

Transportation Analysis

Kennemore Tract DRI #3404

Forsyth County, Georgia

October 2021

Prepared for:

Northpoint Capital Investment Holdings, LLC.

Prepared by:

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Kimley»Horn

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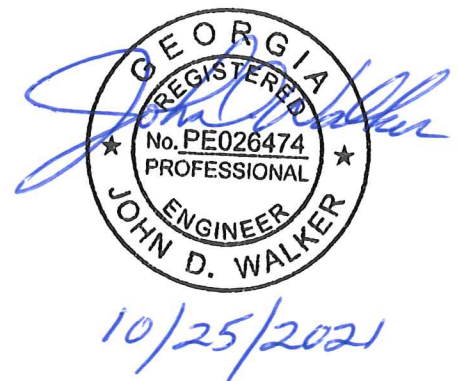
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EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts of the proposed *Kennemore Tract* development located in the Forsyth County, Georgia. The 140.447-acre site is primarily located east of Fowler Road, south of Fowler Hill Road, and north of Union Hill Road. A northern tract is located north of Fowler Hill Road. The site is currently largely undeveloped.

The proposed development will consist of the following land uses and densities contained in **Table 1**. The project is expected to be completed in two (2) phases. Phase 1 is expected to be completed by 2030 (approximately 9 years) and Phase 2 by 2035 (approximately 14 years). Phase 2 considers the full build-out of the site.

Table 1: Proposed Land Use and Density	
Phase 1	
Office	16,040 SF
Townhome	227 units
Phase 2: Full Build-Out	
Office	16,040 SF (total 32,080 SF)
Townhome	45 units (total 272 units)
Single Family	234 SF
Restaurant	16,658 SF
Retail	5,553 SF

The DRI analysis includes an estimation of the overall vehicle trips projected to be generated by the development, also known as gross trips. Mixed-use and pass-by reductions to gross trips are also included in the trip generation, as outlined in the Georgia Regional Transportation Authority (GRTA) Letter of Understanding (dated August 31, 2021).

Capacity analyses were performed for the study intersections under the Estimated 2021, Projected 2030 No-Build (Phase 1), the Projected 2035 No-Build (Phase 2), the Projected 2030 Build (Phase 1), and the Projected 2035 Build (Phase 2) conditions.

- Estimated 2021 conditions represent traffic volumes that were collected in September 2021 with a COVID adjustment factor of 1.02 applied to the PM peak hour. It was determined that no adjustment factor was needed for the AM peak hour.
- Projected 2030 No-Build Conditions (Phase 1) represent the Estimated 2021 traffic volumes grown for nine (9) years using a 1.5% per year growth rate.
- Projected 2035 No-Build Conditions (Phase 2) represent the Estimated 2021 traffic volumes grown for fourteen (14) years using a 1.5% per year growth rate.
- Projected 2030 Build Conditions (Phase 1) represent the Projected 2030 No-Build conditions plus the addition of the project trips that are anticipated to be generated by Phase 1 of the *Kennemore Tract* development.
- Projected 2035 Build Conditions (Phase 2) represent the Projected 2035 No-Build conditions plus the addition of the project trips that are anticipated to be generated by the full-build out of the *Kennemore Tract* development.

The intersection of Union Hill Road at McFarland Parkway (Intersection 1) contains approaches which currently operate at LOS F under the Estimated 2021 conditions.

No-Build (System Improvements)

Due to the low level-of-service (LOS) at the following intersections under the Estimated 2021, Projected 2030 No-Build, and Projected 2035 No-Build conditions, the following intersection improvements are recommended:

- Union Hill Road at McFarland Parkway (Intersection 1)
 - System Improvements (needed to serve background traffic, without the development)
 - Construct one (1) eastbound through lane along McFarland Parkway (creating 3 through lanes).
 - Construct one (1) additional southbound left turn lane along Union Hill Road (creating 3 left-turn lanes).
 - Construct one (1) additional channelized westbound right-turn lane along McFarland Parkway under yield control (creating dual right-turn lanes).

Union Hill Road at McFarland Parkway (Intersection 1) LOS Summary

Overall LOS Standard: D
Approach LOS Standard: D

Overall LOS Standard: D Approach LOS Standard: D			Union Hill Road			Union Hill Road			McFarland Parkway			McFarland Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
PH 1 NO-BUILD (2030) IMPROVED (SIGNAL)	AM	Overall LOS	D (48.6)											
		Approach LOS	D (47.8)			D (43.1)			D (51.9)			D (46.5)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	56	153	69	272	190	0	62	272	0	113	356	46
		95th Queue	107	218	177	307	243	50	107	325	40	267	439	107
	PM	Overall LOS	D (41.5)											
		Approach LOS	D (44.8)			D (48.3)			D (37.8)			D (40.2)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	86	154	28	133	61	0	88	217	0	90	321	196
		95th Queue	147	214	109	167	94	39	130	275	5	140	396	302
PH 2 NO-BUILD (2035) IMPROVED (SIGNAL)	AM	Overall LOS	D (47.8)											
		Approach LOS	D (49.5)			D (47.0)			D (54.2)			D (51.4)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	60	168	88	301	214	0	65	305	0	138	251	0
		95th Queue	112	224	193	364	275	54	103	363	52	300	301	48
	PM	Overall LOS	D (47.6)											
		Approach LOS	D (45.3)			D (48.2)			D (40.2)			D (52.3)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	93	181	36	144	71	0	94	216	0	87	204	302
		95th Queue	155	239	126	185	110	50	139	279	30	134	245	422
PH 1 BUILD (2030) IMPROVED (SIGNAL)	AM	Overall LOS	D (47.7)											
		Approach LOS	D (47.1)			D (44.4)			D (53.7)			D (46.9)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	56	158	30	281	198	0	65	283	0	116	347	42
		95th Queue	106	213	120	335	255	54	117	343	8	219	429	219
	PM	Overall LOS	D (43.0)											
		Approach LOS	D (50.6)			D (55.0)			D (37.0)			D (42.0)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	86	174	34	139	69	0	91	205	0	82	302	261
		95th Queue	148	234	124	177	106	49	134	254	25	127	373	373
PH 2 BUILD (2035) IMPROVED (SIGNAL)	AM	Overall LOS	D (51.0)											
		Approach LOS	D (52.3)			D (46.0)			D (54.8)			D (53.9)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	60	181	89	328	224	2	81	302	0	151	393	75
		95th Queue	112	240	195	404	285	59	153	358	51	318	511	150
	PM	Overall LOS	D (52.8)											
		Approach LOS	D (54.9)			D (54.6)			D (48.9)			D (53.8)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	93	202	22	162	78	0	122	233	0	93	333	365
		95th Queue	156	271	112	201	118	40	212	304	3	143	410	525

Build (Site Access Improvements)

No additional improvements are recommended to serve the Projected 2030 Build conditions. All site driveways are projected to operate at an acceptable LOS under the Projected 2030 and 2035 conditions.

The following should be considered to serve the projected 2035 Build Conditions (Phase 2):

- Mullinax Road at Fowler Road (Intersection 3)
 - Construct one (1) additional southbound left turn lane along Fowler Road (creating dual left-turn lanes).
- Fowler Road at Fowler Hill Road (Intersection 5)
 - Construct one (1) westbound right turn lane along Fowler Hill Road.

Mullinax Road at Fowler Road (Intersection 3) LOS Summary

Overall LOS Standard: D Approach LOS Standard: D			-			Fowler Road			Mullinax Road			Mullinax Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	U	T	R
PH 2 BUILD (2035) IMPROVED (SIGNAL)	AM	Overall LOS	C (24.2)											
		Approach LOS				C (25.3)			B (12.9)			C 34.8)		
		Storage						125	250			230		200
		50th Queue				153		0	13	314		0	412	36
		95th Queue				181		33	30	401		0	560	85
	PM	Overall LOS	B (10.4)											
		Approach LOS				C (31.4)			A (3.7)			A (9.7)		
		Storage						125	250			230		200
		50th Queue				52		0	3	43		0	124	17
		95th Queue				85		23	11	71		0	322	106

Fowler Road at Fowler Hill Road (Intersection 5) LOS Summary

Overall LOS Standard: D Approach LOS Standard: D			Fowler Road			Fowler Road			-			Fowler Hill Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
PH 2 BUILD (2035) (TWSC)	AM	Overall LOS	(1.2)											
		Approach LOS	A (0.0)			A (0.3)						C (21.0)		
		Storage												
		50th Queue		-	-	-	-				-		-	
		95th Queue		-	-	30	-				30		30	
	PM	Overall LOS	(1.5)											
		Approach LOS	A (0.0)			A (1.5)						C (16.5)		
		Storage												
		50th Queue		-	-	-	-				-		-	
		95th Queue		-	-	30	-				30		30	

- The following site driveway improvements should be constructed as the site driveways are constructed:
 - Fowler Hill Road at Driveway E / Driveway F (Intersection 7)
 - Construct one (1) eastbound right turn lane along Fowler Hill Road entering the site.
 - Fowler Road at Site Driveway B (Intersection 8)
 - Construct one (1) southbound left-turn lane and one (1) northbound right-turn lane along Fowler Road entering the site.
 - Mullinax Road at Site Driveway A (Intersection 9)
 - Construct one (1) westbound right-turn lane along Mullinax Road entering the site.
 - Union Hill Road at Site Driveway C (Intersection 10)
 - Construct one (1) eastbound left-turn lane along Union Hill Road entering the site.

1.0 PROJECT DESCRIPTION

1.1 Introduction

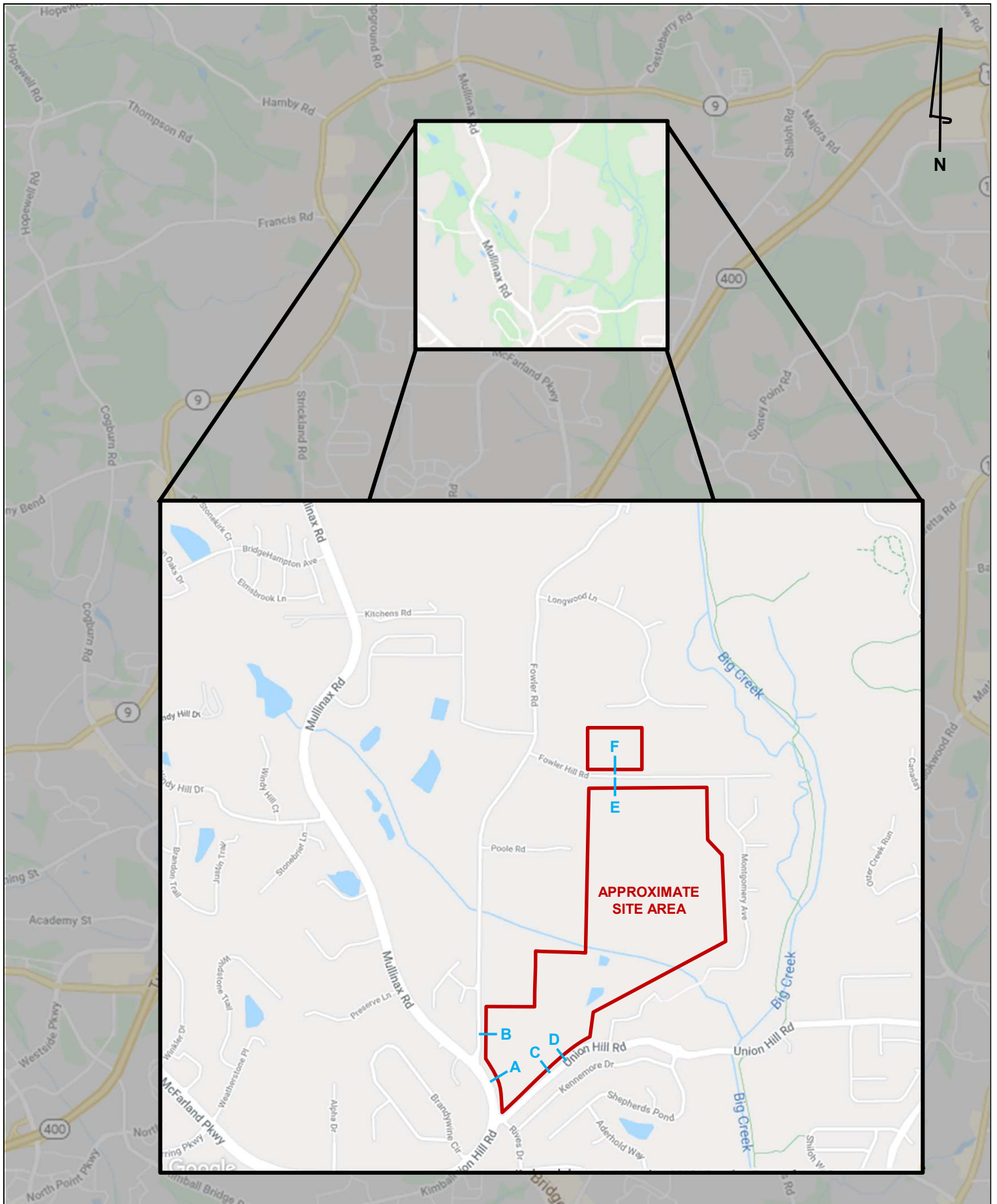
This report presents the analysis of the anticipated traffic impacts of the proposed *Kennemore Tract* development located in the Forsyth County, Georgia. The approximate 140.447-acre site is located east of Fowler Road, south of Fowler Hill Road, and north of Union Hill Road with a northern tract located north of Fowler Hill Road. The site is currently largely undeveloped. The project site is currently zoned NS (Neighborhood Shopping), and A1 (Agricultural). The zoning application was submitted on July 9, 2021. The site is proposed to be rezoned to MPD (Master Plan District). **Figure 1** provides a location map of the project site. **Figure 2** provides an aerial view of the project site and surrounding area.

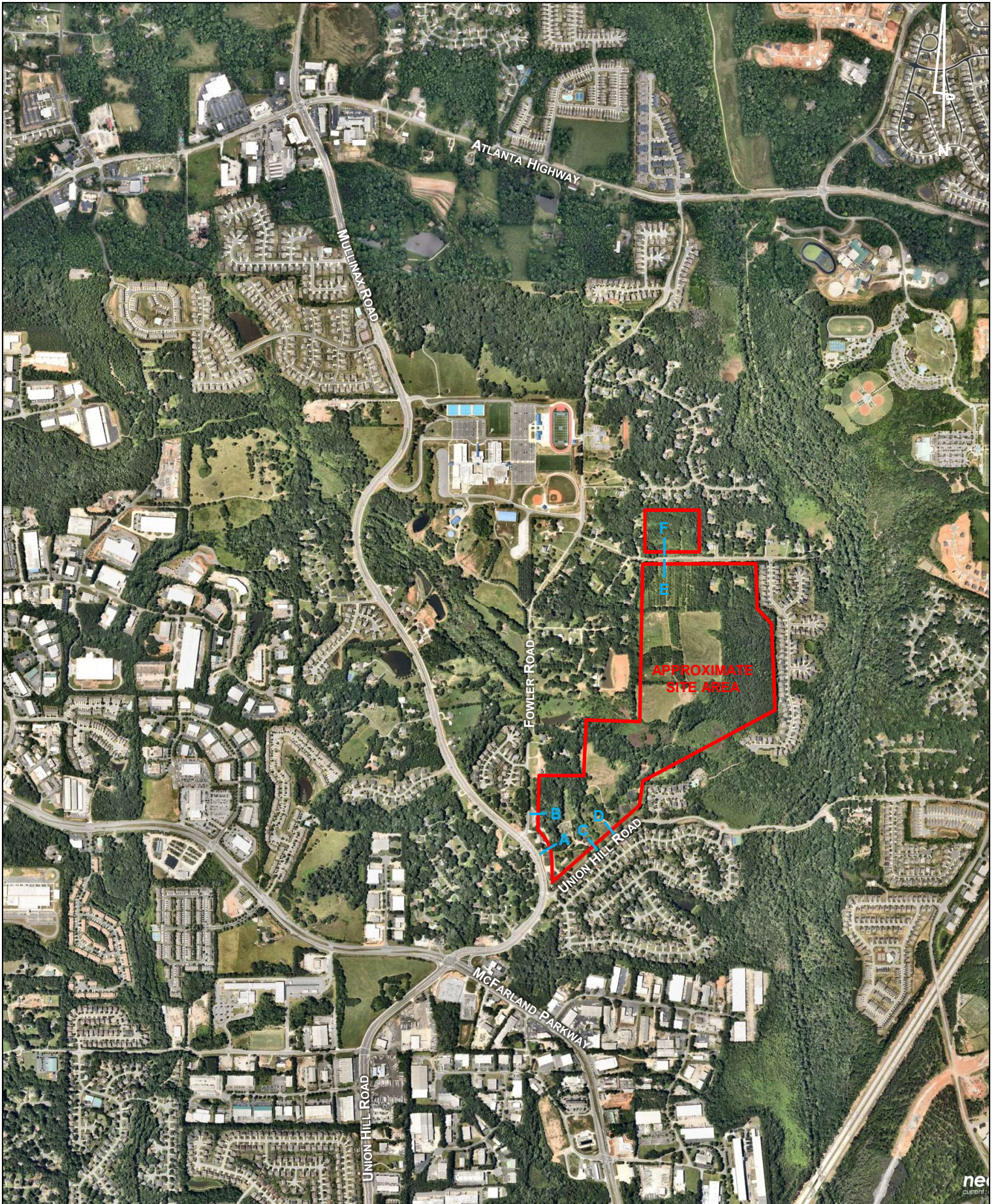
The site is currently largely undeveloped. The proposed development will consist of the following land uses and densities contained in **Table 2**. The project is expected to be completed in two (2) phases. Phase 1 is expected to be completed by 2030 (approximately 9 years) and Phase 2 by 2035 (approximately 14 years). Phase 2 considers the full build-out of the site.

Table 2: Proposed Land Use and Density	
Phase 1	
Office	16,040 SF
Townhome	227 units
Phase 2: Full Build-Out	
Office	16,040 SF (total 32,080 SF)
Townhome	45 units (total 272 units)
Single Family	234 SF
Restaurant	16,658 SF
Retail	5,553 SF

A reference of the proposed site plan is provided in **Appendix A**. A full-sized site plan consistent with GRTA's Site Plan Guidelines is also being submitted as part of the review package.

The project is considered 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 square feet in an established suburb. The DRI was formally triggered with the filing of the Initial DRI Information (Form 1) on July 28, 2021 by Forsyth County. This transportation analysis includes all inputs and methodologies discussed at the DRI Methodology Meeting with GRTA, ARC, and other stakeholders. The inputs and methodologies are outlined in the GRTA Letter of Understanding (LOU), dated August 31, 2021.





1.2 Site Access

As currently envisioned, the proposed development will be accessible via six (6) new access points:

1. **Driveway A** – a proposed right-in/right-out driveway located along Mullinax Road approximately 400 feet north of the intersection of Union Hill Road at Mullinax Road to operate under side street stop control. Driveway A will primarily provide access to the office, retail, restaurant, and townhome residential land uses. The medium-density single family residential land use will also be accessible from Driveway A.
2. **Driveway B** – a proposed full-movement driveway located along Fowler Road approximately 400 feet north of the intersection of Mullinax Road at Fowler Road to operate under side street stop control. Driveway B will primarily provide access to the office, retail, restaurant, and townhome residential land uses. The medium-density single family residential land use will also be accessible from Driveway B.
3. **Driveway C** – a proposed full-movement driveway located along Union Hill Road approximately 600 feet east of the intersection of Union Hill Road at Mullinax to operate under side street stop control. Driveway C will primarily provide access to the office, retail, restaurant, and townhome residential land uses. The medium-density single family residential land use will also be accessible from Driveway C.
4. **Driveway D** – a proposed full-movement driveway located along Union Hill Road approximately 1,000 feet east of the intersection of Union Hill Road at Mullinax to operate under side street stop control. Driveway D will primarily provide access to the office, retail, restaurant, and townhome residential land uses. The medium-density single family residential land use will also be accessible from Driveway D.
5. **Driveway E** – a proposed full-movement driveway located along Fowler Hill Road to align with Driveway F to operate under side street stop control. Driveway E will primarily provide access to the medium-density single family residential land use. The office, retail, and restaurant and townhome residential land uses will also be accessible from Driveway E.
6. **Driveway F** – a proposed full-movement driveway located along Fowler Hill Road to align with Driveway E and operate under side street stop control. Site Driveway F will provide access to the low-density single family residential land use in the site.

1.3 Internal Circulation Analysis

The site consists of two (2) separate areas: the main site area and the northern tract.

The proposed main site area is located south of Fowler Hill Road. In the main site area, the office, retail, and restaurant land uses are primarily along the southern site frontage, while the residential land uses make up the northern and central portions of the site. Driveway A, Driveway B, Driveway C, Driveway D, and Driveway E serve the main site area and internal connections are provided to access the entire main area from each driveway.

The proposed northern tract consists of low-density single-family residential land use. It is located north of Fowler Hill Road and is served by Site Driveway F. No internal connections are provided to access the rest of the site from this area.

1.4 Parking

The current number of total site parking spaces to be provided are listed below in **Table 3**. The site development is currently in progress and the number of parking provided is subject to change.

Table 3: Proposed Parking			
Land Use	Minimum	Maximum	Proposed
Single Family (attached or detached)	1,012 2 per unit	1,265*	Residential 1,043 parking spaces
Office	107 1 per 300 SF	134*	Mixed-Use 325 parking spaces
Shopping Center	23 1 per 250 SF	29*	
Restaurant	167 1 per 100 SF	209*	
Total	1,309	1,637*	1,368 (subject to change)

*Parking shall not be provided in quantities greater than 25 percent above the required minimum.

Additional parking details are provided on the proposed site plan in **Appendix A**.

1.5 Alternative Transportation Facilities

Pedestrian sidewalk facilities are currently provided along Mullinax Road. Pedestrian facilities will be provided throughout the development. Additionally, the Big Creek Greenway is located approximately ½ mile east of the site. The Greenway can be accessed via Union Hill Road and Fowler Hill Road.

