DEVELOPMENT OF REGIONAL IMPACT
(DRI #4456)

TRANSPORTATION STUDY
FOR
PROJECT ROCKFORGE

ROCKDALE COUNTY, GEORGIA

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A & R Project # 25-062

EXECUTIVE SUMMARY

Traffic impacts were evaluated for the proposed Project Rockforge development located at 2100 Irwin Bridge Road in Rockdale County, Georgia. The development will consist of two-storied eight data center buildings, six each of 270,250 sf per floor and two each of 211,500 sf per floor for a total of 4,089,000 sf.

The development proposes one full access driveway on Farmer Road and one full access driveway on Irwin Bridge Road.

Existing and future operations during the AM peak hour (7:00 AM – 9:00 AM) and PM peak hour (4:00 PM – 6:00 PM) before and after completion of the project were analyzed at the following intersections:

1. Sigman Road @ Irwin Bridge Road
2. Rockbridge Road @ Farmer Road
3. Farmer Road @ Site Driveway 1
4. Irwin Bridge Road @ Site Driveway 2

Traffic Operations Summary

As per GRTA requirements, all approaches that do not meet the level-of-service (LOS) standard (considered failing) are required to be shown under Traffic Operations Summary along with the project's total added trip and the respective percentage of overall total "Build" condition approach traffic volume for all failing LOS approaches after all improvements are completed. Since all approaches at all study intersections will meet the level-of-service standard, we do not have anything to report here.

The results of both the "No-Build" and "Build" traffic operations show that all the study intersections will operate satisfactorily at a level-of-service "D" or better for all approaches in both the AM and PM peak hours.

Recommendation for Site Access Configuration

The following access configuration is recommended for the site driveway intersections.

- Site Driveway 1: Full access driveway on Farmer Road
    - One entering lane and one exiting lane
    - Stop-sign controlled on the driveway approach with Farmer Road remaining free flow.
    - Provide adequate sight distance per AASHTO standards.

- Site Driveway 2: Full access driveway on Irwin Bridge Road
    - One entering lane and one exiting lane
    - Stop-sign controlled on the driveway approach with Irwin Bridge Road remaining free flow
    - Left turn lane and right turn lane on Irwin Bridge Road for entering traffic.
    - Provide adequate sight distance per AASHTO standards.

TABLE OF CONTENTS

LIST OF TABLES

Item **Page**

LIST OF FIGURES

Item **Page**

INTRODUCTION

The purpose of this study is to determine the traffic impact from the proposed Project Rockforge development that will be located at 2100 Irwin Bridge Road in Rockdale County, Georgia. The traffic analysis evaluates the current operations and the future conditions with the traffic generated by the development. The development will consist of two-storied eight data center buildings, six each of 270,250 sf per floor and two each of 211,500 sf per floor for a total of 4,089,000 sf.

The development proposes one full access driveway on Farmer Road and one full access driveway on Irwin Bridge Road.

Traffic operations were evaluated for the AM and PM peak hours at the intersections of:

1. Sigman Road @ Irwin Bridge Road
2. Rockbridge Road @ Farmer Road
3. Farmer Road @ Site Driveway 1
4. Irwin Bridge Road @ Site Driveway 2

Recommendations to improve traffic operations have been identified as appropriate and are discussed in detail in the following sections of the report.

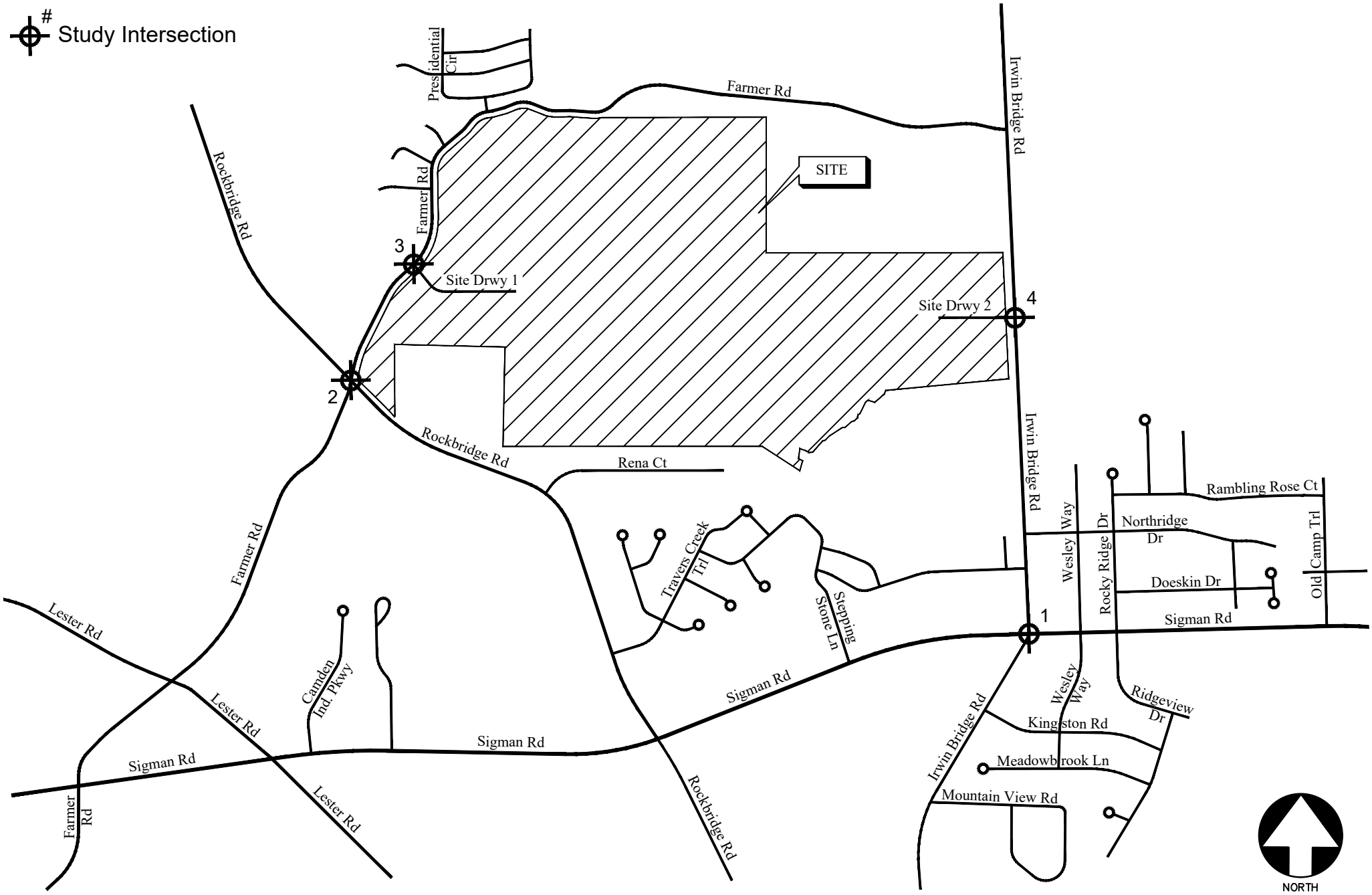
STUDY NETWORK DETERMINATION

The study network was determined by evaluating the amount of traffic that the proposed development will add to each roadway segment in the area. According to GRTA requirements, a roadway segment carries a "significant" amount of traffic if the project contributes 7% or more trips to the two-way daily service volumes of the roadway at the appropriate level of service standard. Upon agreement with GRTA a level of service standard of "D" was used for determining the study area network.

The traffic generated by the proposed project was then assigned to the area roadways using the trip distribution to determine the site-generated traffic on each roadway segment. The boundaries of the study network extend to the most distant intersections where at least 7% of the service volumes on the segment are attributed to project traffic. The following study intersections fell within the 7% rule and/or have been selected as being suitable for evaluation in discussions with GRTA, ARC, GDOT, Rockdale County and City of Conyers:

1. Sigman Road @ Irwin Bridge Road
2. Rockbridge Road @ Farmer Road
3. Farmer Road @ Site Driveway 1
4. Irwin Bridge Road @ Site Driveway 2

The location of the development and the surrounding study network is shown in Figure 1. Other intersections within this corridor, such as unsignalized side streets, right-in / right-out driveways or private driveways have not been included in the study network.



LOCATION MAP AND STUDY INTERSECTIONS

FIGURE 1

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EXISTING ROADWAY FACILITIES

The following is a brief description of each of the roadway facilities located in proximity to the site:

Sigman Road

Sigman Road is an east-west roadway with a posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID's 247-0269 & 247-0272) indicate that the daily traffic volume on Sigman Road in 2023 was 11,800 vehicles west of Rockbridge Road and 15,000 vehicles east of Sigman East Drive. GDOT classifies Sigman Road as an urban principal arterial roadway.

Irwin Bridge Road

Irwin Bridge Road is a north-south, two-lane, undivided roadway with a posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID's 247-0201 & 247-0198) indicate that the daily traffic volume on Irwin Bridge Road in 2023 was 7,320 vehicles north of Farmer Road and 8,140 vehicles south of Sigman Road. GDOT classifies Irwin Bridge Road as an urban major collector roadway.

Farmer Road

Farmer Road is a two-lane, undivided roadway with a posted speed limit of 35 mph in the vicinity of the site.

Rockbridge Road

Rockbridge Road is an east-west, two-lane, undivided roadway with a posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID 247-0145) indicate that the daily traffic volume on Rockbridge Road in 2023 was 2,960 vehicles east of Farmer Road. GDOT classifies Rockbridge Road as an urban minor arterial roadway.

Existing Bicycle and Pedestrian Facilities

- Sidewalks are present on both sides of Sigman Road from approximately 200 feet east of Irwin Bridge Road in the east to approximately 700 feet east of Camden Industrial Parkway in the west
- Sidewalks are present on both sides of Irwin Bridge Road from Sigman Road to approximately 450 feet to the south
- Crosswalks are present at the signalized intersection of Sigman Road and Irwin Bridge Road on all four approaches
- Bike paths are not present in the study network
- There are no streetlights on Farmer Road or Irwin Bridge Road near the proposed development
- There is no public transit service within 0.5 miles of the site

Alternative Modes of Access

- Existing transit routes were not identified in the study network.
- No high-capacity transit stations were identified in the vicinity of the proposed development.

The graphic below includes the location of existing sidewalks in the study network.

Existing Alternative Transportation Map

STUDY METHODOLOGY

In this study, the methodology used for evaluating traffic operations at each of the subject intersections is based on the criteria set forth in the Transportation Research Board's Highway Capacity Manual, 6th edition (HCM 6). Synchro software, which utilizes the HCM methodology, was used for the analysis. The following is a description of the methodology employed for the analysis of unsignalized and signalized intersections.

Unsignalized Intersections

For unsignalized intersections controlled by a stop sign on minor streets, the level-of-service (LOS) for motor vehicles with controlled movements is determined by the computed control delay according to the thresholds stated in Table 1 below. LOS is determined for each minor street movement (or shared movement), as well as major street left turns. LOS is not defined for the intersection as a whole or for major street approaches. The LOS of any controlled movement which experiences a volume to capacity ratio greater than 1 is designed as "F" regardless of the control delay.

Control delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. Several factors affect the control delay for unsignalized intersections, such as the availability and distribution of gaps in the conflicting traffic stream, critical gaps and follow-up time for a vehicle in the queue.

Level-of-service is assigned a letter designation from "A" through "F". Level-of-service "A" indicates excellent operations with little delay to motorists, while level-of-service "F" exists when there are insufficient gaps of acceptable size to allow vehicles on the side street to cross the main road without experiencing long delays.

TABLE 1 – LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Control Delay (sec/vehicle)	LOS by Volume-to-Capacity Ratio*	
	v/c ≤ 1.0	**v/c > 1.0**
≤ 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

*The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection.

Source: Highway Capacity Manual, 6th edition, Exhibit 20-2 *LOS Criteria: Motorized Vehicle Mode*

Signalized Intersections

According to HCM procedures, LOS can be calculated for the entire intersection, each intersection approach, and each lane group. HCM uses control delay alone to characterize LOS for the entire intersection or an approach. Control delay per vehicle is composed of initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. Both control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. A volume-to-capacity ratio greater than 1.0 for a lane group indicates failure from capacity perspective. Therefore, such a lane group is assigned LOS F regardless of the amount of control delay.

Table 2 below summarizes the LOS criteria from HCM for motorized vehicles at signalized intersections.

TABLE 2 – LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Control Delay (sec/vehicle)*	LOS for Lane Group by Volume-to-Capacity Ratio*	
	v/c ≤ 1.0	**v/c > 1.0**
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

*For approach-based and intersection wide assessments, LOS is defined solely by control delay

Source: Highway Capacity Manual, 6th edition, Exhibit 19-8 *LOS Criteria: Motorized Vehicle Mode*

LOS A is typically assigned when the volume-to-capacity (v/c) ratio is low and either progression is exceptionally favorable, or the cycle length is very short. LOS B is typically assigned when the v/c ratio is low and either progression is highly favorable, or the cycle length is short. However, more vehicles are stopped than with LOS A. LOS C is typically assigned when progression is favorable, or the cycle length is moderate. Individual cycle failures (one or more queued vehicles are not able to depart because of insufficient capacity during the cycle) may begin to appear at this level. Many vehicles still pass through the intersection without stopping, but the number of vehicles stopping is significant. LOS D is typically assigned when the v/c ratio is high and either progression is ineffective, or the cycle length is long. There are many vehicle-stops and individual cycle failures are noticeable. LOS E is typically assigned when the v/c ratio is high, progression is very poor, the cycle length is long, and individual cycle failures are frequent. LOS F is typically assigned when the v/c ratio is very high, progression is very poor, the cycle length is long, and most cycles fail to clear the queue.

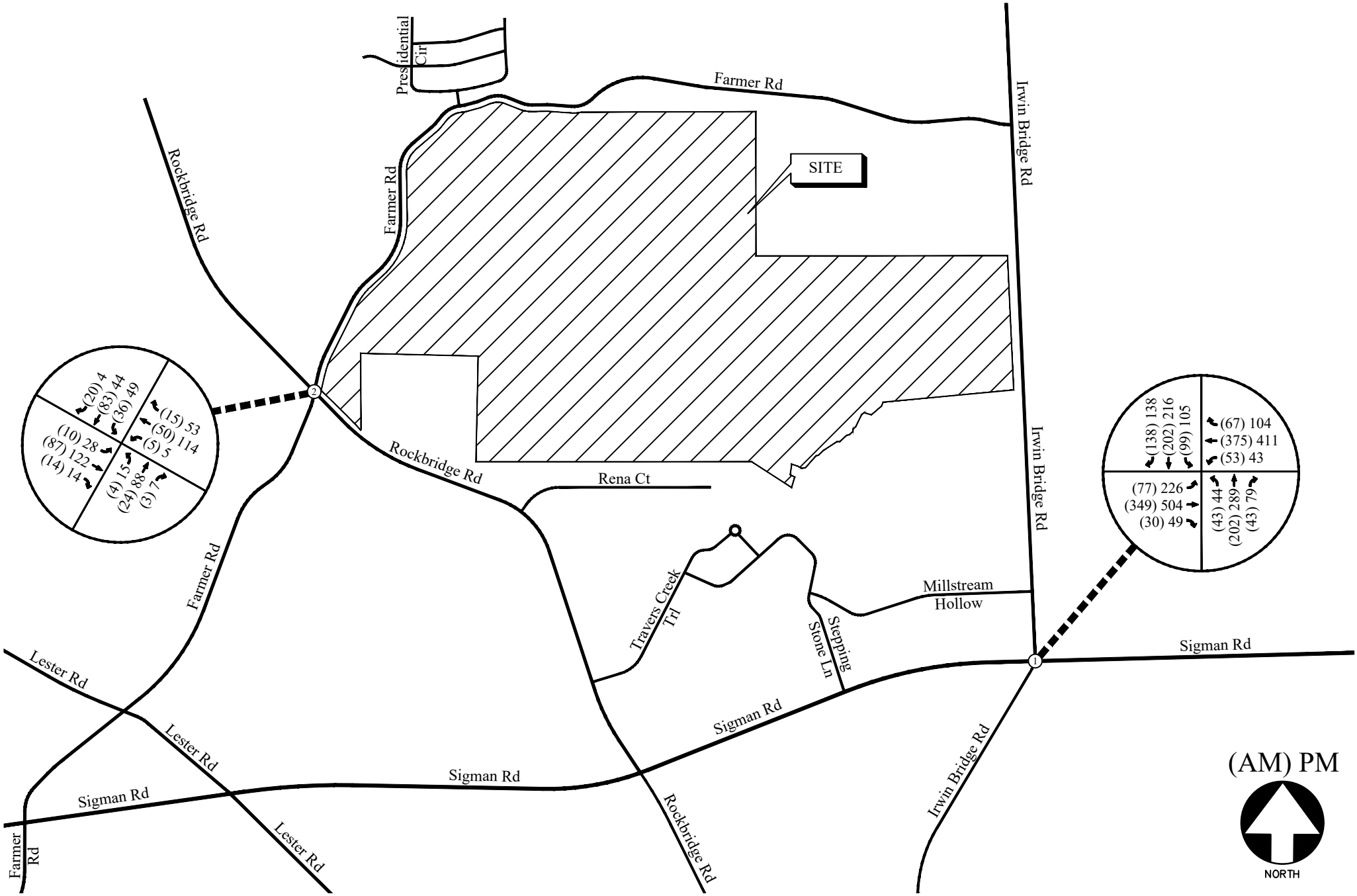
EXISTING 2025 TRAFFIC ANALYSIS

Existing Traffic Volumes

Existing traffic counts were obtained at the following study intersections:

1. Sigman Road @ Irwin Bridge Road
2. Rockbridge Road @ Farmer Road

Turning movement counts were collected on Wednesday, April 23, 2025. All turning movement counts were recorded during the AM and PM peak hours between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, respectively. Truck data was included separately in the counts. The four consecutive 15-minute interval volumes that produced the highest volume at the intersections were then determined. These volumes make up the peak hour traffic volumes for the intersections counted and are shown in Figure 2. The existing traffic control and lane geometry for the intersections are shown in Figure 3.



EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 2

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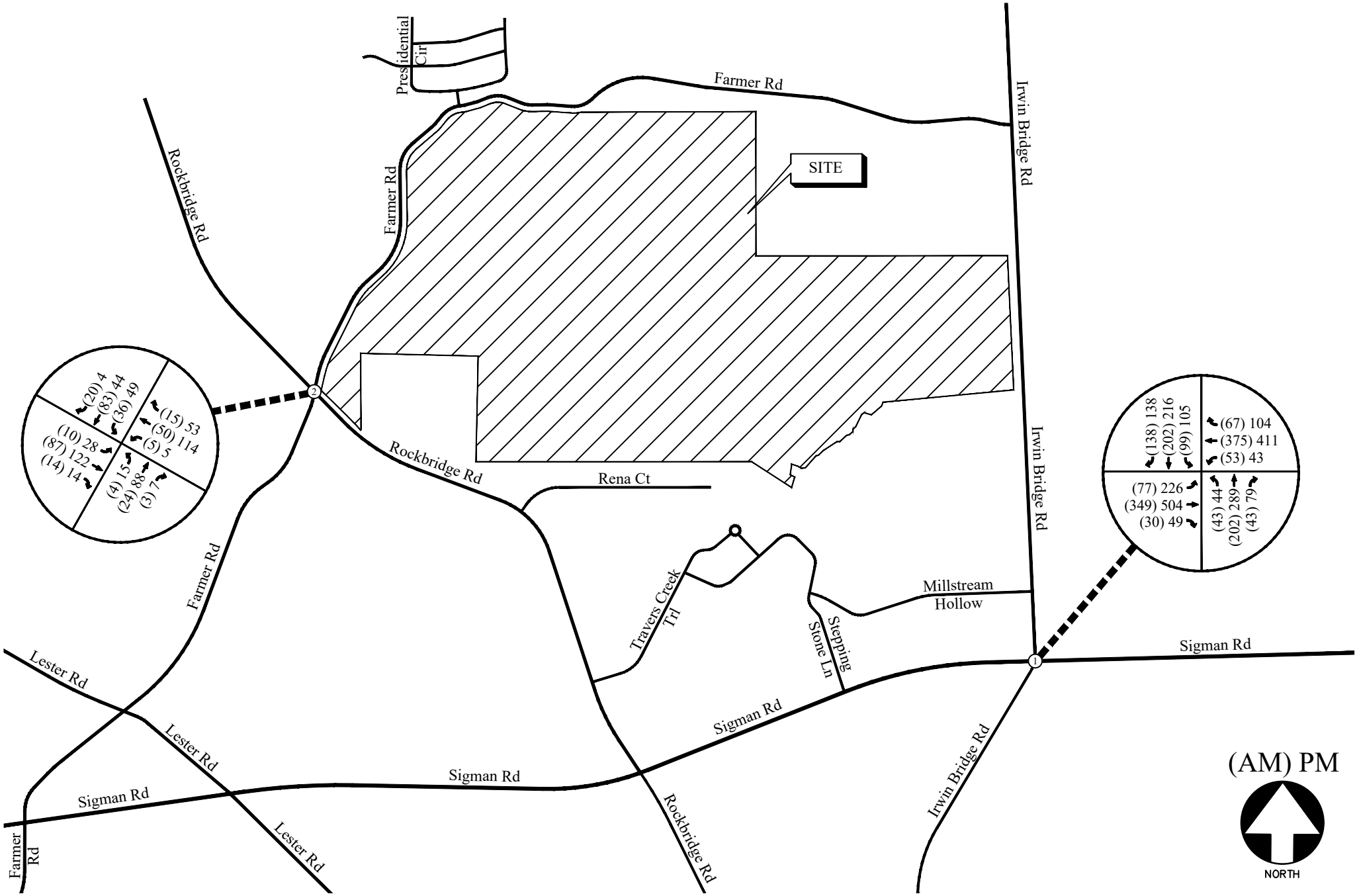


EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 2

A&R Engineering Inc.

Existing Traffic Operations

Existing 2025 traffic operations were analyzed at the study intersections in accordance with the HCM methodology. The results of the analyses are shown in Table 3.

TABLE 3 – EXISTING 2025 INTERSECTION OPERATIONS

	Intersection	Traffic Control	AM Peak	PM Peak	LOS Standard
1	**Sigman Road @ Irwin Bridge Road**	Signalized	**C (23.5)**	**C (23.4)**	**D/D**
	-Eastbound Approach		A (8.6)	B (14.7)	D/D
	-Westbound Approach		A (7.8)	B (10.9)	D/D
	-Northbound Approach		D (41.9)	D (37.8)	D/D
	-Southbound Approach		D (43.7)	D (39.6)	D/D
2	**Rockbridge Road @ Farmer Road**	Stop Controlled on NB and SB Approaches			
	-Eastbound Left		A (7.4)	A (7.8)	D/D
	-Westbound Left		A (7.4)	A (7.7)	D/D
	-Northbound Approach		B (10.9)	B (14.3)	D/D
	-Southbound Approach		B (11.5)	B (14.7)	D/D

The results of existing traffic operations analysis indicate that all the study intersections are operating at a level of service "D" or better for all approaches in both the AM and PM peak hours.

PROJECT DESCRIPTION

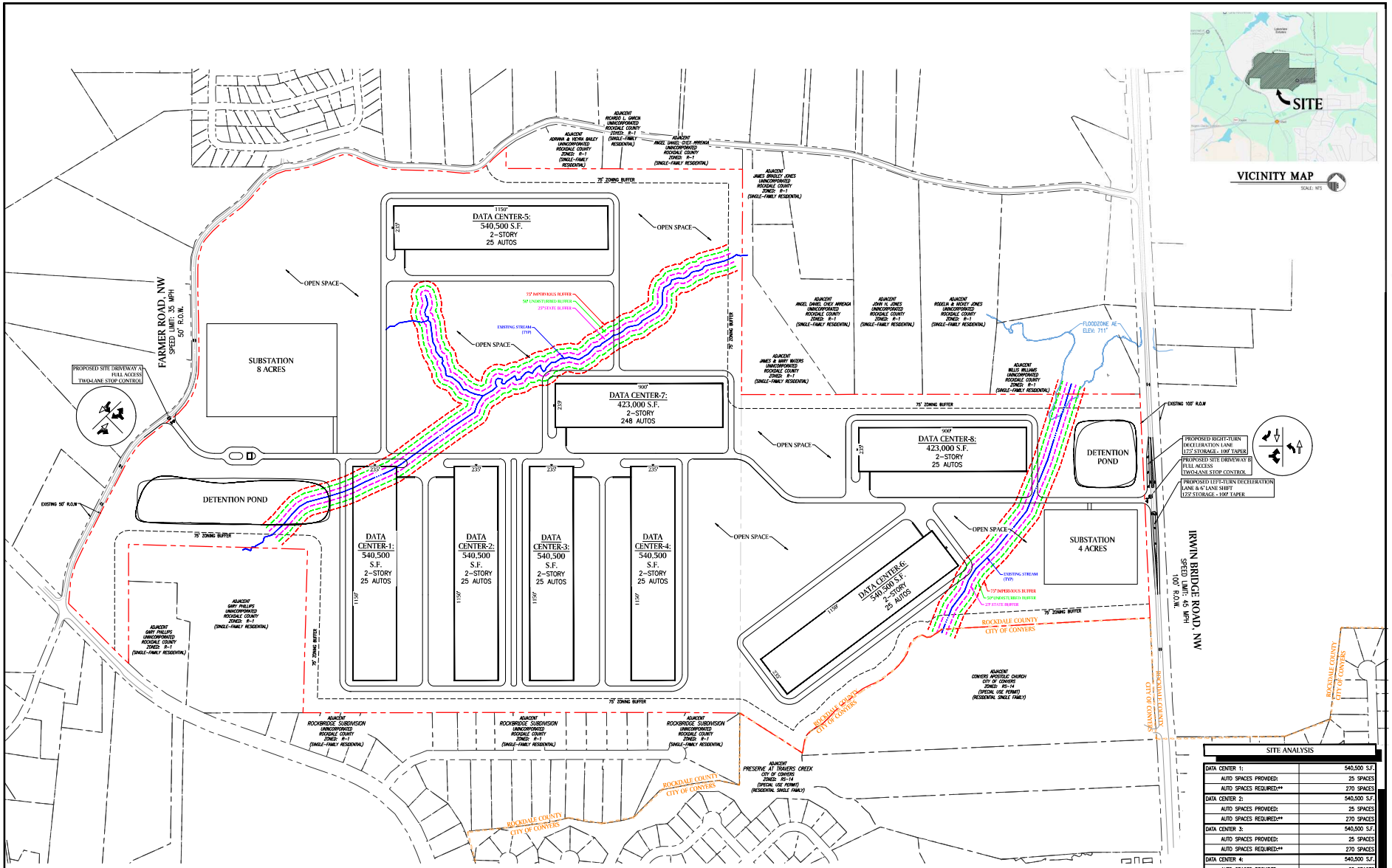
The proposed Project Rockforge development will be located at 2100 Irwin Bridge Road in the City of Conyers, between Farmer Road, Irwin Bridge Road and Rockbridge Road. In general, the site is located to the north and east of I-20. The development will consist of two-storied eight data center buildings, six each of 270,250 sf per floor and two each of 211,500 sf per floor for a total of 4,089,000 sf.

The development proposes access at the following locations:

- Site Driveway 1: Full access driveway on Farmer Road
- Site Driveway 2: Full access driveway on Irwin Bridge Road

Site Plan

A site plan is shown in Figure 4. A digital copy of the site plan is also provided with this report.



VICINITY MAP
SCALE: NTS

CONCEPTUAL SITE PLAN

0 100 200 400 800
SCALE: 1 = 200

LEGEND

WETLANDS
STREAMS
STREAM BUFFERS
PROPERTY BOUNDARY
FLOODPLAIN – SHADED ZONE 'X'
CITY BOUNDARY

CONTACTS:

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SUITE N
ATLANTA, GEORGIA 30350
PHONE

SITE PLANNER
JOHN WISE
PAULSON MITCHELL WISE, INC.
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(770) 650-7685

TRAFFIC CONSULTANT
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A&R Engineering, Inc.
2160 Kingston Court, Suite O
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SITE ANALYSIS

DATA CENTER 1:	540,500 S.F.
AUTO SPACES PROVIDED:	25 SPACES
AUTO SPACES REQUIRED:**	270 SPACES
DATA CENTER 2:	540,500 S.F.
AUTO SPACES PROVIDED:	25 SPACES
AUTO SPACES REQUIRED:**	270 SPACES
DATA CENTER 3:	540,500 S.F.
AUTO SPACES PROVIDED:	25 SPACES
AUTO SPACES REQUIRED:**	270 SPACES
DATA CENTER 4:	540,500 S.F.
AUTO SPACES PROVIDED:	25 SPACES
AUTO SPACES REQUIRED:**	270 SPACES
DATA CENTER 5:	540,500 S.F.
AUTO SPACES PROVIDED:	25 SPACES
AUTO SPACES REQUIRED:**	270 SPACES
DATA CENTER 6:	540,500 S.F.
AUTO SPACES PROVIDED:	25 SPACES
AUTO SPACES REQUIRED:**	270 SPACES
DATA CENTER 7:	423,000 S.F.
AUTO SPACES PROVIDED:	25 SPACES
AUTO SPACES REQUIRED:**	211 SPACES
DATA CENTER 8:	423,000 S.F.
AUTO SPACES PROVIDED:	25 SPACES
AUTO SPACES REQUIRED:**	211 SPACES
TOTAL BUILDING AREA:	4,089,000 S.F.
FLOOR AREA RATIO (FAR):	0.35 FAR
OPEN SPACE PROVIDED:	±144 ACRES (±54%)
TOTAL SITE AREA:	±265 ACRES

**WAREHOUSE REQUIREMENT CURRENTLY SHOWN AS ROCKDALE COUNTY DOES NOT CURRENTLY HAVE A REQUIRED AUTO SPACES CODE FOR DATA CENTER. VARIANCE OR SITE SPECIFIC REQUIREMENT WILL BE PURSUED

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PROJECT:

PROJECT ROCKFORGE
DRI #4456
2000 IRWIN BRIDGE ROAD,
CONYERS, GA

PARCELS: 0410010008B AND 0410010004

UNINCORPORATED
ROCKDALE COUNTY, GEORGIA

FOR:

MMM ACQUISITIONS, LLC
8735 DUNWOODY PLACE, SUITE N
ATLANTA, GEORGIA 30350

ZONING INFORMATION

ZONING CLASSIFICATION

JURISDICTION:	UNINCORPORATED ROCKDALE COUNTY
EX. ZONING:	CRS (COLLABORATIVE RESIDENTIAL SUB.)
OVERLAY DISTRICT:	--
PR. ZONING:	M-1 (LIMITED INDUSTRIAL DISTRICT)

BUILDING SETBACKS

FRONT:	40'
MAJOR SIDE:	50' (CORNER LOT)
MINOR SIDE:	25'
REAR:	50'

BUFFERS

LANDSCAPE STRIP:	20' FRONT | 10' SIDE & BACK
ZONING BUFFER:	75' ADJ TO RES | 50' ADJ TO C-1 & C-2
STATE STREAM BUFFER:	25'
COUNTY STREAM BUFFER:	50' (UNDISTURBED)
CITY STREAM BUFFER:	75'

PARKING SUMMARY

WAREHOUSE REQ.:	1 PER 2,000 SF OF GFA
STALL:	9' X 19'
LANDSCAPE ISLAND SPACING:	1 PER 8 SPACES

LANDSCAPE REQ'S.

MAXIMUM IMPERVIOUS ALLOWED:	75%
MAXIMUM BUILDING COVERAGE:	__%

ENVIRONMENTAL

FLOOD PLAIN PRESENT (NO):	FEMA/ROCKDALE GIS
STREAMS PRESENT (NO):	NW/ROCKDALE GIS
WETLANDS PRESENT (NO):	NW/ROCKDALE GIS
TOPOGRAPHY DATA:	ROCKDALE COUNTY GIS

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CONCEPTUAL
SITE PLAN

SHEET **CP-1**

Planned Bicycle and Pedestrian Facilities

Pedestrian sidewalks will be provided for individual buildings to parking lots. Data Centers don't encourage outside pedestrian activity and therefore will be for internal use only.

Potential Pedestrian and Bicycle Destinations

There are no potential pedestrian and bicycle destinations within 0.25-mile of the proposed development except the Rockdale County 911 Emergency Center that is located within 0.25-mile of the site driveway on Farmer Road.

Planned Transit Facilities

There is no existing or planned public transit service near the proposed development.

