



# HEXAGON TRANSPORTATION CONSULTANTS, INC.

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July 19, 2021

Mr. Robert Sauvageau  
RYS Architects, Inc.  
10 Monterey Boulevard #1  
San Francisco, CA 94131

**Re: *Transportation Analysis for the Proposed Hotel at 1580 Lincoln Avenue in San Rafael, California***

Dear Mr. Sauvageau:

Hexagon Transportation Consultants, Inc. has completed a transportation analysis for the proposed hotel at 1580 Lincoln Avenue in San Rafael, California. The project would consist of a four-story business hotel with 46 guestrooms, a boardroom, fitness center, outdoor pet area, and second floor guest patio. A small cafe is proposed on the first floor that would be open to the public. The project would have a garage with 38 parking spaces including 26 spaces in a three-level mechanical stacked parking system, which would be accessed by a driveway on Grand Avenue.

Existing uses on the site include 930 square feet of a commercial retail building and an outdoor garden center, which would be demolished to develop the proposed hotel.

## **Trip Generation**

Vehicle trips generated by the project were estimated using the trip rates published in the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition (2017) for "Business Hotel" (Land Use 312) located in a general Urban/Suburban area.

Table 1 shows that the project would generate 185 daily vehicle trips, including 18 trips (8 inbound and 10 outbound) occurring during the AM peak hour and 15 trips (8 inbound and 7 outbound) occurring during the PM peak hour. The existing "Nursery (Garden Center)" (Land Use 817), is estimated to generate 63 daily trips, including 2 trips (1 inbound and 1 outbound) occurring during the AM peak hour and 6 trips (3 inbound and 3 outbound) occurring during the PM peak hour. ITE defines a nursery or garden center is a free-standing building with an outside storage area for planting or landscape stock. Nurseries can have large greenhouses, office, storage, and shipping facilities and is similar to the existing use currently on the site.

After crediting the existing trip generation, the project is estimated to generate 122 net new daily trips, including 16 net new trips (7 inbound and 9 outbound) in the AM peak hour and 9 net new trips (5 inbound and 4 outbound) in the PM peak hour.



**Table 1  
 Trip Generation Estimates**

Land Use	Size	Daily		AM Peak Hour			PM Peak Hour				
		Rate	Trip	Rate	Trip		Rate	Trip			
					In	Out	Total		In	Out	Total
<b>Proposed Land Uses <sup>1</sup></b>											
Business Hotel	46 Rooms	4.020	185	0.390	8	10	18	0.320	8	7	15
<b>Existing Land Uses <sup>2</sup></b>											
Nursery (Garden Center)	930 Square Feet	68.100	63	2.430	1	1	2	6.940	3	3	6
<b>Net Project Trips</b>			<b>122</b>		<b>7</b>	<b>9</b>	<b>16</b>		<b>5</b>	<b>4</b>	<b>9</b>

Source: ITE Trip Generation Manual, 10<sup>th</sup> Edition 2017  
 Notes:  
 1. Business Hotel (Land Use 312), average rates expressed in trips per room are used.  
 2. Nursery (Garden Center) (Land Use 817), average rates expressed in trips per 1000 square feet are used. ITE does not provide peak hour directional split percentages for this land use. Peak hour directional split percentages were used from Shopping Center (Land Use 820).

### Vehicle Miles Travelled (VMT) Analysis

The *City of San Rafael Transportation Impact Analysis Guidelines, March 2021* establish procedures for determining project impacts on VMT based on project description, characteristics, and location. The City of San Rafael defines VMT as the total miles of travel by personal motorized vehicles a project is expected to generate in a day. Based on guidance from the State of California’s Office of Planning and Research (OPR) Technical Advisory (December 2018, pages 13-15), the City guidelines state that land use projects that meet at least one of the following screening criteria are presumed to not require CEQA VMT analysis.