1.6 Enhanced Focus Area for Dense Urban Environments

Per Section 3.2.4.2 of the GRTA *Development of Regional Impact Review Procedures* the Kennemore Tract development does not qualify for a “Dense Urban Environment Enhanced Focus Area” review, due to its location in Forsyth County.

2.0 TRAFFIC ANALYSES, METHODOLOGY AND ASSUMPTIONS

2.1 Study Network Determination

The study area was determined at the methodology meeting with input from GRTA, ARC, and other local agency stakeholders. The study includes the following six (6) off-site intersections described in **Table 4** and shown visually in **Figure 3**.

Table 4: Intersection Control Summary		
Intersection	Jurisdiction	Control
1. Union Hill Road at McFarland Parkway	Forsyth County	Signalized
2. Mullinax Road at Union Hill Road	Forsyth County	Signalized (Green-T)
3. Mullinax Road at Fowler Road	Forsyth County	Signalized
4. Union Hill Road at Shepherds Pond	Forsyth County	Unsignalized (Roundabout)
5. Fowler Road at Fowler Hill Road	Forsyth County	Unsignalized (TWSC)
6. Atlanta Highway (SR 9) at Fowler Road	GDOT	Unsignalized (TWSC)

2.2 Existing Roadway Facilities

Roadway classification descriptions and estimated Annual Average Daily Traffic (AADT) for roadway segments within the study network are provided in **Table 5** (bolded roadways are adjacent to the site).

Table 5: Roadway Classifications			
Roadway	Lanes	AADT	GDOT Functional Classification
Mullinax Road	4	-	Local
Union Hill Road	4/2*	4,490**	Local
Fowler Road	2	-	Local
Fowler Hill Road	2	-	Local
McFarland Parkway	4	23,100	Minor Arterial
Atlanta Highway (SR 9)	2	15,400	Minor Arterial
Shepherds Pond	2	-	Local

*Union Hill Road is 4 lanes south of Mullinax Road and 2 lanes east of Mullinax Road

**East of Mullinax Road.

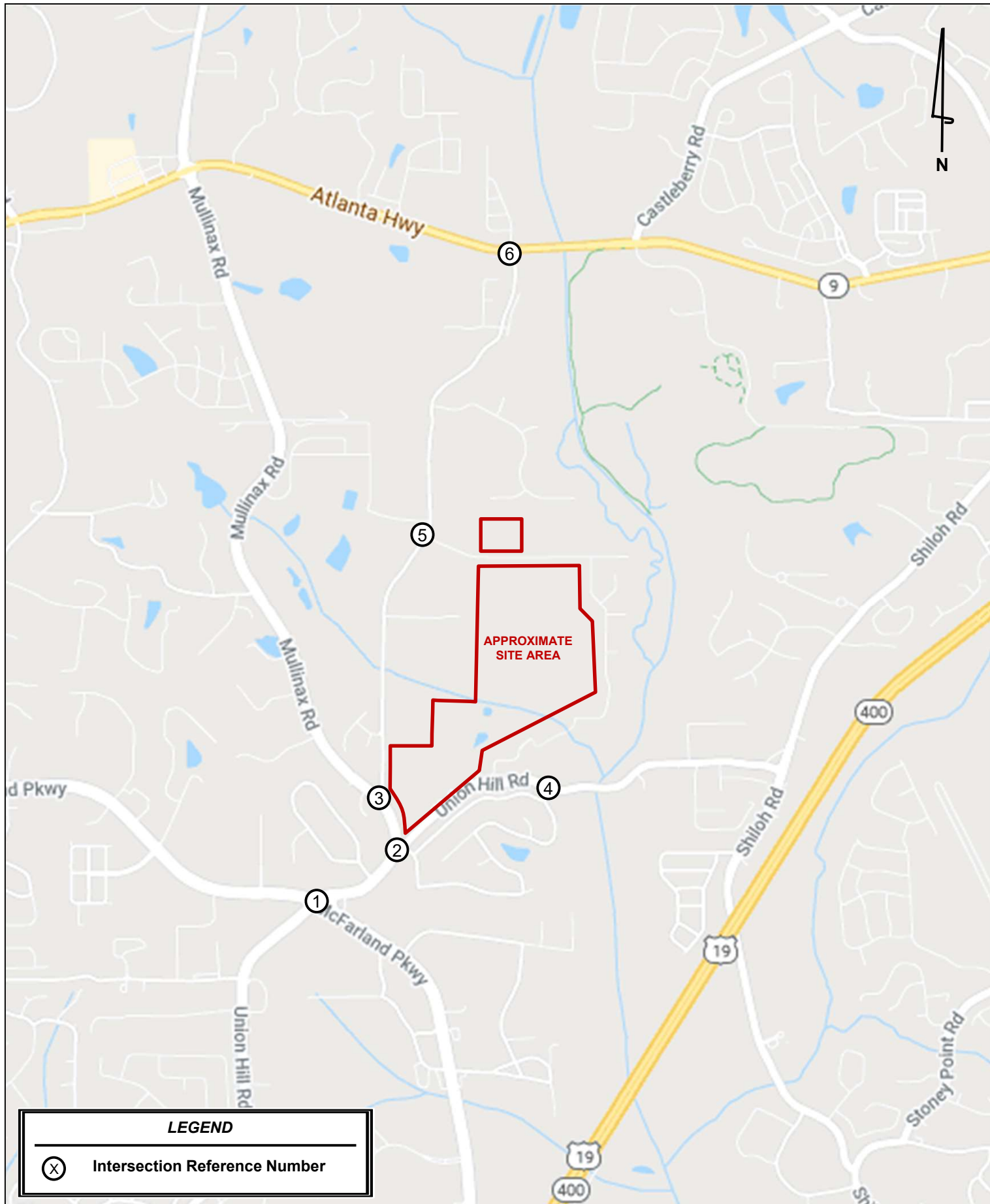


Figure 3: Study Intersections

2.3 Traffic Data Collection and Calibration

New traffic counts were collected at all of the study intersections on Tuesday, September 28, 2021. The newly collected counts were then calibrated using calibration factors to account for the potential impacts of COVID-19 to typical traffic volumes and patterns.

Historical data was used to develop the Estimated 2021 traffic conditions. Average Daily Traffic (ADT) volumes collected in 2021 and Annual Average Daily Traffic (AADT) volumes from GDOT's Traffic Analysis & Data Application (TADA) were used to compare typical traffic volumes in the vicinity of the project site. The volume comparison is shown in **Table 6** based on GDOT TADA count data and 2021 ADT collected for this project. It was determined that no adjustment factor is needed for the AM turning movements and an adjustment factor of 1.02 is needed for the PM turning movement counts. These adjustment factors were determined by taking a weighted average of the directional factors at GDOT Count Station 117-0009 and 117-8052.

Table 6: Traffic Count Comparison and Adjustment Calculations

Table 6: Traffic Count Comparison and Adjustment Calculations										
Count Station	Location	GDOT					Collected			
		Two-Way AADT	ADT Date	ADT	AM Peak	PM Peak	2021 ADT	AM Peak	PM Peak	
117-0009	Atlanta Highway (SR 9) e/o Mars Hill Road	15,400	Feb 2019	16,999	1,248	1,532	15,908	1,063	1,450	
117-8052	Union Hill Road e/o Double Branches Drive	5,110	May 2016	4,668	440	464	5,234	668	502	
Difference Calculations		ADT			AM Peak			PM Peak		
		Vol	Percent	Factor	Vol	Percent	Factor	Vol	Percent	Factor
117-0009	Atlanta Highway (SR 9) e/o Mars Hill Road	-1091	-6%	1.07	-185	-15%	1.17	-82	-5%	1.06
117-8052	Union Hill Road e/o Double Branches Drive	+566	+12%	0.86	+38	+8%	0.66	+38	+8%	0.92
Average				1.02	Average		0.98	Average		1.02

Traffic count peak hours for all the study intersections are shown in **Table 7**.

Table 7: Traffic Count Summary

Intersection		AM Peak Hour	PM Peak Hour
1.	McFarland parkway at Union Hill Road	7:45 – 8:45 AM	4:30 – 5:30 PM
2.	Union Hill Road at Mullinax Road	7:30 – 8:30 AM	4:30 – 5:30 PM
3.	Mullinax Road at Fowler Road	7:30 – 8:30 AM	4:30 – 5:30 PM
4.	Union Hill Road at Shepherds Pond	7:30 – 8:30 AM	4:00 – 5:00 PM
5.	Fowler Road at Fowler Hill Road	7:30 – 8:30 AM	4:30 – 5:30 PM
6.	Fowler Road at Atlanta Highway (SR 9)	7:30 – 8:30 AM	4:45 – 5:45 PM

The collected peak hour turning movement traffic counts are available upon request.

2.4 Background Growth

Background traffic is defined as expected traffic on the roadway network in future year(s) absent the construction and opening of the proposed *Kennemore Tract* development. Background traffic can include a base growth rate based on historical count data and population growth data as well as trips anticipated from nearby or adjacent other projects.

Based on methodology outlined in the GRTA Letter of Understanding (LOU), a 1.5% per year background traffic growth rate for Phase 1 from 2021 to 2030 (9 years) and for Phase 2 from 2021 to 2035 (14 years) was used throughout the study network.

2.5 Programmed and Planned Projects

Programmed and planned projects near the project site were researched to account for any improvements or modifications within the study network before or by the build-out year of the development. The programmed and planned projects were discussed in the methodology meeting with GRTA, ARC, and other local stakeholders.

One project was identified to include in the capacity analyses. The Atlanta Highway (SR 9) project includes the widening of Atlanta Highway (SR 9) from existing two (2) lanes to four (4) lanes with raised median and urban shoulders. The intersection of Atlanta Highway (SR 9) at Fowler Road (Intersection 6) is proposed to be converted to an RCUT (sidestreet left-turn restricted). This project is taken into consideration in the analysis of the No-Build 2030, No-Build 2035, Build 2030, and Build 2035 conditions. The project details are outlined in **Table 8**.

Table 8: Programmed Projects							
Project Name	From / To Points:	Sponsor	GDOT PI #	ARC ID # (TIP)	Design FY	ROW / UTL FY	CST FY
Atlanta Highway (SR 9): Segment 3 - Widening	Post Road (SR 371) / Peachtree Parkway (SR 141)	GDOT	0008357	FT-001C	2019	2018	2022

*Project information was obtained from GeoPI (GDOT) and the Atlanta Region's Plan (ARC)

Available fact sheets for projects listed in the table above can be found in **Appendix D**.

2.6 Level-of-Service Overview

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. LOS analyses were conducted at all intersections within the study network using *Synchro 11*. Existing traffic signal phasing and timing data were retrieved for available intersections. Roundabouts were analyzed using *SIDRA INTERSECTION 9.0*. *SIDRA* uses the gap acceptance methodology for the roundabout capacity model.

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

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

2.7 Level-of-Service Standards

For the purposes of this traffic analysis, a LOS standard of D was assumed for all study intersections, per the GRTA Letter of Understanding.

3.0 TRIP GENERATION

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. Reductions to gross trips are also considered in the analysis, including mixed-use reductions and alternative transportation mode reductions.

Mixed-use reductions occur when a site has a combination of different land uses that interact with one another. For example, people living in a residential development may walk to the restaurants and retail instead of driving off-site or to the site. This reduces the number of vehicle trips that will be made on the roadway, thus reducing traffic congestion. Mixed-use reductions were applied to the analysis.

Alternative modes reductions are taken when a site can be accessed by modes other than vehicles (walking, bicycling, transit, etc.). No alternative modes reductions were taken in this analysis per the LOU.

Pass-by reductions are taken for a site when traffic normally traveling along a roadway may choose to visit a retail or restaurant establishment that is along the vehicle's path. These trips were already on the road and would therefore only be new trips on the driveways. Pass-by trips were taken for the retail and restaurant land-uses based on ITE rates.

Table 9 summarizes the gross trip generation, reductions, net trip generation, and driveway volumes for the proposed *Kennemore Tract* development.

Table 9: Trip Generation								
Land Use	Density	Daily Traffic			AM Peak Hour		PM Peak Hour	
		Total	Enter	Exit	Enter	Exit	Enter	Exit
Phase 1								
221 – Multi-Family Housing (Mid-Rise)	227 units	1,236	618	618	20	56	59	38
710 – General Office Building	16,040 S.F.	180	90	90	36	6	3	17
Gross Project Trips		1,416	708	708	56	62	62	55
Mixed-Use Reductions		-4	-2	-2	-1	-1	-2	-2
Alternative Mode Reductions		-0	-0	-0	-0	-0	-0	-0
Pass-By Reductions		-0	-0	-0	-0	-0	-0	-0
Net New Trips		1,412	706	706	55	61	60	53
Phase 2: Full Build-Out (Includes Phase 1)								
210 – Single-Family Detached Housing	234 units	2,274	1,137	1,137	43	128	145	85
221 – Multifamily Housing (Mid-Rise)	272 units	1,480	740	740	24	67	71	45
710 – General Office Building	32,080 S.F.	352	176	176	49	8	6	33
820 – Shopping Center	5,553 S.F.	210	105	105	3	2	10	11
932 – High-Turnover (Sit-Down) Restaurant	16,658 S.F.	1,868	934	934	91	75	101	62
Gross Project Trips		6,184	3,092	3,092	210	280	333	236
Mixed-Use Reductions		-552	-276	-276	-37	-37	-45	-45
Alternative Mode Reductions		-0	-0	-0	-0	-0	-0	-0
Pass-By Reductions		-706	-380	-380	-0	-0	-29	-29
Net New Trips		4,872	2,436	2,436	173	243	259	162

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

4.0 TRIP DISTRIBUTION AND ASSIGNMENT

The distribution 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, and other local stakeholders.

The anticipated distribution and assignment of the trips throughout the study roadway network for residential land uses for Phase 1 and Phase 2 are shown in **Figure 4** and **Figure 5**, respectively. The anticipated assignment of the trips throughout the study roadway network for office land use are shown in **Figure 6**. The anticipated assignment of the trips throughout the study roadway network for retail/restaurant land uses are shown in **Figure 7**. These trip assignment percentages were applied to the net project trips expected to be generated by the development, and the volumes were assigned to the roadway network. The peak hour project trips for Phase 1 and Phase 2 are shown by turning movement throughout the study network in **Figure 8** and **Figure 9**, respectively.

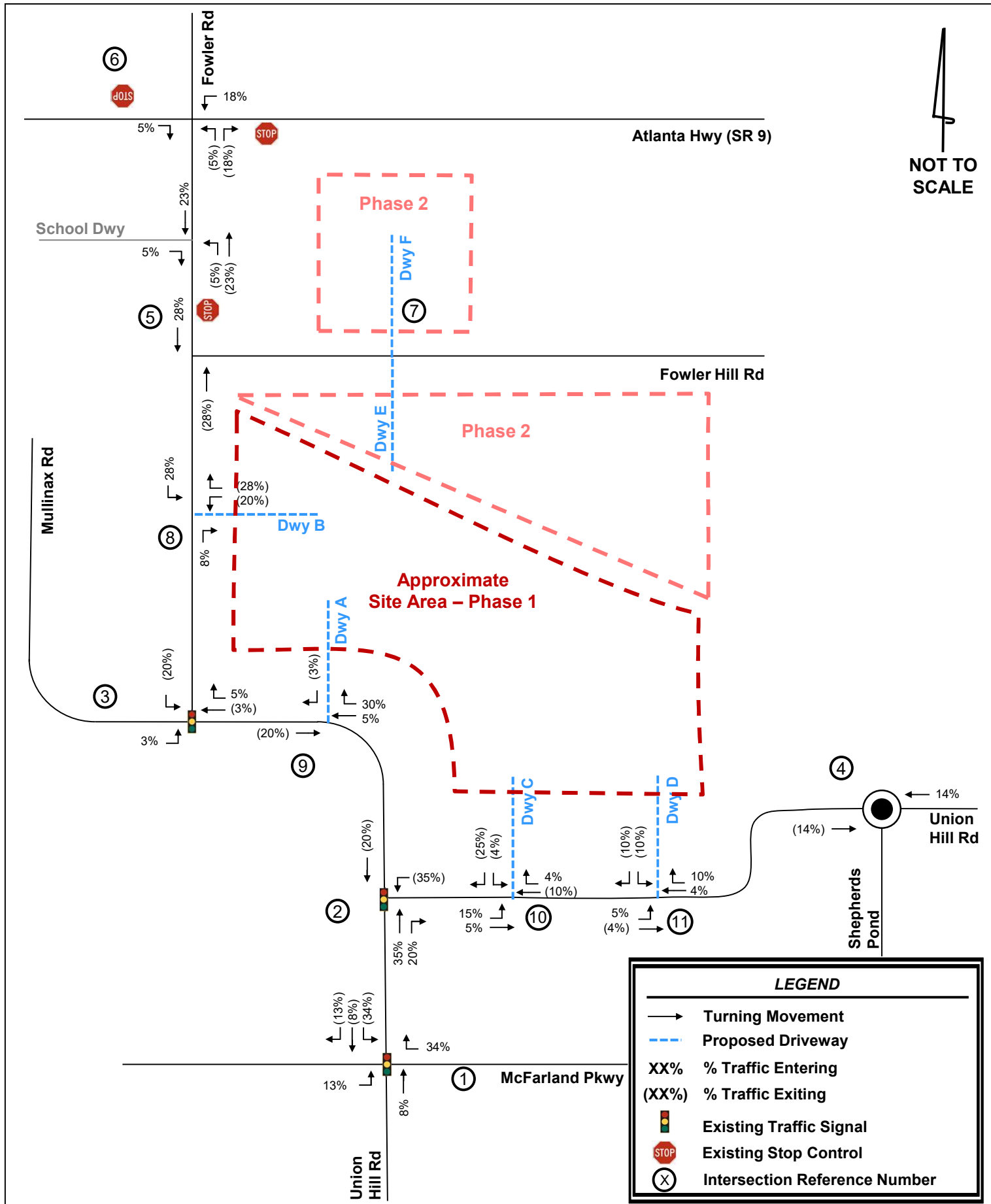
Detailed intersection volume worksheets are provided in **Appendix C**.

