

Riverview Site DRI #3095

Douglas County, Georgia

Report Prepared:

November 2020

Prepared for:

Panattoni Development Company, Inc.

Prepared by:



Kimley-Horn and Associates, Inc. 11720 Amber Park Drive, Suite 600 Alpharetta, Georgia 30009 013527001

Transportation Analysis

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EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts of the proposed *Riverview Site* development located in unincorporated Douglas County, Georgia. The approximately 154-acre site is located east of Whistler Drive, south of Fairburn Road (SR 70/154/166), and southwest of Britt Road near the Chattahoochee River. The one proposed site driveway is located approximately 400 feet west of the intersection of Fairburn Road (SR 70/154/166) at Britt Road and aligned with Valley Road. The proposed development will be an industrial warehouse facility with approximately 798,000 SF of warehousing space.

The project is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review due to the project size exceeding 500,000 SF of an Industrial development. The DRI trigger for this development is a Development Review Committee (DRC) submission/review with Douglas County, combined with the proposed development exceeding 500,000 gross square feet for industrial developments within a developing suburbs area. The DRI was formally triggered with the filing of the Initial DRI Information (Form 1) on April 6, 2020 by Douglas County. The Additional DRI Information (Form 2) was filed on October 26, 2020.

According to GRTA's Procedures and Principles for GRTA Development of Regional Impact Review, the proposed DRI complies with the Expedited Review Criteria in **Section 3-102**, **Part B – Limited Trip Generation**, which states:

...the land uses within the proposed DRI are such that the amount of trips generated by the development is likely to have minimal impact on the road network.

- 1. No more than one thousand (1,000) gross daily trips generated by the DRI based on a trip generation memorandum; or,
- 2. More than one thousand (1,000) but no more than three thousand (3,000) gross daily trips will be generated by the DRI, based on a trip generation memorandum and requires the submittal of an Access Analysis; or,
- 3. The proposed DRI is projected to generate no more than one hundred (100) gross PM peak hour weekday trips based on a trip generation memorandum.

The project site is currently zoned for LI-R-C (Restricted Light Industrial-Conditions) and LI-R (Restricted Light Industrial) land uses. The proposed project is expected to be completed by 2023. The proposed development will consist of the following land use and density presented by **Table 1**:

Table 1: Proposed Land Uses					
Land Use	Density				
Warehouse	798,000 SF (new construction)				

Capacity analyses were performed throughout the study network for the Adjusted 2020 conditions, the Projected 2023 No-Build conditions, and the Projected 2023 Build conditions.

• The Adjusted 2020 conditions were estimated by using 2018 traffic count volumes and increasing them at two (2) percent per year for two (2) years due to the current COVID-19 situation.

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- Projected 2023 No-Build conditions represent the existing traffic volumes grown for three (3) years at 2.0 percent per year throughout the study network, plus project trips from the previously approved DRI #2791 Campbellton Site (Notice of Decision from GRTA dated May 9, 2018).
- Projected 2023 Build conditions represent the Projected 2023 No-Build conditions with the addition of the project trips that are anticipated to be generated by the proposed *Riverview Site* development.

Based on the **Adjusted 2020** conditions (present conditions; i.e. <u>excludes</u> background traffic growth and the estimated project trips from the *Riverview Site* DRI), one (1) signalized intersection of the three (3) total study intersections operates below its acceptable overall level-of-service (LOS) standard of D during the PM peak hour. Therefore, the intersection PM peak hour LOS standard becomes LOS E for future No-Build and Build scenarios, per GRTA guidelines. The remaining two (2) study intersections are projected to operate within the acceptable overall level-of-service (LOS) standards as defined in *Section 2.6 Level-of-Service Standards*.

For the **Projected 2023 No-Build** conditions (<u>includes</u> background traffic growth plus project trips from DRI #2791 Campbellton Site but <u>excludes</u> the *Riverview Site* project traffic), no study intersections are projected to operate below their acceptable <u>overall</u> LOS standard during the AM and PM peak hours. It should be noted that the southbound approach of Valley Road is expected to operate at LOS E during the PM peak hour.

For the **Projected 2023 Build** conditions (<u>includes</u> both background traffic growth and the *Riverview Site* project traffic, plus the site access driveways), no study intersections are projected to operate below their acceptable <u>overall</u> LOS standard during the AM and PM peak hours. It should be noted that side-street stop-controlled approaches for Fairburn Road (SR 70/154/166) at Valley Road / Proposed Site Driveway (Intersection 3) are expected to operate below the acceptable overall approach level-of-service standard during the AM and PM peak hours.

Based on the Projected 2023 Build conditions, no roadway improvements are recommended.

The following site-access improvements are recommended to serve the traffic associated with the *Riverview Site* development:

- Intersection 3: Fairburn Road (SR 70/154/166) at Valley Road / Proposed Site Driveway
 - On the site, construct one (1) northbound shared left-turn/through lane and one (1) northbound right-turn lane exiting the site onto Fairburn Road (SR 70/154/166) and one (1) ingress lane entering the site.
 - Along Fairburn Road (SR 70/154/166), construct one (1) eastbound right-turn lane with 250 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 mph road.
 - Along Fairburn Road (SR 70/154/166), construct one (1) westbound left-turn lane with 310 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 mph road.

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1.0 PROJECT DESCRIPTION

1.1 Introduction

This report presents the analysis of the anticipated traffic impacts of the proposed *Riverview Site* development located in unincorporated Douglas County, Georgia. The approximately 154-acre site is located east of Whistler Drive, south of Fairburn Road (SR 70/154/166), and southwest of Britt Road near the Chattahoochee River. The one proposed site driveway is located approximately 400 feet west of the intersection of Fairburn Road (SR 70/154/166) at Britt Road and aligned with Valley Road.

The proposed development will be an industrial warehouse facility with approximately 798,000 SF of warehousing space. The project will exceed 500,000 square feet for an industrial development; therefore, the proposed development is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review.

According to GRTA's Procedures and Principles for GRTA Development of Regional Impact Review, the proposed DRI complies with the Expedited Review Criteria in **Section 3-102**, **Part B – Limited Trip Generation**, which states:

...the land uses within the proposed DRI are such that the amount of trips generated by the development is likely to have minimal impact on the road network.

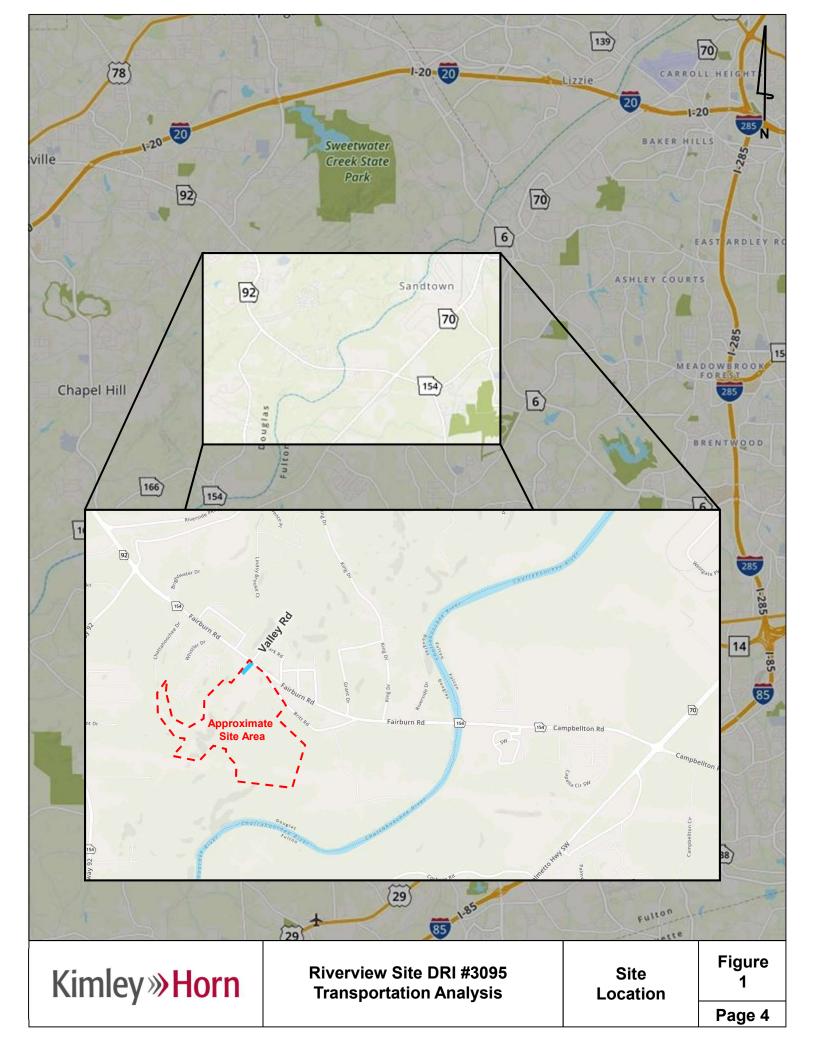
- 1. No more than one thousand (1,000) gross daily trips generated by the DRI based on a trip generation memorandum; or,
- 2. More than one thousand (1,000) but no more than three thousand (3,000) gross daily trips will be generated by the DRI, based on a trip generation memorandum and requires the submittal of an Access Analysis; or,
- 3. The proposed DRI is projected to generate no more than one hundred (100) gross PM peak hour weekday trips based on a trip generation memorandum.

