

Traffic and Circulation Study

SYWEST INDUSTRIAL BUILDING PROJECT CITY OF GOLETA, CALIFORNIA

UPDATED TRAFFIC AND CIRCULATION STUDY



July 24, 2024

ATE Project #22052

Prepared for: SyWest Development 150 Pelican Way San Rafael, CA 93101



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UPDATED TRAFFIC AND CIRCULATION STUDY FOR THE SYWEST INDUSTRIAL BUILDING PROJECT – CITY OF GOLETA

Associated Transportation Engineers (ATE) has prepared the following updated traffic and circulation study for the Sywest Industrial Building Project proposed in the Old Town area of the City of Goleta. The study updates the analysis completed previously by ATE (study dated December 11, 2023).

Associated Transportation Engineers

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Scott A. Schell Principal Transportation Planner

INTRODUCTION1
PROJECT DESCRIPTION
EXISTING CONDITIONS
Street Network
Roadway Operations
Intersection Operations
CITY OF GOLETA CONSISTENCY CRITERIA
EXISTING + PROJECT ANALYSIS
Trip Generation
Trucks9
Existing + Project Roadway Operations12
Existing + Project Intersection Operations12
CUMULATIVE ANALYSIS
Traffic Forecasts
Planned Improvements
Cumulative + Project Roadway Operations17
Cumulative + Project Intersection Operations17
SITE ACCESS AND CIRCULATION 18
Truck Access
Kellogg Avenue/Private Road Intersection Sight Distance Evaluation
VEHICLE MILE TRAVELED (POTENTIAL CEQA IMPACTS)
Screening Criteria
REFERENCES AND PERSONS CONTACTED
TECHNICAL APPENDIX

CONTENTS

TABLES

Table 1	Existing Roadway Operations	7
Table 2	Existing Intersection Operations	7
Table 3	Project Trip Generation	9
Table 4	ITE Trip Generation 11th Edition Truck Rates Used for Warehouses	9
Table 5	Project Trip Distribution	10
Table 6	Existing + Project Roadway Operations	12
Table 7	Existing + Project Intersection Operations – AM Peak Hour	14
Table 8	Existing + Project Intersection Operations – PM Peak Hour	14
Table 9	Cumulative + Project Roadway Operations	17
Table 10	Cumulative + Project Intersection Operations – AM Peak Hour	18
Table 11	Cumulative + Project Intersection Operations - PM Peak Hour	18

FIGURES

Figure 1	Project Site Location	2
Figure 2	Project Site Plan	3
Figure 3	Existing Street Network	4
Figure 4	Existing Traffic Volumes	6
Figure 5	Project Trip Distribution and Assignment	11
Figure 6	Existing + Project Traffic Volumes	13
Figure 7	Cumulative Traffic Volumes	15
Figure 8	Cumulative + Project Traffic Volumes	16
Figure 9	Ingress Turning Movements	20
Figure 10	Egress Turning Movements and Recommended Improvements	21
Figure 11	Private Road Sight Distances	22
Figure 12	City of Goleta VMT Screening Map – Work-Based Projects	25

INTRODUCTION

The following report presents ATE's updated traffic and circulation analysis for the Sywest Industrial Building Project (the "Project"), proposed in the City of Goleta's Old Town area. The report evaluates existing and future traffic operations for the roadways and intersections in the study area in order to determine the Project's consistency with City's General Plan level of service transportation policies. The report also evaluates the Project's potential CEQA impacts based on the Vehicle Miles Traveled (VMT) criteria adopted by the City.

The updated study incorporates updated trip generation estimates using data for 4 similar High-Cube Warehouse facilities. The analysis also includes additional information regarding truck trip centages.

PROJECT DESCRIPTION

The Sywest Industrial Building site is located at 907 S. Kellogg Avenue in the City of Goleta. Figure 1 shows the location of the Project site. The existing parcel is currently occupied by the West Wind Drive-In movie theater. It is noted that the movie theater is currently vacant, therefore no existing trip credits were applied. The Project is proposing to demolish the theater and construct 70,594 square feet (SF) of warehouse space. As noted above, the traffic analysis assumes the average rate of 4 similar High-Cube Warehouse facilities. Figure 2 illustrates the Project site plan. As shown on the plan, access to the Project site would be provided via two new connections to the existing driveway that extends south from Kellogg Avenue.

EXISTING CONDITIONS

Street Network

The Project site is served by a network of highways, arterial roadways, and collector streets, as shown in Figure 3. The following text briefly describes the major components of the study-area street network.

US 101, located north of the Project site, is a multi-lane interstate freeway serving the Pacific Coast. US 101 is the principal route between the Goleta area and the adjacent cities of Santa Barbara, Carpinteria, and Ventura to the south; and Buellton and Santa Maria to the north. Access to US 101 would be provided via the US 101/Fairview Avenue interchange on the west and the SR 217/Hollister Avenue interchange on the east (which connects to US 101 – see Figure 3).

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SR 217, located east of the Project site, is a 4-lane freeway that connects US 101 on the north to UCSB on the south. SR 217 includes a full-access interchange at Hollister Avenue. Access to US 101 would be provided via the SR 217/Hollister Avenue interchange (see Figure 3).

Hollister Avenue, located north of the Project site, is a 4-lane east-west arterial roadway that extends through the Goleta Valley area from State Route 154 on the east to Calle Real on the west. Hollister Avenue is the primary east-west surface streets in the Goleta Old Town area.

Fairview Avenue, located west of the Project site, is a north-south 2- and 4-lane arterial roadway. North of Hollister Avenue, Fairview Avenue extends as a 4-lane roadway that connects to the US 101 interchange and Calle Real north of US 101. Fairview Avenue extends south of Hollister Avenue to its terminus at Fowler Road. The US 101/Fairview Avenue Interchange would provide freeway access for the Project site.

Pine Avenue, located west of the Project site, is a 2-lane collector road that extends south from Hollister Avenue and connect to Thornwood Drive.

Kellogg Avenue, located on the east side of the Project site, is a 2-lane collector road that extends north and south of Hollister Avenue. The two-lane roadway provides direct access to the site via the existing private driveway connection.

Ekwill Street, located south of the Project site, is a 2-lane road that extends for a short distance west of Kellogg Avenue. This segment was constructed as part of the Old Town Village Mixed Use Project. The City has plans to extend Ekwill Street between Fairview Avenue and Kellogg Avenue to relieve traffic loading on Hollister Avenue. The remaining portions of the Ekwill Street extension are now funded and began construction in 2023.

Roadway Operations

Figure 4 shows the Existing average daily traffic (ADT) volumes for the key study-area roadway segments identified for analysis. The ADT volumes were developed based on volumes collected in 2019 that were adjusted using new intersection counts conducted in 2022 (see Technical Appendix for ADT adjustment analysis). The operational characteristics of the study-area roadways were analyzed based on the LOS C policy adopted by the City ("Acceptable Capacity" roadway rating system contained in Technical Appendix for reference). Table 1 shows the Existing ADT volumes and the City's Acceptable Capacity (LOS C) thresholds for the key roadways in the study-area. As shown, the study-area roadway segments currently carry traffic volumes within the City's Acceptable Capacity ratings, which indicates that the roadway system operates at LOS C or better.



6

Associated Transportation Engineers July 24, 2024

Roadway Segment	Roadway Classification	Number of Lanes	Acceptable Capacity(a)	Existing ADT
Pine Avenue s/o Hollister Avenue	Secondary 1	2 Lanes	9,300	4,000
Kellogg Avenue s/o Hollister Avenue	Secondary 1	2 Lanes	9,300	4,600
Hollister Avenue e/o Kellogg Avenue	Primary 2	4 Lanes	34,000	22,600

Table 1 Existing Roadway Operations

(a) Acceptable Capacity equates to LOS C standard.

Intersection Operations

Because traffic flows on street networks are most constrained at intersections, detailed traffic analyses focus on operations at key intersections during peak travel periods. In rating intersection operations, "Levels of Service" (LOS) A through F are used, with LOS A indicating free flow operations and LOS F indicating congested operations (more complete definitions of levels of service are included in the Technical Appendix). The City of Goleta has established LOS C as the minimum acceptable operating standard for intersections.

AM and PM peak hour traffic volumes for the study-area intersections were obtained from traffic counts conducted by the City in 2022 (traffic count data is contained in the Technical Appendix for reference). For the intersections where new counts were not provided, the 2019 volumes adjusted using 2022 counts at the adjacent intersections (see Technical Appendix for adjustment analysis).

Figure 4 shows the peak hour turning movements for the study-area intersections. Levels of service were calculated for the signalized intersections using the "Intersection Capacity Utilization" (ICU) methodology adopted by the City (LOS calculations contained in Technical Appendix). As shown in Table 2, the study-area intersections currently operate at LOS C or better, which meet the City's LOS C standard.

		AM Peak Hour		PM Peak	Hour
Intersection	Control	ICU	LOS	ICU	LOS
#1 - Hollister Avenue/Fairview Avenue	Signal	0.478	A	0.606	В
#2 - Hollister Avenue/Pine Avenue	Signal	0.430	A	0.556	А
#3 - Hollister Avenue/Kellogg Avenue	Signal	0.571	A	0.604	А
#4 - Hollister Avenue/SR 217 SB Ramps	Signal	0.644	В	0.642	В
#5 - Hollister Avenue/SR 217 NB Ramps	Signal	0.452	A	0.573	А

Table 2Existing Intersection Operations

CITY OF GOLETA CONSISTENCY CRITERIA

The transportation policies and standards outlined in City's Circulation Element of the General Plan were used to evaluate the Project's consistency with the City's General Plan (Policies TE 4.1-4.3). As outlined in the Circulation Element, the policies state that the traffic standard is to maintain LOS C or better on major arterials, minor arterials, collector roadways, and at intersections. A deficiency plan is required where LOS C is exceeded. The Circulation Element policies include an exception for the Storke-Hollister intersection, where the policy is to maintain LOS D or better with a volume-to-capacity of 0.89 or better.

EXISTING + PROJECT ANALYSIS

Trip Generation

Following City traffic analysis procedures, trip generation estimates were calculated for the Project using the rates presented in the Institute of Transportation Engineers (ITE) Trip Generation Manual.¹ The average ITE rates for High-Cube Transload and Short-Term Storage Warehouse (ITE #154), High-Cube Fulfillment Center Warehouse – Non-Sort (Land Use Code #155), High-Cube Fulfillment Center Warehouse – Sort (Land Use Code #155), and High-Cube Parcel Hub Warehouse (ITE #156) were used in the trip generation analysis. The ITE Trip Generation Manual definition for these types of facilities is as follows:

"A high-cube warehouse (HCW) is a building primarily used for the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. A typical HCW has a high level of on-site automation and logistics management. The automation and logistics enable highly-efficient processing of goods through the HCW. A high-cube warehouse can be free-standing or located in an industrial park. Each fulfillment center in the ITE database has been categorized as either a sort or non-sort facility. A sort facility is a fulfillment center that ships out smaller items, requiring extensive sorting, typically by manual means."

Table 3 presents trip generation estimates for the Project (a worksheet showing the trip generation calculations is contained in the Technical Appendix).

¹ <u>Trip Generation</u>, Institute of Transportation Engineers, 11th Edition, 2021.

		ADT		AM P	eak Hour	PM F	Peak Hour
					Trips		Trips
Land Use	Size	Rate	Trips	Rate	(In/Out)	Rate	(In/Out)
SyWest Industrial Building Project	70,594 SF	3.57	252	0.45	32 (24/8)	0.53	37 (16/21)

Table 3 Project Trip Generation

(a) Trip generation based on the average ITE rates of 4 similar High-Cube Warehouse facilities (ITE #154, 155, 156).

As shown in Table 3, the Project is forecast to generate 252 average daily trips (ADT), 32 AM peak hour trips, and 37 PM peak hour trips.

The Project trip generation estimates do not include trip credits for the existing West Wind Drive-In Movie Theater which is vacant and would be demolished as part of the project. The drive-in theater generates traffic outside of the peak hours (show times start at 8:45 PM) on days when screening is scheduled. Given the fluctuating nature and low level of traffic generated by the drive-in theater, no existing average daily traffic was assumed. Due to the unavailability of attendance records for the existing drive-in at the time this report was prepared, no existing trip credits are applied in this report.

Truck Trips

Truck trip percentages were calculated for the Project using ITE data for the 4 similar High-Cube Warehouse facilities discussed previously. It is noted that the cold storage warehouse facility is not a realistic use for the Project, therefore the rates were not used to calculate the average truck trips. The truck percentages apply to ADT volumes. Table 4 presents the results of the truck percentage calculations for similar warehouses types.

Land Use	ITE Code	ADT Rate / KSF	Truck Rate / KSF	Truck %
High-Cube Transload and Short-Term Storage Warehouse	154	1.40	0.22	15.7%
High-Cube Fulfillment Center Warehouse – Non-Sort	155	1.81	0.23	12.7%
High-Cube Fulfillment Center Warehouse – Sort	155	6.44	0.19	3.0%
High-Cube Parcel Hub Warehouse	156	4.63	0.58	12.5%
Average		3.57	0.31	11.0%

Table 4ITE Trip Generation 11th Edition Truck Rates Used for Warehouses

The data presented in Table 4 show that the average truck percentage for the High-Cube Warehouse uses is 11% of the daily traffic.

Trip Distribution

Trip distribution percentages were developed for the Project based on existing traffic patterns observed in the study area, input provided by City staff, and the anticipated origins/destinations of Project-generated traffic. Table 5 presents the trip distribution pattern developed for the Project. Figure 5 illustrates the trip distribution pattern and shows the assignment of Project traffic on the study-area street network.

