIL	BRIDGE RAILING OR PARAPET (ON BRIDGE OR APPROACH)
047	BR ABUTMNT	BRIDGE ABUTMENT (INCLUDED "APPROACH END" THRU 2013)
048	BR COLMN	BRIDGE PILLAR OR COLUMN
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL BRIDGE STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	POLE UNK	POLE - TYPE UNKNOWN
053	POLE UTL	POLE - POWER OR TELEPHONE
054	ST LIGHT	POLE - STREET LIGHT ONLY
055	TRF SGNL	POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY
056	SGN BRDG	POLE - SIGN BRIDGE
057	STOPSIGN	STOP OR YIELD SIGN

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT
060	MARKER	DELINEATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, FALLEN OR FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
074	OVERHD OBJ	OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	LO-HI EDGE	LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ FRM MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTHR CRASH	CRASH RELATED TO ANOTHER SEPARATE CRASH
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
091	BUILDING	BUILDING OR OTHER STRUCTURE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE
093	CELL PHONE	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABR EDGE	ABRUPT EDGE
099	CELL WTNSD	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	FIXED OBJECT, UNKNOWN TYPE.
101	OTHER OBJ	NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE
102	TEXTING	TEXTING
103	WZ WORKER	WORK ZONE WORKER
104	ON VEHICLE	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
108	OFFICER	LAW ENFORCEMENT / POLICE OFFICER
109	SUB-BIKE	"SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
115	DSTRCT GPS	DISTRACTED BY NAVIGATION SYSTEM OR GPS DEVICE
116	DSTRCT OTH	DISTRACTED BY OTHER ELECTRONIC DEVICE
117	RR GATE	RAIL CROSSING DROP-ARM GATE
118	EXPNSN JNT	EXPANSION JOINT
119	JERSEY BAR	JERSEY BARRIER
120	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
121	FENCE	FENCE
123	OBJ IN VEH	LOOSE OBJECT IN VEHICLE STRUCK OCCUPANT
124	SLIPPERY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE (NOT GRAVEL)
125	SHLDR	SHOULDER GAVE WAY
126	BOULDER	ROCK(S), BOULDER (NOT GRAVEL; NOT ROCK SLIDE)
127	LAND SLIDE	ROCK SLIDE OR LAND SLIDE
128	CURVE INV	CURVE PRESENT AT CRASH LOCATION
129	HILL INV	VERTICAL GRADE / HILL PRESENT AT CRASH LOCATION
130	CURVE HID	VIEW OBSCURED BY CURVE
131	HILL HID	VIEW OBSCURED BY VERTICAL GRADE / HILL
132	WINDOW HID	VIEW OBSCURED BY VEHICLE WINDOW CONDITIONS
133	SPRAY HID	VIEW OBSCURED BY WATER SPRAY
134	TORRENTIAL	TORRENTIAL RAIN (EXCEPTIONALLY HEAVY RAIN)
135	RAIL OCC	INJURED OCCUPANT OF RAILWAY TRAIN, LIGHT RAIL, STREET CAR OR CABLE CAR

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN MAJOR COLLECTOR
18	URBAN MINOR COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINLINE STATE HIGHWAY
1	COUplet
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY (K)
2	INJA	SUSPECTED SERIOUS INJURY (A)
3	INJB	SUSPECTED MINOR INJURY (B)
4	INJC	POSSIBLE INJURY (C)
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE
9	NONE	NO APPARENT INJURY (O)

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DLIT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DAWN	DAWN (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSDMD	SOLID MEDIAN BARRIER
2	DIVMD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

MOVEMENT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	STRGHT	STRAIGHT AHEAD
2	TURN-R	TURNING RIGHT
3	TURN-L	TURNING LEFT
4	U-TURN	MAKING A U-TURN
5	BACK	BACKING
6	STOP	STOPPED IN TRAFFIC
7	PRKD-P	PARKED - PROPERLY
8	PRKD-I	PARKED - IMPROPERLY
9	PARKNG	PARKING MANEUVER

NON-MOTORIST LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH OR PARKING LANE
09	NOT-AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
13	AT INTERSECTION - IN BIKE LANE
14	NOT AT INTERSECTION - IN BIKE LANE
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
16	NOT AT INTERSECTION - IN PARKING LANE
18	OTHER, NOT IN ROADWAY
99	UNKNOWN LOCATION

ROAD CHARACTER CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	INTER	INTERSECTION
2	ALLEY	DRIVEWAY OR ALLEY
3	STRGHT	STRAIGHT ROADWAY
4	TRANS	TRANSITION
5	CURVE	CURVE (HORIZONTAL CURVE)
6	OPENAC	OPEN ACCESS OR TURNOUT
7	GRADE	GRADE (VERTICAL CURVE)
8	BRIDGE	BRIDGE STRUCTURE
9	TUNNEL	TUNNEL

PARTICIPANT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	OCC	UNKNOWN OCCUPANT TYPE
1	DRVR	DRIVER
2	PSNG	PASSENGER
3	PED	PEDESTRIAN
4	CONV	PEDESTRIAN USING A PEDESTRIAN CONVEYAL
5	PTOW	PEDESTRIAN TOWING OR TRAILERING AN OB
6	BIKE	PEDALCYCLIST
7	BTOW	PEDALCYCLIST TOWING OR TRAILERING AN (
8	PRKD	OCCUPANT OF A PARKED MOTOR VEHICLE
9	OTHR	OTHER TYPE OF NON-MOTORIST

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
000	NONE	NO CONTROL
001	TRF SIGNAL	TRAFFIC SIGNALS
002	FLASHBCN-R	FLASHING BEACON - RED (STOP)
003	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
004	STOP SIGN	STOP SIGN
005	SLOW SIGN	SLOW SIGN
006	REG-SIGN	REGULATORY SIGN
007	YIELD	YIELD SIGN
008	WARNING	WARNING SIGN
009	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFGR/FLAG	POLICE OFFICER, FLAGMAN - SCHOOL PATROL
012	BRDG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-ZN	NO PASSING ZONE
015	ONE-WAY	ONE-WAY STREET
016	CHANNEL	CHANNELIZATION
017	MEDIAN BAR	MEDIAN BARRIER
018	PILOT CAR	PILOT CAR
019	SP PED SIG	SPECIAL PEDESTRIAN SIGNAL
020	X-BUCK	CROSSBUCK
021	THR-GN-SIG	THROUGH GREEN ARROW OR SIGNAL
022	L-GRN-SIG	LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
023	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
024	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
025	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
026	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
028	SP RR STOP	SPECIAL RR STOP SIGN
029	ILUM GRD X	ILLUMINATED GRADE CROSSING
037	RAMP METER	METERED RAMPS
038	RUMBLE STR	RUMBLE STRIP
040	AUTO. FLAG	AUTOMATED FLAGGER ASSISTANCE DEVICE
090	L-TURN REF	LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)
091	R-TURN ALL	RIGHT TURN AT ALL TIMES SIGN, ETC.
092	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
093	ACCEL LANE	ACCELERATION OR DECELERATION LANES
094	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING
095	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS

VEHICLE TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
00	PDO	NOT COLLECTED FOR PDO CRASHES
01	PSNGR CAR	PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, SEATED MOTOR SCOOTER, MOTOR BIKE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE, DIRT BIKE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER (STANDING)
15	SNOWMOBILE	SNOWMOBILE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

091 PACIFIC HIGHWAY WEST Crashes on OR-99W, Pacific Hwy (#091), within 250 Ft NE of Intersection with SW Sherwood Blvd/SW Edy Rd in Sherwood, OR.
January 1, 2016 through December 31, 2020

Table with columns: SER#, INVEST, UNLOC?, E A / C O DATE, COUNTY, RD#, FC, CONN #, INT-TYP, CRASH TYP, SPCL USE, MOVE, PRTC INJ, A S, G E LICNS, PED, ACTN EVENT, CAUSE. Rows include crash details for various dates and locations like WASHINGTON and SHERWOOD.

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
011	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
012	STP/L TRN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
014	EMR V PKD	EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNED ON RED AFTER STOPPING
017	LOSTCTRL	LOST CONTROL OF VEHICLE
018	EXIT DWY	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DWY	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED OR DISABLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSUING OR ATTEMPTING TO STOP A VEHICLE
031	PASSING	PASSING SITUATION
032	PRKOFFRD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
035	X W/ SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
036	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BTWN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY OR ALONG SHOULDER
046	W/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC
047	A/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD
052	MERGING	MERGING

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
055	SPRAY	BLINDED BY WATER SPRAY
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS SIG	DISREGARDED TRAFFIC SIGNAL
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
17	ILLNESS	PHYSICAL ILLNESS
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHIN
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHFT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
28	NM INATT	NON-MOTORIST INATTENTION
29	F AVOID	FAILED TO AVOID VEHICLE AHEAD
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (PER PAR)
33	RECKLESS	RECKLESS DRIVING (PER PAR)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)
40	VIEW OBS	VIEW OBSCURED
50	USED MDN	IMPROPER USE OF MEDIAN OR SHOULDER
51	FAIL LN	FAILED TO MAINTAIN LANE
52	OFF RD	RAN OFF ROAD

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PEDALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1 L-TURN	FROM OPPOSITE DIRECTION-ONE LEFT TURN, ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

DRIVER LICENSE CODE TRANSLATION LIST

LIC CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NOT LICENSED (HAD NEVER BEEN LICENSED)
1	OR-Y	VALID OREGON LICENSE
2	OTH-Y	VALID LICENSE, OTHER STATE OR COUNTRY
3	SUSP	SUSPENDED/REVOKED
4	EXP	EXPIRED
8	N-VAL	OTHER NON-VALID LICENSE
9	UNK	UNKNOWN IF DRIVER WAS LICENSED AT TIME OF CRASH

DRIVER RESIDENCE CODE TRANSLATION LIST

RES CODE	SHORT DESC	LONG DESCRIPTION
1	OR<25	OREGON RESIDENT WITHIN 25 MILE OF HOME
2	OR>25	OREGON RESIDENT 25 OR MORE MILES FROM HOME
3	OR-?	OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME
4	N-RES	NON-RESIDENT
9	UNK	UNKNOWN IF OREGON RESIDENT

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
000	NONE	NO ERROR
001	WIDE TRN	WIDE TURN
002	CUT CORN	CUT CORNER ON TURN
003	FAIL TRN	FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS
004	L IN TRF	LEFT TURN IN FRONT OF ONCOMING TRAFFIC
005	L PROHIB	LEFT TURN WHERE PROHIBITED
006	FRM WRNG	TURNUED FROM WRONG LANE
007	TO WRONG	TURNUED INTO WRONG LANE
008	ILLEG U	U-TURNUED ILLEGALLY
009	IMP STOP	IMPROPERLY STOPPED IN TRAFFIC LANE
010	IMP SIG	IMPROPER SIGNAL OR FAILURE TO SIGNAL
011	IMP BACK	BACKING IMPROPERLY (NOT PARKING)
012	IMP PARK	IMPROPERLY PARKED
013	UNPARK	IMPROPER START LEAVING PARKED POSITION
014	IMP STRT	IMPROPER START FROM STOPPED POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATTENT	INATTENTION (FAILURE TO DIM LIGHTS PRIOR TO 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING/EXITING PARKED POSITION W/ INSUFFICIENT CLEARANCE; OTHER IMPROPER PARKING MANEUVER
019	DIS DRIV	DISREGARDED OTHER DRIVER'S SIGNAL
020	DIS SGNL	DISREGARDED TRAFFIC SIGNAL
021	RAN STOP	DISREGARDED STOP SIGN OR FLASHING RED
022	DIS SIGN	DISREGARDED WARNING SIGN, FLARES OR FLASHING AMBER
023	DIS OFCR	DISREGARDED POLICE OFFICER OR FLAGMAN
024	DIS EMER	DISREGARDED SIREN OR WARNING OF EMERGENCY VEHICLE
025	DIS RR	DISREGARDED RR SIGNAL, RR SIGN, OR RR FLAGMAN
026	REAR-END	FAILED TO AVOID STOPPED OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS
027	BIKE ROW	DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST
028	NO ROW	DID NOT HAVE RIGHT-OF-WAY
029	PED ROW	FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN
030	PAS CURV	PASSING ON A CURVE
031	PAS WRNG	PASSING ON THE WRONG SIDE
032	PAS TANG	PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS
033	PAS X-WK	PASSED VEHICLE STOPPED AT CROSSWALK FOR PEDESTRIAN
034	PAS INTR	PASSING AT INTERSECTION
035	PAS HILL	PASSING ON CREST OF HILL
036	N/PAS ZN	PASSING IN "NO PASSING" ZONE
037	PAS TRAF	PASSING IN FRONT OF ONCOMING TRAFFIC
038	CUT-IN	CUTTING IN (TWO LANES - TWO WAY ONLY)
039	WRNGSIDE	DRIVING ON WRONG SIDE OF THE ROAD (2-WAY UNDIVIDED ROADWAYS)

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS
042	F/SLO MV	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TOO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDL LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD
047	BASCRULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
050	SPEED	DRIVING IN EXCESS OF POSTED SPEED
051	RECKLESS	RECKLESS DRIVING (PER PAR)
052	CARELESS	CARELESS DRIVING (PER PAR)
053	RACING	SPEED RACING (PER PAR)
054	X N/SGNL	CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT
055	X W/SGNL	CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT
056	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
057	BTWN INT	CROSSING BETWEEN INTERSECTIONS
059	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
060	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
061	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
062	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
063	PLAYINRD	PLAYING IN STREET OR ROAD
064	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
065	WORK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAY ON RD	STANDING OR LYING IN ROADWAY
071	NM IMP USE	IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST
073	ELUDING	ELUDING / ATTEMPT TO ELUDE
079	F NEG CURV	FAILED TO NEGOTIATE A CURVE
080	FAIL LN	FAILED TO MAINTAIN LANE
081	OFF RD	RAN OFF ROAD
082	NO CLEAR	DRIVER MISJUDGED CLEARANCE
083	OVRSTEER	OVER-CORRECTING
084	NOT USED	CODE NOT IN USE
085	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
097	UNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
001	FEL/JUMP	OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE
002	INTERFER	PASSENGER INTERFERED WITH DRIVER
003	BUG INTF	ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER
004	INDRCT PED	PEDESTRIAN INDIRECTLY INVOLVED (NOT STRUCK)
005	SUB-PED	"SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	INDRCT BIK	PEDALCYCLIST INDIRECTLY INVOLVED (NOT STRUCK)
007	HITCHIKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOW	PASSENGER OR NON-MOTORIST BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON/OFF STOPPED/PARKED VEHICLE (OCCUPANTS ONLY; MUST HAVE PHYSICAL CONTACT W/ VEHICLE)
010	SUB OTRN	OVERTURNED AFTER FIRST HARMFUL EVENT
011	MV PUSHD	VEHICLE BEING PUSHED
012	MV TOWED	VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE
013	FORCED	VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN
014	SET MOTN	VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)
015	RR ROW	AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)
016	LT RL ROW	AT OR ON LIGHT-RAIL RIGHT-OF-WAY
017	RR HIT V	TRAIN STRUCK VEHICLE
018	V HIT RR	VEHICLE STRUCK TRAIN
019	HIT RR CAR	VEHICLE STRUCK RAILROAD CAR ON ROADWAY
020	JACKKNIFE	JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE
021	TRL OTRN	TRAILER OR TOWED VEHICLE OVERTURNED
022	CN BROKE	TRAILER CONNECTION BROKE
023	DETACH TRL	DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT
024	V DOOR OPN	VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE
025	WHEELOFF	WHEEL CAME OFF
026	HOOD UP	HOOD FLEW UP
028	LOAD SHIFT	LOST LOAD, LOAD MOVED OR SHIFTED
029	TIREFAIL	TIRE FAILURE
030	PET	PET: CAT, DOG AND SIMILAR
031	LVSTOCK	STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.
032	HORSE	HORSE, MULE, OR DONKEY
033	HRSE&RID	HORSE AND RIDER
034	GAME	WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)
035	DEER ELK	DEER OR ELK, WAPITI
036	ANML VEH	ANIMAL-DRAWN VEHICLE
037	CULVERT	CULVERT, OPEN LOW OR HIGH MANHOLE
038	ATENUATN	IMPACT ATTENUATOR
039	PK METER	PARKING METER
040	CURB	CURB (ALSO NARROW SIDEWALKS ON BRIDGES)
041	JIGGLE	JIGGLE BAR OR TRAFFIC SNAKE FOR CHANNELIZATION
042	GDRL END	LEADING EDGE OF GUARDRAIL
043	GARDRAIL	GUARD RAIL (NOT METAL MEDIAN BARRIER)
044	BARRIER	MEDIAN BARRIER (RAISED OR METAL)
045	WALL	RETAINING WALL OR TUNNEL WALL
046	BR RAIL	BRIDGE RAILING OR PARAPET (ON BRIDGE OR APPROACH)
047	BR ABUTMNT	BRIDGE ABUTMENT (INCLUDED "APPROACH END" THRU 2013)
048	BR COLMN	BRIDGE PILLAR OR COLUMN
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL BRIDGE STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	POLE UNK	POLE - TYPE UNKNOWN
053	POLE UTL	POLE - POWER OR TELEPHONE
054	ST LIGHT	POLE - STREET LIGHT ONLY
055	TRF SGNL	POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY
056	SGN BRDG	POLE - SIGN BRIDGE
057	STOPSIGN	STOP OR YIELD SIGN

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT
060	MARKER	DELINEATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, FALLEN OR FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
074	OVERHD OBJ	OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	LO-HI EDGE	LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ FRM MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTHR CRASH	CRASH RELATED TO ANOTHER SEPARATE CRASH
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
091	BUILDING	BUILDING OR OTHER STRUCTURE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE
093	CELL PHONE	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABR EDGE	ABRUPT EDGE
099	CELL WTNSD	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	FIXED OBJECT, UNKNOWN TYPE.
101	OTHER OBJ	NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE
102	TEXTING	TEXTING
103	WZ WORKER	WORK ZONE WORKER
104	ON VEHICLE	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
108	OFFICER	LAW ENFORCEMENT / POLICE OFFICER
109	SUB-BIKE	"SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
115	DSTRCT GPS	DISTRACTED BY NAVIGATION SYSTEM OR GPS DEVICE
116	DSTRCT OTH	DISTRACTED BY OTHER ELECTRONIC DEVICE
117	RR GATE	RAIL CROSSING DROP-ARM GATE
118	EXPNSN JNT	EXPANSION JOINT
119	JERSEY BAR	JERSEY BARRIER
120	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
121	FENCE	FENCE
123	OBJ IN VEH	LOOSE OBJECT IN VEHICLE STRUCK OCCUPANT
124	SLIPPERY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE (NOT GRAVEL)
125	SHLDR	SHOULDER GAVE WAY
126	BOULDER	ROCK(S), BOULDER (NOT GRAVEL; NOT ROCK SLIDE)
127	LAND SLIDE	ROCK SLIDE OR LAND SLIDE
128	CURVE INV	CURVE PRESENT AT CRASH LOCATION
129	HILL INV	VERTICAL GRADE / HILL PRESENT AT CRASH LOCATION
130	CURVE HID	VIEW OBSCURED BY CURVE
131	HILL HID	VIEW OBSCURED BY VERTICAL GRADE / HILL
132	WINDOW HID	VIEW OBSCURED BY VEHICLE WINDOW CONDITIONS
133	SPRAY HID	VIEW OBSCURED BY WATER SPRAY
134	TORRENTIAL	TORRENTIAL RAIN (EXCEPTIONALLY HEAVY RAIN)
135	RAIL OCC	INJURED OCCUPANT OF RAILWAY TRAIN, LIGHT RAIL, STREET CAR OR CABLE CAR

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN MAJOR COLLECTOR
18	URBAN MINOR COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINLINE STATE HIGHWAY
1	COUplet
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY (K)
2	INJA	SUSPECTED SERIOUS INJURY (A)
3	INJB	SUSPECTED MINOR INJURY (B)
4	INJC	POSSIBLE INJURY (C)
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE
9	NONE	NO APPARENT INJURY (O)

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DLIT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DAWN	DAWN (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSDMD	SOLID MEDIAN BARRIER
2	DIVMD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

MOVEMENT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	STRGHT	STRAIGHT AHEAD
2	TURN-R	TURNING RIGHT
3	TURN-L	TURNING LEFT
4	U-TURN	MAKING A U-TURN
5	BACK	BACKING
6	STOP	STOPPED IN TRAFFIC
7	PRKD-P	PARKED - PROPERLY
8	PRKD-I	PARKED - IMPROPERLY
9	PARKNG	PARKING MANEUVER

NON-MOTORIST LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH OR PARKING LANE
09	NOT-AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
13	AT INTERSECTION - IN BIKE LANE
14	NOT AT INTERSECTION - IN BIKE LANE
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
16	NOT AT INTERSECTION - IN PARKING LANE
18	OTHER, NOT IN ROADWAY
99	UNKNOWN LOCATION

ROAD CHARACTER CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	INTER	INTERSECTION
2	ALLEY	DRIVEWAY OR ALLEY
3	STRGHT	STRAIGHT ROADWAY
4	TRANS	TRANSITION
5	CURVE	CURVE (HORIZONTAL CURVE)
6	OPENAC	OPEN ACCESS OR TURNOUT
7	GRADE	GRADE (VERTICAL CURVE)
8	BRIDGE	BRIDGE STRUCTURE
9	TUNNEL	TUNNEL

