



CITY OF GLENDALE, CALIFORNIA REPORT TO THE CITY COUNCIL

AGENDA ITEM

Report: Drive-Through Technical Report: Design and Procedures for Evaluating Developments with Drive-Through Operations

1. Motion to Provide Direction to Staff Regarding Design and Procedures for Evaluating Developments with Drive-Through Operations

COUNCIL ACTION

Item Type: Action Item

Approved for March 4, 2025 **calendar**

EXECUTIVE SUMMARY

In response to a growing number of applications for modifications to existing and new construction of drive-through establishments, the City Council enacted a moratorium on drive-through establishments on September 27, 2022. This decision aimed to address safety, aesthetics, traffic and environmental concerns associated with such developments. The city engaged JB & Associates, a traffic and transportation consultant with expertise in drive-through analysis and design, to study and develop solutions for drive-through establishments in Glendale. There were also two extensions to the moratorium adopted, until September 26, 2024, to allow staff time to review existing requirements and develop an approval process and design standards for drive-through establishments. On August 13, 2024, CDD staff introduced an ordinance to amend the zoning code requirements for drive-through establishments to include creating definitions for drive-throughs and implementing a conditional use permit (CUP) process. On August 20, 2024, adoption of the ordinance failed with 3 in favor and 2 opposed, where a 4/5th vote is required. On November 19, 2024, Councilmember Brotman requested this topic be brought back as an informational item regarding development standards specific to new drive-through establishments.

The scope of the JB & Associates study included selecting a list of 19 existing drive-throughs in and around the city, conducting field observations (e.g., trip generation data, queueing analysis, etc.), reviewing zoning and design standards of other cities for drive-through establishments, and developing design guidelines. Based on field observations

of the 19 establishments in and around Glendale, the consultant analyzed trip generation data and categorized the drive-through establishments into four different tiers, depending on the volume of trips generated during peak operating hours. The study also provides some recommendations for drive-through establishment development standards related to their design, including location of drive-through features (e.g., entrance, proximity to residential, etc.), queuing lengths that are dependent on tier classification, operational standards, accommodations for mobile order pickup areas, minimum lane dimensions, and a requirement for bypass lanes. The study provides additional considerations for banks and pharmacies, pedestrian oriented access, and parking. Staff also recommends looking into establishing minimum lot size standards; this would be consistent with existing standards in place for other automobile-related uses (e.g., car washes, gas stations, vehicle dealerships).

RECOMMENDATION

Staff is requesting the City Council to provide direction on considerations regarding future drive-through development standards.

BACKGROUND / ANALYSIS

In response to a growing number of applications for modifications to existing and new construction of drive-through establishments, the City Council enacted a moratorium on drive-through establishments on September 27, 2022. This decision aimed to address safety, aesthetics, traffic and environmental concerns associated with such developments. Extensions to the moratorium were adopted to allow staff time to review existing requirements and develop an approval process and design standards and the moratorium expired on September 26, 2024.

On October 23, 2023, the city engaged JB & Associates, a traffic and transportation consultant with expertise in drive-through analysis and design, to study and develop solutions for drive-through establishments in Glendale. Additionally, the Mobility Section of the Community Development Department (CDD) partnered with the Public Works Traffic Engineering Division worked with JB & Associates to assess the performance of existing drive-through establishments in the city and focus on options to improve their overall design and performance. The scope of the JB & Associates study included the following tasks:

- Selecting a list of existing drive-through establishments in Glendale and adjacent cities to study their associated traffic operations and patterns.

- Conducting field observations of the selected fast-food restaurants and coffee shops, collect trip generation data, and drive-through queueing data during the peak operation periods, and identify traffic impacts on vehicles, pedestrians, and bicyclists.
- Reviewing current Zoning Codes and Standards of other cities in California related to uses typically associated with drive-through lanes.
- Developing design guidelines for drive-through operations with additional consideration for less typical drive-through uses such as banks, and pharmacies.

