July 18, 2022

Jack Lanphere III
L&S Architects, Inc.
38516 Amateur Way
Beaumont, CA 92223

Re: **Drive-Thru Stacking and Trip Generation Study**
Proposed Ziggi's Coffee Drive-Thru at 311 E. 1st Street, Beaumont

Dear Jack,

Per your request, we have conducted a queuing analysis for the proposed Ziggi's Coffee drive-through in Beaumont. This letter presents our methodology, finding, and recommendations.

PROJECT INFORMATION

The project site (APN# 418-290-023) is located at 311 E. 1st Street in the City of Beaumont. The site has been partially improved as a parking lot. The project consists of constructing a new restaurant building for Ziggi's Coffee (655 square feet) with a drive-through lane. The proposed site plan is shown in **Exhibit 1**.

The proposed drive-through lane has enough space to accommodate 14 vehicles in queue from the ordering station and three (3) additional vehicles behind the pick-up window. Overall the stacking capacity for the drive-through lane is 14 vehicles.

QUEUING SURVEY

The subject Ziggi's Coffee is a growing national franchise originated in Colorado that has yet to establish any business operation in California. The business operations of food and drinks are similar and comparable to Dunkin' Donuts. To evaluate stacking capacity, the study conducted a stacking analysis at three comparable Dunkin' Donuts with drive-through lanes based on field observations between the 9 AM to 11 AM on Saturday, April 23, 2022 and Sunday, April 24, 2022 at the following locations:

1. Dunkin' Donuts with Drive-Through at 15415 Jeffery Rd, Suite 100, Irvine
2. Dunkin' Donuts with Drive-Through at 13905 Francisquito Ave, Baldwin Park
3. Dunkin' Donuts with Drive-Through at 100 S. Harbor Blvd, Santa Ana

The occurrence of the longest queue and the drive-through volumes were noted in each 10-minute period. Complete stacking survey data of the similar drive-through operations can be found in **Appendix A**.

With a sample size of 87 drive-through trips, our observations found that the maximum queue was ten (10) vehicles, including eight (8) vehicles in queue at the ordering station and two (2) vehicles in queue for the pick-up window. A summary of the observations is provided in **Table 1**.

<u>**Table 1. Summary of Drive-Thru Stacking Survey**</u>

Date	Day of Week	Location	Time Period	Drive-Thru Volume	Longest Queue
4/23/2022	Saturday	Irvine	10:00 AM to 11:00 AM	31	10 vehicles
4/23/2022	Saturday	Baldwin Park	10:00 AM to 11:00 AM	24	7 vehicles
4/24/2022	Sunday	Santa Ana	9:30 AM to 10:30 AM	32	9 vehicles
			Total	**87**	**Maximum 10 vehicles**

Based on the study of similar drive-through operations, the proposed Dunkin' Donuts with drive-through in the City of Temecula has provided sufficient stacking length to accommodate 13 vehicles including three (3) spaces between the ordering station and the pick-up window, and ten (10) queuing spaces from the ordering station. It is concluded that the proposed drive-through lane provides adequate stacking capacity to accommodate the maximum expected queue. No overflow onto the parking aisles or public streets is anticipated.

TRIP GENERATION

According to the "*Trip Generation, 11ᵗʰ Edition*," published by the Institute of Transportation Engineers (ITE), the proposed use is defined as 655 square feet of Coffee/Donut Shop with Drive-Through Window and No Indoor Seating (Land Use: 938). The applicable ITE trip generation rates and project trips associated with the proposed café are provided in **Table 1**.

