## Development Services

## "TOGETHER WE ARE BUILDING A SAFE AND UNITED DALLAS"

## APPLICATION/APPEAL TO THE BOARD OF ADIUSTMENT

 Data Relative to Subject Property:> Location address
> Lot No.: 6A

5526 E. R. L. Thornton FWY Block No.: 7/1633 Acreage: 0.6054
Street Frontage (in Feet): 1) 248.95
To the Honorable Board of Adjustment:
Owner of Property (per Warranty Deed):

## Modern Pyramids, Inc. - Mark Barakat

Applicant:
Audra Buckley
Telephone
214.686.3635

Mailing Address:
1414 Belleview Street, Ste 150
zip code
75215

E-mail Address:
permitted.development.dfw@gmail.com
Represented by: Permitted Development, LLC Telephone: 214.686.3635
1414 Belleview Street, Ste 150
Zip Code
75215
Mailing Address:
E-mail Address:

## permitted.development.dfw@gmail.com

Affirm that an appeal has been made for a Variance $\checkmark$ or Special Expeption $\checkmark$ of $14^{\circ}$
Variance to the off-street parking requirements for a reduction of $37.5 \%$ or 28 of the required 32 spaces,
variance of 20 ' to the side yard setback required adjacent to the alley, and a landscape special exception.
Application is made to the Board of Adjustment, in accordance with the provisions of the Dallas Development Code, to Grant the described appeal for the following reason:
These request will not adversely impact surrounding properties. With regards to the parking reduction, please see submitted traffic analysis. Due to existing conditions of the block plus existing, solid, residential fences south of the alley, the reduction of the side yard setback to 0 ' will not adversely impact neighbors to the south. Additionally, solid screening is proposed along the alley as part of the alternate landscape plan provided in tieu of Article X . Note to Applicant: If the appeal requested in this application is granted by the Board of Adjustment, a permit must be applied for within 180 days of the date of the final action of the Board, unless the Board specifically grants a longer period.

## Affidavit

Before me the undersigned on this day personally appeared

## Audra Buckley

(Affiant/Applicant's name printed)
who on (his/her) oath certifies that the above statements are true and correct to his/her best knowledge and that he/she is the owner/or principal/or authorized reprentative of the subject property

subscribed and sworn to before me this 11 day of September, 2023
Chairman


Building Official's Report
I hereby certify that Audra Buckley
represented by did submit a request

Permitted Development
for (1) a variance to the parking regulations, and for (2) a special exception to the landscaping regulations, and for (3) a variance to the side yard setback regulations
at $\quad 5526$ E R.L. Thornton Hwy

BDA212-078. Application of Audra Buckley for (1) a variance to the parking regulations, ifc (2) a special exception to the Landscape and tree preservation regulations, and for (3) a variance to the side yard setback regulations at 5526 E RL THORNTON FWY. This property is more fully described as lot 6A, block $7 / 1633$ and is zoned $C R$, which requires parking to be provided, and Landscape to be provided and a 20 -foot side yard setback to be provided. The applicant proposes to construct and/or maintain nonresidential structures for retail and personal service uses and provide 20 of the required 34 parking spaces, which will require a 14 space variance ( $41 \%$ reduction) to the parking regulation.

Sincerely,

## Appeal number: BDA 212-078

## Modern Pyramids, Inc. - Mark Barakat

## Permitted Development, LLC - Audra Buckley

(Applicant's name as stated on application)
To pursue an appeal to the City of Dallas Zoning Board of Adjustment for the following requests)
$\qquad$ Variance (specify below)
X
Special Exception (specify below)
$\qquad$ Other Appeal (specify below)
Specify: Variance to the off-street parking requirements for a reduction of $39.5 \%$ or $\nless 2$ of the required 32 spaces,
variance of $20^{\prime}$ to the side yard setback required adjacent to the alley, and a landscape special exception.


Signature of property owner or registered agent
Date $\qquad$
Before me, the undersigned, on this day personally appeared $\square$
Mark Barakat
Who on his/her oath certifies that the above statements are true and correct to his/her best knowledge.
Subscribed and sworn to before me this 11 day of Sept ember 2023


Notary Public for Dallas County, Texas


Commission expires on $05 / 01 / 2027$



## Documentary Evidence for Setback Variance Request:

(i) the variance is not contrary to the public interest when, owing to special conditions, a literal enforcement of this chapter would result in unnecessary hardship, and so that the spirit of the ordinance will be observed, and substantial justice done;

The property is zoned CR with property to the south of the alley being zoned PDD 136 - residential zoning. The Dallas development code requires a $20^{\prime}$ setback wherever CR properties are located adjacent to or across an alley from a residential zoning district. The purpose is to provide a buffer between two different use types, which is sometimes done with landscaping/living screen. However, as shown in these two photos, existing conditions show both sides of the alley are lined with solid screening/fencing. Any improvements made to the subject site would not be visible.


Additionally, none of the residents across the alley from the subject use the alley for access. Parking occurs onstreet or in their respective driveways as shown:


Therefore, we do not believe a reduction in the setback along the alley will be contrary to the public interest but would result in an unnecessary hardship in the development of the subject site due to its depth of approximately $97^{\prime}$ at the narrowest point. Compliance would result in a loss of $20^{\prime}$ of depth which would further hinder development commensurate with other CR zoned parcels along RL Thornton. As described in the next section, most all the structures along RL Thornton are shown immediately adjacent to their respective alleys.
(ii) the variance is necessary to permit development of a specific parcel of land that differs from other parcels of land by being of such a restrictive area, shape, or slope that it cannot be developed in a manner commensurate with the development upon other parcels of land with the same zoning; and

The undeveloped portion of the subject site is approximately 97 ' deep at the narrowest point. This is not a common condition for RL Thornton as shown in the following image. The purpose of a setback is to establish a consistent appearance within a particular zoning designation. There is no continuity in this segment of the freeway as most of the buildings are older and setback to the property line.