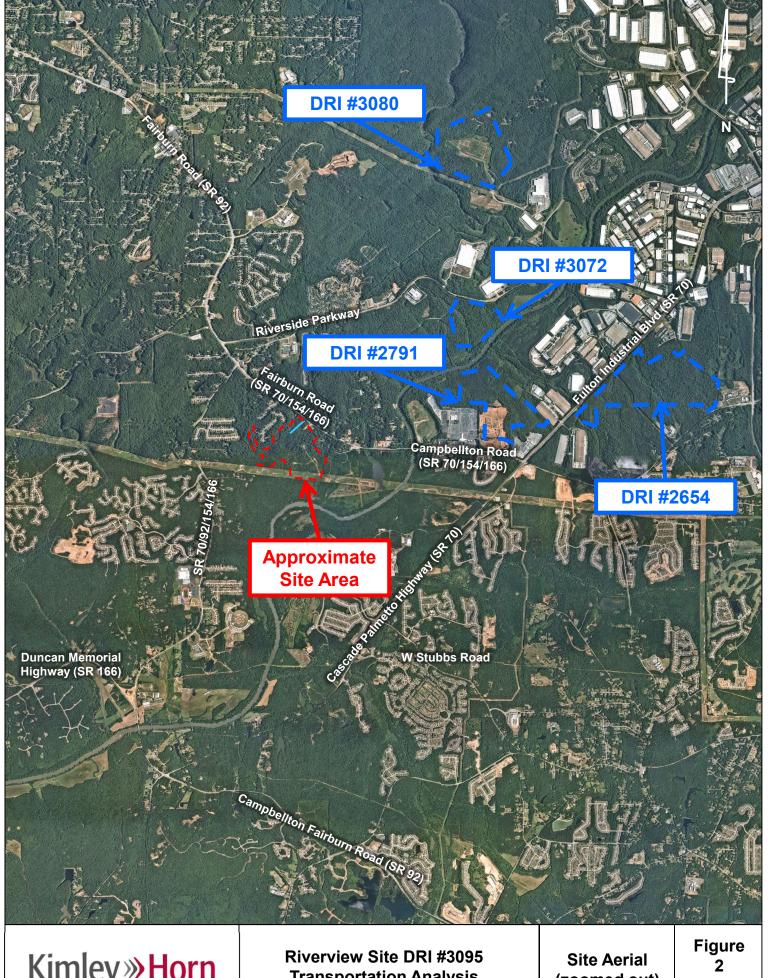
Figure 1 provides the site location of proposed *Riverview Site* development, and **Figure 2** and **Figure 3**. The *Official Douglas County Zoning Map* and ARC's *Unified Growth Policy Map* are included in **Appendix A**.

The proposed project is expected to be completed by 2023, and this analysis will consider the full buildout of the proposed site in 2023. A summary of the proposed land-use and density is provided below in **Table 2**.

Table 2: Proposed Land Uses					
Land Use Density					
Warehouse	798,000 SF (new construction)				

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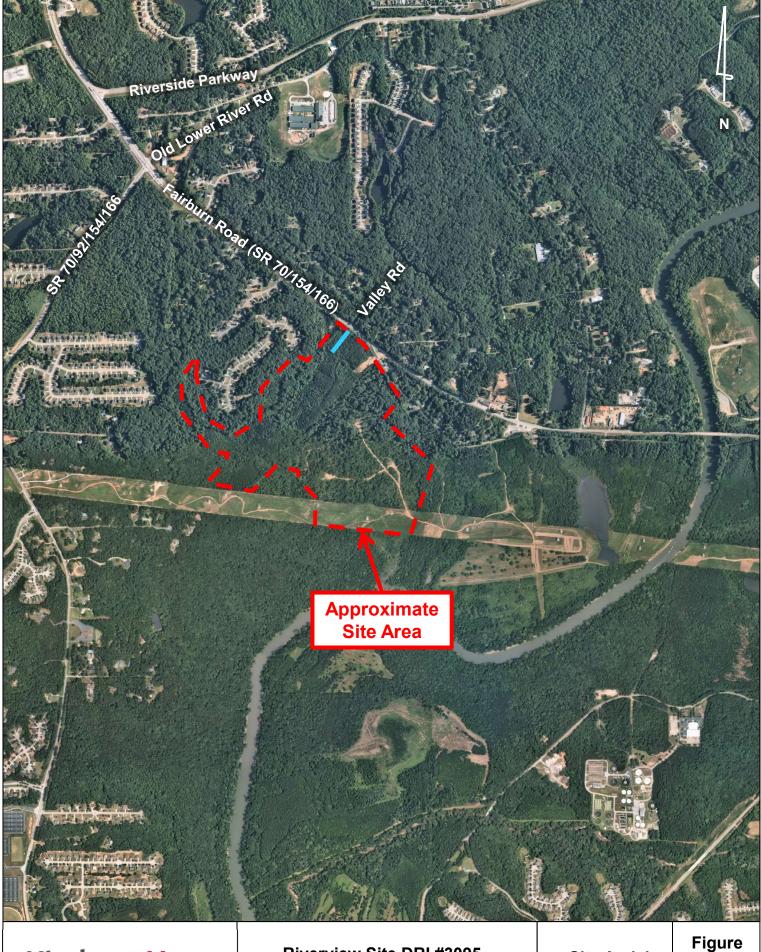


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Transportation Analysis

(zoomed out)

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Riverview Site DRI #3095 **Transportation Analysis**

Site Aerial (zoomed in) Figure 3

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1.2 Site Access

As currently envisioned, the proposed *Riverview Site* development will be accessible via one (1) full access driveway:

1. Proposed Site Driveway – a proposed full-movement driveway located along Fairburn Road (SR 70/154/166) approximately 400 feet west of the unsignalized intersection of Fairburn Road (SR 70/154/166) at Britt Road, and will align directly south of the existing local road Valley Road. The proposed site driveway is proposed as a side-street stop-controlled full-movement driveway with one (1) northbound shared left-turn/through lane and one (1) northbound right-turn lane exiting the site onto Fairburn Road (SR 70/154/166) and one (1) ingress lane entering the site.

Capacity analyses were performed for the proposed site driveway using *Synchro 10.0*. The results of the capacity analyses for this intersection (LOS, delay, and recommended laneage) are reported in *Section 5.3* of this report.

1.3 Internal Circulation Analysis

Internal roadways throughout the site provide vehicular access to all buildings and parking on the site. The proposed site driveway will provide access to buildings on the site. See referenced site plan in **Appendix B** for a visual representation of vehicular access and circulation throughout the proposed development.

Parking will be provided throughout the development as follows (the final proposed parking details are currently being developed):

Vehicle Parking Provided: 420 parking spaces
Vehicle Parking Required: 399 parking spaces
Trailer Parking Provided: 210 truck stalls

1.4 Bicycle and Pedestrian Facilities

Pedestrian facilities (sidewalks) currently do not exist along the project site frontage. There are no bicycle or pedestrian projects programmed in the vicinity of the project site that will be completed prior to the buildout of the *Riverview Site* development. According to the DRI site plan, no bicycle or pedestrian facilities are proposed.

1.5 Transit Facilities

There are no direct transit routes located within a reasonable distance from the frontage of the project site, and therefore, there were no alternative mode reductions taken.

2.0 TRAFFIC ANALYSES, METHODOLOGY AND ASSUMPTIONS

2.1 Study Network Determination

A general study area was determined based on a review of land uses and population densities in the area as well as a review of peak hour traffic counts and engineering judgement. The study area was agreed upon during methodology discussions with GRTA, ARC, and Douglas County staff, and includes the following three (3) intersections described in **Table 3**. The study intersections are shown in **Figure 4**.

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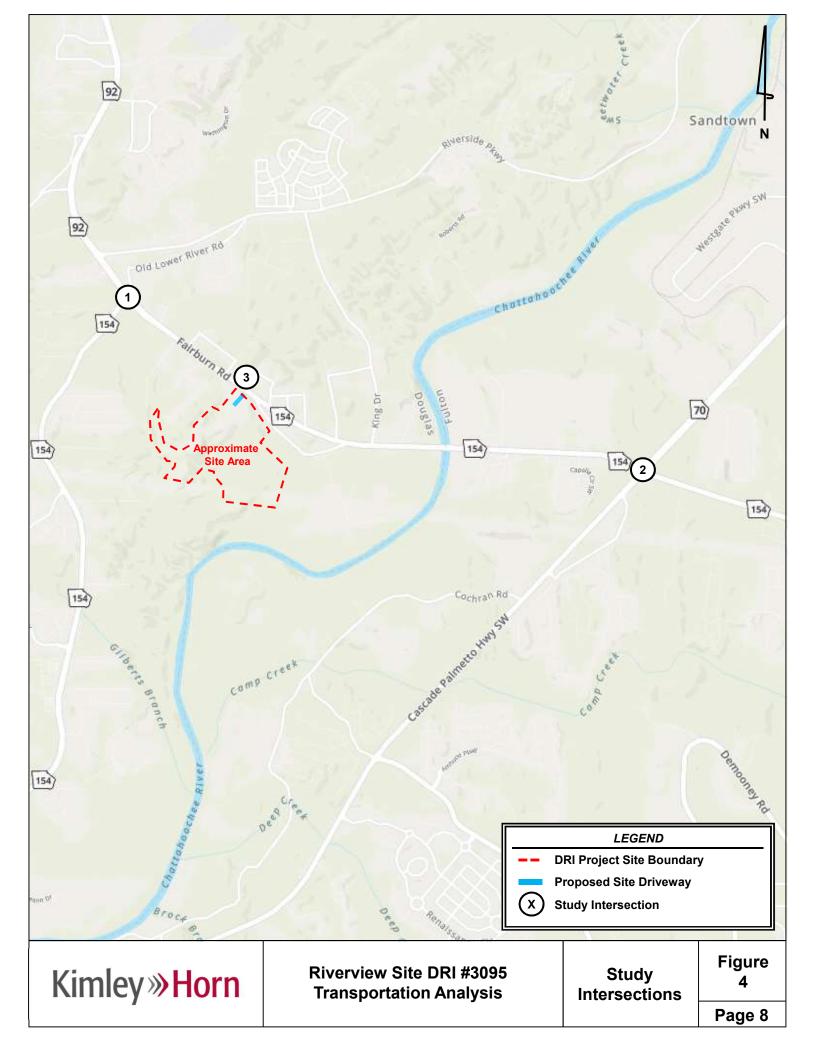


Table 3: Intersection Control Summary					
Intersection Control					
1. Fairburn Road (SR 70/154/166) at Old Lower River Road (SR 70/92/154/166)	Signal				
2. Campbellton Road (SR 70/154/166) at Fulton Industrial Boulevard (SR 70) / Cascade Palmetto Highway (SR 70)	Signal				
3. Fairburn Road (SR 70/154/166) at Valley Road/Proposed Site Driveway	TWSC				

Each of the intersections listed in **Table 3** were analyzed for the Existing 2020 conditions, the Projected 2023 No-Build conditions, and the Projected 2023 Build conditions.

