



December 23, 2017

Patrick Streeter, AICP
Senior Planner
100 Santa Rosa Avenue, Room 3
Santa Rosa, CA 95404

Subject: Session Climbing – Parking & Traffic Assessment

Dear Mr. Streeter,

This letter report provides the requested Parking & Traffic Assessment for the proposed Session Climbing rock climbing facility (“the project”) proposed on South A Street in Santa Rosa. This report provides a general assessment of the project’s anticipated traffic-generation and peak parking demand characteristics, and provides findings relevant to the project applicant’s request for a reduction in code-required parking.

PROJECT OVERVIEW

The project site is a vacant lot bordering the US 101 freeway on the west side of South A Street, between Barham Avenue and Earle Street. As proposed, the site would be developed with a rock climbing facility that would provide 14,000 square feet of climbing wall terrain on a roughly 18,000 square foot building footprint. The building would contain up to 23,000 gross square foot (GFA) of building area including mezzanine and climbing wall structure support space.

Motor Vehicle Parking

The Santa Rosa Municipal Code specifies the minimum number of off-street parking spaces for specific land uses in section 20-36.040, table 3-4. The Municipal Code does not contain a minimum parking requirement specific to Rock Climbing Gyms. As stated in section 20.36040 (F), when a land use is not specifically listed in Table 3-4, the City “shall use the requirements of Table 3-4 for similar uses as a guide” for determining the minimum number of parking spaces to be provided. Two potentially similar uses are Commercial Recreation Facilities (indoor) and Health Club/Fitness Facilities, both of which are required to provide one vehicle parking space for each 250 square feet of gross floor area (GFA), thus 4.00 spaces per thousand square feet of GFA. Therefore, the minimum parking requirement (based on 23,000 square feet of GFA) would be 92 off-street parking spaces, unless a reduction is granted. Section 20-356.050 specifies that a reduction in the minimum parking requirement may be granted if the following two findings can be made:

- *Due to special circumstances associated with the operation of the use at its location, the proposed use will generate a parking demand different from the standards specified in Table 3-4;*
- *The number of parking spaces approved will be sufficient for the safe, convenient and efficient operations of the us.*

Proposed Project Parking Supply: The project applicant proposes to provide off-street parking at a rate roughly 16 percent higher than the average at 16 similar facilities, based on the amount of climbing

terrain provided. **Table 1** provides a comparison of the parking supply at the 16 similar facilities, provided by the project applicant. As shown:

- ▶ The average parking supply at the 16 climbing facilities shown on Table 1 equates to 3.76 parking spaces per thousand square feet of climbing wall terrain (not based on GFA).
- ▶ The project applicant proposes to provide 61 off-street parking spaces, thus a rate of 4.36 off-street parking spaces per thousand square feet of climbing wall terrain (not based on GFA).
- ▶ The total proposed parking supply for the project, including 11 adjacent on-street parking spaces on the west side of South A Street, would be 72 spaces - thus a total parking supply of 5.14 spaces per thousand square feet of climbing space (not based on GFA) including adjacent on-street spaces.
- ▶ Based on GFA (not climbing wall terrain), the proposed off-street parking supply equates to 2.65 off-street parking spaces per thousand square feet of GFA (not including the 11 on-street spaces). The total parking supply thus equates to 3.13 total parking spaces per GFA (based on 23,000 sq. ft. GFA) including the 11 on-street parking spaces.

Table 1: Parking Supply Comparison (Parking Spaces per 1,000 SF of Climbing Wall Terrain)

Facility Name	Location	Climbing Wall Terrain (sq. ft.)	Parking Spaces (off-street)	Parking Spaces per 1,000 SF of Climbing Walls
Triangle Rock Club	Morrisville, NC	26,000	72	2.77
First Ascent	Chicago, IL	25,000	74	2.96
The Front Climbing Club	Salt Lake City, UT	30,000	90	3.00
Evo Rock	Concord, NH	16,000	52	3.25
Planet Granite	San Francisco, CA	25,000	84	3.36
Sender One	Santa Ana, CA	25,000	85	3.40
Crux Climbing Center	Austin, TX	22,000	76	3.45
Movement	Denver, CO	26,000	100	3.85
Cliff Hangers	Moorseville, NC	20,000	81	4.05
Mesa Rim	Reno, NV	25,000	102	4.08
Stone Summit	Kennesaw, GA	33,000	102	3.09
Climb Nashville	Nashville, TN	12,000	53	4.42
Salt Pump	Scarborough, ME	11,000	50	4.55
Ubergripen	Denver, CO	16,000	73	4.56
Ascent Studio	Fort Collins, CO	14,000	65	4.64
Earth Treks	Golden, CO	28,500	135	4.74
Average size & off-street parking supply		22,156	81	3.76
Proposed Project: Session Climbing	Off-street parking only	14,000	61	4.36
	Total parking supply including 11 on-street spaces bordering the site on the west side of South A Street.	14,000	72	5.14
Source: Kevin Jorgeson, Session Climbing, December 2017.				