PARTICIPANT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	OCC	UNKNOWN OCCUPANT TYPE
1	DRVR	DRIVER
2	PSNG	PASSENGER
3	PED	PEDESTRIAN
4	CONV	PEDESTRIAN USING A PEDESTRIAN CONVEYAL
5	PTOW	PEDESTRIAN TOWING OR TRAILERING AN OB
6	BIKE	PEDALCYCLIST
7	BTOW	PEDALCYCLIST TOWING OR TRAILERING AN (
8	PRKD	OCCUPANT OF A PARKED MOTOR VEHICLE
9	OTHR	OTHER TYPE OF NON-MOTORIST

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
000	NONE	NO CONTROL
001	TRF SIGNAL	TRAFFIC SIGNALS
002	FLASHBCN-R	FLASHING BEACON - RED (STOP)
003	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
004	STOP SIGN	STOP SIGN
005	SLOW SIGN	SLOW SIGN
006	REG-SIGN	REGULATORY SIGN
007	YIELD	YIELD SIGN
008	WARNING	WARNING SIGN
009	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFGR/FLAG	POLICE OFFICER, FLAGMAN - SCHOOL PATROL
012	BRDG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-ZN	NO PASSING ZONE
015	ONE-WAY	ONE-WAY STREET
016	CHANNEL	CHANNELIZATION
017	MEDIAN BAR	MEDIAN BARRIER
018	PILOT CAR	PILOT CAR
019	SP PED SIG	SPECIAL PEDESTRIAN SIGNAL
020	X-BUCK	CROSSBUCK
021	THR-GN-SIG	THROUGH GREEN ARROW OR SIGNAL
022	L-GRN-SIG	LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
023	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
024	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
025	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
026	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
028	SP RR STOP	SPECIAL RR STOP SIGN
029	ILUM GRD X	ILLUMINATED GRADE CROSSING
037	RAMP METER	METERED RAMPS
038	RUMBLE STR	RUMBLE STRIP
040	AUTO. FLAG	AUTOMATED FLAGGER ASSISTANCE DEVICE
090	L-TURN REF	LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)
091	R-TURN ALL	RIGHT TURN AT ALL TIMES SIGN, ETC.
092	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
093	ACCEL LANE	ACCELERATION OR DECELERATION LANES
094	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING
095	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS

VEHICLE TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
00	PDO	NOT COLLECTED FOR PDO CRASHES
01	PSNGR CAR	PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, SEATED MOTOR SCOOTER, MOTOR BIKE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE, DIRT BIKE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER (STANDING)
15	SNOWMOBILE	SNOWMOBILE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

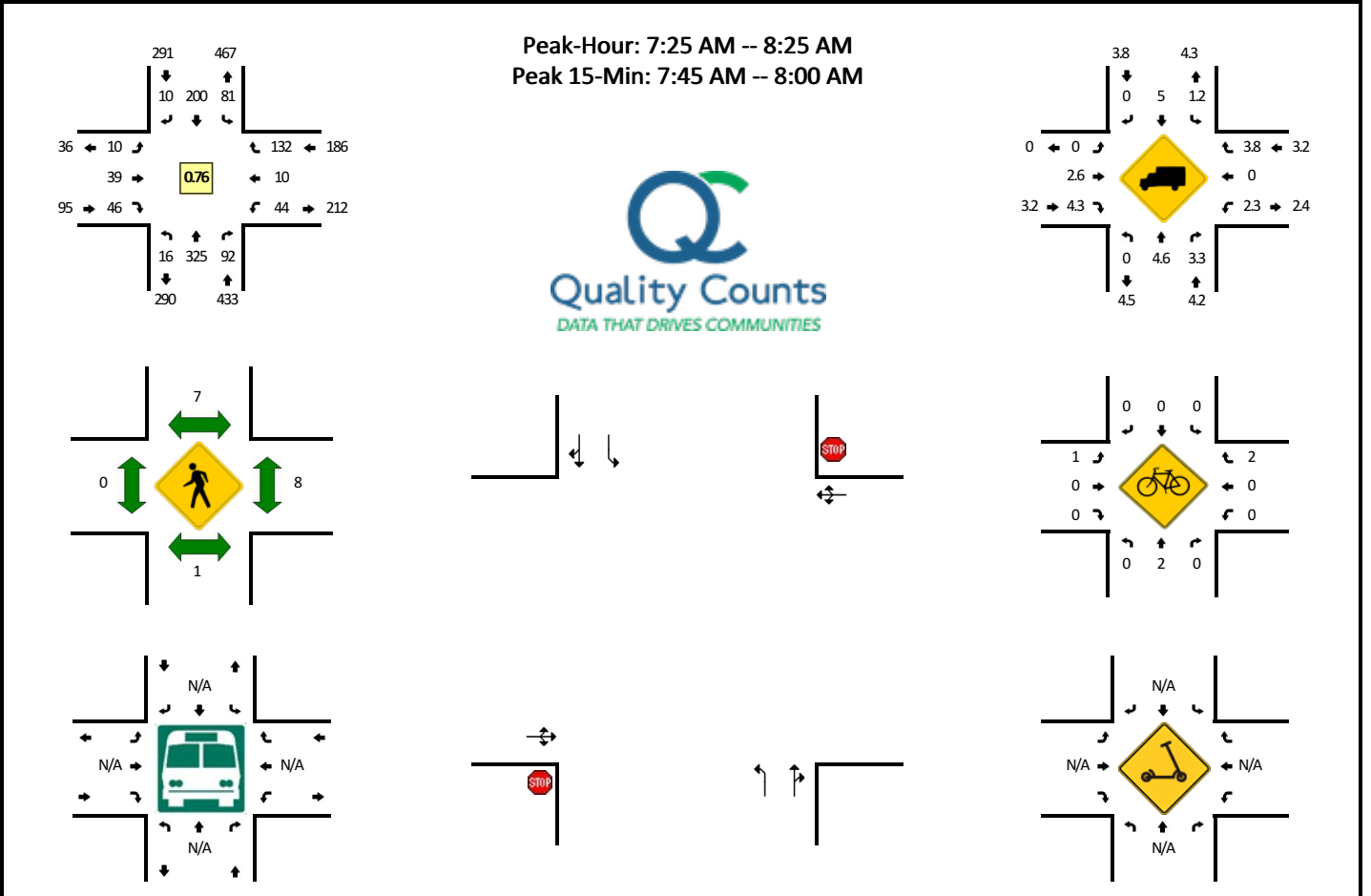
WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH

Appendix B
Traffic Count Data

LOCATION: Sherwood Blvd -- SW 12th St/SW Century Dr
CITY/STATE: Sherwood, OR

QC JOB #: 15970011
DATE: Wed, Oct 5 2022



5-Min Count Period Beginning At	Sherwood Blvd (Northbound)				Sherwood Blvd (Southbound)				SW 12th St/SW Century Dr (Eastbound)				SW 12th St/SW Century Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	1	4	1	0	3	2	0	0	1	0	0	0	0	0	5	0	17	
6:05 AM	0	7	0	0	3	4	0	0	1	2	1	0	1	1	4	0	24	
6:10 AM	0	6	0	0	3	5	0	0	2	2	0	0	0	0	4	0	22	
6:15 AM	0	3	1	0	6	3	1	0	0	1	0	0	0	1	2	0	18	
6:20 AM	0	9	1	0	5	4	0	0	1	4	0	0	0	0	6	0	30	
6:25 AM	0	9	0	0	3	4	1	0	1	1	0	0	0	0	1	0	20	
6:30 AM	0	4	0	0	3	2	0	0	1	0	0	0	0	0	6	0	16	
6:35 AM	0	9	0	0	1	8	1	0	2	0	0	0	1	0	5	0	27	
6:40 AM	0	9	1	0	4	4	0	0	1	0	0	0	0	0	8	0	27	
6:45 AM	0	9	1	0	6	5	0	0	2	5	0	0	0	1	4	0	33	
6:50 AM	0	22	1	0	2	9	0	0	1	5	0	0	0	0	6	0	46	
6:55 AM	1	10	1	0	2	7	1	0	0	1	0	0	0	0	6	0	29	309
7:00 AM	2	7	0	0	5	5	2	0	0	1	1	0	2	1	2	0	28	320
7:05 AM	0	12	1	0	5	13	1	0	1	2	2	0	1	0	3	0	41	337
7:10 AM	1	19	0	0	5	12	2	0	0	1	1	0	1	1	7	0	50	365
7:15 AM	1	15	3	0	4	8	0	0	1	3	4	0	1	0	5	0	45	392
7:20 AM	1	14	3	0	4	16	1	0	0	5	4	0	2	0	5	0	55	417
7:25 AM	0	20	2	0	7	19	1	0	2	1	5	0	1	2	4	0	64	461
7:30 AM	1	15	3	0	6	12	0	0	1	4	2	0	2	0	12	0	58	503
7:35 AM	0	17	3	0	6	10	1	0	0	4	3	0	3	3	7	0	57	533
7:40 AM	0	27	10	0	8	18	1	0	1	5	5	0	8	1	11	0	95	601
7:45 AM	1	34	16	0	7	21	2	0	1	3	9	0	12	0	19	0	125	693
7:50 AM	2	33	19	0	7	13	2	0	2	2	5	0	4	0	11	0	100	747
7:55 AM	2	39	14	0	10	16	0	0	0	5	6	0	1	0	11	0	104	822
8:00 AM	2	29	6	0	8	21	2	0	1	4	3	0	2	1	12	0	91	885
8:05 AM	1	27	1	0	8	18	0	0	0	3	4	0	1	2	13	0	78	922
8:10 AM	3	25	5	0	5	21	0	0	0	7	0	0	4	0	18	0	88	960
8:15 AM	3	26	7	0	5	15	0	0	0	1	3	0	2	1	6	0	69	984
8:20 AM	1	33	6	0	4	16	1	0	2	0	1	0	4	0	8	0	76	1005
8:25 AM	0	17	3	0	8	12	1	0	2	3	1	0	5	0	8	0	60	1001
8:30 AM	1	19	5	0	3	17	1	0	1	3	1	0	1	0	5	0	57	1000
8:35 AM	0	22	0	0	11	6	0	0	0	5	1	0	0	0	4	0	49	992
8:40 AM	1	10	1	0	6	12	1	0	0	3	0	0	0	0	4	0	38	935
8:45 AM	0	15	0	0	6	8	1	0	1	0	1	0	1	1	5	0	39	849
8:50 AM	1	13	1	0	6	10	0	0	1	5	2	0	1	0	10	0	50	799
8:55 AM	0	28	1	0	5	15	0	0	1	1	2	0	1	0	7	0	61	756

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	424	196	0	96	200	16	0	12	40	80	0	68	0	164	0	1316
Heavy Trucks	0	12	4		4	8	0		0	0	0		0	0	4		32
Buses																	
Pedestrians		4				16				0				4			24
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scoters																	

Comments:

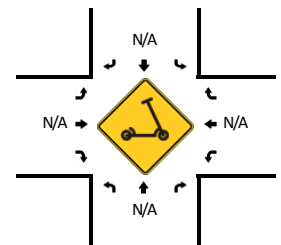
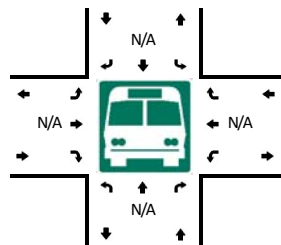
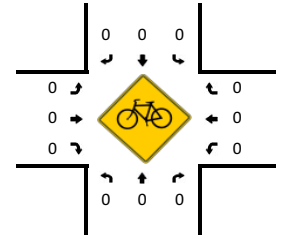
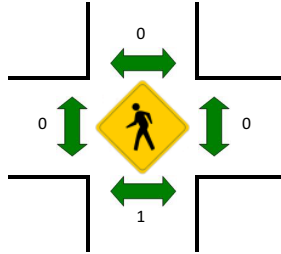
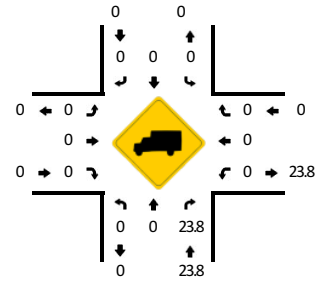
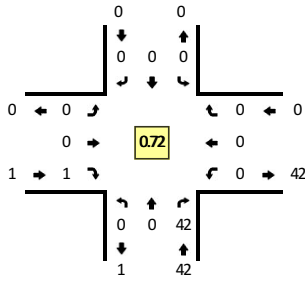
Report generated on 11/25/2022 4:52 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Chevron Dwy (east) -- 99W
CITY/STATE: Sherwood, OR

QC JOB #: 15970003
DATE: Wed, Oct 5 2022

Peak-Hour: 7:25 AM -- 8:25 AM
 Peak 15-Min: 7:25 AM -- 7:40 AM



5-Min Count Period Beginning At	Chevron Dwy (east) (Northbound)				Chevron Dwy (east) (Southbound)				99W (Eastbound)				99W (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
6:05 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
6:10 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
6:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
6:20 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
6:25 AM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
6:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
6:35 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
6:40 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
6:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
6:50 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
6:55 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	37
7:05 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	35
7:10 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	33
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
7:20 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	35
7:25 AM	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	4	31
7:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	33
7:35 AM	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	35
7:40 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	35
7:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	34
7:50 AM	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	36
7:55 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	35
8:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	36
8:05 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	39
8:10 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	36
8:15 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	41
8:20 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	43
8:25 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	42
8:30 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	43
8:35 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	39
8:40 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	41
8:45 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	43
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
8:55 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	37

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	56	0	0	0	0	0	0	0	4	0	0	0	0	0	60
Heavy Trucks	0	0	24		0	0	0		0	0	0		0	0	0		24
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

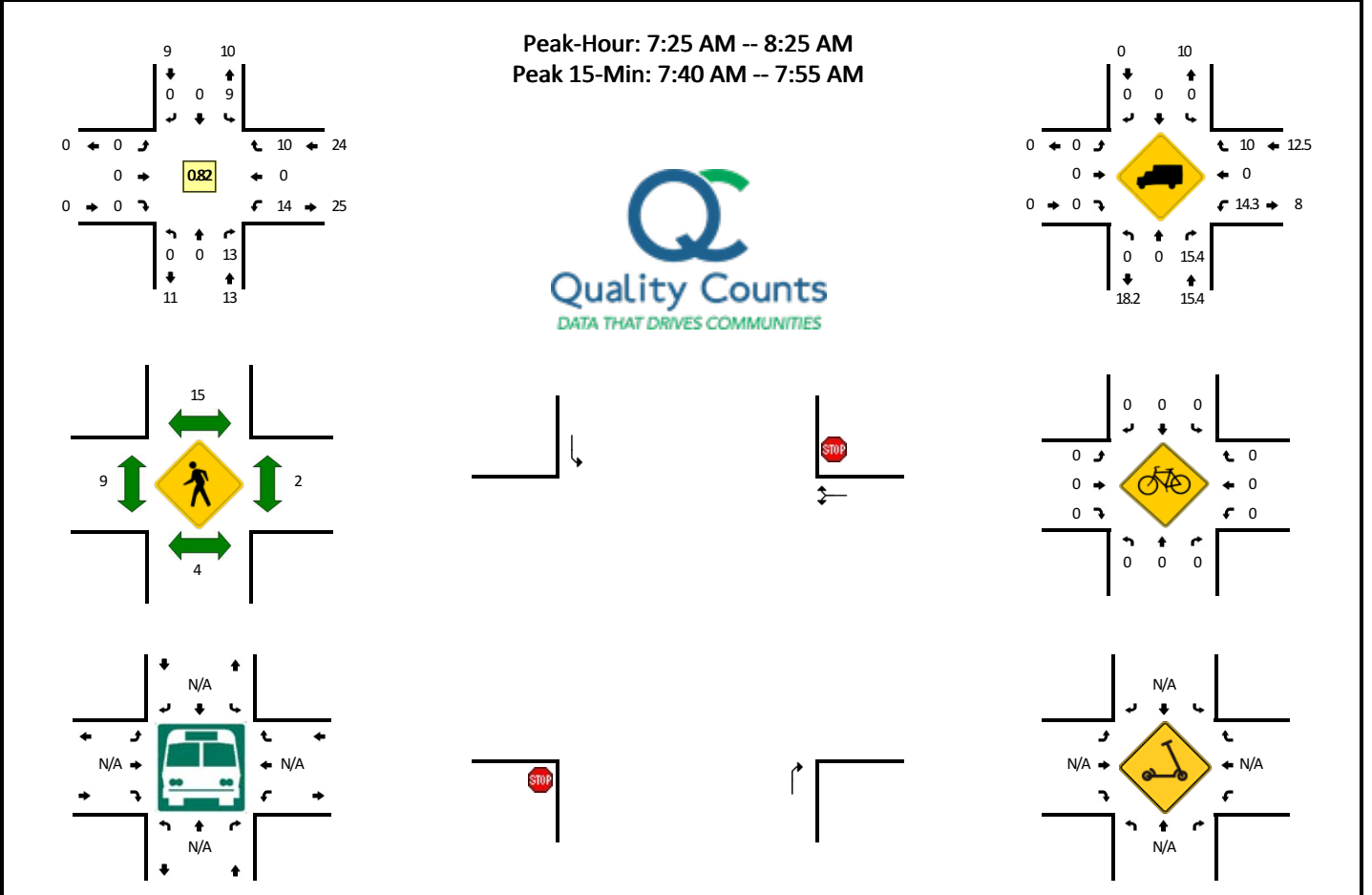
Comments:

Report generated on 11/25/2022 4:52 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Chevron Dwy (west) -- Chevron Dwy (east)
CITY/STATE: Sherwood, OR

QC JOB #: 15970005
DATE: Wed, Oct 5 2022



5-Min Count Period Beginning At	Chevron Dwy (west) (Northbound)				Chevron Dwy (west) (Southbound)				Chevron Dwy (east) (Eastbound)				Chevron Dwy (east) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	
6:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
6:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
6:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2	
6:20 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	
6:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2	
6:35 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	3	
6:40 AM	0	0	2	0	1	0	0	0	0	0	0	0	1	0	0	0	4	
6:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	
6:50 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	4	
6:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	26
7:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3	27
7:05 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3	29
7:10 AM	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	2	6	34
7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	34
7:20 AM	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	3	35
7:25 AM	0	0	1	0	1	0	0	0	0	0	0	0	2	0	0	1	5	40
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	40
7:35 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	3	40
7:40 AM	0	0	3	0	0	0	0	0	0	0	0	0	1	0	1	0	5	41
7:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	1	5	44
7:50 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	4	44
7:55 AM	0	0	1	0	2	0	0	0	0	0	0	0	1	0	0	0	4	45
8:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	3	0	1	0	6	48
8:05 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	46
8:10 AM	0	0	2	0	1	0	0	0	0	0	0	0	1	0	1	0	5	45
8:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	45
8:20 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	4	46
8:25 AM	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	4	45
8:30 AM	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	4	47
8:35 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	46
8:40 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	43
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	40
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	38
8:55 AM	0	0	3	0	1	0	0	0	0	0	0	0	1	0	0	0	5	39

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	20	0	4	0	0	0	0	0	0	0	12	0	16	4	56
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				8				4				4			16
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

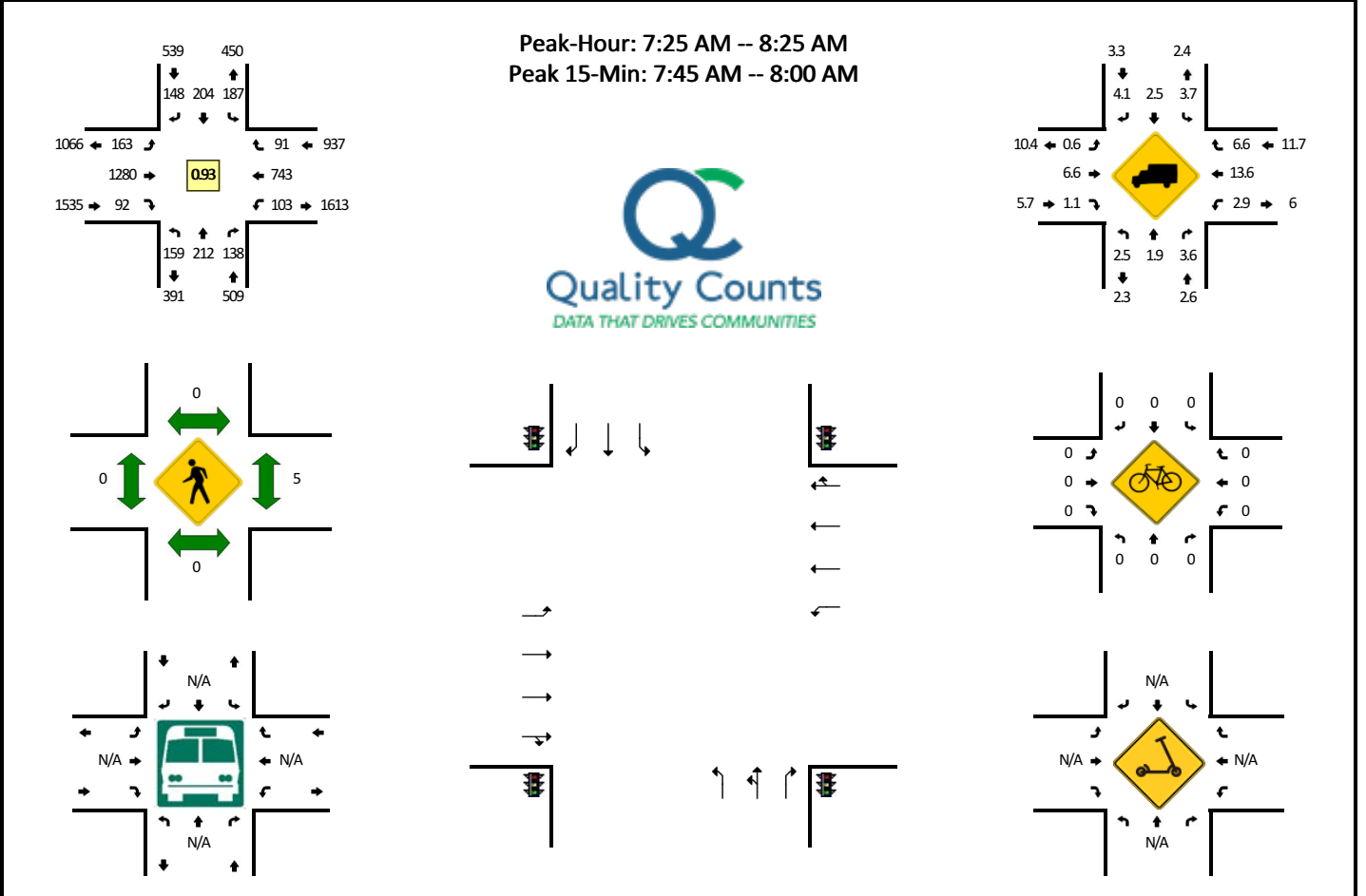
Comments:

Report generated on 11/25/2022 4:52 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Sherwood Blvd -- 99W
CITY/STATE: Sherwood, OR

QC JOB #: 15970007
DATE: Wed, Oct 5 2022



5-Min Count Period Beginning At	Sherwood Blvd (Northbound)				Sherwood Blvd (Southbound)				99W (Eastbound)				99W (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	3	1	1	0	4	5	0	0	6	84	7	1	1	33	0	0	146	
6:05 AM	3	4	5	0	3	4	3	0	0	79	4	3	0	36	1	0	145	
6:10 AM	3	6	4	0	6	7	5	0	6	91	3	2	3	23	1	0	160	
6:15 AM	1	4	3	0	9	7	6	0	4	104	3	1	3	37	2	0	184	
6:20 AM	2	6	5	0	9	7	4	0	3	116	7	1	0	28	2	2	192	
6:25 AM	1	1	7	0	7	8	5	0	10	121	5	0	1	40	3	0	209	
6:30 AM	5	6	5	0	10	5	4	0	5	86	2	2	2	41	0	0	173	
6:35 AM	3	6	5	0	7	2	4	0	4	147	7	3	3	57	3	0	251	
6:40 AM	3	9	7	0	11	4	5	0	10	122	6	1	2	40	2	0	222	
6:45 AM	6	2	6	0	9	9	3	0	5	114	5	2	5	69	3	0	238	
6:50 AM	8	10	15	0	6	6	3	0	2	117	9	2	0	30	2	0	210	
6:55 AM	3	11	5	0	4	7	7	0	5	94	6	3	4	67	9	0	225	2355
7:00 AM	5	4	3	0	16	11	8	0	10	86	8	0	6	37	4	0	198	2407
7:05 AM	9	5	6	0	10	7	13	0	11	115	7	3	5	52	0	1	244	2506
7:10 AM	15	13	6	0	15	11	7	0	6	94	8	2	4	29	8	0	218	2564
7:15 AM	5	7	11	0	9	10	5	0	14	156	10	5	0	58	9	0	299	2679
7:20 AM	8	12	5	0	16	16	6	0	7	103	2	2	7	38	7	0	229	2716
7:25 AM	6	5	5	0	6	21	10	0	10	161	10	1	6	92	8	1	342	2849
7:30 AM	15	9	11	0	18	11	8	0	8	111	9	0	7	51	3	0	261	2937
7:35 AM	8	12	12	0	10	12	13	0	7	139	6	2	5	79	6	1	312	2998
7:40 AM	17	12	8	0	17	17	13	0	13	106	6	3	11	44	9	1	277	3053
7:45 AM	11	13	13	0	13	13	12	0	11	132	10	0	10	86	8	1	333	3148
7:50 AM	19	24	16	0	22	24	14	0	9	88	6	0	6	67	8	1	304	3242
7:55 AM	13	13	9	0	15	14	8	0	22	117	13	2	13	61	13	1	314	3331
8:00 AM	14	30	14	0	26	24	18	0	12	82	8	1	11	41	11	0	292	3425
8:05 AM	9	22	12	0	14	15	13	0	13	92	8	3	6	58	3	0	268	3449
8:10 AM	18	28	16	0	12	17	15	0	17	92	7	2	6	46	8	2	286	3517
8:15 AM	17	19	12	0	13	14	12	0	15	96	4	1	7	72	10	0	292	3510
8:20 AM	12	25	10	0	21	22	12	0	10	64	5	1	7	46	4	0	239	3520
8:25 AM	11	14	4	0	10	11	11	0	18	119	10	3	4	65	8	0	288	3466
8:30 AM	15	23	9	0	15	13	10	0	18	93	6	0	4	51	2	1	260	3465
8:35 AM	6	10	9	0	16	9	9	0	12	138	10	3	8	69	4	2	305	3458
8:40 AM	11	9	6	0	14	13	10	0	8	76	2	2	5	54	5	1	216	3397
8:45 AM	3	7	10	0	4	5	8	0	6	87	8	0	8	81	5	0	232	3296
8:50 AM	8	14	5	0	15	14	6	0	11	72	4	2	8	51	10	0	220	3212
8:55 AM	8	9	8	0	9	13	8	0	13	102	3	7	7	55	6	1	249	3147

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	172	200	152	0	200	204	136	0	168	1348	116	8	116	856	116	12	3804
Heavy Trucks	4	8	4		0	0	8		4	88	0		4	136	8		264
Buses																	
Pedestrians		0				0				0				8			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

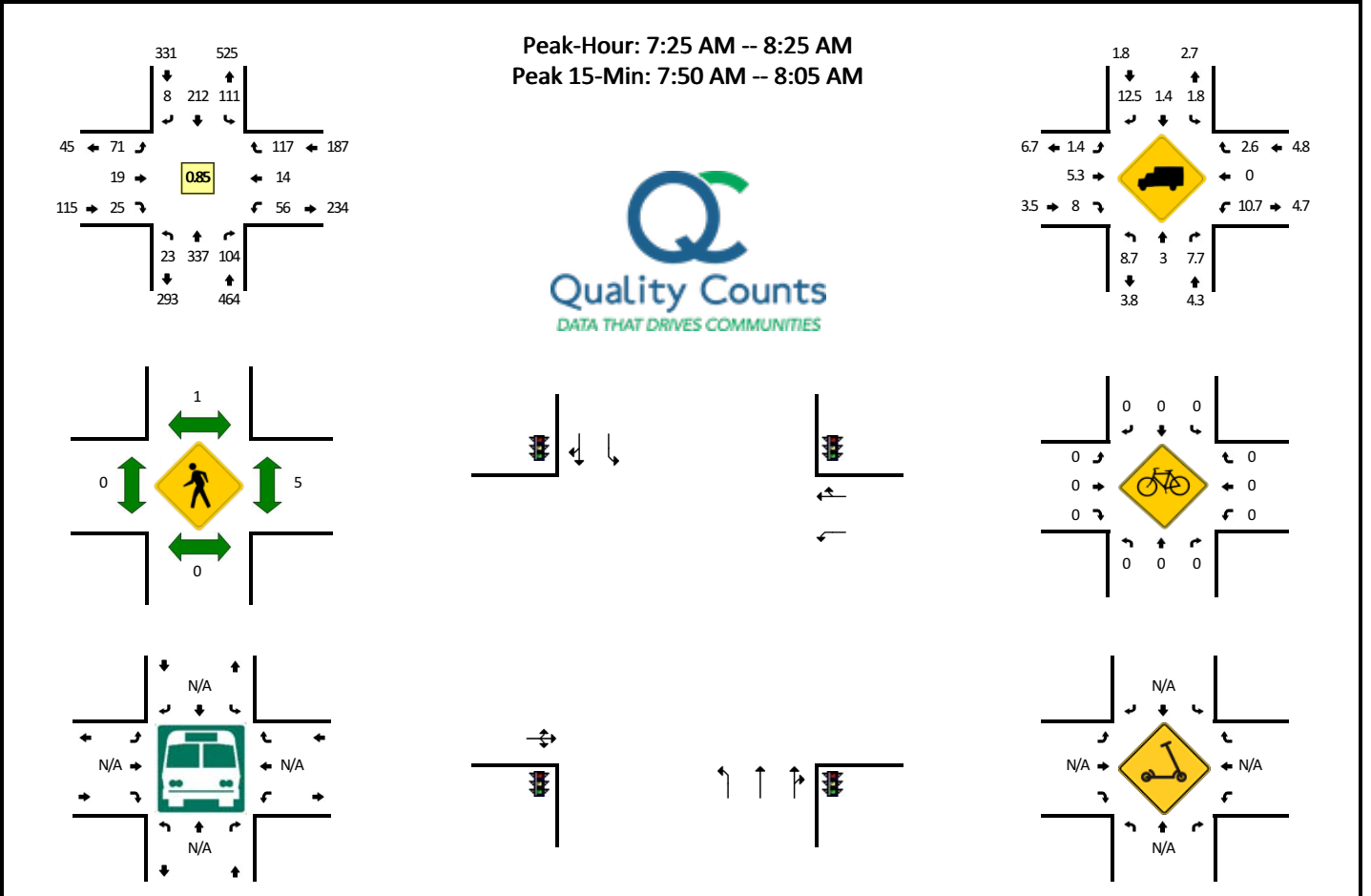
Comments:

Report generated on 11/25/2022 4:52 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Sherwood Blvd -- SW Langer Dr
CITY/STATE: Sherwood, OR

QC JOB #: 15970009
DATE: Wed, Oct 5 2022



5-Min Count Period Beginning At	Sherwood Blvd (Northbound)				Sherwood Blvd (Southbound)				SW Langer Dr (Eastbound)				SW Langer Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	4	4	0	6	6	0	0	2	1	0	0	0	0	0	0	23	
6:05 AM	2	6	5	0	2	5	0	0	3	1	2	0	0	1	2	0	29	
6:10 AM	1	9	3	0	3	6	0	0	4	0	1	0	1	0	2	0	30	
6:15 AM	0	3	2	0	4	5	0	0	2	1	4	0	1	0	1	0	23	
6:20 AM	1	9	6	0	6	6	0	0	5	0	1	0	3	0	1	0	38	
6:25 AM	0	4	4	0	5	6	0	0	3	1	0	0	1	0	3	0	27	
6:30 AM	0	8	4	0	4	3	0	0	6	2	1	0	1	1	2	0	32	
6:35 AM	0	12	3	0	2	7	0	0	3	0	0	0	3	1	3	0	34	
6:40 AM	1	12	6	0	2	5	1	0	1	2	1	0	2	1	3	0	37	
6:45 AM	0	9	5	0	4	7	0	0	5	1	2	0	2	2	3	0	40	
6:50 AM	0	22	4	0	6	6	0	0	5	2	2	0	3	1	3	0	54	
6:55 AM	2	15	4	0	8	7	0	0	3	2	2	0	1	0	5	0	49	416
7:00 AM	0	5	3	0	7	12	0	0	3	2	1	0	2	0	3	0	38	431
7:05 AM	0	12	5	0	6	10	0	0	4	1	1	0	5	1	10	0	55	457
7:10 AM	2	18	3	0	5	12	0	0	4	3	3	0	5	0	4	0	59	486
7:15 AM	0	17	7	0	10	8	0	0	5	2	1	0	2	1	8	0	61	524
7:20 AM	1	12	5	0	8	20	0	0	4	2	2	0	2	0	5	0	61	547
7:25 AM	1	14	11	0	10	21	1	0	3	3	1	0	2	1	8	0	76	596
7:30 AM	1	21	3	0	9	14	0	0	6	0	1	0	5	0	4	0	64	628
7:35 AM	1	16	9	0	6	10	1	0	6	1	1	0	5	0	15	0	71	665
7:40 AM	5	27	6	0	7	22	0	0	3	1	2	0	4	0	6	0	83	711
7:45 AM	4	33	14	0	7	21	0	0	5	5	3	0	6	2	9	0	109	780
7:50 AM	3	31	11	0	14	13	1	0	10	2	3	0	5	0	7	0	100	826
7:55 AM	0	35	8	0	16	20	1	0	4	1	3	0	2	4	12	0	106	883
8:00 AM	3	31	10	0	16	23	1	0	6	0	5	0	6	3	12	0	116	961
8:05 AM	0	30	10	0	6	16	2	0	10	1	0	0	8	0	13	0	96	1002
8:10 AM	2	40	6	0	9	16	0	0	5	2	4	0	7	2	11	0	104	1047
8:15 AM	1	27	5	0	8	16	0	0	7	1	1	0	3	1	13	0	83	1069
8:20 AM	2	32	11	0	3	20	1	0	6	2	1	0	3	1	7	0	89	1097
8:25 AM	2	21	4	0	14	12	0	0	2	3	3	0	3	2	6	0	72	1093
8:30 AM	2	16	5	0	8	15	0	0	9	2	2	0	3	1	11	0	74	1103
8:35 AM	2	18	8	0	6	14	1	0	3	2	1	0	1	0	9	0	65	1097
8:40 AM	0	11	3	0	5	14	0	0	6	2	0	0	5	3	5	0	54	1068
8:45 AM	1	17	2	0	4	8	0	0	5	0	5	0	3	2	4	0	51	1010
8:50 AM	1	14	10	0	3	15	0	0	7	1	1	0	1	1	4	0	58	968
8:55 AM	3	23	7	0	8	13	1	0	4	2	2	0	3	2	9	0	77	939

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	388	116	0	184	224	12	0	80	12	44	0	52	28	124	0	1288
Heavy Trucks	0	16	0		0	0	4		0	0	4		4	0	12		40
Buses																	
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

Comments:

Report generated on 11/25/2022 4:52 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

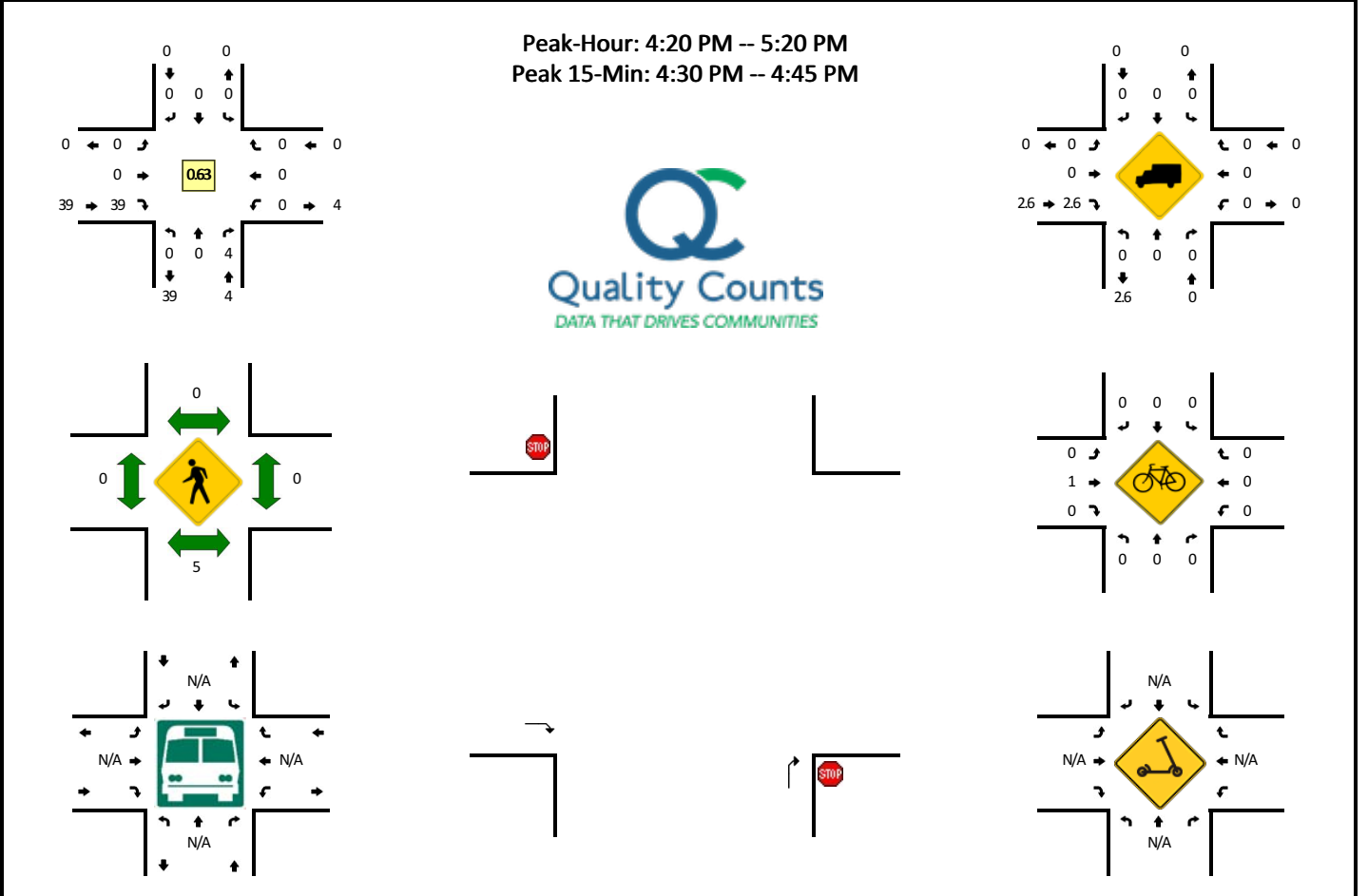
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	424	196	0	96	200	16	0	12	40	80	0	68	0	164	0	1316
Heavy Trucks	0	12	4		4	8	0		0	0	0		0	0	4		32
Buses																	
Pedestrians		4				16				0				4			24
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scoters																	
<i>Comments:</i>																	

Report generated on 11/25/2022 4:52 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Chevron Dwy (west) -- 99W
CITY/STATE: Sherwood, OR

QC JOB #: 15970002
DATE: Wed, Oct 5 2022



5-Min Count Period Beginning At	Chevron Dwy (west) (Northbound)				Chevron Dwy (west) (Southbound)				99W (Eastbound)				99W (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	
3:05 PM	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	5	
3:10 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	
3:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	
3:20 PM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3	
3:25 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	
3:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
3:35 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
3:40 PM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3	
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
3:50 PM	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	5	
3:55 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	39
4:00 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	40
4:05 PM	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0	8	43
4:10 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	39
4:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	41
4:20 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	41
4:25 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	38
4:30 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	7	43
4:35 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	47
4:40 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	48
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	48
4:50 PM	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	5	48
4:55 PM	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0	7	51
5:00 PM	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	4	51
5:05 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	44
5:10 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	47
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
5:20 PM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3	43
5:25 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	46
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
5:35 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	35
5:40 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	33
5:45 PM	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	4	36
5:50 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	35
5:55 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	30

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	0	68	0	0	0	0	0	68
Heavy Trucks	0	0	0		0	0	0		0	0	4		0	0	0		4
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	4	0		0	0	0		4
Scoters																	