2.2 Existing Roadway Facilities

Roadway classification descriptions and estimated Average Daily Traffic (ADT) for the entire study area are provided in **Table 4** (bolded roadway runs adjacent to the site).

Table 4: Roadway Classifications							
Roadway	No. of Lanes	Posted Speed Limit (MPH)	Average Daily Traffic (ADT)	GDOT Functional Classification			
Fairburn Road / Campbellton Road (SR 70/154/166)	3	55	15,800	Principal Arterial			
Britt Road	2	25	-	Local Road			
Valley Road	2	25	-	Local Road			
SR 70/92/154/166	2	55	11,900	Principal Arterial			
Old Lower River Road	2	25	-	Local Road			
Cascade Palmetto Highway (SR 70)	2	55	12,800	Minor Arterial			
Fulton Industrial Boulevard (SR70)	4	55	20,200	Minor Arterial			

2.3 Traffic Data Collection

Weekday peak hour turning movement counts were collected on Wednesday, March 14, 2018 and Tuesday, August 11, 2020 at the study intersections during the AM and PM peak periods. Peak hours for all intersections are shown in **Table 5**.

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	Table 5: Peak Hour Summary					
	Intersection	AM Peak Hour	PM Peak Hour			
1.	Fairburn Road (SR 70/154/166) at Old Lower River Road (SR 70/92/154/166) – <i>March 2018</i>	7:00 AM-8:00 AM	4:45 PM-5:45 PM			
2.	Campbellton Road (SR 70/154/166) at Fulton Industrial Boulevard (SR 70) / Cascade Palmetto Highway (SR 70) – March 2018	7:00 AM-8:00 AM	4:45 PM-5:45 PM			
3.	Fairburn Road (SR 70/154/166) at Valley Road/Proposed Site Driveway – <i>August 2020</i>	7:00 AM-8:00 AM	5:00 PM-6:00 PM			

The collected peak hour turning movement traffic counts are available upon request. Note: to develop the Adjusted 2020 traffic volumes, the 2018 volumes were grown for two (2) years at 2.0 percent per year.

2.4 Growth Rate

Background traffic is defined as expected traffic on the roadway network in future year(s) absent the construction and opening of the *Riverview Site* development. Background traffic can include a base growth rate based on historical count data as well as population growth data and estimates as well as trips anticipated from nearby or adjacent other projects. Based on methodology outlined in the GRTA Letter of Understanding (LOU), a 2.0 percent per year background traffic growth rate was used for all roadways.

In addition to the background growth, the project trips associated with the following development were incorporated into the background traffic:

DRI #2791 – Campbellton Site – 1,450,000 SF of Warehouse – Approved May 2018

The Projected 2023 No-Build conditions represent the existing traffic volumes grown for two (2) years at 2.0 percent per year throughout the study network, plus the project trips generated by *DRI* #2791 – *Campbellton Site*. The Projected 2023 Build conditions represent the project trips generated by the *Riverview Site* development (discussed in *Section 3.0* and *4.0*) added to the Projected 2023 No-Build Conditions.

2.5 Detailed Intersection Analysis

Level-of-service (LOS) is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels-of-service, LOS A through LOS F, with A being the best and F being the worst. Level-of-service analyses were conducted at all intersections within the study network using *Synchro Professional, Version 10.0*. Existing traffic signal phasing and timing data were retrieved for available intersections.

LOS for signalized intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a low level-of-service, while the intersection as a whole may operate acceptably.

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LOS for unsignalized intersections, with stop control on the minor street only, are reported for the side street approaches and the major street left-turn movements. Low levels-of-service for side street approaches are not uncommon, as vehicles may experience significant delays in turning onto a major roadway.

2.6 Level-Of-Service Standards

For the purposes of this traffic analysis, the LOS standard for the intersection of Fulton Industrial Boulevard (SR 70) at Campbellton Road (SR 70/154/166) (Intersection 1) will be LOS E (due to the location in the Fulton Industrial Regional Center according to the Unified Growth Policy Map, in accordance with Section 3-102 of the *GRTA DRI Technical Guidelines*). Note: LOS E was approved as the standard for this intersection in DRI #2791.

An LOS standard of D was assumed for all other intersections and segments within the study network. If, however, an intersection or segment currently operates at LOS E or LOS F during an existing peak period, the LOS standard for the intersection during that peak period becomes LOS E, consistent with the GRTA Letter of Understanding.

3.0 Trip Generation

As stated previously, gross trips associated with the proposed development were estimated using the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition, 2017*, using equations where available.

Trip generation for this proposed development is calculated based upon the Warehousing (ITE 150) land use. The total (net) trips generated and analyzed in this report are listed **Table 6**.

Table 6: Net New Trip Generation								
Land Use	Donoity	Daily Traffic			AM Peak Hour		PM Peak Hour	
Land Use	Density	Total	Enter	Exit	Enter	Exit	Enter	Exit
Warehousing (ITE 150)	798,000 SF	1,306	653	653	93	28	33	91
Gross Project Tri	os	1,306	653	653	93	28	33	91
Total Gross Heavy Vehic	Total Gross Heavy Vehicle Trips*		219*	219*	8*	8*	12*	12*
Total Gross Employee	Total Gross Employee Trips		434	434	85	20	21	79
Mixed-Use Reducti	Mixed-Use Reduction		-0	-0	-0	-0	-0	-0
Alternative Mode Red	Alternative Mode Reduction		-0	-0	-0	-0	-0	-0
Pass-by Reductio	Pass-by Reduction		-0	-0	-0	-0	-0	-0
Net New Trips		1,306	653	653	93	28	33	91
Total Net New Heavy Veh	Total Net New Heavy Vehicle Trips*		219*	219*	8*	8*	12*	12*
Total Net New Employe	e Trips	868	434	434	85	20	21	79

^{*} Note: Truck percentage estimates used from the ITE Trip Generation 10th Edition Supplement

A more detailed trip generation analysis summary table is provided in **Appendix C**.

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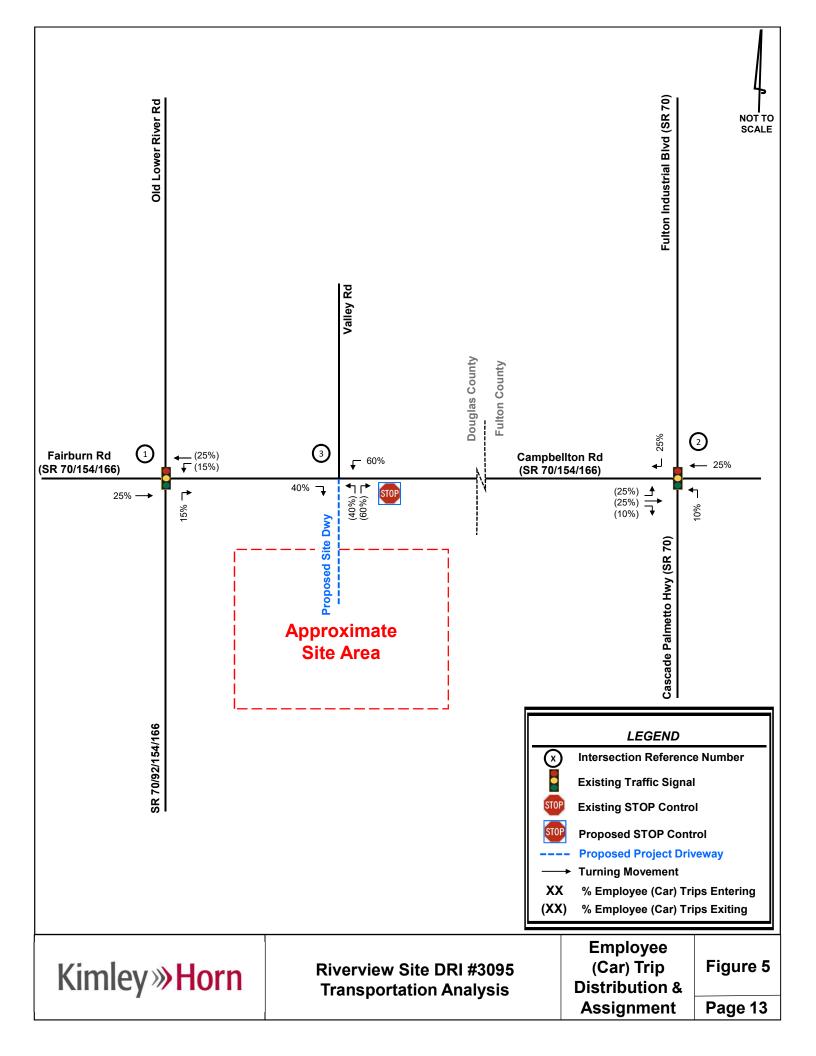
4.0 TRIP DISTRIBUTION AND ASSIGNMENT