Properties to the east of Winslow have depths of approximately $140^{\prime}-145^{\prime}$ representing an additional $50^{\prime}$ in depth than most of the subject site. Without this variance to the setback, the property cannot be developed in a manner commensurate with other properties along RL Thornton. The Shell station to the east of Winslow has the same zoning and code requirements as the subject site but due to their additional depth, they were able to comply.

(iii) the variance is not granted to relieve a self-created or personal hardship, nor for financial reasons only, except as provided in Subparagraph (B)(i), nor to permit any person a privilege in developing a parcel of land not permitted by this chapter to other parcels of land with the same zoning.

The property has been in this configuration for decades. The variance request would align with existing conditions along RL Thornton Fwy to the east and the adjacent building to the west of the subject site. Application of the 20 ' setback with a 10 ' landscape buffer would render the existing use completely noncompliant as the area between the fuel canopy and the property line is needed for traffic circulation of passenger and commercial vehicles. Furthermore, compliance with these requirements would also severely restrict, if not prohibit, development of the vacant, westernmost portion of the property due to the reduction of lot depth by $20^{\prime}$ adjacent to the alley and a reduction of 10 ' along the freeway for street improvements. A landscape special exception regarding the street improvements and other Article X requirements is also requested and will be addressed separately.




2. DUMPSTER ELEVATION FRONT
$1 / 4^{\prime \prime}=1^{\prime}-0^{0}$

SOLAR POWERED
LIGHT FACING
PARKING LOT
PARKING LTI ON
ALTERNATING FENO



CASE \# 212-078

3) DUMPSTER ELEVATION EAST
$3^{\prime \prime}$ CAST STONE CA


4 DUMPSTER ELEVATION WEST
$1 / 4^{\prime \prime}=1^{\prime}-0^{\prime \prime}$

## Parking Demand Assessment

Circle K and Taco Casa 5526 East R. L. Thornton Fwy Dallas, Texas

BDA212-078


Prepared for:<br>DFW Oil \& Energy, LLC

September 2023

Texas Board of Professional Lingincers, l-12534
I, Adrian O. Murphy, hereby certify that the information provided in this report is complete and accurate to the best of my knowledge.
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## EXECUTIVE SUMMARY

The development representative retained Leadership Traffic Services to perform a parking demand assessment for the proposed Taco Casa Restaurant that will serve as an addition to an existing Circle K convenience store and gas station located at 5526 East R. L. Thornton Freeway (IH 30 eastbound service road) at Winslow Avenue in Dallas, Texas.

The purpose of the parking demand assessment is to provide technical justification to support a reduction in the number of required parking spaces as regulated by the City of Dallas. The parking demand assessment document will be provided to the City of Dallas staff for technical review to fulfill the associated requirements of the local approval process.

Based on the parking demand assessment performed for the proposed Circle K convenience store and Taco Casa development, the following conclusions and recommendations have been offered in support of allowing a greater reduction to the required parking:

- The proposed development will generate 161 vehicles trips ( 82 entering and 79 exiting) during the AM peak hour and 110 vehicle trips ( 57 entering and 53 exiting) during the PM peak hour.
- Driveway access will be served from one existing driveway along East R. L. Thornton Freeway (IH 30) eastbound service road and one existing driveway along Winslow Avenue. A second existing driveway along East R. L. Thornton Freeway (IH 30) eastbound service road will be closed.
- The proposed development requires 34 parking spaces as contained in the City of Dallas Development Code.
- The proposed development will provide 22 total parking spaces.
- Internal trip capture can create less demand for parking since a single trip can visit more than one land use due to the closeness and interconnectivity of shared driveways and parking.
- A prototypical model located at 12950 Coit Road in Dallas where there is higher concentration of adjacent street traffic does not consume its available on-site parking during peak demands periods of the day.
- A reduction in parking spaces at East R. L. Thornton Freeway (IH 30) and Winslow Avenue to serve the Circle K and Taco Casa development would not create a traffic hazard or traffic congestion to the adjacent roadway system.
- Fifteen (15) additional spaces may be realized when considering the drive-through window available queue space and parking at the pump for vehicle fueling operations.


## INTRODUCTION

The development representative retained Leadership Traffic Services to perform a parking demand assessment for the proposed Taco Casa Restaurant that will serve as an addition to an existing Circle K convenience store and gas station located at 5526 East R. L. Thornton Freeway (IH 30 eastbound service road) at Winslow Avenue in Dallas, Texas.

The purpose of the parking demand assessment is to provide technical justification to support a reduction in the number of required parking spaces as regulated by the City of Dallas. The parking demand assessment document will be provided to the City of Dallas staff for technical review to fulfill the associated requirements of the local approval process.

## SITE AND STUDY AREA DESCRIPTION

The proposed development will be located at 5526 East R. L. Thornton Freeway, southwest of IH 30 and Winslow Avenue in Dallas, Texas. The proposed development will serve as a redevelopment of the existing site that contains a Circle K convenience store and gas station. Access to the site will be served from one driveway along East R. L. Thornton service road and one driveway along Winslow Avenue. A second existing driveway that currently serves the Circle K convenience store and gas station will be closed with the development and addition of the Taco Caso restaurant. A vicinity map is presented in Figure 1. The site is bounded by East R. L. Thornton Freeway to the north, commercial and residential to the west, residential to the south, and commercial to the east.

FIGURE 1. VICINITY MAP


## EXISTING AND PROPOSED LAND USE

The existing site for the proposed development is currently occupied by the Circle K convenience store and gas station. The Circle K convenience store will be converted to a Taco Casa restaurant and expanded by an additional 750 square feet. The Circle K convenience store will be rebuilt on an adjacent lot that is currently vacant. The fuel pumps will remain in their existing location and will continue operations as part of the new convenience store. Based on the official zoning map for the City of Dallas, the property is currently zoned as CR Community Retail. The adjacent properties in the immediate vicinity of the proposed development are zoned as CR - Community Retail. The proposed development will be constructed as a single phase with a completion date for 2023. The proposed land use for the development is presented below in Table 1.