Origin/Destination	Direction	Distribution %
Hallister Avenue	East	25%
nomster Avenue	West	15%
Fairview Avenue	North of Hollister	15%
SR 217	North (to/from US 101)	45%
Total		100%

Table 5 Project Trip Distribution



Sywest Industrial Building Project Updated Traffic and Circulation Study

1

Existing + Project Roadway Operations

Existing + Project roadway volumes are shown on Figure 6. Table 6 compares the Existing and Existing + Project roadway volumes and identifies locations that are forecast to exceed the City's LOS C standard. As shown, the study-area roadways are forecast to carry volumes within their Acceptable Capacity ratings under Existing + Project conditions. Thus, the Project would be consistent with the City's LOS C standard for roadways.

	Average Daily Trips				
Roadway Segment	Acceptable Capacity(a)	Existing	Project Added	Existing + Project	Exceeds LOS C?
Pine Avenue s/o Hollister Avenue	9,300	4,000	30	4,030	No
Kellogg Avenue s/o Hollister Avenue	9,300	4,600	222	4,822	No
Hollister Avenue e/o Kellogg Avenue	34,000	22,600	177	22,777	No

Table 6Existing + Project Roadway Operations

(a) Acceptable Capacity equates to LOS C standard.

Existing + Project Intersection Operations

Existing + Project levels of service were calculated for the study-area intersections assuming the traffic volumes presented on Figure 6. Tables 7 and 8 compare the Existing and Existing + Project levels of service and identify intersections that are forecast to exceed the City's LOS C standard.



Sywest Industrial Building Project Updated Traffic and Circulation Study

13

Associated Transportation Engineers July 24, 2024

	Existing		Existing + P	Exceed	
Intersection	ICU	LOS	ICU	LOS	LOS C?
#1 - Hollister Avenue/Fairview Avenue	0.478	А	0.478	A	NO
#2 - Hollister Avenue/Pine Avenue	0.430	А	0.430	A	NO
#3 - Hollister Avenue/Kellogg Avenue	0.571	А	0.583	A	NO
#4 - Hollister Avenue/SR 217 SB Ramps	0.644	В	0.648	В	NO
#5 - Hollister Avenue/SR 217 NB Ramps	0.452	A	0.455	A	NO

Table 7Existing + Project Intersection Operations – AM Peak Hour

Table 8Existing + Project Intersection Operations – PM Peak Hour

	Existing		Existing + P	roject	Exceed
Intersection	ICU	LOS	ICU	LOS	LOS C?
#1 - Hollister Avenue/Fairview Avenue	0.606	В	0.608	В	NO
#2 - Hollister Avenue/Pine Avenue	0.556	А	0.558	А	NO
#3 - Hollister Avenue/Kellogg Avenue	0.604	А	0.616	В	NO
#4 - Hollister Avenue/SR 217 SB Ramps	0.642	В	0.649	В	NO
#5 - Hollister Avenue/SR 217 NB Ramps	0.573	А	0.577	А	NO

As shown in Tables 7 and 8, the study-area intersections are forecast to operate at LOS C or better under Existing + Project conditions. Thus, the Project would be consistent with the City's LOS C standard for intersections.

CUMULATIVE ANALYSIS

Traffic Forecasts

Cumulative traffic volumes were forecast based on a list of approved and pending projects proposed within the City of Goleta and forecasts generated by the City's traffic model (the list of approved and pending projects is contained in the Technical Appendix for reference). The Cumulative forecasts generated by the model assume completion of the Ekwill Road extension project that is scheduled for construction in 2023/2024. These roadway system changes will reduce traffic on Hollister Avenue within Old Town and change the traffic patterns at 3 of the study-area intersections (Hollister Avenue/Fairview Avenue, Hollister Avenue/Pine Avenue, and Hollister Avenue/Kellogg Avenue). The traffic pattern changes were accounted for in the following Cumulative and Cumulative + Project scenarios. Cumulative traffic volumes are shown on Figure 7 and Cumulative + Project volumes are shown on Figure 8.



Sywest Industrial Building Project Updated Traffic and Circulation Study

5

Associated Transportation Engineers July 24, 2024



16

Planned Improvements

In addition to the Ekwill Street extension, The City is planning to implement roundabouts at the SR 217/Hollister Avenue interchange. These improvements are included in the Cumulative traffic modeling since they are funded and planned to be completed in the near term.

Cumulative + Project Roadway Operations

Table 9 compares the Cumulative and Cumulative + Project roadway operations and identifies locations that are forecast to exceed the City's LOS C standard.

		Average Daily Trips				
	Acceptable		Project	Cumulative	Exceeds	
Roadway Segment	Capacity(a)	Cumulative	Added	+ Project	LOS C?	
Pine Avenue s/o Hollister Avenue(b)	9,300	2,100	30	2,130	No	
Kellogg Avenue s/o Hollister Avenue(b)	9,300	7,300	222	7,522	No	
Hollister Avenue e/o Kellogg Avenue (b)	34,000	25,800	177	25,977	No	

Table 9Cumulative + Project Roadway Operations

(a) Acceptable Capacity equates to LOS C standard.

(b) Cumulative volumes adjusted to include traffic diversions caused by Ekwill & Fowler roadway extensions.

As shown in Table 9, the study-area roadways are forecast to carry volumes within their Acceptable Capacity ratings with Cumulative and Cumulative + Project traffic. Thus, the Project would be consistent with the City's LOS C standard for roadways.

Cumulative + Project Intersection Operations

Cumulative and Cumulative + Project levels of service were calculated for the study-area intersections assuming the traffic volumes presented on Figures 7 and 8. Tables 10 and 11 compare the Cumulative and Cumulative + Project levels of service and identify locations that are forecast to exceed the City's LOS C standard.

Table 10
Cumulative + Project Intersection Operations – AM Peak Hour

	Cumula	tive	Cumulativ	Exceed	
Intersection	ICU	LOS	ICU	LOS	LOS C?
#1 - Hollister Avenue/Fairview Avenue(a)	0.635	В	0.636	В	NO
#2 - Hollister Avenue/Pine Avenue(a)	0.420	А	0.423	А	NO
#3 - Hollister Avenue/Kellogg Avenue(a)	0.704	В	0.717	С	NO
#4 - Hollister Avenue/SR 217 SB Ramps(b)	26.3 sec	С	28.4 sec	С	NO
#5 - Hollister Avenue/SR 217 NB Ramps(b)	10.3 sec	В	10.4 sec	В	NO

(a) ICU/LOS values assume traffic diversions caused by Ekwill & Fowler roadway extensions.(b) LOS assumes implementation of planned roundabouts, intersection LOS based on average weighted delay.

Table 11
Cumulative + Project Intersection Operations - PM Peak Hour

	Cumula	tive	Cumulative	Exceed	
Intersection	ICU	LOS	ICU	LOS	LOSC
#1 - Hollister Avenue/Fairview Avenue(a)	0.651	В	0.653	В	NO
#2 - Hollister Avenue/Pine Avenue(a)	0.517	А	0.519	А	NO
#3 - Hollister Avenue/Kellogg Avenue(a)	0.788	С	0.801	С	NO
#4 - Hollister Avenue/SR 217 SB Ramps(b)	18.6 sec	В	19.3 sec	В	NO
#5 - Hollister Avenue/SR 217 NB Ramps(b)	17.0 sec	С	17.5 sec	С	NO

(a) ICU/LOS values assume traffic diversions caused by Ekwill & Fowler roadway extensions.

(b) LOS assumes implementation of planned roundabouts, intersection LOS based on average weighted delay.

As shown in Table 11, study-area intersections are forecast to operate at LOS C or better under Cumulative + Project conditions. Thus, the Project would be consistent with the City's LOS C standard for intersections.

SITE ACCESS AND CIRCULATION

As shown in Figure 2, access to the site is proposed via two driveways on the north and south boundary of the site, which connect to the existing private access road to the drive-in theater and storage yard located south of the site. The existing private access road is proposed to be widened to 40 feet wide at Kellogg Avenue. Trucks will enter the site via the northern driveway and exit via the southern driveway. The site access and circulation plan is designed to accommodate WB-62 truck turning requirements. Signage should be installed at the northern access driveway to direct truck traffic.

Truck Access

The private road access for delivery trucks was evaluated to determine if there is adequate maneuvering area for trucks to enter and exit from Kellogg Avenue. The analysis was completed using the AutoTURN software which tracks turning movement vehicle paths. As shown on Figure 9, a WB-62 truck would be able to enter the private road from Kellogg Avenue. As shown on Figure 10, a WB-62 truck would not be able to exit the private road from Kellogg Avenue without driving on the opposite side of the street. It is recommended that the east curb be modified as shown on Figure 10 to provide adequate maneuvering area for the trucks.

Kellogg Avenue/Private Road Intersection Sight Distance Evaluation

The existing private road along Kellogg Avenue is located adjacent to a horizontal curve where Kellogg Avenue transitions from an east-west to a north-south orientation. Approximately 25 feet of red curb "No Parking" has been installed east of the intersection. No red curb is installed west of the intersection. A sight distance analysis was completed for the existing private road to determine if there would be adequate inter-visibility between a driver exiting the private road and a vehicle traveling on Kellogg Avenue. Floating car surveys found that vehicles travel in the 20-25 MPH range adjacent to the private road. The Caltrans Highway Design Manual indicates that the minimum stopping sight distance for a 25 MPH design speed is 150 feet. As shown on Figure 11, the sight distance to the west extends approximately 225 feet and the sight distance to the east extends approximately 235 feet. These sight distances meet the Caltrans minimum standards for the 25 MPH design speed. It is noted that vehicles currently park along the curb directly west of the private road. These vehicles block the sight distance for drivers exiting the private road as shown on Figure 11. It is recommended that a red curb "No Parking" zone be installed 80 feet west of the private road. With the recommended curb return improvement noted previously, the existing landscape vegetation at the southeast corner of the intersection would be removed which would maintain visibility for vehicles exiting the private road.





Sywest Industrial Building Project Updated Traffic and Circulation Study

21



Looking West

Looking East







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PRIVATE ROAD SIGHT DISTANCES

FIGURE (11)

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VEHICLE MILE TRAVELED (POTENTIAL CEQA IMPACTS)

Per the State's Natural Resource Agency Updated Guidelines for the Implementation of the CEQA adopted in 2018, Vehicle Miles Traveled (VMT) has been designated as the most appropriate measure of transportation impacts. "Vehicle Miles Traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. For land use projects, vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. The City of Goleta has published a "VMT Thresholds Study"¹, in compliance with Senate Bill 743, which includes a requirement to analyze VMT as the transportation impact metric for CEOA rather

than the traditional Level of Service (LOS) metric used previously.

<u>CEQA</u> Guidelines. The Governor's Office of Planning and Research (OPR) published a Technical Advisory on Transportation that includes recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures.² The Technical Advisory provides screening tools to determine when a project may have a significant VMT impacts, as follows:



"Many agencies use "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. (See e.g., CEQA Guidelines, §§ 15063(c)(3)(C), 15128, and Appendix G.) As explained below, this technical advisory suggests that lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing."

Screening Criteria

Consistent with the recommendations in the OPR Technical Advisory, Section 3.4 of the City of Goleta's VMT Thresholds Study establishes screening criteria for certain projects that are exempt from performing a detailed VMT analysis and may be presumed to have a less than significant VMT impact as follows:

¹ <u>VMT Thresholds Study,</u> City of Goleta, GHD, July 2020.

² <u>Technical Advisory on Evaluating Transportation Impacts in CEQA</u>, Governor's Office of Planning and Research, December 2018.

3.4 Map-Based Screening

Residential and work-based projects that are located in areas with existing low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Therefore, these projects can be presumed to have a less-than-significant VMT impact without the need to conduct a VMT analysis. The areas where projects would be presumed to have a less-than-significant VMT impact are depicted in Figure 3.1 for work-based projects and Figure 3.2 for residential projects. These indicate where residential and work-based projects would generate an average VMT of 15% or less below the baselines and would not require a VMT analysis. It's important to emphasize that if a project is not presumed to be less than significant based on these screening maps, it does not necessarily mean that the project will have a VMT analysis would be necessary to make that determination.

The City's screening map for work-based projects (Figure 3.1 in the VMT Thresholds Study) is shown on Figure 12. As shown on the map, the Sywest Industrial Building Project is located in an area where the VMT impacts are presumed to be less than significant.

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Figure 3.1 Screening Area for Work-Based Projects



REFERENCES AND PERSONS CONTACTED

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References

Final Traffic Impact Analysis for the Goleta Hotel Project, Pinnacle Traffic Engineering, November 2019.

Highway Capacity Manual, Transportation Research Board, 6th Edition, 2016.

Traffic, Circulation, and Parking Study for the 6210 Hollister Avenue Project, Associated Transportation Engineers, September 2016.

Traffic, Circulation, and Parking Study for the Old Town Village Mixed Use Project, Associated Transportation Engineers, October 2014.

Trip Generation, Institute of Transportation Engineers, 11th Edition, 2021.

<u>Updated Phase I Traffic Analysis for the Lund Industrial Park Project</u>, Associated Transportation Engineers, October 2017.

Persons Contacted

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TECHNICAL APPENDIX

CONTENTS:

LEVEL OF SERVICE DEFINITIONS

CITY OF GOLETA ROADWAY DESIGN CAPACITIES

TRAFFIC COUNT DATA

PROJECT TRIP GENERATION WORKSHEET

CITY OF GOLETA CUMULATIVE PROJECT LIST

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

Reference 1 - Hollister Avenue/Fairview Avenue Reference 2 - Hollister Avenue/Pine Avenue Reference 3 - Hollister Avenue/Kellogg Avenue Reference 4 - Hollister Avenue/SR 217 SB Ramps Reference 5 - Hollister Avenue/SR 217 NB Ramps LEVEL OF SERVICE DEFINITIONS



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LOS	Delay (a)	V/C Ratio	Definition
А	< 10.0	< 0.60	Progression is extremely favorable. Most vehicles arrive during the green phase. Many vehicles do not stop at all.
В	10.1 - 20.0	0.61 - 0.70	Good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
С	20.1 - 35.0	0.71 - 0.80	Only fair progression, longer cycle lengths, or both, result in higher cycle lengths. Cycle lengths may fail to serve queued vehicles, and overflow occurs. Number of vehicles stopped is significant, though many still pass through intersection without stopping.
D	35.1 - 55.0	0.81 - 0.90	Congestion becomes more noticeable. Unfavorable progression, long cycle lengths and high v/c ratios result in longer delays. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	55.1 - 80.0	0.91 - 1.00	High delay values indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent
F	> 80.0	> 1.00	Considered unacceptable for most drivers, this level occurs when arrival flow rates exceed the capacity of lane groups, resulting in many individual cycle failures. Poor progression and long cycle lengths may also contribute to high delay levels.

