KITTELSON & ASSOCIATES
851 SW 6th Avenue, Suite 600
Portland, OR 97204
P 503.228.5230

May 8, 2023

Project #: 27656

Tamra Mabbott, Planning Director
Morrow County
215 NW Main Avenue
Irrigon, OR 97844

RE: Zone Change/Data Center Transportation Assessment

Dear Tamra:

This letter presents the transportation analysis to support a proposed land use amendment that would change approximately 275 acres zoned *Exclusive Farm Use (EFU)* in Morrow County to *General Industrial (MG)*. The zone change is necessary to allow for the proposed construction of a 1,125,000 square-foot data center complex. The analysis documented herein addresses Oregon's Transportation Planning Rule (TPR) and Morrow County's MCZO 3.070(E) Traffic Impact Analysis study requirements under the General Industrial zone.

Based on the results of the transportation analysis, the proposed zone change and the subsequent development of the data center complex is not anticipated to result in a significant effect on the surrounding transportation network or require near- or long-term offsite transportation improvements. Additional details of our analyses are summarized herein.

PROJECT BACKGROUND

The 275-acre property primarily consists of Tax Lot 28 of Map 3N 24E (see Figure 1). The site is not actively being used for farming/agricultural purposes despite the Exclusive Farm Use (EFU) zoning and has historically been underutilized due to its size and configuration. In order to support the proposed development of a data center on the site, the applicant is proposing to rezone the site to Morrow County's General Industrial (MG) zone.

A change in zoning must be shown to meet the applicable criteria in Oregon Administrative Rule 660-012-0060, also known as the TPR. Per the TPR, an analysis of whether the zone change has the potential to create a significant effect to a transportation facility must be reviewed. The following report addresses the TPR requirements and the specific transportation-related impacts of a proposed data center operation.

Figure 1 – Site Vicinity Map and Study Intersections

STUDY SCOPE & ANALYSIS METHODOLOGY

The proposed land use action is a unique case in that the existing use of the property already represents a reasonable maximum development scenario under the existing EFU zoning. As such, the focus of this analysis is on incremental impacts of the allowed uses under the proposed General Industrial zoning.

STUDY SCOPE

This analysis identifies the transportation-related impacts associated with the application of the General Industrial zone. The study was prepared in accordance with scoping direction from Morrow County staff. The study scope and overall study area for this project were selected based on an analysis of current and future traffic volumes at study intersections and discussions with County staff. The analysis addresses the following:

- Existing land use and transportation system conditions within the site vicinity;
- Review of regional traffic growth, seasonal traffic patterns, in-process developments, and planned transportation improvements;
- Site trip generation and distribution estimates for reasonable worst-case development scenarios for the proposed General Industrial zone;
- Planning horizon year 2043 traffic operations under existing EFU zoning and proposed General Industrial zone scenarios;
- Transportation system adequacy to accommodate the proposed reasonable worst case development scenarios for the proposed General Industrial zone;
- Assessment of zone change compliance with the TPR (OAR Section 660-12-060); and,
- Conclusions and recommendations.

STUDY INTERSECTIONS

The study intersections were identified in collaboration with County staff. Figure 1 illustrates the location of the study intersections that are listed below. For ease of review, each intersection is referenced within this report using a numerical ID.

1. I-84 WB Ramp Terminal / Tower Road
2. I-84 EB Ramp Terminal / Tower Road
3. Tower Road / Kunze Lane
4. Tower Road / Proposed Site Accesses

TRAFFIC ANALYSIS TIME PERIODS

Study intersection operations were analyzed during the weekday morning (intersection peak hour between 7:00-9:00 AM) and evening peak hour (intersection peak hour between 4:00-6:00 PM).

ANALYSIS METHODOLOGY

The unsignalized intersection operational analyses presented in this report were prepared following *Highway Capacity Manual 7th Edition* (Reference 1) analysis procedures using Vistro software.

APPLICABLE MOBILITY STANDARDS

Intersection operating targets adopted by the Oregon Department of Transportation (ODOT) and Morrow County 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 major metropolitan areas. Table 1 summarizes the v/c ratio that will be used to identify the existing and potential future operations at the ODOT owned/maintained I-84 ramp terminal intersections.

Table 1 - ODOT Mobility Targets

Intersection	OHP Mobility Target
I-84 WB Ramp Terminal / Tower Road	V/C $\leq$ 0.70 off ramp approach
I-84 EB Ramp Terminal / Tower Road	V/C $\leq$ 0.70 off ramp approach

MORROW COUNTY OPERATING STANDARDS

The operational standard for intersections involving County roadways is based on level-of-service (LOS). The County's standard is LOS "C" or better for unincorporated areas (i.e., intersections along Tower Road and Kunze Lane).

EXISTING CONDITIONS TRAFFIC ANALYSIS

The existing conditions analysis identifies field conditions and the current operational, traffic control, and geometric characteristics of the roadways and other transportation facilities within the study vicinity. These conditions will be compared with future year conditions later in this report. Kittelson staff visited the study area and inventoried the existing transportation system to identify lane configurations, traffic control devices, bicycle and pedestrian facilities, transit stops, and geometric features at the study intersections in October of 2022.

SITE CONDITIONS AND ADJACENT LAND USES

The site is located approximately 9 miles south of I-84 along the east side of Tower Road. The land is not currently being used for farming or agricultural purposes. All immediately adjacent uses consist of irrigated farm lands, most under circle pivot irrigation systems. The Carty Generating Station is located south of the site while the Six Mile Dairy is located approximately two miles to the northwest.

TRANSPORTATION FACILITIES

Table 2 summarizes the attributes of key roadways in the site vicinity. Figure 2 illustrates the existing lane configurations and traffic control devices at the study intersections.

Table 2 – Existing Transportation Facilities

Roadway	Jurisdictional Authority	Functional Classification[1]	Number of Auto Lanes	Posted Speed (mph)	Sidewalks Present?	Bike Lanes Present?	On-Street Parking Allowed?
I-84	ODOT	Interstate Highway	4	70	No	No	No
Tower Road	Morrow County	Minor Collector	2	55	No	No	No
Kunze Lane	Morrow County	Major Collector	2	45	No	Yes	No

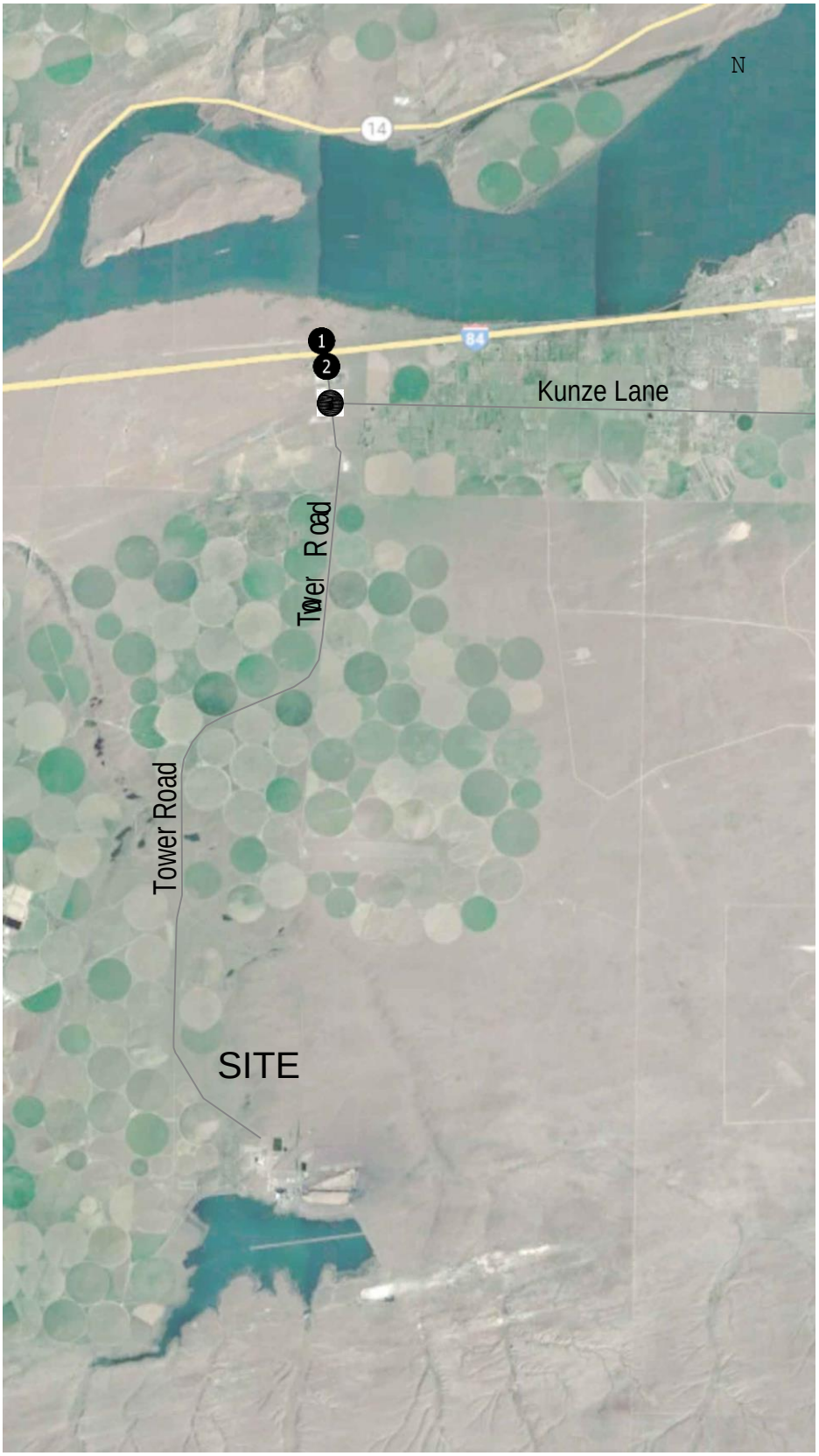
[1]Source: *Oregon Highway Plan* and *Morrow County Transportation System Plan*

INTERSECTION CRASH HISTORY

ODOT provided crash records for the study intersections for the five-year period from January 1, 2016 through December 31, 2020. Table 3 summarizes the ODOT crash data. As shown in the table, there was only one reported crash at the I-84 WB ramp terminal, four crashes at the I-84 EB ramp terminal, and no crashes at the Tower Road/Kunze Lane intersection. Of these crashes, there were no patterns or other characteristics to suggest any geometric-related safety mitigation measures. *Appendix A contains the crash data summary sheets.*

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

Study Intersection	Crash Type					Severity			Total
	Rear End	Turning	Angle	Fixed Object	Other	PDO	Injury	Fatal	
I-84 WB Ramp Terminal/ Tower Road	0	1	0	0	0	1	0	0	1
I-84 EB Ramp Terminal/ Tower Road	1	0	0	2	1	3	1	0	4
Tower Road/ Kunze Lane	0	0	0	0	0	0	0	0	0



1-84 WB Ramp Terminal & Tower Road

1-84 WB Ramp Terminal & Tower Road

1-84 WB Ramp Terminal & Tower Road

1-84 WB Ramp Terminal & Tower Road

STOP SIGN

Existing Lane Configurations & Traffic Control Devices Morrow County, OR

Figure 2

EXISTING CONDITIONS

Turning movement counts at the study intersections were conducted on a mid-week day in early October 2022. *Appendix B contains the intersection turning movement count sheets*.

SEASONAL ADJUSTMENT

To determine an appropriate seasonal factor, three methodologies were investigated as outlined in ODOT's *Analysis Procedures Manual* (APM): On-Site ATR Method, ATR Characteristic Table Method, ATR Seasonal Trend Method.

On-Site ATR Method

The On-Site ATR Method is used when an Automatic Traffic Recorder (ATR) is within or near the project area. There are two ATRs within relatively close proximity of the site. Each of these ATRs are located along the I-84 corridor. A seasonal factor for each ATR was calculated for comparison purposes to the other methodologies described herein. As shown in Table 4, the average seasonal factor for application is 1.25%.