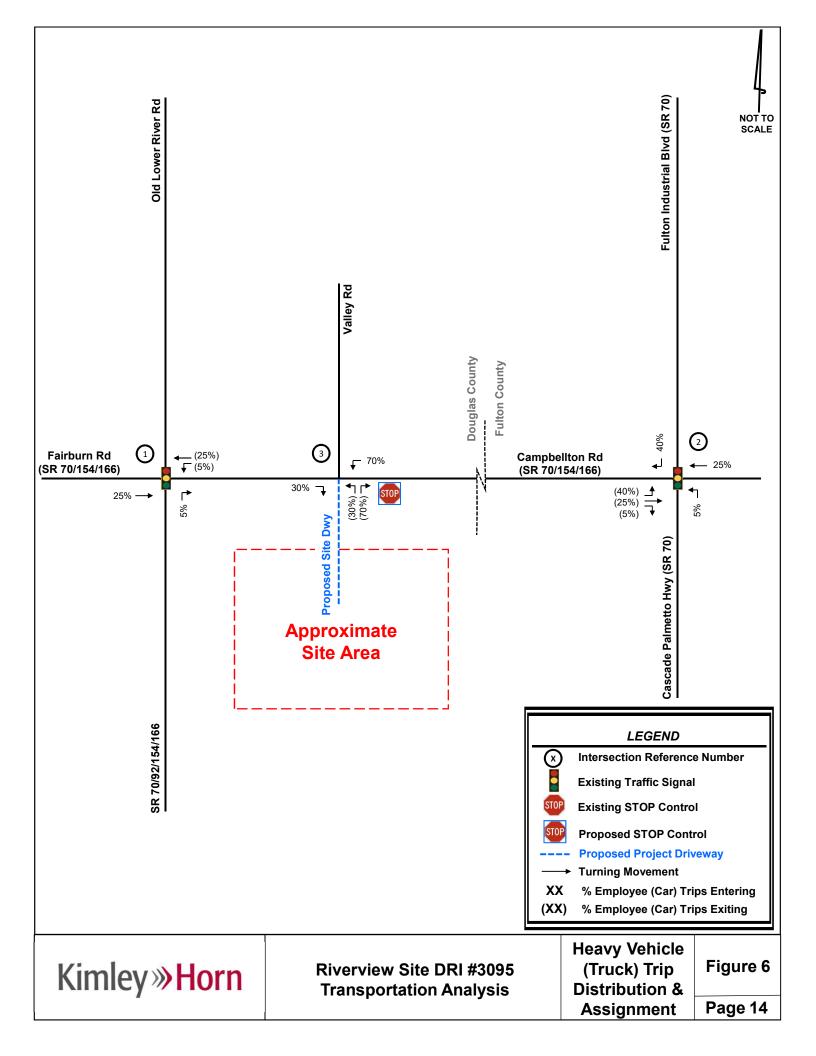
The directional distribution and assignment of new project trips was based on the project land uses, a review of land use densities and road facilities in the area, engineering judgement, and methodology discussions with GRTA, ARC, GDOT, and Douglas County staff.

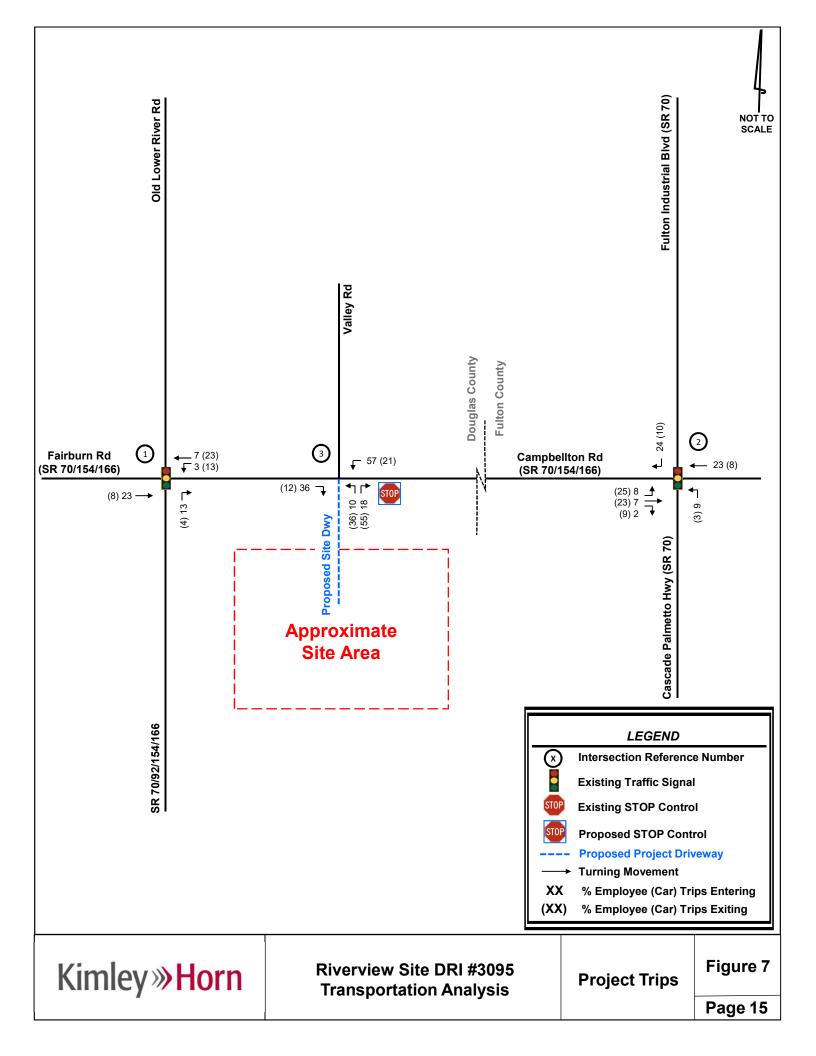
Figure 5 and **Figure 6** display the anticipated distribution and assignment of heavy vehicle (truck) and employee (car) trips throughout the study roadway network. These trip assignment percentages were applied to the net new trips expected to be generated by the development, and the volumes were assigned to the roadway network. The combined peak hour project trips by turning movement throughout the study network, anticipated to be generated by the proposed *Riverview Site* development, are shown on **Figure 7**.

The Projected 2023 Build conditions add the project trips associated with the *Riverview Site* development to the Projected 2023 No-Build conditions. Detailed intersection volume worksheets are provided in **Appendix D**.

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5.0 TRAFFIC ANALYSIS

5.1 Adjusted 2020 Conditions

The adjusted existing peak hour traffic volumes were entered into *Synchro 10.0*, and capacity analyses were performed for the AM and PM peak hours. The adjusted existing peak hour traffic volumes are displayed in **Figure 8**, and the results of the capacity analyses for the Adjusted 2020 conditions are shown in **Table 7**. Detailed *Synchro* analysis reports are available upon request.

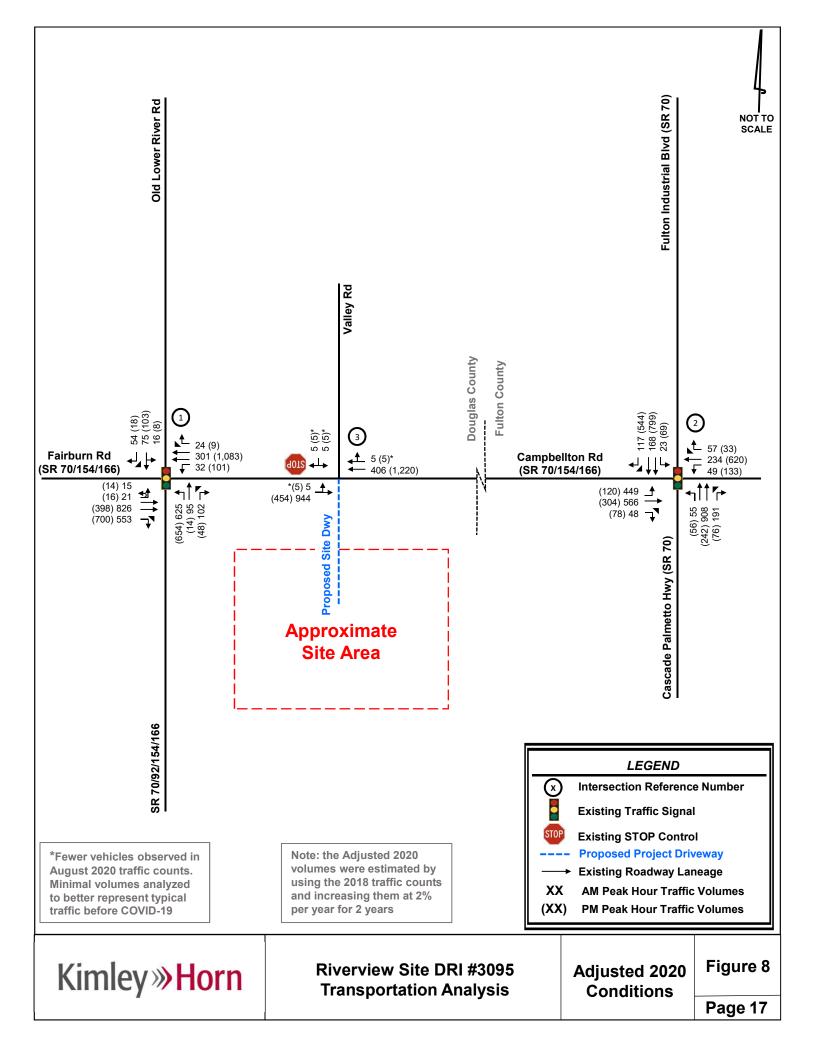
Table 7: Adjusted 2020 Intersection Levels-of-Service LOS (delay in seconds)						
Intersection	Control	Approach/ Movement	LOS Std.*	AM Peak Hour	PM Peak Hour	
1. Fairburn Road (SR 70/154/166) at Old Lower River Road (SR 70/92/154/166)	Signal	Overall	D/E	D (40.8)	E (55.0)	
Campbellton Road (SR 70/154/166) at Fulton Industrial Boulevard (SR 70) / Cascade Palmetto Highway (SR 70)	Signal	Overall	E	C (32.6)	C (36.2)	
3. Fairburn Road (SR 70/154/166) at	Side-Street	EBL	D	A (8.2)	B (11.8)	
Valley Road / Proposed Site Driveway	Stop-Control	SB	D	D (27.5)	E (45.2)	

^{*} For the purposes of this traffic analysis, the LOS standard for Fairburn Road (SR 70/154/166) at Old Lower River Road (SR 70/92/154/166) is LOS D in the AM peak hour and LOD E in the PM peak hour due to the existing condition of LOS E in the PM peak hour. The LOS standard is E for Campbellton Road (SR 70/154/166) at Fulton Industrial Boulevard (SR 70) / Cascade Palmetto Highway (SR 70) in accordance with Section 3-102 of the *GRTA DRI Technical Guidelines*, because this intersection is located in the Fulton Industrial Regional Center according to the Unified Growth Policy Map. The LOS standard is D for all other intersections.

