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TECHNICAL MEMORANDUM

Date: March 29, 2017 Project #: 12904

To: Rosemarie Gaglione, City of Goleta

From: Jim Damkowitch, Kimley-Horn & Associates Inc.

Project: Goleta On-Call Modeling

Subject: 6100 Hollister Avenue: Fair Share Analysis

This memorandum details the Goleta Transportation Improvement Program (GTIP) fair share methodology and calculation for the 6100 Hollister Avenue Project located within the City of Goleta but in the jurisdiction of the City of Santa Barbara. A traffic analysis for the 6100 Hollister Avenue Project was developed by Associated Transportation Engineers (ATE) which addresses the CEQA impact implications of the 6100 Hollister Avenue development (ATE, August 2016). Conversely, this technical memorandum addresses the fair share contribution of the 6100 Hollister Avenue development's project added traffic relative to identified future deficiencies listed in the City of Goleta's GTIP fee program. This fair share analysis only reflects the 6100 Hollister Avenue development – it does not reflect the fair share contributions of other developments planned as part of the Airport Master Plan (e.g., 6210 Hollister Avenue). Future developments associated with the Santa Barbara Airport Master Plan will be required to go through a similar fair share assessment.

INTRODUCTION

The traffic analysis for the 6100 Hollister Avenue Project was based partially on previous older traffic modeling performed as part of the DRI development and new off-model analysis performed by ATE¹. Given that the City of Goleta recently updated its' Goleta Travel Model (VISUM platform), this analysis compares the fair share contribution between the ATE analysis relative to the City's recently updated traffic model. The following two alternative fair share scenarios were tested:

1. Project Trip Generation and Distribution and Cumulative Volume Set from 6100 Hollister Avenue Project TIA
 - a. For GTIP deficiencies not analyzed as part of the 6100 Hollister Avenue Project TIA – Goleta Model
2. Goleta Model Project Trip Generation, Distribution and Cumulative Volume Set

For both scenarios, the following alternative fair share results were computed:

- 1) Just the AM peak hour
- 2) Just the PM peak hour

Fair share percentages were developed for the following City of Goleta GTIP improvement locations:

- Los Carneros Rd/US 101 Southbound Ramp Intersection
- Los Carneros Road/Hollister Avenue Intersection

¹ The updated Goleta Travel Model did not form the basis for developing the cumulative no project analysis nor the project specific trip distribution for the 6100 Hollister Avenue Project TIA

- US 101 Northbound Ramp/Fairview Avenue Intersection
- US 101 Southbound Ramp/Fairview Avenue Intersection
- Hollister Avenue / Fairview Avenue Intersection
- Hollister Avenue / Kellogg Road
- Ekwil Street Extension
- Hollister Avenue/SR 217 Southbound Ramp Intersection
- Hollister Avenue/SR 217 Northbound Ramp Intersection

All fair share results are presented herein as percentages. Fair share costs for identified GTIP improvements (or GTIP supportive improvements) were based on applying the fair share percentages to planning level cost opinions developed by MNS Consultants for the City of Goleta.

FAIR SHARE METHODOLOGY

The fair share methodology described herein is consistent with state guidance on fair share methodology and is included in the Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002).

Per the Guide for the Preparation of Traffic Impact Studies, where a project causes an impact only under cumulative conditions, its equitable fair share of mitigation measures is equal to its share of all future traffic at the impacted facility from all future projects². Equitable fair share is based on the following equation:

$$P = T / (T_B - T_E)$$

Where:

- P = equitable share for the proposed project's traffic impact.
- T = the vehicle trips generated by the project during the peak hour
- T_B = the forecasted cumulative traffic volume on the impacted facility, i.e., 2035
- T_E = existing traffic volume on the impacted facility.

For intersections, trips were summed for all approaches to yield values for T, T_B, and T_E. For roadway sections, the two-way volume was used. The source for all inputs of T, T_B, and T_E is dependent on the fair share scenario being tested. These are provided in **Table 1** below.

Table 1. Source of Inputs by Fair Share Scenario

Test	Fair Share Parameter		
	T	T _B	T _E
Scenario 1	6100 Hollister Ave TIA	6100 Hollister Ave TIA	6100 Hollister Ave TIA
Scenario 2	Goleta Model	Goleta Model	Goleta Model

Fair share percentages were computed for both the AM and PM peak hours respectively. Volume adjustments for passenger car equivalencies were not performed for purposes of computing fair share responsibility. Updated CIP cost estimates for City of Goleta GTIP improvements affected by the 6100 Hollister Avenue development are provided in **Table 2**³.

