Planning Commission
August 28, 2023
7:00PM
City Hall, 6090 Woodson Street

AGENDA

I. CALL TO ORDER
II. APPROVAL OF MINUTES FROM JULY 24, 2023
III. NEW BUSINESS
   1. *Public Hearing: Case #23-17 - Discount Sales Outlet Special Use Permit*
   2. *Public Hearing: Case #23-16 - Popeye's Redevelopment, Preliminary Development Plan*
   3. *Public Hearing: Case #23-18 - Popeye's Preliminary Plat, "Popeye's on Johnson Drive"*
IV. OLD BUSINESS
V. PLANNING COMMISSION COMMENTS
VI. STAFF UPDATES

Questions concerning this meeting may be addressed to the staff contact, Karie Kneller, City Planner, at (913) 676-8366 or kkneller@missionks.org

At A Glance

Applicant:
Leland Lynch, Discount Sales Outlet

Location:
5470 Martway Street

Property ID:
KP37500004 0001

Current Zoning:
MS2

Proposed Zoning:
N/A

Current Land Use:
Commercial

Proposed Land Use:
Warehouse/Storage

[X] Public Hearing Required

Legal Notice:
August 8, 2023

Case Number:
23-17

Project Name:
Discount Sales Special Use Permit

Project Summary:
The applicant requests a Special Use Permit for business operations that include warehouse storage of mattresses and other furniture items to be sold on-line. Delivery and pickup will be provided via a loading dock on the south side of the building, and customers do not enter the premises to conduct transactions.

Staff Contact:
Karie Kneller, Planner

Property Background and Information

The subject property is located at 5470 Martway Street, at the northeast corner of Nall Avenue and Martway Street. The structure is approximately 10,000 square feet, and the warehouse activity will occur in approximately 5,000 square feet in the basement of the existing structure. Primary vehicular access to the facility is from Martway Street, where a loading dock is located on the south side of the existing structure. The proposed warehouse facility is within the lower level of the structure, below grade. The business owner/applicant has been storing mattress goods on premises, and City Staff requested an inspection of the current operations upon learning of the warehouse operations on site prior to accepting an application for a Special Use Permit. Planning staff received an inspection memo from the Mission Building Official following an inspection that cited some fire code violations according to the Fire Marshall that would be reevaluated following the initial inspection. No building code violations were noted during the initial inspection.

On August 1, 2023, the Building Official conducted a follow-up inspection to confirm compliance with fire and building codes. An email from the Building Official to the City Planner confirmed that the storage area was compliant and there were no outstanding items to address to conform with fire and building codes. The letter of no violations is part of the Planning Commission packet for this application.

Project Proposal

The applicant has applied for a Special Use Permit to conduct warehouse operations for new mattresses, bed frames and other furniture-related items from the basement of the property at 5470 Martway Street. Business transactions are conducted on-line and customers do not enter the site to conduct business. Goods are sold and delivered from the facility and the facility receives new goods at the loading dock located on the south side of the building.

Plan Review and Analysis

Mission Comprehensive Plan

The 2007 and updated draft 2023 Comprehensive Plan's Future Land Use map shows a mixed-use, medium density land use for the subject property and property directly adjacent to the east, and surrounding future land uses include Office on the southeast and southwest corner of Nall Avenue and Martway across the street from the proposed warehousing activity. Capitol Federal is the existing business on the west side of Nall, and other commercial and/or office operations surround the subject property.

Analysis: A small warehousing activity on the south side of the building at the northeast corner of Nall and Martway would not be out of context with the future land use plan or existing operations adjacent to the proposed use as a means to utilize and existing structure.

Municipal Code

Under Article III, “Special Use Permits” in the City of Mission municipal code, the following stipulations apply:

§440.140(E) “Criteria for Considering Applications”

- The character of the neighborhood and extent that the use would be in harmony with nearby properties
- The extent to which approval would detrimentally affect nearby properties
- Relative benefit to public welfare by retaining applicable restrictions compared to the destruction of the value of the property or hardship to the owner with denying the request
- The Comprehensive Plan
- The extent to which utilities and public services are adequate
- The extent that the use creates excessive pollution or environmental harm
- The extent to which there is a need for the use in the community
- The economic impact of the use on the community
- The ability of the applicant to satisfy any requirements imposed
- The recommendation of professional staff

Analysis: It is Staff’s interpretation that (a) a Special Use Permit for the use of the property as a warehouse facility meets all applicable criteria in Article III, §440.140; (b) the facility and its surrounding property are harmonious with nearby properties and does not detrimentally affect public health or property values; (c) the use is consistent with the Comprehensive Plan as mixed-use, medium-density adjacent to office and commercial uses, and the property has adequate access to utilities and public services; (d) excessive pollution or environmental harm have not been reported to Staff’s knowledge, and the operation has not negatively impacted the community economically; (e) the applicant has thus far met all requirements imposed by the City and other regulatory bodies, including an inspection by the City’s Building Official; (f) the warehouse facility benefits public welfare by providing an on-line service to non-profit organizations in the region.

Under §445.210 of the City’s municipal code, Special Use Permits may be for a specified time period or continual. Revocation of a Special Use Permit may be granted if any of the following conditions are met:

- Non-compliance with any applicable requirement

- Non-compliance with any special conditions imposed at the time of approval
- Violation of any provisions of the Code
- Where conditions of the neighborhood have changed to the extent that approval would be unwarranted
- Violation of any State or Federal law or regulation

Recommendation

It is Staff's determination that the warehouse facility does not currently violate any established municipal requirements and does not currently violate any State or Federal regulations. It is Staff's interpretation that the future land use plan for the property is not consistent with either vertical or horizontal mixed-use operation on the site, but utilizing an existing structure for the proposed purpose does not directly violate the future land use plan. However, if the property is redeveloped in the future, the mixed-use allocation of land would not fit the context of the Comprehensive Plan's intent. Therefore, Staff recommends that the Planning Commission recommend approval for the Special Use Permit on the following conditions:

1. The Special Use Permit is contingent upon the property remaining as-is regarding site design and building structure; should the site be redeveloped in the future, the Special Use Permit may be reevaluated.
2. The Special Use Permit shall become void if the facility is vacant for six months or more.
3. If the special use is determined to be in violation at any time of the five conditions of 445.210, the Special Use Permit shall become void and violations shall be corrected and a new application for a Special Use Permit shall be under review by the Planning Commission.
4. Staff recommends an initial 10-year term limit on the Special Use Permit that shall require an application for renewal at the end of the term.

Planning Commision Action

Case #23-17 will be considered by the Planning Commission at their August 28, 2023 public hearing.

City Council Action

Contingent upon Planning Commission approval, Case #23-17 will be considered by the City Council at their August 28, 2023 public hearing.

Community Development Department
6090 Woodson Street
Mission, KS 66202
913-676-8360

Development Application

Permit #_____

Applicant Name: Leland Lynch	Company: Discount Sales Outlet
Address: 5470 Martway	
City/State/Zip: Mission, KS 66202	
Telephone: 913 645 5919	
Email: lee@discountsalesoutlet.com	
Property Owner Name: Taula Rose	Company: Woodsonia Real Estate
Address: 17007 Marcy Street Suite 2	
City/State/Zip: Omaha NE 68118	
Telephone: 402 212 1172	
Email: michael@woodsonia.net	
Firm Preparing Application: Leland Lynch	Company: Discount Sales Outlet
Address: same as applicant	
City/State/Zip:	
Telephone:	
Email:	

*All correspondence on this application should be sent to (check one) X Applicant_____Owner____Firm

Application Type

Rezoning ☐ SUP ☒ Plat ☐ Site Plan ☐ PDP ☐ FDP ☐ Lot Split ☐ Other (Specify):

Description of Request

Please provide a brief description of the request: Storage Area for on-line sales

Project Details

General Location or Address of Property: 5437 Johnson Dr, Mission, KS 66202

Present zoning of property: Rezoning

Present use of property: Storage

Agreement to Pay Expenses

Applicant intends to file an application with the Community Development Department of the City of Mission, Kansas (City). As a result of the filing of said application, City may incur certain expenses, such as but not limited to publication costs, consulting fee, attorney fee, and court reporter fees. Applicant hereby agrees to be responsible for and to reimburse City for all cost incurred by City as a result of said application. Said costs shall be paid within ten (10) days of the receipt of any bill submitted by City to Applicant. It is understood that no requests granted by City or any of its commissions will be effective until all costs have been paid. Costs will be owed whether or not Applicant obtains the relief requested in the application.

Affidavit of Ownership and/or Authorization of Agent

I, Leland Lynch certify that I am the owner or contract purchaser of the subject property. I give my permission for the undersigned to act as my agent on behalf of the application hereby being submitted.

X _____ Date 06/05/2023
Signature (Owner)

X _____ Date _____
Signature (Owner's Agent)

FOR OFFICE USE ONLY

File Fee: $	**Meeting Date**
Total:	PC CC **Date Notices Sent**
Receipt #	
Notes:	**Date Published**
	Decision

Karie Kneller

From: Jim Brown
Sent: Thursday, June 8, 2023 12:38 PM
To: Karie Kneller
Subject: Discount Sales Outlet- Bldg/Fire Code Analysis for SUP
Attachments: MISSION- CODE ANALYSIS LETTER- Discount Sales Outlet- Warehouse.pdf

Karie,

The Fire Marshal and I met on-site with the owner of Discount Sales Outlet this morning to investigate and evaluate the proposed basement storage area. (we referenced the code analysis attached, as a guide for this investigation)

Our onsite-investigation revealed:

1. The existing building was constructed in 1955. The exterior basement walls are concrete and the floor ceiling assembly separating the lower and upper floors is a ribbed concrete design which typically equates to not less than a 2-hour fire resistance rating.
2. All storage of mattresses in the west portion of the basement will be completely removed.
3. The existing fire doors in the fire separation wall assembly will be secured thereby restricting access to the west portion of the basement to the Fed Ex space only.
4. Currently Fed Ex does not use this basement space for any purpose.
5. In the east portion of the basement an existing vault (which served a previous bank) remains.
6. The vault serves as its own independent fire area and the existing construction would equate to no less than a 3 hour(or greater) fire resistance rating.
7. The remaining inventory of mattresses will be relocated to the existing lower level vault. This reduced area of storage would not require the installation of a fire sprinkler system.
8. The existing ceiling height in the basement area is compliant.
9. There are no existing issues with egress, travel distance or exiting components.
10. The Fire Marshal has scheduled a follow-up inspection August 1, 2023 to re-inspect for compliance.

Jim Brown, CBO, LEED Green Assoc.
Building Official
6090 Woodson St. | Mission, KS 66202 | 913.676.8363
jbrown@missionks.org

Karie Kneller

From: Jim Brown
Sent: Tuesday, August 22, 2023 1:05 PM
To: Karie Kneller
Subject: Fw: Discount Sales Outlet- Bldg/Fire Code Analysis for SUP
Attachments: MISSION- CODE ANALYSIS LETTER- Discount Sales Outlet- Warehouse.pdf

Karie,

As a condition of the inspection report provided June 8, 2023, (below) a follow-up inspection was performed on August 1, 2023.
All items noted in the inspection report have been satisfactorily addressed. The storage area is compliant with no outstanding items.

Jim Brown, CBO, LEED Green Assoc.
Building Official
6090 Woodson St. | Mission, KS 66202 | 913.676.8363
jbrown@missionks.org

From: Jim Brown <jbrown@missionks.org>
Sent: Thursday, June 8, 2023 12:37 PM
To: Karie Kneller <KKneller@missionks.org>
Subject: Discount Sales Outlet- Bldg/Fire Code Analysis for SUP

Karie,

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Jim Brown, CBO, LEED Green Assoc.
Building Official
6090 Woodson St. | Mission, KS 66202 | 913.676.8363
jbrown@missionks.org

Kansas & Western Missouri Division
The Salvation Army

"...there is no reward equal to that of doing the most good to the most people in the most need." –Evangeline Booth

June 8, 2023

Re: The Salvation Army SSVF Program and Discount Sales Outlet

To Whom It May Concern:

The Supportive Services for Veteran Families (SSVF) program, developed as part of The Department of Veterans Affairs strategic plan to end Veteran homelessness, assists single Veterans and Veterans with Families who need assistance in obtaining or maintaining permanent housing. In the Kansas City area, Discount Sales Outlet has for over 10 years supplied mattresses to Veterans we have served and continue to serve as part of SSVF in the Kansas and Western Missouri Division of The Salvation Army.

When a Veteran needs a mattress, the SSVF Case Manager will reach out to Mr. Lee Lynch of Discount Sales Outlet and provide him with the Veteran's name, need, contact information, and address. Discount Sales Outlet will contact the client and arrange for a delivery date and time, usually within 24-48 hours, and in some cases less than that for emergencies. SSVF has been extremely pleased with the quality of the service and mattresses provided by Discount Sales.

Discount Sales Outlet has grown to be a very dependable source and has helped the SSVF program accomplish the mission of helping Veterans maintain permanent housing by providing them with just some of the basic needs necessary to help prevent homelessness. We look forward to continuing our relationship with Discount Sales Outlet and many more years of working hand in hand to help provide Veterans what they need.

Sincerely,

Matthew R. Thom
Director, Supportive Services for Veteran Families

DIVISIONAL HEADQUARTERS
3637 Broadway, Kansas City, MO 64111
Phone 816.756.1455
www.salarmymokan.org

reStart
empowering people. ending homelessness.

918 East 9th Street, Kansas City, MO 64106-3072
(816) 472-5664 • (816) 472-6127 • 24 Hour Youth Hotline (816) 309-9048
www.reStartinc.org

June 6, 2023

To whom this may concern:

This letter is to communicate to you the ongoing partnership reStart's Supportive Services for Veteran families (SSVF) has had with Discount Sale: Our agency received the (SSVF) grant in FY14 and has been working with Discount Sales to rapidly house homeless veterans. Discount Sales aligns witl our mission to house homeless veterans rapidly by responding to email or tex the same day and within 24-48 hours delivering a bed and bedding to recently housed veterans.

Discount Sale is needed and is a staple in the community meeting the immediate demands of the (SSVF) programs for beds.

If you require additional information, please reach out by email or phone at: (816) 214-2584.

Sincerely

Robin Johnson

DISCOUNT Sales OUTLET
www.discountsalesoutlet.com
YOUR NAME BRAND MATTRESS & FURNITURE OUTLET

June 9,2023

Re: Use of space 5470 Martway , Mission , Ks

To Karie Kneller , City Planner

The space below the Fed Ex Building will be used to store mattresses, bed frames and other furniture-related items. All merchandise is received directly from the manufacturer and is brand new. I have worked hand in hand for many years (over 10 yrs.) with the Salvation Army, Restart and Catholic charities to provide mattress for their Homeless Vets programs known as The Supportive Services for Veteran Families (SSVF). These charities have grants with The Department of Veterans Affairs to help homeless Vets regain control of their lives. I served in the United States Airforce so early on I took a particular interest in being a part of their Mission. As the years have passed their dependance has grown on my company's ability to provide affordable bedding and deliver and setup, since the Covid Pandemic I have been their sole provider for these services. We deliver a 100-mile radius of KC that includes Topeka, Manhattan, Leavenworth as well as the entire Kansas City Metro . I have attached letters from The Directors of The Salvation Army and Restart as to the relationship they have with my company As well as a few of the case workers that I deal with on a weekly basis by text or email, feel free to contact them.

The Salvation Army and Restart are my biggest users and to this date this year we have delivered for the Salvation Army 63 Vets, Restart 25 Vets Catholic Charities has had only a few .

Although the entire space is 10,000 sq ft will be using only around 5000. I have rented this space since 1997 and at that time I was told by the City that if its for storage there wasn't anything I needed .

There will not be any signage needed , no customer has ever been in the warehouse .

There will not be any hours of operation. We simply store the product

We deliver on Tuesday, Thursday, and Saturday's . We load up and go deliver only .

We use the loading dock area located on the Martway side of Fed Ex

The only employee that I will have is my delivery man , Danny Vela who has been with me for over 15 years .

As an outcome of the Inspection by the Fire Inspector we have become aware of the fire codes related to the space and have hired Day Constuction to perform these updates which should take place shortly

Sincerely,

Leland

5930 BROADMOOR • MISSION • KS • 66202
Phone (913) 831-7909 / Fax (913) 722-5547

Woodsonia
Real Estate Inc

June 6, 2023

Mr. Lee Lynch
Discount Sales Outlet, Inc.
5930 Broadmoor
Shawnee Mission, KS 66202

Re: Landlord Authorization Letter for Special Use Permit
5437 Johnson Drive, Mission, KS 66205

Dear Mr. Lynch,

For the City of Mission's consideration of a Special Use Permit for the above listed Premises, 5437 Johnson, LLC, a Nebraska limited liability company, and Tabula Rasa, LLC, a Nebraska limited liability company (collectively, "Landlord"), hereby authorizes Discount Sales Outlet, Inc., a Kansas corporation ("Tenant"), to utilize the Premises for the receipt and storage of mattresses and miscellaneous furniture items.

If you have any further questions or need any additional information, please contact the Property Manager listed below:

Michael Kisielewski
Woodsonia Real Estate, Inc.
E: michael@woodsonia.net
C: (402) 212-1172

Sincerely,

Drew Snyder
Manager

At A Glance

Applicant:
CSM Groups, dba Popeye's Louisiana Kitchen

Location:
6821 Johnson Drive

Property ID:
KF251208-2052

Current Zoning:
Form Based Code / C2-B

Proposed Zoning:
N/A

Current Land Use:
Fast Food Drive-Through

Proposed Land Use:
Fast Food Drive-Through

[X] Public Hearing Required

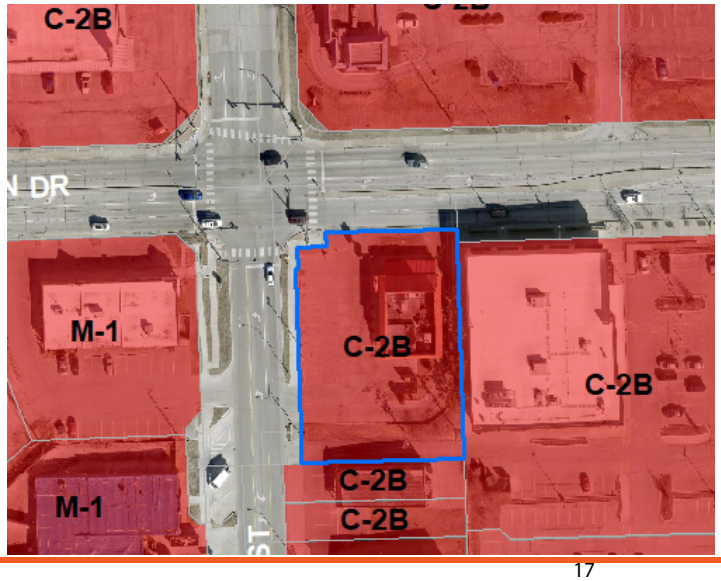
Legal Notice:
August 8, 2023

Case Number:
23-16

Project Name:
Popeye's Redevelopment

Project Summary:
The proposal includes an existing structure that will be razed and the redevelopment of Popeye's fast food drive-through restaurant with parking lot, landscaping, and pedestrian realm improvements. The property lies within the Form Based Code overlay district, and is requesting a non-conforming situation permit.

Staff Contact:
Karie Kneller, Planner



Property Background and Information

The applicant, CSM Groups, dba Popeye's Louisiana Kitchen, submitted an application for a preliminary development plan for a fast food drive-through restaurant located at 6821 Johnson Drive, on the southeast corner of Johnson Drive and Broadmoor Street. The property is in the Form Based Code (FBC) overlay district and it is zoned C-2B "Retail and Service District." Surrounding properties are zoned C2-B on the east and south, and M-1 on the west across Broadmoor Street. The property north of Johnson Drive is also zoned C2-B. The property is currently a half-acre (21,918 square feet), with a proposed re-plat associated with Case #23-18 that reduces the lot with additional dedicated right-of-way to under a half-acre. All necessary utilities are available on-site. The former Popeye's drive through restaurant suffered fire damage in January of 2023 and will be completely rebuilt on the current site.

Project Proposal

The applicant proposes razing the existing structure and a complete rebuild of the former Popeye's drive-through restaurant, with certain site improvements to meet the intent of the municipal code and Form Based Code overlay. Improvements include a six-foot screen wall on the corner of Broadmoor and Johnson Drive surrounding a new parking lot with required landscaping. The screen wall incorporates planters and architectural detailing, with space for outdoor seating along a widened pedestrian path. The entrance to the site on Johnson Drive has been eliminated with this proposal, reducing the number of curb cuts along Johnson Drive. Park benches, pedestrian-scaled streetlights, and bike racks improve the pedestrian realm, and additional landscaping in the pedestrian right-of-way improves the walkability along Johnson Drive and Broadmoor Street.

Proposed surface parking is located in roughly the same area as the existing parking lot, with 16 spaces, including one ADA standard parking space. The former parking lot included 21 parking spaces with two ADA. Drive-through service will be provided via two stacking lanes, whereas the former layout included one drive-through lane. Drive-through vehicles empty onto Johnson Drive and are allowed to exit with a right turn only. The applicant included a trip generation report according to the building square footage and anticipated traffic thereof. New landscaping and green space is increased with the proposal, which will improve the stormwater runoff conditions on the site.

The proposed structure has entrances on Johnson Drive and from the parking lot on the west side of the building. The structure is 26 feet tall with spandrel panels and awnings for a faux second story. The height of the structure will be roughly equivalent with the structure to the east on the same block. Materials are brick, fiber cement, and EIFS in neutral colors with accent colors in the company brand. Glazing on the north and west side of the building is transparent. The dumpster enclosure on the south side of the lot near the drive-through lanes consists of cement block painted a consistent color with the primary structure, and includes plastic lumber gates. Signage will be submitted as a separate application and reviewed for consistency with the applicable municipal code during the construction phase.

Plan Review and Analysis

Mission Comprehensive Plan

The Comprehensive Plan indicates the property lies within the FBC overlay district. The FBC takes precedence for development and performance standards over the municipal code for setback, height, architectural features, and priority of the pedestrian realm. Projects that do not meet the required 90 points according to the scoring criteria a variance approved by the Planning Commission and City Council. It is Mission's long-term vision that the West Gateway commercial district in our community will be an extension, with its own unique character, of the Downtown Johnson Drive District. Additionally, any development or redevelopment that does not meet the requirements set forth in the first section of the FBC to gain the initial 45 points during Development Committee review, shall not be considered sufficient to meet the intent of the FBC.

The property is in "Block S" of the FBC. Structures on a half-acre or less in Block S may be low rise buildings (one story), but structures must be built to a height of 26 feet. Low-rise structures require "shopfront" and awnings, and require continuous frontage with appropriate openings for pedestrian access. Front and side street setbacks shall be 0-10 feet, side lot and rear setbacks shall be a 10-foot minimum. Parking is permitted in the rear and set back a minimum of 10 feet when screened from view. Curb-cuts should be reduced, and parking lots should be screened to lessen the impact on pedestrians.

Analysis: The proposed primary structure does not provide continuous frontage, but the permitted parking lot screen wall along the activating corner of the lot attempts to meet the intent of the FBC for continuous frontage. The height of the screen wall on Johnson Drive and Broadmoor helps to screen the parking from pedestrian view and provides corner activation in lieu of a structure. However, the parking is not located at the rear of the lot, therefore requiring a non-conforming situation permit.

While the building orientation and lot layout does not strictly comply with the FBC, and therefore cannot receive the required points under the scoring criteria to attain a total of 90 points, the improvements to the pedestrian realm and attention to massing and corner activation attempts to meet the intent of the FBC for setback, height, architectural features, and priority of the pedestrian realm.

Johnson Drive Design Guidelines

According to the requirements of the Johnson Drive Design Guidelines, sidewalks on Johnson Drive shall be a minimum of eight feet wide. Sidewalks on secondary streets such as Broadmoor shall be a minimum of five feet wide. Materials shall include brick, stone, and transparent glass along Johnson Drive frontage, and buildings shall have a 360-degree design. EIFS shall be a maximum of 25% on any one facade and not included from the ground elevation to eight-foot height. Elements that enhance the pedestrian realm, including park benches, pedestrian-scaled streetlights, bike racks, and landscaping are required. Screen walls for street-facing parking lots may be a height of six feet combined with softscape vegetation. Roof-mounted mechanical

equipment shall be screened from pedestrian view around the site.

Analysis: The proposal provides an extended pedestrian "plaza" along Johnson Drive that includes outdoor seating, landscaping, street lighting, and bicycle amenities. Material selections are brick, cement fiber board, and EIFS. EIFS consists of less than 25% on each facade and is located above eight feet from ground level. Each side of the building incorporates architectural detail with horizontal delineation, and material/pattern changes that break up expansive facades. The parking lot screen wall is a combination of plantings and brick at a six-foot height. Rooftop equipment is screened by a parapet wall.

Municipal Code

The FBC takes precedence over the municipal code for setbacks. Required setbacks for front and side street are 0-10 feet, and the required setback for rear and side yards is a minimum of zero feet.

Zoning code in Section 410.100 for properties in C2-B districts permits drive-through restaurants.

Sections 415.070, 415.100, 415.120, and 415.130 pertain to the landscaping and maintenance requirements of the municipal code. Section 425.020 sets forth the minimum space requirements for parking. Fast food restaurants with drive-through facilities requires one space for every four seats. A minimum of 6% of the parking lot shall have interior landscaping, according to Section 415.110.

Analysis: The proposal complies with FBC regulations for setbacks, but the location of the parking lot is non-conforming. Therefore, the plan must receive approval from the Planning Commission for a variance due to site configuration and setback. The structure seats 24 customers and provides 16 parking spaces, which is double the minimum requirement. The operation also anticipates a maximum of 15 employees during peak hours. The proposal incorporates 8.3% landscaping in the parking area which conforms with the minimum requirement.

Analysis: The proposal seats 24 customers and provides 16 parking spaces, which is double the minimum requirement. The operation also anticipates a maximum of 15 employees during peak hours. The proposal incorporates 8.3% landscaping in the parking area.

The applicant provided a trip generation report that accounts for the anticipated number of trips to the restaurant during peak hours. The queue would exceed 9 cars 7% of the time. In other words, the report states that there is reasonable assurance that the design of the stacking lanes would be sufficient 93% of the time. Internal parking access could be potentially blocked for short periods at peak times about 5% of the time. Vehicular stacking could overflow to Broadmoor about 3% of time.

Drainage on the site has been significantly improved with the addition of landscaping and green space that did not previously exist on-site. Stormwater is captured via inlets at lower elevations and no significant flooding is attributed to the existing site.

Recommendation

Staff recommends that the Planning Commission vote to recommend approval of the preliminary development plan and non-conforming situation permit for Popeye's redevelopment to the City Council with the following conditions:

1. Public amenities shall be provided in accordance with City Standards and the site design of adjacent improved properties on Johnson Drive, including but not limited to park benches, bike racks, and pedestrian street lights; once installed, the City agrees to maintain amenities that are fully within the public right-of-way.

2. A demolition permit application for the existing structure is required within three months of City Council approval of the Preliminary Development Plan.

3. The applicant will provide a two (2) year warranty bond on any public infrastructure installed as part of this Preliminary Development Plan. Said bond(s) will be placed on file with the City of Mission Community Development DepartmentA final development plan will be submitted to the City and approved by the Planning Commission prior to the issuance of any building permits.

4. This Preliminary Plan approval shall lapse in five (5) years from its effective date if construction on the project has not begun, or if such construction is not being diligently pursued; provided, however, that the applicant may request a hearing before the City Council to request an extension of this time period. The City Council may grant an extension for a maximum of 12 months for good cause.

5. A detailed landscaping plan is required with the submittal of the final development plan; landscaping that is native and non-invasive shall be provided.

6. A detailed lighting plan is required with the submittal of the final development plan; lighting specifications that adhere to International Dark Sky Standards is preferred.

7. The applicant shall submit a Final Site Plan and construction documents to the City for review and approval prior to building permit issuance.

8. The applicant shall obtain all approvals from Johnson County Wastewater and Johnson County Water District #1 prior to building permit issuance.

9. The applicant shall obtain all necessary reviews, inspections, and approvals from Consolidated Fire District #2 prior to final occupancy permit being issued.

10. The applicant shall be responsible for all damage to existing City infrastructure, including roads, curbs, and sidewalks. Repairs shall be of a quality like or better than existing conditions before final Certificate of Occupancy issuance.

11. Maintenance agreement for all site improvements, including but not limited to structures, improved infrastructure, landscaping, parking, and pedestrian connections on the property shall be provided and signed by the applicant and the appropriate City officials prior to construction permitting.

Planning Commision Action

The Planning Commission will hear Case #23-16, the Preliminary Development Plan for Popeye's Louisiana Kitchen at its August 28, 2023 public hearing.

City Council Action

Contingent upon Planning Commission's recommendation, the City Council will hear Case #23-16 at its September 20, 2023 meeting.

Community Development Department
6090 Woodson Street
Mission, KS 66202
913-676-8360

Development Application

Permit #_____

Applicant Name:	Popeye's Louisiana Kitchen Company: CSM Groups / Attn: Faizan Yousuf
Address:	10190 Katy Freeway Suite 350
City/State/Zip:	Houston, Texas 77043
Telephone:	713.266.8799 ext 201
Email:	f.yousuf@csmgroup.org
Property Owner Name:	Company: WELLS FAMILY TRUST
Address:	1008 VALENTINE RD
City/State/Zip:	KANSAS CITY, MO 64111
Telephone:	816-561-2555
Email:	coult@devries-law-kc.com
Firm Preparing Application:	Kathy Warman, AIA Company: WARMAN Architecture+Design
Address:	1735 Swift Ave.
City/State/Zip:	North Kansas City, MO 64116
Telephone:	816.474.2233
Email:	kathy@kwarman.com

*All correspondence on this application should be sent to (check one)_____Applicant_____Owner_X_Firm

Application Type

Rezoning ☐ SUP ☐ Plat ☐ Site Plan ☐ PDP ☒ FDP ☐ Lot Split ☐ Other (Specify):

Description of Request

Please provide a brief description of the request:

Preliminary plan for re-building the property due to fire.

Project Details

General Location or Address of Property: 6821 JOHNSON DR

Present zoning of property: C-2B

Present use of property: Commercial

Agreement to Pay Expenses

Applicant intends to file an application with the Community Development Department of the City of Mission, Kansas (City). As a result of the filing of said application, City may incur certain expenses, such as but not limited to publication costs, consulting fee, attorney fee, and court reporter fees. Applicant hereby agrees to be responsible for and to reimburse City for all cost incurred by City as a result of said application. Said costs shall be paid within ten (10) days of the receipt of any bill submitted by City to Applicant. It is understood that no requests granted by City or any of its commissions will be effective until all costs have been paid. Costs will be owed whether or not Applicant obtains the relief requested in the application.

Affidavit of Ownership and/or Authorization of Agent

I, F. Coulter DeVries Agent for Wells Trust Attorney and Agent for certify that I am the owner or ~~contract purchaser~~ of the subject property. I give my permission for the undersigned to act as my agent on behalf of the application hereby being submitted.

X _____ Date _____
Signature (Owner)

X _____ Date 6/23/23
Signature (Owner's Agent)

**********FOR OFFICE USE ONLY**********

File Fee: $	**Meeting Date**
	PC CC
Total:	**Date Notices Sent**
Receipt #	
Notes:	**Date Published**
	Decision

Plat Description

All that part of the Southwest Quarter of Section 8, Township 12 South, Range 25 East, in the City of Mission, Johnson County, Kansas, being more particularly described by Scott G Chrisman, LS-1306, on June 19, 2023, for project 230238, as follows:

Commencing at the Northwest corner of the Southwest Quarter of said Section 8; thence N 89°53’00” E, along the North line of said Southwest Quarter of said Section 8, a distance of 590.00 feet, to the point of intersection of the North line of the Southwest Quarter of said Section 8, and the centerline of Broadmoor Street, as now established, said point also being the Point of Beginning; thence, continuing along said North line, N 89°53'00" E, a distance of 155.00 feet, to the Northwest corner of CORNERSTONE COMMONS, a platted subdivision of land in the City of Mission, Johnson County, Kansas; thence S 0°07'00" E, a distance of 215.00 feet; thence S 89°53'00" W, a distance of 155.00 feet, to a point on the centerline of Broadmoor Street, as now established; thence N 0°07'00" W, along said centerline of said Broadmoor Street, a distance of 215.00 feet, to the Point of Beginning, containing 0.7650 acres, more or less, of unplatted land.

WARMAN ***ARCHITECTURE+DESIGN***
1735 Swift Ave.
North Kansas City, Missouri 64116
v. 816.474.2233 f. 816.474.1051

Project Narrative

Date: **June 23, 2023**

Project: **Popeyes Louisiana Kitchen**
6821 Johnson Dr.
Mission, KS 66202

The Popeye's Chicken restaurant located at 6821 Johnson Dr. experienced a fire in their current building and the owners will be required to raze and rebuild the building to the new Popeye's Corporate building standards. This is also an opportunity to bring the site and building into better compliance with the City of Mission's adopted Form Based Code. We are proposing a new 2,354 sq. ft restaurant building located with the main entrance adjacent to and with direct pedestrian access from Johnson Dr. The westernmost curb cut on Johnson Dr. will be removed and that area will be replaced with a pedestrian plaza area with benches and planters and a low wall to screen the parking field behind it. The drive thru function will be along the east side of the building and will be largely screened from public view by the Natural Grocers. We believe this will meet the spirit and intent of the new code while ensuring that the restaurant can be operationally functional.

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NAPA VALLEY

103675

Napa Valley
Blend
TUP033
Acme Brick - Tulsa Plant
Size
Modular
Texture
Heritage

brick.com
Acme Brick. The Best Thing To Have Around Your House.

