



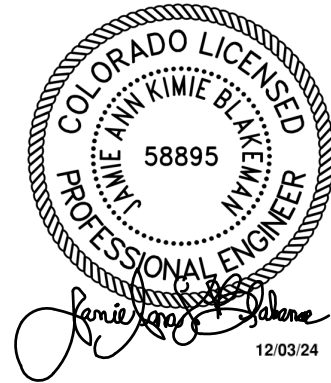
To: Samantha Villegas
Atwell

Date: December 3, 2024

From: Jamie Ann K. Blakeman, PE, PTOE

Job Number: 24.5742

RE: Black Rock Coffee – 5560 Barnes Road
Traffic Impact Statement



INTRODUCTION

Lōkahi, LLC (Lōkahi) has prepared a Traffic Impact Statement for the proposed Black Rock Coffee located at 5560 Barnes Road, on the northwest (NWC) of Barnes Road and Chaparral Road in Colorado Springs, Colorado. See **Figure 1** for the vicinity map.

The proposed Black Rock Coffee is a 645 square-foot (SF) drive-through coffee shop with approximately 260 feet for vehicle queuing. See **Attachment A** and **Figure 2** for the site plan.



Figure 1 - Vicinity Map

The objective of this Traffic Impact Statement is to analyze the proposed development's traffic-related impacts on the adjacent roadway network and evaluate the on-site circulation and vehicle stacking.





EXISTING CONDITIONS

The proposed development is located on a part of assessor parcel number (APN) 632-510-6040 occupying a 0.91 acre area. According to the El Paso County Assessor, this parcel is currently zoned as a Commercial District/Commercial Regional (C6/CR). The site is currently undeveloped. See **Attachment B** for the El Paso County Assessor’s information.

BARNES ROAD is an east-west roadway that generally provides two (2) lanes in each direction of travel. According to the Colorado Department of Transportation (CDOT) *Traffic Counts* map, Barnes Road has a 2023 average annual daily traffic (AADT) of 10,253 and 9,830 vehicles per day (vpd) in the eastbound and westbound direction, respectively, east of Chaparral Road. Per Colorado Springs Traffic and Transportation Engineering (CSTTE), Barnes Road is classified as a primary arterial. There is a posted speed limit of 35 miles per hour (mph).

CHAPARRAL ROAD is an east-west and north-south roadway that provides one (1) through lane in each direction of travel. According to CSTTE, Chapparral Road is classified as a collector with a 2018 AADT of 618 and 831 vpd in the eastbound and westbound direction, respectively. There is a posted speed limit of 25 mph.

PROPOSED DEVELOPMENT

The proposed development is located along Barnes Road, approximately 155 feet west of Chapparral Road (curb to property line) at 5560 Barnes Road in Colorado Springs, Colorado. It includes a 645 SF coffee shop with a drive-through aisle. The drive-through aisle has two (2) lanes that merge into one (1) prior to the menu board. Approximately 260 feet of vehicle stacking will be provided on-site, which, assuming approximately 25 feet of on-site storage per vehicle, is anticipated to accommodate eleven (11) vehicles in the queue. See **Figure 2** for the site plan.

There will be two (2) access points to the proposed development. The first access point is located along Barnes Road, approximately 250 feet west of Chaparral Road (center to center). This access point will be limited to right-in and right-out only movements.

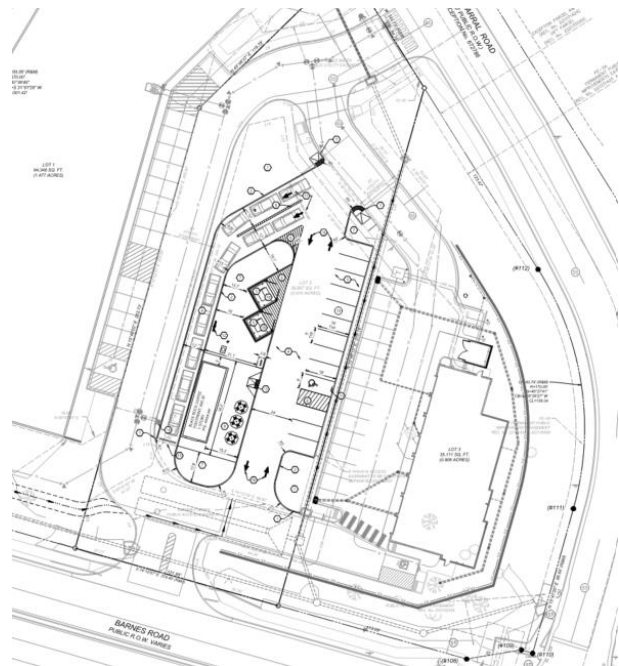


Figure 2 – Site Plan



The second access point is located along Chaparral Road, approximately 365 feet north of Barnes Road (center to center). This access point will be a full-access driveway, allowing all movements into the site.

