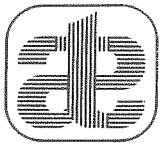


Transportation and Traffic

APPENDIX H



ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • FAX (805) 682-8509

Since 1978

Richard L. Pool, P.E.
Scott A. Schell, AICP, PTP

May 8, 2012

05012L17.WP

Peter Koetting
Westar
2925 Bristol Street
Costa Mesa, CA 92626

GOLETA MIXED-USE VILLAGE PROJECT - SUPPLEMENTAL TRAFFIC MITIGATION ANALYSIS

Associated Transportation Engineers (ATE) has prepared the following supplemental traffic mitigation analysis for the Goleta Mixed-use Village Project. The information provided is intended to refine the traffic mitigation measures presented in the project DEIR.

Storke Road/U.S. 101 Southbound Ramps Mitigation Phasing

The DEIR indicates that the project would generate a project-specific impact at the Storke Road/U.S. 101 Southbound Ramps intersection during the A.M. peak hour. The DEIR mitigation measure requires that the project implement improvements to the intersection, and requires that the improvements be in place prior to occupancy clearance for any portion of the project.

A portion of the project could be constructed and occupied without generating impacts to the intersection. In order to provide some flexibility in the timing of the project occupancy, an analysis was completed evaluating what percentage of the project could be constructed and occupied without triggering impacts to the Storke Road/U.S. 101 Southbound Ramps intersection. The analysis was completed assuming construction of the residential component of the project and the commercial component as separate phases. Table 1 presents the A.M. peak hour Existing + Project LOS for the intersection assuming the mitigation phasing options (LOS worksheets attached for reference).

Table 1
Storke Road/U.S. 101 Southbound Ramps
Existing + Project Mitigation Phasing Analysis

Project Phasing	Size	Existing LOS	Existing + Project LOS	Impact?
Residential Only	279 Units	0.784/LOS C	0.814/LOS D	Yes
68% Residential Only	190 Units	0.784/LOS C	0.804/LOS C	No
Commercial/Retail Only	90,054 SF	0.784/LOS C	0.795/LOS C	No

The data presented in Table 1 show that full development of the residential component of the project (with no retail) would continue to generate a significant impact to the Storke Road/U.S. 101 Southbound Ramps intersection. The project could build 190 residential units (68% percent) without triggering an impact. Table 1 also shows that development of the commercial component alone would not generate a significant impact to the Storke Road/U.S. 101 Southbound Ramps intersection during the A.M. peak hour.

Storke Road Widening

The DEIR indicates that the project would contribute to significant cumulative impacts on the section of Storke Road south of Whittier Drive. The City of Goleta has indicated that the project would be required to contribute a fair-share payment for the widening of Storke Road from Phelps Road to the southern City limits to mitigate this impact. The City provided a cost estimate for the widening project (attached) indicating a total cost of \$3,030,000. The cost estimate assumes that the entire section Storke Road from Phelps Road to Whittier Drive would need to be widened to provide two new travel lanes, a revised median, and new sidewalks on both sides of the roadway. However, the existing section of Storke Road between Phelps Road and Whittier Road is fully completed in the southbound direction and only needs the addition of one travel lane in the northbound direction. The median has also been completed in its final location and sidewalks have been installed on both sides of the road within this segment.

The City's cost estimates were updated to reflect the existing developed section of Storke Road between Phelps Road and Whittier Drive. Table 2 shows the updated cost estimates developed for the two segments (Phelps to Whittier and Whittier to City Limits). These cost estimates utilized the same methodologies contained in the City's original cost worksheets (updated cost worksheets attached).

Table 2
Storke Road Widening Updated Cost Estimates by Segment

Section	Widening Project	Updated Costs	Project Share	Project Cost
<u>Section A</u> Phelps Rd to Whittier Dr	Add NB Lane	\$310,000	9.4%	\$29,140
<u>Section B</u> Whittier Dr to City Limits	Add NB & SB Lane	\$2,130,000	9.4%	\$200,220
Total		\$2,440,000	9.4%	\$229,360

The data presented in Table 2 show that the updated cost estimate for the Storke Road widening is \$2,440,000. The project's 9.4% fair-share payment for the improvements is \$229,360.

This concludes ATE's supplemental traffic mitigation analysis for the Goleta Mixed-use Village Project.

Associated Transportation Engineers

By: 
 Scott A. Schell, AICP, PTP
 Principal Transportation Planner

SAS

attachments

**2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate**

Storke Road	GTIP No.	R-12
Phelps Road to Southern City Limits		

Project elements include:

- Widen both sides of Storke Road from Phelps Road to southern City limits to provide for two lanes in each directions, left turn lanes at intersections, bike lanes, and a sidewalk on the both sides..
- Reduce width of planted median.
- Reduce width of existing travel lanes.
- Sidewalk on eastside of Storke Road adjacent to road
- Sidewalk on west side separated from road.

Prepared By: Bruce Burnworth, Penfield & Smith

Date: July 26, 2007

SUMMARY OF CONSTRUCTION COST

Item	Description	Estimated Total
1.	Earthwork Items	\$263,000
2.	Structural Section	\$700,000
3.	Drainage Items	\$52,000
4.	Specialty Items	\$383,000
5.	Traffic Items	\$122,000
6.	Minor Items	\$152,000
7.	Mobilization	\$167,000
8.	Bridge Items	\$0
9.	Contingency	20% \$368,000
Estimated Total Construction Costs		\$2,207,000

SUMMARY OF ENGINEERING AND RIGHT-OF-WAY COSTS

Item	Description	Estimated Total
10.	Right of Way Items	\$20,000
11.	Design Engineering	12% \$265,000
12.	Const. Engineering	14% \$309,000
13.	Environmental Process	7% \$154,000
14.	Project Management	3% \$66,000
15.	ROW Contingency	20% \$4,000
Estimated Total Engineering and Right-of-Way Cost		\$818,000

Total Estimated Project Cost (rounded to three significant figures):	\$3,030,000
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**2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate**

PROJECT INFORMATION	Quantity	Unit	Notes
Average Width of Roadway	24	FT	
Length of Pavement	1,800	FT	
Estimated Depth of AC	0.25	FT	
Estimated Depth of Class II Base	1.33	FT	
Total Square Feet for Roadway	43,200	SF	
Average Depth of Excavation	1.58	FT	
Average Depth of Imported Borrow	2.00	FT	

1. EARTHWORK ITEMS	Quantity	Unit	Unit Price	Total	Notes
Roadway Excavation	2,533	CY	\$50.00	\$126,672	
Imported Borrow	3,200	CY	\$35.00	\$112,000	
Clearing and Grubbing		10%	of earthwork	\$23,867	
Estimated Total for Earthwork Items				\$262,539	

2. STRUCTURAL SECTION	Quantity	Unit	Unit Price	Total	Notes
Bus Stops	2	EA	\$15,000.00	\$30,000	
Asphalt Concrete	756	TON	\$120.00	\$90,720	
Aggregate Base	2,133	CY	\$40.00	\$85,338	
Road Oil	13	TON	\$500.00	\$6,299	
Sawcut AC	7,200	LF	\$2.35	\$16,920	
Remove AC	21,600	SF	\$5.00	\$108,000	
Slurry Seal	14,000	SY	\$2.00	\$28,000	
Sidewalk	10,800	SF	\$11.00	\$118,800	6 foot wide
Curb and Gutter	7,200	LF	\$30.00	\$216,000	
Driveway					
Estimated Total for Structural Section				\$700,076	

3. DRAINAGE ITEMS	Quantity	Unit	Unit Price	Total	Notes
Storm Drain 18"	50	LF	\$314.00	\$15,700	
Storm Drain 24"					
Storm Drain 36"					
Drop Inlets	2	EA	\$8,000.00	\$16,000	
Other Drainage	1	LS	\$20,000.00	\$20,000	
Estimated Total for Drainage Items				\$51,700	

**2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate**

4. SPECIALTY ITEMS	Quantity	Unit	Unit Price	Total	Notes
Retaining Walls (simple)					
Ret. Walls (complex)					
Fence					
Erosion Control	2.00	ACRE	\$2,500.00	\$5,000	
Metal Beam Guard Rail					
Hazardous Waste					
Wetlands Mitigation	10,800	SF	\$35.00	\$378,000	
Estimated Total for Specialty Items				\$383,000	

5. TRAFFIC ITEMS	Quantity	Unit	Unit Price	Total	Notes
Lighting	12	EA	\$6,000.00	\$72,000	
New Traffic Signal (major)					
New Traffic Signal (minor)					
Modify Traffic Signal					
Modify Traffic Signal					
Traffic Control	1	LS	\$50,000	\$50,000	
Estimated Total for Traffic Items				\$122,000	

6. MINOR ITEMS					
Various Minor Items		10.0%	of items 1-5,8	\$151,932	
Estimated Total for Minor Items				\$151,932	

7. MOBILIZATION					
Mobilization, Bonds and Insurance		10.0%	of items 1-6,8	\$167,125	
Estimated Total for Mobilization				\$167,125	

**2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate**

8. BRIDGE ITEMS	
Structure Type	
Width (FT)	
Span Length (FT)	
Total Area (SF)	
Footing Type (pile/spread)	
Cost per Square Foot	
Bridge Sub-Total	
Railroad Related Items	

Estimated Total for Bridge Items

10. RIGHT-OF-WAY	Quantity	Unit	Unit Price	Total	Notes
Right of Way Agent					
Right of Way Residential					
Right of Way Commercial					
<hr/>					
Subtotal for Right of Way Acquisition					
Utility Relocation	1	LS	\$20,000.00	\$20,000	
Demolition Clearance					
Title and Escrow Fees					
Estimated Total for Right of Way				\$20,000	

2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate A - Updated May - 2012

Storke Road	GTIP No.	R-12A
Phelps Road to WHITTIER DRIVE - SECTION A		

Project elements include:

- Widen EAST side of Storke Road from Phelps Road to 125 FEET SOUTH WHITTIER DRIVE TO PROVIDE ONE ADDITIONAL NORTHBOUND LANE (680 feet total)
- MEDIAN ALREADY IN PLACE
- Sidewalk on east side of Storke Road adjacent to road ALREADY CONSTRUCTED
- Sidewalk on west side ADJACENT TO ROAD ALREADY CONSTRUCTED.

Prepared By: Bruce Burnworth, Penfield & Smith

Date: July 26, 2007

SUMMARY OF CONSTRUCTION COST

Item	Description	Estimated Total
1.	Earthwork Items	\$50,000
2.	Structural Section	\$67,000
3.	Drainage Items	\$0
4.	Specialty Items	\$3,000
5.	Traffic Items	\$37,000
6.	Minor Items	\$16,000
7.	Mobilization	\$17,000
8.	Bridge Items	\$0
9.	Contingency	20% \$38,000
Estimated Total Construction Costs		\$228,000

SUMMARY OF ENGINEERING AND RIGHT-OF-WAY COSTS

Item	Description	Estimated Total
10.	Right of Way Items	\$0
11.	Design Engineering	12% \$27,000
12.	Const. Engineering	14% \$32,000
13.	Environmental Process	7% \$16,000
14.	Project Management	3% \$7,000
15.	ROW Contingency	20% \$0
Estimated Total Engineering and Right-of-Way Cost		\$82,000

Total Estimated Project Cost (rounded to three significant figures):	\$310,000
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2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate A - Updated May - 2012

PROJECT INFORMATION	Quantity	Unit	Notes
Average Width of Roadway	12	FT	
Length of Pavement	680	FT	
Estimated Depth of AC	0.25	FT	
Estimated Depth of Class II Base	1.33	FT	
Total Square Feet for Roadway	8,160	SF	
Average Depth of Excavation	1.58	FT	
Average Depth of Imported Borrow	2.00	FT	

1. EARTHWORK ITEMS	Quantity	Unit	Unit Price	Total	Notes
Roadway Excavation	479	CY	\$50.00	\$23,927	
Imported Borrow	604	CY	\$35.00	\$21,156	
Clearing and Grubbing		10%	of earthwork	\$4,508	
Estimated Total for Earthwork Items				\$49,591	

2. STRUCTURAL SECTION	Quantity	Unit	Unit Price	Total	Notes
Bus Stops					
Asphalt Concrete	143	TON	\$120.00	\$17,136	
Aggregate Base	403	CY	\$40.00	\$16,119	
Road Oil	2	TON	\$500.00	\$1,190	
Sawcut AC	680	LF	\$2.35	\$1,598	
Remove AC		SF			<i>None required</i>
Slurry Seal	5,289	SY	\$2.00	\$10,578	
Sidewalk					<i>Present</i>
Curb and Gutter	680	LF	\$30.00	\$20,400	<i>680' 1 side</i>
Driveway					
Estimated Total for Structural Section				\$67,021	

3. DRAINAGE ITEMS	Quantity	Unit	Unit Price	Total	Notes
Storm Drain 18"					
Storm Drain 24"					
Storm Drain 36"					
Drop Inlets					
Other Drainage					
Estimated Total for Drainage Items					

2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate A - Updated May - 2012

4. SPECIALTY ITEMS	Quantity	Unit	Unit Price	Total	Notes
Retaining Walls (simple)					
Ret. Walls (complex)					
Fence					
Erosion Control	1.00	ACRE	\$2,500.00	\$2,500	
Metal Beam Guard Rail					
Hazardous Waste					
Wetlands Mitigation		SF	\$35.00		
Estimated Total for Specialty Items				\$2,500	

5. TRAFFIC ITEMS	Quantity	Unit	Unit Price	Total	Notes
Lighting	2	EA	\$6,000.00	\$12,000	
New Traffic Signal (major)					
New Traffic Signal (minor)					
Modify Traffic Signal					
Modify Traffic Signal					
Traffic Control	1	LS	\$25,000	\$25,000	
Estimated Total for Traffic Items				\$37,000	

6. MINOR ITEMS					
Various Minor Items		10.0%	of items 1-5,8	\$15,611	
Estimated Total for Minor Items				\$15,611	

7. MOBILIZATION					
Mobilization, Bonds and Insurance		10.0%	of items 1-6,8	\$17,172	
Estimated Total for Mobilization				\$17,172	

2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate A - Updated May - 2012

8. BRIDGE ITEMS	
Structure Type	
Width (FT)	
Span Length (FT)	
Total Area (SF)	
Footing Type (pile/spread)	
Cost per Square Foot	
Bridge Sub-Total	
Railroad Related Items	

Estimated Total for Bridge Items

10. RIGHT-OF-WAY	Quantity	Unit	Unit Price	Total	Notes
Right of Way Agent					
Right of Way Residential					
Right of Way Commercial					
<hr/>					
Subtotal for Right of Way Acquisition					
Utility Relocation					
Demolition Clearance					
Title and Escrow Fees					

Estimated Total for Right of Way

2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate B - Updated May - 2012

Storke Road	GTIP No.	R-12B
Phelps Road to Southern City Limits		

Project elements include:

- Widen both sides of Storke Road from WHITTIER DRIVE TO southern City limits to provide for two lanes in each directions, left turn lanes at intersections, bike lanes, and a sidewalk on the both sides..
- Reduce width of planted median.
- Reduce width of existing travel lanes.
- Sidewalk on eastside of Storke Road adjacent to road
- Sidewalk on west side separated from road.

Prepared By: Bruce Burnworth, Penfield & Smith

Date: July 26, 2007

SUMMARY OF CONSTRUCTION COST

Item	Description	Estimated Total
1.	Earthwork Items	\$150,000
2.	Structural Section	\$412,000
3.	Drainage Items	\$52,000
4.	Specialty Items	\$381,000
5.	Traffic Items	\$73,000
6.	Minor Items	\$107,000
7.	Mobilization	\$117,000
8.	Bridge Items	\$0
9.	Contingency	20% \$258,000
Estimated Total Construction Costs		\$1,550,000

SUMMARY OF ENGINEERING AND RIGHT-OF-WAY COSTS

Item	Description	Estimated Total
10.	Right of Way Items	\$20,000
11.	Design Engineering	12% \$186,000
12.	Const. Engineering	14% \$217,000
13.	Environmental Process	7% \$109,000
14.	Project Management	3% \$47,000
15.	ROW Contingency	20% \$4,000
Estimated Total Engineering and Right-of-Way Cost		\$583,000

Total Estimated Project Cost (rounded to three significant figures):	\$2,130,000
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2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate B - Updated May - 2012

PROJECT INFORMATION	Quantity	Unit	Notes
Average Width of Roadway	24	FT	
Length of Pavement	1,025	FT	970 East 1080 West
Estimated Depth of AC	0.25	FT	
Estimated Depth of Class II Base	1.33	FT	
Total Square Feet for Roadway	24,600	SF	
Average Depth of Excavation	1.58	FT	
Average Depth of Imported Borrow	2.00	FT	

1. EARTHWORK ITEMS	Quantity	Unit	Unit Price	Total	Notes
Roadway Excavation	1,443	CY	\$50.00	\$72,133	
Imported Borrow	1,822	CY	\$35.00	\$63,778	
Clearing and Grubbing		10%	of earthwork	\$13,591	
Estimated Total for Earthwork Items				\$149,501	

2. STRUCTURAL SECTION	Quantity	Unit	Unit Price	Total	Notes
Bus Stops	2	EA	\$15,000.00	\$30,000	
Asphalt Concrete	431	TON	\$120.00	\$51,660	
Aggregate Base	1,215	CY	\$40.00	\$48,595	
Road Oil	7	TON	\$500.00	\$3,587	
Sawcut AC	4,100	LF	\$2.35	\$9,635	
Remove AC	12,300	SF	\$5.00	\$61,500	
Slurry Seal	7,972	SY	\$2.00	\$15,944	
Sidewalk	6,150	SF	\$11.00	\$67,650	6 foot wide
Curb and Gutter	4,100	LF	\$30.00	\$123,000	1025 x 4
Driveway					
Estimated Total for Structural Section				\$411,571	

3. DRAINAGE ITEMS	Quantity	Unit	Unit Price	Total	Notes
Storm Drain 18"	50	LF	\$314.00	\$15,700	
Storm Drain 24"					
Storm Drain 36"					
Drop Inlets	2	EA	\$8,000.00	\$16,000	
Other Drainage	1	LS	\$20,000.00	\$20,000	
Estimated Total for Drainage Items				\$51,700	

**2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate B - Updated May - 2012**

4. SPECIALTY ITEMS	Quantity	Unit	Unit Price	Total	Notes
Retaining Walls (simple)					
Ret. Walls (complex)					
Fence					
Erosion Control	1.00	ACRE	\$2,500.00	\$2,500	
Metal Beam Guard Rail					
Hazardous Waste					
Wetlands Mitigation	10,800	SF	\$35.00	\$378,000	
Estimated Total for Specialty Items				\$380,500	

5. TRAFFIC ITEMS	Quantity	Unit	Unit Price	Total	Notes
Lighting	8	EA	\$6,000.00	\$48,000	
New Traffic Signal (major)					
New Traffic Signal (minor)					
Modify Traffic Signal					
Modify Traffic Signal					
Traffic Control	1	LS	\$25,000	\$25,000	
Estimated Total for Traffic Items				\$73,000	

6. MINOR ITEMS					
Various Minor Items		10.0%	of items 1-5,8	\$106,627	
Estimated Total for Minor Items				\$106,627	

7. MOBILIZATION					
Mobilization, Bonds and Insurance		10.0%	of items 1-6,8	\$117,290	
Estimated Total for Mobilization				\$117,290	

2007 GTIP COST ESTIMATE
R12 Storke Road cost estimate B - Updated May - 2012

8. BRIDGE ITEMS	
Structure Type	
Width (FT)	
Span Length (FT)	
Total Area (SF)	
Footing Type (pile/spread)	
Cost per Square Foot	
Bridge Sub-Total	
Railroad Related Items	

Estimated Total for Bridge Items

10. RIGHT-OF-WAY	Quantity	Unit	Unit Price	Total	Notes
Right of Way Agent					
Right of Way Residential					
Right of Way Commercial					
<hr/>					
Subtotal for Right of Way Acquisition					
Utility Relocation	1	LS	\$20,000.00	\$20,000	
Demolition Clearance					
Title and Escrow Fees					
<hr/>					
Estimated Total for Right of Way				\$20,000	

#05012 WESTAR MIXED-USE PROJECT

REF: 02AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: **NOVEMBER 3, 2009**

TIME PERIOD: **A.M. PEAK HOUR** RESIDENTIAL TRIPS ONLY

N/S STREET: **STORKE ROAD**

E/W STREET: **U.S. SB 101 RAMPS**

CONTROL TYPE: **SIGNAL**

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	326	811	831	1067	0	15	2	168	0	0	0
(B) RESIDENTIAL-ADDED	0	12	63	0	17	0	0	0	1	0	0	0
(C) CUMULATIVE	0	334	939	923	1051	0	22	3	284	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	TT	R	LL	TT	LT	R		

TRAFFIC SCENARIOS

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

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	0	0	0	0	-	-	-	-		
NBT	2	3200	326	338	334	346	0.102	0.106	0.104	0.108		
NBR (a)	1	1600	633	682	732	782	0.396 *	0.426 *	0.458 *	0.489 *		
SBL	2	3200	831	831	923	923	0.260 *	0.260 *	0.288 *	0.288 *		
SBT	2	3200	1067	1084	1051	1068	0.333	0.339	0.328	0.334		
SBR	0	0	0	0	0	0	-	-	-	-		
EBL	0	0	15	15	22	22	-	-	-	-		
EBT	1	1600	2	2	3	3	0.011	0.011	0.016	0.016		
EBR (b)	1	1600	44	44	74	74	0.028 *	0.028 *	0.046 *	0.046 *		
WBL	0	0	0	0	0	0	-	-	-	-		
WBT	0	0	0	0	0	0	-	-	-	-		
WBR	0	0	0	0	0	0	-	-	-	-		
LOST TIME:							0.100 *	0.100 *	0.100 *	0.100 *		
TOTAL INTERSECTION CAPACITY UTILIZATION:							0.784	0.814	0.892	0.923		
SCENARIO LEVEL OF SERVICE:							C	D	D	E		

NOTES:

RTOR: (a) 22%
(b) 74%

#05012 WESTAR MIXED-USE PROJECT

REF: 02AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: **NOVEMBER 3, 2009**

TIME PERIOD: **A.M. PEAK HOUR**

N/S STREET: **STORKE ROAD**

66% RESIDENTIAL ONLY

E/W STREET: **U.S. SB 101 RAMPS**

CONTROL TYPE: **SIGNAL**

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	326	811	831	1067	0	15	2	168	0	0	0
(B) PROJECT-ADDED	0	8	43	0	11	0	0	0	0	0	0	0
(C) CUMULATIVE	0	334	939	923	1051	0	22	3	284	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	TT	R	LL	TT	LT	R		

TRAFFIC SCENARIOS

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

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	0	0	0	0	-	-	-	-		
NBT	2	3200	326	334	334	342	0.102	0.104	0.104	0.107		
NBR (a)	1	1600	633	666	732	766	0.396 *	0.416 *	0.458 *	0.479 *		
SBL	2	3200	831	831	923	923	0.260 *	0.260 *	0.288 *	0.288 *		
SBT	2	3200	1067	1078	1051	1062	0.333	0.337	0.328	0.332		
SBR	0	0	0	0	0	0	-	-	-	-		
EBL	0	0	15	15	22	22	-	-	-	-		
EBT	1	1600	2	2	3	3	0.011	0.011	0.016	0.016		
EBR (b)	1	1600	44	44	74	74	0.028 *	0.028 *	0.046 *	0.046 *		
WBL	0	0	0	0	0	0	-	-	-	-		
WBT	0	0	0	0	0	0	-	-	-	-		
WBR	0	0	0	0	0	0	-	-	-	-		
LOST TIME:							0.100 *	0.100 *	0.100 *	0.100 *		
TOTAL INTERSECTION CAPACITY UTILIZATION:							0.784	0.804	0.892	0.913		
SCENARIO LEVEL OF SERVICE:							C	C	D	E		

NOTES:

RTOR: (a) 22%
(b) 74%

#05012 WESTAR MIXED-USE PROJECT

REF: 02AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: **NOVEMBER 3, 2009**

TIME PERIOD: **A.M. PEAK HOUR**

RETAIL TRIPS ONLY

N/S STREET: **STORKE ROAD**

E/W STREET: **U.S. SB 101 RAMPS**

CONTROL TYPE: **SIGNAL**

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	326	811	831	1067	0	15	2	168	0	0	0
(B) RETAIL-ADDED	0	5	24	0	42	0	0	0	4	0	0	0
(C) CUMULATIVE	0	334	939	923	1051	0	22	3	284	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	TT	R	LL	TT	LT	R		

TRAFFIC SCENARIOS

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

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	0	0	0	0	-	-	-	-		
NBT	2	3200	326	331	334	339	0.102	0.103	0.104	0.106		
NBR (a)	1	1600	633	651	732	751	0.396 *	0.407 *	0.458 *	0.469 *		
SBL	2	3200	831	831	923	923	0.260 *	0.260 *	0.288 *	0.288 *		
SBT	2	3200	1067	1109	1051	1093	0.333	0.347	0.328	0.342		
SBR	0	0	0	0	0	0	-	-	-	-		
EBL	0	0	15	15	22	22	-	-	-	-		
EBT	1	1600	2	2	3	3	0.011	0.011	0.016	0.016		
EBR (b)	1	1600	44	45	74	75	0.028 *	0.028 *	0.046 *	0.047 *		
WBL	0	0	0	0	0	0	-	-	-	-		
WBT	0	0	0	0	0	0	-	-	-	-		
WBR	0	0	0	0	0	0	-	-	-	-		
<i>LOST TIME:</i>							0.100 *	0.100 *	0.100 *	0.100 *		
TOTAL INTERSECTION CAPACITY UTILIZATION:							0.784	0.795	0.892	0.904		
SCENARIO LEVEL OF SERVICE:							C	C	D	D		

NOTES:

- RTOR: (a) 22%
- (b) 74%

STREET NETWORK IMPROVEMENTS PLANNED BY THE APPLICANT

Several street network improvements are planned by the applicant to enhance access and circulation in the vicinity of the site. The following text provides a summary of each of the improvements. These street network improvements are assumed to be in place for the Existing + Project and Cumulative + Project scenarios.

Hollister Avenue/Marketplace Drive. Primary access is proposed via a new connection to the Hollister Avenue/Marketplace Drive intersection, which is presently a "T" intersection controlled by traffic signals. The project's main access driveway would form the north leg of the intersection, resulting in a conventional four-leg intersection. The new leg would contain 1 left-turn lane and 1 shared left + thru + right-turn lane for traffic outbound from the site plus two inbound lanes. Hollister Avenue would be widened along the project's frontage to provide an eastbound left-turn lane and a westbound right-turn lane for traffic inbound to the site. The northbound approach (outbound from Camino Real) would be restriped to provide 1 shared left-thru lane and 1 right-turn lane. The northbound right-turn lane is currently served by an overlap arrow so that the right-turns proceed concurrently with the westbound Hollister left-turn movement. This overlap would be retained as part of the project; thus, westbound Hollister Avenue U-turns would continue to be prohibited.

