




Office of the City Manager

INFORMATION CALENDAR

October 24, 2006

To: Honorable Mayor and  
Members of the City Council

From:  Phil Kamlarz, City Manager

Submitted by: Claudette Ford, Director, Public Works Department

Subject: Marin Avenue Reconfiguration–Before and After Traffic Study Report (CF-04-05)

SUMMARY

This report summarizes the results of the Marin Avenue Reconfiguration Project “before and after” traffic study. As requested by the City Council, the study measured traffic conditions on Marin Avenue and surrounding streets before and after the traffic lane reconfiguration, which occurred in September 2005. In general, after completion of the project, the impact on traffic has been positive, and traffic is moving in one-lane platoons, resulting in calmer traffic operations. The average daily traffic has dropped throughout the study area. However, the impact on vehicle speeds seems to be negligible. The results presented in this document are generally consistent with the results reported by the City of Albany.

CURRENT SITUATION AND ITS EFFECTS

The traffic data collection program recorded motor vehicle volume and speed on Marin Avenue and other selected streets. The pre-reconfiguration condition data was collected in April 2005, and the post (one year) reconfiguration condition data was collected in April 2006. The data was collected in each direction separately for seven days a week, on a 24-hour period basis. All local schools and UC Berkeley were in session during both the before and after monitoring of traffic. The locations of each data collection point are as follows, and illustrated on Attachment 1.

1. Marin Avenue at Tulare Street;
2. Gilman Avenue east of Santa Fe Street;
3. Colusa Avenue north of Marin Avenue;
4. Colusa Avenue south of Marin Avenue;
5. Monterey Avenue east of Colusa Avenue;
6. Sonoma Avenue west of Monterey Avenue;
7. San Fernando Avenue north of Thousand Oaks Boulevard;
8. Thousand Oaks Boulevard west of Colusa Avenue;
9. Hopkins Street west of Monterey Avenue;
10. Solano Avenue west of Colusa Avenue.

Throughout the study area, the weekend traffic volumes are lower than the weekday volumes. Therefore, weekend data is not used to generate averages.

*Data Comparison:*

Generally speaking the weekday 24-hour traffic volumes recorded throughout the study area were lower in the after condition than before the reconfiguration.

On Marin Avenue itself the reduction averaged approximately 14%. On the other streets, there was a very wide range of weekday 24-hour traffic volume reductions, from an average of 4% on Sonoma to 33% on Gilman.

On the lower volume roadways, a 10% variance in daily traffic volumes could be anticipated and considered typical for local streets. The only significant difference in the study conditions between the before and after data collection is this: the weather was dry during the pre-reconfiguration study, and rainy during the post study. This could explain some variance in the before and after volumes.

For the most part, the speed variances in the overall before and after study are negligible. On Marin Avenue, for instance, the 85<sup>th</sup> percentile speed was recorded as 2 MPH slower than post-reconfiguration. The 85<sup>th</sup> percentile speed is the speed at or below which 85% of all vehicles are traveling. As noted earlier, the weather was rainy during April 2006, whereas it was dry during data collection in 2005.

On the other streets studied, traffic speeds were generally one or two miles-per-hour faster after the reconfiguration, but still within the speed range that is typical for these types of roads.

The detailed study results are listed on Attachments 2 and 3. Staff considers the Marin Avenue Reconfiguration Project an improvement over the previous four lane cross section for the following reasons:

- Speed differentials and passing on neighboring traffic lanes have been eliminated;
- Pedestrians can cross Marin Avenue more safely as they are better able to gauge traffic approaching in one lane rather than two; and
- Cyclists now have a safer lane profile.

BACKGROUND

On December 14, 2004, Berkeley City Council approved the project to reconfigure the traffic lanes on about five blocks of Marin Avenue, basically between The Alameda and the city boundary at Tulare Street. The reconfiguration called for replacing four traffic lanes (two in each direction) with three traffic lanes (one in each direction plus a center dual left-turn lane) and a bike lane in each direction. The work to re-stripe Marin Avenue was undertaken in the fall of 2005.

The purpose of this reconfiguration project has been to provide a safer environment for all road users, by calming traffic and providing bike lanes on Marin Avenue. This project provides a consistent roadway design on Marin Avenue between the City of Berkeley and the City of

Albany, which is consistent with the traffic calming recommendations in the City of Berkeley General Plan as well as the Council-adopted Bicycle Plan.

POSSIBLE FUTURE ACTION

None.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

Not applicable.