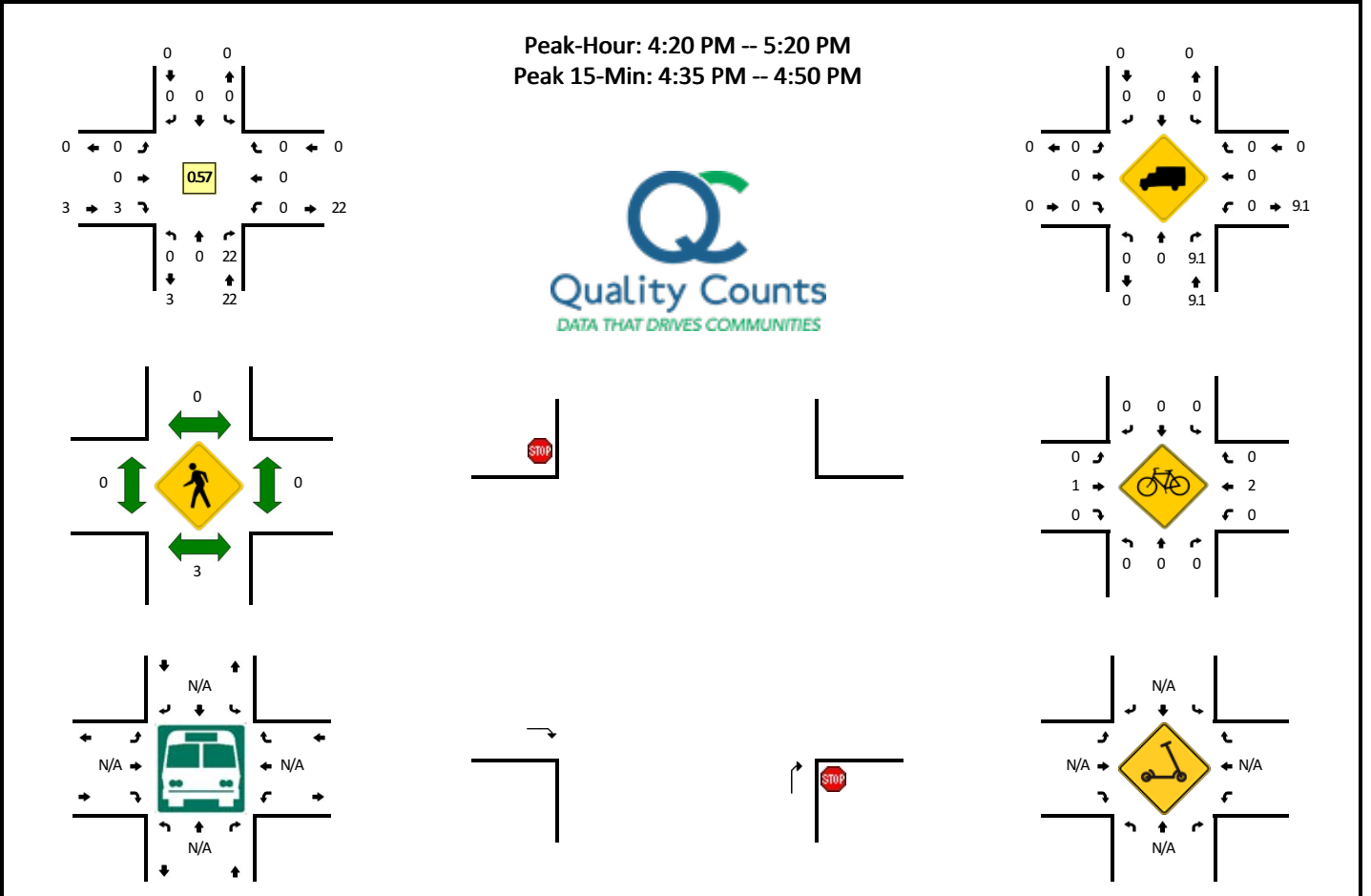
Comments:

Report generated on 11/25/2022 4:58 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Chevron Dwy (east) -- 99W
CITY/STATE: Sherwood, OR

QC JOB #: 15970004
DATE: Wed, Oct 5 2022



5-Min Count Period Beginning At	Chevron Dwy (east) (Northbound)				Chevron Dwy (east) (Southbound)				99W (Eastbound)				99W (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
3:05 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
3:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
3:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:25 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	
3:30 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
3:35 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
3:40 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
3:45 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
3:50 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
3:55 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	20
4:05 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	22
4:10 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	25
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	24
4:20 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	25
4:25 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	25
4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	23
4:35 PM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	28
4:40 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	30
4:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	28
4:50 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	28
4:55 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	28
5:00 PM	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	4	29
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
5:10 PM	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	4	26
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
5:25 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	24
5:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	25
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
5:40 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	19
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	18
5:50 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	18
5:55 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	19

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0	44
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

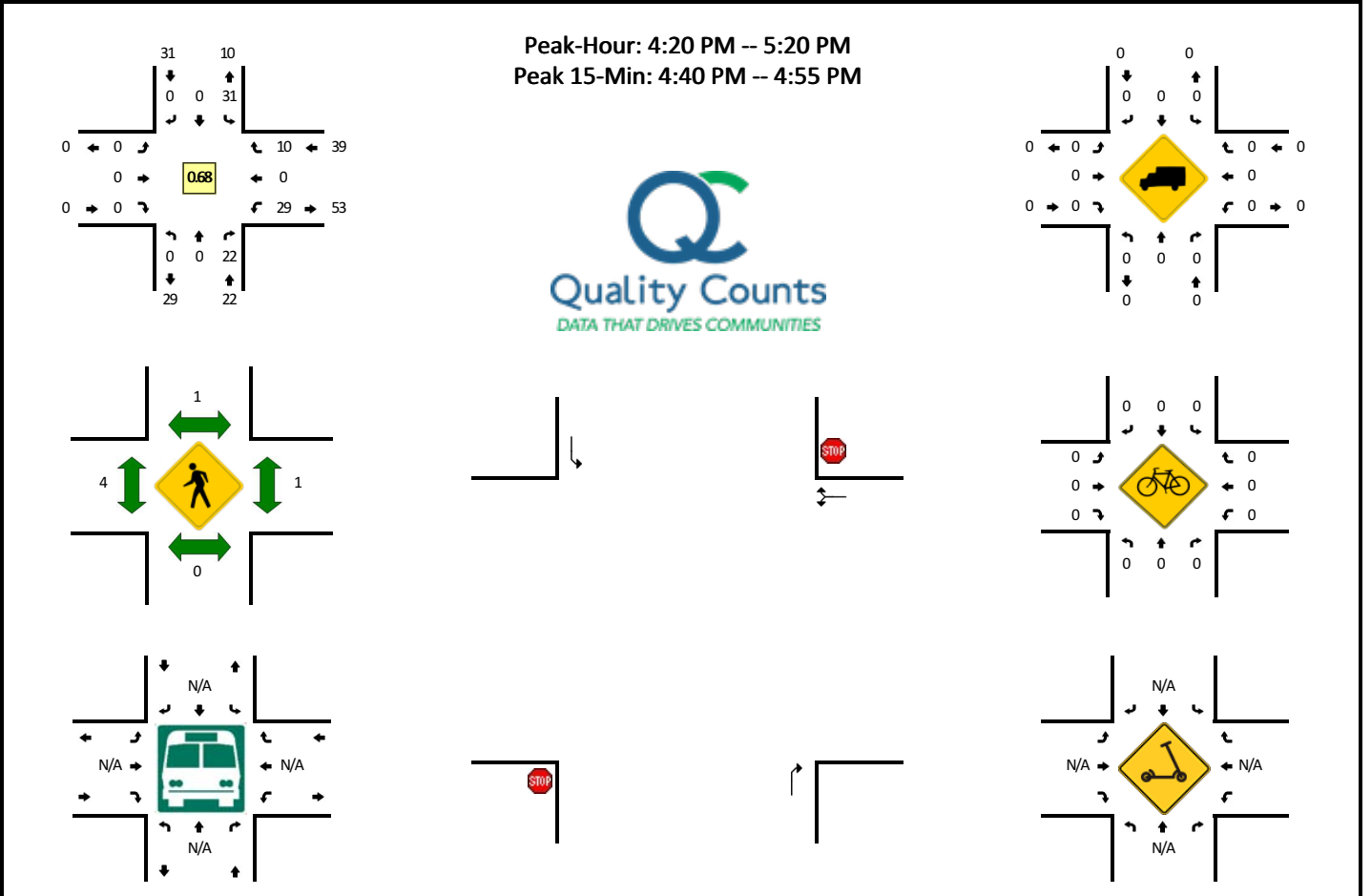
Comments:

Report generated on 11/25/2022 4:58 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Chevron Dwy (west) -- Chevron Dwy (east)
CITY/STATE: Sherwood, OR

QC JOB #: 15970006
DATE: Wed, Oct 5 2022



5-Min Count Period Beginning At	Chevron Dwy (west) (Northbound)				Chevron Dwy (west) (Southbound)				Chevron Dwy (east) (Eastbound)				Chevron Dwy (east) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	0	0	1	0	4	0	0	0	0	0	0	0	0	0	1	0	6	
3:05 PM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	4	
3:10 PM	0	0	3	0	2	0	0	0	0	0	0	0	0	1	0	0	6	
3:15 PM	0	0	1	0	3	0	0	0	0	0	0	0	0	2	0	0	7	
3:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
3:25 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	3	
3:30 PM	0	0	3	0	3	0	0	0	0	0	0	0	0	1	0	0	7	
3:35 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	3	
3:40 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	4	0	0	7	
3:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	3	0	0	5	
3:50 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	3	0	3	8	
3:55 PM	0	0	4	0	2	0	0	0	0	0	0	0	0	2	0	0	9	66
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	6	66
4:05 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	2	0	0	6	68
4:10 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	1	6	68
4:15 PM	0	0	4	0	6	0	0	0	0	0	0	0	0	3	0	1	14	75
4:20 PM	0	0	0	0	4	0	0	0	0	0	0	0	0	1	0	0	5	79
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	77
4:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	3	73
4:35 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	4	74
4:40 PM	0	0	1	0	4	0	0	0	0	0	0	0	0	7	0	1	13	80
4:45 PM	0	0	3	0	5	0	0	0	0	0	0	0	0	2	0	0	10	85
4:50 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	2	0	5	11	88
4:55 PM	0	0	5	0	2	0	0	0	0	0	0	0	0	2	0	0	9	88
5:00 PM	0	0	1	0	5	0	0	0	0	0	0	0	0	2	0	0	8	90
5:05 PM	0	0	3	0	2	0	0	0	0	0	0	0	0	2	0	1	8	92
5:10 PM	0	0	2	0	4	0	0	0	0	0	0	0	0	3	0	0	9	95
5:15 PM	0	0	2	0	3	0	0	0	0	0	0	0	0	4	0	2	11	92
5:20 PM	0	0	1	0	4	0	0	0	0	0	0	0	0	2	0	1	8	95
5:25 PM	0	0	3	0	1	0	0	0	0	0	0	0	0	3	0	0	8	102
5:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	3	102
5:35 PM	0	0	2	0	4	0	0	0	0	0	0	0	0	2	0	0	8	106
5:40 PM	0	0	1	0	2	0	0	0	0	0	0	0	0	3	0	1	8	101
5:45 PM	0	0	1	0	2	0	0	0	0	0	0	0	0	2	0	2	7	98
5:50 PM	0	0	4	0	3	0	0	0	0	0	0	0	0	1	0	0	9	96
5:55 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	3	90

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	24	0	44	0	0	0	0	0	0	0	44	0	24	0	136
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				8				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

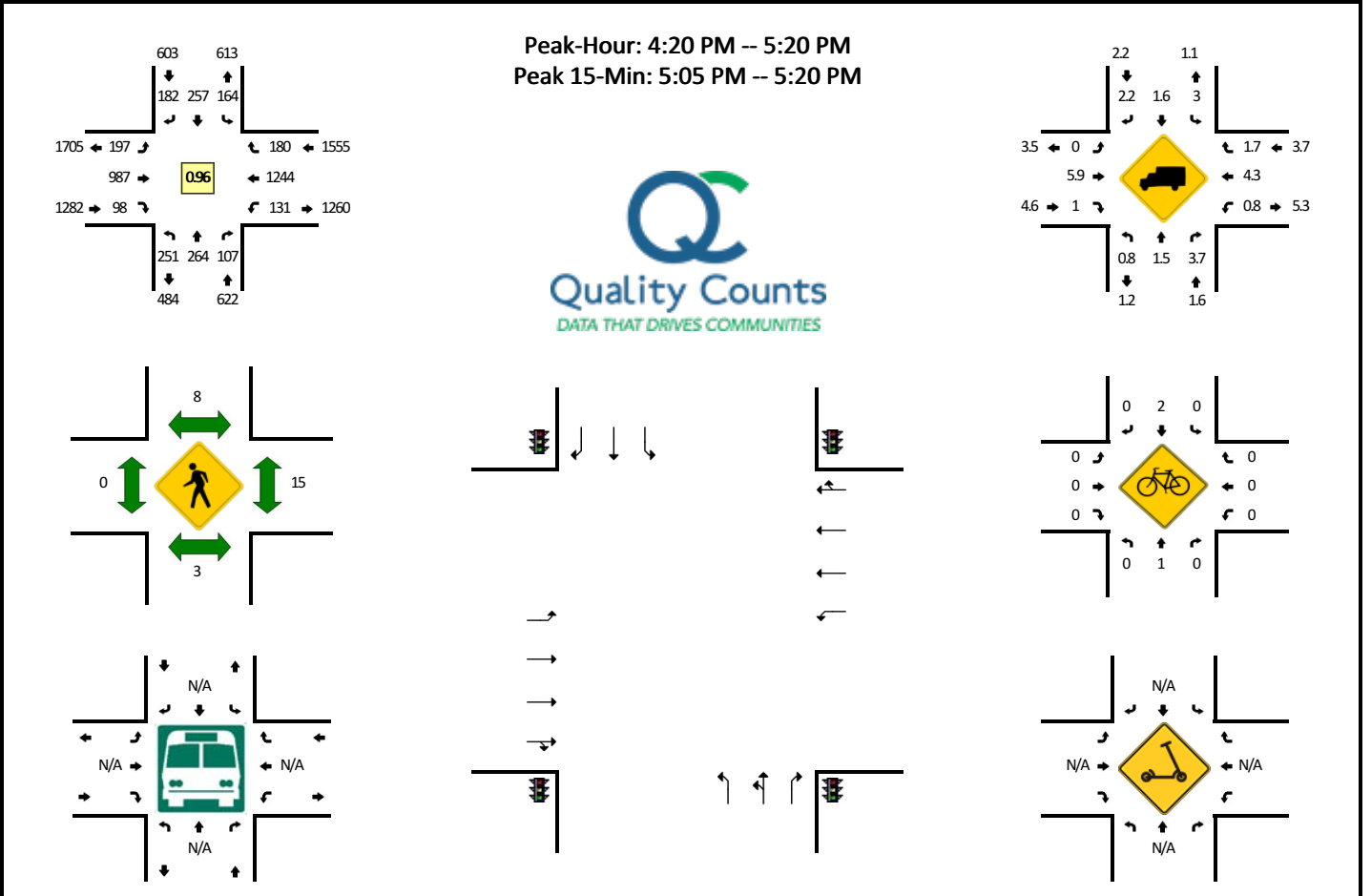
Comments:

Report generated on 11/25/2022 4:58 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Sherwood Blvd -- 99W
CITY/STATE: Sherwood, OR

QC JOB #: 15970008
DATE: Wed, Oct 5 2022



5-Min Count Period Beginning At	Sherwood Blvd (Northbound)				Sherwood Blvd (Southbound)				99W (Eastbound)				99W (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	24	13	7	0	10	15	14	0	8	86	7	5	7	93	10	0	299	
3:05 PM	10	9	12	0	13	17	13	0	6	79	11	1	4	82	4	0	261	
3:10 PM	24	16	5	0	11	20	13	0	10	94	9	0	12	75	10	1	300	
3:15 PM	25	13	7	0	6	14	7	0	11	68	10	1	13	97	9	0	281	
3:20 PM	20	14	4	0	7	10	9	0	11	94	4	0	4	111	15	2	305	
3:25 PM	23	21	8	0	19	13	16	0	9	83	3	0	8	99	14	1	317	
3:30 PM	18	24	7	0	13	15	14	0	21	90	4	0	8	82	11	0	307	
3:35 PM	24	24	9	0	8	9	16	0	7	62	12	1	11	141	6	0	330	
3:40 PM	22	30	9	0	16	18	15	0	5	76	9	2	10	112	10	0	334	
3:45 PM	22	27	15	0	15	17	21	0	12	83	6	1	11	91	20	0	341	
3:50 PM	23	23	13	0	15	17	15	0	17	94	7	3	5	104	9	1	346	
3:55 PM	15	14	6	0	14	20	7	0	8	69	4	1	17	122	12	0	309	3730
4:00 PM	28	26	5	0	15	24	13	0	15	60	9	2	13	76	13	0	299	3730
4:05 PM	21	16	11	0	16	17	18	0	21	73	6	1	8	100	11	0	319	3788
4:10 PM	16	20	15	0	4	17	15	0	12	64	6	3	8	113	16	0	309	3797
4:15 PM	27	34	8	0	11	18	28	0	13	69	5	0	6	84	8	0	311	3827
4:20 PM	26	20	13	0	12	27	14	0	19	101	11	4	9	86	24	0	366	3888
4:25 PM	14	20	10	0	10	17	13	0	12	79	6	1	13	133	19	1	348	3919
4:30 PM	27	27	9	0	13	17	8	0	11	60	6	2	3	95	9	1	288	3900
4:35 PM	23	18	9	0	14	15	24	0	13	93	9	4	10	82	8	0	322	3892
4:40 PM	18	21	5	0	12	22	8	0	11	91	10	2	14	104	15	0	333	3891
4:45 PM	24	20	9	0	6	19	14	0	12	76	9	1	13	110	13	0	326	3876
4:50 PM	15	27	8	0	22	31	14	0	16	74	9	1	6	88	7	0	318	3848
4:55 PM	19	22	9	0	11	20	14	0	21	93	5	1	9	105	21	0	350	3889
5:00 PM	19	25	6	0	18	19	21	0	11	74	11	2	19	109	23	0	357	3947
5:05 PM	26	29	5	0	18	26	19	0	12	46	5	3	14	97	5	0	305	3933
5:10 PM	19	14	10	0	15	25	20	0	19	107	9	3	4	107	16	0	368	3992
5:15 PM	21	21	14	0	13	19	13	0	12	93	8	4	15	128	20	0	381	4062
5:20 PM	21	32	14	0	15	20	19	0	9	66	7	2	2	98	11	0	316	4012
5:25 PM	18	23	8	0	19	19	10	0	20	90	8	5	6	97	8	0	331	3995
5:30 PM	15	24	14	0	9	21	10	0	10	64	12	3	12	127	21	0	342	4049
5:35 PM	22	35	3	0	11	19	20	0	13	69	6	1	7	88	11	0	305	4032
5:40 PM	16	16	6	0	24	32	26	0	18	72	10	1	5	103	16	0	345	4044
5:45 PM	19	19	6	0	7	20	14	0	11	82	5	0	12	134	18	0	347	4065
5:50 PM	23	19	4	0	11	22	21	0	10	76	9	0	14	109	12	0	330	4077
5:55 PM	26	25	5	0	17	28	27	0	12	60	4	1	0	88	16	0	309	4036

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	264	256	116	0	184	280	208	0	172	984	88	40	132	1328	164	0	4216
Heavy Trucks	0	8	4		4	8	0		0	56	0		4	84	0		168
Buses																	
Pedestrians		4				8				0				20			32
Bicycles	0	0	0		0	8	0		0	0	0		0	0	0		8
Scoters																	

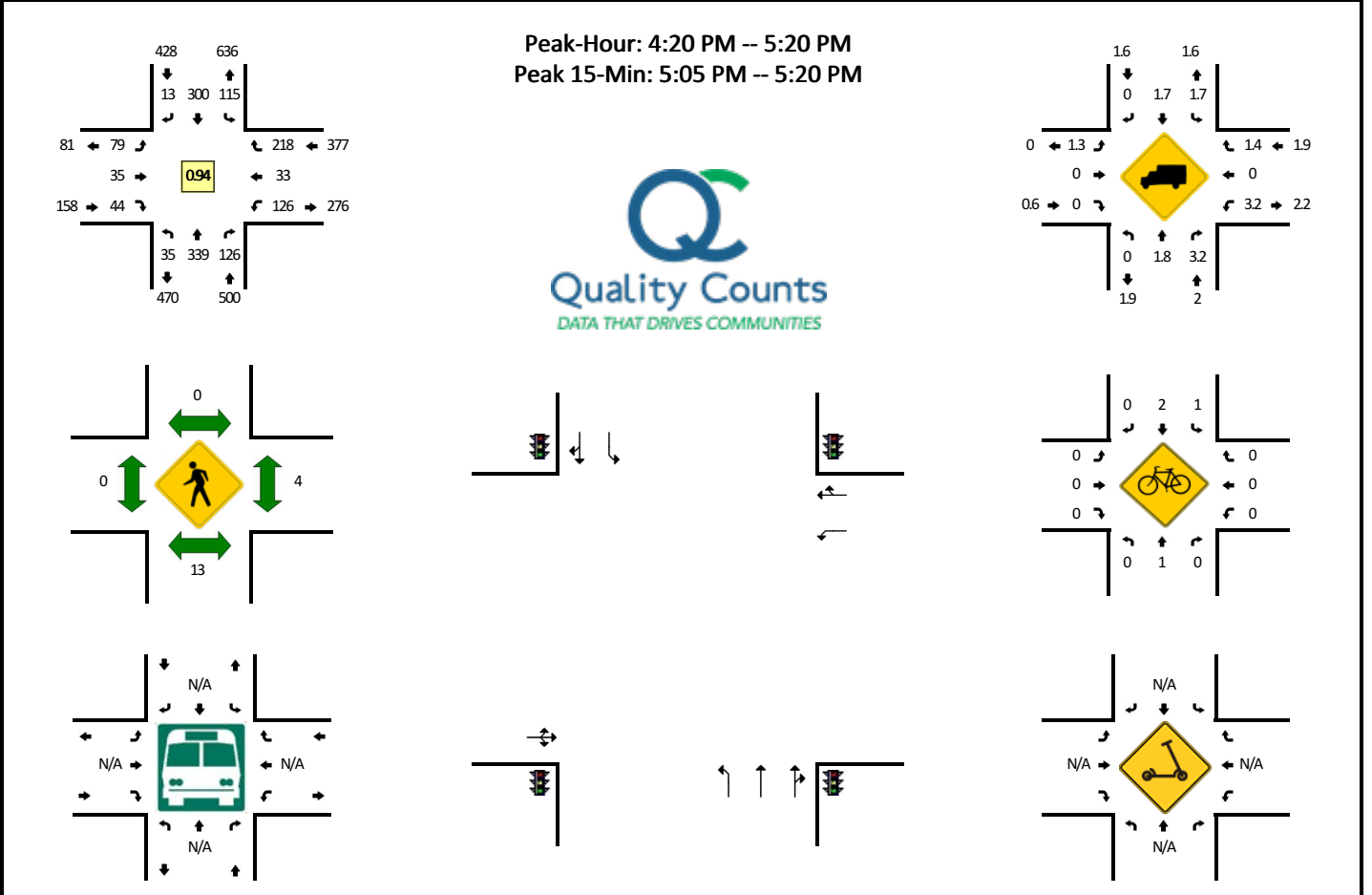
Comments:

Report generated on 11/25/2022 4:58 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Sherwood Blvd -- SW Langer Dr
CITY/STATE: Sherwood, OR

QC JOB #: 15970010
DATE: Wed, Oct 5 2022



5-Min Count Period Beginning At	Sherwood Blvd (Northbound)				Sherwood Blvd (Southbound)				SW Langer Dr (Eastbound)				SW Langer Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	0	19	7	0	8	24	0	0	8	2	2	0	6	0	14	0	90	
3:05 PM	1	22	3	0	8	16	0	0	7	0	4	0	1	1	12	0	75	
3:10 PM	1	18	11	0	10	21	0	0	6	2	3	0	5	2	16	0	95	
3:15 PM	5	18	10	0	14	14	2	0	7	4	3	0	12	4	19	0	112	
3:20 PM	3	17	11	0	9	10	0	0	5	4	0	0	4	7	21	0	91	
3:25 PM	2	26	9	0	2	16	0	0	11	3	1	0	12	1	12	0	95	
3:30 PM	1	32	3	0	6	21	0	0	7	1	8	0	4	2	20	0	105	
3:35 PM	1	30	8	0	13	15	0	0	4	5	0	0	4	1	14	0	95	
3:40 PM	0	38	5	0	9	26	3	0	5	2	2	0	8	3	19	0	120	
3:45 PM	4	38	6	0	11	12	0	0	8	2	3	0	13	3	17	0	117	
3:50 PM	4	32	7	0	10	16	0	0	6	2	3	0	10	6	19	0	115	
3:55 PM	2	20	6	0	11	23	0	0	8	2	1	0	10	5	16	0	104	
4:00 PM	2	15	6	0	7	20	1	0	13	3	3	0	9	3	23	0	105	
4:05 PM	2	28	15	0	8	24	1	0	11	1	3	0	10	4	17	1	125	
4:10 PM	0	32	11	0	9	11	1	0	9	3	5	0	8	1	17	0	107	
4:15 PM	2	31	11	0	5	22	1	0	6	1	2	0	11	3	21	0	116	
4:20 PM	0	29	11	0	10	28	1	0	5	2	0	0	10	2	22	0	120	
4:25 PM	1	37	11	0	11	20	1	0	5	1	4	0	8	4	15	0	118	
4:30 PM	2	31	11	0	6	20	2	0	4	7	4	0	10	0	16	0	113	
4:35 PM	3	20	18	0	3	18	1	0	7	6	5	0	11	5	19	0	116	
4:40 PM	5	37	9	0	11	28	0	0	9	1	4	0	9	1	15	0	129	
4:45 PM	4	23	12	0	10	32	1	0	5	2	3	0	8	3	9	0	112	
4:50 PM	5	24	10	0	12	22	1	0	9	1	3	0	8	3	25	0	123	
4:55 PM	5	26	12	0	10	28	0	0	5	0	3	0	11	0	22	0	122	
5:00 PM	2	26	6	0	14	30	0	0	5	3	7	0	10	3	16	0	122	
5:05 PM	2	26	7	0	4	27	4	0	7	4	4	0	13	4	19	0	121	
5:10 PM	4	24	14	0	11	21	1	0	9	5	4	0	15	4	21	0	133	
5:15 PM	2	36	5	0	13	26	1	0	9	3	3	0	13	4	19	0	134	
5:20 PM	5	26	8	0	9	18	1	0	9	2	7	0	14	3	17	0	119	
5:25 PM	0	41	5	0	11	25	0	0	5	1	4	0	9	0	14	0	115	
5:30 PM	0	26	10	0	6	22	0	0	8	3	3	0	13	3	21	0	115	
5:35 PM	0	20	8	0	8	29	0	0	6	4	3	0	5	2	13	0	98	
5:40 PM	1	29	11	0	6	30	0	0	8	0	3	0	8	4	11	0	111	
5:45 PM	1	20	12	0	8	26	0	0	9	0	4	0	13	4	18	0	115	
5:50 PM	2	25	7	0	11	26	2	0	4	3	4	0	14	3	14	0	115	
5:55 PM	4	29	8	0	5	20	0	0	9	4	6	0	11	1	15	0	112	

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	32	344	104	0	112	296	24	0	100	48	44	0	164	48	236	0	1552
Heavy Trucks	0	12	0		4	8	0		0	0	0		8	0	0		32
Buses																	
Pedestrians		16				0				0				12			28
Bicycles	0	0	0		0	8	0		0	0	0		0	0	0		8
Scoters																	

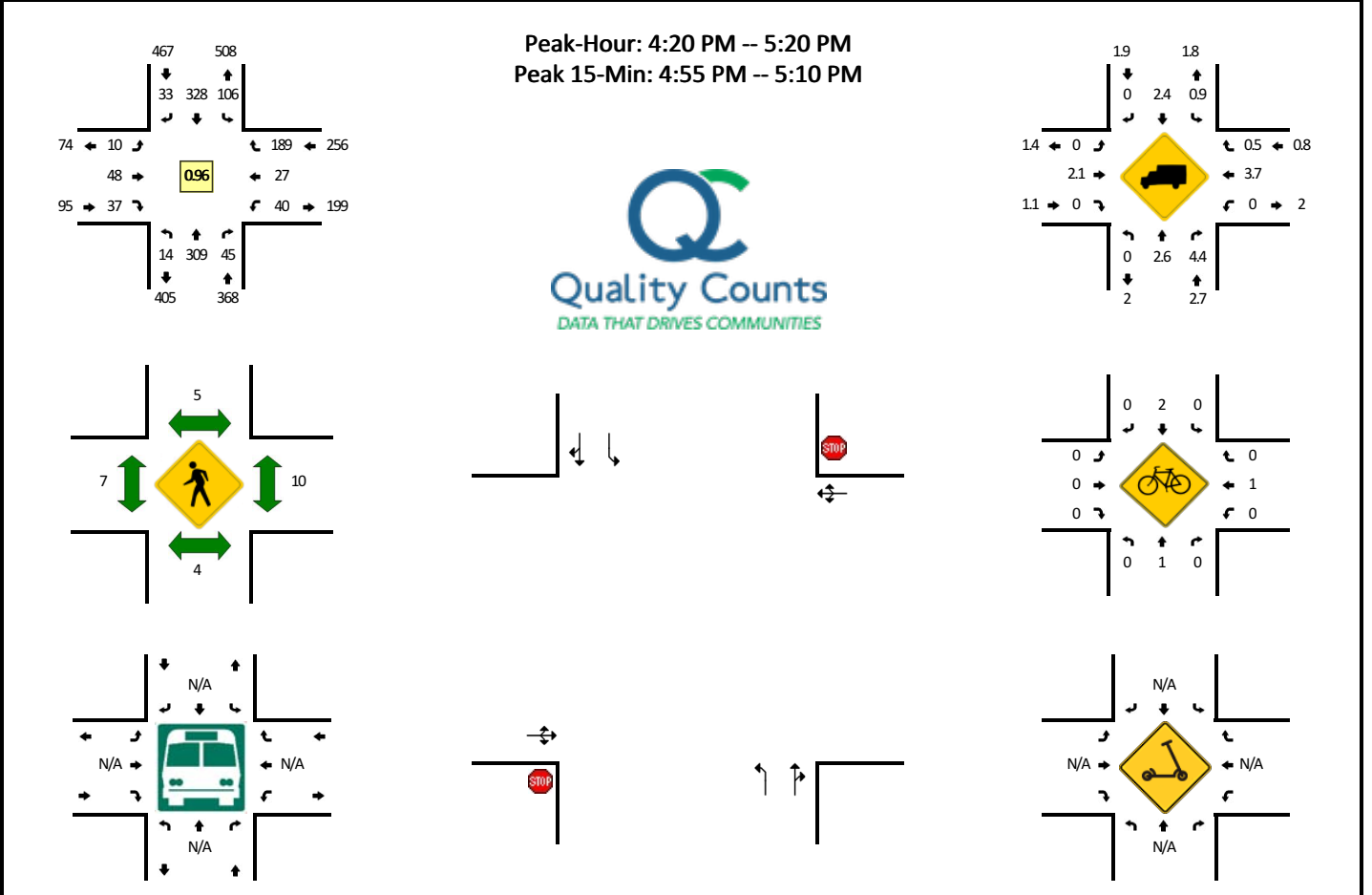
Comments:

Report generated on 11/25/2022 4:58 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Sherwood Blvd -- SW 12th St/SW Century Dr
CITY/STATE: Sherwood, OR

QC JOB #: 15970012
DATE: Wed, Oct 5 2022



5-Min Count Period Beginning At	Sherwood Blvd (Northbound)				Sherwood Blvd (Southbound)				SW 12th St/SW Century Dr (Eastbound)				SW 12th St/SW Century Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	1	11	3	0	7	21	3	0	2	4	1	0	4	2	13	0	72	
3:05 PM	0	14	3	0	5	16	0	0	0	3	1	0	3	2	11	0	58	
3:10 PM	0	15	2	0	8	15	5	0	0	2	1	0	1	0	13	0	62	
3:15 PM	1	17	2	0	11	18	1	0	2	1	0	0	1	1	15	0	70	
3:20 PM	1	18	2	0	3	12	0	0	1	3	2	0	7	2	12	0	63	
3:25 PM	0	23	1	0	7	20	1	0	0	3	1	0	3	1	15	0	75	
3:30 PM	1	23	1	0	4	28	1	0	1	4	1	0	2	1	13	0	80	
3:35 PM	3	26	2	0	10	8	2	0	1	4	0	0	2	0	13	0	71	
3:40 PM	1	32	4	0	12	19	3	0	0	4	1	0	2	3	12	0	93	
3:45 PM	2	31	3	0	6	21	2	0	0	5	2	0	1	1	14	0	88	
3:50 PM	2	24	6	0	3	25	1	0	2	3	3	0	0	2	17	0	88	
3:55 PM	1	11	4	0	4	29	1	0	1	6	2	0	3	3	13	0	78	898
4:00 PM	1	16	5	0	11	20	1	0	0	3	3	0	3	3	11	0	77	903
4:05 PM	1	26	5	0	9	25	3	0	2	3	3	0	5	0	13	0	95	940
4:10 PM	0	28	5	0	9	12	1	0	2	4	1	0	4	3	17	0	86	964
4:15 PM	1	25	1	0	8	26	2	0	0	3	6	0	3	5	15	0	95	989
4:20 PM	3	22	3	0	12	24	1	0	1	6	1	0	5	0	22	0	100	1026
4:25 PM	2	35	10	0	6	23	4	0	0	7	4	0	3	3	11	0	108	1059
4:30 PM	0	33	1	0	6	26	2	0	0	1	2	0	3	2	12	0	88	1067
4:35 PM	0	27	4	0	7	22	3	0	2	3	2	0	4	2	21	0	97	1093
4:40 PM	1	26	6	0	13	25	2	0	3	6	2	0	1	2	13	0	100	1100
4:45 PM	1	20	4	0	10	30	2	0	1	2	3	0	5	4	15	0	97	1109
4:50 PM	1	20	3	0	10	23	2	0	0	5	5	0	3	2	18	0	92	1113
4:55 PM	1	28	1	0	4	38	1	0	0	5	5	0	2	2	17	0	104	1139
5:00 PM	1	26	3	0	10	31	2	0	0	4	7	0	4	4	12	0	104	1166
5:05 PM	1	24	4	0	7	32	6	0	2	4	1	0	4	3	12	0	100	1171
5:10 PM	3	18	6	0	9	27	5	0	1	3	3	0	3	1	21	0	100	1185
5:15 PM	0	30	0	0	12	27	3	0	0	2	2	0	3	2	15	0	96	1186
5:20 PM	3	27	2	0	8	30	1	0	1	1	4	0	4	3	13	0	97	1183
5:25 PM	3	24	4	0	8	28	2	0	2	5	2	0	1	1	15	0	95	1170
5:30 PM	4	19	4	0	6	31	1	0	0	5	4	0	1	0	13	0	88	1170
5:35 PM	0	20	5	0	8	28	1	0	1	4	4	0	5	5	9	0	90	1163
5:40 PM	0	25	4	0	10	26	0	0	0	4	4	0	6	1	14	0	94	1157
5:45 PM	0	20	2	0	9	32	5	0	1	2	2	0	3	1	13	0	90	1150
5:50 PM	0	27	7	0	9	37	0	0	1	4	12	0	7	1	7	0	112	1170
5:55 PM	2	25	8	0	7	30	0	0	0	3	2	0	4	1	14	0	96	1162

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	312	32	0	84	404	36	0	8	52	52	0	40	36	164	0	1232
Heavy Trucks	0	4	0		0	4	0		0	0	0		0	0	0		8
Buses																	
Pedestrians		8				0				4				16			28
Bicycles	0	4	0		0	4	0		0	0	0		0	0	0		8
Scoters																	

Comments:

Report generated on 11/25/2022 4:58 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

Appendix C
Existing Traffic Conditions Worksheets

HCM 6th TWSC
2: Chevron Dwy (west) & 99W

11/15/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1555	50	0	0	0	2
Future Vol, veh/h	1555	50	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	11	0	0	0	0
Mvmt Flow	2046	66	0	0	0	3

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	1056
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	193
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	193
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	23.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	193	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-
HCM Control Delay (s)	23.9	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

HCM 6th TWSC
3: Chevron Dwy (east) & 99W

11/15/2022

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1556	1	0	0	0	42
Future Vol, veh/h	1556	1	0	0	0	42
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	0	0	0	0	0	24
Mvmt Flow	2161	1	0	0	0	58

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	1082
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.58
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.14
Pot Cap-1 Maneuver	-	-	0	-	0	156
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	156
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-






















Approach	EB	WB	NB
HCM Control Delay, s	0	0	41.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	156	-	-	-
HCM Lane V/C Ratio	0.374	-	-	-
HCM Control Delay (s)	41.2	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	1.6	-	-	-

HCM Signalized Intersection Capacity Analysis

4: Sherwood Blvd & SW Langer Dr

11/15/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 				
Traffic Volume (vph)	71	19	25	56	14	117	23	337	104	111	212	8
Future Volume (vph)	71	19	25	56	14	117	23	337	104	111	212	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.87		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1637		1656	1581		1736	3318		1770	1828	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1752	1637		1656	1581		1736	3318		1770	1828	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	84	22	29	66	16	138	27	396	122	131	249	9
RTOR Reduction (vph)	0	25	0	0	120	0	0	32	0	0	1	0
Lane Group Flow (vph)	84	26	0	66	34	0	27	486	0	131	257	0
Confl. Peds. (#/hr)	1						1		5	5		
Heavy Vehicles (%)	3%	5%	7%	9%	0%	3%	4%	4%	5%	2%	3%	14%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases												
Actuated Green, G (s)	6.1	7.1		4.4	6.3		2.5	21.4		6.7	26.7	
Effective Green, g (s)	8.0	9.1		7.2	8.3		4.3	22.8		9.4	27.9	
Actuated g/C Ratio	0.12	0.14		0.11	0.13		0.07	0.35		0.15	0.43	
Clearance Time (s)	5.9	6.0		6.8	6.0		5.8	5.4		6.7	5.2	
Vehicle Extension (s)	2.7	1.6		2.4	1.6		2.9	2.1		2.6	2.1	
Lane Grp Cap (vph)	217	230		184	203		115	1172		257	790	
v/s Ratio Prot	c0.05	0.02		0.04	c0.02		0.02	c0.15		c0.07	0.14	
v/s Ratio Perm												
v/c Ratio	0.39	0.11		0.36	0.17		0.23	0.41		0.51	0.33	
Uniform Delay, d1	26.0	24.2		26.5	25.0		28.5	15.8		25.4	12.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.1		0.8	0.1		1.0	0.1		1.2	0.1	
Delay (s)	27.0	24.3		27.3	25.2		29.5	15.9		26.7	12.2	
Level of Service	C	C		C	C		C	B		C	B	
Approach Delay (s)		25.9			25.8			16.6			17.1	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			19.3				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			64.5				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			44.7%				ICU Level of Service			A		
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary
4: Sherwood Blvd & SW Langer Dr

11/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	19	25	56	14	117	23	337	104	111	212	8
Future Volume (veh/h)	71	19	25	56	14	117	23	337	104	111	212	8
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		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1826	1796	1767	1900	1856	1841	1841	1826	1870	1856	1693
Adj Flow Rate, veh/h	84	22	29	66	16	138	27	396	122	131	249	9
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	5	7	9	0	3	4	4	5	2	3	14
Cap, veh/h	190	116	152	196	29	251	118	666	203	261	583	21
Arrive On Green	0.11	0.16	0.12	0.12	0.17	0.13	0.07	0.25	0.22	0.15	0.33	0.30
Sat Flow, veh/h	1767	713	939	1682	170	1463	1753	2633	801	1781	1779	64
Grp Volume(v), veh/h	84	0	51	66	0	154	27	261	257	131	0	258
Grp Sat Flow(s),veh/h/ln	1767	0	1652	1682	0	1633	1753	1749	1686	1781	0	1843
Q Serve(g_s), s	2.2	0.0	1.4	1.8	0.0	4.4	0.7	6.5	6.7	3.4	0.0	5.4
Cycle Q Clear(g_c), s	2.2	0.0	1.4	1.8	0.0	4.4	0.7	6.5	6.7	3.4	0.0	5.4
Prop In Lane	1.00		0.57	1.00		0.90	1.00		0.48	1.00		0.03
Lane Grp Cap(c), veh/h	190	0	268	196	0	280	118	442	426	261	0	604
V/C Ratio(X)	0.44	0.00	0.19	0.34	0.00	0.55	0.23	0.59	0.60	0.50	0.00	0.43
Avail Cap(c_a), veh/h	424	0	566	434	0	559	417	930	896	456	0	973
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	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	18.5	20.2	0.0	19.7	21.9	16.3	16.7	19.5	0.0	13.1
Incr Delay (d2), s/veh	1.4	0.0	0.1	0.7	0.0	0.6	0.9	0.6	0.6	1.2	0.0	0.2
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	0.9	0.0	0.5	0.7	0.0	1.6	0.3	2.3	2.4	1.3	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.2	0.0	18.6	20.8	0.0	20.3	22.8	16.9	17.3	20.7	0.0	13.3
LnGrp LOS	C	A	B	C	A	C	C	B	B	C	A	B
Approach Vol, veh/h		135			220			545				389
Approach Delay, s/veh		20.8			20.5			17.4				15.8
Approach LOS		C			C			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	20.5	9.3	12.5	11.3	16.6	9.8	12.0				
Change Period (Y+Rc), s	* 5.8	* 5.4	* 5.9	6.0	* 6.7	* 5.4	* 6.8	6.0				
Max Green Setting (Gmax), s	* 10	* 25	* 10	15.0	* 10	* 25	* 10	15.0				
Max Q Clear Time (g_c+I1), s	2.7	7.4	4.2	6.4	5.4	8.7	3.8	3.4				
Green Ext Time (p_c), s	0.0	0.9	0.1	0.3	0.1	2.0	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

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

HCM 6th AWSC
 5: Chevron Dwy (west) & Chevron Dwy (east)

11/15/2022

Intersection

Intersection Delay, s/veh	7
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	14	10	0	13	9	0
Future Vol, veh/h	14	10	0	13	9	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	19	0	0	29	0	0
Mvmt Flow	17	12	0	16	11	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.3	6.4	7.2
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	58%	100%
Vol Thru, %	0%	0%	0%
Vol Right, %	100%	42%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	13	24	9
LT Vol	0	14	9
Through Vol	0	0	0
RT Vol	13	10	0
Lane Flow Rate	16	29	11
Geometry Grp	1	1	1
Degree of Util (X)	0.015	0.034	0.013
Departure Headway (Hd)	3.359	4.137	4.163
Convergence, Y/N	Yes	Yes	Yes
Cap	1066	869	861
Service Time	1.378	2.144	2.18
HCM Lane V/C Ratio	0.015	0.033	0.013
HCM Control Delay	6.4	7.3	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0

HCM 6th TWSC
6: Sherwood Blvd & SW 12th St/SW Century Dr

11/15/2022

Intersection												
Int Delay, s/veh	14.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	39	46	44	10	132	16	322	92	81	202	10
Future Vol, veh/h	10	39	46	44	10	132	16	322	92	81	202	10
Conflicting Peds, #/hr	7	0	1	1	0	7	0	0	8	8	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	3	4	2	0	4	0	5	3	1	5	0
Mvmt Flow	13	51	61	58	13	174	21	424	121	107	266	13