- *Transit Priority Areas (TPA)*: Projects located within ½ mile walkshed around major transit stops (i.e., the Downtown San Rafael and Civic Center SMART Stations) in San Rafael.
- *Affordable Housing*: 100% restricted affordable residential projects in infill locations.
- *Small Projects*: Projects defined as generating 110 or fewer average daily vehicle trips.
- *Locally Serving Public Facility*: Locally serving public facilities that encompasses government, civic, cultural, health, and infrastructure uses and activity which contribute to and support community needs.
- *Neighborhood-Serving Retail Project*: Neighborhood-serving retail projects that are less than 50,000 square feet, which serve the immediate neighborhoods.
- *Location in a Low VMT Area*: The project is located within a low VMT area for its land use, or a transit priority area.

The *City of San Rafael Transportation Impact Analysis Guidelines, March 2021* do not provide guidance on evaluating VMT for hotel land uses. For the purpose of VMT evaluation, the proposed new hotel trips were converted to equivalent retail space. The hotel trips were considered to be like retail trips. The hotel is expected to serve visitors to the area who would already be travelling there and are currently staying at alternative hotels farther away. Therefore, the hotel would reduce trip lengths, just like neighborhood-serving retail development. Based on the conversion process, a hotel with 46 rooms would generate daily trips equivalent to 4,901 square feet of retail space, which is under the 50,000 square feet threshold as described above.



Neighborhood-serving retail projects are considered to have a less-than significant VMT impact and do not require a detailed CEQA transportation analysis.

**Table 2**  
**Daily Trip Conversion from New Hotel Trips to Local-Serving Retail**

Land Use	Size	Daily	
		Rate	Trip
<b>Proposed Land Uses <sup>1</sup></b>			
Business Hotel	46 Rooms	4.020	185
<b>Equivalent Use <sup>2</sup></b>			
Shopping Center	4,901 Square Feet	37.750	185
Source: ITE Trip Generation Manual, 10 <sup>th</sup> Edition 2017			
Notes:			
1. Business Hotel (Land Use 312), average rates expressed in trips per room are used.			
2. Shopping Center (Land Use 820), average rates expressed in trips per 1000 square feet are used.			

As described in the section below, the project would provide adequate emergency access, is consistent with plans and policies, and would not cause any design hazards. Therefore, the project’s impact under CEQA can be considered less than significant.

**Site Access and Circulation**

Site access and on-site circulation were evaluated using commonly accepted transportation principles. This review is based on the site plan prepared by RYS Architects on October 2<sup>nd</sup>, 2020 (see Figure 1).

**Vehicle Site Access and Site Circulation**

Vehicular access to the project site would be provided by one full-access driveway on Grand Avenue. This driveway would provide direct access to a parking garage that would have ninety-degree mechanical stacker parking spaces as well as ninety-degree standard and accessible parking spaces. The dimensions of the standard parking stalls and drive aisles meet the City of San Rafael’s Zoning Code 14.18.130 of 9 feet by 19 feet and 26 feet width, respectively. The dimensions of the mechanical parking lifts are per the manufacturer’s specifications of 8.2 feet by 18.9 feet.

The site plan shows a designated parking space for guests checking in and out of the hotel next to the stairs in the garage. A valet service would also be available to assist new guests in parking their cars on the mechanical lift. When guests become familiar with the mechanical parking system, they would have the option of parking and removing their car on and off the mechanical lift by themselves without requiring valet services.