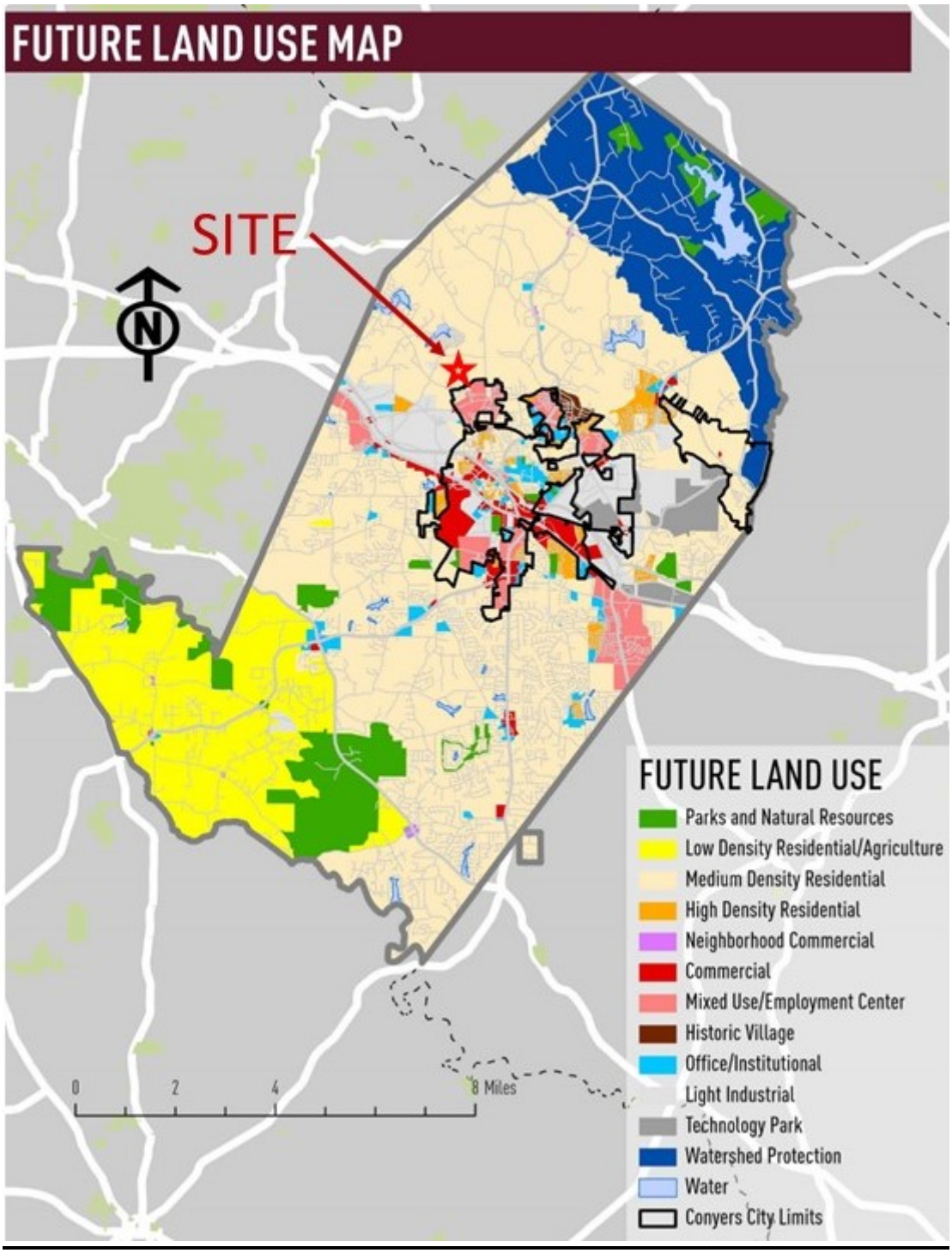
Consistency with Adopted Comprehensive Plan

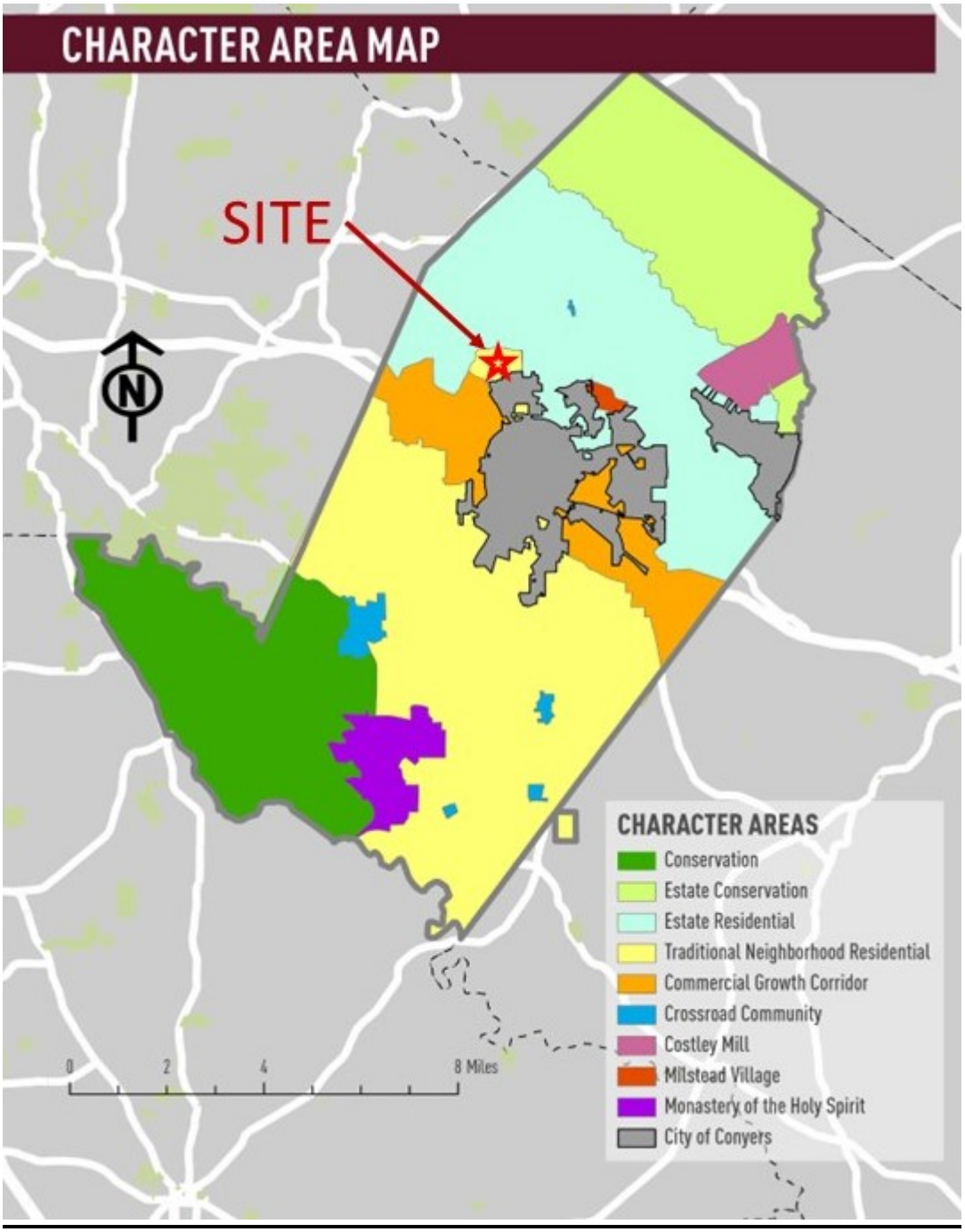
The proposed data center development will include two-storied, eight buildings, six each of 270,250 sf per floor and two each of 211,500 sf per floor for a total of 4,089,000 sf. The property includes 263 acres of land. The site is currently zoned as Collaborative Residential Subdivision and is requesting a rezoning to Limited Industrial District.

Land Use and Zoning

Current Future Land Use Designation	Medium Density Residential
Proposed Future Land Use Designation	Light Industrial
Current Future Character Area Designation	Traditional Neighborhood Residential
Proposed Future Character Area Designation	Commercial Growth Corridor
Character Area for Rockdale County	Traditional Neighborhood Residential This character area is intended to be a transition area between the "intensive development in the City of Conyers and along I-20, and the largely rural agrarian character of the southern tip of the county in the Conservation Character Area." • Allow for residential development and densities that support traditional neighborhood uses, as well as economic viability in the non-residential uses in the adjacent Crossroads Character Community Area • Preserve stable existing single family residential neighborhoods • Provide institutional and recreational opportunities at a scale that is compatible with adjacent traditional residential uses.

	• Plan for the preservation of historic sites, including cemeteries
Relation to Existing Land Use Plans	The proposed development is not consistent with the land use vision listed above.
Chattahoochee River/Metropolitan River Protection Act	N/A


FUTURE LAND USE MAP
SITE
N
0
2
4
8 Miles
FUTURE LAND USE
Parks and Natural Resources
Low Density Residential/Agriculture
Medium Density Residential
High Density Residential
Neighborhood Commercial
Commercial
Mixed Use/Employment Center
Historic Village
Office/Institutional
Light Industrial
Technology Park
Watershed Protection
Water
Conyers City Limits



Project Phasing

This project has been evaluated for the complete build-out of the development in 2032.

Trip Generation

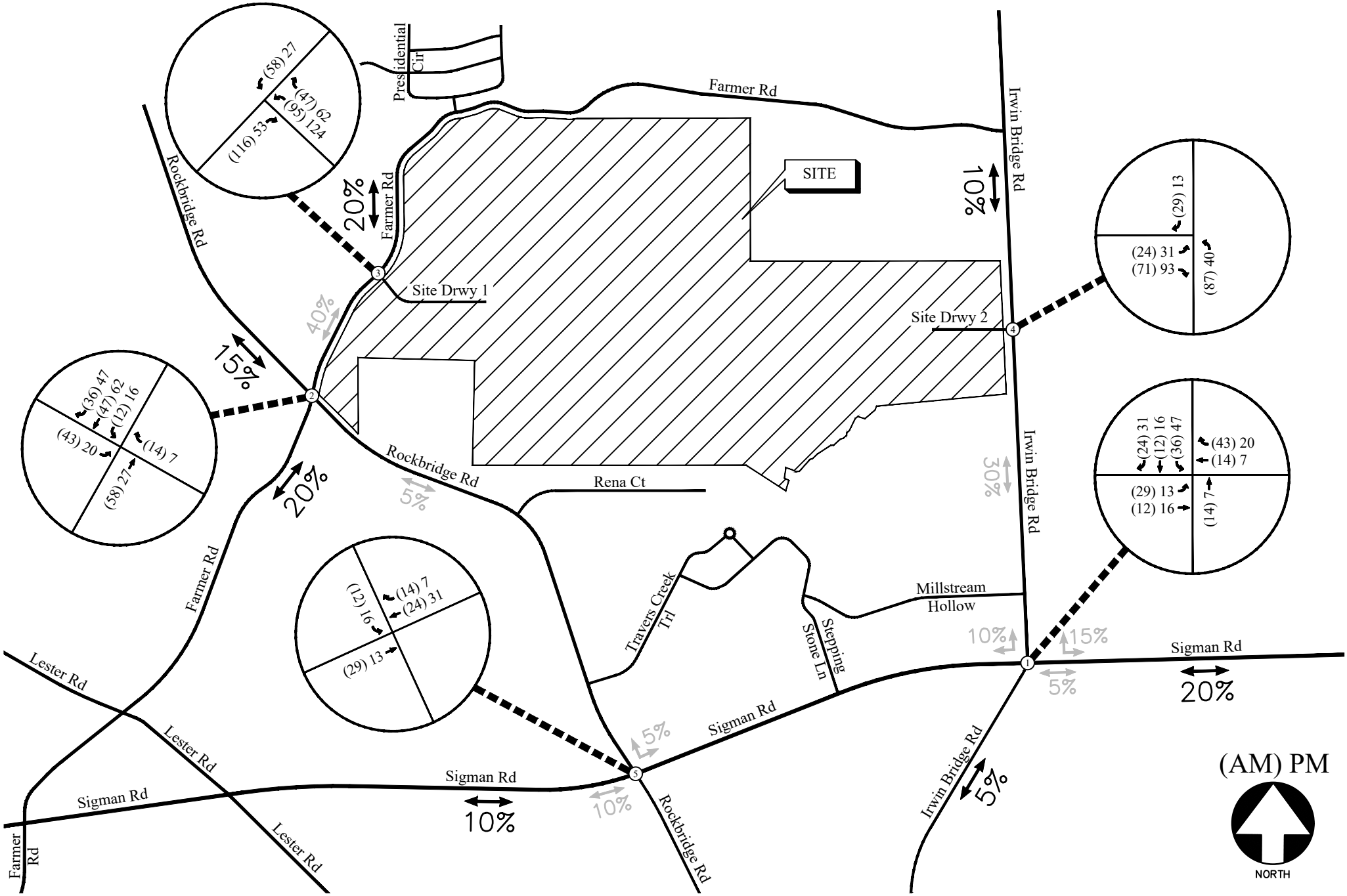
Trip generation estimates for the project were based on the rates and equations published in the 11th edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the following ITE *Land Use: 160 – Data Center*. The calculated total trip generation for the proposed development is shown in Table 4.

TABLE 4 – TRIP GENERATION

Land Use	Size	AM Peak Hour			PM Peak Hour			24 Hour
		Enter	Exit	Total	Enter	Exit	Total	Two-way
ITE 160 – Data Center	4,089,000 SF	289	237	526	133	311	444	4,048

Trip Distribution

The trip distribution describes how traffic arrives and departs from the site. An overall trip distribution was developed for the site based on the nature of the development and the locations of major roadways and highways that will serve the development and a review of the existing travel patterns in the area. The site-generated peak hour traffic volumes, shown in Table 4, were assigned to the study area intersections based on this distribution. The outer-leg distribution and AM and PM peak hour new traffic generated by the site are shown in Figure 5.



TRIP DISTRIBUTION AND SITE-GENERATED WEEKDAY PEAK HOUR VOLUMES

FIGURE 5

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FUTURE 2032 TRAFFIC ANALYSIS

The future 2032 traffic operations are analyzed for the "Build" and "No-Build" conditions. This provides a basis of reference for determining both the contribution of the site to overall traffic conditions and the additional improvements needed to provide sufficient site access and capacity for passing traffic.

Improvements that are identified as "System Improvements" address deficiencies that are found within the existing road network prior to any impacts from the proposed development's added traffic. Improvements that are identified as "Site Mitigation Improvements" address further impacts that are a result of the proposed development's added traffic. Note that survey and construction drawings would be needed to verify the feasibility and extent of additional right-of-way required for any recommended improvements.

Future "No-Build" Conditions

The "No-Build" (or background) conditions provide an assessment of how traffic will operate in the study horizon year without the study site being developed as proposed, with projected increases in through traffic volumes due to normal annual growth. The Future "No-Build" volumes consist of the existing traffic volumes (Figure 2) plus increases for annual growth of traffic.

Annual Traffic Growth

To evaluate future traffic operations in this area, a projection of normal traffic growth was applied to the existing volumes. The Georgia Department of Transportation recorded average daily traffic volumes at several locations in the vicinity of the site. Reviewing the growth over the last five years (2018-2019 & 2021-2023) revealed a traffic volume increase of approximately 3% in the area. This growth factor was applied to the existing traffic volumes to estimate the future year traffic volumes prior to the addition of site-generated traffic. The resulting Future "No-Build" volumes on the roadway are shown in Figure 6.

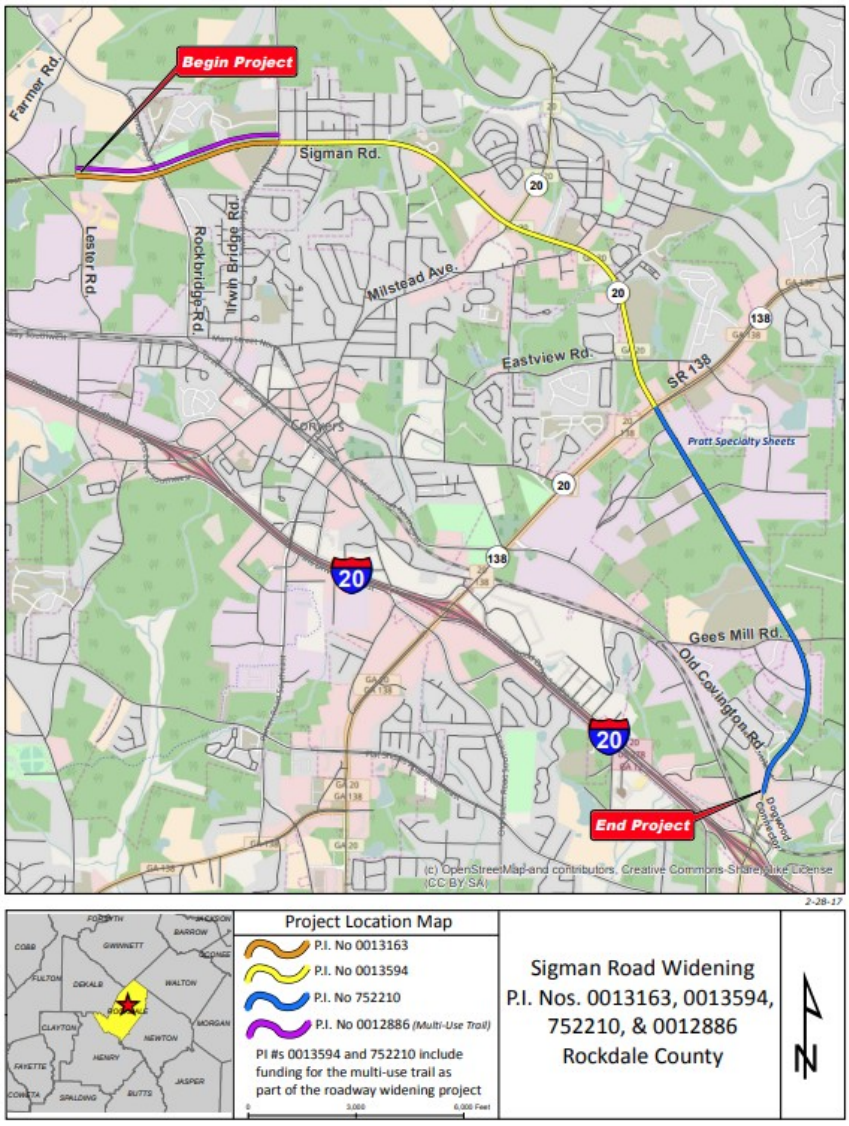
Planned and Programmed Improvements in Study Area

The following improvements have been identified in the Regional Transportation Plan (Plan 2040), GDOT GeoPi, and/or the local comprehensive transportation plan. These improvements are within the vicinity of the proposed development.

TABLE 5 – PLANNED AND PROGRAMMED IMPROVEMENTS

Item #	Project Name	From / To Points	Sponsor	GDOT PI #	ARC ID #	Design FY	ROW / UTL FY	CST FY
1	Sigman Road Widening – Phase 2	E of CR 79/Lester Road to CS 442/Irwin Bridge Road	GDOT	0013163	RO-235C	2015	2017	2019
2	SR 20 & Sigman Road	CS 442/Irwin Bridge Road to SR 138	GDOT	0013594		2020	2026	2028
3	Sigman Road Multi Use Trail	E of CR 79/ Lester Road to CS 442/Irwin Bridge Road	GDOT	0012886		2014	2017	2020

Sigman Road Widening:



GDOT PI 0013163 (orange): This project aims to widen 6.5 miles of Sigman Road from east of Lester Road to Irwin Bridge Road. Two lane roads will be widened to four 12 ft lane roads with a 20 ft raised median. The shoulder will be upgraded to urban type with curb and gutter. The left shoulder will be widened to 21 ft with a 10 ft multi use path and the right shoulder would be widened to 16 ft with a standard 5 ft sidewalk.