TRAFFIC ASSESSMENT

Vehicle Trip Generation

This section provides a vehicle trip generation forecast for the proposed project, based on Institute of Transportation Engineers' (ITE) trip generation data contained in the *ITE Trip Generation Manual* that is the standard source for vehicle trip generation rates. The ITE data is based on vehicle trips per GFA, and indicates that a Rock Climbing Gym generates 1.40 vehicle trips per thousand square feet GFA during the a.m. peak hour, 1.64 vehicle trips per GFA during the p.m. peak traffic hour of adjacent streets (between 5:00 and 6:00 pm). In addition, the ITE data indicates a rate of 2.57 vehicle trips per thousand square feet of GFA during the peak hour of the use (Rock Climbing Gym) which occurs after 6:00 pm and thus does not coincide with the peak hour of adjacent street traffic. Therefore, based on the ITE trip generation rate for Rock Climbing Gyms:

- **Table 2** summarizes the anticipated volume of vehicle traffic that would be generated by the proposed project during the a.m. and p.m. peak hours of adjacent street traffic. During those peak traffic hours, the project is anticipated to generate 32 vehicle trips during the a.m. peak hour (11 inbound and 21 outbound); and 38 vehicle trips during the p.m. peak hour (22 inbound and 16 outbound).
- **Table 3** shows the anticipated volume of traffic that would be generated during the peak hour of the "use", between 6:00 and 7:00 p.m. As shown, the project is anticipated to generate 59 vehicle trips between 6:00 and 7:00 p.m. (27 inbound and 32 outbound). These trips would occur after the p.m. peak traffic period (which occurs from 4:00 to 6:00 p.m.) has ended.

Table 2: Vehicle Trip Generation: AM & PM Peak Hours of Adjacent Street Traffic

Land Use (ITE Code)	Size	AM Peak Hour (7-9 am)					PM Peak Hour (4-6 pm)				
		Rate	In/Out	In	Out	Total Vehicle Trips	Rate	In / Out	In	Out	Total Vehicle Trips
Rock Climbing Gym (434)	23,000 Sq. Ft. GFA	1.40	33% entering / 67% exiting	11	21	32	1.64	57% entering / 43% exiting	22	16	38

Source: Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition.

Table 3: Vehicle Trip Generation: Peak Hour of Use (6-7 pm)

Land Use (ITE Code)	Size	Peak Hour of Use (6-7 pm)				
		Rate	In / Out	In	Out	Total
Rock Climbing Gym (434)	23,000 Sq. Ft. GFA	2.57	45% entering / 55% exiting	27	32	59

Source: ITE *Trip Generation Manual*, 10th Edition.

Daily Vehicle Trips: ITE data does not include daily vehicle trip generation rates for Rock Climbing Gyms. Based on the hourly data collected by the project applicant from similar locations, roughly 20 percent of total daily weekday trips would occur during the “peak hour of use” from 6 p.m. to 7 p.m. while weekend days would have five percent fewer visitors than weekdays. Therefore, based on those usage patterns: the project would generate approximately 295 daily vehicle trips on typical weekdays (Monday to Friday), and 280 daily vehicle trips on typical weekend days (Saturday and Sunday).

Distribution of Project Vehicle Trips

Site access would be via South A Street, with over 90 percent of project traffic anticipated to reach South A Street via Barham Street from the signalized four-way intersection of Santa Rosa Avenue and Barham Street. A small portion of project vehicle trips (less than 10 percent) would potentially use Earle Street (instead of Barham Street) to reach South A Street when approaching the site from the north (traveling southbound) on Santa Rosa Avenue.

Traffic Assessment Findings

Peak hour traffic impacts are evaluated based on the peak traffic hours of adjacent streets, which occurs during the a.m. between 7:00 and 9:00 a.m., and during the p.m. between 4:00 and 6:00 p.m.