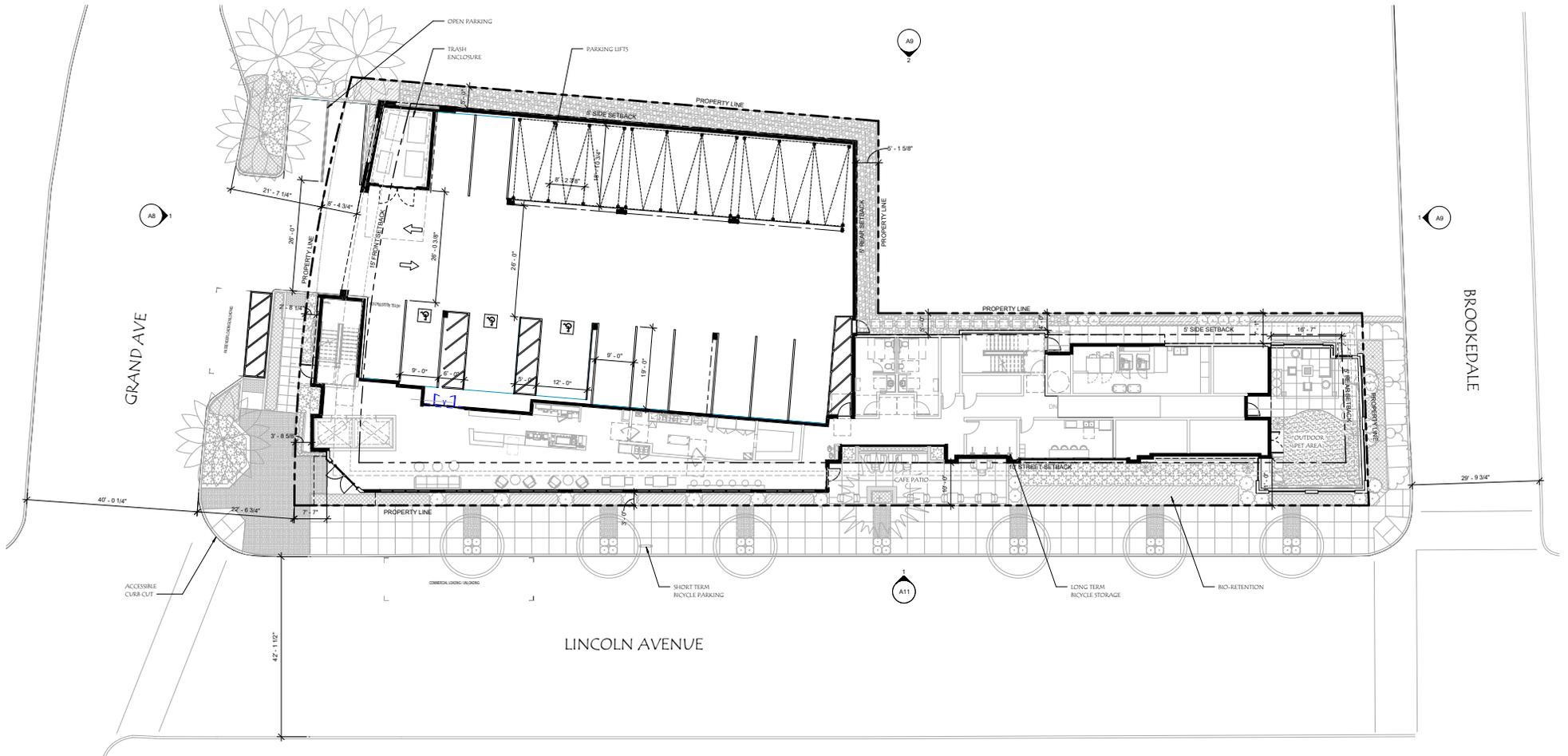


Figure 1  
Site Plan



### **Loading Zones**

A commercial loading zone would be provided along the project frontage on Lincoln Avenue as shown on Figure 1. It would be used for deliveries to the proposed hotel. Access from the loading zone to the hotel would be through the front door or through the rear garage entry. There would be no access from the sidewalk to the cafe patio due to the grade change and lack of space for an accessible ramp.

A passenger loading/unloading zone would be provided on Grand Avenue south of the garage entrance. It would be used primarily for passenger pick up and drop off by ridesharing companies. It is anticipated that ridesharing vehicles also would use the commercial loading zone on Lincoln Avenue for pick-up and drop-off if it is not occupied. In case there is a truck, they would use the loading zone on Grand Avenue and then make a three-point turn to exit Grand Avenue. Currently, the passenger loading zone measures 21 feet 9 inches long to align with the stair tower. The loading zone should be at least 25 feet long to accommodate one vehicle. It is recommended that the project applicant coordinate with the City to get a variance on the length of the passenger loading zone.

### **Driveway Operations**

Per the City of San Rafael's Zoning Code 14.18.130, the two-way driveway on Grand Avenue should be at least 26 feet wide. The driveway measures to 26 feet on the site plan and meets the City's requirements.

