

# PUTNAM COUNTY BOARD OF COMMISSIONERS



117 Putnam Drive, Suite A ♦ Eatonton, GA 31024

## Agenda

Tuesday, August 17, 2021 ♦ 6:30 PM

Putnam County Administration Building – Room 203

### Opening

1. Welcome - Call to Order
2. Approval of Agenda
3. Invocation - Jonathon Dawson, Lakepoint Community Church
4. Pledge of Allegiance (JW)
5. Special Presentation - Girls Softball Proclamation

### Zoning Public Hearing

6. Request by SDH Atlanta LLC, agent for Maddox Family Partnership LLLP to rezone 29.54 acres on Old Phoenix Road from AG to R-PUD [Map 106, Parcel 002, District 2] (staff-P&D)
7. Request by Duane Gentes to rezone 5.40 acres on Emory Drive from R-1 to R-2 [Map 111, Parcel 001044, District 4] (staff-P&D)
8. Request by James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox to rezone 66.56 acres at 916 Harmony Road from AG to C-PUD [Map 103, Parcel 001001, District 3] (staff-P&D)
9. Request by James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox to rezone 5 acres at 916 Harmony Road Parcel A from AG to C-PUD [Map 103, Parcel 001, District 3] (staff-P&D)

### Budget Public Hearing

10. Presentation of Proposed FY22 Budget (staff-CM & Finance)
11. Comments from Commissioners and/or Staff
12. Comments from the Public

### Regular Business Meeting

13. Public Comments
14. Consent Agenda
  - a. Approval of Minutes - August 6, 2021 Regular Meeting (staff-CC)
  - b. Approval of Minutes - August 6, 2021 Executive Session (staff-CC)
  - c. Approval of Minutes - August 6, 2021 Budget Work Session (staff-CC)
15. Request for Final Plat Subdivision Approval for Eagles Rest at Cuscowilla Cottages (staff-P&D)
16. Petition to waive final six-month time interval regarding the Application for Rezoning from Danny Copelan at 931 Pea Ridge Road [Map 092, Parcel 017001001] (DB)

The Board of Commissioners reserves the right to continue the meeting to another time and place in the event the number of people in attendance at the meeting, including the Board of Commissioners, staff, and members of the public exceeds the legal limits. The meeting cannot be closed to the public except by a majority vote of a quorum present for the meeting. The board can vote to go into an executive session on a legally exempt matter during a public meeting even if not advertised or listed on the agenda. Individuals with disabilities who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding the accessibility of the meeting or the facilities are required to contact the ADA Compliance Officer, at least three business days in advance of the meeting at 706-485-2776 to allow the County to make reasonable accommodations for those persons.

17. Approval of Changes to the Personnel Policy (staff-HR & CM)
18. Approval of American Rescue Plan (ARP) Hazard Pay for Putnam County Employees (staff-CM)
19. Discussion on Projects for State Rescue Money (BW)

### **Reports/Announcements**

20. County Manager Report
21. County Attorney Report
22. Commissioner Announcements

### **Executive Session**

23. Enter Executive Session as allowed by O.C.G.A. 50-14-4 for Personnel, Litigation, or Real Estate
24. Reopen meeting and execute Affidavit concerning the subject matter of the closed portion of the meeting
25. Action, if any, resulting from the Executive Session

### **Closing**

26. Adjournment

The Board of Commissioners reserves the right to continue the meeting to another time and place in the event the number of people in attendance at the meeting, including the Board of Commissioners, staff, and members of the public exceeds the legal limits. The meeting cannot be closed to the public except by a majority vote of a quorum present for the meeting. The board can vote to go into an executive session on a legally exempt matter during a public meeting even if not advertised or listed on the agenda. Individuals with disabilities who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding the accessibility of the meeting or the facilities are required to contact the ADA Compliance Officer, at least three business days in advance of the meeting at 706-485-2776 to allow the County to make reasonable accommodations for those persons.



**File Attachments for Item:**

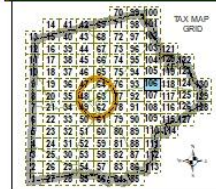
6. Request by SDH Atlanta LLC, agent for Maddox Family Partnership LLLP to rezone 29.54 acres on Old Phoenix Road from AG to R-PUD [Map 106, Parcel 002, District 2] (staff-P&D)

**Request by SDH Atlanta LLC, agent for Maddox Family Partnership LLLP to rezone 29.54 acres on Old Phoenix Road from AG to R-PUD. [Map 106, Parcel 002, District 2].**

**PLANNING & DEVELOPMENT-LISA JACKSON STAFF RECOMMENDATION:**

The applicant is requesting to rezone 29.5 acres from AG to R-PUD. If approved, the 29.5 acres would become the third phase of the thriving Phoenix Crossing subdivision. The adjacent subdivision was rezoned in 2005 from AG to R-1R PUD. The original development consisted of 88.62 acres and was developed in two phases. The first phase consisted of 33 lots, and the second phase has 91 lots totaling 124 lots. The proposed development will consist of 53 lots. Piedmont Water is both the water and sewer provider for this development. According to the impact analysis, there will be one full-movement vehicular access on Old Phoenix and Garrett Drive. A 24-hour bi-directional traffic volume count collected on Tuesday, June 15, 2021, indicated a northbound volume of 2,226 vehicles and a southbound volume of 2,123 vehicles for a two-way volume of 4,349 vehicles. Growth in the area has been generally low, with average annual growth ranging from -2.1% to 1.4%, and with the most recent year of growth being negative and ranging from -14.3% to -0.3%. 4. The study shows that the proposed subdivision will generate 42 a.m. peak hour trips, 55 p.m. peak hour trips, and 580-weekday trips. It also suggests delays will increase slightly from the no-build condition, but all locations, including the project access on Old Phoenix Road, will operate well. In addition, both entrances should be constructed with one entering and one exiting lane, or as required by the County. Each exiting approach should be controlled by a side street stop sign and accompanying stop bar.

The proposed use is consistent with the allowed uses, as listed in [Sec. 66-119\(A\)](#) of the R-PUD zoning district. The future land use comprehensive plan is consistent with the proposed residential use. Therefore, the proposed use is compatible with the purpose and intent of the comprehensive plan. The surrounding properties are R-1R to the north and east, being Phoenix Crossing subdivision; to the west and south are AG properties. While the property can be used as it is currently zoned, it would be more marketable and of more significant benefit to the community rezoned. The rezoning will not adversely affect the existing use, value, or usability of adjacent or nearby properties. There is no evidence that the proposed development would cause excessive or burdensome use of public services, nor should it affect police, fire protection, or sewer services. If approved, the staff recommends that the developer should install a deceleration lane on Old Phoenix Road.



**GEOGRAPHIC FEATURE LEGEND**

Eatonton Limits	Agriculture/Forestry	Park/Recreation/Conservation	Residential
County Boundary	Commercial	Public/Institutional	Transportation/Communication/Utilities
Roads	Industrial	Undeveloped/Vacant	
Parcels			
Parcel Hooks			
	Mixed Use		

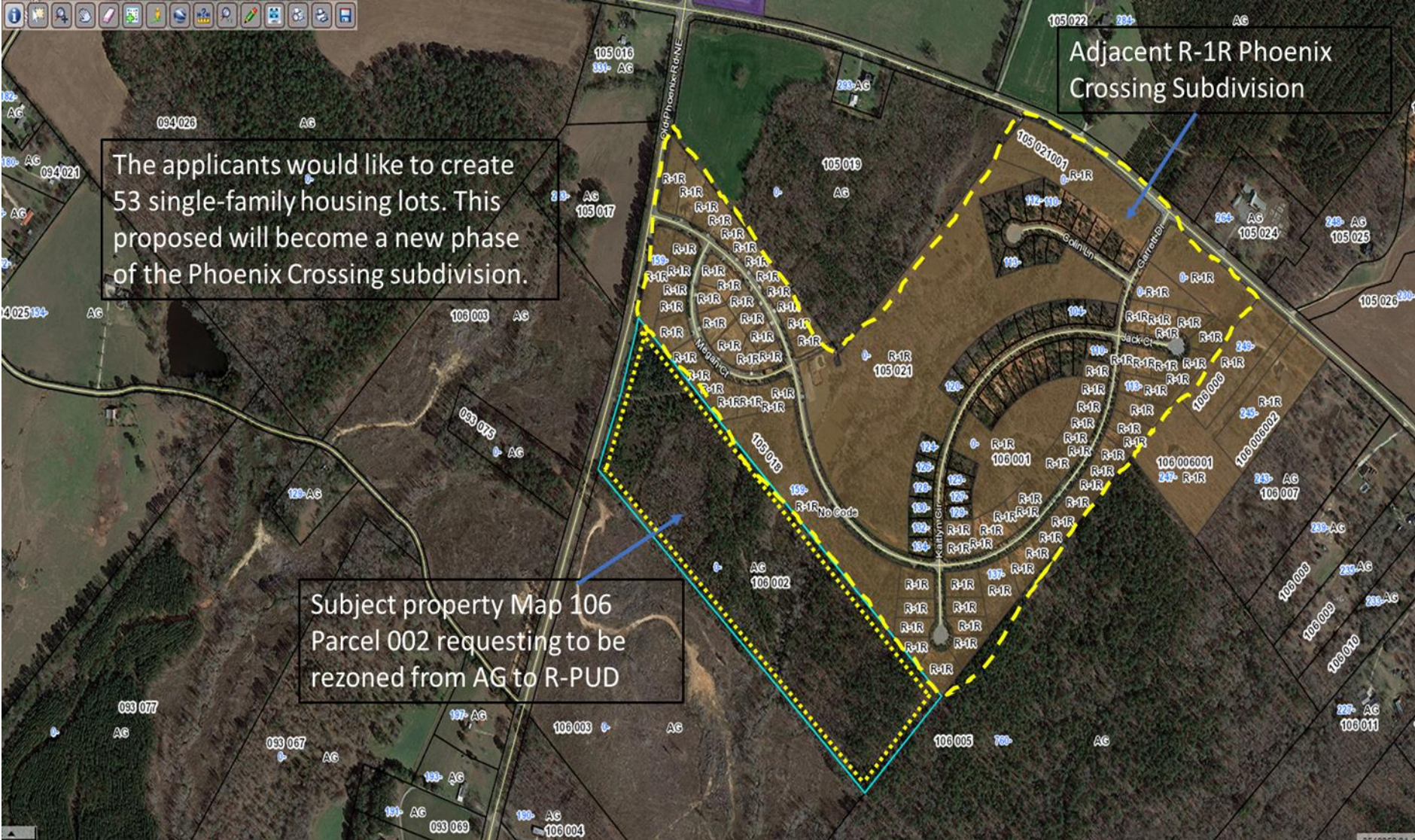
**MGRC**  
 Middle Georgia Regional Commission  
 175 Emery Hwy  
 Suite C  
 Macon, Georgia 31217  
 (478) 751-6100  
 Web:  
[www.middlegeorgia.org](http://www.middlegeorgia.org)

PUTNAM COUNTY, GEORGIA  
 FUTURE LAND USE MAPS

MAP 106

MAP SCALE: 1" = 500'    SCALE RATIO: 1:6,000    DATE: JULY 2021





The applicants would like to create 53 single-family housing lots. This proposed will become a new phase of the Phoenix Crossing subdivision.