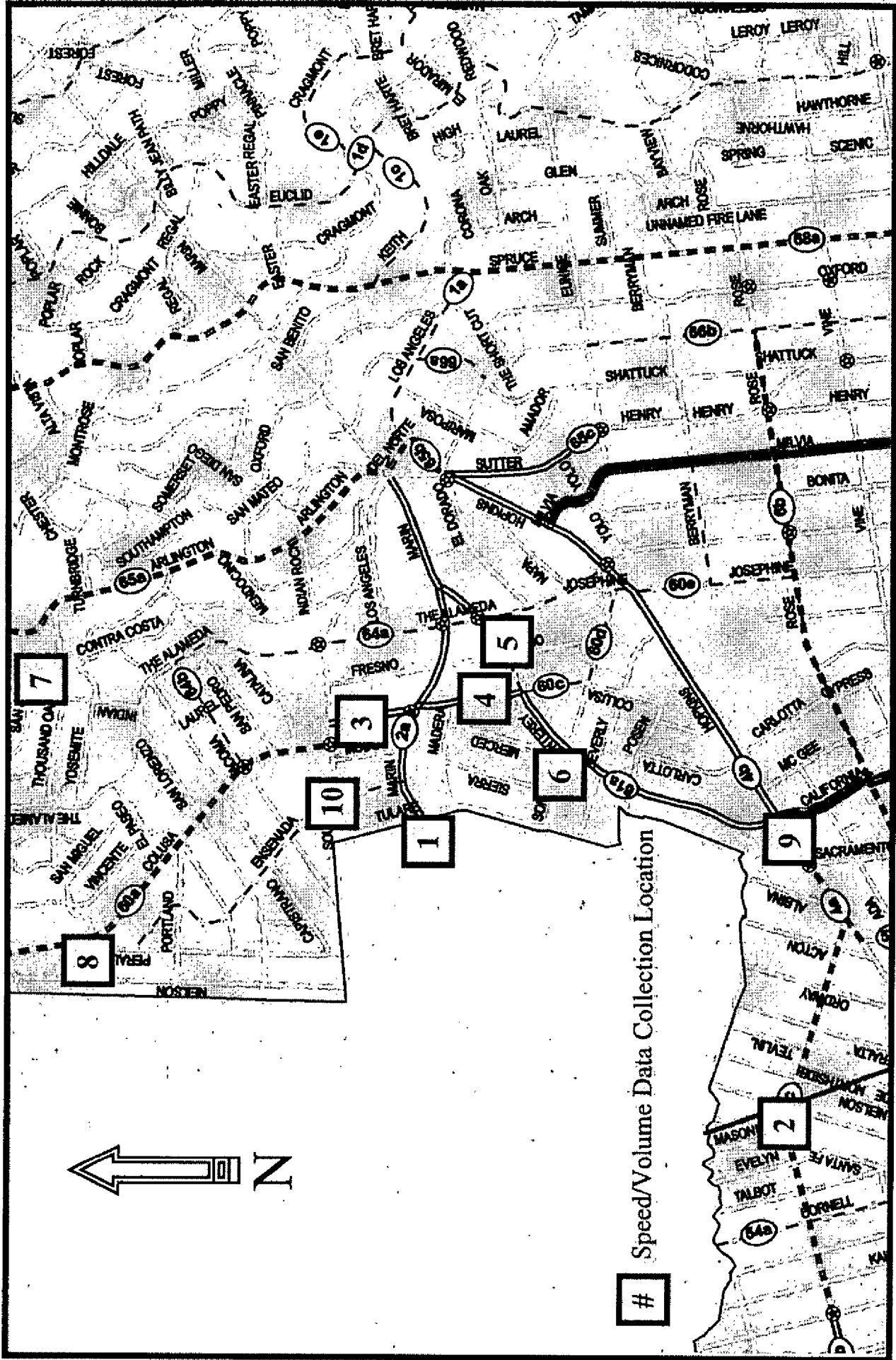
CONTACT PERSON

Peter K. Hillier, Assistant Public Works Director, 981-7010

Attachments:

- 1: Figure 1: Data Collection Location Map
- 2: Table: Average Daily Traffic Volume Comparison
- 3: Table: Average Daily Speed Comparison

Figure 1



Attachment 2

Marin Avenue Reconfiguration Project  
Average Weekday Traffic Volume Comparison (24-Hours)