TRIP GENERATION

The trip generation for the proposed development was calculated utilizing the Institute of Transportation Engineers (ITE) publication entitled *Trip Generation, 11th Edition*. The ITE rates are based on studies that measured the trip generation characteristics for various types of land uses. The rates are expressed in terms of trips per unit of land use type. This publication is the standard for the transportation engineering profession.

ITE Code 937—Coffee/Donut Shop with Drive-Through Window was used to calculate the trip generation for the proposed Black Rock Coffee development.

PASS-BY TRIPS

Pass-by trips are intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from the existing traffic passing the site on an adjacent street or roadway that offers direct access to the generator. These trips are not considered to add new traffic to the adjacent street network and may be reduced from the total external trips generated by the proposed development. Pass-by rates are based on the Trip Generation Manual, 11th Edition data. For the purposes of this Traffic Impact Statement, daily pass-by rates were determined based on an average of the AM and PM peak hour rates.

The total trip generation calculations are shown in **Table 1**. See **Attachment C** for detailed trip generation calculations.

Table 1 – Trip Generation (Proposed Black Rock Coffee)

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour		
				Total	Total	In	Out	Total	In	Out
Coffee/Donut Shop with Drive-Through Window	937	0.645	1000 SF GFA	344	55	28	27	25	12	13
Pass-By Trips				323	49	25	24	23	11	12
Total New Trips				21	6	3	3	2	1	1

The proposed development is expected to generate 344 weekday trips, with 55 vehicles per hour (vph) occurring during the AM peak hour and 25 vph during the PM peak hour. Based on data provided by ITE, over 90% of these trips are pass-by trips. Thus, the proposed Black Rock Coffee Bar is anticipated to add 21 new daily trips, with 6 vph occurring during the AM peak hour and 2 vph during the PM peak hour to the surrounding roadways.



ON-SITE CIRCULATION AND QUEUE ANALYSIS

Vehicles will enter the site and circulate in a counterclockwise direction. The drive-through will provide two (2) lanes that merge into one (1) lane prior to the menu board. Approximately 260 feet will be provided for vehicle queuing, which is anticipated to accommodate eleven (11) vehicles in the queue. See [Figure 3](#).

QUEUE DATA

On-site queue data was collected at an existing Black Rock Coffee Bar located at 7451 W Glendale Avenue in Glendale, Arizona, on Wednesday, July 10, 2024, and Saturday, July 13, 2024, in one-minute intervals during the peak times in an effort to capture the maximum queue demand. The peak time on Wednesday was from 7:00 to 9:00 am and the peak time on Saturday was from 9:00 to 11:00 am. The data is provided in [Attachment D](#).

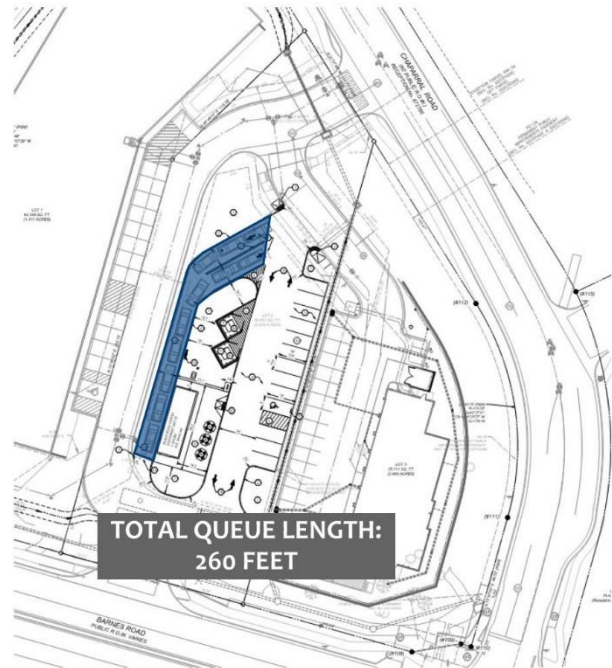


Figure 3 – On Site Queuing

The average number of vehicles in queue was six (6) vehicles, and the maximum number was 15 vehicles, which occurred for a three-minute period during the six (6) hours of recorded data. Based on the collected queue data, the proposed on-site storage provides sufficient capacity to accommodate queued vehicles 99% of the time.

TURN LANES

According to the City of Colorado Springs Engineering Criteria Manual, right turn lanes are required on principal arterials, when a peak hour right ingress turning volume is 25 vph or greater.

The site generates 28 vph and 12 vph entering during the AM and PM peak, respectively. Assuming the site traffic is somewhat equally split between the two site driveways, the right turning criteria for principal arterials does not warrant the westbound deceleration lane on Barnes Road.



SUMMARY

The proposed Black Rock Coffee is a 645 SF drive-through coffee shop with approximately 260 feet of vehicle queuing space, accommodating 11 vehicles.

The proposed development is anticipated to generate 21 new daily trips, with 6 vph occurring during the AM peak hour and 2 vph during the PM peak hour.

Based on the collected queue data, the proposed on-site storage provides sufficient capacity to accommodate queued vehicles.