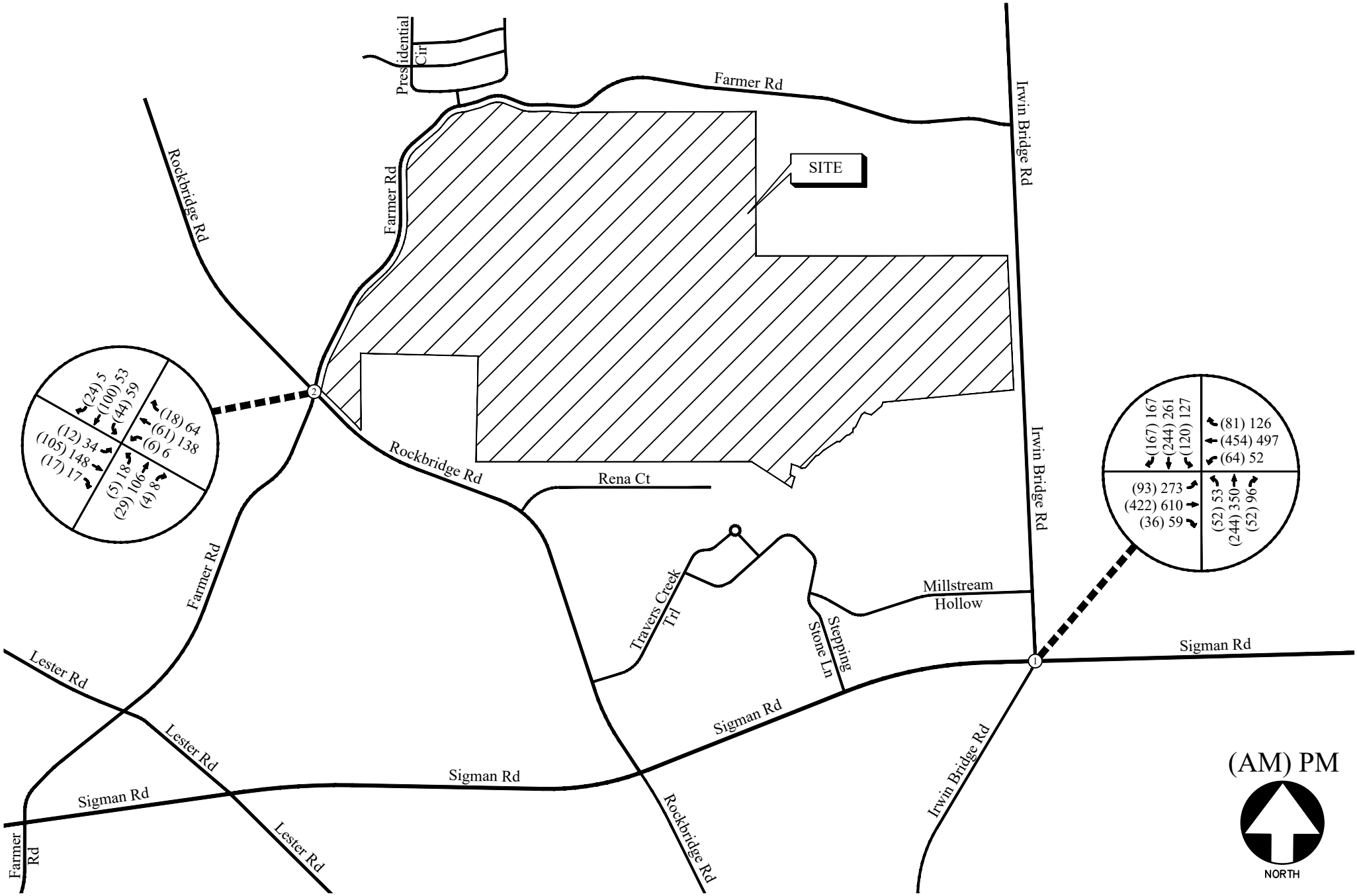
GDOT PI 0013594 (yellow): This project aims to widen Sigman Road from Irwin Bridge Road to SR 138. No design documents or further details were found online.

GDOT PI 0012886 (purple): This project is under construction and will provide bicycle and pedestrian accommodation along Sigman Road. It is being coordinated with PI 0013163.

GDOT PI 0013163, 0013594, and 0012886 improvements have been included in the No-Build and Build scenario modeling for this DRI analysis since the project build year will be 2032, after the improvement projects are to be completed.

Future "Build" Conditions

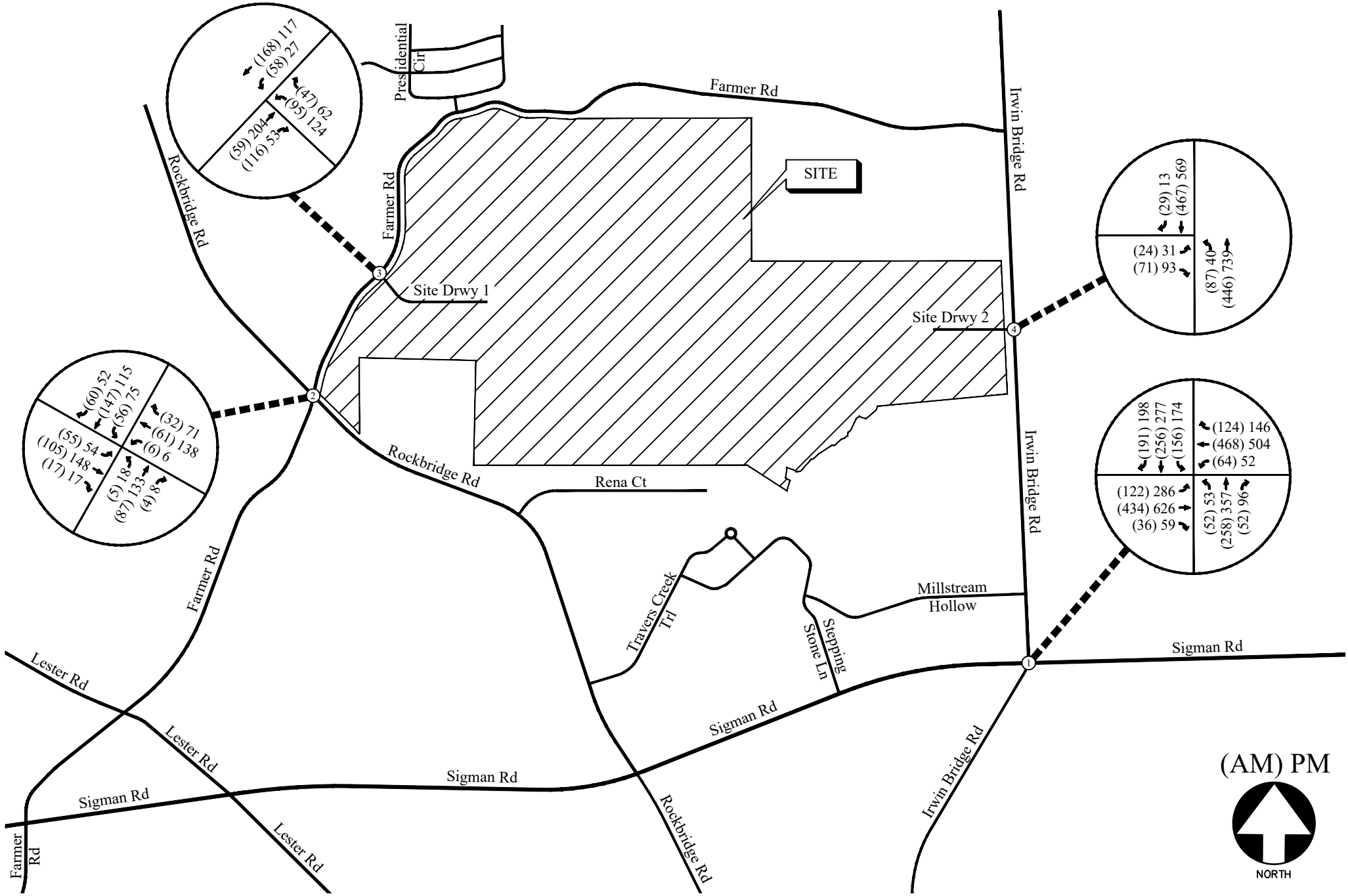
The "Build" or development conditions include the estimated background traffic from the "No-Build" conditions plus the traffic from the proposed development. To evaluate future traffic operations in this area, the additional traffic volumes from the site (Figure 5) were added to base traffic volumes (Figure 6) to calculate the future traffic volumes after the construction of the development. These total future "Build" traffic volumes are shown in Figure 7.



FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 6

A&R Engineering Inc.



FUTURE (BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 7

A&R Engineering Inc.

Auxiliary Lane Analysis

Included below are analyses for turn lanes for all site driveways per Rockdale County standards.

Left Turn Lane Analysis

Rockdale County Code of Ordinances (Section 332-5(h)(4)) state that *"Under the following conditions, left storage lanes shall be added to two-lane collectors or arterials with speed limits of 30 mph or more, at unsignalized locations where left turning vehicles will leave the arterial or collector street and enter major driveways or development entrances."* See the "Table of left storage lane requirements."

TABLE 6 – ROCKDALE COUNTY TABLE OF LEFT STORAGE LANE REQUIREMENTS

If average peak hour left turn volume is:	And collector/arterial traffic is: (vehicles per lane in peak hour):	Left turn storage lane
Over 25	All volumes	Required
16 – 25	51-100	Required
13 – 15	101-200	Required
1 – 12	Over 200	May be required
Any volume	Any volume	May be required by director if sight distance (in feet) in either direction is less than 10 times the posted speed limit.

Rockdale County classifies Farmer Road as a local roadway and Irwin Bridge Road as a major collector roadway. Both roads are two-lane roadways with a posted speed limit exceeding 30 mph. Based on the projected future peak hour volumes at the site driveway intersections shown in Figure 7, the left entering volumes at each site driveway are more than 25 vehicles in both the AM and PM peak hours but only the driveway on Irwin Bridge Road is a major collector way project. Therefore, a left turn lane is warranted only at the driveway on Irwin Bridge Road. No left turn lane is warranted at the driveway on Farmer Road.

Deceleration Turn Lane Analysis

Rockdale County Code of Ordinances (Section 332-3(d)) state that deceleration lanes shall be required by Rockdale County at each access point on roads classified as arterials or collectors when the posted speed limit is 30 mph or higher. Rockdale County classifies Farmer Road as a local roadway and Irwin Bridge Road as a major collector roadway. Therefore, a deceleration lane is warranted at the driveway on Irwin Bridge Road only. No deceleration lane is warranted for the driveway on Farmer Road.

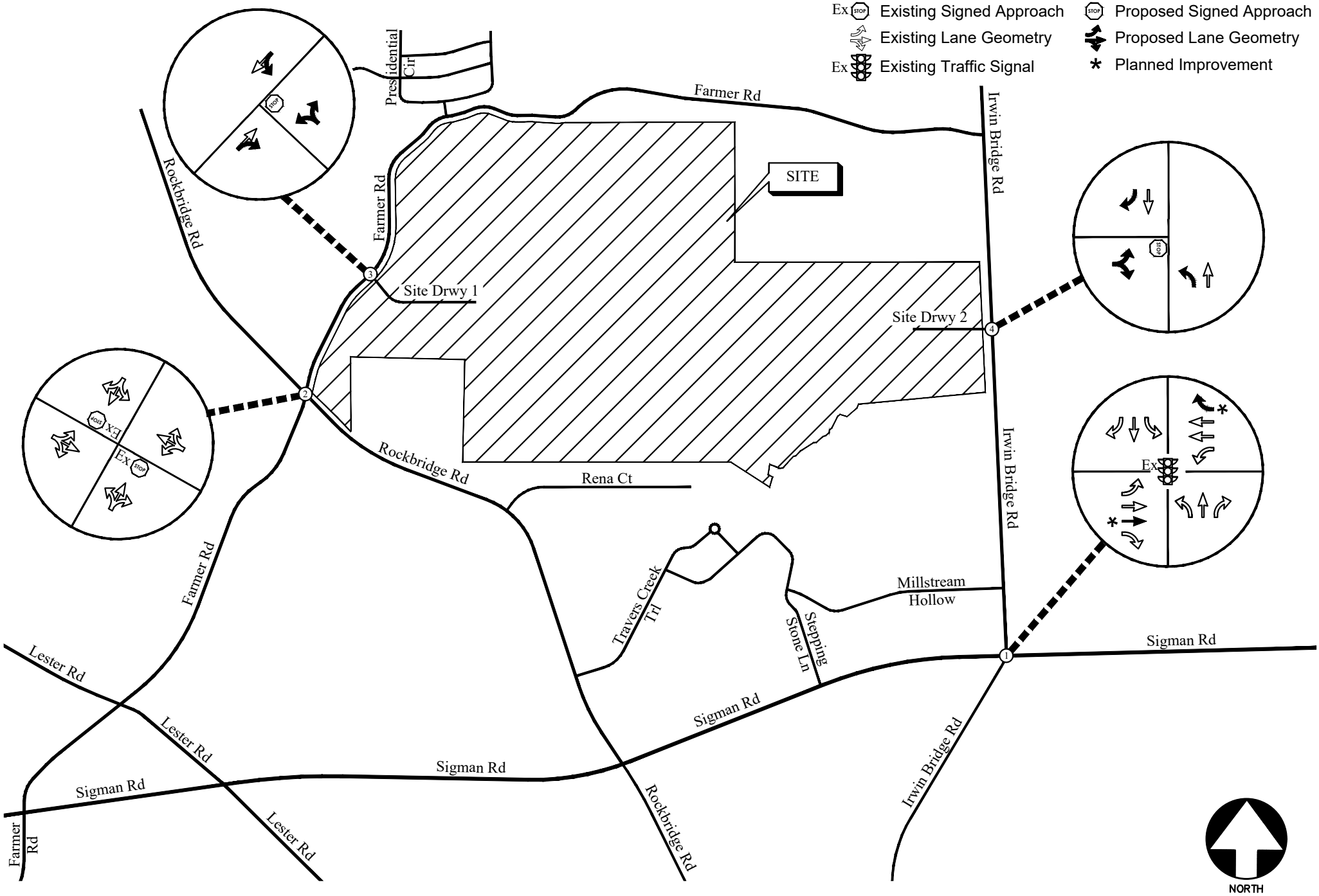
Future Traffic Operations

The future "No-Build" and "Build" traffic operations were analyzed using the volumes in Figures 6 and 7, respectively. The results of the future traffic operations analysis are shown below in Table 7. Recommendations for future traffic control and lane geometry are shown in Figure 8.

TABLE 7 – FUTURE 2032 INTERSECTION OPERATIONS

	Intersection	LOS (Delay)			
		NO-BUILD		BUILD	
		AM Peak	PM Peak	AM Peak	PM Peak
	Sigman Road @ Irwin Bridge Road	**C (23.5)**	**C (24.3)**	**C (24.1)**	**C (25.8)**
	-Eastbound Approach	B (10.2)	B (17.8)	B (12.4)	C (22.8)
1	-Westbound Approach	A (9.9)	B (13.5)	B (11.7)	B (16.5)
	-Northbound Approach	D (38.1)	C (34.1)	D (35.2)	C (29.6)
	-Southbound Approach	D (40.1)	D (36.7)	D (39.2)	D (35.1)
	Rockbridge Road @ Farmer Road				
	-Eastbound Left	A (7.4)	A (7.9)	A (7.5)	A (8.0)
2	-Westbound Left	A (7.5)	A (7.8)	A (7.5)	A (7.8)
	-Northbound Approach	B (11.4)	C (16.9)	B (14.1)	C (21.7)
	-Southbound Approach	B (12.5)	C (18.1)	C (17.7)	D (30.6)
	Farmer Road @ Site Driveway 1				
3	-Westbound Approach	-	-	B (11.7)	B (13.1)
	-Southbound Left			A (7.7)	A (7.9)
	Irwin Bridge Road @ Site Driveway 2				
4	-Eastbound Approach	-	-	C (18.1)	D (28.3)
	-Northbound Left			A (8.9)	A (9.0)

The results of both the future "No-Build" and "Build" traffic operations analyses indicate that all the study intersections will operate at a level of service "D" or better for all approaches in both the AM and PM peak hours.



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 8

A&R Engineering Inc.

CONCLUSIONS AND RECOMMENDATIONS

Traffic impacts were evaluated for the proposed Project Rockforge development that will be located at 2100 Irwin Bridge Road in Rockdale County, Georgia. The development will consist of two-storied eight data center buildings, six each of 270,250 sf per floor and two each of 211,500 sf per floor for a total of 4,089,000 sf.

The development proposes one full access driveway on Farmer Road and one full access driveway on Irwin Bridge Road.

Traffic operations were evaluated for the AM and PM peak hours at the intersections of:

1. Sigman Road @ Irwin Bridge Road
2. Rockbridge Road @ Farmer Road
3. Farmer Road @ Site Driveway 1
4. Irwin Bridge Road @ Site Driveway 2

The analysis included the evaluation of Future operations for "No-Build" and "Build" conditions, both of which account for increases in annual growth of through traffic. The results of future traffic operations showed that the intersection of SR 306 and Freedom Parkway will operate at LOS "E" or "F" for one or more approaches in the PM peak hour. After the recommended system improvements are implemented, the intersection will operate at LOS "D" or better in both the AM and PM peak hours.

Recommendation for Site Access Configuration

The following access configuration is recommended for the proposed site driveway intersections:

- Site Driveway 1: Full access driveway on Farmer Road
  - One entering lane and one exiting lane
  - Stop-sign controlled on the driveway approach with Farmer Road remaining free flow.
  - Provide adequate sight distance per AASHTO standards.