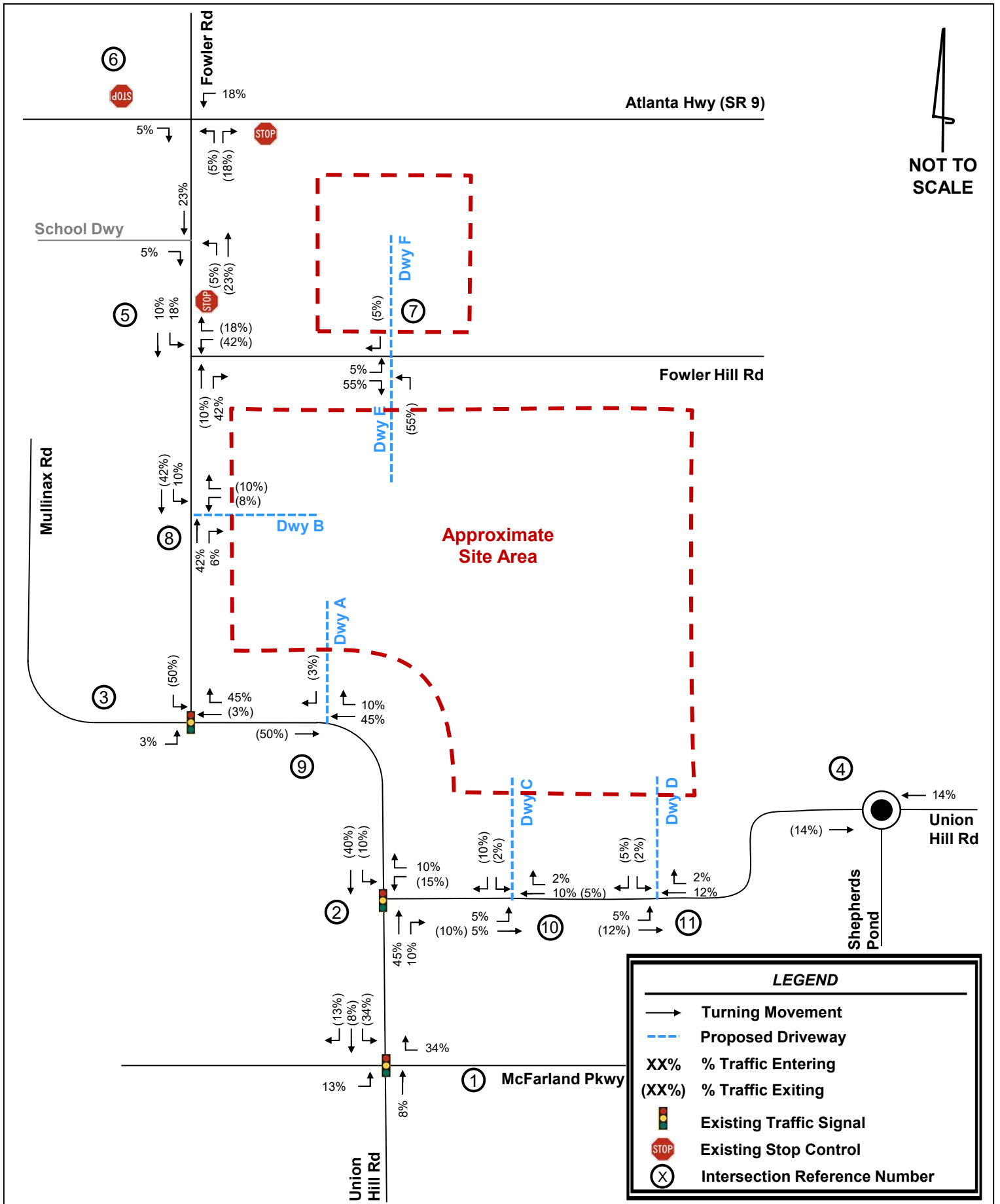
5.0 TRAFFIC ANALYSIS

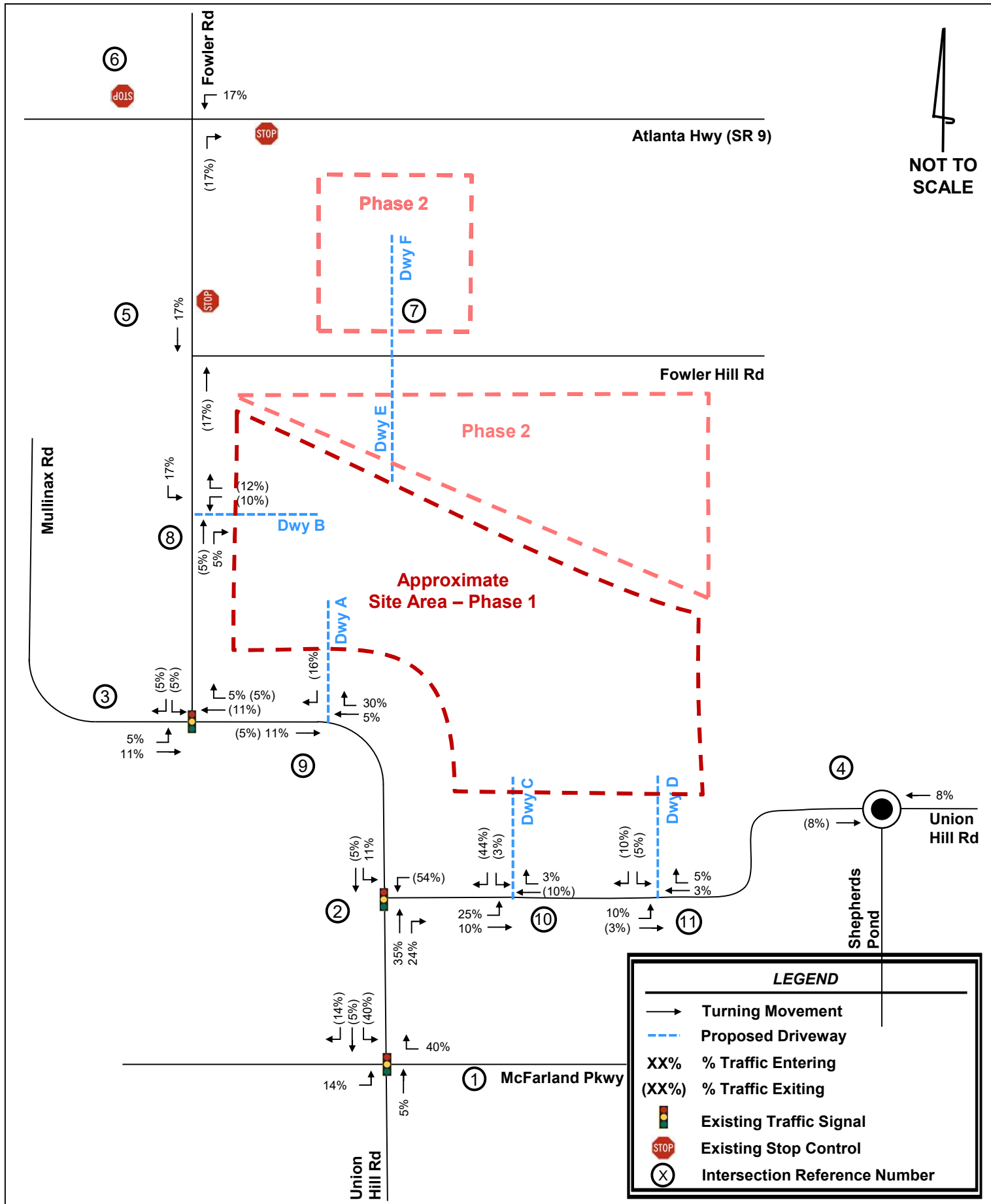
Capacity analyses were performed using *Synchro 11* and *SIDRA INTERSECTION 9.0* for the AM and PM peak hours under the Estimated 2021 conditions, Projected 2030 No-Build Conditions (Phase 1), Projected 2035 No-Build Conditions (Phase 2), Projected 2030 Build Conditions (Phase 1), and Projected 2035 Build Conditions (Phase 2). The capacity analyses were performed using methodologies from the *Highway Capacity Manual (HCM)*, 6th Edition unless otherwise noted.

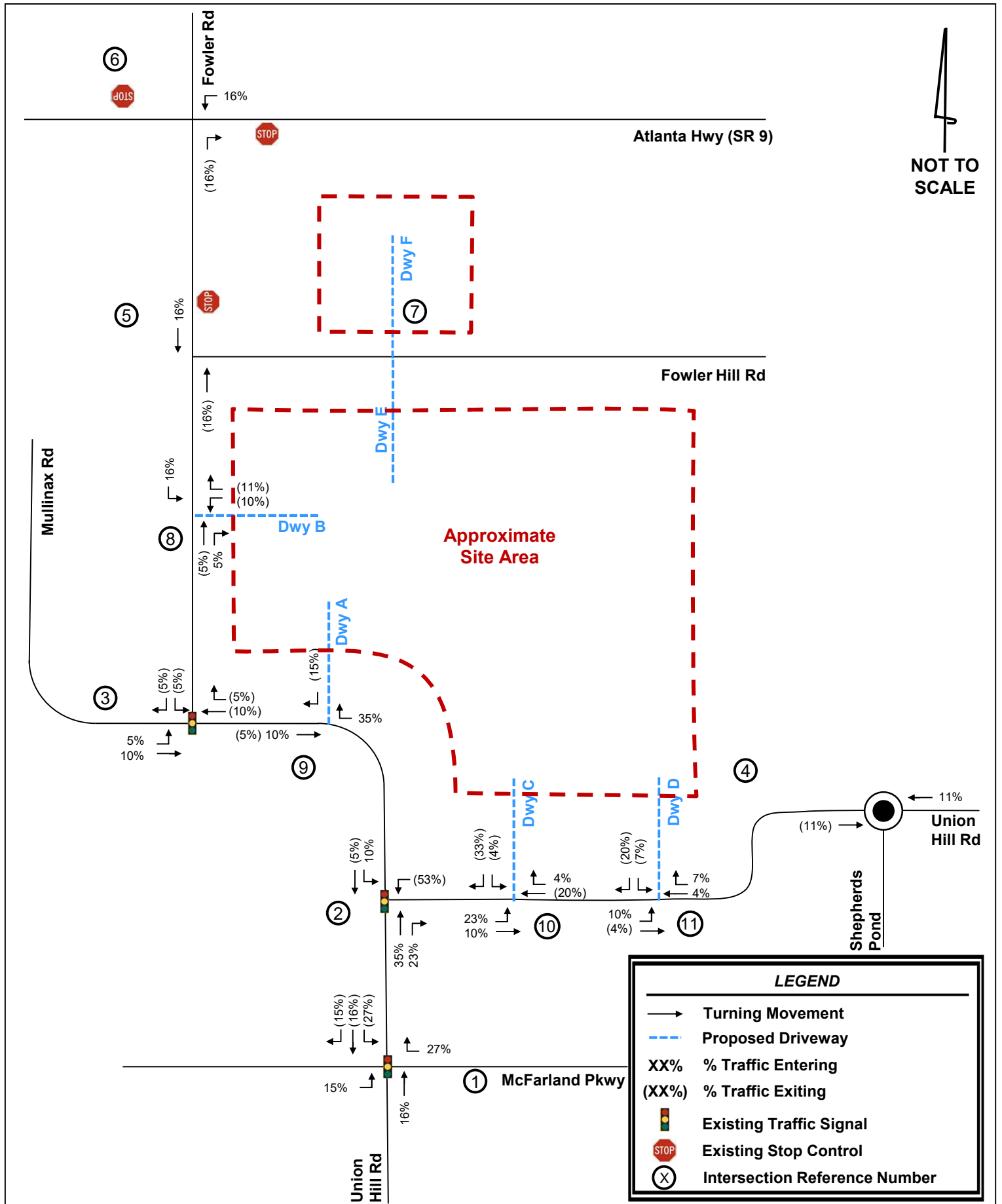
These analyses included existing roadway laneage and signal timing data for each of the scenarios. The traffic volumes and roadway laneage used for each scenario are shown visually in **Figure 10** for Estimated 2021 conditions, **Figure 11** for Projected 2030 No-Build Conditions (Phase 1), **Figure 12** for Projected 2035 No-Build Conditions (Phase 2), **Figure 13** for Projected 2030 Build Conditions (Phase 1), and **Figure 14** for Projected 2035 Build Conditions (Phase 2).

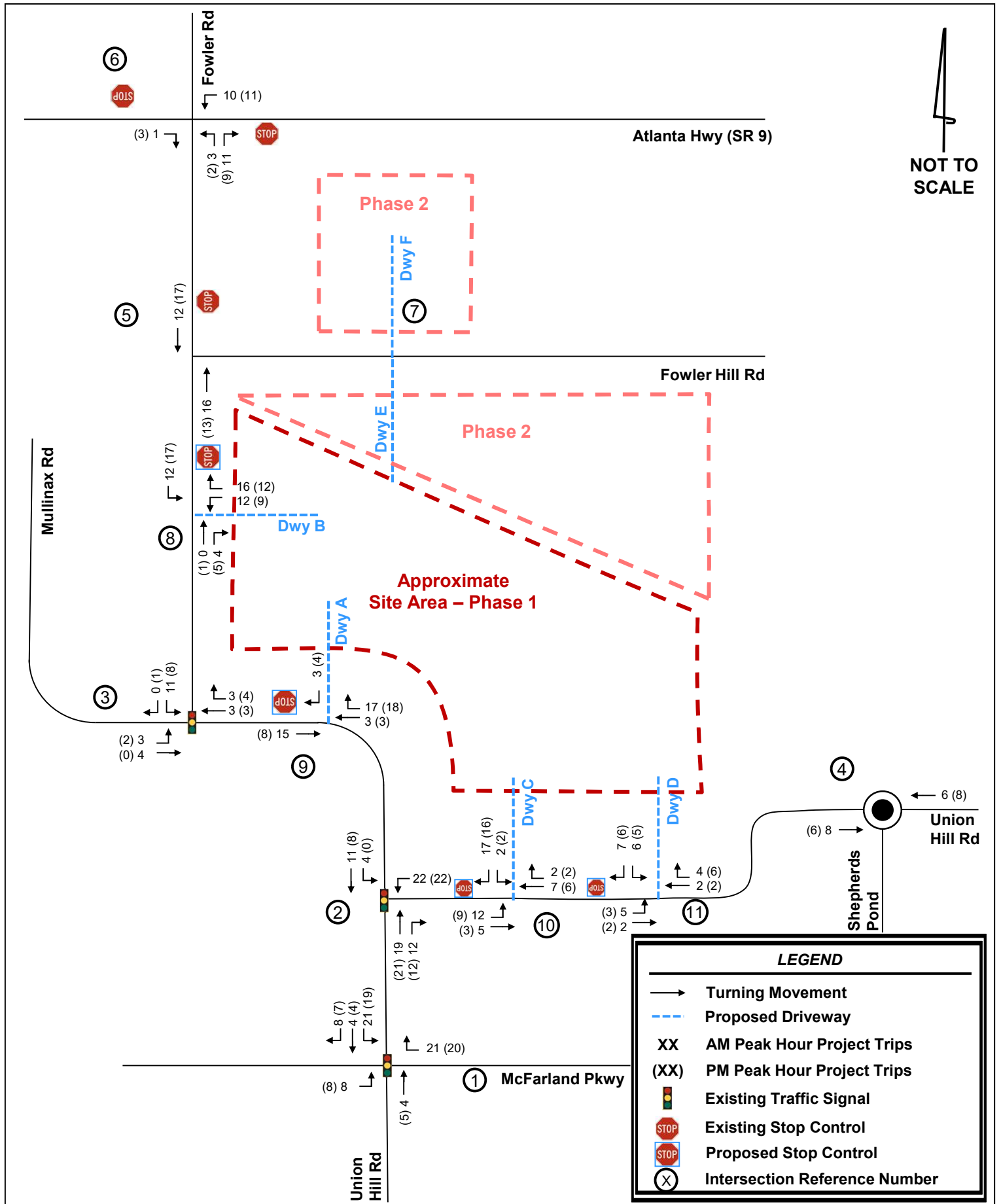
Sections 5.1 – 5.11 provide the results of the capacity analyses are presented for each study intersection and include projected LOS, delay, and queue lengths.

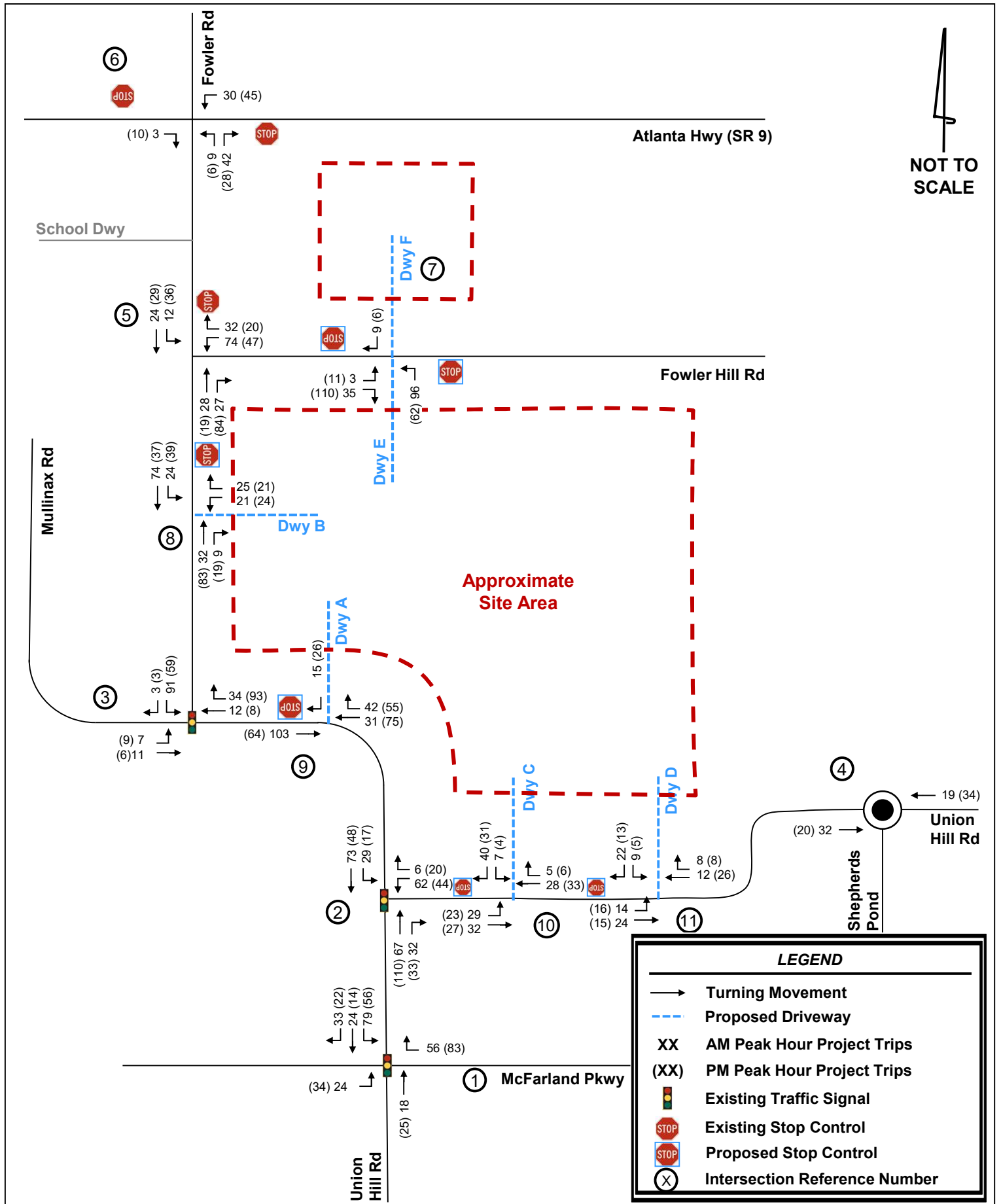












5.1 Union Hill Road at McFarland Parkway (Intersection 1)

Overall LOS Standard: D
Approach LOS Standard: D

Overall LOS Standard: D Approach LOS Standard: D			Union Hill Road			Union Hill Road			McFarland Parkway			McFarland Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (EST 2021) (SIGNAL)	AM	Overall LOS	D (50.1)											
		Approach LOS	D (54.1)			D (47.3)			E (58.7)			D (43.1)		
		Storage	350		350	600		200	200		200	370		200
		50th Queue	49	142	45	350	166	0	54	361	0	100	294	28
		95th Queue	96	195	137	455	216	49	88	471	25	234	368	147
	PM	Overall LOS	D (54.8)											
		Approach LOS	D (39.5)			E (76.4)			E (60.9)			D (41.0)		
		Storage	350		350	600		200	200		200	370		200
		50th Queue	75	155	38	187	63	0	81	235	0	60	207	781
		95th Queue	134	211	126	292	98	32	161	301	13	95	258	1042
PH 1 NO-BUILD (2030) (SIGNAL)	AM	Overall LOS	E (59.9)											
		Approach LOS	E (64.4)			E (56.0)			E (71.3)			D (50.8)		
		Storage	350		350	600		200	200		200	370		200
		50th Queue	56	165	74	423	195	0	61	441	0	125	352	91
		95th Queue	107	223	196	568	250	52	98	588	39	288	434	265
	PM	Overall LOS	E (63.6)											
		Approach LOS	D (44.0)			F (108.2)			E (66.8)			D (39.1)		
		Storage	350		350	600		200	200		200	370		200
		50th Queue	86	181	86	239	73	0	105	285	0	69	247	1051
		95th Queue	156	253	192	348	111	45	188	354	21	108	305	1316
PH 2 NO-BUILD (2035) (SIGNAL)	AM	Overall LOS	E (72.2)											
		Approach LOS	E (68.2)			E (69.5)			F (89.9)			E (58.8)		
		Storage	350		350	600		200	200		200	370		200
		50th Queue	61	180	95	502	213	0	67	523	0	156	388	149
		95th Queue	122	254	237	636	272	54	108	659	50	324	484	352
	PM	Overall LOS	E (70.4)											
		Approach LOS	D (47.0)			F (130.8)			E (72.1)			D (38.7)		
		Storage	350		350	600		200	200		200	370		200
		50th Queue	93	197	118	271	79	0	121	319	0	76	273	1215
		95th Queue	173	285	261	383	118	54	206	391	26	117	335	1481
PH 1 BUILD (2030) (SIGNAL)	AM	Overall LOS	E (60.0)											
		Approach LOS	E (64.1)			E (56.7)			E (71.1)			D (51.1)		
		Storage	350		350	600		200	200		200	370		200
		50th Queue	56	167	74	451	196	0	65	441	0	125	352	97
		95th Queue	107	225	196	582	251	53	103	588	39	288	434	280
	PM	Overall LOS	E (68.6)											
		Approach LOS	D (43.8)			F (133.3)			E (70.1)			D (39.2)		
		Storage	350		350	600		200	200		200	370		200
		50th Queue	86	183	86	257	75	0	112	285	0	69	243	1082
		95th Queue	156	258	192	369	113	52	196	354	21	108	300	1348
PH 2 BUILD (2035) (SIGNAL)	AM	Overall LOS	E (75.6)											
		Approach LOS	E (69.9)			F (83.7)			F (91.1)			E (60.5)		
		Storage	350		350	600		200	200		200	370		200
		50th Queue	61	189	95	573	224	5	78	523	0	156	388	173
		95th Queue	122	272	237	707	284	62	135	659	50	323	484	457
	PM	Overall LOS	F (87.9)											
		Approach LOS	D (47.1)			F (191.2)			F (91.0)			D (38.7)		
		Storage	350		350	600		200	200		200	370		200
		50th Queue	93	212	118	331	86	0	157	319	0	76	273	1389
		95th Queue	173	315	261	447	127	61	247	391	26	117	335	1657

Under the Estimated 2021 conditions, the eastbound approach of Union Hill Road at McFarland Parkway (Intersection 1) is projected to operate at an unacceptable LOS during the AM peak hour. The eastbound and southbound approaches are projected to operate an unacceptable LOS during the PM peak hour.

The intersection is projected to operate at an unacceptable overall LOS under the No-Build 2030, No-Build 2035, Build 2030, and Build 2035 conditions. Under these scenarios, multiple approaches of the intersection are projected to operate at an unacceptable LOS under all studied scenarios.

In order to improve the overall and approach LOS under the No-Build 2030, No-Build 2035, Build 2030, and Build 2035 conditions, Kimley-Horn recommends the following system improvements (shown in red on **Figure 11, Figure 12, Figure 13, and Figure 14**):

- Construct one (1) eastbound through lane along McFarland Parkway
- Construct one (1) additional southbound left turn lane along Union Hill Road, creating triple lefts.
- Construct one (1) additional channelized westbound right-turn lane along McFarland Parkway under yield control. The existing right-turn lane will continue to operate as a free-flow right-turn lane.

The analysis results for the improved conditions at Intersection 1 are shown in the table below.