Signalized Intersection Level of Service Definitions

(a) Average control delay per vehicle in seconds.

Unsignalized Intersection Level of Service Definitions

The HCM¹ uses *control delay* to determine the level of service at unsignalized intersections. Control delay is the difference between the travel time actually experienced at the control device and the travel time that would occur in the absence of the traffic control device. Control delay includes deceleration from free flow speed, queue move-up time, stopped delay and acceleration back to free flow speed.

LOS	Control Delay Seconds per Vehicle
А	< 10.0
В	10.1 - 15.0
С	15.1 - 25.0
D	25.1 - 35.0
E	35.1 - 50.0
F	> 50.0

¹ Highway Capacity Manual, National Research Board, 2016.

CITY OF GOLETA ROADWAY DESIGN CAPACITIES

Classification	Purpose and Design Factors	Design Capacity		LOS A Threshold(a)		LOS C Threshold(b)	
		2 Lane	4 Lane	2 Lane	4 Lane	2 lane	4 Lane
Primary 1	Roadways designed to serve primarily non-residential development. Roadways would have a minimum of 12-foot wide lanes with shoulders and few curb cuts. Signals would be spaced at 1 mile or more intervals.	19,900	47,760	11,940	28,700	15,900	38,200
Primary 2	Roadways which serve a high proportion of non-residential development with some residential lots and few or no driveway curb cuts. Lane widths are a minimum of 12 feet with well spaced curb cuts. Signals intervals at a minimum of 1/2 mile.	17,900	42,480	10,800	25,500	14,300	34,000
Primary 3	Roadways designed to serve nonresidential development and residential development. More frequent driveways are acceptable. Potential signal intervals of 1/2-1/4 mile.	15,700	37,680	9,400	22,600	12,500	30,100
Secondary 1	Roadways designed to primarily serve non-residential development and large lot residential development with well spaced driveways. Roadways would be 2 lanes with infrequent driveways. Signal would generally occur at intersections with primary roads.	11,600	NA	7,000	NA	9,300	NA
Secondary 2	Roadways designed to serve residential and non-residential land uses. Roadways would be 2 lanes with close to moderately spaced driveways.	9,100	NA	5,500	NA	7,300	NA
Secondary 3	Roadways designed to primarily serve residential with small to medium lots. Roadways are 2 lanes with more frequent driveways.	7,900	NA	4,700	NA	6,300	NA
 (a) Defined as 60% of Design Capacity. (b) Defined as 80% of Design Capacity. Source: City of Goleta General Plan Transportation Element. 							

Table 1 Goleta Roadway Classifications
TRAFFIC COUNT DATA

Fairview Ave & Hollister Ave



Pine Ave/Nectarine Ave & Hollister Ave



Kinman Ave & Hollister Ave



Kellogg Ave & Hollister Ave/Cross Town Route



Ward Memorial Blvd WB Ramps/Dearborn Pl & Hollister Ave



Ward Dr & Hollister Ave





Associated Transportation Engineers #22052 2019 vs 2022 Count Data Comparison Worksheet

		SYWES	T INDUSTRIAL BI	JILDING PROJEC	т									
AM Peak Hour PM Peak Hour														
Roadway Segment	2019 Volumes	2022 Volumes	Net Difference	% Difference	2019 Volumes	2022 Volumes	Net Difference	% Difference						
Pine Avenue s/o Hollister Avenue	272	271	-1	-0.37%	401	368	-33	-8.23%						
Hollister Avenue e/o Kellogg Avenue	1,782	1,665	-117	-6.57%	2,105	2,113	8	0.38%						
Kellogg Avenue s/o Hollister Avenue	No Change	No Change	0	0%	No Change	No Change	0	0%						

PROJECT TRIP GENERATION WORKSHEET

Associated Transportation	Engineers #22052
Trin Congration Workshoot	•

The Generation worksheet																
			S	YWESTI	NDUSTR	IAL BUIL	DING PF	ROJECT								
	ADT AM PEAK HOUR PM PEAK HOUR Use Size Rate Trips In % Trips Qut % Trips In % In % Trips In % In															
Use	Rate	Trips	Rate	Trips	In %	Trips	Out %	Trips	Rate	Trips	In %	Trips	Out %	Trips		
PROPOSED SyWest Industrial Building Project	70,594	SF	3.57	252	0.45	32	72%	24	28%	8	0.53	37	44%	16	56%	21
Total				252		32		24		8		37		16		21

(a) Trip generation based on the average ITE rates of 4 similar High-Cube Warehouse facilities (#154,155,156).

CITY OF GOLETA CUMULATIVE PROJECT LIST

			City of Go	leta Cumulative	Projects Li	st (Updated September 25, 2023)				
Case #	Project	Address	APN	Land Use	Parcel Size (acres)	Project Description	Planner	Status	Adjacent to creek or tributary?	ESHA Setback Reduction Requested or Approved?
			1	PROJE	CTS UNDER C	CONSTRUCTION			1	
13-085-Plan	Ellwood Butterfly Habitat Management Plan Implementation	N/A	079-210-013, - 014, -015, -019, -024, -070, - 071, & -072	Open Space- Passive Recreation	13.66	Implement management program to restore Monarch aggregation sites, enhance biodiversity, and maintain public access, and other management plan activities.	A. Wells / G. Thomson	Approved by City. Implementation is underway led by PW (George Thomson)	Yes	No. Habitat Restoration Allowed)
17-089-EMP	Ellwood Tree Safety Emergency Permit and Ellwood North Restoration	N/A	079-210-069	Open Space- Passive Recreation	136.60	Emergency Tree Removal for safety reasons by habitat enhancements in monarch butterfly aggregation sites.	A. Wells / G. Thomson	Approved by Coastal Commission; Implementation is underway led by PW (George Thomson)	Yes	No. (Habitat Restoration allowed in ESHA)
10-083-LUP, 12-165-LUP, & CDP No. E-02- 024-A3	Beach Hazards Removal	N/A	079-200-012, - 013, 079-210- 059, -069, -013, -014, &, -015,	Visitor Serving/ Passive & Active Open Space	N/A	Removal of remnant oil and gas infrastructure hazards along City coastline.	A. Newkirk	Under Construction	No	No
19-0201-DP; 19-0202-DPAM; 19- 0202-CUP; 19-0001-SUB	Goleta Battery Energy Storage Facility	6868 & 6864 Cortona Drive	073-140-027	Utility	5.88 gross	New 60 megawatt (240 megawatt hour) battery energy storage facility; lot split into two lots	K. Allen	Under Construction	No	N/A
MOU Agreement No. 2018-081	PRC 421 Piers	Pacific Ocean- Intertidal Zone.	079-210-059	Open Space- Active Recreation	192.93	Plug and abandon 2 existing oil wells, remove piers, infrastructure, and access roadway.	A. Wells	Removal of Component 1 (wells, caissons, piers) is underway. Component 2 (beach access road, infrastructure, rock, wood wall) is pending funding and permits.	No	N/A
MOU Agreement No. 2018-081	Platform Holly Decommissioning	Pacific Ocean- 2 miles from shore.	N/A	N/A	N/A	Plug and abandon 32 existing oil wells.	A. Wells	In Progress	No	No
19-032-DPAM	Kellogg Crossing Self Storage (Formerly Schwan Self Storage)	10 South Kellogg Avenue	071-090-082	Industrial	2.06	New 136,067 SF self-storage facility containing 1,043 units.	T. Lee	Under Construction	Yes	Approved.
09-133-DP; 15-177-LUP; 18-126- SCD-LUP;	Security Paving (former Highway		074 100 024	Industrial	11 71	Concrete and asphalt recycling facility with temporary and permanent equipment. Includes creek/SPA restoration, fencing, landscaping, trash enclosure,	L Danage		Vec	
19-111-PCN	Recycling)	909 South Kellogg Avenue	071-190-034				L. Plasse	Under Construction	Tes	Approved.
13-039-CUP	Ellwood Mesa Coastal Trails and Habitat Restoration Project	NA	079-210-024, - 069, -015, -014, -013, -072, - 071, -70	Open Space- Passive Recreation	252.00	Improve 7.1 miles of trails, improve 3 drainage crossings, improve 2 beach access points, and 13 acres of habitat restoration.	A. Wells/ George Thomson	Approved by Coastal Commission and Awaiting Funding	Yes	No. (Trails & Habitat Restoration allowed in ESHA)
21-0042-ZC	Distribution/Delivery Facility	355 Coromar Drive	073-610-036	Industrial	7.60	A new 54,080 square foot distribution/delivery facility within Cabrillo Business Park.	B. Hiefield	Approved -	No	No
18-031-CUPAM,-DP-DRB; 20-0003-SCD	New 7,390-sf Synagogue	6045 Stow Canyon Road	077-140-044	Design Residential	3.29	New 7,390 SF Synagogue and 841 SF storage building, with sanctuary, event hall, office spaces, and kitchen. Revised parking, landscaping, and hardscaping also included.		Approved	Yes	No
21-0003-DPAM	Santa Babara Corporate Center Office and R and D Building	5385 Hollister Avenue	071-140-075	Office and Institutional	1.82	New parcel map with a 14,000 square foot office and R and D building, and other assocatied improvments.	D. Mimick	Approved by Planning Commission July 2022	No	No
20-0003-TPM-DP-DPAM	Seymour Duncan Office and R and D Building	5385 Hollister Avenue	071-140-075	Office and Institutional	2.04	New parcel map with a 34,002 square foot office and R and D building, and other assocaited improvments.	D. Mimick	Approved by Planning Commission July 2022	No	No
21-0056-ZC (19-073-DP)	Honda Dealership zoning clearance effectuating Development Plan No. 19-073- DP	475 S. Kellogg Avenue	071-140-085	Commercial	2.60	New showroom addition and canopy structures totaling 6,860 sq. ft. and associated site improvements.	B. Hiefield	ZC Issued - Awaiting submittal to Building	Yes	No
21-0058-ZC (19-074- DP)	Toyota Dealership zoning clearance effectuating Development Plan No. 19-074- DP.	5611 Hollister Avenue	071-140-083	Commercial	2.78	3,000 service bay and associated site improvements.	B. Hiefield	ZC Issued - Awaiting submittal to Building	Yes	No
 20-0001-GPA	General Plan Amendment Initiation	625 Dara Road	069-373-055 to 062; 069-373- 010 to -013 and 069-373-063	Single Family R- SF	4.23 Acres	Initiation of a General Plan Amendment to Change Land Use from Single-Family Residential (R- SF) to Multi-Family Residential (R- MD)	M. Chang	Initiation Approved. Waiting on project submittal	No	No
19-080-DPAM	GVCH DPAM for Permanent Hollipat Parking Lot	334 S. Patterson Ave.	065-090-028	Office, Residential	9.03	Approve the existing, temporary parking lot for permanent use.	C.McGuire	Approved by Planning Commission Dec. 2021, Processing Effectuating ZC	Yes	No

			City of Go	leta Cumulative	Projects Li	st (Updated September 25, 2023)				
Case #	Project	Address	APN	Land Use	Parcel Size (acres)	Project Description	Planner	Status	Adjacent to creek or tributary?	ESHA Setback Reduction Requested or Approved?
20-0002-DP	GVCH DPRV New Rehabilitation Pool/Center	351 S. Patterson Ave	065-090-022	Office	8.40	Interior remodel of the main hospital building and the construction of an aquatic facility in the southern parking lot.	C. McGuire	Approved by Planning Commission Dec. 2021, Processing Effectuating ZC	No	
14-049-, -VTM, -DR, -CUP	Heritage Ridge	North of Calle Koral and West of Los Carneros	073-060-031 thru -043	Residential	16.20	102 Affordable & 2 caretaker units, and 228 Market Rate apartments.	M. Chang	Approved by Council on March 7, 2023	Yes	Requested (Creek and Coastal Sage Scrub)
22-0005-SCD	Costco	7095 Marketplace Dr	073-440-014	Regional Commercial	13.74	PROPOSED LOCKER ROOM MEZZANINE ADD: 828 SQ.FT.,EXISTING LOCKER ROOM 829 SQ.FT., EXISTING MPU:345 SQ.FT.	C.McGuire	Approved by Director Decision April 2023, effectuating ZC issued	No	No
21-0005-DP, 21-0002-SP	Storke Medical Center	6975 Santa Felicia	073-440-026	Commercial	4.32	Specific Plan Amendment to remove parcel from Camino Real Market Plan SP and request for Development Plan for two medical office buildings of 18,600 sq. ft. each with accessory child care in 2,113 sq. ft. of the westerly building.	C. McGuire	Approved by City Council on September 19, 2023	No	No
22.0005 DD-22.0004 CUD		C401 Callo Deed	077 160 066	Office Institutional (OI)		The proposed project at 6491 Calle Real is for new mixed-use development on a vacant 0.53-acre lot. The development would comprise 14 one-bedroom residential units, ranging in size from 587 to 869 square feet, and one commercial office space of 585 square feet. The lot is located on the southeast corner of the Calle Real/Los Carneros roundabout and is zoned		Approived by Planning Commission on September	Ne	Na
22-0005-DP,22-0001-C0P	Addition and conversion of auto service bay to convenience market and 3 new	190 N Existion	060 110 054	0.55	0.28	Proposed changes include a build-out/addition to the floor area of the existing 1,757 sf service station of 779 sf and the addition of a trash enclosure of 119 sf, for a total building coverage of 2,655 sf. Tenant improvements include interior improvements and removal of the service bays, installation of new roofing, windows doors and exterior finish. Two additional parking spaces to be provided, for a total of 10, with one ADA space within the 10 ft. setback. New landscaping to		Approved by Zoning Administrator on September 7,	No	No
22 0000 D1,22 0004 MOD	purking spaces	100 11 11 11 11	003 110 034	PENDING F	PROJECTS (Coi	mplete Applications)	T. Leey C. Weddire	1015	110	110
05-154-GPA, -RZ, -VTM 08-205-GPA, -RZ, -VTM	Shelby Kenwood Village	7400 Cathedral Oaks Road Calle Real w/o Calaveras Avenue	077-530-019 077-130-066, - 019; 077-141- 049	Residential Residential	15.8 (gross); 14.88 (net) 10.00	ROOM. WORK TO INCLUDE DEMO EXISTING FENCING AND CONSTRUCT NEW WALL, AND DOOR. 60 new residences including 13 new lots for single family homes, 20 duplexes for residences, 27 triplex residences and 145 parking spaces	L. Prasse K. Allen	Pending/On Hold - due to water availability. Pending/On Hold - due to water availability.	Yes	Requested
17-121-DP-DRB	Sywest	907 South Kellogg Avenue	071-190-035	Industrial	11.71	70,594 sf high cube industrial building.	B. Hiefield	Drafting ADEIR - Estimated public review January '24	Yes	Yes