- Site Driveway 2: Full access driveway on Irwin Bridge Road
  - One entering lane and one exiting lane
  - Stop-sign controlled on the driveway approach with Irwin Bridge Road remaining free flow
  - Left turn lane and right turn lane on Irwin Bridge Road for entering traffic.
  - Provide adequate sight distance per AASHTO standards.

Appendix

Existing Intersection Traffic Counts

National Data & Surveying Services

Intersection Turning Movement Count

Location: Irwin Bridge Rd NW & Farmer Rd NW
City: Conyers
Control: 1-Way Stop(EB)

Project ID: 25-180105-003
Date: 4/23/2025

Data - Total

NS/EW Streets:	Irwin Bridge Rd NW				Irwin Bridge Rd NW				Farmer Rd NW				Farmer Rd NW				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	88	0	0	0	79	11	0	20	0	15	0	0	0	0	0	215
7:15 AM	7	91	0	0	0	68	30	0	23	0	14	0	0	0	0	0	233
7:30 AM	1	86	0	0	0	94	21	0	13	0	12	0	0	0	0	0	227
7:45 AM	7	87	0	0	0	92	12	0	7	0	12	0	0	0	0	0	217
8:00 AM	4	78	0	0	0	88	7	0	5	0	7	0	0	0	0	0	189
8:15 AM	6	81	0	0	0	91	6	0	6	0	5	0	0	0	0	0	195
8:30 AM	2	75	0	0	0	78	5	0	2	0	5	0	0	0	0	0	167
8:45 AM	8	59	0	0	0	76	4	0	5	0	7	0	0	0	0	0	159
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	37	645	0	0	0	666	96	0	81	0	77	0	0	0	0	0	1602
APPROACH %'s :	5.43%	94.57%	0.00%	0.00%	0.00%	87.40%	12.60%	0.00%	51.27%	0.00%	48.73%	0.00%					
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	17	352	0	0	0	333	74	0	63	0	53	0	0	0	0	0	892
PEAK HR FACTOR :	0.607	0.967	0.000	0.000	0.000	0.886	0.617	0.000	0.685	0.000	0.883	0.000	0.000	0.000	0.000	0.000	0.957
	0.941				0.885				0.784								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	13	95	0	0	0	81	9	0	10	0	8	0	0	0	0	0	216
4:15 PM	11	88	0	0	0	81	7	0	20	0	11	0	0	0	0	0	218
4:30 PM	18	95	0	0	0	86	13	0	8	0	8	0	0	0	0	0	228
4:45 PM	19	135	0	0	0	115	10	0	13	0	11	0	0	0	0	0	303
5:00 PM	16	143	0	0	0	106	6	0	13	0	8	0	0	0	0	0	292
5:15 PM	24	136	0	0	0	98	12	0	9	0	11	0	0	0	0	0	290
5:30 PM	16	122	0	0	0	112	12	0	19	0	9	0	0	0	0	0	290
5:45 PM	9	116	0	0	0	95	4	0	24	0	10	0	0	0	0	0	258
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	126	930	0	0	0	774	73	0	116	0	76	0	0	0	0	0	2095
APPROACH %'s :	11.93%	88.07%	0.00%	0.00%	0.00%	91.38%	8.62%	0.00%	60.42%	0.00%	39.58%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	75	536	0	0	0	431	40	0	54	0	39	0	0	0	0	0	1175
PEAK HR FACTOR :	0.781	0.937	0.000	0.000	0.000	0.937	0.833	0.000	0.711	0.000	0.886	0.000	0.000	0.000	0.000	0.000	0.969
	0.955				0.942				0.830								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Irwin Bridge Rd NW & Sigman Rd/Sigman Rd NW
City: Conyers
Control: Signalized

Project ID: 25-180105-001
Date: 4/23/2025

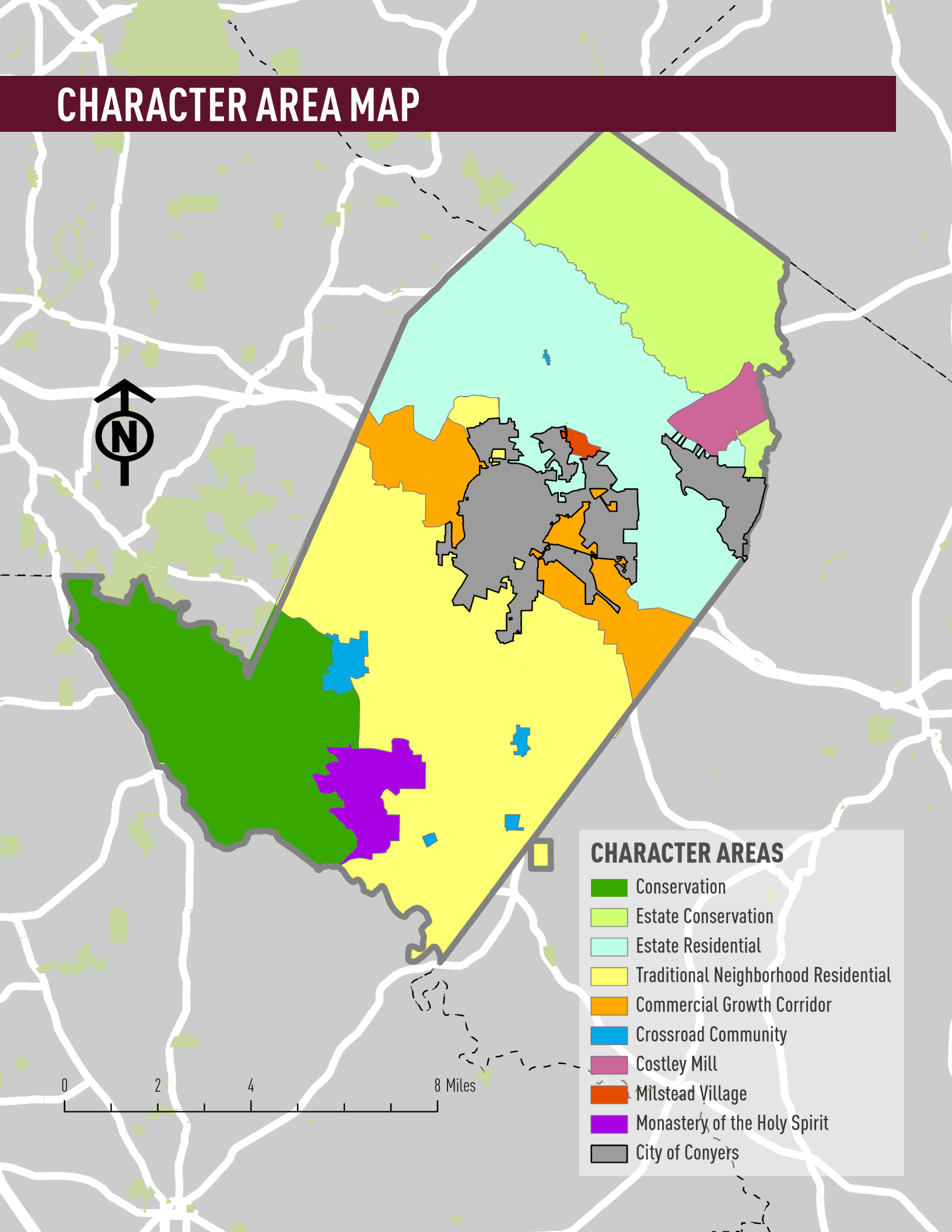
Data - Total

NS/EW Streets:	Irwin Bridge Rd NW				Irwin Bridge Rd NW				Sigman Rd/Sigman Rd NW				Sigman Rd/Sigman Rd NW				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	1	1	0	1	1	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	54	14	0	28	36	24	0	18	60	7	0	13	83	18	0	361
7:15 AM	11	45	20	0	21	32	35	0	22	82	5	0	14	82	26	0	395
7:30 AM	15	48	11	0	28	47	35	0	21	75	12	0	15	126	13	0	446
7:45 AM	10	53	9	0	29	58	33	0	16	86	6	0	12	88	26	0	426
8:00 AM	9	44	7	0	22	51	37	0	20	84	5	0	12	61	13	0	365
8:15 AM	9	57	16	0	20	46	33	0	20	104	7	0	14	100	15	0	441
8:30 AM	7	45	15	0	15	49	28	0	24	77	4	0	12	65	11	0	352
8:45 AM	5	38	9	0	17	39	26	0	20	76	5	0	10	74	12	0	331
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	72	384	101	0	180	358	251	0	161	644	51	0	102	679	134	0	3117
APPROACH %'s :	12.93%	68.94%	18.13%	0.00%	22.81%	45.37%	31.81%	0.00%	18.81%	75.23%	5.96%	0.00%	11.15%	74.21%	14.64%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	43	202	43	0	99	202	138	0	77	349	30	0	53	375	67	0	1678
PEAK HR FACTOR :	0.717	0.886	0.672	0.000	0.853	0.871	0.932	0.000	0.917	0.839	0.625	0.000	0.883	0.744	0.644	0.000	0.941
	0.878				0.915				0.870				0.804				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	1	1	0	1	1	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	8	61	20	0	29	48	21	0	36	117	11	0	17	96	28	0	492
4:15 PM	15	47	19	0	32	47	25	0	29	108	9	0	14	116	29	0	490
4:30 PM	9	44	21	0	23	46	26	0	46	126	20	0	15	102	24	0	502
4:45 PM	16	58	21	0	27	47	38	0	57	112	6	0	11	106	33	0	532
5:00 PM	11	76	24	0	25	57	30	0	60	128	17	0	11	91	29	0	559
5:15 PM	6	84	17	0	29	55	29	0	63	127	16	1	13	114	26	0	580
5:30 PM	11	71	17	0	24	57	41	0	45	137	10	0	8	100	16	0	537
5:45 PM	15	55	9	0	27	48	35	0	68	98	17	0	13	73	17	0	475
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	91	496	148	0	216	405	245	0	404	953	106	1	102	798	202	0	4167
APPROACH %'s :	12.38%	67.48%	20.14%	0.00%	24.94%	46.77%	28.29%	0.00%	27.60%	65.10%	7.24%	0.07%	9.26%	72.41%	18.33%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	44	289	79	0	105	216	138	0	225	504	49	1	43	411	104	0	2208
PEAK HR FACTOR :	0.688	0.860	0.823	0.000	0.905	0.947	0.841	0.000	0.893	0.920	0.721	0.250	0.827	0.901	0.788	0.000	0.952
	0.928				0.941				0.941				0.912				

Character Areas

CHARACTER AREA MAP



GRTA Letter of Understanding

LETTER OF UNDERSTANDING

May 13th, 2025

Justin Golshir
MMM Acquistion LLC
835 Dunwoody Place, Suite N
Atlanta, GA 30350

RE: Project Rockforge (DRI#: 4456)

Dear Justin Golshir:

The purpose of this Letter of Understanding is to document the discussions during the Methodology Meeting held virtually on April 21st, 2025, regarding **Project Rockforge DRI # 4456** Development of Regional Impact (DRI). The *GRTA DRI Review Procedures*, as well as the inputs and parameters documented in this Letter of Understanding and the revised Methodology Meeting Packet, shall be adhered to in preparing the GRTA required Transportation Study.

PROJECT OVERVIEW

- The proposed site is located at 33°41'56"N, 84°1'54"W. The development is located at 2100 Irwin Bridge Road in the City of Conyers, between Farm Road, Irwin Bridge Road and Rockbridge Road. In general, the site is located to the north and east of I-20.
- The proposed development includes a proposed data center development to include two-storied, eight building, six each of 270,250 square feet per floor and two each of 211,500 square feet per floor for a total of 4,089,000 square feet.
- The projected build-out is one phase to be completed by 2032.
- The proposed development includes (2) site accesses along Farmer Road and Irwin Bridge Road.
- The DRI trigger for this development is a Rezoning.
- The vehicular trip generation is estimated to be 4,048 net daily trips based on the *ITE Trip Generation Manual 11th edition.*
- The applicant is applying for approval under GRTA's non-expedited Traffic Impact Study review process.

STUDY NETWORK

1. Sigman Road @ Irwin Bridge Road
2. Farmer Road @ Rockbridge Road
3. Farmer Road @ Site Driveway 1
4. Irwin Bridge Road @ Site Driveway 2

METHODOLOGY MEETING PACKET INPUTS & PARAMETERS

- The Site Plan shall meet all the applicable requirements in Section 7.1 of the *GRTA DRI Review Procedures*.
- All Study Network intersections shall be analyzed during the AM and PM peak hours for (1) existing conditions, (2) future "no-build" conditions, and (3) future "build" conditions as specified in the *GRTA DRI Review Procedures*.

- This DRI shall be modeled and reviewed in one phase to be completed by 2032.

- The Level of Service (LOS) standard for all analysis shall be LOS D unless specified otherwise in Section 3.2.2.1. For example, a LOS E standard is allowed if the existing LOS for the intersection or approach is a LOS F.

- Default values should not be assumed in the traffic modeling. Existing conditions shall be taken into account as required in Section 3.2.2.

- The trip generation calculations in the revised Methodology Meeting Packet shall be used in the Transportation Study. Mixed-use and pass-by reductions are not allowed for this site. Pass-by reductions shall not exceed 15% of a roadway's traffic volume standard established in Appendix 7.2.

- The trip assignment approach in the revised Methodology Meeting Packet shall be utilized for all Study Network intersection movements.

- The applicant shall research TIP, STIP, RTP and GDOT's construction work program, as well as any local government and transit operator plans (SPLOST, CIP, etc.), to determine the open date, sponsor, cost of the project, funding source(s), for future roadway projects in the project vicinity. Programmed transportation projects anticipated to open on or before the Build Out year of the DRI Project shall be modeled as completed in the No-Build and Build conditions unless approved otherwise.

- A 3.0% annual traffic Background Growth Rate shall be used for all roadways.

- Capacity analysis shall be based on turning movement counts collected not more than 12-months prior to the date of the actual DRI submittal to GRTA, unless specified otherwise. As specified in Section 2.3, turning movement counts shall be collected while local schools are in session, on a Tuesday, Wednesday or Thursday (unless approved otherwise) and not during holiday periods (weeks of July 4th, Thanksgiving and +/- 5 days of Christmas).

- If the *GRTA DRI Review Procedures* requires an Enhanced Focus Area for Heavy Vehicles or an Enhanced Focus Area for Dense Urban Environments, the Transportation Study shall incorporate the inputs and parameters agreed to at the Methodology Meeting and documented in the revised Methodology Meeting Packet. These inputs may include a Heavy Vehicle modeling percentages, a Heavy Vehicle route map, a pedestrian crosswalk delay adjustment and a bus blockage adjustment factor.

ADDITIONAL REQUIREMENTS

All applicable requirements of the *GRTA DRI Review Procedures* must be met for the Transportation Study to be considered complete. The *GRTA DRI Review Procedures* are located on GRTA's DRI website: https://www.srta.ga.gov/programs-projects/dev-of-regional-impact/ Contact GRTA staff if you have any questions on these requirements.

The Transportation Study shall also include as attachments the native LOS modeling file (i.e., Synchro modeling files) as well as the modeling reports (PDFs) for all Study Network intersections for the Existing, No-Build and Build conditions for all phases. The PDF reports shall be numbered (in page headers) and organized in order according to the Study Network numbering sequence in this Letter of Understanding. The reports shall also be organized in the following sequence: *Existing condition AM, Existing condition PM, No-build condition AM, No-Build condition PM, Build condition AM, Build condition PM*. If improvements are modeled, those PDFs shall be labeled as such and follow the appropriate condition's applicable peak period.

The Transportation Study appendices shall also include all turning movement count data, regardless of if using historic data or newly collected turning movement counts.

When documenting any Queue Length impacts required in Section 3.2.3.6, the TIS Executive Summary shall also note any individual *movements* not meeting the LOS standard where the DRI Project adds trips in the Build condition and exceeds available storage capacity for that movement.

When identifying mitigations in the existing, no-build and build conditions, the mitigations identified in preceding conditions shall not be modeled as complete when conducting the LOS analysis. The same mitigation may still be proposed as mitigation in the subsequent condition but it shall not be included as completed in the default analysis. For example, a turn lane may be identified as a needed improvement in the no-build condition. The turn lane should not be modeled as completed in the build condition. The turn lane should only be modeled as complete in the no-build with improvements condition and the build with improvements condition.

DRI REVIEW PACKAGE SUBMITTAL

GRTA will begin reviewing the DRI once the DRI Review Package is submitted and deemed complete. The DRI Review Package includes: the permitting Local Government inputting both Department of Community Affairs (DCA) forms into the DCA DRI website; and the **Traffic Engineer submittal of the GRTA Transportation Study (including LOS appendices, traffic count data and any other required attachments) and Site Plan to GRTA staff and ALL stakeholders included in the CC list of this Letter of Understanding**.

All DRI Review Packages shall be submitted electronically via email to all stakeholders in the CC list of the Letter of Understanding. If the DRI Review Package total file size is greater than 10 MB, the DRI Review Package shall be submitted via email with a FTP link provided for downloading the files.

Please contact me if you have any questions about the Letter of Understanding or the *GRTA DRI Review Procedures*.