Adjacent R-1R Phoenix Crossing Subdivision

Subject property Map 106 Parcel 002 requesting to be rezoned from AG to R-PUD

**Staff recommendation is for approval to rezone 29.54 acres from AG to R-PUD on Old Phoenix Road [Map 106, Parcel 002, District 2] with the following conditions:**

- (1)The developer shall construct a deceleration lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the main entrance on Old Phoenix Road.
- (2)Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the County.

**PLANNING & ZONING COMMISSION RECOMMENDATION:**

*The Planning & Zoning Commission’s recommendation is for approval to rezone 29.54 acres from AG to R-PUD on Old Phoenix Road [Map 106, Parcel 002, District 2] with the following conditions:*

- (1)The developer shall construct a deceleration lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the main entrance on Old Phoenix Road.*
- (2)Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the County.*

**PLANNING & ZONING COMMISSION MINUTES:**

The Putnam County Planning & Zoning Commission conducted a public hearing on Thursday, August 5, 2021 at 6:30 PM in the Putnam County Administration Building, 117 Putnam Drive, Room 203, Eatonton, Georgia.

**Present: Martha Farley, Maurice Hill, Jr., Tim Pierson, John Mitchell**  
**Staff Present: Lisa Jackson, Courtney Andrews and Kenteria Williams**

Request by **SDH Atlanta LLC, agent for Maddox Family Partnership LLLP** to rezone 29.54 on Old Phoenix Road from AG to R-PUD. **[Map 106, Parcel 002, District 2]. \* Attorney Jay Dell** represented this request. He stated that the intent is to develop the property the same as Phoenix Crossing. He added that the proposed use was suitable for the zoning and development of neighboring properties. It will not affect the value of nearby or adjacent properties and is consistent with the future comprehensive plan. They will acquire both water and sewer from

Piedmont Water. **Attorney Dell** stated that the Phoenix Crossing Subdivision has been a vibrant neighborhood that has taken off and it shows a need for this type of housing. **No one spoke in opposition of this request.**

**Staff recommendation is for approval to rezone 29.54 acres from AG to R-PUD on Old Phoenix Road [Map 106, Parcel 002, District 2] with the following conditions:**

- (1) The developer shall construct a deceleration lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the main entrance on Old Phoenix Road.**
- (2) Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the County.**

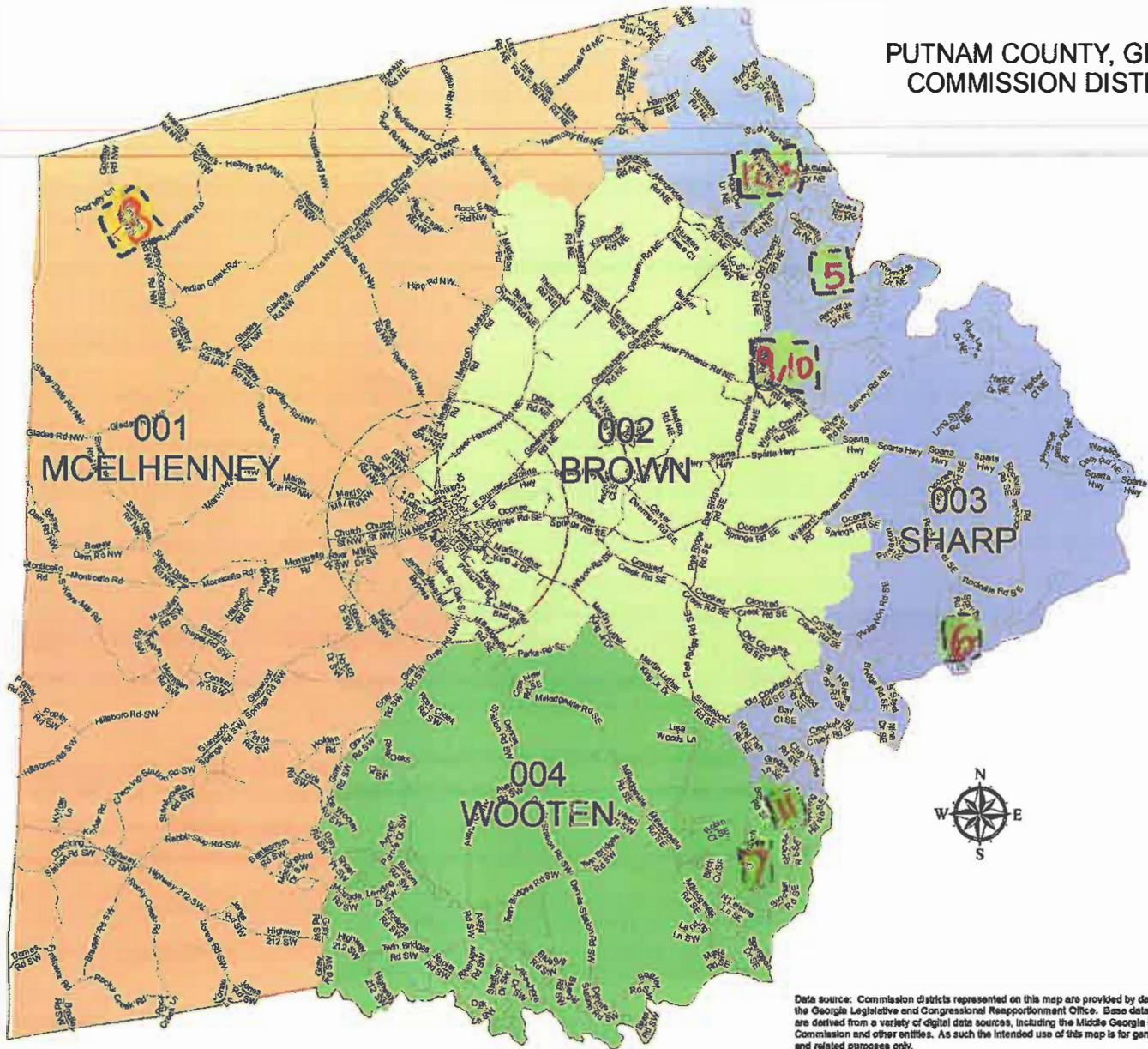
Motion to approve the request by **SDH Atlanta LLC, agent for Maddox Family Partnership LLLP** to rezone 29.54 acres from AG to R-PUD on Old Phoenix Road [Map 106, Parcel 002, District 2] with the following conditions:

- (1) The developer shall construct a deceleration lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the main entrance on Old Phoenix Road.**
- (2) Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the County.**

made by **Member Hill** and seconded by **Member Mitchell**.

Voting Yea: **Vice-Chairman Pierson, Member Hill, Member Farley, Member Mitchell**





Data source: Commission districts represented on this map are provided by data from the Georgia Legislative and Congressional Reapportionment Office. Base data features are derived from a variety of digital data sources, including the Middle Georgia Regional Commission and other entities. As such the intended use of this map is for general planning and related purposes only.

MAP SCALE: 1" = 5,097.26' SCALE RATIO: 1:88,367.34 DATE: JANUARY 2021

5. Request by **Wallace Gerald Wright** for a side yard setback variance at 149 Collis Marina Road. Presently zoned R-1 [Map 104B, Parcel 013, District 3].
6. Request by **Thomas & Gwen Ralston** for a rear yard setback variance at 189 S. Spring Road. Presently zoned R-2 [Map 115C, Parcel 019, District 3].
7. Request by **Thomas W Gardner** for a side and rear yard setback variance at 348A Cold Branch Road. Presently zoned R-2 [Map 112C, Parcel 009, District 4].
8. Request by **Mt. Pleasant Baptist Church** for a side yard setback variance at 1628 Godfrey Road NW. Presently zoned AG. [Map 016, Parcel 015, District 1].
9. Request by **SDH Atlanta LLC, Agent for Maddox Family Partnership LLLP** for a side yard setback variance on Old Phoenix Road. Presently zoned AG. [Map 106, Parcel 002, District 2].
10. Request by **SDH Atlanta LLC, agent for Maddox Family Partnership LLLP** to rezone 29.54 on Old Phoenix Road from AG to R-PUD. [Map 106, Parcel 002, District 2].\*
11. Request by **Duane Gentes** to rezone 5.40 acres on Emory Drive from R-1 to R-2. [Map 111, Parcel 001044, District 4].\*
12. Request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 66.56 acres at 916 Harmony Road from AG to C-PUD. [Map 103, Parcel 001001, District 3].\*
13. Request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 5 acres at 916 Harmony Road Parcel A from AG to C-PUD. [Map 103, Parcel 001, District 3].\*



# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ www.putnamcountyga.us

## APPLICATION FOR REZONING

REZONING

PERMIT# PLAN-2021-01133

APPLICATION NO. \_\_\_\_\_

DATE: 6/24/2021

MAP 106 PARCEL 002 ZONING DISTRICT 3

1. Owner Name: Maddox Family Partnership LLLP

2. Applicant Name (If different from above): SDH Atlanta LLC

3. Mailing Address: c/o J.V. Dell, P.C., 1040 FOUNDERS ROW, STE B. GREENSBORO, GA 30642

4. Email Address: jay.dell@jvdelllaw.com

5. Phone: (home) N/A (office) 706-453-4800 (cell) [REDACTED]

6. The location of the subject property, including street number, if any: Old Phoenix Road

7. The area of land proposed to be rezoned (stated in square feet if less than one acre):  
29.5 acres

8. The proposed zoning district desired: R-PUO

9. The purpose of this rezoning is (Attach Letter of Intent)  
Develop single family residential subdivision similar to adjacent property. See attached letter of Intent.

