



Memo: Power & Guadalupe Retail – Parking Analysis (EPS#22-0519) – FIRST REVISION

Date: 4/13/2023
TO: City of Mesa
FROM: Eric Maceyko, P.E., PTOE
Kelly Fletcher, P.E.

INTRODUCTION

A new commercial development is being proposed on the northeast corner of Power Road and Guadalupe Road within the City of Mesa, Arizona. The site sits on a gross area of 2.54 acres and is planned to contain a total building area of 5,352 square feet of building area. This includes a fast-food restaurant with drive-thru window (2,178 square feet of building area) and a car wash (3,174 square feet of building area).

The proposed development is planning to provide a total of 45 on-site parking spaces (17 spaces for the restaurant and 28 spaces for the car wash), including one van accessible space and one standard accessible space. Additionally, 4 bicycle parking spaces will also be provided. EPS Group has been retained to conduct a Parking Analysis for the proposed development to evaluate the anticipated parking demand and determine the recommended number of parking spaces to provide adequate operation.

LOCATION & SITE PLAN

Figure 1 provides a map of the proposed site location and local vicinity. The existing site currently contains a gas station / convenience market with an adjacent car wash. Access to the existing site is provided by two (2) right-in, right-out only driveways on Power Road and one (1) right-in, right-out only driveway on Guadalupe Road. The proposed development will retain all three (3) existing access driveways.

The new proposed restaurant building will generally encompass the existing convenience market, while the new proposed car wash will generally encompass the area of the existing car wash. **Figure 2** provides the proposed development site plan.



Figure 1: Proposed Site Location

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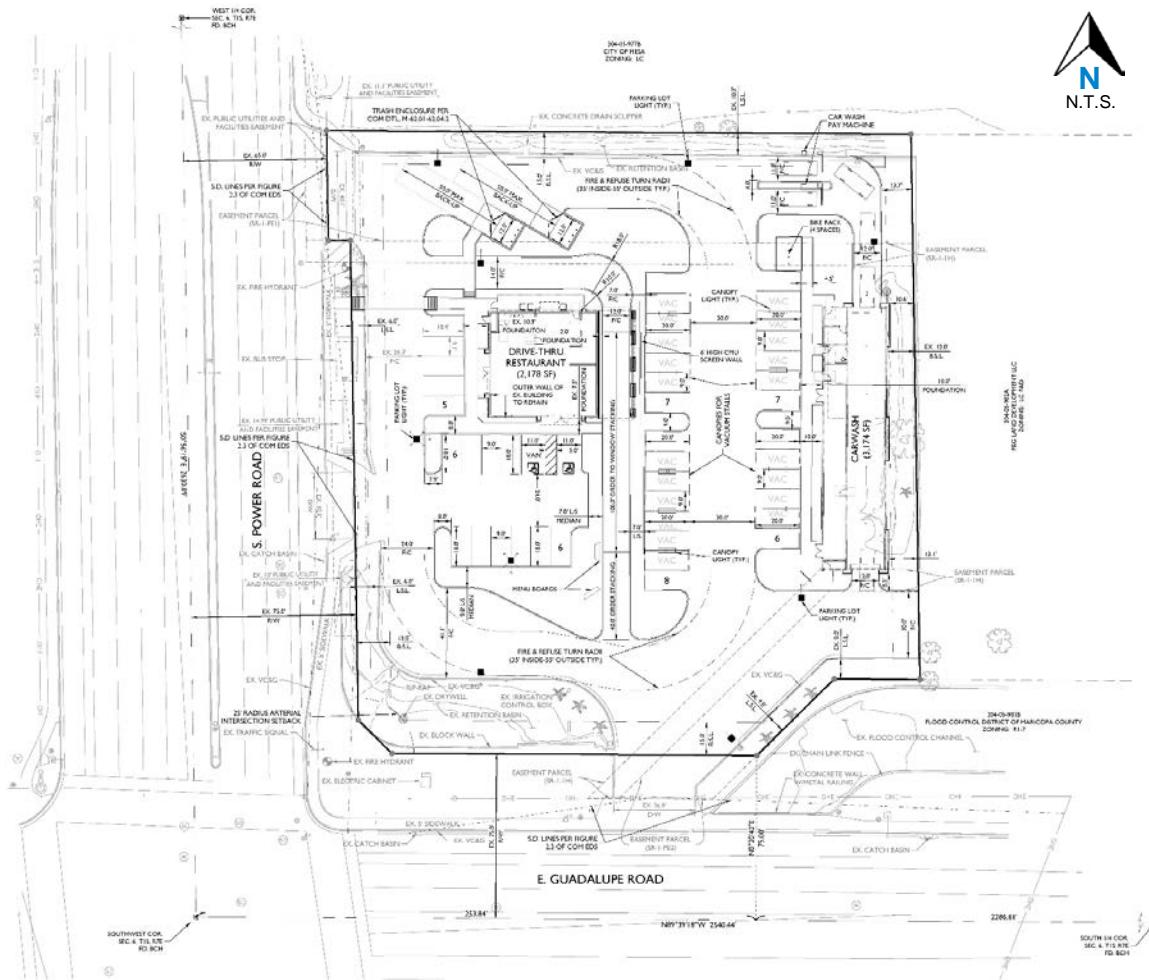


Figure 2: Proposed Site Plan

PARKING ANALYSIS

Parking analysis was conducted utilizing three (3) sources suitable for the proposed development including:

- City of Mesa Zoning Ordinance
- *Parking Generation*, 5th edition by Institute of Transportation Engineers (ITE)
- Site Specific Data

The following sections detail the analysis results from each source.