Sincerely,

Brittany Williams
Program Manager

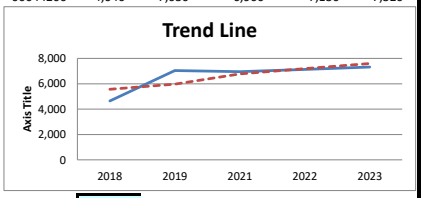
Cc:

Zane Grennell, DCA
Donald Shockey, ARC
Shelby Piccolo, ARC
Brittany Williams, GRTA/SRTA
Derrick Peevy, GRTA/SRTA
Megan Wilson, GDOT District 7
Landon Perry, GDOT District 7
Ashley Cowan, GDOT District 7
Carolina Angulo, Rockdale County
Lara Parker, Rockdale County
LaShawn Gardiner, Rockdale County
Denise Tugman, Rockdale County
Kaaba Johnson, Rockdale County
Brian Kelley, Rockdale County
Kimbry Peek, Rockdale County
Scott Gaither, City of Conyers
Marvin Flanigan, City of Conyers
Raina Philippus, City of Conyers
Abdul Amer, A&R Engineering
Naser Omer, A&R Engineering
Naila Amer, A&R Engineering
Justin Golshir, MMM Acquistions, LLC
John Wise, Site Planner, Paulson Mitchell

Linear Regression of Daily Traffic

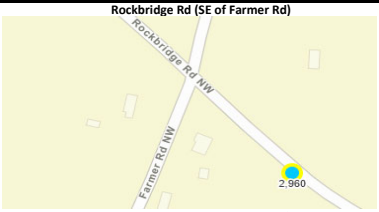
Location	Growth Rate	R Squared	Station ID	Route	2018	2019	2021	2022	2023
Irwin Bridge Rd (N of Farmer Rd)	8.1%	0.57	247-0201	00044200	4,640	7,050	6,960	7,130	7,320
Rockbridge Rd (SE of Farmer Rd)	2.7%	0.97	247-0145	00007400	2,690	2,710	2,880	2,940	2,960
Sigman Rd (E of Sigman E Dr)	-1.6%	0.28	247-0272	00205700	16,400	14,600	14,500	14,900	15,000
Sigman Rd (W of Rockbridge Rd)	-1.9%	0.24	247-0269	00043500	12,700	12,800	13,700	11,700	11,800
Irwin Bridge Rd (S of Tillman St/Laurel Ln)	20.2%	0.95	247-0198	00204701	4,190	4,280	7,130	7,300	8,140
Weighted Average	**2.8%**	0.84	Sum of Count Stations =		40,620	41,440	45,170	43,970	45,220

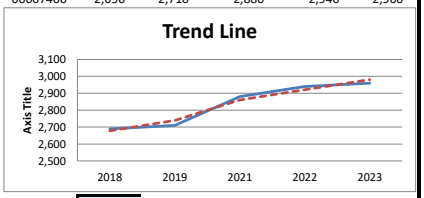
Location	Traffic Counter	RCLINK	2018	2019	2021	2022	2023
Irwin Bridge Rd (N of Farmer Rd)	247-0201	00044200	4,640	7,050	6,960	7,130	7,320



Growth Rate					
	8.1%	Intercept	-814,542	Slope	406.40
Trend Line	5,563	5,970	6,783	7,189	7,595

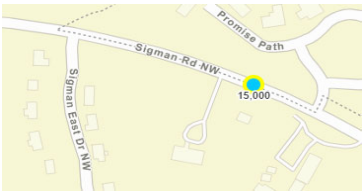
Location	Traffic Counter	RCLINK	2018	2019	2021	2022	2023
Rockbridge Rd (SE of Farmer Rd)	247-0145	00007400	2,690	2,710	2,880	2,940	2,960

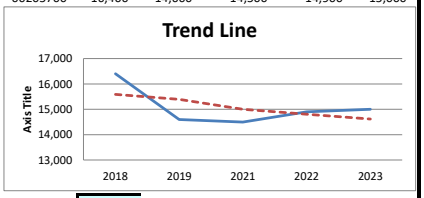




Growth Rate					
	2.7%	Intercept	-119,575	Slope	60.58
Trend Line	2,678	2,739	2,860	2,921	2,981

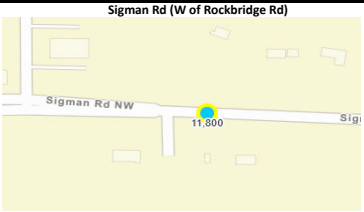
Location	Traffic Counter	RCLINK	2018	2019	2021	2022	2023
Sigman Rd (E of Sigman E Dr)	247-0272	00205700	16,400	14,600	14,500	14,900	15,000

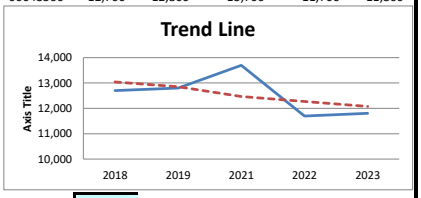




Growth Rate					
	-1.6%	Intercept	407,452	Slope	-194.19
Trend Line	15,585	15,391	15,002	14,808	14,614

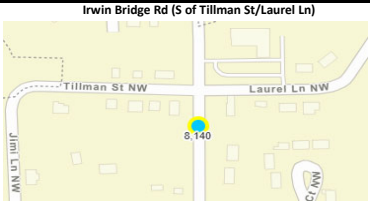
Location	Traffic Counter	RCLINK	2018	2019	2021	2022	2023
Sigman Rd (W of Rockbridge Rd)	247-0269	00043500	12,700	12,800	13,700	11,700	11,800

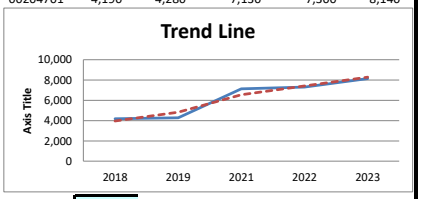




Growth Rate					
	-1.9%	Intercept	402,563	Slope	-193.02
Trend Line	13,042	12,849	12,463	12,270	12,077

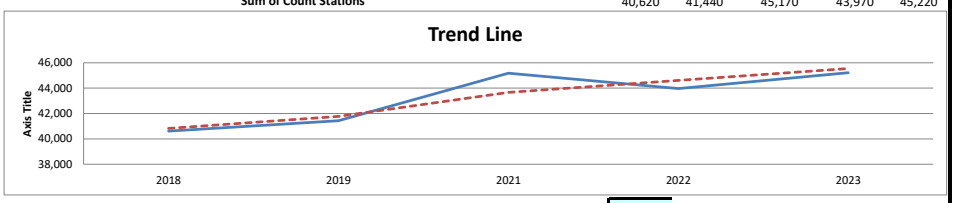
Location	Traffic Counter	RCLINK	2018	2019	2021	2022	2023
Irwin Bridge Rd (S of Tillman St/Laurel Ln)	247-0198	00204701	4,190	4,280	7,130	7,300	8,140





Growth Rate					
	20.2%	Intercept	-1,740,201	Slope	864.30
Trend Line	3,961	4,825	6,554	7,418	8,282

Weighted Average	2018	2019	2021	2022	2023
Sum of Count Stations	40,620	41,440	45,170	43,970	45,220



Growth Rate					
	2.8%	Intercept	-1,864,303	Slope	944.07
Trend Line	40,829	41,773	43,662	44,606	45,550

Fact Sheets for Planned and Programmed Improvements

Sigman Road Widening

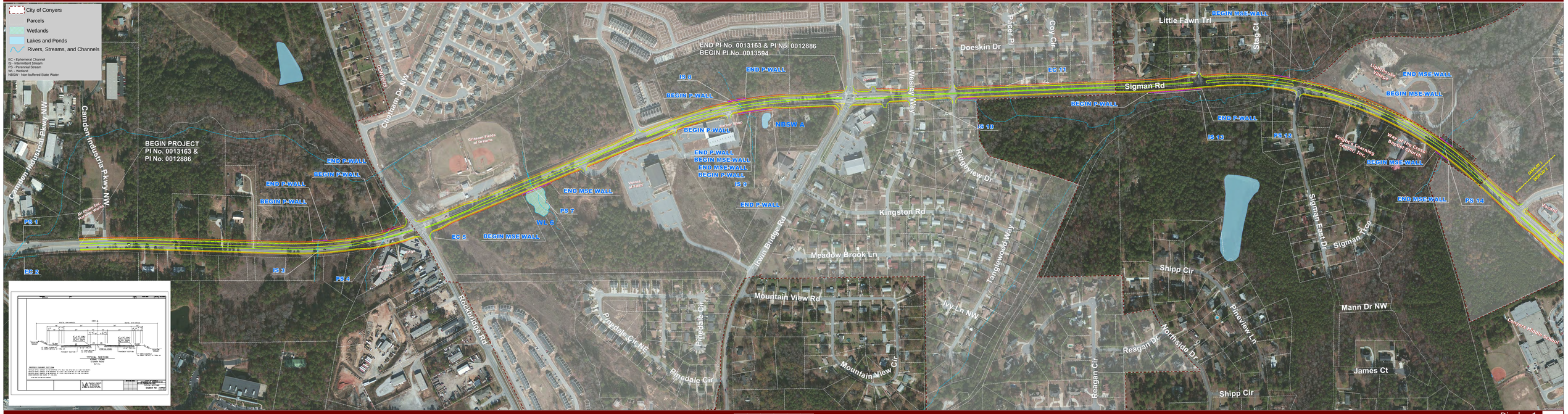
0 100 200 400 600 Feet

NORTH

Display 2

October 2015

Sigman Road Widening



Rockdale County PI #s: 0013163, 0013594, 752210, and 0012886

0 100 200 400 600 Feet NORTH

Display 1
October 2015

Sigman Road Widening

Rockdale County PI #s: 0013163, 0013594, 752210, and 0012886

Display 3
October 2015

Existing Intersection Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	77	349	30	53	375	43	202	43	99	202	138
Future Volume (vph)	77	349	30	53	375	43	202	43	99	202	138
Lane Group Flow (vph)	82	371	32	56	470	46	215	46	105	215	147
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		6			2		8			4	
Permitted Phases	6		6	2		8		8	4		4
Detector Phase	6	6	6	2	2	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	28.5	28.5	28.5	28.5	28.5	30.5	30.5	30.5	30.5	30.5	30.5
Total Split (s)	71.0	71.0	71.0	71.0	71.0	49.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.13	0.28	0.03	0.08	0.19	0.41	0.71	0.16	0.93	0.71	0.38
Control Delay	6.1	6.4	2.1	5.7	5.1	53.4	59.4	12.1	115.5	59.4	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	6.4	2.1	5.7	5.1	53.4	59.4	12.1	115.5	59.4	9.2
Queue Length 50th (ft)	16	81	0	10	46	32	160	0	81	160	0
Queue Length 95th (ft)	41	154	10	29	82	67	226	31	#159	226	53
Internal Link Dist (ft)		1141			801		854			1202	
Turn Bay Length (ft)	270			145		115			155		150
Base Capacity (vph)	617	1327	1066	710	2480	245	656	576	245	656	656
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.28	0.03	0.08	0.19	0.19	0.33	0.08	0.43	0.33	0.22

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sigman Rd & Irwin Bridge Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	349	30	53	375	67	43	202	43	99	202	138
Future Volume (veh/h)	77	349	30	53	375	67	43	202	43	99	202	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1811	1707	1841	1826	1767	1826	1826	1796	1826	1826	1841
Adj Flow Rate, veh/h	82	371	0	56	399	71	46	215	46	105	215	147
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	6	13	4	5	9	5	5	7	5	5	4
Cap, veh/h	604	1232		655	2004	354	185	417	347	197	417	356
Arrive On Green	0.68	0.68	0.00	0.68	0.68	0.68	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	865	1811	1447	995	2947	520	995	1826	1522	1092	1826	1560
Grp Volume(v), veh/h	82	371	0	56	234	236	46	215	46	105	215	147
Grp Sat Flow(s),veh/h/ln	865	1811	1447	995	1735	1732	995	1826	1522	1092	1826	1560
Q Serve(g_s), s	4.7	9.9	0.0	2.9	6.0	6.1	5.1	12.4	2.9	11.2	12.4	9.6
Cycle Q Clear(g_c), s	10.7	9.9	0.0	12.8	6.0	6.1	17.4	12.4	2.9	23.5	12.4	9.6
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	604	1232		655	1180	1178	185	417	347	197	417	356
V/C Ratio(X)	0.14	0.30		0.09	0.20	0.20	0.25	0.52	0.13	0.53	0.52	0.41
Avail Cap(c_a), veh/h	604	1232		655	1180	1178	318	662	552	343	662	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.1	7.7	0.0	10.3	7.1	7.1	48.1	40.5	36.8	50.8	40.5	39.5
Incr Delay (d2), s/veh	0.5	0.6	0.0	0.3	0.4	0.4	0.7	1.0	0.2	2.2	1.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.5	0.0	0.6	2.0	2.1	1.3	5.6	1.1	3.1	5.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	8.4	0.0	10.5	7.5	7.5	48.8	41.5	37.0	53.0	41.5	40.2
LnGrp LOS	A	A		B	A	A	D	D	D	D	D	D
Approach Vol, veh/h		453			526			307			467	
Approach Delay, s/veh		8.6			7.8			41.9			43.7	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		87.1		32.9		87.1		32.9				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		65.5		43.5		65.5		43.5				
Max Q Clear Time (g_c+I1), s		14.8		25.5		12.7		19.4				
Green Ext Time (p_c), s		6.6		1.9		5.9		1.5				

Intersection Summary												
HCM 6th Ctrl Delay			23.5									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	87	14	5	50	15	4	24	3	36	83	20
Future Vol, veh/h	10	87	14	5	50	15	4	24	3	36	83	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	6	29	0	8	13	25	21	100	6	11	15
Mvmt Flow	11	96	15	5	55	16	4	26	3	40	91	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	71	0	0	111	0	0	256	207	104	213	206	63
Stage 1	-	-	-	-	-	-	126	126	-	73	73	-
Stage 2	-	-	-	-	-	-	130	81	-	140	133	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.35	6.71	7.2	7.16	6.61	6.35
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.71	-	6.16	5.61	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.71	-	6.16	5.61	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.725	4.189	4.2	3.554	4.099	3.435
Pot Cap-1 Maneuver	1542	-	-	1492	-	-	652	657	739	735	675	966
Stage 1	-	-	-	-	-	-	825	757	-	927	817	-
Stage 2	-	-	-	-	-	-	821	792	-	854	769	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1542	-	-	1492	-	-	566	650	739	703	668	966
Mov Cap-2 Maneuver	-	-	-	-	-	-	566	650	-	703	668	-
Stage 1	-	-	-	-	-	-	818	751	-	920	815	-
Stage 2	-	-	-	-	-	-	710	790	-	814	763	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.5	10.9	11.5
HCM LOS			B	B

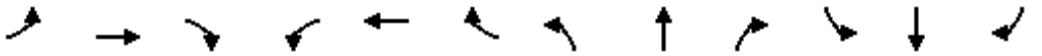
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	645	1542	-	-	1492	-	-	709
HCM Lane V/C Ratio	0.053	0.007	-	-	0.004	-	-	0.215
HCM Control Delay (s)	10.9	7.4	0	-	7.4	0	-	11.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.8

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	226	504	49	43	411	44	289	79	105	216	138
Future Volume (vph)	226	504	49	43	411	44	289	79	105	216	138
Lane Group Flow (vph)	238	531	52	45	542	46	304	83	111	227	145
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		6			2		8			4	
Permitted Phases	6		6	2		8		8	4		4
Detector Phase	6	6	6	2	2	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	28.5	28.5	28.5	28.5	28.5	30.5	30.5	30.5	30.5	30.5	30.5
Total Split (s)	75.0	75.0	75.0	75.0	75.0	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (%)	62.5%	62.5%	62.5%	62.5%	62.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.43	0.41	0.05	0.09	0.23	0.27	0.77	0.20	1.05	0.58	0.33
Control Delay	12.4	10.1	2.4	8.3	7.1	40.8	56.4	8.1	145.7	47.1	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	10.1	2.4	8.3	7.1	40.8	56.4	8.1	145.7	47.1	7.5
Queue Length 50th (ft)	71	156	0	10	64	30	224	0	~95	160	0
Queue Length 95th (ft)	164	290	15	31	115	60	292	38	#181	217	48
Internal Link Dist (ft)		1141			801		854			1202	
Turn Bay Length (ft)	270			145		115			155		150
Base Capacity (vph)	558	1290	1135	515	2373	260	607	582	162	601	589
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.41	0.05	0.09	0.23	0.18	0.50	0.14	0.69	0.38	0.25

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sigman Rd & Irwin Bridge Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	504	49	43	411	104	44	289	79	105	216	138
Future Volume (veh/h)	226	504	49	43	411	104	44	289	79	105	216	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1870	1900	1826	1856	1870	1870	1856	1885	1826	1841	1781
Adj Flow Rate, veh/h	238	531	0	45	433	109	46	304	83	111	227	145
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	2	0	5	3	2	2	3	1	5	4	8
Cap, veh/h	536	1176		470	1757	439	240	519	447	195	515	422
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.63	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	850	1870	1610	852	2795	698	1010	1856	1598	973	1841	1510
Grp Volume(v), veh/h	238	531	0	45	272	270	46	304	83	111	227	145
Grp Sat Flow(s),veh/h/ln	850	1870	1610	852	1763	1730	1010	1856	1598	973	1841	1510
Q Serve(g_s), s	20.5	17.7	0.0	3.5	8.1	8.3	4.7	16.9	4.7	13.3	12.2	9.2
Cycle Q Clear(g_c), s	28.8	17.7	0.0	21.1	8.1	8.3	16.9	16.9	4.7	30.2	12.2	9.2
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	536	1176		470	1108	1087	240	519	447	195	515	422
V/C Ratio(X)	0.44	0.45		0.10	0.25	0.25	0.19	0.59	0.19	0.57	0.44	0.34
Avail Cap(c_a), veh/h	536	1176		470	1108	1087	290	611	526	243	606	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	11.6	0.0	17.0	9.8	9.8	42.4	37.2	32.8	50.3	35.5	34.4
Incr Delay (d2), s/veh	2.7	1.3	0.0	0.4	0.5	0.5	0.4	1.1	0.2	2.6	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	6.9	0.0	0.7	3.0	3.0	1.2	7.8	1.9	3.3	5.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.8	12.8	0.0	17.4	10.3	10.4	42.8	38.3	33.0	52.9	36.1	34.9
LnGrp LOS	B	B		B	B	B	D	D	C	D	D	C
Approach Vol, veh/h		769			587			433			483	
Approach Delay, s/veh		14.7			10.9			37.8			39.6	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		80.9		39.1		80.9		39.1				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		69.5		39.5		69.5		39.5				
Max Q Clear Time (g_c+I1), s		23.1		32.2		30.8		18.9				
Green Ext Time (p_c), s		7.7		1.3		11.0		2.1				