10. Present use of property: Vacant Land Desired use of property: Single-Family residential

11. Existing zoning district classification of the property and adjacent properties:  
Existing: AG 2  
North: R12-PUO South: AG 2 East: AG 2 West: AG 2

12. Copy of warranty deed for proof of ownership and if not owned by applicant, please attach a signed and notarized letter of agency from each property owner for all property sought to be rezoned. See attached

13. Legal description and recorded plat of the property to be rezoned. see attached

14. The Comprehensive Plan Future Land Use Map category in which the property is located. (If more than one category applies, the areas in each category are to be illustrated on the concept plan. See concept plan insert.): Residential

15. A detailed description of existing land uses: Vacant land

16. Source of domestic water supply: well \_\_\_\_\_, community water \_\_\_\_\_, or private provider .  
If source is not an existing system, please provide a letter from provider. see attached.





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- 17. Provision for sanitary sewage disposal: septic system \_\_\_\_, or sewer . If sewer, please provide name of company providing same, or, if new development, provide a letter from sewer provider. *see attached*
- 18. Complete attachment of Disclosure of Campaign Contributions Form by the applicant and/or the applicant's attorney as required by the Georgia Conflict of Interest in Zoning Act (O.C.G.A. 36-67A). *See attached*
- 19. The application designation, date of application and action taken on all prior applications filed for rezoning for all or part of the subject property. (Please attach on separate sheet.) *Not applicable*
- 20. Proof that property taxes for the parcel(s) in question have been paid. *see attached.*
- 21. Concept plan. *see attached.*
  - If the application is for less than 25 single-family residential lots, a concept plan need not be submitted. (See attachment.)
  - A concept plan may be required for commercial development at director's discretion
- 22. Impact analysis. *see attached*
  - If the application is for less than 25 single-family residential lots, an impact analysis need not be submitted. (See attachment.)
  - An Impact analysis (including a traffic study) is required when rezoning from residential zoned or used property to commercial or industrial districts.

THE ABOVE STATEMENTS AND ACCOMPANYING MATERIALS ARE COMPLETE AND ACCURATE. APPLICANT HEREBY GRANTS PERMISSION FOR PLANNING AND DEVELOPMENT PERSONNEL OR ANY LEGAL REPRESENTATIVE OF PUTNAM COUNTY TO ENTER UPON AND INSPECT THE PROPERTY FOR ALL PURPOSES ALLOWED AND REQUIRED BY THE PUTNAM COUNTY CODE OF ORDINANCES.

By: *[Signature]* *6/24/2021*  
Signature (Property Owner) (Date)

*Maddox Family Partnership LLC*  
*Rebecca Bason*

Notary Public

*[Signature]* *J.V. Nell attorney*  
Signature (Applicant) (Date) *at law*

*Rebecca Bason* *6/24/2021* *for*  
*SPH Atlanta LLC*

Notary Public



Office Use

Paid: \$ \_\_\_\_\_ (cash) \_\_\_\_\_ (check) \_\_\_\_\_ (credit card) \_\_\_\_\_

Receipt No. \_\_\_\_\_ Date Paid: \_\_\_\_\_

Date Application Received: \_\_\_\_\_

Reviewed for completeness by: \_\_\_\_\_

Date of BOC hearing: \_\_\_\_\_ Date submitted to newspaper: \_\_\_\_\_

Date sign posted on property: \_\_\_\_\_ Picture attached: yes \_\_\_\_\_ no \_\_\_\_\_



# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ [www.putnamcountyga.us](http://www.putnamcountyga.us)

## LETTER OF AGENCY- Rezoning Application

WE, THE UNDERSIGNED OWNERS OF REAL PROPERTY LOCATED IN THE CITY OF EATONTON/PUTNAM COUNTY, GEORGIA, HEREBY APPOINT SDH Atlatna LLC and Jay V. Dell, attorney at law TO BE MY AGENT FOR THE PURPOSE OF APPLYING FOR rezoning OF PROPERTY DESCRIBED AS MAP 106 PARCEL 002 , CONSISTING OF 29.5 ACRES, WHICH HAS THE FOLLOWING ADDRESS: Old Phoenix Raod, EATONTON, GEORGIA 31024. ATTACHED HERETO IS A COPY OF A DEED AND OR PLAT OF SURVEY DESCRIBING THE PROPERTY OWNED BY THE PROPERTY OWNER(S) TO WHICH THIS LETTER OF AGENCY APPLIES.

THE ABOVE NAMED AGENT HEREBY IS AUTHORIZED TO COMPLETE AND SIGN THE CITY OF EATONTON/PUTNAM COUNTY APPLICATION FOR rezoning ON OUR BEHALF. WE UNDERSTAND THAT THIS LETTER OF AGENCY WILL BE ATTACHED TO AND MADE PART OF SAID FORM AND WILL BE RELIED UPON BY THE CITY OF EATONTON/PUTNAM COUNTY. FOR AND IN CONSIDERATION OF THE CITY OF EATONTON/PUTNAM COUNTY ACCEPTING THIS LETTER OF AGENCY, WE HEREBY INDEMNIFY AND HOLD HARMLESS THE CITY OF EATONTON/PUTNAM COUNTY AND ITS AGENTS AND/OR EMPLOYEES IN THE EVENT THAT THE ABOVE NAMED AGENT SHOULD MISUSE THIS LETTER OF AGENCY AND WE SUFFER DAMAGES AS A RESULT.

THIS 24th DAY OF June, 2021.

PROPERTY OWNER(S): Maddox Family Partnerhsip LLLP by Jeff Maddox

NAME (PRINTED)

*Jeff Maddox*  
SIGNATURE

ADDRESS: 167 N Wesley Chapel Road

Eatonton, GA 31024

PHONE: XXXXXXXXXX

ALL SIGNATURES WERE HEREBY SWORN TO AND SUBSCRIBED BEFORE ME THIS

24th DAY OF June, 2021

*Rebecca Bashore*

NOTARY

MY COMMISSION EXPIRES: \_\_\_\_\_



**Letter of Intent**

June 24, 2021

Putnam County Planning and Development  
Attn: Lisa Jackson, Director  
117 Putnam Drive, Ste. B  
Eatonton, GA 3124

**RE: Rezoning Application of SDH Atlanta LLC**  
**Current Owner: Maddox Family Partnership LLLP**  
**Tax Map Parcel: 106 002**  
**Address: Old Phoenix Road, Eatonton, GA**

Dear Lisa:

We are filing an application to rezone the above referenced property from AG-1 to R-PUD. The property consists of 29.5 acres and is adjacent to Old Phoenix Road and the existing subdivision known as Phoenix Crossing. The intent is to develop this tract for entry level single family detached housing. This will fill a desperate need in the County for affordable single family housing. The development will be similar in all respects to Phoenix Crossing subdivision.

There will be 53 total lots with open space as shown on the Concept Plan submitted herewith. The subdivision will have access from Old Phoenix Road and Garrett Drive (within Phoenix Crossing). We plan on 15' front setbacks, 20' rear setbacks, and 10' side setbacks (the same as Phoenix Crossing). The housing type will primarily be ranch style, but there will be some 2-story houses, ranging from approximately 1400 - 2500 square feet with 3 and 4 bedroom plans. Each house will have an attached 2 car garage with landscaping similar to Phoenix Crossing.

We are currently developing Phoenix Crossing and this product has been hugely successful. We are currently selling 5.4 homes per month with an average sales price of \$220,000. Our target market will be the families and workers that live and work in our local community.

Thank you for your consideration and we look forward to working with and in Putnam County, GA.

Sincerely,

SDH Atlanta, LLC

By: Tina Hughes  
Name: Tina Hughes

SIGNATURE CERTIFICATE



REFERENCE NUMBER  
30974793-9352-424D-AE2F-68FBEEED18CDC

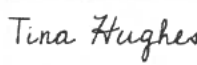
TRANSACTION DETAILS

**Reference Number**  
30974793-9352-424D-AE2F-68FBEEED18CDC  
**Transaction Type**  
Signature Request  
**Sent At**  
06/24/2021 12:00 EDT  
**Executed At**  
06/24/2021 12:07 EDT  
**Identity Method**  
email  
**Distribution Method**  
email  
**Signed Checksum**  
4b8a9746d802a26460346f780627c06383fb5994a9943614f0d90e3ccc0eb399  
**Signer Sequencing**  
Disabled  
**Document Passcode**  
Disabled

DOCUMENT DETAILS

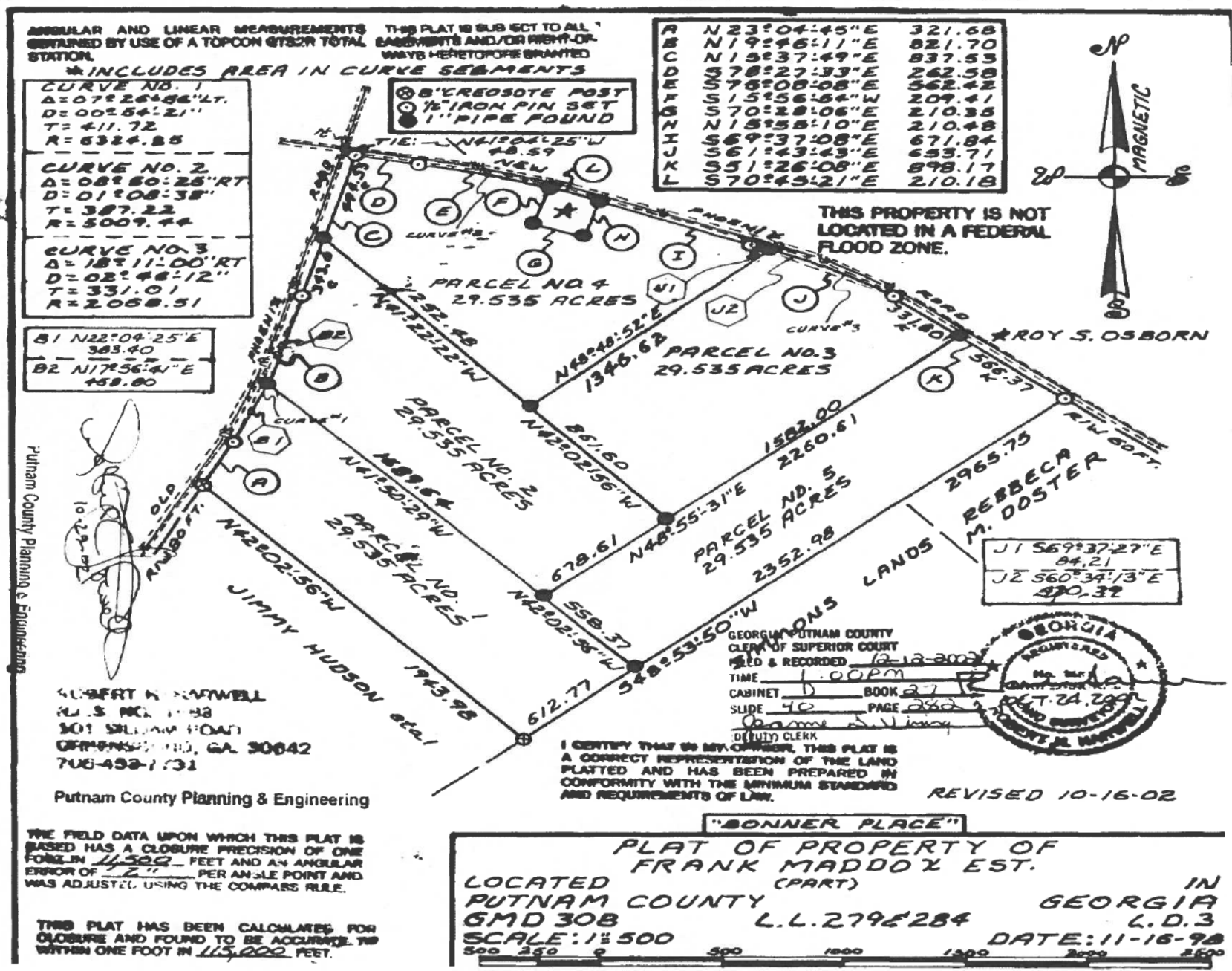
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**Filename**  
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**Pages**  
1 page  
**Content Type**  
application/pdf  
**File Size**  
66.1 KB  
**Original Checksum**  
1fb5bb99c73aea889a37e8a24924d416598134ad23183a22a8500ed0fc993ca0