Table 4 - Seasonal Adjustment Calculations for ATRs

	2021	2019	2018	2017	2016	Average
ATR 11-009						
Count Month (October)	102	100	102	~~105~~	~~99~~	101.3
Peak Month	132	132	130	~~136~~	~~130~~	131.3
ATR 25-008						
Count Month (October)	~~102~~	105	103	~~105~~	102	103.3
Peak Month	124	124	~~122~~	~~126~~	122	123.3

- ATR 11-009 Season Adjustment Factor = 131.3%/101.3% = 1.30%
- ATR 25-008 Seasonal Adjustment Factor = 123.3%/103.3% = 1.19%

ATR Characteristics Table

The ATR Characteristic Table provides general characteristics for each ATR in Oregon and is typically used when there is not a nearby ATR within the immediate study area. Since two of the study intersections are interchange ramp terminals, a review of the Characteristic Table did not find an ATR that closely matches the unique study area conditions. As such, the ATR Seasonal Trend Method was evaluated as described in the following section.

ATR Seasonal Trend Method

The seasonal trend table is used when there is not an ATR nearby or in a representative area. This method averages seasonal trend groupings from the ATR Characteristics Table. For movements at the study interchange (which has significant industrial and employment generators with limited freeway oriented retail uses), an average of the "commuter" and "summer" trends was deemed appropriate and consistent with other recent development-driven traffic studies in the area. As shown in Table 5, the average of the seasonal adjustment factor calculations for the Commuter and Summer trends would be a factor of 1.08.

Table 5 – ATR Seasonal Trend Method for Commuter and Summer Trends

	October Count Month	Seasonal Trend Peak Period Factor
Commuter	0.9614	0.9335
Summer	0.9357	0.8299

- The peak period seasonal factor is 0.9335 for the Commuter trend and 0.8299 for the Summer Trend.
- The October count date seasonal factor is 0.9614 for the Commuter trend and 0.9357 for the Summer trend.
- The Commuter seasonal adjustment is 0.9614/0.9355 = 1.03 and the Summer seasonal adjustment is 0.9357/0.8299 = 1.13.
- An average of the Commuter and Summer season adjustments is 1.08

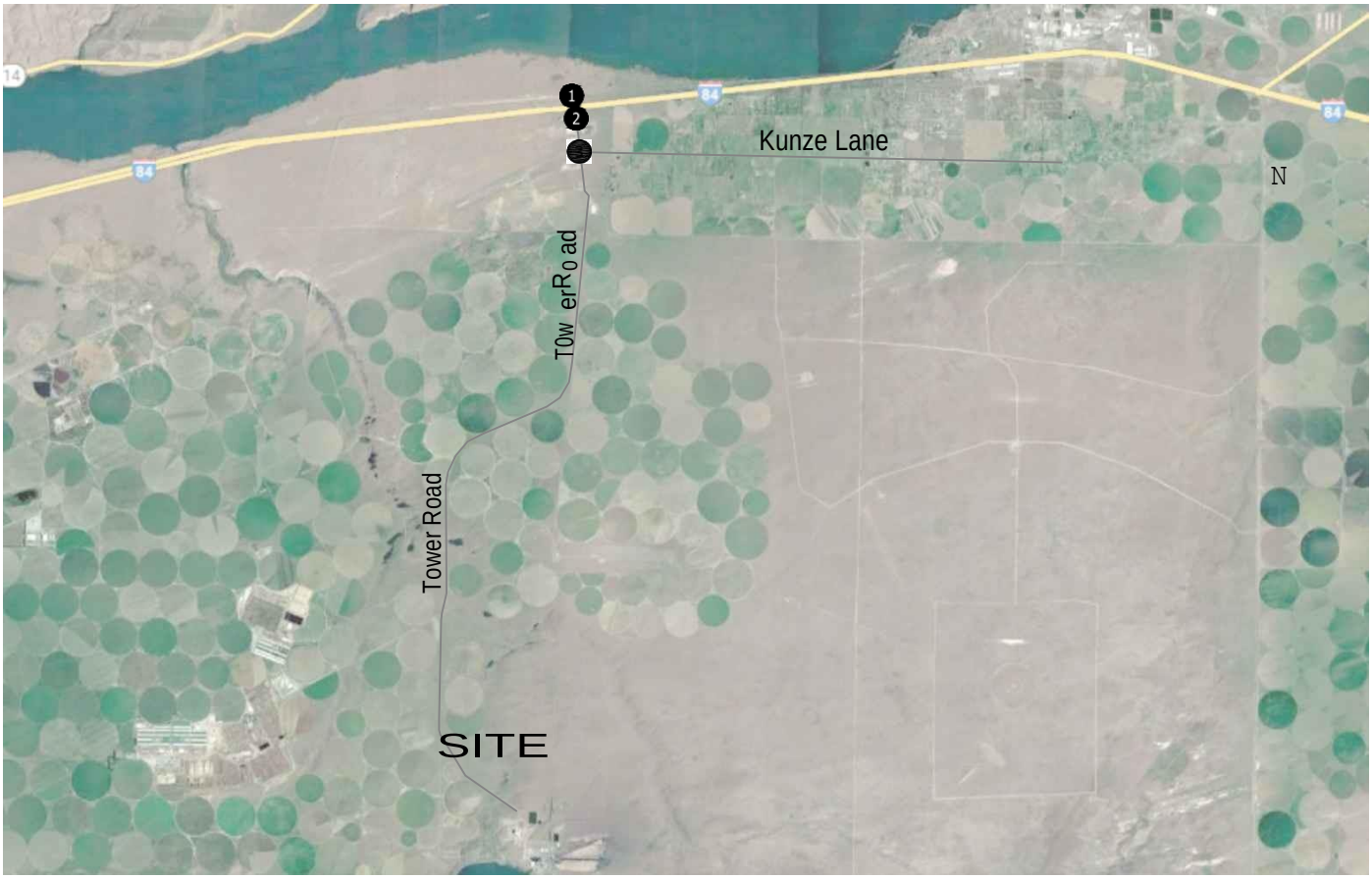
As described in the previous sections, a comparison of the On-Site ATR Method and the ATR Seasonal Trend Method revealed a higher seasonal factor derived from the On-Site ATR Method. However, since the ATRs used in this method primarily reflect freeway traffic volumes and the Tower Road interchange does not serve a large number of freeway-oriented uses with the exception of a single truck strop, the ATR Seasonal Trend Method was deemed to be a more representative method. For the purposes of this analysis, a seasonal factor of 1.08 has been applied to existing traffic volumes.

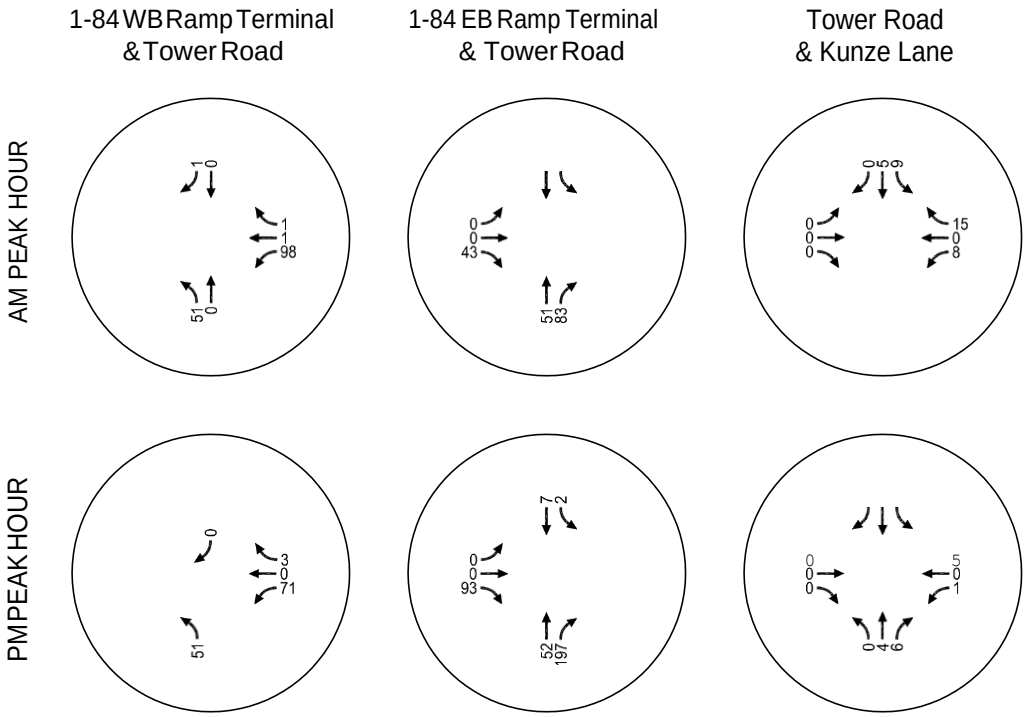
EXISTING INTERSECTION OPERATIONS

Figure 3 illustrates the seasonally adjusted 2022 existing traffic volumes at the study intersections while Table 6 summarizes the corresponding traffic operations during the weekday AM and PM peak hours. As shown in Table 6 and detailed in *Appendix C* (which includes the existing conditions operations analysis worksheets), the study intersection operations satisfy applicable ODOT performance targets and County standards during the AM and PM peak hours.

Table 6 – 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
I-84 WB Ramp Terminal/ Tower Road	Westbound	0.15	11.0	B	0.14	11.2	B
I-84 EB Ramp Terminal/ Tower Road	Eastbound	0.06	9.5	A	0.12	9.6	A
Tower Road/ Kunze Lane	Westbound	0.03	9.1	A	0.01	9.5	A





Existing Traffic Conditions
Weekday AN & PM Peak Hour
Morrow County, OR

Figure 3

YEAR 2043 TRAFFIC CONDITIONS

This section of the report contains a detailed assessment of the long-term traffic impacts associated with the existing and proposed zoning. For the proposed zoning, it evaluates the impacts of a data center complex which would be allowed under the proposed General Industrial zone. The analysis of long-term traffic conditions is required by the State's Transportation Planning Rule (TPR, OAR Section 660-12-0060), given that the proposed zone change would require an amendment to an acknowledged land use regulation and may have the potential to significantly affect a transportation facility.

To test for a significant effect and development-related impacts, an analysis of traffic conditions was conducted under the existing EFU land use designation (assuming potential farming use of the site) and the proposed General Industrial zone (assuming the development of a data center complex).

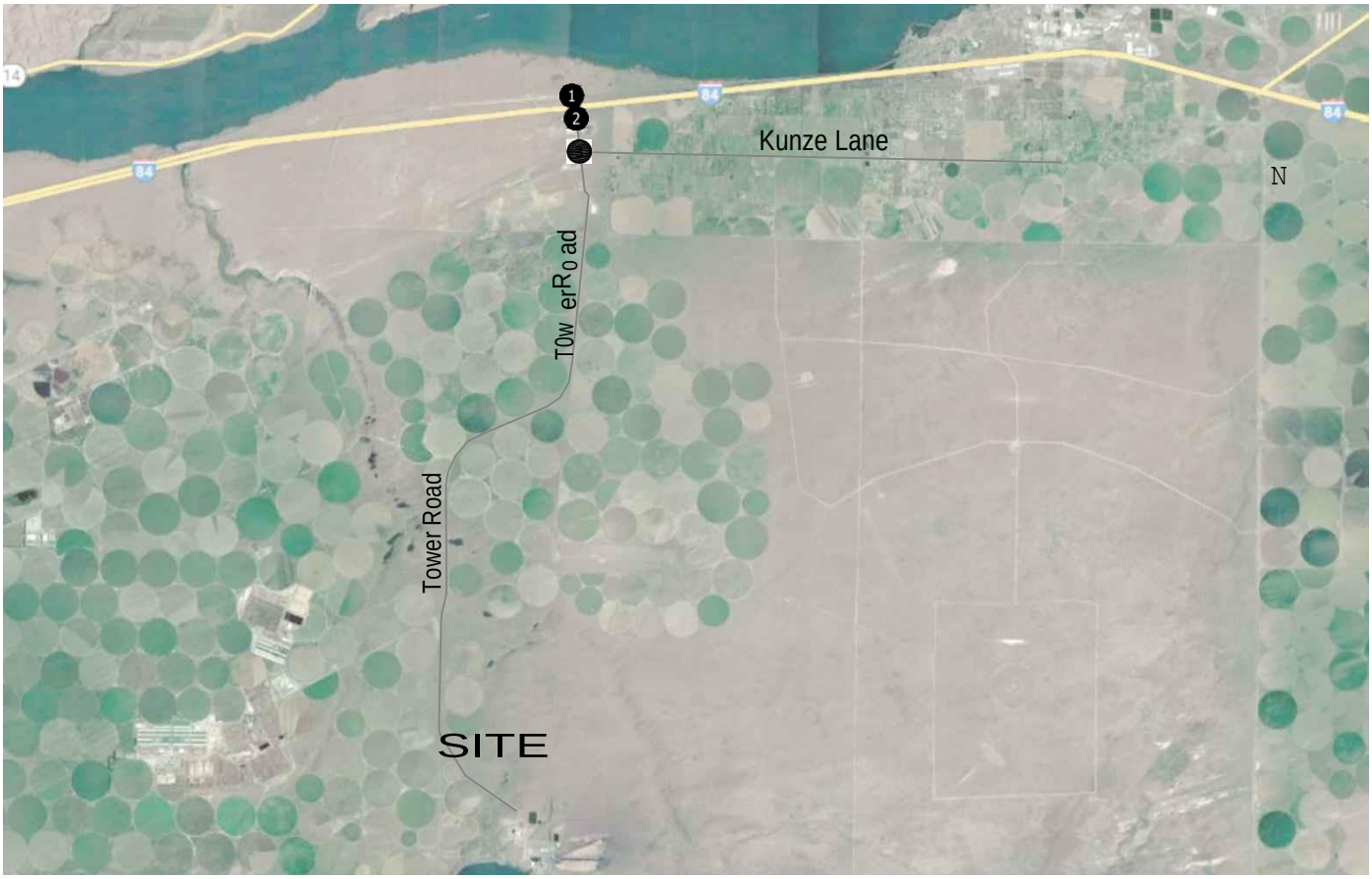
Based on the required analysis, the impacts of traffic generated by the potential General Industrial zone (using the proposed data center complex as a reasonable worst-case proxy) were examined in the following manner:

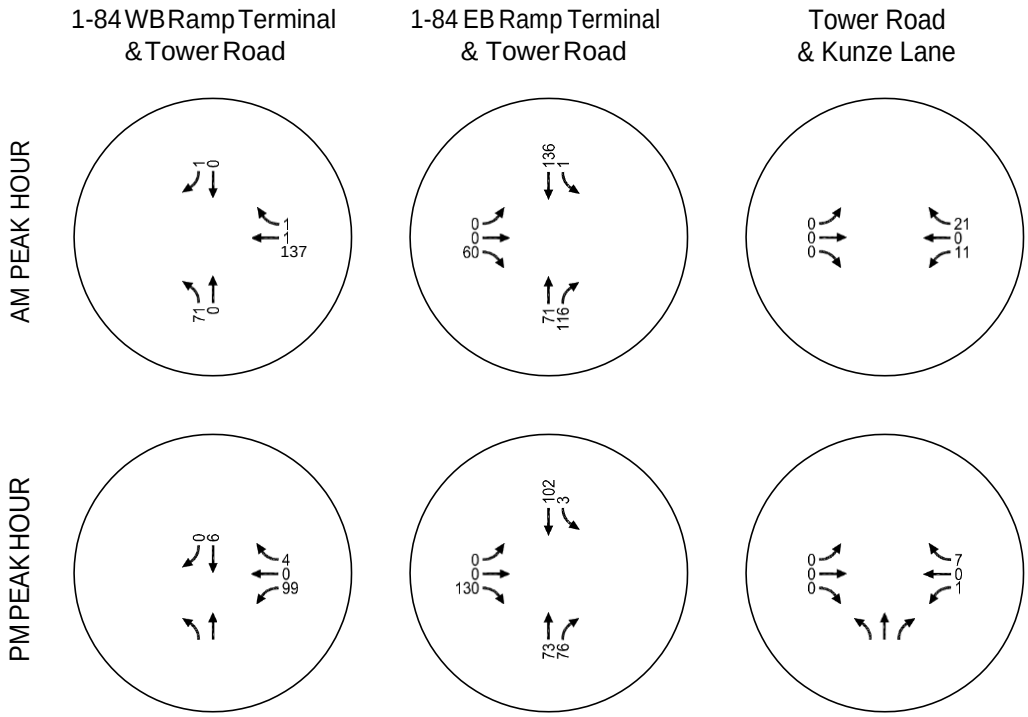
- Anticipated future traffic growth patterns were identified for the weekday AM and PM peak hour under the 2043 planning horizon year. This horizon year assumes no rezone and is indicative of future conditions with no land use modifications beyond those allowed under the Exclusive Farm Use designation.
- A reasonable worst-case land development scenario (data center complex) was developed under the proposed General Industrial zone. Estimates of average daily, weekday AM, and weekday PM peak hour site trips were prepared for the potential General Industrial zone using the proposed data center complex.
- A site trip distribution pattern was derived through a review of existing traffic volumes and the site's location to the regional transportation network.
- Weekday AM and PM peak hour site-generated trips from the proposed data center complex were assigned to the surrounding streets and study intersections.
- Planning horizon year 2043 traffic volumes and operations were analyzed for the weekday AM and PM peak hour under the existing zoning conditions and for the proposed General Industrial zone designation.

YEAR 2043 EXISTING ZONING SCENARIO TRAFFIC FORECAST

To achieve a reasonable estimate of existing zoning scenario traffic levels during the 2043 planning horizon year, a 2% per year growth rate was applied to the study intersection traffic volumes. This growth rate is consistent with other recent traffic studies performed in the regional vicinity.

The resulting Year 2043 existing zoning scenario traffic volumes forecast for the weekday AM and PM peak hour are illustrated in Figure 4. The volumes shown reflect background traffic levels without any changes to the underlying zoning on the subject site.





2043 Existing Zoning Traffic Conditions
Weekday AN & PM Peak Hour
Morrow County, OR

Figure 4

YEAR 2043 EXISTING ZONING INTERSECTION OPERATIONS

Study intersection operations under the 2043 Existing Zoning Scenario were assessed to understand the base future year operations assuming no changes are made to the site zoning and the land continues under its existing farming/agricultural zoning (which would not generate a measurable amount of daily traffic demand). Table 7 summarizes the operational analyses for the weekday AM and PM peak hours reflective of anticipated regional and local traffic volume growth. As shown, all study intersections are forecast to continue to operate acceptably during both the weekday AM and PM peak hours. *Appendix D includes the 2043 existing zoning intersection operations analysis worksheets.*

Table 7 – 2043 Existing Zoning 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
I-84 WB Ramp Terminal/ Tower Road	Westbound	0.23	12.2	B	0.22	12.7	B
I-84 EB Ramp Terminal/ Tower Road	Eastbound	0.09	10.0	A	0.17	10.1	B
Tower Road/ Kunze Lane	Westbound	0.02	10.1	B	0.01	11.7	B

PROPOSED GENERAL INDUSTRIAL ZONE

The Morrow County General Industrial zone allows retail, wholesale, construction businesses, cold storage plants, distribution centers, warehousing, vet clinics, laboratories, manufacturing, food processing, and data centers. For 275-acre sites (in this case, only 190 acres are buildable), manufacturing, distribution centers, and food processing facilities are logical and "reasonable maximum" uses from a trip generation standpoint. However, it was determined in this case that they are not logical/reasonable uses given the site is located approximately 9 miles from the convenience of the I-84 regional travel corridor on a rural county road with limited regional connectivity. For these reasons, it was determined that the proposed 1,125,000 square foot data center complex represents a worst-case development scenario for the site. Anticipated operational features of the proposed data center complex would include:

- One story data center located on a consolidated campus site.
- Two secured access driveways located along the Tower Road.

A trip generation estimate was prepared for the proposed data center based on information provided in the *Trip Generation Manual, 11th Edition*, published by the Institute of Transportation Engineers (ITE). ITE land use code 160 (Data Center) was used as a basis for the estimate. Table 8 summarizes the estimates for the daily, weekday AM, and weekday PM peak hours.

Table 8 – Data Center Trip Generation Estimates

Land Use	ITE Code	Size (Sq. Ft.)	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Data Center	160	1,125,000	1,114	124	68	56	101	30	71

SITE TRIP DISTRIBUTION AND ASSIGNMENT

The site-generated trips from the proposed data center complex were distributed onto the study area roadway system via an assumed future site driveway along the Tower Road site frontage. From there, the regional distribution was determined via a combination of existing traffic patterns and destinations afforded by the regional transportation facilities within the site vicinity. Figure 5 illustrates the resulting trip distribution pattern and site-generated trip assignment at the study intersections.

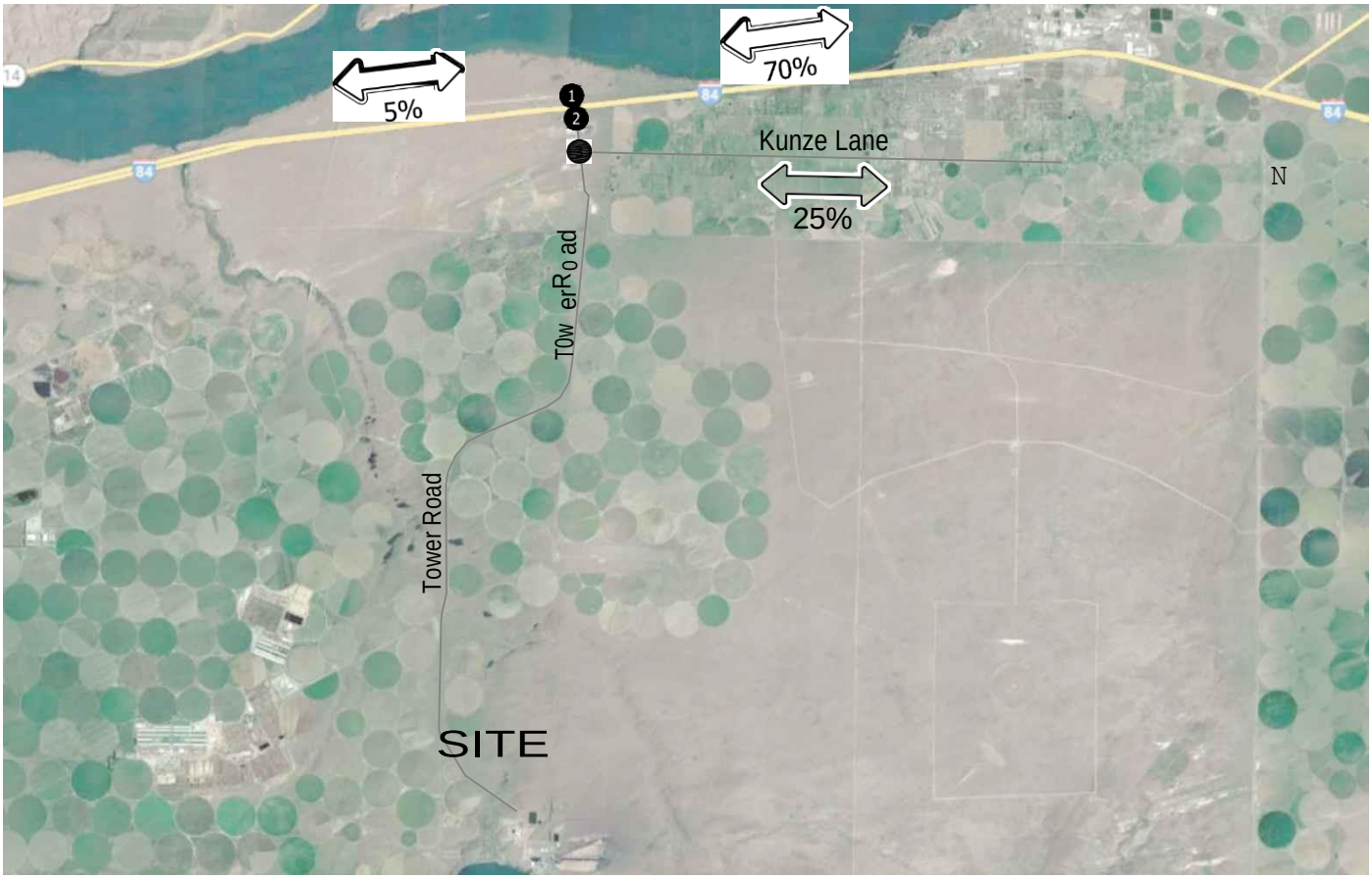
YEAR 2043 GENERAL INDUSTRIAL ZONE INTERSECTION OPERATIONS

To reflect conditions anticipated under the proposed General Industrial zone, the weekday AM and PM peak hour site generated traffic volumes shown in Figure 5 was added to the existing zoning traffic volumes shown in Figure 4 to arrive at the cumulative 2043 traffic volumes shown in Figure 6.