Hollister Avenue/Glen Annie Road. The applicant is proposing to improve operations at this intersection pursuant to City of Goleta plans. Full access is currently provided at the intersection and the intersection is controlled by a stop sign on the Glen Annie Road approach. Improvements were previously planned by the County (Goleta Transportation Improvement Plan - GTIP) prior to Goleta incorporation and those improvements were incorporated into the City's GTIP after incorporation. According to the GTIP, there will not be enough gaps in Hollister Avenue traffic for turning left from southbound Glen Annie Road as traffic volumes continue to rise on Hollister Avenue. The GTIP recommendations include construction of a new roadway north of Hollister Avenue to connect to the north leg of the Hollister Avenue/Marketplace Drive intersection to provide an alternative to using the Hollister Avenue/Glen Annie Road intersection. This roadway extension is planned as part of the Goleta Mixed-Use Village Project. The project also includes installing a traffic signal and crosswalks at this intersection. The proposed improvements would accommodate the southbound left-turns onto Hollister Avenue and allow pedestrians to safely cross the street. Figure 7 shows the conceptual design for the intersection.

Figure 7 Hollister Avenue/Glen Annie Road - Concept Median and Signal Plan

Table 7
Existing + Project A.M. Peak Hour Levels of Service

Intersection	Existing		Existing + Project		Project-Added Trips	V/C Change	Impact?
	ICU	LOS	ICU	LOS			
U.S. 101 NB Ramps/Storke Road	0.71	LOS C	0.72	LOS C	78	0.013	No
U.S. 101 SB Ramps/Storke Road	0.78	LOS C	0.83	LOS D	172	0.043	Yes
Hollister Avenue/Pacific Oaks Drive	0.41	LOS A	0.42 2	LOS A	20	0.003	No
Hollister Avenue/Santa Felicia Drive(a)	11.8 sec.	LOS B	11.9	LOS B	20	N/A	No
Hollister Avenue/Marketplace Drive(b)	0.44	LOS A	0.48	LOS A	200	0.04	No
Hollister Avenue/Glen Annie Road (a) (b) (c)	14.9 sec.	LOS B	0.36	LOS A	239	N/A	No
Hollister Avenue/Storke Road	0.61	LOS B	0.65	LOS B	239	0.039	No
Marketplace Drive/Storke Road	0.35	LOS A	0.36	LOS A	28	0.005	No
U.S. 101 NB Ramps/Los Carneros Road	0.54	LOS A	0.55	LOS A	16	0.002	No
U.S. 101 SB Ramps/Los Carneros Road	0.52	LOS A	0.53	LOS A	19	0.002	No
Hollister Avenue/Los Carneros Road	0.42	LOS A	0.42	LOS A	43	0.003	No

Bolded values exceed City's LOS C standard.

(a) Unsignalized Intersection. LOS based on average weighted control delay per vehicle in seconds.

(b) Existing + Project LOS assume Goleta Mixed-Use Village Project improvements.

(c) Existing LOS assume unsignalized intersection. Existing + Project LOS assumes signalized intersection as part of the Goleta Mixed-Use Village Project programmed improvements.

Table 8
Existing + Project P.M. Peak Hour Levels of Service

Intersection	Existing		Existing + Project		Project-Added Trips	V/C Change	Impact?
	ICU	LOS	ICU	LOS			
U.S. 101 NB Ramps/Storke Road	0.69	LOS B	0.72	LOS C	145	0.027	No
U.S. 101 SB Ramps/Storke Road	0.76	LOS C	0.80	LOS C	249	0.048	No
Hollister Avenue/Pacific Oaks Drive	0.47	LOS A	0.48	LOS A	39	0.006	No
Hollister Avenue/Santa Felicia Drive(a)	17.3 sec.	LOS C	17.8 sec.	LOS C	39	N/A	No
Hollister Avenue/Marketplace Drive(b)	0.54	LOS A	0.59	LOS A	405	0.054	No
Hollister Avenue/Glen Annie Road (a) (b) (c)	24.2 sec.	LOS C	0.68	LOS B	446	N/A	No
Hollister Avenue/Storke Road	0.74	LOS C	0.77	LOS C	381	0.065	No
Marketplace Drive/Storke Road	0.53	LOS A	0.54	LOS A	61	0.011	No
U.S. 101 NB Ramps/Los Carneros Road	0.53	LOS A	0.54	LOS A	27	0.005	No
U.S. 101 SB Ramps/Los Carneros Road	0.78	LOS C	0.78	LOS C	30	0.002	No
Hollister Avenue/Los Carneros Road	0.67	LOS B	0.69	LOS B	71	0.012	No

Bolded values exceed City's LOS C standard.

(a) Unsignalized Intersection. LOS based on average weighted control delay per vehicle in seconds.

(b) Existing + Project LOS assume Goleta Mixed-Use Village Project improvements.

(c) Existing LOS assume unsignalized intersection. Existing + Project LOS assumes signalized intersection as part of the Goleta Mixed-Use Village Project programmed improvements.

Intersection Impacts

Tables 15 and 16 compare the Cumulative and the Cumulative + Project levels of service for the study-area intersections and identify cumulative impacts based on City thresholds. It is noted that the Cumulative + Project level of service forecasts assume the improvements planned as part of the Goleta Mixed-Use Village Project (modifications to Hollister Avenue/Marketplace Drive and Hollister Avenue/Glen Annie Road).

Table 15
Cumulative and Cumulative + Project A.M. Peak Hour Levels of Service

Intersection	Cumulative		Cumulative + Project		Change in V/C	Impact?
	ICU	LOS	ICU	LOS		
U.S. 101 NB Ramps/Storke Road	0.73	LOS C	0.75	LOS C	0.013	No
U.S. 101 SB Ramps/Storke Road	0.89	LOS D	0.94	LOS E	0.044	Yes
Hollister Avenue/Pacific Oaks Drive	0.50	LOS A	0.50	LOS A	0.003	No
Hollister Avenue/Santa Felicia Drive(a)	16.7 sec.	LOS C	17.0 sec.	LOS C	N/A	No
Hollister Avenue/Marketplace Drive(b)	0.44	LOS A	0.48	LOS A	0.04	No
Hollister Avenue/Glen Annie Road (a)(b) (c)	0.35	LOS A	0.40	LOS A	0.059	No
Hollister Avenue/Storke Road	0.71	LOS B	0.74	LOS C	0.023	No
Marketplace Drive/Storke Road	0.39	LOS A	0.39	LOS A	0.004	No
U.S. 101 NB Ramps/Los Carneros Road	0.65	LOS B	0.65	LOS B	0.003	No
U.S. 101 SB Ramps/Los Carneros Road	0.66	LOS B	0.67	LOS B	0.003	No
Hollister Avenue/Los Carneros Road	0.48	LOS A	0.48	LOS A	0.004	No

Bolded values exceed LOS C standard.

- (a) Unsignalized Intersection. LOS based on average weighted control delay per vehicle in seconds.
- (b) Cumulative + Project LOS assume Goleta Mixed-Use Village Project improvements.
- (c) Cumulative LOS assumes signalized intersection as part of the Goleta Mixed-Use Village Project improvements.

The data presented in Table 15 show that the Goleta Mixed-Use Village Project would generate a significant cumulative impact at the U.S. Highway 101 SB Ramps/Storke Road intersection during the A.M. peak period. Improvement recommendations are presented below in the Mitigation Measures section.

Table 16
Cumulative and Cumulative + Project P.M. Peak Hour Levels of Service

Intersection	Cumulative		Cumulative + Project		Change in V/C	Impact?
	ICU	LOS	ICU	LOS		
U.S. 101 NB Ramps/Storke Road	0.72	LOS C	0.75	LOS C	0.027	No
U.S. 101 SB Ramps/Storke Road	0.84	LOS D	0.89	LOS D	0.048	Yes
Hollister Avenue/Pacific Oaks Drive	0.50 0.48	LOS A	0.50 0.48	LOS A	0.006	No
Hollister Avenue/Santa Felicia Drive(a)	17.5 sec.	LOS C	17.9 sec.	LOS C	N/A	No
Hollister Avenue/Marketplace Drive(b)	0.54	LOS A	0.59	LOS A	0.055	No
Hollister Avenue/Glen Annie Road(a)(b)	0.57	LOS A	0.69	LOS B	0.118	No
Hollister Avenue/Storke Road	0.87	LOS D	0.92	LOS E	0.047	Yes
Marketplace Drive/Storke Road	0.64	LOS B	0.65	LOS B	0.011	No
U.S. 101 NB Ramps/Los Carneros Road	0.65	LOS B	0.65	LOS B	0.006	No
U.S. 101 SB Ramps/Los Carneros Road	1.00	LOS E	1.00	LOS E	0.002	No
Hollister Avenue/Los Carneros Road	0.80	LOS C	0.81	LOS D	0.012	No

Bolded values exceed LOS C standard.

(a) Unsignalized Intersection. LOS based on average weighted control delay per vehicle in seconds.

(b) Cumulative + Project LOS assume Goleta Mixed-Use Village Project improvements.

(c) Cumulative LOS assumes signalized intersection as part of the Goleta Mixed-Use Village Project improvements.

The data presented in Table 16 show that the Goleta Mixed-Use Village Project would generate significant cumulative impacts at the U.S. Highway 101 SB Ramps/Storke Road intersection and at the Hollister Avenue/Storke Road intersection during the P.M. peak period. Improvement recommendations are presented below in the Mitigation Measures section.

MITIGATION MEASURES

Project-Specific Measures

Storke Road north of Hollister Avenue. The Goleta Mixed-Use Village Project would generate a significant impact to the segment of Storke Road north of Hollister Avenue based on the City's Acceptable Capacity standard. The City is planning to implement a new northbound lane on Storke Road that would extend from Hollister Avenue to the existing right-turn lane that serves the U.S. Highway 101 Southbound On-Ramp at the Storke Road interchange (see Figure 22). The new northbound lane would serve as an acceptor lane and would allow the westbound right-turns from Hollister Avenue onto Storke Road to become a free movement.

The planned improvement has been adopted as a condition of approval for several approved developments in the study-area (Cabrillo Business Park, Rincon Palms Hotel, etc.). If the lane

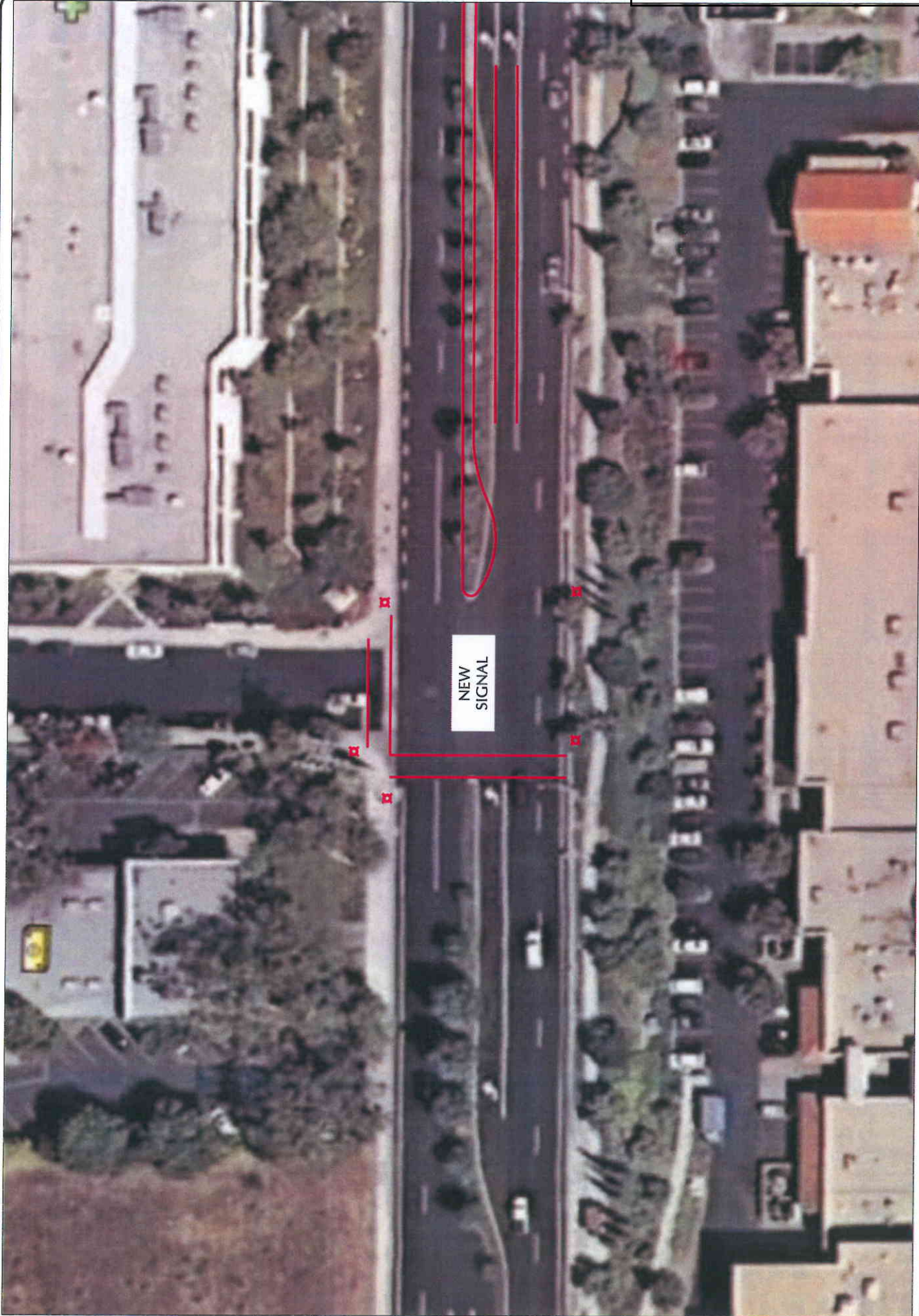


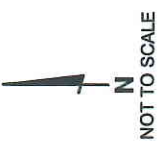
FIGURE 7

JSL-#05012

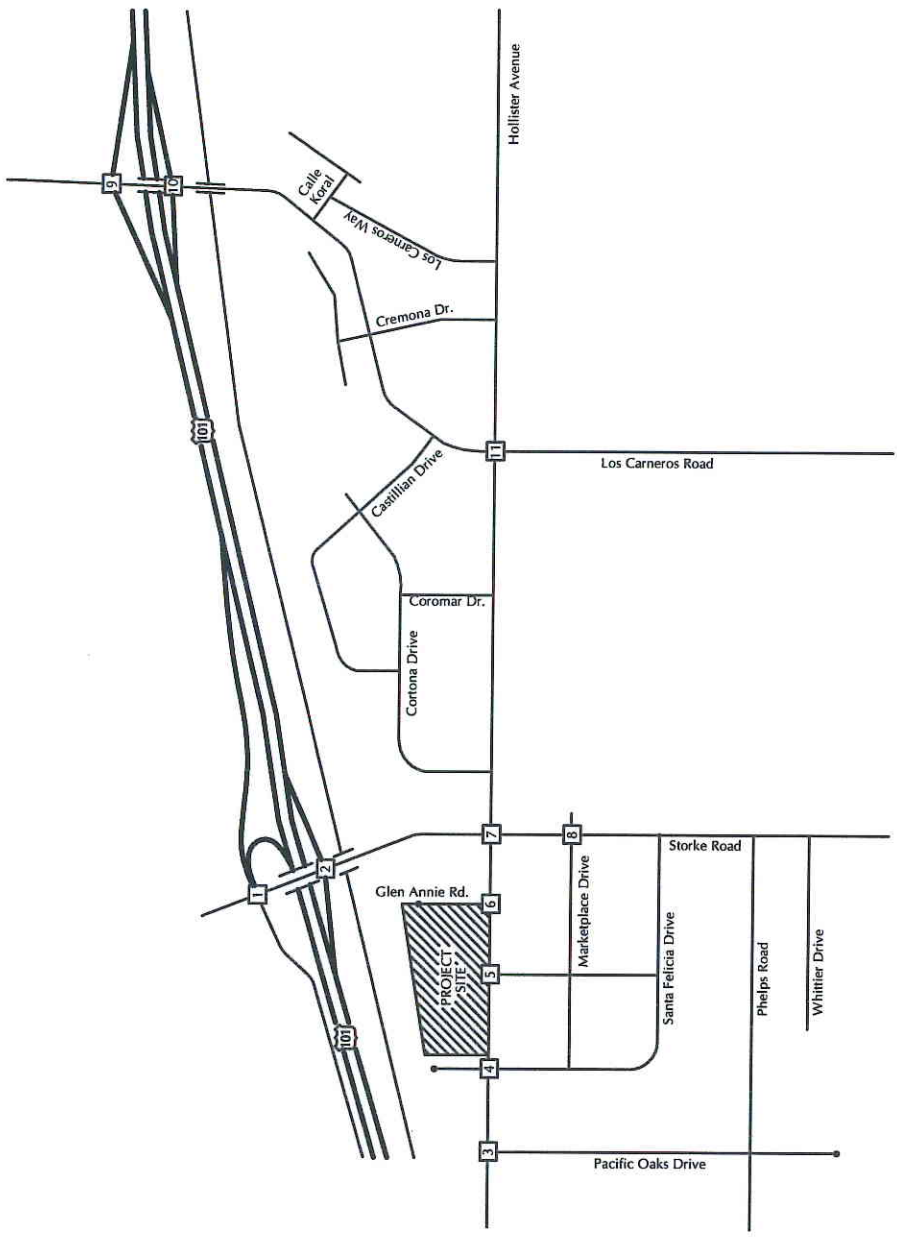
HOLLISTER AVENUE/GLEN ANNIE ROAD - CONCEPT MEDIAN AND SIGNAL PLAN

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1	5	56	8	9
2	61	5	89	17



9	5	3	8
10	8	3	8
11	8	8	4

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LEGEND

XX - A.M. Peak Hour Volume

3	9	11
4	9	11
5	96	14
6	47	27
7	64	20
8	16	12



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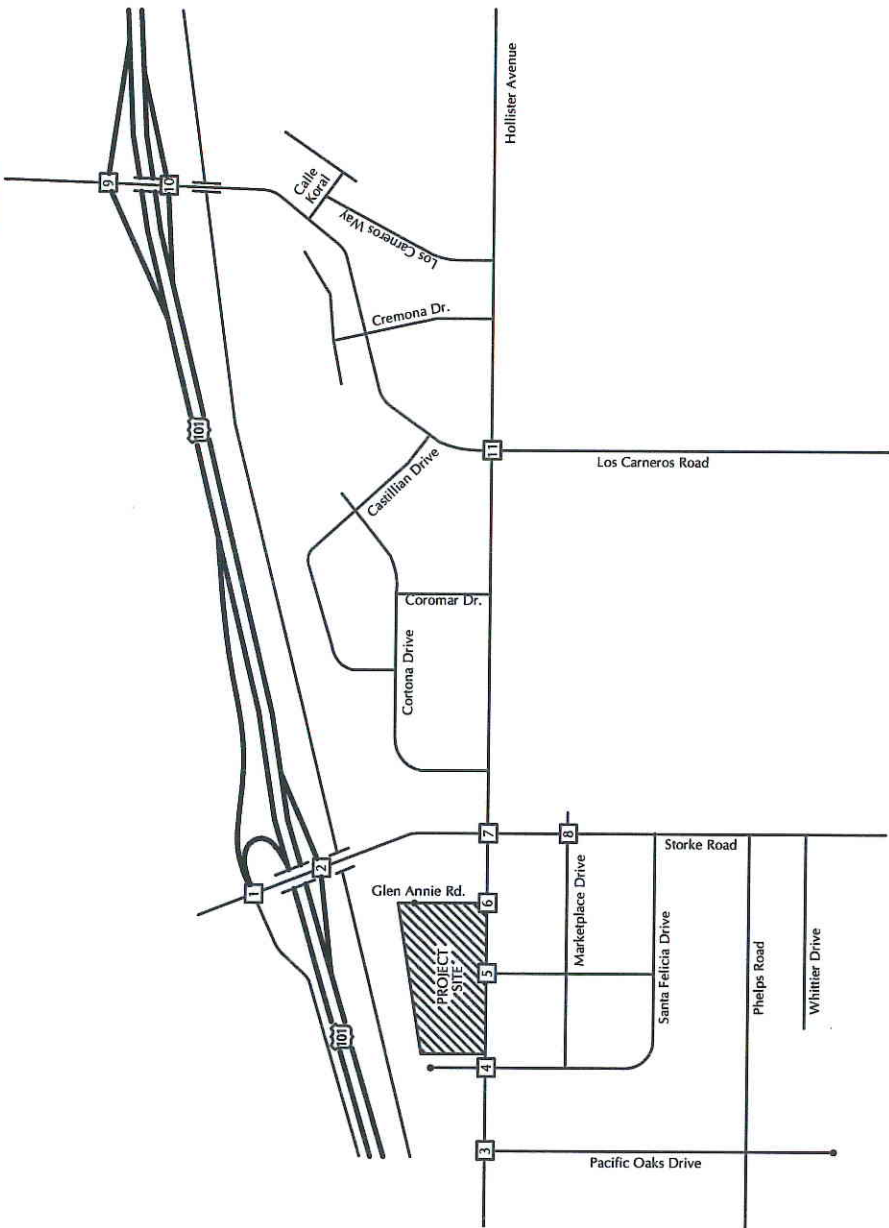
PROJECT-ADDED A.M. PEAK HOUR VOLUMES

FIGURE 10

MMF - #05012



1	12	113	10	10
2	125	12	92	20



9	12	5	10
10	17	3	10
11	17	15	6
		13	14
			6

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Parking Study

LEGEND

XX - P.M. Peak Hour Volume

3	20	19	
4	20	19	
5	146	11	183
	46	47	15
		27	14
6	72	4	60
			164
7	151	14	38
		122	25
		33	10
		36	
8	36		25

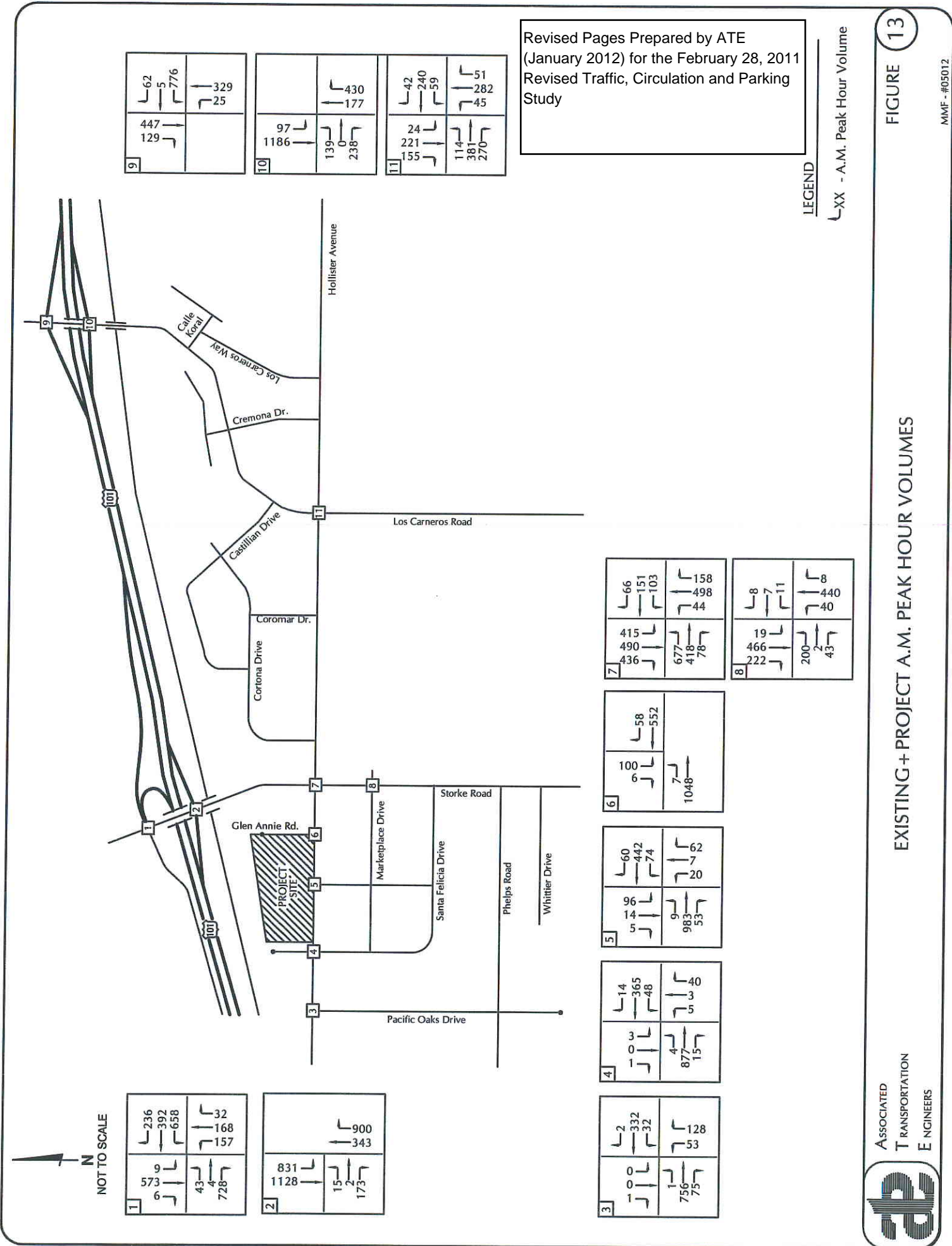


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PROJECT-ADDED P.M. PEAK HOUR VOLUMES

FIGURE 11

MMF - #05012



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 Study

LEGEND

XX - A.M. Peak Hour Volume

FIGURE 13

EXISTING+PROJECT A.M. PEAK HOUR VOLUMES

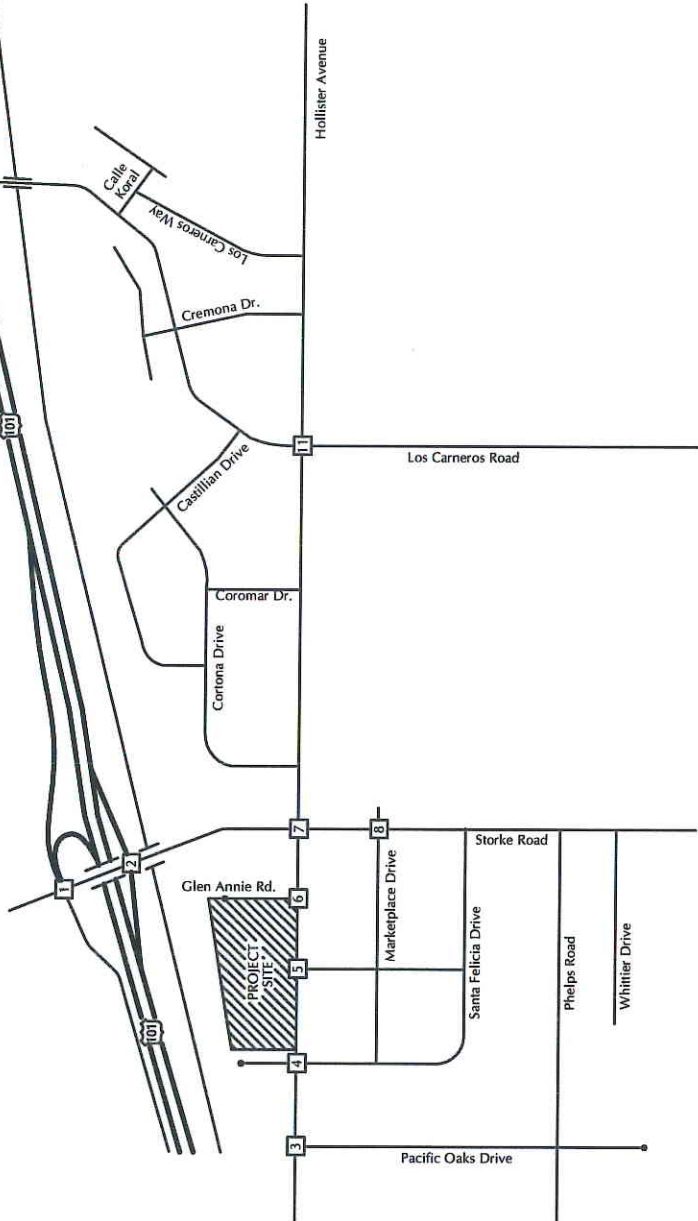
MMF - #05012



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1	<table border="1"> <tr><td>155</td><td>170</td></tr> <tr><td>423</td><td>242</td></tr> <tr><td>1134</td><td>299</td></tr> </table>	155	170	423	242	1134	299	<table border="1"> <tr><td>1162</td></tr> <tr><td>698</td></tr> </table>	1162	698		
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320	0											
12	55											
321	0											
1463	0											