			City of Go	leta Cumulative	Projects L	ist (Updated September 25, 2023)				
Case #	Project	Address	APN	Land Use	Parcel Size (acres)	Project Description	Planner	Status	Adjacent to creek or tributary?	ESHA Setback Reduction Requested or Approved?
22-0005-GPA; 22-0003-SUB; 22-0008- DP: 22-0004-CUP: and 22-0026-DBB	SB Humane Campus Renovation	5399 Overnass Road	071-220-031, - 036 -024	Industrial	3 98	GPA (City Council initiated October 18, 2022) to change from I- G to C-G, Zoning Amendment, DP, CUP for Kennel use, Voluntary Lot Merger, and DRB approval for a SB Humane campus renovation. Project includes replacing all existing buildings (10 buildings and 1 barn) except the education building (renovation only) and relocating historic Beck House on-site (remove non-historic addition). Applicant requests a parking reduction from 79 required spaces to 65. Grading includes 3,200 cy of cut, 280 cy of fill, and 2,920 cy of export. Of the 56 existing trees, 36 trees are proposed for removal, 1 is proposed to be relocated, and 19 will be protected in place. 67 517 square feet of landscaping is proposed	Tilee	Application complete, Notice of Exemption	No	Νο
DF, 22-0004-COF, and 22-0020-DKB	SB numarie Campus Renovation	5555 Overpass Road	030, -024			07,517 square reet of fandscaping is proposed.	1. Lee	prepareu	NO	NO
22-0004-DP	Hangar 5 Relocation	115 Castilian Drive	073-150-025	Industrial (Business Park)	3.52	The applicant intends to develop the vacant portion of APN 073-150-025 with a re-purposed two-story hangar building totaling 17,912 square feet. The hangar building would be relocated to the subject property from Airport property at 500 Fowler Rd, Santa Barbara, CA.	D. Mimick	Pending - Awaiting applicant response to incomplete letter	No	No
20-0001-DP-CDP- 20-0001-SUB	Willow Industrial Park	891 South Kellogg Road	071-170-079; -	Industrial	20.00	212,670 contraction storage yard using crushed asphalt surface and removal of apporximately 32,000 sq. ft. of crushed asphalt from SPA buffer area placed without permits. Additionally, the applicant is proposing a new R&D/Technology building on APN 071-170-083 that is approximately 2 587 square feet with 15 parking stalls	D. Mimick	Pending - Awaiting applicant response to	Ves	No
22-0001-CDPH; 22-0001-30B	Sandoinor Colf Course	7025 Hollictor Augenee	070 210 050	Open Space- Active	102.00	The proposed project includes constructing a new 16,019 square foot clubhouse with a turf roof, redesigning the existing 18-hole golf course, including reducing the golf turf footprint in favor of a native plant palette, restoring the Barnsdall Gas Station to repurpose it as a coffee shop, replace and upgrade an existing comfort station located on the golf course, replace and upgrade the existing maintenance facilities, and provide Improvements along Hollister Avenue, including revising entry points, a new public trail, underground electrical lines, relocating the bus station, and providing curb	D. Mimick	Panding in 20 day series	Ves	No

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

Reference 1 - Hollister Avenue/Fairview Avenue Reference 2 - Hollister Avenue/Pine Avenue Reference 3 - Hollister Avenue/Kellogg Avenue Reference 4 - Hollister Avenue/SR 217 SB Ramps Reference 5 - Hollister Avenue/SR 217 NB Ramps

#220 INTE TIME N/S S E/W CON	052 - GC ERSECT E PERIO STREET: STREET: NTROL 1	DLETA BI FION CAF D: : : YPE:	JSINESS CEN PACITY UTILIZ AM PEAK HO FAIRVIEW A HOLLISTER A SIGNAL	NTER PR ZATION \ DUR VENUE AVENUE	OJECT WORKSHI	EET	<u>REET E.</u>	<u>XTENSION</u>	<u>!</u>			REF:	01 AI	М			
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6 8.0525			500														
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SBT		2	320	0	405	405	0	0			0.127	0.127					
SBR	(b)	1	160	0	239	239	0	0			0.149 *	0.149 *			*		
EBL		2	320	0	164	164	0	0			0.051 *	0.051 *		2	*		
EBT		2	320	0	309	312	0	3			0.097	0.098					
EBR	(C)	1	160	0	98	98	0	0			0.061	0.061					
14/01			100	0	26	26	0	~			0.022	0.022					
WBL WRT		1	320	0	36	36 400	0	0			0.023	0.023			*		
WBR	(d)	1	160	0	64	63	0	-1			0.040	0.039					
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EBR (c)	1	1600		0	0	186	186					0.116	0.116		
WBL WBT WBR (d)	1 2 1	1600 3200 1600		0 0 0	0 1 -1	12 353 51	12 354 49					0.008 0.110 * 0.032	0.008 0.111 * 0.031		
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EBL EBT EBR (c)	2 2 1	3200 3200 1600	460 544 72	460 546 72	0 0 0	0 2 0			0.144 * 0.170 0.045	0.144 * 0.171 0.045		*			
WBL WBT WBR (d)	1 2 1	1600 3200 1600	51 468 224	51 471 227	0 0 0	0 3 1.5			0.032 0.146 * 0.140	0.032 0.147 * 0.142		*			
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						C	GEOME	TRICS							
		NOP			SOLL			FAS			\٨/٢				
LANE GEOM	IETRICS		T TR		L	L TT R		LAJ	L TT F	R	VVL	L TT R			
						TDA			16						
	IRAFFIC SCENARIOS														
SCENARIO 3 SCENARIO 4	SCENARIO 3 = CUMULATIVE (C) SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B + C)														
LEVEL OF SERVICE CALCULATIONS															
MOVE-	LEVEL OF SERVICE CALCULATIONS MOVE- # OF SCENARIO VOLUMES SCENARIO V/C RATIOS MENTS LANIS CARACITY 1 2 2 1 2														
IVIEIN I S	LAINES	CAPACITY			2	3	4					3	4		
NBL	1	1600		0	0	295 642	295 642					0.184	0.184		
NBR (a)	0	0		0	0	38	38					-	-		
- 1-2					5	50	00								
SBL	2	3200		0	3	181	184					0.057 *	0.058 *		
SBT	2	3200		0	0	202	202					0.063	0.063		
SBR (b)	1	1600		0	0	116	116					0.073	0.073		
EBL	2	3200		0	0	470	470					0.147 *	0.147 *	c	
EBT	2	3200		0	2	564	566					0.176	0.177		
EBR (c)	1	1600		0	0	106	106					0.066	0.066		
14/51				-		12112	21.24						0.000		
WBL WBT	1	1600		0	0	46	46					0.029	0.029		
WBR (d)	1	1600		-1.5	د 1.5	420 195.5	431 197					0.134	0.135 *		
							LC	DST TIME:				0.100 *	0.100 *		
			тот	AL INTER	RSECTIO	ON CAPA	CITY U	FILIZATI	ON:			0.651	0.653		
					SCENA	RIO LEVI	el of Si	RVICE:				В	В		
NOTES:										•					
RTOR:	(a) 6%														
	(b) 27%														
	(c) 49% (d) 13% F	ROTR + OVFRIA	REDU	CTION	WITH 9	SB LEFT-	TURN								
Printed:	07/24/24														
EXISTING: SCENARIO	1 = EXIST	THIS COMF FING VOLUMES (ARES	TO CO	NDITIC)N (A)									

SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

#22052 - GO INTERSEC TIME PERIO N/S STREET E/W STREET CONTROL	OLETA BUS TION CAPAG D: A : P : H TYPE: S	INESS CENTER CITY UTILIZATIC M PEAK HOUR INE AVENUE - NI IOLLISTER AVEN IGNAL	PROJECT ON WORKSH ECTARINE AV UE	IEET /ENUE	<u>1</u>	WITHC	OUT EK	WILL ST	TREET EXTI	ENSION			REF:	02 AM	
		ΝΟΡΤΙ			FFIC V		E SUN			14/5)			
VOLUMES			T R	L	T	R	L	T	R	L	T	R			
(A) EXISTIN (B) PROJEC	NG: CT-ADDED:	65 1	7 34 0 0	53 0	14 0	36 0	9 0	493 4	79 3	73 0	671 1	34 0			
					G	EOMET	RICS								
LANE GEON	METRICS	NORTH	h bound Ltr	SOUTH	H BOU LTR	ND	EAS	f Boun L T Tr	ND	WE	ST BOUNE L T TR)			
					TRAF	FIC SCF	NARIO	DS .							
	<u> </u>			LEVEL	OF SEF	RVICE	CALCU	LATIO	NS						
MOVE- MENTS	VE- # OF <u>SCENARIO VOLUMES</u> <u>SCENARIO V/C RATIOS</u> TTS LANES CAPACITY 1 2 3 4 1 2														
NBL	0	0	65	66	0					-					
NBT	1	1600	7	7	0	0			0.054 *	0.054 *					
NBR (a)	0	0	14	14	0	0			-	-					
SBL	0	0	53	53	0	0			_	-					
SBT	1	1600	14	14	0	0			0.051 *	0.051 *	e.				
SBR (b)	0	0	14	14	0	0			-	-					
EBL	1	1600	9	9	0	0			0.006 *	0.006 *					
EBT	2	3200	493	497	0	4			0.176	0.178					
EBR (c)	0	0	69	71	0	3			-	-					
WBL	1	1600	73	73	0	0			0.046	0.046					
WBT	2	3200	671	672	0	1			0.219 *	0.219 *	¢				
WBR (d)	0	0	29	29	0	0			-	-					
						LOS	ST TIME:		0.100 *	0.100 *	c				
			TOTAL INTE	rsection Scenari	I Capac O Levei	L OF SEF	ILIZATI RVICE:	ON:	0.430 A	0.430 A					
NOTES: RTOR: Printed:	(a) 60% (b) 61% (c) 13% (d) 16% : 07/22/24								1	1			1	I	

SCENARIO 1 = EXISTING VOLUMES (A) SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B) SCENARIO 3 = CUMULATIVE (C) SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

#220 INTE TIME N/S S E/W S CON	952 - GC ERSECT E PERIOL STREET: STREET: ITROL T	D LETA BU TION CAP D: YPE:	JSINESS CENTE ACITY UTILIZAT AM PEAK HOUR PINE AVENUE - HOLLISTER AVE SIGNAL	R PRC ION W NECTA NUE	DJECT ORKSH RINE AV	EET ⁄ENUE		<u>WITH</u>	EKWIL	L STREET	T EXTEN	<u>sion</u>			REF:	02 A	\M_2
						TR.	AFFIC	VOLU	ME SU	MMARY	10						
VOL	UMES		NOR L	T IH BO	UND R	SOUT L	H BOL	JND R	EAS	T BOUN	ND R	L WE	ST BOUND T	R			
(A)	EXICTIN	C.	E			_			_			-					
(A) (B)	PROJEC	G. F-ADDED:	1	0	0	0	0	0	0	4	3	0	1	0			
(C)	CUMUL	ATIVE:	44	7	16	54	44	36	9	439	5	121	569	35			
							0	GEOMI	TRICS								
LANE	e geom	ETRICS	NOR	TH BO LTR	UND	SOUT	TH BOU LTR	JND	EAS	t boun L t tr	1D	WE	ST BOUND L T TR				
	TRAFFIC SCENARIOS																
SCEN SCEN	NARIO 3 NARIO 4	= CUMI = CUMI	Jlative (C) Jlative + proje	CT VO	UUMES ((B + C)											
	LEVEL OF SERVICE CALCULATIONS																
MOV MENT	LEVEL OF SERVICE CALCULATIONS OVE- # OF SCENARIO VOLUMES SCENARIO V/C RATIOS ENTS LANES CAPACITY 1 2 3 4																
NBL		0	0		0	1	44	45					-	-			
NBT		1	1600		0	0	7	7					0.036 *	0.036 *			
NBR	(a)	0	0		0	0	6	6					-	-			
SBL		0	0		0	0	54	54					-	-			
SBT	4.5	1	1600		0	0	44	44					0.070 *	0.070 *			
SBR	(D)	0	0		0	0	14	14					-	-			
EBL		1	1600		0	0	9	9					0.006	0.006			
EBT		2	3200		0	4	439	443					0.138 *	0.141 *			
FRK	(<i>C)</i>	U	0		0	3	4	7					-	-			
WBL		1	1600		0	0	121	121					0.076 *	0.076 *			
WBT		2	3200		0	1	569	570					0.187	0.187			
WBR	(<i>a</i>)	U	0		0	0	29	29					-	-			
								LO	OST TIME:				0.100 *	0.100 *			
				то	TAL INTE	SCENAR		CITY U	TILIZATI FRVICE	ON:			0.420 A	0.423 A			
NOT	·EC.					JULINA											
NUL	es: rtor:	(a) 60%															
		(b) 61%															
		(c) 13% (d) 16%															
	Printed:	07/24/24															
EXIS	STING:		< THIS COM	PARES	5 TO CO	NDITIO	N (A)										