City of Mesa Zoning Ordinance:

Per Section 11-32-3: *PARKING SPACES REQUIRED*, criteria for required parking is provided for a multitude of different land uses. As provided in *Table 11-32-3.A: Required Parking Spaces By Use*, the following criteria is applicable to the proposed development:

- Eating Establishments (with drive-through window and associated queuing drive aisle) – 1 space per 100 square feet for indoor area, and 1 space per 200 square feet for outdoor seating area
- General auto repair, garages, service stations, car washes, and drive-through lubrication shops – 1 space per 375 square feet, including service bays, wash tunnels, and retail areas

Based on the above criteria, and provided site plan, a total of 30 parking spaces are required (22 spaces for the restaurant and 8 spaces for the car wash).

Review of the existing Valley Metro System Route Map and schedules revealed the following nearby bus routes / accommodations:

Bus Stop 3478 (adjacent, shelter)

- Local Route 108 NB
- Local Route 184 NB

Bus Stop 9654 (~300' west, shelter)

- Local Route 108 WB

Bus Stop 4718 (~300' west, no accommodations)

- Local Route 108 SB
- Local Route 184 SB

Bus Stop 8979 (~1,200' north, shelter)

- Local Route 108 NB
- Local Route 184 NB

The proposed site has access to multiple nearby bus stops with available routes to / from three of the four cardinal directions (north, south and west). Since all above bus stops are within walking distance, there is the potential to reduce the anticipated parking demand. This can be particularly impactful for employee parking, which could potentially free up parking spaces for long periods of time.

ITE Parking Generation:

In 2019, the Institute of Transportation Engineers (ITE) published the fifth edition of *Parking Generation*. This document provides parking supply and demand data for 121 separate land use categories. The data provides hourly counts of parked vehicles at land uses throughout North America that can be utilized to predict future parking demand at similar land uses. This resource contains accurate parking demand data and each individual hour of the day contains a unique value.

ITE Land Use Code 934 – Fast-Food Restaurant with Drive-Through Window contains the most appropriate data for the restaurant building. Since there is no exact comparable LUC for the car wash, ITE 943 – Automobile Parts and Service Center was determined to be the most appropriate for the car wash based on similar operation. The independent variable 1000 Sq. Ft. GFA was utilized for the parking generation analysis.

Per the ITE data sets, the following typical minimum and maximum range of parking demand rates were provided:

- LUC 934: 3.23 – 23.26 parked vehicles per 1000 Sq. Ft. GFA
- LUC 943: 0.40 – 14.37 parked vehicles per 1000 Sq. Ft. GFA

This results in the following calculated parking demand for the proposed development:

- 7 to 51 parked vehicles
- 1 to 44 parked vehicles

As can be seen in the above calculations, the provided parking for both uses is estimated to fall within the peak parking demand ranges. Therefore, these results indicate that the proposed development is planning to adequately accommodate the estimated parking demand.

Site Specific Data:

Many jurisdictions will specify parking demand for areas dedicated to customers and employees and / or operations separately to better account for different types of restaurants. This typically involves a higher requirement for customer areas and a lower (usually at least half) requirement for the remainder of the area.

Since the current city code makes no distinction for the percentage of building area dedicated to customers versus employees and / or operations, this restaurant was evaluated further to determine site specific operations and its anticipated impact on parking demand. The proposed restaurant is intended primarily for walk-in / walk-out service with little seating. It was estimated that approximately 60% of the building area (1,307 square feet) was dedicated to customer use, leaving approximately 871 square feet for employees and / or operations.

Applying the standard City code to the customer area and half of the code to the remaining area results in a parking requirement of 17 spaces. Therefore, the proposed development is providing the required number of parking spaces based on the site specific calculations.

RESULTS

The proposed development is planning to provide a total of 45 on-site parking spaces (17 spaces for the restaurant and 28 spaces for the car wash), including one van accessible space and one standard accessible space. Additionally, 4 bicycle parking spaces will also be provided. Based on the current City of Mesa criteria, and provided site plan, a total of 30 parking spaces are required (22 spaces for the restaurant and 8 spaces for the car wash).

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Please contact me at (480) 355-0237 if you have any questions or would like to discuss this memorandum.



Expires: 6/30/2023