The proposed hotel is expected to generate 16 trips (7 inbound and 9 outbound) occurring during the AM peak hour and 9 trips (5 inbound and 4 outbound) occurring during the PM peak hour, which would be less than one vehicle in each direction every minute. Since the project traffic is minor, the driveway is not expected to experience any issues with vehicles entering or exiting the driveway.

### **Sight Distance**

The project driveway should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Any landscaping and signage should be located in such a way as to ensure an unobstructed view for drivers entering and exiting the site. Adequate corner sight distance (sight distance triangles) should be provided at all site access points in accordance with the Caltrans recommended stopping sight distance.

The project driveway would be located on Grand Avenue, which is a minor street and terminates 170 feet east of the project driveway. It is expected that vehicles entering and exiting Grand Avenue are travelling at very low speeds. The Caltrans recommended stopping sight distance for roadways with speeds of approximately 10 mph is 50 feet. As shown on the site plan, the project proposes no tall vegetation or objects that would block a driver's ability to see 50 feet down the road. There is on-street parking along the project frontage on Grand Avenue. However, with the development of the project, the frontage along Grand Avenue would be red curb for fire access as shown on Figure 2. This would ensure that exiting vehicles can see approaching vehicles on the road.





### **Garbage Collection**

A trash room would be located in the northeast corner of the parking garage. The trash carts and bins would be rolled out and back into the garage after trash collection. It is recommended that the trash be rolled to the proposed no parking zone east of the driveway on Grand Avenue so as to not obstruct the driveway access for vehicles or sidewalks for pedestrians.

### **Pedestrian Access**

Pedestrians can access the project site via the lobby entrance from Grand Avenue. Sidewalk is present along the project frontage on Lincoln Avenue but is absent along the project frontage at Grand Avenue. The project would add a sidewalk along its frontage on Grand Avenue. The project would provide an attractive main building entrance and café patio that create a pedestrian-friendly environment. In summary, it would improve existing pedestrian conditions.

### **Bicycle Access and Circulation**

A bicycle storage room would be located in the southern portion of the project site fronting Lincoln Avenue. It would be accessed through the garage entrance on Grand Avenue. Guests would wheel bicycles through the garage to the hotel entrance door from the southern edge of the garage, which would be close to the bicycle storage room entrance. It is recommended that clear signage be provided for cyclists to enter and exit the bicycle storage room using the garage instead of the lobby entrance.

### **Parking Analysis**

The City parking requirements specify that a hotel should provide one parking space for each guest room, one space for the manager, and one space for every two employees. Assuming one manager and six employees at the hotel, per the City's minimum parking requirement, the proposed hotel should provide 50 parking spaces. The parking study summarized below supports a reduced parking space rate.

Hexagon has conducted parking counts at seven hotels in the Bay Area. The hotels ranged in size from 56 to 173 rooms. Table 3 shows the names and locations of the hotels and the results of the parking counts. The results show an average of 108 occupied rooms with 81 occupied parking spaces. Thus, the average parking demand ratio is 0.75 spaces per occupied room.

Applying this ratio to the proposed hotel at 1580 Lincoln Avenue yields a parking demand estimate of 35 spaces when all 46 rooms are occupied.

Table 3 also shows the hotel parking rate from the Institute of Transportation Engineers (ITE) Parking Generation Manual. The manual provides average parking demand rates for different land uses based on approved submitted parking count data. Rates taken from the category of "Business Hotel" (Land Use 312 in the Parking Generation Manual 5<sup>th</sup> edition) were used to estimate peak hour parking demand. As seen in Table 4, the 46-room hotel would have a peak hour demand of 34 parking spaces based on the ITE rate.

The proposed garage would have 26 3-level lift parking stalls, 9 standard parking stalls, and 3 accessible parking stalls for a total of 38 parking spaces including 3 electric vehicle parking spaces. Based on counts at other hotels, Hexagon estimates the hotel will need 34 to 35 parking spaces for the proposed 46 rooms. Thus, the proposed garage design with 38



parking spaces would be sufficient. Furthermore, outside the project parking garage, on Grand Avenue, there are two city-owned uncovered parking stalls, which can also be utilized by the hotel. There is also on-street parking available along the project frontage on Lincoln Avenue.