SCENARIO 1 = EXISTING VOLUMES (A) SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

n/s street e/w street control	CTION CAPAC DD: PA T: PA T: H TYPE: SA	INESS CENTER PR CITY UTILIZATION M PEAK HOUR INE AVENUE - NECT IOLLISTER AVENUE IGNAL	OJECT WORKSH	eet 'enue	ŀ	WITHO	UT EK	WILL EX	(TENSION				REF:	02 PM
				TRA	FFIC V		E SUN	MARY			TROUT			
VOLUMES			OUND R	SOUT	L ROOI	ND R	EAST	BOUN	ND R	WES	TBOUND) R		
		I	K			ĸ	L							
(A) EXISTI (B) PROJE	NG: CT-ADDED:	146 6 2 0	143 0	51 0	8 0	21 0	21 0	696 3	50 2	48 0	785 4	37 0		
					GI	eometi	RICS							
lane geo	METRICS	NORTH B LTR	OUND	SOUTH	h Boui Ltr	ND	EAST	BOUN T TR	١D	WES	t bound L t tr)		
					TRAFF	FIC SCE	NARIC)S						
				LEVEL	OF SER	<u>RVIC</u> E C	ALCU	<u>LATI</u> ON	NS					
MOVE-	# OF			SCEN	NARIO V	OLUMF	5				SCENARIO	V/C RATIO	S	
MENTS	LANES	CAPACITY	1	2	3	4	-		1	2				
NBL	0	0	146	148	0	2			-	-				
	1 1	1600	6	6	0	0			0.137 *	0.138 *		*		
NBT		1600	0											
NBT NBR (a)	0	0	67	67	0	0			-	-				
NBT NBR (a)	0	0	67	67	0	0			-	-				
NBT NBR (a) SBL SBT	0	0 1600	67 51 8	67 51 8	0 0 0	0 0 0			- - 0.049 *	- - 0.049 *		*		
NBT NBR (a) SBL SBT SBR (b)	0 0 1 0	0 0 1600 0	67 51 8 20	67 51 8 20	0 0 0 0	0 0 0 0			- 0.049 * -	- 0.049 * -		*		
NBT NBR (a) SBL SBT SBR (b)	0	0 0 1600 0	67 51 8 20	67 51 8 20	0 0 0 0 0	0 0 0 0 0			- 0.049 * -	- 0.049 * -		*		
NBT NBR (a) SBL SBT SBR (b) EBL EBL	0	0 0 1600 0 1600 3200	67 51 8 20 21 696	67 51 8 20 21 699	0 0 0 0	0 0 0 0 0 3			- 0.049 * - 0.013 *	0.049 * - 0.013 *		*		
NBT NBR (a) SBL SBT SBR (b) EBL EBT EBR (c)	0 0 1 0 1 2 0	0 0 1600 0 1600 3200 0	67 51 8 20 21 696 47	67 51 8 20 21 699 48	0 0 0 0 0 0 0	0 0 0 0 3 2			- 0.049 * - 0.013 * 0.232	- 0.049 * - 0.013 * 0.233		*		
NBT (a) SBL SBT (b) EBL EBT EBR (c)	0 0 1 0 1 2 0	0 0 1600 0 1600 3200 0	67 51 8 20 21 696 47	67 51 8 20 21 699 48	0 0 0 0 0 0	0 0 0 0 3 2			- 0.049 * - 0.013 * 0.232 -	- 0.049 * - 0.013 * 0.233		*		
NBT (a) SBL SBT SBR (b) EBL EBT EBR (c) WBL	0 1 0 1 2 0 1 2 0	0 0 1600 0 1600 3200 0 1600	67 51 8 20 21 696 47 48	67 51 8 20 21 699 48 48	0 0 0 0 0 0 0 0	0 0 0 0 3 2 0			- 0.049 * - 0.013 * 0.232 - 0.030	0.049 * - 0.013 * 0.233		*		
NBT (a) SBL SBT (b) EBL EBT EBR (c) WBL WBT (d)	0 0 1 0 1 2 0 1 2 0	0 0 1600 0 1600 3200 0 1600 3200 0	67 51 8 20 21 696 47 48 785 37	67 51 8 20 21 699 48 48 789 37		0 0 0 3 2 0 4 0			- 0.049 * - 0.232 * - 0.030 0.257 *	- 0.049 * - 0.233 * 0.233 - 0.030 0.258 *		*		
NBT (a) SBL SBT (b) EBL EBT (c) WBL WBT (d)	0 0 1 0 1 2 0 1 2 0	0 0 1600 0 1600 3200 0 1600 3200 0	67 51 8 20 21 696 47 48 785 37	67 51 8 20 21 699 48 48 789 37	0 0 0 0 0 0 0 0 0 0	0 0 0 0 3 2 0 4 0 2	TIME:		- 0.049 * - 0.013 * 0.232 - 0.030 0.257 * - 0.100 *	- 0.049 * - 0.233 * 0.233 - 0.030 0.258 * - 0.100 *		*		
NBT (a) SBL SBT (b) EBL EBT (c) WBL WBT (d)	0 0 1 0 1 2 0 1 2 0	0 0 1600 0 1600 3200 0 1600 3200 0	67 51 8 20 21 696 47 48 785 37	67 51 8 20 21 699 48 48 789 37	0 0 0 0 0 0 0 0 0	0 0 0 3 2 0 4 0 2	TIME:		- 0.049 * - 0.232 - 0.030 0.257 * - 0.100 *	- 0.049 * - 0.233 * - 0.030 0.258 * - 0.100 *		*		
NBT (a) SBL (b) SBR (b) EBL (c) EBR (c) WBL (d)	0 0 1 0 1 2 0 1 2 0	0 0 1600 0 1600 3200 0 1600 3200 0	67 51 8 20 21 696 47 48 785 37 OTAL INTER	67 51 8 20 21 699 48 48 789 37 85 85 85 85 85 85 85 85 85 85 85 85 85	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 3 2 0 4 0	<i>TIME:</i>	DN:	- 0.049 * - 0.232 * - 0.030 0.257 * - 0.100 * 0.556 A	- 0.049 * - 0.233 * - 0.030 0.258 * - 0.100 * 0.558 A		*		
NBT NBR (a) SBL SBR (b) EBL EBR (c) WBL WBT WBR (d) NOTES: RTOR	 a) 53% b) 4% c) 7% 	0 0 1600 0 1600 3200 0 1600 3200 0	67 51 8 20 21 696 47 48 785 37	67 51 8 20 21 699 48 48 789 37 85CENARI	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 3 2 0 4 0	t <i>time:</i> I ZATI C	DN:	- 0.049 * - 0.033 * 0.232 - 0.030 0.257 * - 0.100 * 0.556 A	- 0.049 * - 0.233 * 0.233 * - 0.030 0.258 * - 0.100 * 0.558 A		*		
NBT (a) 5BL 5BR (b) 5BR (c) 6BL 6BT 6BR (c) WBL WBR (d) NOTES: RTOR	 1 0 1 0 1 2 0 1 2 0 1 2 0 1 2 0 4% (c) 7% (d) 0% 	1600 0 1600 0 1600 3200 0 1600 3200 0	67 51 8 20 21 696 47 48 785 37 OTAL INTER	67 51 8 20 21 699 48 48 789 37 37 RSECTION SCENARI	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 3 2 0 4 0	t time: I zati (Vice:	DN:	- 0.049 * - 0.232 - 0.030 0.257 * - 0.100 * 0.556 A	- 0.049 * - 0.233 * 0.233 * 0.258 * - 0.100 * 0.558 A		*		

SCENARIO 2 = EXISTING VOLUMES (A) SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B) SCENARIO 3 = CUMULATIVE (C) SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

#220 INTE TIME N/S S E/W CON	952 - GO ERSECTI E PERIOD STREET: STREET: STREET:	LETA BI ION CAF D: YPE:	USINESS CENTE PACITY UTILIZAT PM PEAK HOUR PINE AVENUE - N HOLLISTER AVEN SIGNAL	R PRO ION W NECTA NUE	DJECT VORKSH RINE AV	EET 'ENUE		<u>WITH</u>	I EKWILI	. EXTEN	<u>sion</u>				REF:	02 PM_2
						TR	AFFIC	VOLU	IME SUI	AMARY						
	111.150		NOR	ГН ВО	UND	SOUT	H BOU	JND	EAS	T BOUN	۲D	. WE	ST BOUND	-		
VOL	UMES		L	I	К	L	I	R	L	Г	К	L	I	К		
(A)	EXISTINC):														
(B)	PROJECT	-ADDED:	2	0	0	0	0	0	0	3	2	0	4	0		
(C)	CUMULA	ATIVE:	93	U	//	55	ö	24	23	/56	5	27	δ 2 Ι	39		
							C	GEOM	ETRICS							
			NOR	ГН ВО	UND	SOUT	'H BOL	JND	EAS	T BOUN	ND.	WE	est bound			
LAN	e geomi	ETRICS		LTR	annan an A		LTR			LTTR			LTTR			
							TRAF	FICS	CENARI	25						
SCEN SCEN	NARIO 3 NARIO 4	= CUMI = CUMI	ulative (C) Ulative + proje	ct vo	ilumes (B + C)					400					
	T		1			LEVE	L OF SE	RVIC	E CALCU	LATION	NS					
MOV	Έ-	# OF			1	SCE	NARIO	VOLU	MES	1			SCENARIO	V/C RATIO	<u>S</u>	
MEN	TS	LANES	CAPACITY		1	2	3	4	1		1	2	3	4	-	
NBL		0	0		0	2	93	95	5				-	-		
	(2)	1	1600		0	0	0) 24)				0.081 *	0.082 *		
INDK	(a)	U			U	U	30	36	,				1	-		
SBL		0	0		0	0	53	53	3				-	-		
SBT		1	1600		0	0	8	8	3				0.053 *	0.053 *	ē.	
SBR	(b)	0	0		0	0	23	23	3				-	-		
EBL		1	1600		0	0	23	23	3				0.014 *	0.014 *		
EBT		2	3200		0	3	756	759)				0.238	0.239		
EBR	(c)	0	0		0	2	5	7	7				-	-		
						-	10000		_							
WBL		1	1600		0	0	27	27	7				0.017	0.017		
WBR	(d)	2	0		0	4 0	39	62: 39	,)				-	-		
				то	TAL INTEI	RSECTIO SCENAR	n capa Rio leve	L CITY U	ost time: J tilizati Service:	ON:			0.100 * 0.517 A	0.100 * 0.519 A	R	
NOT	TES:										1	1	1	1		
	RTOR:	(a) 53%														
		(b) 4%														
		(C) 7 % (d) 0 %														
	Printed:	07/24/24														
EXIS	STING:		< THIS COMF	PARES	в то со	NDITIO	N (A)									

SCENARIO 1 = EXISTING VOLUMES (A) SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

#22052 - G(INTERSEC TIME PERIO N/S STREET E/W STREET CONTROL	OLETA BU TION CAPA DD: : : : TYPE:	SINESS CENTER F ACITY UTILIZATION AM PEAK HOUR KELLOGG AVENUE HOLLISTER AVENU SIGNAL	P ROJECT I WORKSH	EET	<u>WITHC</u>	DUT EK	WILL S	TREET E	XTENSION				REF:	03 AM
		NORTH	BOUND		AFFIC	VOLUN	TE SUN		ND	W/FS				
VOLUMES		L T	R	L	T	R	L	T	R	L	T	R		
(A) EXISTIN (B) PROJEC	NG: CT-ADDED:	43 1 1 (0 87) 6	146 0	6 0	38 0	38 0	499 0	54 4	281 17	684 0	85 0		
					C	GEOME	FRICS							
LANE GEON	METRICS	NORTH LT	bound R	SOUT	h bol Lt r	JND	EAS	t boun l t tr	ND	WES	t bound l t tr			
					TRA	FFIC SC	ENARIO	OS						
	2 – LABIII			LEVE	OF SE	RVICE	CALCU	LATIO	٧S					
MOVE-	# OF			SCE	NARIO	VOLUM	ES				SCENARIO V	/C RATIO	s	
MENTS	LANES	CAPACITY	1	2	3	4			1	2	,		1	
NBL	0	0	43	44	0	1			-					
NBR (a)	1	1600 1600	10 49	10 52	0 0	0 3			0.033 *	0.034 * 0.033		*	a	
				52	Ŭ	5								
SBL	0	0	146	146	0	0			-	-				
SBT	1	1600	6	6 35	0	0			0.095 *	0.095 *		*		
50K (D)		1000	55	55	0	0			0.022	0.022				
EBL	1	1600	38	38	0	0			0.024	0.024				
EBT	2	3200	499	499	0	0			0.167 *	0.168 *		*		
EBR (c)	0	0	36	38	0	3			-	-				
WBL	1	1600	281	298	0	17			0.176 *	0.186 *		*		
WBT	2	3200	684	684	0	0			0.237	0.237				
WBR (d)	0	0	73	73	0	0			-	-				
						LO	ST TIME:		0.100 *	0.100 *		*		
			TOTAL INTE	RSECTIO SCENAR	N CAPA IO LEVI	CITY UT El OF SE	ilizati RVICE:	ON:	0.571 A	0.583 A				
NOTES: RTOR: Printed:	(a) 44% (b) 7% (c) 34% (d) 14% : 07/22/24													
EXISTING: SCENARIO			RES TO CO	NDITIO	N (A)									

SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

#2205 INTER TIME F N/S ST E/W ST CONT	2 - GOLET RSECTION Period: Treet: Treet: Rol Type:	CAPA	SINESS CENTE ACITY UTILIZAT AM PEAK HOUR KELLOGG AVEN HOLLISTER AVEI SIGNAL	r Prc Ion W Ue NUE	ORKSH	EET	<u>WITH B</u>	EKWILI	<u>L STREE</u>	<u>T EXTEN</u>	<u>ISION</u>				REF:	03 AM_2
						TR	AFFIC	VOLU	ME SUI	AMARY						
			NOR	гн во	UND	SOUT	TH BOU	JND	EAS	t boun	1D	WES	st bound			
VOLU	MES		L	Т	R	L	Т	R	L	Т	R	L	Т	R		
(A) E	XISTING:															
(B) P	ROJECT-ADI	DED:	1	0	6	0	0	0	0	0	4	17	0	0		
(C) C	CUMULATIVE	E:	18	27	176	152	32	48	84	426	21	463	830	138		
									TRICE							
									TRICS	TROUT			T DOL			
LANE	GEOMETRI	ICS	NOR	lh bo Lt r	UND	SOUT	lt r	IND	EAS	l boun	1D	WES	L T TR			
							TRAF	FIC SC	ENARI	DS .						
SCENA SCENA	ARIO 3 = C ARIO 4 = C	CUMU CUMU	Lative (C) Lative + proje	ct vo	lumes (B + C)										
						LEVE	L OF SE	RVICE	CALCU	LATION	NS					
MOVE-	#	OF				SCE	NARIO	VOLUN	<u>AES</u>				SCENARIO '	V/C RATIO	<u>S</u>	
MENTS	LA	NES	CAPACITY		1	2	3	4			1	2	3	4	_	
NBL		0	0		0	1	18	19					-	-		
NBT		1	1600		0	0	27	27					0.028	0.029		
NBR (á	a)	1	1600		0	3	99	102					0.062 *	0.064 *		
SBI			0		0	0	150	150								
SBT		1	1600			0	32	152					0.115 *	0.115 *		
SBR (h	b)	1	1600		0	0	45	45					0.028	0.028		
EBL		1	1600		0	0	84	84					0.053	0.053		
EBT		2	3200		0	0	426	426					0.138 *	0.138 *		
EBR (c	c)	0	0		0	3	14	17					-	-		
\A/RI		1	1600		0	17	463	480					0.280 *	0.300 *		
WBT		2	3200		0	0	830	400 830					0.209	0.297		
WBR (d	d)	0	0		0	0	119	119					-	-		
	1	I		то	I TAL INTEI	rsectio Scenaf	n capa Rio leve	LC CITY U EL OF SI	dst time: Tilizati Ervice:	ON:			0.100 * 0.704 B	0.100 * 0.717 C		
NOTES	S:											1	1	•		1
R	RTOR: (a) 4	44%														
	(b) 7	7%														
	(c) 3	34% 1.4%														
	(d) 1 Printed: 071	14%														
	rnnieu: 0//	/24/24														
EXIST	ING:		< THIS COMF	PARES	то со	NDITIO	N (A)									

SCENARIO 1 = EXISTING VOLUMES (A) SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

#22052 - GG INTERSEC TIME PERIO N/S STREET E/W STREET CONTROL	OLETA BU TION CAP, DD: : : : TYPE:	SINESS CENTER PR ACITY UTILIZATION N PM PEAK HOUR KELLOGG AVENUE HOLLISTER AVENUE SIGNAL	OJECT WORKSH	IEET	WITHO	DUT EKI	VILL S	TREET E	XTENSION	<u>l</u>			REF:	03 PM
		NORTH R		SOUT	H BOU	VOLUN	E SUN		ND	W/FS				
VOLUMES		L T	R	L	Т	R	L	Т	R	L	Т	R		
(A) EXISTIN (B) PROJEC	NG: CT-ADDED:	78 11 4 0	189 15	118 0	7 0	47 0	40 0	774 0	60 3	164 11	758 0	110 0		
					G	GEOMET	RICS							
lane geon	METRICS	NORTH BO LT F	DUND R	SOUT	h bou lt r	JND	EAS	t boun L t tr	ND L	WES	t bound l t tr			
					TRAF	FIC SCI	NARI	OS						
SCENARIO	2 = EXISTI	NG + PROJECT VOLU	MES (A+I	3)										
	1 1			LEVEL	OF SE	RVICE	CALCU	LATION	NS					
MOVE- MENTS	# OF LANES	CAPACITY	1	<u>SCE</u>	NARIO V	VOLUM	S		1	2	SCENARIO V	//C RATIC	<u>95</u>	
NBL NBT	0 1	0 1600	78 11	82 11	0 0	4 0			- 0.056	- 0.058				
NBR (a)	1	1600	106	114	0	8			0.066 *	0.071 *		2	*	
SBL SBT SBR <i>(b)</i>	0 1 1	0 1600 1600	118 7 33	118 7 33	0 0 0	0 0 0			- 0.078 * 0.021	- 0.078 * 0.021			*	
EBL EBT FBR (c)	1 2 0	1600 3200 0	40 774 48	40 774 50	0 0	0 0 2			0.025 0.257 *	0.025 0.258 *			*	
WBL WBT WBR (d)	1 2 0	1600 3200 0	164 758 98	175 758 98	0 0 0	11 0 0			0.103 * 0.268	0.109 * 0.268 -		5	*	
			-			LOS	ST TIME:		0.100 *	0.100 *		3	*	
		T	OTAL INTE	RSECTION SCENAR	n capa (10 leve	CITY UT EL OF SEI	ilizati Rvice:	ON:	0.604 A	0.616 B				
NOTES: RTOR:	(a) 44% (b) 30% (c) 20% (d) 11%									1				
Printed:	07/22/24													
EXISTING: SCENARIO	1 = EXIST	< THIS COMPARE ING VOLUMES (A)	S TO CC	NDITION	N (A)									

SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

#220 INTE TIME N/S S E/W CON	D52 - GC ERSECT E PERIOL STREET: STREET: NTROL T	DLETA BI TION CAF D: YPE:	USINESS CENT PACITY UTILIZA PM PEAK HOU KELLOGG AVE HOLLISTER AV SIGNAL	ER PRO TION W R NUE ENUE	D JECT /ORKSH	EET	WITH E	EKWILI	L STREE	T EXTEN	<u>ISION</u>				REF:	03 PM_2
						TR	AFFIC	VOLU	ME SU	AMARY	0					
			NO	RTH BO	UND	SOUT	H BOL	JND	EAS	T BOUN	ND	. WE	ST BOUND	-		
VOL	UMES		L	Г	R	L	I	R	L	T	R	L	I	R		
(A)	EXISTIN	G:														
(B)	PROJEC	T-ADDED:	4	0	15	0	0	0	0	0	3	11	0	0		
(C)	CUMUL	ATIVE:	96	37	339	186	22	66	42	797	32	291	748	124		
							G	GEOME	TRICS							
LAN	e geom	IETRICS	NO	RTH BO LT R	UND	SOUT	'H BOU LT R	JND	EAS	t boun L t tr	ND	WE	st bound L t tr			
							7045			26						
SCEN SCEN	NARIO 3 NARIO 4	= CUMI = CUMI	ulative (C) ulative + proj	ECT VO	olumes (B + C)										
						LEVE	L OF SE	RVICE	CALCU	LATION	NS					
MOV	′E-	# OF				<u>SCE</u>	NARIO	VOLUN	AES				SCENARIO	V/C RATIO	<u>S</u>	
MEN	TS	LANES	CAPACIT	Y	1	2	3	4			1	2	3	4		
NBL		0	0		0	4	96	100					-	-		
NBT		1	1600		0	0	37	37					0.083	0.086		
NBR	(a)	1	1600		0	8	190	198					0.119 *	0.124 *		
SBL		0	0		0	0	186	186					_	-		
SBT		1	1600		0	0	22	22					0.130 *	0.130 *		
SBR	(b)	1	1600		0	0	46	46					0.029	0.029		
EBL		1	1600		0	0	42	42					0.026	0.026		
EBT	(c)	2	3200			0	797	797					0.257 *	0.258 *		
EDK						2	26	28					1	-		
WBL		1	1600		0	11	291	302					0.182 *	0.189 *		
WBT		2	3200		0	0	748	748					0.268	0.268		
WBR	(d)	0	0		0	0	110	110					-	-		
		-	·	то	TAL INTE	rsectio Scenar	n capa Rio leve	lo city u El of si	DST TIME: TILIZATI ERVICE:	ON:			0.100 * 0.788 C	0.100 * 0.801 C		
NOT	ES:										1	1	1	l	1	1
	RTOR:	(a) 44%														
		(b) 30%														
		(c) 20%														
		(d) 11%														
	Printed:	07/24/24														
EXIS	STING:		< THIS CON	IPARES	6 TO CO	NDITIO	N (A)									

SCENARIO 1 = EXISTING VOLUMES (A) SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

#22052 - GOLETA BUSINESS CENTER PROJECT INTERSECTION CAPACITY UTILIZATION WORKSHEET TIME PERIOD: AM PEAK HOUR N/S STREET: SR 217 SB RAMPS

e/W STREET Control	Γ: TYPE:	HOLLISTER AVEN SIGNAL	NUE												
					TR/	AFFIC V	/OLUN	ME SUN	1MARY						
		NORT	H BO	UND	SOUT	H BOU	ND	EAS	BOUN	ND	WE	ST BOUNE)		
VOLUMES		L	Т	R	L	Т	R	L	Т	R	Ĺ	Т	R		
(A) EXISTIN (B) PROJEC	NG: CT-ADDED:	0 0	0 0	0 0	179 0	1 0	452 11	0 0	800 6	39 0	146 0	450 6	0 0		
						G	EOME	TRICS							
LANE GEOM	METRICS	NORT	TH BO	UND	SOUT	H BOU _ LTR	ND	EAST	f Boun t tr	ND	WE	st boune l tt)		
						TRAF	FIC SC	ENARIO)S						
SCENARIO	2 = EXISTI	NG + PROJECT V	OLUN	ies (A + B	3)										
	-				LEVEI	OF SEE	RVICE	CALCU	LATIO	NS					
MOVE-	# OF				<u>SCE</u>	NARIO V	/OLUN	1ES				SCENARIO	V/C RATIOS		
MENTS	LANES	CAPACITY		1	2	3	4			1	2				
NBL	0	0		0	0	0	0			-	-				
NBT	0	0		0	0	0	0			-	-				
NBR	0	0		0	0	0	0			-	-				
CDI	0	0		170	170	0	0								
SRT		3200		1/9	179	0	0			0.196 *	0.199 *		*		
SBR (a)	0	0		447	458	0	11			-	-				
1999-000-000-000 - 1999-004															
EBL	0	0		0	0	0	0			-	-				
EBT	2	3200		800	806	0	6			0.257 *	0.258 *		*		
EBR (b)	0	0		21	21	0	0			-	-				2
\A/D1	1	1600		140	146	0	0			0.001 *	0.001 *		*		
WBT		3200		450	140	0	0			0.091 *	0.091 *		Ť		
WBR	0	0		0	0	0	0			-	-				
														+	
							LC	OST TIME:		0.100 *	0.100 *		*		
			то	TAL INTE	RSECTIO	N CAPAC	CITY UT	FILIZATIO	DN:	0.644	0.648				
					SCENAR	IO LEVEI	l of se	RVICE:		В	В				
NOTES:														<u>.</u>	
RTOR	: (a) 1%														
	(b) 47%														

Printed: 07/22/24

EXISTING: ----- THIS COMPARES TO CONDITION (A) SCENARIO 1 = EXISTING VOLUMES (A) SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B) SCENARIO 3 = CUMULATIVE (C) SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LANE LEVEL OF SERVICE

Lane Level of Service

W Site: 101 [Hollister Ave and SR 217 SB - CUMULATIVE AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

New Site Site Category: (None) Roundabout



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

MOVEMENT SUMMARY

W Site: 101 [Hollister Ave and SR 217 SB - CUMULATIVE AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

New Site Site Category: (None) Roundabout

Vehic	le Mo	ovement	Perfor	man	се										
Mov ID	Turn	Mov Class	Dem F [Total veh/h	nand Iows HV] %	Ar Fl [Total veh/h	rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% E Qu [Veh. veh	Back Of eue Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
East: I	Hollist	er Ave													
1	L2	All MCs	213	3.0	213	3.0	0.371	5.8	LOS A	2.1	53.6	0.15	0.04	0.15	31.8
6	T1	All MCs	724	3.0	724	3.0	0.371	5.7	LOS A	2.1	53.6	0.14	0.04	0.14	33.1
16	R2	All MCs	38	3.0	38	3.0	0.371	5.6	LOS A	2.0	52.0	0.14	0.04	0.14	33.3
Approa	ach		975	3.0	975	3.0	0.371	5.7	LOS A	2.1	53.6	0.14	0.04	0.14	32.8
NorthE	East: S	SR 217													
1bx	L3	All MCs	234	3.0	234	3.0	0.483	16.4	LOS B	2.3	58.5	0.75	0.87	1.14	26.6
1ax	L1	All MCs	1	3.0	1	3.0	0.483	16.4	LOS B	2.3	58.5	0.75	0.87	1.14	26.6
16ax	R1	All MCs	511	3.0	511	3.0	1.060	81.0	LOS F	24.3	623.2	1.00	2.33	5.49	15.9
16bx	R3	All MCs	64	3.0	64	3.0	1.060	81.0	LOS F	24.3	623.2	1.00	2.33	5.49	15.7
Approa	ach		810	3.0	810	3.0	1.060	62.3	LOS E	24.3	623.2	0.93	1.91	4.23	18.0
North:	Dear	born Pl													
7	L2	All MCs	125	3.0	125	3.0	0.652	35.1	LOS D	2.7	68.2	0.90	1.06	1.53	22.3
4	T1	All MCs	16	3.0	16	3.0	0.652	35.9	LOS D	2.7	68.2	0.90	1.06	1.53	22.6
14	R2	All MCs	50	3.0	50	3.0	0.652	35.9	LOS D	2.7	68.2	0.90	1.06	1.53	22.5
Approa	ach		191	3.0	191	3.0	0.652	35.4	LOS D	2.7	68.2	0.90	1.06	1.53	22.4
West:	Hollis	ter Ave													
5	L2	All MCs	27	3.0	27	3.0	0.623	15.6	LOS B	5.0	128.5	0.77	0.85	1.31	28.7
2	T1	All MCs	871	3.0	871	3.0	0.623	15.1	LOS B	5.1	130.5	0.77	0.84	1.30	29.4
12	R2	All MCs	59	3.0	59	3.0	0.623	14.6	LOS B	5.1	130.5	0.76	0.83	1.29	29.4
Approa	ach		957	3.0	957	3.0	0.623	15.0	LOS B	5.1	130.5	0.77	0.84	1.30	29.4
All Vel	nicles		2933	3.0	2933	3.0	1.060	26.3	LOS C	24.3	623.2	0.61	0.88	1.74	25.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6). Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