As shown in **Table 7**, one (1) study intersection, Fairburn Road (SR 70/154/166) at Old Lower River Road (SR 70/92/154/166) (Intersection 1), operates below the overall LOS standard of LOS D during PM peak hour. Per GRTA guidelines, the LOS standard for the PM peak hour at Intersection 1 thus becomes LOS E for the analyses of the No-Build and Build future scenarios.

The remaining study intersections currently operate at or above their acceptable <u>overall</u> level-of-service standard during the AM and PM peak hours for the Adjusted 2020 conditions. For side-street stop-controlled intersections, low levels-of-service for side street approaches are not uncommon, as vehicles may experience significant delays in turning onto a major roadway. Therefore, there are no recommended improvements for the Adjusted 2020 scenario.

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5.2 Projected 2023 No-Build Conditions

To account for growth in the vicinity of the proposed development, the Adjusted 2020 traffic volumes were increased for three (3) years at 2.0 percent per year throughout the study network. Additionally, estimated traffic from the proposed Campbellton Site development (DRI #2791) was included to determine impacts from that proposed future development for the No-Build and Build scenarios. These volumes were entered into *Synchro 10.0*, and capacity analyses were performed. The Projected 2023 No-Build conditions were analyzed using existing roadway geometry and existing intersection control types.

The intersection laneage and traffic volumes for the Projected 2023 No-Build conditions are shown in **Figure 9**. The results of the capacity analyses for the Projected 2023 No-Build are shown in **Table 8**.

Detailed Synchro analysis reports are available upon request.

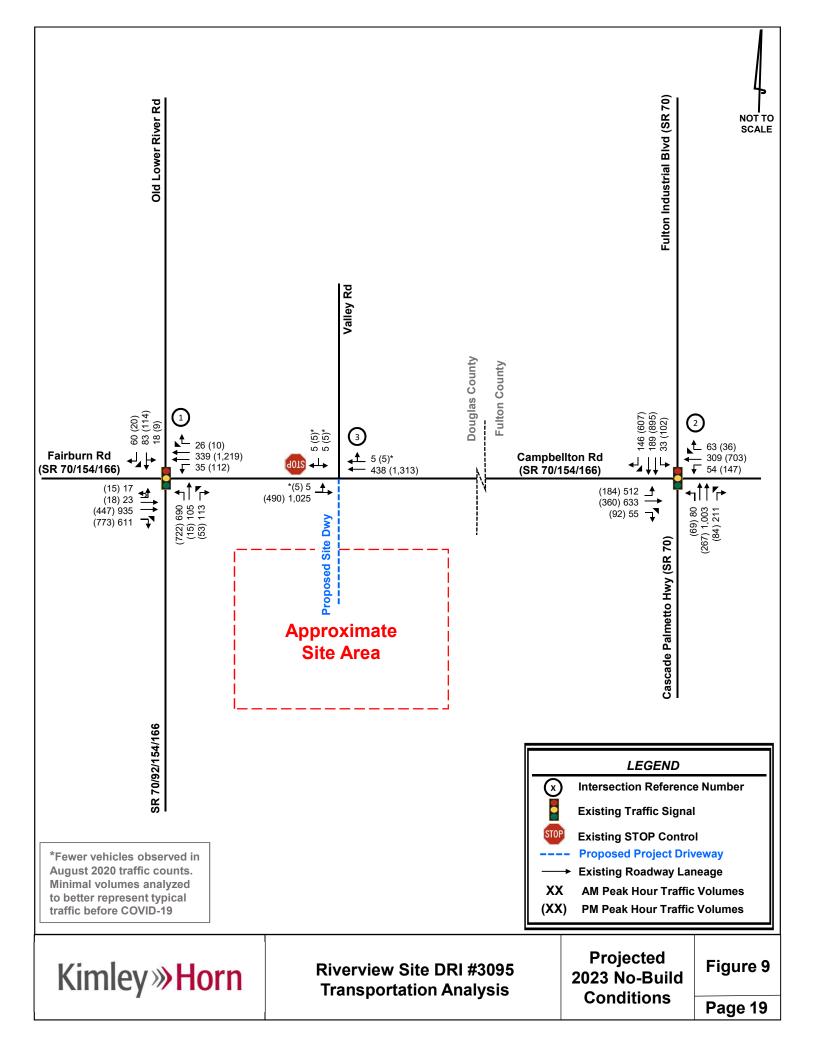
Table 8: Projected 2023 No-Build Intersection Levels-of-Service LOS (delay in seconds)						
Intersection	Control	Approach/ Movement	LOS Std.*	AM Peak Hour	PM Peak Hour	
1. Fairburn Road (SR 70/154/166) at Old Lower River Road (SR 70/92/154/166)	Signal	Overall	D/E	D (53.4)	E (65.9)	
Campbellton Road (SR 70/154/166) at Fulton Industrial Boulevard (SR 70) / Cascade Palmetto Highway (SR 70)	Signal	Overall	Е	D (48.6)	E (57.7)	
3. Fairburn Road (SR 70/154/166) at	Side-Street	EBL	D	A (8.3)	B (12.4)	
Valley Road / Proposed Site Driveway	Stop-Control	SB	D	D (32.2)	F (56.0)	

^{*} For the purposes of this traffic analysis, the LOS standard for Fairburn Road (SR 70/154/166) at Old Lower River Road (SR 70/92/154/166) is LOS D in the AM peak hour and LOD E in the PM peak hour due to the existing condition of LOS E in the PM peak hour. The LOS standard is E for Campbellton Road (SR 70/154/166) at Fulton Industrial Boulevard (SR 70) / Cascade Palmetto Highway (SR 70) in accordance with Section 3-102 of the *GRTA DRI Technical Guidelines*, because this intersection is located in the Fulton Industrial Regional Center according to the Unified Growth Policy Map. The LOS standard is D for all other intersections.

As shown in **Table 8**, all study intersections are projected to operate at or above their acceptable overall level-of-service standards during the AM and PM peak hours for the Projected 2023 No-Build conditions.

The southbound approach at Fairburn Road (SR 70/154/166) at Valley Road (Intersection 3) is projected to operate below the intersection's acceptable <u>overall</u> level-of-service for the PM peak hour for the Projected 2023 No-Build conditions. For side-street stop-controlled intersections, low levels-of-service for side street approaches are not uncommon, as vehicles may experience significant delays in turning onto a major roadway. Therefore, there are no recommended improvements for the Projected No-Build 2023 scenario.

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5.3 Projected 2023 Build Conditions

The traffic associated with the proposed *Riverview Site* development was added to the Projected 2023 No-Build volumes. These volumes were then entered into *Synchro 10.0*, and capacity analyses were performed. The Projected 2023 Build conditions were analyzed using the existing roadway geometry, existing intersection control types, and proposed site driveways as shown in the DRI site plan.

The intersection laneage and traffic volumes used for the Projected 2023 Build conditions are shown in **Figure 10**. The results of the capacity analyses for the Projected 2023 Build conditions are shown in **Table 9**.

Detailed Synchro analysis reports are available upon request.

Table 9: Projected 2023 Build Intersection Levels-of-Service LOS (delay in seconds)						
Intersection	Control	Approach/ Movement	LOS Std.*	AM Peak Hour	PM Peak Hour	
1. Fairburn Road (SR 70/154/166) at Old Lower River Road (SR 70/92/154/166)	Signal	Overall	D/E	D (54.3)	E (67.7)	
2. Campbellton Road (SR 70/154/166) at Fulton Industrial Boulevard (SR 70) / Cascade Palmetto Highway (SR 70)	Signal	Overall	E	D (52.8)	E (67.4)	
		EBL	D	A (8.3)	B (12.4)	
3. Fairburn Road (SR 70/154/166) at	Side-Street	WBL	D	B (12.1)	A (9.4)	
Valley Road / Proposed Site Driveway	Stop-Control	NB	D	E (36.4)	D (26.2)	
		SB	D	E (47.2)	F (72.0)	

^{*} For the purposes of this traffic analysis, the LOS standard for Fairburn Road (SR 70/154/166) at Old Lower River Road (SR 70/92/154/166) is LOS D in the AM peak hour and LOD E in the PM peak hour due to the existing condition of LOS E in the PM peak hour. The LOS standard is E for Campbellton Road (SR 70/154/166) at Fulton Industrial Boulevard (SR 70) / Cascade Palmetto Highway (SR 70) in accordance with Section 3-102 of the *GRTA DRI Technical Guidelines*, because this intersection is located in the Fulton Industrial Regional Center according to the Unified Growth Policy Map. The LOS standard is D for all other intersections.

As shown in **Table 9**, all study intersections are projected to operate at or above their acceptable overall level-of-service standards during the AM and PM peak hours for the Projected 2023 Build conditions.

