

August 20, 2023

Ms. Gabriela Marks
Marks Architects
2643 4th Ave.
San Diego, CA 92103

Subject: JIB Carson Trip Generation Assessment (JN 0037-0049)

Dear Ms. Marks:

Trames Solutions Inc. is pleased to submit this Trip Generation Assessment for the proposed 1,885 sf Jack in the Box restaurant with a drive-thru. The site previously consisted of a 1,445 sf restaurant and a 3,868 sf office. Both of these buildings will be demolished and replaced with the proposed restaurant. The site is located on the corner of E. Radbard St. and Central Ave. in the City of Carson.

INTRODUCTION

The proposed project consists of developing a 1,885 sf Jack in the Box restaurant with a drive-thru. Attachment "A" contains the site plan for the proposed project. Previously, the site was occupied by a 1,445 sf restaurant and a 3,868 sf office. The intent of this analysis is to determine the number of trips that would be generated during the morning and evening peak hours and throughout the day.

TRIP GENERATION ANALYSIS

Typically, traffic generated by developments can be determined based on the Institute of Transportation Engineers (ITE), Trip Generation handbook (11th edition). This publication contains trip rates based on studies conducted for a variety of uses. The proposed project consists of a fast food restaurant with a drive-thru and the previous uses consisted of a

restaurant and an office development. Table 1 provides a summary of the daily, AM peak hour, and PM peak hour trip rates for the proposed project and previous uses.

Some of the traffic from the uses are anticipated to be comprised of pass-by trips. These trips are intermediate stops between an origin and a primary destination. An example would be a person leaving a residence (origin) in the morning but “passes by” and stops for a coffee on their way to work (primary destination). The Trip Generation handbook provides average pass-by reduction rates for these uses.

Table 2 provides a summary of the trips. Based on the proposed 1,885 sf Jack in the Box restaurant with a drive-thru, it is estimated that a total of 440 new trips will occur per day, with 41 new trip ends occurring during the AM Peak Hour, and 27 new trip ends occurring during the PM Peak Hour. The previous uses were estimated to generate a total of 182 trips per day, with 8 trip ends during the AM Peak Hour, and 24 trip ends during the PM Peak Hour. Based on these estimates, the project would result in a net increase of 258 trips per day, with 33 more trip ends during the AM Peak Hour, and 3 more trip ends during the PM Peak Hour.

CONCLUSIONS

The site was previously occupied by a 1,445 sf restaurant and a 3,868 sf office. The trips due to these uses have been generated and compared to the proposed project. The proposed 1,885 sf Jack in the Box restaurant with a drive-thru is estimated to generate a total of 440 new trips will occur per day, with 41 new trip ends occurring during the AM Peak Hour, and 27 new trip ends occurring during the PM Peak Hour. The previous uses were estimated to generate a total of 182 trips per day, with 8 trip ends during the AM Peak Hour, and 24 trip ends during the PM Peak Hour. Based on these estimates, the project would result in a net increase of 258 trips per day, with 33 more trip ends during the AM Peak Hour, and 3 more trip ends during the PM Peak Hour. Based on the

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relatively small increase in traffic volumes during the AM and PM peak hours, it is unlikely that a significant traffic impact will occur at the intersections adjacent to the project site.

If you have any questions, please contact me directly at (949) 244-2436.

Respectfully submitted,

Trames Solutions Inc.



Scott Sato, P.E.

Vice President

Attachment A – Site Plan

**TABLE 1
PROJECT TRIP GENERATION RATES¹**

Land Use	ITE Code	Quantity ²	Peak Hour Trip Rates						Daily
			AM			PM			
			IN	OUT	Total	IN	OUT	Total	
Fast-Food Restaurant w/ Drive-Through Window	934	1.885 TSF	22.75	21.86	44.61	17.18	15.85	33.03	467.48
Fast Casual Restaurant	930	1.445 TSF	0.72	0.71	1.43	6.90	5.65	12.55	97.14
General Office Building	710	3.868 TSF	1.34	0.18	1.52	0.24	1.20	1.44	10.84

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

² TSF = Thousand Square Feet

**TABLE 2
PROJECT TRIP GENERATION SUMMARY**

Land Use	ITE Code	Quantity ¹	Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
PROPOSED PROJECT									
Fast-Food Restaurant w/ Drive-Through Window	934	1.885 TSF	43	41	84	32	30	62	881
Pass-By Reduction (50%-AM, 55%-PM)			-22	-21	-43	-18	-17	-35	-441
Subtotal			21	20	41	14	13	27	440
PREVIOUS USES									
Fast Casual Restaurant	930	1.445 TSF	1	1	2	10	8	18	140
General Office Building	710	3.868 TSF	5	1	6	1	5	6	42
Subtotal			6	2	8	11	13	24	182
Net Trips			15	18	33	3	0	3	258

¹ TSF = Thousand Square Feet

ATTACHMENT A
SITE PLAN