Modeling performed using the City of Goleta's updated Travel Demand Model was based on the Cumulative Land Use (Existing Plus Approved and Pending – EPAP) developments. Cumulative modeling assumes completion of the Ekwil Road Extension only (i.e., Fowler Extension is not assumed). The 6100 Hollister Avenue project land use was coded

² See Guide at Appendix B, page 2 (http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf).

³ This analysis does not reflect the costs associated with the two CIP improvements #1 and #6 given that these improvements have already been completed.

into the model land use and network and zone connector modifications were made to reflect the project access characteristics. Flow Bundle (i.e., select zone analysis) was performed to isolate the trip distribution of the project specific trips throughout the network. Intersection volume demand (existing and future) were based on summing all turn movements for a given peak hour. Segment volume demand reflects the vehicle sum for both directions of travel. Based on the above equation and parameters, fair share percentages for the 6100 Hollister Avenue Project were computed for the identified GTIP intersections and roadways under 2035 cumulative conditions.

Fair share percentage results for Scenario 1 are shown in **Table 3**. Scenario 1 yields a fee of \$3.96 million and \$3.0 million between the AM or PM peak hours respectively. Fair share percentage results for Scenario 2 are shown in **Table 4**. For Scenario 2, the AM or PM peak hours yield a total fair share fee of \$2.9 and \$2.91 million respectively.

Table 2 City of Goleta GTIP Update 2017 Cost Estimates

#	Project Description	Project #		Estimate or Actual	Total	Comments
		1999 GTIP	2009 GTIP			
1	Los Carneros Road/US 101 SB Right Turn Lane.	I-9	I-5	Actual - completed in 2016	\$2,112,967	This improvements is an element of the Overall Project I-5 - The Los Carneros Road Overhead Bridge Replacement Project. The cost estimate for the element is 20% of the actual Project Cost based on the width requirements for the additional Rt-turn lane.
2	Los Carneros Road/US 101 SB Additional Right Turn Lane.	NA	I-5/I-X1	Estimate	\$6,116,000	Improvement Part/Supportive of Project I-5
3	Ekwill Street Extensions.	R-6	R-1	Estimate	\$7,000,000	Fowler Road has been removed.
4	Hollister Avenue SR 217 SB Ramps Roundabout	R-6	R-1	Estimate	\$6,200,000	
5	Hollister Avenue SR 217 NB Ramps Roundabout	R-6	R-1	Estimate	\$5,300,000	
6	Construct second left-turn lane on NB Los Carneros Road to Hollister Avenue.	I-3	I-6	Actual - completed in 2013	\$806,000	
7	Construct second left-turn lane on SB Los Carneros Road to Hollister Avenue.	I-3	I-6/I-X2	Estimate	\$1,442,000	Improvement Part/Supportive of Project I-6
8	Construct additional shared through + right-turn lane on US 101 NB Off-Ramp at Fairview Avenue.	I-2	I-3	Estimate	\$988,000	
9	Construct additional shared right-turn lane on NB Fairview Ave to US 101 SB On-Ramp.	NA	I-2	Estimate	\$6,621,000	
10	Extend right turn lane from NB Kellogg Avenue to east-bound Hollister Avenue.	NA	I-13	Estimate	\$246,000	
11	Construct Roundabout at Hollister/Fairview Intersection.	NA	R2/I-X3	Estimate	\$6,661,000	Improvement Part/Supportive of Project R2