WHITE BLUFF

White Bluff
Blend
PWP856
Acme Brick - Perla West Gate Plant
Size
King
Texture
Heritage

VINTAGEWOOD - CEDAR

Benjamin Moore

Moonlight White
OC-125

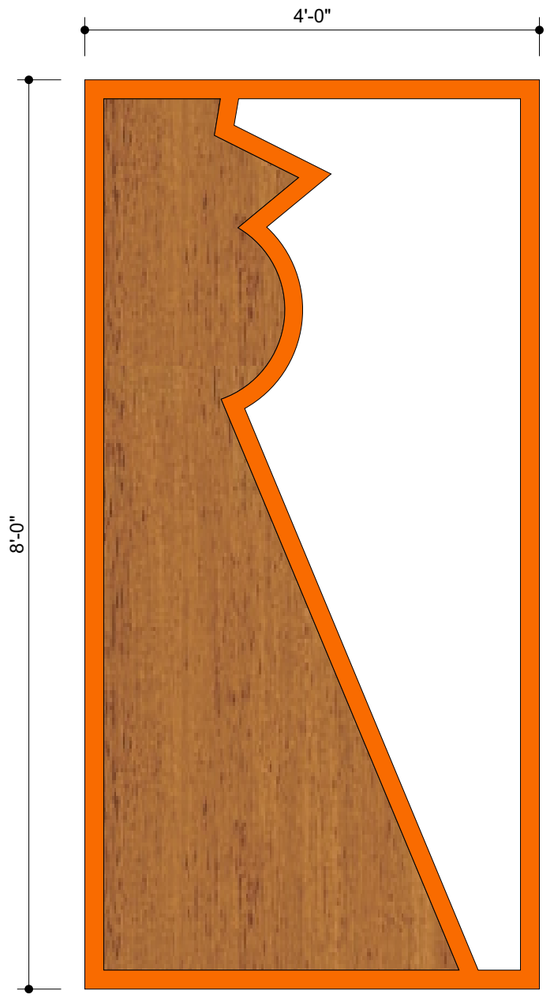
EIFS - STO, MEDIUM TEXTURE

Warranty Information:
1.) 6 Year Warranty on 3M Vinyl mounted First Surface

Decorative Shutters

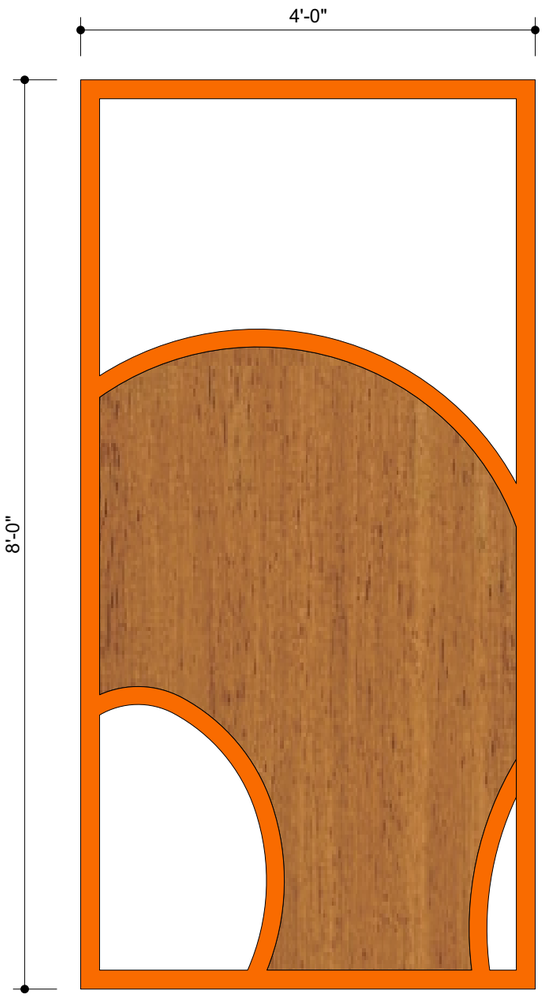
Fabricated Aluminum Shutters

Insert Item Code



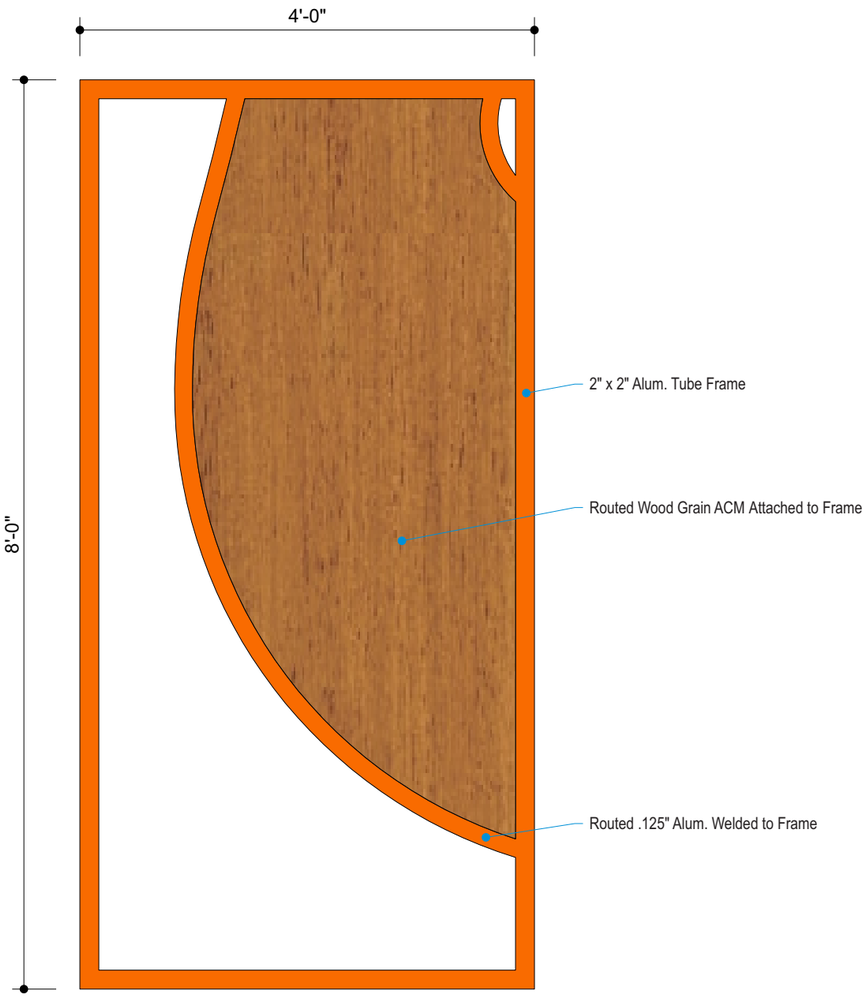
Front View
Scale: 3/4"=1'-0"

32.00 Sq Ft



Front View
Scale: 3/4"=1'-0"

32.00 Sq Ft



Front View
Scale: 3/4"=1'-0"

32.00 Sq Ft

Color Specifications

Reynobond Duragloss
5000 French Walnut

Paint Specifications

Paint to Match
Pantone 3564C - Orange

All paint finishes to be Satin unless otherwise specified

General Specifications:

Frame:	Fabricated 2" x 2" Alum. Tube & Angle Frame
Graphic:	Routed 4mm Wood Grain ACM Panel Attached to Frame
Wall:	Stucco
Quantity:	SEE BUILDING LAYOUT

Allen Industries
YOUR BRAND AT ITS BEST™
1-800-967-2553
www.allenindustries.com

Client:
POPEYES
#

Address:
,,

Issue Date:
05/23/22

Page #:
8 of 21

File Name:
Popeyes_2100 Series Signage Reference Book

Sales:	Design:	PM:
House	**ECW**	**-**

#	Date	Description	Initial
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-

Client Review Status
Allen Industries, Inc. requires that an approved drawing be obtained from the client prior to any production release or production release revision.

Client Signature:

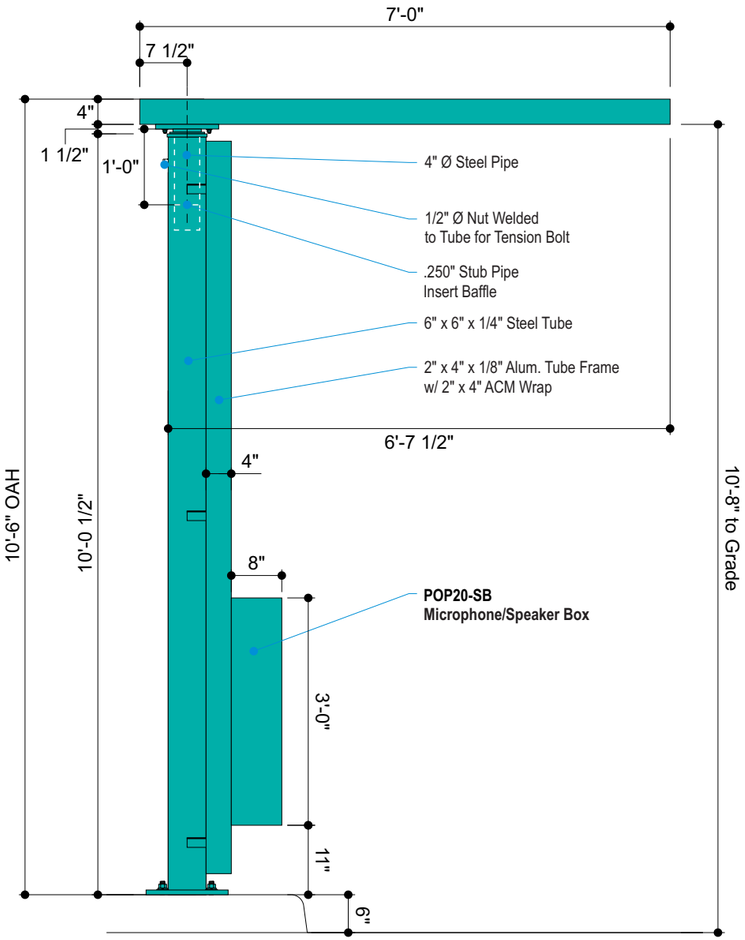
Approval Date:

Warranty Information:
1.) 10 Year Warranty on GE 7100K LED Lighting
2.) 5 Year Warranty on GE Power Supplies

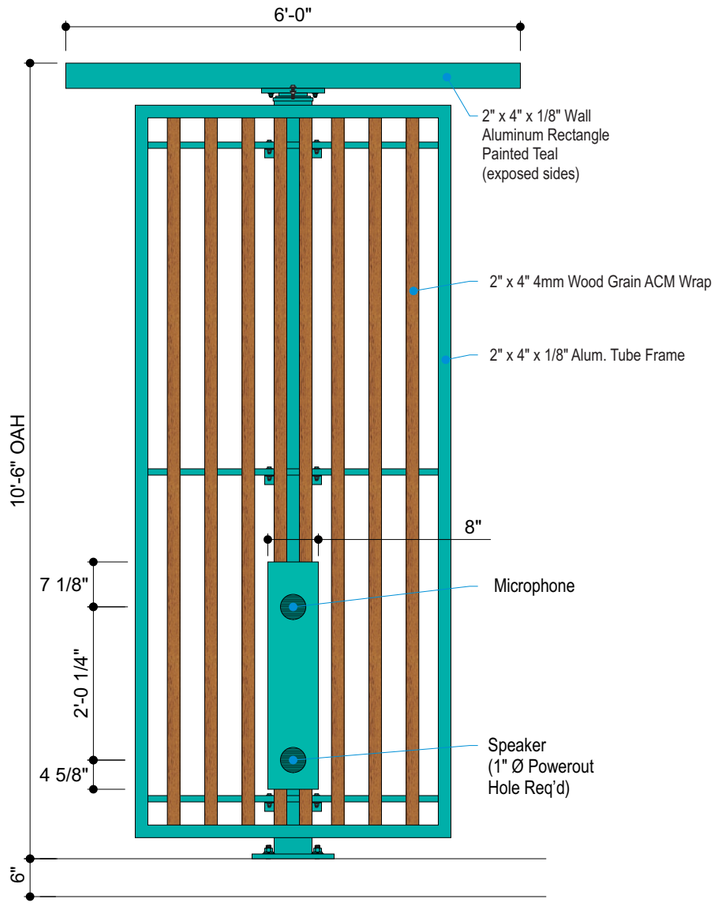
Drive Thru Order Canopy

Proposed
Insert Item Code

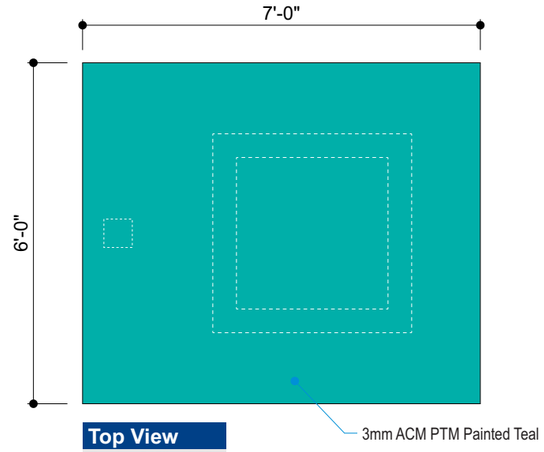
DESIGN INTENT ONLY
Engineering Required to Determine Actual Production & Installation Requirements



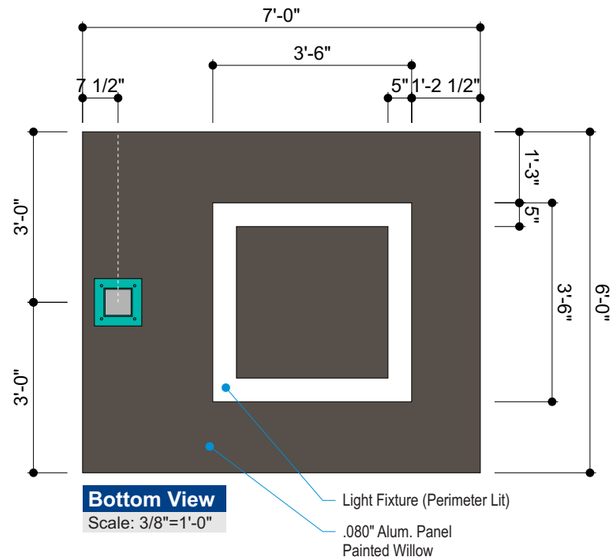
Front (Entrance) View
Scale: 1/2"=1'-0"



Side View
Scale: 1/2"=1'-0"



Top View
Scale: 3/8"=1'-0"



Bottom View
Scale: 3/8"=1'-0"

Color Specifications
Reynobond Duragloss 5000 French Walnut

Paint Specifications
Paint to Match Pantone 326C - Teal
BM CC-542 Willow

All paint finishes to be Satin unless otherwise specified

General Specifications:

Canopy:	Fabricated Aluminum & ACM Structure w/ Steel Tube Support.
Electrical:	Actual Number of Circuits to be Determined by Licensed Electrical Contractor (1) 20 AMP Circuit, 120 Volts - All Wiring Shall be 12 GA
Quantity:	(1) ONE

Allen Industries — FILE NUMBER: E212503
Listed MET E212503 — Electric Sign Complies with UL48
THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF **ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE** AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.
GROUNDED ELECTRICAL CONNECTIONS

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1-800-967-2553
www.allenindustries.com

Client: **POPEYES #**
Address: **,,**

Issue Date: **05/23/22**
Page #: **14 of 21**
File Name: **Popeyes_2100 Series Signage Reference Book**
Sales: **House** Design: **ECW** PM: **-**

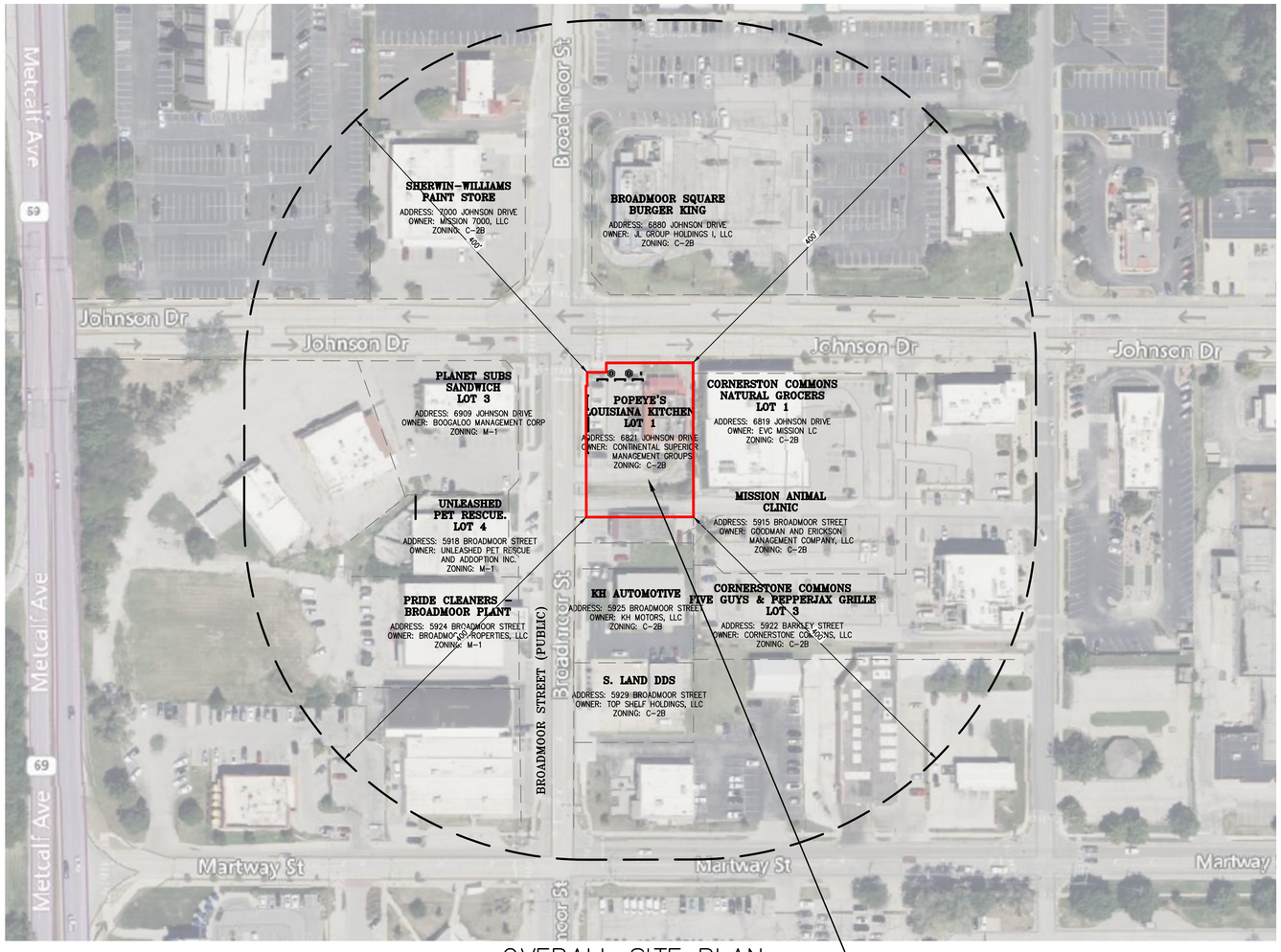
#	Date	Description	Initial
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-

Client Review Status
Allen Industries, Inc. requires that an approved drawing be obtained from the client prior to any production release or production release revision.

Client Signature:
Approval Date:

PRELIMINARY DEVELOPMENT PLANS
FOR
POPEYE'S LOUISIANA KITCHEN
ADDRESS: 6821 JOHNSON DRIVE
IN THE CITY OF MISSION, JOHNSON COUNTY, KANSAS

	INDEX
C0	COVER SHEET
C1	DEMO PLAN
C2	SITE PLAN – AERIAL
C3	SITE PLAN
C4	GRADING PLAN
C5	UTILITY PLAN
	LANDSCAPE PLANS
	ARCHITECTURE PLANS



OVERALL SITE PLAN

OWNER/DEVELOPER:
CONTINENTAL SUPERIOR MANAGEMENT GROUPS
10190 KATY FREEWAY, SUITE 350
HOUSTON, TX 77043
713–266–8799 OFFICE
713–266–2703 FAX
CONTACT: FAIZAN YOUSUF

ARCHITECT
WARMAN ARCHITECTURE+DESIGN
1735 SWIFT AVE.
NORTH KANSAS CITY, MO 64116
816–474–2233 OFFICE
816–474–1051 FAX
CONTACT: KATHLEEN A. WARMAN, AIA, NCARB

CIVIL ENGINEER & SURVERYOR:
PHELPS ENGINEERING, INC.
1270 N. WINCHESTER
OLATHE, KS 66061
913–393–1155 OFFICE
913–393–1166 FAX
CONTACT: JUDD CLAUSSEN, P.E.

UTILITY COMPANIES:

EVERGY (816) 652–1852
AMANDA KAUER (Amanda.Kauer@evergy.com) (605) 321–6121–CELL
16215 W. 108TH STREET
LENEXA, KANSAS 66219

ATMOS ENERGY
TONY BENDICT (tony.bendict@atmosenergy.com) (913) 254–6344
25090 W. 110TH TER. (913) 768–4924 FAX
OLATHE, KS 66061

COMCAST CABLE CO. (816) 795–2257
JIM DUFF (816) 795–0346 FAX
(james_duff@cable.comcast.com)
3400 W. DUNCAN ROAD
BLUE SPRINGS, MISSOURI 64015

CITY OF OLATHE (PUBLIC WORKS) (913) 971–9065
CHET BELCHER (913) 971–8504 FAX
100 E. SANTA FE
OLATHE, KS 66051
(cbelcher@olatheks.org)

CITY OF OLATHE (PUBLIC UTILITIES) (913) 971–9066
MR. CHAD JONES (913) 971–9099 FAX
1385 S. ROBINSON DRIVE
OLATHE, KS 66051

CONSOLIDATED COMMUNICATIONS (913) 322–9622
MELISSA STRINGER
(melissa.stringer@consolidated.com)
14859 W. 95TH STREET
LENEXA, KS 66215

AT&T (913) 383–4929
CLAYTON ANSPAUGH (ca4089@att.com) (913) 383–4849 FAX
9444 NALL AVENUE
OVERLAND PARK, KANSAS 66207

SPECTRUM CABLE (913) 440–4189
450 N. ROGERS RD.
OLATHE KS. 66062

GOOGLE FIBER
MS. TERESA ERB(TERESAERB@GOOGLE.COM) (913) 551–4492
908 BROADWAY BLVD.
KANSAS CITY, MO 66105

Know what's below. Call before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

LEGAL DESCRIPTION:

ALL THAT PART OF THE SW1/4 OF SECTION 8, TOWNSHIP 12, RANGE 25, NOW IN THE CITY OF MISSION, JOHNSON COUNTY, KANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT A POINT ON THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8, AND 590 FEET EAST OF THE NORTHWEST CORNER THEREOF, AS MEASURED ALONG SAID NORTH LINE, SAID POINT ALSO BEING ON THE CENTERLINE OF BROADMOOR, AS NOW ESTABLISHED; THENCE SOUTHERLY, ALONG A LINE PERPENDICULAR TO THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8 AND ALONG THE CENTER–LINE OF SAID BROADMOOR, A DISTANCE OF 45 FEET; THENCE EASTERLY, ALONG A LINE PARALLEL TO THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8, A DISTANCE OF 30 FEET, TO A POINT ON THE EASTERLY RIGHT–OF–WAY LINE OF SAID BROADMOOR, SAID POINT ALSO BEING THE TRUE POINT OF BEGINNING OF SUBJECT TRACT; THENCE SOUTHERLY, ALONG A LINE PERPENDICULAR TO THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8, AND ALONG THE EASTERLY RIGHT–OF–WAY LINE OF SAID BROADMOOR, AS ESTABLISHED 30 FEET EAST OF THE CENTERLINE THEREOF, A DISTANCE OF 170 FEET; THENCE EASTERLY, ALONG A LINE PARALLEL TO THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8, A DISTANCE OF 125 FEET; THENCE NORTHERLY, ALONG A LINE PERPENDICULAR TO THE LAST DESCRIBED COURSE, A DISTANCE OF 180 FEET, TO A POINT 35 FEET SOUTH OF THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8, SAID POINT ALSO BEING ON THE SOUTHERLY RIGHT–OF–WAY LINE OF JOHNSON DRIVE, AS NOW ESTABLISHED; THENCE WESTERLY, ALONG A LINE 35 FEET SOUTH OF AND PARALLEL TO THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8 AND ALONG THE SOUTHERLY RIGHT–OF–WAY LINE OF SAID JOHNSON DRIVE, A DISTANCE OF 115 FEET, TO A POINT 40 FEET EAST OF THE CENTERLINE OF SAID BROADMOOR; THENCE SOUTHWESTERLY, ALONG THE SOUTHERLY RIGHT–OF–WAY LINE OF SAID JOHNSON DRIVE, TO THE POINT OF BEGINNING, EXCEPT THAT PART IN STREETS AND ROADS.

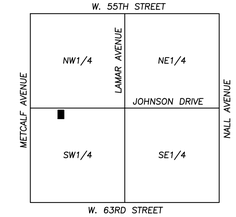
GROSS AREA = 22,218± SQ.FT. / 0.5101± ACRES

BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING SMARTNET GPS NETWORK
1. SET "□" CUT IN BACK OF CURB NW CORNER OF PARKING LOT
ELEVATION = 1020.60

FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF MISSION, COMMUNITY NO. 200170, JOHNSON COUNTY, KANSAS, MAP NO. 20091C0023G, AND DATED AUGUST 3, 2009.



VICINITY MAP
SEC. 8–12–25

SCALE: 1"=2000'

SCALE: 1"=80'
0' 80' 160'

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
FAX (913) 393-1166
www.phelpsengineering.com
PLANNING ENGINEERING IMPLEMENTATION

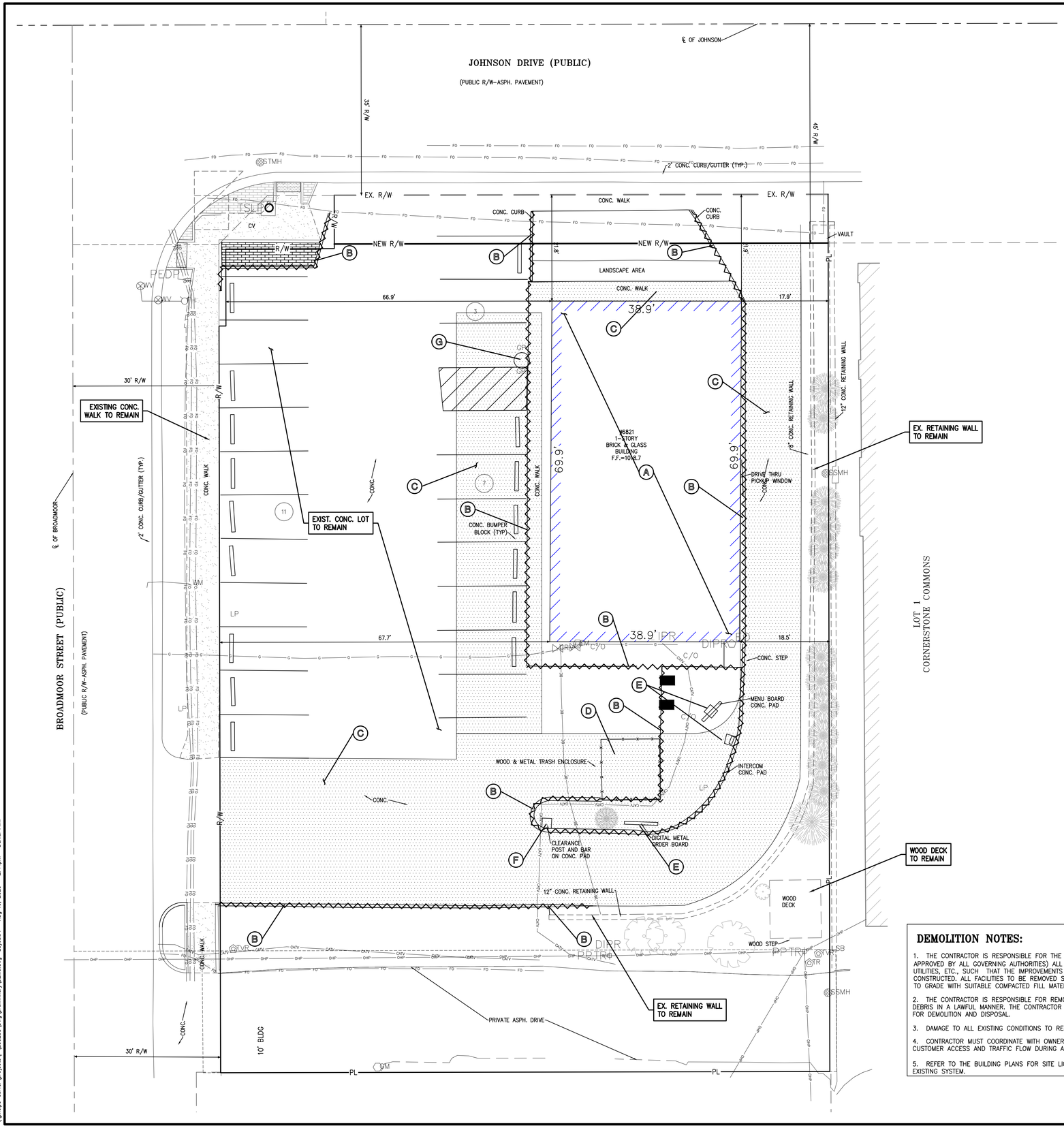
COVER SHEET
POPEYE'S LOUISIANA KITCHEN
6821 JOHNSON DRIVE
MISSION, KANSAS 66202

No.	Date	Revisions:	By	App.
1.	08-16-23	REVISED PER STAFF COMMENTS	AEB	DAF

PROJECT NO. 230238
DATE: 6-23-2023 | DRAWN: AEB
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING – LS-82
CERTIFICATE OF AUTHORIZATION LAND SURVEYING – 2007001128
ENGINEERING–2007005328

SHEET
C0

\\phelps-server\projects\P\230238\Dwg\preliminary\COVER.dwg Layout:1 Aug 16, 2023 - 2:45pm Daniel Finn



Know what's **below.**
Call before you dig.

UTILITY NOTES:
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DEMOLITION KEY NOTES:

(A) SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR DEMOLITION OF EXISTING BUILDING.

(B) REMOVE EXISTING CURB.

(C) REMOVE EXISTING CONCRETE PAVEMENT.

(D) REMOVE EXISTING TRASH ENCLOSURE.

(E) REMOVE EXISTING MENU BOARDS.

(F) REMOVE EXISTING CLEARANCE BAR, POST AND CONCRETE PAD.

(G) REMOVE EXISTING POLE AND CONCRETE BASE.

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- REMOVE EXISTING CURB & GUTTER
- EXISTING BUILDING TO BE REMOVED
- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- EXISTING CONCRETE PAVEMENT/SIDEWALK TO BE REMOVED
- EXISTING GRAVEL TO BE REMOVED
- EXISTING TREE TO REMAIN
- REMOVE TREE
- BT — EXISTING BURIED TELEPHONE
- CATV — EXISTING CABLE TELEVISION LINE
- FO — EXISTING FIBER OPTIC LINE
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- BE — EXISTING BURIED ELECTRIC
- OHP — EXISTING OVERHEAD POWER LINE
- SS — EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING FIRE HYDRANT
- LP — EXISTING LIGHT POLE
- EXISTING CHAIN LINK FENCE

DEMOLITION NOTES:

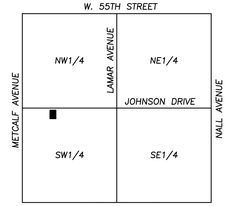
1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL CURBS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL.

2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.

3. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

4. CONTRACTOR MUST COORDINATE WITH OWNER PRIOR TO ANY CONSTRUCTION TO ESTABLISH CUSTOMER ACCESS AND TRAFFIC FLOW DURING ALL PHASES.

5. REFER TO THE BUILDING PLANS FOR SITE LIGHTING ELECTRICAL MODIFICATIONS (IF ANY) TO THE EXISTING SYSTEM.



VICINITY MAP
SEC. 8-12-25

SCALE: 1"=2000'

SCALE: 1"=10'
0' 10' 20'

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1156
www.phelpsengineering.com

PLANNING
ENGINEERING
IMPLEMENTATION

DEMOLITION PLAN
POPEYE'S LOUISIANA KITCHEN
6821 JOHNSON DRIVE
MISSION, KANSAS 66202

Revisions:	No.	Date	By	App.
REVISED PER STAFF COMMENTS	1.	08-16-23	AEB	DAF

PROJECT NO. 230238
DATE: 08-23-2023 | DRAWN: AEB
CHECKED: DAF | APPROVED: JDC

CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING - LS-82
ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007001128
ENGINEERING-2007003339

SHEET
C1

MISSION WEST GATEWAY FORM BASED CODE

LOW-RISE BUILDINGS

Low-rise buildings are single-story buildings under single tenancy or divided into multiple storefronts. Low-rise buildings are permitted in the West Gateway District under the following conditions:

+ Low-rise buildings may be developed in any sector, provided the total site area does not exceed 1/2 acre.
+ Low-rise buildings, built according to low-rise building guidelines, may be developed as up to 60% of the gross square feet of development (in one or multiple buildings) in any sector provided the total site area does not exceed 3 acres.
+ Low-rise buildings, built according to low-rise building guidelines, may be developed as up to 20% of the gross square feet of development or 20,000 square feet, whichever is less (in one or multiple buildings) in any sector provided the site area exceeds 3 acres.

Low-rise buildings may include commercial retail and support uses only. Low-rise buildings are typically parked in surface lots, but may utilize structured parking. Low-rise buildings are either 1 or 2 stories tall, and must be no less then 26' in height from grade. A mezzanine level may be built inside the building, but must include windows facing streets. Entrances to Low-rise buildings shall be direct (rather than through a lobby), from both street side and parking lots. Parking must be provided in either a well-designed surface lot or a structured garage, not to exceed the height of the building, behind the building (away from the street).