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452														
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787														
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35	89													
571	595													
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480	354													
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LEGEND

XX - P.M. Peak Hour Volume

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836	625													
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43	554													
75	169													
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394	80													



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EXISTING+PROJECT P.M. PEAK HOUR VOLUMES

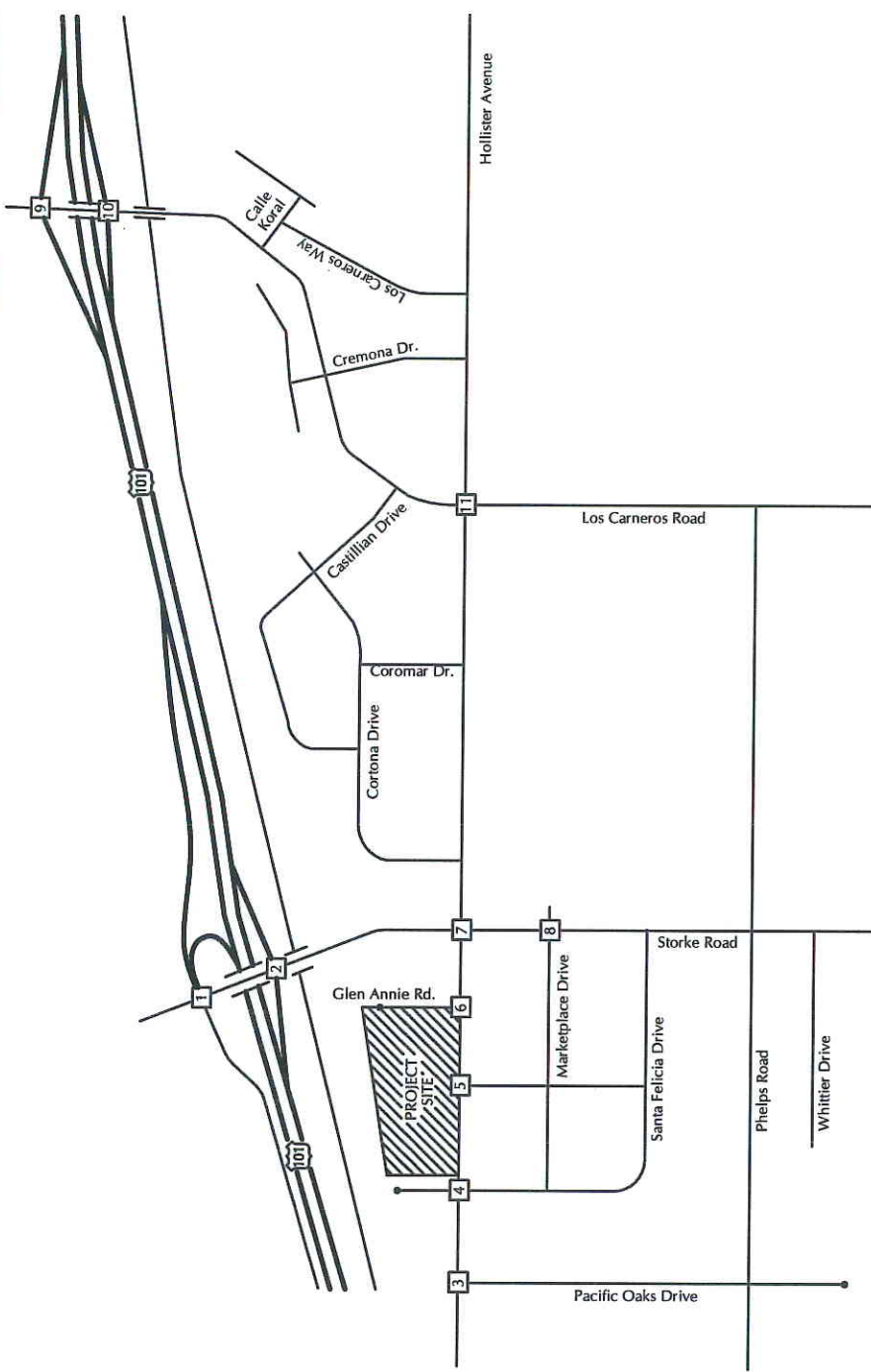
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FIGURE 20

MMMF - #05012

LEGEND

XX - A.M. Peak Hour Volume



9	<table border="1"> <tr><td>62</td><td>380</td></tr> <tr><td>5</td><td>66</td></tr> <tr><td>486</td><td></td></tr> <tr><td>176</td><td></td></tr> </table>	62	380	5	66	486		176		10	<table border="1"> <tr><td>537</td><td></td></tr> <tr><td>211</td><td></td></tr> <tr><td>111</td><td></td></tr> <tr><td>1337</td><td></td></tr> <tr><td>235</td><td></td></tr> <tr><td>0</td><td></td></tr> <tr><td>321</td><td></td></tr> </table>	537		211		111		1337		235		0		321		11	<table border="1"> <tr><td>58</td><td>51</td></tr> <tr><td>346</td><td>362</td></tr> <tr><td>68</td><td>56</td></tr> <tr><td>29</td><td></td></tr> <tr><td>262</td><td></td></tr> <tr><td>226</td><td></td></tr> <tr><td>160</td><td></td></tr> <tr><td>395</td><td></td></tr> <tr><td>342</td><td></td></tr> </table>	58	51	346	362	68	56	29		262		226		160		395		342	
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CUMULATIVE + PROJECT A.M. PEAK HOUR VOLUMES



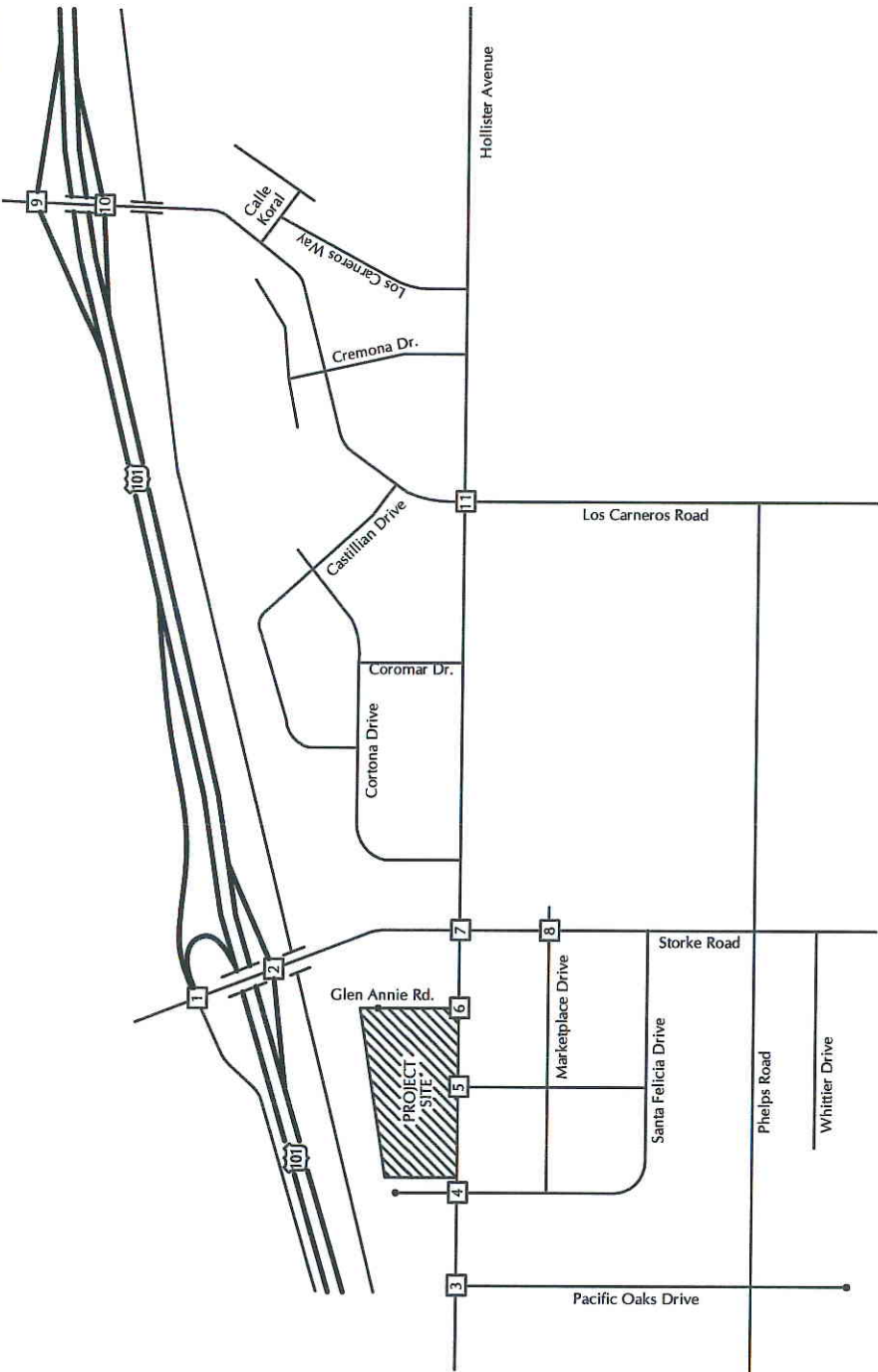
ASSOCIATED
TRANSPORTATION
ENGINEERS

Revised Pages Prepared by ATE (January 2012) for the February 28, 2011 Revised Traffic, Circulation and Parking Study

LEGEND
 XX - P.M. Peak Hour Volume

FIGURE 21

MMMF - #05012



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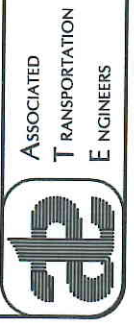
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CUMULATIVE + PROJECT P.M. PEAK HOUR VOLUMES



#05012 WESTAR MIXED-USE PROJECT
INTERSECTION CAPACITY UTILIZATION WORKSHEET
COUNT DATE: **NOVEMBER 3, 2009**
TIME PERIOD: **A.M. PEAK HOUR**
N/S STREET: **MARKETPLACE DRIVE**
E/W STREET: **HOLLISTER AVENUE**
CONTROL TYPE: **SIGNAL**

Revised Pages Prepared by ATE (January 2012) for
the February 28, 2011 Revised Traffic, Circulation
and Parking Study

REF: 05AM

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	20	0	62	0	0	0	0	983	53	74	433	0
(B) PROJECT-ADDED	0	7	0	96	14	5	9	0	0	0	9	60
(C) CUMULATIVE	20	0	62	0	0	0	0	983	53	74	424	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	L	T R	L	LTR	L	TT R	LL	TT R

TRAFFIC SCENARIOS

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

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	20	20	20	20	-	-	-	-		
NBT	1	1600	0	7	0	7	0.013 *	0.017 *	0.013 *	0.017 *		
NBR (a)	1	1600	7	7	7	7	0.004	0.004	0.004	0.004		
SBL	0	0	0	96	0	96	-	-	-	-		
SBT	2	3200	0	14	0	14	0.000 *	0.036 *	0.000 *	0.036 *		
SBR	0	0	0	5	0	5	-	-	-	-		
EBL	1	1600	0	9	0	9	0.000	0.006	0.000	0.006		
EBT	2	3200	983	983	983	983	0.307 *	0.307 *	0.307 *	0.307 *		
EBR (b)	1	1600	51	51	51	51	0.032	0.032	0.032	0.032		
WBL	2	3200	74	74	74	74	0.023 *	0.023 *	0.023 *	0.023 *		
WBT	2	3200	433	442	424	433	0.135	0.138	0.133	0.135		
WBR	1	1600	0	60	0	60	0.000	0.038	0.000	0.038		
LOST TIME:							0.100 *	0.100 *	0.100 *	0.100 *		
TOTAL INTERSECTION CAPACITY UTILIZATION:							0.443	0.483	0.443	0.483		
SCENARIO LEVEL OF SERVICE:							A	A	A	A		

NOTES:

(a) 29% RTOR + WB Lef-Turn Overlap
(b) 4% RTOR

#05012 WESTAR MIXED-USE PROJECT
INTERSECTION CAPACITY UTILIZATION WORKSHEET
COUNT DATE: **NOVEMBER 3, 2009**
TIME PERIOD: **P.M. PEAK HOUR**
N/S STREET: **MARKETPLACE DRIVE**
E/W STREET: **HOLLISTER AVENUE**
CONTROL TYPE: **SIGNAL**

Revised Pages Prepared by ATE (January 2012) for the
February 28, 2011 Revised Traffic, Circulation and Parking
Study

REF: 05PM

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	72	0	434	0	0	0	0	697	49	301	882	0
(B) PROJECT-ADDED	0	14	0	146	11	46	47	-27	0	0	-15	183
(C) CUMULATIVE	80	0	427	0	0	0	0	704	54	298	882	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	LT	R	L	LTR	L	TT R	LL	TT R

TRAFFIC SCENARIOS

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

LEVEL OF SERVICE CALCULATIONS

MOVE- MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	72	72	80	80	-	-	-	-		
NBT	1	1600	0	14	0	14	0.045	0.054	0.050	0.059		
NBR (a)	1	1600	205	205	201	201	0.128 *	0.128 *	0.126 *	0.126 *		
SBL	0	0	0	146	0	146	-	-	-	-		
SBT	2	3200	0	11	0	11	0.000 *	0.063 *	0.000 *	0.063 *		
SBR	0	0	0	46	0	46	-	-	-	-		
EBL	1	1600	0	47	0	47	0.000	0.029	0.000	0.029		
EBT	2	3200	697	670	704	677	0.218 *	0.209 *	0.220 *	0.212 *		
EBR (b)	1	1600	46	46	51	51	0.029	0.029	0.032	0.032		
WBL	2	3200	301	301	298	298	0.094 *	0.094 *	0.093 *	0.093 *		
WBT	2	3200	882	867	882	867	0.276	0.271	0.276	0.271		
WBR	1	1600	0	183	0	183	0.000	0.114	0.000	0.114		
<i>LOST TIME:</i>							0.100 *	0.100 *	0.100 *	0.100 *		
TOTAL INTERSECTION CAPACITY UTILIZATION:							0.540	0.594	0.539	0.594		
SCENARIO LEVEL OF SERVICE:							A	A	A	A		

NOTES:

(a) 18% RTOR + WB Left-Turn Overlap
(b) 6% RTOR

#05012 WESTAR MIXED-USE PROJECT

INTERSECTION CAPACITY UTILIZATION WORKSHEET

TIME PERIOD: **A.M. PEAK HOUR**
 N/S STREET: **GLEN ANNIE ROAD**
 E/W STREET: **HOLLISTER AVENUE**
 CONTROL TYPE: **SIGNAL**

Revised Pages Prepared by ATE (January 2012)
 for the February 28, 2011 Revised Traffic,
 Circulation and Parking Study

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	0	0	53	0	6	7	952	0	0	483	31
(B) PROJECT-ADDED	0	0	0	47	0	0	0	96	0	0	69	27
(C) CUMULATIVE	0	0	0	53	0	6	7	1190	0	0	621	31

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND			SOUTH BOUND		EAST BOUND		WEST BOUND	
	L	T	R	L	R	L	TT	TT	TT

TRAFFIC SCENARIOS

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

LEVEL OF SERVICE CALCULATIONS

MOVE- MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
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	100	53	100	-	-	-	-		
SBT	1	1600	0	0	0	0	0.037 *	0.066 *	0.037 *	0.066 *		
SBR	0	0	6	6	6	6	-	-	-	-		
EBL	1	1600	7	7	7	7	0.004 *	0.004 *	0.004 *	0.004 *		
EBT	2	3200	952	1048	1190	1286	0.298	0.328	0.372	0.402		
EBR	0	0	0	0	0	0	-	-	-	-		
WBL	0	0	0	0	0	0	-	-	-	-		
WBT	2	3200	483	552	621	690	0.161 *	0.191 *	0.204 *	0.234 *		
WBR	0	0	31	58	31	58	-	-	-	-		
<i>LOST TIME:</i>							0.100 *	0.100 *	0.100 *	0.100 *		
TOTAL INTERSECTION CAPACITY UTILIZATION:							0.302	0.361	0.345	0.404		
SCENARIO LEVEL OF SERVICE:							A	A	A	A		

NOTES:

#05012 WESTAR MIXED-USE PROJECT
INTERSECTION CAPACITY UTILIZATION WORKSHEET
 TIME PERIOD: **P.M. PEAK HOUR**
 N/S STREET: **GLEN ANNIE ROAD**
 E/W STREET: **HOLLISTER AVENUE**
 CONTROL TYPE: **SIGNAL**

Revised Pages Prepared by ATE (January 2012)
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TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	0	0	47	0	30	14	1017	0	0	1257	41
(B) PROJECT-ADDED	0	0	0	72	0	4	0	146	0	0	164	60
(C) CUMULATIVE	0	0	0	47	0	30	14	1020	0	0	1289	41

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND			SOUTH BOUND		EAST BOUND		WEST BOUND	
	L	T	R	L	R	L	TT	TT	TT

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
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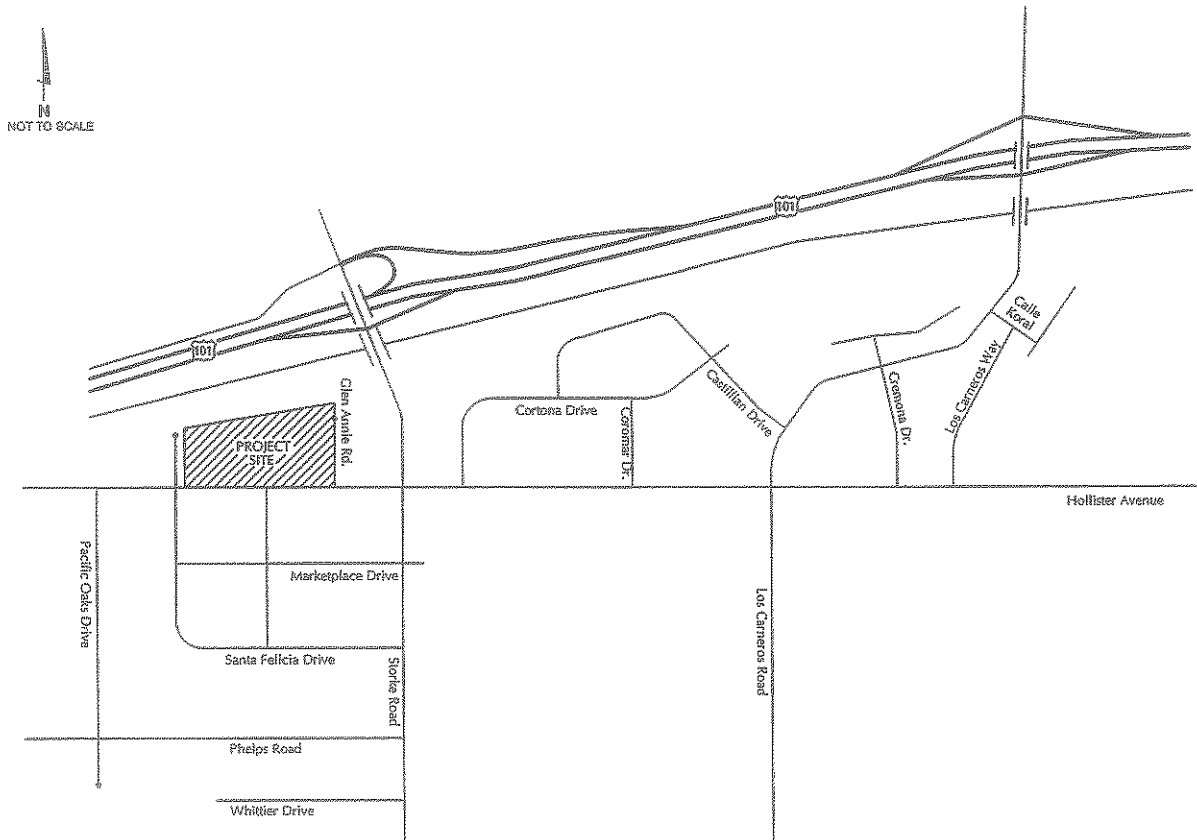
LEVEL OF SERVICE CALCULATIONS

MOVE- MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	0	0	0	0	-	-	-	-		
NBT	0	0	0	0	0	0	-	-	-	-		
NBR	0	0	0	0	0	0	-	-	-	-		
SBL	0	0	47	119	47	119	-	-	-	-		
SBT	1	1600	0	0	0	0	0.048 *	0.096 *	0.048 *	0.096 *		
SBR	0	0	30	34	30	34	-	-	-	-		
EBL	1	1600	14	14	14	14	0.009 *	0.009 *	0.009 *	0.009 *		
EBT	2	3200	1017	1163	1020	1166	0.318	0.363	0.319	0.364		
EBR	0	0	0	0	0	0	-	-	-	-		
WBL	0	0	0	0	0	0	-	-	-	-		
WBT	2	3200	1257	1421	1289	1453	0.406 *	0.476 *	0.416 *	0.486 *		
WBR	0	0	41	101	41	101	-	-	-	-		
<i>LOST TIME:</i>							0.100 *	0.100 *	0.100 *	0.100 *		
TOTAL INTERSECTION CAPACITY UTILIZATION:							0.563	0.681	0.573	0.691		
SCENARIO LEVEL OF SERVICE:							A	B	A	B		

NOTES:

GOLETA MIXED-USE VILLAGE PROJECT CITY OF GOLETA, CALIFORNIA

REVISED TRAFFIC, CIRCULATION AND PARKING STUDY



February 28, 2011

ATE #05012

Prepared For:

Westar
2925 Bristol Street
Costa Mesa, CA 92626



ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110-1686 • (805) 687-4418 • FAX (805) 682-8509



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Since 1978

Richard L. Pool, P.E.
Scott A. Schell, AICP, PTP

February 28, 2011

05012R02.WP

Peter Koetting
Westar
2925 Bristol Street
Costa Mesa, CA 92626

REVISED TRAFFIC, CIRCULATION AND PARKING STUDY FOR THE GOLETA MIXED-USE VILLAGE PROJECT - CITY OF GOLETA, CA

Associated Transportation Engineers (ATE) has prepared the following revised traffic, circulation and parking study for the Goleta Mixed-Use Village Project, located in the City of Goleta. The study addresses potential traffic and circulation impacts associated with the project and identifies improvements where appropriate. This revised study addresses the peer review comments provided by LLG on the original traffic study completed for the project (ATE study dated September 14, 2010).

Associated Transportation Engineers

Scott A. Schell, AICP, PTP
Principal Transportation Planner

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INTRODUCTION

The following revised report contains an analysis of the potential traffic and circulation impacts associated with the Goleta Mixed-Use Village Project. The report provides information regarding existing and future traffic conditions within the project study-area and recommends improvements where necessary. The report also contains an analysis of the project's site access, circulation, and parking plan. An analysis of the project's consistency with the policies outlined in the Congestion Management Program (CMP) is also provided.

PROJECT DESCRIPTION

The Goleta Mixed-Use Village Project is proposing to develop the existing vacant site, located on the north side of Hollister Avenue west of Glen Annie Road, with 274 residential apartment units, 5 live/work condominium units with 3,294 SF of live/work retail space, and an 86,760 SF neighborhood shopping center. The project site also encompasses the developed parcel located on the northwest corner of the Hollister Avenue/Glen Annie Road intersection that would be redeveloped as part of the project. This parcel includes a bank building that is used as a production studio for the local cable TV company and two drive-through bank ATMs, which would be removed as part of the project. Figure 1 illustrates the location of the project site within the City of Goleta and Figure 2 shows the project site plan.

Primary access to the site is proposed via a new connection to Hollister Avenue opposite the existing Marketplace Drive intersection, which is currently a "T" intersection controlled by traffic signals. The main access driveway would form the north leg of the intersection, resulting in a conventional four-leg intersection. Secondary access for the project would be provided via a new driveway connection to Hollister Avenue at the west end of the project site and two connections to Glen Annie Road on the east side of the site. The northernmost connection to Glen Annie Road would be located opposite Sespe Drive and the southern connection would be located opposite the driveway for the existing office buildings on Glen Annie Road.

The project proposes to provide a total of 904 parking spaces, with 352 spaces provided in surface lots for the commercial uses, 542 spaces provided for the apartment units (208 garage spaces + 66 carport spaces + 268 uncovered spaces), and 10 spaces for the 5 live-work units (10 garage spaces). The project also includes modifying the configuration of Glen Annie Road to provide 15 new parking spaces for public use. Figure 2 presents the project site plan.

TRAFFIC STUDY SCOPING

The scope of work included in this traffic study was developed based on input provided by staff at the City of Goleta Community Services and Planning Departments, as well as information contained in the Initial Study completed for the project. City staff provided input on the specific roadway segments and intersections to be analyzed in the study, and identified specific traffic and circulation issues to be addressed in the analysis.

