



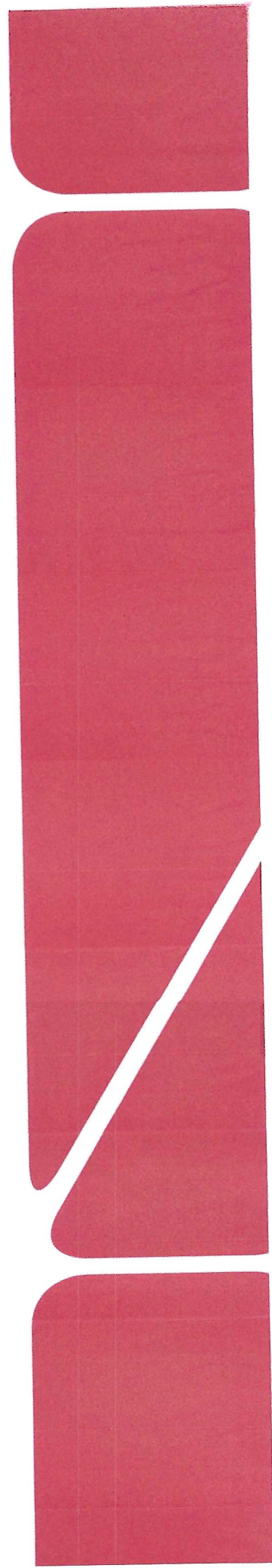
Traffic Impact Analysis

United Supermarket and Retail Development
Wolfforth, Texas

Kimley-Horn and Associates, Inc.
Richardson, Texas

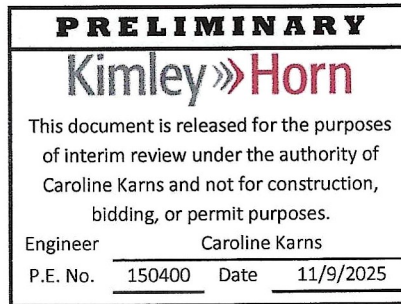
Project #066079915
Registered Firm F-928

Kimley»Horn



Traffic Impact Analysis

**United Supermarket and Retail Development
Wolfforth, Texas**



Prepared by:

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EXECUTIVE SUMMARY

The proposed United Supermarket and Retail development is located between Cambridge Drive and Alcove Avenue along the northern side of Donald Preston Drive and US 62 in Wolfforth, Texas. Phase 1 of the site is proposed to be a 90,477 SF shopping center with grocery store. Phase 2 of the site is assumed to be built as 200,000 SF of shopping center retail uses. This study is intended to identify traffic generation characteristics, identify potential traffic related impacts on the local street system, and develop mitigation measures recommended for identified impacts.

The following existing intersections were selected to be part of this study:

- Donald Preston Drive at US 62 SBFR
- Donald Preston Drive at US 62 NBFR
- Donald Preston Drive at Cambridge Drive
- Donald Preston Drive at Alcove Avenue
- Alcove Avenue at US 62 SBFR

The analysis also includes the following driveways providing access for the site, all of which provide cross-access among Phases 1 and 2:

- Drive 1, which is a full-access driveway to Cambridge Drive and will be built with Phase 1.
- Drive 2, which is a full-access driveway to Cambridge Drive and will be built with Phase 1.
- Drive 3, which is an existing full-access driveway to Cambridge Drive.
- Drive 4, which is an existing full-access driveway to Donald Preston Drive and will be relocated with Phase 1.
- Drive 5, which is a full-access driveway to Alcove Avenue and will be built with Phase 2.

Traffic operations were analyzed at the study intersections for 2025 existing volumes, 2027 and 2032 background traffic volumes, and 2027 and 2032 background plus site-generated traffic volumes. The future years correspond to the expected buildout year of the Phase 1 and Phase 2, respectively. Conditions were analyzed for the weekday AM and PM peak hours. The background traffic conditions include existing traffic with compound growth rates, plus explicit modeling of the following developments in the vicinity:

- Iron Horse Single Family Residential site – a development consisting of approximately 195 single family units to the north of the proposed United Supermarket and Retail site. The site is expected to be fully built out by 2028.
- City of Lubbock Solid Waste Facility – a development of approximately 147,906 SF to the east of Alcove Avenue. The site is expected to be fully build out by 2027.