Table 1. Proposed Land Use

| Land Use | Size | Unit |
| :--- | :---: | :---: |
| Fast-Food Restaurant <br> with Drive-Through <br> Window | 2.338 | $1,000 \mathrm{SF}$ |
| }{Gas station} | 1.8 | $1,000 \mathrm{SF}$ |
|  | 8 | Vehicle fueling <br> positions |

## TRANSPORTATION SYSTEM

## Thoroughfare System

The following is a general description of the major thoroughfares within the study area as they exist today.

East R. L. Thornton (IH 30) Eastbound Service Road is directly north of the proposed development and is a three-lane, one-way roadway that runs in an east direction with a speed limit of 40 MPH . The roadway is considered a TxDOT roadway and is not characterized on the City of Dallas Thoroughfare Plan. Two (2) existing driveways serve the property of the proposed development. One driveway will be removed with the proposed development. Historical traffic data from NCTCOG indicates 8,000 vehicles per day travel along East R. L. Thornton (IH 30) eastbound service road.

Winslow Avenue is located east of the proposed development and is two-lane undivided roadway. A speed limit posting was not observed along Winslow Avenue. The roadway is characterized on the City of Dallas Thoroughfare Plan as a C - Community Collector roadway, minimum four-lane undivided ( $\mathrm{M}-4-\mathrm{U}$ ). One existing driveway serves the property of the proposed development and will serve the proposed development. Historical traffic data from NCTCOG indicates 4,000 vehicles per day travel along Winslow Avenue near East R. L. Thornton (IH 30) freeway.

## SITE TRAFFIC CHARACTERISTICS

## Proposed Site Trip Generation

The number of trips generated by the Circle K convenience store and Taco Casa development is a function of the type and quantity of land use for the development. The number of vehicle trips generated by the proposed development was estimated based on ITETripGen, a web-based app that incorporates the latest trip generation rates and equations provided in the publication entitled Trip Generation Manual, Eleventh Edition, by the Institute of Transportation Engineers (ITE). Estimates of the number of trips generated by the site were made for the AM and PM peak hour, as well as daily. Table 2 provides the estimated rates and equations along with the entering and exiting distribution splits. Due to the nature of the proposed development and the mix of land uses being considered, some trips generated by the development would be contained within the site as an internal trip capture. When combined within a single mixed-use development, these land uses tend to interact and thus attract a portion of each other's trip generation. The recommended methodology for internal trip capture reduction is based on using the NCHRP Report 684 and has been applied to the Circle K convenience store and Taco Casa development. A summary of the total number of trips that are projected to be generated by the proposed development during typical daily, AM and PM time periods is shown in Table 3. The number of trips generated represents the number of vehicles entering and exiting the proposed development to and from the adjacent roadway system. Supporting documentation from the ITE Trip Generation Manual has been included in the appendix. Based on the site traffic that would access the proposed development from the adjacent roadway system, traffic congestion is not likely to occur.

Table 2. Trip Generation Rates

| Land Use <br> Description | Unit | Daily |  | AM Peak Hour |  | PM Peak Hour |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Split | Rate | Split | Rate | Split |  |
| Fast-Food <br> Restaurant with <br> Drive-Through <br> Window | 1000 SF | 467.48 | $50 \%$ In <br> $50 \%$ Out | 44.61 | $51 \%$ In <br> $49 \%$ Out | 33.03 | $52 \%$ In <br> $48 \%$ Out |
| Convenience <br> Store /Gas <br> Station <br> $(2-8$ VFP $)$ | 1000 SF | 624.20 | $50 \%$ In <br> $50 \%$ Out | 40.59 | $50 \%$ In <br> 505 Out | 48.48 | $50 \%$ In <br> $50 \%$ Out |

Table 3. Trip Generation Summary for 5626 East R. L. Thornton Freeway

| ITE Land Use | ITE Code | Unit | Quantity | Daily |  | AM Peak Hour |  | PM Peak Hour |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Enter | Exit | Enter | Exit | Enter | Exit |
| Fast-Food Restaurant with Drive-Through Window | 934 | 1000 SF | 2.34 | 547 | 547 | 53 | 51 | 40 | 37 |
| Convenience Store / Gas Station (2-8 VFP) | 945 | 1000 SF | 1.8 | 562 | 562 | 37 | 36 | 44 | 43 |
| Internal Trip Capture Reduction |  |  |  | --- | --- | 8 | 8 | 27 | 27 |
| Totals |  |  |  | 2218 |  | 161 |  | 110 |  |

## Parking Generation

The required parking for the proposed Circle K and Taco Casa development is based on land use per the City of Dallas parking and loading regulations with provisions for parking reductions and credits. Table 4 below summarizes the parking analysis for the proposed development. As shown in Table 4, the proposed development will not provide enough parking spaces as required in the City of Dallas Development Code.

Table 4. Parking Analysis (5526 East R. L. Thornton Freeway, Dallas)

| Land Use | Size | Parking Code Criteria | Parking Spaces Required | Parking Spaces Provided |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Per Code | Additional |
| Taco Casa restaurant with drive-through window | 2,338 SF | 1 per 100 SF | 23 | 4 | --- |
|  | Vehicle Queue in Drive-through Window Lane | --- | --- | --- | 7 |
| Circle K convenience store / gas station | 1,800 SF | 1 per 200 SF | 9 | 14 | --- |
|  | Canopy | --- | 2 | -- | --- |
|  | Vehicle Fueling Positions | --- | --- | --- | 8 |
| Bicycle Rack | --- | --- | --- | 4 | --- |
| Total Parking Spaces |  |  | 34 | 22 | 15 |

The Board of Adjustment (BDA) may grant special exceptions to allow for up to $25 \%$ reduction to required parking if the development's allowed parking reduction does not create a traffic hazard or increase traffic congestion on the adjacent and nearby roadways. The Circle K and Taco Casa development would be twelve (12) parking spaces shy of the required amount, creating $35 \%$ reduction. To fall within the allowable tolerance of $25 \%$ reduction, the development would need to provide 26 parking spaces to result in a deficit of eight (8) parking spaces shy of the required amount.