PROJECT SITE LOCATION AND EXISTING STREET NETWORK

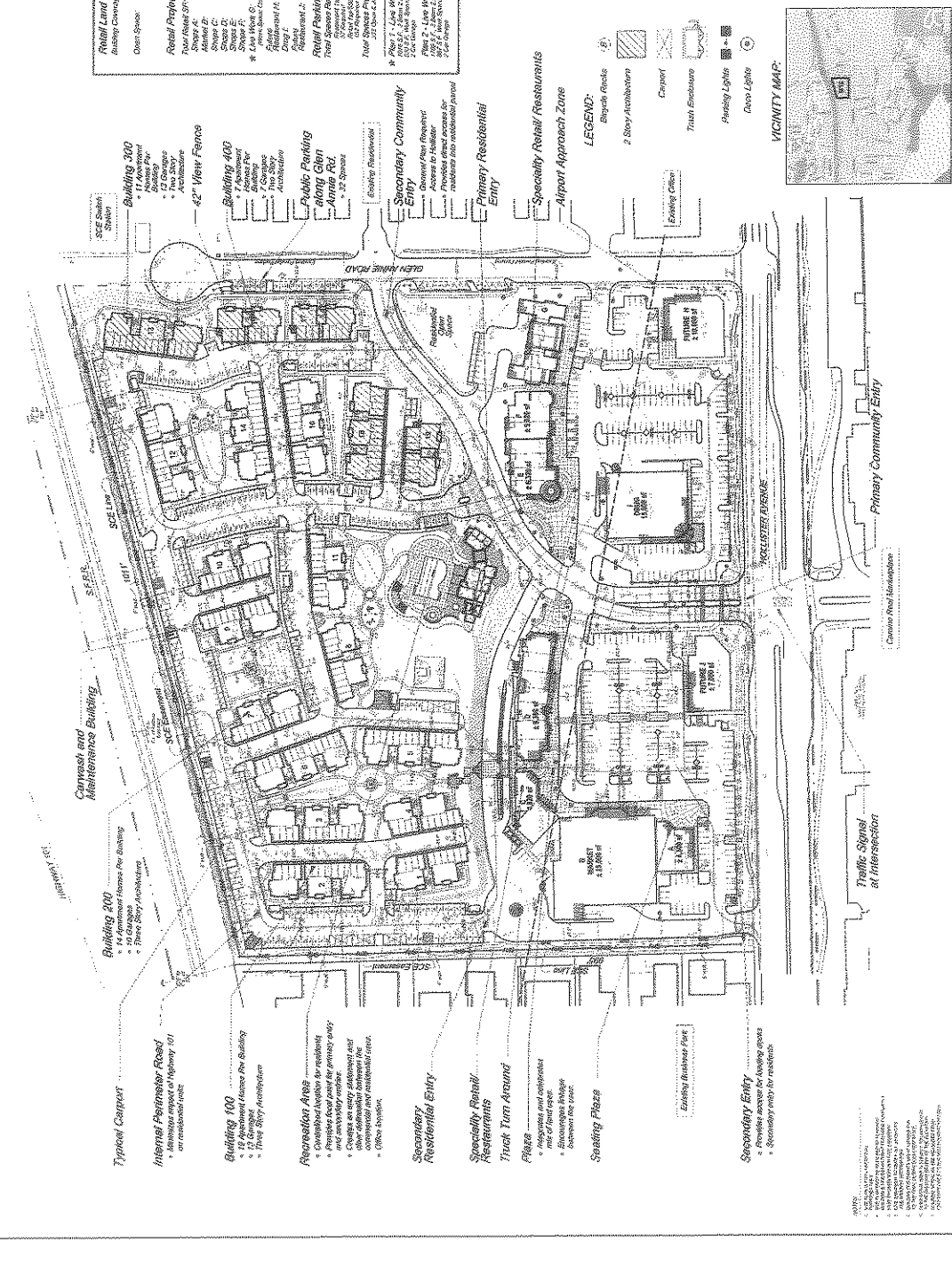


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Total Project Summary Total Site Area: 25.05 Acres ± Total Building Area: 1,100,000 sq ft Total Parking: 8,000 spaces ± Total Density: 44 units/acre ±	Residential Land Use Summary: Single-Family: 150 units Townhomes: 200 units Total: 350 units Density: 14 units/acre	Commercial Land Use Summary: Office: 1,000,000 sq ft Retail: 500,000 sq ft Total: 1,500,000 sq ft Density: 60 units/acre	13.7 AC. RESIDENTIAL ZONING ANALYSIS ZONING: RM-10 Max Density: 10 units/acre Max Floor Area: 10,000 sq ft/unit Max Lot Area: 10,000 sq ft Max Height: 35 feet Max Setback: 10 feet
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Goleta Mixed Use Village
 Goleta, CA
 Westar Associates

PROJECT SITE PLAN



EXISTING CONDITIONS

Street Network

The project site is served by a network of highways, arterial streets and collector streets, as illustrated in Figure 1. The following text provides a brief discussion of the major components of the study-area street network.

U.S. Highway 101, located north of the project site, is a multi-lane interstate highway that extends along the Pacific Coast between Los Angeles and the state of Washington. This highway is the principal route connecting the City of Goleta with the adjacent cities of Santa Barbara, Carpinteria, and Ventura to the south; and the cities of Buellton and Santa Maria to the north. Primary access to U.S. Highway 101 would be provided via the Storke Road interchange, with secondary access provided via the Los Carneros Road interchange to the east and the Hollister Avenue-Winchester Canyon interchange to the west.

Hollister Avenue, located along the southern boundary of the project site, is an arterial roadway that is the primary east-west surface street in the City of Goleta. Within the study-area, Hollister Avenue is a 4-lane divided arterial with on-street bike lanes. Two new connections to Hollister Avenue would provide access to the project site.

Storke Road, located east of the project site, is a 4 lane north-south arterial roadway that extends from U.S. Highway 101 on the north to El Colegio Road on the south. Storke Road provides freeway access for the western portion of the Goleta Valley via an interchange at U.S. Highway 101. North of the interchange, Storke Road becomes Glen Annie Road and extends as a 2-lane road to Cathedral Oaks Road.

Glen Annie Road, located along the eastern boundary of the project site, extends north from Hollister Avenue and terminates just south of U.S. Highway 101. Two new connections to Glen Annie Road would provide secondary access to the project site.

Los Carneros Road, located east of the project site, is a north-south arterial street. North of Hollister Avenue, Los Carneros Road extends as 4-lane roadway connecting with the U.S. Highway 101 interchange and continues north to its terminus at Cathedral Oaks Road. Los Carneros Road extends as a 2-lane road south of Hollister Avenue to El Colegio, providing access to the Isla Vista-UCSB area.

Marketplace Drive, located south of the project site, is a two-lane road that provides one of the main access points for the Camino Real Marketplace shopping center. A new connection to Hollister Avenue opposite the Marketplace Drive intersection would provide primary access to the project site.

Roadway Operations

Figure 3 illustrates the existing average daily traffic (ADT) volumes for the roadway segments analyzed in this study. These volumes were obtained from traffic counts conducted in November of 2009 with additional count data provided by the City of Goleta. The operation of the study-area roadway segments were analyzed by comparing the existing ADT volumes to the roadway design capacities that have been adopted by the City of Goleta (roadway capacities are summarized in the Technical Appendix). Table 1 shows the existing ADT volumes and the "Acceptable Capacity" thresholds for the key roadway segments in the study area.

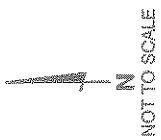
Table 1
Existing Average Daily Roadways Volumes

Roadway Segment	Roadway Classification	Geometry	Acceptable Capacity	Existing ADT
Storke Road n/o Hollister Avenue	Major Arterial	4-Lane	34,000	33,800
Storke Road s/o Hollister Avenue	Major Arterial	4-Lane	34,000	17,600
Storke Road s/o Whittier Drive	Major Arterial	2-Lane	14,300	13,200
Hollister Avenue w/o Storke Road	Major Arterial	4-Lane	34,000	26,300
Hollister Avenue e/o Storke Road	Major Arterial	4-Lane	34,000	20,900

The data presented in Table 1 indicate that the study-area roadway segments currently carry volumes within the City's Acceptable Capacity designations. It is noted that the volumes on the segments of Storke Road north of Hollister Avenue and Storke Road south of Whittier Drive are approaching the Acceptable Capacity standard.

Intersection Operations

Because traffic flow on urban arterials is most constrained at intersections, detailed traffic flow analyses focus on the operating conditions of critical 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, with LOS D allowed at the Storke Road/Hollister Avenue intersection.



LEGEND
 X - Average Daily Traffic Volume

EXISTING AVERAGE DAILY TRAFFIC VOLUMES

FIGURE 3

MMF - #05012



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Figure 4 shows the location of the intersections analyzed in this study and illustrates the existing traffic controls and lane geometries. Existing A.M. and P.M. peak hour traffic volumes for the study-area intersections were obtained from traffic counts conducted in November of 2009, February of 2010, and updated with additional count data collected in February of 2011 (traffic count data is contained in the Technical Appendix for reference). Figures 5 and 6 present the existing A.M. and P.M. peak hour traffic volumes.

Levels of service were calculated for the signalized intersections using the "Intersection Capacity Utilization" (ICU) methodology as required by the City. Levels of service for the unsignalized intersections were calculated using the methodology outlined in the Highway Capacity Manual (HCM).¹ Table 2 lists the existing levels of service for the study-area intersections (calculation worksheets are contained in the Technical Appendix).

Table 2
Existing Intersection Levels of Service

Intersection	Control	A.M. Peak		P.M. Peak	
		ICU/Delay	LOS	ICU/Delay	LOS
Storke Road/U.S. 101 NB Ramps	Signal	0.71	LOS C	0.69	LOS B
Storke Road/U.S. 101 SB Ramps	Signal	0.78	LOS C	0.76	LOS C
Hollister Avenue/Pacific Oaks Road	Signal	0.41	LOS A	0.47	LOS A
Hollister Avenue/Santa Felicia Drive(a)	Stop-Sign	11.8 sec.	LOS B	17.3 sec.	LOS C
Hollister Avenue/Marketplace Drive	Signal	0.46	LOS A	0.57	LOS A
Hollister Avenue/Glen Annie Road(a)	Stop-Sign	14.9 sec.	LOS B	24.2 sec.	LOS C
Storke Road/Hollister Avenue	Signal	0.61	LOS B	0.74	LOS C
Storke Road/Marketplace Drive	Signal	0.35	LOS A	0.53	LOS A
Los Carneros Road/U.S. 101 NB Ramps	Signal	0.54	LOS A	0.53	LOS A
Los Carneros Road/U.S. 101 SB Ramps	Signal	0.52	LOS A	0.78	LOS C
Hollister Avenue/Los Carneros Road	Signal	0.42	LOS A	0.67	LOS B

(a) Unsignalized Intersection. LOS based on average weighted control delay per vehicle in seconds.

The data presented in Table 2 show that the study-area intersections operate at LOS C or better during the A.M. and P.M. peak hour periods, which meet the City's LOS C standard.

¹ Highway Capacity Manual, Transportation Research Special Report 209, National Research Council, 2000.

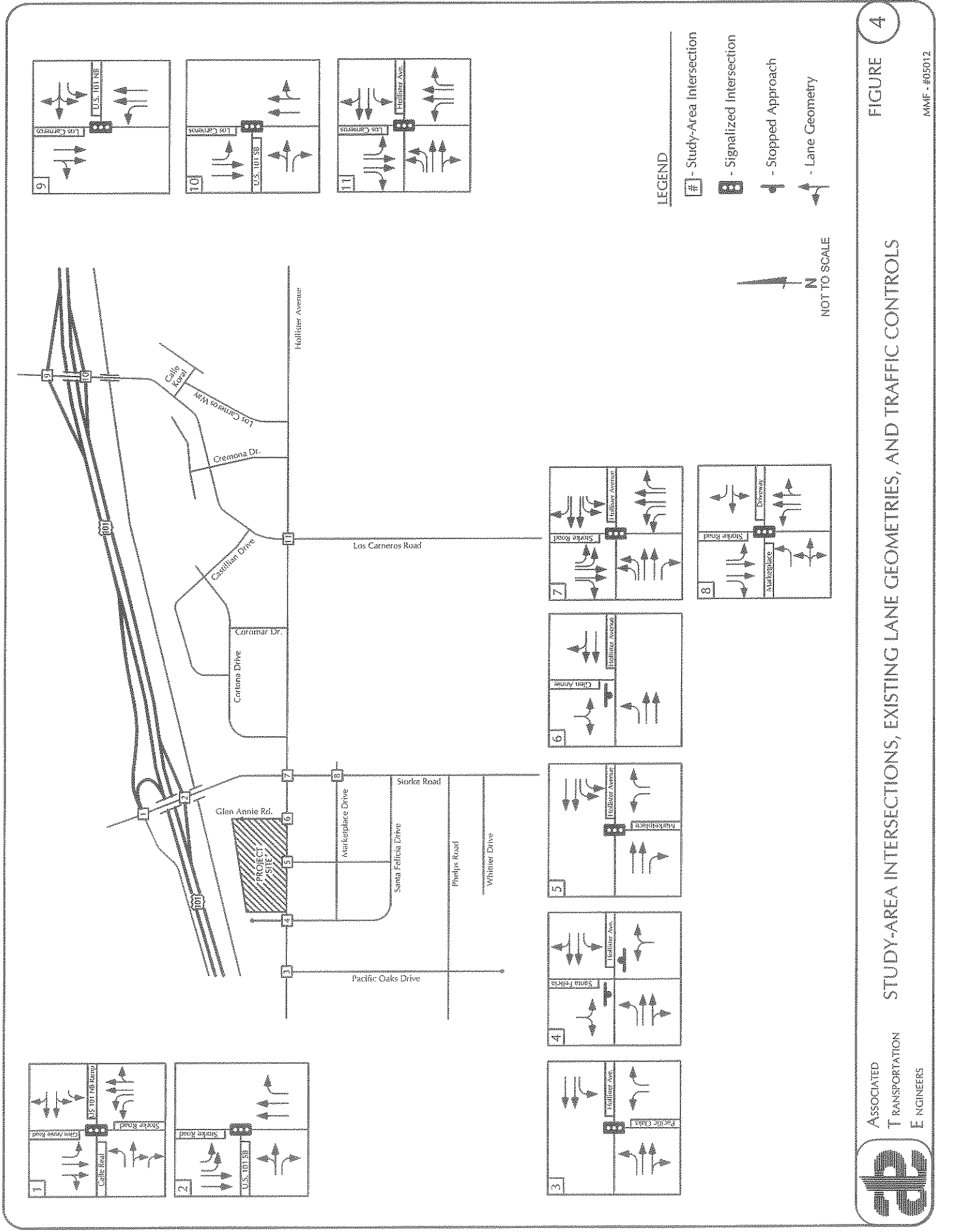
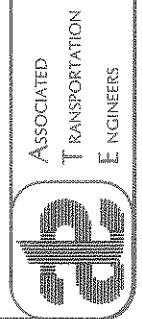
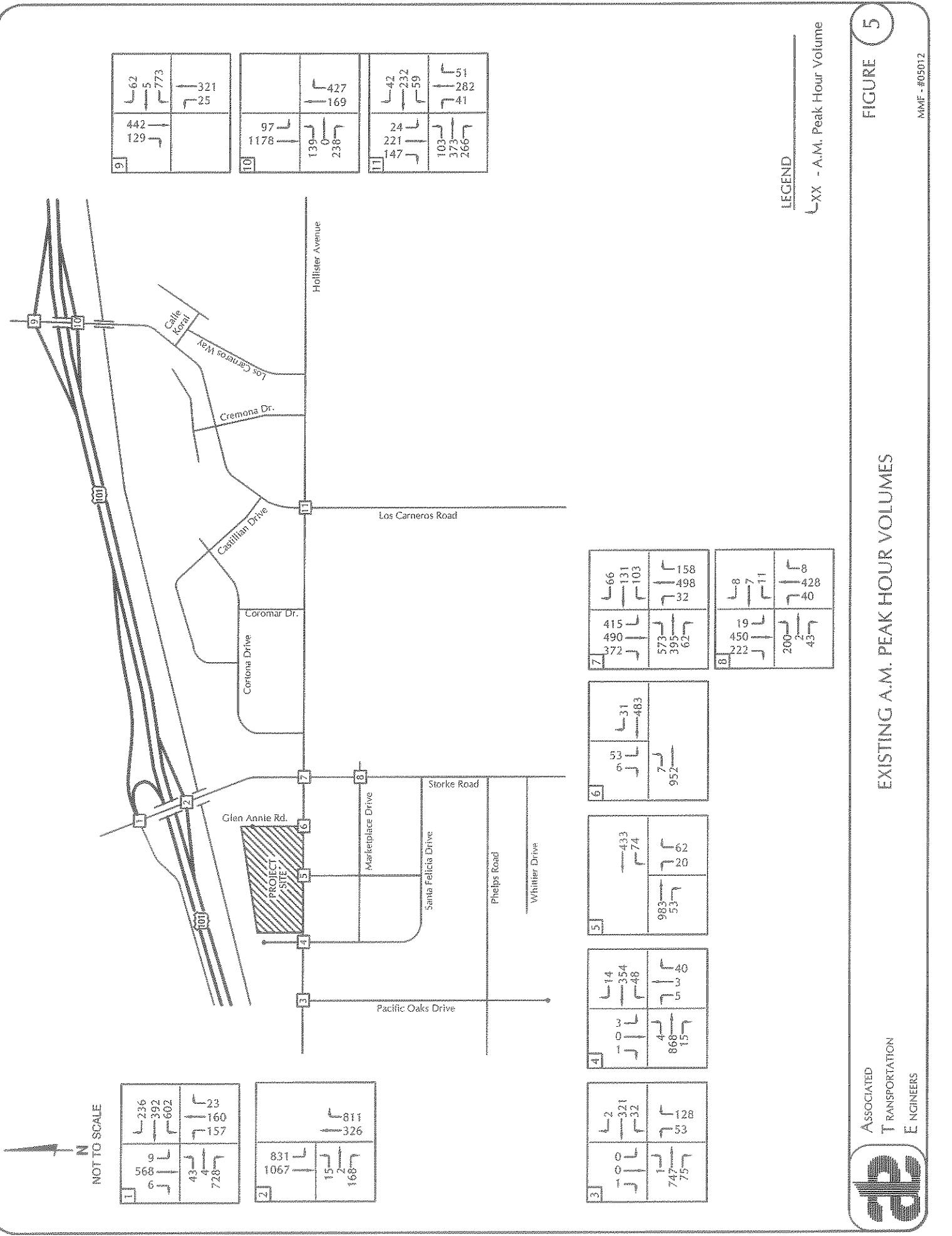


FIGURE 4

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9	442 129	62 5 773	321 25
10	97 1178	139 238	427 169
11	24 221 147	42 232 59	51 282 41

1	568 6	236 392 602	23 160 157
2	43 4 728	831 1067	15 2 168

3	747 75	321 32	53 128
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7	415 490 372	66 131 103	158 498 32
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6	53 7	31 483	952
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5	983 53	433 74	62 26
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4	868 15	14 354 48	5 40
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3	747 75	321 32	53 128
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8	450 222	19 7 11	8 428 40
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7	200 2 43	8 7 11	8 428 40
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LEGEND

XX - A.M. Peak Hour Volume



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EXISTING A.M. PEAK HOUR VOLUMES

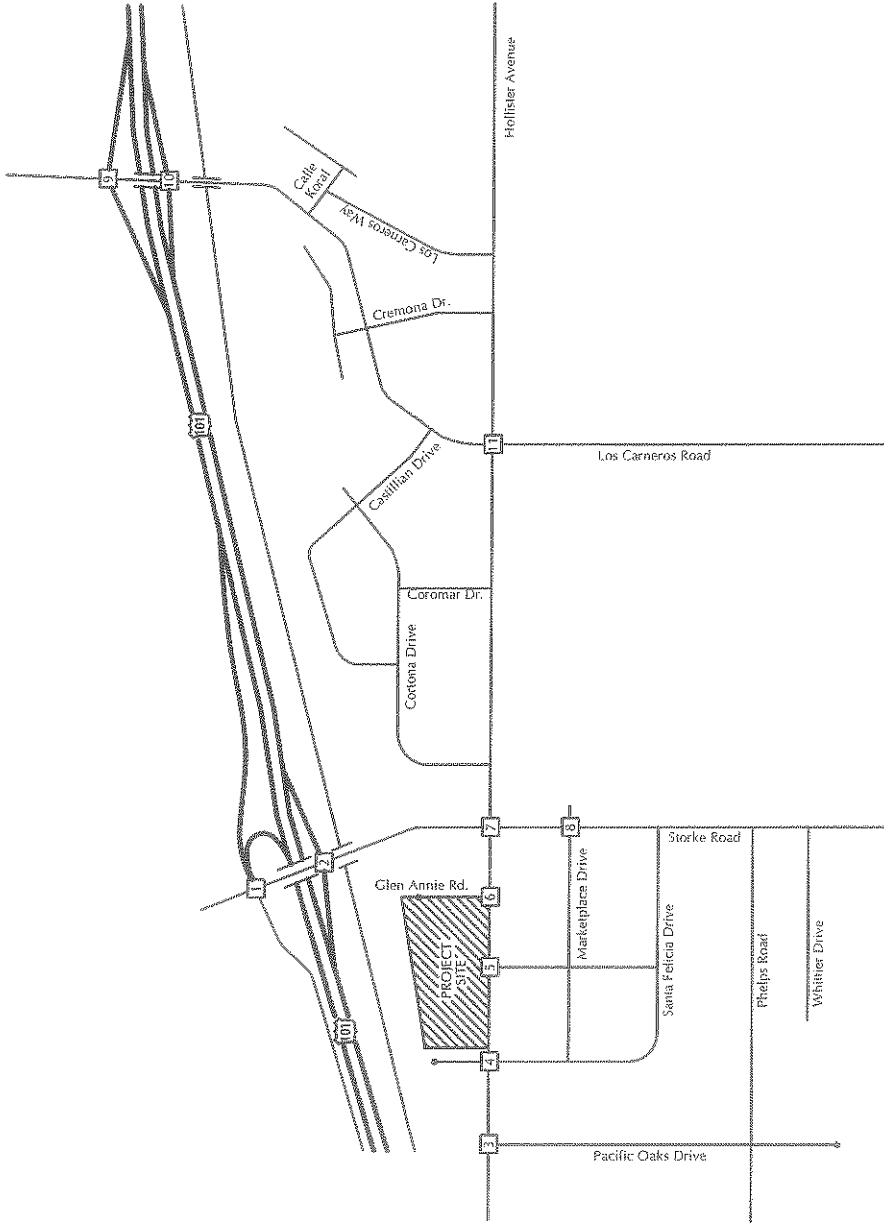
FIGURE 5

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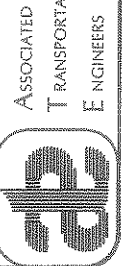


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LEGEND

XX - P.M. Peak Hour Volume



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EXISTING P.M. PEAK HOUR VOLUMES

FIGURE 6

MMF - #05012

THRESHOLDS OF SIGNIFICANCE

The City of Goleta's CEQA traffic impact thresholds were used to determine the significance of the traffic increases generated by the Goleta Mixed-Use Village Project. The City's thresholds include the following criteria:

- A. The project will result in a significant impact on transportation and circulation if proposed project traffic increases the volume to capacity (V/C) ratio at local intersections by the values provided in the following table:

Significant Changes In Levels Of Service	
Intersection Level of Service (Including Project)	Increase in V/C or Trips Greater Than
LOS A	0.20
LOS B	0.15
LOS C	0.10
LOS D	15 Trips
LOS E	10 Trips
LOS F	5 Trips

- B. The project's access to a major road or arterial road would require access that would create an unsafe situation, a new traffic signal, or major revisions to an existing traffic signal.
- C. The project would add traffic to a roadway that has design features (e.g., narrow width, road-side ditches, sharp curves, poor sight distance, inadequate pavement structure) that would become a potential safety problem with the addition of project traffic.
- D. Project traffic would utilize a substantial portion of an intersection's capacity where the intersection is currently operating at acceptable levels of service, but with cumulative traffic would degrade to or approach LOS D (V/C 0.80) or lower. Substantial is defined as a minimum change of 0.03 for an intersection which would operate from 0.80 to 0.85, a change of 0.02 for an intersection which would operate from 0.86 to 0.90 and a change of 0.01 for an intersection which would operate greater than 0.90 (LOS E or worse).

In addition to the CEQA impact thresholds, the City of Goleta has developed the administrative policy of defining a significant roadway impact if a project would increase traffic volumes by more than 1.0% (either project-specific or project contribution to cumulative impacts) on roadways that currently exceed the Acceptable Capacity or are forecast to exceed the Acceptable Capacity under cumulative conditions.

STREET NETWORK IMPROVEMENTS PLANNED BY THE APPLICANT

Several street network improvements are planned by the applicant to enhance access and circulation in the vicinity of the site. The following text provides a summary of each of the improvements. These street network improvements are assumed to be in place for the Existing + Project and Cumulative + Project scenarios.

Hollister Avenue/Marketplace Drive. Primary access is proposed via a new connection to the Hollister Avenue/Marketplace Drive intersection, which is presently a "T" intersection controlled by traffic signals. The project's main access driveway would form the north leg of the intersection, resulting in a conventional four-leg intersection. The new leg would contain 1 left-turn lane and 1 shared left+ thru + right-turn lane for traffic outbound from the site plus two inbound lanes. Hollister Avenue would be widened along the project's frontage to provide an eastbound left-turn lane and a westbound right-turn lane for traffic inbound to the site. The northbound approach (outbound from Camino Real) would be restriped to provide 1 shared left-thru lane and 1 right-turn lane. The northbound right-turn lane is currently served by an overlap arrow so that the right turns proceed concurrently with the westbound Hollister left-turn movement. This overlap would be retained as part of the project, thus westbound Hollister U-turns would continue to be prohibited. Vehicles that would be diverted from the turn restriction planned at the Hollister Avenue/Glen Annie Road intersection (see below discussion), would not be able to make a U-turn here, but instead would use the new signal at the project entrance to turn left onto Hollister Avenue. It is estimated that the U-turn restriction would affect less than 15 vehicles per hour.

Hollister Avenue/Glen Annie Road. The applicant is proposing to improve operations at this intersection pursuant to City of Goleta plans. Full access is currently provided at the intersection and the intersection is controlled by a stop sign on the Glen Annie Road approach. Improvements were previously planned by the County (Goleta Transportation Improvement Plan - GTIP) prior to Goleta incorporation and those improvements were incorporated into the City's GTIP after incorporation. According to the GTIP, there will not be enough gaps in Hollister Avenue traffic for turning left from southbound Glen Annie Road as traffic volumes continue to rise on Hollister Avenue. The GTIP recommendations include construction of a new roadway north of Hollister Avenue to connect to the north leg of the Hollister Avenue/Marketplace Drive intersection to provide an alternative to using the Hollister Avenue/Glen Annie Road intersection. This roadway extension is planned as part of the Goleta Mixed-Use Village Project. In addition, the center median adjacent to the Hollister Avenue/Glen Annie Road intersection will be reconfigured to restrict southbound left-turns from Glen Annie Road onto Hollister Avenue. Figure 7 shows the conceptual design for the intersection. The design will include "Right-Turn Only" striping on the Glen Annie approach (as shown on the site plan). Additionally, "No Left-Turn" and/or "One-Way" signs will be installed on the Hollister Avenue median in front of the intersection to inform/direct motorists. It is noted that the Hollister Avenue/Glen Annie Road intersection modifications will also increase the eastbound left-turn storage bays that extend from the Hollister Avenue/Storke Road intersection, which is also planned by the City.