Operations of the study intersections under 2043 conditions (with the site developed as a data center complex) are summarized in Table 9 for the weekday AM and PM peak hours. As shown, all of the study intersections are forecast to continue to operate acceptably during both the weekday AM and PM peak hours. *Appendix E includes the 2043 total traffic conditions intersection operations analysis worksheets.*

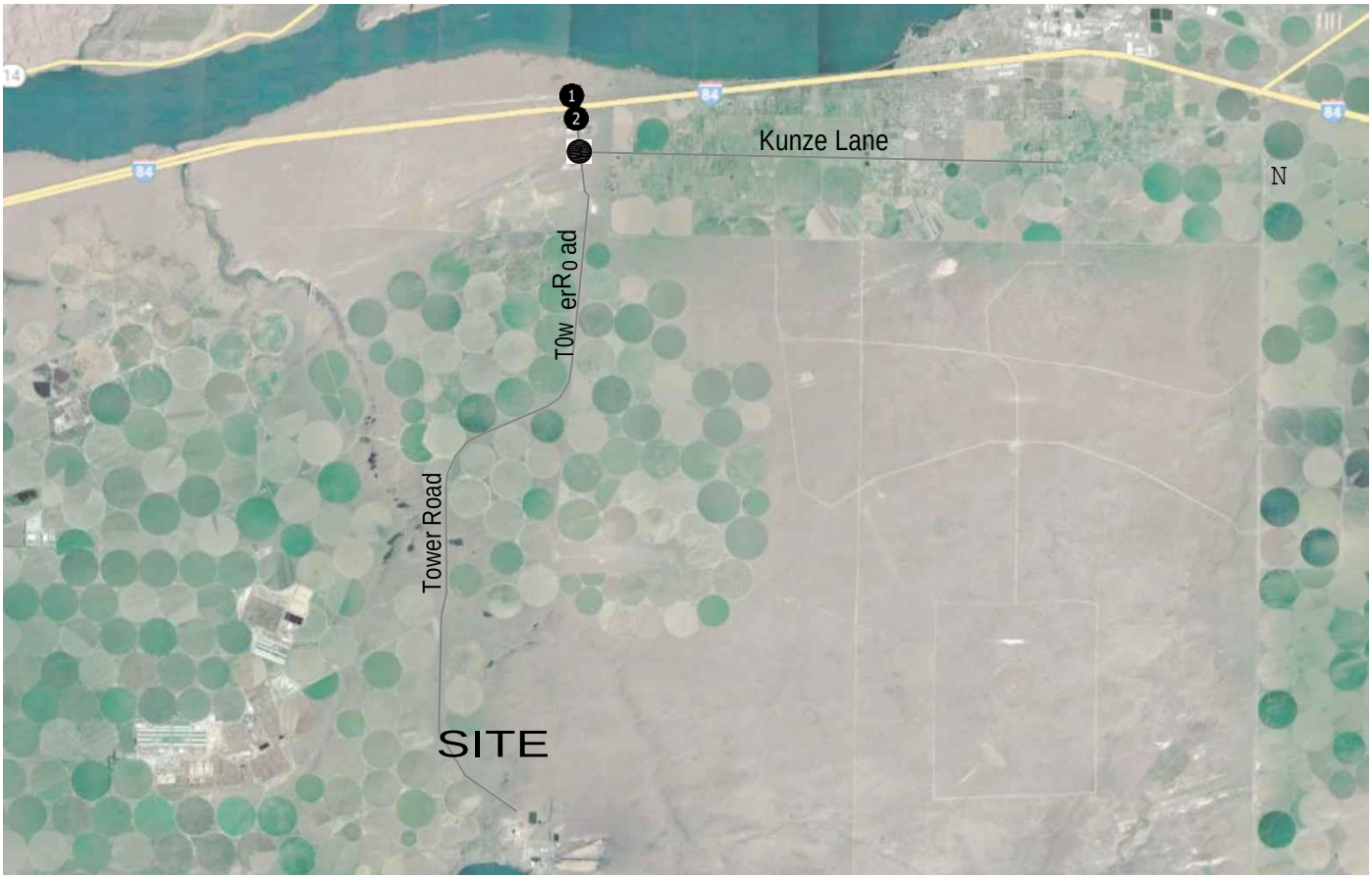
Table 9 – 2043 General Industrial Zoning (with a Data Center) Traffic Conditions

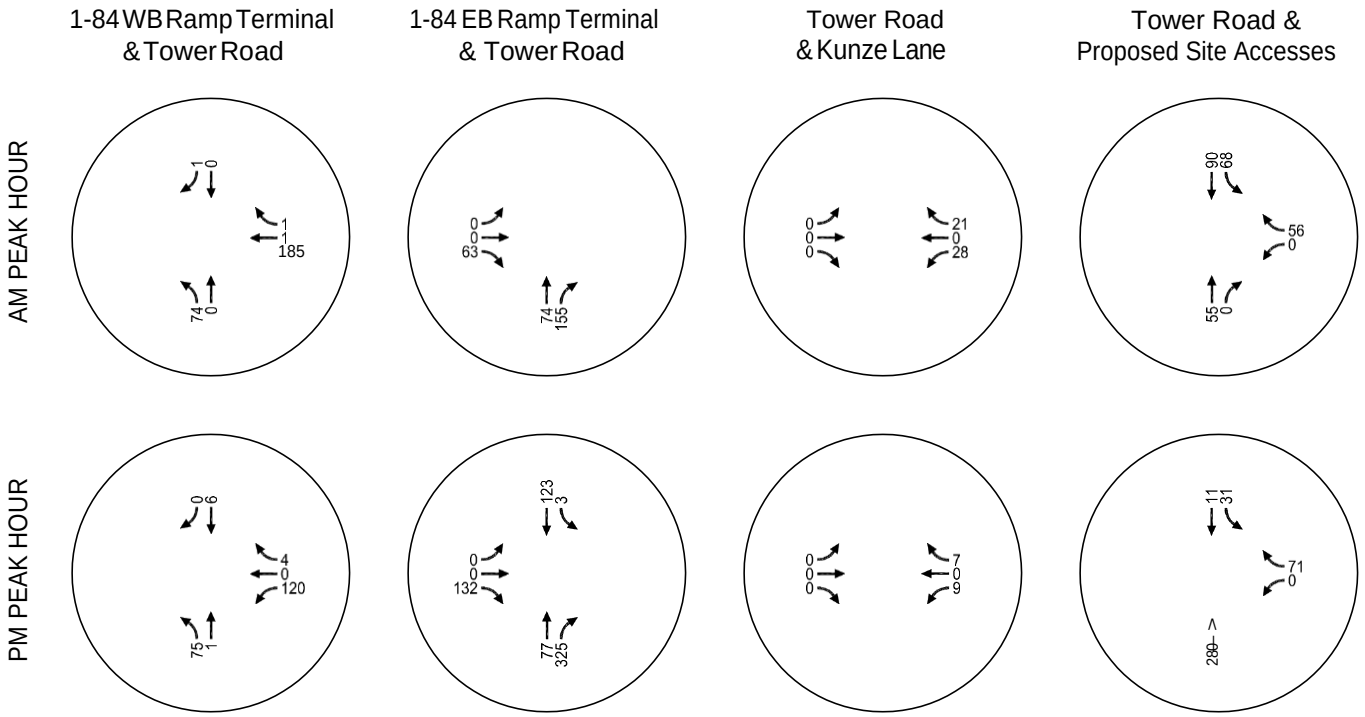
Intersection	Critical Approach/ Lane	Weekday AM Peak Hour			Weekday PM Peak Hour		
		V/C	Approach Delay (sec)	Approach LOS	V/C	Approach Delay (sec)	Approach LOS
I-84 WB Ramp Terminal/ Tower Road	Westbound	0.32	13.2	B	0.27	13.4	B
I-84 EB Ramp Terminal/ Tower Road	Eastbound	0.10	10.4	B	0.18	10.3	B
Tower Road/ Kunze Lane	Westbound	0.08	10.5	B	0.03	11.9	B
Tower Road/ Site Access	Westbound	0.07	8.9	A	0.12	10.7	B



Estimated Trip Distribution Pattern and Site-Generated Trips
Weekday AN & PM Peak Hour
Morrow County, OR

Figure 5





2043 Proposed General Industrial Zone Traffic Conditions
Weekday AN & PM Peak Hour
Morrow County, OR

Figure
6

H:\27\27656 - Tower Road Rezone\report\figs\27656 Figures.dwg May 12, 2023 - 3:45pm - akauffman Layout Tab: TT

TRANSPORTATION PLANNING RULE COMPLIANCE

This section addresses the Oregon Administrative Rule Section 660-12-0060 of the Oregon Transportation Planning Rule (TPR) requirements for the proposed zone change.

TRANSPORTATION PLANNING RULE

OAR Section 660-12-0060 Plan and Land Use Regulation Amendments of the TPR sets forth the criteria for evaluating plan and land use regulation amendments. The criteria establish the determination of significant effect on a transportation system resulting from a land use action; where a significant effect is identified, the criteria establish the means for achieving compliance. The relevant portion of this section of the TPR is reproduced below in italics followed by the response for this project in standard text.

660-12-0060 Plan and Land Use Regulation Amendments

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

Response: The proposed General Industrial zone will not require or result in any changes to the functional classification of any transportation facility in the vicinity of the site.

(b) Change standards implementing a functional classification system; or

Response: The proposed General Industrial zone will not require changes to the standards that implement the functional classification system.

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

Response: The proposed General Industrial zone would result in future traffic volumes that remain consistent with the functional classifications of the roadways in the study area.

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

Response: The proposed General Industrial zone would not degrade operations of the study intersections below adopted performance targets.

MCZO 3.070(E) TRAFFIC IMPACT ANALYSIS

As noted herein, the transportation system/study intersections can accommodate the peak-hour transportation-related impacts of the proposed data center complex and its assumed site access connection to Tower Road. Although the analysis is a long-term 20-year assessment completed primarily to address the impacts of the zone change, it can be deduced that all of the study intersections will operate acceptably during both the weekday AM and PM peak hours upon a near-term buildout of the data center complex. As such, no additional operations analysis is required to address MCZO 3.070(E).

To support a follow up land use application for the data center complex, the following section includes an assessment of preliminary sight distance at the site access connection of Tower Road.

PRELIMINARY INTERSECTION SIGHT DISTANCE

Intersection sight distance (ISD) was evaluated at the proposed site access roadway connection along Tower Road. For this assessment, preliminary intersection sight distance measurements were evaluated using the recommended observation reference points[1] outlined in *A Policy on Geometric Design of Highways and Streets.* While there is no posted speed along this section of Tower Road, 55 mph was used. As noted in *A Policy on Geometric Design of Highways and Streets*, the minimum passenger car intersection sight distance requirement for a 55-mph design speed is 610 feet (left-turn from stop) and 530 feet (right- turn from stop).

From the approximate location of the proposed site access driveway approach to Tower Road, there is adequate sight distance (>850 feet) looking to the north and adequate sight distance (>930 feet) looking to the south.

To provide and maintain adequate intersection sight distance post development, it is recommended that any proposed signage or landscaping be appropriately located such that the minimum intersection sight distance can be maintained. To confirm adequate sight lines, it is further recommended that a final sight distance evaluation be performed post access road construction and prior to site beginning formal operations.

SITE ACCESS TRAFFIC CONTROL

To accommodate future traffic movements on the site access road, a STOP (R1-1) sign should be installed on the westbound access driveway approach to Tower Road in accordance with County standards and the *Manual on Uniform Traffic Control Devices (MUTCD)* in conjunction with site development.

[1] For passenger cars, an eye height of 3.5 feet, an object height of 3.5 feet, and an observation point located 14.5 feet from the edge of the cross-street travel lane.

CONCLUSIONS

Based on the results of the transportation analysis outlined in this report, the proposed General Industrial zone and the assumed data center complex is not anticipated to result in a significant effect on the surrounding transportation network or require offsite mitigation under long-term planning conditions or near-term buildout conditions. To support the land use application for a data center complex, the following is recommended:

- Construct a new site access driveway along the Tower Road site frontage. A STOP (R1-1) sign should be installed on the westbound approach to Tower Road in accordance with Morrow County standards and the *Manual on Uniform Traffic Control* Devices (MUTCD) in conjunction with site development.
- To provide and maintain adequate intersection sight distance at the site access road connection to Tower Road, locate any proposed signage or landscaping appropriately such that the minimum intersection sight distance can be maintained. To confirm adequate sight lines, it is further recommended that a final sight distance evaluation be performed post site access driveway construction and prior to site occupancy.