Based on the nature of the development, that includes different integrated, complementary, and interacting land uses that allows for interconnectivity of driveways and shared parking where on-site parking can be accessed by users visiting more than one land use without creating an additional trip and the need for an available parking space, there would be a reduced parking demand created from the proximity of the complementary land uses.

To support the claim of reduced parking demand, the developer representative allowed parking demand data to be collected at a prototypical model site located at 12950 Coit Road in Dallas where there is a Circle K convenience store with Exxon gas station and Taco Casa restaurant. There are 14 vehicle fueling positions at the Coit Road location with comparable sizes for the Circle K convenience store and Taco Casa restaurant envisioned for the site near East R. L. Thornton Freeway (IH 30) and Winslow Avenue. The Coit Road location is near a greater concentration of traffic ( 40,000 vehicles per day along Coit Road and 20,000 vehicles per day along IH 635 eastbound service road yet based on the data summarized in Table 5 below, the peak demand experienced at the Coit Road location allowed for ample parking without exceeding demand and the drive-through window for the Taco Casa restaurant did not exceed the available on-site queue.

Table 5. Peak Parking Analysis (12950 Coit Road, Dallas)

| Land Use | Parking <br> Spaces <br> Provided <br> Onsite | Drive- <br> Through <br> Window <br> Queuing <br> Lanes | Max Occupied <br> Parking Spaces <br> / Drive- <br> Through <br> Queue Lanes ${ }^{2}$ |
| :--- | :---: | :---: | :---: |
| Taco Casa restaurant with <br> drive-through window | --- | 8 | $4(3)$ |
| Circle K convenience store / <br> Exxon gas station | 44 | --- | $20(18)$ |

[^0]In addition to the twenty-two (22) parking spaces that will be provided, the Taco Casa restaurant will be able to safely accommodate up to seven (7) vehicles for the drive-through window service. A request will be made to the Board of Adjustments to allow credit for vehicles that park at the pump during vehicle fueling operations or to patronize the convenience store or restaurant, accommodating an additional eight (8) parking spaces. Considering both the spaces at the pump and the drive-through vehicle queue, up to fifteen (15) additional parking spaces would be available.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the parking demand assessment performed for the proposed Circle K convenience store and Taco Casa development, the following conclusions and recommendations have been offered in support of allowing a greater reduction to the required parking:

- The proposed development will generate 161 vehicles trips ( 82 entering and 79 exiting) during the AM peak hour and 110 vehicle trips ( 57 entering and 53 exiting) during the PM peak hour.
- Driveway access will be served from one existing driveway along East R. L. Thornton Freeway (IH 30) eastbound service road and one existing driveway along Winslow Avenue. A second existing driveway along East R. L. Thornton Freeway (IH 30) eastbound service road will be closed.
- The proposed development requires 34 parking spaces as determined in the City of Dallas Development Code.
- The proposed development will provide 22 total parking spaces.
- Internal trip capture can create less demand for parking since a single trip can visit more than one land use due to the closeness and interconnectivity of shared driveways and parking.
- A prototypical model located at 12950 Coit Road in Dallas where there is higher concentration of adjacent street traffic does not consume its available on-site parking during peak demands periods of the day.
- A reduction in parking spaces at East R. L. Thornton Freeway (IH 30) and Winslow Avenue to serve the Circle K and Taco Casa development would not create a traffic hazard or cause traffic congestion to the adjacent roadway system.
- Fifteen (15) additional spaces may be realized when considering the drive-through window available queue space and parking at the pump for vehicle fueling operations.


# Appendix List of Sections 

\author{

1. Site Plan <br> \section*{2. Trip Generation}
}

## 3. Parking Demand Data

## 1. Site Plan







## 2. Trip Generation

# Land Use: 934 <br> Fast-Food Restaurant with Drive-Through Window 

## Description

This land use includes any fast-food restaurant with a drive-through window. This type of restaurant is characterized by a large drive-through and large carry-out clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. The restaurant does not provide table service. A patron generally orders from a menu board and pays before receiving the meal. A typical duration of stay for an eat-in patron is less than 30 minutes. Fast casual restaurant (Land Use 930), high-turnover (sit-down) restaurant (Land Use 932), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window and no indoor seating (Land Use 935) are related uses.

## Additional Data

## Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alaska, Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Washington, and Wisconsin.

## Source Numbers

$163,164,168,180,181,241,245,278,294,300,301,319,338,340,342,358,389,438,502,552$, $577,583,584,617,640,641,704,715,728,810,866,867,869,885,886,927,935,962,977,1050$, 1053, 1054

## Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

## Setting/Location: General Urban/Suburban

Number of Studies: 71
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50\% entering, 50\% exiting
Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
| :---: | :---: | :---: |
| 467.48 | $98.89-1137.66$ | 238.62 |

## Data Plot and Equation



# Fast-Food Restaurant with Drive-Through Window (934) 

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 96
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 51\% entering, 49\% exiting
Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
| :---: | :---: | :---: |
| 44.61 | $1.05-164.25$ | 27.14 |

Data Plot and Equation


# Fast-Food Restaurant with Drive-Through Window (934) 

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 190
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: $52 \%$ entering, $48 \%$ exiting
Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
| :---: | :---: | :---: |
| 33.03 | $8.77-117.22$ | 17.59 |

Data Plot and Equation


# Land Use: 945 Convenience Store/Gas Station 

## Description

A convenience store/gas station is a facility with a co-located convenience store and gas station. The convenience store sells grocery and other everyday items that a person may need or want as a matter of convenience. The gas station sells automotive fuels such as gasoline and diesel.

A convenience store/gas station is typically located along a major thoroughfare to optimize motorist convenience. Extended hours of operation (with many open 24 hours, 7 days a week) are common at these facilities.