Overall LOS Standard: D
Approach LOS Standard: D

Overall LOS Standard: D Approach LOS Standard: D			Union Hill Road			Union Hill Road			McFarland Parkway			McFarland Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
PH 1 NO-BUILD (2030) IMPROVED (SIGNAL)	AM	Overall LOS	D (48.6)											
		Approach LOS	D (47.8)			D (43.1)			D (51.9)			D (46.5)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	56	153	69	272	190	0	62	272	0	113	356	46
		95th Queue	107	218	177	307	243	50	107	325	40	267	439	107
	PM	Overall LOS	D (41.5)											
		Approach LOS	D (44.8)			D (48.3)			D (37.8)			D (40.2)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	86	154	28	133	61	0	88	217	0	90	321	196
		95th Queue	147	214	109	167	94	39	130	275	5	140	396	302
PH 2 NO-BUILD (2035) IMPROVED (SIGNAL)	AM	Overall LOS	D (47.8)											
		Approach LOS	D (49.5)			D (47.0)			D (54.2)			D (51.4)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	60	168	88	301	214	0	65	305	0	138	251	0
		95th Queue	112	224	193	364	275	54	103	363	52	300	301	48
	PM	Overall LOS	D (47.6)											
		Approach LOS	D (45.3)			D (48.2)			D (40.2)			D (52.3)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	93	181	36	144	71	0	94	216	0	87	204	302
		95th Queue	155	239	126	185	110	50	139	279	30	134	245	422
PH 1 BUILD (2030) IMPROVED (SIGNAL)	AM	Overall LOS	D (47.7)											
		Approach LOS	D (47.1)			D (44.4)			D (53.7)			D (46.9)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	56	158	30	281	198	0	65	283	0	116	347	42
		95th Queue	106	213	120	335	255	54	117	343	8	219	429	219
	PM	Overall LOS	D (43.0)											
		Approach LOS	D (50.6)			D (55.0)			D (37.0)			D (42.0)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	86	174	34	139	69	0	91	205	0	82	302	261
		95th Queue	148	234	124	177	106	49	134	254	25	127	373	373
PH 2 BUILD (2035) IMPROVED (SIGNAL)	AM	Overall LOS	D (51.0)											
		Approach LOS	D (52.3)			D (46.0)			D (54.8)			D (53.9)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	60	181	89	328	224	2	81	302	0	151	393	75
		95th Queue	112	240	195	404	285	59	153	358	51	318	511	150
	PM	Overall LOS	D (52.8)											
		Approach LOS	D (54.9)			D (54.6)			D (48.9)			D (53.8)		
		Storage	350		350	600		200	200		200	370		TBD
		50th Queue	93	202	22	162	78	0	122	233	0	93	333	365
		95th Queue	156	271	112	201	118	40	212	304	3	143	410	525

With the improvements listed above, the intersection of Union Hill Road at McFarland Parkway (Intersection 1) is projected to operate at or above its overall and approach LOS standards under both Estimated 2021, No-Build 2030, No-Build 2035, Build 2030, and Build 2035 conditions.

5.2 Mullinax Road at Union Hill Road (Intersection 2)*

Overall LOS Standard: D
Approach LOS Standard: D

		Union Hill Road			Mullinax Road			-			Union Hill Road		
		Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (EST 2021) (SIGNAL)	AM	Overall LOS	C (21.8)										
		Approach LOS	B (18.5)			B (19.0)			C (34.7)				
		Storage			360	250							100
		50th Queue		211	0	141	0				143		55
		95th Queue		272	31	267	0				208		126
	PM	Overall LOS	B (14.0)										
		Approach LOS	B (14.8)			A (5.2)			C (31.9)				
		Storage			360	250							100
		50th Queue		249	0	39	0				59		0
		95th Queue		383	37	86	0				113		40
PH 1 NO-BUILD (2030) (SIGNAL)	AM	Overall LOS	C (28.1)										
		Approach LOS	C (21.3)			C (28.7)			D (38.9)				
		Storage			360	250							100
		50th Queue		168	97	279	0				190		0
		95th Queue		240	181	325	32				310		0
	PM	Overall LOS	B (16.3)										
		Approach LOS	B (18.2)			A (5.6)			C (32.2)				
		Storage			360	250							100
		50th Queue		326	1	45					69		0
		95th Queue		543	42	97	0				126		42
PH 2 NO-BUILD (2035) (SIGNAL)	AM	Overall LOS	C (32.6)										
		Approach LOS	C (23.5)			D (35.0)			D (42.9)				
		Storage			360	250							100
		50th Queue		316	0	214	0				184		124
		95th Queue		362	33	335	0				266		214
	PM	Overall LOS	B (18.8)										
		Approach LOS	C (21.9)			A (5.9)			C (32.0)				
		Storage			360	250							100
		50th Queue		384	7	49	0				76		0
		95th Queue		623	52	104	0				134		43
PH 1 BUILD (2030) (SIGNAL)	AM	Overall LOS	C (29.8)										
		Approach LOS	C (22.2)			C (31.3)			D (40.1)				
		Storage			360	250							100
		50th Queue		291	0	198	0				185		98
		95th Queue		334	33	317	0				268		182
	PM	Overall LOS	B (17.4)										
		Approach LOS	B (19.7)			A (5.6)			C (32.3)				
		Storage			360	250							100
		50th Queue		346	2	46	0				80		0
		95th Queue		573	46	99	0				142		42
PH 2 BUILD (2035) (SIGNAL)	AM	Overall LOS	D (41.6)										
		Approach LOS	C (27.5)			D (49.1)			D (49.1)				
		Storage			360	250							100
		50th Queue		355	0	260	0				245		133
		95th Queue		403	35	384	0				386		237
	PM	Overall LOS	D (36.0)										
		Approach LOS	D (48.5)			A (6.3)			C (32.7)				
		Storage			360	250							100
		50th Queue		348	0	254	0				234		131
		95th Queue		396	34	378	0				367		235

*Intersection was analyzed with HCM 2000 due to intersection timing sequencing.

The intersection of Mullinax Road at Union Hill Road (Intersection 2) is projected to operate at an acceptable overall LOS under the Estimated 2021, No-Build 2030, No-Build 2035, Build 2030, and Build 2035 conditions. Each approach of the intersection is projected to operate acceptably under all studied scenarios. No improvements are recommended to be conditioned.

5.3 Mullinax Road at Fowler Road (Intersection 3)

Overall LOS Standard: D
Approach LOS Standard: D

			-			Fowler Road			Mullinax Road			Mullinax Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	U	T	R
EXISTING (EST 2021)	AM	Overall LOS	B (19.9)											
		Approach LOS				D (36.4)			B (13.0)			B (19.5)		
		Storage						125	250			230		200
		50th Queue				209		12	10	251		0	312	15
		95th Queue				270		44	23	288		0	364	47
	PM	Overall LOS	A (8.8)											
		Approach LOS				D (35.7)			A (3.4)			A (7.9)		
		Storage						125	250			230		200
		50th Queue				60		0	2	34		0	94	3
		95th Queue				112		20	8	63		0	247	48
PH 1 NO-BUILD (2030)	AM	Overall LOS	C (25.6)											
		Approach LOS				D (40.2)			B (17.5)			C (27.1)		
		Storage						125	250			230		200
		50th Queue				251		23	12	345	0	0	417	28
		95th Queue				320		58	25	353		0	486	63
	PM	Overall LOS	A (9.9)											
		Approach LOS				D (35.0)			A (3.8)			A (9.2)		
		Storage						125	250			230		200
		50th Queue				70		0	2	42		0	121	10
		95th Queue				126		21	10	76		0	312	74
PH 2 NO-BUILD (2035)	AM	Overall LOS	C (32.5)											
		Approach LOS				D (43.3)			C (21.4)			D (38.3)		
		Storage						125	250			230		200
		50th Queue				278		31	13	396		0	520	36
		95th Queue				382		69	27	400		0	551	75
	PM	Overall LOS	A (8.3)											
		Approach LOS				C (34.2)			A (3.1)			A (7.3)		
		Storage						125	250			230		200
		50th Queue												
		95th Queue												
PH 1 BUILD (2030)	AM	Overall LOS	C (26.8)											
		Approach LOS				D (45.6)			B (18.0)			C (28.7)		
		Storage						125	250			230		200
		50th Queue				261		26	13	347		0	424	29
		95th Queue				354		61	27	356		0	489	64
	PM	Overall LOS	B (10.1)											
		Approach LOS				D (35.5)			A (4.0)			A (9.5)		
		Storage						125	250			230		200
		50th Queue				73		0	3	43		0	123	11
		95th Queue				132		21	11	78		0	317	77
PH 2 BUILD (2035)	AM	Overall LOS	D (44.0)											
		Approach LOS				F (85.2)			C (23.0)			D (46.7)		
		Storage						125	250			230		200
		50th Queue				411		45	15	402		0	532	43
		95th Queue				510		86	30	405		0	562	85
	PM	Overall LOS	B (12.8)											
		Approach LOS				C (34.7)			A (5.2)			B (12.5)		
		Storage						125	250			230		200
		50th Queue				105		0	4	55		0	161	22
		95th Queue				176		22	16	100		0	401	134

The intersection of Mullinax Road at Fowler Road (intersection 3) is projected to operate at an acceptable overall LOS. The southbound approach is projected to operate at LOS F under the 2035 Build conditions.

In order to improve the approach LOS under the Build 2035 conditions, Kimley-Horn recommends the following (shown in blue on **Figure 14**):

- Construct one (1) additional southbound left turn lane along Fowler Road, creating dual lefts.

The analysis results for the improved conditions at Intersection 3 are shown in the table below.

Overall LOS Standard: D Approach LOS Standard: D			-			Fowler Road			Mullinax Road			Mullinax Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	U	T	R
PH 2 BUILD (2035) IMPROVED (SIGNAL)	AM	Overall LOS	C (24.2)											
		Approach LOS				C (25.3)			B (12.9)			C 34.8)		
		Storage						125	250			230		200
		50th Queue				153		0	13	314		0	412	36
		95th Queue				181		33	30	401		0	560	85
	PM	Overall LOS	B (10.4)											
		Approach LOS				C (31.4)			A (3.7)			A (9.7)		
		Storage						125	250			230		200
		50th Queue				52		0	3	43		0	124	17
		95th Queue				85		23	11	71		0	322	106

With the improvements listed above, the intersection of Mullinax Road at Fowler Road (Intersection 3) is projected to operate at or above its overall and approach LOS standards under 2035 Build conditions.

5.4 Union Hill Road at Shepherds Pond (Intersection 4)

Overall LOS Standard: D
Approach LOS Standard: D

			Shepherds Pond			-			Union Hill Road			Union Hill Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (EST 2021) (ROUNDABOUT)	AM	Overall LOS	A (6.8)											
		Approach LOS	A (4.3)						A (5.8)			A (7.6)		
		Storage												
		50th Queue	2		-				22	-	-	41		
		95th Queue	4		-				54	-	-	102		
	PM	Overall LOS	A (4.8)											
		Approach LOS	A (4.2)						A (4.9)			A (4.6)		
		Storage												
		50th Queue	1		-				15	-	-	13		
		95th Queue	3		-				36	-	-	31		
PH 1 NO-BUILD (2030) (ROUNDABOUT)	AM	Overall LOS	A (7.7)											
		Approach LOS	A (4.5)						A (6.4)			A (8.7)		
		Storage												
		50th Queue	2		-				27	-	-	53		
		95th Queue	5		-				67	-	-	132		
	PM	Overall LOS	A (5.1)											
		Approach LOS	A (4.4)						A (5.3)			A (4.9)		
		Storage												
		50th Queue	2		-				17	-	-	15		
		95th Queue	4		-				42	-	-	36		
PH 2 NO-BUILD (2035) (ROUNDABOUT)	AM	Overall LOS	A (8.3)											
		Approach LOS	A (4.7)						A (6.7)			A (9.5)		
		Storage												
		50th Queue	3		-				30	-	-	63		
		95th Queue	6		-				75	-	-	154		
	PM	Overall LOS	A (5.3)											
		Approach LOS	A (4.5)						A (5.5)			A (5.1)		
		Storage												
		50th Queue	2		-				19	-	-	16		
		95th Queue	4		-				47	-	-	40		
PH 1 BUILD (2030) (ROUNDABOUT)	AM	Overall LOS	A (7.8)											
		Approach LOS	A (4.6)						A (6.4)			A (8.8)		
		Storage												
		50th Queue	2		-				28	-	-	55		
		95th Queue	6		-				69	-	-	136		
	PM	Overall LOS	A (5.1)											
		Approach LOS	A (4.4)						A (5.3)			A (5.0)		
		Storage												
		50th Queue	2		-				18	-	-	15		
		95th Queue	4		-				43	-	-	38		
PH 2 BUILD (2035) (ROUNDABOUT)	AM	Overall LOS	A (8.6)											
		Approach LOS	A (4.8)						A (7.1)			A (9.8)		
		Storage												
		50th Queue	3		-				34	-	-	67		
		95th Queue	6		-				85	-	-	166		
	PM	Overall LOS	A (5.5)											
		Approach LOS	A (4.6)						A (5.7)			A (5.4)		
		Storage												
		50th Queue	2		-				21	-	-	19		
		95th Queue	4		-				51	-	-	47		

The intersection of Union Hill Road at Shepherd Pond (Intersection 4) is projected to operate at an acceptable overall LOS under the Estimated 2021, No-Build 2030, No-Build 2035, Build 2030, and Build 2035 conditions. Each approach of the intersection is projected to operate acceptably under all studied scenarios. No improvements are recommended to be conditioned.

5.5 Fowler Road at Fowler Hill Road (Intersection 5)

Overall LOS Standard: D
Approach LOS Standard: D

			Fowler Road			Fowler Road			-			Fowler Hill Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (EST 2021) (TWSC)	AM	Overall LOS	(1.9)											
		Approach LOS	A (0.0)			A (0.4)						C (16.9)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	3	-					23		-
	PM	Overall LOS	(0.8)											
		Approach LOS	A (0.0)			A (0.5)						B (11.6)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	0	-					5		-
PH 1 NO-BUILD (2030) (TWSC)	AM	Overall LOS	(2.3)											
		Approach LOS	A (0.0)			A (0.4)						C (20.6)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	3	-					35		-
	PM	Overall LOS	(0.8)											
		Approach LOS	A (0.0)			A (0.5)						B (12.4)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	0	-					10		-
PH 2 NO-BUILD (2035) (TWSC)	AM	Overall LOS	(2.6)											
		Approach LOS	A (0.0)			A (0.4)						C (23.7)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	3	-					43		-
	PM	Overall LOS	(0.8)											
		Approach LOS	A (0.0)			A (0.5)						B (12.9)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	0	-					13		-
PH 1 BUILD (2030) (TWSC)	AM	Overall LOS	(2.3)											
		Approach LOS	A (0.0)			A (0.4)						C (21.5)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	3	-					35		-
	PM	Overall LOS	(0.8)											
		Approach LOS	A (0.0)			A (0.5)						B (12.6)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	0	-					10		-
PH 2 BUILD (2035) (TWSC)	AM	Overall LOS	(16.3)											
		Approach LOS	A (0.0)			A (0.5)						F (91.9)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	3	-					230		-
	PM	Overall LOS	(2.5)											
		Approach LOS	A (0.0)			A (1.6)						C (18.3)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	5	-					35		-

The intersection of Fowler Road at Fowler Hill Road (intersection 5) is projected to operate at an acceptable overall LOS. The westbound approach is projected to operate at LOS F under the 2035 Build conditions.

In order to improve the approach LOS under the Build 2035 conditions, Kimley-Horn recommends the following (shown in blue on **Figure 14**):

- Construct one (1) westbound right turn lane along Fowler Hill Road.

The analysis results for the improved conditions at Intersection 5 are shown in the table below.

Overall LOS Standard: D Approach LOS Standard: D			Fowler Road			Fowler Road			-			Fowler Hill Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
PH 2 BUILD (2035) (TWSC)	AM	Overall LOS	(1.2)											
		Approach LOS	A (0.0)			A (0.3)						C (21.0)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	30	-					30		30
	PM	Overall LOS	(1.5)											
		Approach LOS	A (0.0)			A (1.5)						C (16.5)		
		Storage												
		50th Queue		-	-	-	-					-		-
		95th Queue		-	-	30	-					30		30

With the improvements listed above, the intersection of Fowler Road at Fowler Hill Road (Intersection 5) is projected to operate at or above its overall and approach LOS standards under 2035 Build conditions.

5.6 Atlanta Highway (SR 9) at Fowler Road (Intersection 6)

Overall LOS Standard: D
Approach LOS Standard: D

			Fowler Road			Wren Hollow Court			Atlanta Highway (SR 9)			Atlanta Highway (SR 9)		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (EST 2021) (TWSC)	AM	Overall LOS	(11.2)											
		Approach LOS	F (65.8)			F (61.4)			A (0.0)			A (3.6)		
		Storage			75				340		200	275		290
		50th Queue	-	-	-	-	-	-	-	-	-	-	-	-
		95th Queue	-	98	45	-	13	-	0	-	-	35	-	-
	PM	Overall LOS	(18.2)											
		Approach LOS	F (99.0)			F*			A (0.0)			A (1.7)		
		Storage			75				340		200	275		290
		50th Queue	-	-	-	-	-	-	-	-	-	-	-	-
		95th Queue	-	28	315	-	*	-	0	-	-	15	-	-
PH 1 NO-BUILD (2030) (RCUT by GDOT)	AM	Overall LOS	(5.8)											
		Approach LOS	B (14.7)			B (13.2)			A (0.0)			A (4.0)		
		Storage			-			-	340		200	275		290
		50th Queue			-			-	-	-	-	-	-	-
		95th Queue			53			3	0	-	-	50	-	-
	PM	Overall LOS	(4.6)											
		Approach LOS	E (39.3)			B (11.0)			A (0.0)			A (1.8)		
		Storage			-			-	340		200	275		290
		50th Queue			-			-	-	-	-	-	-	-
		95th Queue			213			0	0	-	-	20	-	-
PH 2 NO-BUILD (2035) (RCUT by GDOT)	AM	Overall LOS	(4.5)											
		Approach LOS	C (15.9)			B (10.8)			A (0.0)			A (4.3)		
		Storage			-			-	340		200	275		290
		50th Queue			-			-	-	-	-	-	-	-
		95th Queue			63			3	0	-	-	60	-	-
	PM	Overall LOS	(11.6)											
		Approach LOS	F (60.9)			B (11.3)			A (0.0)			A (2.0)		
		Storage			-			-	340		200	275		290
		50th Queue			-			-	-	-	-	-	-	-
		95th Queue			300			0	0	-	-	25	-	-
PH 1 BUILD (2030) (RCUT by GDOT)	AM	Overall LOS	(4.4)											
		Approach LOS	C (15.0)			B (10.6)			A (0.0)			A (4.2)		
		Storage			-			-	340		200	275		290
		50th Queue			-			-	-	-	-	-	-	-
		95th Queue			55			3	0	-	-	50	-	-
	PM	Overall LOS	(8.5)											
		Approach LOS	E (42.3)			B (11.0)			A (0.0)			A (2.0)		
		Storage			-			-	340		200	275		290
		50th Queue			-			-	-	-	-	-	-	-
		95th Queue			93			0	0	-	-	48	-	-
PH 2 BUILD (2035) (RCUT by GDOT)	AM	Overall LOS	(5.3)											
		Approach LOS	C (17.6)			B (10.8)			A (0.0)			A (4.8)		
		Storage			-			-	340		200	275		290
		50th Queue			-			-	-	-	-	-	-	-
		95th Queue			85			3	0	-	-	70	-	-
	PM	Overall LOS	(15.9)											
		Approach LOS	F (79.9)			B (11.3)			A (0.0)			A (2.6)		
		Storage			-			-	340		200	275		290
		50th Queue			-			-	-	-	-	-	-	-
		95th Queue			378			30	0	-	-	38	-	-

The intersection of Atlanta Highway (SR 9) at Fowler Road (Intersection 6) is projected to operate at an acceptable overall LOS under the Estimated 2021, No-Build 2030, No-Build 2035, and Build 2030, Build 2035 scenarios. Each approach of the intersection is projected to operate acceptably under all studied scenarios. No improvements are recommended to be conditioned.

The intersection has been designed as an RCUT as a part of a greater GDOT corridor improvement project. As a result, no further improvements are feasible to improve the LOS of the northbound approach at this intersection. It is not uncommon for a sidestreet approach to experience delay at an unsignalized intersection with a major roadway.

5.7 Fowler Hill Road at Driveway E / Driveway F (Intersection 7)

Overall LOS Standard: D
Approach LOS Standard: D

Overall LOS Standard: D Approach LOS Standard: D			Driveway E			Driveway F			Fowler Hill Road			Fowler Hill Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
PH 1 BUILD (2030) (TWSC)	AM	Overall LOS												
		Approach LOS												
		Storage												
		50th Queue												
		95th Queue												
	PM	Overall LOS												
		Approach LOS												
		Storage												
		50th Queue												
		95th Queue												
PH 2 BUILD (2035) (TWSC)	AM	Overall LOS	(4.0)											
		Approach LOS	B (10.7)			A (8.9)			A (0.2)			A (0.0)		
		Storage	-	-	-	-	-	-	-	-	-	-	-	-
		50th Queue	-	-	-	-	-	-	-	-	-	-	-	-
		95th Queue	-	18	-	-	0	-	0	-	-	0	-	-
	PM	Overall LOS	(4.8)											
		Approach LOS	A (9.5)			A (8.5)			A (0.4)			A (0.0)		
		Storage	-	-	-	-	-	-	-	-	-	-	-	-
		50th Queue	-	-	-	-	-	-	-	-	-	-	-	-
		95th Queue	-	8	-	-	0	-	0	-	-	0	-	-

The intersection of Fowler Hill Road at Driveway E/Driveway F (Intersection 7) is projected to operate at an acceptable LOS overall and for each approach under the build conditions. The intersection is proposed to operate under two-way stop control with stop control for the northbound and southbound approaches. The recommended lane configuration for Driveway E and Driveway F is one lane entering the site and one lane exiting the site. It is recommended that one (1) eastbound right turn lane is constructed along Fowler Road to serve traffic entering the site.

