



## **SM ROCHA, LLC**

TRAFFIC AND TRANSPORTATION CONSULTANTS

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October 20, 2021

Clif Dayton  
R&R Engineers & Surveyors, Inc.  
1635 W 13<sup>th</sup> Avenue, Suite 310  
Denver, CO 80204

**RE: Jackson Gap Fairfield Inn & Suites / Traffic Generation Analysis  
Aurora, Colorado**

Dear Clif,

SM ROCHA, LLC is pleased to provide traffic generation information for the development entitled Jackson Gap Fairfield Inn & Suites. This development is located on the east side of Jackson Gap Street south of E 68<sup>th</sup> Avenue in Aurora, Colorado.

This traffic generation analysis has been revised to address City review comments dated 09/29/21 regarding site circulation and trip generation comparison.

The intent of this analysis is to present traffic volumes likely generated by the proposed development, provide a traffic volume comparison to previous land use assumptions approved for the development site, and consider potential impacts to the adjacent roadway network.

The following is a summary of analysis results.

### **Site Description and Access**

Land for the development is currently vacant and surrounded by a mix of commercial and open space land uses. The proposed development is understood to entail the new construction of a Fairfield Inn & Suites hotel building with 123 rooms.

Proposed access to the development is provided at the following location: one full-movement access onto future Private Drive (referred to as Site Access).

General site and access locations are shown on Figure 1.

A conceptual site plan, as prepared by R&R Engineers & Surveyors, Inc. is shown on Figure 2. This plan is provided for illustrative purposes.



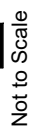
**JACKSON GAP FAIRFIELD INN & SUITES**  
Traffic Generation Analysis

**Figure 1**  
**SITE LOCATION**

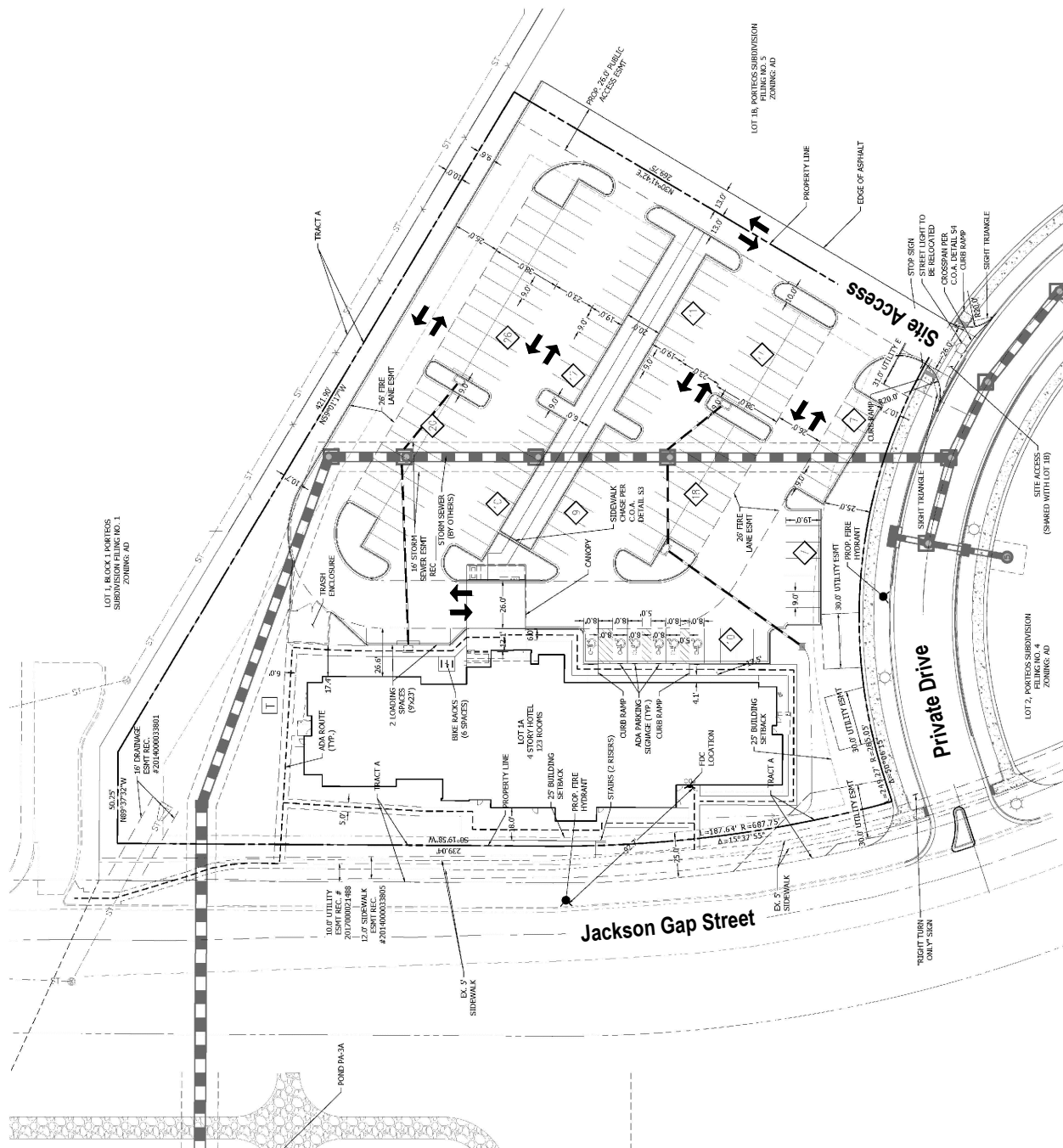
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## Figure 2 SITE PLAN

