



# KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

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August 11, 2014

Project #: 17673

Dhruv Patel  
Hampton Inn & Suites  
1700 Harbor Bay Parkway  
Alameda, CA 94502

***RE: Home 2 Suites Traffic Letter***

Dear Mr. Patel,

The purpose of this traffic letter is to summarize the trip generation findings for the proposed development of a new Home 2 Suites located at 1700 Harbor Bay Parkway in the City of Alameda, California. It will also discuss the findings of our assessment on the operational impacts the Home 2 Suites may have on the two project driveways and the nearby intersection of Harbor Bay Parkway and North/South Loop Road.

**Background**

Kittelison & Associates, Inc. (KAI) was asked to prepare a trip generation letter for a new Home 2 Suites (project) with 72 rooms directly adjacent to the existing Hampton Inn & Suites. In addition to the hotel rooms, the proposed project is also expected to include a 4,463 square foot (SF) restaurant. The expected daily trip generation during a typical weekday as well as during the AM and PM peak hours is documented in this letter. The attached Exhibit 4 presents the location of the proposed project in relation to the surrounding vicinity.

**Trip Generation**

A generally accepted method of calculating trips generated by a proposed development is to use regression equations and/or average rates developed by the Institute of Transportation Engineers (ITE) through the compilation of field data collected at sites located throughout the United States in suburban areas. This field data is documented in ITE's *Trip Generation Manual*. The latest edition of this manual (9<sup>th</sup>) was used for this analysis.

The proposed project contains 4,463 SF of restaurant space in addition to the 72 hotel rooms. A review of the hotel land use description within the ITE *Trip Generation Manual* shows that small restaurants are included within the trip generation rates for a hotel. Therefore, no additional restaurant trips need to be added to the estimated trips generated by the 72 hotel rooms.

According to the ITE *Trip Generation Manual*, a hotel with 72 hotel rooms is expected to generate approximately 642 daily weekday trips with about 50 of these trips occurring in both the AM and PM peak hours as shown in Exhibit 1. This averages to less than one additional vehicle per minute during

the AM and PM peak hours which represent the worst conditions for nearby roadways. These additional trips are not expected to have a significant impact on nearby intersection.

It should also be noted that ITE trip generation estimates are based on hotels located in suburban locations where guests primarily arrive by vehicle. The proposed hotel is expected to serve airport passengers and nearby businesses and will offer a complimentary airport shuttle. The close proximity of the nearby businesses and the airport shuttle are likely to result in fewer vehicle trips than estimated by the ITE *Trip Generation Manual*. Therefore, the trip generation numbers shown in Exhibit 1 can be considered a conservative estimate.

#### Exhibit 1 – Estimated Trip Generation for Proposed Project

Land Use	Unit	ITE Code	Size	Total Weekday	Weekday AM Peak Hour Site Trips			Weekday PM Peak Hour Site Trips		
					Total	In	Out	Total	In	Out
Hotel	Occupied Rooms	310	72	642	48	28	20	50	25	25
Source: ITE Trip Generation Manual, 9 <sup>th</sup> Edition										

#### Traffic Operations Assessment

KAI also reviewed whether the proposed project would cause traffic operation concerns at the two project driveways and the intersection of Harbor Bay Parkway and North/South Loop Road. The western driveway provides the main entrance to the existing Hampton Inn & Suites while the eastern driveway provides primary access to the adjacent office properties. Both of these driveways are right-out only onto Harbor Bay Parkway which has about 500 conflicting vehicles on two through lanes. This is a minimal amount of traffic to be conflicting with the right turns out of the project driveway. Therefore, the project driveways are expected to operate well (LOS B or better) with the addition of project traffic in both the AM and PM peak hours.

To assess how the project would affect the intersection of North/South Loop Road and Harbor Bay Parkway, KAI performed an intersection level-of-service (LOS) analysis using traffic volumes provided by the City of Alameda and the Synchro software program. The findings of this analysis are shown in Exhibit 2.

#### Exhibit 2 – LOS Findings for the Intersection of North/South Loop Road and Harbor Bay Parkway

Scenario	V/C	Delay*	LOS*
Existing AM	1.48	40.7 (276.2)	E (F)
Existing AM + Project	1.59	45.9 (322.8)	E (F)
Existing PM	1.08	23.3 (138.0)	C (F)
Existing PM + Project	1.17	27.4 (172.8)	D (F)
*Delay presented as: Average (Worst Approach)			

As Exhibit 2 shows, existing conditions at this intersection are already operating at LOS F for the worst approach which is below the City's LOS D standard. Since this intersection is already operating at the worst LOS (LOS F), the project is considered to have a significant impact if the traffic volume increases by 3% or more. Based on the existing volumes provided by the City, the Home 2 Suites increases the AM peak hour volumes by 3.3% and the PM peak hour volumes by 3.9% (see Exhibit 3). Therefore, the project can be considered to have a significant impact on the intersection of North/South Loop Road and Harbor Bay Parkway.