SIGNERS

SIGNER	E-SIGNATURE	EVENTS
<b>Name</b> Tina Hughes <b>Email</b> thughes@smithdouglas.com <b>Components</b> 1	<b>Status</b> signed <b>Multi-factor Digital Fingerprint Checksum</b> 23850f82f962fba89bd9fdb706ab488be82add0029707ecda583154920de2ded <b>IP Address</b> 45.24.130.179 <b>Device</b> Chrome via Windows <b>Typed Signature</b>  <b>Signature Reference ID</b> F6D93740	<b>Viewed At</b> 06/24/2021 12:04 EDT <b>Identity Authenticated At</b> 06/24/2021 12:07 EDT <b>Signed At</b> 06/24/2021 12:07 EDT

AUDITS

TIMESTAMP	AUDIT
06/24/2021 12:00 EDT	Jay Dell (jay.dell@jvdelllaw.com) created document 'loi_210624.pdf' on Chrome via Windows from 64.191.61.149.
06/24/2021 12:00 EDT	Tina Hughes (thughes@smithdouglas.com) was emailed a link to sign.
06/24/2021 12:04 EDT	Tina Hughes (thughes@smithdouglas.com) viewed the document on Chrome via Windows from 45.24.130.179.
06/24/2021 12:07 EDT	Tina Hughes (thughes@smithdouglas.com) authenticated via email on Chrome via Windows from 45.24.130.179.
06/24/2021 12:07 EDT	Tina Hughes (thughes@smithdouglas.com) signed the document on Chrome via Windows from 45.24.130.179.



007908

667

This space for use of Clerk of Court:

FILED IN OFFICE OF THE  
CLERK OF SUPERIOR COURT  
PUTNAM COUNTY, GEORGIA

2002 DEC 31 AM 10: 27

COURT 397 PAGE 667-668  
*Shirley M. Rogers*

Putnam County, Georgia  
Real Estate Transfer Tax

Paid \$ 0.00

Date 12/31/02

*Shirley M. Rogers*  
Notary Public

After filing, please return to:

Law Offices of **TRENTON BROWN III, P.C.**, Attorney at Law  
105 South Jefferson Avenue, Eatonton, Georgia 31024-3085

STATE OF GEORGIA  
COUNTY OF PUTNAM

WARRANTY DEED  
(NO TITLE OPINION GIVEN)

THIS INDENTURE, made the 30<sup>TH</sup> day of December, 2002 between **Jeff A. Maddox, Sr.** as party or parties of the first part, hereinafter called Grantor, and **The Maddox Family Partnership, LLLP.**, as party or parties of the second part, hereinafter called Grantee (the words "Grantor" and "Grantee" to include their respective heirs, successors, and assigns where the context requires or permits).

WITNESSETH that: Grantor, for and in consideration of the sum of ten dollars and 00/100 (\$10.00) and other valuable consideration in hand paid at or before the sealing and delivery of these presents, the receipt and sufficiency whereof is hereby acknowledged, by these presents does hereby grant, bargain, sell, alien, convey and confirm unto said Grantee,

See Exhibit "A" attached hereto and by reference made a part hereof.

TO HAVE AND TO HOLD the said tract or parcel of land, with all and singular the rights, members and appurtenances thereof, to same being, belonging, or in anywise appertaining, to the only proper use, benefit and behoof of the said Grantee forever in FEE SIMPLE.

AND THE SAID Grantor will warrant and forever defend the right and title to the above described property unto the said Grantees against the claims of all persons whomsoever.

IN WITNESS WHEREOF, Grantor has signed and sealed this deed, the day and year first above written.

Signed, sealed and delivered in the presence of:

*Jandra M. Barr*  
Witness

*Charles S. Beard*  
Notary Public  
My Commission expires Notary Public, Putnam  
My Comm. No. 2002-001

Jeff A. Maddox, Sr.  
*Jeff Maddox* (SEAL)  
BY: Jeff A. Maddox, Jr., Attorney in fact

*Leonell M. Allgood* (SEAL)  
BY: Leonell M. Allgood, Attorney in fact

*Margaret M. Johnson* (SEAL)  
BY: Margaret M. Johnson, Attorney in fact

SEAL AFFIXED

668

## EXHIBIT "A"

All that tract or parcel of land, lying and being in the 308<sup>th</sup> G. M. District, Putnam County, Georgia, containing 29.535 acres, more or less, and being designated as Parcel No 1 of the "Bonner Place" Tract as shown on a plat prepared for the Frank Maddox Estate by Robert H. Harwell, Georgia Registered Land Surveyor No. 1683, dated November 6<sup>th</sup>, 1998, and recorded in Cabinet D, Plat Book 27, Slide 40, Page 282, Clerk's Office, Putnam County Superior Court, and by reference said plat is hereby made a part of this description.

**Legal Description**  
Tax Map Parcel 106 002  
Old Phoenix Road, Putnam County, GA

All that tract or parcel of land, lying and being in the 2081h G.M. District, Putnam County, Georgia, containing 29.535 acres, more or less, and being designated as Parcel No.1 of the "Bonner Place" Tract as shown on a plat prepared for the Frank Maddox Estate by Robert H. Harwell, Georgia Registered Land Surveyor No. 1683, dated November 6, 1998, and recorded in Cabinet D, Plat Book 27, Slide 40, Page 282, Cleric's Office, Putnam County Superior Court, and by reference said plat is hereby made a part of this description.





May 26, 2021

Smith Douglas Homes  
Tina Hughes

Subject: Water & Sewer Capacity, Putnam County Parcel 106 002

Ms. Hughes:

Piedmont Water Company will make available water and sewer capacity for up to 53 homes on the above referenced property subject to the following conditions:

- Customer will acquire easements for water and sewer line extensions from the Phoenix Crossing water and sewer system
- The execution of a Customer User Agreement

Any additional improvements to the Phoenix Crossing systems to provide these services will be the responsibility of the developer, as will on-site infrastructure on the site.

Please call if you have any additional questions on this matter.

Sincerely,

A handwritten signature in black ink that reads "Brent Hurst". The signature is written in a cursive, flowing style.

Brent Hurst  
Chief Operating Officer



# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ www.putnamcountyga.us

## DISCLOSURE OF APPLICANT'S CAMPAIGN CONTRIBUTION

The *Putnam County Code of Ordinances*, Section 66-167(c) states as follows:

“When any applicant or his attorney for a rezoning action has made, within two years immediately preceding the filing of that applicant’s application for the rezoning action, campaign contributions aggregating \$250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

a. The name and official position of the local government official to whom the campaign contribution was made; and

b. The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution. The disclosures required by this section shall be filed within ten days after an application for the rezoning action is first filed.”

1. Name: SDH Atlanta, LLC

2. Address: 110 Village Trail, Ste 215  
Woodstock, GA 30188

3. Have you given contributions that aggregated \$250.00 or more within two years immediately preceding the filing of the attached application to a candidate that will hear the proposed application?  Yes  No If yes, who did you make the contributions to? : \_\_\_\_\_

Signature of Applicant: [Signature]  
Date: 5/27/21



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a. The name and official position of the local government official to whom the campaign contribution was made; and

b. The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution. The disclosures required by this section shall be filed within ten days after an application for the rezoning action is first filed.”

1. Name: Jay Bell

2. Address: 1040 Founders Row, Ste. B  
Greensboro, GA 30642

3. Have you given contributions that aggregated \$250.00 or more within two years immediately preceding the filing of the attached application to a candidate that will hear the proposed application?  Yes  No If yes, who did you make the contributions to? : \_\_\_\_\_

Signature of Applicant:   
Date: 6 / 24 / 21



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a. The name and official position of the local government official to whom the campaign contribution was made; and

b. The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution. The disclosures required by this section shall be filed within ten days after an application for the rezoning action is first filed.”

1. Name: Maddox Family Partnership LLC

2. Address: 167 N Wesley Chapel Rd  
Eatonton, GA 31024

3. Have you given contributions that aggregated \$250.00 or more within two years immediately preceding the filing of the attached application to a candidate that will hear the proposed application?  Yes  No If yes, who did you make the contributions to? : \_\_\_\_\_

Signature of Applicant:   
Date: 06 / 24 / 2021

5/24/2021

Taxes

INTERNET TAX RECEIPT

2020 014318  
MADDOX FAMILY PARTNERSHIP LLLP

PARECEL 1 BONNER PLACE  
106 002

DESCRIPTION	TAX AMOUNT	EXEMPTION	MILLAGE
FAIR MARKET VALUE	\$141,862		
COUNTY	\$37.88	\$51,978.00	8.078
SCHOOL	\$73.92	\$51,978.00	15.772
SPEC SERV	\$1.77	\$51,978.00	0.378

ORIGINAL TAX DUE
\$113.55
INTEREST
COLLECTION COST
FIFA CHARGE
PENALTY
TOTAL PAID
\$113.55
TOTAL DUE
\$0.00

TO MADDOX FAMILY PARTNERSHIP LLLP  
167 N WESLEY CHAPEL RD  
EATONTON, GA 31024

FROM Putnam County Tax Commissioner  
100 South Jefferson Ave Suite 207  
Eatonton, GA 31024-1061  
(706) 485-6441



Date Paid: 11/30/2020



Scan this code with  
your mobile phone  
to view this bill

INTERNET TAX RECEIPT



NOTE:  
THE TOPOGRAPHIC AND ELEVATION DATA SHOWN HEREON  
WAS OBTAINED FROM USGS AND IS NOT CERTIFIED AS  
CORRECT BY THIS ENGINEER. USERS OF THIS DATA DO SO  
AT THEIR OWN RISK.