LANE LEVEL OF SERVICE

Lane Level of Service

W Site: 101 [Hollister Ave and SR 217 SB - CUMULATIVE + PROJECT AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

New Site Site Category: (None) Roundabout



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

MOVEMENT SUMMARY

Site: 101 [Hollister Ave and SR 217 SB - CUMULATIVE + PROJECT AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

New Site Site Category: (None) Roundabout

Vehic	le Mo	ovement	Perfor	man	се										
Mov ID	Turn	Mov Class	Dem F [Total veh/h	nand Iows HV] %	Ar Fl [Total veh/h	rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% E Qu [Veh. veh	Back Of eue Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
East: I	Hollist	er Ave													
1	L2	All MCs	213	3.0	213	3.0	0.374	5.8	LOS A	2.1	54.1	0.15	0.04	0.15	31.8
6	T1	All MCs	730	3.0	730	3.0	0.374	5.7	LOS A	2.1	54.1	0.14	0.04	0.14	33.1
16	R2	All MCs	38	3.0	38	3.0	0.374	5.6	LOS A	2.1	52.5	0.14	0.04	0.14	33.3
Approa	ach		982	3.0	982	3.0	0.374	5.7	LOS A	2.1	54.1	0.14	0.04	0.14	32.8
NorthE	East: S	SR 217													
1bx	L3	All MCs	234	3.0	234	3.0	0.487	16.6	LOS B	2.3	58.9	0.76	0.87	1.15	26.5
1ax	L1	All MCs	1	3.0	1	3.0	0.487	16.6	LOS B	2.3	58.9	0.76	0.87	1.15	26.5
16ax	R1	All MCs	523	3.0	523	3.0	1.089	90.1	LOS F	27.8	710.4	1.00	2.51	6.11	14.9
16bx	R3	All MCs	64	3.0	64	3.0	1.089	90.1	LOS F	27.8	710.4	1.00	2.51	6.11	14.8
Approa	ach		822	3.0	822	3.0	1.089	69.1	LOS E	27.8	710.4	0.93	2.04	4.69	17.1
North:	Dear	born Pl													
7	L2	All MCs	125	3.0	125	3.0	0.655	35.4	LOS D	2.7	68.6	0.90	1.07	1.54	22.3
4	T1	All MCs	16	3.0	16	3.0	0.655	36.2	LOS D	2.7	68.6	0.90	1.07	1.54	22.6
14	R2	All MCs	50	3.0	50	3.0	0.655	36.2	LOS D	2.7	68.6	0.90	1.07	1.54	22.5
Approa	ach		191	3.0	191	3.0	0.655	35.7	LOS D	2.7	68.6	0.90	1.07	1.54	22.3
West:	Hollis	ter Ave													
5	L2	All MCs	27	3.0	27	3.0	0.627	15.7	LOS B	5.1	130.6	0.78	0.86	1.32	28.7
2	T1	All MCs	877	3.0	877	3.0	0.627	15.2	LOS B	5.2	132.7	0.77	0.85	1.31	29.4
12	R2	All MCs	59	3.0	59	3.0	0.627	14.7	LOS B	5.2	132.7	0.76	0.83	1.30	29.4
Approa	ach		963	3.0	963	3.0	0.627	15.2	LOS B	5.2	132.7	0.77	0.85	1.31	29.4
All Vel	nicles		2958	3.0	2958	3.0	1.089	28.4	LOS C	27.8	710.4	0.62	0.92	1.88	24.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6). Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

#22052 - GOLETA BUSINESS CENTER PROJECTINTERSECTION CAPACITY UTILIZATION WORKSHEETTIME PERIOD:PM PEAK HOURN/S STREET:SR 217 SB RAMPSE/W STREET:HOLLISTER AVENUECONTROL TYPE:SIGNAL

				TRA	FFIC V	/OLUM	e sum	MARY				
	NOR	RTH BO	UND	SOU	TH BO	UND	EAS	T BOUN	ID	WE	ST BOUNE)
VOLUMES	L	Т	R	L	Т	R	L	Т	R	L	Т	R
(A) EXISTING: (B) PROJECT-ADDED:	0 0	0 0	0 0	53 0	0 0	405 7	0 0	1047 15	62 0	101 0	611 4	0 0

		GEOMET	RICS		
	NORTH BOUND	south bound	EAST BOUND	WEST BOUND	
LANE GEOMETRICS		L LTR	T TR	L TT	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

				LEVEL C	OF SERV	ICE CALCULATION	S				
MOVE-	# OF			SCEN	NARIO V	OLUMES			SCENARIO V	//C RATIOS	
MENTS	LANES	CAPACITY	1	2	3	4	1	2			
NBL	0	0	0	0	0	0	-	-			
NBT	0	0	0	0	0	0	-	-			
NBR	0	0	0	0	0	0	-	-			
SBL	0	0	53	53	0	0	-	-			
SBT	2	3200	0	0	0	0	0.141 *	0.143 *		*	
SBR (a)	0	0	397	404	0	7	~	-			
EBL	0	0	0	0	0	0	-	-			
EBT	2	3200	1047	1062	0	15	0.338 *	0.343 *		*	
EBR (b)	0	0	34	34	0	0	-	-			
WBL	1	1600	101	101	0	0	0.063 *	0.063 *		*	
WBT	2	3200	611	615	0	4	0.191	0.192			
WBR	0	0	0	0	0	0	-	-			
						LOST TIME:	0.100 *	0.100 *		*	
		TOT	AL INTER	RSECTION	CAPAC	ITY UTILIZATION:	0.642	0.649			
				SCENARI	O LEVEL	OF SERVICE:	В	В			

NOTES:

RTOR: (a) 2%

(b) 45%

Printed: 07/22/24

EXISTING: ----- THIS COMPARES TO CONDITION (A)
SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

REF: 04 PM

LANE LEVEL OF SERVICE

Lane Level of Service

W Site: 101 [Hollister Ave and SR 217 SB - CUMULATIVE PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

New Site Site Category: (None) Roundabout



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

MOVEMENT SUMMARY

W Site: 101 [Hollister Ave and SR 217 SB - CUMULATIVE PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

New Site Site Category: (None) Roundabout

Vehic	le Mo	ovement	Perfor	man	се	_									
Mov ID	Turn	Mov Class	Dem F [Total veh/h	nand Iows HV] %	Ar Fl [Total veh/h	rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% E Qu [Veh. veh	Back Of leue Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
East: H	Hollist	er Ave													
1	L2	All MCs	134	3.0	134	3.0	0.358	6.3	LOS A	1.9	48.8	0.28	0.12	0.28	31.9
6	T1	All MCs	647	3.0	647	3.0	0.358	6.1	LOS A	1.9	48.8	0.27	0.11	0.27	33.0
16	R2	All MCs	109	3.0	109	3.0	0.358	6.0	LOS A	1.9	47.5	0.26	0.11	0.26	33.1
Approa	ach		889	3.0	889	3.0	0.358	6.1	LOS A	1.9	48.8	0.27	0.11	0.27	32.8
NorthEast: SR 217															
1bx	L3	All MCs	102	3.0	102	3.0	0.207	10.1	LOS B	0.7	17.8	0.66	0.66	0.66	28.6
1ax	L1	All MCs	1	3.0	1	3.0	0.207	10.1	LOS B	0.7	17.8	0.66	0.66	0.66	28.6
16ax	R1	All MCs	418	3.0	418	3.0	0.847	35.9	LOS D	8.3	213.2	0.91	1.34	2.37	23.2
16bx	R3	All MCs	52	3.0	52	3.0	0.847	35.9	LOS D	8.3	213.2	0.91	1.34	2.37	23.0
Approa	ach		574	3.0	574	3.0	0.847	31.3	LOS C	8.3	213.2	0.86	1.21	2.06	24.0
North:	Dear	oorn Pl													
7	L2	All MCs	126	3.0	126	3.0	0.492	19.4	LOS B	2.0	51.2	0.81	0.91	1.19	26.4
4	T1	All MCs	15	3.0	15	3.0	0.492	19.4	LOS B	2.0	51.2	0.81	0.91	1.19	26.9
14	R2	All MCs	59	3.0	59	3.0	0.492	19.4	LOS B	2.0	51.2	0.81	0.91	1.19	26.7
Approa	ach		200	3.0	200	3.0	0.492	19.4	LOS B	2.0	51.2	0.81	0.91	1.19	26.5
West: Hollister Ave															
5	L2	All MCs	87	3.0	87	3.0	0.805	21.5	LOS C	14.6	373.4	0.93	1.10	1.93	26.6
2	T1	All MCs	1370	3.0	1370	3.0	0.805	20.9	LOS C	15.0	384.6	0.93	1.09	1.92	27.4
12	R2	All MCs	57	3.0	57	3.0	0.805	20.4	LOS C	15.0	384.6	0.92	1.08	1.91	27.4
Approa	ach		1513	3.0	1513	3.0	0.805	20.9	LOS C	15.0	384.6	0.93	1.09	1.92	27.3
All Veh	nicles		3176	3.0	3176	3.0	0.847	18.6	LOS B	15.0	384.6	0.72	0.83	1.44	27.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6). Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.
Lane Level of Service

W Site: 101 [Hollister Ave and SR 217 SB - CUMULATIVE + PROJECT PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

New Site Site Category: (None) Roundabout



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Site: 101 [Hollister Ave and SR 217 SB - CUMULATIVE + PROJECT PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

New Site Site Category: (None) Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Dem F [Total veh/h	nand Iows HV] %	Ar Fl [Total veh/h	rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% E Qu [Veh. veh	Back Of leue Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
East: H	Hollist	er Ave													
1	L2	All MCs	134	3.0	134	3.0	0.360	6.3	LOS A	1.9	49.2	0.28	0.12	0.28	31.9
6	T1	All MCs	651	3.0	651	3.0	0.360	6.2	LOS A	1.9	49.2	0.27	0.11	0.27	33.0
16	R2	All MCs	109	3.0	109	3.0	0.360	6.1	LOS A	1.9	47.9	0.26	0.11	0.26	33.1
Approa	ach		893	3.0	893	3.0	0.360	6.2	LOS A	1.9	49.2	0.27	0.11	0.27	32.8
NorthE	ast: S	SR 217													
1bx	L3	All MCs	102	3.0	102	3.0	0.208	10.1	LOS B	0.7	17.9	0.66	0.66	0.66	28.6
1ax	L1	All MCs	1	3.0	1	3.0	0.208	10.1	LOS B	0.7	17.9	0.66	0.66	0.66	28.6
16ax	R1	All MCs	426	3.0	426	3.0	0.864	38.2	LOS D	8.9	229.1	0.92	1.38	2.51	22.7
16bx	R3	All MCs	52	3.0	52	3.0	0.864	38.2	LOS D	8.9	229.1	0.92	1.38	2.51	22.4
Approa	ach		582	3.0	582	3.0	0.864	33.2	LOS C	8.9	229.1	0.87	1.25	2.18	23.6
North:	Dear	oorn Pl													
7	L2	All MCs	126	3.0	126	3.0	0.498	19.8	LOS B	2.0	51.8	0.81	0.92	1.21	26.3
4	T1	All MCs	15	3.0	15	3.0	0.498	19.8	LOS B	2.0	51.8	0.81	0.92	1.21	26.7
14	R2	All MCs	59	3.0	59	3.0	0.498	19.8	LOS B	2.0	51.8	0.81	0.92	1.21	26.6
Approa	ach		200	3.0	200	3.0	0.498	19.8	LOS B	2.0	51.8	0.81	0.92	1.21	26.4
West:	Hollis	ter Ave													
5	L2	All MCs	87	3.0	87	3.0	0.814	22.1	LOS C	15.2	389.3	0.94	1.12	1.99	26.4
2	T1	All MCs	1386	3.0	1386	3.0	0.814	21.5	LOS C	15.7	401.4	0.94	1.11	1.97	27.2
12	R2	All MCs	57	3.0	57	3.0	0.814	21.0	LOS C	15.7	401.4	0.93	1.11	1.96	27.2
Approa	ach		1529	3.0	1529	3.0	0.814	21.5	LOS C	15.7	401.4	0.94	1.11	1.97	27.1
All Veh	nicles		3204	3.0	3204	3.0	0.864	19.3	LOS B	15.7	401.4	0.73	0.85	1.49	27.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6). Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