On August 13, 2024, CDD staff introduced an ordinance to the City Council that amended the zoning code requirements for drive-through establishments which included creating definitions for drive-throughs and implementing a conditional use permit (CUP) process for existing and new drive-through establishments. This was intended to be the first phase of changes to be adopted before the moratorium expired, with staff also initiating the second phase of amendments to address design standards (e.g., minimum lot size, queuing lengths, menu and order board separations, landscape buffers, etc.). During the hearing, Council directed staff to amend the proposed ordinance to omit the CUP requirement for existing drive-through establishments. On August 20, 2024, the amended ordinance was presented to council, however the City's charter requires a 4/5th vote for zoning amendments and the ordinance failed with 3 in favor and 2 opposed to the adoption. On November 19, 2024, Councilmember Brotman requested this topic be brought back as an informational item regarding development standards specific to new drive-through establishments.

The study prepared by JB & Associates identified seven tasks that were necessary in developing the design guidelines and included research on current design guidelines, ordinance and procedures from other cities, conducting field observations, data collection and analysis for trip generation rates, developing guidelines, and establishing a traffic analysis procedure.

Task: Research on Current Drive-Through Design Guidelines, Ordinances, and Procedures from Various Public Agencies

In preparation for establishing standards and guidelines for businesses with drive-through operations in the City of Glendale, staff members from JB & Associates, in collaboration with Community Development staff, conducted comprehensive research on city ordinances, zoning codes, and design guidelines relevant to drive-through

establishments. This research encompassed policies from the following 19 public agencies across California including cities of Pasadena, Long Beach, Irvine, Anaheim, Santa Ana, Arcadia, Torrance, Whittier, Orange, Buena Park, Burbank, Santa Clarita, Huntington Beach, Monrovia, Lancaster, Elk Grove, La Puente, Jackson, and Union City.

Task: Field Observations

In consultation with City staff, JB & Associates selected a total of 15 food-oriented and 4 non-food-oriented establishments for field observation and data collection, as outlined in Table 1 below. The majority of these locations are in Glendale, with the exception of two establishments in Pasadena and one in Los Angeles near the city boundary line. Field observations were conducted at all 19 study locations, with video recordings capturing all ingress and egress movements, as well as drive-through operations, during the establishments' hours of operation.

Table 1		
Drive-through Study Locations		
No.	Street Address	Business Use
1	Starbucks--1143 W. Glenoaks Boulevard, Glendale	Coffee Shop
2	Carl's Jr.--1124 W. Glenoaks Boulevard, Glendale	Fast-food Restaurant
3	Del Taco--6550 San Fernando Road, Glendale	Fast-food Restaurant
4	El Pollo Loco--235 S. Glendale Avenue, Glendale	Fast-food Restaurant
5	Jack in the Box--805 N. Pacific Avenue, Glendale	Fast-food Restaurant
6	Taco Bell--1113 E. Colorado Street, Glendale	Fast-food Restaurant
7	Burger King--1200 E. Colorado Street, Glendale	Fast-food Restaurant
8	McDonald's--1326 E. Colorado Street, Glendale	Fast-food Restaurant
9	In-N-Out Burger--310 Harvey Drive, Glendale	Fast-food Restaurant
10	Carl's Jr.--424 W. Los Feliz Road, Glendale	Fast-food Restaurant
11	Starbucks--1801 S. Brand Boulevard, Glendale	Coffee Shop
12	Chick-fil-A--790 N. Lake Avenue, Pasadena	Fast-food Restaurant
13	Chick-fil-A--1700 E. Colorado Boulevard, Pasadena	Fast-food Restaurant
14	Starbucks--3517 Foothill Boulevard, Glendale	Coffee Shop
15	In-N-Out Burger--6225 Foothill Boulevard, Los Angeles	Fast-food Restaurant
16	Bank of America at 611 North Brand Boulevard, Glendale	
17	Bank of America at 3812 San Fernando Road, Glendale	
18	CVS Pharmacy at 125 N. Central Avenue, Glendale	
19	Walgreens Pharmacy at 105 E. Glenoaks Boulevard, Glendale	

Task: Data Collection

Trip counts were conducted for 14 food-oriented locations during the morning and

afternoon commuter peak periods (6:30 to 9:30 am and 4:00 to 7:00 pm). Additionally, for fast-food restaurants that generate trips comparable to or exceeding the average rates estimated in the ITE Trip Generation Manual—specifically Chick-fil-A, In-N-Out Burger, McDonald's, Taco Bell, El Pollo Loco, and Jack in the Box—trip counts were also conducted during the midday peak period (11:00 am to 2:00 pm).

