

MEMORANDUM

DATE: October 21, 2024

To: Brian T Diebolt, Design Concepts

FROM: Ambarish Mukherjee, P.E., AICP, Principal

SUBJECT: Lighthouse Church and Coffee Project Trip Generation Comparison Analysis Memorandum (LSA Project No. 20241873)

LSA Associates, Inc. (LSA) has prepared this Trip Generation Comparison Analysis Memorandum (Memo) for the proposed Lighthouse Church and Coffee (project) located at 57155 29 Palms Highway in the Town of Yucca Valley (Town). Currently, the project site includes a vacant Bank of America (BoA) building with drive-up lanes/windows and the automated teller machines (ATMs). The BoA building is no longer in operation while the ATMs are still functional for bank customers to use. The proposed project will convert the vacant BoA building to include a church and a coffee shop with a drive-through window while keeping the ATMs in operation for bank customers to use.

BACKGROUND AND PROJECT DESCRIPTION

The project site is located at 57155 29 Palms Highway in the Town of Yucca Valley (APN 0595-371-15), on the southeast corner of 29 Palms Highway and Dumosa Avenue. Three driveways are provided for the project site: one full-access driveway and one right-in-right-out (RIRO) only driveway on Dumosa Avenue and one egress-only driveway on 29 Palms Highway. The project site currently includes a vacant 12,259 square-foot (sf) Bank of America (BoA) building, which has two drive-in lanes with ATMs. As previously stated, the BoA building is currently vacant and not in operation, but the ATM drive-in lanes service is still in operation.

The proposed project will convert the BoA structure into a 10,773 sf church and 1,486 sf coffee shop with a drive-through window while keeping the ATMs operational for bank patrons. According to the operational information provided by the client, the church facility would not be in operation during the typical a.m. peak-hour period (7 a.m. to 9 a.m.) during the weekdays.

Figure 1 illustrates the regional and project location (All figures and tables attached). Figure 2 illustrates a conceptual site plan for the proposed project. The site is currently zoned as C-MU (Mixed Use Commercial) and the General Plan land use identified these parcels as Mixed Use. The project is consistent with the City's General Plan land use and zoning designation.

This Memo evaluates whether the proposed project trip generation would generate more daily trips when compared to the previous trip generation of the BoA building when it was fully operational.

PROJECT TRIP GENERATION COMPARISON

To determine whether the proposed project would generate more daily trips, a trip generation comparison analysis was conducted.

The trip generation for the previously operational BoA building with drive-in lanes was developed using rates from the Institute of Transportation Engineers *Trip Generation Manual* (11th Edition) for Land Use 912 – “Drive-in Bank”. Table A (attached) summarizes the daily, a.m. and p.m. peak hour trip generation. Given the nature of the land use, appropriate pass-by trip percentage from ITE *Trip Generation Manual* was also applied to the trip generation rates to determine the bank’s pass-by trips. A pass-by rate of 29 percent was used for the a.m. peak hour and a pass-by rate of 35 percent was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual*, the average of a.m. and p.m. pass-by rate was used as the daily pass-by rate (32 percent). As such, the net trip generation for the previous BoA building was developed by subtracting the pass-by trips from the trip generation. As shown on Table A, after accounting for the pass-by trips, the previously operational BoA building was estimated to generate 836 net daily trips, with 86 net trips occurring during the a.m. peak hour and 168 net trips occurring during the p.m. peak hour.

To develop the trip generation for the currently operational ATMs in the drive-in lanes, the difference in the drive-in bank trips and walk-in bank trips was considered to be the ATM only trips. As such, the trip generation for the walk-in BoA building trips only was developed using rates for Land Use 911 – “Walk-in Bank”. Since daily and a.m. peak hour trip rates are not available for Land Use 911 – “Walk-in Bank” in the ITE *Trip Generation Manual*, the ratio of the trip generation rates of Land Use 912 – “Drive-in Bank” (p.m. peak hour to daily ratio) was applied to develop the daily and a.m. peak hour trip generation rate for Land Use 911 – “Walk-in Bank” (BoA building only use). Applying this approach, the trip generation for the BoA walk-in only use is estimated to be 710 daily trips, with 71 trips occurring in the a.m. peak hour and 148 trips occurring in the p.m. peak hour. As such, the difference between the drive-in bank trip generation (fully operational BoA with drive-in lanes) and the BoA walk-in trips only trip generation results in the trip generation for the drive-in lanes ATM trips only. Therefore, the drive-in ATM trip generation is estimated to be 126 daily trips with 15 trips occurring in the a.m. peak hour and 20 trips occurring in the p.m. peak hour. This ATM trip generation will be used as part of the proposed project trip generation as the proposed project will keep the drive-in lane ATM operational.

The trip generation for the proposed project is summarized in Table B using a combination of rates from ITE *Trip Generation Manual* (11th Edition) for Land Use 560 – “Church”, Land Use 937 – “Coffee/Donut Shop with Drive-through Window”) operational data provided by the project applicant for the church use, the ATM trip generation derived from Table A, and pass-by rate assumptions for the coffee shop with drive-through. Following is a brief description of the project’s operational statement and assumptions for the pass-by rates for coffee shop with drive-through.:

- **Church:** The proposed church facility would not be in operation during the typical a.m. peak-hour period (7 a.m. to 9 a.m.) during the weekdays. Therefore, no trips are anticipated during the a.m. peak-hour. As shown on Table B, the proposed church would generate 82 daily trips with 0 trips occurring during the a.m. peak hour and 5 trips occurring during the p.m. peak hour.