WATTS & BROWNING ENGINEERS, INC. HAS EXAMINED THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP (FIRM) AND BY GRAPHICALLY PLOTTING THE LOCATION OF THE SUBJECT PROPERTY ONTO PUTNAM COUNTY FIRM MAP NUMBER 15202010C, DATED SEPTEMBER 18, 2008 THE REFERENCED PROPERTY IS LOCATED IN THE ZONE LISTED BELOW.

ZONE 2 (HATCHED) AREAS DETERMINED TO BE OUTSIDE THE 5% ANNUAL CHANCE FLOODPLAIN.

THE FLOOD LINE IF SHOWN IS APPROXIMATE AND THE ACTUAL LIMITS OF FLOOD LINE BASED ON PUBLISHED ELEVATIONS MAY EXTEND BEYOND THOSE SHOWN HEREON.

**OWNER/APPLICANT:**

SDH ATLANTA, LLC  
151 WILKIE TRAIL, SUITE 215  
WOODSTOCK, GA 30189  
PHONE: (678) 557-4329

**ENGINEER:**

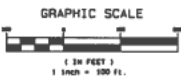
WATTS & BROWNING ENGINEERS, INC.  
1348 OLD 41 HWY HWY, SUITE #220  
MARIETTA, GA 30066  
PHONE: (770) 524-1192  
FAX: (770) 584-8875  
CONTACT: DARVY, COOK

**REFERENCE MATERIAL:**

1. SURVEY PLAT OF PROPERTY OF FRANK MADDOX EST., LOCATED BY GEORGIA G.M.D. 308, PUTNAM COUNTY, GEORGIA, PREPARED BY ROBERT HARRWELL, R.L.S. NO. 1843, DATED NOVEMBER 18, 1984, REVISED ON OCTOBER 16, 2005.  
2. WETLANDS & CREEK DELINEATION PROVIDED BY AN AQUATIC RESOURCES FINDINGS REPORT BY CORBELL ECOLOGY GROUP, DATED JUNE 14, 2011.

**DEVELOPMENT DATA**

TOTAL SITE AREA	± 28.5 AC
LOTS	53
DENSITY	1.8 UNITS/AC
EXISTING ZONING	AG-1
PROPOSED ZONING	RUPD
SETBACKS (MINIMUM)	
FRONT:	10'
SEAS:	10'
REAR:	20'



CONCEPT PLAN / REZONING EXHIBIT  
FOR  
OLD PHOENIX ROAD TRACT  
G.M.D. 308  
PUTNAM COUNTY, GEORGIA



DATE	BY	DESCRIPTION



**WATTS & BROWNING ENGINEERS, INC.**  
CIVIL ENGINEERS & LAND SURVEYORS  
1348 OLD 41 HWY HWY, SUITE #220  
MARIETTA, GEORGIA 30066  
PHONE: (770) 524-1192  
WWW.WEBER.COM  
L152001020 - P12/00114

SCALE:	1" = 100'
DESIGNED BY:	ORC
DRAWN BY:	JIT
CHECKED BY:	ORC
INITIAL ISSUE DATE:	06/25/2011
JOB NUMBER:	210408

## Traffic Impact Study

Proposed Old Phoenix Road Residential Subdivision  
Putnam County, Georgia

June 24, 2021

MARC R. ACAMPORA, PE, LLC  
TRAFFIC ENGINEERING



## Traffic Impact Study

Proposed Old Phoenix Road Residential Subdivision  
Putnam County, Georgia

study prepared for:

Smith Douglas Homes  
110 Village Trail, Suite 215  
Woodstock, GA 30188

June 24, 2021



**MARC R. ACAMPORA, PE, LLC**  
TRAFFIC ENGINEERING

858 Myrtle Street, NE  
Atlanta, Georgia 30308  
(678) 637-1763

e-mail: [acamporatraffic@comcast.net](mailto:acamporatraffic@comcast.net)  
web: [www.acamporatraffic.com](http://www.acamporatraffic.com)



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## Introduction

This study assesses the traffic impact of a proposed residential subdivision in Putnam County, Georgia. The site is located on the east side of Old Phoenix Road, as shown in the location map in Figure 1. The project will include 53 single-family homes. One full-movement vehicular access will be provided on Old Phoenix Road and one full-movement access will be provided on Garrett Drive, which connects between Old Phoenix Road and New Phoenix Road.

The purpose of this traffic impact study is to determine existing traffic operating conditions in the vicinity of the proposed subdivision, project future traffic volumes, assess the impact of the subject development, then develop conclusions and recommendations to mitigate the project traffic impact and ensure safe and efficient existing and future traffic conditions in the vicinity of the project.

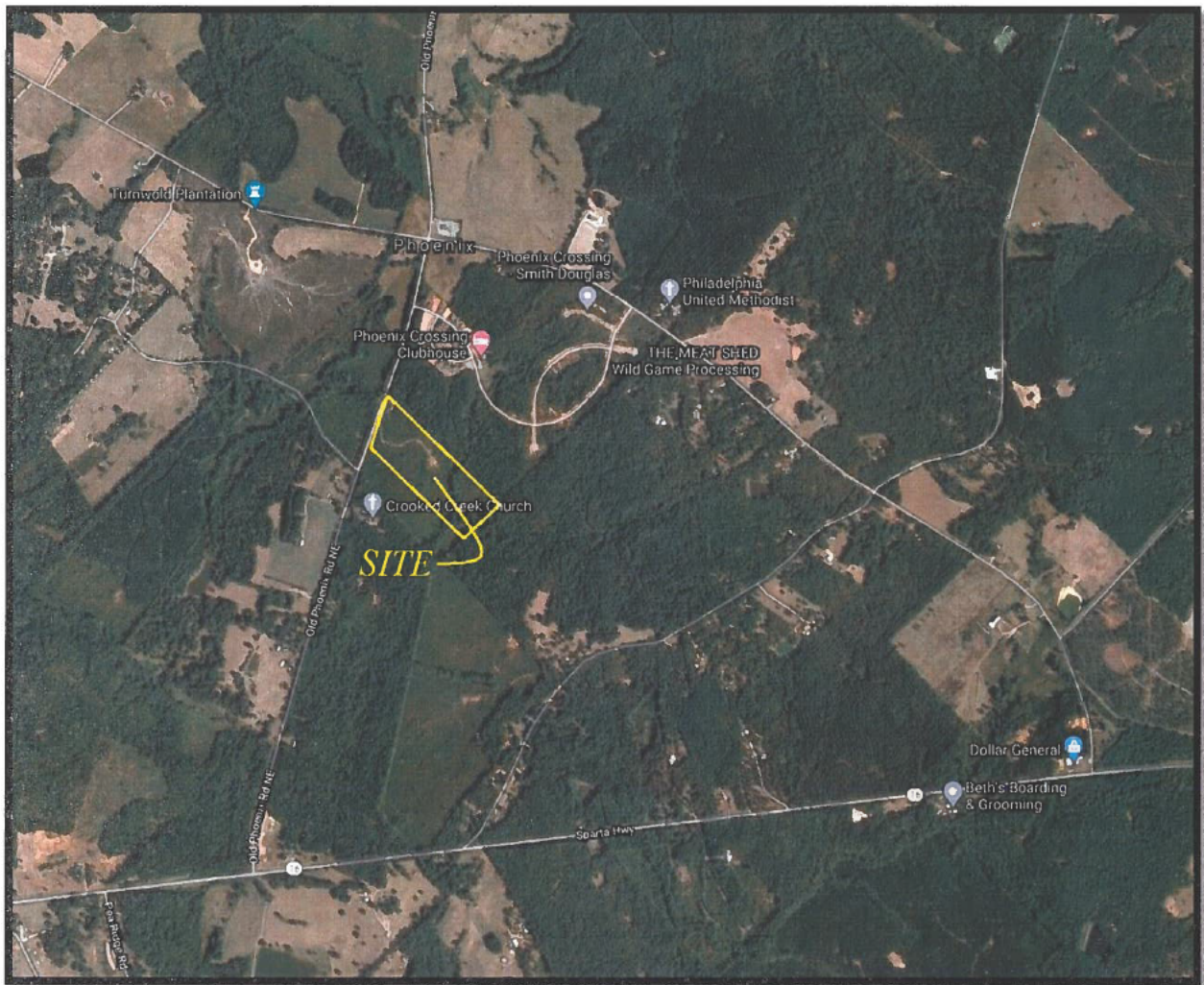


Figure 1 – Site Location Map

## Existing Traffic Conditions

Existing traffic operating conditions in the vicinity of the proposed subdivision were assessed. The following is a description of existing transportation facilities, traffic volumes, and intersection operations.

### Description of Existing Roadways

Old Phoenix Road is a two lane rural major collector that begins at a side street stop sign controlled intersection at GA 16, passes the subject site, intersects New Phoenix Road at an all-way stop sign controlled intersection, then continues to the north. The terrain along Old Phoenix Road is very gently rolling and the posted speed limit is 55 mph, with an advisory 45 mph limit in the vicinity of the subject site. A 24-hour bi-directional traffic volume count collected for this study at the project access location on Tuesday, June 15, 2021, showed a northbound volume of 2,226 vehicles and a southbound volume of 2,123 vehicles, for a two-way volume of 4,349 vehicles.

New Phoenix Road is a two lane collector that begins at a side street stop sign controlled intersection at GA 16, intersects with Old Phoenix Road, then continues to the west and terminates at GA 44. The terrain is gently rolling and the posted speed limit is 55 mph.