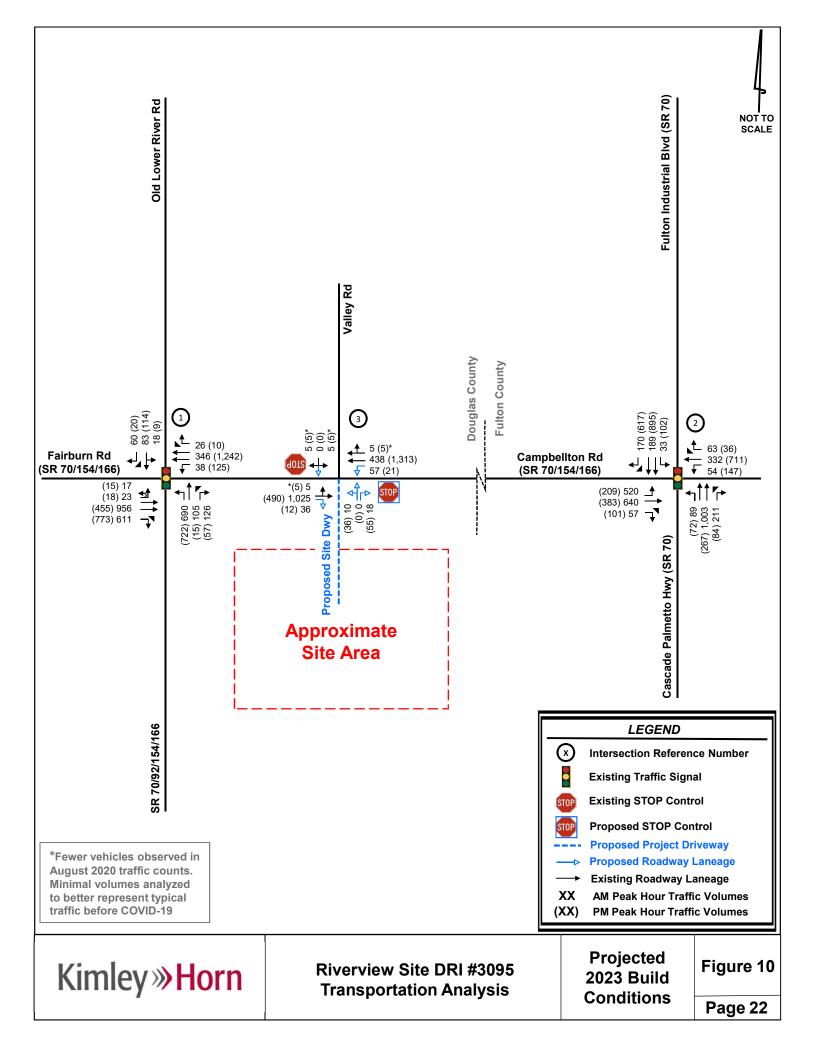
The intersection of Fairburn Road (SR 70/154/166) at Valley Road / Proposed Site Driveway (Intersection 3) shows side-street stop-controlled approaches that operate below the acceptable <u>overall</u> approach level-of-service standard during the AM and PM peak hours for the Projected 2023 Build traffic. It should be noted that it is not uncommon for side-street stop-controlled approaches to experience long delays when there is heavy major street volume. Also, a traffic signal at Intersection 3 is projected to <u>not</u> be warranted and is <u>not</u> proposed. Therefore, there are no recommended roadway improvements for the Projected Build 2023 scenario.

The following site-access improvements are recommended to serve the traffic associated with the *Riverview Site* development:

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- Intersection 3: Fairburn Road (SR 70/154/166) at Valley Road / Proposed Site Driveway
 - On the site, construct one (1) northbound shared left-turn/through lane and one (1) northbound right-turn lane exiting the site onto Fairburn Road (SR 70/154/166) and one (1) ingress lane entering the site.
 - Along Fairburn Road (SR 70/154/166), construct one (1) eastbound right-turn lane with 250 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 mph road.
 - Along Fairburn Road (SR 70/154/166), construct one (1) westbound left-turn lane with 310 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 mph road.

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6.0 IDENTIFICATION OF PROGRAMMED PROJECTS

According to ARC's Regional Transportation Program (RTP), the GDOT Statewide TIP (STIP), Atlanta Region's Plan, GDOT's Construction Work Program, and Douglas County's programmed projects, two (2) projects are programmed or planned to be completed. The completion dates of these projects are after the build-out date. The identified projects are listed in **Table 10** below.

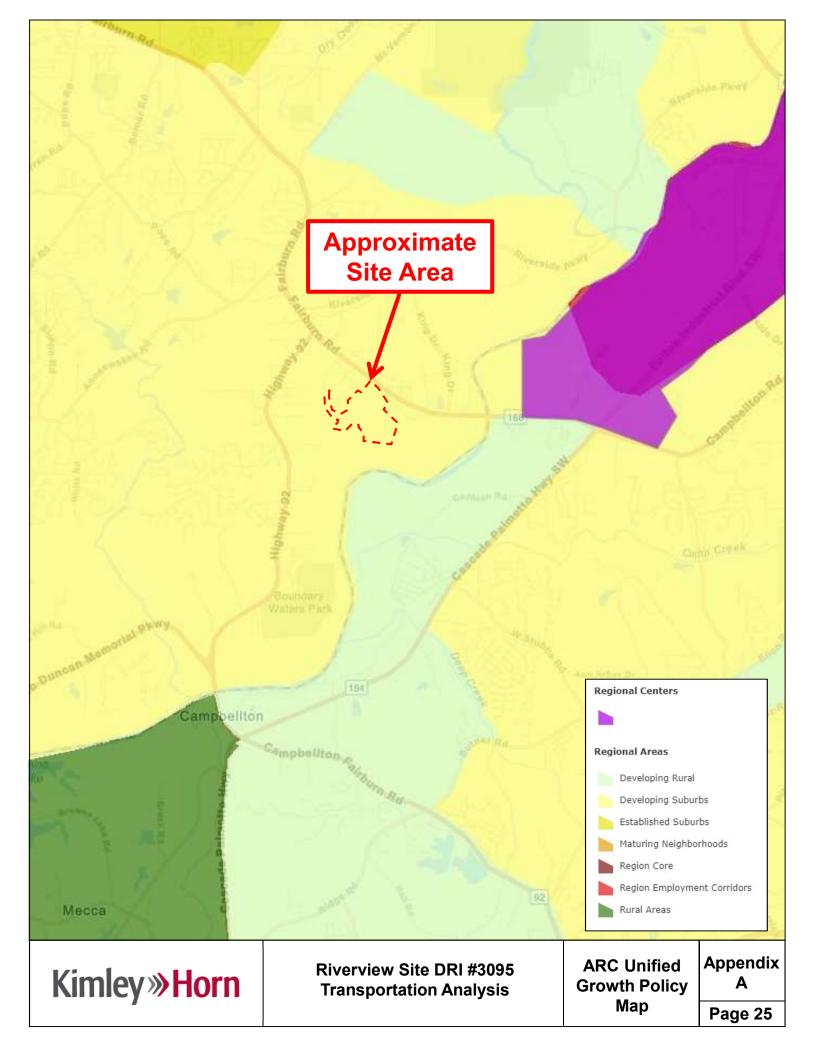
	Table 10: Programmed Improvements							
#	# Year Project ID Description							
1	2040	DO-019	Widen Fairburn Road (SR 166) from 2 to 4 lanes from Old Lower River Road to SR 70					
2	TBD	CHC Regional Trail	This long-range project includes portions of four counties (Carroll, Coweta, Douglas, and Fulton) and the City of Chattahoochee Hills. A 98-mile trail is planned to interconnect all parts of the CHC (Chattahoochee Hill Country Regional Greenway Trail)					

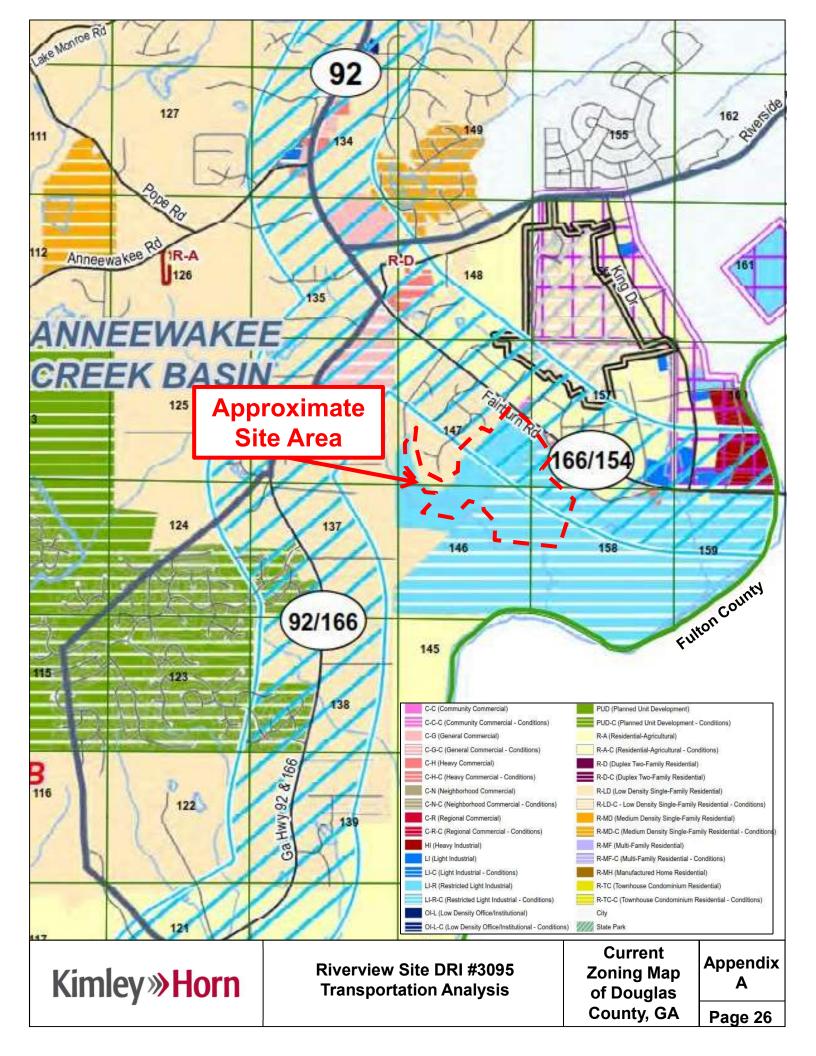
The available fact sheets of the proposed and planned projects can be found in **Appendix E**.

