



**SOUTHWEST TRAFFIC
ENGINEERING, LLC**

TRAFFIC IMPACT ANALYSIS

McKINNEY INDUSTRIAL

SARIVAL AVENUE, SOUTH OF BETHANY HOME ROAD

12 JULY 2022



Alan Heathcoat, P.E.
Principal Engineer
Glendale Transportation

07/19/2022 2:41:53 PM

APPROVED

PREPARED FOR

McKINNEY INVESTMENTS, LLC
25131 RIDGE OAK DRIVE
BONITA SPRINGS, FLORIDA 34134

SOUTHWEST TRAFFIC ENGINEERING, LLC
3838 NORTH CENTRAL AVENUE, SUITE 1810
PHOENIX, AZ 85012
T 602.266.SWTE (7983) F 602.266.1115



MCKINNEY INDUSTRIAL SARIVAL AVENUE, SOUTH OF BETHANY HOME ROAD TRAFFIC IMPACT ANALYSIS

Executive Summary

The purpose of this traffic study is to evaluate the current and future transportation system within the project study area surrounding the project site without and with the proposed project.

Traffic volumes from the following nearby projects were included as adjacent developments in this analysis:

- *Allen Ranches Traffic Impact Analysis* (Allen Ranches TIA) dated May 2021 and completed by United Civil Group (UCG).
- *Camelback 303 Traffic Impact Analysis* (Camelback 303 TIA) dated August 2021 and completed by Southwest Traffic Engineering, LLC (SWTE).
- *Commerce @ 303 Traffic Impact Analysis* (Commerce TIA) dated February 2021 and completed by SWTE.
- *Lincoln Logistics Traffic Impact Analysis* (Lincoln Logistics TIA) dated November 2018 and completed by SWTE.
- *Loop 303 Bethany Business Park Traffic Impact Analysis* (Loop 303 TIA) dated October 2020 and completed by SWTE.
- *Russel Organics Traffic Impact Analysis* (Russel Organics TIA) dated July 2022 and completed by SWTE.
- *Sarival Logistics Center Traffic Impact Analysis* (Sarival Logistics Center TIA) dated February 2021 and completed by SWTE.
- *VT 303 Traffic Impact Analysis* (VT 303 TIA) dated October 2020 and completed by SWTE.
- *West 303 Crossing Traffic Impact Analysis* (West 303 TIA) dated November 2019 and completed by SWTE.

Existing Traffic Data

The eastbound and westbound left turn/through movement at the intersection of Sarival Avenue/Camelback Road currently experiences delay during the weekday AM and PM peak hours. This is likely due to the high volume of vehicles being forced to STOP before entering the intersection.

The remaining study intersections currently operate at an adequate LOS during the weekday AM and PM peak hours.

Future Traffic Data Without Project

The eastbound left turning movement at Bethany Home Road/Sarival Avenue is expected to begin experiencing delay during the weekday AM and PM peak hours in 2022 and 2025 without traffic from the project with traffic from adjacent developments. The westbound through/right turn movement is also expected to experience delay during the weekday PM



peak hour without the project. These delays are likely due to the high volume of vehicles approaching the intersection from all directions exceeding the capacity of the single-lane approaches.

The remaining study intersections are expected to continue to operate at an adequate LOS in 2022 and 2025 without traffic from the project.

Future Traffic Data With Project

The eastbound left turning movement at Bethany Home Road/Sarival Avenue is expected to continue experiencing delay during the weekday AM and PM peak hours in 2022 and 2025 without and with traffic from the project and traffic from adjacent developments. The westbound through/right turn movement is also expected to experience delay during the weekday PM peak hour without and with the project. These delays are likely due to the high volume of vehicles approaching the intersection from all directions exceeding the capacity of the single-lane approaches.

The remaining study intersections are anticipated to operate at an adequate LOS during the weekday peak hours in 2022 and 2025 without and with traffic from the project.

Turn Lane Analysis

The southbound right turn lane proposed at Missouri Avenue/Sarival Avenue is expected to require no storage based on Synchro 95th percentile calculations.

The eastbound right turning vehicles at the intersection of West Access/Bethany Home Road are expected to be accommodated by the existing right turn lane that is anticipated to be installed by the Russel Organics project.

No queue overlap is expected between any other of the proposed driveways.

Crash Analysis

No unique crash patterns were observed at any of the study intersections.

Traffic Signal Warrant Analysis

The installation of a traffic signal is not currently warranted at the intersection of Bethany Home Road/Sarival Avenue; however, it is warranted in 2022 and 2025 without and with traffic from the project.

Mitigation

The eastbound left turning movement at Bethany Home Road/Sarival Avenue is expected to continue experiencing delay during the weekday AM and PM peak hours in 2022 and 2025 without and with traffic from the project and traffic from adjacent developments. The westbound through/right turn movement is also expected to experience delay during the weekday PM peak hour without and with the project. These delays are likely due to the high volume of vehicles approaching the intersection from all directions exceeding the capacity of the single-lane approaches. The installation of a traffic signal is warranted at this intersection, this is also expected to alleviate the delay at this intersection. Eventually,



development will occur on all four corners of this intersection, each approach will be widened to its final cross section, and a traffic signal will be installed further improving the operation of the intersection.

Recommendations

The proposed southbound right turn lane at Missouri Avenue/Sarival Avenue should be constructed to provide the minimum storage length of 100 feet of storage with an 80-foot taper and 160 feet, respectively, per MCDOT guidelines.

While the northbound left turn lane at Missouri Avenue/Sarival Avenue is proposed, it may not be able to be constructed due to lack of adjacent right-of-way. Upon the construction of the land to the south of the Russel Organics site this turn lane is expected to be installed.

Due to the expected large eastbound left turning volume at Sarival Avenue/Bethany Home Road, right of way should be set aside for future dual eastbound left turn lanes at the intersection. These turn lanes can be 'striped in' once northbound Sarival Avenue, north of Bethany Home Road, is widened in the future by an adjacent development.