- ▶ During peak traffic hours, the project is anticipated to generate 32 vehicle trips during the a.m. peak hour between 7:00 and 9:00 a.m. (11 inbound and 21 outbound); and 38 vehicle trips during the p.m. peak hour (22 inbound and 16 outbound) between 4:00 and 6:00 pm.

Based on the anticipated volume and distribution pattern for project trips, the effect of the project on the following key locations during the a.m. and p.m. peak traffic hours is described below:

- ▶ **Santa Rosa Avenue & Barham Road:** at this intersection, the project would be expected to add 29 a.m. peak hour vehicle trips (between 7:00 and 9:00 a.m.), and 35 p.m. peak hour vehicle trips (between 4:00 and 6:00 p.m.). The added volume would therefore consist of just one added vehicle roughly every two minutes during the peak traffic hours, at an intersection that has a capacity of over 5,000 vehicles per hour (while the current volume appears to be well below capacity). TJKM anticipates that the addition of project trips would add less than two seconds to average vehicle delay at this intersection, and impacts to intersection level of service (LOS) would be less than significant.
- ▶ **US 101 ramp intersections, at Baker Avenue and to/from Santa Rosa Avenue:** the project is anticipated to add less than 30 vehicle trips to US 101 (both north and south of the site) during both the a.m. and p.m. peak hours, and no significant impacts to freeway operations or ramp operations are anticipated given the relatively low volume (just one added vehicle trip every two minutes).
- ▶ **Earle Avenue:** a small portion of inbound project traffic (less than 10 percent) would potentially use Earle Avenue to reach the project site. This volume of traffic (one vehicle per 20 minutes) would not result in significant traffic impacts based on Santa Rosa’s transportation impact criteria.

Therefore, as described above: based on the relatively low volume of vehicle trips generated during the peak hours of adjacent street traffic and the anticipated distribution pattern of project traffic, **no significant traffic impacts (based on City of Santa Rosa impact thresholds) are anticipated to result from the addition of vehicle trips generated by the project.**

PARKING ASSESSMENT

This section provides findings relevant to the applicant's request for a reduction in the required supply of off-street parking spaces. TJKM compared the proposed parking supply with that of similar uses.

Parking Reduction Findings

Based on the peak parking demand forecast described above, findings relevant to the Santa Rosa code requirements for the granting of a reduction in the required provision of off-street motor vehicle parking are provided below.

Parking Reduction Finding #1: Due to special circumstances associated with the operation of the use at its location, the proposed use will generate a parking demand different from the standards specified in Section 20-36.040, Table 3-4.

The proposed land use (Rock Climbing Gym) is not among the land uses specified in Section 20-36.040, Table 4, which specifies the minimum parking requirement for typical land uses. In addition, the ITE Parking Generation manual does not contain parking demand data for Rock Climbing facilities.

In such a case, when a land use is not specifically listed in Table 3-4, Municipal Code Section 20-36.040 (F) specifies that the City "*shall use the requirements of Table 3-4 for similar uses as a guide*" for determining the minimum number of parking spaces to be provided. In this case: two potentially similar uses were identified: Commercial Recreation Facilities (indoor) and Health Club/Fitness Facilities, both of which are required to provide one vehicle parking space for each 250 square feet of gross floor area (GFA), thus 4.00 spaces per thousand square feet of GFA.

However, while seemingly similar: a comparison of traffic generation data indicates that Rock Climbing facilities generate much less traffic (and thus less parking demand) on a "per square foot" basis as described below.

Table 4 provides a comparison of the Rock Climbing Gym traffic generation rate with that of two relatively similar land uses, Athletic Clubs and Health/Fitness Clubs. This comparison is also relevant to the project's request for a reduction in code-required parking. As shown:

- ▶ The Rock Climbing Gym is anticipated to generate a much lower rate of traffic per thousand square feet of GFA during peak hours of operation, compared to Athletic Clubs and Health/Fitness Club.
- ▶ The volume of traffic anticipated to be generated by the Rock Climbing Gym during the PM Peak Hour of adjacent street traffic is 65 percent lower than the combined average of Athletic Clubs and Health/Fitness Centers.
- ▶ The volume of traffic anticipated to be generated during the peak hour of the use (after 6 pm) is 48 percent lower than the combined average of Athletic Clubs and Health/Fitness Centers during the respective peak hours of each use.