5.8 Fowler Road at Driveway B (Intersection 8)

Overall LOS Standard: D
Approach LOS Standard: D

		Fowler Road			Fowler Road			-			Driveway B		
		Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
PH 1 BUILD (2030) (TWSC)	AM	Overall LOS	(0.6)										
		Approach LOS	A (0.0)			A (0.2)						C (14.9)	
		Storage		-	-	-	-				-		-
		50th Queue		-	-	-	-				-		-
		95th Queue		-	-	0	-				8		-
	PM	Overall LOS	(0.6)										
		Approach LOS	A (0.0)			A (0.7)						B (12.5)	
		Storage		-	-	-	-				-		-
		50th Queue		-	-	-	-				-		-
		95th Queue		-	-	0	-				3		-
PH 2 BUILD (2035) (TWSC)	AM	Overall LOS	(1.1)										
		Approach LOS	A (0.0)			A (0.3)						C (20.2)	
		Storage		-	-	-	-				-		-
		50th Queue		-	-	-	-				-		-
		95th Queue		-	-	3	-				23		-
	PM	Overall LOS	(1.2)										
		Approach LOS	A (0.0)			A (1.2)						C (16.2)	
		Storage		-	-	-	-				-		-
		50th Queue		-	-	-	-				-		-
		95th Queue		-	-	5	-				15		-

The intersection of Fowler Road at Driveway B (Intersection 8) is projected to operate at an acceptable LOS overall and for each approach under the build conditions. The intersection is proposed to operate under two-way stop control with stop control for the westbound approach only. The recommended lane configuration for Driveway B is one lane entering the site and one lane exiting the site. It is recommended that one (1) southbound left turn lane and one (1) northbound right turn lane are constructed along Fowler Road to serve traffic entering the site.

5.9 Mullinax Road at Driveway A (Intersection 9)

Overall LOS Standard: D
Approach LOS Standard: D

			-			Driveway A			Mullinax Road			Mullinax Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
PH 1 BUILD (2030) (RIRO)	AM	Overall LOS	(0.0)											
		Approach LOS				C (19.2)			A (0.0)			A (0.0)		
		Storage						-		-			-	-
		50th Queue						-		-			-	-
		95th Queue						0		-			-	-
	PM	Overall LOS	(0.0)											
		Approach LOS				C (18.4)			A (0.0)			A (0.0)		
		Storage						-		-			-	-
		50th Queue						-		-			-	-
		95th Queue						0		-			-	-
PH 2 BUILD (2035) (RIRO)	AM	Overall LOS	(0.1)											
		Approach LOS				C (22.7)			A (0.0)			A (0.0)		
		Storage						-		-			-	-
		50th Queue						-		-			-	-
		95th Queue						15		-			-	-
	PM	Overall LOS	(0.2)											
		Approach LOS				C (23.3)			A (0.0)			A (0.0)		
		Storage						-		-			-	-
		50th Queue						-		-			-	-
		95th Queue						15		-			-	-

The intersection of Mullinax Road at Driveway A (Intersection 9) is projected to operate at an acceptable LOS overall and for each approach under the build conditions. The intersection is proposed as a right-in/right-out intersection, to operate under two-way stop control with stop control for the southbound approach only. The recommended lane configuration for Driveway A is one lane entering the site and one right-turn lane exiting the site. It is recommended that one (1) westbound right turn lane is constructed along Mullinax Road to serve traffic entering the site.

5.10 Union Hill Road at Driveway C (Intersection 10)

Overall LOS Standard: D
Approach LOS Standard: D

			-			Driveway C			Union Hill Road			Union Hill Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
PH 1 BUILD (2030) (TWSC)	AM	Overall LOS	(0.4)											
		Approach LOS				C (15.8)			A (0.3)			A (0.0)		
		Storage				-		-		-	-	-	-	
		50th Queue				-		-		-	-	-	-	
		95th Queue				5		-		-	-	3	-	
	PM	Overall LOS	(0.4)											
		Approach LOS				B (10.3)			A (0.2)			A (0.0)		
		Storage				-		-		-	-	-	-	
		50th Queue				-		-		-	-	-	-	
		95th Queue				3		-		-	-	0	-	
PH 2 BUILD (2035) (TWSC)	AM	Overall LOS	(1.0)											
		Approach LOS				C (20.7)			A (0.6)			A (0.0)		
		Storage				-		-		-	-	-	-	
		50th Queue				-		-		-	-	-	-	
		95th Queue				23		-		-	-	5	-	
	PM	Overall LOS	(0.7)											
		Approach LOS				B (11.0)			A (0.4)			A (0.0)		
		Storage				-		-		-	-	-	-	
		50th Queue				-		-		-	-	-	-	
		95th Queue				5		-		-	-	3	-	

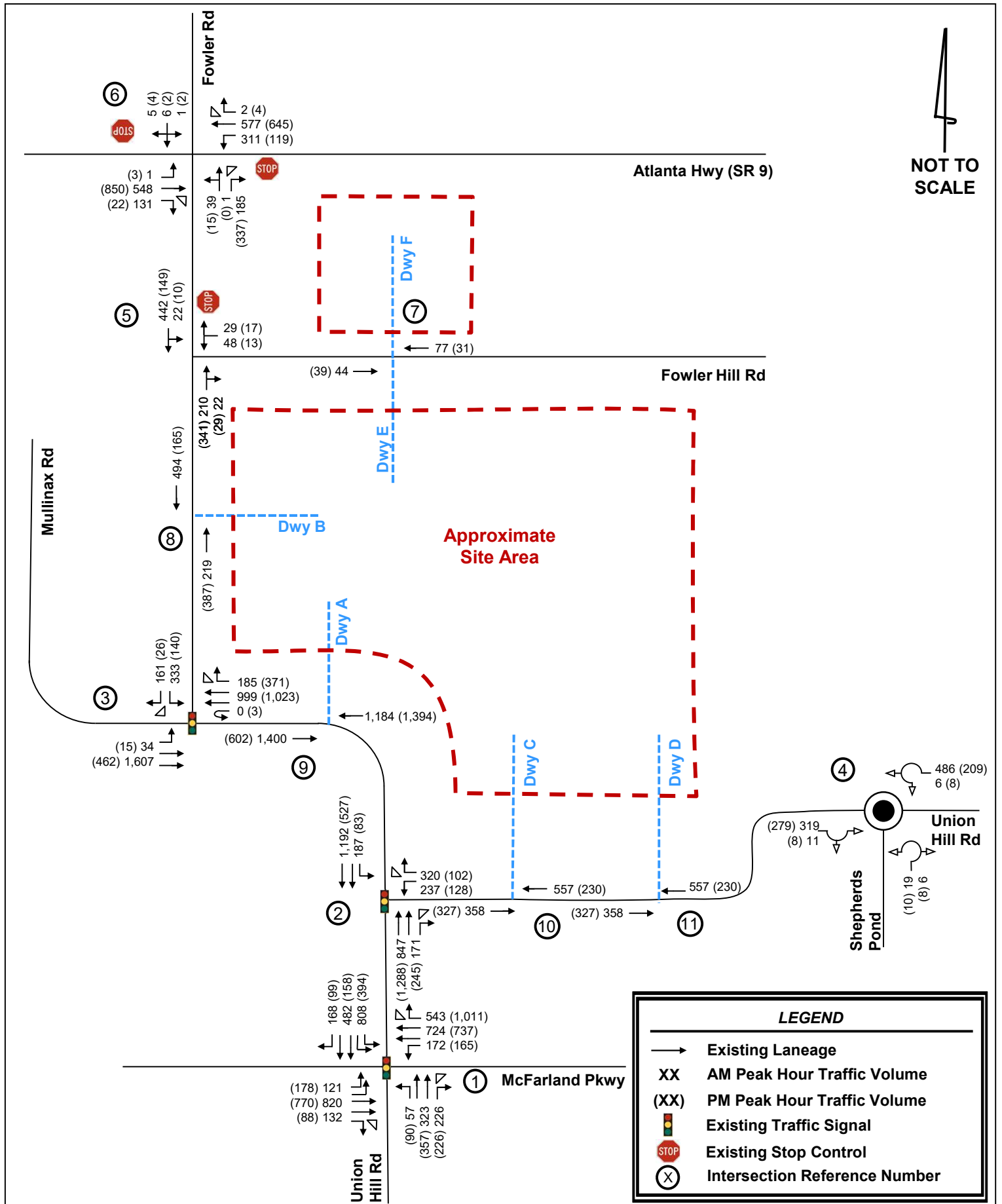
The intersection of Union Hill Road at Driveway C (Intersection 10) is projected to operate at an acceptable LOS overall and for each approach under the build conditions. The intersection is proposed to operate under two-way stop control with stop control for the southbound approach only. The recommended lane configuration for Driveway C is one lane entering the site and one lane exiting the site. It is recommended that one (1) eastbound left turn lane is constructed along Union Hill Road to serve traffic entering the site.

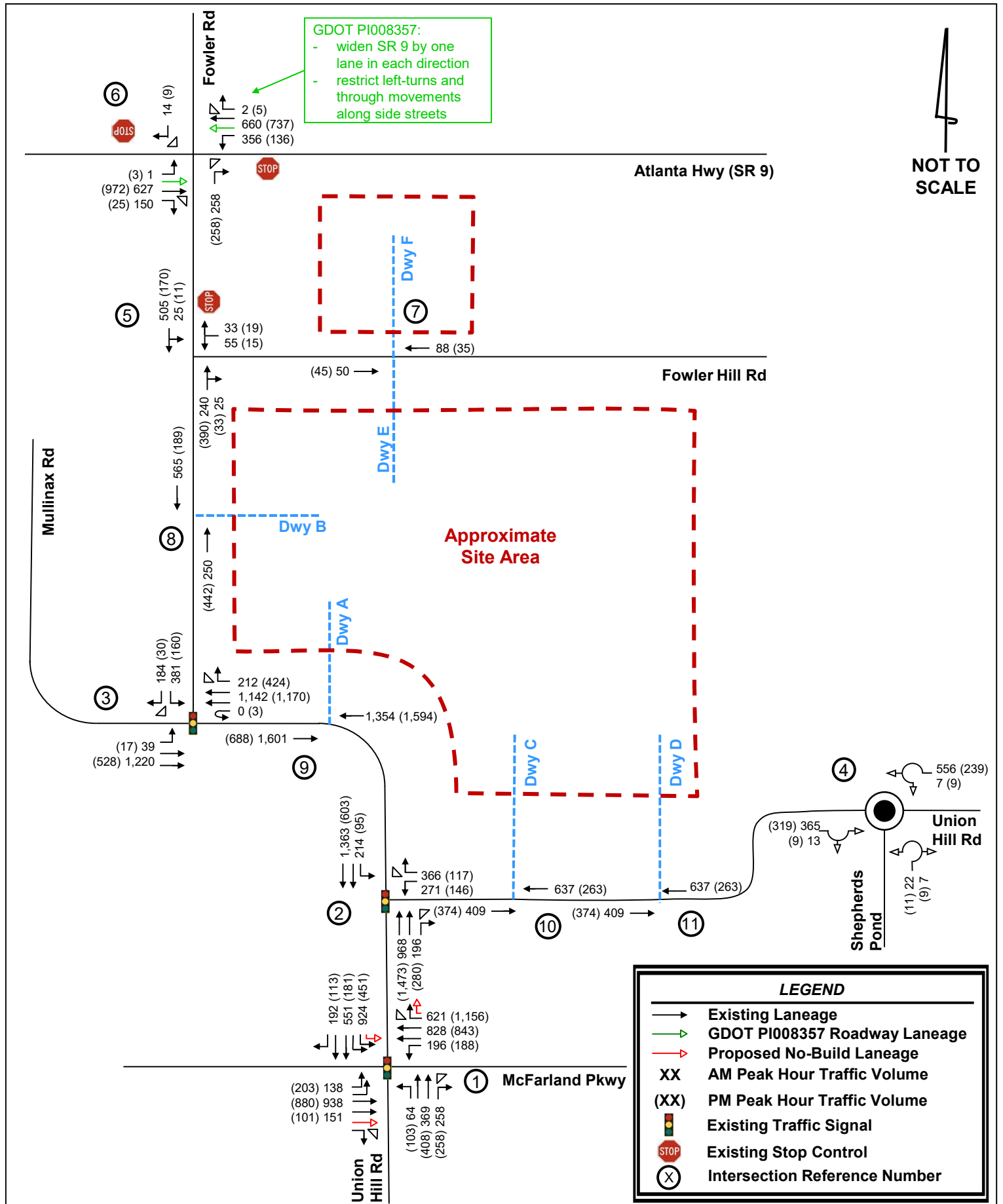
5.11 Union Hill Road at Driveway D (Intersection 11)

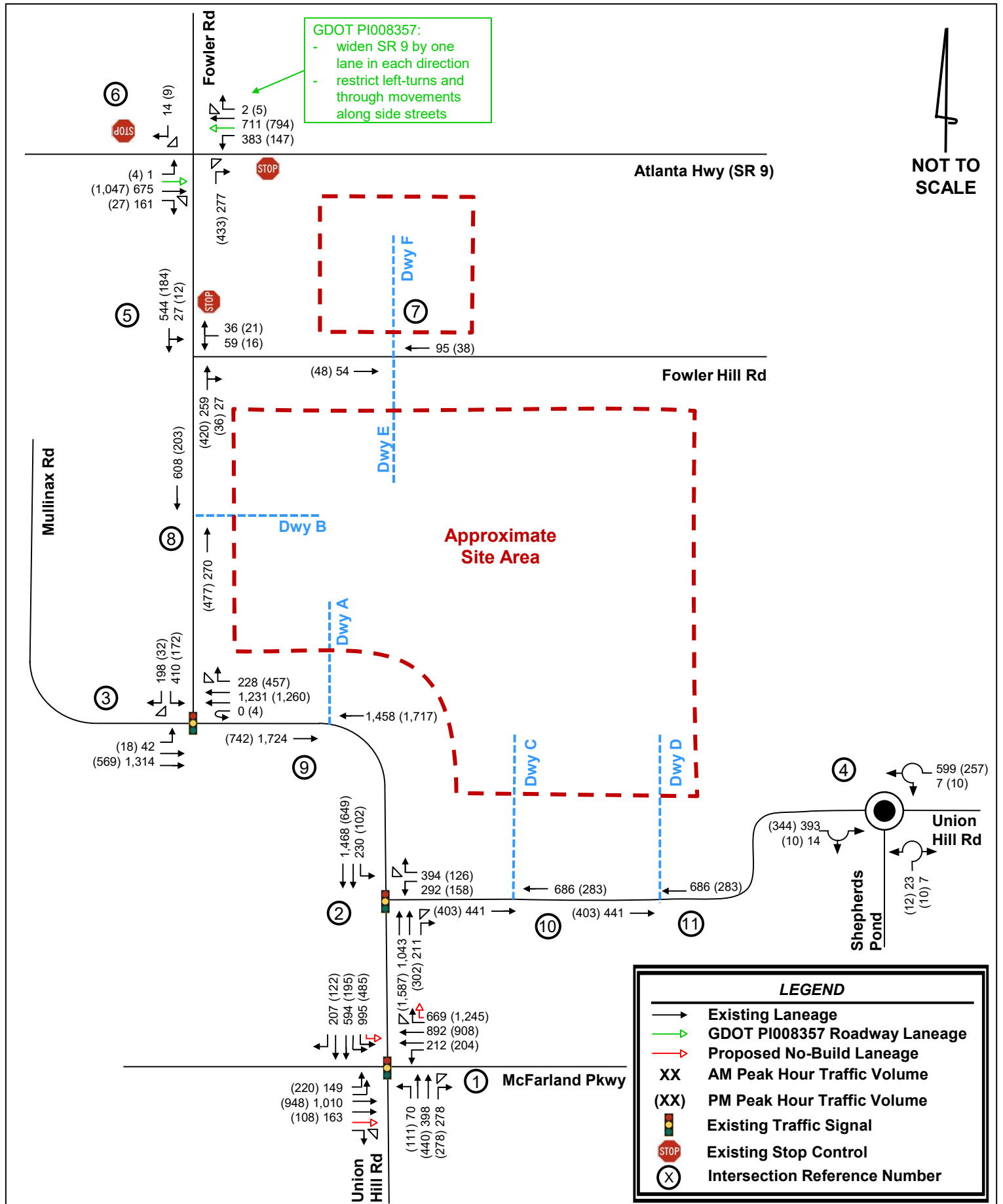
Overall LOS Standard: D
Approach LOS Standard: D

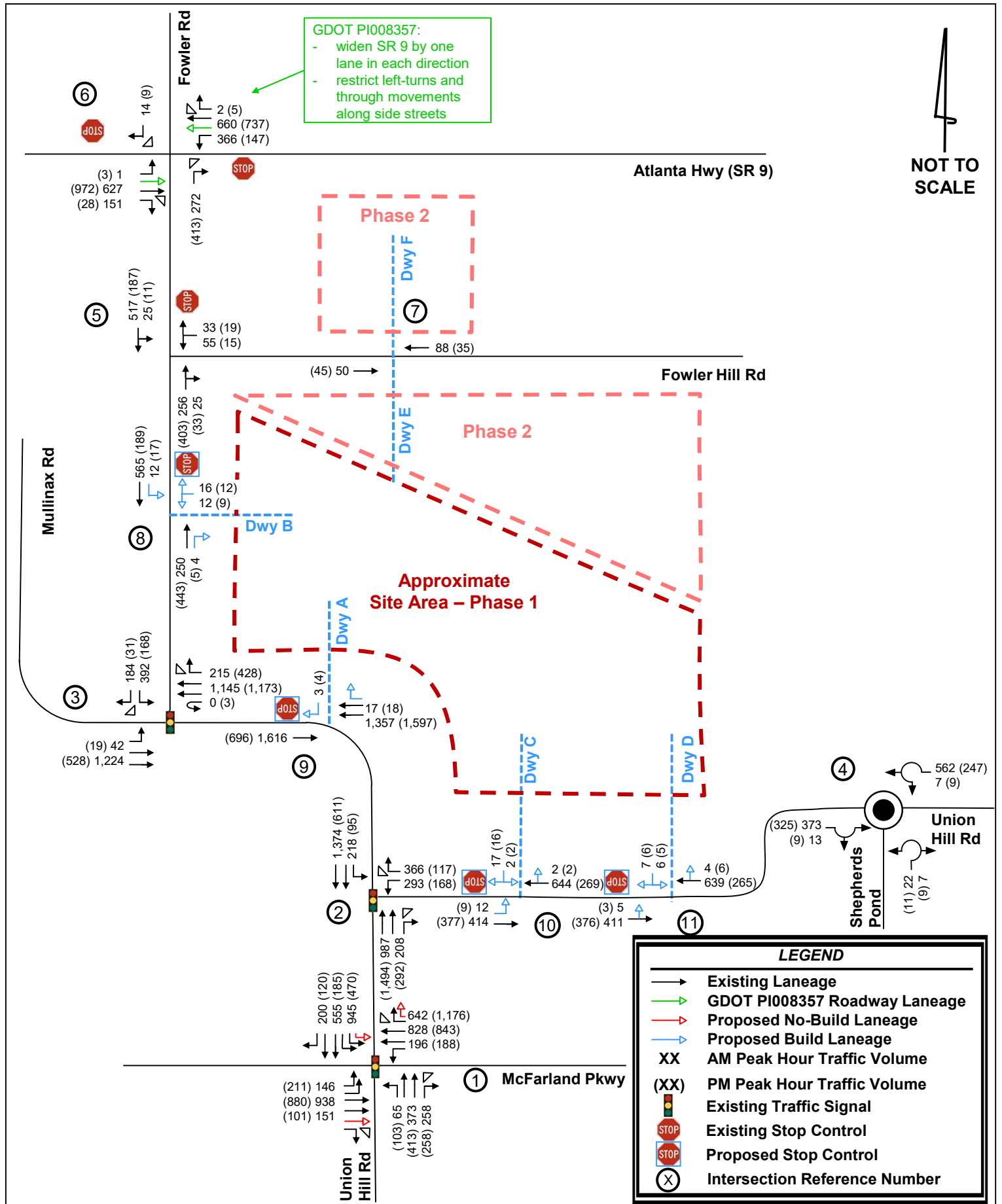
Overall LOS Standard: D Approach LOS Standard: D				-			Driveway F			Union Hill Road			Union Hill Road		
				Northbound			Southbound			Eastbound			Westbound		
				L	T	R	L	T	R	L	T	R	L	T	R
PH 1 BUILD (2030) (TWSC)	AM	Overall LOS	(0.3)												
		Approach LOS				C (19.7)			A (0.1)			A (0.0)			
		Storage				-		-		-	-	-	-		
		50th Queue				-		-		-	-	-	-		
		95th Queue				5		-		-	-	0	-		
	PM	Overall LOS	(0.2)												
		Approach LOS				B (11.5)			A (0.1)			A (0.0)			
		Storage				-		-		-	-	-	-		
		50th Queue				-		-		-	-	-	-		
		95th Queue				3		-		-	-	0	-		
PH 2 BUILD (2035) (TWSC)	AM	Overall LOS	(0.7)												
		Approach LOS				C (21.6)			A (0.3)			A (0.0)			
		Storage				-		-		-	-	-	-		
		50th Queue				-		-		-	-	-	-		
		95th Queue				15		-		-	-	3	-		
	PM	Overall LOS	(0.4)												
		Approach LOS				B (11.5)			A (0.1)			A (0.0)			
		Storage				-		-		-	-	-	-		
		50th Queue				-		-		-	-	-	-		
		95th Queue				3		-		-	-	0	-		