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1114	1082	274	1079	1028	500	279	0	0	553	0	0
Stage 1	487	487	-	535	535	-	-	-	-	-	-	-
Stage 2	627	595	-	544	493	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.53	6.24	7.12	6.5	6.24	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.53	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.53	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.027	3.336	3.518	4	3.336	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	187	217	760	196	236	567	1295	-	-	1022	-	-
Stage 1	566	549	-	529	527	-	-	-	-	-	-	-
Stage 2	475	491	-	523	550	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	108	184	759	125	200	559	1295	-	-	1014	-	-
Mov Cap-2 Maneuver	108	184	-	125	200	-	-	-	-	-	-	-
Stage 1	552	480	-	513	510	-	-	-	-	-	-	-
Stage 2	309	475	-	376	481	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	31		58.8		0.3		2.5	
HCM LOS	D		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1295	-	-	260	291	1014	-	-
HCM Lane V/C Ratio	0.016	-	-	0.481	0.841	0.105	-	-
HCM Control Delay (s)	7.8	0	-	31	58.8	9	0	-
HCM Lane LOS	A	A	-	D	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.4	7.1	0.4	-	-

Intersection Level Of Service Report

Intersection 1:

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.689

Intersection Setup

Name	Sherwood Blvd			Sherwood Blvd			99W			99W		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	150.00	100.00	100.00	475.00	100.00	100.00	415.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Sherwood Blvd			Sherwood Blvd			99W			99W		
Base Volume Input [veh/h]	159	228	138	187	204	148	163	1280	92	103	743	91
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	4.00	4.00	2.00	4.00	1.00	7.00	1.00	3.00	14.00	7.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	159	228	138	187	204	148	163	1280	92	103	743	91
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	61	37	50	55	40	44	344	25	28	200	24
Total Analysis Volume [veh/h]	171	245	148	201	219	159	175	1376	99	111	799	98
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	End of Lagging Red
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	6	6	6	6	4	10	10	4	10	10
Maximum Green [s]	19	19	19	20	20	20	20	50	50	12	40	40
Amber [s]	4.0	4.0	4.0	4.5	4.5	4.5	3.5	5.0	5.0	3.5	5.0	5.0
All red [s]	1.0	1.0	1.0	0.5	0.5	0.5	1.0	0.5	0.5	1.0	0.5	0.5
Split [s]	24	24	24	25	25	25	25	55	55	16	46	46
Vehicle Extension [s]	2.3	2.3	2.3	3.0	3.0	3.0	3.0	4.4	4.4	2.3	4.4	4.4
Walk [s]	0	0	0	9	9	9	0	8	8	0	9	9
Pedestrian Clearance [s]	19	19	19	11	11	11	0	27	27	0	28	28
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.5	3.5	3.5	2.5	3.5	3.5
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	18	18	18	17	17	17	14	56	56	9	52	52
g / C, Green / Cycle	0.15	0.15	0.15	0.14	0.14	0.14	0.11	0.47	0.47	0.08	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.10	0.13	0.09	0.11	0.12	0.10	0.10	0.29	0.29	0.06	0.19	0.19
s, saturation flow rate [veh/h]	1767	1870	1564	1752	1870	1564	1795	3418	1734	1767	3217	1597
c, Capacity [veh/h]	265	280	235	242	258	216	206	1600	812	136	1386	688
d1, Uniform Delay [s]	48.00	49.90	47.89	50.34	50.48	49.61	52.13	23.79	23.80	54.53	23.90	23.93
k, delay calibration	0.07	0.17	0.07	0.19	0.20	0.13	0.11	0.50	0.50	0.08	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	12.37	1.71	11.67	12.74	5.83	9.98	1.75	3.43	8.75	0.98	1.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.87	0.63	0.83	0.85	0.74	0.85	0.61	0.61	0.81	0.43	0.43
d, Delay for Lane Group [s/veh]	49.62	62.27	49.60	62.01	63.22	55.44	62.11	25.55	27.23	63.29	24.88	25.92
Lane Group LOS	D	E	D	E	E	E	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.94	8.14	4.27	6.65	7.33	4.93	5.74	10.56	11.10	3.63	6.10	6.29
50th-Percentile Queue Length [ft/ln]	123.44	203.49	106.80	166.35	183.16	123.13	143.40	264.02	277.56	90.85	152.52	157.21
95th-Percentile Queue Length [veh/ln]	8.58	12.82	7.66	10.88	11.77	8.56	9.66	15.89	16.57	6.54	10.15	10.40
95th-Percentile Queue Length [ft/ln]	214.54	320.46	191.55	272.11	294.14	214.12	241.59	397.25	414.17	163.54	253.79	260.02

Movement, Approach, & Intersection Results

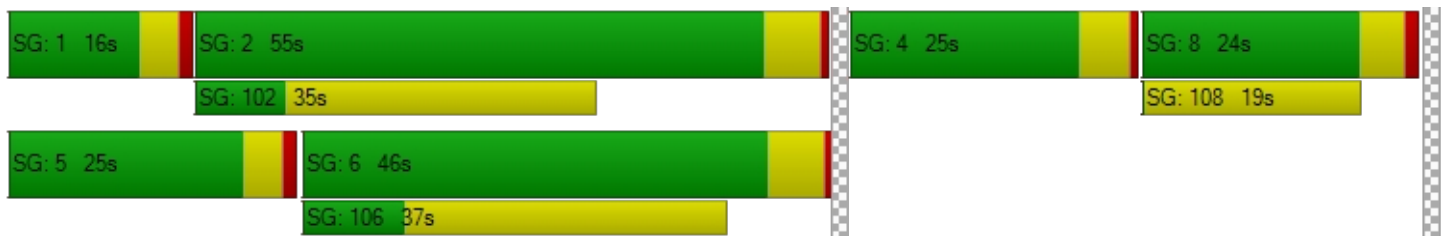
d_M, Delay for Movement [s/veh]	49.62	62.27	49.60	62.01	63.22	55.44	62.11	26.03	27.23	63.29	25.14	25.92
Movement LOS	D	E	D	E	E	E	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	55.11			60.67			29.93			29.42		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.21											
Intersection LOS	D											
Intersection V/C	0.689											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	13.0	0.0	4.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.60	47.71	0.00	56.07
I_p,int, Pedestrian LOS Score for Intersection	2.386	2.411	0.000	2.993
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	317	333	825	675
d_b, Bicycle Delay [s]	42.51	41.67	20.71	26.34
I_b,int, Bicycle LOS Score for Intersection	2.490	2.515	2.467	2.114
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	8	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



HCM 6th TWSC
2: Chevron Dwy (west) & 99W

11/15/2022

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1219	39	0	0	0	4
Future Vol, veh/h	1219	39	0	0	0	4
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	63	63	63	63
Heavy Vehicles, %	0	4	0	0	0	0
Mvmt Flow	1935	62	0	0	0	6

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	1004
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	209
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	208
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	208	-	-	-
HCM Lane V/C Ratio	0.031	-	-	-
HCM Control Delay (s)	22.9	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

HCM 6th TWSC
 3: Chevron Dwy (east) & 99W

11/15/2022

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1220	3	0	0	0	22
Future Vol, veh/h	1220	3	0	0	0	22
Conflicting Peds, #/hr	0	3	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	57	57	57	57
Heavy Vehicles, %	0	0	0	0	0	7
Mvmt Flow	2140	5	0	0	0	39

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1076
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 7.24
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.97
Pot Cap-1 Maneuver	-	-	0 - 0 178
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 177
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -






















Approach	EB	WB	NB
HCM Control Delay, s	0	0	30.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	177	-	-	-
HCM Lane V/C Ratio	0.218	-	-	-
HCM Control Delay (s)	30.9	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.8	-	-	-

HCM Signalized Intersection Capacity Analysis

4: Sherwood Blvd & SW Langer Dr

11/15/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 				
Traffic Volume (vph)	79	35	44	126	33	218	35	339	126	115	300	13
Future Volume (vph)	79	35	44	126	33	218	35	339	126	115	300	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.87		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1701		1752	1638		1805	3360		1770	1851	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	1701		1752	1638		1805	3360		1770	1851	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	84	37	47	134	35	232	37	361	134	122	319	14
RTOR Reduction (vph)	0	40	0	0	190	0	0	47	0	0	2	0
Lane Group Flow (vph)	84	44	0	134	77	0	37	448	0	122	331	0
Confl. Peds. (#/hr)			13	13					4	4		
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	1%	0%	0%	3%	0%	1%	0%	2%	3%	2%	2%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases												
Actuated Green, G (s)	6.0	7.6		6.6	9.1		2.6	15.8		6.5	20.8	
Effective Green, g (s)	7.9	9.6		9.4	11.1		4.4	17.2		9.2	22.0	
Actuated g/C Ratio	0.13	0.16		0.15	0.18		0.07	0.28		0.15	0.36	
Clearance Time (s)	5.9	6.0		6.8	6.0		5.8	5.4		6.7	5.2	
Vehicle Extension (s)	2.7	1.6		2.4	1.6		2.9	2.1		2.6	2.1	
Lane Grp Cap (vph)	229	265		268	296		129	941		265	663	
v/s Ratio Prot	0.05	0.03		c0.08	c0.05		0.02	0.13		c0.07	c0.18	
v/s Ratio Perm												
v/c Ratio	0.37	0.17		0.50	0.26		0.29	0.48		0.46	0.50	
Uniform Delay, d1	24.5	22.4		23.8	21.6		27.0	18.4		23.8	15.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.1		1.0	0.2		1.2	0.2		1.0	0.3	
Delay (s)	25.3	22.5		24.8	21.8		28.2	18.5		24.8	15.7	
Level of Service	C	C		C	C		C	B		C	B	
Approach Delay (s)		23.9			22.8			19.2			18.1	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			20.3				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			61.4				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			53.6%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

4: Sherwood Blvd & SW Langer Dr

11/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	35	44	126	33	218	35	339	126	115	300	13
Future Volume (veh/h)	79	35	44	126	33	218	35	339	126	115	300	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1900	1856	1900	1885	1900	1870	1856	1870	1870	1900
Adj Flow Rate, veh/h	84	37	47	134	35	232	37	361	134	122	319	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	0	0	3	0	1	0	2	3	2	2	0
Cap, veh/h	181	141	179	257	50	329	131	594	217	241	523	23
Arrive On Green	0.10	0.19	0.15	0.15	0.23	0.20	0.07	0.24	0.21	0.14	0.29	0.27
Sat Flow, veh/h	1795	741	941	1767	212	1403	1810	2526	921	1781	1776	78
Grp Volume(v), veh/h	84	0	84	134	0	267	37	252	243	122	0	333
Grp Sat Flow(s),veh/h/ln	1795	0	1681	1767	0	1614	1810	1777	1670	1781	0	1854
Q Serve(g_s), s	2.4	0.0	2.4	3.8	0.0	8.4	1.1	6.9	7.2	3.5	0.0	8.4
Cycle Q Clear(g_c), s	2.4	0.0	2.4	3.8	0.0	8.4	1.1	6.9	7.2	3.5	0.0	8.4
Prop In Lane	1.00		0.56	1.00		0.87	1.00		0.55	1.00		0.04
Lane Grp Cap(c), veh/h	181	0	319	257	0	379	131	418	393	241	0	546
V/C Ratio(X)	0.46	0.00	0.26	0.52	0.00	0.71	0.28	0.60	0.62	0.51	0.00	0.61
Avail Cap(c_a), veh/h	392	0	525	415	0	504	392	862	810	416	0	892
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	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	19.3	21.5	0.0	20.0	23.9	18.5	19.0	21.8	0.0	16.5
Incr Delay (d2), s/veh	1.6	0.0	0.2	1.1	0.0	1.5	1.1	0.6	0.7	1.3	0.0	0.5
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	1.0	0.0	0.9	1.5	0.0	3.1	0.5	2.6	2.6	1.4	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	0.0	19.5	22.6	0.0	21.5	25.0	19.2	19.7	23.2	0.0	17.0
LnGrp LOS	C	A	B	C	A	C	C	B	B	C	A	B
Approach Vol, veh/h		168			401			532				455
Approach Delay, s/veh		22.1			21.9			19.8				18.7
Approach LOS		C			C			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	20.2	9.5	16.8	11.4	16.8	11.9	14.3				
Change Period (Y+Rc), s	* 5.8	* 5.4	* 5.9	6.0	* 6.7	* 5.4	* 6.8	6.0				
Max Green Setting (Gmax), s	* 10	* 25	* 10	15.0	* 10	* 25	* 10	15.0				
Max Q Clear Time (g_c+I1), s	3.1	10.4	4.4	10.4	5.5	9.2	5.8	4.4				
Green Ext Time (p_c), s	0.0	1.2	0.1	0.4	0.1	1.9	0.1	0.1				

Intersection Summary

HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

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

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

HCM 6th AWSC
 5: Chevron Dwy (west) & Chevron Dwy (east)

11/15/2022

Intersection

Intersection Delay, s/veh 7.2

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		B			Y
Traffic Vol, veh/h	29	10	0	22	31	0
Future Vol, veh/h	29	10	0	22	31	0
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	43	15	0	32	46	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.3	6.6	7.5
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	74%	100%
Vol Thru, %	0%	0%	0%
Vol Right, %	100%	26%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	22	39	31
LT Vol	0	29	31
Through Vol	0	0	0
RT Vol	22	10	0
Lane Flow Rate	32	57	46
Geometry Grp	1	1	1
Degree of Util (X)	0.031	0.064	0.054
Departure Headway (Hd)	3.435	4.031	4.226
Convergence, Y/N	Yes	Yes	Yes
Cap	1037	888	847
Service Time	1.472	2.06	2.253
HCM Lane V/C Ratio	0.031	0.064	0.054
HCM Control Delay	6.6	7.3	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2

HCM 6th TWSC
6: Sherwood Blvd & SW 12th St/SW Century Dr

11/15/2022

Intersection												
Int Delay, s/veh	10.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	48	37	40	27	189	14	301	45	106	331	33
Future Vol, veh/h	10	48	37	40	27	189	14	301	45	106	331	33
Conflicting Peds, #/hr	5	0	4	4	0	5	7	0	10	10	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	4	1	0	3	4	1	2	0
Mvmt Flow	10	50	39	42	28	197	15	314	47	110	345	34

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1074	990	373	1009	984	353	386	0	0	371	0	0
Stage 1	589	589	-	378	378	-	-	-	-	-	-	-
Stage 2	485	401	-	631	606	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.52	6.2	7.1	6.54	6.21	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.52	-	6.1	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.52	-	6.1	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.018	3.3	3.5	4.036	3.309	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	199	246	678	221	246	693	1184	-	-	1193	-	-
Stage 1	498	495	-	648	612	-	-	-	-	-	-	-
Stage 2	567	601	-	472	484	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	113	210	671	152	210	683	1176	-	-	1182	-	-
Mov Cap-2 Maneuver	113	210	-	152	210	-	-	-	-	-	-	-
Stage 1	487	434	-	632	596	-	-	-	-	-	-	-
Stage 2	377	585	-	346	424	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	27.8		33.3		0.3			1.9		
HCM LOS	D		D							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1176	-	-	255	383	1182	-	-
HCM Lane V/C Ratio	0.012	-	-	0.388	0.696	0.093	-	-
HCM Control Delay (s)	8.1	0	-	27.8	33.3	8.4	0	-
HCM Lane LOS	A	A	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.7	5.1	0.3	-	-

Intersection Level Of Service Report

Intersection 1:

Control Type:	Signalized	Delay (sec / veh):	47.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

Intersection Setup

Name	Sherwood Blvd			Sherwood Blvd			99W			99W		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	150.00	100.00	100.00	475.00	100.00	100.00	415.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Sherwood Blvd			Sherwood Blvd			99W			99W		
Base Volume Input [veh/h]	251	278	107	164	257	182	197	987	98	131	1244	180
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	1.00	4.00	2.00	1.00	2.00	1.00	5.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	251	278	107	164	257	182	197	987	98	131	1244	180
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	72	28	43	67	47	51	257	26	34	324	47
Total Analysis Volume [veh/h]	261	290	111	171	268	190	205	1028	102	136	1296	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	2		4			1			4			
v_di, Inbound Pedestrian Volume crossing in	1		4			2			4			
v_co, Outbound Pedestrian Volume crossing	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing mi	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	End of Lagging Red
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	6	6	6	6	4	10	10	4	10	10
Maximum Green [s]	30	30	30	18	18	18	20	44	44	18	42	42
Amber [s]	4.0	4.0	4.0	4.5	4.5	4.5	3.5	5.0	5.0	3.5	5.0	5.0
All red [s]	1.0	1.0	1.0	0.5	0.5	0.5	1.0	0.5	0.5	1.0	0.5	0.5
Split [s]	35	35	35	23	23	23	24	50	50	22	48	48
Vehicle Extension [s]	2.3	2.3	2.3	3.0	3.0	3.0	3.0	4.4	4.4	2.3	4.4	4.4
Walk [s]	0	0	0	9	9	9	0	8	8	0	9	9
Pedestrian Clearance [s]	30	30	30	9	9	9	0	27	27	0	28	28
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.5	3.5	3.5	2.5	3.5	3.5
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	23	23	23	18	18	18	17	58	58	12	53	53
g / C, Green / Cycle	0.17	0.17	0.17	0.14	0.14	0.14	0.13	0.44	0.44	0.09	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.15	0.15	0.07	0.10	0.14	0.12	0.11	0.22	0.22	0.08	0.28	0.29
s, saturation flow rate [veh/h]	1781	1885	1564	1781	1885	1589	1795	3475	1740	1781	3503	1716
c, Capacity [veh/h]	309	327	271	247	261	220	232	1540	771	162	1419	695
d1, Uniform Delay [s]	52.03	52.48	47.79	53.37	56.00	54.80	55.67	25.73	25.74	58.13	32.11	32.18
k, delay calibration	0.13	0.16	0.07	0.18	0.41	0.30	0.23	0.50	0.50	0.07	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.61	11.17	0.60	5.77	57.26	22.42	20.11	1.11	2.22	6.92	2.90	5.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.89	0.41	0.69	1.03	0.86	0.89	0.49	0.49	0.84	0.70	0.70
d, Delay for Lane Group [s/veh]	59.63	63.65	48.40	59.14	113.26	77.22	75.78	26.85	27.96	65.06	35.02	38.08
Lane Group LOS	E	E	D	E	F	E	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	8.90	10.26	3.27	5.73	12.70	7.46	7.91	8.51	8.77	4.72	13.48	13.87
50th-Percentile Queue Length [ft/ln]	222.50	256.44	81.69	143.37	317.57	186.55	197.66	212.63	219.24	118.03	336.93	346.72
95th-Percentile Queue Length [veh/ln]	13.79	15.51	5.88	9.66	18.78	11.94	12.52	13.29	13.63	8.28	19.50	19.98
95th-Percentile Queue Length [ft/ln]	344.82	387.75	147.05	241.55	469.53	298.55	312.94	332.21	340.66	207.12	487.44	499.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.63	63.65	48.40	59.14	113.26	77.22	75.78	27.15	27.96	65.06	35.73	38.08
Movement LOS	E	E	D	E	F	E	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	59.51			87.66			34.68			38.46		
Approach LOS	E			F			C			D		
d_I, Intersection Delay [s/veh]	47.84											
Intersection LOS	D											
Intersection V/C	0.793											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	13.0	0.0	4.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	52.65	0.00	61.06
I_p,int, Pedestrian LOS Score for Intersection	2.433	2.467	0.000	3.024
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	277	685	654
d_b, Bicycle Delay [s]	38.46	48.25	28.12	29.45
I_b,int, Bicycle LOS Score for Intersection	2.652	2.597	2.294	2.451
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	8	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix D
2023 Background Traffic Operations
2023 Total Traffic Operations Worksheets

HCM 6th TWSC
2: Chevron Dwy (west) & 99W

11/18/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1587	50	0	0	0	2
Future Vol, veh/h	1587	50	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	16	0	0	0	0
Mvmt Flow	2088	66	0	0	0	3

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	- 1077
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	- 7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	- 3.9
Pot Cap-1 Maneuver	-	-	0	-	0 187
Stage 1	-	-	0	-	0 -
Stage 2	-	-	0	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 187
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	24.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	187	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-
HCM Control Delay (s)	24.5	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

HCM 6th TWSC
3: Chevron Dwy (east) & 99W

11/18/2022

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1588	1	0	0	0	42
Future Vol, veh/h	1588	1	0	0	0	42
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	0	0	0	0	0	24
Mvmt Flow	2206	1	0	0	0	58

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	1105
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.58
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.14
Pot Cap-1 Maneuver	-	-	0	-	0	150
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	150
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	43.5
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	150	-	-	-
HCM Lane V/C Ratio	0.389	-	-	-
HCM Control Delay (s)	43.5	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	1.7	-	-	-