The convenience store product mix typically includes pre-packaged grocery items, beverages, dairy products, snack foods, confectionary, tobacco products, over-the-counter drugs, and toiletries. A convenience store may sell alcohol, often limited to beer and wine. Coffee and premade sandwiches are also commonly sold at a convenience store. Made-to-order food orders are sometimes offered. Some stores offer limited seating.

The sites in this land use include both self-pump and attendant-pumped fueling positions and both pre-pay and post-pay operations.

Convenience store (Land Use 851), gasoline/service station (Land Use 944), and truck stop (Land Use 950) are related uses.

## Land Use Subcategory

Multiple subcategories were added to this land use to allow for multi-variable evaluation of sites with single-variable data plots. All study sites are assigned to one of three subcategories, based on the number of vehicle fueling positions (VFP) at the site: between 2 and 8 VFP, between 9 and 15 VFP, and between 16 and 24 VFP. For each VFP range subcategory, data plots are presented with GFA as the independent variable for all time periods and trip types for which data are available. The use of both GFA and VFP (as the independent variable and land use subcategory, respectively) provides a significant improvement in the reliability of a trip generation estimate when compared to the single-variable data plots in prior editions of Trip Generation Manual.

Further, the study sites were also assigned to one of three other subcategories, based on the gross floor area (GFA) of the convenience store at the site: between 2,000 and 4,000 square feet, between 4,000 and 5,500 square feet, and between 5,500 and 10,000 square feet. For each GFA subcategory range, data plots are presented with VFP as the independent variable for all time periods and trip types for which data are available. The use of both VFP and GFA (as the independent variable and land use subcategory, respectively) provides a significant improvement in the reliability of a trip generation estimate when compared to the single-variable data plots in prior editions of Trip Generation Manual.

When analyzing the convenience store/gas station land use with each combination of GFA and VFP values as described above, the two sets of data plots will produce two estimates of sitegenerated trips. Both values can be considered when determining a site trip generation estimate.

Data plots are also provided for three additional independent variables: AM peak hour traffic on adjacent street, PM peak hour traffic on adjacent street, and employees. These independent variables are intended to be analyzed as single independent variables and do not have subcategories associated with them. Within the data plots and within the ITETripGen web app, these plots are found under the land use subcategory "none."

## Additional Data

ITE recognizes there are existing convenience store/gas station sites throughout North America that are larger than the sites presented in the data plots. However, the ITE database does not include any site with more than 24 VFP or any site with gross floor area greater than 10,000 square feet. Submission of trip generation data for larger sites is encouraged.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://wwwite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Arkansas, California, Connecticut, Delaware, Florida, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, Vermont, Washington, and Wisconsin.

## Source Numbers

$221,245,274,288,300,340,350,351,352,355,359,385,440,617,718,810,813,844,850,853$, $864,865,867,869,882,883,888,904,926,927,936,938,954,960,962,977,1004,1024,1025$, 1027, 1052

## Convenience Store/Gas Station - GFA (2-4k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions<br>On a: Weekday

## Setting/Location: General Urban/Suburban

Number of Studies: 48
Avg. Num. of Vehicle Fueling Positions: 8
Directional Distribution: 50\% entering, 50\% exiting
Vehicle Trip Generation per Vehicle Fueling Position

| Average Rate | Range of Rates | Standard Deviation |
| :---: | :---: | :---: |
| 265.12 | $68.50-701.00$ | 142.37 |

Data Plot and Equation


# Convenience Store/Gas Station - GFA (2-4k) <br> (945) 

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday,
Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 76
Avg. Num. of Vehicle Fueling Positions: 8
Directional Distribution: 50\% entering, 50\% exiting
Vehicle Trip Generation per Vehicle Fueling Position

| Average Rate | Range of Rates | Standard Deviation |
| :---: | :---: | :---: |
| 16.06 | $3.75-50.00$ | 8.79 |

## Data Plot and Equation



# Convenience Store/Gas Station - GFA (2-4k) (945) 

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday,
Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 93
Avg. Num. of Vehicle Fueling Positions: 8
Directional Distribution: 50\% entering, 50\% exiting
Vehicle Trip Generation per Vehicle Fueling Position

| Average Rate | Range of Rates | Standard Deviation |
| :---: | :---: | :---: |
| 18.42 | $5.75-57.80$ | 10.16 |

Data Plot and Equation


| NCHRP 8-51 Internal Trlp Capture Estlmation Tool |  |  |  |  |
| ---: | :---: | :---: | :---: | :---: |
| Project Name: | Circle K and Taco Casa Development |  | Organlzation: | Leadership Traffic Services |
| Project Locatlon: | Dallas, TX | Performed By: | Adrian Murphy |  |
| Scenario Descriptlon: | Build Out | Date: | $4 / 6 / 2023$ |  |
| Analysis Year: | 2024 |  | Checked By: |  |
| Analysis Period: | AM Street Peak Hour | Date: |  |  |


| Table 1-A: Base Vehicle-Trip Generation Estlmates (Single-Use Site Estimate) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | Development Data (For Information Only) |  |  | Estimated Vehicle-Trips |  |  |
|  | ITE LUCs' | Quantity | Units | Total | Entering | Exiting |
| Office |  |  |  | 0 |  |  |
| Retail | 945 | 2 | 1000 SF | 73 | 37 | 36 |
| Restaurant | 934 | 2 | 1000 SF | 104 | 53 | 51 |
| Cinema/Entertainment |  |  |  | 0 |  |  |
| Residential |  |  |  | 0 |  |  |
| Hotel |  |  |  | 0 |  |  |
| All Other Land Uses ${ }^{2}$ |  |  |  | 0 |  |  |
| Total |  |  |  | 177 | 90 | 87 |