A	FRONT SETBACK	0' - 10'	The Front Setback is measured from the property line along the principal frontage to the main facade of the building. Elements which contribute to the Public Realm may encroach into the Front Setback. These elements may include balconies, porches, stoops, and cornice and eave details.
B	SIDE STREET SETBACK	0' - 10'	Side Street Setback applies to lots at the intersections of streets. Side Street Setback is measured from the property line along the secondary frontage to the facade of the building. Encroachments that contribute to the Public Realm may be considered, based on architectural merit.
C	SIDE LOT SETBACK	0' MIN	Side Lot Setback is measured from the side lot line to the side elevation of the building. No encroachments in the Side Setback are permitted. The 0' minimum dimension is intended to encourage continuous facades along the street. Building Code requirements must still be met.
D	REAR SETBACK	0' MIN	Rear Setback is measured from the rear property line to the rear elevation of the nearest building. Encroachments in the Rear Setback are limited to eave overhangs and cornices.
E	PARKING		Parking is permitted in the rear of lots only, and may be accessed on side streets as dictated by the Regulating Plan. For interior, or non-corner lots, parking is permitted along the full width of the property in the rear, up to the rear of the building. For corner lots, parking must be set back 10-20' from a side street. A minimum 20' is required when properly landscaped and minimum 10' when screened from view through the use of a 4' high wall, fence or evergreen hedge, installed in the side street setback. Parking lots set back 40' or more from a side street do not require the wall, fence or hedge, but all must be landscaped as per the Landscape Guidelines

URBAN GUIDELINES BY BUILDING TYPE
CHAPTER 4: PAGE 2

07.29.14

811 Know what's below. Call before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 6" CURB
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- L/S — LANDSCAPE SETBACK LINE
- STANDARD DUTY ASPHALT PAVEMENT
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- CONCRETE SIDEWALK

VICINITY MAP
SEC. 8-12-25

SCALE: 1"=2000'

SCALE: 1"=10'
0' 10' 20'

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SITE PLAN - AERIAL

POPEYE'S LOUISIANA KITCHEN
6821 JOHNSON DRIVE
MISSION, KANSAS 66202

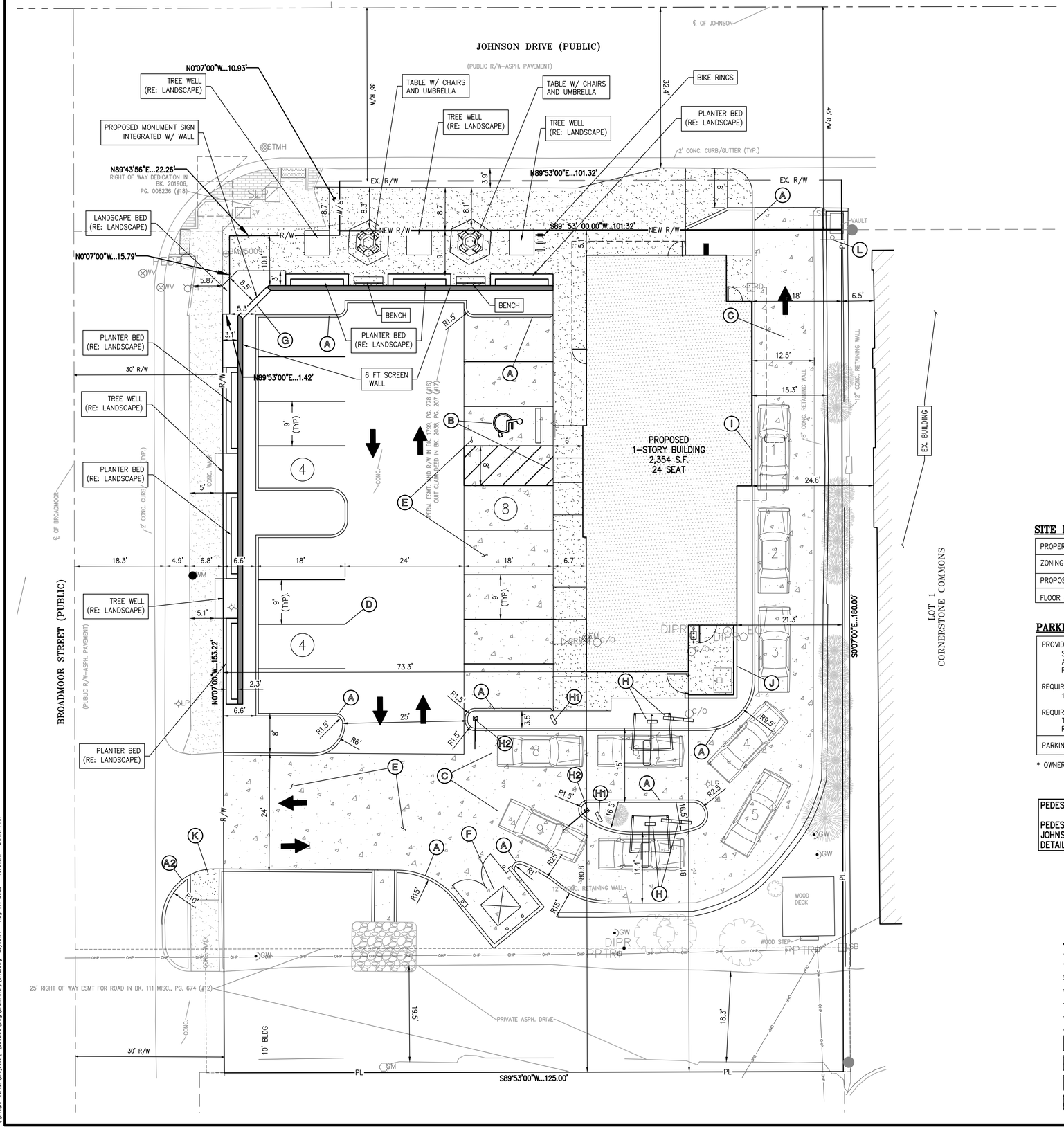
Revisions:	No.	Date	By	Appr.
REVISED PER STAFF COMMENTS	1.	08-16-23	AEB	DAF

PROJECT NO. 230238
DATE 06-23-2023 | DRAWN AEB
CHECKED DAF | APPROVED JDC

CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING - LS-82
ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007001128
ENGINEERING-2007005008

SHEET
C2



SITE PLAN NOTES:

1. All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference:
   A) City ordinances & O.S.H.A. Regulations.
   B) The City of Mission Technical Specifications and Municipal Code..
   C) The Project Specifications.
2. The contractor shall have one (1) signed copy of the plans (approved by the City) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.
3. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Mission, Kansas, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
4. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall assume all responsibility for protecting and maintaining his work during the construction period and between the various trades/sub-contractors constructing the work.
5. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state and federal regulations.
6. Contractor shall be responsible for all relocations, including but not limited to, all utilities, storm drainage, sanitary sewer services, signs, traffic signals & poles, etc. as required. All work shall be in accordance with governing authorities specifications and shall be approved by such. All cost shall be included in base bid.
7. All existing utilities indicated on the drawings are according to the best information available to the Engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All utilities, shown and unshown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.
8. The contractor will be responsible for all damage to existing utilities, pavement, fences, structures and other features not designated for removal. The contractor shall repair all damages at his expense.
9. The contractor shall verify the flow lines of all existing storm or sanitary sewer connections and utility crossings prior to the start of construction. Notify the engineer of any discrepancies.
10. SAFETY NOTICE TO CONTRACTOR: In accordance with generally accepted construction practices, the contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on or near the construction site.
11. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

SITE DIMENSION NOTES:

1. BUILDING TIES SHOWN ARE TO THE OUTSIDE FACE OF PROPOSED WALLS. THE SUBCONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR SPECIFIC DIMENSIONS AND LAYOUT INFORMATION FOR THE BUILDINGS.
2. ALL DIMENSIONS SHOWN FOR THE PARKING LOT AND CURBS ARE MEASURED FORM BACK OF CURB TO BACK OF CURB.

PAVEMENT MARKING AND SIGNAGE NOTES:

1. PARKING STALL MARKING STRIPES SHALL BE FOUR INCH (4") WIDE WHITE STRIPES. DIRECTIONAL ARROW AND HANDICAP STALL MARKINGS SHALL BE FURNISHED AT LOCATIONS SHOWN ON PLANS.
2. HANDICAP PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO ALL FEDERAL (AMERICANS WITH DISABILITIES ACT) AND STATE LAWS AND REGULATIONS.
3. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
4. STOP SIGNS SHALL BE PROVIDED AT ALL LOCATIONS AS SHOWN ON PLANS AND SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". SIGNS SHALL BE 18" X 12", 18 GAUGE STEEL AND SHALL BE ENGINEER GRADE REFLECTIVE.
5. TRAFFIC CONTROL AND PAVEMENT MARKINGS SHALL BE PAINTED WITH A WHITE SHERWIN WILLIAMS S-W TRAFFIC MARKING SERIES B-29Y2 OR APPROVED EQUAL. THE PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. APPLY ON A CLEAN, DRY SURFACE AND AT A SURFACE TEMPERATURE OF NOT LESS THAN 70°F AND THE AMBIENT AIR TEMPERATURE SHALL NOT BE LESS THAN 60°F AND RISING. TWO COATS SHALL BE APPLIED.

SITE DATA

PROPERTY AREA	21,198 S.F. / 0.49 AC.
ZONING	C2-B
PROPOSED BUILDING (1-STORY)	2,354 S.F.
FLOOR AREA RATIO (FAR)	0.111 S.F.

PARKING SUMMARY

PROVIDED PARKING	
STANDARD STALLS (9'-0" X 18'-0")	15
ACCESSIBLE STALLS	1
PROVIDED STALLS	16
REQUIRED PARKING STALLS	
1 STALL / 4 SEATS (24 SEATS)*	6
REQUIRED ACCESSIBLE STALLS	
TOTAL STALLS	1-25
REQUIRED ACCESSIBLE STALLS	1
PARKING LOT % LANDSCAPED	9%

* OWNER ANTICIPATES UP TO 15 EMPLOYEES WORKING DURING MAX SHIFT

PEDESTRIAN LIGHTING NOTE:

PEDESTRIAN STREET LIGHTING TO BE PROVIDED ALONG JOHNSON DRIVE AND COORDINATED WITH CITY STAFF. DETAILS TO BE INCLUDED WITH FINAL DEVELOPMENT PLAN.

- (A) CONSTRUCT PRIVATE 6" CURB (TYPICAL).
- (A1) CONSTRUCT PUBLIC 6" CURB (TYPICAL).
- (B) CONSTRUCT ACCESSIBLE PARKING SPACE. INSTALL MARKINGS PER STD. DETAIL. INSTALL VAN ACCESSIBLE PARKING SIGN. (1 TOTAL).
- (C) CONSTRUCT DRIVE THRU LANE W/ CONCRETE PAVEMENT.
- (D) INSTALL PAVEMENT STRIPPING (TYPICAL).
- (E) CONSTRUCT CONCRETE PAVEMENT.
- (F) INSTALL TRASH ENCLOSURE WITH HEAVY DUTY CONCRETE PAVEMENT (RE: ARCH. PLANS FOR ENCLOSED DETAILS).
- (G) PROPOSED MONUMENT SIGN (RE: ARCHITECT PLANS).
- (H) INSTALL MENU BOARD AND ORDER BOX (RE: ARCH. PLANS).
- (H1) INSTALL PRE-ORDER MENU BOARD (RE: ARCH. PLANS).
- (H2) INSTALL MENU BOARD AND ORDER BOX (RE: ARCH. PLANS).
- (I) PICK-UP WINDOW (RE. ARCH. PLANS).
- (J) CONSTRUCT SCREEN WALL (RE: ARCH. PLANS).
- (K) CONSTRUCT PUBLIC CONC. SIDEWALK RAMP.
- (L) INSTALL STOP SIGN AND CONCRETE BASE (TYPICAL).

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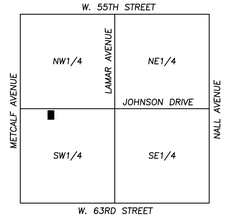

VICINITY MAP
SEC. 8-12-25

SCALE: 1"=2000'

SCALE: 1"=10'
0' 10' 20'

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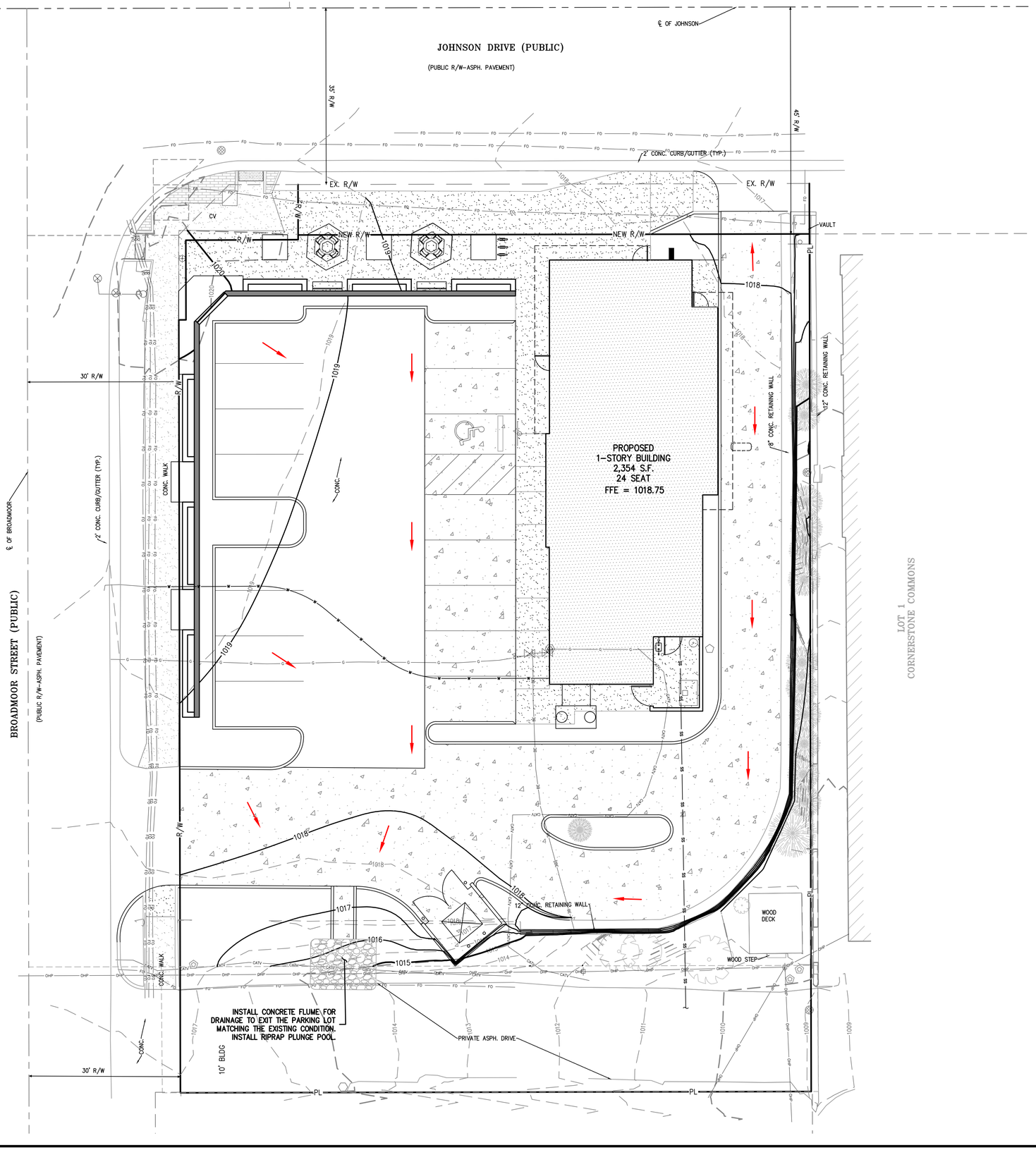

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SITE GRADING NOTES:

1. CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one foot (1') contour intervals, unless otherwise noted, proposed contours and elevations shown represent approximate finish grade. Contractor shall hold down subgrades to allow for pavement and sub-base thicknesses.
2. If the contractor does not accept existing topography as shown on the plans, without exception, he shall have made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.
3. CLEARING AND GRUBBING: Prior to beginning preparation of subgrade, all areas under pavements or building shall be stripped of all topsoil, vegetation, large rock fragments (greater than 6 inches in any dimension) and any other deleterious material. The actual stripping depth should be based on visual examination during construction and the results of proof-rolling operations. The root systems of all trees (not designated to remain) shall be removed in their entirety. Stripping materials shall not be incorporated into structural fills.
4. TOPSOIL STRIPPING: Prior to the start of site grading, the contractor shall strip all topsoil from areas to be graded, and stockpiled at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. At that time, and prior to the installation of landscaping or irrigation, all topsoil graded areas shall be visually inspected and accepted by the owner and ITL.
5. Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade. Contractor shall assure positive drainage away from buildings for all natural and paved areas.
6. SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.
7. PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and pavement areas to receive engineered fill should be systematically proof-rolled using a tandem axle dump truck loaded to approximately 20,000 pounds per axle. Also, any finished subgrade areas to receive paving shall be proof-rolled within 48 hours of paving. Unsuitable soils that are detected and that can not be recompacted should be over-excavated and replaced with controlled structural fill.
8. EARTHWORK:

   A) GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report. Said report and its recommendations are herein incorporated into the project requirements by reference. Prior to beginning construction, the contractor shall obtain a copy of and become familiar with the geotechnical report. Unless specifically noted on the plans, the recommendations in the geotechnical report are hereby incorporated into the project requirements and specifications.

   B) SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.

   C) FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil and debris. In areas where the thickness of the engineered fill is greater than five, feet building and pavement construction should not commence until so authorized by the on-site geotechnical engineer to allow for consolidation.

   D) BUILDING SUBGRADE: As specified in the Geotechnical Engineering Report, the upper section of building subgrade shall consist of Low Volume Change (LVC) material defined as approved, compacted granular fill or low to moderate plasticity cohesive soil materials stabilized with Class C Flyash. Granular fill shall consist of compacted granular materials with a maximum particle size of two (2) inches or less, such as limestone screenings. Refer to geotechnical report for complete requirements.

   E) EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). The benches should be cut wide enough to accommodate the compaction equipment. Fill material shall be placed and compacted in horizontal lifts not exceeding nine inches (9") (loose lift measurement), unless otherwise approved by the Geotechnical Engineer.

   F) COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall within a range of 0% below to 4% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.
9. All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 6" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.
10. TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.
11. CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock excavation.
12. PERMANENT RESTORATION: All areas disturbed by earthwork operations shall be sodded, unless shown otherwise by the landscaping plan or erosion control plan.
13. UTILITIES: The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
14. LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P.P. requirements.

BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING SMARTNET GPS NETWORK

1. SET "□" CUT IN BACK OF CURB NW CORNER OF PARKING LOT
   ELEVATION = 1020.60

FLOOD NOTE:

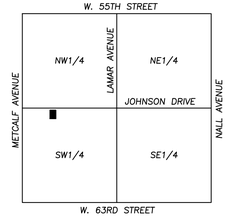
THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF MISSION, COMMUNITY NO. 200170, JOHNSON COUNTY, KANSAS, MAP NO. 20091C0023G, AND DATED AUGUST 3, 2009.

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 920 — EXISTING CONTOURS
- 918 —
- 920 — PROPOSED CONTOURS
- 918 —
- 1088.00 SW — PROPOSED SPOT ELEVATION

LG	LIP OF GUTTER
TC	TOP OF CURB
SW	SIDEWALK
ME	MATCH EXISTING
HP	HIGH POINT
LP	LOW POINT
P	TOP OF PAVEMENT
TE	TOP OF STRUCTURE
GR	GROUND ELEVATION
BS	BOTTOM OF STEPS
TS	TOP OF STEPS
BW	BOTTOM OF WALL
TW	TOP OF WALL

- EXISTING STORM SEWER
- PROPOSED STORM PIPE
- PROPOSED WET CURB & GUTTER
- PROPOSED DRY CURB & GUTTER
- PROPOSED RETAINING WALL
- DENOTES FLOW DIRECTION



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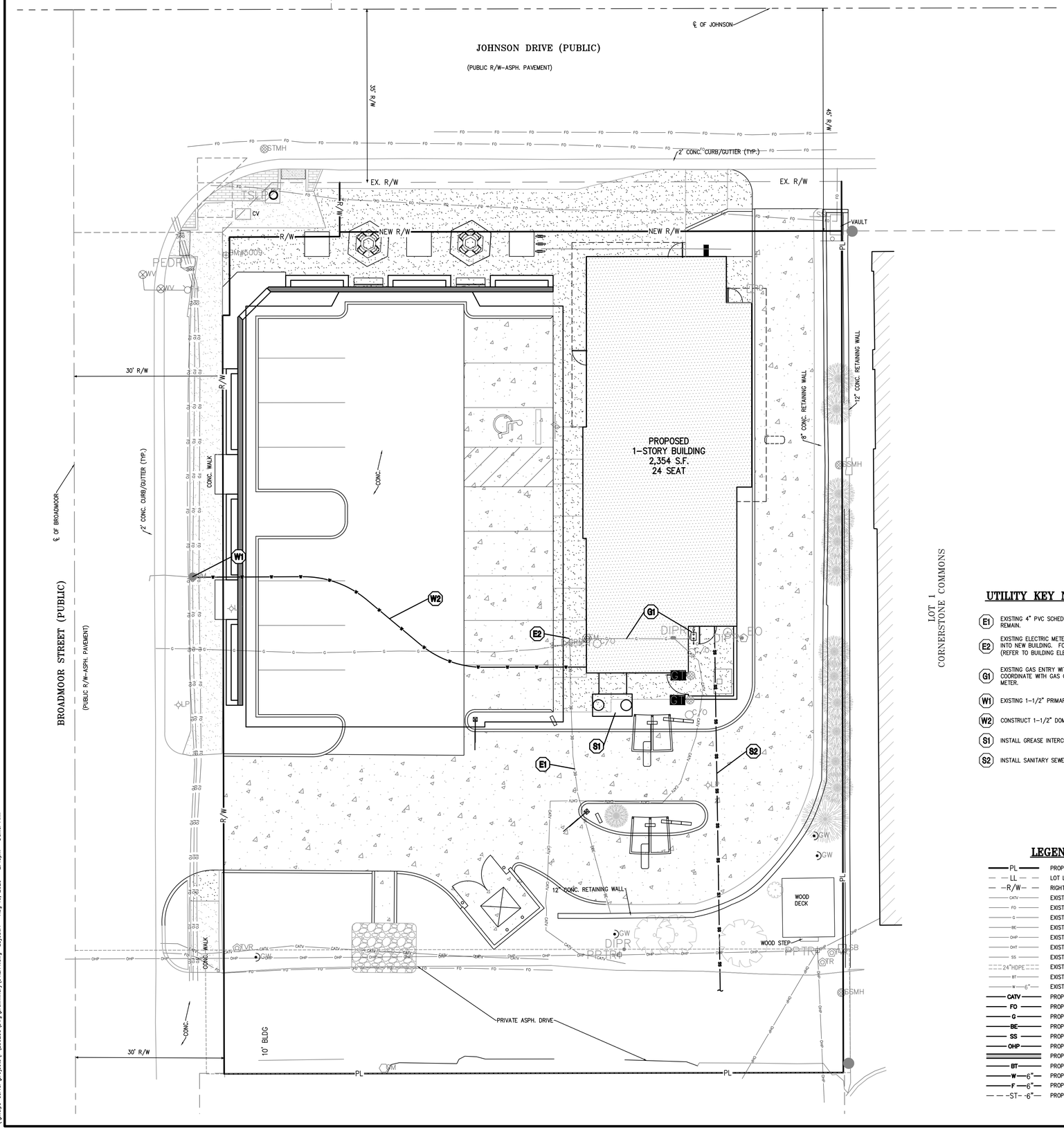
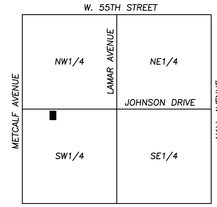


UTILITY KEY NOTES:

- (E1) EXISTING 4" PVC SCHEDULE 40 PRIMARY ELECTRICAL CONDUIT TO REMAIN.
- (E2) EXISTING ELECTRIC METER TO BE USED FOR ELECTRIC ENTRY INTO NEW BUILDING. FOLLOW ELECTRIC COMPANY REQUIREMENTS (REFER TO BUILDING ELECTRIC PLAN.)
- (G1) EXISTING GAS ENTRY WITH GAS METER. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR TYING OF EXISTING GAS METER.
- (W1) EXISTING 1-1/2" PRIMARY WATER METER PIT.
- (W2) CONSTRUCT 1-1/2" DOMESTIC WATERLINE.
- (S1) INSTALL GREASE INTERCEPTOR.
- (S2) INSTALL SANITARY SEWER LINE.

LEGEND

PL	PROPERTY LINE
LL	LOT LINE
R/W	RIGHT-OF-WAY
CATV	EXISTING CABLE TELEVISION LINE
FO	EXISTING FIBER OPTIC LINE
G	EXISTING GAS LINE
BE	EXISTING BURIED ELECTRIC LINE
OHP	EXISTING OVERHEAD POWER LINE
OHT	EXISTING OVERHEAD TELEPHONE LINE
SS	EXISTING SANITARY SEWER LINE
24"HDPE	EXISTING STORM SEWER LINE (& SIZE)
BT	EXISTING BURIED TELEPHONE LINE
W 6"	EXISTING WATER LINE (& SIZE)
CATV	PROPOSED CABLE TELEVISION LINE
FO	PROPOSED FIBER OPTIC LINE
G	PROPOSED GAS LINE
BE	PROPOSED BURIED ELECTRIC LINE
SS	PROPOSED SANITARY SEWER LINE
OHP	PROPOSED OVERHEAD POWER LINE
	PROPOSED STORM SEWER LINE (& SIZE)
BT	PROPOSED BURIED TELEPHONE LINE
W 6"	PROPOSED WATER LINE (& SIZE)
F 6"	PROPOSED FIRE LINE (& SIZE)
-ST- 6"	PROPOSED ROOF DRAIN (& SIZE)



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UTILITY NOTES:

1. The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate &/or remove all existing utilities which conflict with the proposed improvements shown on the plans.
2. The construction of storm sewers on this project shall conform to the requirements of the City's Technical Specifications and Design Criteria.
3. The contractor shall field verify the exact location and elevation of the existing storm sewer lines and the existing elevation at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans, the contractor shall contact the design engineer. No pipes shall be laid until direction is received from the design engineer.
4. It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.
5. Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. Spacing and at all bend points. Do not connect roof drains directly to storm sewer pipe.
6. The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, backflow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the buildings shall be the responsibility of the contractor. All work shall conform to the requirements of City.
7. The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the buildings to the public line. All work shall conform to the requirements of the City and Johnson County Unified Wastewater District.
8. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
9. By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.
10. The Contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structures. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.
11. All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
12. Contractor shall notify the utility authorities inspectors 48 hours before connecting to any existing line.
13. Water lines shall be as follows (unless otherwise shown on plans):

    A. Pipe sizes less than 3-inches that are installed below grade and outside building shall comply with the following:
    1. Seamless Copper Tubing: Type "K" soft copper, ASTM B88.
    2. Fittings: Wrought copper (95_5 Tin Antimony solder joint), ASME B 16.22.

    B. Pipe sizes 3-inches Through 48-inches that are installed below grade and outside building shall comply with one of the following:
    1. Gray Cast Iron Water Pipe: ANSI A21.6, thickness class 52.
       a. Fittings: Either mechanical joint or push_on joint, AWWA C110 or AWWA C111.
       b. Elastomeric gaskets and lubricant: ASTM F477.
       c. Cement Mortar Lining, AWWA C104
    2. Ductile Iron Water Pipe: AWWA C151, thickness class 50.
       a. Fittings: Either mechanical joint or push_on joint, AWWA C110 or AWWA C111.
       b. Elastomeric gaskets and lubricant: ASTM F477.
       c. Cement Mortar Lining, AWWA C104
    3. Polyvinyl Chloride (PVC) Water Pipe: Pipe, AWWA C900, rated DR 18 (Class 150), continually marked as required.
       a. Elastomeric gaskets and lubricant: ASTM F477 for smaller pipes.
       b. Pipe joints: Integrally molded bell ends, ASTM D3139.
       c. Trace wire: Magnetic detectable conductor, (#12 Copper) brightly colored plastic covering imprinted with "Water Service" in large letters
14. Minimum trench width shall be 2 feet.
15. Contractor shall maintain a minimum of 42" cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to waterone's specifications for commercial services.
16. All waterlines shall be kept min. ten (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 24" vertical clearance (outside edge of pipe to outside edge of pipe) of the water line above the sewer line is required.
17. Sanitary conflicts will be resolved prior to permit issuance.
18. In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of crossing (or encased in concrete this same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 24" clearance. Meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C-151) (CLASS 50).
19. All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.
20. All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
21. Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place & tested prior to paving.
22. When a building utility connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such site utility terminations.
23. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1066
www.phelpsengineering.com
PLANNING
ENGINEERING
IMPLEMENTATION

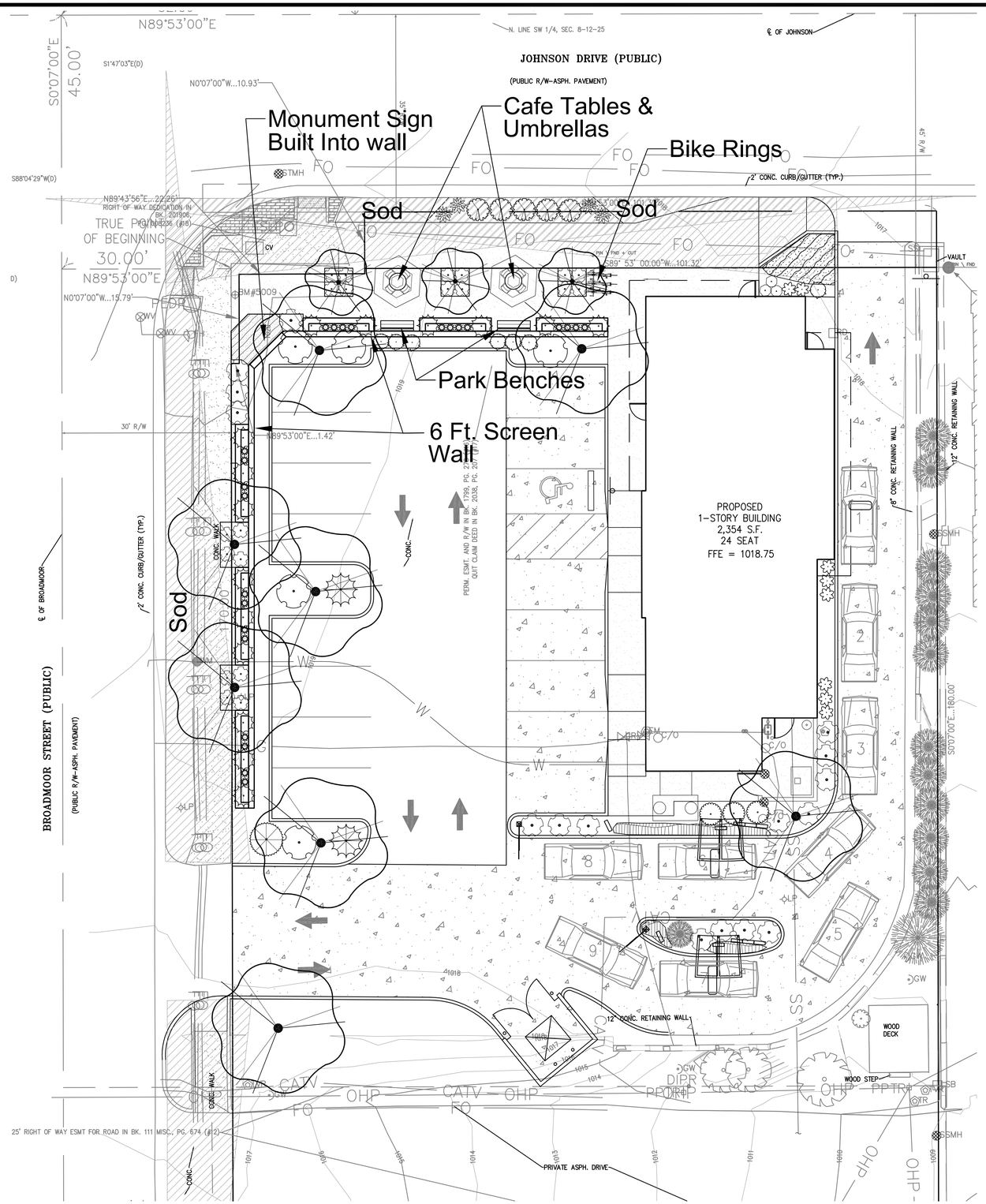
UTILITY PLAN

POPEYE'S LOUISIANA KITCHEN
6821 JOHNSON DRIVE
MISSION, KANSAS 66202

Revisions:	No.	Date	By	App.
REVISED PER STAFF COMMENTS	1.	08-16-23	AEB	DAF

PROJECT NO. 230238
DATE: 08-23-2023 | DRAWN: AEB
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING - LS-82
CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128
ENGINEERING-2007005268

SHEET
C5



Sight Triangle

15'

140'

CONCEPT PLANT SCHEDULE

	MEDIUM SHADE TREES	8
	ORNAMENTAL TREE	3
	COLUMNAR EVERGREEN SHRUB	7
	SPREADER EVERGREEN SHRUB	1
	DECIDUOUS SHRUB 1	5
	DECIDUOUS SHRUB II	5
	LOW SPREADING EVERGREEN	2
	ORNAMENTAL GRASS TALL	3
	ORNAMENTAL GRASS MEDIUM	8
	ORNAMENTAL GRASS MEDIUM II	24
	SMALL DECIDUOUS SHRUB	36
	MEDIUM ORNAMENTAL SHRUB	3
	PERENNIAL	4
	LOW SPREADING EVERGREEN II	15
	PERENNIAL I	137 sf
	GROUNDCOVER I	82 sf

NOTES:
All landscape plant material shall be native and/or hardy in the State of Kansas.

Details and specifications to be provided in construction documents.

SCALE 1" = 10'

Utility Note:

Utilities shown on plan are diagramatic and some may be missing. Before starting any construction call appropriate locating service. In Kansas call 1-800-DIG-SAFE (344-7233) to have utilities located.