HCM 6th Signalized Intersection Summary
 4: Sherwood Blvd & SW Langer Dr

11/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	19	1	57	14	119	23	344	106	113	216	8
Future Volume (veh/h)	72	19	1	57	14	119	23	344	106	113	216	8
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		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1826	1781	1737	1900	1856	1767	1856	1781	1870	1885	1722
Adj Flow Rate, veh/h	85	22	1	67	16	140	27	405	125	133	254	9
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	5	8	11	0	3	9	3	8	2	1	12
Cap, veh/h	193	280	13	193	29	250	113	676	206	262	598	21
Arrive On Green	0.11	0.16	0.12	0.12	0.17	0.13	0.07	0.25	0.23	0.15	0.33	0.31
Sat Flow, veh/h	1795	1733	79	1654	167	1465	1682	2653	809	1781	1809	64
Grp Volume(v), veh/h	85	0	23	67	0	156	27	268	262	133	0	263
Grp Sat Flow(s),veh/h/ln	1795	0	1811	1654	0	1632	1682	1763	1699	1781	0	1873
Q Serve(g_s), s	2.2	0.0	0.5	1.9	0.0	4.5	0.8	6.7	6.9	3.4	0.0	5.5
Cycle Q Clear(g_c), s	2.2	0.0	0.5	1.9	0.0	4.5	0.8	6.7	6.9	3.4	0.0	5.5
Prop In Lane	1.00		0.04	1.00		0.90	1.00		0.48	1.00		0.03
Lane Grp Cap(c), veh/h	193	0	293	193	0	279	113	449	433	262	0	619
V/C Ratio(X)	0.44	0.00	0.08	0.35	0.00	0.56	0.24	0.60	0.61	0.51	0.00	0.42
Avail Cap(c_a), veh/h	427	0	616	423	0	555	397	931	897	452	0	981
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	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	17.8	20.3	0.0	19.9	22.1	16.4	16.7	19.6	0.0	13.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.7	0.0	0.7	1.0	0.6	0.6	1.2	0.0	0.2
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	0.9	0.0	0.2	0.7	0.0	1.6	0.3	2.4	2.4	1.4	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.3	0.0	17.9	21.1	0.0	20.5	23.1	17.0	17.4	20.9	0.0	13.3
LnGrp LOS	C	A	B	C	A	C	C	B	B	C	A	B
Approach Vol, veh/h		108			223			557				396
Approach Delay, s/veh		21.3			20.7			17.5				15.8
Approach LOS		C			C			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	20.7	9.4	12.5	11.4	16.7	9.8	12.1				
Change Period (Y+Rc), s	* 5.8	* 5.4	* 5.9	6.0	* 6.7	* 5.4	* 6.8	6.0				
Max Green Setting (Gmax), s	* 10	* 25	* 10	15.0	* 10	* 25	* 10	15.0				
Max Q Clear Time (g_c+I1), s	2.8	7.5	4.2	6.5	5.4	8.9	3.9	2.5				
Green Ext Time (p_c), s	0.0	0.9	0.1	0.3	0.1	2.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th AWSC
 5: Chevron Dwy (west) & Chevron Dwy (east)

11/18/2022

Intersection

Intersection Delay, s/veh 7
 Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	14	10	0	13	9	0
Future Vol, veh/h	14	10	0	13	9	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	14	10	0	15	0	0
Mvmt Flow	17	12	0	16	11	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.2	6.4	7.2
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	58%	100%
Vol Thru, %	0%	0%	0%
Vol Right, %	100%	42%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	13	24	9
LT Vol	0	14	9
Through Vol	0	0	0
RT Vol	13	10	0
Lane Flow Rate	16	29	11
Geometry Grp	1	1	1
Degree of Util (X)	0.015	0.033	0.013
Departure Headway (Hd)	3.359	4.051	4.163
Convergence, Y/N	Yes	Yes	Yes
Cap	1067	887	862
Service Time	1.376	2.059	2.178
HCM Lane V/C Ratio	0.015	0.033	0.013
HCM Control Delay	6.4	7.2	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0

HCM 6th TWSC
6: Sherwood Blvd & SW 12th St/SW Century Dr

11/18/2022

Intersection												
Int Delay, s/veh	15.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	40	47	45	10	135	16	328	94	83	206	10
Future Vol, veh/h	10	40	47	45	10	135	16	328	94	83	206	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	3	4	2	0	4	0	5	3	1	5	0
Mvmt Flow	13	53	62	59	13	178	21	432	124	109	271	13

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1128	1094	278	1089	1038	494	284	0	0	556	0	0
Stage 1	496	496	-	536	536	-	-	-	-	-	-	-
Stage 2	632	598	-	553	502	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.53	6.24	7.12	6.5	6.24	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.53	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.53	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.027	3.336	3.518	4	3.336	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	183	213	756	193	233	571	1290	-	-	1020	-	-
Stage 1	559	544	-	529	527	-	-	-	-	-	-	-
Stage 2	472	489	-	517	545	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	106	181	756	123	199	571	1290	-	-	1020	-	-
Mov Cap-2 Maneuver	106	181	-	123	199	-	-	-	-	-	-	-
Stage 1	546	475	-	516	514	-	-	-	-	-	-	-
Stage 2	309	477	-	369	476	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	32.1		61.7		0.3		2.5	
HCM LOS	D		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1290	-	-	257	291	1020	-	-
HCM Lane V/C Ratio	0.016	-	-	0.497	0.859	0.107	-	-
HCM Control Delay (s)	7.8	0	-	32.1	61.7	9	0	-
HCM Lane LOS	A	A	-	D	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.6	7.5	0.4	-	-

Intersection Level Of Service Report

Intersection 1:

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.704

Intersection Setup

Name	Sherwood Blvd			Sherwood Blvd			99W			99W		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	150.00	100.00	100.00	475.00	100.00	100.00	415.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Sherwood Blvd			Sherwood Blvd			99W			99W		
Base Volume Input [veh/h]	162	233	141	191	208	151	166	1306	94	105	758	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	4.00	4.00	2.00	4.00	1.00	7.00	1.00	3.00	14.00	7.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	162	233	141	191	208	151	166	1306	94	105	758	93
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	63	38	51	56	41	45	351	25	28	204	25
Total Analysis Volume [veh/h]	174	251	152	205	224	162	178	1404	101	113	815	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	End of Lagging Red
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	6	6	6	6	4	10	10	4	10	10
Maximum Green [s]	19	19	19	20	20	20	20	50	50	12	40	40
Amber [s]	4.0	4.0	4.0	4.5	4.5	4.5	3.5	5.0	5.0	3.5	5.0	5.0
All red [s]	1.0	1.0	1.0	0.5	0.5	0.5	1.0	0.5	0.5	1.0	0.5	0.5
Split [s]	24	24	24	25	25	25	25	55	55	16	46	46
Vehicle Extension [s]	2.3	2.3	2.3	3.0	3.0	3.0	3.0	4.4	4.4	2.3	4.4	4.4
Walk [s]	0	0	0	9	9	9	0	8	8	0	9	9
Pedestrian Clearance [s]	19	19	19	11	11	11	0	27	27	0	28	28
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.5	3.5	3.5	2.5	3.5	3.5
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	18	18	18	17	17	17	14	55	55	9	51	51
g / C, Green / Cycle	0.15	0.15	0.15	0.14	0.14	0.14	0.12	0.46	0.46	0.08	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.10	0.13	0.10	0.12	0.12	0.10	0.10	0.29	0.29	0.06	0.19	0.19
s, saturation flow rate [veh/h]	1767	1870	1564	1752	1870	1564	1795	3418	1734	1767	3217	1597
c, Capacity [veh/h]	270	286	239	246	263	220	209	1578	800	138	1363	677
d1, Uniform Delay [s]	47.77	49.75	47.71	50.19	50.35	49.44	52.03	24.57	24.58	54.46	24.59	24.62
k, delay calibration	0.07	0.19	0.07	0.19	0.21	0.14	0.12	0.50	0.50	0.09	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.58	13.76	1.72	12.14	13.51	6.09	10.52	1.94	3.79	9.51	1.07	2.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.88	0.64	0.83	0.85	0.74	0.85	0.63	0.63	0.82	0.45	0.45
d, Delay for Lane Group [s/veh]	49.35	63.50	49.42	62.34	63.86	55.54	62.55	26.51	28.37	63.97	25.66	26.78
Lane Group LOS	D	E	D	E	E	E	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.01	8.44	4.38	6.81	7.54	5.03	5.86	11.04	11.63	3.73	6.35	6.54
50th-Percentile Queue Length [ft/ln]	125.31	211.08	109.58	170.34	188.61	125.73	146.56	275.98	290.65	93.17	158.70	163.60
95th-Percentile Queue Length [veh/ln]	8.68	13.21	7.82	11.09	12.05	8.71	9.83	16.49	17.22	6.71	10.48	10.74
95th-Percentile Queue Length [ft/ln]	217.11	330.21	195.42	277.36	301.22	217.67	245.84	412.21	430.44	167.71	262.00	268.49

Movement, Approach, & Intersection Results

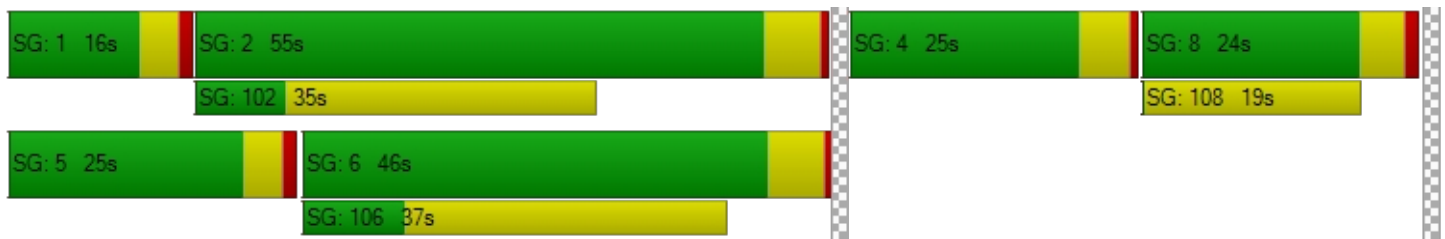
d_M, Delay for Movement [s/veh]	49.35	63.50	49.42	62.34	63.86	55.54	62.55	27.05	28.37	63.97	25.94	26.78
Movement LOS	D	E	D	E	E	E	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	55.53			61.05			30.88			30.20		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.96											
Intersection LOS	D											
Intersection V/C	0.704											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	13.0	0.0	4.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.60	47.71	0.00	56.07
I_p,int, Pedestrian LOS Score for Intersection	2.392	2.416	0.000	3.001
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	317	333	825	675
d_b, Bicycle Delay [s]	42.51	41.67	20.71	26.34
I_b,int, Bicycle LOS Score for Intersection	2.512	2.535	2.485	2.125
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	8	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



HCM 6th TWSC
2: Chevron Dwy (west) & 99W

11/18/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1244	39	0	1587	0	4
Future Vol, veh/h	1244	39	0	1587	0	4
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	63	63	63	63
Heavy Vehicles, %	0	3	0	0	0	0
Mvmt Flow	1975	62	0	2519	0	6

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	-	-	1024
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	203
Stage 1	-	-	0	-	-
Stage 2	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	202
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	23.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	202	-	-	-
HCM Lane V/C Ratio	0.031	-	-	-
HCM Control Delay (s)	23.4	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

HCM 6th TWSC
3: Chevron Dwy (east) & 99W

11/18/2022

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1245	3	0	1587	0	22
Future Vol, veh/h	1245	3	0	1587	0	22
Conflicting Peds, #/hr	0	3	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	57	57	57	57
Heavy Vehicles, %	0	0	0	0	0	9
Mvmt Flow	2184	5	0	2784	0	39

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	1098
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.28
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.99
Pot Cap-1 Maneuver	-	-	0	-	169
Stage 1	-	-	0	-	-
Stage 2	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	169
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	32.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	169	-	-	-
HCM Lane V/C Ratio	0.228	-	-	-
HCM Control Delay (s)	32.5	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.8	-	-	-

HCM 6th Signalized Intersection Summary
 4: Sherwood Blvd & SW Langer Dr

11/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	36	45	129	34	222	36	346	129	117	306	13
Future Volume (veh/h)	81	36	45	129	34	222	36	346	129	117	306	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1900	1856	1900	1885	1900	1870	1856	1870	1870	1900
Adj Flow Rate, veh/h	86	38	48	137	36	236	38	368	137	124	326	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	0	0	3	0	1	0	2	3	2	2	0
Cap, veh/h	181	141	179	259	50	331	131	598	219	242	528	23
Arrive On Green	0.10	0.19	0.15	0.15	0.24	0.20	0.07	0.24	0.21	0.14	0.30	0.28
Sat Flow, veh/h	1795	743	939	1767	214	1401	1810	2523	923	1781	1778	76
Grp Volume(v), veh/h	86	0	86	137	0	272	38	257	248	124	0	340
Grp Sat Flow(s),veh/h/ln	1795	0	1682	1767	0	1615	1810	1777	1669	1781	0	1854
Q Serve(g_s), s	2.5	0.0	2.5	4.0	0.0	8.7	1.1	7.1	7.4	3.6	0.0	8.7
Cycle Q Clear(g_c), s	2.5	0.0	2.5	4.0	0.0	8.7	1.1	7.1	7.4	3.6	0.0	8.7
Prop In Lane	1.00		0.56	1.00		0.87	1.00		0.55	1.00		0.04
Lane Grp Cap(c), veh/h	181	0	320	259	0	382	131	421	396	242	0	550
V/C Ratio(X)	0.48	0.00	0.27	0.53	0.00	0.71	0.29	0.61	0.63	0.51	0.00	0.62
Avail Cap(c_a), veh/h	387	0	518	410	0	497	387	850	799	410	0	880
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	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	19.6	21.8	0.0	20.2	24.2	18.8	19.2	22.1	0.0	16.7
Incr Delay (d2), s/veh	1.7	0.0	0.2	1.1	0.0	1.9	1.1	0.7	0.8	1.3	0.0	0.5
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	1.1	0.0	0.9	1.6	0.0	3.2	0.5	2.7	2.7	1.5	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	19.7	22.9	0.0	22.1	25.4	19.4	20.0	23.5	0.0	17.3
LnGrp LOS	C	A	B	C	A	C	C	B	B	C	A	B
Approach Vol, veh/h		172			409			543				464
Approach Delay, s/veh		22.4			22.4			20.1				18.9
Approach LOS		C			C			C				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	20.6	9.6	17.0	11.5	17.1	12.1	14.5				
Change Period (Y+Rc), s	* 5.8	* 5.4	* 5.9	6.0	* 6.7	* 5.4	* 6.8	6.0				
Max Green Setting (Gmax), s	* 10	* 25	* 10	15.0	* 10	* 25	* 10	15.0				
Max Q Clear Time (g_c+I1), s	3.1	10.7	4.5	10.7	5.6	9.4	6.0	4.5				
Green Ext Time (p_c), s	0.0	1.2	0.1	0.4	0.1	1.9	0.1	0.1				

Intersection Summary

HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Notes

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

HCM 6th TWSC
5: Chevron Dwy (west) & Chevron Dwy (east)

11/18/2022

Intersection						
Int Delay, s/veh	6.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	10	0	22	31	0
Future Vol, veh/h	29	10	0	22	31	0
Conflicting Peds, #/hr	0	1	0	1	1	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	68	68	68	68	68	68
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	43	15	0	32	46	0

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	109	18	0	0	33
Stage 1	17	-	-	-	-
Stage 2	92	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	893	1066	-	-	1592
Stage 1	1011	-	-	-	-
Stage 2	937	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	866	1064	-	-	1590
Mov Cap-2 Maneuver	866	-	-	-	-
Stage 1	1010	-	-	-	-
Stage 2	910	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	7.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	909	1590
HCM Lane V/C Ratio	-	-	0.063	0.029
HCM Control Delay (s)	-	-	9.2	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

HCM 6th TWSC
6: Sherwood Blvd & SW 12th St/SW Century Dr

11/18/2022

Intersection												
Int Delay, s/veh	10.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	49	38	41	28	193	14	307	46	108	338	34
Future Vol, veh/h	10	49	38	41	28	193	14	307	46	108	338	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	4	4	0	3	4	1	2	0
Mvmt Flow	10	51	40	43	29	201	15	320	48	113	352	35

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1085	994	370	1015	987	344	387	0	0	368	0	0
Stage 1	596	596	-	374	374	-	-	-	-	-	-	-
Stage 2	489	398	-	641	613	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.52	6.2	7.1	6.54	6.24	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.52	-	6.1	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.52	-	6.1	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.018	3.3	3.5	4.036	3.336	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	196	245	680	219	245	694	1183	-	-	1196	-	-
Stage 1	494	492	-	651	614	-	-	-	-	-	-	-
Stage 2	564	603	-	466	480	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	112	212	680	151	212	694	1183	-	-	1196	-	-
Mov Cap-2 Maneuver	112	212	-	151	212	-	-	-	-	-	-	-
Stage 1	486	432	-	641	604	-	-	-	-	-	-	-
Stage 2	375	593	-	340	422	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	27.7		34.3		0.3		1.9	
HCM LOS	D		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1183	-	-	258	384	1196	-	-
HCM Lane V/C Ratio	0.012	-	-	0.392	0.711	0.094	-	-
HCM Control Delay (s)	8.1	0	-	27.7	34.3	8.3	0	-
HCM Lane LOS	A	A	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.8	5.3	0.3	-	-

Intersection Level Of Service Report

Intersection 1:

Control Type:	Signalized	Delay (sec / veh):	49.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.813

Intersection Setup

Name	Sherwood Blvd			Sherwood Blvd			99W			99W		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	150.00	100.00	100.00	475.00	100.00	100.00	415.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Sherwood Blvd			Sherwood Blvd			99W			99W		
Base Volume Input [veh/h]	256	284	109	167	262	186	201	1007	100	134	1269	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	2.00	4.00	3.00	2.00	2.00	2.00	6.00	1.00	1.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	256	284	109	167	262	186	201	1007	100	134	1269	184
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	74	28	43	68	48	52	262	26	35	330	48
Total Analysis Volume [veh/h]	267	296	114	174	273	194	209	1049	104	140	1322	192
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	2			4			1			4		
v_di, Inbound Pedestrian Volume crossing in	1			4			2			4		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	End of Lagging Red
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	6	6	6	6	4	10	10	4	10	10
Maximum Green [s]	30	30	30	18	18	18	20	44	44	18	42	42
Amber [s]	4.0	4.0	4.0	4.5	4.5	4.5	3.5	5.0	5.0	3.5	5.0	5.0
All red [s]	1.0	1.0	1.0	0.5	0.5	0.5	1.0	0.5	0.5	1.0	0.5	0.5
Split [s]	35	35	35	23	23	23	24	50	50	22	48	48
Vehicle Extension [s]	2.3	2.3	2.3	3.0	3.0	3.0	3.0	4.4	4.4	2.3	4.4	4.4
Walk [s]	0	0	0	9	9	9	0	8	8	0	9	9
Pedestrian Clearance [s]	30	30	30	9	9	9	0	27	27	0	28	28
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.5	3.5	3.5	2.5	3.5	3.5
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.0	6.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	23	23	23	18	18	18	17	57	57	12	52	52
g / C, Green / Cycle	0.18	0.18	0.18	0.14	0.14	0.14	0.13	0.44	0.44	0.09	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.15	0.16	0.07	0.10	0.15	0.12	0.12	0.22	0.22	0.08	0.29	0.29
s, saturation flow rate [veh/h]	1795	1870	1564	1767	1870	1589	1781	3446	1726	1795	3503	1716
c, Capacity [veh/h]	319	332	278	245	259	220	235	1507	755	166	1394	683
d1, Uniform Delay [s]	51.62	52.21	47.40	53.52	56.00	54.95	55.48	26.48	26.49	58.05	33.17	33.24
k, delay calibration	0.14	0.17	0.07	0.19	0.42	0.31	0.25	0.50	0.50	0.07	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.37	12.21	0.59	6.69	66.55	25.41	21.29	1.23	2.46	6.95	3.36	6.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.89	0.41	0.71	1.05	0.88	0.89	0.51	0.51	0.84	0.73	0.73
d, Delay for Lane Group [s/veh]	58.99	64.42	47.99	60.21	122.55	80.36	76.78	27.72	28.95	64.99	36.53	40.05
Lane Group LOS	E	E	D	E	F	F	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.06	10.56	3.34	5.90	13.27	7.79	8.13	8.87	9.15	4.86	14.11	14.57
50th-Percentile Queue Length [ft/ln]	226.59	263.92	83.57	147.57	331.74	194.77	203.26	221.64	228.75	121.49	352.72	364.35
95th-Percentile Queue Length [veh/ln]	14.00	15.89	6.02	9.89	19.73	12.37	12.81	13.75	14.11	8.47	20.27	20.83
95th-Percentile Queue Length [ft/ln]	350.02	397.13	150.42	247.18	493.13	309.21	320.17	343.72	352.77	211.87	506.72	520.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.99	64.42	47.99	60.21	122.55	80.36	76.78	28.05	28.95	64.99	37.35	40.05
Movement LOS	E	E	D	E	F	F	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	59.51			92.86			35.59			40.00		
Approach LOS	E			F			D			D		
d_I, Intersection Delay [s/veh]	49.48											
Intersection LOS	D											
Intersection V/C	0.813											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	13.0	0.0	4.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	52.65	0.00	61.06
I_p,int, Pedestrian LOS Score for Intersection	2.439	2.473	0.000	3.033
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	277	685	654
d_b, Bicycle Delay [s]	38.46	48.25	28.12	29.45
I_b,int, Bicycle LOS Score for Intersection	2.677	2.617	2.309	2.469
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	8	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix E
2023 Total Traffic Operations Worksheets

HCM 6th TWSC
2: WEST DRIVEWAY & 99W

11/22/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1555	89	0	0	0	2
Future Vol, veh/h	1555	89	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1920	110	0	0	0	2