Phase 1 of the United Supermarket and Retail development is expected to generate approximately 320 new weekday AM peak hour one-way vehicle trips and 621 new weekday

PM peak hour one-way vehicle trips at buildout. Phase 2 is expected to generate an additional 255 new weekday AM peak hour one-way vehicle trips and 668 new weekday PM peak hour one-way vehicle trips at buildout. The distribution of the site-generated traffic volumes onto the street system was based on the surrounding roadway network, existing traffic patterns, and the project's proposed access locations.

The following improvements are recommended at proposed driveways.

- (Phase 1) Construct a dedicated westbound right-turn lane at Drive 4 by 2027.
- (Phase 2) Construct a dedicated northbound right-turn lane at Drive 3 by 2032.
- Relocate or modify the proposed configuration of Drive 4 along Donald Preston Drive to avoid left-turn path overlap safety concerns. See **Appendix J** for alternatives.

In Phase 1, the following additional improvements to the external roadway network are recommended.

- US 62 SBFR & Alcove Ave:
 - Heavy southbound delay is expected from vehicles exiting the site.
 - It is recommended to install a dedicated westbound acceleration lane to serve southbound right-turning traffic. This would allow vehicles to turn onto the frontage road without waiting for a gap.

In Phase 2, the following additional improvements to the external roadway network are recommended.

- Donald Preston Drive & Cambridge Drive:
 - Heavy westbound, northbound, and southbound delay is expected at this intersection with the addition of site traffic.
 - It is recommended to install a westbound right-turn lane and a corresponding right-turn overlap head to accommodate the added traffic and reduce delay at the intersection.
- Donald Preston Road & US 62 Frontage Roads:
 - Heavy eastbound and westbound delay is expected at the intersections with the US 62 frontage roads.
 - Signal timing adjustments are not expected to relieve the excessive delay on their own.
 - To mitigate delay, capacity would need to be added to the Donald Preston Road approaches through the addition of eastbound and westbound through lanes.
- Drives 1, 2, and 3:
 - With the addition of Phase 2 traffic, these driveways are expected to have excessive westbound (exiting) delay.
 - A signal is recommended at one of these intersections to funnel traffic to a main entrance and alleviate delay.

I. INTRODUCTION

A. Purpose

Kimley-Horn was retained to conduct a Traffic Impact Analysis (TIA) of future traffic conditions associated with the development of the United Supermarket and Retail site located between Cambridge Drive and Alcove Avenue along the northern side of Donald Preston Drive. A site vicinity map is provided as **Exhibit 1**. **Exhibit 2** shows the proposed conceptual site plan. This study is intended to identify traffic generation characteristics, identify potential traffic related impacts on the local street system, and develop mitigation measures required for identified impacts.

B. Methodology

Traffic operations were analyzed at the study intersections for AM and PM peak hours for the following scenarios:

- 2025 existing traffic
- 2027 background traffic
- 2027 background plus site traffic
- 2032 background traffic
- 2032 background plus site traffic

The capacity analyses were conducted using the *Synchro*[™] software package and its associated *Intersection* reports for signalized intersections and *Highway Capacity Manual* reports for unsignalized intersections.

C. Roadway Characteristics

The following signalized intersections were evaluated as part of this study:

- Donald Preston Drive at US 62 SBFR
- Donald Preston Drive at US 62 NBFR
- Donald Preston Drive at Cambridge Drive

The following unsignalized intersection was evaluated as part of this study:

- US 62 SBFR at Alcove Avenue

The major study area roadways are described in **Appendix A**. **Exhibit 3** illustrates the intersection geometry used for the traffic analysis.

D. Existing Study Area

The property is zoned in a C-2 General Commercial District. The property has an existing United Gas Station store on the southwest corner of the lot.