| Table 2-A: Mode Split and Vehicle Occupancy Estimates |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | Entering Trips |  |  | Exiting Trips |  |  |
|  | Veh. Occ. | \% Transit | \% Non-Motorized | Veh. Occ. | \% Transit | \% Non-Motorized |
| Office |  |  |  |  |  |  |
| Retail | 1.00 |  | 0\% | 1.00 |  | 0\% |
| Restaurant | 1.00 |  | 0\% | 1.00 |  | 0\% |
| Cinema/Entertainment |  |  |  |  |  |  |
| Residential | 1.00 |  | 0\% | 1.00 |  | 0\% |
| Hotel | 1.00 |  | 0\% | 1.00 |  | 0\% |
| All Other Land Uses ${ }^{2}$ |  |  |  |  |  |  |


| Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance) |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| Origin (From) |  | Destination (To) |  |  |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |  |  |  |
| Office |  |  |  |  |  |  |  |  |  |
| Retail |  |  |  |  |  |  |  |  |  |
| Restaurant |  |  |  |  |  |  |  |  |  |
| Cinema/Entertainment |  |  |  |  |  |  |  |  |  |
| Residential |  |  |  |  |  |  |  |  |  |
| Hotel |  |  |  |  |  |  |  |  |  |


| Table 4-A: Internal Person-Trip Origin-Destination Matrix* |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) |  | Destination (To) |  |  |  |  |  | Restal |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | 0 |  |  |
| Office |  | 0 | 0 | 0 | 0 | 0 |  |  |
| Retail | 0 |  | 5 | 0 | 0 | 0 |  |  |
| Restaurant | 0 | 3 |  | 0 | 0 | 0 |  |  |
| Cinema/Entertainment | 0 | 0 | 0 |  | 0 | 0 |  |  |
| Residential | 0 | 0 | 0 | 0 | 0 |  |  |  |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |  |  |


| Table 5-A: Computations Summary |  |  |  | Table 6-A: Internal Trip Capture Percentages by Land Use |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Entering | Exiting | Land Use | Entering Trips | Exiting Trips |
| All Person-Trips | 177 | 90 | 87 | Office | N/A | N/A |
| Internal Capture Percentage | 9\% | 9\% | 9\% | Retail | 8\% | 14\% |
|  |  |  |  | Restaurant | 9\% | 6\% |
| Extemal Vehicle-Trips ${ }^{3}$ | 161 | 82 | 79 | Cinema/Entertainment | N/A | N/A |
| External Transit-Trips ${ }^{4}$ | 0 | 0 | 0 | Residential | N/A | N/A |
| External Non-Motorized Trips ${ }^{4}$ | 0 | 0 | 0 | Hotel | N/A | N/A |

[^1]| Project Name: | Circle K and Taco Casa DevelopmentAM Street Peak Hour |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Analysis Period: |  |  |  |  |  |  |
| Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends |  |  |  |  |  |  |
| Land Use | Table 7-A (D): Entering Trips |  |  | Table 7-A (O): Exiting Trips |  |  |
|  | Veh. Occ. | Vehicle-Trips | Person-Trips* | Veh. Occ. | Vehicle-Trips | Person-Trips* |
| Office | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Retail | 1.00 | 37 | 37 | 1.00 | 36 | 36 |
| Restaurant | 1.00 | 53 | 53 | 1.00 | 51 | 51 |
| Cinema/Entertainment | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Residential | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Hotel | 1.00 | 0 | 0 | 1.00 | 0 | 0 |


| Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) |  | Destination (To) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |  |
| Office |  | 0 | 0 | 0 | 0 | 0 |  |
| Retail | 10 |  | 5 | 0 | 5 | 0 |  |
| Restaurant | 16 | 7 |  | 0 | 2 | 0 |  |
| Cinema/Entertainment | 0 | 0 | 0 |  | 0 | 0 |  |
| Residential | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |  |


| Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) |  | Destination (To) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |  |
| Office |  | 12 | 12 | 0 | 0 | 0 |  |
| Retail | 0 |  | 27 | 0 | 0 | 0 |  |
| Restaurant | 0 | 3 |  | 0 | 0 | 0 |  |
| Cinema/Entertainment | 0 | 0 | 0 |  | 0 | 0 |  |
| Residential | 0 | 6 | 11 | 0 | 0 | 0 |  |
| Hotel | 0 | 1 | 3 | 0 | 0 | 0 |  |


| Destination Land Use | Table 9-A (D): Internal and External Trips Summary (Entering Trips) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Person-Trip Estimates |  |  | External Trips by Mode* |  |  |
|  | Internal | External | Total | Vehicles' | Transit ${ }^{2}$ | Non-Motorized ${ }^{2}$ |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 3 | 34 | 37 | 34 | 0 | 0 |
| Restaurant | 5 | 48 | 53 | 48 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 0 | 0 | 0 | 0 | 0 | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |
| All Other Land Uses ${ }^{3}$ | 0 | 0 | 0 | 0 | 0 | 0 |


| Table 9-A (0): Internal and External Trips Summary (Exiting Trips) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin Land Use | Person-Trip Estimates |  |  | External Trips by Mode* |  |  |
|  | Internal | External | Total | Vehicles ${ }^{1}$ | Transit ${ }^{2}$ | Non-Motorized ${ }^{2}$ |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 5 | 31 | 36 | 31 | 0 | 0 |
| Restaurant | 3 | 48 | 51 | 48 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 0 | 0 | 0 | 0 | 0 | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |
| All Other Land Uses ${ }^{3}$ | 0 | 0 | 0 | 0 | 0 | 0 |

${ }^{1}$ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
${ }^{2}$ Person-Trips
${ }^{3}$ Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator *Indicates computation that has been rounded to the nearest whole number.