Sparta Highway (Georgia State Route 16) is an east/west rural major collector that provides regional mobility through this area of central Georgia. The terrain is very gently rolling and the posted speed limit is 55 mph. In 2019 (the latest year for which data was available at this location) the Georgia Department of Transportation (Georgia DOT) recorded an Annual Average Daily Traffic (AADT) volume of 1,740 vehicles per day (vpd) on GA 16 east of Old Phoenix Road. A 24-hour bi-directional traffic volume count collected for this study at this same location on Tuesday, June 15, 2021, showed a two-way volume of 2,399 vehicles.

Garrett Drive is a two lane local road that connects Old Phoenix Road to New Phoenix Road through the Phoenix Crossing subdivision.

### Pedestrian, Bicycle, and Transit Accessibility

There are no sidewalks or dedicated bicycle lanes adjacent to the proposed development on either Old Phoenix Road or New Phoenix Road. There is no regularly scheduled mass transit service in the vicinity of the site.



### Existing Traffic Volumes

Existing full turning movement peak hour traffic volume counts were collected at the following intersections:

1. Old Phoenix Road at New Phoenix Road
2. Sparta Highway (GA 16) at Old Phoenix Road
3. New Phoenix Road at Garrett Drive

The counts were collected on Tuesday, June 15, 2021, from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m. Area schools were in not session on the day on which the counts were recorded and volumes may or may not be atypical due to the COVID-19 pandemic, addressed below.

In addition to the intersection counts, 24-hour traffic volume counts were collected on Old Phoenix Road at the project access location and on GA 16 at the location of Georgia DOT Count Station 237-0114. This second 24-hour was compared with the Georgia DOT counts from pre-COVID-19 conditions to develop an adjustment factor to account for the pandemic and school being in recess, as described below.

In order to account for possibly-decreased volumes due to the pandemic and school being in recess, an adjustment factor was considered to be applied to the counted volumes. The 2019 Georgia DOT AADT volume closest to the site (Count Station 237-0114 on US 16 east of Old Phoenix Road, data presented later in Table 2), was compared to the 24-hour count collected at that location for this study. The 2019 Georgia DOT AADT was 1,740 vpd and the five year average growth rate was -2.1%, with the last year having a decrease of -14.3%, at that count station. Because the trend on GA 16 has been decreasing, extrapolating that AADT from 2019 to 2021 would result in an even lower AADT. The count collected for this study is 2,399 vehicles, which is 38% higher than the 2019 AADT. Because the current counted 24-hour volume is so much higher than the expected 2021 AADT, the volumes counted for this study were not adjusted/increased and the current counts are considered to be representative of "normal" existing conditions. It is noted that the effect of the ending of the pandemic and return to pre-pandemic conditions in the Fall of 2021 may be tempered by lifestyle changes that occurred during the pandemic, such as working from home and some degree of at-home schooling, so that any adjusting of the counts collected for this study, in light of the above volume comparison, would be considered highly speculative.

From the intersection turning movement count data, the highest four consecutive 15-minute interval volumes at each intersection, during each time period, were determined. These volumes make up the existing weekday a.m. and p.m. peak hour traffic volumes at each intersection and are shown in Figure 2. The raw count data is found in Appendix A.

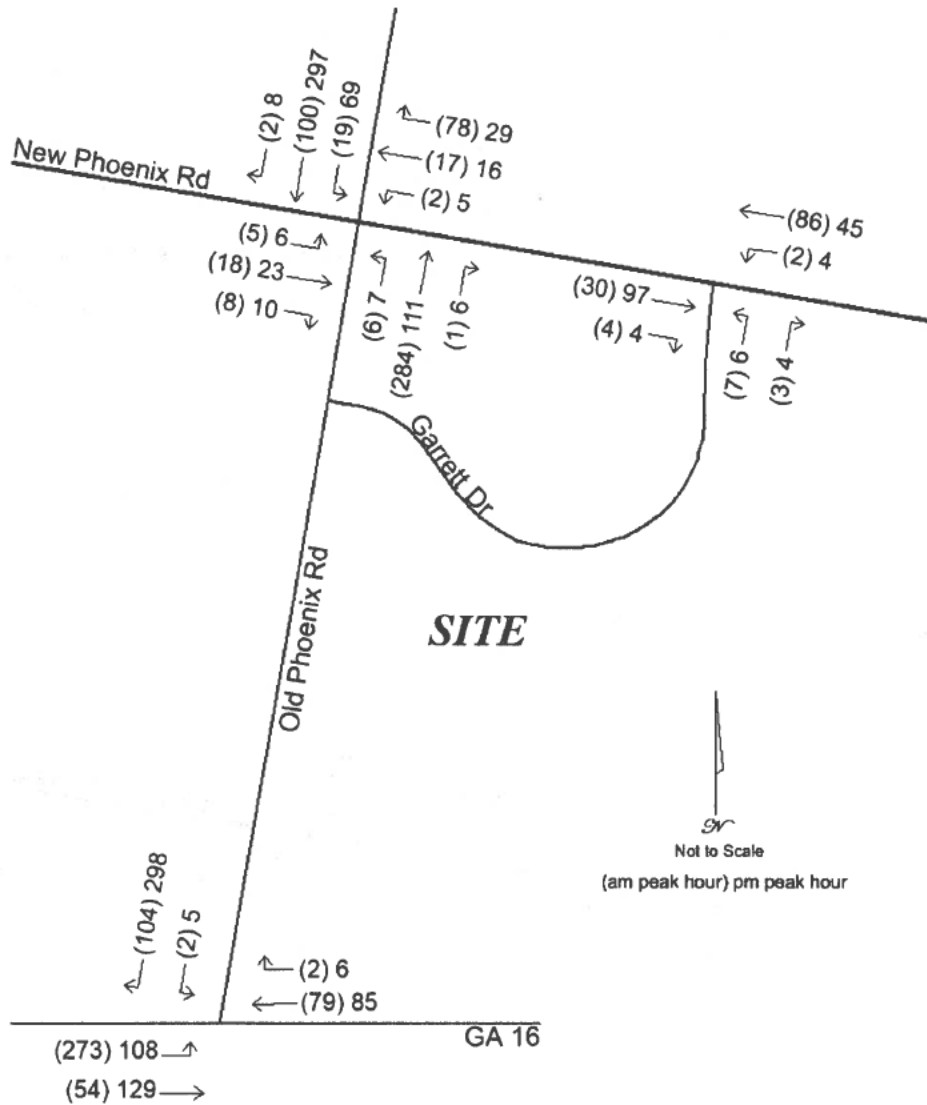


Figure 2 – Existing Weekday A.M. and P.M. Peak Hour Traffic Volumes

Existing Intersection Operations

Existing traffic operations were analyzed at the study intersections using Synchro software, version 10, in accordance with the methodology presented in the Transportation Research Board's 2016 Highway Capacity Manual (HCM 6). This methodology is presented in Appendix B. The results of the analysis are shown in Table 1. Computer printouts containing detailed results of the existing analysis are located in Appendix C. Levels of service and delays are provided for each overall intersection and for each controlled approach or movement. Locations that operate unacceptably (LOS E or LOS F) are presented in bold type.

**Table 1 – Existing Intersection Operations**

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Old Phoenix Road at New Phoenix Road	A	9.8	B	11.3
northbound approach	B	10.7	A	8.9
southbound approach	A	9.1	B	12.8
eastbound approach	A	8.5	A	8.7
westbound approach	A	8.6	A	8.6
2. GA 16 at Old Phoenix Road	A	6.3	A	6.6
southbound left turn	C	19.5	B	12.2
southbound right turn	A	9.3	B	10.9
eastbound left turn	A	8.2	A	7.7
3. New Phoenix Road at Garrett Drive	A	0.9	A	1.0
northbound approach	A	9.2	A	9.3
westbound left turn	A	7.3	A	7.5

The existing analysis reveals good operating conditions at all study intersections. No mitigation is identified for the existing condition.

### No-Build Traffic Conditions

A no-build condition was developed. This represents the traffic conditions that will exist in the future at the anticipated time of the build-out of the proposed subdivision, but not including the subdivision’s trips. The purpose of the analysis of this condition is to isolate the traffic impacts of the proposed development from background growth in volumes that are expected to occur in the area while the subdivision is under construction.

Georgia DOT AADT volume counts were obtained on nearby roadways for the five years from 2015 to 2019 (the latest year for which volumes are available). Table 2 presents the historic Georgia DOT counts and the annual growth rates between the counts.

**Table 2 – Historic Georgia DOT Traffic Volume Counts and Annual Growth Rates**

Year	GA 16 E of Old Phoenix	Annual Growth	Old Phoenix S of Lake Oconee	Annual Growth
Station ID	237-0114		237-0178	
2015	1,930		3,560	
2016	2,030	5.2%	3,770	5.9%
2017	2,060	1.5%	3,880	2.9%
2018	2,030	-1.5%	3,830	-1.3%
2019	1,740	-14.3%	3,820	-0.3%
<i>avg growth</i>		-2.1%		1.4%

Growth in the area has been generally low, with average annual growth ranging from -2.1% to 1.4%, and with the most recent year of growth being negative and ranging from -14.3% to -0.3%. Based on the growth trends identified in Table 2, no background growth factor was applied to the existing volumes when projecting the future no-build volumes. However, the Phoenix Crossing subdivision, adjacent to the subject development, is approved for 110 single family homes. As of the date of this study, 53 of those homes are occupied, while 37 are under construction and 20 are undeveloped. Therefore, the trips for the remaining (unbuilt or under construction homes) were calculated and assigned to the study intersections to develop a no-build condition. The trips were calculated using the ITE *Trip Generation Manual* and assigned using the same trip distribution as the subject subdivision of this study. Trip generation and distribution is discussed further in the Project Traffic Characteristics section of this report. The existing volumes plus the trips from the approved but unbuild and unoccupied homes in the Phoenix Crossing subdivision produce the no-build traffic volumes that will be on the roadway network in the future when the proposed subdivision is completely developed, but excluding the proposed subdivision’s trips.

**Programmed Transportation Infrastructure Improvements**

The Georgia DOT projects website was reviewed for planned (anticipated) and programmed (scheduled and funded) transportation infrastructure improvements in the study area. No projects were identified at the study intersections or in the immediate vicinity within the anticipated build-out time of the proposed subdivision.

**No-Build Intersection Operations**

The no-build condition includes the no-build traffic volumes, as described above. These were entered into the Synchro model and the no-build traffic operations were analyzed at the study intersections using Synchro 10 software in accordance with the HCM 6 methodology. The results of the no-build analysis are shown in Table 3. Computer printouts containing detailed results of the no-build analysis are located in Appendix D. Levels of service and delays are provided for each overall intersection and for each controlled approach or movement. Locations that operate unacceptably (LOS E or LOS F) are presented in bold type.