PETER A. OPPERMANN LICENSED LANDSCAPE ARCHITECT KANSAS

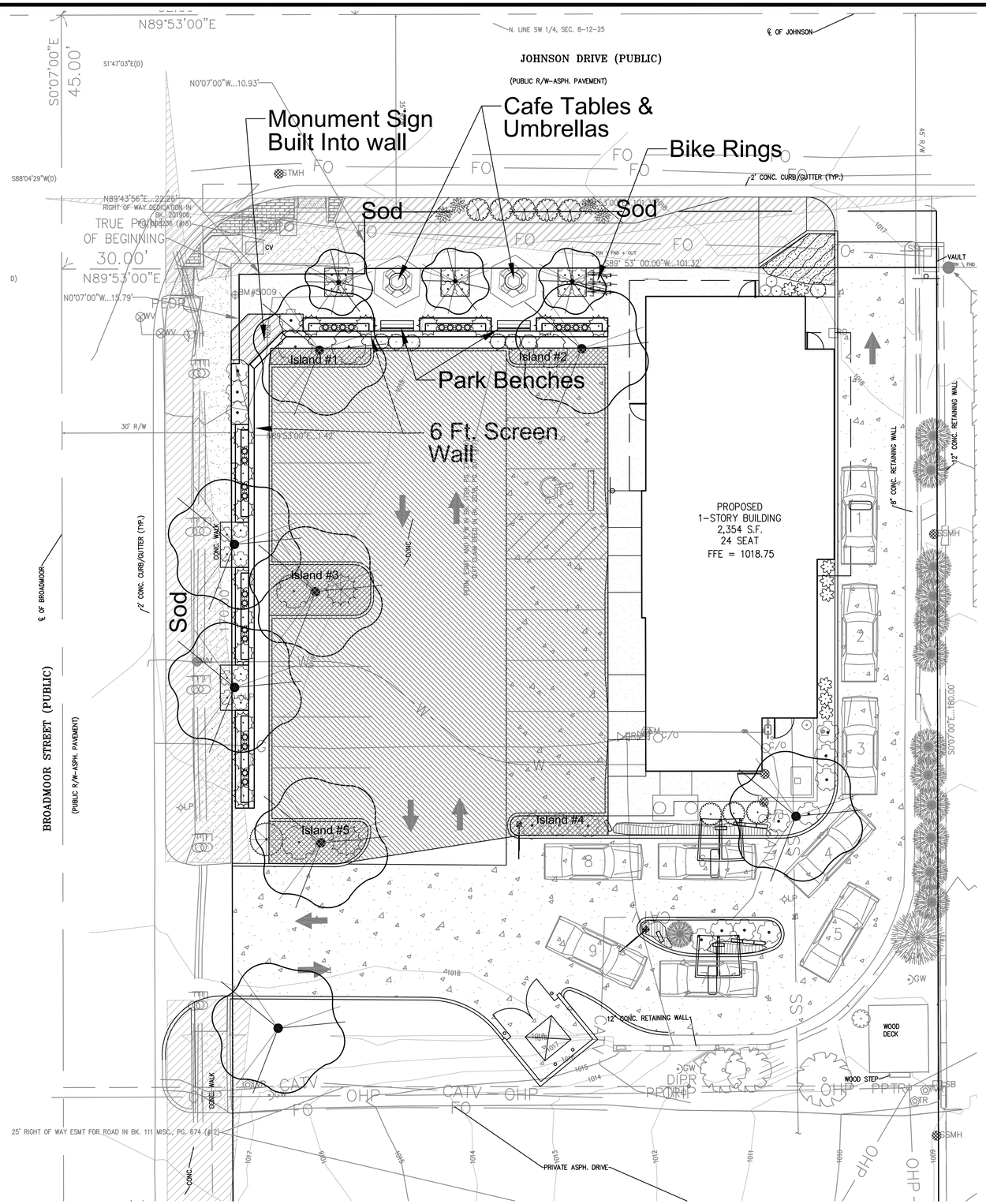
08/17/2023

Preliminary Landscape Plan
Popeye's Louisiana Kitchen

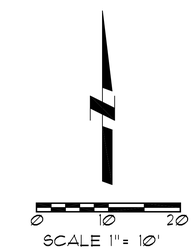
Johnson Drive and Broadmoor St.
Mission, Kansas

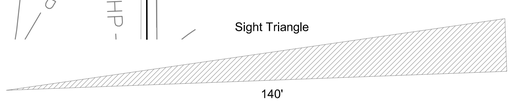
LS-1

Oppermann LandDesign, LLC
Land Planning ♣ Landscape Architecture
22 Debra Lane
New Windsor, New York 12553
peteoppermann56@gmail.com
913.522.5598



Parking Lot Island Calcs:
Overall Lot Equals 5326 s.f.
Island #1 50.31 s.f.
Island #2 50.00 s.f.
Island #3 158.15 s.f.
Island #4 59.14 s.f.
Island #5 123.43 s.f.
Ttl. Island 441 s.f.
441 Divided By 5326 = 8.33%





Utility Note:

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PETER A. OPPERMANN
LICENSED
KANSAS
LANDSCAPE ARCHITECT

08/17/2023

Island Square Footage Plan
Popeye's Louisiana Kitchen

Johnson Drive and Broadmoor St.
Mission, Kansas

LS-1

Oppermann LandDesign, LLC
Land Planning & Landscape Architecture
22 Debra Lane
New Windsor, New York 12553
peteoppermann56@gmail.com
913.522.5598

CONCEPT PLANT SCHEDULE

	MEDIUM SHADE TREES	8
	ORNAMENTAL TREE	3
	COLUMNAR EVERGREEN SHRUB	7
	SPREADER EVERGREEN SHRUB	1
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	LOW SPREADING EVERGREEN	2
	ORNAMENTAL GRASS TALL	3
	ORNAMENTAL GRASS MEDIUM	8
	ORNAMENTAL GRASS MEDIUM II	24
	SMALL DECIDUOUS SHRUB	36
	MEDIUM ORNAMENTAL SHRUB	3
	PERENNIAL	4
	LOW SPREADING EVERGREEN II	15
	PERENNIAL I	137 sf
	GROUNDCOVER I	82 sf
	EXISTING EVERGREEN	
	EXISTING SHADE	

0 10 20
SCALE 1" = 10'

Preliminary Landscape Plan
Popeye's Louisiana Kitchen

Johnson Drive and Broadmoor St.
Mission, Kansas

LS-1

08/17/2023

Oppermann LandDesign, LLC
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92 Debra Lane
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Utility Note:

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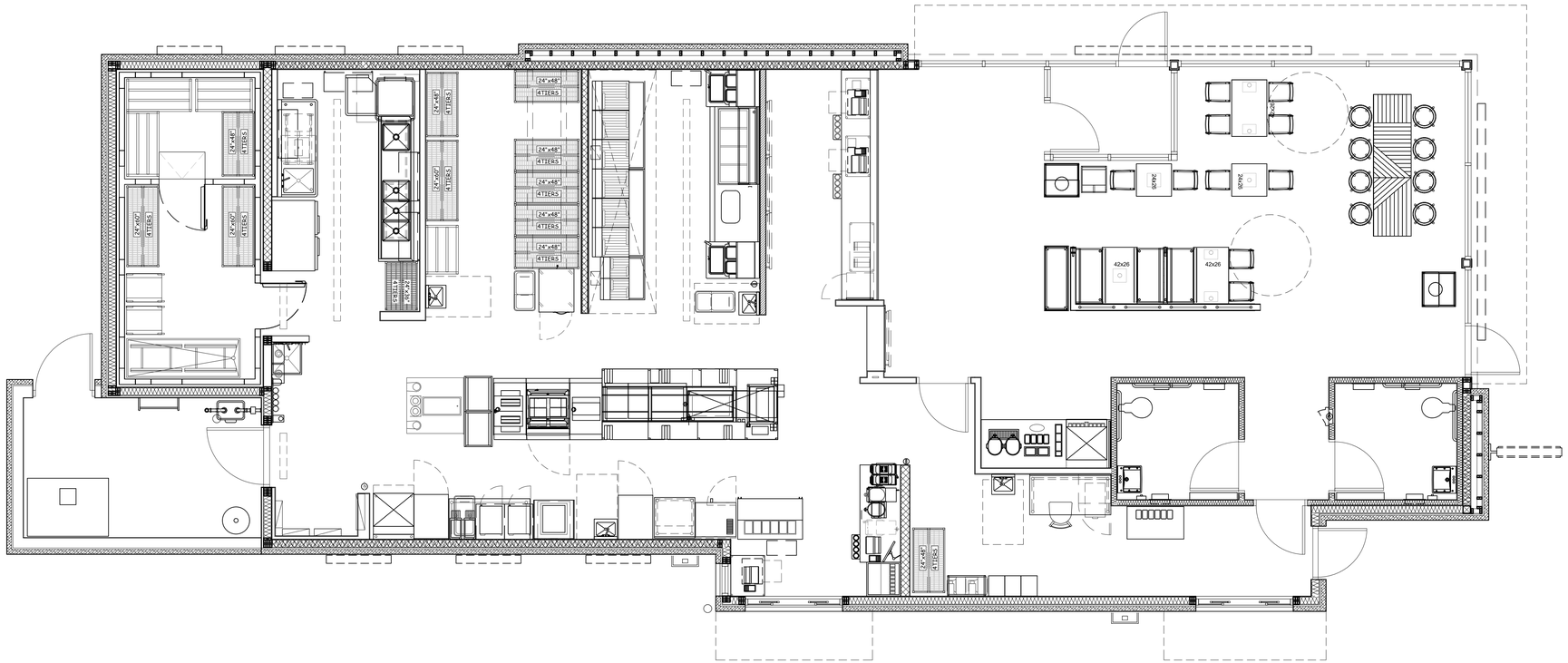


1 / A1 **EQUIPMENT PLAN**

SCALE: 1/4"=1'-0"

NORTH

ISSUE TABLE

No.	Date (mm/dd/yy)	Description
01	02-07-2023	2124 VE UPDATED DRAWINGS

REVISIONS

No.	Date	Description

DRAWINGS REVISED AS PER DESIGN BULLETIN

No.	Date	Description
01	10-27-21	2124 PROTOTYPE DOCUMENTS

Seal

Company Logo

WARMAN *ARCHITECTURE+DESIGN*
1735 SWIFT AVE.
NORTH KANSAS CITY, MISSOURI 64116
V. 816.474.2233 F. 816.474.1051

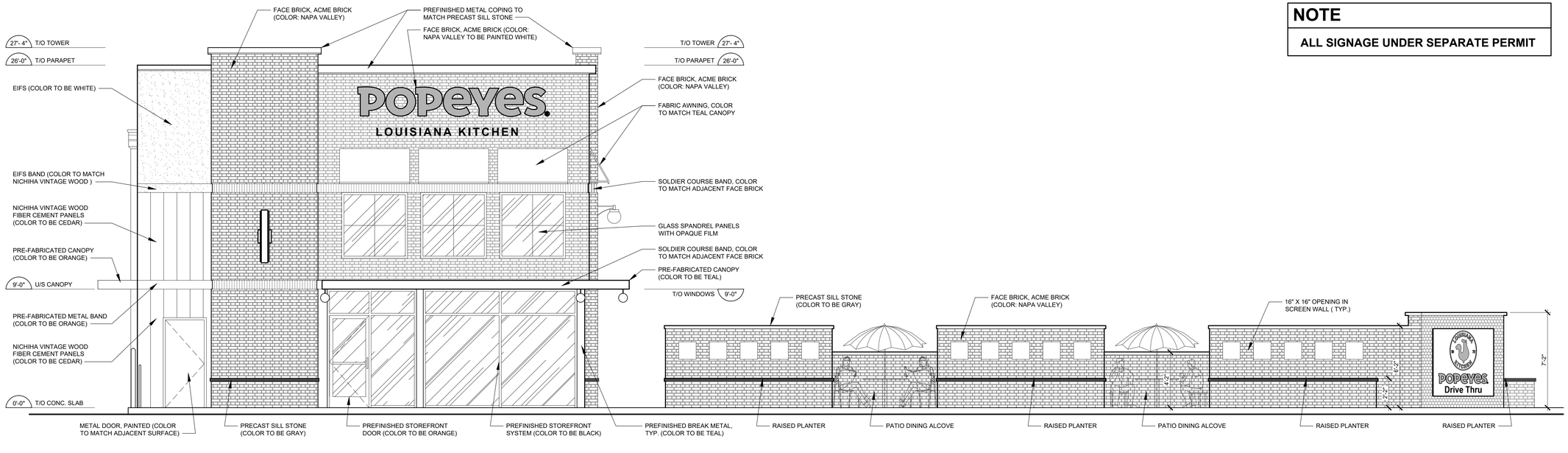
Project

Store Type
ATYPICAL
(BASED ON US 2124 PROTOTYPE)

Location
6821 Johnson Dr
Mission, KS

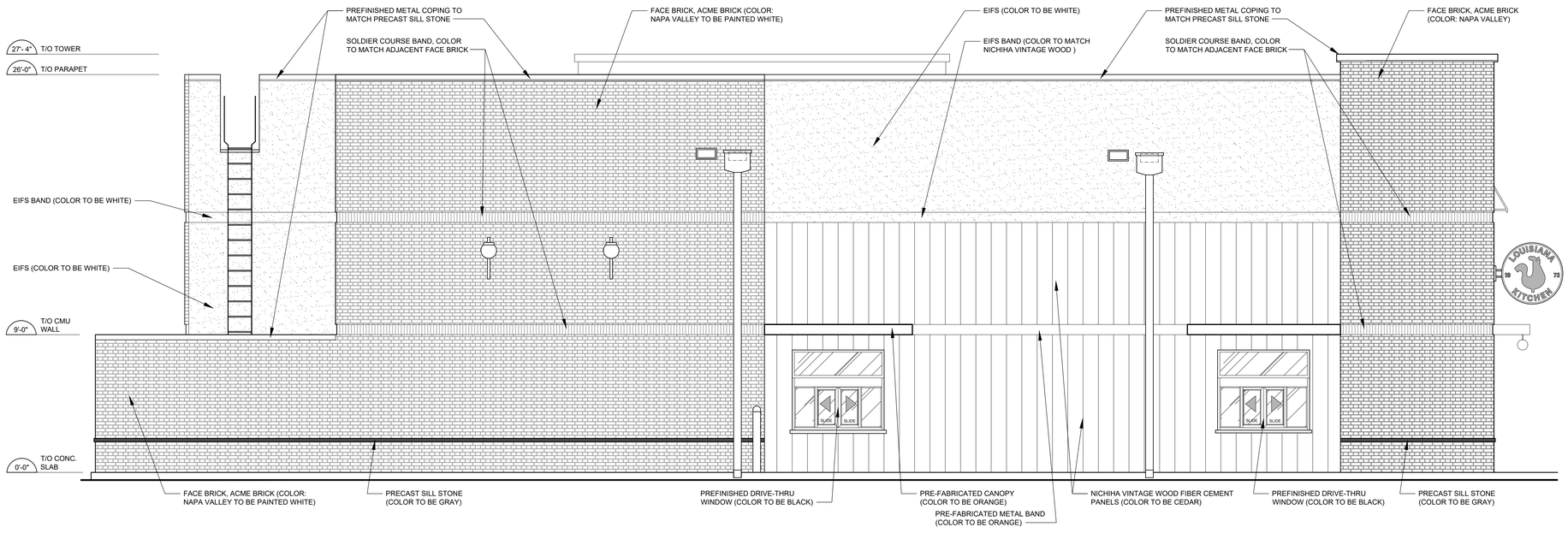
Drawing Title
EQUIPMENT PLAN

Drawn	Checked
cdt	KAW
Scale	**Date**
1/4"=1'-0"	AUGUST 01, 2023
Project No.	**Drawing No.**
5961-23	A1



1 / A5 NORTH ELEVATION

SCALE: 1/4"=1' - 0"



2 / A5 EAST ELEVATION

SCALE: 1/4"=1' - 0"

NOTE

ALL SIGNAGE UNDER SEPARATE PERMIT

ISSUE TABLE

No.	Date (mm/dd/yy)	Description
01	02-07-2023	2124 VE UPDATED DRAWINGS

REVISIONS

No.	Date	Description

DRAWINGS REVISED AS PER DESIGN BULLETIN

No.	Date	Description
01	10-27-21	2124 PROTOTYPE DOCUMENTS

Seal

Company Logo

WARMAN *ARCHITECTURE+DESIGN*
1735 SWIFT AVE.
NORTH KANSAS CITY, MISSOURI 64116
V. 816.474.2233 F. 816.474.1051

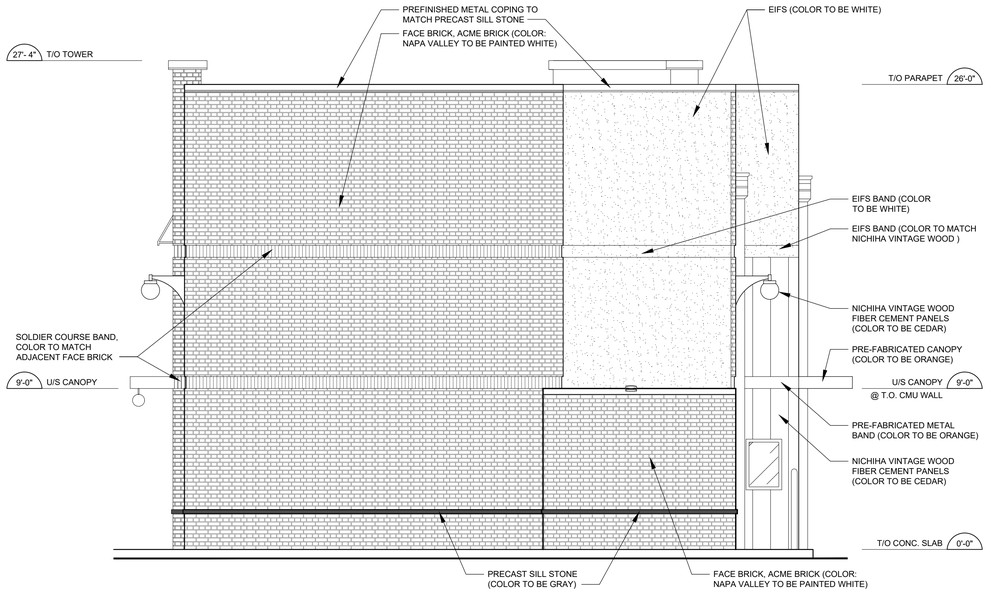
Project

Store Type
ATYPICAL
(BASED ON US 2124 PROTOTYPE)

Location
6821 Johnson Dr
Mission, KS

Drawing Title
EXTERIOR ELEVATIONS

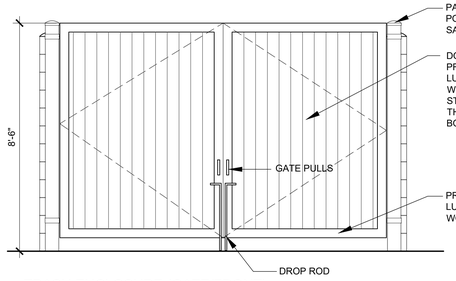
Drawn	Checked
cdt	KAW
Scale	**Date**
1/4"=1'-0"	AUGUST 01, 2023
Project No.	**Drawing No.**
5961-23	A5.0



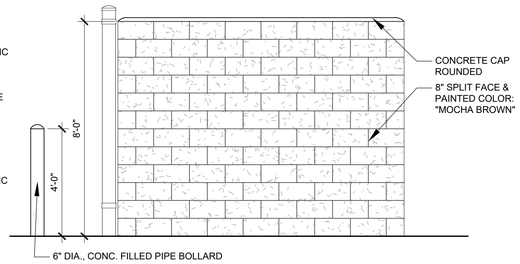
1 A5.1 **SOUTH ELEVATION**
SCALE: 1/4"=1' - 0"

NOTE

ALL SIGNAGE UNDER SEPARATE PERMIT

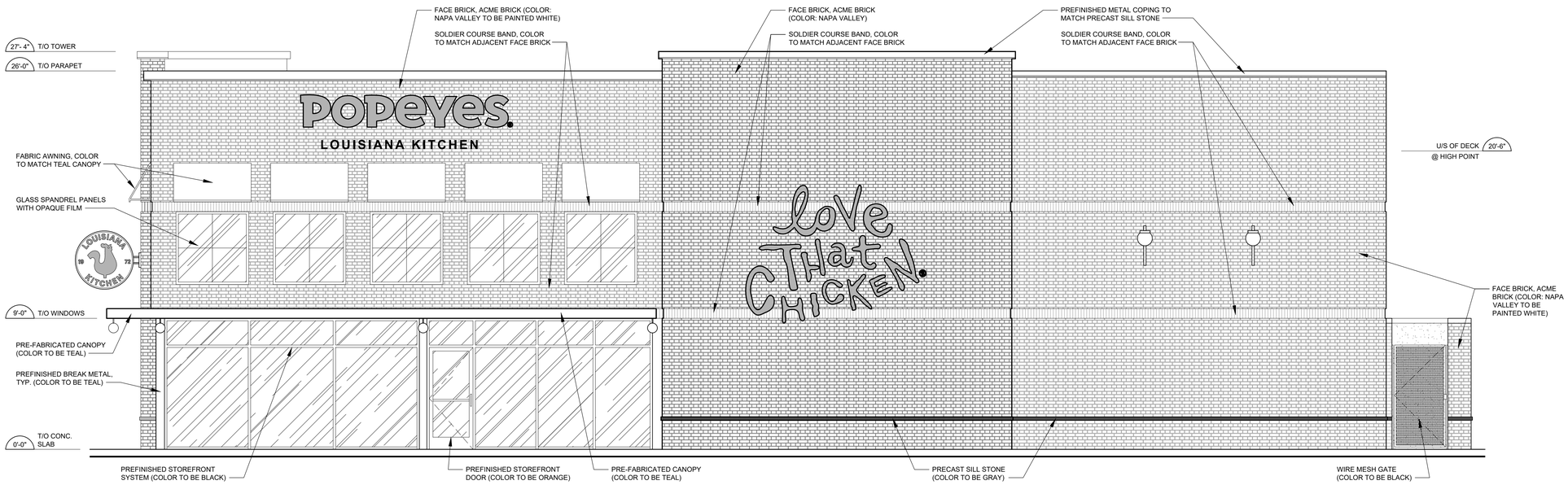


TRASH ENCLOSURE (GATE/FRONT)



TRASH ENCLOSURE (SIDE)

3 A5.1 **DUMPSTER ENCLOSURE ELEVATIONS**
SCALE: 3/8" = 1'-0"



2 A5.1 **WEST ELEVATION**
SCALE: 1/4"=1' - 0"

ISSUE TABLE

No.	Date (mm/dd/yy)	Description
01	02-07-2023	2124 VE UPDATED DRAWINGS

REVISIONS

No.	Date	Description

DRAWINGS REVISED AS PER DESIGN BULLETIN

No.	Date	Description
01	10-27-21	2124 PROTOTYPE DOCUMENTS

Seal

Company Logo
WARMAN *ARCHITECTURE+DESIGN*
1735 SWIFT AVE.
NORTH KANSAS CITY, MISSOURI 64116
V. 816.474.2233 F. 816.474.1051

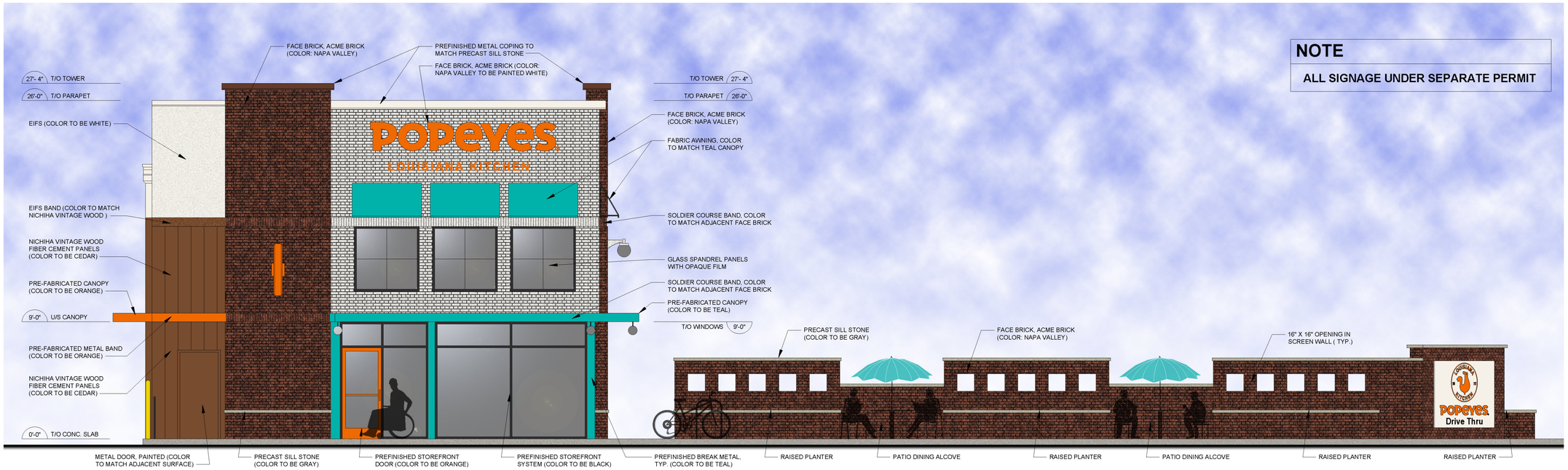
Project

Store Type
ATYPICAL
(BASED ON US 2124 PROTOTYPE)

Location
6821 Johnson Dr
Mission, KS

Drawing Title
EXTERIOR ELEVATIONS

Drawn	Checked
cdt	KAW
Scale	**Date**
1/4"=1'-0"	AUGUST 01, 2023
Project No.	**Drawing No.**
5961-23	A5.1

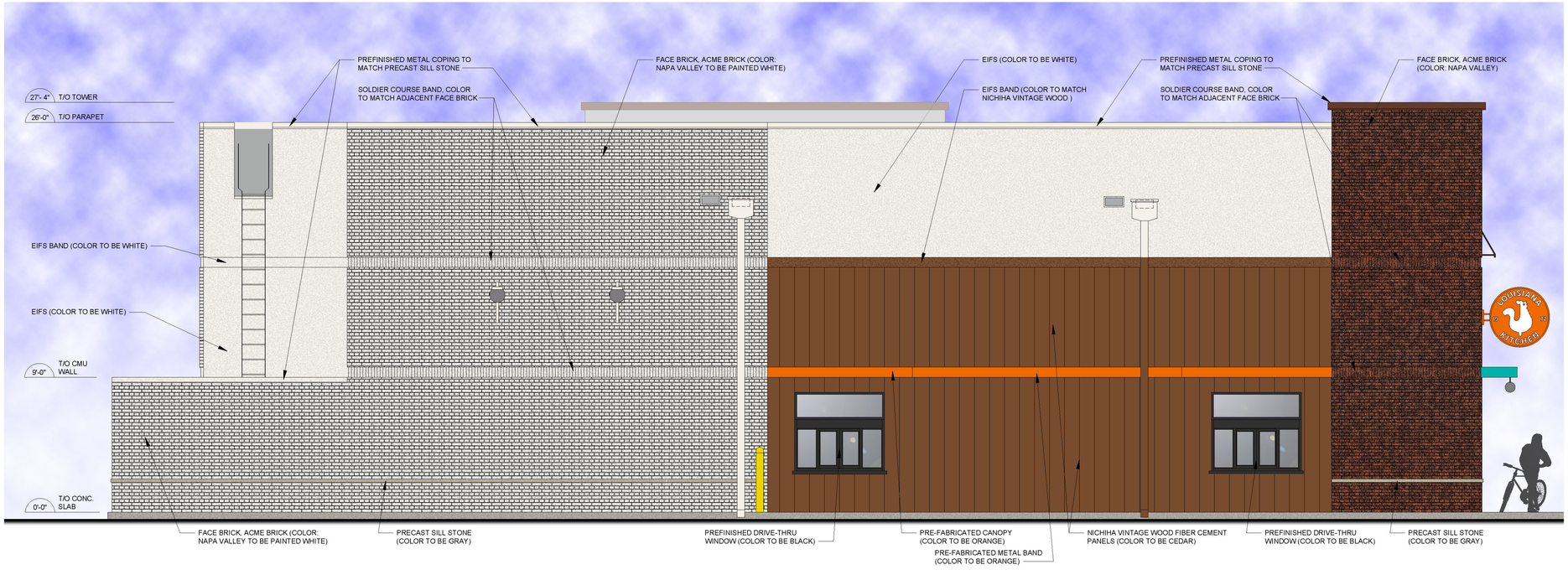


NOTE

ALL SIGNAGE UNDER SEPARATE PERMIT

1 / A5 **NORTH ELEVATION**

SCALE: 1/4"= 1' - 0"



2 / A5 **EAST ELEVATION**

SCALE: 1/4"= 1' - 0"

ISSUE TABLE

No.	Date (mm/dd/yy)	Description
01	02-07-2023	2124 VE UPDATED DRAWINGS

REVISIONS

No.	Date	Description

DRAWINGS REVISED AS PER DESIGN BULLETIN

No.	Date	Description
01	10-27-21	2124 PROTOTYPE DOCUMENTS

Company Logo

WARMAN ARCHITECTURE+DESIGN
1735 SWIFT AVE.
NORTH KANSAS CITY, MISSOURI 64116
V. 816.474.2233 F. 816.474.1051

Project

LOUISIANA KITCHEN 1972

POPEYES

Store Type

ATYPICAL

(BASED ON US 2124 PROTOTYPE)

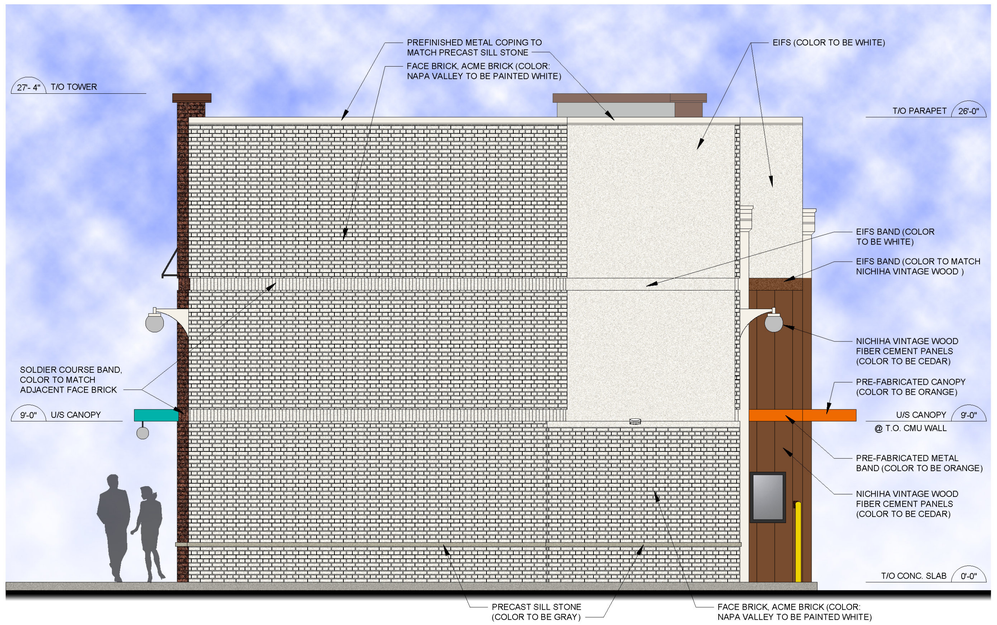
Location

6821 Johnson Dr
Mission, KS

Drawing Title

EXTERIOR ELEVATIONS

Drawn	Checked
cdt	KAW
Scale	**Date**
1/4"=1'-0"	AUGUST 01, 2023
Project No.	**Drawing No.**
5961-23	A5.0

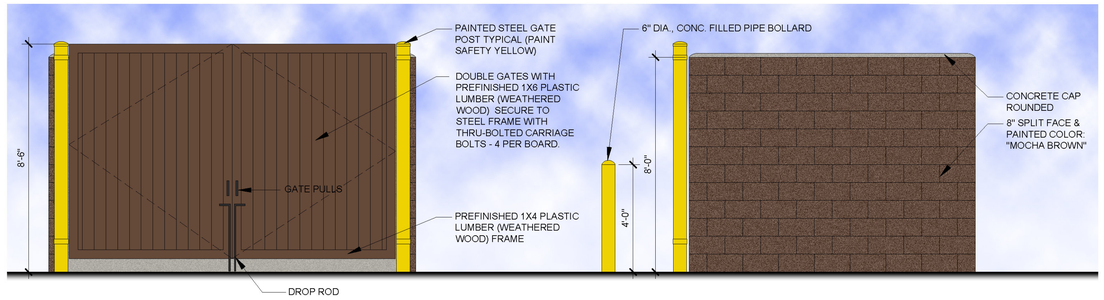


1 A5.1 **SOUTH ELEVATION**

SCALE: 1/4"=1' - 0"

NOTE

ALL SIGNAGE UNDER SEPARATE PERMIT

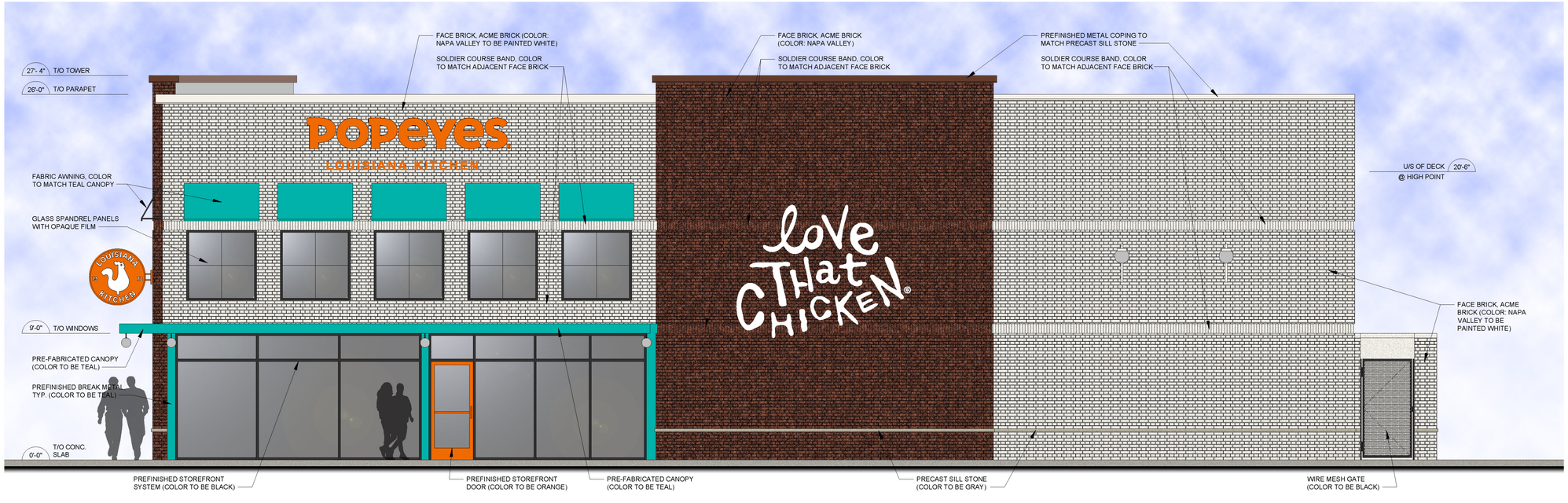


TRASH ENCLOSURE (GATE/FRONT)

TRASH ENCLOSURE (SIDE)

3 A5.1 **DUMPSTER ENCLOSURE ELEVATIONS**

SCALE: 3/8" = 1'-0"



2 A5.1 **WEST ELEVATION**

SCALE: 1/4"=1' - 0"

ISSUE TABLE

No.	Date (mm/dd/yy)	Description
01	02-07-2023	2124 VE UPDATED DRAWINGS

REVISIONS

No.	Date	Description

DRAWINGS REVISED AS PER DESIGN BULLETIN

No.	Date	Description
01	10-27-21	2124 PROTOTYPE DOCUMENTS

Company Logo

WARMAN ARCHITECTURE+DESIGN
1735 SWIFT AVE.
NORTH KANSAS CITY, MISSOURI 64116
V. 816.474.2233 F. 816.474.1051

Project

Store Type
ATYPICAL
(BASED ON US 2124 PROTOTYPE)

Location
6821 Johnson Dr
Mission, KS

Drawing Title
EXTERIOR ELEVATIONS

Drawn	Checked
cdt	KAW
Scale	**Date**
1/4"=1'-0"	AUGUST 01, 2023
Project No.	**Drawing No.**
5961-23	A5.1


NATURAL GROCERS
popeyes
LOUISIANA KITCHEN
love THAT CHICKEN
LOUISIANA KITCHEN
popeyes
DRIVE THRU

Merge Midwest Engineering, LLC
2668 W Catalpa Street
Olathe, KS 66061
913.788.1985

August 17, 2023

Judd Claussen, PE
President
Phelps Engineering, Inc.
1270 N. Winchester
Olathe, KS 66061

SUBJECT Traffic Engineering Services
Popeyes Trip Generation & Queuing Analysis
Mission, Kansas

Dear Mr. Claussen:

As requested, Merge Midwest Engineering, LLC has prepared a trip generation comparison and queue analysis for the proposed Popeyes development located on the southeast quadrant of the intersection of Johnson Drive & Broadmoor Street. The site originally contained a 2,719 square-foot Popeyes Restaurant that experienced fire damage in January 2023. A new 2,354 square-foot Popeyes Restaurant is being constructed in its place. The new restaurant will include a double drive through with two ordering windows. The proposed site plan is shown on **Exhibit 1**.