Drive-through queueing surveys were conducted at five study locations, noted below, during peak periods. Vehicle counts at the order board and pick-up window were recorded at 1-minute intervals during peak hours: 7:30 to 9:30 am for Starbucks, and 11:00 am to 2:00 pm for Chick-fil-A and In-N-Out Burger.

- Starbucks, Glenoaks Blvd, Glendale
- McDonald's, E. Colorado St, Glendale
- Starbucks, S. Brand Blvd, Glendale
- Chick-fil-A, N. Lake Ave, Pasadena
- In-N-Out Burger, Foothill Blvd, Los Angeles

Task: Data Analysis

According to the City of Glendale's Transportation Impact Analysis Guidelines, vehicle trips generated by a project should be estimated using the average trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual. However, when comparing trip generation rates derived from data collection with the ITE averages for fast-food restaurants and coffee shops, there were significant variations that can be attributed to factors such as building size, location, and brand popularity. To provide a more accurate trip generation estimate for this study, the 19 study sites were categorized into the following groups:

Tier 1: Fast-food restaurants that generate *significantly fewer trips* than the average rates estimated in the ITE Trip Generation Manual.

Tier 2: Fast-food restaurants that generate *trip rates comparable to the averages* in the ITE Trip Generation Manual.

Tier 3: Fast-food restaurants that generate *significantly more trips* than the rates estimated in the ITE Trip Generation Manual.

Tier 4: Coffee shops with a drive-through operation.

Drive-through Queue Length Analysis

Based on the peak-period drive-through queue data, a drive-through queueing analysis was conducted for the peak hour of business at each of the following five study locations:

- Site No. 1—Starbucks on Glenoaks Boulevard, Glendale (*Tier 4*)
 Site No. 8—McDonald's on E. Colorado Street, Glendale (*Tier 2*)
 Site No. 11—Starbucks on S. Brand Boulevard, Glendale (*Tier 4*)
 Site No. 12—Chick-fil-A on N. Lake Avenue, Pasadena (*Tier 3*)
 Site No. 15—In-N-Out Burger on Foothill Boulevard, Los Angeles (*Tier 3*)

For each study site, the frequency of each observed queue length, from zero vehicles up to the maximum observed queue, the cumulative frequency, and the probability of the queue not exceeding a certain length were calculated based on the observed data:

Table 4
Drive-through Queueing Analysis Summary
Peak Hour of the Generator

	Order Board Queue (No. of Vehicles)		Pick-up Window Queue (No. of Vehicles)		Total Queue (No. of Vehicles)	
	85th % ¹	Max ²	85th % ¹	Max ²	85th % ¹	Max ²
Site 1 Starbucks Glenoaks Blvd, Glendale	8	11	4	4	12	15
Site 11 Starbucks S. Brand Blvd, Glendale	3	4	4	5	7	9
Site 12 Chick-fil-A N. Lake Ave, Pasadena	13	16	5	5	18	21
Site 13 Chick-fil-A E. Colorado Blvd, Pasadena	*	*	*	*	19	25
Site 15 In-N-Out Burger Foothill Blvd, Los Angeles	**	**	**	**	16	19

¹85th Percentile Queue—with an 85% probability that the number of vehicles waiting in the drive-through lane will not exceed this number based on the observed data.

²Maximum Queue—the maximum number of vehicles waiting in the drive-through lane during the observation period.

*Orders are not taken at the order board. Restaurant staff takes orders from each vehicle in the drive-through lane using hand-held tablets and process payments.

** Orders are not taken at the order board. Restaurant staff takes order from each vehicles in the drive-through lane using hand-held tablets and process payments at the pick-up window.

Drive -Through Establishment Design Guidelines

The goal of design guidelines is to ensure the safe and efficient circulation of vehicular, pedestrian, and bicycle traffic, while also minimizing potential nuisances caused by vehicle backups and conflicts associated with drive-through operations.

The design guidelines have been developed based on:

- Field observations of 19 existing fast-food restaurants and coffee shops.
- Research by the City and JB& Associates on design guidelines from 19 other cities.
- Previous traffic studies conducted by JB & Associates on similar fast-food restaurants and coffee shops with drive-through operations.