We trust this traffic impact analysis adequately addresses impacts associated with the proposed General Industrial zone and proposed data center complex. Please contact us if you have any questions or comments regarding the contents of this report or the analyses performed.

Sincerely,
KITTELSON & ASSOCIATES, INC.

Matt Hughart, AICP
Principal Planner

Julia Kuhn, P.E.
Senior Principal Engineer

Appendix A Crash Data

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at Tower Rd & Interstate 84, Columbia River Hwy (#002) East Bound Off Ramps in Morrow County, OR.
January 1, 2016 through December 31, 2020

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2019														
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
2019 TOTAL	0	1	0	1	0	1	0	1	0	1	0	1	0	0
YEAR: 2017														
BACKING	0	0	1	1	0	0	1	0	0	0	1	1	0	0
FIXED / OTHER OBJECT	0	0	2	2	0	0	0	0	1	0	2	2	0	2
2017 TOTAL	0	0	3	3	0	0	1	0	1	0	3	3	0	2
FINAL TOTAL	0	1	3	4	0	1	1	1	1	1	3	4	0	2

Disclaimers: *Effective 2016,* ***collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants.*** *Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.*

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

002 COLUMBIA RIVER — Intersectional Crashes at Tower Rd & Interstate 84, Columbia River Hwy (#002) East Bound Off Ramps in Morrow County, OR.
January 1, 2016 through December 31, 2020

SER# / INVEST / UNLOC?	SPEED	ALC	DRUG	MH	SCHL	WORK	DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / LRS	FC / MILEPNT	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF	LIGHT	CRASH TYP / COLL TYP / SVRTY	V	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00155		N	N	N	N	N	11/26/2017	MORROW	1	01	1	INTER	CROSS	N	Y	RAIN	FIX OBJ		01	NONE	9	STRGHT										043,115	27,03
COUNTY		N					Sun 3A		CN 0			UN		STOP SIGN	N	WET	FIX			N/A		W E							000		00
									159.30			06	0		N	DLIT	PDO			PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45 49*						*43.10 -119 48*	*3.75*	0002GP100S00																			UNK					
00166		N	N	N			12/13/2017	MORROW	1	01	1	INTER	CROSS	N	Y	CLR	FIX OBJ		01	NONE	9	STRGHT										043	03
STATE		N					Wed 6P		CN 0			E		STOP SIGN	N	UNK	FIX			N/A		W E							000		00
									159.30			06	0		N	DARK	PDO			PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45 49*						*43.10 -119 48*	*3.75*	0002GP100S00																			UNK					
79999		N	N	N			11/09/2017	MORROW	1	01	1	INTER	CROSS	N	N	UNK	O-1STOP		01	NONE	9	BACK										089	10
STATE		N					Thu 3A		CN 0			W		STOP SIGN	N	UNK	BACK			N/A		E W							021		00
									159.30			06	0		N	DARK	PDO			PSNGR CAR											
No	*45 49*						*43.10 -119 48*	*3.75*	0002GP100S00																								
																			02	NONE	9	STOP										
																				N/A		W E							011		00
																				SEMI TOW			01	DRVR	NONE	00	U	UNK		000	000		00
																												UNK					
00125		N	NN	N	N		11/10/2019	MORROW	1	01	1	INTER	CROSS	N	N	CLR	S-1STOP		01	NONE	0	STRGHT										093	29,27
COUNTY		N					Sun 10A		CN 0			W		STOP SIGN	N	DRY	REAR			PRVTE		W E							000		00
									159.30			06	0		N	DAY	INJ			PSNGR CAR		01	DRVR	NONE	36	M	OR-Y		016,026	038	093	29,27
No	*45 49*						*43.10 -119 48*	*3.76*	0002GP100S00																			OR>25					
																			02	NONE	0	STOP										
																				PRVTE		W E							011		00
																				PSNGR CAR			01	DRVR	NONE	64	M	OTH-Y		000	000		00
																												N-RES					
																							02	PSNG	INJC	62	F			000	000		00

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	TURNED FROM WRONG LANE
007	TO WRONG	TURNED INTO WRONG LANE
008	ILLEG U	U-TURNED 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/ VEHI
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	JACKNIFE	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 CONVEYA
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)
03	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
04	STOP SIGN	STOP SIGN
05	SLOW SIGN	SLOW SIGN
06	REG-SIGN	REGULATORY SIGN
07	YIELD	YIELD SIGN
08	WARNING	WARNING SIGN
09	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFCR/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
23	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
24	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
25	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
26	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
27	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
28	SP RR STOP	SPECIAL RR STOP SIGN
29	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.
92	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
93	ACCEL LANE	ACCELERATION OR DECELERATION LANES
94	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING
95	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS

099 UNKNOWN UNKNOWN OR NOT DEFINITE

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
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at Tower Rd & Interstate 84, Columbia River Hwy (#002) West Bound Off Ramps in Morrow County, OR.
January 1, 2016 through December 31, 2020

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2020														
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2020 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FINAL TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0

Disclaimers: *Effective 2016,* ***collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants.*** *Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.*

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

002 COLUMBIA RIVER

Intersectional Crashes at Tower Rd & Interstate 84, Columbia River Hwy (#002) West Bound Off Ramps in Morrow County, OR.
January 1, 2016 through December 31, 2020

SER# / INVEST / UNLOC?	SPEED	ALC	DRUG	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# / CMPT/MILE / LRS	FC / MLG / PNT	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN EVENT	CAUSE
00112	N	N	N	N	N	11/04/2020	MORROW	1	01	5	INTER	CROSS	N		N	CLR	S-1TURN	01	NONE	9	STRGHT									22,07
STATE		N				Wed 4P		CN	0		UN		UNKNOWN		N	DRY	TURN		N/A		S N								000	00
								158.87			01	0			N	DAY	PDO		PSNGR	CAR		01	DRVR	NONE	00	U	UNK		000	000	00
No						*45 49 48.39 -119 48 4.66*		0002GT100S00																			UNK				
																	02	NONE	9	TURN-L										
																		N/A		S W									000	00
																		PSNGR	CAR		01	DRVR	NONE	00	U	UNK		000	000	00
																										UNK				

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	TURNED FROM WRONG LANE
007	TO WRONG	TURNED INTO WRONG LANE
008	ILLEG U	U-TURNED 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/ VEHI
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	JACKNIFE	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 CONVEYA
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)
03	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
04	STOP SIGN	STOP SIGN
05	SLOW SIGN	SLOW SIGN
06	REG-SIGN	REGULATORY SIGN
07	YIELD	YIELD SIGN
08	WARNING	WARNING SIGN
09	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFCR/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
23	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
24	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
25	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
26	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
27	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
28	SP RR STOP	SPECIAL RR STOP SIGN
29	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.
92	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
93	ACCEL LANE	ACCELERATION OR DECELERATION LANES
94	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING
95	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS

099 UNKNOWN UNKNOWN OR NOT DEFINITE

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 Summary Worksheets

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

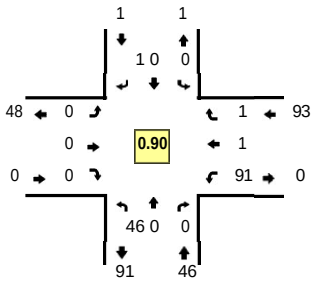
LOCATION: Tower Rd -- I-84 WB Ramps

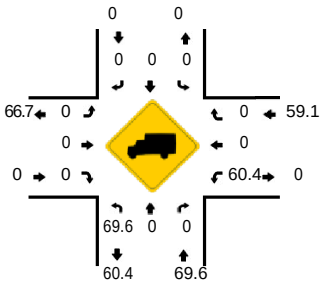
QC JOB #: 15907101

CITY/STATE: Morrow, OR

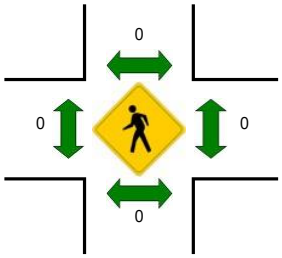
DATE: Tue, Aug 16 2022

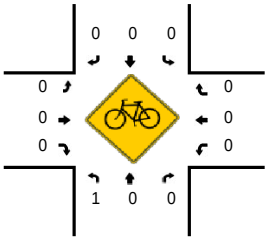
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

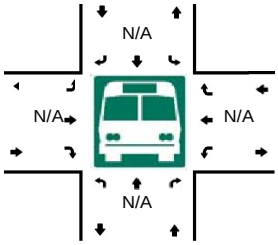


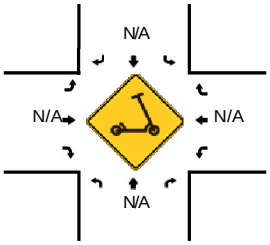


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Tower Rd (Northbound)				Tower Rd (Southbound)				I-84 WB Ramps (Eastbound)				I-84 WB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	
7:05 AM	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	
7:10 AM	7	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	13	
7:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	11	
7:20 AM	6	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	13	
7:25 AM	6	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	12	
7:30 AM	3	0	0	0	0	0	0	0	0	0	0	0	5	1	1	0	10	
7:35 AM	5	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	13	
7:40 AM	5	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	13	
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	10	0	0	0	11	
7:50 AM	3	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	13	
7:55 AM	8	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	15	135
8:00 AM	4	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	11	139
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	142
8:10 AM	4	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	11	140
8:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	9	138
8:20 AM	4	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	10	135
8:25 AM	1	0	0	0	0	0	0	0	0	0	0	0	7	0	2	0	10	133
8:30 AM	4	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	10	133
8:35 AM	3	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	12	132
8:40 AM	2	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	9	128
8:45 AM	5	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	7	124
8:50 AM	2	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	8	119
8:55 AM	5	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	12	116

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	44	0	0	0	0	0	4	0	0	0	0	0	108	0	0	0	156
Heavy Trucks	28	0	0		0	0	0		0	0	0		56	0	0		84
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/12/2022 8:05 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

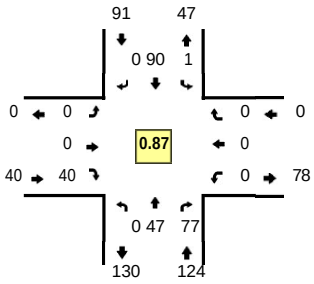
LOCATION: Tower Rd -- I-84 EB Ramps

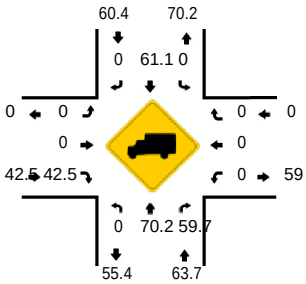
QC JOB #: 15907103

CITY/STATE: Morrow, OR

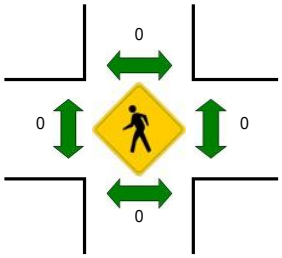
DATE: Tue, Aug 16 2022

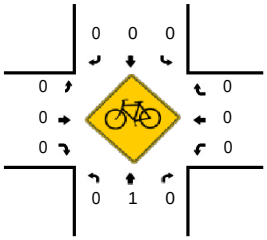
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