E. Proposed Site Improvements

The proposed development includes two phases. Phase 1 of the site is proposed to be a 90,477 SF shopping center with grocery store. Phase 2 of the site has not yet been designed but is expected to be a mix of commercial land uses. To be conservative, it is assumed that the remainder of the site be developed as general retail. A Floor Area Ratio (FAR) of 0.15 was used to estimate the density of retail. Therefore, it is assumed that Phase 2 is proposed to be built with 200,000 SF of shopping center retail uses. Phase 1 is assumed to be built out by 2027 while Phase 2 is assumed to be built out by 2032.

As shown in **Exhibit 3**, the site has five proposed driveways. All driveways will provide cross-access among Phases 1 and 2. The driveways to be modeled in this analysis are as follows:

Drive 1

- Full-Access to Cambridge Drive
- North of West Drive 2, south of 2nd street
- One inbound, one outbound lane
- Built in Phase 1

Drive 2

- Full-Access to Cambridge Drive
- South of West Drive 1, North of West Drive 3
- One inbound, one outbound lane
- Built in Phase 1

Drive 3

- Full-Access to Cambridge Drive
- South of West Drive 2, existing drive for United Gas Station
- One inbound, one outbound lane
- Built in Phase 1

Drive 4

- Full-Access to Donald Preston Drive
- East of Cambridge Drive, existing drive for United Gas Station
- One inbound, one outbound lane
- Closed in Phase 1

Drive 4 (Relocated)

- Full-Access to Donald Preston Drive
- East of Cambridge Drive and east of existing Drive 4 location
- One inbound, one outbound lane
- Built in Phase 1

Drive 5

- Full-Access to Alcove Avenue
- North of US 62 SBFR
- One inbound, one outbound lane
- Built in Phase 2

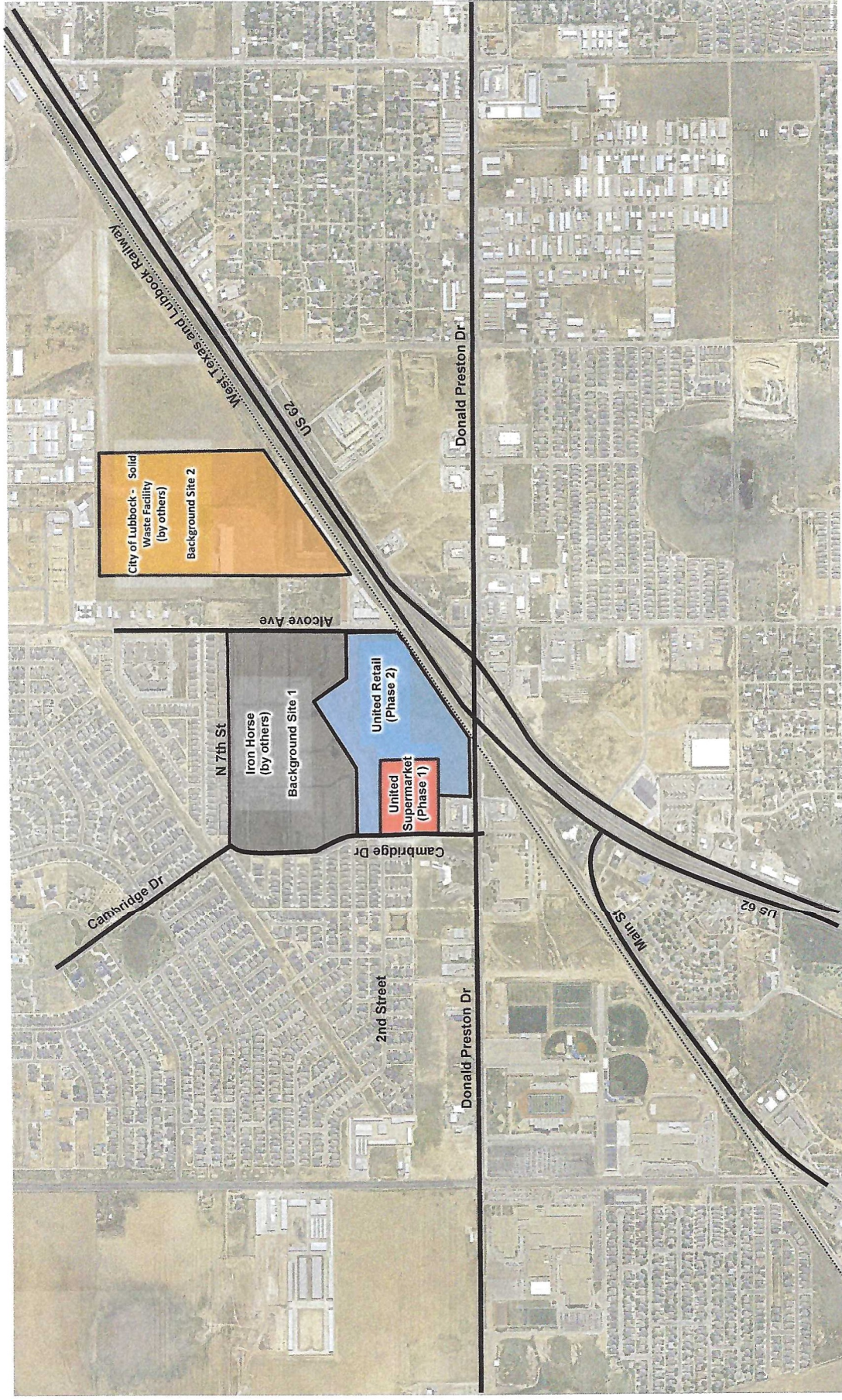
Intersection sight distance at the proposed driveways is acceptable, with each on relatively flat and straight segments of their respective roadway.