The location and design of a drive-through establishments depends on factors like site size, parking, brand popularity and traffic flow. Key elements in designing drive-through establishments can include:

1. **Location:**

- Drive-through features (e.g., lanes, order boards, pick-up windows, etc.) must be 100 feet from residential areas to limit noise and emissions.
- The entrance to any drive-through lane should be 60 feet from the property line and from public street intersections.
- The drive-through lane should be at the back of the restaurant to minimize visibility from the street.

2. **Design:**

- The lane width should be a minimum of 10 feet along straight sections and 12 feet along curves, with a minimum curve radius of 10 feet.
- The drive-through lane must have enough capacity to prevent traffic from spilling onto streets or parking areas. The study establishes minimum queuing capacities based on the use and different tiers:
 - Tiers 1 and 2 Fast-food Restaurants: 10 vehicles (220 feet). Includes 6 vehicles (132 feet) between drive-through entrance and order board, and 4 vehicle (88 feet) between order board and pickup window.
 - Tier 3 Fast-food Restaurants: 25 vehicles (550 feet).
 - Tier 4 Coffee Shops: 15 vehicles (330 feet). Includes 11 vehicles (242 feet) between drive-through entrance and order board, and 4 vehicle (88 feet) between order board and pickup window.
- Employees may assist with remote ordering with hand-held tablets and delivering orders to customers in vehicles during peak periods at Tier 3 restaurants.
- Clear signage and pavement markings should direct traffic flow.
- Tier 3 restaurants may have a bypass lane to allow customers to leave the queue after receiving their order.
- Double drive-through lanes (side-by-side) shall be entered from a single lane that splits and converges back into one lane before exiting.
- Mobile order pickup areas should be considered for fast food restaurants and coffee shops.

3. **Other Considerations:**

- Banks and pharmacies have different queuing capacity needs and the recommended minimum queuing capacities are:
 - Bank: 5 vehicles (110 feet) per ATM
 - Pharmacy: 3 vehicles (66 feet) per window

- Limiting hours of operation based on proximity to residential uses.
- Pedestrian access is important for urban planning as it affects walkability, safety, and neighborhood appeal. To improve it, commercial developments should be near the street with the main entrance facing it.
- A minimum 4-foot-wide walkway should connect the street to the development's main entrance.
- Pedestrian walkways should avoid crossing drive-through lanes, but if they do, they must be clearly visible with special paving or markings.
- On-site parking should be allocated for employees (to avoid taking up on-street parking), delivery vehicles (to maintain traffic flow), and bicycles (to promote alternative transportation).
- For Tier 3 fast-food restaurants and coffee shops on major streets, consider adding left-turn and/or right-turn deceleration lanes for easier access.
- Drive-through access can be provided through public alleys, but the alley cannot be used as part of the drive-through storage lane. If that's not possible, limit access to only right-turn entry and exit.

An additional development standard that could apply to drive-through establishments includes establishing minimum lot size standards specific to drive-throughs. This would be consistent with current use specific development standards in the Zoning Code for automobile-related uses, including car washes, gas stations and vehicle dealerships. Establishing minimum lot size requirements will help ensure that building sites can adequately accommodate the anticipated development, including vehicular circulation and queueing capacities.

STAKEHOLDERS/OUTREACH

Not required at this time as this is an informational item. Depending on Council direction, where applicable, staff will conduct public outreach for items that impact zoning development standards for drive-throughs.

FISCAL IMPACT

There is no fiscal impact associated with this report.

ENVIRONMENTAL REVIEW (CEQA)

N/A

CAMPAIGN DISCLOSURE

N/A

ALTERNATIVES TO STAFF RECOMMENDATION

1. Provide direction to begin modifications regarding development standards for drive-through developments.
2. Decline to initiate changes regarding development standards for drive-through developments.
3. Any other alternative not presented by staff.

ADMINISTRATIVE ACTION

Submitted by:

Bradley Calvert, Director of Community Development

Prepared by:

Fred Zohrehvand, Principal Mobility Planner

Approved by:

Roubik R. Golanian, P.E., City Manager

EXHIBITS/ATTACHMENTS