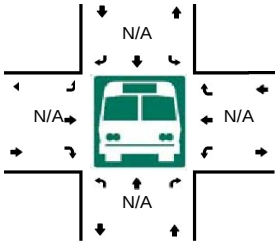


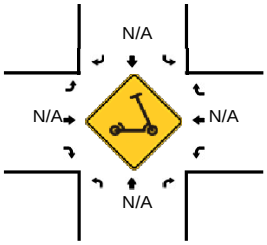


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Tower Rd (Northbound)				Tower Rd (Southbound)				I-84 EB Ramps (Eastbound)				I-84 EB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	8	0	0	6	0	0	0	0	4	0	0	0	0	0	18	
7:05 AM	0	2	6	0	0	3	0	0	0	0	5	0	0	0	0	0	16	
7:10 AM	0	6	4	0	0	5	0	0	0	0	0	0	0	0	0	0	15	
7:15 AM	0	3	8	0	0	9	0	0	0	0	3	0	0	0	0	0	23	
7:20 AM	0	7	5	0	0	7	0	0	0	0	4	0	0	0	0	0	23	
7:25 AM	0	4	3	0	0	6	0	0	0	0	1	0	0	0	0	0	14	
7:30 AM	0	4	3	0	0	6	0	0	0	0	2	0	0	0	0	0	15	
7:35 AM	0	4	4	0	1	6	0	0	0	0	1	0	0	0	0	0	16	
7:40 AM	0	5	7	0	0	9	0	0	0	0	3	0	0	0	0	0	24	
7:45 AM	0	1	6	0	0	9	0	0	0	0	5	0	0	0	0	0	21	
7:50 AM	0	2	9	0	0	10	0	0	0	0	5	0	0	0	0	0	26	
7:55 AM	0	10	8	0	0	7	0	0	0	0	1	0	0	0	0	0	26	237
8:00 AM	0	2	6	0	0	7	0	0	0	0	4	0	0	0	0	0	19	238
8:05 AM	0	1	6	0	0	7	0	0	0	0	7	0	0	0	0	0	21	243
8:10 AM	0	4	12	0	0	7	0	0	0	0	4	0	0	0	0	0	27	255
8:15 AM	0	1	6	0	1	7	0	0	0	0	1	0	0	0	0	0	16	248
8:20 AM	0	4	3	0	0	6	0	0	0	0	1	0	0	0	0	0	14	239
8:25 AM	0	2	10	0	0	6	0	0	0	0	2	0	0	0	0	0	20	245
8:30 AM	0	4	6	0	0	6	0	0	0	0	2	0	0	0	0	0	18	248
8:35 AM	0	2	9	0	0	10	0	0	0	0	4	0	0	0	0	0	25	257
8:40 AM	0	4	5	0	0	6	0	0	0	0	4	0	0	0	0	0	19	252
8:45 AM	0	3	6	0	0	1	0	0	0	0	1	0	0	0	0	0	11	242
8:50 AM	0	2	6	0	0	6	0	0	0	0	8	0	0	0	0	0	22	238
8:55 AM	0	6	6	0	0	7	0	0	0	0	8	0	0	0	0	0	27	239

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	52	92	0	0	104	0	0	0	0	44	0	0	0	0	0	292
Heavy Trucks	0	36	52		0	56	0		0	0	8		0	0	0		152
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/12/2022 8:05 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

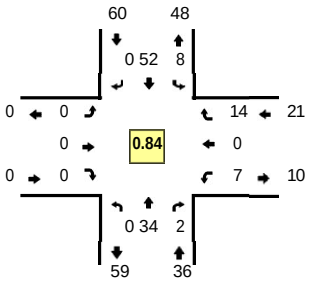
LOCATION: Tower Rd -- Kunze Rd

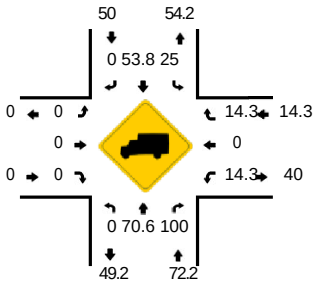
QC JOB #: 15907105

CITY/STATE: Morrow, OR

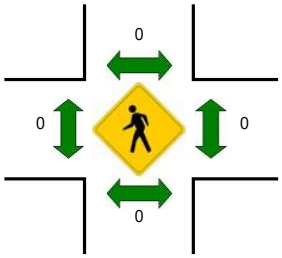
DATE: Tue, Aug 16 2022

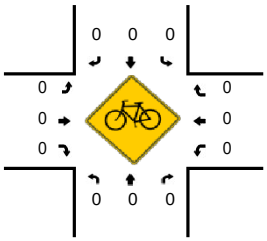
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

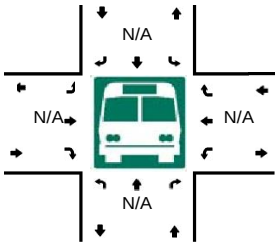


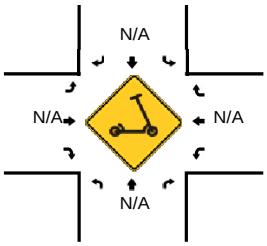


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Tower Rd (Northbound)				Tower Rd (Southbound)				Kunze Rd (Eastbound)				Kunze Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	0	0	1	7	0	0	0	0	0	0	0	0	0	0	9	
7:05 AM	0	1	0	0	1	2	0	0	0	0	0	0	1	0	0	0	5	
7:10 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	
7:15 AM	0	3	0	0	0	4	0	0	0	0	0	0	0	0	1	0	8	
7:20 AM	0	1	0	0	0	6	0	0	0	0	0	0	1	0	3	0	11	
7:25 AM	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	
7:30 AM	0	5	2	0	1	1	0	0	0	0	0	0	0	0	1	0	10	
7:35 AM	0	2	0	0	0	3	0	0	0	0	0	0	0	0	1	0	6	
7:40 AM	0	3	0	0	0	3	0	0	0	0	0	0	1	0	2	0	9	
7:45 AM	0	5	0	0	1	8	0	0	0	0	0	0	0	0	0	0	14	
7:50 AM	0	4	0	0	1	6	0	0	0	0	0	0	0	0	0	0	11	
7:55 AM	0	1	0	0	0	4	0	0	0	0	0	0	1	0	4	0	10	102
8:00 AM	0	2	0	0	2	2	0	0	0	0	0	0	2	0	1	0	9	102
8:05 AM	0	4	0	0	1	5	0	0	0	0	0	0	2	0	0	0	12	109
8:10 AM	0	4	0	0	2	5	0	0	0	0	0	0	0	0	1	0	12	117
8:15 AM	0	0	3	0	0	5	0	0	0	0	0	0	1	0	1	0	10	119
8:20 AM	0	3	0	0	0	3	0	0	0	0	0	0	1	0	0	0	7	115
8:25 AM	0	2	0	0	1	5	0	0	0	0	0	0	1	1	2	0	12	122
8:30 AM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	1	0	5	117
8:35 AM	0	2	0	0	0	1	0	0	0	1	0	0	0	0	1	0	5	116
8:40 AM	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	6	113
8:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0	5	104
8:50 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	95
8:55 AM	0	2	0	0	3	3	0	0	0	0	0	0	0	0	1	0	9	94

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	40	0	0	8	72	0	0	0	0	0	0	4	0	16	0	140
Heavy Trucks	0	36	0		0	40	0		0	0	0		0	0	0		76
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/12/2022 8:05 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

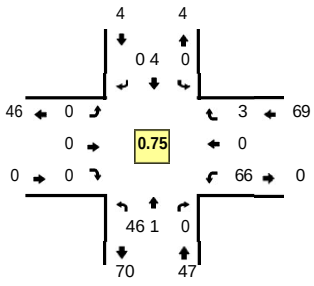
LOCATION: Tower Rd -- I-84 WB Ramps

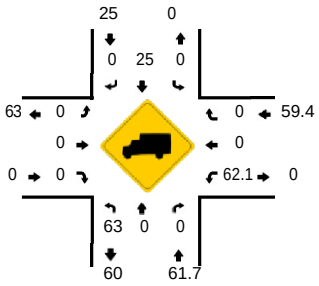
QC JOB #: 15907102

CITY/STATE: Morrow, OR

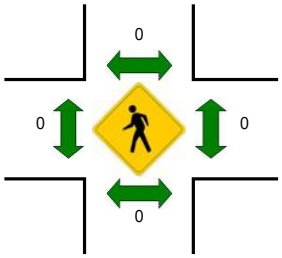
DATE: Tue, Aug 16 2022

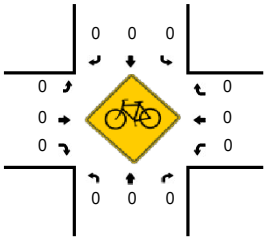
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:25 PM -- 5:40 PM

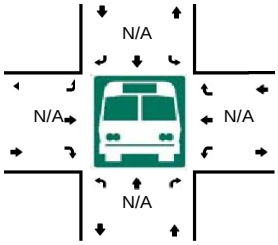


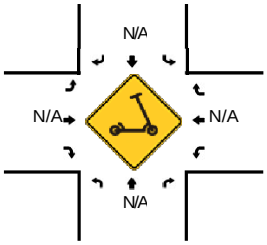


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Tower Rd (Northbound)				Tower Rd (Southbound)				I-84 WB Ramps (Eastbound)				I-84 WB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	0	0	0	0	1	0	0	0	0	0	0	11	0	0	0	15	
4:05 PM	4	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	12	
4:10 PM	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	6	
4:15 PM	5	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	10	
4:20 PM	4	0	0	0	0	1	0	0	0	0	0	0	6	0	0	0	11	
4:25 PM	5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	8	
4:30 PM	3	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	11	
4:35 PM	4	1	0	0	0	0	0	0	0	0	0	0	5	0	0	0	10	
4:40 PM	3	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	11	
4:45 PM	3	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	10	
4:50 PM	1	1	0	0	0	1	0	0	0	0	0	0	6	0	0	0	9	
4:55 PM	6	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	9	122
5:00 PM	3	0	0	0	0	2	0	0	0	0	0	0	5	0	0	0	10	117
5:05 PM	4	0	0	0	0	1	0	0	0	0	0	0	4	0	0	0	9	114
5:10 PM	5	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	7	115
5:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	8	113
5:20 PM	4	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	7	109
5:25 PM	3	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	10	111
5:30 PM	7	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	15	115
5:35 PM	6	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	15	120
5:40 PM	4	1	0	0	0	0	0	0	0	0	0	0	4	0	1	0	10	119
5:45 PM	1	0	0	0	0	2	0	0	0	0	0	0	5	0	0	0	8	117
5:50 PM	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	111
5:55 PM	3	0	0	0	0	1	0	0	0	0	0	0	5	0	0	0	9	111

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	64	0	0	0	0	0	0	0	0	0	0	0	96	0	0	0	160
Heavy Trucks	48	0	0		0	0	0		0	0	0		48	0	0		96
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/12/2022 8:06 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

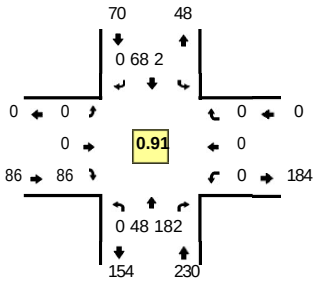
LOCATION: Tower Rd -- I-84 EB Ramps

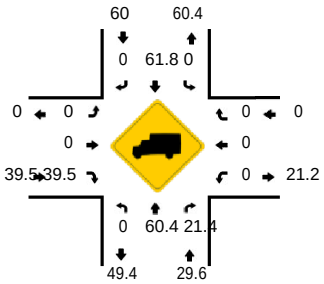
QC JOB #: 15907104

CITY/STATE: Morrow, OR

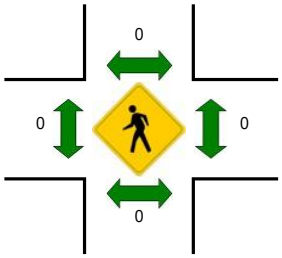
DATE: Tue, Aug 16 2022

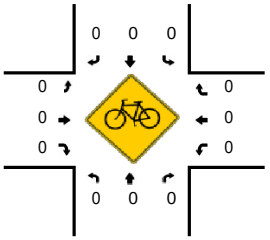
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:25 PM -- 5:40 PM