**Table 3 – No-Build Intersection Operations**

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Old Phoenix Road at New Phoenix Road	A	10.0	B	12.0
northbound approach	B	11.1	A	9.1
southbound approach	A	9.3	B	13.8
eastbound approach	A	8.6	A	8.9
westbound approach	A	8.8	A	8.8
2. GA 16 at Old Phoenix Road	A	6.4	A	6.7
southbound left turn	C	19.8	B	12.4
southbound right turn	A	9.4	B	11.0
eastbound left turn	A	8.2	A	7.7
3. New Phoenix Road at Garrett Drive	A	1.6	A	1.5
northbound approach	A	9.4	A	9.4
westbound left turn	A	7.4	A	7.5

The no-build analysis shows modest increases in delays and continued good operations at all study locations. Therefore, no mitigation is identified for the no-build condition.



### Project Traffic Characteristics

This section describes the anticipated traffic characteristics of the proposed subdivision, including a project description, how much traffic the project will generate, and where that traffic will travel.

### Project Description

The site will be developed with 53 single-family homes. One full-movement vehicular access will be provided on Old Phoenix Road and one full-movement access will be provided on Garrett Drive, which connects between Old Phoenix Road and New Phoenix Road. The site plan is presented in Figure 3.



Figure 3 – Site Plan for Proposed Subdivision

### Trip Generation

Trip generation is an estimate of the number of entering and exiting vehicular trips that will be generated by the proposed development. The volume of traffic that will be generated by the subdivision was calculated using the equations in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10<sup>th</sup> Edition – with Supplement*. ITE Land Use 210 – Single-Family Detached Housing was chosen as representative of the single family homes. The trip generation for the subdivision is presented in Table 4.

**Table 4 – Old Phoenix Road Subdivision Trip Generation**

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Single Family Homes	210	53 homes	10	32	42	35	20	55	580

The proposed subdivision will generate 42 a.m. peak hour trips, 55 p.m. peak hour trips, and 580 weekday trips.

### Trip Distribution and Assignment

The trip distribution percentages indicate what proportion of the project’s trips will travel to and from various directions. The trip distribution percentages for the subdivision were developed based on the locations and proximity of likely trip origins and destinations including regional employment centers, retail and offices in the area, nearby schools, other regional trip attractors, and the major routes of travel in the area, including GA 16 to the south and Interstate 20, a bit distant to the north. The new project trips, shown in Table 4, were assigned to the roadway network based on the distribution percentages. The trip distribution percentages and the a.m. and p.m. peak hour trips expected to be generated by the proposed subdivision are shown in Figure 4.

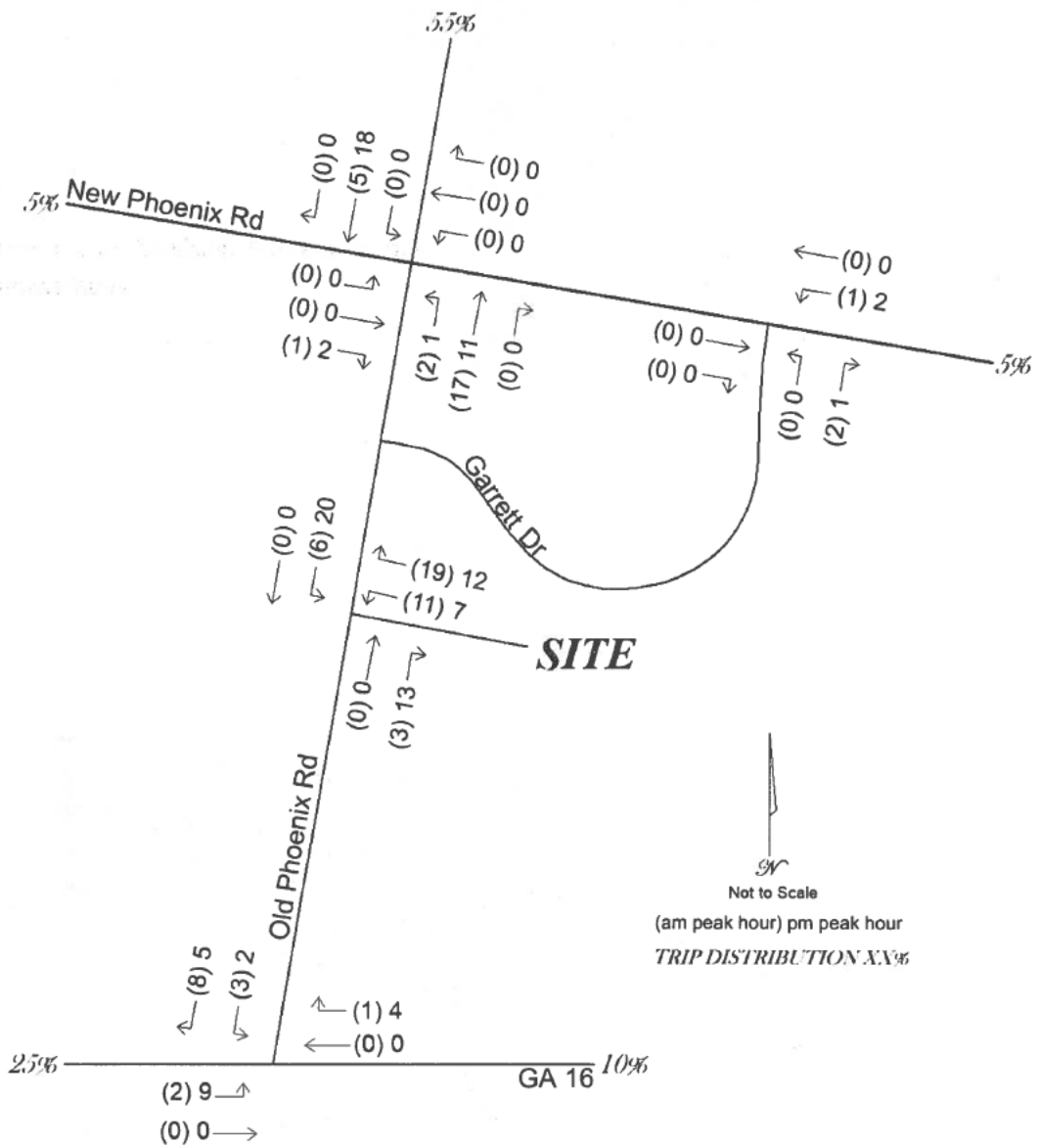


Figure 4 – Weekday A.M. and P.M. Peak Hour Project Trips and Trip Distribution Percentages

### Future Traffic Conditions

The future volumes consist of the no-build volumes plus the trips that will be generated by the proposed subdivision. The future volumes are shown in Figure 5.

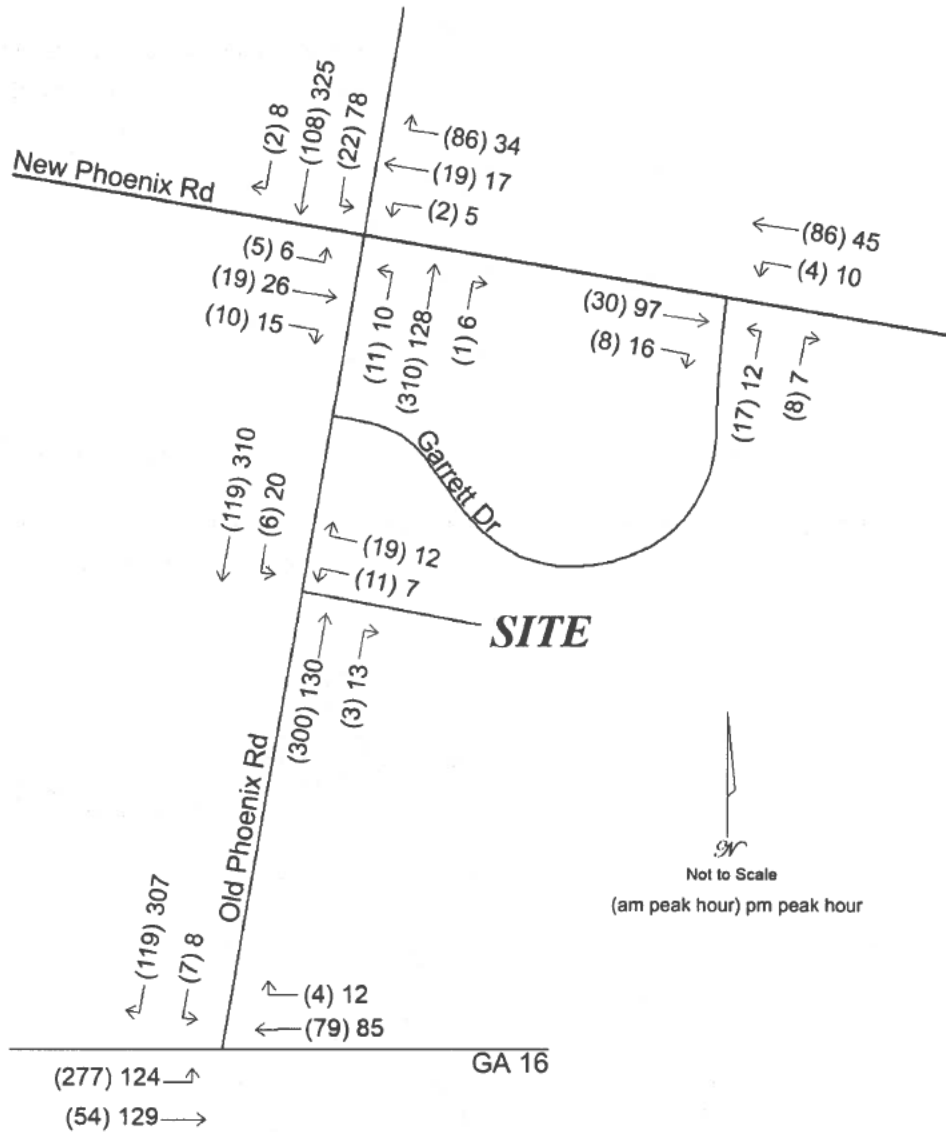


Figure 5 – Future Weekday A.M. and P.M. Peak Hour Volumes

### Lane Configuration at Subdivision Access

The Putnam County Code of Ordinances, Chapter 28 – Development Regulations, Article I – In General, Section 28-66 – Required Improvements, (k) Deceleration lanes and center turn lanes states:

- (1) Deceleration lanes or a center turn lane are required if sight distances required by this chapter cannot be achieved or the number of dwelling units in a development exceeds 50, at each entrance to a multifamily or nonresidential development project intersecting a county collector or a county arterial road, or if the director deems either a deceleration or turn lane or both are necessary to protect the safety of the public.
- (2) Deceleration and turn lane construction standards.
  - a. Deceleration lanes shall be designed and installed in accordance with the Georgia Department of Transportation Regulations for Driveway and Encroachment Control. The lane shall be 12 feet in width exclusive of the curb and gutter width. Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the county.
  - b. Left turn lanes may be required if the average daily traffic (ADT) exceeds 2,000 vehicles per day or if the director has knowledge of other information that would warrant a detailed traffic impact study as established by the Georgia Department of Transportation to determine if a left turn is needed. The study shall be prepared in accordance with the Georgia Department of Transportation Regulations for Driveway and Encroachment Control.
  - c. Other project access improvements as deemed necessary by the director of the planning and development department in addition to a required deceleration lane in order to ensure adequate site access, pedestrian access, convenience, and safety to the motoring public may be required.