<u>**Table 1. Trip Generation for Coffee Shop with Drive-Through**</u>

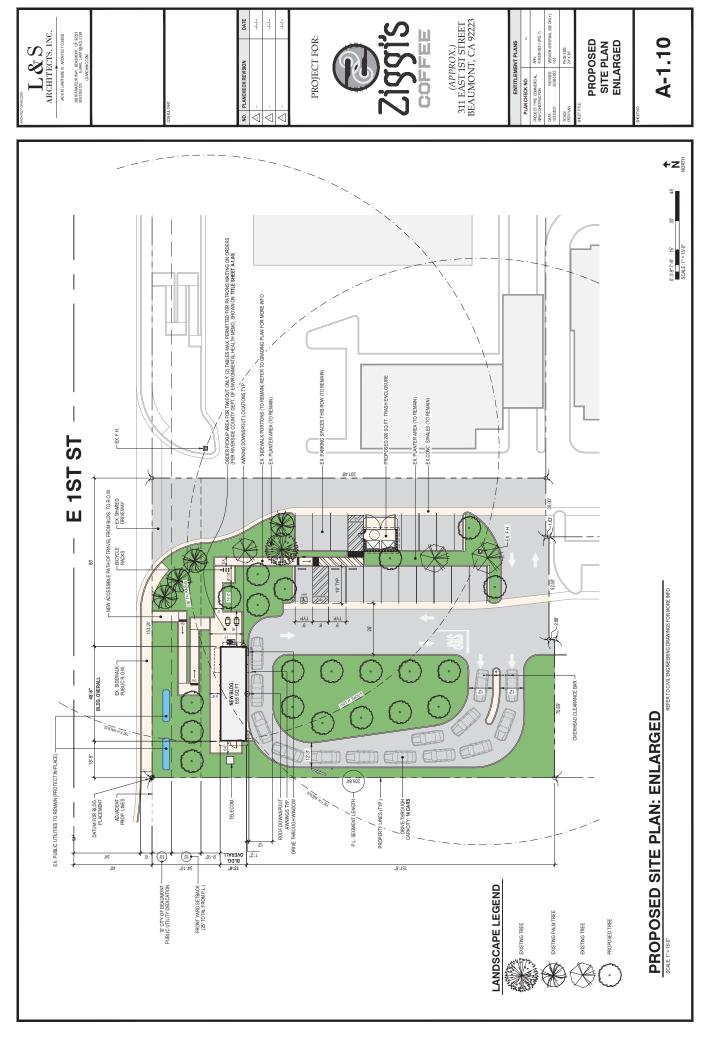| Land Use	Quantity	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
ITE Trip Generation Rates								
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating (938)	1,000 Sq. Ft.	39.81	50%	50%	15.08	50%	50%	179.00
Project Trip Generation								
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating (938)	655 Sq. Ft.	**26**	13	13	**10**	5	5	**117**

The proposed operation is anticipated to have a trip generation of 26 trips in the AM peak hour, 10 trips in the PM peak hour, and 117 Average Daily Traffic (ADT) trips.

Regards,

K2 Traffic Engineering, Inc.

Jende "Kay" Hsu, T.E.
California Licensed TR2285

CONSULTANT:

NO.	PLANCHECK REVISION	DATE
△	--	-/-/-
△	--	-/-/-
△	--	-/-/-

PROJECT FOR:

Ziggi's
COFFEE

(APPROX.)
311 EAST 1ST STREET
BEAUMONT, CA 92223

PROPOSED
SITE PLAN
ENLARGED

SHEET TITLE

A-1.10

SHEET NO.

EX. F.H.

E 1ST ST

ORDER PICKUP AREA FOR TAKEOUT ONLY. (2) TABLES MAX PERMITTED FOR PATRONS WAITING ON ORDERS (PER RIVERSIDE COUNTY DEPT. OF ENVIRONMENTAL HEALTH MEMO, SHOWN ON **TITLE SHEET A-1.00**)

AWNING DOWNSPOUT LOCATIONS TYP.

EX. SIDEWALK PORTIONS (TO REMAIN) REFER TO GRADING PLAN FOR MORE INFO

EX. PLANTER AREA (TO REMAIN)

EX. PARKING SPACES THIS ROW (TO REMAIN)

PROPOSED 200 SQ. FT. TRASH ENCLOSURE

EX. PLANTER AREA (TO REMAIN)

EX. CONC. SWALES (TO REMAIN)

EX. F.H.

201.48'

30.00'

1.63'

52.50'

2.88'

EX. SHARED DRIVEWAY

NEW ACCESSIBLE PATH OF TRAVEL FROM BLDG. TO R.O.W.

BICYCLE RACKS

86'

153.24'

48'-6"

BLDG. OVERALL

EX. SIDEWALK PUBLIC R.O.W.

EX. PUBLIC UTILITIES TO REMAIN (PROTECT IN-PLACE)

DATUM FOR BLDG. PLACEMENT

ADJACENT PROP. LINES

TELECOM

ROOF DOWNSPOUT

AWNINGS TYP.