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	1015
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	206
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	206
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	206	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-
HCM Control Delay (s)	22.7	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

HCM 6th TWSC
3: EAST DRIVEWAY & 99W

11/22/2022

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1555	2	0	0	0	76
Future Vol, veh/h	1555	2	0	0	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2160	3	0	0	0	106

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	1082
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	186
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	186
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	47.1
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	186	-	-	-
HCM Lane V/C Ratio	0.568	-	-	-
HCM Control Delay (s)	47.1	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	3	-	-	-

HCM 6th Signalized Intersection Summary

4: SHERWOOD BLVD & LANGER DR

11/22/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	19	26	61	14	132	23	344	108	113	216	8
Future Volume (veh/h)	72	19	26	61	14	132	23	344	108	113	216	8
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	84	22	30	71	16	153	27	400	126	131	251	9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	194	123	168	216	28	268	122	659	205	263	578	21
Arrive On Green	0.11	0.17	0.13	0.12	0.18	0.14	0.07	0.24	0.22	0.15	0.32	0.29
Sat Flow, veh/h	1810	728	993	1810	155	1479	1810	2709	844	1810	1823	65
Grp Volume(v), veh/h	84	0	52	71	0	169	27	265	261	131	0	260
Grp Sat Flow(s),veh/h/ln	1810	0	1721	1810	0	1634	1810	1805	1748	1810	0	1888
Q Serve(g_s), s	2.2	0.0	1.3	1.8	0.0	4.8	0.7	6.5	6.6	3.3	0.0	5.4
Cycle Q Clear(g_c), s	2.2	0.0	1.3	1.8	0.0	4.8	0.7	6.5	6.6	3.3	0.0	5.4
Prop In Lane	1.00		0.58	1.00		0.91	1.00		0.48	1.00		0.03
Lane Grp Cap(c), veh/h	194	0	291	216	0	296	122	439	426	263	0	599
V/C Ratio(X)	0.43	0.00	0.18	0.33	0.00	0.57	0.22	0.60	0.61	0.50	0.00	0.43
Avail Cap(c_a), veh/h	434	0	590	467	0	560	431	961	931	463	0	998
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	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	18.2	20.0	0.0	19.4	21.9	16.6	17.0	19.5	0.0	13.4
Incr Delay (d2), s/veh	1.3	0.0	0.1	0.6	0.0	0.6	0.9	0.6	0.7	1.2	0.0	0.2
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	0.9	0.0	0.5	0.7	0.0	1.7	0.3	2.4	2.4	1.3	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	0.0	18.3	20.6	0.0	20.1	22.7	17.2	17.7	20.7	0.0	13.6
LnGrp LOS	C	A	B	C	A	C	C	B	B	C	A	B
Approach Vol, veh/h		136			240			553				391
Approach Delay, s/veh		20.6			20.2			17.7				16.0
Approach LOS		C			C			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	19.9	9.3	13.0	11.2	16.1	9.9	12.4				
Change Period (Y+Rc), s	* 5.8	* 5.4	* 5.9	6.0	* 6.7	* 5.4	* 6.8	6.0				
Max Green Setting (Gmax), s	* 10	* 25	* 10	15.0	* 10	* 25	* 10	15.0				
Max Q Clear Time (g_c+I1), s	2.7	7.4	4.2	6.8	5.3	8.6	3.8	3.3				
Green Ext Time (p_c), s	0.0	0.9	0.1	0.3	0.1	2.0	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Notes

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

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

HCM 6th TWSC
5: SHERWOOD BLVD & CENTURY DR

11/22/2022

Intersection												
Int Delay, s/veh	15.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	40	47	45	10	135	16	330	94	84	209	10
Future Vol, veh/h	10	40	47	45	10	135	16	330	94	84	209	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	53	62	59	13	178	21	434	124	111	275	13

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1138	1104	282	1099	1048	496	288	0	0	558	0	0
Stage 1	504	504	-	538	538	-	-	-	-	-	-	-
Stage 2	634	600	-	561	510	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	180	213	762	192	230	578	1286	-	-	1023	-	-
Stage 1	554	544	-	531	526	-	-	-	-	-	-	-
Stage 2	471	493	-	516	541	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	105	181	762	122	196	578	1286	-	-	1023	-	-
Mov Cap-2 Maneuver	105	181	-	122	196	-	-	-	-	-	-	-
Stage 1	541	474	-	518	513	-	-	-	-	-	-	-
Stage 2	310	481	-	367	471	-	-	-	-	-	-	-




Approach	EB		WB		NB		SB	
HCM Control Delay, s	32.1		61.7		0.3		2.5	
HCM LOS	D		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1286	-	-	257	291	1023	-	-
HCM Lane V/C Ratio	0.016	-	-	0.497	0.859	0.108	-	-
HCM Control Delay (s)	7.8	0	-	32.1	61.7	8.9	0	-
HCM Lane LOS	A	A	-	D	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.6	7.5	0.4	-	-

HCM 6th AWSC
6: Chevron Exit & Langer Dr. Exit

11/22/2022

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	15	0	19	29	0
Future Vol, veh/h	20	15	0	19	29	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	23	17	0	22	34	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.1	6.5	7.4
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	57%	100%
Vol Thru, %	0%	0%	0%
Vol Right, %	100%	43%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	19	35	29
LT Vol	0	20	29
Through Vol	0	0	0
RT Vol	19	15	0
Lane Flow Rate	22	41	34
Geometry Grp	1	1	1
Degree of Util (X)	0.021	0.044	0.039
Departure Headway (Hd)	3.396	3.854	4.188
Convergence, Y/N	Yes	Yes	Yes
Cap	1053	930	857
Service Time	1.419	1.874	2.205
HCM Lane V/C Ratio	0.021	0.044	0.04
HCM Control Delay	6.5	7.1	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1

Intersection Level Of Service Report

Intersection 1:

Control Type:	Signalized	Delay (sec / veh):	39.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

Intersection Setup

Name	SHERWOOD BLVD			SHERWOOD BLVD			99W			99W		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	150.00	100.00	100.00	475.00	100.00	100.00	415.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	SHERWOOD BLVD			SHERWOOD BLVD			99W			99W		
Base Volume Input [veh/h]	172	235	141	192	208	151	166	1311	94	105	758	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	4.00	4.00	2.00	4.00	1.00	7.00	1.00	3.00	14.00	7.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	172	235	141	192	208	151	166	1311	94	105	758	93
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	63	38	52	56	41	45	352	25	28	204	25
Total Analysis Volume [veh/h]	185	253	152	206	224	162	178	1410	101	113	815	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	End of Lagging Red
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	6	6	6	6	4	10	10	4	10	10
Maximum Green [s]	19	19	19	20	20	20	20	50	50	12	40	40
Amber [s]	4.0	4.0	4.0	4.5	4.5	4.5	3.5	5.0	5.0	3.5	5.0	5.0
All red [s]	1.0	1.0	1.0	0.5	0.5	0.5	1.0	0.5	0.5	1.0	0.5	0.5
Split [s]	24	24	24	25	25	25	25	55	55	16	46	46
Vehicle Extension [s]	2.3	2.3	2.3	3.0	3.0	3.0	3.0	4.4	4.4	2.3	4.4	4.4
Walk [s]	0	0	0	9	9	9	0	8	8	0	9	9
Pedestrian Clearance [s]	19	19	19	11	11	11	0	27	27	0	28	28
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.5	3.5	3.5	2.5	3.5	3.5
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	18	18	18	17	17	17	14	55	55	9	51	51
g / C, Green / Cycle	0.15	0.15	0.15	0.14	0.14	0.14	0.12	0.46	0.46	0.08	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.10	0.14	0.10	0.12	0.12	0.10	0.10	0.29	0.29	0.06	0.19	0.19
s, saturation flow rate [veh/h]	1781	1870	1564	1752	1870	1564	1795	3418	1734	1767	3217	1597
c, Capacity [veh/h]	274	288	241	246	263	220	209	1574	799	138	1360	675
d1, Uniform Delay [s]	47.94	49.68	47.59	50.22	50.35	49.44	52.03	24.71	24.72	54.46	24.69	24.71
k, delay calibration	0.07	0.19	0.07	0.20	0.21	0.14	0.12	0.50	0.50	0.09	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.78	14.03	1.68	12.55	13.50	6.09	10.52	1.98	3.87	9.51	1.07	2.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.88	0.63	0.84	0.85	0.74	0.85	0.64	0.64	0.82	0.45	0.45
d, Delay for Lane Group [s/veh]	49.72	63.71	49.26	62.77	63.85	55.53	62.55	26.69	28.58	63.97	25.76	26.89
Lane Group LOS	D	E	D	E	E	E	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.36	8.53	4.38	6.87	7.54	5.03	5.86	11.13	11.73	3.73	6.36	6.56
50th-Percentile Queue Length [ft/ln]	134.07	213.24	109.38	171.85	188.60	125.72	146.56	278.27	293.20	93.17	159.06	163.99
95th-Percentile Queue Length [veh/ln]	9.16	13.32	7.81	11.17	12.05	8.71	9.83	16.60	17.34	6.71	10.50	10.76
95th-Percentile Queue Length [ft/ln]	229.02	332.98	195.13	279.35	301.21	217.67	245.84	415.06	433.61	167.71	262.48	268.99

Movement, Approach, & Intersection Results

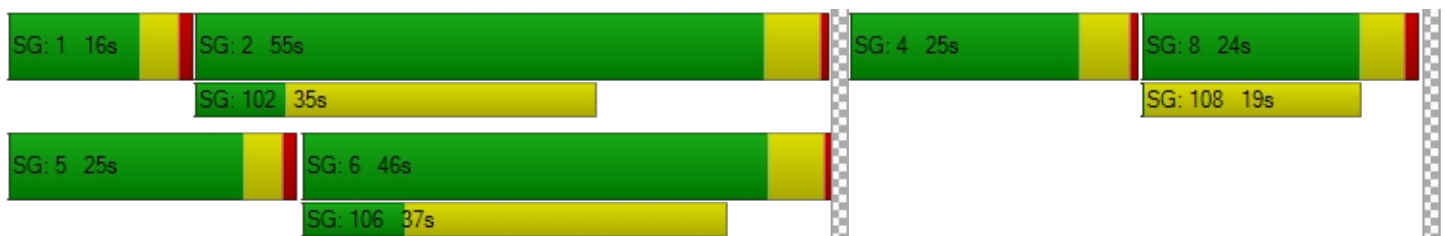
d_M, Delay for Movement [s/veh]	49.72	63.71	49.26	62.77	63.85	55.53	62.55	27.23	28.58	63.97	26.04	26.89
Movement LOS	D	E	D	E	E	E	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	55.60			61.20			31.04			30.29		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	39.14											
Intersection LOS	D											
Intersection V/C	0.707											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	13.0	0.0	4.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.60	47.71	0.00	56.07
I_p,int, Pedestrian LOS Score for Intersection	2.395	2.417	0.000	3.002
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	317	333	825	675
d_b, Bicycle Delay [s]	42.51	41.67	20.71	26.34
I_b,int, Bicycle LOS Score for Intersection	2.533	2.536	2.489	2.125
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	8	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



HCM 6th TWSC
2: WEST DRIVEWAY & 99W

11/22/2022

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1220	69	0	0	0	4
Future Vol, veh/h	1220	69	0	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1627	92	0	0	0	5

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	860
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	260
Stage 1	-	-	0	-	-
Stage 2	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	260
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	260	-	-	-
HCM Lane V/C Ratio	0.021	-	-	-
HCM Control Delay (s)	19.1	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

HCM 6th TWSC
3: EAST DRIVEWAY & 99W

11/22/2022

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↑
Traffic Vol, veh/h	1220	4	0	0	0	47
Future Vol, veh/h	1220	4	0	0	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1627	5	0	0	0	63

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	816
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	278
Stage 1	-	-	0	-	-
Stage 2	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	278
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	278	-	-	-
HCM Lane V/C Ratio	0.225	-	-	-
HCM Control Delay (s)	21.7	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.8	-	-	-

HCM 6th Signalized Intersection Summary
 4: SHERWOOD BLVD & LANGER DR

11/22/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	36	45	131	34	230	36	346	132	117	306	13
Future Volume (veh/h)	81	36	45	131	34	230	36	346	132	117	306	13
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	86	38	48	139	36	245	38	368	140	124	326	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	184	148	187	266	50	343	132	590	221	246	522	22
Arrive On Green	0.10	0.19	0.16	0.15	0.24	0.20	0.07	0.23	0.20	0.14	0.29	0.27
Sat Flow, veh/h	1810	763	964	1810	210	1432	1810	2569	963	1810	1808	78
Grp Volume(v), veh/h	86	0	86	139	0	281	38	257	251	124	0	340
Grp Sat Flow(s),veh/h/ln	1810	0	1727	1810	0	1642	1810	1805	1727	1810	0	1886
Q Serve(g_s), s	2.4	0.0	2.4	3.9	0.0	8.7	1.1	7.0	7.2	3.5	0.0	8.5
Cycle Q Clear(g_c), s	2.4	0.0	2.4	3.9	0.0	8.7	1.1	7.0	7.2	3.5	0.0	8.5
Prop In Lane	1.00		0.56	1.00		0.87	1.00		0.56	1.00		0.04
Lane Grp Cap(c), veh/h	184	0	335	266	0	394	132	415	397	246	0	545
V/C Ratio(X)	0.47	0.00	0.26	0.52	0.00	0.71	0.29	0.62	0.63	0.50	0.00	0.62
Avail Cap(c_a), veh/h	395	0	538	424	0	512	391	873	835	421	0	905
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	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	19.1	21.5	0.0	19.9	23.9	18.9	19.3	21.9	0.0	16.9
Incr Delay (d2), s/veh	1.6	0.0	0.1	1.1	0.0	1.9	1.1	0.7	0.8	1.3	0.0	0.5
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	1.1	0.0	0.9	1.6	0.0	3.3	0.5	2.7	2.7	1.4	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	0.0	19.3	22.6	0.0	21.8	25.1	19.6	20.1	23.2	0.0	17.4
LnGrp LOS	C	A	B	C	A	C	C	B	C	C	A	B
Approach Vol, veh/h		172			420			546				464
Approach Delay, s/veh		22.0			22.1			20.2				18.9
Approach LOS		C			C			C				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	20.0	9.5	17.1	11.4	16.5	12.0	14.6				
Change Period (Y+Rc), s	* 5.8	* 5.4	* 5.9	6.0	* 6.7	* 5.4	* 6.8	6.0				
Max Green Setting (Gmax), s	* 10	* 25	* 10	15.0	* 10	* 25	* 10	15.0				
Max Q Clear Time (g_c+I1), s	3.1	10.5	4.4	10.7	5.5	9.2	5.9	4.4				
Green Ext Time (p_c), s	0.0	1.2	0.1	0.4	0.1	1.9	0.1	0.1				

Intersection Summary

HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Notes

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

HCM 6th TWSC
5: SHERWOOD BLVD & CENTURY DR

11/22/2022

Intersection												
Int Delay, s/veh	10.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	49	38	41	28	194	14	309	46	109	341	34
Future Vol, veh/h	10	49	38	41	28	194	14	309	46	109	341	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	10	51	40	43	29	202	15	322	48	114	355	35

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1093	1001	373	1022	994	346	390	0	0	370	0	0
Stage 1	601	601	-	376	376	-	-	-	-	-	-	-
Stage 2	492	400	-	646	618	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	193	245	678	216	247	702	1180	-	-	1200	-	-
Stage 1	491	493	-	649	620	-	-	-	-	-	-	-
Stage 2	562	605	-	464	484	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	110	212	678	149	213	702	1180	-	-	1200	-	-
Mov Cap-2 Maneuver	110	212	-	149	213	-	-	-	-	-	-	-
Stage 1	483	433	-	639	610	-	-	-	-	-	-	-
Stage 2	375	595	-	338	425	-	-	-	-	-	-	-




Approach	EB		WB		NB		SB	
HCM Control Delay, s	27.8		34.3		0.3		1.9	
HCM LOS	D		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1180	-	-	257	385	1200	-	-
HCM Lane V/C Ratio	0.012	-	-	0.393	0.712	0.095	-	-
HCM Control Delay (s)	8.1	0	-	27.8	34.3	8.3	0	-
HCM Lane LOS	A	A	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.8	5.3	0.3	-	-

HCM 6th AWSC
6: Chevron Exit & Langer Dr. Exit

11/22/2022

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	15	0	27	43	0
Future Vol, veh/h	34	15	0	27	43	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	44	19	0	35	55	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.3	6.6	7.6
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	69%	100%
Vol Thru, %	0%	0%	0%
Vol Right, %	100%	31%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	27	49	43
LT Vol	0	34	43
Through Vol	0	0	0
RT Vol	27	15	0
Lane Flow Rate	35	63	55
Geometry Grp	1	1	1
Degree of Util (X)	0.033	0.07	0.065
Departure Headway (Hd)	3.451	4.01	4.237
Convergence, Y/N	Yes	Yes	Yes
Cap	1031	891	845
Service Time	1.493	2.045	2.267
HCM Lane V/C Ratio	0.034	0.071	0.065
HCM Control Delay	6.6	7.3	7.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2

Intersection Level Of Service Report

Intersection 1:

Control Type:	Signalized	Delay (sec / veh):	49.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

Intersection Setup

Name	SHERWOOD BLVD			SHERWOOD BLVD			99W			99W		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	150.00	100.00	100.00	475.00	100.00	100.00	415.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	SHERWOOD BLVD			SHERWOOD BLVD			99W			99W		
Base Volume Input [veh/h]	262	285	109	169	262	186	201	1011	100	134	1269	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	1.00	4.00	2.00	1.00	2.00	1.00	5.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	262	285	109	169	262	186	201	1011	100	134	1269	184
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9300	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	74	28	44	68	50	52	263	26	35	330	48
Total Analysis Volume [veh/h]	273	297	114	176	273	200	209	1053	104	140	1322	192
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	End of Lagging Red
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	6	6	6	6	4	10	10	4	10	10
Maximum Green [s]	30	30	30	18	18	18	20	44	44	18	42	42
Amber [s]	4.0	4.0	4.0	4.5	4.5	4.5	3.5	5.0	5.0	3.5	5.0	5.0
All red [s]	1.0	1.0	1.0	0.5	0.5	0.5	1.0	0.5	0.5	1.0	0.5	0.5
Split [s]	35	35	35	23	23	23	24	50	50	22	48	48
Vehicle Extension [s]	2.3	2.3	2.3	3.0	3.0	3.0	3.0	4.4	4.4	2.3	4.4	4.4
Walk [s]	0	0	0	9	9	9	0	8	8	0	9	9
Pedestrian Clearance [s]	30	30	30	9	9	9	0	27	27	0	28	28
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.5	3.5	3.5	2.5	3.5	3.5
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	23	23	23	18	18	18	17	57	57	12	52	52
g / C, Green / Cycle	0.18	0.18	0.18	0.14	0.14	0.14	0.13	0.44	0.44	0.09	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.15	0.16	0.07	0.10	0.14	0.13	0.12	0.22	0.22	0.08	0.29	0.29
s, saturation flow rate [veh/h]	1781	1885	1564	1781	1885	1589	1795	3475	1742	1781	3503	1723
c, Capacity [veh/h]	316	334	277	247	261	220	235	1519	762	166	1399	688
d1, Uniform Delay [s]	51.97	52.24	47.47	53.54	56.00	55.19	55.54	26.46	26.46	57.99	33.01	33.02
k, delay calibration	0.16	0.17	0.07	0.20	0.42	0.33	0.24	0.50	0.50	0.07	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.83	11.92	0.60	6.77	63.51	30.53	20.86	1.21	2.41	6.93	3.30	6.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.89	0.41	0.71	1.05	0.91	0.89	0.51	0.51	0.84	0.73	0.73
d, Delay for Lane Group [s/veh]	61.81	64.16	48.06	60.30	119.51	85.72	76.40	27.67	28.87	64.92	36.31	39.60
Lane Group LOS	E	E	D	E	F	F	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.51	10.57	3.35	5.98	13.16	8.32	8.10	8.88	9.16	4.86	14.06	14.48
50th-Percentile Queue Length [ft/ln]	237.85	264.16	83.64	149.40	328.90	208.10	202.60	222.10	229.09	121.45	351.55	361.98
95th-Percentile Queue Length [veh/ln]	14.57	15.90	6.02	9.99	19.51	13.06	12.77	13.77	14.13	8.47	20.21	20.72
95th-Percentile Queue Length [ft/ln]	364.31	397.44	150.55	249.63	487.78	326.40	319.32	344.30	353.20	211.81	505.30	517.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.81	64.16	48.06	60.30	119.51	85.72	76.40	28.00	28.87	64.92	37.07	39.60
Movement LOS	E	E	D	E	F	F	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	60.54			93.04			35.47			39.72		
Approach LOS	E			F			D			D		
d_I, Intersection Delay [s/veh]	49.61											
Intersection LOS	D											
Intersection V/C	0.808											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	13.0	0.0	4.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	52.65	0.00	61.06
I_p,int, Pedestrian LOS Score for Intersection	2.441	2.476	0.000	3.034
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	277	685	654
d_b, Bicycle Delay [s]	38.46	48.25	28.12	29.45
I_b,int, Bicycle LOS Score for Intersection	2.688	2.630	2.311	2.469
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	8	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

