



December 9, 2016

**Attention: Mr. Michael Tracy**  
Kirk E. Peterson & Associates  
5253 College Avenue  
Oakland CA 94618

Dear Mr. Michael,

**Reference: Initial Traffic Study for Proposed Mixed-Use Development at 2542 Durant Avenue in Berkeley**

In response to your request, this letter report presents the trip generation estimation for the proposed mixed-use development at 2542 Durant Avenue in Berkeley. The proposed project falls within the Telegraph Avenue Commercial (C-T) zoning district in the City of Berkeley on the block that is bounded by Durant Avenue to the north, Telegraph Avenue to the west, Channing Way to the south and Bowditch Street to the east. Currently, the project site is a pay for parking lot with 30 spaces.

As proposed, the proposed project includes the demolition of the existing building, and construction of a five-story building, with 1,500 Square-Foot (Sq. Ft.) ground floor commercial space and 32 apartment units above. It will have no parking spaces as there are no requirements in this district.

Trip generation for the proposed project was estimated based on rates provided in the Trip Generation, 9<sup>th</sup> Edition, published by the Institute of Transportation Engineers (ITE). In addition, per City of Berkeley Guidelines for Development of Traffic Impact Reports<sup>1</sup>, trip reductions for high levels of non-auto use need to be justified. The existing trips could also be deducted from the total project trip generation.

**Table 1** shows the proposed project trip generation during the weekday daily, a.m. and p.m. peak hours. As shown, based on the 2010-2014 American Community Survey data for the Census Tract 4228 where the proposed project is located at, approximately 72.5% of residential trips use non-auto modes (i.e. transit, walk, bike, etc.). In addition, it is assumed that approximately 40% of working trips at the project site use non-auto modes, based on proximity of the project site to the Downtown Berkeley BART station and the general pattern of working trips in the City of Berkeley. Therefore, the proposed project is expected to generate approximately 90 net daily trips, 4 net trips (2 inbound and 2 outbound) during the a.m. peak hour and 5 net trips (3 inbound and 2 outbound) during the p.m. peak hour. In addition, the existing land use (i.e. parking lot) at the project site currently generates approximately 150 daily trips, 20 inbound trips during the a.m. peak hour and 20 outbound trips during the p.m. peak hour. Therefore, after deducting the existing trips, the proposed project would generate approximately negative 60 daily net new auto

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<sup>1</sup> City of Berkeley Guidelines for Development of Traffic Impact Reports, City of Berkeley Office of Transportation



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trips, negative 16 net new auto trips (negative 18 inbound and 2 outbound) during the a.m. peak hour and negative 15 net new auto trips (3 inbound and negative 18 outbound) during the p.m. peak hour.

**Table 1 Trip Generation for the Proposed Project**

Land Use (ITE Code)	Size		Daily		A.M. Peak Hour			P.M. Peak Hour				
			Rate	Total	Rate <sup>1</sup>	In	Out	Total	Rate	In	Out	Total
<b>Proposed Land Use</b>												
Apartment (220)	32	units	6.65	213	0.51	3	13	16	0.62	13	7	20
Transit/Walk/Bike Trips <sup>2</sup>	80.9%			172		2	11	13		11	6	17
<b>Net Proposed Trips from Apartment</b>			-	<b>41</b>	-	<b>1</b>	<b>2</b>	<b>3</b>	-	<b>2</b>	<b>1</b>	<b>3</b>
Specialty Retail Center (826)	1,500	S.F.	44.32	66	0.70	1	0	1	2.71	2	2	4
Transit/Walk/Bike Trips <sup>3</sup>	25.0%			17		0	0	0		1	1	1
<b>Net Proposed Trips from Retail</b>			-	<b>49</b>	-	<b>1</b>	<b>0</b>	<b>1</b>	-	<b>1</b>	<b>1</b>	<b>2</b>
<b>Total Proposed Trips</b>			-	<b>90</b>	-	<b>2</b>	<b>2</b>	<b>4</b>	-	<b>3</b>	<b>2</b>	<b>5</b>
<b>Existing Land Use</b>												
Existing Parking Lot <sup>4</sup>	30	spaces	NA	150	NA	20	0	20	NA	0	20	20
<b>Total Existing Trips</b>			-	<b>150</b>	-	<b>20</b>	<b>0</b>	<b>20</b>	-	<b>0</b>	<b>20</b>	<b>20</b>
<b>Net New Auto Trips</b>			-	<b>-60</b>	-	<b>-18</b>	<b>2</b>	<b>-16</b>	-	<b>3</b>	<b>-18</b>	<b>-15</b>