Table 3. Scenario 1 ATE TIA: AM Peak Hour Only and PM Peak Hour Only

Scenario 1 ATE TIA															
Intersections															
GTIP Project ID	Cost	Project Trips		Cumulative No Project		Existing Trips		Trip Growth		Equitable Share		Fair Share		Fair Share	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM Peak Hr	Cost	PM Peak Hr	Cost
Los Carneros Rd/US 101 Southbound (GTIP Project I-5/I-X1)	\$6,116,000	8	12	3,163	2,881	2,504	2,150	659	731	1.2%	1.6%	1.2%	\$74,246	1.64%	\$100,399.45
Los Carneros Road/Hollister Avenue (GTIP Project I-6/I-X2)	\$1,442,000	15	26	3,834	2,925	3,042	2,123	792	802	1.9%	3.2%	1.9%	\$27,311	3.24%	\$46,748.13
US 101 Northbound Off-Ramp/Fairview Avenue (GTIP Project I-3)	\$988,000	17	49	2,932	2,761	2,521	2,476	411	285	4.1%	17.2%	4.1%	\$40,866	17.19%	\$169,866.67
US 101 Southbound Ramp/Fairview Avenue (GTIP Project I-2)	\$6,621,000	74	45	3,134	2,862	2,560	2,463	574	399	12.9%	11.3%	12.9%	\$653,578	11.28%	\$746,729.32
Hollister Avenue / Fairview Avenue (GTIP Project R-2)	\$6,661,000	107	67	2,845	3,385	2,557	3,061	288	324	37.2%	20.7%	37.2%	\$2,474,747	20.68%	\$1,377,429.01
Hollister Avenue / Kellogg Avenue (GTIP Project I-13)	\$246,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hollister Avenue/SR 217 Southbound Ramps (GTIP Project R1)	\$6,200,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hollister Avenue/SR 217 Northbound Ramps (GTIP Project R1)	\$5,300,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Roadways															
												5 Imp ATE TIA		\$3,470,748	\$2,441,173
												4 Imp Goleta Model		\$484,333	\$560,240
														\$3,955,081	\$3,001,413

n/a – not analyzed in ATE TIA. Fair share costs reflect the sum of the five ATE TIA fair share costs with the four Goleta Model fair share estimates from Table 4.

Table 4. Scenario 2 Goleta Model: AM Peak Hour Only and PM Peak Hour Only

Scenario 2 Goleta Model															
Intersections															
GTIP Project ID	Cost Estimate	Project Trips		Cumulative No Project		Existing Trips		Trip Growth		Equitable Share		Fair Share		Fair Share	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM Peak Hr	Cost	PM Peak Hr	Cost
Los Carneros Rd/US 101 Southbound (GTIP Project I-5/I-X1)	\$6,116,000	3	7	2,549	2,913	1,865	2,374	684	539	0.4%	1.3%	0.4%	\$26,825	1.30%	\$79,428.57
Los Carneros Road/Hollister Avenue (GTIP Project I-6/I-X2)	\$1,442,000	18	20	3,047	3,498	2,236	2,723	811	775	2.2%	2.6%	2.2%	\$32,005	2.58%	\$37,212.90
US 101 Northbound Off-Ramp/Fairview Avenue (GTIP Project I-3)	\$988,000	31	22	2,684	2,945	2,584	2,555	100	390	31.0%	5.6%	31.0%	\$306,280	5.64%	\$55,733.33
US 101 Southbound Ramp/Fairview Avenue (GTIP Project I-2)	\$6,621,000	49	44	2,951	3,147	2,526	2,878	425	269	11.5%	16.4%	11.5%	\$763,362	16.36%	\$1,082,988.85
Hollister Avenue / Fairview Avenue (GTIP Project R-2)	\$6,661,000	85	79	3,413	3,932	2,974	3,449	439	483	19.4%	16.4%	19.4%	\$1,289,715	16.36%	\$1,089,480.33
Hollister Avenue / Kellogg Avenue (GTIP Project I-13)	\$246,000	8	10	2,278	2,632	2,219	2,478	59	154	13.6%	6.5%	13.6%	\$33,356	6.49%	\$15,974.03
Hollister Avenue/SR 217 Southbound Ramps (GTIP Project R1)	\$6,200,000	8	8	2,564	2,609	2,400	2,424	164	185	4.9%	4.3%	4.9%	\$302,439	4.32%	\$268,108.11
Hollister Avenue/SR 217 Northbound Ramps (GTIP Project R1)	\$5,300,000	6	8	2,009	2,564	1,768	2,395	241	169	2.5%	4.7%	2.5%	\$131,950	4.73%	\$250,887.57
Roadways															
												5 Imp ATE TIA		\$3,470,748	\$2,441,173
												4 Imp Goleta Model		\$484,333	\$560,240
														\$3,955,081	\$3,001,413