Trip Generation

The estimated trip generation for the existing and proposed Popeyes Development was based upon the 11th Edition of the Institute of Transportation Engineers (ITE) *Trip Generation Handbook.* As Popeyes does not serve breakfast and typically opens at 11:00 AM, the AM Peak Hour was not analyzed. The daily and PM Peak Hour trip generation is shown in **Table 1** below:

Merge Midwest Engineering, LLC
2668 W Catalpa Street
Olathe, KS 66061
913.788.1985

Table 1 – Daily & PM Peak Hour Trip Generation Comparison							
					PM Peak Hour (VPH)		
Land Use		Qty	Unit	ADT (VPD)	TOTAL	IN	OUT
Previous Popeyes Development							
934	Fast-Food Restaurant w/Drive-Through Window	2,719	SF	1,272	90	47	43
			TOTALS	**1,272**	**90**	**47**	**43**
New Popeyes Development							
934	Fast-Food Restaurant w/Drive-Through Window	2,354	SF	1,099	78	40	38
			TOTALS	**1,099**	**78**	**40**	**38**
			NET CHANGE	**-173**	**-12**	**-7**	**-5**

As shown in the table, with the lower square footage of the proposed building, a reduction of 12 trips would be expected during the PM Peak Hour according to the trip generation estimates. A conservative estimate would be that the trips would remain unchanged as the land use and occupant will be the same as before.

Queuing Analysis

The original Popeyes had a single drive through. The proposed Popeyes provides two drive-through lanes which provide room for additional cars to queue as well as the opportunity for shorter wait times. The site plan shows approximate queuing space for nine vehicles. Any additional queuing will back beyond the entrance to the dedicated parking area for the restaurant.

A study on drive-through queue generation was written by Mike Spack, PE, PTOE; Max Mooreland, EIT; Lindsay de Leeuw; and Nate Hood. Included was queuing collected at six fast-food restaurants over a total of fourteen days. The study included sites with single and dual drive throughs. The average maximum queue was found to be 8.50 vehicles, with an 85th percentile queue of 12 vehicles. The study recommended that drive-throughs for fast-food restaurants should be able to accommodate 12 vehicles of stacking distance, or 240'. A copy of the report is attached. An additional 60' is available on-site that could accommodate 12 total vehicles, although it would temporarily back beyond the entrance to the parking lot.

Merge Midwest Engineering, LLC
2668 W Catalpa Street
Olathe, KS 66061
913.788.1985

Conclusion

The number of PM Peak Hour trips generated by the proposed Popeyes development are anticipated to be slightly less or equal to the previous Popeyes development.

The distance provided to accommodate the queuing of the vehicles falls within the recommended length based on studies on queuing for drive-through restaurants (12 vehicles) if queuing space up to Broadmoor Street is allowed. Queueing for nine vehicles is provided without backing up beyond the entrance to Popeyes parking lot.

We appreciate the opportunity to serve you on this very important project. Please feel free to contact us if you should have any questions.

Respectfully submitted,

Merge Midwest Engineering, LLC

Janelle M. Clayton, P.E., PTOE
Manager / Co-Owner

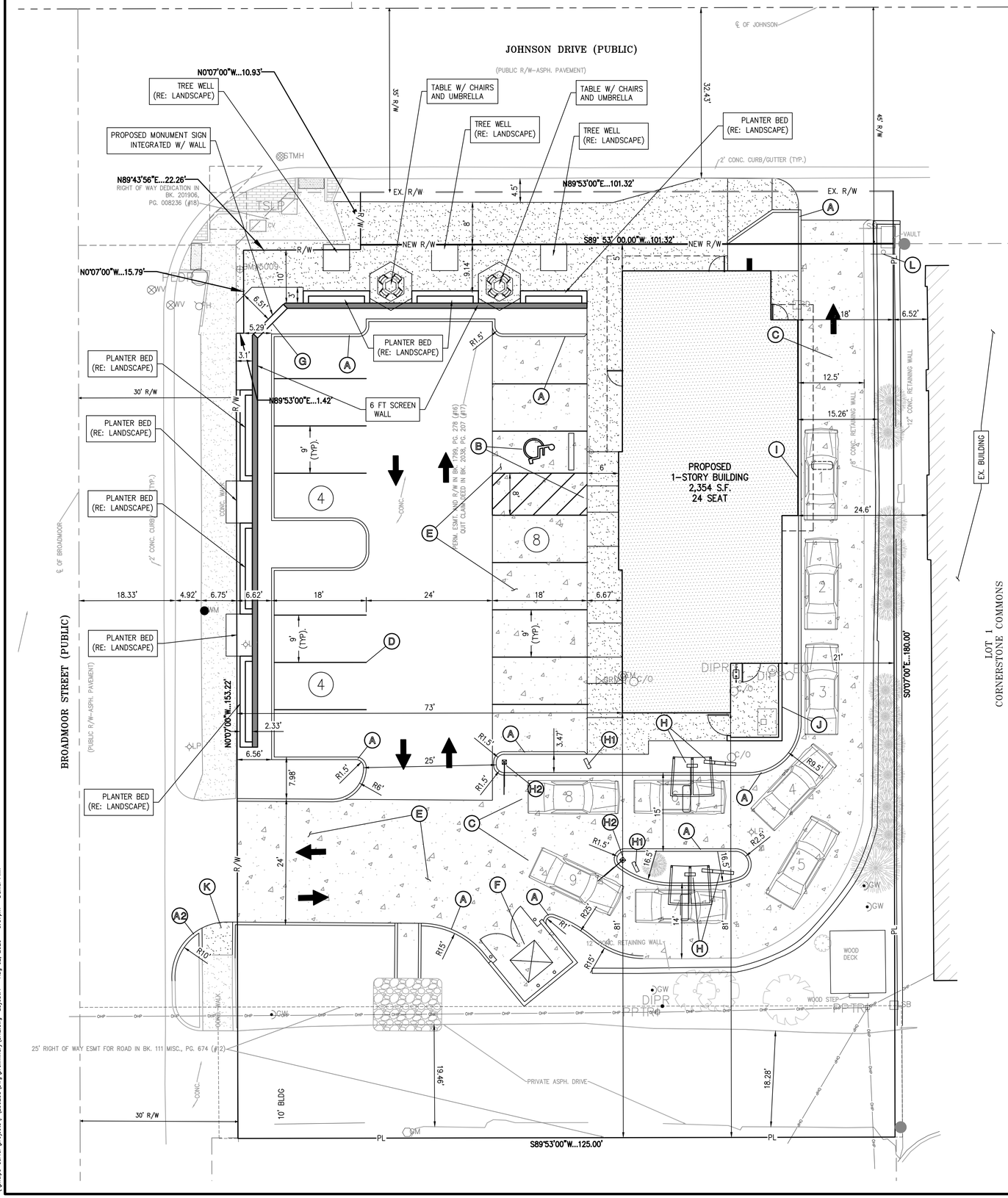


EXHIBIT 1

811 Know what's **below.** **Call** before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

SITE PLAN NOTES:

1. All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference:
   A) City ordinances & O.S.H.A. Regulations.
   B) The City of Mission Technical Specifications and Municipal Code..
   C) The Project Specifications.
2. The contractor shall have one (1) signed copy of the plans (approved by the City) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.
3. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Mission, Kansas, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
4. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall assume all responsibility for protecting and maintaining his work during the construction period and between the various trades/sub-contractors constructing the work.
5. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state and federal regulations.
6. Contractor shall be responsible for all relocations, including but not limited to, all utilities, storm drainage, sanitary sewer services, signs, traffic signals & poles, etc. as required. All work shall be in accordance with governing authorities specifications and shall be approved by such. All cost shall be included in base bid.
7. All existing utilities indicated on the drawings are according to the best information available to the Engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All utilities, shown and unshown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.
8. The contractor will be responsible for all damage to existing utilities, pavement, fences, structures and other features not designated for removal. The contractor shall repair all damages at his expense.
9. The contractor shall verify the flow lines of all existing storm or sanitary sewer connections and utility crossings prior to the start of construction. Notify the engineer of any discrepancies.
10. SAFETY NOTICE TO CONTRACTOR: In accordance with generally accepted construction practices, the contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on or near the construction site.
11. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

SITE DIMENSION NOTES:

1. BUILDING TIES SHOWN ARE TO THE OUTSIDE FACE OF PROPOSED WALLS. THE SUBCONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR SPECIFIC DIMENSIONS AND LAYOUT INFORMATION FOR THE BUILDINGS.
2. ALL DIMENSIONS SHOWN FOR THE PARKING LOT AND CURBS ARE MEASURED FORM BACK OF CURB TO BACK OF CURB.

PAVEMENT MARKING AND SIGNAGE NOTES:

1. PARKING STALL MARKING STRIPES SHALL BE FOUR INCH (4") WIDE WHITE STRIPES. DIRECTIONAL ARROW AND HANDICAP STALL MARKINGS SHALL BE FURNISHED AT LOCATIONS SHOWN ON PLANS.
2. HANDICAP PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO ALL FEDERAL (AMERICANS WITH DISABILITIES ACT) AND STATE LAWS AND REGULATIONS.
3. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
4. STOP SIGNS SHALL BE PROVIDED AT ALL LOCATIONS AS SHOWN ON PLANS AND SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". SIGNS SHALL BE 18" X 12", 18 GAUGE STEEL AND SHALL BE ENGINEER GRADE REFLECTIVE.
5. TRAFFIC CONTROL AND PAVEMENT MARKINGS SHALL BE PAINTED WITH A WHITE SHERWIN WILLIAMS S-W TRAFFIC MARKING SERIES B-29Y2 OR APPROVED EQUAL. THE PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. APPLY ON A CLEAN, DRY SURFACE AND AT A SURFACE TEMPERATURE OF NOT LESS THAN 70°F AND THE AMBIENT AIR TEMPERATURE SHALL NOT BE LESS THAN 60°F AND RISING. TWO COATS SHALL BE APPLIED.

SITE DATA

PROPERTY AREA	21,198 S.F. / 0.49 AC.
ZONING	C2-B
PROPOSED BUILDING (1-STORY)	2,354 S.F.
FLOOR AREA RATIO (FAR)	0.111 S.F.

PARKING SUMMARY

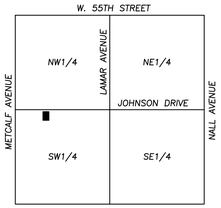
PROVIDED PARKING	
STANDARD STALLS (9'-0" X 18'-0")	15
ACCESSIBLE STALLS	1
PROVIDED STALLS	16
REQUIRED PARKING STALLS	
1 STALL / 4 SEATS (24 SEATS)*	6
REQUIRED ACCESSIBLE STALLS	
TOTAL STALLS	1-25
REQUIRED ACCESSIBLE STALLS	1
PARKING LOT % LANDSCAPED	9%

* OWNER ANTICIPATES UP TO 15 EMPLOYEES WORKING DURING MAX SHIFT

- (A) CONSTRUCT PRIVATE 6" CURB (TYPICAL).
- (A1) CONSTRUCT PUBLIC 6" CURB (TYPICAL).
- (B) CONSTRUCT ACCESSIBLE PARKING SPACE. INSTALL MARKINGS PER STD. DETAIL. INSTALL VAN ACCESSIBLE PARKING SIGN. (1 TOTAL).
- (C) CONSTRUCT DRIVE THRU LANE W/ CONCRETE PAVEMENT.
- (D) INSTALL PAVEMENT STRIPPING (TYPICAL).
- (E) CONSTRUCT CONCRETE PAVEMENT.
- (F) INSTALL TRASH ENCLOSURE WITH HEAVY DUTY CONCRETE PAVEMENT (RE: ARCH. PLANS FOR ENCLOSED DETAILS).
- (G) PROPOSED MONUMENT SIGN (RE: ARCHITECT PLANS).
- (H) INSTALL MENU BOARD AND ORDER BOX (RE: ARCH. PLANS).
- (H1) INSTALL PRE-ORDER MENU BOARD (RE: ARCH. PLANS).
- (H2) INSTALL MENU BOARD AND ORDER BOX (RE: ARCH. PLANS).
- (I) PICK-UP WINDOW (RE. ARCH. PLANS).
- (J) CONSTRUCT SCREEN WALL (RE: ARCH. PLANS).
- (K) CONSTRUCT PUBLIC CONC. SIDEWALK RAMP.
- (L) INSTALL STOP SIGN AND CONCRETE BASE (TYPICAL).

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 6" CURB
- B/L — BUILDING SETBACK LINE
- P/S — PARKING SETBACK LINE
- L/S — LANDSCAPE SETBACK LINE
- STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED BUILDING
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK



VICINITY MAP
SEC. 8-12-25

SCALE: 1"=2000'

SCALE: 1"=10'
0' 10' 20'

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1066
www.phelpsengineering.com
PLANNING ENGINEERING IMPLEMENTATION

SITE PLAN

POPEYE'S LOUISIANA KITCHEN
6821 JOHNSON DRIVE
MISSION, KANSAS 66202

No.	Revisions:	Date	By	App.
1.	REVISED PER STAFF COMMENTS	08-XX-XX	AEB	DAF

PROJECT NO. 230238
DATE: 06-23-2023 DRAWN: AEB
CHECKED: DAF APPROVED: JDC

CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING - LS-82
KANSAS ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007005028

SHEET
C3

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

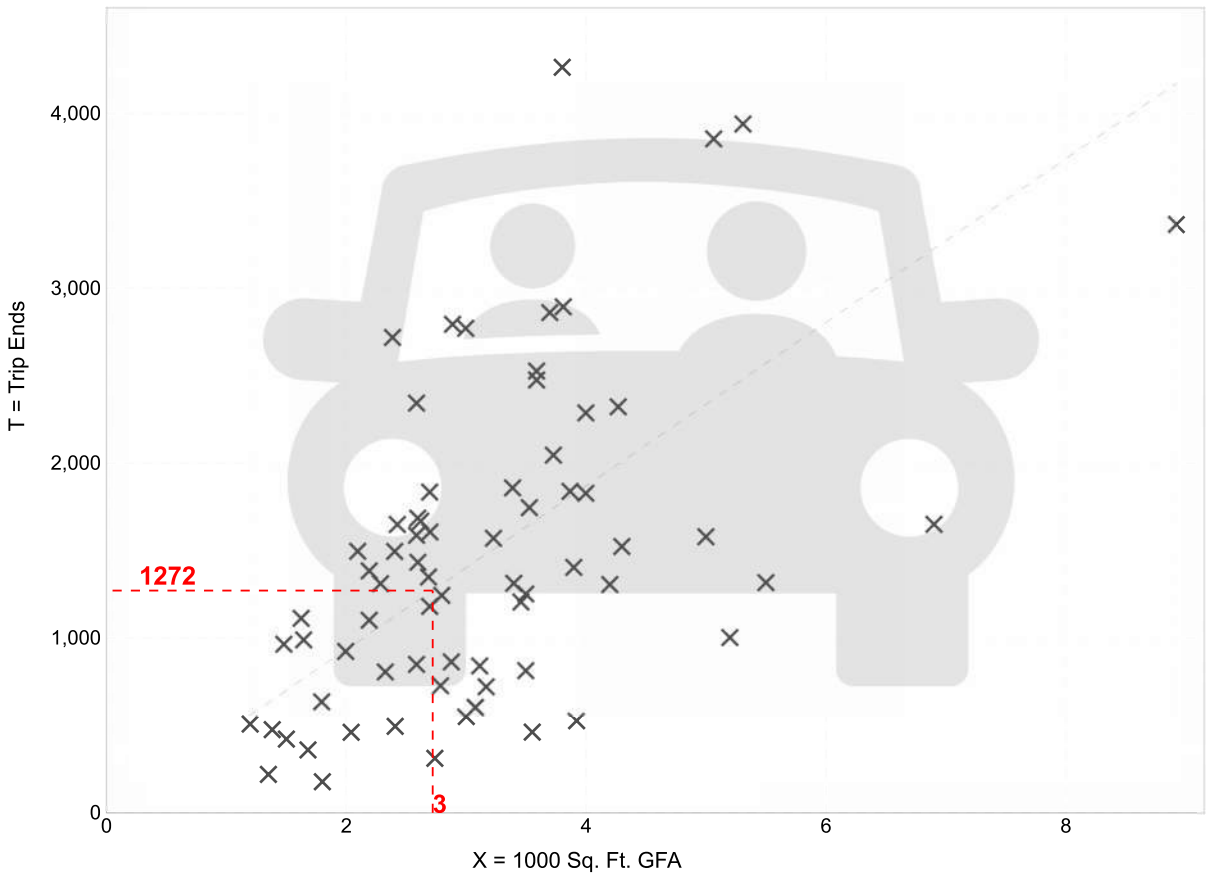
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

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



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Calculated Trip Ends:
Average Rate: 1272 (Total), 636 (Entry), 636 (Exit)

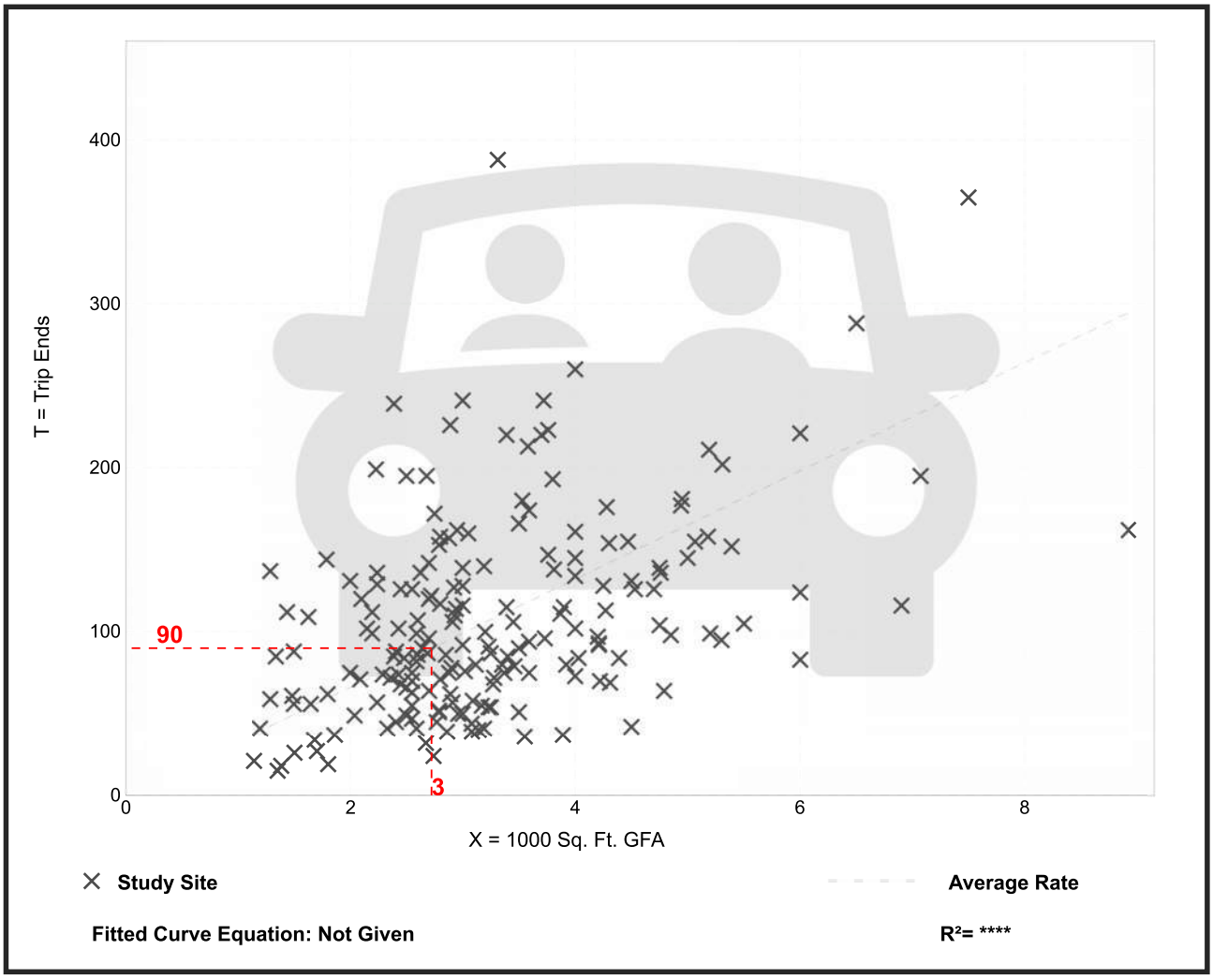
Fast-Food Restaurant with Drive-Through Window
(934)

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



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

Calculated Trip Ends:

Average Rate: 90 (Total), 47 (Entry), 43 (Exit)

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

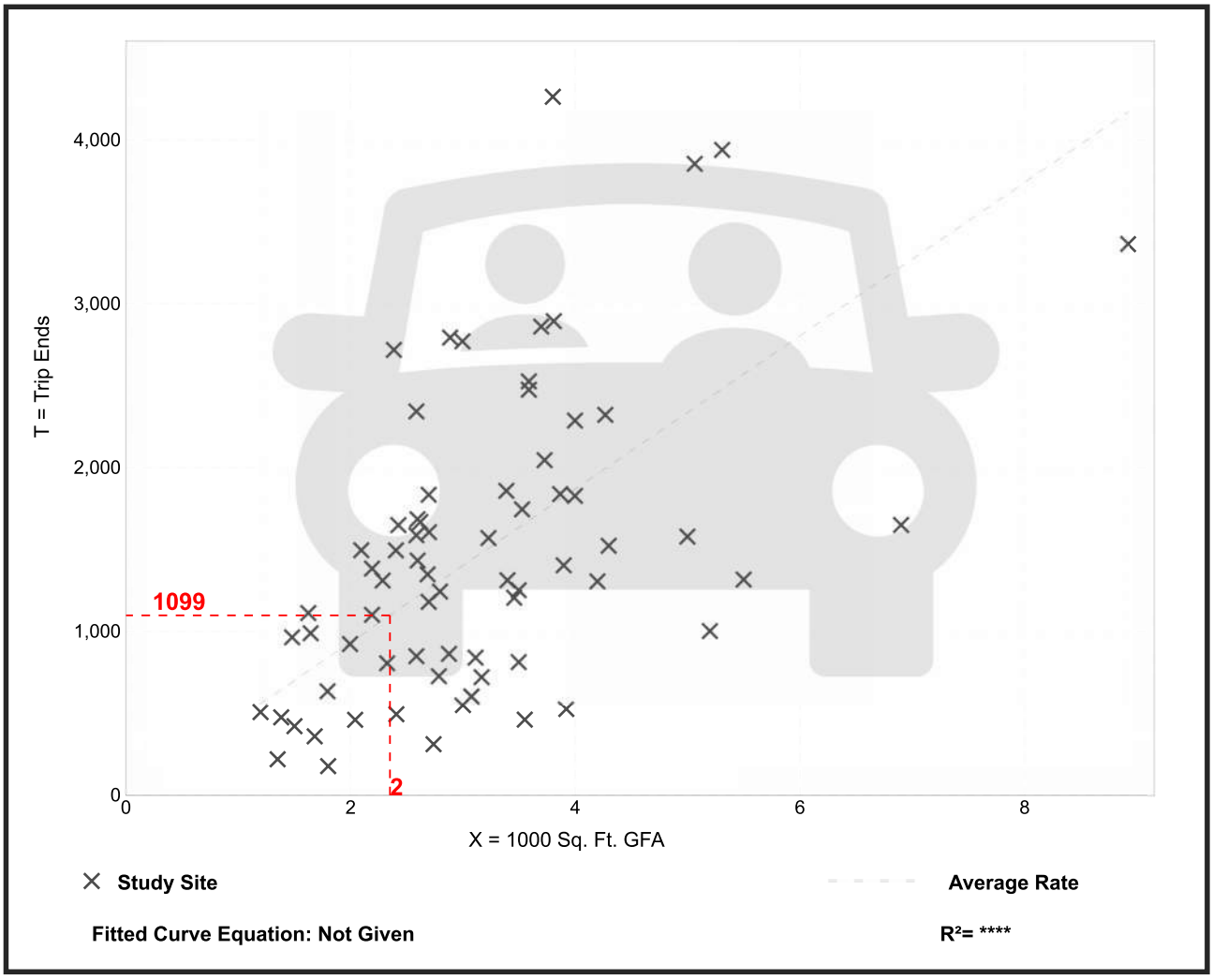
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

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



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Calculated Trip Ends:
Average Rate: 1099 (Total), 549 (Entry), 550 (Exit)

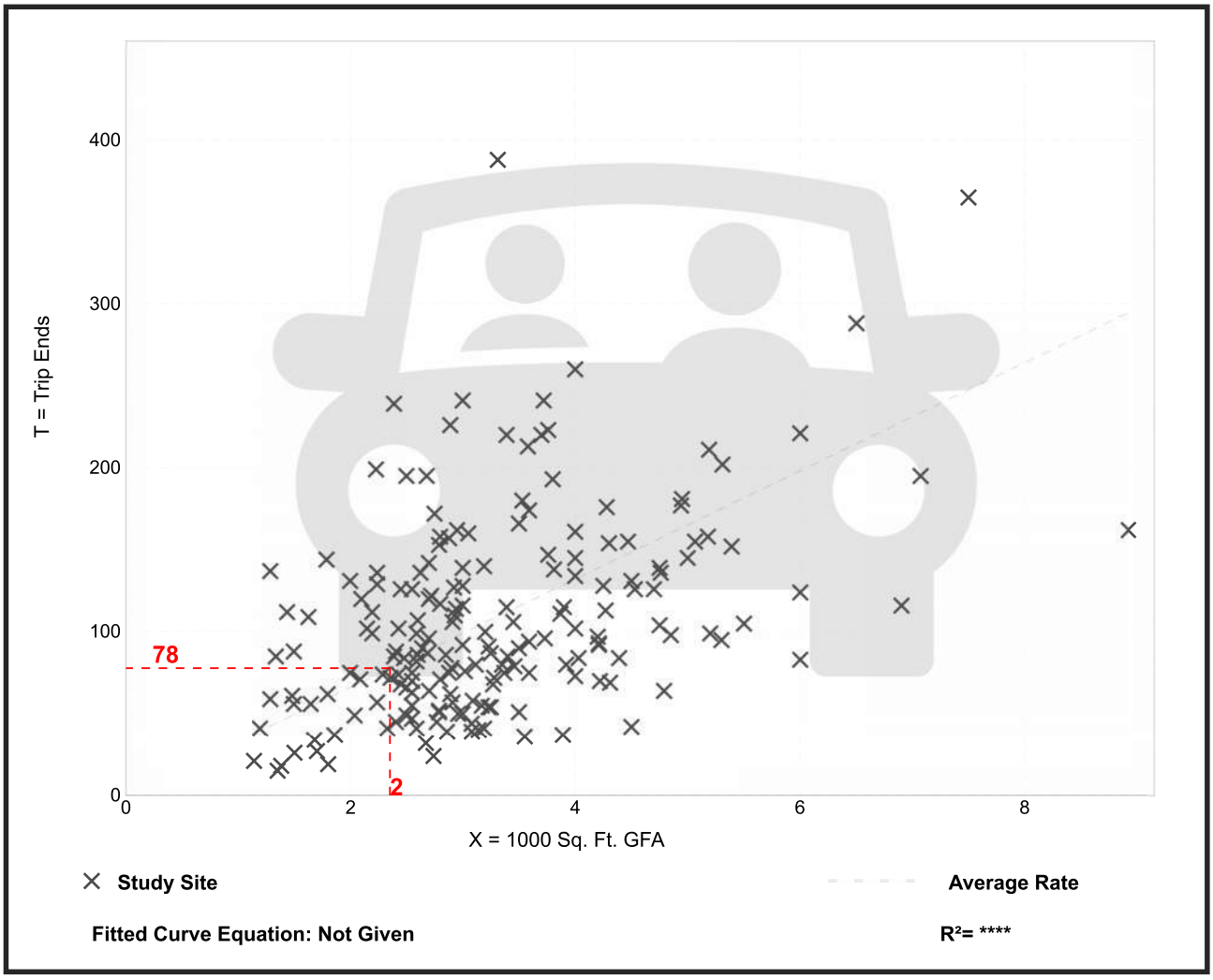
Fast-Food Restaurant with Drive-Through Window
(934)

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



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Calculated Trip Ends:

Average Rate: 78 (Total), 40 (Entry), 38 (Exit)

Drive-Through Queue Generation

Mike Spack, PE, PTOE, Max Moreland, EIT, Lindsay de Leeuw, Nate Hood

1.0 Introduction

This report provides queuing data for businesses with drive-through services. It is intended to be an aid for site designers and reviewers, similar to the Institute of Transportation Engineers' *Trip Generation* and *Parking Generation* reports. The data presentation is modeled on the *Parking Generation* report and data is provided based on at least six sites, similar to data sets marked as statistically significant in *Trip Generation*.

Businesses with drive-through lanes are very common in the United States and having data that gives usage information for drive-through lanes will assist designers as well as cities in determining the appropriate amount of storage needed for proposed drive-through businesses. Data for drive-through queues was published by the ITE Technical Council Committee 5D-10 in 1995 based on information collected between the late 1960's and the 1990's. A paper was also published in 2009 by Mark Stuecheli, PTP giving updated information for bank and coffee shop drive-through lanes. The results from the 2009 study are incorporated into this paper (thank you Mark for your assistance).

2.0 Data Collection

Data was collected using COUNTcam video recording systems at a total of 30 drive-through locations in Minneapolis, MN and several surrounding suburbs between 2010 and 2012 (26 of the 30 videos were recorded in February of 2012, which should represent peak usage in the cold Minnesota winter). Videos of drive-through lanes were collected at banks, car washes, coffee shops, fast food restaurants and pharmacies. A total of six locations were selected for each of the five different land uses. Each location was recorded for between one and five days where the majority of locations were recorded for two consecutive days. The days of the week that each video was recorded on varies.

The 24-hour videos were watched at high speeds with the PC-TAS counting software and maximum queues throughout the day were noted. Most of the COUNTcams were set up such that the entire queue lane could be seen, but at a few locations the drive-through lanes wrapped around the building in a way that the entire queue length would not be able to be seen. For these situations, the COUNTcams were set up so that the ordering window and back of the queue could be seen and it was noted how many vehicles could fit between the ordering window and the front of the queue. For drive-through locations with multiple lanes, the number of lanes was noted but the maximum queue is defined as the sum of the queues at each lane for any given point in time, not the queue per lane. This approach provides overall demand, which may assist designers in determining how many drive through lanes are appropriate in addition to determining how long they should be.

Once the maximum queue for each day at each location was determined, the data was compiled and statistics for each land use were calculated. The average maximum queue, standard deviation, coefficient of variation, range, 85th percentile and 33rd percentile were calculated for each land use.

Data for drive-through coffee shops and banks from the Kansas City, Kansas metropolitan area was published in the 2009 paper New Drive-Through Stacking Information for Banks and Coffee Shops by Mark Stuecheli. This data is included in the analysis.

3.0 Data Analysis

Based on the peak queue lengths, it is apparent that each land use will require a different minimum drive through stacking distance. The results for each land use can be found below. The peak queue lengths for each location, broken down by land use and day of the week, can be found in the Appendix.

3.1 Banks

Data collection was done at six banks with drive-through services (including one credit union) in August 2011 and February 2012. Twelve days of data were collected. The banks were located in the cities of Minneapolis, Robbinsdale and St. Louis Park, MN.

All of the locations had a lane with a drive-through ATM and at least two other lanes. Though service times may differ for ATM lanes compared to the regular lanes, the maximum queues were counted together. This is because based upon what was observed, vehicles would occasionally switch the lane they were in. For example, a vehicle waiting in the ATM line with a queue of three vehicles may move over to a regular line with a queue of only one vehicle. Much of what can be done at the bank's drive-through lane can also be accomplished at that bank's ATM and vice versa. Vehicles being served were counted as being in the queue.

Nine days of data from the Kansas City, Kansas area is also included. This data does not factor in vehicles in ATM lanes.

Table 3.1 – Drive-Through Bank Maximum Queue Statistics

	Minnesota Data	Minnesota + Kansas Data
Number of Data Points	12	21
Average Maximum Queue (Vehicles)	5.83	5.76
Standard Deviation (Vehicles)	1.85	2.21
Coefficient of Variation	32%	38%
Range (Vehicles)	3 to 8	1 to 10
85th Percentile (Vehicles)	8.00	8.00
33rd Percentile (Vehicles)	5.00	5.00

Figure 3.1.1 – Drive-Through Bank Maximum Queue Frequency – Minnesota Data

Figure 3.1.2 – Drive-Through Bank Maximum Queue Frequency – Minnesota + Kansas Data

The data for Kansas banks was collected between 4:30pm and 6:00pm. While many of the maximum queues for the data collected in Minnesota were between these times, maximum queues occurred between 8:30am and 5:30pm so it is possible that some of the Kansas data does not capture the actual maximum queues for the day.

The number of available lanes at banks, not including the ATM lane, ranged from two to seven lanes (though the most open at one time was five lanes). Even though plenty of lanes were available, cars often stacked at the lane closest to the building, thus additional lanes may not result in shorter queues. With an 85th percentile maximum queue of eight vehicles, the data suggests that banks with drive-through lanes should be able to accommodate 160 feet of vehicle stacking.

3.2 Car Washes

Data collection was done at six car washes with drive-through services (including one full-service car wash) in February 2012. Twelve days of data were collected. The car washes were located in the cities of Falcon Heights, Hopkins, Minneapolis, Roseville and St. Louis Park, MN. Five of the six car washes (excluding the full-service car wash) were located at gas stations. Only the vehicles waiting in line were counted; vehicles being washed were not added to the queue.

Table 3.2 – Drive-Through Car Wash Maximum Queue Statistics

Number of Data Points	**12**
Average Maximum Queue (Vehicles)	**4.42**
Standard Deviation (Vehicles)	**2.31**
Coefficient of Variation	**52%**
Range (Vehicles)	**1 to 10**
85th Percentile (Vehicles)	**6.20**
33rd Percentile (Vehicles)	**3.00**

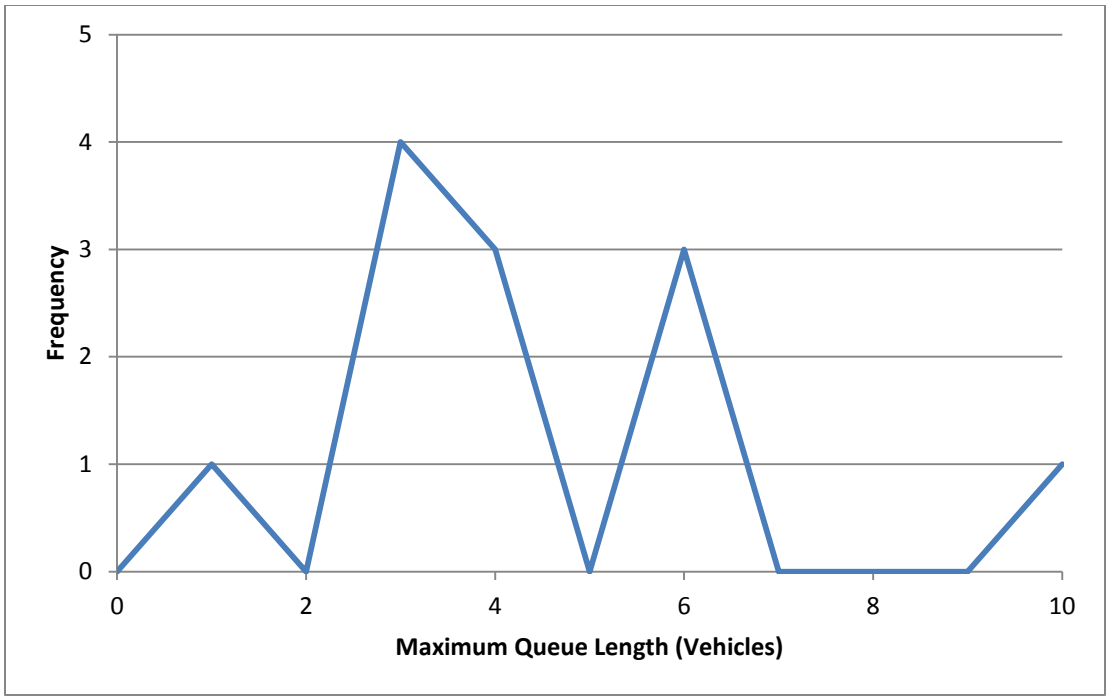


Figure 3.2 – Drive-Through Car Wash Maximum Queue Frequency

Two of the car washes had two lanes while the other four were one lane car washes. The full-service car wash had two lanes and also produced the highest maximum queue of 10 vehicles. The maximum queues for car washes were spread throughout the afternoon from 12:30pm to 8:30pm. With an 85th percentile maximum queue of more than six vehicles, the data suggests that car washes with drive-through lanes should be able to accommodate 140 feet of vehicle stacking throughout the day.