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APPENDIX A

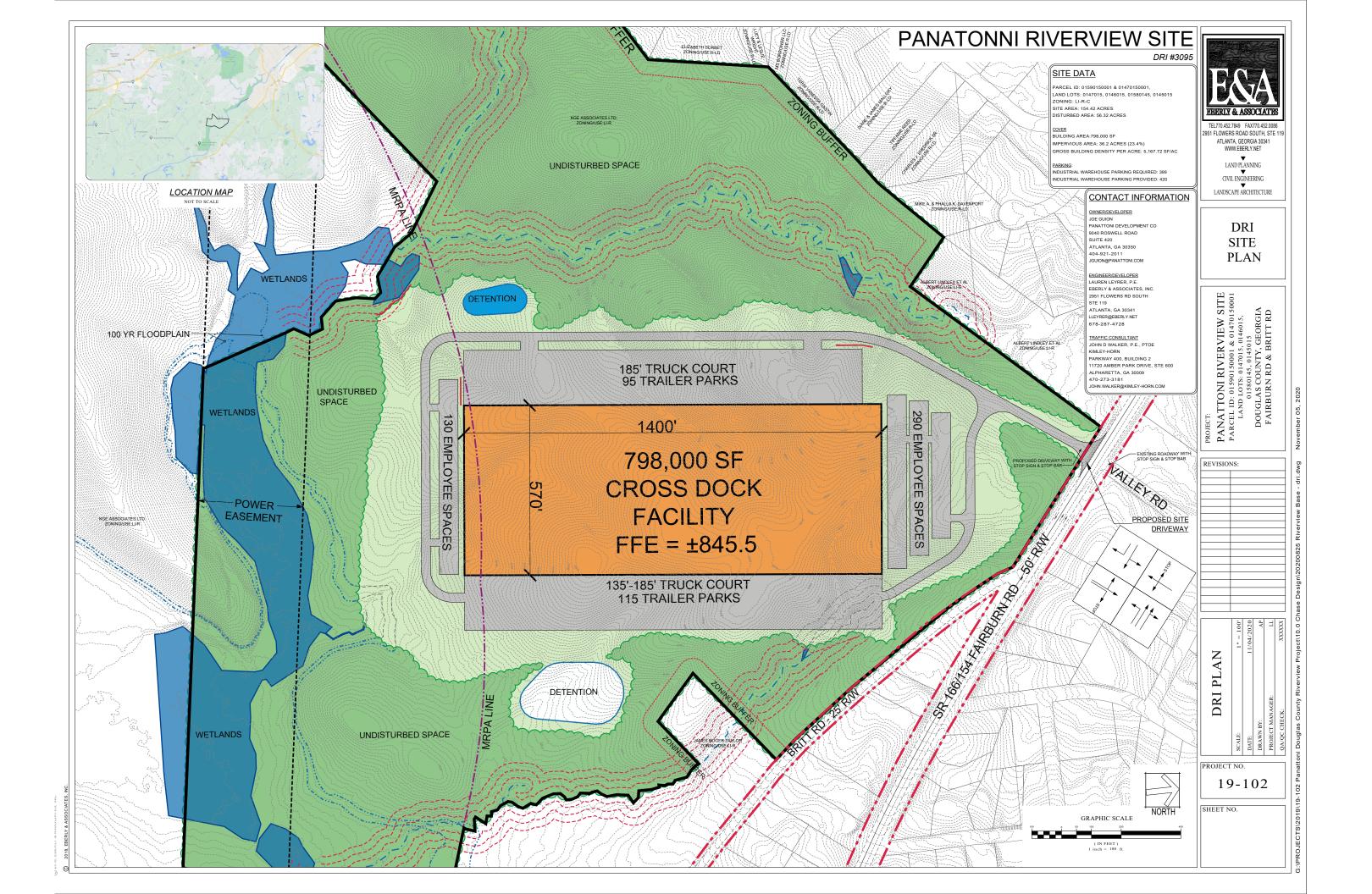
Land Use and Zoning Maps





APPENDIX B

Proposed Site Plan



APPENDIX C

Trip Generation Analysis

Trip Generation Analysis (10th Ed.) Riverview Site DRI #3095 Douglas County, GA

Land Use	Intensity	Daily	AM	Peak H	our	PM Peak Hour		
	_	Trips	Total	In	Out	Total	ln	Out
Proposed Site Traffic								
150 Warehousing	798,000 s.f.	1,306	121	93	28	124	33	91
Gross Trips		1,306	121	93	28	124	33	91
Truck Trips (ITE 10th Edition Supplement) Mixed-Use Reductions		438 <i>0</i>	16 <i>0</i>	8 0	8 0	24 0	12 <i>0</i>	12 0
Alternative Mode Reductions Adjusted Truck Trips		0 438	0 16	<i>0</i> 8	0 8	0 24	0 12	0 12
Car Trips (Total Non-Truck Trips)		868	105	85	20	100	21	79
Mixed-Use Reductions Alternative Mode Reductions Adjusted Car Trips		0 0 868	0 0 105	0 0 85	0 0 20	0 0 100	0 0 21	0 0 79
/ Agustou dui Tripo			100	- 00	20	100		70
Mixed-Use Reductions - TOTAL		0	0	0	0	0	0	0
Alternative Mode Reductions - TOTAL		0	0	0	0	0	0	0
Pass-By Reductions - TOTAL		0	0	0	0	0	0	0
New Trips		1,306	121	93	28	124	33	91
Driveway Volumes		1,306	121	93	28	124	33	91

c:\users\danielle.kronowski\kh\fats - 013527001_riverview site dri - douglas county - march 2020_phase ii\analysis\[10-20-2020_riverview_phase ii_analysis.xls]trip generation (10th edition)

APPENDIX D

Intersection Volume Worksheets

INTERSECTION VOLUME DEVELOPMENT
Intersection 1
Intersection 1: Fairburn Rd @ SR 70/154/166 / Old Lower River Rd
AM PEAK HOUR

	SR 70/154/166			Old l	Lower Riv	er Rd			urn Rd	Fairburn Rd				
	<u>N</u>	orthbour	ıd	<u>S</u>	outhboun				ound		<u> </u>	Vestboun	<u>d</u>	
Description	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right	Left	Through	Right	
Observed 2018 Traffic Volumes	601	91	98	15	72	52	14	20	794	532	31	289	23	
Pedestrians														
Conflicting Pedestrians	0		0	0		0		0		0	0		0	
Heavy Vehicles	10	0	0	0	0	0	0	0	10	18	1	7	0	
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	2%	2%	
Peak Hour Factor		0.92			0.92			0.	92		0.92			
Adjustment	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	
Adjusted 2020 Volumes	625	95	102	16	75	54	15	21	826	553	32	301	24	
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Campbellton Rd Trips (DRI # 2791) - Car Trips									17			5		
Campbellton Rd Trips (DRI # 2791) - Truck Trips									6			2		
2023 Background Traffic	690	105	113	18	83	60	17	23	935	611	35	339	26	
2023 No-Build Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	2%	
Project Trips														
Trip Distribution IN			5%						25%					
Trip Distribution OUT											5%	25%		
Truck Trips	0	0	0	0	0	0	0	0	2	0	0	2	0	
Trip Distribution IN			15%						25%					
Trip Distribution OUT	<u> </u>		1370						2370		15%	25%		
Car Trips	0	0	13	0	0	0	0	0	21	0	3	5	0	
	Ť	Ť	-15	Ť	Ŭ	Ť	Ť			Ť			- V	
Total Project Trips	0	0	13	0	0	0	0	0	23	0	3	7	0	
2023 Buildout Total	690	105	126	18	83	60	17	23	958	611	38	346	26	
2023 Build Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	2%	

PM PEAK HOUR

	SI	R 70/154/1	.66	Old	Lower Riv	er Rd		Fairb	urn Rd		Fairburn Rd		
	<u>N</u>	orthbour	<u>1d</u>	<u>s</u>	outhboun	<u>ıd</u>		Eastl	ound		7	Westboun	<u>d</u>
Description	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right	Left	Through	Right
Observed 2018 Traffic Volumes	629	13	46	8	99	17	13	15	383	673	97	1,041	9
Pedestrians													
Conflicting Pedestrians	0		0	0		0		0		0	0		0
Heavy Vehicles	18	0	2	0	0	0	0	0	12	20	1	- 11	0
Heavy Vehicle %	3%	2%	4%	2%	2%	2%	2%	2%	3%	3%	2%	2%	2%
Peak Hour Factor		0.93			0.93			0.	93				
Adjustment	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
Adjusted 2020 Volumes	654	14	48	8	103	18	14	16	398	700	101	1083	9
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104
Campbellton Rd Trips (DRI # 2791) - Car Trips									6			17	
Campbellton Rd Trips (DRI # 2791) - Truck Trips									2			6	
2023 Background Traffic	722	15	53	9	114	20	15	18	447	773	112	1,219	10
2023 No-Build Heavy Vehicle %	3%	2%	4%	2%	2%	2%	2%	2%	4%	3%	2%	2%	2%
Project Trips													
Trip Distribution IN			5%						25%				
Trip Distribution OUT											5%	25%	
Truck Trips	0	0	1	0	0	0	0	0	3	0	1	3	0
Trip Distribution IN			15%						25%				
Trip Distribution OUT											15%	25%	
Car Trips	0	0	3	0	0	0	0	0	5	0	12	20	0
Total Project Trips	0	0	4	0	0	0	0	0	8	0	13	23	0
2023 Buildout Total	722	15	57	9	114	20	15	18	455	773	125	1,242	10
2023 Build Heavy Vehicle %	3%	2%	6%	2%	2%	2%	2%	2%	4%	3%	3%	3%	2%

INTERSECTION VOLUME DEVELOPMENT

Intersection 2

Intersection 2: Cascade Palmetto Highway / Fulton Industrial Blvd @ Campbellton Rd AM PEAK HOUR