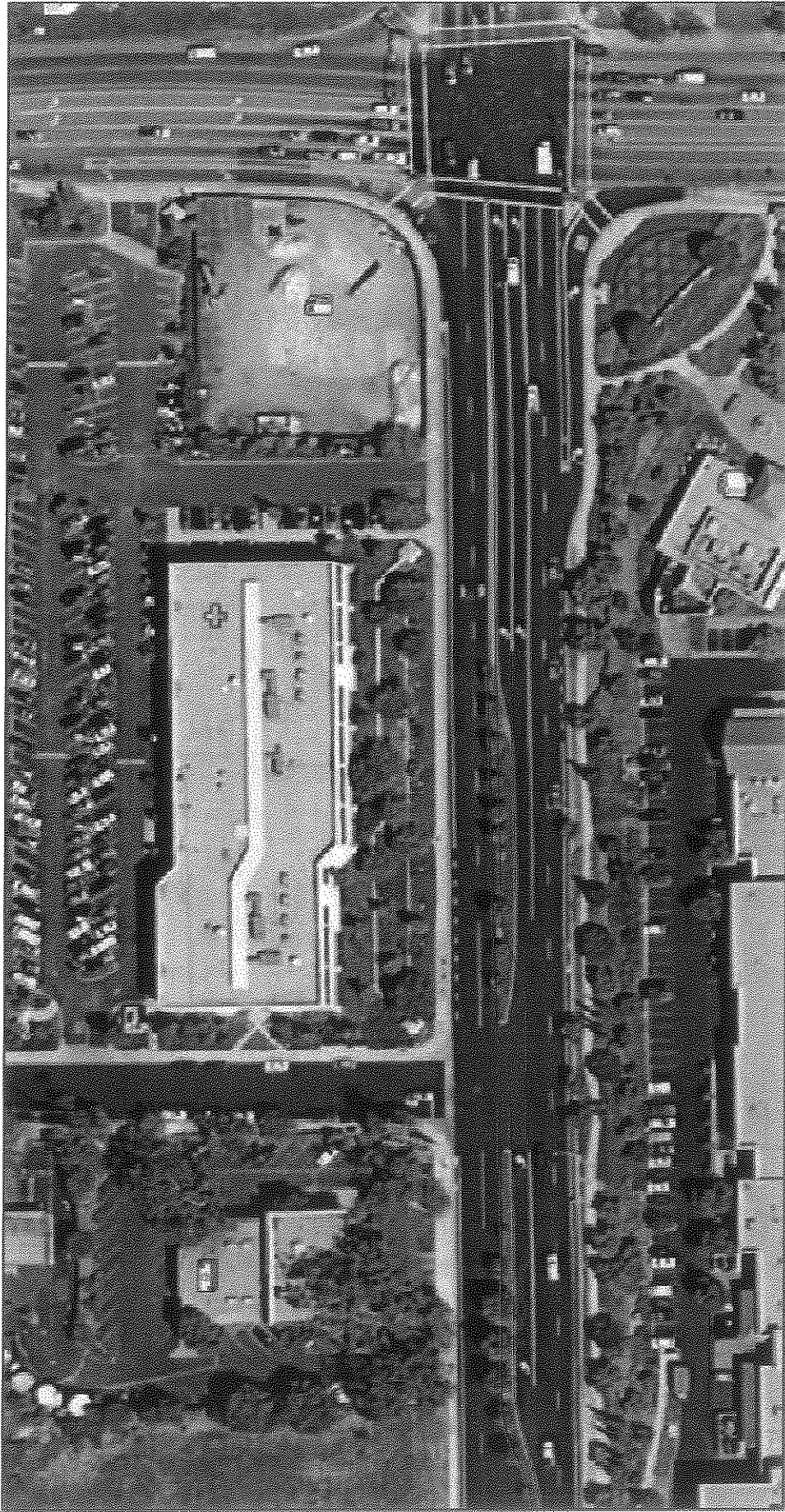


FIGURE 7

HOLLISTER AVENUE/GLEN ANNIE ROAD - PROPOSED MEDIAN CONFIGURATION

NMF - #05012



PROJECT-SPECIFIC IMPACTS

Project Trip Generation

Trip generation estimates were calculated for the Goleta Mixed-Use Village Project based on rates presented in the Institute of Transportation Engineers (ITE) Trip Generation report.² The rates for Shopping Centers (Land Use Code #820), Apartments (Land Use Code #220), and Residential Townhouse/Condominiums (Land Use Code #230) were selected for the analysis.

Table 3 summarizes the trip generation estimates for the proposed project. A worksheet showing the detailed calculations with inbound and outbound splits is contained in the Technical Appendix. As shown in the table, the trip generation analysis accounts for the existing site uses that would be removed as part of the project (cable TV production studio and bank ATMs). Trip generation estimates for the existing site uses were developed based on driveway counts conducted by ATE in August 2010 (count data showing the trip generation for these uses are contained in the Technical Appendix for reference).

Table 3
Project Trip Generation

Land Use	Size	ADT		A.M. Peak		P.M. Peak	
		Rate	Trips	Rate	Trips (In/Out)	Rate	Trips (In/Out)
<u>Proposed Uses</u>							
Shopping Center	90,054 SF	70.45	6,344	1.61	145 (88/57)	6.59	593 (291/302)
Apartments	274 Units	6.65	1,822	0.51	140 (28/112)	0.62	170 (109/61)
Condominiums	5 Units	5.81	29	0.44	2 (0/2)	0.52	3 (2/1)
Sub-Totals			8,195		287 (116/171)		766 (402/364)
<u>Existing Uses</u>							
TV Studio & ATMs(a)	NA	NA	340	NA	7 (4/3)	NA	34 (18/16)
Totals			7,855		280 (112/168)		732 (384/348)

Trip rates are per 1,000 SF for commercial uses and per unit for residential uses.

(a) Trip generation based on driveway counts.

The data presented in Table 3 show that the Goleta Mixed-Use Village Project is forecast to generate a net increase of 7,855 ADT, 280 A.M. peak hour trips, and 732 P.M. peak hour trips.

² Trip Generation, Institute of Transportation Engineers, 8th Edition, 2008.

The trip generation analysis also accounts for the various trip types that would occur at the site, including "Internal Capture", "Primary", "Diverted-Linked", and "Pass-By" trips (a breakdown of the project's trips by type is shown on the trip generation worksheet contained in the Technical Appendix). The following text outlines the trip type forecasts for the site uses.

Internal Capture trips are those made within the project site between the retail and residential land uses (residents of the apartments patronize the on-site retail uses). These trips would occur on-site and would not affect the study-area street network. The ITE mixed-use traffic model³ was used to determine the number of trips that would be captured on the site (a copy of the mixed-use model is attached for reference). The mixed use model shows that 14.4% of the daily trips (1,182 ADT) and 15.6% of the P.M. peak hour trips (120 peak hour trips) would be internal to the site. The ITE mixed-use model does not contain data for the A.M. peak hour, so internal trips were not calculated for this period.

Primary trips are single purpose trips where the sole purpose of the trip is related to the proposed uses (i.e. from a home to the store and then back home). These trips would be new to the study-area street network. Based on the data contained in the ITE Trip Generation Handbook, 66% of the average daily and P.M. peak hour trips generated by the commercial uses would be primary trips.

Diverted-Linked trips are trips that would divert to the retail shops from nearby roadways. These would include trips that are traveling on Storke Road that divert from their normal travel route to patronize the new commercial center and then return to Storke Road and continue to their final destination. Based on the data presented in the ITE Trip Generation Handbook and input provided by City staff, it is assumed that 9% of the commercial trips would be diverted-linked trips from Storke Road.

Pass-By trips are trips that come from the existing traffic stream on Hollister Avenue directly adjacent to the project site. These trips would not affect the study-area street network beyond the project the project site. Based on the data presented in the ITE Trip Generation Handbook and input provided by City staff, it is assumed that 25% of the commercial trips would be pass-by trips from the Hollister Avenue traffic stream adjacent to the site. The ITE Trip Generation Handbook does not contain data for the A.M. peak hour, so pass-by trips were not calculated for this period.

As noted, internal capture trips and pass-by trips will not affect the study-area intersections and roadways beyond the project site. Table 4 shows the total trips that would affect the study-area roadways and intersections beyond the project site.

³ [Trip Generation Handbook, an ITE Recommended Practice, 2nd Edition, 2004.](#)

Table 4
Project Trip Generation - Less Internal & Pass-By Trips

Trip Generation	ADT	A.M. Peak Trips (In/Out)	P.M. Peak Trips (In/Out)
Total Project (All Trips)	7,855	280 (112/168)	732 (384/348)
Less Internal Trips	-1,182	NA(a)	-120 (60/60)
Less Pass-By Trips	-1,438	NA(a)	-133 (66/67)
Net Trips(b)	5,235	280 (112/168)	479 (258/221)

- (a) Internal Capture & Pass-By not applied to A.M. peak hour trips.
- (b) Net trips are those trips that would affect the study-area roadways and intersections beyond the project site.

As shown, the Goleta Mixed-Use Village Project would generate a net increase of 5,235 ADT, 280 A.M. peak hour trips, and 479 P.M. peak hour trips on the study-area street network beyond the project site.

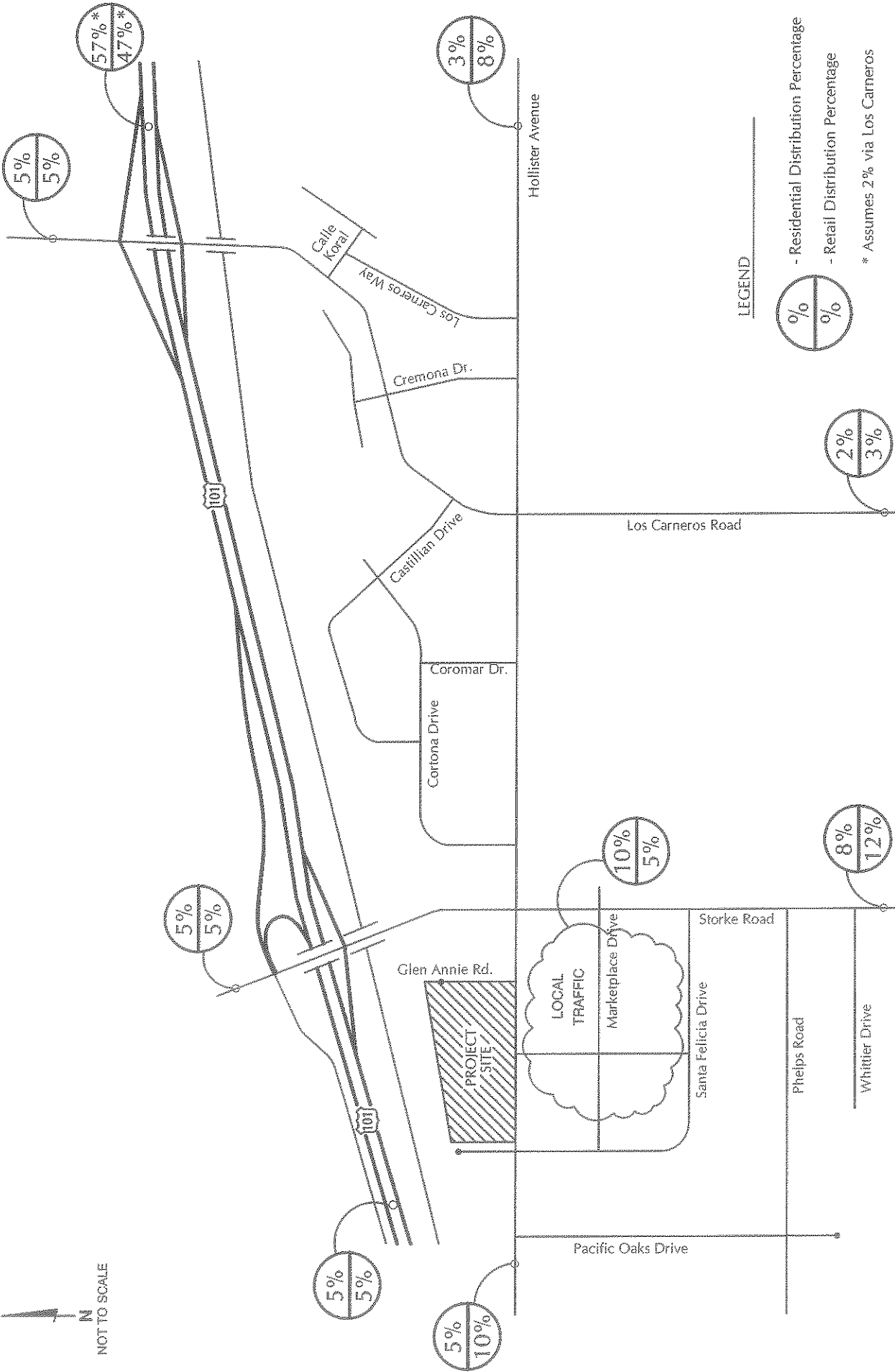
Project Trip Distribution

Trip distribution percentages were developed for the retail and residential components of the project based on data derived from the City's traffic model, existing traffic flows, previous traffic studies, consideration of the population centers in the surrounding area, and input from City staff. Table 5 and Figure 8 show the trip distribution percentages developed for the project. Project-added ADT volumes are shown on Figure 9. Project-added A.M. and P.M. peak hour volumes are shown on Figures 10 and 11. It is noted that the project-added volumes shown in the figures include adjustments for the pass-by and diverted link trips.

Table 5
Project Trip Distribution Percentages

Origin/Destination	Direction	Percentage (Retail)	Percentage(Residential)
U.S. Highway 101	North	5%	5%
	South	47%	57%
Hollister Avenue	East	8%	3%
	West	10%	5%
Storke Road	North	5%	5%
	South	12%	8%
Los Carneros Road	North	5%	5%
	South	3%	2%
Marketplace Drive	South	5%	10%
Total		100%	100%

N
NOT TO SCALE



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PROJECT TRIP DISTRIBUTION PERCENTAGES

FIGURE 8

MMF - #05012

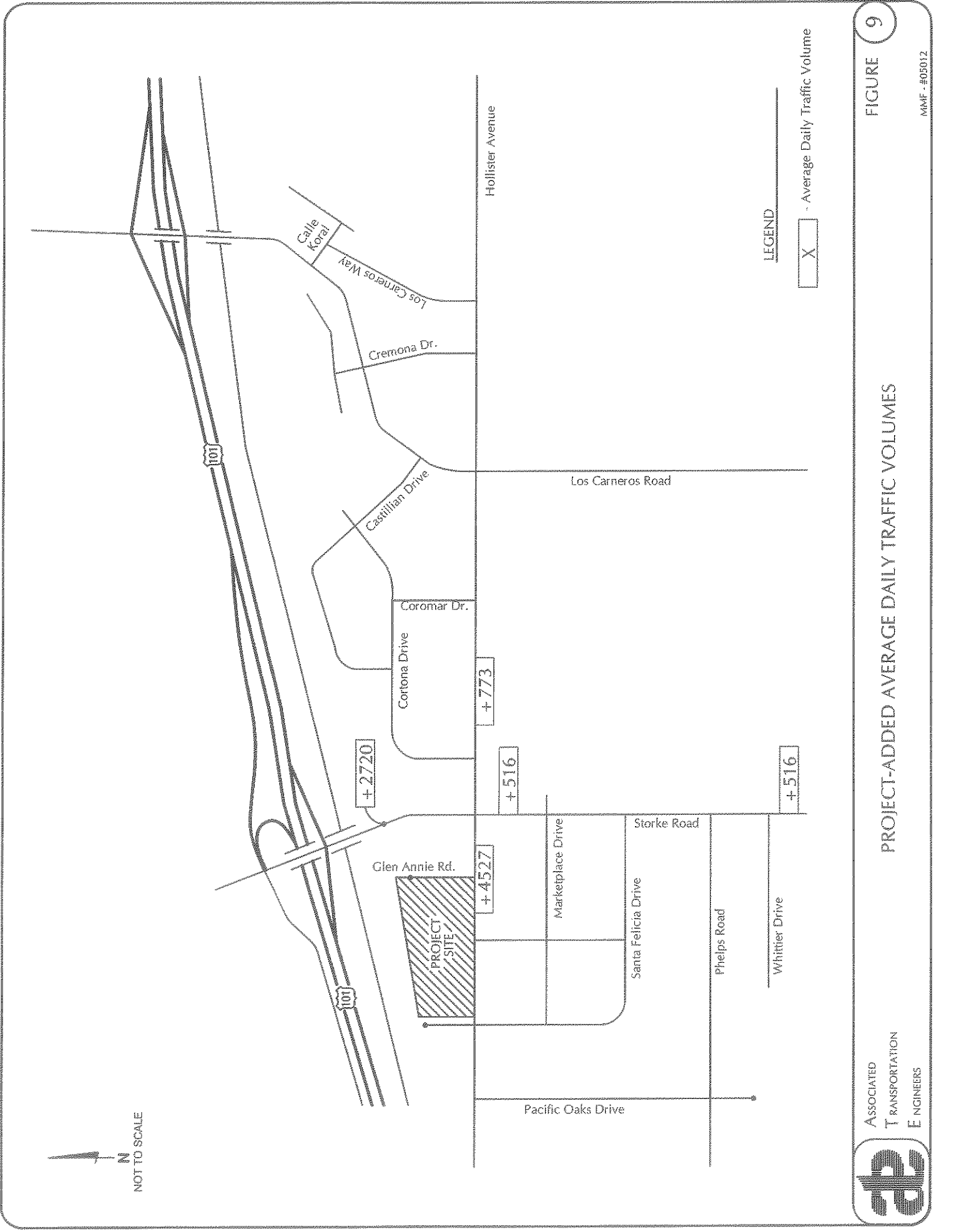


FIGURE 9

PROJECT-ADDED AVERAGE DAILY TRAFFIC VOLUMES

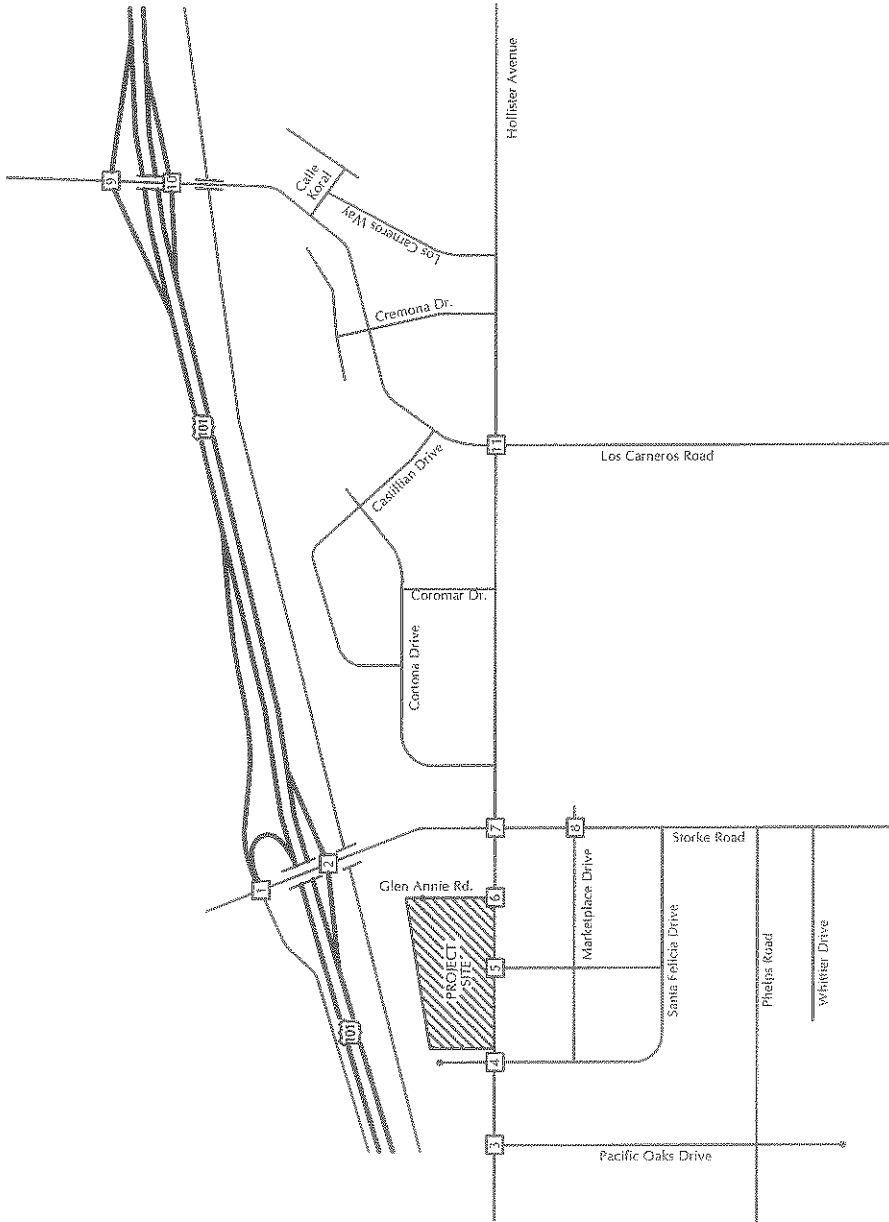
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1	5	56	8	9
2	5	61	89	17



9	5	3	8
10	8	3	8
11	8	8	4

3	9	11
4	9	11
5	196	14
6	53	27
7	64	20
8	16	12

LEGEND
 XX - A.M. Peak Hour Volume

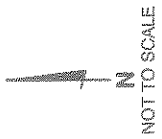


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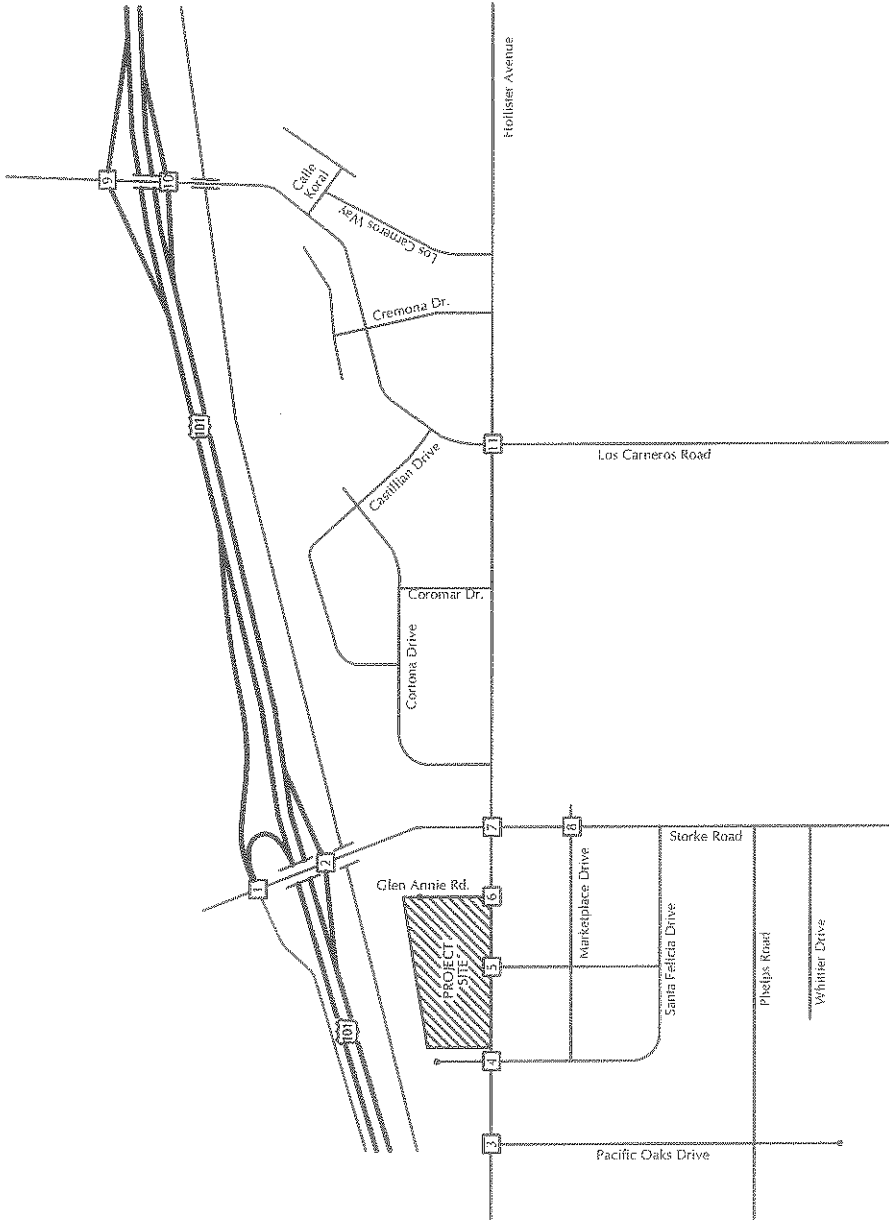
PROJECT-ADDED A.M. PEAK HOUR VOLUMES

FIGURE 10

MMF - #05012



1	12	113	10	10
2	125	12	92	20



9	12	5	10
10	17	3	10
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3	19	20						
4	19	20						
5	265	11	46	183	15	14		
		47	-27					
6	47	4	60	164	238			
7	151	-14	122	33	36	38	10	25
8	36	25						

LEGEND
 LXX - P.M. Peak Hour Volume



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PROJECT-ADDED P.M. PEAK HOUR VOLUMES

FIGURE 11

MMF - #05012

Roadway Impacts

The Existing + Project ADT volume forecasts for the study-area roadways are shown on Figure 12. Table 6 compares the Existing and Existing + Project roadway volumes and identifies the potential impacts of the project's traffic additions based on the City's Acceptable Capacity standard.

Table 6
Existing + Project Roadway Volumes

Roadway Segment	Acceptable Capacity	Existing ADT	Existing + Project ADT	% Change	Impact?
Storke Road n/o Hollister Avenue	34,000	33,800	36,520	8.0%	Yes
Storke Road s/o Hollister Avenue	34,000	17,600	18,116	2.9%	No
Storke Road s/o Whittier Drive	14,300	13,200	13,716	3.9%	No
Hollister Avenue w/o Storke Road	34,000	26,300	30,827	17.2%	No
Hollister Avenue e/o Storke Road	34,000	20,900	21,673	3.7 %	No

Bolded values exceed the Acceptable Capacity standard.

The data presented in Table 6 show that the segment of Storke Road north of Hollister Avenue is forecast to carry volumes above the Acceptable Capacity standard with the addition of project traffic. It is the City's administrative practice to define a significant impact if a project would increase traffic volumes by more than 1.0% on roadways that are forecast to exceed the Acceptable Capacity standard. The project would increase traffic volumes on Storke Road north of Hollister Avenue by 8.0%, thus generating a significant roadway impact based on the City's threshold. The Mitigation Measures section of this report reviews the improvement project that has been developed by the City for this roadway segment.

Intersection Impacts

Levels of service were calculated for the study-area intersections assuming the Existing + Project traffic volumes presented on Figures 13 and 14. Tables 7 and 8 compare the Existing and Existing + Project levels of service and identify project-specific impacts based on the City's thresholds. It is noted that the Existing + Project level of service forecasts assume the improvements planned as part of the Goleta Mixed-Use Village Project (see Street Network Improvements Planned by the Applicant).