While the impact was significant, the trip generation values are based on suburban hotels where guests likely arrive primarily by vehicle. The Home 2 Suites hotel is located in an office park and provides complimentary shuttle service to the airport and nearby commercial zones (Park Street). These features may reduce the number of project trips compared to the ITE estimates which would lessen the impact at the intersection of North/South Loop Road and Harbor Bay Parkway.

**Exhibit 3 – Percent Increase in Traffic Volume Resulting from the Project**

Peak Hour	Total Existing Traffic Volume	Project Volume	Percent Increase
AM	1,456	48	3.3%
PM	1,279	50	3.9%

We hope that this traffic letter helps with your planning efforts. If you have any questions or concerns, please feel free to contact me.

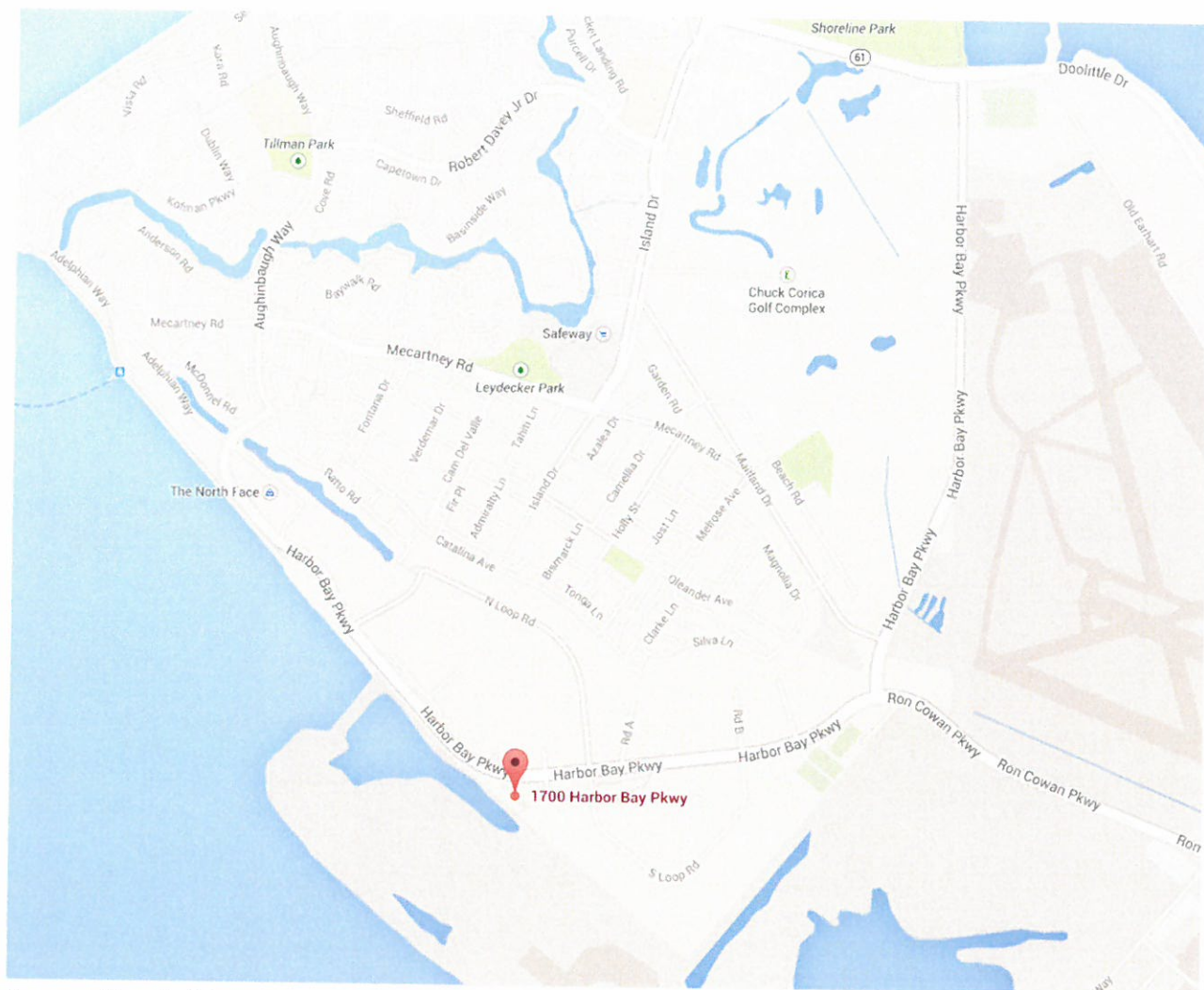
Sincerely,  
KITTELSON & ASSOCIATES, INC.



Aaron Elias, P.E.  
Traffic Engineer



## Exhibit 4 – Project Site Vicinity Map



Source: Google Maps