DRIVE THROUGH WINDOW

P.L. SEGMENT LENGTH

PROPERTY LINES (TYP.)

DRIVE THROUGH CAPACITY: **14 CARS**

OVERHEAD CLEARANCE BAR

NEW BLDG.
655 SQ. FT.

VAN

19' TYP.

9'

8'

9'

26'

18'-8"

205.84'

70.69'

12-3'

34'

40'

6'

34'-10"

9'-10"

13'-6"
BLDG. OVERALL

1'-2"

12'

157'-6"

LANDSCAPE LEGEND

EXISTING TREE	
EXISTING PALM TREE	
EXISTING TREE	
PROPOSED TREE	

10' CITY OF BEAUMONT PUBLIC UTILITY DEDICATION

FRONT YARD SETBACK (25' TOTAL FROM P.L.)

REFER TO CIVIL ENGINEERING DRAWINGS FOR MORE INFO

PROPOSED SITE PLAN: ENLARGED
SCALE: 1" = 15'-0"

EXHIBIT 1. SITE PLAN

N
NORTH

0' 3' 6" 7'-6"   15'   30'   45'
SCALE: 1" = 15'-0"

APPENDIX A. DRIVE-THROUGH QUEUE SURVEY

Location: Dunkin Donuts with Drive-Through - Irvine   By: Erica T.

Address: 15415 Jeffery Rd, Suite 100, Irvine   Date: 4/23/2022

Day: Saturday

Start	End	Longest Queue (From Order Station)										Sum	Drive-Thru Volume
		1	2	3	4	5	6	7	8	9	10		
10:00 AM	10:10 AM	☑	☑	☑	☑	☑	☑					6	6
10:10 AM	10:20 AM	☑	☑	☑	☑	☑	☑	☑	☑			8	8
10:20 AM	10:30 AM	☑	☑	☑	☑	☑	☑	☑	☑			8	7
10:30 AM	10:40 AM	☑	☑	☑	☑	☑	☑	☑				7	4
10:40 AM	10:50 AM	☑	☑	☑	☑	☑						5	5
10:50 AM	11:00 AM	☑										1	1

Total Drive-Thru Volume	**31**
Longest Queue from Order Station	**8**
Space between Order Station and Pick-Up Window	2
Maximum Queue	**10**

APPENDIX A. DRIVE-THROUGH QUEUE SURVEY

Location: Dunkin Donuts with Drive-Through - Baldwin Park

Address: 13905 Francisquito Ave, Baldwin Park

By: Erica T.

Date: 4/23/2022

Day: Saturday

Start	End	Longest Queue (From Order Station)										Sum	Drive-Thru Volume
		1	2	3	4	5	6	7	8	9	10		
10:00 AM	10:10 AM	☑										1	4
10:10 AM	10:20 AM	☑	☑									2	3
10:20 AM	10:30 AM	☑	☑	☑								3	7
10:30 AM	10:40 AM	☑	☑	☑								3	3
10:40 AM	10:50 AM	☑										1	5
10:50 AM	11:00 AM	☑	☑									2	2

Total Drive-Thru Volume	**24**
Longest Queue from Order Station	**3**
Space between Order Station and Pick-Up Window	4
Maximum Queue	**7**

K2 Traffic Engineering, Inc.

APPENDIX A. DRIVE-THROUGH QUEUE SURVEY

Location: Dunkin Donuts with Drive-Through - Santa Ana   By: Erica T.

Address: 100 S. Harbor Blvd, Santa Ana   Date: 4/24/2022

Day: Sunday

Start	End	Longest Queue (From Order Station)										Sum	Drive-Thru Volume
		1	2	3	4	5	6	7	8	9	10		
9:30 AM	9:40 AM	☑	☑	☑	☑							4	8
9:40 AM	9:50 AM	☑	☑	☑								3	7
9:50 AM	10:00 AM	☑	☑	☑								3	4
10:00 AM	10:10 AM	☑	☑	☑	☑							4	6
10:10 AM	10:20 AM	☑	☑	☑	☑	☑						5	6
10:20 AM	10:30 AM	☑	☑	☑	☑	☑	☑					6	1

Total Drive-Thru Volume	**32**
Longest Queue from Order Station	**6**
Space between Order Station and Pick-Up Window	3
Maximum Queue	**9**