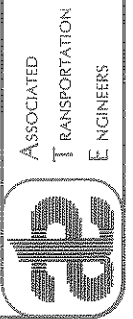
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LEGEND
 X - Average Daily Traffic Volume

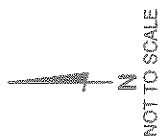
FIGURE 12

EXISTING + PROJECT AVERAGE DAILY TRAFFIC VOLUMES



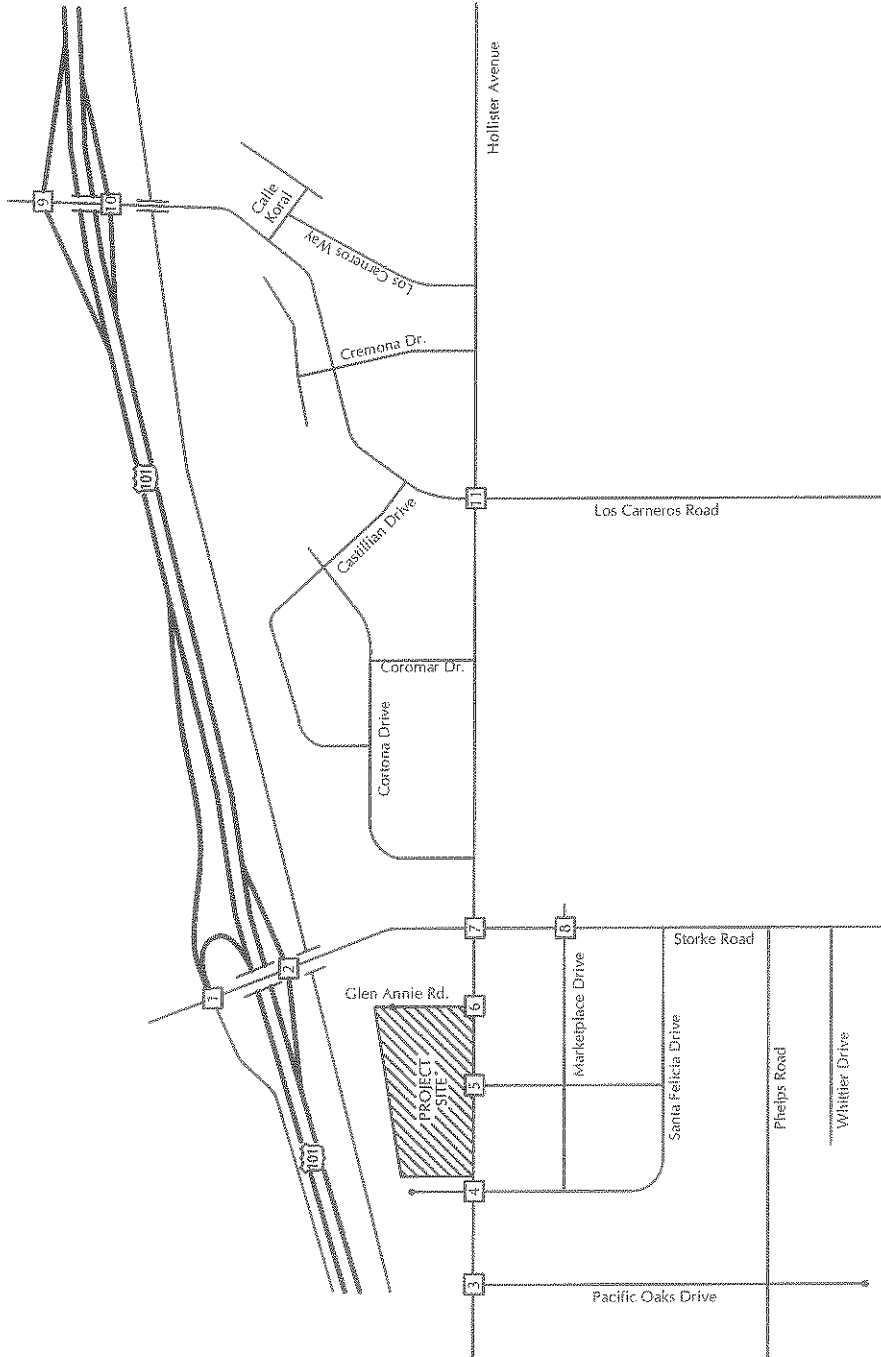
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MMF - #05012



1	573 9	236 392 658	43 4	32 168 157
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2	831 1128	15 2	900 343
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9	447 129	62 5 776	329 25
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10	97 1186	430 177	139 238
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11	24 221 155	42 240 59	51 282 45
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3	10 756	332 32	128 53
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4	14 365 46	4 877 15	40 5 15
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5	196 14 5	60 433 74	9 983 55	62 20
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6	58 552	1148
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7	415 490 436	66 151 103	158 498 44
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8	19 466 222	8 7 11	8 440 40
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LEGEND

—XX— A.M. Peak Hour Volume



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EXISTING + PROJECT A.M. PEAK HOUR VOLUMES

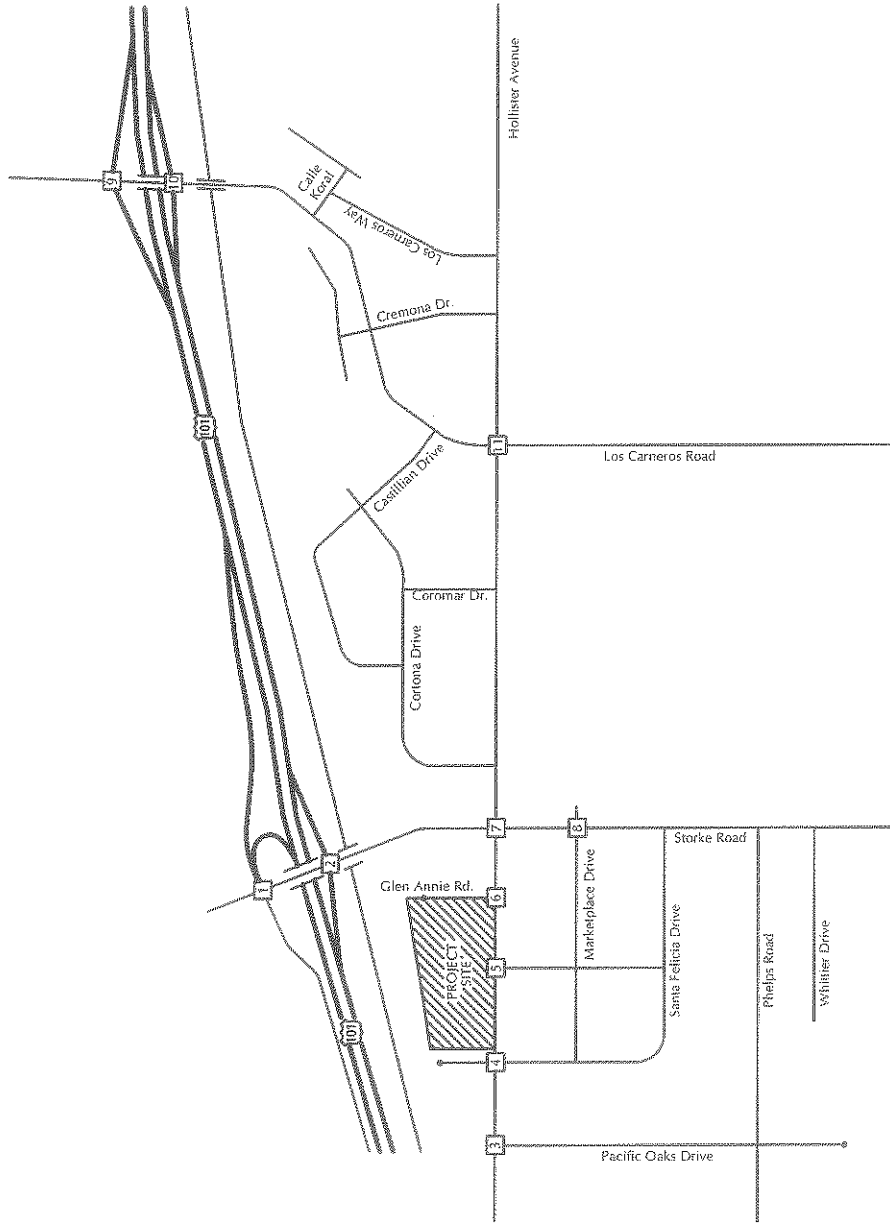
FIGURE 13

MMF - #05012



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LEGEND

└-XX - P.M. Peak Hour Volume



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EXISTING + PROJECT P.M. PEAK HOUR VOLUMES

**Table 7
Existing + Project A.M. Peak Hour Levels of Service**

Intersection	Existing		Existing + Project		Project-Added Trips	V/C Change	Impact?
	ICU	LOS	ICU	LOS			
U.S. 101 NB Ramps/Storke Road	0.71	LOS C	0.72	LOS C	78	0.013	No
U.S. 101 SB Ramps/Storke Road	0.78	LOS C	0.83	LOS D	172	0.043	Yes
Hollister Avenue/Pacific Oaks Drive	0.41	LOS A	0.42	LOS A	20	0.003	No
Hollister Avenue/Santa Felicia Drive(a)	11.8 sec.	LOS B	11.9	LOS B	20	N/A	No
Hollister Avenue/Marketplace Drive(b)	0.44	LOS A	0.51	LOS A	300	0.071	No
Hollister Avenue/Glen Annie Road(a)(b)	14.9 sec.	LOS B	9.4 sec.	LOS A	239	N/A	No
Hollister Avenue/Storke Road	0.61	LOS B	0.65	LOS B	239	0.039	No
Marketplace Drive/Storke Road	0.35	LOS A	0.36	LOS A	28	0.005	No
U.S. 101 NB Ramps/Los Carneros Road	0.54	LOS A	0.55	LOS A	16	0.002	No
U.S. 101 SB Ramps/Los Carneros Road	0.52	LOS A	0.53	LOS A	19	0.002	No
Hollister Avenue/Los Carneros Road	0.42	LOS A	0.42	LOS A	43	0.003	No

Bolded values exceed City's LOS C standard.

- (a) Unsignalized Intersection. LOS based on average weighted control delay per vehicle in seconds.
- (b) Existing + Project LOS assumes Goleta Mixed-Use Village Project improvements.

**Table 8
Existing + Project P.M. Peak Hour Levels of Service**

Intersection	Existing		Existing + Project		Project-Added Trips	V/C Change	Impact?
	ICU	LOS	ICU	LOS			
U.S. 101 NB Ramps/Storke Road	0.69	LOS B	0.72	LOS C	145	0.027	No
U.S. 101 SB Ramps/Storke Road	0.76	LOS C	0.80	LOS C	249	0.048	No
Hollister Avenue/Pacific Oaks Drive	0.47	LOS A	0.48	LOS A	39	0.006	No
Hollister Avenue/Santa Felicia Drive(a)	17.3 sec.	LOS C	17.8 sec.	LOS C	39	N/A	No
Hollister Avenue/Marketplace Drive(b)	0.54	LOS A	0.63	LOS B	524	0.092	No
Hollister Avenue/Glen Annie Road(a)(b)	24.2 sec.	LOS C	14.6 sec.	LOS B	419	N/A	No
Hollister Avenue/Storke Road	0.74	LOS C	0.77	LOS C	381	0.065	No
Marketplace Drive/Storke Road	0.53	LOS A	0.54	LOS A	61	0.011	No
U.S. 101 NB Ramps/Los Carneros Road	0.53	LOS A	0.54	LOS A	27	0.005	No
U.S. 101 SB Ramps/Los Carneros Road	0.78	LOS C	0.78	LOS C	30	0.002	No
Hollister Avenue/Los Carneros Road	0.67	LOS B	0.69	LOS B	71	0.012	No

Bolded values exceed City's LOS C standard.

- (a) Unsignalized Intersection. LOS based on average weighted control delay per vehicle in seconds.
- (b) Existing + Project LOS assumes Goleta Mixed-Use Village Project improvements.

The data presented in Table 7 show that the U.S. Highway 101 SB Ramps/Storke Road intersection is forecasts to operate at LOS D during the A.M. peak hour period with the addition of project traffic. The project would add 172 trips to the intersection during the A.M. peak hour, which is considered a significant impact based on the City's LOS D impact threshold (threshold = 15 or more peak hour trips). Improvements for this impacted location are included in the Mitigation Measures section of this report.

Hollister Avenue Left-Turn Queues and Storage Requirements

City staff requested an analysis of left-turn queues within the Hollister Avenue corridor between Cortona Drive on the east and Pacific Oaks Road on the west in order to evaluate the project's potential impacts to left-turn queues and storage requirements. The analysis was completed using the Existing and Existing + Project P.M. peak hour traffic forecasts, since the P.M. peak hour is the period with the highest traffic demands within the corridor.

The SYNCHRO software program was used for the analysis. SYNCHRO implements the Highway Capacity Manual operations method and produces level of service, delay, queue forecasts, etc. The SYNCHRO model predicts both "50th Percentile" and "95th Percentile" queue forecasts for the peak period. The 50th Percentile queue forecasts represent the average queues during the peak period. The 95th Percentile queue forecasts represent the peak queue during the peak period and is recommended for design purposes. The following analysis is based on the 95th Percentile queue forecasts. Worksheets showing the queue forecasts are contained in the Technical Appendix for reference.

Table 9 summarizes the Existing and Existing + Project left-turn storage and peak queue forecasts for the Hollister Avenue corridor between Cortona Drive and Pacific Oaks Road. The Existing + Project forecasts assume the improvements planned as part of the Goleta Mixed-Use Village Project (modifications to Hollister Avenue/Marketplace Drive and Hollister Avenue/Glen Annie Road).

Table 9
Existing and Existing + Project Peak Queue Forecasts & Storage Requirements

Intersection	Left-Turn Storage (Feet)	Peak Queue Forecast (Feet)	
		Existing	Existing + Project
<u>Hollister Avenue/Pacific Oaks Road</u> WB Left-Turn	300	114	116
<u>Hollister Avenue/Santa Felicia Drive</u> EB Left-Turn	140	20(a)	20(a)
<u>Hollister Avenue/Santa Felicia Drive</u> WB Left-Turn	300	29	30
<u>Hollister Avenue/Marketplace Drive</u> EB Left-Turn(b)	120	N/A	78
<u>Hollister Avenue/Marketplace Drive</u> WB Left-Turn(b)(c)	235	96	122
<u>Hollister Avenue/Glen Annie Road</u> EB Left-Turn	160	20(a)	20(a)
<u>Hollister Avenue/Storke Road</u> EB Left-Turn(c)	415(d)/565(d)	647	461 (b)
<u>Hollister Avenue/Storke Road</u> WB Left-Turn(c)	255	149	149
<u>Hollister Avenue/Cortona Drive</u> EB Left-Turn	100	20(a)	20(a)

(a) Forecast calculated at less than 1 vehicle. Length of 1 vehicle used.

(b) Storage/queue forecasts assume improvements planned by the applicant.

(c) Dual left-turn lanes. Storage/queue forecasts based on average capacity of both lanes.

(d) Existing storage = 415 x 2 lanes = 830 total. Existing + Project storage = 565 x 2 lanes = 1,130 total.

The Existing conditions data presented in Table 9 show that the left-turn storage provided at the intersections along Hollister Avenue accommodate the P.M. peak hour queues, except for the eastbound left-turn movement at the Storke Road/Hollister Avenue intersection. The eastbound approach currently contains 2 left-turn lanes, with the Number 1 left-turn lane providing approximately 300 feet of vehicle storage and the Number 2 left-turn lane providing approximately 530 feet of vehicle storage - for a total of 830-feet of vehicle storage. Observations made by ATE found unequally loading within the left-turn lanes, with approximately 25% of the left-turn vehicles queued in the Number 1 left-turn lane and 75% queued in the Number 2 left-turn lane (the Existing queue model assumes this lane utilization). The unequal loading occurs because most of the left-turn vehicles are destined for southbound U.S. Highway 101 at the U.S. Highway 101/Storke Road interchange and using the Number 2 left-turn lane does not require merging after clearing the Storke Road/Hollister Avenue intersection. The queue in the Number 2 left-turn lane often times extends back so that it blocks access to the Number 1 left-turn lane.

The Existing + Project queue model assumes the street network improvements planned by the applicant, including 1) modifications to Hollister Avenue/Glen Annie Road, which will increase the eastbound left-turn storage bays at Hollister Avenue/Storke Road to 565 feet in each lane (total of 1,130 feet of vehicle storage), and 2) the project-specific mitigation required at the U.S. Highway 101 Southbound/Storke Road intersection.

The additional northbound lane that is planned by the City for northbound Storke Road between Hollister Avenue and the at the U.S. Highway 101 Southbound on-ramp and changing the northbound right-turn lane at the U.S. Highway 101 Southbound ramps intersection to a free right-turn lane (see Project-Specific mitigation for U.S. Highway 101 SB Ramp/Storke Road) will eliminate the queuing that occurs in the outside thru lane on northbound Storke Road between Hollister Avenue and the U.S. Highway 101 Southbound on-ramp. In turn, more equal loading will occur within the eastbound left-turn storage bays at Hollister Avenue/Storke Road. The Existing + Project forecasts show that the eastbound left-turn peak queues at Hollister Avenue/Storke Road would be accommodated with these improvements.

SITE ACCESS AND CIRCULATION

Site Access

Primary access to the site is proposed via a new connection to the Hollister Avenue/Marketplace Drive intersection, which is currently a "T" intersection controlled by traffic signals. The main access driveway is proposed to form the north leg of the intersection, resulting in a conventional four-leg intersection. The new leg would contain 1 left-turn lane and 1 shared left + thru + right-turn lane for traffic outbound from the site plus two inbound lanes. Hollister Avenue would be widened on the north side to provide an eastbound left-turn lane and a westbound right-turn lane for traffic inbound to the site. As shown in Tables 15 and 16, this intersections is forecast to operate at LOS A during the A.M. peak hour and LOS C during the P.M. peak hour under Cumulative + Project conditions. These service levels indicate that the modified intersection would accommodate Existing + Project traffic as well as cumulative growth.

Secondary access for the project would be provided via a new driveway connection to Hollister Avenue at the west end of the project site and two connections to Glen Annie Road along the east end of the site. The driveway connection to Hollister Avenue at the west end of the site would be limited to right turns by the raised median on Hollister Avenue. This connection is forecast to carry low volumes and delays for vehicles using the driveway would be minimal. The northernmost connection to Glen Annie Road would be located opposite Sespe Lane. Stop signs would be installed on the Sespe Lane and Goleta Mixed-Use Village Project approaches to control traffic flows. This connection is also forecast to carry low volumes and delays for vehicles would be minimal. The southern connection to Glen Annie Road would be located opposite the driveway for the existing office buildings on Glen Annie Road and stop signs would be installed on the Goleta Mixed-Use Village Project approach to control traffic flows. This connection is also forecast to carry low volumes and delays for vehicles would be minimal.

On-Site Circulation

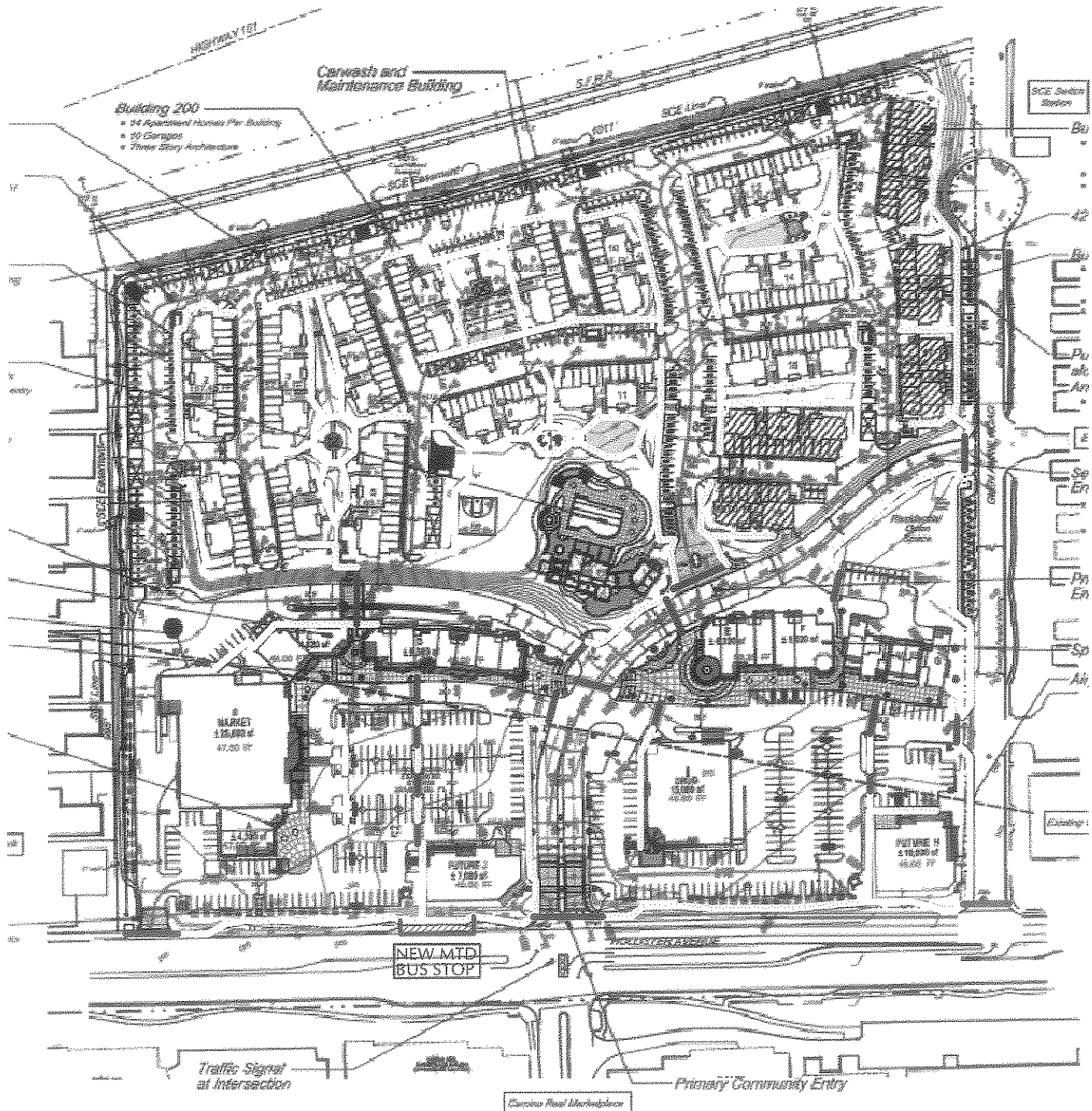
Review of the site plan found that the on-site circulation system would provide adequate access for the proposed uses. On-street parallel parking would be prohibited on the internal streets serving the site to facilitate traffic flows. Streets would be posted with "No Parking" signs or red curb.

Trucks access to the retail buildings is planned at the rear of the buildings. The on-site circulation system has been designed to accommodate trucks via the western driveway on Hollister Avenue and the main entry on Hollister Avenue opposite Marketplace Drive. The majority of trucks would enter the western driveway on Hollister Avenue and travel to the back of the stores. A truck turnaround area is located in the western portion of the site. A center island is present to direct regular-sized vehicle to use the area as a traffic circle. Signing and striping is also planned to direct motorist through the circle. The truck access pattern developed for the site provides good separation between the residential and commercial components of the project.

City staff identified potential operational and pedestrian issues at the main on-site intersection that serves the retail components. In order to resolve the potential conflicts, it is recommended that all-way stop-sign control be implemented to allow for installation of pedestrian crosswalks on all four legs of the intersection. ATE analyzed the operation of the intersection assuming all-way stop-sign control using the P.M. peak hour forecasts contained in the traffic study. The intersection is forecast to operate at LOS A assuming all-way stop control (LOS worksheets contained in the Technical Appendix for reference). LOS A indicates delays of less than 10 seconds with no congestion or significant queuing occurring during the P.M. peak period.

Pedestrian Access and Circulation

Review of the site plan shows that it has been designed to accommodate pedestrians. Figure 15 shows the pedestrian facilities planned as part of the project. As shown, a bus stop would be located on the north side of Hollister Avenue just west of the project's main driveway for transit riders (the bus pull-out is designed to meet MTD's standards). A meandering sidewalk is proposed along the Hollister Avenue frontage, which would provide pedestrian connectivity to the east and west. Sidewalk is also shown along the eastern frontage of the site for pedestrian use and connectively to Hollister Avenue and the adjacent pedestrian facilities. Finally, sidewalk and crosswalk facilities are shown along the internal streets for pedestrians walking within the site.



LEGEND

- Pedestrian Sidewalk
- Pedestrian Crosswalk



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PEDESTRIAN FACILITIES

PARKING ANALYSIS

The following parking analyses review the Zoning Ordinance parking requirements for the Goleta Mixed-Use Village Project and the project's peak parking demands based on empirical data.

Proposed Parking Supply

The project is proposing to provide total of 904 parking spaces on the site, with 352 spaces provided in surface lots for the commercial uses, 542 spaces provided for the apartment units (208 garage spaces + 66 carport spaces + 268 uncovered spaces), and 10 spaces for the 5 live-work units (10 garage spaces). The plan also includes modifying Glen Annie Road to provide a net addition of 15 spaces for public use.

Zoning Ordinance Parking Requirements

The City's Zoning Ordinance parking requirement for the proposed Goleta Mixed-Use Village Project is presented in Table 10. Pursuant to the Zoning Ordinance, the calculation for the retail-commercial uses is based on the gross building size and the calculation for the restaurant uses are based the number of square feet devoted to patrons plus the number of employees anticipated.

Table 10
City of Goleta Zoning Ordinance Parking Requirements

Land-Use	Size	Parking Rate	Spaces Required	Spaces Provided
Commercial Uses				
Retail/General Commercial	73,054 SF	1 Space per 500 SF	146 Spaces	--
Restaurant(a)				
Patron Area	17,000 SF	1 Space per 300 SF	57 Spaces	--
Employees	36 Emps	1 Space per 2 Employees	18 Spaces	--
Commercial Sub-Total			221 Spaces	352 Spaces
Apartment Units				
Single Bedroom Units	96 Units	1 Space per Unit	96 Spaces	--
Two Bedroom Units	126 Units	2 Spaces per Unit	252 Spaces	--
Three Bedroom Units	52 Units	2.5 Spaces per Unit	130 Spaces	--
Visitor Parking	274 Units	1 Space per 5 Units	55 Spaces	--
Apartment Sub-Total			533 Spaces	542 Spaces
Live-Work Units	5 Units	2 Spaces per Unit	10 Spaces	10 Spaces
Total Spaces			764 Spaces	904 Spaces

(a) Pursuant to Zoning Ordinance, parking required based on the number of square feet devoted to patrons + 2 spaces per employee.

The data presented in Table 10 indicate that the Zoning Ordinance parking requirement for the Goleta Mixed-Use Village Project is 764 spaces. The 352 spaces provided for the commercial uses would exceed the Zoning Ordinance requirement of 221 spaces and provide a buffer for peak parking periods. The 542 parking spaces provided for the apartments would exceed the Zoning Ordinance requirement of 533 spaces and the 10 garage spaces provided for the live-work units would meet the Zoning Ordinance requirement of 10 spaces.

Parking Demand Analysis

The parking demands associated with any project may be different than the Zoning Ordinance requirement. ATE researched empirical parking data for shopping centers, apartments, and condominiums in order to forecast the peak parking demands for the Goleta Mixed-Use Village Project. Rates were derived from the ITE parking report as well as ULI reports.⁴ The peak parking demand for the commercial component of the project is based on rates derived from the ULI *Parking Requirements for Shopping Centers*. While the ITE *Parking Generation* publication includes rates for shopping centers, it does not stratify the data by the size or type of center. The ULI *Parking Requirements for Shopping Centers* includes rates the various center sizes and types. The rates for "Neighborhood" center were selected for the analysis since the proposed center fits the ULI definition, "The typical square footage for this type of center is about 30,000 to 100,000 SF or more. It usually includes a supermarket and/or drugstores." Table 11 presents the peak parking demand forecasts.