F. Existing Traffic Volumes

Traffic data was collected on Tuesday September 9, 2025. **Exhibit 4** shows the existing weekday AM and PM peak hour traffic volumes. 24-hour machine counts were collected near the site on Donald Preston Drive and Alcove Avenue. The raw count sheets, as well as a comparison between the 24-hour volumes collected and previous 24-hour counts, are provided in **Appendix C**.

The 24-hour count shows the daily volume on the roadway links as follows:

- Donald Preston Drive: 20,468 vehicles per day
- Alcove Avenue: 4,183 vehicles per day



North
 ↑
 Not To Scale

EXHIBIT 1

Vicinity Map
 United United Supermarket and Retail - Wolfforth, Texas



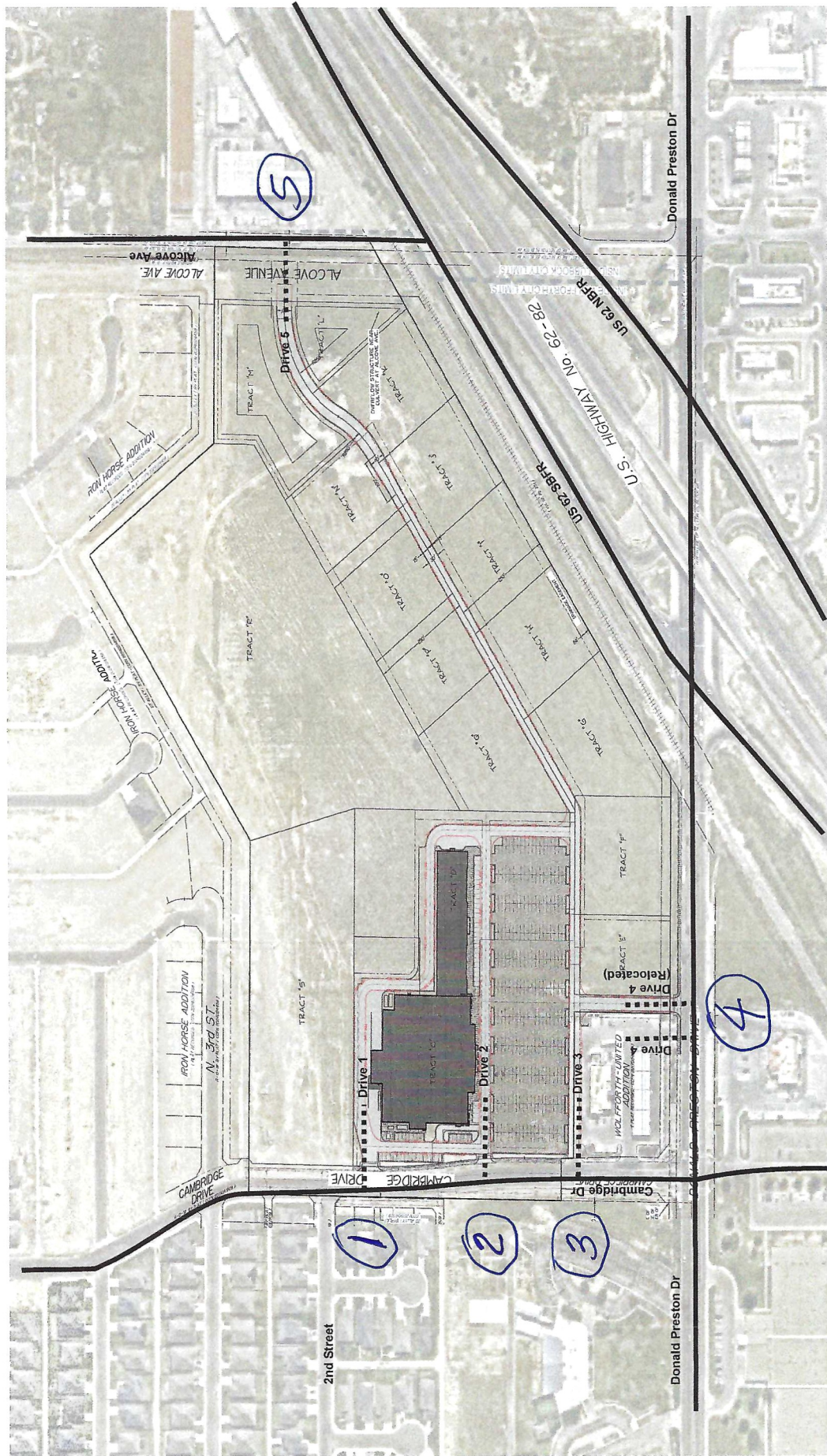


EXHIBIT 2

Conceptual Site Plan

United Supermarket and Retail - Wolfforth, Texas



North
↑
Not To Scale

IV. CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, the proposed United Supermarket and Retail development, located between Cambridge Drive and Alcove Avenue along the southern side of Donald Preston Drive in Wolfforth, Texas, can be successfully incorporated into the surrounding roadway network with mitigations. The proposed site driveways provide the appropriate level of access going into the development but may pose challenges going out of the development due to the high traffic volumes.

The following improvements are recommended at proposed driveways.

- (Phase 1) Construct a dedicated westbound right-turn lane at Drive 4 by 2027.
- (Phase 2) Construct a dedicated northbound right-turn lane at Drive 3 by 2032.
- Relocate or modify the proposed configuration of Drive 4 along Donald Preston Drive to avoid left-turn path overlap safety concerns. See **Appendix J** for alternatives.

In Phase 1, the following additional improvements to the external roadway network are recommended.

- US 62 SBFR & Alcove Ave:
 - Heavy southbound delay is expected from vehicles exiting the site.
 - It is recommended to install a dedicated westbound acceleration lane to serve southbound right-turning traffic. This would allow vehicles to turn onto the frontage road without waiting for a gap.

In Phase 2, the following additional improvements to the external roadway network are recommended.

- Donald Preston Drive & Cambridge Drive:
 - Heavy westbound, northbound, and southbound delay is expected at this intersection with the addition of site traffic.
 - It is recommended to install a westbound right-turn lane and a corresponding right-turn overlap head to accommodate the added traffic and reduce delay at the intersection.
- Donald Preston Road & US 62 Frontage Roads:
 - Heavy eastbound and westbound delay is expected at the intersections with the US 62 frontage roads.
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