**Notes:**

1. Trip generation rate for Specialty Retail Center during A.M. Peak Hour takes the ratio of A.M. Peak Hour to P.M. Peak Hour rates for a similar land use Shopping Center (ITE Code 820).
2. Multi-Modal trip generation adjustment factor was based on the 2010-2014 American Community Survey for Census Tract 4228.
3. Multi-Modal trip generation adjustment factor was based on the engineering judgement due to proximity of the project site to BART.
4. For the existing parking lot, the daily parking turnover rate is assumed to be 2.5 and the parking occupancy is assumed to be 67% during both a.m. and p.m. peak hours. In the a.m. peak hour, all the vehicle trips are assumed to be inbound while in the p.m. peak hour, all the vehicle trips are assumed to be outbound.

**Source:** Stantec, December 2016; ITE Trip Generation, 9th Edition, 2012; and, 2010-2014 American Community Survey.



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Thank you for the opportunity to provide this analysis. Please let me know if you have any comments and/or questions.

Regards,

Joy Bhattacharya, P.E.  
Principal  
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Attachment: Census Data

## Mode Share and Geographic Distribution for Residential Work Trips Based on Census Journey to Work Data

### Person Trip Mode Share for Journey to Work Trips B08301 MEANS OF TRANSPORTATION TO WORK

Data Set: 2010-2014 American Community Survey 5-year Estimates for Census Tract 4228 (2542 Durant Avenue)

Census Tract 4228, San Francisco County, California		Sum of Individual Elements of Mode of Travel			Residential Journey to Work Mode Share	
					Mode of Travel	Percent of Person Trips by Mode
<b>Total:</b>	<b>1,924</b>				Drove alone	13.2%
<b>Car, truck, or van:</b>	259	persons	14.8%		Carpooled	1.5%
Drove alone	232	persons	13.2%	89.6%	All Auto Trips (Drive Alone +Carpool)	14.8%
Carpooled	27	persons	1.5%	10.4%	All Transit	14.4%
<b>Public transportation:</b>	253	persons	14.4%		Bicycle	2.1%
Bus or trolley bus	59	persons	3.4%	23.3%	Walked	65.2%
Streetcar or trolley car (publico in Puerto Rico)	0	persons	0.0%	0.0%	Taxi/Motorcycle/Other	3.5%
Subway or elevated	168	persons	9.6%	66.4%		
Railroad	26	persons	1.5%	10.3%		
Ferryboat	0	persons	0.0%	0.0%		
Taxicab	0	persons	0.0%			
Motorcycle	43	persons	2.5%			
Bicycle	36	persons	2.1%			
Walked	1142	persons	65.2%			
Other means	19	persons	1.1%			
Worked at home	172	persons				
<b>Total Person-Trips (excluding worked at home)</b>	<b>1,752</b>		<b>100.0%</b>			<b>100.0%</b>

### Vehicle Occupancy Rate to Convert Person Trips into Vehicle Trips

#### B08301 MEANS OF TRANSPORTATION TO WORK

Data Set: 2010-2014 American Community Survey 5-year Estimates for Census Tract 4228 (2542 Durant Avenue)

Census Tract 4228, San Francisco County, California				Computation of Vehicle Occupancy	
				Mode	Vehicles
<b>Total:</b>	<b>1,924</b>			Drove Alone	232
<b>Car, truck, or van:</b>	259	persons	14.8%	Total Carpool	14
Drove alone	232	persons	13.2%	Carpool (2)	13.5
Carpooled:	27	persons	1.5%	Carpool (3)	0
In 2-person carpool	27	persons	1.5%	Carpool (4)	0
In 3-person carpool	0	persons	0.0%	Carpool (5-6)	0
In 4-person carpool	0	persons	0.0%	Carpool (7+)	0
In 5- or 6-person carpool	0	persons	0.0%	Total Vehicles	246
In 7-or-more-person carpool	0	persons	0.0%		
Other means (public transportation+taxi cab+Bicycle+Walk)	1,493	persons	85.2%		
<b>Total (excluding work from home):</b>	<b>1,752</b>		<b>100.0%</b>	<b>Occupancy (Persons / Veh)</b>	
		<b>Vehicle Occupancy Rate</b>	Carpool vehicles + drive alone	Carpool Vehicles	14
			Carpool only	Average Auto Occupancy (per/veh)	1.05
				Carpool Occupancy (per/veh)	1.93