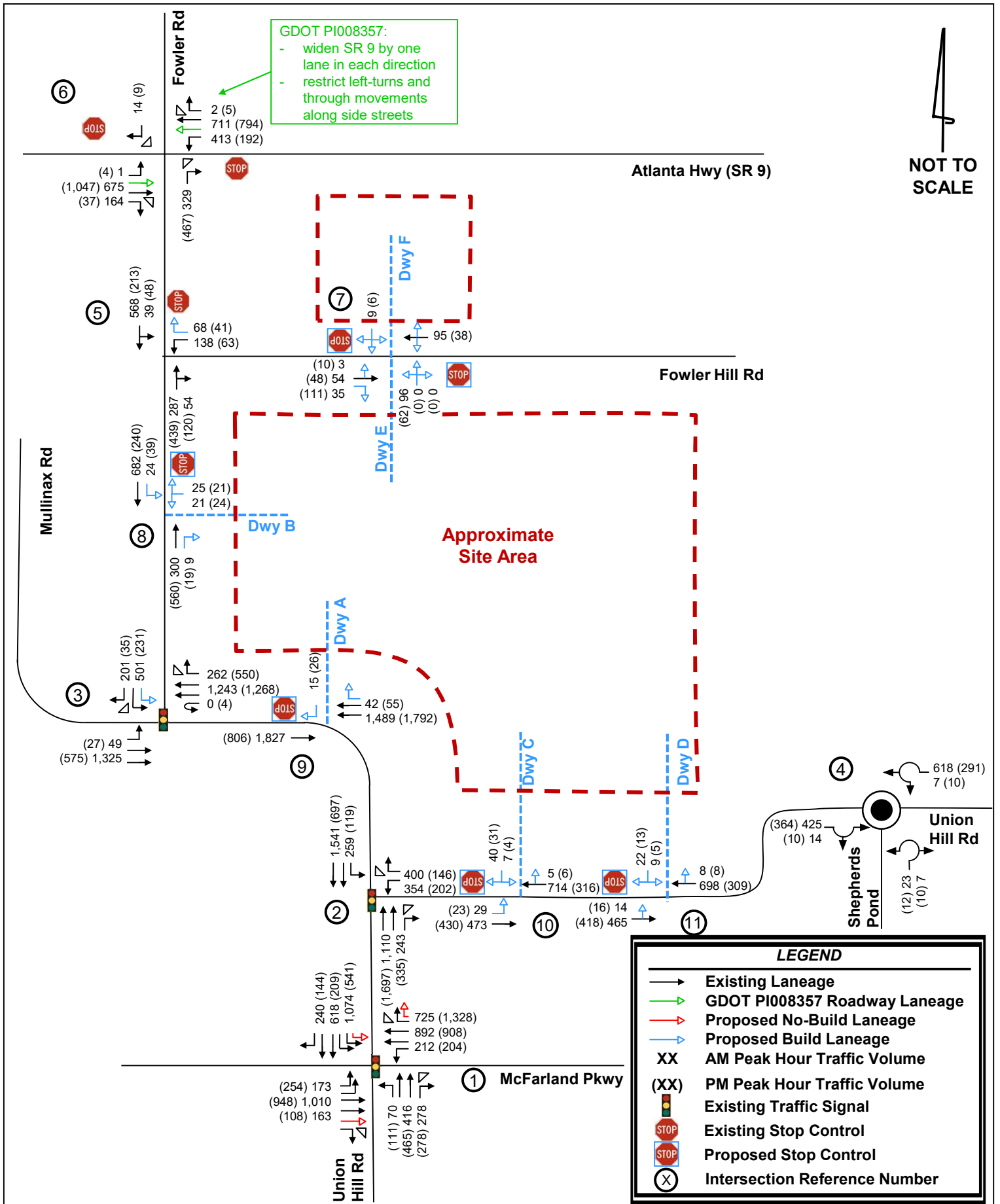
The intersection of Union Hill Road at Driveway D (Intersection 11) is projected to operate at an acceptable LOS overall and for each approach under the build conditions. The intersection is proposed to operate under two-way stop control with stop control for the southbound approach only. The recommended lane configuration for Driveway D is one lane entering the site and one lane exiting the site.









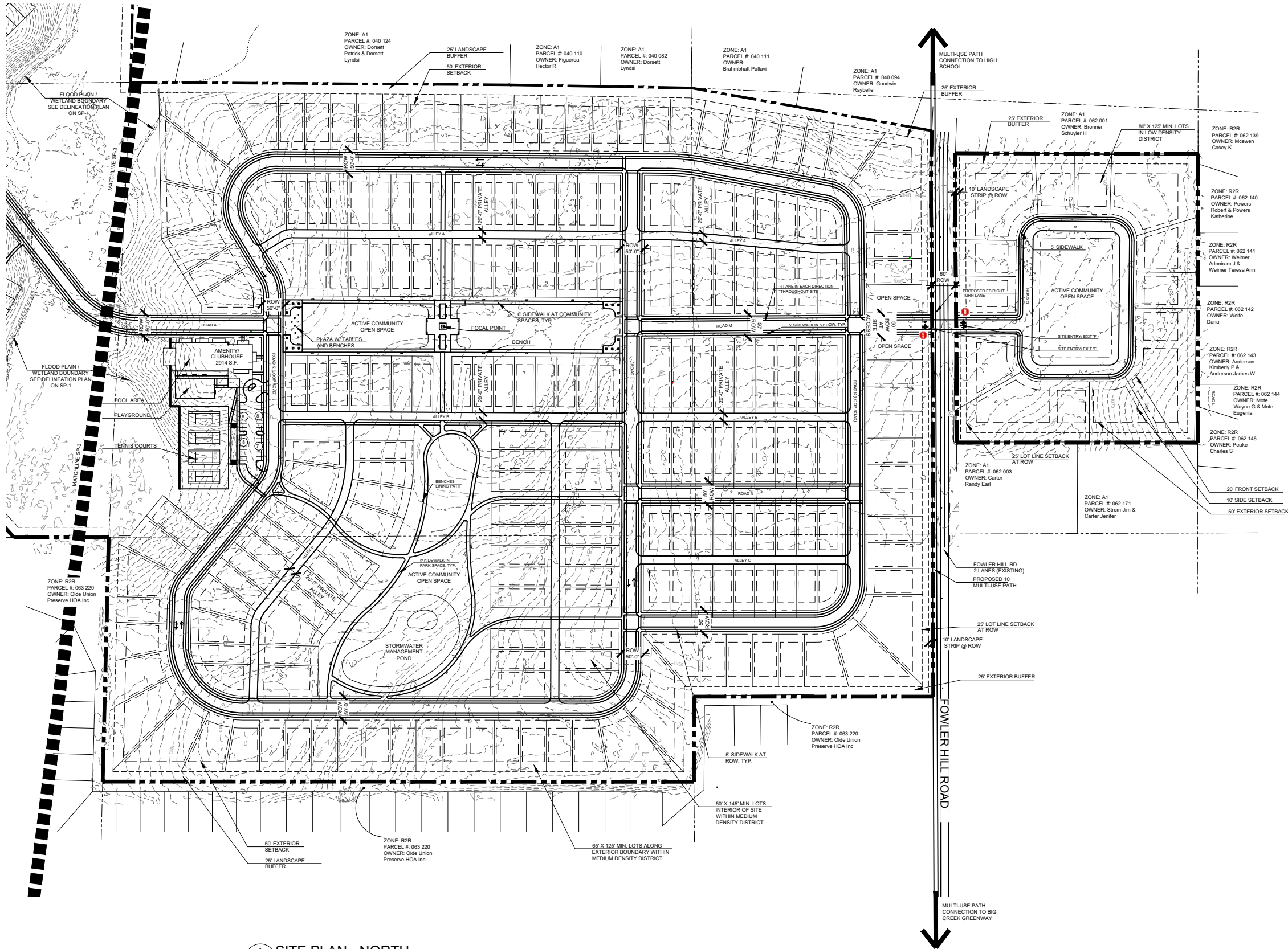


Proposed Site Plan

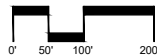


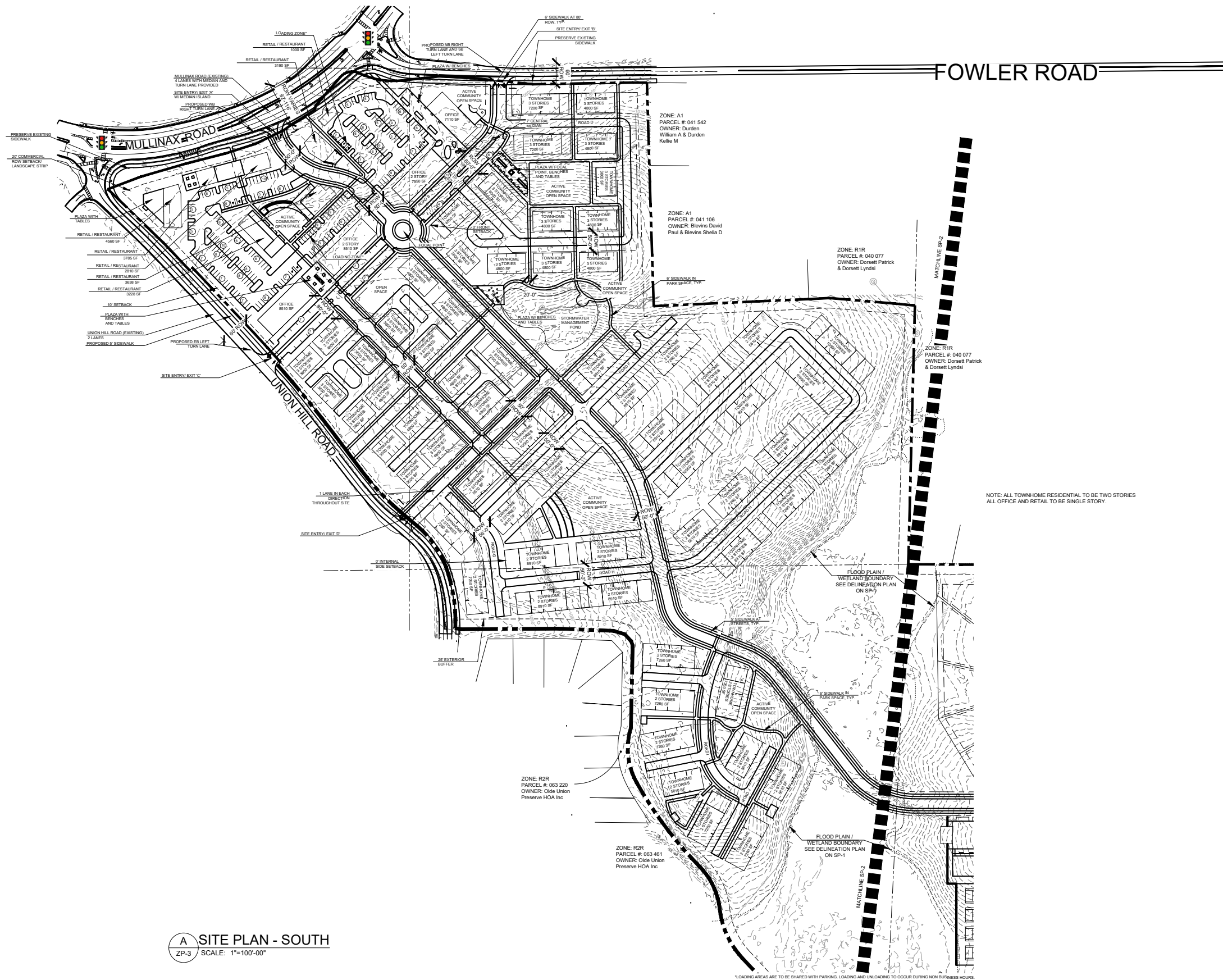
SHEET NO.:
SP-1

NOT RELEASED FOR CONSTRUCTION

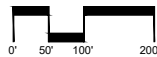


A SITE PLAN - NORTH
SP-2 SCALE: 1"=100'-0"





A SITE PLAN - SOUTH
ZP-3 SCALE: 1"=100'-00"



Trip Generation Analysis

Intersection Volume Worksheets

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #1
McFarland Pkwy (West)/McFarland Pkwy (East) at Union Hill Rd (South)/Union Hill Rd (North)

AM PEAK HOUR																	
	Union Hill Rd (South)				Union Hill Rd (North)				McFarland Pkwy (West)				McFarland Pkwy (East)				
	Northbound		Through	Right	Southbound		Through	Right	Eastbound		Through	Right	Westbound		Through	Right	
	U-Turn	Left			U-Turn	Left			U-Turn	Left			U-Turn	Left			
Observed 2021 Traffic Volumes	1	56	323	226	8	800	482	168	0	121	820	132	17	155	724	543	
Pedestrians			0				0				0				0		
Conflicting Pedestrians		0	0	0		0	0	0		0	0	0		0	0	0	
Bicycles		0	0	0		0	0	0		0	0	0		0	0	0	
Conflicting Bicycles				0				0				0				0	
Heavy Vehicles		0	6	10	27	1	28	6	7	0	5	71	7	0	13	53	
Heavy Vehicle %		2%	11%	3%	12%	13%	4%	2%	4%	2%	4%	9%	5%	2%	8%	7%	
Peak Hour Factor		0.96				0.96				0.96				0.96			
Adjustment Factor		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Adjusted 2021 Volumes	1	56	323	226	8	800	482	168	0	121	820	132	17	155	724	543	
Annual Growth Rate		1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Growth Factor		1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	
Annual Growth Rate (Design Year)		1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Growth Factor (Design Year)		1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	
Background Growth Trips		1	64	369	258	9	915	551	192	0	138	938	151	19	177	828	
Background Growth Trips (Design Year)		1	69	398	278	10	985	594	207	0	149	1010	163	21	191	892	
2030 No-Build Traffic		1	64	369	258	9	915	551	192	0	138	938	151	19	177	828	
2035 No-Build Traffic (Design Year)		1	69	398	278	10	985	594	207	0	149	1,010	163	21	191	892	
Phase 1																	
Trip Distribution IN				8%							13%					34%	
Trip Distribution OUT						(34%)	(8%)	(13%)									
Residential Trips		0	0	2	0	0	19	4	7	0	3	0	0	0	0	7	
Trip Distribution IN				5%							14%					40%	
Trip Distribution OUT						(40%)	(5%)	(14%)									
Office Trips		0	0	2	0	0	2	0	1	0	5	0	0	0	0	14	
Total Vehicular Project Trips		0	0	4	0	0	21	4	8	0	8	0	0	0	0	21	
2030 Build Traffic		1	64	373	258	9	936	555	200	0	146	938	151	19	177	828	
2030 Build Heavy Vehicle %		2%	11%	3%	12%	13%	3%	2%	4%	2%	4%	9%	5%	2%	8%	6%	
Phase 2																	
Trip Distribution IN				8%							13%					34%	
Trip Distribution OUT						(34%)	(8%)	(13%)									
Residential Trips		0	0	5	0	0	60	14	23	0	8	0	0	0	0	22	
Trip Distribution IN				5%							14%					40%	
Trip Distribution OUT						(40%)	(5%)	(14%)									
Office Trips		0	0	2	0	0	1	0	0	0	6	0	0	0	0	16	
Trip Distribution IN				16%							15%					27%	
Trip Distribution OUT						(27%)	(16%)	(15%)									
Retail Trips		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trip Distribution IN				16%							15%					27%	
Trip Distribution OUT						(27%)	(16%)	(15%)									
Restaurant Trips		0	0	11	0	0	18	10	10	0	10	0	0	0	0	18	
Pass-By Distribution IN																	
Pass-By Distribution OUT																	
Pass-By Trips		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Vehicular Project Trips		0	0	18	0	0	79	24	33	0	24	0	0	0	0	56	
2035 Build Traffic (Design Year)		1	69	416	278	10	1,064	618	240	0	173	1,010	163	21	191	892	
2035 Build Heavy Vehicle % (Design Year)		2%	11%	3%	12%	12%	3%	2%	4%	2%	4%	9%	5%	2%	8%	7%	

	PM PEAK HOUR																
	Union Hill Rd (South)				Union Hill Rd (North)				McFarland Pkwy (West)				McFarland Pkwy (East)				
	Northbound				Southbound				Eastbound				Westbound				
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Observed 2021 Traffic Volumes	1	87	350	222	5	381	155	97	3	172	755	86	16	146	723	991	
Pedestrians						0				0				0			
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Bicycles		0	0	0		0	0	0		0	0	0		0	0	0	
Conflicting Bicycles				0				0								0	
Heavy Vehicles		0	4	6		9	17	5		0	8	35		2	15	38	
Heavy Vehicle %		2%	5%	2%		4%	3%	6%		2%	5%	5%		13%	10%	5%	
Peak Hour Factor		0.983				0.98				0.98				0.98			
Adjustment Factors	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	
Adjusted 2021 Volumes	1	89	357	226	5	389	158	99	3	175	770	88	16	149	737	1,011	
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	
Background Growth Trips	1	102	408	258	6	445	181	113	3	200	880	101	18	170	843	1,156	
Background Growth Trips (Design Year)	1	110	440	278	6	479	195	122	4	216	948	108	20	184	908	1,245	
2030 No-Build Traffic	1	102	408	258	6	445	181	113	3	200	880	101	18	170	843	1,156	
2035 No-Build Traffic (Design Year)	1	110	440	278	6	479	195	122	4	216	948	108	20	184	908	1,245	
Phase 1																	
Trip Distribution IN				8%							13%					34%	
Trip Distribution OUT						(34%)	(8%)	(13%)									
Residential Trips	0	0	5	0	0	12	3	5	0	8	0	0	0	0	0	20	
Trip Distribution IN				5%							14%					40%	
Trip Distribution OUT						(40%)	(5%)	(14%)									
Office Trips	0	0	0	0	0	7	1	2	0	0	0	0	0	0	0	0	
Total Vehicular Project Trips	0	0	5	0	0	19	4	7	0	8	0	0	0	0	0	20	
2030 Build Traffic	1	102	413	258	6	464	185	120	3	208	880	101	18	170	843	1,176	
2030 Build Heavy Vehicle %	2%	5%	2%	4%	2%	4%	3%	6%	2%	4%	5%	3%	13%	10%	5%	3%	
Phase 2																	
Trip Distribution IN				8%							13%					34%	
Trip Distribution OUT						(34%)	(8%)	(13%)									
Residential Trips	0	0	16	0	0	38	9	15	0	26	0	0	0	0	0	68	
Trip Distribution IN				5%							14%					40%	
Trip Distribution OUT						(40%)	(5%)	(14%)									
Office Trips	0	0	0	0	0	12	2	4	0	0	0	0	0	0	0	0	
Trip Distribution IN				16%							15%					27%	
Trip Distribution OUT						(27%)	(16%)	(15%)									
Retail Trips	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
Trip Distribution IN				16%							15%					27%	
Trip Distribution OUT						(27%)	(16%)	(15%)									
Restaurant Trips	0	0	9	0	0	5	3	3	0	8	0	0	0	0	0	15	
Pass-By Distribution IN																	
Pass-By Distribution OUT																	
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Vehicular Project Trips	0	0	25	0	0	56	14	22	0	34	0	0	0	0	0	83	
2035 Build Traffic (Design Year)	1	110	465	278	6	535	209	144	4	250	948	108	20	184	908	1,328	
2035 Build Heavy Vehicle % (Design Year)	2%	5%	2%	4%	2%	4%	3%	5%	2%	4%	5%	3%	13%	10%	5%	3%	

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #2
Union Hill Rd (East) at Union Hill Rd (South)/Mullinax Rd

AM PEAK HOUR																
	Union Hill Rd (South)				Mullinax Rd				Eastbound				Union Hill Rd (East)			
	Northbound			Right	Southbound			Through	Right	Left		Through	Right	Westbound		Right
	U-Turn	Left	Through		U-Turn	Left	Through		U-Turn	Left	Through		U-Turn	Left	Through	
Observed 2021 Traffic Volumes	0	0	847	171	0	187	1,192	0	0	0	0	0	0	237	0	320
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	0	27	11	0	11	30	0	0	0	0	0	0	7	0	6
Heavy Vehicle %	2%	2%	3%	6%	2%	6%	3%	2%	2%	2%	2%	2%	2%	3%	2%	2%
Peak Hour Factor	0.84				0.84				0.84				0.84			
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2021 Volumes	0	0	847	171	0	187	1,192	0	1	1	1	1	0	237	0	320
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	968	196	0	214	1363	0	0	0	0	0	0	271	0	366
Background Growth Trips (Design Year)	0	0	1043	211	0	230	1468	0	0	0	0	0	0	292	0	394
2030 No-Build Traffic	0	0	968	196	0	214	1363	0	0	0	0	0	0	271	0	366
2035 No-Build Traffic (Design Year)	0	0	1,043	211	0	230	1,468	0	0	0	0	0	0	292	0	394
Phase 1																
Trip Distribution IN			35%	20%			(20%)									
Trip Distribution OUT														(35%)		
Residential Trips	0	0	7	4	0	0	11	0	0	0	0	0	0	19	0	0
Trip Distribution IN			35%	24%		11%										
Trip Distribution OUT						(5%)									(54%)	
Office Trips	0	0	12	8	0	4	0	0	0	0	0	0	0	3	0	0
Total Vehicular Project Trips	0	0	19	12	0	4	11	0	0	0	0	0	0	22	0	0
2030 Build Traffic	0	0	987	208	0	218	1,374	0	0	0	0	0	0	293	0	366
2030 Build Heavy Vehicle %	2%	2%	3%	6%	2%	6%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%
Phase 2																
Trip Distribution IN			45%	10%		(10%)	(40%)									10%
Trip Distribution OUT														(15%)		
Residential Trips	0	0	29	6	0	18	70	0	0	0	0	0	0	26	0	6
Trip Distribution IN			35%	24%		11%										
Trip Distribution OUT						(5%)									(54%)	
Office Trips	0	0	14	10	0	4	0	0	0	0	0	0	0	1	0	0
Trip Distribution IN			35%	23%		10%										
Trip Distribution OUT						(5%)									(53%)	
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Trip Distribution IN			35%	23%		10%										
Trip Distribution OUT						(5%)									(53%)	
Restaurant Trips	0	0	24	16	0	7	3	0	0	0	0	0	0	34	0	0
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	67	32	0	29	73	0	0	0	0	0	0	62	0	6
2035 Build Traffic (Design Year)	0	0	1,110	243	0	259	1,541	0	0	0	0	0	0	354	0	400
2035 Build Heavy Vehicle % (Design Year)	2%	2%	3%	6%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%