The proposed Black Rock Coffee Bar development is anticipated to result in minimal traffic impacts to the existing roadway network, and the drive-through provides sufficient vehicle queuing space.



ATTACHMENT A – PROPOSED SITE PLAN





ATTACHMENT B – EL PASO COUNTY ASSESSOR’S INFORMATION



EL PASO COUNTY - COLORADO

6325106040
5560 BARNES RD

Total Market Value
\$252,474

OVERVIEW

Owner:	ADVANCED STORAGE BARNES LLC
Mailing Address:	5001 S WINDERMERE ST # 100 LITTLETON CO, 80120-1022
Location:	5560 BARNES RD
Tax Status:	Taxable
Zoning:	C6/CR AO
Plat No:	R03002
Legal Description:	TRACT 5 SADDLEBACK ESTATES EX PT PLATTED TO CHAPARRAL RIDGE FIL NO 1 EX THAT PT CONV TO ROW BY REC #220120327 & 221071424

MARKET & ASSESSMENT DETAILS

	Market Value	Assessed Value
Land	\$252,474	\$70,440
Improvement	\$0	\$0
Total	\$252,474	\$70,440

No buildings to show.

LAND DETAILS

Sequence Number	Land Use	Assessment Rate	Area	Market Value
1	VACANT COMMERCIAL LOTS	27.900	3.6 Acres	\$252,474

SALES HISTORY

	Sale Date	Sale Price	Sale Type	Reception
+	09/12/2023	\$2,150,000	Vacant Land; Other	223083570

TAX ENTITY AND LEVY INFORMATION

County Treasurer Tax Information

Tax Area Code: **FBY** Levy Year: **2023** Mill Levy: **54.789**

Taxing Entity	Levy	Contact Name/Organization	Contact Phone
EL PASO COUNTY	6.862	FINANCIAL SERVICES	(719)520-6400
EPC ROAD & BRIDGE SHARE	0.165	-	(719)520-6498
CITY OF COLORADO SPRINGS	3.579	CITY OF CS-CFO	(719)385-5224
EPC-COLORADO SPGS ROAD & BRIDGE SHARE	0.165	-	(719)520-6498
COLO SPGS SCHOOL DISTRICT #11	40.069	LAURA HRONIK	(719)520-2010
PIKES PEAK LIBRARY DISTRICT	3.061	RANDALL A GREEN	(719)531-6333
SOUTHEASTERN COLO WATER CONSERVANCY DISTRICT	0.888	JAMES BRODERICK	(719)948-2400
EL PASO COUNTY CONSERVATION DISTRICT	0.000	MARIAH HUDSON	(719)600-4706



ATTACHMENT C – TRIP GENERATION





Black Rock Coffee Bar - 5560 Barnes Road, Colorado Springs

Trip Generation Calculations

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour		
				Total	Total	In	Out	Total	In	Out
Coffee/Donut Shop with Drive-Through Window	937	0.645	1000 SF GFA	344	55	28	27	25	12	13
Pass-By Trips				323	49	25	24	23	11	12
Total New Trips				21	6	3	3	2	1	1



ATTACHMENT D – QUEUE DATA



On-Site Queue Data

Black Rock Coffee Bar at 7451 W Glendale Avenue, Glendale, AZ

Time	Queue 7/10/2024	Time	Queue 7/10/2024	Time	Queue 7/10/2024	Time	Queue 7/13/2024	Time	Queue 7/13/2024	Time	Queue 7/13/2024
6:00 AM	4	7:00 AM	4	8:00 AM	3	9:00 AM	7	10:00 AM	12	11:00 AM	11
6:01 AM	5	7:01 AM	4	8:01 AM	3	9:01 AM	8	10:01 AM	12	11:01 AM	11
6:02 AM	4	7:02 AM	3	8:02 AM	4	9:02 AM	8	10:02 AM	12	11:02 AM	12
6:03 AM	3	7:03 AM	2	8:03 AM	3	9:03 AM	7	10:03 AM	10	11:03 AM	13
6:04 AM	2	7:04 AM	1	8:04 AM	4	9:04 AM	6	10:04 AM	9	11:04 AM	13
6:05 AM	1	7:05 AM	0	8:05 AM	3	9:05 AM	6	10:05 AM	9	11:05 AM	12
6:06 AM	1	7:06 AM	2	8:06 AM	2	9:06 AM	6	10:06 AM	9	11:06 AM	12
6:07 AM	1	7:07 AM	3	8:07 AM	2	9:07 AM	7	10:07 AM	10	11:07 AM	12
6:08 AM	1	7:08 AM	3	8:08 AM	1	9:08 AM	6	10:08 AM	9	11:08 AM	12
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6:12 AM	1	7:12 AM	1	8:12 AM	1	9:12 AM	7	10:12 AM	9	11:12 AM	12
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6:58 AM	2	7:58 AM	4	8:58 AM	5	9:58 AM	11	10:58 AM	10	11:58 AM	7
6:59 AM	2	7:59 AM	4	8:59 AM	5	9:59 AM	11	10:59 AM	10	11:59 AM	6

MAX	15
Average	6