#22052 - GOLETA BUSINESS CENTER PROJECT **REF:** 05 AM INTERSECTION CAPACITY UTILIZATION WORKSHEET TIME PERIOD: AM PEAK HOUR N/S STREET: SR 217 NB RAMP - WARD DRIVE E/W STREET: HOLLISTER AVENUE CONTROL TYPE: SIGNAL TRAFFIC VOLUME SUMMARY WEST BOUND NORTH BOUND SOUTH BOUND EAST BOUND VOLUMES R R R Т R Т L Т L Т L L EXISTING: 41 56 69 0 0 0 377 460 141 55 555 85 (A) (B) PROJECT-ADDED: 0 0 0 0 0 0 4 2 0 0 6 0 GEOMETRICS NORTH BOUND SOUTH BOUND EAST BOUND WEST BOUND LT R LL T TR L TT R LANE GEOMETRICS TRAFFIC SCENARIOS SCENARIO 1 = EXISTING VOLUMES (A) SCENARIO 2 = EXISTING + PROJECT VOLUMES (A + B) LEVEL OF SERVICE CALCULATIONS MOVE-# OF SCENARIO VOLUMES SCENARIO V/C RATIOS CAPACITY LANES MENTS 2 3 4 1 2 NBL 0 41 41 0 0 0 _ NBT 1600 0 0.061 * 0.061 * 56 56 0 1 NBR (a) 1 1600 11 11 0 0 0.007 0.007

WBL 1 1600 55 55 0 0 0.034 0.034 WBT 555 0.173 * 0.175 * 2 3200 561 0 6 WBR (C) 1 1600 85 85 0 0 0.053 0.053 0.100 * 0.100 * LOST TIME: TOTAL INTERSECTION CAPACITY UTILIZATION: 0.455 0.452 SCENARIO LEVEL OF SERVICE: Α Α

NOTES:

SBL

SBT

SBR

EBL

EBT

EBR

(b)

RTOR: (a) 84%

(b) 23%

0

0

0

2

2

0

0

0

0

3200

3200

0

0

0

0

377

460

109

0

0

0

381

462

109

0

0

0

0

0

0

0

0

0

4

2

0

-

-

0.118 *

0.178

-

0.119 *

0.178

(c) 38%

Printed: 07/23/24

EXISTING: <---- THIS COMPARES TO CONDITION (A) SCENARIO 1 = EXISTING VOLUMES (A) SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B) SCENARIO 3 = CUMULATIVE (C) SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

Lane Level of Service

W Site: [Hollister Ave and SR 217 NB - CUMULATIVE AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

NA Site Category: (None)

Roundabout



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

W Site: [Hollister Ave and SR 217 NB - CUMULATIVE AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

NA Site Category: (None) Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Dem F [Total veh/h	nand Iows HV] %	Ar F [Total veh/h	rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Qı [Veh. veh	Back Of Jeue Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South	Ward	l Dr													
3	L2	All MCs	50	3.0	50	3.0	0.111	9.5	LOS A	0.3	9.0	0.67	0.67	0.67	29.1
8	T1	All MCs	66	3.0	66	3.0	0.147	10.0	LOS B	0.5	12.0	0.67	0.67	0.67	31.6
18	R2	All MCs	141	3.0	141	3.0	0.279	11.2	LOS B	1.0	24.7	0.68	0.71	0.76	30.5
Appro	ach		258	3.0	258	3.0	0.279	10.6	LOS B	1.0	24.7	0.68	0.69	0.72	30.5
East: I	Hollist	er Ave													
1	L2	All MCs	65	3.0	65	3.0	0.618	14.9	LOS B	5.2	132.5	0.76	0.82	1.28	28.8
6	T1	All MCs	925	3.0	925	3.0	0.618	14.4	LOS B	5.2	134.3	0.75	0.81	1.27	29.7
16	R2	All MCs	121	3.0	121	3.0	0.157	6.3	LOS A	0.6	14.8	0.53	0.44	0.53	32.6
Appro	ach		1111	3.0	1111	3.0	0.618	13.5	LOS B	5.2	134.3	0.73	0.77	1.19	29.9
West:	Hollis	ter Ave													
5	L2	All MCs	428	3.0	428	3.0	0.482	7.4	LOS A	3.3	83.7	0.29	0.11	0.29	30.6
2	T1	All MCs	646	3.0	646	3.0	0.482	7.4	LOS A	3.3	83.7	0.29	0.11	0.29	32.2
12	R2	All MCs	174	3.0	174	3.0	0.482	7.4	LOS A	3.3	83.7	0.29	0.11	0.29	32.4
Appro	ach		1248	3.0	1248	3.0	0.482	7.4	LOS A	3.3	83.7	0.29	0.11	0.29	31.7
All Vel	hicles		2616	3.0	2616	3.0	0.618	10.3	LOS B	5.2	134.3	0.52	0.45	0.71	30.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6). Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Lane Level of Service

W Site: [Hollister Ave and SR 217 NB - CUMULATIVE + PROJECT AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

NA Site Cate

Site Category: (None) Roundabout



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

W Site: [Hollister Ave and SR 217 NB - CUMULATIVE + PROJECT AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

NA Site Category: (None) Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Dem F [Total veh/h	nand Iows HV] %	Ar Fl [Total veh/h	rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Q [Veh. veh	Back Of ueue Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South	Ward	l Dr													
3	L2	All MCs	50	3.0	50	3.0	0.111	9.6	LOS A	0.4	9.0	0.67	0.67	0.67	29.1
8	T1	All MCs	66	3.0	66	3.0	0.148	10.1	LOS B	0.5	12.1	0.68	0.68	0.68	31.5
18	R2	All MCs	141	3.0	141	3.0	0.281	11.3	LOS B	1.0	24.9	0.69	0.71	0.76	30.4
Appro	ach		258	3.0	258	3.0	0.281	10.6	LOS B	1.0	24.9	0.68	0.69	0.72	30.4
East: I	Hollist	er Ave													
1	L2	All MCs	65	3.0	65	3.0	0.625	15.1	LOS C	5.3	135.4	0.77	0.83	1.30	28.7
6	T1	All MCs	932	3.0	932	3.0	0.625	14.6	LOS B	5.4	137.4	0.76	0.82	1.29	29.6
16	R2	All MCs	121	3.0	121	3.0	0.158	6.4	LOS A	0.6	14.8	0.53	0.45	0.53	32.6
Appro	ach		1117	3.0	1117	3.0	0.625	13.8	LOS B	5.4	137.4	0.74	0.78	1.21	29.8
West:	Hollis	ter Ave													
5	L2	All MCs	433	3.0	433	3.0	0.484	7.4	LOS A	3.3	84.5	0.29	0.11	0.29	30.6
2	T1	All MCs	648	3.0	648	3.0	0.484	7.4	LOS A	3.3	84.5	0.29	0.11	0.29	32.2
12	R2	All MCs	174	3.0	174	3.0	0.484	7.4	LOS A	3.3	84.5	0.29	0.11	0.29	32.4
Appro	ach		1254	3.0	1254	3.0	0.484	7.4	LOS A	3.3	84.5	0.29	0.11	0.29	31.6
All Vel	nicles		2629	3.0	2629	3.0	0.625	10.4	LOS B	5.4	137.4	0.52	0.45	0.72	30.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6). Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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#22052 - GOLETA BUSINESS CENTER PROJECTINTERSECTION CAPACITY UTILIZATION WORKSHEETTIME PERIOD:PM PEAK HOURN/S STREET:SR 217 NB RAMP - WARD DRIVEE/W STREET:HOLLISTER AVENUECONTROL TYPE:SIGNAL

	TRAFFIC VOLUME SUMMARY													
		NORTH BOUND			SOUTH BOUND			EAST BOUND			WE	ST BOUNE)	
VOLU	L	Т	R	L	Т	R	L	Т	R	L	Т	R		
(A) (B)	EXISTING: PROJECT-ADDED:	134 0	118 0	258 0	0 0	0 0	0 0	428 10	624 5	57 0	33 0	578 4	48 0	

		GEOMET	RICS	
LANE GEOMETRICS	NORTH BOUND LT R	south bound	EAST BOUND LL T TR	WEST BOUND L TT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

LEVEL OF SERVICE CALCULATIONS												
MOVE-	# OF			SCEN	NARIO V	OLUMES			SCENARIO	V/C RATIOS		
MENTS	LANES	CAPACITY	1	2	3	4	1	2				
NBL	0	0	134	134	0	0	-	-				
NBT	1	1600	118	118	0	0	0.158 *	0.158 *		*		
NBR(a)	1	1600	206	206	0	0	0.129	0.129				
SBL	0	0	0	0	0	0	-	-				
SBT	0	0	0	0	0	0	-	-				
SBR	0	0	0	0	0	0	-	-				
EBL	2	3200	428	438	0	10	0.134 *	0.137 *		*		
EBT	2	3200	624	629	0	5	0.213	0.214				
EBR	0	0	57	57	0	0	-	-				
WBL	1	1600	33	33	0	0	0.021	0.021				
WBT	2	3200	578	582	0	4	0.181 *	0.182 *		*		
WBR	1	1600	48	48	0	0	0.030	0.030				
						LOST TIME:	0.100 *	0.100 *		*		
		TO	TAL INITED	SECTION	CADAC		0.573	0.577				
		101		SCENIADI			0.373	0.377				
				JULINARI				<u>^</u>				
NOTES:												
RTOR:	(a) 20%.											

Printed: 07/23/24

Lane Level of Service

W Site: [Hollister Ave and SR 217 NB - CUMULATIVE PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

NA Site Category: (None)

Roundabout



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

W Site: [Hollister Ave and SR 217 NB - CUMULATIVE PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

NA Site Category: (None) Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Dem F [Total veh/h	nand Iows HV] %	Ar F [Total veh/h	rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Qı [Veh. veh	Back Of Jeue Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South	Ward	l Dr													
3	L2	All MCs	147	3.0	147	3.0	0.439	21.3	LOS C	1.6	42.1	0.83	0.92	1.17	25.4
8	T1	All MCs	141	3.0	141	3.0	0.439	21.3	LOS C	1.6	42.1	0.83	0.92	1.17	27.3
18	R2	All MCs	335	3.0	335	3.0	0.896	55.9	LOS F	7.1	182.8	0.96	1.44	2.75	18.9
Appro	ach		623	3.0	623	3.0	0.896	39.9	LOS E	7.1	182.8	0.90	1.20	2.02	21.8
East: I	Hollist	er Ave													
1	L2	All MCs	36	3.0	36	3.0	0.604	17.3	LOS C	4.0	101.6	0.78	0.90	1.32	28.0
6	T1	All MCs	742	3.0	742	3.0	0.604	16.6	LOS C	4.0	103.1	0.78	0.89	1.31	28.9
16	R2	All MCs	65	3.0	65	3.0	0.106	7.1	LOS A	0.4	9.2	0.58	0.55	0.58	32.3
Appro	ach		843	3.0	843	3.0	0.604	15.9	LOS C	4.0	103.1	0.76	0.86	1.25	29.1
West:	Hollis	ter Ave													
5	L2	All MCs	483	3.0	483	3.0	0.545	7.7	LOS A	4.3	109.7	0.24	0.07	0.24	30.5
2	T1	All MCs	907	3.0	907	3.0	0.545	7.7	LOS A	4.3	109.7	0.24	0.07	0.24	32.1
12	R2	All MCs	62	3.0	62	3.0	0.545	7.7	LOS A	4.3	109.7	0.24	0.07	0.24	32.3
Appro	ach		1451	3.0	1451	3.0	0.545	7.7	LOS A	4.3	109.7	0.24	0.07	0.24	31.6
All Vel	hicles		2917	3.0	2917	3.0	0.896	17.0	LOS C	7.1	182.8	0.53	0.54	0.91	28.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6). Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Lane Level of Service

W Site: [Hollister Ave and SR 217 NB - CUMULATIVE + PROJECT PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

NA Site Category: (None)

Roundabout



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

W Site: [Hollister Ave and SR 217 NB - CUMULATIVE + PROJECT PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

NA Site Category: (None) Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Dem F [Total veh/h	nand Iows HV] %	Ar Fl [Total veh/h	rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Q [Veh. veh	Back Of ueue Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South	Ward	l Dr													
3	L2	All MCs	147	3.0	147	3.0	0.447	21.9	LOS C	1.7	42.8	0.83	0.93	1.18	25.3
8	T1	All MCs	141	3.0	141	3.0	0.447	21.9	LOS C	1.7	42.8	0.83	0.93	1.18	27.1
18	R2	All MCs	335	3.0	335	3.0	0.910	59.1	LOS F	7.5	192.5	0.96	1.48	2.88	18.4
Appro	ach		623	3.0	623	3.0	0.910	41.9	LOS E	7.5	192.5	0.90	1.22	2.10	21.4
East: I	Hollist	er Ave													
1	L2	All MCs	36	3.0	36	3.0	0.614	17.8	LOS C	4.1	104.2	0.79	0.92	1.34	27.9
6	T1	All MCs	747	3.0	747	3.0	0.614	17.1	LOS C	4.1	105.8	0.78	0.90	1.34	28.7
16	R2	All MCs	65	3.0	65	3.0	0.108	7.2	LOS A	0.4	9.3	0.59	0.55	0.59	32.2
Appro	ach		848	3.0	848	3.0	0.614	16.3	LOS C	4.1	105.8	0.77	0.88	1.28	28.9
West:	Hollis	ter Ave													
5	L2	All MCs	493	3.0	493	3.0	0.551	7.8	LOS A	4.4	112.3	0.24	0.07	0.24	30.4
2	T1	All MCs	912	3.0	912	3.0	0.551	7.8	LOS A	4.4	112.3	0.24	0.07	0.24	32.1
12	R2	All MCs	62	3.0	62	3.0	0.551	7.8	LOS A	4.4	112.3	0.24	0.07	0.24	32.3
Appro	ach		1467	3.0	1467	3.0	0.551	7.8	LOS A	4.4	112.3	0.24	0.07	0.24	31.5
All Vel	nicles		2938	3.0	2938	3.0	0.910	17.5	LOS C	7.5	192.5	0.53	0.55	0.93	28.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab). Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6). Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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