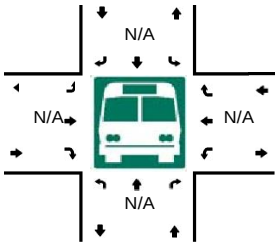


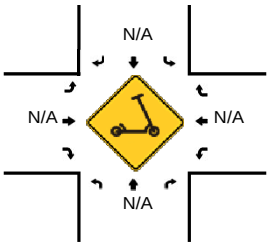


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Tower Rd (Northbound)				Tower Rd (Southbound)				I-84 EB Ramps (Eastbound)				I-84 EB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	4	10	0	1	11	0	0	0	0	6	0	0	0	0	0	32	
4:05 PM	0	3	12	0	1	6	0	0	0	0	4	0	0	0	0	0	26	
4:10 PM	0	3	15	0	0	3	0	0	0	0	4	0	0	0	0	0	25	
4:15 PM	0	5	14	0	0	5	0	0	0	0	6	0	0	0	0	0	30	
4:20 PM	0	5	11	0	1	6	0	0	0	1	2	0	0	0	0	0	26	
4:25 PM	0	4	11	0	0	3	0	0	0	0	6	0	0	0	0	0	24	
4:30 PM	0	4	10	0	0	8	0	0	0	0	5	0	0	0	0	0	27	
4:35 PM	0	4	11	0	0	5	0	0	0	0	10	0	0	0	0	0	30	
4:40 PM	0	3	19	0	0	7	0	0	0	0	12	0	0	0	0	0	41	
4:45 PM	0	3	19	0	0	7	0	0	0	0	1	0	0	0	0	0	30	
4:50 PM	0	2	20	0	0	7	0	0	0	0	4	0	0	0	0	0	33	
4:55 PM	0	6	8	0	0	3	0	0	0	0	6	0	0	0	0	0	23	347
5:00 PM	0	4	12	0	2	5	0	0	0	0	4	0	0	0	0	0	27	342
5:05 PM	0	4	11	0	0	5	0	0	0	0	9	0	0	0	0	0	29	345
5:10 PM	0	4	16	0	0	2	0	0	0	0	8	0	0	0	0	0	30	350
5:15 PM	0	2	19	0	0	6	0	0	0	0	13	0	0	0	0	0	40	360
5:20 PM	0	4	15	0	0	2	0	0	0	0	6	0	0	0	0	0	27	361
5:25 PM	0	5	15	0	0	8	0	0	0	0	9	0	0	0	0	0	37	374
5:30 PM	0	4	19	0	0	7	0	0	0	0	10	0	0	0	0	0	40	387
5:35 PM	0	7	9	0	0	9	0	0	0	0	4	0	0	0	0	0	29	386
5:40 PM	0	4	12	0	0	4	0	0	0	0	4	0	0	0	0	0	24	369
5:45 PM	0	1	12	0	1	6	0	0	0	0	7	0	0	0	0	0	27	366
5:50 PM	0	1	7	0	0	2	0	0	0	0	9	0	0	0	0	0	19	352
5:55 PM	0	4	12	0	2	5	0	0	0	0	11	0	0	0	0	0	34	363

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	64	172	0	0	96	0	0	0	0	92	0	0	0	0	0	424
Heavy Trucks	0	44	44		0	48	0		0	0	40		0	0	0		176
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/12/2022 8:06 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

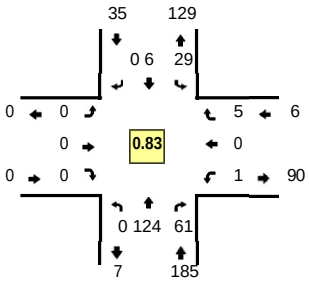
LOCATION: Tower Rd -- Kunze Rd

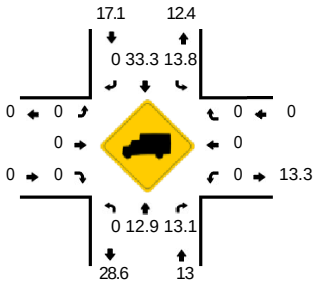
QC JOB #: 15907106

CITY/STATE: Morrow, OR

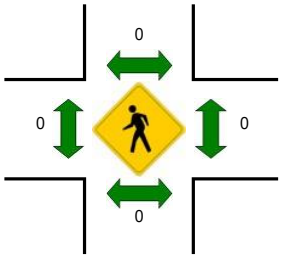
DATE: Tue, Aug 16 2022

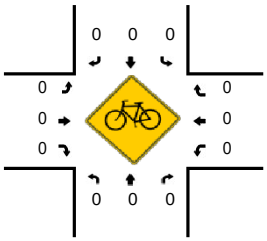
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 4:40 PM -- 4:55 PM

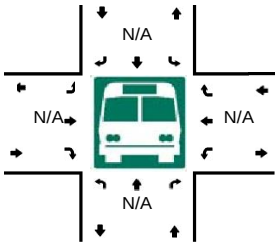


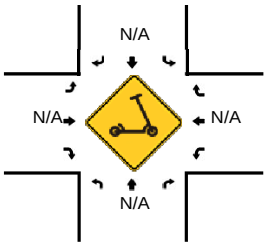


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Tower Rd (Northbound)				Tower Rd (Southbound)				Kunze Rd (Eastbound)				Kunze Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	6	2	0	0	1	0	0	0	0	0	0	0	0	0	0	9	
4:05 PM	0	5	2	0	1	0	0	0	0	0	0	0	0	0	0	0	8	
4:10 PM	0	16	4	0	2	2	0	0	0	0	0	0	0	0	2	0	26	
4:15 PM	0	4	3	0	0	0	0	0	0	0	0	0	0	0	1	0	8	
4:20 PM	0	8	3	0	1	2	0	0	0	0	0	0	2	0	0	0	16	
4:25 PM	0	7	7	0	0	1	0	0	0	0	0	0	5	0	1	0	21	
4:30 PM	0	3	5	0	1	4	0	0	0	0	0	0	1	0	0	0	14	
4:35 PM	0	10	3	0	1	5	0	0	0	0	0	0	0	0	0	0	19	
4:40 PM	0	15	6	0	1	0	0	0	0	0	0	0	0	0	0	0	22	
4:45 PM	0	22	10	0	4	0	0	0	0	0	0	0	0	0	0	0	36	
4:50 PM	0	5	2	0	3	0	0	0	0	0	0	0	0	0	0	0	10	
4:55 PM	0	5	3	0	0	1	0	0	0	0	0	0	1	0	0	0	10	199
5:00 PM	0	7	6	0	3	1	0	0	0	0	0	0	0	0	1	0	18	208
5:05 PM	0	3	5	0	1	1	0	0	0	0	0	0	0	0	0	0	10	210
5:10 PM	0	9	4	0	4	0	0	0	0	0	0	0	0	0	1	0	18	202
5:15 PM	0	15	4	0	4	0	0	0	0	0	0	0	0	0	0	0	23	217
5:20 PM	0	11	2	0	3	0	0	0	0	0	0	0	0	0	1	0	17	218
5:25 PM	0	7	5	0	2	1	0	0	0	0	0	0	0	0	1	0	16	213
5:30 PM	0	15	4	0	2	2	0	0	0	0	0	0	0	0	1	0	24	223
5:35 PM	0	10	10	0	2	0	0	0	0	0	0	0	0	0	0	0	22	226
5:40 PM	0	7	2	0	1	1	0	0	0	0	0	0	0	0	1	0	12	216
5:45 PM	0	2	1	0	0	0	0	0	0	0	0	0	1	0	0	0	4	184
5:50 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	176
5:55 PM	0	3	2	0	4	0	0	0	0	0	0	0	0	0	2	0	11	177

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	168	72	0	32	0	0	0	0	0	0	0	0	0	0	0	272
Heavy Trucks	0	20	16		0	0	0		0	0	0		0	0	0		36
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/12/2022 8:06 AM

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

Appendix C Existing Traffic Operations Worksheets

Intersection Level Of Service Report
Intersection 1: I-84 WB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.154

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	0	0	0	0	1	0	0	0	91	1	1
Base Volume Adjustment Factor	1.0800	1.0800	1.0000	1.0000	1.0800	1.0800	1.0000	1.0000	1.0000	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	70.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	60.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	0	0	0	0	1	0	0	0	98	1	1
Peak Hour Factor	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	0	0	0	0	0	0	0	27	0	0
Total Analysis Volume [veh/h]	57	0	0	0	0	1	0	0	0	109	1	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00
d_M, Delay for Movement [s/veh]	7.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.00	10.77	9.23
Movement LOS	A	A			A	A				B	B	A
95th-Percentile Queue Length [veh/ln]	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55
95th-Percentile Queue Length [ft/ln]	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.74	13.74	13.74
d_A, Approach Delay [s/veh]	7.97			0.00			0.00			10.98		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	9.90											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: I-84 EB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	47	77	1	90	0	0	0	40	0	0	0
Base Volume Adjustment Factor	1.0000	1.0800	1.0800	1.0800	1.0800	1.0000	1.0800	1.0800	1.0800	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	70.00	60.00	0.00	61.00	2.00	0.00	0.00	42.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	51	83	1	97	0	0	0	43	0	0	0
Peak Hour Factor	1.0000	0.8700	0.8700	0.8700	0.8700	1.0000	0.8700	0.8700	0.8700	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	24	0	28	0	0	0	12	0	0	0
Total Analysis Volume [veh/h]	0	59	95	1	111	0	0	0	49	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.50	0.00	0.00	10.13	10.87	9.53	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	B	A			
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.04	0.04	0.00	4.61	4.61	4.61	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			0.07			9.53			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.51											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Tower Road / Kunze Lane

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	34	2	8	52	0	0	0	0	7	0	14
Base Volume Adjustment Factor	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	0.00	71.00	100.00	25.00	54.00	0.00	0.00	0.00	0.00	14.00	0.00	14.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	37	2	9	56	0	0	0	0	8	0	15
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	11	1	3	17	0	0	0	0	2	0	4
Total Analysis Volume [veh/h]	0	44	2	11	67	0	0	0	0	10	0	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02
d_M, Delay for Movement [s/veh]	7.33	0.00	0.00	7.54	0.00	0.00	9.45	9.78	8.59	9.60	9.90	8.75
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.02	0.02	0.02	0.00	0.00	0.00	0.09	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.46	0.46	0.46	0.00	0.00	0.00	2.36	2.36	2.36
d_A, Approach Delay [s/veh]	0.00			1.06			9.27			9.06		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.21											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 1: I-84 WB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.142

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	1	0	0	4	0	0	0	0	66	0	3
Base Volume Adjustment Factor	1.0800	1.0800	1.0000	1.0000	1.0800	1.0800	1.0000	1.0000	1.0000	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	63.00	0.00	2.00	2.00	25.00	0.00	2.00	2.00	2.00	62.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	1	0	0	4	0	0	0	0	71	0	3
Peak Hour Factor	0.7500	0.7500	1.0000	1.0000	0.7500	0.7500	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
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]	17	0	0	0	1	0	0	0	0	24	0	1
Total Analysis Volume [veh/h]	68	1	0	0	5	0	0	0	0	95	0	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00
d_M, Delay for Movement [s/veh]	7.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.26	10.94	9.20
Movement LOS	A	A			A	A				B	B	A
95th-Percentile Queue Length [veh/ln]	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.51
95th-Percentile Queue Length [ft/ln]	4.09	4.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.66	12.66	12.66
d_A, Approach Delay [s/veh]	7.81			0.00			0.00			11.18		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	9.51											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: I-84 EB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.115

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	48	182	2	68	0	0	0	86	0	0	0
Base Volume Adjustment Factor	1.0000	1.0800	1.0800	1.0800	1.0800	1.0000	1.0800	1.0800	1.0800	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	60.00	21.00	0.00	62.00	2.00	0.00	0.00	40.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	52	197	2	73	0	0	0	93	0	0	0
Peak Hour Factor	1.0000	0.9100	0.9100	0.9100	0.9100	1.0000	0.9100	0.9100	0.9100	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	14	54	1	20	0	0	0	26	0	0	0
Total Analysis Volume [veh/h]	0	57	216	2	80	0	0	0	102	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.77	0.00	0.00	10.62	11.83	9.60	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	B	A			
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.39	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.08	0.08	0.00	9.74	9.74	9.74	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			0.19			9.60			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.18											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Tower Road / Kunze Lane

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	124	61	29	6	0	0	0	0	1	0	5
Base Volume Adjustment Factor	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	0.00	13.00	13.00	14.00	33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	134	66	31	6	0	0	0	0	1	0	5
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	40	20	9	2	0	0	0	0	0	0	2
Total Analysis Volume [veh/h]	0	161	80	37	7	0	0	0	0	1	0	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.21	0.00	0.00	7.92	0.00	0.00	10.57	11.20	8.33	10.54	10.93	9.30
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.08	0.08	0.08	0.00	0.00	0.00	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.65	0.65	0.65
d_A, Approach Delay [s/veh]	0.00			6.66			10.03			9.48		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	1.23											
Intersection LOS	B											

Appendix D Year 2043 Existing Zoning Operations Worksheets

Intersection Level Of Service Report
Intersection 1: I-84 WB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.234