Table 4: Vehicle Trip Generation per 1,000 SF GFA: Comparison with Similar Uses

Land Use (ITE Code)	AM Peak Hour of Adjacent Street Traffic (7-9 am)	PM Peak Hour of Adjacent Street Traffic (4-6 pm)	Peak Hour of Use (6-7 pm)	Daily (Weekday)	Daily (Saturday)	Daily (Sunday)
Athletic Club (493)	2.97	5.84	5.96	93.17	83.33	79.67
Health/Fitness Club (492)	1.41	3.53	4.06	32.93	20.87	26.76
Average of Athletic Club & Health/Fitness Club rates	2.19	4.69	5.01	63.05	52.10	54.72
Rock Climbing Gym (434)	1.40	1.64	2.57	N/A	N/A	N/A

Source: Institute of Transportation Engineers *Trip Generation Manual*.

Therefore, based on the traffic generation characteristics described above:

- ▶ The proposed Rock Climbing facility is a unique use that is unlikely to generate the same level of parking demand as Commercial Recreation Facilities (indoor) and Health Club/Fitness Facilities, since Rock Climbing facilities generate a much lower rate of traffic. During the peak hour of use (between 6:00 and 7:00 p.m.) which correlates most closely with peak parking demand: Rock Climbing facilities generate 49 percent traffic less than the combined average of Athletic Club and Health/Fitness Centers.
- ▶ Therefore, the parking demand associated with Rock Climbing facilities would be reduced roughly from that of Athletic Club and Health/Fitness Clubs. Based on a 49 percent reduction from the combined average parking demand for Athletic Club and Health/Fitness Center uses (as shown on **Table 5**), the peak parking demand would be 2.26 vehicles per square feet GFA.

Table 5: Peak Parking Demand per 1,000 SF GFA: Similar Uses

Land Use (ITE Code)	Peak Parking Demand (Number of Vehicles per Sq. Ft. GFA)
Athletic Club (493)	3.55*
Health/Fitness Club (492)	5.27*
Average of Athletic Club & Health/Fitness Club rates	4.41
Rock Climbing Facility (based on 49% reduction from average of Athletic Club & Health/Fitness Club uses)	2.26

Source: *Institute of Transportation Engineers *Parking Generation*, 4th Edition



VISION THAT MOVES YOUR COMMUNITY

Therefore, based on the information summarized above: findings can be made that, the project would generate a parking demand different from the standards specified in Section 20-36.040, Table 4 for Commercial Recreation Facilities (indoor) and Health Club/Fitness Facilities, both of which are required to provide 4.00 spaces per thousand square feet of GFA.

Parking Reduction Finding #2: The number of parking spaces approved will be sufficient for the safe, convenient and efficient operations of the use.

As described in Finding #1 above: the project is anticipated to generate a peak parking demand of 2.26 vehicles parked per thousand square feet of GFA. Based on up to 23,000 square feet of GFA, the typical peak parking demand would therefore consist of 52 vehicles parked during the peak hour of operation, between 6:00 and 7:00 p.m.

Based on the amount of climbing wall terrain provided (14,000 square feet), the peak demand of 52 vehicles equates to 3.71 vehicles per 1,000 square feet of climbing wall terrain. As noted in Table 1, the average provision of off-street parking for 16 similar facilities is 3.79 parking spaces per thousand square feet of climbing wall terrain.

TJKM recommends provision of 4.00 parking spaces per thousand square feet of climbing wall terrain (not GFA), thus slightly higher than the average for similar facilities, to efficiently serve the peak demand between 6:00 and 7:00 pm. Therefore, the recommended supply of off-street parking is 56 spaces.

In addition, the total parking supply would include an additional 11 on-street parking spaces immediately bordering the site on the west side of South A Street. Based on site observations, the current on-street parking usage pattern on South A Street appears to peak in the morning, with a larger supply of vacant on-street spaces during the late afternoon, prior to the peak occupancy period for the rock climbing facility.

Based on this evaluation: the finding can be made the number of parking spaces proposed will be sufficient for the safe, convenient and efficient operations of the use.

Please feel free to contact me at (925) 264-5034 if you have any questions regarding this assessment.

Sincerely,

Colin Burgett
Senior Project Manager

Chris Kinzel, P.E.
Vice President



HIGHWAY 101



session