| NCHRP 8-51 Internal Trip Capture Estimation Tool |  |  |  |
| ---: | :---: | ---: | ---: |
| Project Name: | Circle K and Taco Casa Development |  | Organization: |
| Project Location: | Dallas, TX | Peadership Traffic Services |  |
| Scenario Description: | Buildout | Permed By: | Date: |
| Analysis Year: | 2024 | $4 / 6 / 2023$ |  |
| Analysis Period: | PM Street Peak Hour | Checked By: |  |
|  |  | Date: |  |


| Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | Development Data (For information Only) |  |  | Estimated Vehicle-Trips |  |  |
|  | ITE LUCs ${ }^{1}$ | Quantity | Units | Total | Entering | Exiting |
| Office |  |  |  | 0 |  |  |
| Retail | 945 | 2 | 1000 SF | 87 | 44 | 43 |
| Restaurant | 934 | 2 | 1000 SF | 77 | 40 | 37 |
| Cinema/Entertainment |  |  |  | 0 |  |  |
| Residential |  |  |  | 0 |  |  |
| Hotel |  |  |  | 0 |  |  |
| All Other Land Uses ${ }^{2}$ |  |  |  | 0 |  |  |
| Total |  |  |  | 164 | 84 | 80 |


| Table 2-P: Mode Split and Vehicle Occupancy Estimates |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | Entering Trips |  |  | Exiting Trips |  |  |
|  | Veh. Occ. | \% Transit | \% Non-Motorized | Veh. Occ. | \% Transit | \% Non-Motorized |
| Office |  |  |  |  |  |  |
| Retail | 1.00 |  | 0\% | 1.00 |  | 0\% |
| Restaurant | 1.00 |  | 0\% | 1.00 |  | 0\% |
| Cinema/Entertainment |  |  |  |  |  |  |
| Residential | 1.00 |  | 0\% | 1.00 |  | 0\% |
| Hotel | 1.00 |  | 0\% | 1.00 |  | 0\% |
| All Other Land Uses ${ }^{2}$ |  |  |  |  |  |  |


| Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) | Destination (To) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office |  |  |  |  |  |  |
| Retail |  |  |  |  |  |  |
| Restaurant |  |  |  |  |  |  |
| Cinema/Entertainment |  |  |  |  |  |  |
| Residential |  |  |  |  |  |  |
| Hotel |  |  |  |  |  |  |


| Table 4-P: Internal Person-Trip OrigIn-Destination Matrix* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) |  | Destination (To) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertairment | Residential | Hotel |  |
| Office |  | 0 | 0 | 0 | 0 | 0 |  |
| Retail | 0 |  | 12 | 0 | 0 | 0 |  |
| Restaurant | 0 | 15 |  | 0 | 0 | 0 |  |
| Cinema/Entertainment | 0 | 0 | 0 |  | 0 | 0 |  |
| Residential | 0 | 0 | 0 | 0 | 0 |  |  |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |  |


| Table 5-P: Computations Summary |  |  |  | Table 6-P: Internal Trip Capture Percentages by Land Use |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Entering | Exiting | Land Use | Entering Trips | Exiting Trips |
| All Person-Trips | 164 | 84 | 80 | Office | N/A | N/A |
| Intemal Capture Percentage | 33\% | 32\% | 34\% | Retail | 34\% | 28\% |
|  |  |  |  | Restaurant | 30\% | 41\% |
| Extemal Vehicle-Trips ${ }^{3}$ | 110 | 57 | 53 | Cinema/Entertainment | N/A | N/A |
| External Transit-Trips ${ }^{4}$ | 0 | 0 | 0 | Residential | N/A | N/A |
| Extemal Non-Motorized Trips ${ }^{4}$ | 0 | 0 | 0 | Hotel | N/A | N/A |

LLand Use Codes (LUCs) from Trip Generation Informational Report, published by the Institute of Transportation Engineers.
${ }^{2}$ Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
${ }^{3}$ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
${ }^{4}$ Person-Trips
*Indicates computation that has been rounded to the nearest whole number.
Estimation Tool Developed by the Texas Transportation Institute

| Project Name: | Circle K and Taco Casa Development |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Analysis Period: | PM Street Peak Hour |  |  |  |  |  |
| Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends |  |  |  |  |  |  |
| Land Use | Table 7-P (D): Entering Trips |  |  | Table 7-P (O): Exiting Trips |  |  |
|  | Veh. Occ. | Vehicle-Trips | Person-Trips* | Veh. Occ. | Vehicle-Trips | Person-Trips* |
| Office | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Retail | 1.00 | 44 | 44 | 1.00 | 43 | 43 |
| Restaurant | 1.00 | 40 | 40 | 1.00 | 37 | 37 |
| Cinema/Entertainment | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Residential | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Hotel | 1.00 | 0 | 0 | 1.00 | 0 | 0 |


| Table 8-P (0): Internal Person-Trip Origin-Destination Matrix (Computed at Origin) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) | Destination (To) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office |  | 0 | 0 | 0 | 0 | 0 |
| Retail | 1 |  | 12 | 2 | 11 | 2 |
| Restaurant | 1 | 15 |  | 3 | 7 | 3 |
| Cinema/Entertainment | 0 | 0 | 0 |  | 0 | 0 |
| Residential | 0 | 0 | 0 | 0 |  | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 |  |


| Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) | Destination (TO) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office |  | 4 | 1 | 0 | 0 | 0 |
| Retait | 0 |  | 12 | 0 | 0 | 0 |
| Restaurant | 0 | 22 |  | 0 | 0 | 0 |
| Cinema/Entertainment | 0 | 2 | 1 |  | 0 | 0 |
| Residential | 0 | 4 | 6 | 0 |  | 0 |
| Hotel | 0 | 1 | 2 | 0 | 0 |  |


| Table 9-P (D): Internal and External Trips Summary (Entering Trips) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Destination Land Use | Person-Trip Estimates |  |  | External Trips by Mode* |  |  |
|  | Internal | External | Total | Vehicles ${ }^{1}$ | Transit ${ }^{2}$ | Non-Motorized ${ }^{2}$ |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 15 | 29 | 44 | 29 | 0 | 0 |
| Restaurant | 12 | 28 | 40 | 28 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 0 | 0 | 0 | 0 | 0 | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |
| All Other Land Uses ${ }^{3}$ | 0 | 0 | 0 | 0 | 0 | 0 |


| Origin Land Use | Table 9-P (O): Internal and External Trips Summary (Exiting Trips) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Person-Trip Estimates |  |  | External Trips by Mode* |  |  |
|  | Internal | External | Total | Vehicles ${ }^{1}$ | Transit ${ }^{2}$ | Non-Motorized ${ }^{2}$ |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 12 | 31 | 43 | 31 | 0 | 0 |
| Restaurant | 15 | 22 | 37 | 22 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 0 | 0 | 0 | 0 | 0 | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |
| All Other Land Uses ${ }^{3}$ | 0 | 0 | 0 | 0 | 0 | 0 |