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## Vehicle Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 10<sup>th</sup> Edition, were applied to the previously approved and proposed land use in order to estimate the average daily traffic (ADT) and peak hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from point of origin to point of destination.

The approved traffic study<sup>1</sup> for the Porteos Planning Area 3 (PA 3) development used previous versions of ITE's Trip Generation Manual and included a "Hotel" land use in the same development area as currently proposed with this project. The previous study assumed a maximum density of up to 264 rooms for hotel uses within PA 3-6 and PA 3-7 defined as Traffic Analysis Zone 1 (TAZ 1). However, the current development being proposed only encompasses PA 3-6, which is approximately 50 percent of total area of TAZ 1. Therefore, half of the maximum density of 264 rooms for TAZ 1, or 132 rooms, was used for analysis.

Table 1 presents average trip generation rates for the previously approved land use and for the development area proposed. Use of average trip generation rates presents a conservative analysis. ITE land use code 310 (Hotel) was used for analysis because of its best fit to the previously approved and proposed land use.

**Table 1 – Trip Generation Rates**

ITE CODE                    LAND USE                    UNIT			TRIP GENERATION RATES						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
310	Hotel	RMS	8.36	0.28	0.19	0.47	0.31	0.29	0.60

Key: RMS = Number of Rooms.

Note: All data and calculations above are subject to being rounded to nearest value.

Table 2 summarizes the projected ADT and peak hour traffic volumes likely generated by the land use area proposed and provides comparison to traffic volume estimates for the previously approved land use.

<sup>1</sup> Transportation Impact Study: Porteos PA 3 – Jackson Gap Commercial, Felsburg Holt & Ullevig, February 2020.

**Table 2 – Trip Generation Summary**

ITE  CODE                    LAND USE                    SIZE				TOTAL TRIPS GENERATED						
				24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
					ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
<u>Site Development - Previously Approved</u>										
310	Hotel		132 RMS	1,104	37	25	62	40	39	79
Previously Approved Total:				1,104	37	25	62	40	39	79
<u>Site Development - Proposed</u>										
310	Hotel		123 RMS	1,028	34	24	58	38	36	74
Proposed Total:				1,028	34	24	58	38	36	74
Difference Total:				-75	-2	-2	-4	-3	-3	-5

Note: All data and calculations above are subject to being rounded to nearest value.

As Table 2 shows, the proposed development area has the potential to generate approximately 1,028 daily trips with 58 of those occurring during the morning peak hour and 74 during the afternoon peak hour. Table 2 further shows how proposed development traffic volumes do not exceed those approved in the Porteos PA 3 traffic study.

### Adjustments to Trip Generation Rates

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

### Vehicle Trip Generation Comparison & Development Impacts

As Table 2 shows, the proposed development does not exceed traffic volumes approved for the area in comparison to previously projected volumes of the overall development area. These volumes are not likely to negatively impact operations of Jackson Gap Street nor other adjacent roadways or intersections.

## Conclusion

This analysis assessed traffic generation for the Jackson Gap Fairfield Inn & Suites development, provided a traffic volume comparison to previous land use assumptions approved for the development site, and considered potential impacts to the adjacent roadway network.

It is our professional opinion that the proposed site-generated traffic is expected to create no negative impact to traffic operations for the surrounding roadway network and existing site access, nor at the Jackson Gap Street intersection with E 68<sup>th</sup> Avenue and is in compliance with the Porteos PA 3 Traffic Impact Study.

We trust that our findings will assist in the planning and approval of the Jackson Gap Fairfield Inn & Suites development. Please contact us should further assistance be needed.

Sincerely,

**SM ROCHA, LLC**

*Traffic and Transportation Consultants*



Stephen Simon, EIT  
Traffic Engineer



Adam Maxwell, PE, PTOE#2093  
Senior Traffic Engineer