Cascade Palmetto Highway Fulton Industrial Blvd Campbellton Rd Campbellton Rd Eastbound Northbound Southbound Westbound Through Through Description Through Through Right Observed 2018 Traffic Volumes 184 432 544 46 161 Pedestrians Conflicting Pedestrians 0 0 0 0 0 0 0 0 Heavy Vehicles 4 Heavy Vehicle % 2% 4% 2% 4% 9% 2% 8% Peak Hour Factor 0.96 0.96 0.96 0.96 1.0404 1.0404 1.0404 1.0404 1.0404 1.0404 1.0404 1.0404 1.0404 1.0404 1.0404 1.0404 Adjustment Adjusted 2020 Volumes 55 908 191 23 117 449 49 234 57 168 566 48 Annual Growth Rate 2.0% 2.0% 2.0% 2.0% 2.0% 2.0% 2.0% 2.0% 2.0% 2.0% 2.0% 2.0% Growth Factor 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 Campbellton Rd Trips (DRI # 2791) - Car Trips 40 17 11 10 Campbellton Rd Trips (DRI # 2791) - Truck Trips 2 3 11 1 6 6 1 2023 Background Traffic 80 1,003 211 33 189 146 512 633 55 54 309 63 2023 No-Build Heavy Vehicle % 4% 9% 4% 2% 27% 8% 7% 3% 5% 15% 2% 2% Project Trips Trip Distribution IN 5% 40% 25% Trip Distribution OUT 40% 25% 5% Truck Trips 0 0 0 0 0 3 3 2 0 0 2 0 Trip Distribution IN 10% 25% 25% Trip Distribution OUT 25% 25% 10% Car Trips 9 0 0 0 0 21 0 21 0 Total Project Trips 9 0 0 0 0 24 8 7 2 0 23 0 2023 Buildout Total 1.003 189 520 640 63

PM PEAK HOUR

4%

	Cascade	Cascade Palmetto Highway			n Industria	l Blvd	Ca	mpbellton	Rd	Ca	mpbellton	Rd
	<u> </u>	orthboun	<u>ıd</u>	<u>s</u>	outhboun	<u>d</u>]	Eastbound	<u>d</u>	<u>y</u>	Westboun	<u>d</u>
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2018 Traffic Volumes	54	233	73	66	768	523	115	292	75	128	596	32
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	27	0	13	21	11	6	7	4	1	7	6
Heavy Vehicle %	2%	12%	2%	20%	3%	2%	5%	2%	5%	2%	2%	19%
Peak Hour Factor		0.96			0.96			0.96			0.96	
Adjustment	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
Adjusted 2020 Volumes	56	242	76	69	799	544	120	304	78	133	620	33
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104
Campbellton Rd Trips (DRI # 2791) - Car Trips	6			17	11	4	33	22	6		14	
Campbellton Rd Trips (DRI # 2791) - Truck Trips	1			9	2	2	19	2			4	
2023 Background Traffic	69	267	84	102	895	607	184	360	92	147	703	36
2023 No-Build Heavy Vehicle %	3%	12%	2%	24%	3%	2%	14%	3%	5%	2%	3%	19%
Project Trips	1											
Trip Distribution IN	5%					40%					25%	
Trip Distribution OUT							40%	25%	5%			
Truck Trips	1	0	0	0	0	5	5	3	1	0	3	0
Trip Distribution IN	10%					25%					25%	
Trip Distribution OUT							25%	25%	10%			
Car Trips	2	0	0	0	0	5	20	20	8	0	5	0
Total Project Trips	3	0	0	0	0	10	25	23	9	0	8	0
2023 Buildout Total	72	267	84	102	895	617	209	383	101	147	711	36
2023 Build Heavy Vehicle %	4%	12%	2%	24%	3%	3%	15%	3%	6%	2%	3%	19%

2023 Build Heavy Vehicle %

INTERSECTION VOLUME DEVELOPMENT

Intersection 3 Intersection 3: Fairburn Rd @ Proposed Site Driveway / Valley Rd AM PEAK HOUR

Proposed Site Driveway Northbound			<u>d</u>	_	Valley Rd Southboun	<u>d</u>		Fairburn R Eastboun	<u>1</u>	Fairburn Rd <u>Westbound</u>		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Estimated 2020 Traffic Volumes	0	0	0	5	0	5	5	944	0	0	406	5
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	0	0	0	0	0	0	10	0	0	4	0
Heavy Vehicle %	0%	0%	0%	2%	0%	2%	2%	2%	0%	0%	2%	2%
Peak Hour Factor		0.93			0.93			0.93		0.93		
Annual Growth Rate	2.0%	2.0%	2.0%					2.0%	2.0%	2.0%	2.0%	
Growth Factor	1.061	1.061	1.061	1.000	1.000	1.000	1.000	1.061	1.061	1.061	1.061	1.000
Campbellton Rd Trips (DRI # 2791) - Car Trips								17			5	
Campbellton Rd Trips (DRI # 2791) - Truck Trips								6			2	
2023 Background Traffic	0	0	0	5	0	5	5	1,025	0	0	438	5
2023 No-Build Heavy Vehicle %	0%	0%	0%	2%	0%	2%	2%	3%	0%	0%	2%	2%
Project Trips												
Trip Distribution IN									30%	70%		
Trip Distribution OUT	30%		70%									
Truck Trips	2	0	6	0	0	0	0	0	2	6	0	0
Trip Distribution IN									40%	60%		
Trip Distribution OUT	40%		60%									
Car Trips	8	0	12	0	0	0	0	0	34	51	0	0
Total Project Trips	10	0	18	0	0	0	0	0	36	57	0	0
2023 Buildout Total	10	0	18	5	0	5	5	1,025	36	57	438	5
2023 Build Heavy Vehicle %	20%	0%	33%	2%	0%	2%	2%	3%	6%	11%	2%	2%

PM PEAK HOUR

	Proposed Site Driveway				Valley Rd			Fairburn R	d	Fairburn Rd			
	1	Northboun	<u>d</u>	<u>s</u>	outhboun			Eastbound	<u>i</u>		Westbound	<u>d</u>	
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	
Estimated 2020 Traffic Volumes	0	0	0	5	0	5	5	454	0	0	1,220	5	
Pedestrians													
Conflicting Pedestrians	0		0	0		0	0		0	0		0	
Heavy Vehicles	0	0	0	0	0	0	0	12	0	0	7	0	
Heavy Vehicle %	0%	0%	0%	2%	0%	2%	2%	3%	0%	0%	2%	2%	
Peak Hour Factor		0.95			0.95			0.95			0.95		
Annual Growth Rate	2.0%	2.0%	2.0%					2.0%	2.0%	2.0%	2.0%		
Growth Factor	1.061	1.061	1.061	1.000	1.000	1.000	1.000	1.061	1.061	1.061	1.061	1.000	
Campbellton Rd Trips (DRI # 2791) - Car Trips								6			14		
Campbellton Rd Trips (DRI # 2791) - Truck Trips								2			4		
2023 Background Traffic	0	0	0	5	0	5	5	490	0	0	1,313	5	
2023 No-Build Heavy Vehicle %	0%	0%	0%	2%	0%	2%	2%	3%	0%	0%	2%	2%	
Project Trips													
Trip Distribution IN									30%	70%			
Trip Distribution OUT	30%		70%										
Truck Trips	4	0	8	0	0	0	0	0	4	8	0	0	
Trip Distribution IN									40%	60%			
Trip Distribution OUT	40%		60%										
Car Trips	32	0	47	0	0	0	0	0	8	13	0	0	
Total Project Trips	36	0	55	0	0	0	0	0	12	21	0	0	
2023 Buildout Total	36	0	55	5	0	5	5	490	12	21	1,313	5	
2023 Build Heavy Vehicle %	11%	0%	15%	2%	0%	2%	2%	3%	33%	38%	2%	2%	

APPENDIX E

Programmed Project Fact Sheets

DO-019

Atlanta Region's Plan RTP (2020) PROJECT FACT SHEET

Short Title	SR 166 (FAIRBURN ROAD / CAMPBELLTON ROAD) WIDENING FROM OLD LOWER RIVER ROAD IN DOUGLAS COUNTY TO SR 70 IN FULTON COUNTY	Riverside PkW)
GDOT Project No.	721770-	
Federal ID No.	STP00-0186-01(022)	Campbella
Status	Long Range	
Service Type	Roadway / General Purpose Capacity	
Sponsor	GDOT	The state of the s
Jurisdiction	Douglas County	ndary 0 0.25 0.5 Miles
Analysis Level	In the Region's Air Quality Conformity Analysis	iters 6/0
Existing Thru Lane	2 LCI	Network Year 2040
Planned Thru Lane	4 Flex	Corridor Length 3.4 miles
Detailed Description a	nd Justification	
The project begins in Dougla	as County on SR 166 east of the intersection with Old Lower	D: D

Phas	se Status & Funding	Status	FISCAL	TOTAL PHASE	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE							
Info	rmation		YEAR	COST	FEDERAL	STATE	BONDS	LOCAL/PRIVATE				
PE	STP - Urban (>200K) (ARC)	AUTH	1992	\$1,602,919	\$1,282,335	\$320,584	\$0,000	\$0,000				
PE	Transportation Funding Act (HB 170)	AUTH	2016	\$500,000	\$0,000	\$500,000	\$0,000	\$0,000				
PE	Transportation Funding Act (HB 170)		LR 2026- 2030	\$1,500,000	\$0,000	\$1,500,000	\$0,000	\$0,000				
ALL	Transportation Funding Act (HB 170)		LR 2031- 2040	\$32,953,312	\$0,000	\$32,953,312	\$0,000	\$0,000				
				\$36,556,231	\$1,282,335	\$35,273,896	\$0,000	\$0,000				

7

Report Generated:

A:C

1/13/2020

HILL COUNTRY TRAIL MAP