Table 11
Peak Parking Demand Forecasts - ITE Rates

Land Use	Size	Peak Demand Rate	Peak Parking Demand	Spaces Provided
Shopping Center(a)	90,054 SF	3.3 Spaces/1,000 SF	297 Spaces	352 Spaces
Apartments(b)	274 Units	1.94 Spaces/Unit	532 Spaces	542 Spaces
Live/Work Condos(b)	5 Units	1.52 Spaces/Unit	8 spaces	10 Spaces
Total			837 Spaces	904 Spaces

(a) Demand based on neighborhood shopping center rate derived from ULI *Parking Requirements for Shopping Centers*.

(b) Demand based on 85th percentile rate derived from ITE *Parking Generation*.

Table 11 shows that the peak parking demand is forecast at 297 spaces for the retail-commercial uses and 540 spaces for the residential uses. The 352 spaces proposed for the retail-commercial uses would accommodate the peak demand with a reserve of 55 spaces.

⁴ Parking Generation, Institute of Transportation Engineers, 4th Edition, 2010.

Parking Requirements for Shopping Centers, Urban Land Institute, 2nd Edition, 1999.

The 552 spaces proposed for the residential uses would accommodate the peak demand with a reserve of 12 spaces. The analysis shows that peak parking demands would be accommodated within the site and not spillover onto adjacent streets.

Goleta Apartment Parking Demand Rates. Parking demand surveys conducted at the Willow Springs apartment complex, located in the City of Goleta, were also used to forecast the project's peak demands for the proposed apartments. Table 12 presents the peak parking demand forecast for the apartments based on the Willow Springs parking study.

Table 12
Peak Parking Demand Forecasts - Apartments Based on Local Study

Land Use	Size	Peak Demand Rate	Peak Parking Demand	Spaces Provided
Apartments(a)	274 Units	1.74 Spaces/Unit	477 Spaces	542 Spaces

(a) Demand based on rate derived from Willow Spring parking study.

Table 12 shows a peak parking demand of 477 spaces for the proposed apartments based on the local study, which would be met by the 542 spaces that are proposed.

Glen Annie Road Parking

On-street parallel parking is currently available along Glen Annie Road (a figure showing the existing on-street parking supply is contained in the Technical Appendix). Based on the standard of 23-feet for each parallel parking space, there are approximately 27 spaces along the east side of the road, 30 spaces along the west side of the road, and 7 spaces within the existing cul-de-sac at the end of the road (64 total spaces).

The project is proposing to widen Glen Annie Road to provide additional parking along the west side of the road as well as widen the cul-de-sac to increase those spaces (a figure showing the future parking supply is contained in the Technical Appendix). A total of 79 spaces would be available with the proposed modifications. As shown on the site plan, there would be 18 ninety-degree spaces, 13 angled spaces, and 11 parallel spaces along the west side of Glen Annie Road. The widened cul-de-sac would provide 10 parking spaces. It is noted that the Glen Annie road width has been designed so that vehicles pulling out of the angled parking stalls do not back out past the centerline and interfere with northbound traffic flows.

The on-street spaces along Glen Annie would be available for general public use, including spillover parking demands from the adjacent residential uses east of the site. Windshield surveys conducted during evening hours found vehicles parked along Glen Annie Road from the existing residential units located east of the road. However, excess on-street parking was available during the peak evening periods. Nonetheless, the additional on-street parking

spaces proposed by the applicant would increase the public parking supply for the residential and commercial uses in the area by 15 spaces. Table 13 summarizes the existing and proposed parking supply on Glen Annie Road.

**Table 13
Glen Annie Road Parking Supply**

Scenario	East Side	West Side	Cul-De Sac	Total
Existing	27	30	7	64
Proposed	27	42	10	79
Change	0	+12	+3	+15

CUMULATIVE ANALYSIS

Cumulative Traffic Volumes

Cumulative traffic volumes were forecast using the City's traffic model (model data contained in the Technical appendix for reference). The cumulative forecasts include traffic generated by approved and pending projects proposed within the City of Goleta (a list summarizing the approved and pending projects is contained in the Technical Appendix for reference) as well as development of the UCSB Long Range Development Plan, the Santa Barbara Airport Specific Plan, and regional growth in the Goleta-Santa Barbara area.

The traffic model also assumes key roadway improvements that are planned in Goleta. The key improvements in the vicinity of the project site include: 1) construction of a new freeway overcrossing that would be located between the Hollister Avenue and Storke Road interchanges and 2) extending Phelps Road from Storke Road to Los Carneros Road.

Cumulative ADT volumes were developed based on the change in P.M. peak hour link volumes. The change in peak hour volumes was factored by a peak hour factor and then added to the existing ADT volumes. Cumulative ADT roadway volumes are shown on Figure 16. Figures 17 and 18 present the Cumulative A.M. and P.M. peak hour intersection volumes. Cumulative + Project ADT roadway volumes are shown on Figure 19. Cumulative + Project A.M. and P.M. peak hour intersection volumes are presented on Figures 20 and 21.

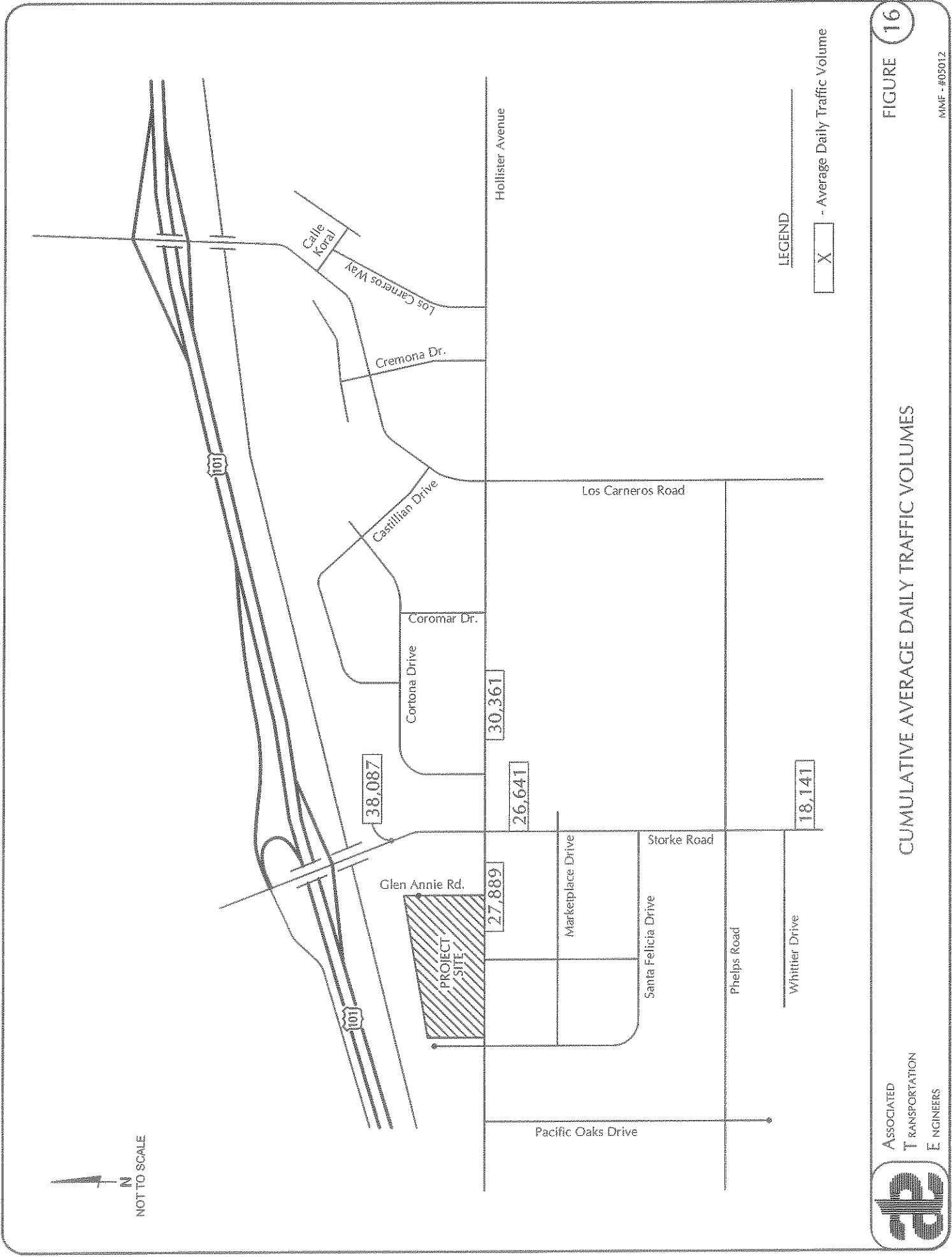


FIGURE 16

CUMULATIVE AVERAGE DAILY TRAFFIC VOLUMES

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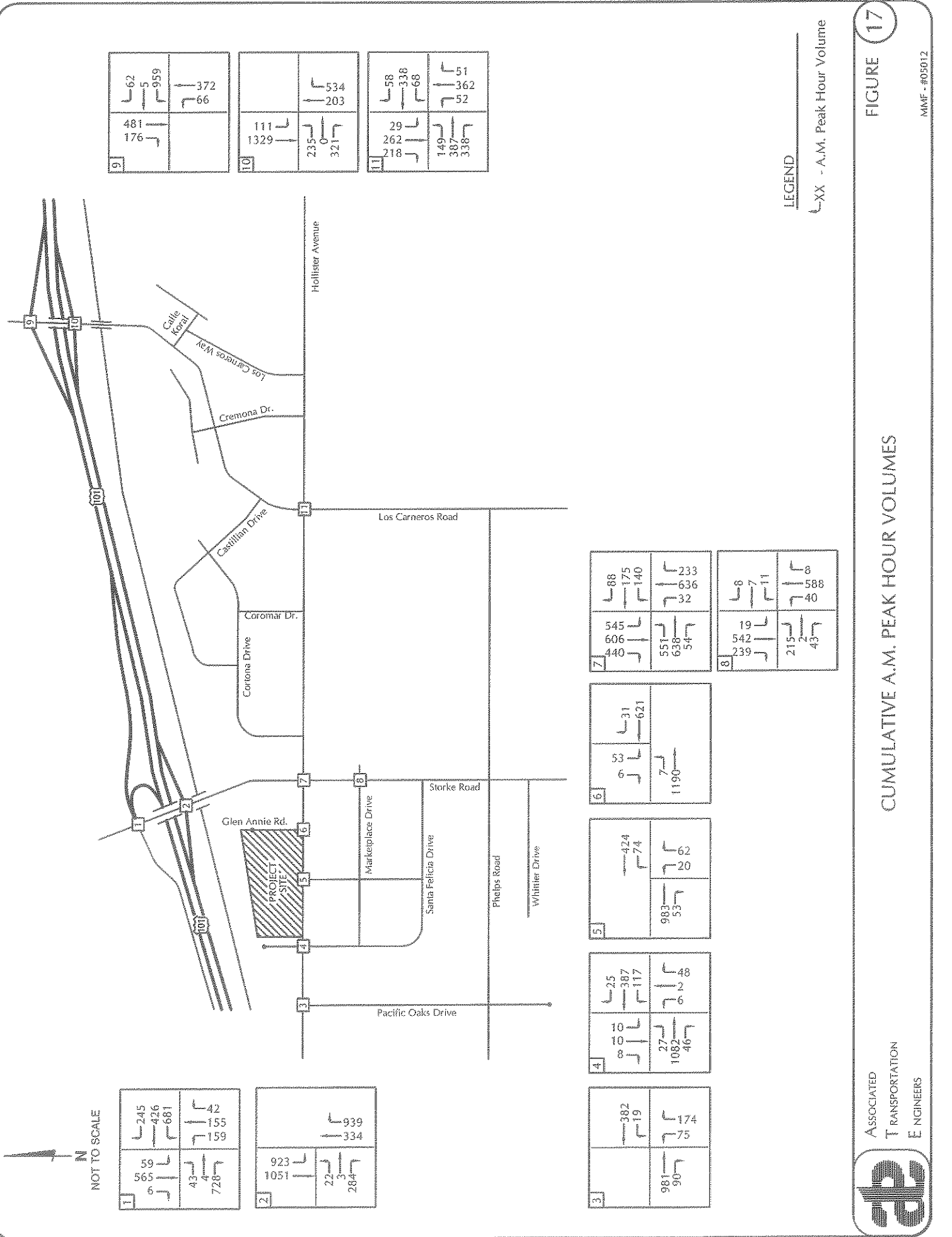
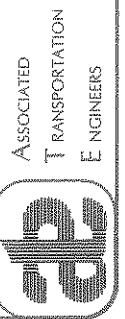
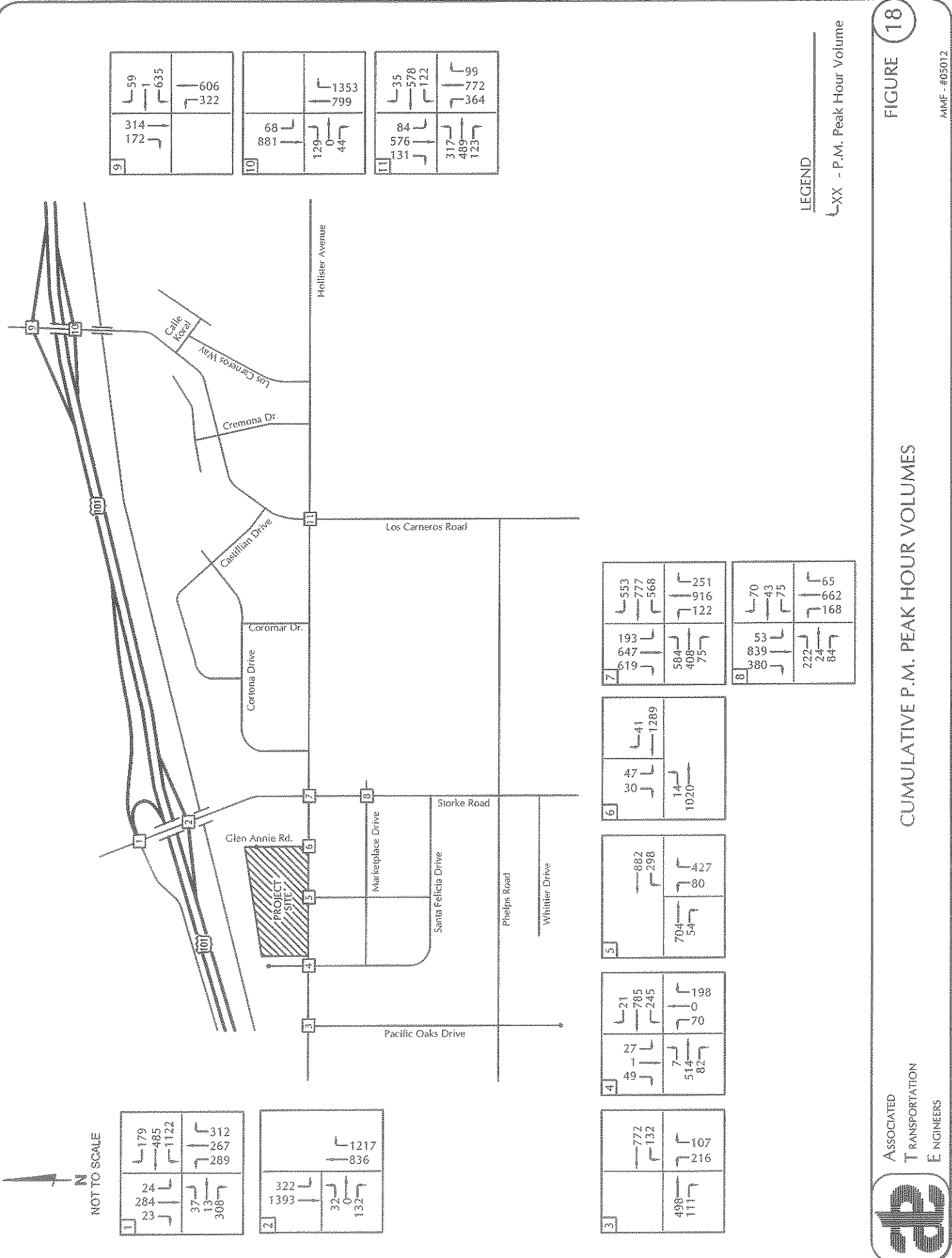


FIGURE 17

CUMULATIVE A.M. PEAK HOUR VOLUMES





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└-XX - P.M. Peak Hour Volume

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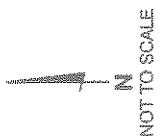
FIGURE 18

CUMULATIVE P.M. PEAK HOUR VOLUMES



ASSOCIATED
TRANSPORTATION
ENGINEERS

MMF - #05012



LEGEND
 X - Average Daily Traffic Volume

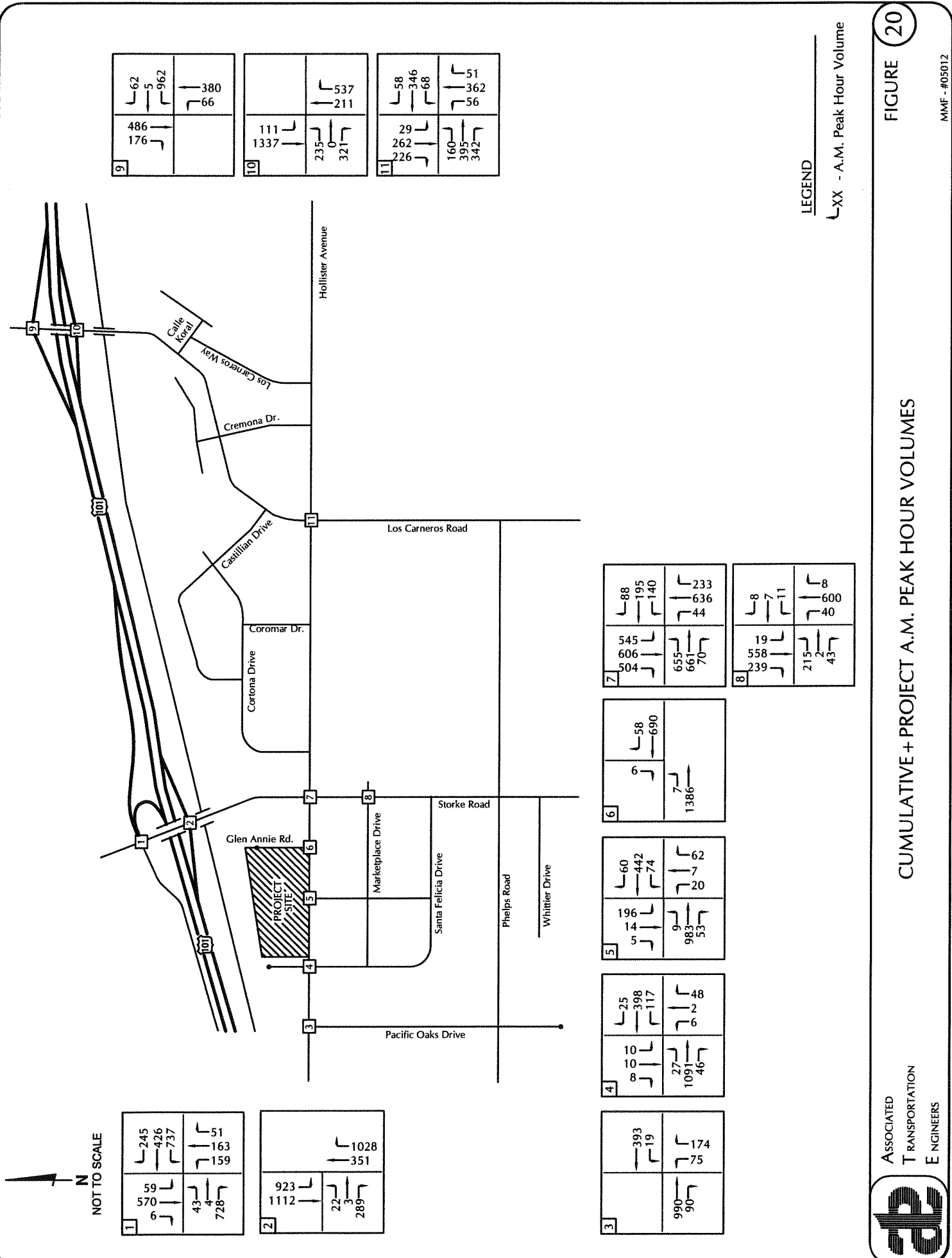
FIGURE 19

CUMULATIVE + PROJECT AVERAGE DAILY TRAFFIC VOLUMES



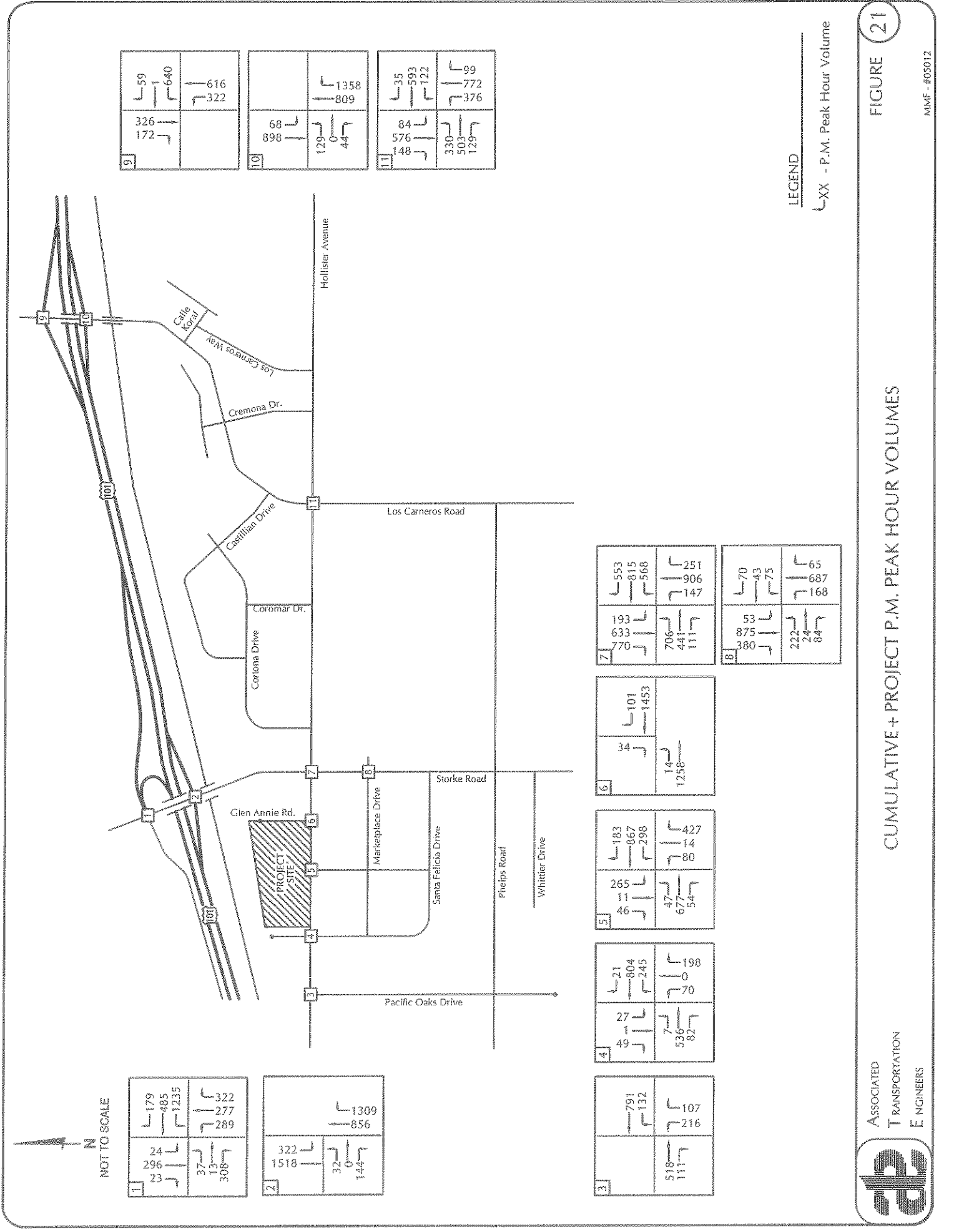
ASSOCIATED
 TRANSPORTATION
 ENGINEERS

MMF - #05012



CUMULATIVE + PROJECT A.M. PEAK HOUR VOLUMES

FIGURE 20



9	<table border="1"> <tr><td>59</td><td>640</td></tr> <tr><td>326</td><td>172</td></tr> <tr><td>616</td><td>322</td></tr> </table>	59	640	326	172	616	322	10	<table border="1"> <tr><td>1358</td><td>809</td></tr> <tr><td>68</td><td>898</td></tr> <tr><td>129</td><td>44</td></tr> </table>	1358	809	68	898	129	44	11	<table border="1"> <tr><td>35</td><td>593</td><td>122</td><td>99</td></tr> <tr><td>84</td><td>576</td><td>148</td><td>772</td></tr> <tr><td>330</td><td>503</td><td>129</td><td>376</td></tr> </table>	35	593	122	99	84	576	148	772	330	503	129	376
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LEGEND

└─XX - P.M. Peak Hour Volume

CUMULATIVE + PROJECT P.M. PEAK HOUR VOLUMES

FIGURE 21

MIME - #05012

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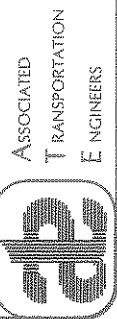
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Roadway Impacts

Table 14 compares the Cumulative and Cumulative + Project roadway volumes and identifies the impact of project-added traffic based on the City's Acceptable Capacity standard.

**Table 14
Cumulative and Cumulative + Project Roadway Volumes**

Roadway Segment	Acceptable Capacity	Cumulative ADT	Cumulative + Project ADT	% Change	Impact?
Storke Road n/o Hollister Avenue	34,000	38,087	40,807	7.1%	Yes
Storke Road s/o Hollister Avenue	34,000	26,641	27,157	1.9%	No
Storke Road s/o Whittier Drive	14,300	18,141	18,657	2.8%	Yes
Hollister Avenue w/o Storke Road	34,000	27,889	32,416	16.2 %	No
Hollister Avenue e/o Storke Road	34,000	30,361	31,134	2.5%	No

Bolded values exceed Acceptable Capacity standard.

The data presented in Table 14 show that the segment of Storke Road north of Hollister Avenue and the segment of Storke Road south of Whittier Drive are forecast to exceed the Acceptable Capacity standard under Cumulative and Cumulative + Project conditions. The project would increase the traffic volume on these two segments by more than 1.0%, which exceeds the City's impact threshold. The Mitigation Measures section of this report reviews improvements that have been developed by the City for these roadway segments.

Intersection Impacts

Tables 15 and 16 compare the Cumulative and the Cumulative + Project levels of service for the study-area intersections and identify cumulative impacts based on City thresholds. It is noted that the Cumulative + Project level of service forecasts assume the improvements planned as part of the Goleta Mixed-Use Village Project (modifications to Hollister Avenue/Marketplace Drive and Hollister Avenue/Glen Annie Road).