Intersection Summary												
HCM 6th Ctrl Delay			23.4									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	28	122	14	5	114	53	15	88	7	49	44	4
Future Vol, veh/h	28	122	14	5	114	53	15	88	7	49	44	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	14	2	0	20	2	4	13	9	29	4	2	0
Mvmt Flow	32	139	16	6	130	60	17	100	8	56	50	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	190	0	0	155	0	0	411	413	147	437	391	160
Stage 1	-	-	-	-	-	-	211	211	-	172	172	-
Stage 2	-	-	-	-	-	-	200	202	-	265	219	-
Critical Hdwy	4.24	-	-	4.3	-	-	7.23	6.59	6.49	7.14	6.52	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.23	5.59	-	6.14	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.23	5.59	-	6.14	5.52	-
Follow-up Hdwy	2.326	-	-	2.38	-	-	3.617	4.081	3.561	3.536	4.018	3.3
Pot Cap-1 Maneuver	1315	-	-	1322	-	-	532	519	833	526	545	890
Stage 1	-	-	-	-	-	-	767	715	-	825	756	-
Stage 2	-	-	-	-	-	-	777	721	-	736	722	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1315	-	-	1322	-	-	479	502	833	431	528	890
Mov Cap-2 Maneuver	-	-	-	-	-	-	479	502	-	431	528	-
Stage 1	-	-	-	-	-	-	746	696	-	803	752	-
Stage 2	-	-	-	-	-	-	718	717	-	607	703	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.2	14.3	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	512	1315	-	-	1322	-	-	481
HCM Lane V/C Ratio	0.244	0.024	-	-	0.004	-	-	0.229
HCM Control Delay (s)	14.3	7.8	0	-	7.7	0	-	14.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0	-	-	0.9

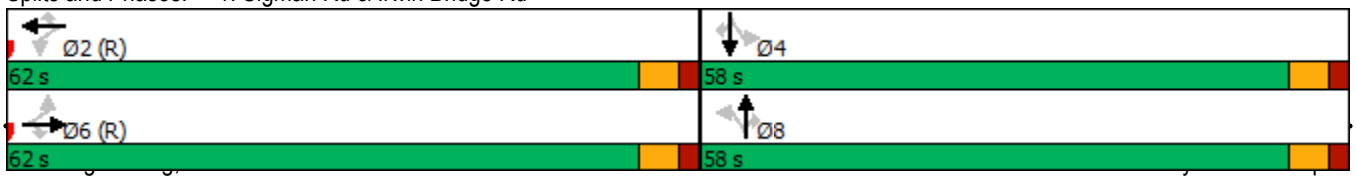
Future “No-Build” Intersection Analysis

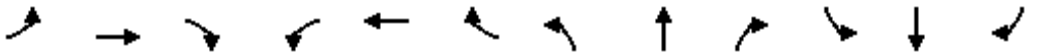
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	422	36	64	454	81	52	244	52	120	244	167
Future Volume (vph)	93	422	36	64	454	81	52	244	52	120	244	167
Lane Group Flow (vph)	99	449	38	68	483	86	55	260	55	128	260	178
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	6	6	6	2	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	28.5	28.5	28.5	28.5	28.5	28.5	30.5	30.5	30.5	30.5	30.5	30.5
Total Split (s)	62.0	62.0	62.0	62.0	62.0	62.0	58.0	58.0	58.0	58.0	58.0	58.0
Total Split (%)	51.7%	51.7%	51.7%	51.7%	51.7%	51.7%	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.17	0.19	0.04	0.11	0.20	0.08	0.46	0.72	0.16	1.08	0.72	0.39
Control Delay	8.0	6.9	2.5	7.5	6.9	1.9	52.7	55.4	9.8	147.9	55.4	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	6.9	2.5	7.5	6.9	1.9	52.7	55.4	9.8	147.9	55.4	7.6
Queue Length 50th (ft)	23	54	0	15	59	0	38	190	0	~110	190	0
Queue Length 95th (ft)	58	98	13	40	105	19	75	255	32	#198	255	53
Internal Link Dist (ft)		1141			801			854			1202	
Turn Bay Length (ft)	270		300	235		300	115			155		150
Base Capacity (vph)	580	2411	1023	636	2434	1074	262	791	691	262	791	779
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.19	0.04	0.11	0.20	0.08	0.21	0.33	0.08	0.49	0.33	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sigman Rd & Irwin Bridge Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	422	36	64	454	81	52	244	52	120	244	167
Future Volume (veh/h)	93	422	36	64	454	81	52	244	52	120	244	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1811	1707	1841	1826	1767	1826	1826	1796	1826	1826	1841
Adj Flow Rate, veh/h	99	449	0	68	483	0	55	260	55	128	260	178
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	6	13	4	5	9	5	5	7	5	5	4
Cap, veh/h	549	2176		595	2193		205	504	420	222	504	431
Arrive On Green	0.63	0.63	0.00	0.63	0.63	0.00	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	854	3441	1447	926	3469	1497	928	1826	1522	1039	1826	1560
Grp Volume(v), veh/h	99	449	0	68	483	0	55	260	55	128	260	178
Grp Sat Flow(s),veh/h/ln	854	1721	1447	926	1735	1497	928	1826	1522	1039	1826	1560
Q Serve(g_s), s	6.7	6.6	0.0	4.0	7.1	0.0	6.4	14.4	3.3	14.2	14.4	11.2
Cycle Q Clear(g_c), s	13.9	6.6	0.0	10.6	7.1	0.0	20.8	14.4	3.3	28.7	14.4	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	549	2176		595	2193		205	504	420	222	504	431
V/C Ratio(X)	0.18	0.21		0.11	0.22		0.27	0.52	0.13	0.58	0.52	0.41
Avail Cap(c_a), veh/h	549	2176		595	2193		355	799	666	390	799	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	9.3	0.0	11.6	9.4	0.0	45.4	36.7	32.6	48.8	36.7	35.5
Incr Delay (d2), s/veh	0.7	0.2	0.0	0.4	0.2	0.0	0.7	0.8	0.1	2.4	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.3	0.0	0.8	2.5	0.0	1.5	6.5	1.2	3.7	6.3	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.1	9.5	0.0	12.0	9.7	0.0	46.1	37.5	32.8	51.1	37.5	36.1
LnGrp LOS	B	A		B	A		D	D	C	D	D	D
Approach Vol, veh/h		548			551			370			566	
Approach Delay, s/veh		10.2			9.9			38.1			40.1	
Approach LOS		B			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		81.4		38.6		81.4		38.6				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		56.5		52.5		56.5		52.5				
Max Q Clear Time (g_c+I1), s		12.6		30.7		15.9		22.8				
Green Ext Time (p_c), s		7.4		2.5		7.3		2.0				

Intersection Summary												
HCM 6th Ctrl Delay			23.5									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	105	17	6	61	18	5	29	4	44	100	24
Future Vol, veh/h	12	105	17	6	61	18	5	29	4	44	100	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	6	29	0	8	13	25	21	100	6	11	15
Mvmt Flow	13	115	19	7	67	20	5	32	4	48	110	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	87	0	0	134	0	0	310	252	125	260	251	77
Stage 1	-	-	-	-	-	-	151	151	-	91	91	-
Stage 2	-	-	-	-	-	-	159	101	-	169	160	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.35	6.71	7.2	7.16	6.61	6.35
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.71	-	6.16	5.61	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.71	-	6.16	5.61	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.725	4.189	4.2	3.554	4.099	3.435
Pot Cap-1 Maneuver	1522	-	-	1463	-	-	600	620	717	685	637	949
Stage 1	-	-	-	-	-	-	800	738	-	906	802	-
Stage 2	-	-	-	-	-	-	792	776	-	824	749	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1522	-	-	1463	-	-	500	611	717	647	628	949
Mov Cap-2 Maneuver	-	-	-	-	-	-	500	611	-	647	628	-
Stage 1	-	-	-	-	-	-	793	731	-	898	798	-
Stage 2	-	-	-	-	-	-	661	772	-	776	742	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.5	11.4	12.5
HCM LOS			B	B

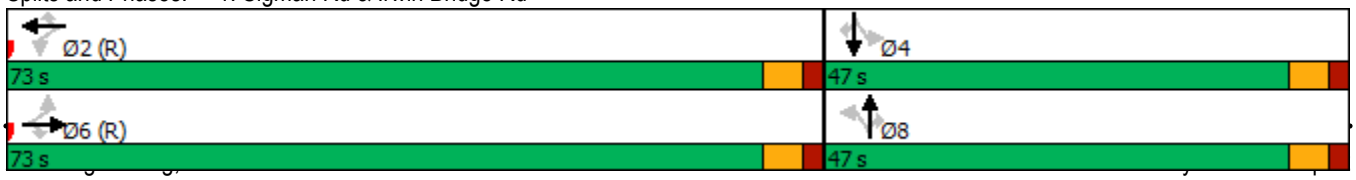
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	603	1522	-	-	1463	-	-	665
HCM Lane V/C Ratio	0.069	0.009	-	-	0.005	-	-	0.278
HCM Control Delay (s)	11.4	7.4	0	-	7.5	0	-	12.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	1.1

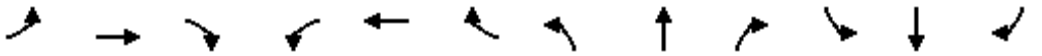
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	610	59	52	497	126	53	350	96	127	261	167
Future Volume (vph)	273	610	59	52	497	126	53	350	96	127	261	167
Lane Group Flow (vph)	287	642	62	55	523	133	56	368	101	134	275	176
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	6	6	6	2	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	28.5	28.5	28.5	28.5	28.5	28.5	30.5	30.5	30.5	30.5	30.5	30.5
Total Split (s)	73.0	73.0	73.0	73.0	73.0	73.0	47.0	47.0	47.0	47.0	47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%	60.8%	60.8%	60.8%	39.2%	39.2%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.55	0.28	0.06	0.12	0.23	0.12	0.29	0.76	0.20	1.16	0.57	0.34
Control Delay	18.8	10.6	2.9	11.3	10.2	2.2	36.5	50.4	6.4	171.5	42.0	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	10.6	2.9	11.3	10.2	2.2	36.5	50.4	6.4	171.5	42.0	5.9
Queue Length 50th (ft)	113	105	0	15	82	0	35	262	0	~121	185	0
Queue Length 95th (ft)	249	171	19	42	136	27	66	333	38	#221	243	48
Internal Link Dist (ft)		1141			801			854			1202	
Turn Bay Length (ft)	270		300	235		300	115			155		150
Base Capacity (vph)	525	2284	1064	450	2263	1068	253	638	619	153	631	632
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.28	0.06	0.12	0.23	0.12	0.22	0.58	0.16	0.88	0.44	0.28

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sigman Rd & Irwin Bridge Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	273	610	59	52	497	126	53	350	96	127	261	167
Future Volume (veh/h)	273	610	59	52	497	126	53	350	96	127	261	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1870	1900	1826	1856	1870	1870	1856	1885	1826	1841	1781
Adj Flow Rate, veh/h	287	642	0	55	523	0	56	368	101	134	275	176
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	2	0	5	3	2	2	3	1	5	4	8
Cap, veh/h	494	2046		431	2030		262	617	531	211	612	502
Arrive On Green	0.58	0.58	0.00	0.58	0.58	0.00	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	865	3554	1610	769	3526	1585	940	1856	1598	902	1841	1510
Grp Volume(v), veh/h	287	642	0	55	523	0	56	368	101	134	275	176
Grp Sat Flow(s),veh/h/ln	865	1777	1610	769	1763	1585	940	1856	1598	902	1841	1510
Q Serve(g_s), s	29.7	11.2	0.0	4.8	8.9	0.0	6.0	19.8	5.4	17.4	14.1	10.6
Cycle Q Clear(g_c), s	38.5	11.2	0.0	16.0	8.9	0.0	20.0	19.8	5.4	37.2	14.1	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	494	2046		431	2030		262	617	531	211	612	502
V/C Ratio(X)	0.58	0.31		0.13	0.26		0.21	0.60	0.19	0.63	0.45	0.35
Avail Cap(c_a), veh/h	494	2046		431	2030		275	642	553	223	637	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	13.2	0.0	17.3	12.7	0.0	39.3	33.3	28.5	48.8	31.4	30.2
Incr Delay (d2), s/veh	4.9	0.4	0.0	0.6	0.3	0.0	0.4	1.4	0.2	5.4	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	4.3	0.0	0.9	3.3	0.0	1.4	9.0	2.1	4.1	6.1	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	13.6	0.0	17.9	13.0	0.0	39.7	34.7	28.7	54.2	31.9	30.7
LnGrp LOS	C	B		B	B		D	C	C	D	C	C
Approach Vol, veh/h		929			578			525			585	
Approach Delay, s/veh		17.8			13.5			34.1			36.7	
Approach LOS		B			B			C			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.6		45.4		74.6		45.4				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		67.5		41.5		67.5		41.5				
Max Q Clear Time (g_c+I1), s		18.0		39.2		40.5		22.0				
Green Ext Time (p_c), s		8.2		0.7		11.7		2.7				

Intersection Summary												
HCM 6th Ctrl Delay			24.3									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	34	148	17	6	138	64	18	106	8	59	53	5
Future Vol, veh/h	34	148	17	6	138	64	18	106	8	59	53	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	14	2	0	20	2	4	13	9	29	4	2	0
Mvmt Flow	39	168	19	7	157	73	20	120	9	67	60	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	230	0	0	187	0	0	497	500	178	528	473	194
Stage 1	-	-	-	-	-	-	256	256	-	208	208	-
Stage 2	-	-	-	-	-	-	241	244	-	320	265	-
Critical Hdwy	4.24	-	-	4.3	-	-	7.23	6.59	6.49	7.14	6.52	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.23	5.59	-	6.14	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.23	5.59	-	6.14	5.52	-
Follow-up Hdwy	2.326	-	-	2.38	-	-	3.617	4.081	3.561	3.536	4.018	3.3
Pot Cap-1 Maneuver	1270	-	-	1286	-	-	466	463	800	458	490	853
Stage 1	-	-	-	-	-	-	725	683	-	789	730	-
Stage 2	-	-	-	-	-	-	738	691	-	687	689	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1270	-	-	1286	-	-	405	444	800	348	470	853
Mov Cap-2 Maneuver	-	-	-	-	-	-	405	444	-	348	470	-
Stage 1	-	-	-	-	-	-	700	660	-	762	726	-
Stage 2	-	-	-	-	-	-	668	687	-	536	666	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.2	16.9	18.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	450	1270	-	-	1286	-	-	406
HCM Lane V/C Ratio	0.333	0.03	-	-	0.005	-	-	0.327
HCM Control Delay (s)	16.9	7.9	0	-	7.8	0	-	18.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0	-	-	1.4

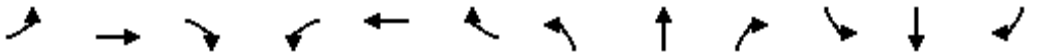
Future “Build” Intersections Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	434	36	64	468	124	52	258	52	156	256	191
Future Volume (vph)	122	434	36	64	468	124	52	258	52	156	256	191
Lane Group Flow (vph)	130	462	38	68	498	132	55	274	55	166	272	203
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	6	6	6	2	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	28.5	28.5	28.5	28.5	28.5	28.5	30.5	30.5	30.5	30.5	30.5	30.5
Total Split (s)	75.0	75.0	75.0	75.0	75.0	75.0	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (%)	62.5%	62.5%	62.5%	62.5%	62.5%	62.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.25	0.20	0.04	0.12	0.22	0.13	0.33	0.62	0.13	1.01	0.62	0.38
Control Delay	11.5	9.2	3.4	10.1	9.3	2.1	39.6	45.3	8.2	116.0	45.1	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	9.2	3.4	10.1	9.3	2.1	39.6	45.3	8.2	116.0	45.1	6.2
Queue Length 50th (ft)	38	68	0	18	75	0	35	187	0	128	186	0
Queue Length 95th (ft)	88	116	15	46	125	26	68	250	30	#230	248	52
Internal Link Dist (ft)		1141			801			854			1490	
Turn Bay Length (ft)	270		300	235		300	115			155		150
Base Capacity (vph)	528	2260	961	583	2282	1028	224	595	533	222	595	647
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.20	0.04	0.12	0.22	0.13	0.25	0.46	0.10	0.75	0.46	0.31