Number	Location	Direction	April 2005 (Before)	April 2006 (After)	Average Volume Change	Average Percent Change
1	Marin at Tulare	EB	9558	8093	-1465	-15%
		WB	10111	8849	-1262	-12%
		<b>EB+WB</b>	<b>19,669</b>	<b>16,942</b>	<b>-2,727</b>	<b>-14%</b>
2	Gilman east of Santa Fe	EB	5925	4318	-1607	-27%
		WB	6507	4023	-2484	-38%
		<b>EB+WB</b>	<b>12,432</b>	<b>8,341</b>	<b>-4,091</b>	<b>-33%</b>
3	Colusa north of Marin	NB	1787	1375	-412	-23%
		SB	3175	2839	-336	-11%
		<b>NB+SB</b>	<b>4,962</b>	<b>4,214</b>	<b>-748</b>	<b>-15%</b>
4	Colusa south of Marin	NB	1583	1436	-147	-9%
		SB	1965	1752	-213	-11%
		<b>NB+SB</b>	<b>3,548</b>	<b>3,188</b>	<b>-360</b>	<b>-10%</b>
5	Monterey east of Colusa	EB	2054	1910	-144	-7%
		WB	2044	1253	-791	-39%
		<b>EB+WB</b>	<b>4,098</b>	<b>3,163</b>	<b>-935</b>	<b>-23%</b>
6	Sonoma west of Monterey	EB	694	641	-53	-8%
		WB	776	767	-9	-1%
		<b>EB+WB</b>	<b>1,470</b>	<b>1,408</b>	<b>-62</b>	<b>-4%</b>
7	San Fernando north of 1000 Oaks	NB	459	260	-199	-43%
		SB	518	401	-117	-23%
		<b>NB+SB</b>	<b>977</b>	<b>661</b>	<b>-316</b>	<b>-32%</b>
8	1000 Oaks west of Colusa	EB	1016	933	-83	-8%
		WB	1260	1110	-150	-12%
		<b>EB+WB</b>	<b>2,276</b>	<b>2,043</b>	<b>-233</b>	<b>-10%</b>
9	Hopkins west of Monterey	EB	4973	4076	-897	-18%
		WB	4985	3088	-1897	-38%
		<b>EB+WB</b>	<b>9,958</b>	<b>7,164</b>	<b>-2,794</b>	<b>-28%</b>
10	Solano west of Colusa	EB	5854	4932	-922	-16%
		WB	5288	4181	-1107	-21%
		<b>EB+WB</b>	<b>11,142</b>	<b>9,113</b>	<b>-2,029</b>	<b>-18%</b>

Attachment 3

Marin Avenue Reconfiguration Project  
Average Weekday 85th Percentile Speed (MPH) Comparison

Number	Location	Direction	April 2005 (Before)	April 2006 (After)	Average Speed Change	Average Percent Change
1	Marin west of Tulare	EB WB <b>EB+WB</b>	36 36 <b>36</b>	34 34 <b>34</b>	-2 -2 <b>-2</b>	-5% -4% <b>-5%</b>
2	Gilman east of Santa Fe	EB WB <b>EB+WB</b>	Speed Data Collection Inconsistent Data Unreliable			
3	Colusa north of Marin	NB SB <b>NB+SB</b>	29 27 <b>28</b>	31 27 <b>29</b>	2 0 <b>1</b>	8% 0% <b>4%</b>
4	Colusa south of Marin	NB SB <b>NB+SB</b>	32 33 <b>33</b>	33 34 <b>34</b>	1 1 <b>1</b>	3% 3% <b>3%</b>
5	Monterey east of Colusa	EB WB <b>EB+WB</b>	27 29 <b>28</b>	29 28 <b>29</b>	2 -1 <b>1</b>	6% -4% <b>1%</b>
6	Sonoma west of Monterey	EB WB <b>EB+WB</b>	28 27 <b>28</b>	30 29 <b>30</b>	2 2 <b>2</b>	6% 7% <b>7%</b>
7	San Fernando north of 1000 Oaks	NB SB <b>NB+SB</b>	25 26 <b>26</b>	26 28 <b>27</b>	1 2 <b>1</b>	3% 6% <b>5%</b>
8	1000 Oaks west of Colusa	EB WB <b>EB+WB</b>	30 30 <b>30</b>	32 31 <b>32</b>	2 1 <b>2</b>	7% 4% <b>5%</b>
9	Hopkins west of Monterey*	EB WB <b>EB+WB</b>	Speed Data Collection Inconsistent Data Unreliable			
10	Solano west of Colusa	EB WB <b>EB+WB</b>	27 26 <b>27</b>	26 22 <b>24</b>	-2 -4 <b>-3</b>	-6% -15% <b>-11%</b>

85th Percentile is the max speed of 85% of the traffic. This is the typical percentile used in traffic speed studies.