3.3 Coffee Shops

Data collection was done at six coffee shops with drive-through services in November 2010, August 2011 and February 2012. Fourteen days of data were collected. The coffee shops were located in the cities of Edina, Hopkins, Minneapolis, Roseville and St. Louis Park, MN. Vehicles being served were counted as being in the queue. Twelve days of data from the Kansas City, Kansas area is also included.

Table 3.3 – Drive-Through Coffee Shop Maximum Queue Statistics

	Minnesota Data	Minnesota + Kansas Data
Number of Data Points	14	26
Average Maximum Queue (Vehicles)	11.00	10.23
Standard Deviation (Vehicles)	2.25	2.76
Coefficient of Variation	20%	27%
Range (Vehicles)	7 to 16	3 to 16
85th Percentile (Vehicles)	13.50	13.00
33rd Percentile (Vehicles)	10.00	9.91

Figure 3.3.1 – Drive-Through Coffee Shop Maximum Queue Frequency – Minnesota Data

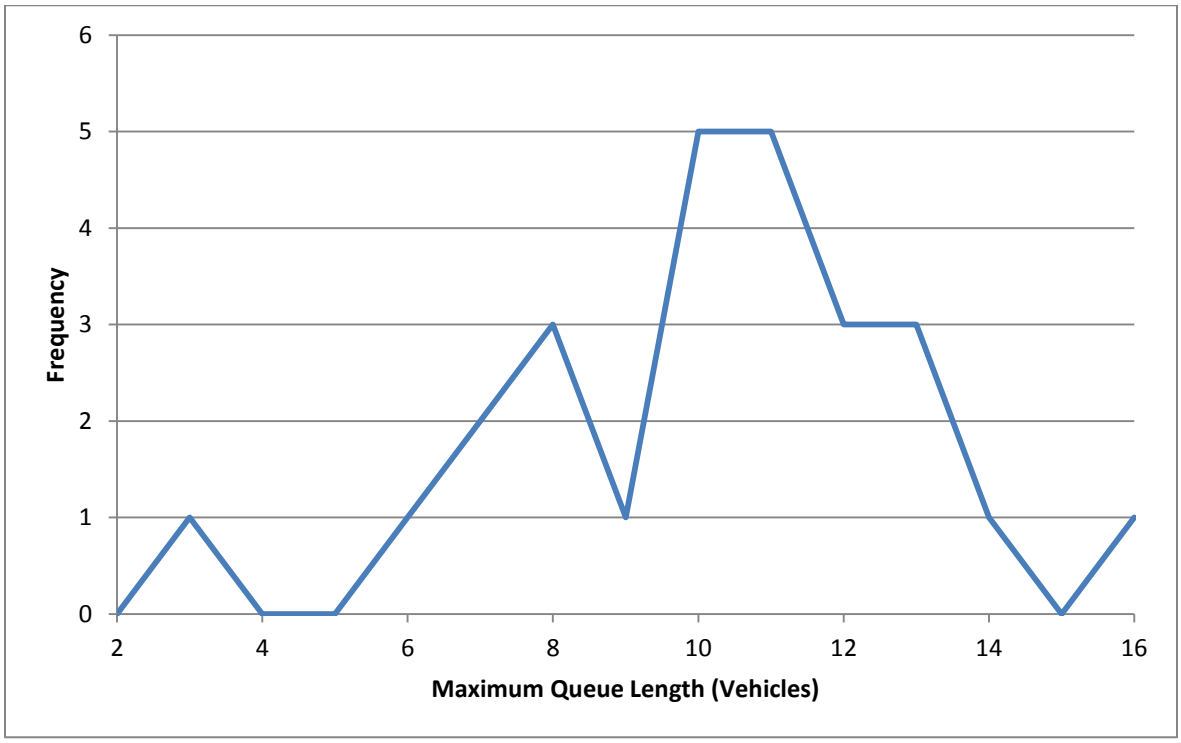


Figure 3.3.2 – Drive-Through Coffee Shop Maximum Queue Frequency – MN + KS Data

Coffee shops produced the longest maximum queues of any of the land uses in this study with all of the maximum queues occurring in the morning. In four of the six cases, the queues spilled out of the parking lot and into the street. These spillovers would typically only happen once or twice a day and last only a few minutes, however, one location had stacking into the street for about 15 minutes in addition to multiple periods of several minutes where cars would queue in the street.

With an 85th percentile maximum queue of 13 vehicles, the data suggests that coffee shops with drive-through lanes should be able to accommodate at least 260 feet of vehicle stacking during morning hours.

3.4 Fast Food Restaurants

Data collection was done at six fast food restaurants with drive-through services in August 2011 and February 2012. Fourteen days of data were collected. The restaurants were located in the cities of Golden Valley, Hopkins, Minneapolis and St. Louis Park, MN. Vehicles being served were counted as being in the queue.

Table 3.4 – Drive-Through Fast Food Restaurant Maximum Queue Statistics

Number of Data Points	**14**
Average Maximum Queue (Vehicles)	**8.50**
Standard Deviation (Vehicles)	**2.68**
Coefficient of Variation	**32%**
Range (Vehicles)	**5-13**
85th Percentile (Vehicles)	**12.00**
33rd Percentile (Vehicles)	**7.90**

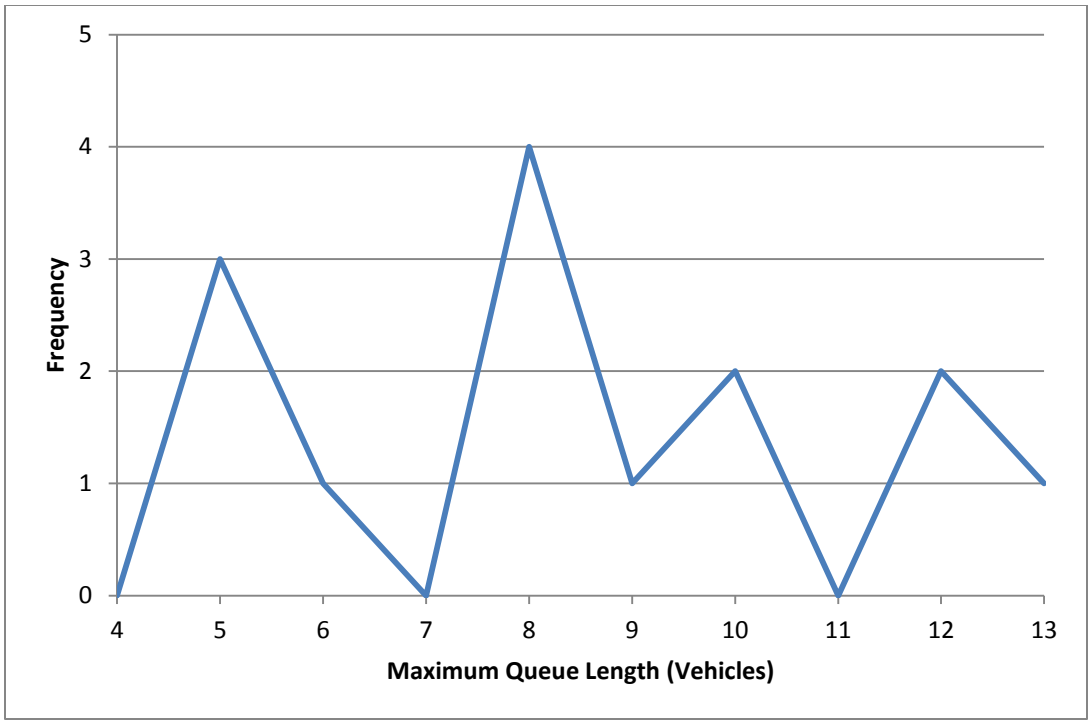


Figure 3.4 – Drive-Through Fast Food Restaurant Maximum Queue Frequency

The maximum queues for fast food restaurants were spread throughout the day from 8:00am to 10:00pm. With an 85th percentile maximum queue of 12 vehicles, the data suggests that fast food restaurants with drive-through lanes should be able to accommodate 240 feet of vehicle stacking throughout the day.

3.5 Pharmacies

Data collection was done at six pharmacies with drive-through services in February 2012. Twelve days of data were collected. The pharmacies were located in the cities of Hopkins, Minneapolis, New Hope and Robbinsdale, MN. Vehicles being served were counted as being in the queue.

Table 3.5 – Drive-Through Pharmacy Maximum Queue Statistics

Number of Data Points	**12**
Average Maximum Queue (Vehicles)	**2.92**
Standard Deviation (Vehicles)	**1.16**
Coefficient of Variation	**40%**
Range (Vehicles)	**1-5**
85th Percentile (Vehicles)	**4.05**
33rd Percentile (Vehicles)	**2.00**

Figure 3.5 – Drive-Through Pharmacy Maximum Queue Frequency

The maximum queues for pharmacies were spread throughout the day from 8:00am to 10:00pm. With an 85th percentile maximum queue of more than 4 vehicles, the data suggests that pharmacies with drive-through lanes should be able to accommodate 100 feet of vehicle stacking throughout the day.

4.0 Conclusions

The 85th percentile maximum queue lengths for each land use are: 160 feet for banks (eight vehicles), 140 feet for car washes (seven vehicles), 260 feet for coffee shops (13 vehicles), 240 feet for fast food restaurants (12 vehicles) and 100 feet for pharmacies (five vehicles).

While some of the locations observed have an excess of space dedicated to drive-through lanes (i.e. some banks and pharmacies), others could occasionally use additional space for drive-through lanes (i.e. coffee shops in the morning).

Fast food restaurants and coffee shops have the longest maximum queues of the five land uses observed. Coffee shops have a tendency for the morning queues to build so long that they spill out onto the street, though, as is expected, their afternoon and evening queues are minimal. Fast food restaurants also have large queues, but they tended to have enough dedicated space that stacking did not go beyond the designated queuing area.

The data collected for this paper along with the data from the papers by Mark Stuecheli and the ITE Technical Committee 5D-10 (see Appendix for both of these) will hopefully provide useful data for traffic engineers and others trying to analyze drive-through queuing storage areas.

5.0 Labor Savings of the COUNTkit

Deploying people in the field to perform this data collection would not have been feasible. Using the COUNTcam video system made it possible to observe the drive through lanes 24 hours a day and the PC-TAS software made the data reduction practical. One location was recorded in November 2010 for 6 hours, three locations were recorded in August 2011 for a total of 202 hours and 26 locations were recorded in February 2012 for a total of 1012 hours. These 1220 hours of video were counted with a total of 120 hours of labor, meaning the videos were watched at approximately 10x speed. Installation of a COUNTcam takes approximately 10 minutes and retrieval takes approximately 5 minutes. This whole project was completed in approximately 3 weeks.

6.0 References

1. Stuecheli, M. (2009). New Drive-Through Stacking Information for Banks and Coffee Shops. *ITE 2009 Annual Meeting and Exhibit.* Print.
2. ITE Technical Committee 5D-10. "Queuing Areas for Drive-Thru Facilities." *ITE Journal* (May 1995): 38-42. Print.
3. Institute of Transportation Engineers. *Parking Generation.* 4th ed. Washington, DC: Institute of Transportation Engineers, 2010. Print.
4. Institute of Transportation Engineers. *Trip Generation.* 8th ed. Washington, DC: Institute of Transportation Engineers, 2008. Print.

7.0 Appendix

A – Day of Week Maximum Queues
B – New Drive-Through Stacking Information for Banks and Coffee Shops
C – ITE Technical Committee 5D-10: Queuing Areas for Drive-Thru Facilities
D – Drive-Through Data Forms

Appendix A

Day of Week Maximum Queues

		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Fast Food	Arby's				5	5		
	Burger King	6	12				10	8
	McDonald's				12	13		
	McDonald's				9	8		
	Taco Bell				10	8		
	White Castle				8	5		
Car Wash	BP				6	6		
	BP			1	3			
	BP			4	3			
	Holiday				3	4		
	Mister Car Wash				10	6		
	Mobil				4	3		
Coffee	Caribou				11	10		
	Caribou	7	10	12			12	8
	Starbucks				14	16		
	Starbucks				10	11		
	Starbucks			10	12			
	Starbucks				11			
Bank	Citizens Independent Bank			5	5			
	SharePoint Credit Union				3	3		
	TCF	4					8	8
	US Bank				7	7		
	Wells Fargo			8	6			
	Wells Fargo			6				
Pharmacy	CVS			1	2			
	CVS			4	4			
	CVS			2	2			
	Walgreens				4	5		
	Walgreens			3	3			
	Walgreens			3	2			

Appendix B

New Drive-Through Stacking Information for Banks and Coffee Shops

Mark Stuecheli, PTP

Abstract

This paper provides updated queuing information for drive-in banks and new queuing data for coffee shops with drive-through lanes. The data is presented in a format similar to that used in the report for **ITE Technical Council Committee 5D-10**, originally published in 1995.

Significant changes have occurred in the way that bank patrons conduct business with their banks. In recognition of those changes, ITE has adjusted the trip generation information included in the Eighth Edition of **Trip Generation, an ITE Informational Report** to include only data collected since 2000, and the revised trip generation totals are significantly lower than in previous editions. Clearly, the reduced trip generation figures indicate a reduction in bank drive-through business. This report summarizes queuing information included in counts taken in the Kansas City metropolitan area.

In the last few years coffee shops with drive-through lanes have become prevalent throughout the country. Because those businesses were uncommon when the 1995 report was prepared, no data was gathered for those operations. This paper contains information on counts taken at those establishments, once again in the Kansas City metropolitan area.

Based on the count data, recommendations are included for the minimum amount of stacking distance to require for the two types of drive-through businesses that were studied.

Background

ITE Technical Council Committee 5D-10 was formed in 1987 to produce a database of queuing information for various types of drive-through lanes. The report of the findings of the Committee, published in the May 1995 **ITE Journal**, included information on the characteristics of drive-through lane stacking for fast-food restaurants, drive-in banks, car washes, day care centers and dry cleaners. The counts that were included in the Committee report were conducted from the late 1960s through the late 1980s in a limited number of mid-western, southern and eastern states.

As a former member of that Committee, and having submitted drive-through counts for the effort, I am in a position to make some observations about the change in drive-through usage.

Appendix B

This paper analyzes two types of drive-through operations – one that is greatly modified and another that is new since the original report was published. First, significant changes have occurred in the ways that bank patrons conduct business with their financial institutions. On-line banking, direct deposit and the wide usage of ATMs have resulted in greatly reduced trip generation totals for drive-in banks. In recognition of that fact, ITE adjusted the trip generation information for drive-in banks in the Eighth Edition of **Trip Generation, an ITE Informational Report,** to include only data collected since 2000. The trip generation rates during the p.m. peak hour for the newer data are about 44% lower than rates in the Seventh Edition.

The amount of stacking provided for bank drive-through lanes often has a critical impact on the potential site design alternatives for proposed bank properties. If the information included in the 1995 Report were to be used as the basis for establishing stacking requirements, a large area would need to be allocated to the drive-through lanes. On tight sites, that limitation could preclude developing an acceptable layout.

Clearly, the major drop in trip generation rates indicates that fewer customers are using drive-through lanes. That reduction in drive-through usage has an impact on queue lengths and other operational characteristics observed at those facilities. This paper includes updated information on queuing in bank drive-through lanes based on counts taken in the City of Overland Park, Kansas, a suburban community of 171,000 residents in the Kansas City metropolitan area.

The second area of analysis in this paper pertains to observed queuing characteristics for coffee shops with drive-through lanes. In the last few years, drive-through coffee shops have become common throughout the country. Because those businesses were an insignificant factor when the report for **ITE Technical Council Committee 5D-10** was completed, no counts were conducted for that land use category. This paper contains data on queuing for coffee shops with drive-through lanes, based on counts conducted predominantly in the Kansas suburbs of the Kansas City metropolitan area.

As is the case for drive-in banks, the length of stacking required for a site has a major impact on potential site layouts. If a relatively short stacking distance is permitted, the lanes can be fit into very restricted sites or be more easily retrofitted to work with existing buildings. But if more queuing occurs than is provided for in a dedicated lane, the flow of traffic within a parking lot can be seriously restricted by that excess queue. In the worst case, if the drive-through stacking is located close to a public street and the excess queue extends into or near the street, the operation of the adjoining public street may be negatively impacted.

Appendix B

Drive-In Banks

Counts were conducted at ten suburban drive-in banks located throughout Overland Park in the fall of 2008 and the spring of 2009. Both established locations and sites that were relatively new were counted, although all banks had been open for business for at least one year. All but one location had drive-through ATMs. Based on the results of counts taken at a single bank location during a mid-week lunch hour, a mid-week p.m. peak hour, a Friday lunch hour, and a Friday p.m. peak hour; the maximum queue lengths occurred during the Friday p.m. peak hour. Therefore, all counts used in the study were conducted during the Friday p.m. peak hour time period.

The counting process involved noting the maximum per lane and total queues for the drive-through lanes at each location in fifteen minute increments, along with collecting information on the stacking of any drive-through ATM. In all cases the vehicles in the service positions were included in the counts. Where possible, the volumes of vehicles entering and exiting the parking lot also were tabulated. As a way to evaluate the frequency of various maximum queue lengths, the total queue lengths were noted at five minute intervals.

The queuing data was analyzed in ways similar to the methods used in the 1995 Report. Table 1 lists the observed frequency of maximum queue lengths per lane. Figure 1 plots the per lane maximum queue lengths using both the 2009 data and the data that was presented in 1995 (please note that the 1995 data involved fifteen counts, compared to the ten counts in the 2009 data). Figure 2 plots the probability that the queue lengths per lane will not exceed a given maximum queue length, once again presenting both 2009 and 1995 data.

Table 1 – Drive-In Bank 2009 Maximum Queue Length Per Lane

Queue Length	Frequency	Cumulative Frequency	P(q≤N)
0	0	0	0.00
1	1	1	.10
2	4	5	.50
3	4	9	.90
4	1	10	1.00

Note: P(q≤N) indicates probability, based on sample, of queue length of “q” not exceeding length “N”

Appendix B

Figure 1 – Drive-In Bank 1995 And 2009 Maximum Queue Length Per Lane Data Plot

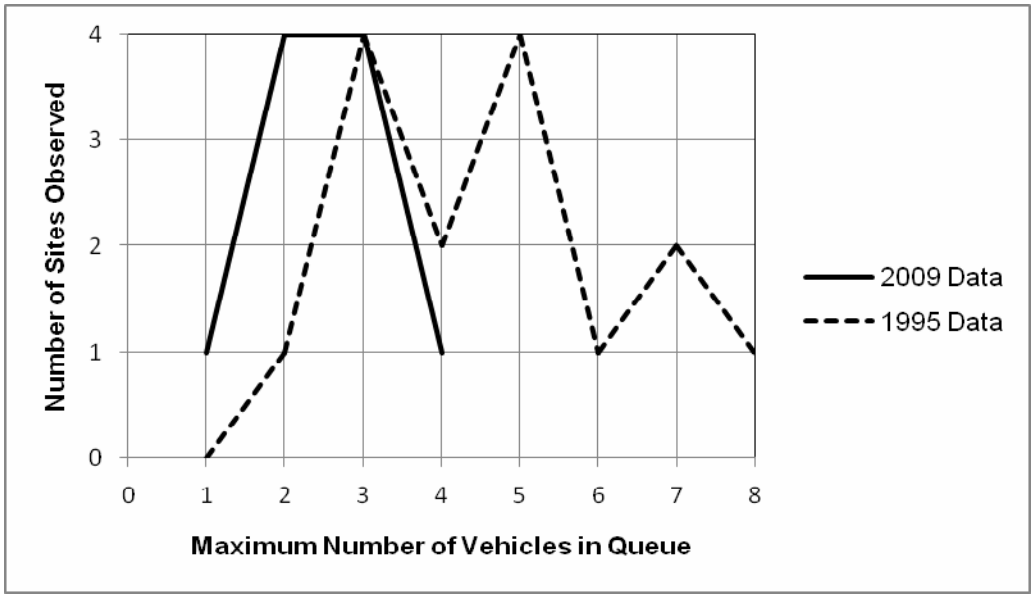
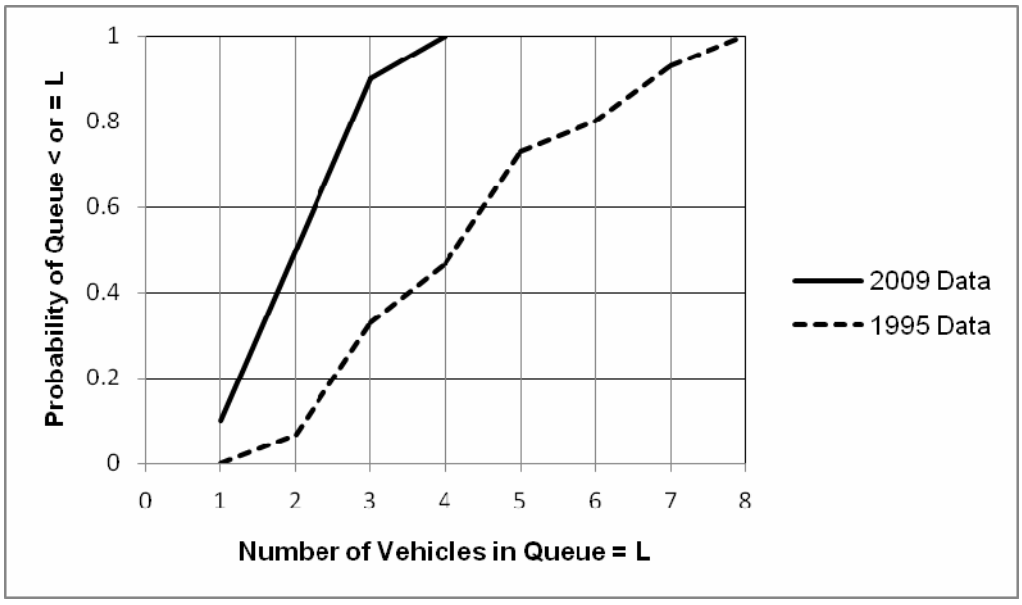


Figure 2 – Drive-In Bank 1995 And 2009 Cumulative Maximum Queue Length Per Lane Data Plot



The differences between the 1995 Report data (as noted earlier, actually based on counts conducted from the late 1960s to the late 1980s) and the 2009 counts are dramatic. The maximum per-lane queue lengths in the current counts were half what they were in the 1995 data.

An attempt was made to determine if such factors as adjoining major street traffic volumes or the size of the building could predict the queuing results, but no correlation was found.

Observations

Some banks, especially those that have been in operation for several years, have a surplus of drive-through lanes and stacking area. That is because those sites were designed to accommodate the much higher demands that existed many years ago. Consequently, they often open only a portion of the available lanes.

In one case, for a main office bank location where it was possible to make a direct comparison between a count conducted in 1988 and a new count in 2008 (actually taken almost precisely 20 years apart), the difference was dramatic. The p.m. peak hour drive-through volumes for the 2008 count were 65% lower than the 1988 count, a much greater drop than would have been indicated by the reduced ITE trip generation figures discussed earlier. The maximum total number of vehicles queued and the maximum queue lengths per lane were correspondingly lower, dropping from 29 to 8 and 7 to 3, respectively. The demographics and development characteristics of the surrounding area have changed little since 1988 and the bank has continued as a stable operation. Considering all of those factors, it is reasonable to assume that the differences are associated with changes in customers' banking habits.

The one incidence of a four car per lane maximum stack was a single occurrence that lasted for only a few minutes. Based on that information, it is reasonable to consider the practical maximum required queue length to be three vehicles.

The maximum queue lengths for ATMS ranged from two to five vehicles. Only one location experienced the longer queue lengths and only for a short time period. All other locations had maximum queue lengths of three vehicles or less.

Coffee Shops With Drive-Through Lanes

Counts were conducted in the fall of 2008 and the spring of 2009 at twelve coffee shops located in the Kansas suburbs of Merriam, Olathe and Overland Park in the Kansas City metropolitan area and also in suburban Kansas City, Missouri. All but two of the establishments were situated in free-standing buildings, and several were located within shopping centers. Three were drive-through-only operations and the remaining nine were full-service locations that included both drive-through lanes and inside seating facilities. Because this type of use is busiest in the morning peak hour, all counts were completed during that time period.

Similar to the process used for drive-in banks, the counting process involved noting the maximum number of vehicles queued in the drive-through lane at each location for fifteen minute increments. As was done for the drive-in bank counts, the vehicle in the

service position was included in the counts. Information on the number of vehicles entering and leaving the parking lot was collected for full-service operations (drive-through-only locations did not have any parking activity). The queuing information was tabulated for both the total length of queue and for the number of vehicles behind the menu board. The observed queue length was noted at five minute intervals as a way to evaluate the frequency of various queue lengths.

Once again, the queuing data was analyzed in ways similar to the methods used in the 1995 Report. Table 2 lists the observed frequency of maximum queue lengths. Figure 3 plots the per-lane maximum queue lengths and Figure 4 plots the probability that the queue will not exceed a given maximum queue length.

Table 2 – Coffee Shop With Drive-Through Maximum Queue Length

Queue Length	Frequency	Cumulative Frequency	P(q≤N)
0	0	0	0.00
1	0	0	0.00
2	0	0	0.00
3	1	1	.08
4	0	1	.08
5	0	1	.08
6	1	2	.17
7	1	3	.25
8	2	5	.42
9	1	6	.50
10	1	7	.58
11	2	9	.75
12	0	9	.75
13	3	12	1.00

Note: P(q≤N) indicates probability, based on sample, of queue length of “q” not exceeding length “N”

Appendix B

Figure 3 – Coffee Shop With Drive-Through Maximum Queue Length Data Plot

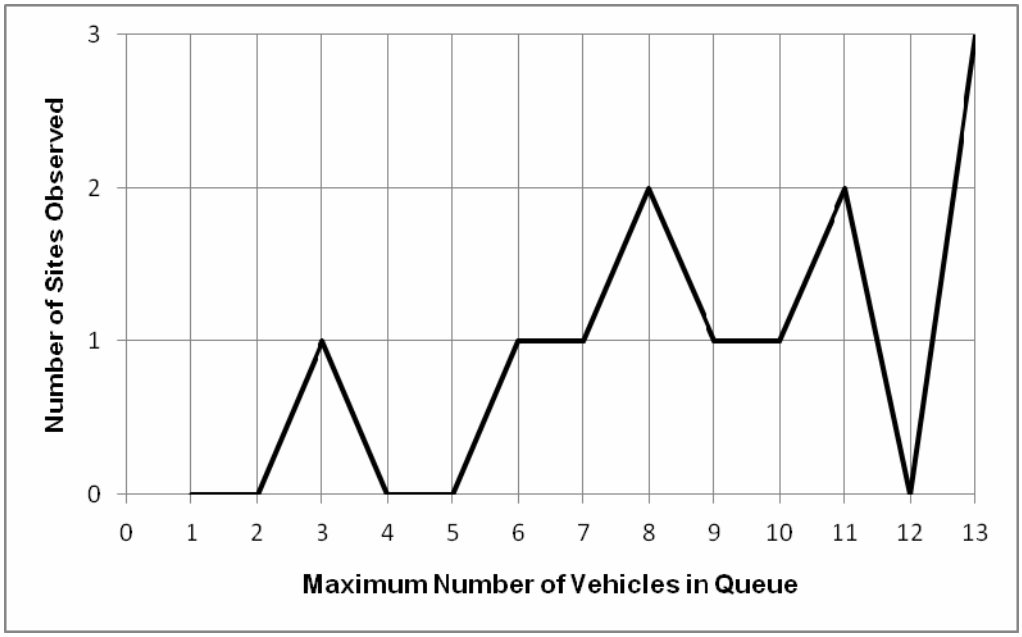
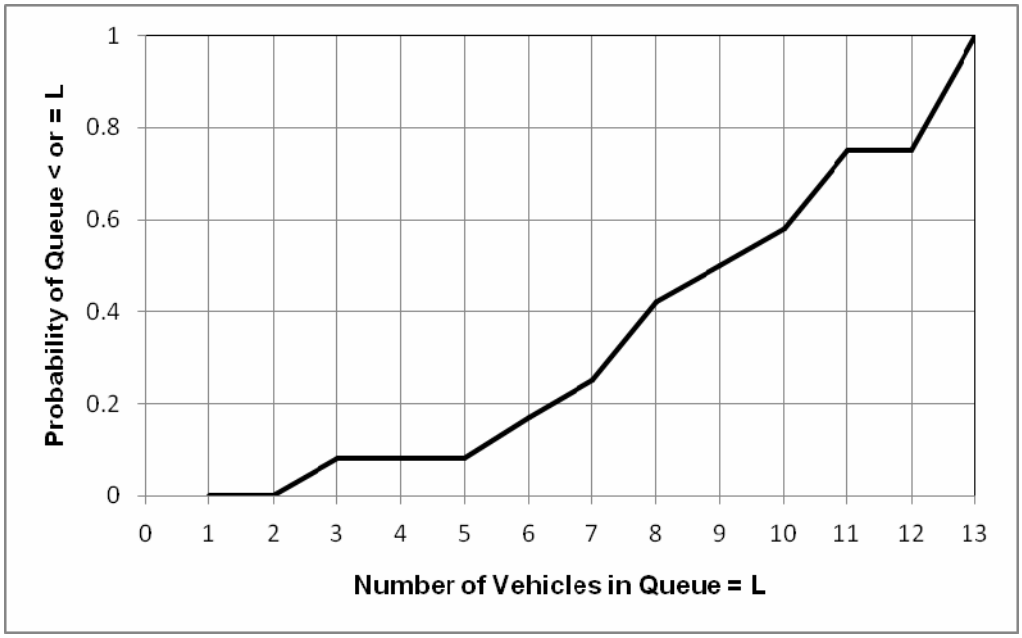


Figure 4 – Coffee Shop With Drive-Through Cumulative Maximum Queue Length Data Plot



Appendix B

The total trip generation figures were compared to the a.m. peak hour ITE rates for Land Use Code 937, Coffee/Donut Shop with Drive-Through Window, and Land Use Code 938, Coffee/Donut Shop with Drive-Through Window and No Indoor Seating. The observed counts generally fell within the range of counts included in those categories, although two of the rates for the No Indoor Seating category exceeded the published range. No correlation was found between the adjoining major street traffic volumes or the size of the building and either the queuing or the trip generation results.

Observations

Several of the drive-through lanes were under-designed for the usage that was observed and queues spilled-out into parking lot circulation areas. In most cases the excess stacking did not result in disruptions of the operations of surrounding uses, since most other businesses were not open in the early morning. But for those sites where the end of the drive-through lane extended into the coffee shop parking lot, the excess queue often disrupted the movements of drivers who were trying to enter or exit parking spaces or the site itself.

One interesting facet of the data is that the three lowest observed maximum queue lengths were for the drive-through-only locations. The highest observed queue length for those operations was seven vehicles, which occurred only once at one location and only for a very short period of time. A six vehicle maximum stack was a more common occurrence.

The data shows that the volume of drive-through traffic and, therefore, the required stacking distance, is higher for full-service coffee shops than for drive-through-only operations. When total trip generation (both drive-through business and customers who park and walk in) is factored in, the full-service coffee shops did, on average, about two and one-half times the business of drive-through-only facilities. Since all of the full-service operations were Starbucks locations, it may be possible to apply the results of those counts to other proposed suburban Starbucks locations elsewhere in the country.

Total vehicular stacking available for a drive-through lane is an important consideration, but the location of the menu board relative to the pick-up window also impacts the efficiency of a drive-through lane operation. If the spacing is too short, stacking behind the pick-up window will extend into the menu board area, delaying ordering for those farther back in the line. In the counts conducted for this study, the pick-up window to menu board available stacking distances ranged from two to five vehicles.

The operation with the two car stack between the pick-up window and menu board regularly resulted in delays for drivers waiting to order at the menu board. The location with a five car stack rarely experienced delays for those ordering. Based on field observations, if an unlimited amount of stacking were available at a proposed site, the five car spacing would be ideal. Realizing that space for stacking nearly always is limited, an acceptable alternative would be the four car spacing.

Appendix B

Conclusions

Drive-in bank usage has dropped dramatically, as illustrated in the data provided in this report. Consequently, a reduced amount of stacking is required. That reduced area for drive-through stacking can provide more flexibility in the design of bank sites, allowing for development on smaller sites or the provision of increased landscaped areas.

Based on the data that was gathered, the City of Overland Park has reduced its previous requirement for a minimum five car stack per lane to a three car stack (a distance of 60 feet per lane, assuming average vehicle spacing to be 20 feet). That design should be sufficient to accommodate virtually all situations. Vehicular stacking requirements for ATMs have been established, also at a minimum of three car lengths.

Coffee shop drive-through lanes are most heavily used during the morning peak period, and therefore it is important to design sites to accommodate that peak demand. The following recommended minimum stacking lengths should be appropriate in most cases. The only exceptions would be situations in which excess queuing could impact a nearby street or major drive, in which case a more conservative approach should be taken.

Based on the data that was gathered for drive-through-only operations, it appears reasonable to require that a dedicated drive-through lane be provided with a stack of 120 feet – enough to handle six vehicles. That should be sufficient to accommodate nearly all vehicles that are likely to arrive during the morning peak hour time period.

For full service establishments, a 220-foot long drive-through lane, providing eleven cars of total storage, should be adequate to handle the vast majority of the drive-through lane volumes that might be encountered. In those cases where more than eleven vehicles were counted, the duration of the extreme queue lasted for only a few minutes. For the most efficient operation, the distance between the pick-up window and menu board should be at least 80 feet to accommodate four vehicles.

References

1. Gattis, J. L., Chair of ITE Technical Council Committee 5D-10. “Queuing Areas for Drive-Thru Facilities, by ITE Technical Council Committee 5D-10.” *ITE Journal* (May 1995): 38-42.