PM PEAK HOUR																
	Union Hill Rd (South)				Mullinax Rd				Eastbound				Union Hill Rd (East)			
	U-Turn	Northbound		Right	U-Turn	Southbound		Right	U-Turn	Left		Through	Right	U-Turn	Westbound	
	0	Left	Through	0	0	Left	Through	0	0	0	0	0	0	0	Left	Through
Observed 2021 Traffic Volumes	0	0	1,263	240	0	81	517	0	0	0	0	0	0	0	125	0
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	0	38	7	0	0	18	0	0	0	0	0	0	0	11	0
Heavy Vehicle %	2%	2%	3%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	9%	2%
Peak Hour Factor	0.976				0.98				0.98				0.98			
Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Adjusted 2021 Volumes	0	0	1,288	245	0	83	527	0	0	0	0	0	0	0	128	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	1,473	280	0	95	603	0	0	0	0	0	0	0	146	0
Background Growth Trips (Design Year)	0	0	1,587	302	0	102	649	0	0	0	0	0	0	0	158	0
2030 No-Build Traffic	0	0	1,473	280	0	95	603	0	0	0	0	0	0	0	146	0
2035 No-Build Traffic (Design Year)	0	0	1,587	302	0	102	649	0	0	0	0	0	0	0	158	0
Phase 1																
Trip Distribution IN			35%	20%												
Trip Distribution OUT							(20%)								(35%)	
Residential Trips	0	0	21	12	0	0	7	0	0	0	0	0	0	0	13	0
Trip Distribution IN			35%	24%		11%										
Trip Distribution OUT							(5%)								(54%)	
Office Trips	0	0	0	0	0	0	1	0	0	0	0	0	0	0	9	0
Total Vehicular Project Trips	0	0	21	12	0	0	8	0	0	0	0	0	0	0	22	0
2030 Build Traffic	0	0	1,494	292	0	95	611	0	0	0	0	0	0	0	168	0
2030 Build Heavy Vehicle %	2%	2%	3%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	8%	2%
Phase 2																
Trip Distribution IN			45%	10%												10%
Trip Distribution OUT							(40%)								(15%)	
Residential Trips	0	0	90	20	0	11	45	0	0	0	0	0	0	0	17	0
Trip Distribution IN			35%	24%		11%										
Trip Distribution OUT							(5%)								(54%)	
Office Trips	0	0	0	0	0	0	2	0	0	0	0	0	0	0	16	0
Trip Distribution IN			35%	23%		10%										
Trip Distribution OUT							(5%)								(53%)	
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Trip Distribution IN			35%	23%		10%										
Trip Distribution OUT							(5%)								(53%)	
Restaurant Trips	0	0	20	13	0	6	1	0	0	0	0	0	0	0	9	0
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	110	33	0	17	48	0	0	0	0	0	0	0	44	0
2035 Build Traffic (Design Year)	0	0	0	1,697	335	0	119	697	0	0	0	0	0	0	202	0
2035 Build Heavy Vehicle %	2%	2%	3%	3%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	7%	2%

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #3
Mullinax Rd (West)/Mullinax Rd (East) at Fowler Rd

AM PEAK HOUR																
	Northbound				Fowler Rd Southbound				Mullinax Rd (West) Eastbound				Mullinax Rd (East) Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	0	0	0	0	333	0	161	0	34	1,067	0	0	0	999	185
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	0	0	0	0	13	0	12	0	2	28	0	0	0	15	18
Heavy Vehicle %	2%	2%	2%	2%	2%	4%	2%	7%	2%	6%	3%	2%	2%	2%	2%	10%
Peak Hour Factor	0.80				0.80				0.80				0.80			
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2021 Volumes	0	0	0	0	0	333	0	161	0	34	1,067	0	0	0	999	185
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	0	0	0	381	0	184	0	39	1,220	0	0	0	1,142	212
Background Growth Trips (Design Year)	0	0	0	0	0	410	0	198	0	42	1,314	0	0	0	1,231	228
2030 No-Build Traffic	0	0	0	0	0	381	0	184	0	39	1,220	0	0	0	1,142	212
2035 No-Build Traffic (Design Year)	0	0	0	0	0	410	0	198	0	42	1,314	0	0	0	1,231	228
Phase 1																
Trip Distribution IN									3%							5%
Trip Distribution OUT						(20%)									(3%)	
Residential Trips	0	0	0	0	0	11	0	0	0	1	0	0	0	0	2	1
Trip Distribution IN									5%	11%						5%
Trip Distribution OUT						(5%)		(5%)							(11%)	(5%)
Office Trips	0	0	0	0	0	0	0	0	2	4	0	0	0	0	1	2
Total Vehicular Project Trips	0	0	0	0	0	11	0	0	3	4	0	0	0	0	3	3
2030 Build Traffic	0	0	0	0	0	392	0	184	0	42	1,224	0	0	0	1,145	215
2030 Build Heavy Vehicle %	2%	2%	2%	2%	2%	4%	2%	7%	2%	5%	3%	2%	2%	2%	2%	10%
Phase 2																
Trip Distribution IN									3%							45%
Trip Distribution OUT						(50%)									(3%)	
Residential Trips	0	0	0	0	0	88	0	0	0	2	0	0	0	0	5	29
Trip Distribution IN									5%	11%						5%
Trip Distribution OUT						(5%)		(5%)							(11%)	(5%)
Office Trips	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	2
Trip Distribution IN									5%	10%						
Trip Distribution OUT						(5%)		(5%)							(10%)	(5%)
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN									5%	10%						
Trip Distribution OUT						(5%)		(5%)							(10%)	(5%)
Restaurant Trips	0	0	0	0	0	3	0	3	0	3	7	0	0	0	7	3
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	91	0	3	0	7	11	0	0	0	12	34
2035 Build Traffic (Design Year)	0	0	0	0	0	501	0	201	0	49	1,325	0	0	0	1,243	262
2035 Build Heavy Vehicle % (Design Year)	2%	2%	2%	2%	2%	3%	2%	7%	2%	5%	3%	2%	2%	2%	2%	8%

PM PEAK HOUR																
	Northbound				Fowler Rd Southbound				Mullinax Rd (West) Eastbound				Mullinax Rd (East) Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	0	0	0	0	137	0	25	0	15	453	0	3	0	1,003	364
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	0	0	0	0	4	0	0	0	1	14	0	0	0	25	14
Heavy Vehicle %	2%	2%	2%	2%	2%	3%	2%	2%	2%	7%	3%	2%	2%	2%	2%	4%
Peak Hour Factor	0.975				0.98				0.98				0.98			
Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Adjusted 2021 Volumes	0	0	0	0	0	140	0	26	0	15	462	0	3	0	1,023	371
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	0	0	0	160	0	30	0	17	528	0	3	0	1,170	424
Background Growth Trips (Design Year)	0	0	0	0	0	172	0	32	0	18	569	0	4	0	1,260	457
2030 No-Build Traffic	0	0	0	0	0	160	0	30	0	17	528	0	3	0	1,170	424
2035 No-Build Traffic (Design Year)	0	0	0	0	0	172	0	32	0	18	569	0	4	0	1,260	457
Phase 1																
Trip Distribution IN									3%							5%
Trip Distribution OUT						(20%)									(3%)	
Residential Trips	0	0	0	0	0	7	0	0	0	2	0	0	0	0	1	3
Trip Distribution IN									5%	11%						5%
Trip Distribution OUT						(5%)		(5%)							(11%)	(5%)
Office Trips	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	1
Total Vehicular Project Trips	0	0	0	0	0	8	0	1	0	2	0	0	0	0	3	4
2030 Build Traffic	0	0	0	0	0	168	0	31	0	19	528	0	3	0	1,173	428
2030 Build Heavy Vehicle %	2%	2%	2%	2%	2%	3%	2%	2%	2%	6%	3%	2%	2%	2%	2%	4%
Phase 2																
Trip Distribution IN									3%							45%
Trip Distribution OUT						(50%)									(3%)	
Residential Trips	0	0	0	0	0	56	0	0	0	6	0	0	0	0	3	90
Trip Distribution IN									5%	11%						5%
Trip Distribution OUT						(5%)		(5%)							(11%)	(5%)
Office Trips	0	0	0	0	0	2	0	2	0	0	0	0	0	0	3	2
Trip Distribution IN									5%	10%						
Trip Distribution OUT						(5%)		(5%)							(10%)	(5%)
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN									5%	10%						
Trip Distribution OUT						(5%)		(5%)							(10%)	(5%)
Restaurant Trips	0	0	0	0	0	1	0	1	0	3	6	0	0	0	2	1
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	59	0	3	0	9	6	0	0	0	8	93
2035 Build Traffic (Design Year)	0	0	0	0	0	231	0	35	0	27	575	0	4	0	1,268	550
2035 Build Heavy Vehicle % (Design Year)	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	3%	2%	2%	2%	2%	3%

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #4
Shepherds Pond at Union Hill Rd (West)/Union Hill Rd (East)

AM PEAK HOUR																
	Shepherds Pond								Union Hill Rd (West)				Union Hill Rd (East)			
	Northbound		Southbound		Eastbound		Westbound		Left		Through		Left		Through	
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	19	0	6	0	0	0	0	0	0	319	11	0	6	486	0
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	1	0	0	0	0	0	0	0	0	19	0	0	1	12	0
Heavy Vehicle %	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	17%	2%	2%
Peak Hour Factor	0.84				0.84				0.84				0.84			
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2021 Volumes	0	19	0	6	0	0	0	0	0	0	319	11	0	6	486	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	22	0	7	0	0	0	0	0	0	365	13	0	7	556	0
Background Growth Trips (Design Year)	0	23	0	7	0	0	0	0	0	0	393	14	0	7	599	0
2030 No-Build Traffic	0	22	0	7	0	0	0	0	0	0	365	13	0	7	556	0
2035 No-Build Traffic (Design Year)	0	23	0	7	0	0	0	0	0	0	393	14	0	7	599	0
Phase 1																
Trip Distribution IN																14%
Trip Distribution OUT											(14%)					
Residential Trips	0	0	0	0	0	0	0	0	0	0	8	0	0	0	3	0
Trip Distribution IN																8%
Trip Distribution OUT											(8%)					
Office Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Total Vehicular Project Trips	0	0	0	0	0	0	0	0	0	0	8	0	0	0	6	0
2030 Build Traffic	0	22	0	7	0	0	0	0	0	0	373	13	0	7	562	0
2030 Build Heavy Vehicle %	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	16%	2%	2%
Phase 2																
Trip Distribution IN																14%
Trip Distribution OUT											(14%)					
Residential Trips	0	0	0	0	0	0	0	0	0	0	25	0	0	0	9	0
Trip Distribution IN																8%
Trip Distribution OUT											(8%)					
Office Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Trip Distribution IN																11%
Trip Distribution OUT											(11%)					
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN																11%
Trip Distribution OUT											(11%)					
Restaurant Trips	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	0	0	0	0	0	32	0	0	0	19	0
2035 Build Traffic (Design Year)	0	23	0	7	0	0	0	0	0	0	425	14	0	7	618	0
2035 Build Heavy Vehicle % (Design Year)	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	16%	2%	2%

PM PEAK HOUR																
	Shepherds Pond								Union Hill Rd (West)				Union Hill Rd (East)			
	Northbound		Southbound		Eastbound		Westbound		Left		Through		Left		Through	
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	10	0	8	0	0	0	0	0	0	274	8	0	8	205	0
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	2	0	0	0	0	0	0	0	0	11	1	0	0	18	0
Heavy Vehicle %	2%	20%	2%	2%	2%	2%	2%	2%	2%	2%	4%	13%	2%	2%	9%	2%
Peak Hour Factor	0.96				0.96				0.96				0.96			
Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Adjusted 2021 Volumes	0	10	0	8	0	0	0	0	0	0	275	8	0	8	209	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	11	0	9	0	0	0	0	0	0	319	9	0	9	239	0
Background Growth Trips (Design Year)	0	12	0	10	0	0	0	0	0	0	344	10	0	10	257	0
2030 No-Build Traffic	0	11	0	9	0	0	0	0	0	0	319	9	0	9	239	0
2035 No-Build Traffic (Design Year)	0	12	0	10	0	0	0	0	0	0	344	10	0	10	257	0
Phase 1																
Trip Distribution IN																14%
Trip Distribution OUT											(14%)					
Residential Trips	0	0	0	0	0	0	0	0	0	0	5	0	0	0	8	0
Trip Distribution IN																8%
Trip Distribution OUT											(8%)					
Office Trips	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	0	0	0	0	0	6	0	0	0	8	0
2030 Build Traffic	0	11	0	9	0	0	0	0	0	0	325	9	0	9	247	0
2030 Build Heavy Vehicle %	2%	21%	2%	2%	2%	2%	2%	2%	2%	2%	4%	13%	2%	2%	8%	2%
Phase 2																
Trip Distribution IN																14%
Trip Distribution OUT											(14%)					
Residential Trips	0	0	0	0	0	0	0	0	0	0	16	0	0	0	28	0
Trip Distribution IN																8%
Trip Distribution OUT											(8%)					
Office Trips	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Trip Distribution IN																11%
Trip Distribution OUT											(11%)					
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN																11%
Trip Distribution OUT											(11%)					
Restaurant Trips	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	0
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	0	0	0	0	0	20	0	0	0	34	0
2035 Build Traffic (Design Year)	0	12	0	10	0	0	0	0	0	0	364	10	0	10	291	0
2035 Build Heavy Vehicle % (Design Year)	2%	23%	2%	2%	2%	2%	2%	2%	2%	2%	4%	13%	2%	2%	8%	2%

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #5
Fowler Rd (South)/Fowler Rd (North) at Driveway/Fowler Hill Rd

AM PEAK HOUR																
Observed 2021 Traffic Volumes	Fowler Rd (South)				Fowler Rd (North)				Driveway				Fowler Hill Rd			
	Northbound		Right	U-Turn	Southbound		Right	U-Turn	Eastbound		Through	Right	U-Turn	Westbound		Right
	Left	Through			Left	Through			Left	Through				Left	Through	
Pedestrians	0	0	210	22	0	22	442	0	0	0	0	0	0	48	0	29
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles	0	0	22	1	0	2	23	0	0	0	0	0	0	2	0	2
Heavy Vehicle %	2%	2%	10%	5%	2%	9%	5%	2%	2%	2%	2%	2%	2%	4%	2%	7%
Peak Hour Factor	0.81				0.81				0.81				0.81			
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2021 Volumes	0	0	210	22	0	22	442	0	1	1	1	1	0	48	0	29
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	240	25	0	25	505	0	0	0	0	0	0	55	0	33
Background Growth Trips (Design Year)	0	0	259	27	0	27	544	0	0	0	0	0	0	59	0	36
2030 No-Build Traffic	0	0	240	25	0	25	505	0	0	0	0	0	0	55	0	33
2035 No-Build Traffic (Design Year)	0	0	259	27	0	27	544	0	0	0	0	0	0	59	0	36
Phase 1																
Trip Distribution IN							28%									
Trip Distribution OUT			(28%)													
Residential Trips	0	0	15	0	0	0	6	0	0	0	0	0	0	0	0	0
Phase 2																
Trip Distribution IN							17%									
Trip Distribution OUT			(17%)													
Office Trips	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	16	0	0	0	12	0	0	0	0	0	0	0	0	0
2030 Build Traffic	0	0	256	25	0	25	517	0	0	0	0	0	0	55	0	33
2030 Build Heavy Vehicle %	2%	2%	10%	5%	2%	9%	5%	2%	2%	2%	2%	2%	2%	4%	2%	7%
Phase 2																
Trip Distribution IN							42%									
Trip Distribution OUT			(10%)											(42%)		(18%)
Residential Trips	0	0	18	27	0	12	6	0	0	0	0	0	0	74	0	32
Phase 3																
Trip Distribution IN							17%									
Trip Distribution OUT			(17%)													
Office Trips	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Phase 4																
Trip Distribution IN							16%									
Trip Distribution OUT			(16%)													
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase 5																
Trip Distribution IN							16%									
Trip Distribution OUT			(16%)													
Restaurant Trips	0	0	10	0	0	0	11	0	0	0	0	0	0	0	0	0
Phase 6																
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	28	27	0	12	24	0	0	0	0	0	0	74	0	32
2035 Build Traffic (Design Year)	0	0	287	54	0	39	568	0	0	0	0	0	0	133	0	68
2035 Build Heavy Vehicle % (Design Year)	2%	2%	9%	2%	2%	6%	5%	2%	2%	2%	2%	2%	2%	2%	2%	4%

PM PEAK HOUR																
	Fowler Rd (South)				Fowler Rd (North)				Driveway				Fowler Hill Rd			
	U-Turn	Northbound		Right	U-Turn	Southbound		Right	U-Turn	Eastbound		Right	U-Turn	Westbound		Right
	0	0	334	28	0	10	146	0	0	0	0	0	0	13	0	17
Observed 2021 Traffic Volumes																
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	0	12	3	0	0	3	0	0	0	0	0	0	0	0	2
Heavy Vehicle %	2%	2%	4%	11%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	12%
Peak Hour Factor	0.958				0.96				0.96				0.96			
Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Adjusted 2021 Volumes	0	0	341	29	0	10	149	0	0	0	0	0	0	13	0	17
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	390	33	0	11	170	0	0	0	0	0	0	15	0	19
Background Growth Trips (Design Year)	0	0	420	36	0	12	184	0	0	0	0	0	0	16	0	21
2030 No-Build Traffic	0	0	390	33	0	11	170	0	0	0	0	0	0	15	0	19
2035 No-Build Traffic (Design Year)	0	0	420	36	0	12	184	0	0	0	0	0	0	16	0	21
Phase 1																
Trip Distribution IN							28%									
Trip Distribution OUT			(28%)													
Residential Trips	0	0	10	0	0	0	17	0	0	0	0	0	0	0	0	0
Trip Distribution IN							17%									
Trip Distribution OUT			(17%)													
Office Trips	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	13	0	0	0	17	0	0	0	0	0	0	0	0	0
2030 Build Traffic																
2030 Build Heavy Vehicle %	0	0	403	33	0	11	187	0	0	0	0	0	0	15	0	19
	2%	2%	3%	11%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	12%
Phase 2																
Trip Distribution IN				42%		18%	10%									
Trip Distribution OUT			(10%)											(42%)		(18%)
Residential Trips	0	0	11	84	0	36	20	0	0	0	0	0	0	47	0	20
Trip Distribution IN							17%									
Trip Distribution OUT			(17%)													
Office Trips	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN							16%									
Trip Distribution OUT			(16%)													
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN							16%									
Trip Distribution OUT			(16%)													
Restaurant Trips	0	0	3	0	0	0	9	0	0	0	0	0	0	0	0	0
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	19	84	0	36	29	0	0	0	0	0	0	47	0	20
2035 Build Traffic (Design Year)																
2035 Build Heavy Vehicle %	0	0	439	120	0	48	213	0	0	0	0	0	0	63	0	41
	2%	2%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #6
GA-9 Atlanta Hwy (West)/GA-9 Atlanta Hwy (East) at Fowler Rd/Wren Hollow Ct

AM PEAK HOUR																
	Fowler Rd				Wren Hollow Ct				GA-9 Atlanta Hwy (West)				GA-9 Atlanta Hwy (East)			
	Northbound				Southbound				Eastbound				Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	39	1	185	0	1	6	5	0	1	548	131	0	311	577	2
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles	0	2	0	27	0	0	0	0	0	0	21	2	0	17	50	0
Heavy Vehicle %	2%	5%	2%	15%	2%	2%	2%	2%	2%	2%	4%	2%	2%	5%	9%	2%
Peak Hour Factor	0.97				0.97				0.97				0.97			
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2021 Volumes	0	39	1	185	0	1	6	5	0	1	548	131	0	311	577	2
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	45	1	212	0	1	7	6	0	1	627	150	0	356	660	2
Background Growth Trips (Design Year)	0	48	1	228	0	1	7	6	0	1	675	161	0	383	711	2
2030 No-Build Traffic	0	45	1	212	0	1	7	6	0	1	627	150	0	356	660	2
2035 No-Build Traffic (Design Year)	0	48	1	228	0	1	7	6	0	1	675	161	0	383	711	2
Phase 1																
Trip Distribution IN												5%			18%	
Trip Distribution OUT		(5%)		(18%)												
Residential Trips	0	3	0	10	0	0	0	0	0	0	0	1	0	4	0	0
Trip Distribution IN															17%	
Trip Distribution OUT				(17%)												
Office Trips	0	0	0	1	0	0	0	0	0	0	0	0	0	6	0	0
Total Vehicular Project Trips	0	3	0	11	0	0	0	0	0	0	0	1	0	10	0	0
2030 Build Traffic	0	48	1	223	0	1	7	6	0	1	627	151	0	366	660	2
2030 Build Heavy Vehicle %	2%	5%	2%	14%	2%	2%	2%	2%	2%	2%	4%	2%	2%	5%	9%	2%
Phase 2																
Trip Distribution IN												5%			18%	
Trip Distribution OUT		(5%)		(18%)												
Residential Trips	0	9	0	32	0	0	0	0	0	0	0	3	0	12	0	0
Trip Distribution IN															17%	
Trip Distribution OUT				(17%)												
Office Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0
Trip Distribution IN															16%	
Trip Distribution OUT				(16%)												
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN															16%	
Trip Distribution OUT				(16%)												
Restaurant Trips	0	0	0	10	0	0	0	0	0	0	0	0	0	11	0	0
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	9	0	42	0	0	0	0	0	0	0	3	0	30	0	0
2035 Build Traffic (Design Year)	0	57	1	270	0	1	7	6	0	1	675	164	0	413	711	2
2035 Build Heavy Vehicle % (Design Year)	2%	4%	2%	12%	2%	2%	2%	2%	2%	2%	4%	2%	2%	5%	9%	2%