- **Coffee Shop with Drive-through Window:** Given the nature of this land use, appropriate pass-by trip percentage from ITE *Trip Generation Manual* was applied to the trip generation rates to subtract the pass-by trips. A pass-by rate of 50 percent was used for the a.m. peak hour and a pass-by rate of 55 percent was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual*, the average of a.m. and p.m. pass-by rate was used as the daily pass-by rate (53 percent). As shown on Table B, after accounting for the pass-by trips, the proposed coffee shop with drive-through window is estimated to generate 373 net daily trips, with 63 net trips occurring during the a.m. peak hour and 26 net trips occurring during the p.m. peak hour.

As summarized in Table B, the proposed project would generate 581 net daily trips, with 78 net trips occurring during the a.m. peak hour and 51 net trips occurring during the p.m. peak hour.

As shown in Table B, the proposed project is estimated to generate 255 less daily trips with 8 less a.m. peak hour trips and 117 less p.m. peak hour trips when compared to the BoA use while in full operation.

ATTACHMENTS

Figures

Figure 1: Regional and Project Location

Figure 2: Conceptual Site Plan

Tables

Table A: Previous Use (Bank of America) Trip Generation

Table B: Project Trip Generation

FIGURES

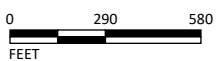


FIGURE 1



LEGEND

 Project Location



SOURCE: ESRI Streets, 2021; Google Earth, 2023.

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*Lighthouse Church and Coffee Project
Trip Generation Comparison Analysis Memorandum
Regional and Project Location*

TABLES



Table A - Previous Use (Bank of America) Trip Generation

Land Use	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Drive-in Bank (Bank of America in full operation)	12.259 TSF							
Trips/Unit ¹		5.77	4.18	9.95	10.51	10.50	21.01	100.35
Trip Generation		71	51	122	129	129	258	1,230
Pass-by Trips ²		(21)	(15)	(36)	(45)	(45)	(90)	(394)
Net Trip Generation		50	36	86	84	84	168	836
Walk-in Bank (Bank of America in full operation)	12.259 TSF							
Trips/Unit ^{1,3}		3.33	2.41	5.74	5.34	6.79	12.13	57.94
Trip Generation		41	30	71	65	83	148	710
Bank Automated Teller Machine (ATM)⁴ (Assuming bank building is removed and only ATM is available)								
Trip Generation for ATM Only		9	6	15	19	1	20	126

Notes:

TSF = thousand square feet (or thousand-square-foot)

¹ Trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 11th Edition (2021).

Land Use Code 911 - Walk-in Bank

Land Use Code 912 - Drive-in Bank

² Trip Pass-by rates from the ITE Trip Generation Manual (11th Edition) for Land Use 912 - 'Drive-in Bank.' A pass-by rate of 29% was used for the a.m. peak hour and a pass-by rate of 35% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE Trip Generation Manual, the average of a.m. and p.m. pass-by rate was used as the daily pass-by rate.

³ Daily and a.m. peak hour trip rates are not available for this use in the ITE Trip Generation Manual and therefore the ratio of walk-in bank and drive-in bank p.m. peak hour rates and the daily and a.m. peak hour trip rates for drive-in bank were used to develop the daily and a.m. peak hour trip rates for this use.

⁴ Trip generation for Bank ATM was developed based on the difference of trips between drive-in and walk-in bank uses.



Table B - Project Trip Generation

Land Use	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Bank Automated Teller Machine (ATM)								
Trip Generation for ATM Only¹		9	6	15	19	1	20	126
Church²	10.773 TSF							
Trips/Unit ³		0.20	0.12	0.32	0.22	0.27	0.49	7.60
Trip Generation		0	0	0	2	3	5	82
Coffee Shop with Drive-through Window	1.486 TSF							
Trips/Unit ³		43.80	42.08	85.88	19.50	19.49	38.99	533.57
Trip Generation		65	63	128	29	29	58	793
Pass-by Trips ⁴		(33)	(32)	(65)	(16)	(16)	(32)	(420)
Net Trip Generation		32	31	63	13	13	26	373
Total Net Trip Generation for Proposed Project		41	37	78	34	17	51	581
Drive-in Bank (Bank of America in full operation)¹								
Net Trip Generation		50	36	86	84	84	168	836
Change in Trip Generation (Proposed Project - Previous Use)		(9)	1	(8)	(50)	(67)	(117)	(255)

Notes:

TSF = thousand square feet (or thousand-square-foot)

¹ Referred to Table A - Previous Use (Bank of America) Trip Generation.

² According to the information provided by the applicant, the proposed church will not be in operation in the a.m. peak period (7 a.m. to 9 a.m.) during the week. Therefore, no a.m. peak-hour trip is expected.

³ Trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 11th Edition (2021).

Land Use Code 560 - Church

Land Use Code 937 - Coffee/Donut Shop with Drive-through Window

⁴ Trip Pass-by rates from the ITE Trip Generation Manual (11th Edition) for Land Use 937 - 'Coffee/Donut Shop with Drive-Through Window.' A pass-by rate of 50% was used for the a.m. peak hour and a pass-by rate of 55% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE Trip Generation Manual, the average of a.m. and p.m. pass-by rate was used as the daily pass-by rate.