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Queuing Areas For Drive-Thru Facilities

BY ITE TECHNICAL COUNCIL COMMITTEE 5D-10

ITE Technical Council Committee 5D-10 was formed to collect and analyze basic information that may be used to estimate and evaluate lengths of automobile queues at drive-thru facilities. In addition to fulfilling this objective, this Informational Report constitutes a starting point for compiling a database for drive-thru facility queue length information.

Introduction

When faced with the need to evaluate the future impacts of a planned development, the transportation engineer often employs some form of analogy, estimating the future impacts of as-yet unbuilt development by using the attributes of existing land uses having a similar nature. For instance, the engineer may refer to published trip generation rates, derived from observations made at existing developments, to obtain a figure by which to estimate volumes that will occur at the proposed development.

***J. L. Gattis**, P.E., was Chair of Technical Council Committee 5D-10. He is an Assistant Professor in the Department of Civil Engineering at the University of Arkansas in Fayetteville, Ark. He is a Member of ITE.*

Many types of businesses (such as fast-food restaurants, banks and cleaners) utilize drive-thru systems. A similar form of drive-thru operation can be found at sites where passenger pick-up operations occur (such as parents picking up schoolchildren). These drive-thru systems are comprised of a server position (often at a service "window"), and vehicle queuing space in advance

QUEUING DATA SHEET

1.	Type of Service Provided	_____
2.	Day(s) of Week	Sun Mon Tue Wed Thu Fri Sat
3.	Time(s) of Day	_____
4.	Type of Area	CBD ☐ Surburban ☐ Rural ☐
5.	Competition in Area (For Same Services)	High ☐ Medium ☐ Low ☐
6.	Service Rate Measured (Per Window or Aisle or Lane)	_____ Vehicles/Time
7.	Arrival Rate Measured (Per Window or Aisle or Lane)	Avg ____ Max ____ Vehicles/Time
8.	Uniformity Rating	_____ (1 - 10)
9.	Capacity of Queue Storage Area	_____ (Vehicles)
10.	Measured Average Queue	_____ (Vehicles)
11.	Measured Maximum Queue	_____ (Vehicles)
12.	Excess Demand Volume	_____ (Vehicles)
13.	Excess Demand Frequency	_____
14.	Size Sample or Length of Count Data	_____
15.	Narrative Description of Service	_____

Figure 1. Data gathering form used in survey.

of the service position, for waiting in line as those ahead are served first.

When attempting to project lengths of automobile queues at proposed drive-thru facilities, the municipal or private consulting engineers may not find available data by which a projection can be made. While such data may be known by larger business chains that have drive-thru operations, the data do not seem to be generally available to the average traffic engineer trying to size or evaluate automobile queue storage area. True, some publications present results of queuing studies or equations for estimating queue lengths based on known system arrival and service rates.[1-4] But the proposed-site arrival and service rates may be unknown, and the proposed system may not possess attributes (such as negative exponential service time rates) needed for certain equations to properly predict queue lengths.

Drive-thru facilities are perceived as time-savers; as a convenience to the physically challenged, elderly and parents with young children; and as a way to avoid going out into inclement weather. Due to vehicle idling while in line, drive-thru facilities may also be viewed as causing unnecessary fuel consumption and air pollution. The popularity of drive-thru services creates a need to evaluate the queuing capacities of the varied drive-thru facilities. This report provides some basic drive-thru facility queue length information. It is hoped that the database will continue to grow, so that a comprehensive analytical tool may be available for the transportation professional.

Methods

The queue length data gathering form shown in Figure 1 was distributed to committee members in November 1987. The form was accompanied by specific user-instructions to ensure uniformity of procedures and compatibility of results.

Completed forms were returned to the committee chair and data were cataloged by land-use type. The maximum observed queue lengths and the maximum observed queue length frequencies were compiled. Cumulative frequencies and the probability that queues would not exceed an absolute maximum were calculated and shown graphically.

Table 1. Ranges of Fast Food Queue Lengths by Food Type

Food Type	Maximum Queue Range (# in system)	Average Maximum Queue (# in system)	Studies
Donuts	4	4	2
Steak	4	4	2
Chicken	2–9	5	5
Fish	5	5	1
Sandwiches	5	5	1
Mexican	7	7	1
Roast Beef	6–8	7	2
Hamburgers	4–13	7	27

Table 2. Fast Food Queue Lengths

Maximum Queue Length (# in system)	Frequency	Cumulative Frequency	P(q≤N)
1	0	0	0.00
2	2	2	0.05
3	0	2	0.05
4	6	8	0.18
5	4	12	0.27
6	7	19	0.43
7	10	29	0.66
8	7	36	0.82
9	5	41	0.93
10	1	42	0.95
11	0	42	0.95
12	1	43	0.98
13	1	44	1.00

Note: P(q≤N) indicates probability, based on sample, of queue length "q" not exceeding length "N".

Findings

Within this report, data have been compiled for banks, car washes, day care facilities, dry cleaners and fast-food restaurants.

Fast Food

This category includes restaurants characterized by food being prepared in advance of, or shortly after, ordering; by high turnover for eat-in customers; and by long business hours. The ITE land-use codes (LUCs) for this use are LUC 834 (*Trip Generation*, 1991) and 836 (*Parking Generation*, 1987).

Forty-four fast-food restaurants were observed for this study. They ranged from those serving chicken to the hamburger chains. All sites were suburban locations. Queuing was observed mainly during the weekday mid-day peak from the 1970s through the 1990s, at sites in Florida, Kansas, Illinois, Minnesota, Montana, New Jersey, Oklahoma, Pennsylvania and Texas. All fast-food facilities observed for this study had a single-window drive-thru system. The industry is changing, with double- and even triple-window systems being utilized. Further information will be needed on queuing characteristics of these facilities.

The average observed service rate was 54 vehicles per hour (vph); the maximum rate was 108 vph. The maximum observed queue lengths (number of vehicles in line, including vehicle at service position) ranged from two to 13 vehicles (see Table 1). Where there was a menu-order board followed by a service window, the combined total of vehicles in both sequential lines was reported.

The restaurants featuring hamburgers had maximum queues in the upper part of the range. Table 2 shows the frequencies of the observed maximum queue lengths, as well as a probability of a queue of less than a given number

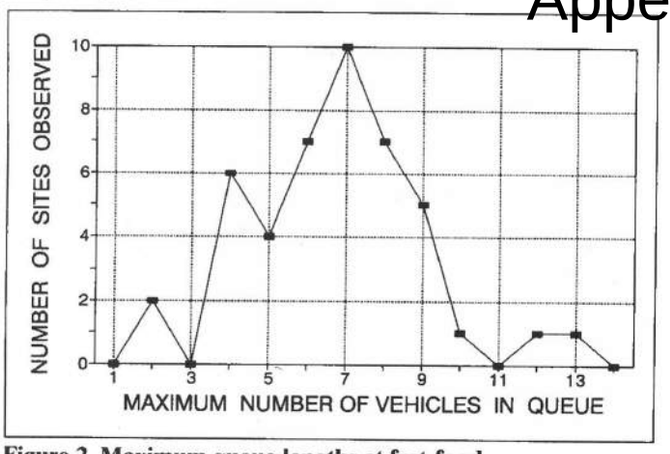


Figure 2. Maximum queue lengths at fast-food.

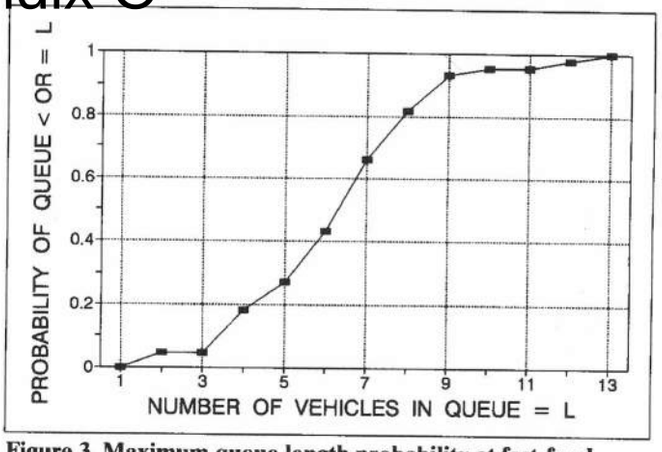


Figure 3. Maximum queue length probability at fast-food.

of vehicles. Figure 2 plots maximum queue length against the observed frequency of occurrence. Figure 3 depicts the probability that at any fast-food site, the queue will not exceed a given maximum queue length. From Table 2 or Figure 3, it can be seen that there was a 95 percent probability that the maximum queue at a site would be no more than 10 vehicles.

The maximum queues were evaluated against days of the week and were found to have no statistical relationship. Likewise, when evaluated against different levels of competition within the area and against service rates, there was no statistical relationship.

Bank

This category includes savings-and-loans with or without automatic teller machines (ATMs) and commercial banks with or without ATMs. Although there were historical differences between banks and savings-and-loans, they are now often indistinguishable to the public. The ITE land-use codes for this use are LUC 912 and 914 (*Trip Generation*, 1991) and LUC 912 (*Parking Generation*, 1987).

The studies analyzed were conducted from the late 1960s through the late 1980s; many were in Illinois, Minnesota, New Jersey and Texas. The size of the bank drive-thru facilities ranged from a minimum of one lane with one teller-window up to an institution with 10 lanes and four tellers.

Observed service rates for these institutions went up to a maximum of 35 vehicles per lane-hour. Maximum observed queues per lane ranged from two to eight vehicles. The maximum system queue lengths (all lanes combined) ranged from five to 29 vehicles. At two sites, it was observed that a queue length exceeding eight vehicles per lane was not tolerated by customers. When the queue length became excessive, customers would park and use walk-in facilities rather than the drive-thru. Thus the collected data reflect a maximum queue per lane of eight vehicles.

Table 3 shows the observed frequency of occurrence of maximum queue lengths per lane. Figure 4 plots the maximum number of vehicles per lane observed. On the basis of the studies received, there is a 100 percent probability that the queue length at a bank drive-thru facility will not exceed eight vehicles per lane, as Figure 5 shows.

Table 4 presents the maximum number of vehicles in an entire drive-thru system (all lanes combined) by ranges, along with the frequency of occurrence. This table shows that the most common maximum number-in-the-system at a bank drive-thru facility fell between six and 10 vehicles, as most observed facilities consisted of two lanes. Table 4 also

Table 3. Bank Queue Lengths

	Maximum Queue Per Lane		
Queue Length	*Frequency*	*Cumulative Frequency*	*P(q≤N)*
0	0	0	0.00
1	0	0	0.00
2	1	1	0.07
3	4	5	0.33
4	2	7	0.47
5	4	11	0.73
6	1	12	0.80
7	2	14	0.93
8	1	15	1.00

Note: P(q≤N) indicates probability, based on sample, of queue length "q" not exceeding length "N".

Table 4. Maximum Number of Vehicles in Bank System (All Lanes)

# in system	*Frequency*	*Cumulative Frequency*	*P(q≤N)*
0 – 5	2	2	0.13
6 – 10	6	8	0.53
11 – 15	3	11	0.73
16 – 20	2	13	0.87
21 – 25	1	14	0.93
26 – 30	1	15	1.00

Note: P(q≤N) indicates probability, based on sample, of queue length "q" not exceeding length "N".

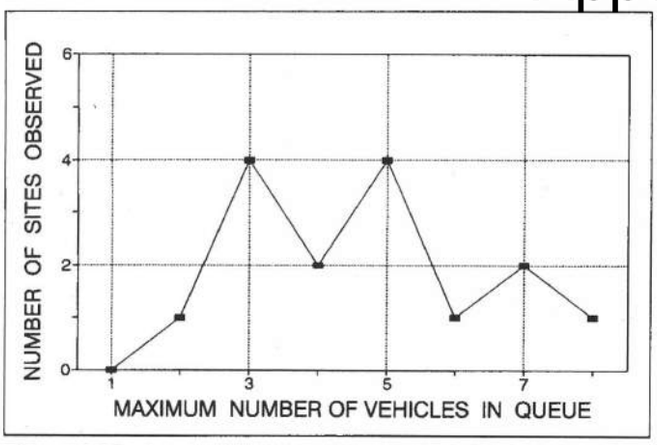


Figure 4. Maximum queue length per lane at bank.

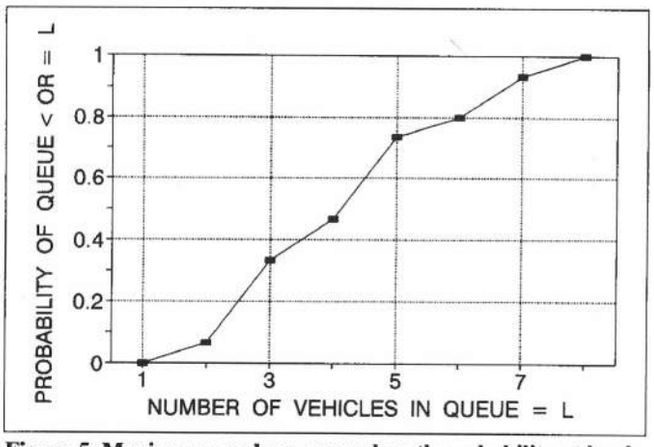


Figure 5. Maximum per lane queue length probability at bank.

gives the probability, based on the studies received, that the number of vehicles in the system will not exceed a certain range.

It should be noted that queuing lengths may be affected by time-of-day banking habits. There may be differences between the central city and a suburb. An area with a large proportion of retired persons may experience unique banking-time behaviors. In addition, the effects of banks incorporating ATMs into drive-thru aisles may also need to be investigated in future queuing studies.

Car Wash

This category includes full-service car washes (offering vacuuming and towel-drying services), exterior tunnel operation (vacuuming and towel drying not a part of the "in-line" operation, but may be offered at separate stations to the side), and self-service car washes (where customers pull into a wash bay, insert coins into a box, and proceed to wash). The ITE land-use code for these uses is LUC 847 (*Trip Generation*, 1991). This land use was not included in the 1987 *Parking Generation* report.

The studies analyzed were conducted from the late 1960s through the late 1980s in Kansas, Illinois, Montana, New Jersey and Texas. They included seven full service car washes, two exterior tunnel car washes, and nine self-service car washes. The number of self-service bays ranged from six to 14 per site. The self-service car washes typically had one or more parallel wash bays; the full-service car wash operations tended to have a single tunnel to serve customers.

Studies at the full-service car washes were made during winter or early spring months. Both full-service car washes consisted of a single tunnel. Observed service rates were 35 vph (maximum queue of nine vehicles) and 27 vph (maximum queue of 26 vehicles). At the site with a 26-vehicle queue, the queue extended off the site and onto an adjacent private street with light traffic volumes.

The self-service car wash studies were conducted on Saturday and Thursday, during late spring and/or summer months. Service rates at self-service car washes ranged from 4.1 vehicles per bay-hour to 5.4 vehicles per bay-hour. The average service rate was 4.77 vehicles per bay-hour. The maximum queue observed at two study sites was three vehicles, and at a third study site the maximum observed was one vehicle. No distinction was made as to whether these were maximum queues per bay or total maximum queues (per entire operation).

Day Care

This category includes facilities that provide a place for children during the day, often while parents are at work. After-school care may also be provided. The ITE land-use code is LUC 565 (*Trip Generation*, 1991). This land use was not included in the 1987 *Parking Generation* report.

Data were submitted for one day-care facility in Texas, during the evening peak hour. The facility had 99 children enrolled and 94 present the day the study was conducted. The day-care facility handled children age 2 through first grade. The facility was operated in a manner that required the parents to park their cars and go inside to get their children.

The hour service rate was 46 vehicles. A maximum of eight vehicles in

This is an Informational Report of the Institute of Transportation Engineers prepared by Technical Council Committee 5D-10. The information in this report has been obtained from experiences of transportation engineering professionals and research. ITE Informational Reports are prepared for informational purposes only and do not include Institute recommendations on which is the best course of action or the preferred application of the data.

Members of Technical Council Committee 5D-10 were J. L. Gattis, P.E. (M), Chair; Grant A. Bacchus, P. Eng. (F); Benedict G. Barkan (F); Robert R. Marvin, P.E. (M); Dale B. McKinney, P.E. (F); Robert A. Nelson, P.E. (F); Seyed M. Safavian (M); James M. Schoen (A); David K. Sorenson, P.E. (A); Mark J. Stuecheli (M); and Jack Wierzenski (A).

Members of the Technical Council Department 5 Standing Committee at the time of approval of this report were Dennis O'Malley (F), Chair; Carol H. Walters, P.E. (M), Assistant Chair; Robert D. McMillen, P.E. (FL); Wamahdri W. Williams (A); and Donald J. Galloway, P.E. (F). Brian S. Bochner, P.E. (F), was the Chair of Technical Council, and John M. Mason, P.E. (F), was the Assistant Chair.

Table 5. Summary of Observed Queue Distances at Drive-Thru Facilities

	Near-maximum number of queued vehicles observed in system (does not include vehicle at service position)	*Lane Length needed to store near-maximum queue (does not include) vehicle at service position)*
Fast-Food (Hamburger)	10 – 1 = 9	60 m (198 feet)
Bank	8 – 1 = 7	47 m (154 feet)
Car Wash (self-service)	3 – 1 = 2	13 m (44 feet)
Day Care	10 – 1 = 9	can store in parallel
Dry Cleaner	3 – 1 = 2	13 m (44 feet)

5 minutes (if sustained, equivalent to 96 vph) were observed; a 20-minute period had 28 vehicles (84 per hour). The maximum number of waiting vehicles was 10 vehicles.

VanWinkle and Kinton reported the results of 29 field studies at day-care establishments in Tennessee. Their findings are in the July 1994 *ITE Journal*.[8]

Dry Cleaners

This category includes facilities that clean clothing and other fabrics that should not be laundered. Often a walk-up window is present. No information is provide for this land use in either the ITE 1991 *Trip Generation* report or the ITE 1987 *Parking Generation* report.

One study was conducted at a dry cleaner with drive-thru facilities in Montana during a weekday p.m. peak period. An average service rate of 41 vph was measured at the single window. The observed maximum queue was three vehicles long. Forty-five percent of the customers used the drive-thru facility.

Conclusions

Table 5 summarizes the observed maximum or near-maximum observed queue lengths, and also lists the stacking distance needed to accommodate these observed queues, based on a front bumper-to-front bumper space occupied length of 22 feet (ft) per vehicle. This 22 ft may not be the exact space that vehicles occupy, but a value ranging from 20 ft to 25 ft seems appropriate for many situations. Because only one day-care facility was observed, and because parents picking up children may park in parallel or in a lot instead of in a single-file line, no stacking length was calculated for this land use.

Due to a change of committee personnel during the course of the data-gathering effort, some of the original forms submitted by committee members are not available. There are some apparent errors in the tables. For instance, the number of studies tallied in Table 1 is 41, while the number in Table 2 is 44. It is not known whether three studies were not included in Table 1, or whether there was double counting in Table 2. The unavailability of the original data forms makes it impossible to recheck the numbers.

The size of this drive-thru facility queuing characteristic database was limited. There is a need to accumulate and analyze more drive-thru queuing system data, so transportation engineers and site planners can be better informed. Additional observations of service rates are also needed in order to determine relationships between service rates and queue lengths, and to evaluate long-term trends in service rates. Finally, investigations of the amount of space occupied per vehicle within a queue are needed so that engineers will have the ability to project not only the number of vehicles that will be in the maximum queue for a given site, but also the queue storage length required for a site.

When collecting queuing data, the recorder should clearly indicate whether the number of vehicles recorded includes or excludes the vehicle(s) in the service position (that is, at the window). The data record must indicate which numbers are for a single queuing line and which totals are for the entire system of multiple queuing lines. An observer should also note instances of arriving vehicles balking or refusing to enter a queue due to excessive length, and how many vehicles were in the queue when the next arrival balked.

Other types of drive-thru operations that could be studied include those at credit unions, funeral homes, gas stations (either gas only, full-service, self-service, or a combination with convenience stores or car washes), libraries, liquor stores, movie theater ticket booths, parking lots and garages (either pick-up ticket or pay, or key, tag, or card), post offices, pre-schools, baby-sitting or school combinations, lower grade schools, stadium ticket sales machines, truck stops and places of worship.

References

1. Ballard, J. L., J. G. Goble, and Pat T. McCoy. "Another Look at the Storage Requirements for Bank Drive-In Facilities." *Transportation Research Record* 971. Washington, D.C.: Transportation Research Board (1984): 130–132.
2. W. Gordon Derr, Thomas E. Mulinazzi, and Bob L. Smith. "Queuing at Drive-up Windows." *Transportation Research Record* 901. Washington, D.C.: Transportation Research Board (1983): 38–42.
3. Fricker, Jon D. and H. S. Tsay. "Drive-Up Windows, Energy, and Air Quality." *Transportation Research Record* 1092. Washington, D.C.: Transportation Research Board (1975): 22–25.
4. Gattis, J. L., N. Zaman, G. W. Tauxe, and R. S. Marshment. "Analyzing Fast-Food Drive-Up Window Site Impacts." *Site Impact Traffic Assessment*. New York: American Society of Civil Engineers (1992): 16–20.
5. Gerlough, D. L. and M. J. Huber. *Traffic Flow Theory: TRB Special Report 165*. Washington, D.C.: Transportation Research Board, 1975.
6. May, Adolf D. *Traffic Flow Fundamentals*. Englewood Cliffs, N.J.: Prentice Hall, 1990.
7. Stover, Vergil G. and Frank J. Koepke. *Transportation and Land Development*. Washington, D.C.: Institute of Transportation Engineers, 1987.
8. VanWinkle, John W. and S. Colin Kinton. "Parking and Trip Generation Characteristics for Day-Care Facilities." *ITE Journal* (July 1994): 24–28.
9. Woods, Donald L. and Carroll J. Messer. "Design Criteria for Drive-In Banking Facilities." *Traffic Engineering* (December 1970): 30–37.

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	912
Land Use/Building Type*:	Drive-in Bank

Name of Business:	Citizens Independent Bank
Address:	3700 W Broadway Ave
City:	Robbinsdale
State:	MN
Zip Code:	55422

Date(s)	February 7-8, 2012 (Tuesday-Wednesday)

Weather Conditions	High 32 °F and Clear

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	X
	Low	

Drive-Through Description	4 Lanes + 1 ATM Lane

Gross Floor Area (estimated)	6300

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday	**5**	**3:36pm**
Wednesday	**5**	**2:37pm**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	912
Land Use/Building Type:	Drive-in Bank

Name of Business:	SharePoint Credit Union
Address:	3670 Aquila Ave S
City:	St. Louis Park
State:	MN
Zip Code:	55426

Date(s)	February 1-2, 2012 (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	X
	Low	

Drive-Through Description :	2 Lanes + 1 ATM Lane

Gross Floor Area (estimated)	7,850 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**3**	**3:28pm**
Thursday	**3**	**8:51am, 10:37am**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	912
Land Use/Building Type:	Drive-in Bank

Name of Business:	TCF Bank
Address:	8020 Highway 7
City:	St. Louis Park
State:	MN
Zip Code:	55426

Date(s)	August 5-7, 2011 (Friday-Sunday)

Weather Conditions	High 84-88 °F and Clear

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	X
	Low	

Drive-Through Description :	5 Lanes + 1 ATM Lane

Gross Floor Area (estimated)	6,000 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday	**4**	**5:18pm**
Monday		
Tuesday		
Wednesday		
Thursday		
Friday	**8**	**12:20pm, 2:20pm**
Saturday	**8**	**11:40am**

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	912
Land Use/Building Type:	Drive-in Bank

Name of Business:	US Bank
Address:	4000 W Broadway Ave
City:	Robbinsdale
State:	MN
Zip Code:	55422

Date(s)	February 7-8, 2012 (Tuesday-Wednesday)

Weather Conditions	High 32 °F and Clear

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	X
	Low	

Drive-Through Description :	3 Lanes + 1 ATM Lane

Gross Floor Area (estimated)	21,550 sq. ft.

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday	**7**	**4:47pm, 5:04pm**
Wednesday	**7**	**3:00pm, 5:26pm**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	912
Land Use/Building Type:	Drive-in Bank
Name of Business:	Wells Fargo
Address:	425 E Hennepin Ave
City:	Minneapolis
State:	MN
Zip Code:	55414
Date(s)	February 7, 2012 (Tuesday)
Weather Conditions	High 32 °F and Clear

Location Within Area (select one):		Competition Within Area (select one):	
	CBD		
X	Urban (non-CBD)	High	
	Suburban (non-CBD)	Medium	X
	Suburban CBD	Low	
	Rural		
	Not Given		

Drive-Through Description :	4 Lanes + 1 ATM Lane
Gross Floor Area (estimated)	12,000 sq. ft.

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday	**6**	**1:18pm**
Wednesday		
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	912
Land Use/Building Type:	Drive-in Bank

Name of Business:	Wells Fargo
Address:	2329 Central Ave NE
City:	Minneapolis
State:	MN
Zip Code:	55418

Date(s)	February 7-8, 2012 (Tuesday-Wednesday)

Weather Conditions	High 32 °F and Clear

Location Within Area (select one):	
CBD	
Urban (non-CBD)	X
Suburban (non-CBD)	
Suburban CBD	
Rural	
Not Given	

Competition Within Area (select one):	
High	
Medium	X
Low	

Drive-Through Description :	7 Lanes (4-5 Lanes were open at various points) + 1 ATM Lane

Gross Floor Area (estimated)	20,125 sq. ft.

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday	**8**	**4:41pm**
Wednesday	**6**	**11:27am, 1:48pm, 2:23pm, 4:32pm, 5:25pm**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	948
Land Use/Building Type:	Automated Car Wash

Name of Business:	BP
Address:	3012 Excelsior Blvd
City:	Minneapolis
State:	MN
Zip Code:	55416

Date(s)	February 1-2, 2012, (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):		Competition Within Area (select one):	
	CBD		
X	Urban (non-CBD)	High	
	Suburban (non-CBD)	Medium	
	Suburban CBD	Low	X
	Rural		
	Not Given		

Drive-Through Description :	1 Lane. Only counted the vehicles waiting in line, not the vehicles currently being washed.

Gross Floor Area (estimated)	3,375 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**6**	**3:08pm**
Thursday	**6**	**3:07pm**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	948
Land Use/Building Type:	Automated Car Wash

Name of Business:	BP
Address:	2441 Fariview Ave N
City:	Roseville
State:	MN
Zip Code:	55113

Date(s)	February 7-8, 2012 (Tuesday-Wednesday)
Weather Conditions	High 32 °F and Clear

Location Within Area (select one):		Competition Within Area (select one):	
	CBD		
	Urban (non-CBD)		
X	Suburban (non-CBD)	High	
	Suburban CBD	Medium	
	Rural	Low	X
	Not Given		

Drive-Through Description :	1 Lane. Only counted the vehicles waiting in line, not the vehicles currently being washed.
Gross Floor Area (estimated)	3,150 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday	**1**	**12:58pm**
Wednesday	**3**	**2:53pm**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	948
Land Use/Building Type:	Automated Car Wash

Name of Business:	BP
Address:	1691 Snelling Ave N
City:	Falcon Heights
State:	MN
Zip Code:	55113

Date(s)	February 7-8, 2012 (Tuesday-Wednesday)

Weather Conditions	High 32 °F and Clear

Location Within Area (select one):	
CBD	
Urban (non-CBD)	
Suburban (non-CBD)	X
Suburban CBD	
Rural	
Not Given	

Competition Within Area (select one):	
High	
Medium	
Low	X

Drive-Through Description :	1 Lane. Only counted the vehicles waiting in line, not the vehicles currently being washed.

Gross Floor Area (estimated)	1,500 sq. ft.

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday	**4**	**1:48pm**
Wednesday	**3**	**4:29pm**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	948
Land Use/Building Type:	Automated Car Wash

Name of Business:	Holiday Gas Station Carwash
Address:	5430 Minnetonka Blvd
City:	St. Louis Park
State:	MN
Zip Code:	55416

Date(s)	February 1-2, 2012 (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	
	Low	X

Drive-Through Description :	1 Lane. Only counted the vehicles waiting in line, not the vehicles currently being washed.

Gross Floor Area (estimated)	3,000 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**3**	**12:37pm, 1:50pm, 3:43pm, 4:41pm, 5:10pm, 7:04pm, 7:30pm**
Thursday	**4**	**2:38pm, 4:20pm**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	948
Land Use/Building Type:	Automated Car Wash

Name of Business:	Mister Car Wash
Address:	8650 Highway 7
City:	St. Louis Park
State:	MN
Zip Code:	55426

Date(s)	February 1-2, 2011 (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):	
CBD	
Urban (non-CBD)	
Suburban (non-CBD)	X
Suburban CBD	
Rural	
Not Given	

Competition Within Area (select one):	
High	
Medium	
Low	X

Drive-Through Description :	2 Lanes, Full Service Wash, only vehicles in line were counted, not the vehicles being washed.

Gross Floor Area (estimated)	8,250 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**10**	**1:03pm**
Thursday	**6**	**4:02pm**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	948
Land Use/Building Type:	Automated Car Wash

Name of Business:	Mobil Car Wash
Address:	3864 Hopkins Crossroad
City:	Minnetonka
State:	MN
Zip Code:	55305

Date(s)	February 1-2, 2012 (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	
	Low	X

Drive-Through Description :	2 lanes. Only vehicles in line were counted, not vehicles being washed.

Gross Floor Area (estimated)	1,225 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**4**	**6:03pm**
Thursday	**3**	**4:37pm, 6:28pm, 7:39pm, 7:51pm, 8:04pm, 8:23pm**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	937
Land Use/Building Type:	Coffee/Donut Shop w/ Drive Thru

Name of Business:	Caribou Coffee
Address:	4745 Cedar Ave S
City:	Minneapolis
State:	MN
Zip Code:	55407

Date(s)	February 1-2, 2012 (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):	
CBD	
Urban (non-CBD)	X
Suburban (non-CBD)	
Suburban CBD	
Rural	
Not Given	

Competition Within Area (select one):	
High	
Medium	X
Low	

Drive-Through Description :	1 Lane

Gross Floor Area (estimated)	1,950 sq. ft.

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**11**	**8:50am**
Thursday	**10**	**7:57am**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	937
Land Use/Building Type:	Coffee/Donut Shop w/ Drive Thru

Name of Business:	Caribou Coffee
Address:	5330 Cedar Lake Rd
City:	St. Louis Park
State:	MN
Zip Code:	55416

Date(s)	August 5-9, 2011 (Friday-Tuesday)

Weather Conditions	High 82-88 °F and Clear

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	X
	Low	

Drive-Through Description :	1 Lane

Gross Floor Area (estimated)	3,600 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday	**7**	**9:39am, 9:41am**
Monday	**10**	**8:39am**
Tuesday	**12**	**9:26am**
Wednesday		
Thursday		
Friday	**12**	**8:12am**
Saturday	**8**	**8:52am, 10:24am**

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	937
Land Use/Building Type:	Coffee/Donut Shop w/ Drive Thru

Name of Business:	Starbucks
Address:	5121 Gus Young Lane
City:	Edina
State:	MN
Zip Code:	55436

Date(s)	February 7-8, 2012 (Tuesday-Wednesday)

Weather Conditions	High 32 °F and Clear

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	
	Low	X

Drive-Through Description :	1 Lane

Gross Floor Area (estimated)	3,000 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**14**	**7:22am, 7:49am**
Thursday	**16**	**8:56am**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	937
Land Use/Building Type:	Coffee/Donut Shop w/ Drive Thru

Name of Business:	Starbucks
Address:	1505 Highway 7
City:	Hopkins
State:	MN
Zip Code:	55305

Date(s)	February 1-2, 2012 (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	X
	Low	

Drive-Through Description :	1 Lane, Queuing Went Out Onto the Street

Gross Floor Area (estimated)	1,800 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**10**	**7:42am, 8:41am, 8:59am**
Thursday	**11**	**7:33am**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	937
Land Use/Building Type:	Coffee/Donut Shop w/ Drive Thru

Name of Business:	Starbucks
Address:	4201 Minnetonka Blvd
City:	St. Louis Park
State:	MN
Zip Code:	55416

Date(s)	November 3, 2010 (Wednesday)
Weather Conditions	High 56 °F and Clear

Location Within Area (select one):	
CBD	
Urban (non-CBD)	
Suburban (non-CBD)	X
Suburban CBD	
Rural	
Not Given	

Competition Within Area (select one):	
High	
Medium	X
Low	

Drive-Through Description :	1 Lane, Queue Lengths Recorded at 5 min Intervals
Gross Floor Area (estimated)	2,550 sq. ft.

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**11**	**8:45am**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	937
Land Use/Building Type:	Coffee/Donut Shop w/ Drive Thru

Name of Business:	Starbucks
Address:	2305 Fairview Ave
City:	Roseville
State:	MN
Zip Code:	55113

Date(s)	February 7-8, 2012 (Tuesday-Wednesday)

Weather Conditions	High 32 °F and Clear

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	X
	Low	

Drive-Through Description :	1 Lane

Gross Floor Area (estimated)	1,500 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday	**10**	**8:09am**
Wednesday	**12**	**7:57am**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	934
Land Use/Building Type:	Fast Food with Drive Thru

Name of Business:	Arby's
Address:	1116 W Lake St
City:	Minneapolis
State:	MN
Zip Code:	55408

Date(s)	February 1-2, 2012 (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):	
CBD	
Urban (non-CBD)	X
Suburban (non-CBD)	
Suburban CBD	
Rural	
Not Given	

Competition Within Area (select one):	
High	
Medium	X
Low	

Drive-Through Description :	1 Lane

Gross Floor Area (estimated)	3,000 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**5**	**6:04pm**
Thursday	**5**	**6:55pm**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	934
Land Use/Building Type:	Fast Food with Drive Thru

Name of Business:	Burger King
Address:	6660 Wayzata Blvd
City:	Golden Valley
State:	Minnesota
Zip Code:	55426
Date(s)	August 5-8, 2011
Weather Conditions	High 82-88 °F and Clear

Location Within Area (select one):		Competition Within Area (select one):	
	CBD		
	Urban (non-CBD)		
X	Suburban (non-CBD)	High	
	Suburban CBD	Medium	X
	Rural	Low	
	Not Given		

Drive-Through Description :	1 Lane
Gross Floor Area (estimated)	3,300 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday	**6**	**4:30pm**
Monday	**12**	**12:10pm**
Tuesday		
Wednesday		
Thursday		
Friday	**10**	**12:12pm**
Saturday	**8**	**9:38pm**

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	934
Land Use/Building Type:	Fast Food with Drive Thru

Name of Business:	McDonald's
Address:	5200 Excelsior Blvd
City:	St. Louis Park
State:	MN
Zip Code:	55416

Date(s)	February 1-2, 2012 (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	X
	Low	

Drive-Through Description :	2 Order Stations

Gross Floor Area (estimated)	3,600 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**12**	**11:46am**
Thursday	**13**	**12:23pm**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	934
Land Use/Building Type:	Fast Food with Drive Thru

Name of Business:	McDonald's
Address:	2929 Hennepin Ave S
City:	Minneapolis
State:	MN
Zip Code:	55408

Date(s)	February 1-2, 2012 (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):	
CBD	
Urban (non-CBD)	X
Suburban (non-CBD)	
Suburban CBD	
Rural	
Not Given	

Competition Within Area (select one):	
High	
Medium	X
Low	

Drive-Through Description :	1 Lane

Gross Floor Area (estimated)	3,825 sq. ft.