### **Bicycle Parking**

Per the City's Zoning Ordinance (14.18.090), the project is required to provide both short-term and long-term bicycle parking equal to five percent of the vehicular parking requirement, which is between two to three parking spaces. Bicycle parking proposed by the project includes two short-term bicycle parking spaces on Lincoln Avenue along the project frontage and four long-term bicycle parking spaces in a bicycle storage room in the hotel for a total of six bicycle parking spaces, meeting the City's requirement.



**Table 3**  
**Bay Area Hotels Parking Demand**

	Holiday Inn Belmont		Fairfield Inn & Suites San Carlos		Hilton Garden Inn Mountain View		Sheraton Inn Sunnyvale		Courtyard Marriott Sunnyvale	
	Wed.	Sat.	Thurs.	Sat.	Thurs.	Sat.	Thurs.	Sat.	Thurs.	Sat.
	3/30/2016	4/2/2016	4/7/2016	4/9/2016	4/30/2015	5/2/2015	4/30/2015	5/2/2015	4/30/2015	5/2/2015
<b>Total Rooms</b>	82	82	120	120	160	160	173	173	145	145
<b>Occupied Rooms</b>	65	68	82	69	155	156	125	164	82	144
<b>Total Parking Spaces</b>	77	77	112	112	153	153	283	283	127	127
<b>Occupied Parking Spaces</b>	39	55	66	88	115	125	88	146	55	107
<b>Parking Demand Ratio</b>	0.60	0.81	0.80	1.28	0.74	0.80	0.70	0.89	0.67	0.74

**Table 3 (Continued)**  
**Bay Area Hotels Parking Demand**

	Aloft Hotel Cupertino		Hotel Vue Mountain View	Average	ITE Average Parking Rate
	Wed.	Sat.	Wed.		
	6/11/2014	6/14/2014	1/9/2019		
<b>Total Rooms</b>	123	123	56	128	25
<b>Occupied Rooms</b>	123	121	48	108	n/a
<b>Total Parking Spaces</b>	n/a	n/a	56	142	n/a
<b>Occupied Parking Spaces</b>	76	67	20	81	21
<b>Parking Demand Ratio</b>	0.62	0.55	0.42	0.75	0.83

**Table 4**  
**ITE Hotel Parking Demand**

Land Use	Size	Weekday Peak Parking Demand	
		Rate	Total
<b>Proposed Use</b>			
Hotel <sup>1</sup>	46 rooms	0.73	34

Notes:

<sup>1</sup> Business Hotel (Land Use 312) average rates published in ITE's Parking Generation Manual, 5th Edition.



## Conclusions

The project is estimated to generate 122 net new daily trips, including 16 net new trips (7 inbound and 9 outbound) in the AM peak hour and 9 net new trips (5 inbound and 4 outbound) in the PM peak hour.

The project would operate similar to a neighborhood-serving retail project and would meet the City's VMT screening criteria resulting in a less than significant VMT impact.

The project garage design providing 38 parking spaces would meet the hotel parking estimates of between 34 and 35 parking spaces per other hotel parking survey studies and the ITE parking estimates, respectively.

Recommendations resulting from the site access and circulation analysis include:

- The project applicant should coordinate with the City to get a variance on the proposed passenger loading zone length of 21 feet 9 inches.
- Trash should be rolled to the proposed no parking zone east of the driveway on Grand Avenue so as to not obstruct the driveway access for vehicles or sidewalks for pedestrians.
- Clear signage should be provided for cyclists to enter and exit the bicycle storage room using the garage instead of the lobby entrance.

We appreciate the opportunity to provide this transportation study. If you have any questions, please do not hesitate to call.

Sincerely,  
**HEXAGON TRANSPORTATION CONSULTANTS, INC.**

Gary K. Black  
President

Shikha Jain  
Transportation Planner