**Table 15
Cumulative and Cumulative + Project A.M. Peak Hour Levels of Service**

Intersection	Cumulative		Cumulative + Project		Change in V/C	Impact?
	ICU	LOS	ICU	LOS		
U.S. 101 NB Ramps/Storke Road	0.73	LOS C	0.75	LOS C	0.013	No
U.S. 101 SB Ramps/Storke Road	0.89	LOS D	0.94	LOS E	0.044	Yes
Hollister Avenue/Pacific Oaks Drive	0.50	LOS A	0.50	LOS A	0.003	No
Hollister Avenue/Santa Felicia Drive(a)	16.7 sec.	LOS C	17.0 sec.	LOS C	N/A	No
Hollister Avenue/Marketplace Drive(b)	0.44	LOS A	0.51	LOS A	0.071	No
Hollister Avenue/Glen Annie Road(a)(b)	17.7 sec.	LOS C	10.0 sec.	LOS A	N/A	No
Hollister Avenue/Storke Road	0.71	LOS B	0.74	LOS C	0.023	No
Marketplace Drive/Storke Road	0.39	LOS A	0.39	LOS A	0.004	No
U.S. 101 NB Ramps/Los Carneros Road	0.65	LOS B	0.65	LOS B	0.003	No
U.S. 101 SB Ramps/Los Carneros Road	0.66	LOS B	0.67	LOS B	0.003	No
Hollister Avenue/Los Carneros Road	0.48	LOS A	0.48	LOS A	0.004	No

Bolded values exceed LOS C standard.

(a) Unsignalized Intersection. LOS based on average weighted control delay per vehicle in seconds.

(b) Cumulative + Project LOS assumes Goleta Mixed-Use Village Project improvements.

The data presented in Table 15 show that the Goleta Mixed-Use Village Project would generate a significant cumulative impact at the U.S. Highway 101 SB Ramps/Storke Road intersection during the A.M. peak period. Improvement recommendations are presented below in the Mitigation Measures section.

**Table 16
Cumulative and Cumulative + Project P.M. Peak Hour Levels of Service**

Intersection	Cumulative		Cumulative + Project		Change in V/C	Impact?
	ICU	LOS	ICU	LOS		
U.S. 101 NB Ramps/Storke Road	0.72	LOS C	0.75	LOS C	0.027	No
U.S. 101 SB Ramps/Storke Road	0.84	LOS D	0.89	LOS D	0.048	Yes
Hollister Avenue/Pacific Oaks Drive	0.50	LOS A	0.50	LOS A	0.006	No
Hollister Avenue/Santa Felicia Drive(a)	17.5 sec.	LOS C	17.9 sec.	LOS C	N/A	No
Hollister Avenue/Marketplace Drive(b)	0.54	LOS A	0.63	LOS B	0.093	No
Hollister Avenue/Glen Annie Road(a)(b)	25.1 sec.	LOS D	14.6 sec.	LOS B	N/A	No
Hollister Avenue/Storke Road	0.87	LOS D	0.92	LOS E	0.047	Yes
Marketplace Drive/Storke Road	0.64	LOS B	0.65	LOS B	0.011	No
U.S. 101 NB Ramps/Los Carneros Road	0.65	LOS B	0.65	LOS B	0.006	No
U.S. 101 SB Ramps/Los Carneros Road	1.00	LOS E	1.00	LOS E	0.002	No
Hollister Avenue/Los Carneros Road	0.80	LOS C	0.81	LOS D	0.012	No

Bolded values exceed LOS C standard.

(a) Unsignalized Intersection. LOS based on average weighted control delay per vehicle in seconds.

(b) Cumulative + Project LOS assumes Goleta Mixed-Use Village Project improvements.

The data presented in Table 16 show that the Goleta Mixed-Use Village Project would generate significant cumulative impacts at the U.S. Highway 101 SB Ramps/Storke Road intersection and at the Hollister Avenue/Storke Road intersection during the P.M. peak period. Improvement recommendations are presented below in the Mitigation Measures section.

MITIGATION MEASURES

Project-Specific Measures

Storke Road north of Hollister Avenue. The Goleta Mixed-Use Village Project would generate a significant impact to the segment of Storke Road north of Hollister Avenue based on the City's Acceptable Capacity standard. The City is planning to implement a new northbound lane on Storke Road that would extend from Hollister Avenue to the existing right-turn lane that serves the U.S. Highway 101 Southbound On-Ramp at the Storke Road interchange (see Figure 22). The new northbound lane would serve as an acceptor lane and would allow the westbound right-turns from Hollister Avenue onto Storke Road to become a free movement.

The planned improvement has been adopted as a condition of approval for several approved developments in the study-area (Cabrillo Business Park, Rincon Palms Hotel, etc.). If the lane is not operational at the time that the Goleta Mixed-Use Village Project is developed, the Goleta Mixed-Use Village Project would be responsible for implementing the improvement.

Goleta Mixed-Use Village Project would be responsible for implementing the improvement. It is anticipated that the City would administer a fair-share payment program between the various developments conditioned to implement the improvement.

The additional travel lane would increase the Acceptable Capacity of Storke Road to 47,000 ADT and mitigate the project-specific impact. Table 17 shows the mitigated capacity for the roadway.

**Table 17
Mitigated Roadway Operations**

Roadway Segment	Acceptable Capacity With Mitigation	Existing + Project ADT
Storke Road n/o Hollister Avenue	47,000 ADT	36,250 ADT

U.S. Highway 101 SB Ramps/Storke Road. This intersection is forecast to operate at LOS D during the A.M. peak hour period with Existing + Project volumes. The recommended improvement for this location is to modify the northbound right-turn channelization island for vehicles turning right from Storke Road onto the U.S. Highway 101 SB on-ramp (see Figure 22). The improvements would include a physical barrier for vehicles entering the lane dedicated for the northbound Storke Road to southbound U.S. Highway 101 movement. The traffic signal would also be modified to provide a constant green arrow for northbound right-turn traffic, thereby creating a free right-turn lane. Since the intersection is controlled by Caltrans, the design and implementation of this mitigation would need to be coordinated with Caltrans.

The modified right-turn lane would provide LOS A operations during the A.M. peak hour under Existing + Project conditions, thus mitigating the project's impact at this location. Table 18 shows the mitigated level of service for the intersection.

**Table 18
U.S. Highway 101 SB Ramps/Storke Road
Existing + Project Mitigated A.M. Peak Hour Levels of Service**

Intersection	Existing Geometry		Mitigated Geometry	
	ICU	LOS	ICU	LOS
U.S. 101 SB Ramps/Storke Road	0.83	LOS D	0.50	LOS A



Project-Specific Improvement:
Construct physical barrier to allow dedicated right-turn for vehicles entering U.S. 101 southbound. Remove stop bar and modify signal to provide constant green right-turn arrow.

City of Goleta Programmed Improvement:
Add northbound through lane between Hollister Avenue and U.S. 101 Southbound On-Ramp.

Cumulative Measures

The City of Goleta charges traffic mitigation fees through the GTIP to implement future capacity improvements that are required to accommodate cumulative traffic growth. The Goleta Mixed-Use Village Project would be required to contribute to the following cumulative mitigations via payment of traffic mitigation fees.

Storke Road north of Hollister Avenue. The addition of project traffic would generate a significant cumulative impact to the roadway segment of Storke Road north of Hollister Avenue. The project-specific mitigation (add northbound travel lane) would increase the Acceptable Capacity of the roadway segment to 47,000 ADT and mitigate the cumulative impact at this location.

Storke Road south of Whittier Drive. The addition of project traffic would generate a significant cumulative impact to the roadway segment of Storke Road south of Whittier Drive. The Isla Vista Master Plan indicates that this segment is to be widened to provide two travel lanes in each direction (4-lane roadway). The widening would increase the Acceptable Capacity to 34,000 ADT and mitigate the cumulative impact at this location.

U.S. Highway 101 SB Ramps/Storke Road. This location is forecast to operate at unacceptable levels of service under Cumulative and Cumulative + Project conditions. The project-specific mitigation (modify the northbound right-turn channelization to provide a free right-turn lane) would provide LOS A under Cumulative and Cumulative + Project conditions, thereby mitigating the cumulative impact at the intersection.

Hollister Avenue/Storke Road. The City General Plan adopted LOS D (V/C 0.89) as the minimum operating standard for this intersection, thus LOS D is the target for the mitigation analysis. The City's plan to construct the new northbound lane on Storke Road between Hollister Avenue and the U.S. Highway 101 Southbound Ramps would serve as an acceptor lane that would allow the westbound right-turns from Hollister Avenue onto Storke Road to become a free movement. The City's plan to construct a new westbound lane on Hollister Avenue between Storke Road and Marketplace Drive would serve as an acceptor lane that would allow for free right-turns for the southbound Storke Road to westbound Hollister Avenue movement. These programmed improvements would provide LOS E operations under Cumulative + Project conditions.

The cumulative mitigation analysis explored several additional measures to address the LOS E deficiency that is forecast with the City's planned improvements. Numerous options were explored, including split-phasing of approach legs, right-turn overlap arrows, and constructing new lanes to increase the capacity (e.g. providing a 3rd eastbound left-turn lane, adding a 3rd westbound through lane, etc.). The results of the analysis found two viable options (providing additional lanes on the eastbound and westbound approaches were reviewed with City staff and rejected due to capacity issues downstream from the intersection).

Mitigation Option 1 would be to restripe the northbound Storke Road approach to provide two left-turn lanes, two through-lanes, and one shared thru+right-turn lane. Mitigation Option 2 would be to reconfigure the northbound Storke Road approach to provide one left-turn lane, three through-lanes and one right-turn lane. Figure 23 illustrates the two mitigation options. Both options, in addition to the City's planned improvements, would provide LOS D under Cumulative + Project conditions and meet the City's operating standard for the intersection. Table 19 shows the mitigated levels of service.

Table 19
Cumulative + Project P.M. Peak Hour Levels of Service
Hollister Avenue/Storke Road Intersection - With Cumulative Mitigations

Option	Cumulative + Project (a)		Cumulative + Project With Improvements	
	ICU	LOS	ICU	LOS
<u>Option #1</u> Restripe NB w/ 2 LT Lanes, 2 Thru Lanes, & 1 Thru-Right Lane	0.92	E	0.84	D
<u>Option #2</u> Restripe NB w/ 1 LT Lane, 3 Thru Lanes, & 1 Right Lane	0.92	E	0.83	D

(a) Assumes completion of the programmed improvements.

As shown, the intersection is forecast to operate at LOS D under both mitigation options and would meet the City's General Plan LOS D (V/C 0.89) standard.

CONGESTION MANAGEMENT PROGRAM ANALYSIS

Impact Criteria

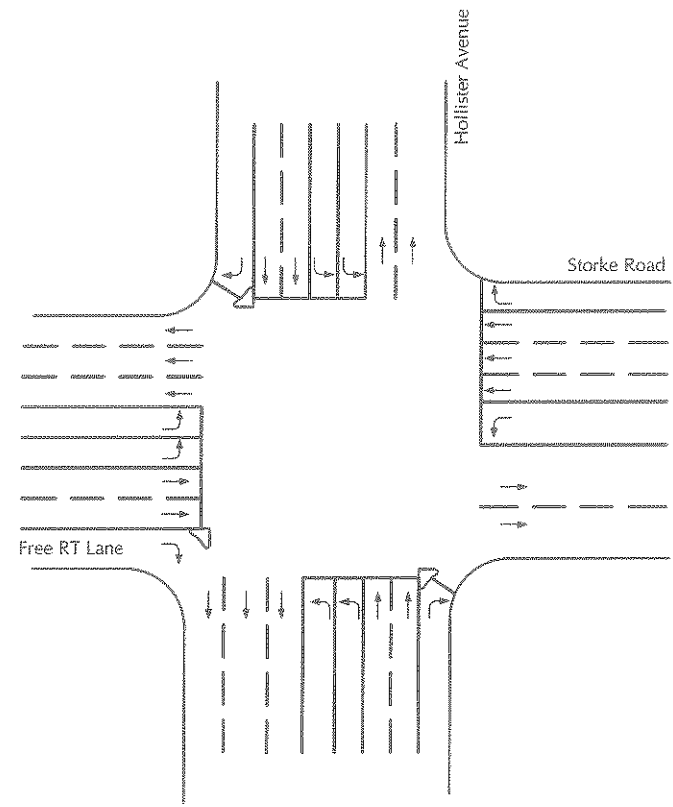
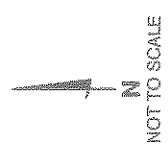
The Santa Barbara County Association of Governments (SBCAG) has developed a set of traffic impact thresholds to assess the impacts of land use decisions made by local jurisdictions on regional transportation facilities located within the Congestion Management Program (CMP) roadway system. The following guidelines were developed by SBCAG to determine the significance of project-generated traffic impacts on the regional CMP system.

1. For any roadway or intersection operating at "Level of Service" (LOS) A or B, a decrease of two levels of service resulting from the addition of project-generated traffic.
2. For any roadway or intersection operating at LOS C, project-added traffic that results in LOS D or worse.

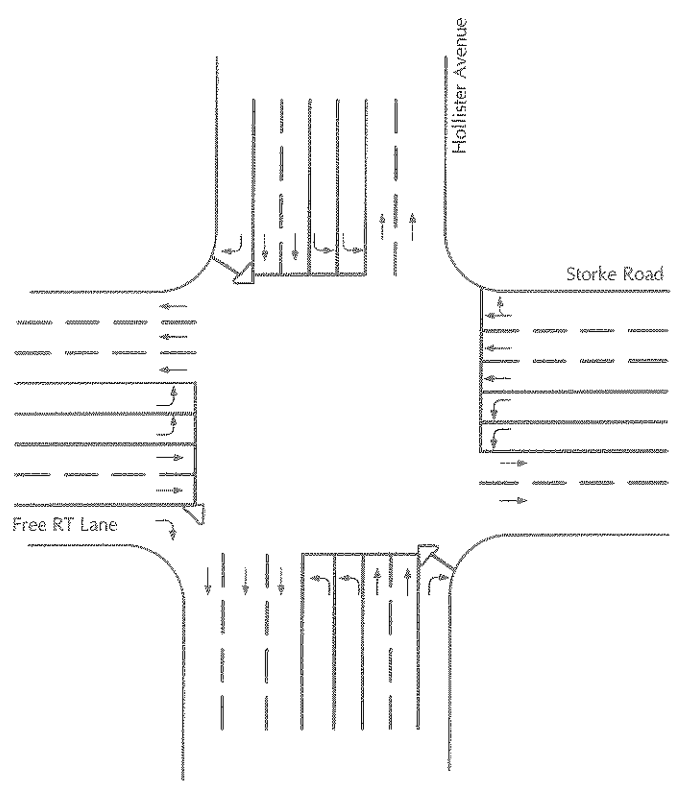
STORKE ROAD/HOLLISTER AVENUE MITIGATION OPTIONS



ASSOCIATED
TRANSPORTATION
ENGINEERS



OPTION #2



OPTION #1

3. For intersections within the CMP system with existing congestion, the following table defines significant impacts.

Level of Service	Project-Added Peak Hour Trips
LOS D	20
LOS E	10
LOS F	10

4. For freeway or freeway segments with existing congestion, the following table defines significant impacts.

Level of Service	Project-Added Peak Hour Trips
LOS D	100
LOS E	50
LOS F	50

Potential Intersection Impacts

The following study-area intersections are located within the CMP network:

Storke Road/U.S. Highway 101 NB Ramps
 Storke Road/U.S. Highway 101 SB Ramps
 Storke Road/Hollister Avenue
 Los Carneros Road/U.S. Highway 101 NB Ramps
 Los Carneros Road/U.S. Highway 101 SB Ramps
 Los Carneros Road/Hollister Avenue

As shown in Table 7, the U.S. Highway 101 SB Ramp/Storke Road intersection is forecast to operate at LOS D during the A.M. peak hour under Existing + Project conditions. The project would add more than 20 trips to this intersection, thus generating a significant impact under CMP criteria. The mitigation measures developed for this location would provide LOS A operations. The recommended improvements would therefore mitigate the project's impact to this CMP intersection.

For Cumulative, Tables 15 and 16 indicate that the U.S. Highway 101 SB Ramps/Storke Road, Hollister Avenue/Storke Road, Hollister Avenue/Los Carneros Road, and U.S. Highway 101 SB Ramps/Los Carneros Road intersections are forecast to operate at LOS D or LOS E under Cumulative + Project conditions. The project is forecast to exceed the CMP impact thresholds at these locations.

The CMP requires that deficiency plans be prepared when an intersection reaches LOS E. The City of Goleta has adopted LOS D as the acceptable operating standard for the Storke Road/Hollister Avenue intersection. The City of Goleta General Plan EIR ⁵ has identified improvements to maintain acceptable operations under Year 2030 (Build Out) conditions. Table 20 presents the Levels of Service for the CMP intersections assuming the planned improvements identified by the City.

**Table 20
City of Goleta General Plan Buildout Levels Of Service**

Intersection	LOS w/ Programmed Improvements
U.S. 101 SB Ramps/Storke Road	0.53/LOS A
Storke Road/Hollister Avenue	0.89/LOS D
U.S. 101 SB Ramps/Los Carneros Road	0.56/LOS A
Los Carneros Road/Hollister Avenue	0.78/LOS C

The GTIP was established to collect funds to implement future identified improvements within the City. The GTIP includes programmed improvements for the Storke Road and Los Carneros Road corridors as well as the Storke Road/Hollister Avenue, U.S. Highway 101 SB Ramps/Los Carneros Road, and Los Carneros Road/Hollister Avenue intersections, which would return service levels to LOS C or better (LOS D or better at the Storke Road/Hollister Avenue intersection). These improvements would thereby meet City standards and provide consistency with the CMP. The proposed project would be required to contribute traffic fees to the GTIP for implementation of the planned improvements.

Potential Freeway Impacts

The 2009 CMP report shows that the segment of U.S. Highway 101 between Storke Road and Los Carneros operates at LOS B during the A.M. peak hour and at LOS C during the P.M. peak hour.⁶ The proposed project is forecast to add 145 A.M. peak hour trips and 205 P.M. peak hour trips to this segment of U.S. Highway 101. The CMP threshold for freeway impacts is 50 trips for segments operating at LOS E or LOS F and 100 trips for segments operating at LOS D. Based on CMP criteria, the project would not generate a significant impact to the freeway segments located in the study-area.



⁵ Goleta General Plan/Coastal Land Use Plan EIR, City of Goleta, September 2006.

⁶ 2009 Santa Barbara County Congestion Management Program, Santa Barbara County Association of Governments, June 2009.

REFERENCES AND PERSONS CONTACTED

Associated Transportation Engineers

Scott A. Schell, AICP, Principal Transportation Planner
Dan Dawson, Supervising Transportation Planner
Matthew Farrington, Transportation Planner I

References

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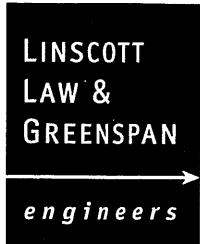
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Persons Contacted

Biega, Jim, City of Goleta
Damkowitz, Jim, Dowling And Associates
Schultz, Marti, City of Goleta
Wagner, Steve, City of Goleta
White, Diana, City of Goleta



MEMORANDUM

To: Brian D. McCarthy
 Envicom Corporation

Date: January 26, 2011

From: Clare M. Look-Jaeger, P.E. *CL Look-Jaeger* LLG Ref: 1-103885-1
 Alfred C. Ying, P.E. *ACY*
 Linscott, Law & Greenspan, Engineers

Subject: Peer Review of the Traffic, Circulation and Parking Study -
 Goleta Mixed-Use Village Project, Goleta, California

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law & Greenspan, Engineers
236 N. Chester Avenue
Suite 200
Pasadena, CA 91106
626.796.2322 T
626.792.0941 F
www.llgengineers.com

Pasadena
Costa Mesa
San Diego
Las Vegas

Linscott, Law & Greenspan, Engineers (LLG) has completed a peer review of the Traffic, Circulation and Parking Study, prepared by Associated Transportation Engineers (ATE), dated September 14, 2010. The proposed project site is located on the north side of Hollister Avenue, west of Glen Annie Road in the City of Goleta, California. The proposed project consists of the development of 274 apartment units, five live/work condominium units with 3,294 square feet of live/work retail space, and an 86,760 square-foot neighborhood shopping center. The project site is mostly vacant with the exception of a bank building (with two bank ATMs with drive through) that is currently utilized as a production studio for a local cable television company. The existing bank building is located at the northwest corner of the Glen Annie Road and Hollister Avenue intersection and is proposed to be demolished as part of the proposed project. Vehicular access to the proposed project site is planned to be provided via two driveways on Hollister Avenue and two driveways on Glen Annie Road. A total of 904 parking spaces will be provided by the project. In addition, the project applicant also proposes to reconfigure and widen the west side of Glen Annie Road along the project frontage (from Hollister Avenue to the cul-de-sac at the north end of Glen Annie Road) to provide up to 15 new parking spaces for public use.

The overall study was found to be comprehensive and prepared in accordance to standard traffic engineering practices. Key peer review comments regarding the traffic, circulation and parking study are summarized in the following paragraphs. It should be noted that some of the comments may necessitate updates to the level of service calculations. Thus, it is LLG's recommendation that conclusions contained in the report with respect to significant project traffic impacts and significant cumulative traffic impacts be re-examined as a result of these potential changes. For referencing purposes, the annotated comments on the study, including relevant portions of the appendices are attached to this memorandum.

Key Comments on the Traffic, Circulation and Parking Study (dated September 14, 2010)

- Page 7 – The existing turning movement counts and the corresponding level of service calculations for Int. No. 3: Hollister Avenue/Pacific Oaks Drive and Int. No. 4: Hollister Avenue/Santa Felicia Drive are based on count data from year 2006. Based on some prior correspondence with the City, the applicant's consultant would recollect traffic count data at these two intersections in Fall

of 2010. Please update the traffic count data and existing conditions analysis accordingly.

For Int. No. 10: Los Carneros Road/US 101 SB Ramps, the traffic count data from the Appendix matched with Figures 5 and 6 for the AM and PM peak hours, respectively, and are based on year 2008 count data. However, the ICU worksheets in the Appendix have different turning volumes and referenced February 2010 count data. Please update and including corresponding count data in the Appendix accordingly.

- **Thresholds of Significance (Page 11)** – The traffic study should incorporate a discussion in this section to quantify roadway segment impacts. It is the City of Goleta’s administrative practice to define a significant impact when a project would increase traffic volumes by more than 1.0 percent (either project-specific or project contribution to cumulative impacts) on a roadway where plus project traffic would exceed acceptable capacity.
- **Page 12** – If U-turn movements are proposed, volume forecasts should be added to this movement in the Existing + Project and Cumulative + Project conditions.
- **Project Trip Generation (Pages 14-16)** – The overall project trip generation methodology, trip rates, and adjustment factors utilized to reflect internal capture, primary and pass-by trip characteristics have been independently reviewed. The various rates and adjustment factors used in the traffic study were prepared in conformance to industry standards and are therefore determined to be acceptable. Please update Tables 3 and 4 to also show the forecast inbound and outbound project vehicle trips for the AM and PM peak hours.
- **Project Trip Distribution (Page 16)** – The project trip distribution assumptions as shown in Figure 8 for the residential and retail land uses have been reviewed and determined to be acceptable. On Figure 9, please verify whether the ADTs shown for the three annotated segments should add up to 4,527 (i.e., which reflects the origins and destinations of all project-related trips on the segment of Hollister Avenue, just west of Storke Road). On Figure 11, please discuss why there are negative project-related trips shown for the northbound and southbound through movements on Storke Road.
- **Intersection Impacts (Pages 21-26)** – Some of the ICU/HCS calculations may need to be updated based on LLG’s comments as annotated on the appendix worksheets. As a result, all LOS summary tables in the study should be reviewed and updated accordingly. Since the City’s significance criteria for intersections are V/C based (i.e., for LOS A, B, and C) and trip based (i.e., for LOS D, E, and F), all LOS summary tables should include both “Project Added Trips” and “Change in V/C” columns.

- Page 25 (Table 8) – For Int. No. 5: Marketplace Drive/Hollister Avenue - According to the ICU worksheets in the Appendix, the existing PM peak hour intersection $V/C = 0.54$ (LOS A) and the existing + project PM peak hour intersection $V/C = 0.73$ (LOS C) which results in a net project increase in V/C of 0.19. Based on the City's criteria, this constitutes a significant project impact during the PM peak hour. As a result, additional project specific mitigation measures will need to be identified for this intersection.
- Pedestrian Access and Circulation (Page 29) – LLG is concerned with the current design of the internal 5-way intersection. This is the first intersection located just north of the primary driveway entrance off of Hollister Avenue. Based on project traffic volumes shown in Figure 11, 566 PM peak hour trips are forecast to traverse through this location. In addition, truck access to the retail buildings is also envisioned to occur partly via the main project driveway. Based on a cursory review of the project site plan, there may be potential alignment issues with the current configurations and potential safety issues associated with the proposed crosswalk locations. Please address accordingly.
- Page 31 (Table 10) – Based on LLG's review of the project description and site plan, the project retail component square footage is calculated to be 73,054 gross square feet (i.e., 90,054 total GSF – 17,000 GSF for restaurant use = 73,054 GSF for retail use).
- Page 32 (Table 11) – Use rates from the more recently published edition of the ITE *Parking Generation* document (i.e., 4th Edition) be utilized.
- Page 32 (Table 12) – It is recommended that the spaces/occupied unit rate from the Willow Springs surveys be utilized in the peak parking demand forecasts.
- Cumulative Traffic Volumes (Page 34) – The City of Goleta Traffic Model data (from Dowling Associates) for cumulative traffic conditions should be included in the Appendix. The study should also include a discussion on how cumulative ADT roadway volumes (as shown on Figure 16) were determined.
- Project-Specific Measures (Pages 42-43) – If a significant project impact is determined at the Marketplace Drive/Hollister Avenue intersection (refer to comment on Table 8), additional project specific mitigation measures will need to be identified and included in this section that will mitigate to the point that the project would increase the City's ICU by less than 0.10 at LOS C, 0.15 at LOS B, or 0.20 at LOS A.
- Potential Intersection Impacts (Page 48) – It is recommended that a table be added summarizing the projected V/C and corresponding LOS from the Goleta General Plan for the CMP intersections to support the last paragraph.

- Comments to the Technical Appendix – The attached comments should be addressed (i.e., comments as annotated on the individual appendix worksheets).

As stated previously, conclusions contained in the report with respect to significant project traffic impacts and significant cumulative traffic impacts should be re-examined as a result of the above comments and potential changes.

State of California Department of Transportation (Caltrans) Comments

LLG has reviewed the August 23, 2010 letter issued by the State of California Department of Transportation (Caltrans) providing comments to the proposed project's Notice of Preparation. While the ATE traffic study does not appear to have provided the additional traffic analyses requested by Caltrans, LLG has requested copies of two previously prepared studies referenced in the Caltrans letter (i.e., traffic analyses prepared for the 101 HOV Widening Project and the Los Carneros Road Overhead Bridge Replacement Project). As a result, upon review of these studies additional comments may be forthcoming.

Please feel free to call us at 626.796.2322, with any questions or comments on our review of the Goleta Mixed-Use Village Project Traffic, Circulation and Parking Study (dated September 14, 2010).