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**9**	**8:48am**
Thursday	**8**	**8:54am**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	934
Land Use/Building Type:	Fast Food with Drive Thru

Name of Business:	Taco Bell
Address:	819 Cambridge St
City:	Hopkins
State:	MN
Zip Code:	55343

Date(s)	February 1-2, 2012 (Wednesday-Thursday)
Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):		Competition Within Area (select one):	
	CBD		
	Urban (non-CBD)		
X	Suburban (non-CBD)		High
	Suburban CBD	X	Medium
	Rural		Low
	Not Given		

Drive-Through Description :	1 Lane
Gross Floor Area (estimated)	2,500 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**10**	**12:26pm**
Thursday	**8**	**12:17pm, 6:57pm**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	934
Land Use/Building Type:	Fast Food with Drive Thru

Name of Business:	White Castle
Address:	1111 Cambridge St
City:	Hopkins
State:	MN
Zip Code:	55343

Date(s)	February 1-2, 2012 (Wednesday-Thursday)

Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	X
	Low	

Drive-Through Description :	1 Lane

Gross Floor Area (estimated)	1,750 sq. ft

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**8**	**5:26pm**
Thursday	**5**	**8:13am, 12:10pm, 1:25pm, 3:22pm, 8:54pm**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	881
Land Use/Building Type:	Pharmacy/Drugstore w/ Drive-Thru
Name of Business:	CVS Pharmacy
Address:	Medicine Lake Rd & Winnetka Ave
City:	New Hope
State:	MN
Zip Code:	55427
Date(s)	February 7-8, 2012 (Tuesday-Wednesday)
Weather Conditions	High 32 °F and Clear

Location Within Area (select one):	
CBD	
Urban (non-CBD)	
Suburban (non-CBD)	X
Suburban CBD	
Rural	
Not Given	

Competition Within Area (select one):	
High	X
Medium	
Low	

Drive-Through Description :	2 Lanes
Gross Floor Area (estimated)	18, 700 sq. ft.

	Maximum Queue	Time Max Queue Occurred
Sunday		
Monday		
Tuesday	**1**	**13 times**
Wednesday	**2**	**5:55pm**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	881
Land Use/Building Type:	Pharmacy/Drugstore w/ Drive-Thru
Name of Business:	CVS
Address:	2426 W Broadway Ave
City:	Minneapolis
State:	MN
Zip Code:	55411
Date(s)	February 7-8, 2012 (Tuesday-Wednesday)
Weather Conditions	High 32 °F and Clear

Location Within Area (select one):		Competition Within Area (select one):	
	CBD		
	Urban (non-CBD)		
X	Suburban (non-CBD)	High	
	Suburban CBD	Medium	X
	Rural	Low	
	Not Given		

Drive-Through Description :	2 Lanes
Gross Floor Area (estimated)	14,200 sq. ft

	Maximum Queue	Time(s) Max Queue Occurred
Sunday		
Monday		
Tuesday	**4**	**5:28pm**
Wednesday	**4**	**6:38pm**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	881
Land Use/Building Type:	Pharmacy/Drugstore w/ Drive-Thru

Name of Business:	CVS
Address:	3655 Central Ave NE
City:	Minneapolis
State:	MN
Zip Code:	55418

Date(s)	February 7-8, 2012 (Tuesday-Wednesday)

Weather Conditions	High 32 °F and Clear

Location Within Area (select one):	
CBD	
Urban (non-CBD)	X
Suburban (non-CBD)	
Suburban CBD	
Rural	
Not Given	

Competition Within Area (select one):	
High	
Medium	X
Low	

Drive-Through Description :	2 Lanes

Gross Floor Area (estimated)	14,200 sq. ft

	Maximum Queue	Time(s) Max Queue Occurred
Sunday		
Monday		
Tuesday	**2**	**1:57pm, 3:35pm, 5:48pm, 6:07pm, 7:10pm**
Wednesday	**2**	**3:03pm, 3:52pm, 4:07pm, 4:46pm, 5:12pm, 5:20pm, 6:43pm**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	881
Land Use/Building Type:	Pharmacy/Drugstore w/ Drive-Thru
Name of Business:	Walgreens
Address:	540 Blake Rd N
City:	Hopkins
State:	MN
Zip Code:	55343
Date(s)	February 1-2, 2012 (Wednesday-Thursday)
Weather Conditions	High 32-36 °F and Fog

Location Within Area (select one):		
	CBD	
	Urban (non-CBD)	
	Suburban (non-CBD)	X
	Suburban CBD	
	Rural	
	Not Given	

Competition Within Area (select one):		
	High	
	Medium	X
	Low	

Drive-Through Description :	2 Lanes
Gross Floor Area (estimated)	14,375 sq. ft

	Maximum Queue	Time(s) Max Queue Occurred
Sunday		
Monday		
Tuesday		
Wednesday	**4**	**2:33pm, 3:31pm, 4:46pm, 4:57pm, 5:28pm, 6:26pm, 6:38pm, 8:20pm, 9:20pm**
Thursday	**5**	**4:30pm, 4:52pm, 5:56pm, 6:00pm**
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	881
Land Use/Building Type:	Pharmacy/Drugstore w/ Drive-Thru
Name of Business:	Walgreens
Address:	4200 Winnetka Ave N
City:	New Hope
State:	MN
Zip Code:	55428
Date(s)	February 7-8, 2012 (Tuesday-Wednesday)
Weather Conditions	High 32 °F and Clear

Location Within Area (select one):		Competition Within Area (select one):	
CBD		High	X
Urban (non-CBD)		Medium	
Suburban (non-CBD)	X	Low	
Suburban CBD			
Rural			
Not Given			

Drive-Through Description :	2 Lanes
Gross Floor Area (estimated)	16675 sq. ft.

	Maximum Queue	Time(s) Max Queue Occurred
Sunday		
Monday		
Tuesday	**3**	**4:03pm**
Wednesday	**3**	**8:34am, 4:04pm, 4:51pm**
Thursday		
Friday		
Saturday		

Appendix D

Drive-Through Queuing Data Form

ITE Land Use Code:	881
Land Use/Building Type:	Pharmacy/Drugstore w/ Drive-Thru
Name of Business:	Walgreens
Address:	4100 W Broadway Ave
City:	Robbinsdale
State:	MN
Zip Code:	55422
Date(s)	February 7-8, 2012 (Tuesday-Wednesday)
Weather Conditions	High 32 °F and Clear

Location Within Area (select one):		Competition Within Area (select one):	
	CBD		
	Urban (non-CBD)		
X	Suburban (non-CBD)	High	X
	Suburban CBD	Medium	
	Rural	Low	
	Not Given		

Drive-Through Description :	1 Lane
Gross Floor Area (estimated)	14,400 sq. ft.

	Maximum Queue	Time(s) Max Queue Occurred
Sunday		
Monday		
Tuesday	**3**	**4:49pm**
Wednesday	**2**	**12:49pm**
Thursday		
Friday		
Saturday		

June 22, 2023

Re: **Popeye's Louisiana Kitchen**
Stormwater Memo
PEI #230238

The existing and proposed impervious areas were analyzed to determine if post development BMPs and detention are required for the proposed Popeye's Louisiana Kitchen.

Existing Site

The existing 21,198 SF (0.49 Ac.) site consists of a paved parking lot and building. The northern portion of the existing site surface drains northeasterly to the Johnson Drive right of way, and the southern portion of the site drains southeasterly to the southerly property line. The existing site consists of 17,891 SF (0.41 acres) of impervious area. See exhibit A1 for reference.

Proposed Site

The proposed project will remove the existing building and a portion of the existing parking lot. A new Popeye's Louisiana Kitchen will be constructed. The proposed site will maintain the existing drainage patterns and surface drain northeasterly and southeasterly. The proposed site consists of 16,780 SF (0.39 acres) of impervious area. See exhibit A2 for reference.

Conclusion

The proposed site results in a decrease in impervious area of 1,111 SF.

Section 500.210 of the Mission Kansas municipal code has adopted APWA for regulating stormwater management. Stormwater detention is not required per Section 5601.3 of the Kansas City Metropolitan Chapter APWA Standard Specifications & Design Criteria, which states that any remodeling, repair, replacement, or other improvements to any existing structure or facility and appurtenances that does not result an increase area of impervious surface on the site is exempt of detention requirements.

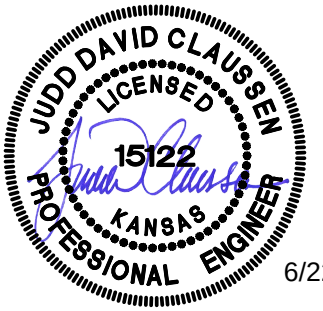
Section 500.215 of the Mission Kansas municipal code has adopted the MARC BMP manual for purposes of stormwater quality management. Stormwater treatment BMP's are not required for this site per Section 4.2.1 of the MARC BMP manual, which states that a previously developed site that maintains or reduces the percent impervious area,

would not meet the definition of a development as stated in APWA 5601.3 and would not require additional stormwater BMP's.

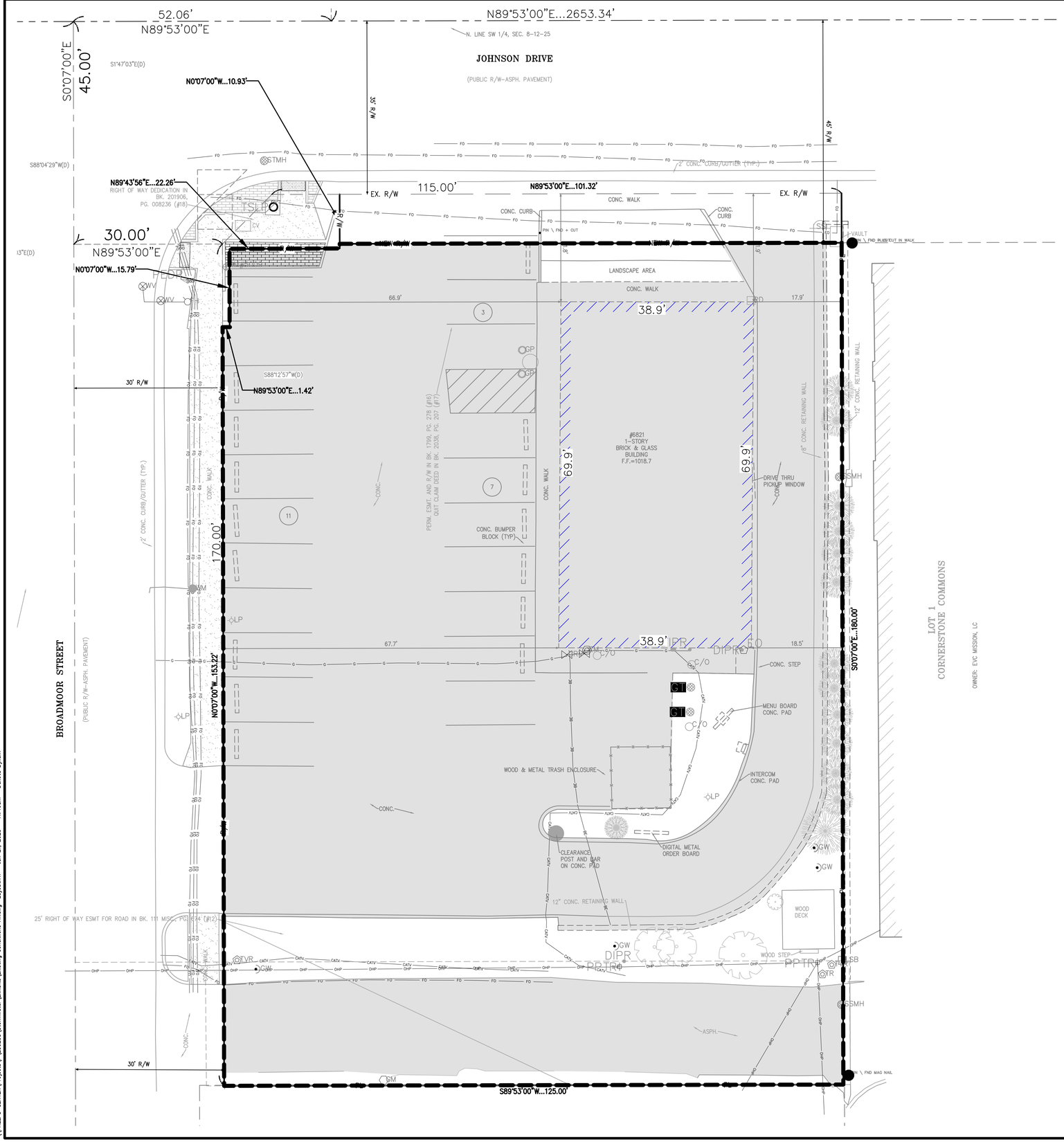
Please feel free to contact me at (913) 393-1155 if you require additional information.

Sincerely,

Phelps Engineering, Inc.



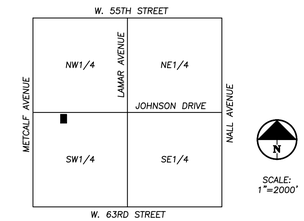
Judd D. Claussen, P.E. 6/22/23



LEGEND

- PL — PROPERTY LINE
- LOT LINE
- R/W — RIGHT-OF-WAY
- IMPERVIOUS
- OPEN SPACE
- DRAINAGE BOUNDARY FOR LOS VALUE RATING CALCULATION

TOTAL LOT = 21,198 S.F. (0.49 ACRES)
IMPERVIOUS = 17,891 S.F. (0.41 ACRES)
OPEN SPACE = 3,307 S.F. (0.08 ACRES)



VICINITY MAP
SEC. 8-12-25

Know what's **below.** **Call** before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

SCALE: 1"=10'
0' 10' 20'

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
FAX (913) 393-1066
www.phelpsengineering.com

PLANNING
ENGINEERING
IMPLEMENTATION

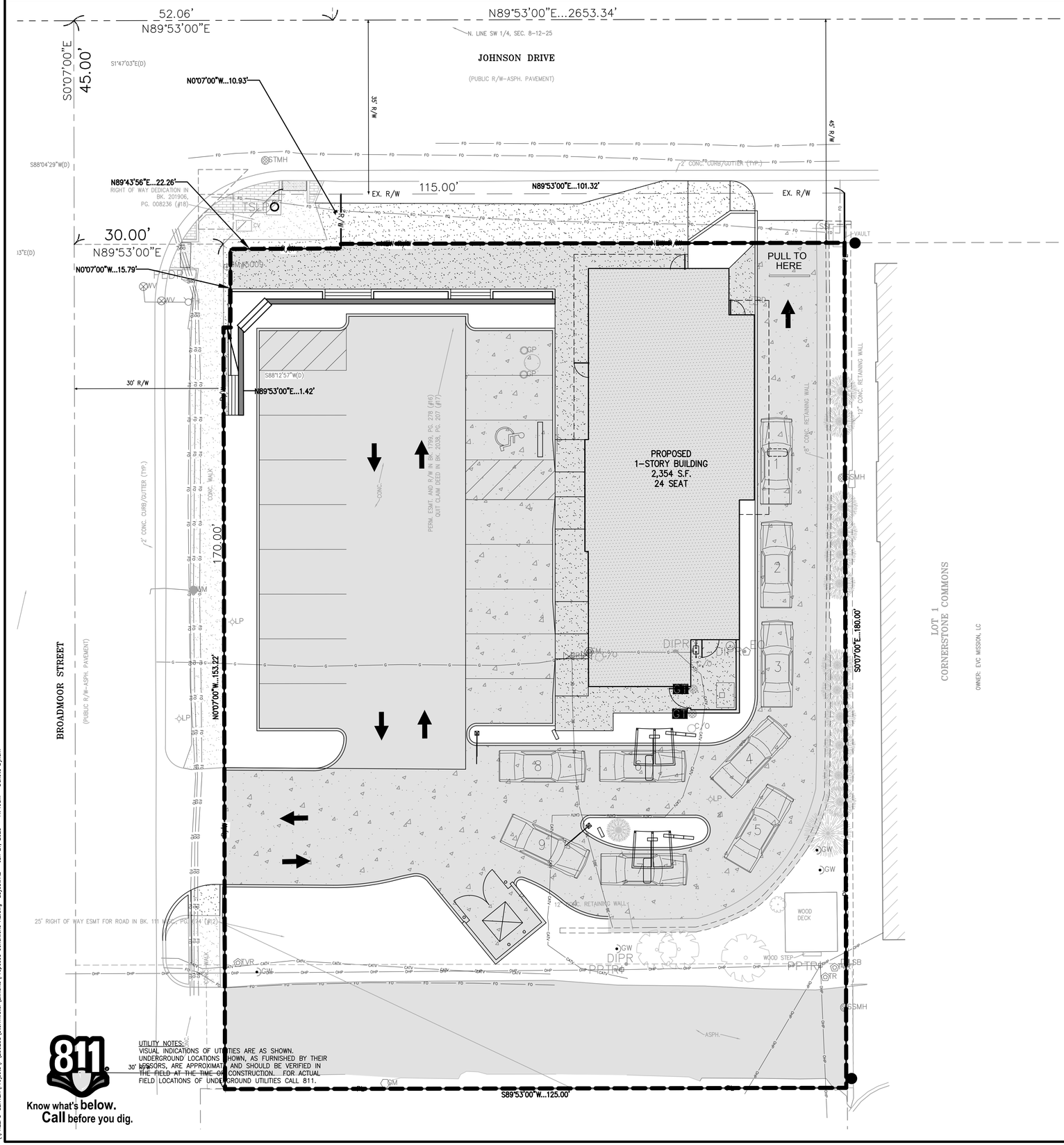
EXISTING CONDITIONS MAP

POPEYE'S LOUISIANA KITCHEN
6821 JOHNSON DRIVE
MISSION, KANSAS 66202

No.	Revisions:	Date	By	App.

PROJECT NO. 230238
DATE: 05-11-2023 | DRAWN: AEB
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING – LS-82
CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128
ENGINEERING-2007003208

SHEET
A1



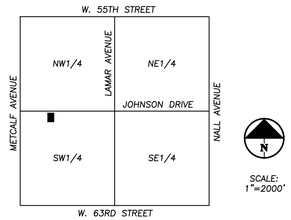
UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

811 Know what's below. Call before you dig.

LEGEND

- PL — PROPERTY LINE
- LOT LINE
- R/W — RIGHT-OF-WAY
- IMPERVIOUS
- OPEN SPACE
- DRAINAGE BOUNDARY FOR LOS VALUE RATING CALCULATION

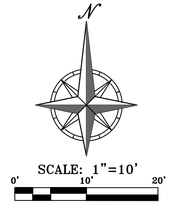
TOTAL LOT = 21,198 S.F. (0.49 ACRES)
IMPERVIOUS = 16,780 S.F. (0.39 ACRES)
OPEN SPACE = 4,418 S.F. (0.10 ACRES)



VICINITY MAP
SEC. 8-12-25

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

811 Know what's below. Call before you dig.



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PLANNING
ENGINEERING
IMPLEMENTATION

PROPOSED CONDITIONS MAP

POPEYE'S LOUISIANA KITCHEN
6821 JOHNSON DRIVE
MISSION, KANSAS 66202

No.	Revisions:	Date	By	App.

PROJECT NO. 230238
DATE: 05-11-2023 | DRAWN: AEB
CHECKED: DAF | APPROVED: DJC
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING - L-82
CERTIFICATE OF AUTHORIZATION LAND SURVEYING- 2007001128
ENGINEERING-2007005358

SHEET
A2

At A Glance

Applicant:
CSM Groups, dba Popeye's Louisiana Kitchen

Location:
6821 Johnson Drive

Property ID:
KF251208-2052

Current Zoning:
Form Based Code / C2-B

Proposed Zoning:
N/A

Current Land Use:
Fast Food Drive-Through

Proposed Land Use:
Fast Food Drive-Through

[X] Public Hearing Required

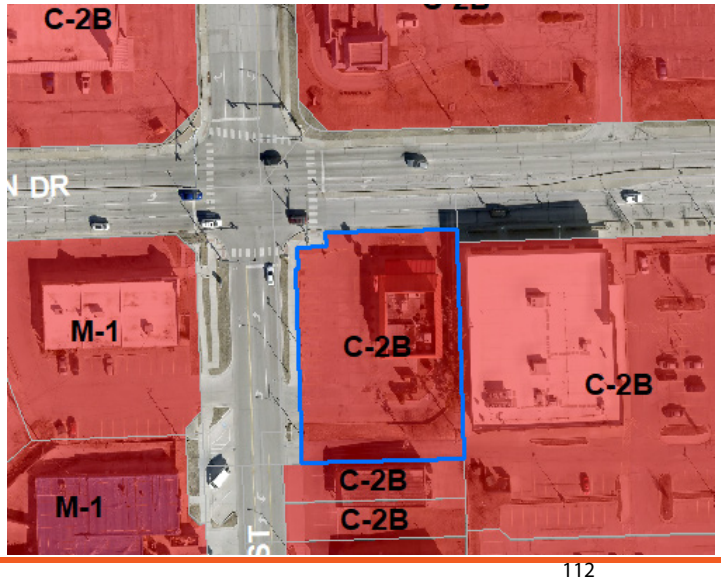
Legal Notice:
August 8, 2023

Case Number:
23-18

Project Name:
Popeye's Redevelopment

Project Summary:
The proposalis a re-plat of property with an existing structure that will be razed and redeveloped for Popeye's fast food drive-through restaurant with parking lot, landscaping, and pedestrian realm improvements. The property lies within the Form Based Code overlay district.

Staff Contact:
Karie Kneller, Planner



Property Background and Information

The applicant, CSM Groups, dba Popeye's Louisiana Kitchen, has submitted an application for a preliminary plat for the property located at 6821 Johnson Drive, on the southeast corner of Johnson Drive and Broadmoor Street. The property is zoned C-2B "Retail and Service District." Surrounding properties are zoned C2-B on the east and south, and zoned M-1 on the west across Broadmoor Street. The property north of Johnson Drive is also zoned C2-B. The subject property is currently a half-acre (21,918 square feet), with a proposed replat associated with this case, Case #23-18, that reduces the lot with additional dedicated right-of-way to under a half-acre. All necessary utilities are available on-site. The former Popeye's drive through restaurant suffered fire damage in January of 2023 and will be completely rebuilt on the current site with improvements to the public right-of-way.

Project Proposal

The applicant proposes a replat of the former Popeye's drive-through restaurant site, with certain site improvements in the public right-of-way to meet the intent of the municipal code and Form Based Code overlay. Improvements include a widened pedestrian path, or pedestrian "plaza," and eliminating existing curb cut on Johnson Drive. Park benches, pedestrian-scaled streetlights, and bike racks improve the pedestrian realm, and additional landscaping in the pedestrian right-of-way improves the walkability along Johnson Drive and Broadmoor Street.

Plan Review and Analysis

Mission Comprehensive Plan

The Comprehensive Plan indicates the property lies within the FBC overlay district. The FBC takes precedence for development and performance standards over the municipal code for setback, height, architectural features, and priority of the pedestrian realm. The front and side street setbacks require a 0-to-10-foot setback, and the rear and side yard setbacks require a minimum of zero feet.

Analysis: The setbacks conform with the regulations set forth in the FBC. The right-of-way provided by the setback includes space for features that improve the pedestrian experience and attempt to meet the intent of the Comprehensive Plan.

Johnson Drive Design Guidelines

According to the requirements of the Johnson Drive Design Guidelines, sidewalks on Johnson Drive shall be a minimum of eight feet wide. Sidewalks on secondary streets such as Broadmoor shall be a minimum of five feet wide. Elements that enhance the pedestrian realm, including park benches, pedestrian-scaled streetlights, bike racks, and landscaping are required.

Analysis: The proposal provides an extended pedestrian "plaza" along Johnson Drive that

will include outdoor seating, landscaping, street lighting, and bicycle amenities as part of the preliminary development plan, heard in Case #23-16.

Municipal Code

Section 440.220 of the Mission Municipal Code provides that preliminary plats shall be approved by the Planning Commission if it determines that:

1. The proposed preliminary plat conforms to the requirements of this Title, the applicable zoning district regulations, and any other applicable provisions of this Code, subject only to acceptable rule exceptions.

Analysis: The subject property is located in the FBC overlay district, and the dedicated right-of-way conforms with the requirements of the FBC.

2. The subdivision or plat represents an overall development pattern consistent with the Master Plan and the Official Street Map.

Analysis: The Mission Comprehensive Plan (i.e. Master Plan) indicates that this property lies within the FBC overlay district, which is consistent with the setbacks allotted in the proposed plat.

3. The plat contains a sound, well-conceived parcel and land subdivision layout consistent with good land planning and site engineering design principles.

Analysis: It is Staff's determination that the plat supports good land planning and allows for future redevelopment in compliance with adopted standards.

4. The spacing and design of proposed curb cuts and intersection locations is consistent with good traffic engineering design and public safety considerations.

It is Staff's determination that the plat is consistent with good traffic engineering and safety standards.

5. All submission requirements have been satisfied.

All the requirements of 440.220 – Submission of Preliminary Plats – have been satisfied.

Recommendation

Staff recommends that the Planning Commission vote to recommend approval of the preliminary plat for Popeye's redevelopment to the City Council.

Planning Commision Action

The Planning Commission will hear Case #23-18, the Preliminary Plat for Popeye's at its August 28, 2023 public hearing.

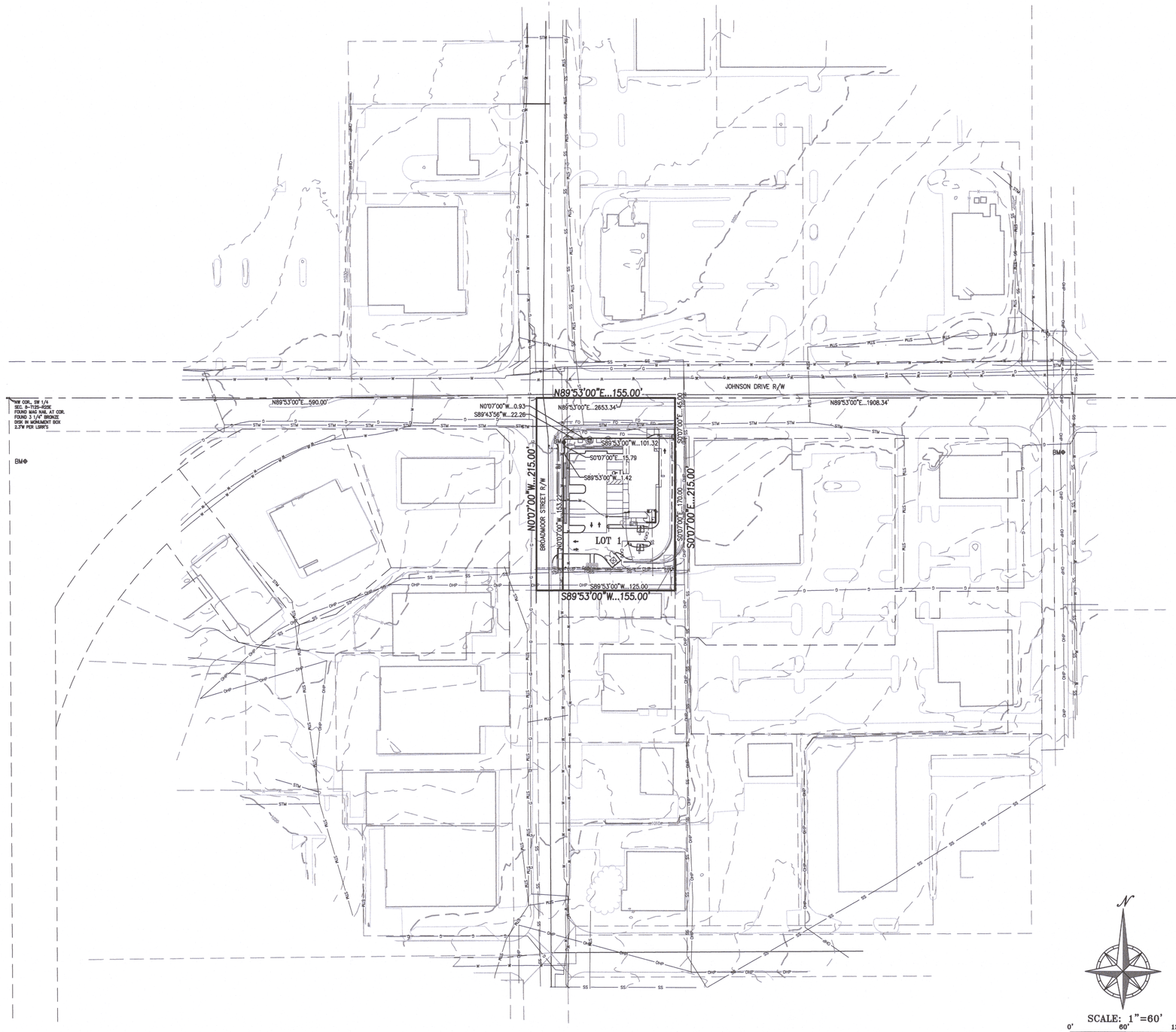
City Council Action

Contingent upon Planning Commission's recommendation, the City Council will hear Case #23-18 at its September 20, 2023 meeting.

PRELIMINARY PLAT OF

POPEYE'S ON JOHNSON DRIVE

A SUBDIVISION OF LAND IN THE SOUTHWEST QUARTER SECTION 8, TOWNSHIP 12 SOUTH, RANGE 25 EAST, IN THE CITY OF MISSION, JOHNSON COUNTY, KANSAS



AREAS		
PARCEL	AREA (S.F.)	AREA (AC.)
BOUNDARY	33325.00	0.7650
LOT 1	21204.78	0.4868
R/W	12120.22	0.2782

DESCRIPTION:

ALL THAT PART OF THE SW1/4 OF SECTION 8, TOWNSHIP 12, RANGE 25, NOW IN THE CITY OF MISSION, JOHNSON COUNTY, KANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT A POINT ON THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8, AND 590 FEET EAST OF THE NORTHWEST CORNER THEREOF, AS MEASURED ALONG SAID NORTH LINE, SAID POINT ALSO BEING ON THE CENTERLINE OF BROADMOOR, AS NOW ESTABLISHED; THENCE SOUTHERLY, ALONG A LINE PERPENDICULAR TO THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8 AND ALONG THE CENTER-LINE OF SAID BROADMOOR, A DISTANCE OF 45 FEET; THENCE EASTERLY, ALONG A LINE PARALLEL TO THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8, A DISTANCE OF 30 FEET, TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF SAID BROADMOOR, SAID POINT ALSO BEING THE TRUE POINT OF BEGINNING OF SUBJECT TRACT; THENCE SOUTHERLY, ALONG A LINE PERPENDICULAR TO THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8, AND ALONG THE EASTERLY RIGHT-OF-WAY LINE OF SAID BROADMOOR, AS ESTABLISHED 30 FEET EAST OF THE CENTERLINE THEREOF, A DISTANCE OF 170 FEET; THENCE EASTERLY, ALONG A LINE PARALLEL TO THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8, A DISTANCE OF 125 FEET; THENCE NORTHERLY, ALONG A LINE PERPENDICULAR TO THE LAST DESCRIBED COURSE, A DISTANCE OF 180 FEET, TO A POINT 35 FEET SOUTH OF THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8, SAID POINT ALSO BEING ON THE SOUTHERLY RIGHT-OF-WAY LINE OF JOHNSON DRIVE, AS NOW ESTABLISHED; THENCE WESTERLY, ALONG A LINE 35 FEET SOUTH OF AND PARALLEL TO THE NORTH LINE OF THE SW1/4 OF SAID SECTION 8 AND ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID JOHNSON DRIVE, A DISTANCE OF 115 FEET, TO A POINT 40 FEET EAST OF THE CENTERLINE OF SAID BROADMOOR; THENCE SOUTHWESTERLY, ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID JOHNSON DRIVE, TO THE POINT OF BEGINNING, EXCEPT THAT PART IN STREETS AND ROADS.

FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF MISSION, COMMUNITY NO. 200170, JOHNSON COUNTY, KANSAS, MAP NO. 20091C0023G, AND DATED AUGUST 3, 2009.

TITLE NOTE:

TITLE INFORMATION SHOWN HEREON WAS TAKEN FROM CHICAGO TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE NO. KCC230901 DATED APRIL 11, 2023 AT 08:00 A.M.

SANITARY SEWER NOTE:

Sanitary Sewer shall be connected to the existing sanitary sewer public system owned by JCW.

OWNER/DEVELOPER:

CONTINENTAL SUPERIOR MANAGEMENT GROUPS
10190 KATY FREEWAY, SUITE 350
HOUSTON, TX 77043
713-266-8799 OFFICE
713-266-2703 FAX
CONTACT: FAIZAN YOUSUF

PROPOSED LAND USE:

COMMERCIAL (RESTAURANT)

LEGEND

- ○ DENOTES SET 1/2"x24" REBAR W/PHELPS CORP. CLS-82 PLASTIC CAP
- ● DENOTES FOUND 1/2" REBAR W/PHELPS CORP. CLS-82 PLASTIC CAP, UNLESS OTHERWISE NOTED
- ■ SET MAG NAIL AND SHINER

U/E DENOTES UTILITY EASEMENT
B.L. DENOTES BUILDING LINE

EXECUTION

IN TESTIMONY WHEREOF, undersigned proprietors has caused this instrument to be executed on this _____ day of _____, 2023.

CSM GROUP

By: _____
Felix Zamilkovsky, Member

APPROVALS

APPROVED by the Planning Commission of the City of Mission, Johnson County, Kansas this _____day of _____, 2023.

_____ Mike Lee, Planning Commission Chair

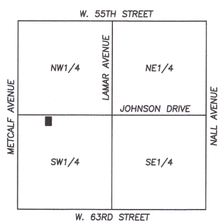
_____ Kimberly Steffens, Planning Commission Secretary

I, SCOTT G. CHRISMAN, HEREBY CERTIFY THAT IN APRIL 2023, I OR SOMEONE UNDER MY DIRECT SUPERVISION HAVE MADE A SURVEY OF THE ABOVE DESCRIBED TRACT OF LAND AND THE RESULTS OF SAID SURVEY ARE CORRECTLY REPRESENTED ON THIS PLAT.

SCOTT G. CHRISMAN LICENSED LS-1306 KANSAS LAND SURVEYOR

BY: _____
SCOTT G. CHRISMAN, KS. LS-1306

BEARING BASIS: RECORDED PLAT OF "CORNERSTONE COMMONS" WITH THE NORTH LINE OF THE SOUTHWEST QUARTER HAVING THE BEARING N 89°53'00" E



VICINITY MAP
SEC. 8-12-25

SCALE: 1"=2000'

CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING - LS-82 ENGINEERING - E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING-2007001128 ENGINEERING-2007005259

PEI PLANNING ENGINEERING IMPLEMENTATION

PHELPS ENGINEERING, INC
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166

PEI 230238 - 06/21/2023

Error Closure: 0.000001' North: 0.0000000' East: 0.0000000' Perimeter: 740' Precision 1: 740000000