[^2]
## 3. Parking Demand Data

| Location: | 5526 E RL THORNTON FWY - CIRCLE K |
| ---: | :--- |
| Start Date: | $3 / 30 / 2023$ |
| Start Time: | $11: 00$ AM |
| Name: | WENDELL GARRET |
| Notes: | The Striped Lanes Include Gas Station Pump Spots |


|  | Total Capacity |  |  |  |
| :---: | ---: | ---: | ---: | ---: |
| Start Time | Unstriped | Striped | ADA | TOTAL |
|  | 10 | 3 |  | 1 |


| Start Time | Unstriped | Striped | ADA | TOTAL |
| :---: | ---: | ---: | ---: | ---: |
| 11:00 AM | 2 | 0 | 0 | 2 |
| $11: 15 \mathrm{AM}$ | 1 | 0 | 0 | 1 |
| $11: 30 \mathrm{AM}$ | 2 | 0 | 0 | 2 |
| $11: 45 \mathrm{AM}$ | 2 | 0 | 0 | 2 |
| $12: 00 \mathrm{PM}$ | 4 | 0 | 0 | 4 |
| $12: 15 \mathrm{PM}$ | 2 | 0 | 0 | 2 |
| $12: 30 \mathrm{PM}$ | 2 | 0 | 0 | 2 |
| $12: 45 \mathrm{PM}$ | 2 | 0 | 0 | 2 |
| $1: 00 \mathrm{PM}$ | 2 | 0 | 0 | 2 |


| Start Time | Unstriped | Striped | ADA | TOTAL |
| :---: | ---: | ---: | ---: | ---: |
| 5:00 PM | 2 | 0 | 0 | 2 |
| 5:15 PM | 2 | 0 | 0 | 2 |
| $5: 30 \mathrm{PM}$ | 1 | 0 | 0 | 1 |
| 5:45 PM | 1 | 0 | 0 | 1 |
| 6:00 PM | 2 | 0 | 0 | 2 |
| $6: 15 \mathrm{PM}$ | 3 | 0 | 0 | 3 |
| 6:30 PM | 2 | 0 | 0 | 2 |
| 6:45 PM | 1 | 0 | 0 | 1 |
| $7: 00 \mathrm{PM}$ | 2 | 0 | 0 | 2 |


| Location: | 12950 COIT RD - EXXON W TACO CASA |
| ---: | :--- |
| Start Date: | $3 / 30 / 2023$ |
| Start Time: | $11: 00$ AM |
| Name: | CHASE BATTLE |
| Notes: | The Striped Lanes Include Gas Station Pump Spots |


|  | Total Capacity |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Start Time | Unstriped | Striped | ADA | TOTAL |
|  | 4 | 39 |  | 1 |



| Start Time | Unstriped | Striped | ADA | TOTAL |
| :---: | ---: | ---: | ---: | ---: |
| 11:00 AM | 0 | 16 | 0 | 16 |
| 11:15 AM | 0 | 15 | 0 | 15 |
| 11:30 AM | 1 | 14 | 0 | 15 |
| 11:45 AM | 0 | 18 | 0 | 18 |
| 12:00 PM | 0 | 15 | 0 | 15 |
| 12:15 PM | 1 | 18 | 0 | 19 |
| 12:30 PM | 0 | 16 | 0 | 16 |
| 12:45 PM | 0 | 20 | 0 | 20 |
| 1:00 PM | 1 | 13 | 0 | 14 |


| QUEUE |
| :---: |
| 0 |
| 3 |
| 1 |
| 0 |
| 2 |
| 2 |
| 4 |
| 3 |
| 4 |


| Start Time | Unstriped | Striped | ADA | TOTAL |
| :---: | ---: | ---: | ---: | ---: |
| 5:00 PM | 0 | 8 | 0 | 8 |
| 5:15 PM | 0 | 9 | 0 | 9 |
| $5: 30 \mathrm{PM}$ | 0 | 6 | 0 | 6 |
| 5:45 PM | 3 | 14 | 1 | 18 |
| $6: 00 \mathrm{PM}$ | 0 | 11 | 0 | 11 |
| $6: 15 \mathrm{PM}$ | 1 | 15 | 1 | 17 |
| 6:30 PM | 1 | 11 | 0 | 12 |
| 6:45 PM | 0 | 9 | 0 | 9 |
| $7: 00 \mathrm{PM}$ | 0 | 6 | 0 | 6 |


| QUEUE |
| :---: |
| 0 |
| 2 |
| 1 |
| 0 |
| 0 |
| 3 |
| 0 |
| 2 |
| 0 |


[^0]:    ${ }^{1}$ Vehicle fueling positions were included in the total count for parking spaces.
    ${ }^{2} \mathrm{AM}$ (PM) peak values

[^1]:    'Land Use Codes (LUCs) from Trip Generation Informational Report, published by the Institute of Transportation Engineers.
    ${ }^{2}$ Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
    ${ }^{3}$ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
    ${ }^{4}$ Person-Trips
    *Indicates computation that has been rounded to the nearest whoie number.
    Estimation Tool Developed by the Texas Transportation Institute

[^2]:    ${ }^{1}$ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
    ${ }^{2}$ Person-Trips
    ${ }^{3}$ Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
    *Indicates computation that has been rounded to the nearest whole number.