PM PEAK HOUR																
	Fowler Rd				Wren Hollow Ct				GA-9 Atlanta Hwy (West)				GA-9 Atlanta Hwy (East)			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	15	0	330	0	2	2	4	0	3	833	22	0	117	632	4
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	0	0	9	0	0	0	0	0	0	28	0	0	2	5	0
Heavy Vehicle %	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Peak Hour Factor	0.948				0.95				0.95				0.95			
Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Adjusted 2021 Volumes	0	15	0	337	0	2	2	4	0	3	850	22	0	119	645	4
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	17	0	385	0	2	2	5	0	3	972	25	0	136	737	5
Background Growth Trips (Design Year)	0	18	0	415	0	2	2	5	0	4	1047	27	0	147	794	5
2030 No-Build Traffic	0	17	0	385	0	2	2	5	0	3	972	25	0	136	737	5
2035 No-Build Traffic (Design Year)	0	18	0	415	0	2	2	5	0	4	1,047	27	0	147	794	5
Phase 1																
Trip Distribution IN												5%			18%	
Trip Distribution OUT		(5%)		(18%)												
Residential Trips	0	2	0	6	0	0	0	0	0	0	0	3	0	11	0	0
Trip Distribution IN															17%	
Trip Distribution OUT				(17%)												
Office Trips	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	2	0	9	0	0	0	0	0	0	0	3	0	11	0	0
2030 Build Traffic	0	19	0	394	0	2	2	5	0	3	972	28	0	147	737	5
2030 Build Heavy Vehicle %	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Phase 2																
Trip Distribution IN												5%			18%	
Trip Distribution OUT		(5%)		(18%)												
Residential Trips	0	6	0	20	0	0	0	0	0	0	0	10	0	36	0	0
Trip Distribution IN															17%	
Trip Distribution OUT				(17%)												
Office Trips	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN															16%	
Trip Distribution OUT				(16%)												
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN															16%	
Trip Distribution OUT				(16%)												
Restaurant Trips	0	0	0	3	0	0	0	0	0	0	0	0	0	9	0	0
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	6	0	28	0	0	0	0	0	0	0	10	0	45	0	0
2035 Build Traffic (Design Year)	0	24	0	443	0	2	2	5	0	4	1,047	37	0	192	794	5
2035 Build Heavy Vehicle % (Design Year)	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #7
Fowler Hill Rd at Driveway E/Driveway F

AM PEAK HOUR																
	Driveway E Northbound				Driveway F Southbound				Fowler Hill Rd Eastbound				Fowler Hill Rd Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	0	0	0	0	0	0	0	0	0	44	0	0	0	77	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	2%	5%	2%
Peak Hour Factor	0.80				0.80				0.80				0.80			
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2021 Volumes	0	0	0	0	0	0	0	0	0	0	44	0	0	0	77	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	0	0	0	0	0	0	0	0	50	0	0	0	88	0
Background Growth Trips (Design Year)	0	0	0	0	0	0	0	0	0	0	54	0	0	0	95	0
2030 No-Build Traffic	0	0	0	0	0	0	0	0	0	0	50	0	0	0	88	0
2035 No-Build Traffic (Design Year)	0	0	0	0	0	0	0	0	0	0	54	0	0	0	95	0
Phase 1																
Trip Distribution IN																
Trip Distribution OUT																
Residential Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN																
Trip Distribution OUT																
Office Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Build Traffic	0	0	0	0	0	0	0	0	0	0	50	0	0	0	88	0
2030 Build Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	2%	5%	2%
Phase 2																
Trip Distribution IN																
Trip Distribution OUT		(5%)						(5%)			5%			55%		
Residential Trips	0	96	0	0	0	0	0	9	0	3	0	35	0	0	0	0
Trip Distribution IN																
Trip Distribution OUT																
Office Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN																
Trip Distribution OUT																
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN																
Trip Distribution OUT																
Restaurant Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	96	0	0	0	0	0	9	0	3	0	35	0	0	0	0
2035 Build Traffic (Design Year)	0	96	0	0	0	0	0	9	0	3	54	35	0	0	95	0
2035 Build Heavy Vehicle % (Design Year)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	2%	5%	2%

PM PEAK HOUR																
	Driveway E Northbound				Driveway F Southbound				Fowler Hill Rd Eastbound				Fowler Hill Rd Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	0	0	0	0	0	0	0	0	0	38	0	0	0	30	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	8%	2%	2%	2%	7%	2%
Peak Hour Factor	0.98				0.98				0.98				0.98			
Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Adjusted 2021 Volumes	0	0	0	0	0	0	0	0	0	0	39	0	0	0	31	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	0	0	0	0	0	0	0	0	45	0	0	0	35	0
Background Growth Trips (Design Year)	0	0	0	0	0	0	0	0	0	0	48	0	0	0	38	0
2030 No-Build Traffic	0	0	0	0	0	0	0	0	0	0	45	0	0	0	35	0
2035 No-Build Traffic (Design Year)	0	0	0	0	0	0	0	0	0	0	48	0	0	0	38	0
Phase 1																
Trip Distribution IN																
Trip Distribution OUT																
Residential Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN																
Trip Distribution OUT																
Office Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Build Traffic	0	0	0	0	0	0	0	0	0	0	45	0	0	0	35	0
2030 Build Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	8%	2%	2%	2%	7%	2%
Phase 2																
Trip Distribution IN																
Trip Distribution OUT		(5%)						(5%)			5%			55%		
Residential Trips	0	62	0	0	0	0	0	6	0	10	0	111	0	0	0	0
Trip Distribution IN																
Trip Distribution OUT																
Office Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN																
Trip Distribution OUT																
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN																
Trip Distribution OUT																
Restaurant Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	62	0	0	0	0	0	6	0	10	0	111	0	0	0	0
2035 Build Traffic (Design Year)	0	62	0	0	0	0	0	6	0	10	48	111	0	0	38	0
2035 Build Heavy Vehicle % (Design Year)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	8%	2%	2%	2%	7%	2%

INTERSECTION #8
Driveway B at Fowler Rd

	AM PEAK HOUR															
	Fowler Rd Northbound				Fowler Rd Southbound				Eastbound				Driveway B Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	0	219	0	0	0	494	0	0	0	0	0	0	0	0	0
Pedestrians																
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles	0	0	20	0	0	0	25	0	0	0	0	0	0	0	0	0
Heavy Vehicle %	2%	2%	9%	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor			0.80				0.80				0.80				0.80	
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2021 Volumes	0	0	219	0	0	0	494	0	0	0	0	0	0	0	0	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	250	0	0	0	565	0	0	0	0	0	0	0	0	0
Background Growth Trips (Design Year)	0	0	270	0	0	0	608	0	0	0	0	0	0	0	0	0
2030 No-Build Traffic	0	0	250	0	0	0	565	0	0	0	0	0	0	0	0	0
2035 No-Build Traffic (Design Year)	0	0	270	0	0	0	608	0	0	0	0	0	0	0	0	0
Phase 1																
Trip Distribution IN				8%		28%										
Trip Distribution OUT														(20%)		(28%)
Residential Trips	0	0	0	2	0	6	0	0	0	0	0	0	0	11	0	15
Trip Distribution IN				5%		17%										
Trip Distribution OUT			(5%)											(10%)		(12%)
Office Trips	0	0	0	2	0	6	0	0	0	0	0	0	0	1	0	1
Total Vehicular Project Trips	0	0	0	4	0	12	0	0	0	0	0	0	0	12	0	16
2030 Build Traffic	0	0	250	4	0	12	565	0	0	0	0	0	0	12	0	16
2030 Build Heavy Vehicle %	2%	2%	9%	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Phase 2																
Trip Distribution IN			42%	6%		10%										
Trip Distribution OUT						(42%)								(8%)		(10%)
Residential Trips	0	0	27	4		6	74	0	0	0	0	0	0	14	0	18
Trip Distribution IN				5%		17%										
Trip Distribution OUT			(5%)											(10%)		(12%)
Office Trips	0	0	0	2	0	7	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN				5%		16%										
Trip Distribution OUT			(5%)											(10%)		(11%)
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN				5%		16%										
Trip Distribution OUT			(5%)											(10%)		(11%)
Restaurant Trips	0	0	3	3	0	11	0	0	0	0	0	0	0	7	0	7
Pass-By Distribution IN			-15%	15%		35%	-35%									
Pass-By Distribution OUT														(35%)		(15%)
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	30	9	0	24	74	0	0	0	0	0	0	21	0	25
2035 Build Traffic (Design Year)	0	0	300	9	0	24	682	0	0	0	0	0	0	21	0	25
2035 Build Heavy Vehicle % (Design Year)	2%	2%	8%	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	2%

[illegible]

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #9
Fowler Rd at Driveway A

AM PEAK HOUR																
	Northbound				Driveway A Southbound				Fowler Rd Eastbound				Fowler Rd Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	0	0	0	0	0	0	0	0	0	1,400	0	0	0	1,184	0
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	41	0	0	0	33	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%	2%
Peak Hour Factor	0.80				0.80				0.80				0.80			
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2021 Volumes	0	0	0	0	0	0	0	0	0	0	1,400	0	0	0	1,184	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	0	0	0	0	0	0	0	0	1601	0	0	0	1354	0
Background Growth Trips (Design Year)	0	0	0	0	0	0	0	0	0	0	1724	0	0	0	1458	0
2030 No-Build Traffic	0	0	0	0	0	0	0	0	0	0	1,601	0	0	0	1,354	0
2035 No-Build Traffic (Design Year)	0	0	0	0	0	0	0	0	0	0	1,724	0	0	0	1,458	0
Phase 1																
Trip Distribution IN															5%	30%
Trip Distribution OUT								(3%)			(20%)					
Residential Trips	0	0	0	0	0	0	0	2	0	0	11	0	0	0	1	6
Trip Distribution IN								(16%)			11%				5%	30%
Trip Distribution OUT											(5%)					
Office Trips	0	0	0	0	0	0	0	1	0	0	4	0	0	0	2	11
Total Vehicular Project Trips	0	0	0	0	0	0	0	3	0	0	15	0	0	0	3	17
2030 Build Traffic	0	0	0	0	0	0	0	3	0	0	1,616	0	0	0	1,357	17
2030 Build Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%	2%
Phase 2																
Trip Distribution IN								(3%)			(50%)				45%	10%
Trip Distribution OUT																
Residential Trips	0	0	0	0	0	0	5	0	0	88	0	0	0	0	29	6
Trip Distribution IN								(16%)			11%				5%	30%
Trip Distribution OUT											(5%)					
Office Trips	0	0	0	0	0	0	0	0	0	5	0	0	0	0	2	12
Trip Distribution IN								(15%)			10%					35%
Trip Distribution OUT											(5%)					
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN								(15%)			10%					35%
Trip Distribution OUT											(5%)					
Restaurant Trips	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	24
Pass-By Distribution IN															-50%	50%
Pass-By Distribution OUT								(50%)								
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	0	0	15	0	0	103	0	0	0	31	42
2035 Build Traffic (Design Year)	0	0	0	0	0	0	0	15	0	0	1,827	0	0	0	1,489	42
2035 Build Heavy Vehicle % (Design Year)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%	2%

PM PEAK HOUR																
	Northbound				Driveway A Southbound				Fowler Rd Eastbound				Fowler Rd Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	0	0	0	0	0	0	0	0	0	590	0	0	0	1,367	0
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	18	0	0	0	39	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%	2%
Peak Hour Factor	0.98				0.98				0.98				0.98			
Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Adjusted 2021 Volumes	0	0	0	0	0	0	0	0	0	0	602	0	0	0	1,394	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	0	0	0	0	0	0	0	0	688	0	0	0	1594	0
Background Growth Trips (Design Year)	0	0	0	0	0	0	0	0	0	0	742	0	0	0	1717	0
2030 No-Build Traffic	0	0	0	0	0	0	0	0	0	0	688	0	0	0	1,594	0
2035 No-Build Traffic (Design Year)	0	0	0	0	0	0	0	0	0	0	742	0	0	0	1,717	0
Phase 1																
Trip Distribution IN								(3%)			(20%)				5%	30%
Trip Distribution OUT																
Residential Trips	0	0	0	0	0	0	0	1	0	0	7	0	0	0	3	18
Trip Distribution IN								(16%)			11%				5%	30%
Trip Distribution OUT											(5%)					
Office Trips	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	0	0	4	0	0	8	0	0	0	3	18
2030 Build Traffic	0	0	0	0	0	0	0	4	0	0	696	0	0	0	1,597	18
2030 Build Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%	2%
Phase 2																
Trip Distribution IN								(3%)			(50%)				45%	10%
Trip Distribution OUT																
Residential Trips	0	0	0	0	0	0	3	0	0	56	0	0	0	0	90	20
Trip Distribution IN								(16%)			11%				5%	30%
Trip Distribution OUT											(5%)					
Office Trips	0	0	0	0	0	0	0	5	0	0	2	0	0	0	0	0
Trip Distribution IN								(15%)			10%					35%
Trip Distribution OUT											(5%)					
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN								(15%)			10%					35%
Trip Distribution OUT											(5%)					
Restaurant Trips	0	0	0	0	0	0	0	3	0	0	6	0	0	0	0	20
Pass-By Distribution IN															-50%	50%
Pass-By Distribution OUT								(50%)								
Pass-By Trips	0	0	0	0	0	0	0	15	0	0	0	0	0	0	-15	15
Total Vehicular Project Trips	0	0	0	0	0	0	0	26	0	0	64	0	0	0	75	55
2035 Build Traffic (Design Year)	0	0	0	0	0	0	0	26	0	0	806	0	0	0	1,792	55
2035 Build Heavy Vehicle % (Design Year)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%	2%

INTERSECTION #10
Union Hill Rd at Driveway C

PM PEAK HOUR																		
	Northbound				Southbound				Eastbound				Westbound					
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right		
Observed 2021 Traffic Volumes	0	0	0	0	0	0	0	0	0	0	0	321	0	0	0	225	0	
Pedestrians																		
Conflicting Pedestrians	0			0		0		0		0		0		0		0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Conflicting Bicycles				0				0				0					0	
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	14	0	
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%	
Peak Hour Factor			0.98				0.98				0.98				0.98			
Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	
Adjusted 2021 Volumes	0	0	0	0	0	0	0	0	0	0	0	327	0	0	0	230	0	
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	
Background Growth Trips	0	0	0	0	0	0	0	0	0	0	0	374	0	0	0	263	0	
Background Growth Trips (Design Year)	0	0	0	0	0	0	0	0	0	0	0	403	0	0	0	283	0	
2030 No-Build Traffic	0	0	0	0	0	0	0	0	0	0	0	374	0	0	0	263	0	
2035 No-Build Traffic (Design Year)	0	0	0	0	0	0	0	0	0	0	0	403	0	0	0	283	0	
Phase 1																		
Trip Distribution IN										15%	5%						4%	
Trip Distribution OUT							(4%)		(25%)							(10%)		
Residential Trips	0	0	0	0	0	0	1	0	9	0	9	3	0	0	0	4	2	
Trip Distribution IN										25%	10%						3%	
Trip Distribution OUT							(3%)		(44%)							(10%)		
Office Trips	0	0	0	0	0	0	1	0	7	0	0	0	0	0	0	2	0	
Total Vehicular Project Trips	0	0	0	0	0	0	2	0	16	0	9	3	0	0	0	6	2	
2030 Build Traffic																		
2030 Build Heavy Vehicle %	0	0	0	0	0	0	2	0	16	0	9	377	0	0	0	269	2	
	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%	
Phase 2																		
Trip Distribution IN										5%	5%					10%	2%	
Trip Distribution OUT							(2%)		(10%)		(10%)					(5%)		
Residential Trips	0	0	0	0	0	0	2	0	11	0	10	21	0	0	0	26	4	
Trip Distribution IN										25%	10%						3%	
Trip Distribution OUT							(3%)		(44%)							(10%)		
Office Trips	0	0	0	0	0	0	1	0	13	0	0	0	0	0	0	3	0	
Trip Distribution IN										23%	10%						4%	
Trip Distribution OUT							(4%)		(33%)							(20%)		
Retail Trips	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	
Trip Distribution IN										23%	10%						4%	
Trip Distribution OUT							(4%)		(33%)							(20%)		
Restaurant Trips	0	0	0	0	0	0	1	0	6	0	13	6	0	0	0	3	2	
Pass-By Distribution IN																		
Pass-By Distribution OUT																		
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Vehicular Project Trips	0	0	0	0	0	0	4	0	31	0	23	27	0	0	0	33	6	
2035 Build Traffic (Design Year)																		
	0	0	0	0	0	0	4	0	31	0	23	430	0	0	0	316	6	
2035 Build Heavy Vehicle % (Design Year)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%	

INTERSECTION #11
Union Hill Rd at Driveway D

	PM PEAK HOUR															
	Northbound				Southbound				Eastbound				Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	0	0	0	0	0	0	0	0	0	0	321	0	0	0	225
Pedestrians																
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles																
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	7	0	0	0	14	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Peak Hour Factor																
Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Adjusted 2021 Volumes	0	0	0	0	0	0	0	0	0	0	327	0	0	0	230	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Annual Growth Rate (Design Year)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor (Design Year)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Background Growth Trips	0	0	0	0	0	0	0	0	0	0	374	0	0	0	263	0
Background Growth Trips (Design Year)	0	0	0	0	0	0	0	0	0	0	403	0	0	0	283	0
2030 No-Build Traffic	0	0	0	0	0	0	0	0	0	0	374	0	0	0	263	0
2035 No-Build Traffic (Design Year)	0	0	0	0	0	0	0	0	0	0	403	0	0	0	283	0
Phase 1																
Trip Distribution IN										5%					4%	10%
Trip Distribution OUT						(10%)		(10%)			(4%)					
Residential Trips	0	0	0	0	0	4	0	4	0	3	1	0	0	0	2	6
Trip Distribution IN										10%					3%	5%
Trip Distribution OUT						(5%)		(10%)			(3%)					
Office Trips	0	0	0	0	0	1	0	2	0	0	1	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	5	0	6	0	3	2	0	0	0	2	6
2030 Build Traffic	0	0	0	0	0	5	0	6	0	3	376	0	0	0	265	6
2030 Build Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Phase 2																
Trip Distribution IN										5%					12%	2%
Trip Distribution OUT						(2%)		(5%)			(12%)					
Residential Trips	0	0	0	0	0	2	0	6	0	10	13	0	0	0	24	4
Trip Distribution IN										10%					3%	5%
Trip Distribution OUT						(5%)		(10%)			(3%)					
Office Trips	0	0	0	0	0	2	0	3	0	0	1	0	0	0	0	0
Trip Distribution IN										10%					4%	7%
Trip Distribution OUT						(7%)		(20%)			(4%)					
Retail Trips	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Trip Distribution IN										10%					4%	7%
Trip Distribution OUT						(7%)		(20%)			(4%)					
Restaurant Trips	0	0	0	0	0	1	0	3	0	0	6	1	0	0	2	4
Pass-By Distribution IN																
Pass-By Distribution OUT																
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	0	0	0	5	0	13	0	16	15	0	0	0	26	8
2035 Build Traffic (Design Year)	0	0	0	0	0	5	0	13	0	16	418	0	0	0	309	8
2035 Build Heavy Vehicle % (Design Year)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%

Programmed Project Fact Sheets

Short Title

SR 9 (ATLANTA HIGHWAY): SEGMENT 3 - WIDENING FROM SR 371 (POST ROAD) TO SR 141 (PEACHTREE PARKWAY)

GDOT Project No.

0008357

Federal ID No.

CSSTP-0008-00(357)

Status

Programmed

Service Type

Roadway / General Purpose Capacity

Sponsor

GDOT

Jurisdiction

Forsyth County

Analysis Level

In the Region's Air Quality Conformity Analysis

Existing Thru Lane

2

LCI

☐

Planned Thru Lane

4

Flex

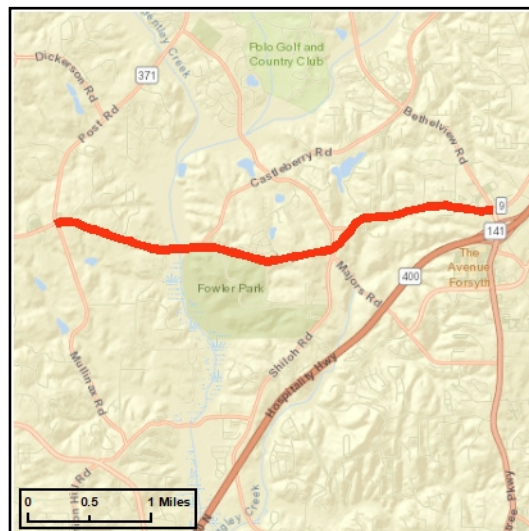
☐

Network Year

2030

Corridor Length

3.8 miles



Detailed Description and Justification

This project involves adding one general purpose lane in each direction along SR 9 (Atlanta Highway) between SR 371 (Post Road) and SR 141 (Peachtree Parkway).

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
PE	STP - Statewide Flexible (GDOT)	AUTH	2011	\$2,402,166	\$1,921,733	\$480,433	\$0,000	\$0,000
PE	Transportation Funding Act (HB 170)	AUTH	2016	\$2,002,024	\$0,000	\$2,002,024	\$0,000	\$0,000
PE	Transportation Funding Act (HB 170)	AUTH	2019	\$300,000	\$0,000	\$300,000	\$0,000	\$0,000
ROW	Transportation Funding Act (HB 170)	AUTH	2018	\$9,220,000	\$0,000	\$9,220,000	\$0,000	\$0,000
UTL	Transportation Funding Act (HB 170)		2022	\$6,073,170	\$0,000	\$6,073,170	\$0,000	\$0,000
CST	Transportation Funding Act (HB 170)		2022	\$31,660,097	\$0,000	\$31,660,097	\$0,000	\$0,000
				\$51,657,457	\$1,921,733	\$49,735,724	\$0,000	\$0,000

SCP: Scoping PE: Preliminary engineering / engineering / design / planning PE-OV: GDOT oversight services for engineering ROW: Right-of-way Acquisition
 UTL: Utility relocation CST: Construction / Implementation ALL: Total estimated cost, inclusive of all phases



For additional information about this project, please call (404) 463-3100 or email transportation@atlantaregional.com.