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sigman Rd & Irwin Bridge Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	434	36	64	468	124	52	258	52	156	256	191
Future Volume (veh/h)	122	434	36	64	468	124	52	258	52	156	256	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1811	1707	1841	1826	1767	1826	1826	1796	1826	1826	1841
Adj Flow Rate, veh/h	130	462	0	68	498	0	55	274	55	166	272	203
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	6	13	4	5	9	5	5	7	5	5	4
Cap, veh/h	511	2072		555	2089		226	559	466	248	559	478
Arrive On Green	0.60	0.60	0.00	0.60	0.60	0.00	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	843	3441	1447	915	3469	1497	897	1826	1522	1026	1826	1560
Grp Volume(v), veh/h	130	462	0	68	498	0	55	274	55	166	272	203
Grp Sat Flow(s),veh/h/ln	843	1721	1447	915	1735	1497	897	1826	1522	1026	1826	1560
Q Serve(g_s), s	10.2	7.4	0.0	4.4	8.0	0.0	6.4	14.7	3.1	18.9	14.6	12.5
Cycle Q Clear(g_c), s	18.2	7.4	0.0	11.8	8.0	0.0	21.0	14.7	3.1	33.6	14.6	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	511	2072		555	2089		226	559	466	248	559	478
V/C Ratio(X)	0.25	0.22		0.12	0.24		0.24	0.49	0.12	0.67	0.49	0.43
Avail Cap(c_a), veh/h	511	2072		555	2089		246	601	501	272	601	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	11.0	0.0	13.7	11.1	0.0	42.5	34.0	30.0	47.7	33.9	33.2
Incr Delay (d2), s/veh	1.2	0.2	0.0	0.5	0.3	0.0	0.6	0.7	0.1	5.5	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.7	0.0	0.9	2.9	0.0	1.4	6.4	1.1	5.1	6.4	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	11.2	0.0	14.1	11.4	0.0	43.0	34.6	30.1	53.2	34.6	33.8
LnGrp LOS	B	B		B	B		D	C	C	D	C	C
Approach Vol, veh/h		592			566			384			641	
Approach Delay, s/veh		12.4			11.7			35.2			39.2	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.8		42.2		77.8		42.2				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		69.5		39.5		69.5		39.5				
Max Q Clear Time (g_c+I1), s		13.8		35.6		20.2		23.0				
Green Ext Time (p_c), s		7.9		1.1		8.3		1.7				

Intersection Summary												
HCM 6th Ctrl Delay			24.1									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	10.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	55	105	17	6	61	32	5	87	4	56	147	60
Future Vol, veh/h	55	105	17	6	61	32	5	87	4	56	147	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	6	29	0	8	13	25	21	100	6	11	15
Mvmt Flow	60	115	19	7	67	35	5	96	4	62	162	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	102	0	0	134	0	0	458	361	125	394	353	85
Stage 1	-	-	-	-	-	-	245	245	-	99	99	-
Stage 2	-	-	-	-	-	-	213	116	-	295	254	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.35	6.71	7.2	7.16	6.61	6.35
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.71	-	6.16	5.61	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.71	-	6.16	5.61	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.725	4.189	4.2	3.554	4.099	3.435
Pot Cap-1 Maneuver	1503	-	-	1463	-	-	476	537	717	558	558	939
Stage 1	-	-	-	-	-	-	710	670	-	898	796	-
Stage 2	-	-	-	-	-	-	740	764	-	705	681	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1503	-	-	1463	-	-	327	511	717	458	531	939
Mov Cap-2 Maneuver	-	-	-	-	-	-	327	511	-	458	531	-
Stage 1	-	-	-	-	-	-	679	641	-	859	792	-
Stage 2	-	-	-	-	-	-	545	760	-	571	652	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.3	0.5	14.1	17.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	502	1503	-	-	1463	-	-	568
HCM Lane V/C Ratio	0.21	0.04	-	-	0.005	-	-	0.509
HCM Control Delay (s)	14.1	7.5	0	-	7.5	0	-	17.7
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-	-	2.9

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	95	47	59	116	58	168
Future Vol, veh/h	95	47	59	116	58	168
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	160	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	51	64	126	63	183

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	373	64	0	0	190	0
Stage 1	64	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	628	1000	-	-	1384	-
Stage 1	959	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	599	1000	-	-	1384	-
Mov Cap-2 Maneuver	599	-	-	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	711	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	691	1384	-
HCM Lane V/C Ratio	-	-	0.223	0.046	-
HCM Control Delay (s)	-	-	11.7	7.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.9	0.1	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	71	87	446	467	29
Future Vol, veh/h	24	71	87	446	467	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	235	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	77	95	485	508	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1183	508	540	0	-	0
Stage 1	508	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	209	565	1028	-	-	-
Stage 1	604	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	565	1028	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	548	-	-	-	-	-
Stage 2	506	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	1.4	0
HCM LOS	C		

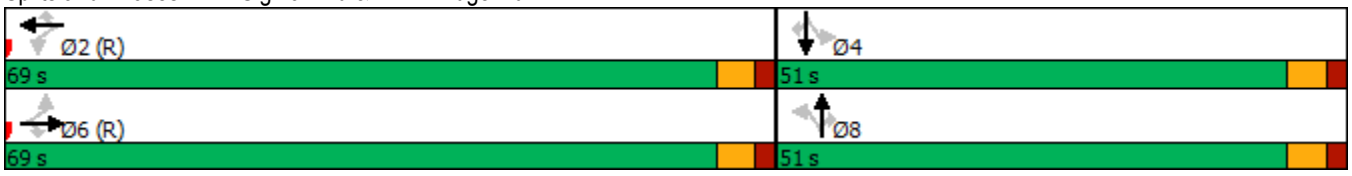
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1028	-	377	-	-
HCM Lane V/C Ratio	0.092	-	0.274	-	-
HCM Control Delay (s)	8.9	-	18.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.1	-	-

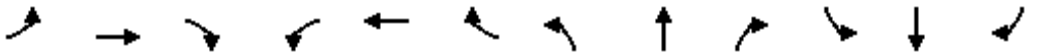
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	286	626	59	52	504	146	53	357	96	174	277	198
Future Volume (vph)	286	626	59	52	504	146	53	357	96	174	277	198
Lane Group Flow (vph)	301	659	62	55	531	154	56	376	101	183	292	208
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	6	6	6	2	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	28.5	28.5	28.5	28.5	28.5	28.5	30.5	30.5	30.5	30.5	30.5	30.5
Total Split (s)	69.0	69.0	69.0	69.0	69.0	69.0	51.0	51.0	51.0	51.0	51.0	51.0
Total Split (%)	57.5%	57.5%	57.5%	57.5%	57.5%	57.5%	42.5%	42.5%	42.5%	42.5%	42.5%	42.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.64	0.31	0.06	0.14	0.25	0.15	0.23	0.66	0.18	1.07	0.51	0.34
Control Delay	26.3	13.7	3.6	14.5	13.2	2.6	29.9	40.3	5.4	128.0	35.8	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	13.7	3.6	14.5	13.2	2.6	29.9	40.3	5.4	128.0	35.8	4.9
Queue Length 50th (ft)	152	133	0	19	103	0	31	242	0	141	178	0
Queue Length 95th (ft)	300	191	21	46	151	32	62	323	36	#275	244	49
Internal Link Dist (ft)		1141			801			854			1490	
Turn Bay Length (ft)	270		300	235		300	115			155		150
Base Capacity (vph)	472	2111	988	396	2091	1007	295	699	668	208	692	695
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.31	0.06	0.14	0.25	0.15	0.19	0.54	0.15	0.88	0.42	0.30

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sigman Rd & Irwin Bridge Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	626	59	52	504	146	53	357	96	174	277	198
Future Volume (veh/h)	286	626	59	52	504	146	53	357	96	174	277	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1870	1900	1826	1856	1870	1870	1856	1885	1826	1841	1781
Adj Flow Rate, veh/h	301	659	0	55	531	0	56	376	101	183	292	208
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	2	0	5	3	2	2	3	1	5	4	8
Cap, veh/h	445	1888		381	1873		293	700	602	256	694	569
Arrive On Green	0.53	0.53	0.00	0.53	0.53	0.00	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	859	3554	1610	757	3526	1585	898	1856	1598	896	1841	1510
Grp Volume(v), veh/h	301	659	0	55	531	0	56	376	101	183	292	208
Grp Sat Flow(s),veh/h/ln	859	1777	1610	757	1763	1585	898	1856	1598	896	1841	1510
Q Serve(g_s), s	35.7	12.8	0.0	5.4	10.0	0.0	5.9	19.0	5.0	24.1	14.1	11.9
Cycle Q Clear(g_c), s	45.7	12.8	0.0	18.2	10.0	0.0	20.0	19.0	5.0	43.1	14.1	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	445	1888		381	1873		293	700	602	256	694	569
V/C Ratio(X)	0.68	0.35		0.14	0.28		0.19	0.54	0.17	0.72	0.42	0.37
Avail Cap(c_a), veh/h	445	1888		381	1873		295	704	606	258	698	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	16.2	0.0	21.4	15.5	0.0	35.1	29.2	24.9	46.0	27.7	27.0
Incr Delay (d2), s/veh	8.0	0.5	0.0	0.8	0.4	0.0	0.3	0.8	0.1	9.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	5.0	0.0	1.0	3.9	0.0	1.3	8.5	1.9	5.8	6.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	16.7	0.0	22.2	15.9	0.0	35.4	30.0	25.0	55.0	28.1	27.4
LnGrp LOS	D	B		C	B		D	C	C	E	C	C
Approach Vol, veh/h		960			586			533			683	
Approach Delay, s/veh		22.8			16.5			29.6			35.1	
Approach LOS		C			B			C			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.3		50.7		69.3		50.7				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		63.5		45.5		63.5		45.5				
Max Q Clear Time (g_c+I1), s		20.2		45.1		47.7		22.0				
Green Ext Time (p_c), s		8.2		0.2		8.8		2.9				

Intersection Summary												
HCM 6th Ctrl Delay			25.8									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	13.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	148	17	6	138	71	18	133	8	75	115	52
Future Vol, veh/h	54	148	17	6	138	71	18	133	8	75	115	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	14	2	0	20	2	4	13	9	29	4	2	0
Mvmt Flow	61	168	19	7	157	81	20	151	9	85	131	59

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	238	0	0	187	0	0	607	552	178	592	521	198
Stage 1	-	-	-	-	-	-	300	300	-	212	212	-
Stage 2	-	-	-	-	-	-	307	252	-	380	309	-
Critical Hdwy	4.24	-	-	4.3	-	-	7.23	6.59	6.49	7.14	6.52	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.23	5.59	-	6.14	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.23	5.59	-	6.14	5.52	-
Follow-up Hdwy	2.326	-	-	2.38	-	-	3.617	4.081	3.561	3.536	4.018	3.3
Pot Cap-1 Maneuver	1262	-	-	1286	-	-	393	432	800	415	460	848
Stage 1	-	-	-	-	-	-	686	653	-	786	727	-
Stage 2	-	-	-	-	-	-	680	686	-	638	660	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1262	-	-	1286	-	-	268	406	800	279	432	848
Mov Cap-2 Maneuver	-	-	-	-	-	-	268	406	-	279	432	-
Stage 1	-	-	-	-	-	-	649	618	-	744	723	-
Stage 2	-	-	-	-	-	-	515	682	-	451	624	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0.2	21.7	30.6
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	393	1262	-	-	1286	-	-	406
HCM Lane V/C Ratio	0.46	0.049	-	-	0.005	-	-	0.677
HCM Control Delay (s)	21.7	8	0	-	7.8	0	-	30.6
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	2.3	0.2	-	-	0	-	-	4.9

Intersection	
Int Delay, s/veh	4.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	124	62	204	53	27	117
Future Vol, veh/h	124	62	204	53	27	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	160	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	135	67	222	58	29	127

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	407	222	0	0	280	0
Stage 1	222	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	600	818	-	-	1283	-
Stage 1	815	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	586	818	-	-	1283	-
Mov Cap-2 Maneuver	586	-	-	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	828	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	647	1283	-
HCM Lane V/C Ratio	-	-	0.312	0.023	-
HCM Control Delay (s)	-	-	13.1	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.3	0.1	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	93	40	739	569	13
Future Vol, veh/h	31	93	40	739	569	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	235	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	101	43	803	618	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1507	618	632	0	-	0
Stage 1	618	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	133	489	951	-	-	-
Stage 1	538	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	127	489	951	-	-	-
Mov Cap-2 Maneuver	127	-	-	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	402	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.3	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	951	-	286	-	-
HCM Lane V/C Ratio	0.046	-	0.471	-	-
HCM Control Delay (s)	9	-	28.3	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0.1	-	2.4	-	-

Traffic Volume Worksheets

Rockforge Data Center (DRI # 4456) - Farmer Rd & Irwin Bridge Rd - Rockdale County, GA

Traffic Volumes

A&R Engineering
July 2025

1. Sigman Rd @ Irwin Bridge Rd

A.M. Peak Hour

	Irwin Bridge Road Northbound				Irwin Bridge Road Southbound				Sigman Road Eastbound				Sigman Road Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2025 Traffic Counts:	43	202	43	288	99	202	138	439	77	349	30	456	53	375	67	495
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
No-Build 2032 Volumes:	52	244	52	348	120	244	167	531	93	422	36	551	64	454	81	599
Total New Trips:	0	14	0	14	36	12	24	72	29	12	0	41	0	14	43	57
Future 2032 Traffic Volumes:	52	258	52	362	156	256	191	603	122	434	36	592	64	468	124	656

P.M. Peak Hour

	Irwin Bridge Road Northbound				Irwin Bridge Road Southbound				Sigman Road Eastbound				Sigman Road Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2025 Traffic Counts:	44	289	79	412	105	216	138	459	226	504	49	779	43	411	104	558
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
No-Build 2032 Volumes:	53	350	96	499	127	261	167	555	273	610	59	942	52	497	126	675
Total New Trips:	0	7	0	7	47	16	31	94	13	16	0	29	0	7	20	27
Future 2032 Traffic Volumes:	53	357	96	506	174	277	198	649	286	626	59	971	52	504	146	702

Rockforge Data Center (DRI # 4456) - Farmer Rd & Irwin Bridge Rd - Rockdale County, GA

Traffic Volumes

A&R Engineering
July 2025

2. Rockbridge Rd @ Farmer Rd

A.M. Peak Hour

	Farmer Road Northbound				Farmer Road Southbound				Rockbridge Road Eastbound				Rockbridge Road Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2025 Traffic Counts:	4	24	3	31	36	83	20	139	10	87	14	111	5	50	15	70
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
No-Build 2032 Volumes:	5	29	4	38	44	100	24	168	12	105	17	134	6	61	18	85
Total New Trips:	0	58	0	58	12	47	36	95	43	0	0	43	0	0	14	14
Future 2032 Traffic Volumes:	5	87	4	96	56	147	60	263	55	105	17	177	6	61	32	99

P.M. Peak Hour

	Farmer Road Northbound				Farmer Road Southbound				Rockbridge Road Eastbound				Rockbridge Road Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2025 Traffic Counts:	15	88	7	110	49	44	4	97	28	122	14	164	5	114	53	172
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
No-Build 2032 Volumes:	18	106	8	132	59	53	5	117	34	148	17	199	6	138	64	208
Total New Trips:	0	27	0	27	16	62	47	125	20	0	0	20	0	0	7	7
Future 2032 Traffic Volumes:	18	133	8	159	75	115	52	242	54	148	17	219	6	138	71	215

Rockforge Data Center (DRI # 4456) - Farmer Rd & Irwin Bridge Rd - Rockdale County, GA

Traffic Volumes

A&R Engineering
July 2025

3. Farmer Rd @ Site Drwy 1

A.M. Peak Hour

	Farmer Road Northbound				Farmer Road Southbound				- Eastbound				Site Driveway 1 Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2025 Traffic Counts:	0	49	0	49	0	139	0	139	0	0	0	0	0	0	0	0
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
No-Build 2032 Volumes:	0	59	0	59	0	168	0	168	0	0	0	0	0	0	0	0
Total New Trips:	0	0	116	116	58	0	0	58	0	0	0	0	95	0	47	142
Future 2032 Traffic Volumes:	0	59	116	175	58	168	0	226	0	0	0	0	95	0	47	142

P.M. Peak Hour

	Farmer Road Northbound				Farmer Road Southbound				- Eastbound				Site Driveway 1 Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2025 Traffic Counts:	0	169	0	169	0	97	0	97	0	0	0	0	0	0	0	0
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
No-Build 2032 Volumes:	0	204	0	204	0	117	0	117	0	0	0	0	0	0	0	0
Total New Trips:	0	0	53	53	27	0	0	27	0	0	0	0	124	0	62	186
Future 2032 Traffic Volumes:	0	204	53	257	27	117	0	144	0	0	0	0	124	0	62	186

Rockforge Data Center (DRI # 4456) - Farmer Rd & Irwin Bridge Rd - Rockdale County, GA

Traffic Volumes

A&R Engineering
July 2025

4. Irwin Bridge @ Site Drwy 2

A.M. Peak Hour

	Irwin Bridge Road **Northbound**				Irwin Bridge Road **Southbound**				Site Driveway 2 **Eastbound**				- **Westbound**			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2025 Traffic Counts:	0	369	0	369	0	386	0	386	0	0	0	0	0	0	0	0
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
No-Build 2032 Volumes:	0	446	0	446	0	467	0	467	0	0	0	0	0	0	0	0
Total New Trips:	87	0	0	87	0	0	29	29	24	0	71	95	0	0	0	0
Future 2032 Traffic Volumes:	87	446	0	533	0	467	29	496	24	0	71	95	0	0	0	0

P.M. Peak Hour

	Irwin Bridge Road **Northbound**				Irwin Bridge Road **Southbound**				Site Driveway 2 **Eastbound**				- **Westbound**			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2025 Traffic Counts:	0	611	0	611	0	470	0	470	0	0	0	0	0	0	0	0
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
No-Build 2032 Volumes:	0	739	0	739	0	569	0	569	0	0	0	0	0	0	0	0
Total New Trips:	40	0	0	40	0	0	13	13	31	0	93	124	0	0	0	0
Future 2032 Traffic Volumes:	40	739	0	779	0	569	13	582	31	0	93	124	0	0	0	0