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	0	0	0	0	1	0	0	0	91	1	1
Base Volume Adjustment Factor	1.0800	1.0800	1.0000	1.0000	1.0800	1.0800	1.0000	1.0000	1.0000	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	70.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	60.00	0.00	0.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	0	0	0	0	1	0	0	0	137	1	1
Peak Hour Factor	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	0	0	0	0	0	0	0	0	38	0	0
Total Analysis Volume [veh/h]	79	0	0	0	0	1	0	0	0	152	1	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00
d_M, Delay for Movement [s/veh]	8.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.24	11.91	10.00
Movement LOS	A	A			A	A				B	B	A
95th-Percentile Queue Length [veh/ln]	0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.91	0.91
95th-Percentile Queue Length [ft/ln]	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.86	22.86	22.86
d_A, Approach Delay [s/veh]	8.02			0.00			0.00			12.22		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	10.75											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: I-84 EB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.087

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	47	77	1	90	0	0	0	40	0	0	0
Base Volume Adjustment Factor	1.0000	1.0800	1.0800	1.0800	1.0800	1.0000	1.0800	1.0800	1.0800	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	70.00	60.00	0.00	61.00	2.00	0.00	0.00	42.00	2.00	2.00	2.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	71	116	1	136	0	0	0	60	0	0	0
Peak Hour Factor	1.0000	0.8700	0.8700	0.8700	0.8700	1.0000	0.8700	0.8700	0.8700	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	33	0	39	0	0	0	17	0	0	0
Total Analysis Volume [veh/h]	0	82	133	1	156	0	0	0	69	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.63	0.00	0.00	10.97	11.86	9.96	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	B	A			
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.28	0.28	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.04	0.04	0.00	7.11	7.11	7.11	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			0.05			9.96			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.58											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Tower Road / Kunze Lane

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	34	2	8	52	0	0	0	0	7	0	14
Base Volume Adjustment Factor	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	0.00	71.00	100.00	25.00	54.00	0.00	0.00	0.00	0.00	14.00	0.00	14.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	52	3	13	78	0	0	0	0	11	0	21
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	1	4	23	0	0	0	0	3	0	6
Total Analysis Volume [veh/h]	0	62	4	15	93	0	0	0	0	13	0	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.03
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	7.59	0.00	0.00	9.90	10.13	8.71	10.06	10.31	8.91
Movement LOS	A	A	A	A	A	A	A	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.14	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	3.40	3.40	3.40
d_A, Approach Delay [s/veh]	0.00			1.05			9.58			9.30		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.20											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 1: I-84 WB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.220

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	1	0	0	4	0	0	0	0	66	0	3
Base Volume Adjustment Factor	1.0800	1.0800	1.0000	1.0000	1.0800	1.0800	1.0000	1.0000	1.0000	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	63.00	0.00	2.00	2.00	25.00	0.00	2.00	2.00	2.00	62.00	0.00	0.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	1	0	0	6	0	0	0	0	99	0	4
Peak Hour Factor	0.7500	0.7500	1.0000	1.0000	0.7500	0.7500	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
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]	24	0	0	0	2	0	0	0	0	33	0	1
Total Analysis Volume [veh/h]	95	1	0	0	8	0	0	0	0	132	0	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
d_M, Delay for Movement [s/veh]	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.72	12.26	10.01
Movement LOS	A	A			A	A				B	B	B
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.86	0.86
95th-Percentile Queue Length [ft/ln]	5.88	5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.47	21.47	21.47
d_A, Approach Delay [s/veh]	7.92			0.00			0.00			12.62		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	10.33											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: I-84 EB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.169

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	48	182	2	68	0	0	0	86	0	0	0
Base Volume Adjustment Factor	1.0000	1.0800	1.0800	1.0800	1.0800	1.0000	1.0800	1.0800	1.0800	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	60.00	21.00	0.00	62.00	2.00	0.00	0.00	40.00	2.00	2.00	2.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	73	276	3	102	0	0	0	130	0	0	0
Peak Hour Factor	1.0000	0.9100	0.9100	0.9100	0.9100	1.0000	0.9100	0.9100	0.9100	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	76	1	28	0	0	0	36	0	0	0
Total Analysis Volume [veh/h]	0	80	303	3	112	0	0	0	143	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.04	0.00	0.00	11.79	13.46	10.11	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	B	B			
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.01	0.00	0.60	0.60	0.60	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.13	0.13	0.00	15.12	15.12	15.12	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			0.21			10.11			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	2.29											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Tower Road / Kunze Lane

Control Type:	Two-way stop	Delay (sec / veh):	11.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	124	61	29	6	0	0	0	0	1	0	5
Base Volume Adjustment Factor	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	0.00	13.00	13.00	14.00	33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	188	92	43	8	0	0	0	0	1	0	7
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	57	28	13	2	0	0	0	0	0	0	2
Total Analysis Volume [veh/h]	0	227	111	52	10	0	0	0	0	1	0	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	8.21	0.00	0.00	11.76	12.45	8.34	11.71	11.99	9.79
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.12	0.12	0.12	0.00	0.00	0.00	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	2.95	2.95	2.95	0.00	0.00	0.00	0.94	0.94	0.94
d_A, Approach Delay [s/veh]	0.00			6.89			10.85			10.00		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	1.26											
Intersection LOS	B											

Appendix E Year 2043 General Industrial Zone Operations Worksheets

Intersection Level Of Service Report
Intersection 1: I-84 WB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.321

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	0	0	0	0	1	0	0	0	91	1	1
Base Volume Adjustment Factor	1.0800	1.0800	1.0000	1.0000	1.0800	1.0800	1.0000	1.0000	1.0000	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	70.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	60.00	0.00	0.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	0	0	0	0	0	0	0	48	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	0	0	0	0	1	0	0	0	185	1	1
Peak Hour Factor	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	0	0	0	0	0	0	0	0	51	0	0
Total Analysis Volume [veh/h]	82	0	0	0	0	1	0	0	0	206	1	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00
d_M, Delay for Movement [s/veh]	8.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.25	12.91	10.95
Movement LOS	A	A			A	A				B	B	B
95th-Percentile Queue Length [veh/ln]	0.21	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40	1.40	1.40
95th-Percentile Queue Length [ft/ln]	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.92	34.92	34.92
d_A, Approach Delay [s/veh]	8.03			0.00			0.00			13.24		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	11.73											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: I-84 EB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.098

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	47	77	1	90	0	0	0	40	0	0	0
Base Volume Adjustment Factor	1.0000	1.0800	1.0800	1.0800	1.0800	1.0000	1.0800	1.0800	1.0800	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	70.00	60.00	0.00	61.00	2.00	0.00	0.00	42.00	2.00	2.00	2.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	39	0	48	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	74	155	1	184	0	0	0	63	0	0	0
Peak Hour Factor	1.0000	0.8700	0.8700	0.8700	0.8700	1.0000	0.8700	0.8700	0.8700	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	21	45	0	53	0	0	0	18	0	0	0
Total Analysis Volume [veh/h]	0	85	178	1	211	0	0	0	72	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.74	0.00	0.00	11.79	12.87	10.40	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	B	B			
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.32	0.32	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.04	0.04	0.00	8.07	8.07	8.07	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			0.04			10.40			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	1.38											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Tower Road / Kunze Lane

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.054

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	34	2	8	52	0	0	0	0	7	0	14
Base Volume Adjustment Factor	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	0.00	71.00	100.00	25.00	54.00	0.00	0.00	0.00	0.00	14.00	0.00	14.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	42	14	0	51	0	0	0	0	17	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	94	17	13	129	0	0	0	0	28	0	21
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	28	5	4	38	0	0	0	0	8	0	6
Total Analysis Volume [veh/h]	0	112	20	15	154	0	0	0	0	33	0	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.03
d_M, Delay for Movement [s/veh]	7.50	0.00	0.00	7.74	0.00	0.00	10.88	11.04	9.01	11.29	11.41	9.46
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.27	0.27	0.27
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	6.63	6.63	6.63
d_A, Approach Delay [s/veh]	0.00			0.69			10.31			10.50		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.02											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Tower Road / Proposed Site Accesses

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.066

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	36	0	0	59	0	0
Base Volume Adjustment Factor	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	71.00	2.00	2.00	54.00	2.00	2.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	68	0	0	56
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	0	68	90	0	56
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	0	20	26	0	16
Total Analysis Volume [veh/h]	65	0	80	106	0	66
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.05	0.00	0.00	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	7.44	0.00	11.00	8.86
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.14	0.14	0.21	0.21
95th-Percentile Queue Length [ft/ln]	0.00	0.00	3.49	3.49	5.30	5.30
d_A, Approach Delay [s/veh]	0.00		3.20		8.86	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: I-84 WB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	13.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.273

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	1	0	0	4	0	0	0	0	66	0	3
Base Volume Adjustment Factor	1.0800	1.0800	1.0000	1.0000	1.0800	1.0800	1.0000	1.0000	1.0000	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	63.00	0.00	2.00	2.00	25.00	0.00	2.00	2.00	2.00	62.00	0.00	0.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	0	0	0	0	21	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	1	0	0	6	0	0	0	0	120	0	4
Peak Hour Factor	0.7500	0.7500	1.0000	1.0000	0.7500	0.7500	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
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]	25	0	0	0	2	0	0	0	0	40	0	1
Total Analysis Volume [veh/h]	100	1	0	0	8	0	0	0	0	160	0	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00
d_M, Delay for Movement [s/veh]	8.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.44	12.95	10.61
Movement LOS	A	A			A	A				B	B	B
95th-Percentile Queue Length [veh/ln]	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13
95th-Percentile Queue Length [ft/ln]	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.18	28.18	28.18
d_A, Approach Delay [s/veh]	7.94			0.00			0.00			13.35		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	10.97											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: I-84 EB Ramp Terminal / Tower Road

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.176

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	48	182	2	68	0	0	0	86	0	0	0
Base Volume Adjustment Factor	1.0000	1.0800	1.0800	1.0800	1.0800	1.0000	1.0800	1.0800	1.0800	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	60.00	21.00	0.00	62.00	2.00	0.00	0.00	40.00	2.00	2.00	2.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	49	0	21	0	0	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	77	325	3	123	0	0	0	132	0	0	0
Peak Hour Factor	1.0000	0.9100	0.9100	0.9100	0.9100	1.0000	0.9100	0.9100	0.9100	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	21	89	1	34	0	0	0	36	0	0	0
Total Analysis Volume [veh/h]	0	85	357	3	135	0	0	0	145	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.19	0.00	0.00	12.38	14.40	10.32	0.00	0.00	0.00
Movement LOS		A	A	A	A		B	B	B			
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.01	0.00	0.64	0.64	0.64	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.13	0.13	0.00	15.95	15.95	15.95	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			0.18			10.32			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	2.10											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Tower Road / Kunze Lane

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	124	61	29	6	0	0	0	0	1	0	5
Base Volume Adjustment Factor	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	0.00	13.00	13.00	14.00	33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	53	18	0	23	0	0	0	0	8	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	241	110	43	31	0	0	0	0	9	0	7
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	73	33	13	9	0	0	0	0	3	0	2
Total Analysis Volume [veh/h]	0	290	133	52	37	0	0	0	0	11	0	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	8.41	0.00	0.00	12.93	13.66	8.46	13.03	13.18	10.45
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.09	0.09	0.09	0.00	0.00	0.00	0.11	0.11	0.11
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	2.23	2.23	2.23	0.00	0.00	0.00	2.74	2.74	2.74
d_A, Approach Delay [s/veh]	0.00			4.91			11.68			11.94		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	1.25											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Tower Road / Proposed Site Accesses

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.118

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	185	0	0	7	0	0
Base Volume Adjustment Factor	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800
Heavy Vehicles Percentage [%]	13.00	2.00	2.00	33.00	2.00	2.00
Growth Factor	1.4000	1.4000	1.4000	1.4000	1.4000	1.4000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	31	0	0	71
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	280	0	31	11	0	71
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	82	0	9	3	0	21
Total Analysis Volume [veh/h]	329	0	36	13	0	84
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.03	0.00	0.00	0.12
d_M, Delay for Movement [s/veh]	0.00	0.00	7.97	0.00	11.91	10.73
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.07	0.07	0.40	0.40
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.66	1.66	9.97	9.97
d_A, Approach Delay [s/veh]	0.00		5.86		10.73	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.57					
Intersection LOS	B					