The number of dwelling units in the proposed subdivision is 53, which exceeds the 50 unit threshold and, therefore a northbound right turn lane is required on Old Phoenix Road at the proposed subdivision access. This study agrees with that requirement.

For a southbound left turn lane on Old Phoenix Road at the project access, the code states that a left turn lane may be required if the ADT exceeds 2,000 vpd and then references the Georgia DOT standards. A left turn lane analysis was performed for this location using the Georgia DOT standards as presented in their *Regulations for Driveway and Encroachment Control, revision 5.0, July 3, 2019*. Georgia DOT Table 4-7a Minimum Volumes Requiring Left Turn Lanes is reproduced below as Table 5.



**Table 5 – Georgia DOT Left Turn Lane Volume Standards**

LEFT TURN REQUIREMENTS-FULL CONSTRUCTION				
Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	ADT		ADT	
	<6000	>=6000	<10000	>=10000
35 MPH or Less	300 LTV a day	200 LTV a day	400 LTV a day	300 LTV a day
40 to 50 MPH	250 LTV a day	175 LTV a day	325 LTV a day	250 LTV a day
>= 55 MPH	200 LTV a day	150 LTV a day	250 LTV a day	200 LTV a day

**Table 4-7a Minimum Volumes Requiring Left Turn Lanes**

Based on a posted speed limit of 55 mph and a 24-hour volume of less than 6,000 vehicles (counted for this study as 4,349 vehicles, with a flat-to-decreasing trend) on Old Phoenix Road, the left turn volume threshold above which a left turn lane would be required is 200 left turn vehicles per day. This study projects 174 southbound left turns into the project. This is below the 200 left turn vehicles per day threshold and, therefore, according to the Georgia DOT standard, no left turn lane is required on Old Phoenix Road at the project access.

The project access at Old Phoenix Road should be built with one entering and one exiting lane, or as required by the County. The exiting approach should be controlled by side street stop sign and accompanying stop bar. This lane configuration was used in the operational analysis.

No turn lanes are considered necessary to serve the project’s access at Garrett Drive because Garrett Drive is a low volume, low speed local street. This access should also be built with one entering and one exiting lane, or as required by the County. The exiting approach should be controlled by side street stop sign and accompanying stop bar.

The project will add minimal trips to the already-low volumes at the New Phoenix Road / Garrett Drive intersection and, therefore, no changes are recommended for that intersection.

**Future Intersection Operations**

An operational analysis was performed for the anticipated future project build-out. Table 6 presents the results of the future analysis. Computer printouts containing detailed results of the future analysis are located in Appendix E. Levels of service and delays are provided for each overall intersection and for each controlled approach or movement. Locations that operate unacceptably (LOS E or LOS F) are presented in bold type.

**Table 6 – Future Intersection Operations**

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Old Phoenix Road at New Phoenix Road	B	10.3	B	12.6
northbound approach	B	11.5	A	9.3
southbound approach	A	9.4	B	14.7
eastbound approach	A	8.7	A	9.0
westbound approach	A	9.0	A	8.9
2. GA 16 at Old Phoenix Road	A	6.5	A	6.7
southbound left turn	C	20.2	B	12.8
southbound right turn	A	9.4	B	11.1
eastbound left turn	A	8.2	A	7.7
3. New Phoenix Road at Garrett Drive	A	1.7	A	1.6
northbound approach	A	9.3	A	9.4
westbound left turn	A	7.4	A	7.5
4. Old Phoenix Road at Subdivision Access	A	0.9	A	0.8
southbound left turn (entering project)	A	8.0	A	7.6
westbound approach (exiting project)	B	11.1	B	10.6

The future analysis shows continued good traffic operations at all study locations. No mitigation is identified for the future condition other than the right turn lane required at the project access on Old Phoenix Road.

## Conclusions and Recommendations

This study assesses the traffic impact of a proposed residential subdivision in Putnam County, Georgia. The site is located on the east side of Old Phoenix Road and the project will include 53 single-family homes. One full-movement vehicular access will be provided on Old Phoenix Road and one full-movement access will be provided on Garrett Drive, which connects between Old Phoenix Road and New Phoenix Road. The following are the findings and recommendations of this study:

1. Existing operations at the studied intersections are good and no mitigation is identified for the existing condition.
2. Traffic volume growth in this area has been low-to-negative. Therefore, no background growth factor was applied in developing the no-build condition. However, the approved but undeveloped homes in the adjacent Phoenix Crossing subdivision were added to the no-build analysis.
3. The no-build condition will see moderate increases in delays and continued good traffic operations. Therefore, no mitigation is identified for the no-build condition.
4. The proposed subdivision will generate 42 a.m. peak hour trips, 55 p.m. peak hour trips, and 580 weekday trips.
5. With the addition of the subdivision's trips, delays will increase slightly from the no-build condition, but all locations, including the project access on Old Phoenix Road, will operate well. Therefore, no mitigation is identified other than the right turn lane required at the project access.
6. A northbound right turn lane is required by County Code on Old Phoenix Road at the project access.
7. Both project accesses should be built with one entering and one exiting lane, or as required by the County. Each exiting approach should be controlled by side street stop sign and accompanying stop bar.
8. The site engineer should comply with all applicable design standards at the site accesses and internal site roadways, including sight distances, turn radii, driveway widths, islands, angles with the adjacent roadways, and grades.

Appendix A

Traffic Count Data and Volume Worksheets

**Old Phoenix Road Subdivision Traffic Impact Study**  
Putnam County, Georgia

June 2021

**Intersection: 1. Old Phoenix Road at New Phoenix Road**

Weekday A.M. Peak Hour	Northbound Old Phoenix Road				Southbound Old Phoenix Road				Eastbound New Phoenix Road				Westbound New Phoenix Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tuesday, June 15, 2021, 7:30-8:30)	6	284	1	291	19	100	2	121	5	18	8	31	2	17	78	97
COVID-19 adjustment	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	
Existing, Adjusted Volumes	6	284	1	291	19	100	2	121	5	18	8	31	2	17	78	97
Total Annual Background Growth	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	
Remaining Phoenix Crossing Homes Trips	3	9	0	12	3	3	0	6	0	1	1	2	0	2	8	10
No-Build Volumes	9	293	1	303	22	103	2	127	5	19	9	33	2	19	86	107
Proposed Old Phoenix Road Subdivision Trips	2	17	0	19	0	5	0	5	0	0	1	1	0	0	0	0
Build Volumes	11	310	1	322	22	108	2	132	5	19	10	34	2	19	86	107

Weekday P.M. Peak Hour	Northbound Old Phoenix Road				Southbound Old Phoenix Road				Eastbound New Phoenix Road				Westbound New Phoenix Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tuesday, June 15, 2021, 4:45-5:45)	7	111	6	124	69	297	8	374	6	23	10	39	5	16	29	50
COVID-19 adjustment	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	
Existing, Adjusted Volumes	7	111	6	124	69	297	8	374	6	23	10	39	5	16	29	50
Total Annual Background Growth	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	
Remaining Phoenix Crossing Homes Trips	2	6	0	8	9	10	0	19	0	3	3	6	0	1	5	6
No-Build Volumes	9	117	6	132	78	307	8	393	6	26	13	45	5	17	34	56
Proposed Old Phoenix Road Subdivision Trips	1	11	0	12	0	18	0	18	0	0	2	2	0	0	0	0
Build Volumes	10	128	6	144	78	325	8	411	6	26	15	47	5	17	34	56



**Old Phoenix Road Subdivision Traffic Impact Study**  
Putnam County, Georgia

June 2021

**Intersection: 2. Sparta Highway (Georgia State Route 16) at Old Phoenix Road**

Weekday A.M. Peak Hour	Southbound Old Phoenix Road			Eastbound GA 16			Westbound GA 16		
	L	R	Tot	L	T	Tot	T	R	Tot
Counted Volumes (Tuesday, June 15, 2021, 7:15-8:15)	2	104	106	273	54	327	79	2	81
COVID-19 adjustment	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
Existing, Adjusted Volumes	2	104	106	273	54	327	79	2	81
Total Annual Background Growth	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
Remaining Phoenix Crossing Homes Trips	2	7	9	2	0	2	0	1	1
No-Build Volumes	4	111		275	54		79	3	
Proposed Old Phoenix Road Subdivision Trips	3	8	11	2	0	2	0	1	1
Build Volumes	7	119	126	277	54	331	79	4	83

Weekday P.M. Peak Hour	Southbound Old Phoenix Road			Eastbound GA 16			Westbound GA 16		
	L	R	Tot	L	T	Tot	T	R	Tot
Counted Volumes (Tuesday, June 15, 2021, 4:45-5:45)	5	298	303	108	129	237	85	6	91
COVID-19 adjustment	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
Existing, Adjusted Volumes	5	298	303	108	129	237	85	6	91
Total Annual Background Growth	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
Remaining Phoenix Crossing Homes Trips	1	4	5	7	0	7	0	2	2
No-Build Volumes	6	302		115	129		85	8	
Proposed Old Phoenix Road Subdivision Trips	2	5	7	9	0	9	0	4	4
Build Volumes	8	307	315	124	129	253	85	12	97

MARC R. ACAMPORA, PE, LLC

**Old Phoenix Road Subdivision Traffic Impact Study**  
Putnam County, Georgia

June 2021

**Intersection: 3. New Phoenix Road at Garrett Drive**

Weekday A.M. Peak Hour	Northbound Garrett Drive				Eastbound New Phoenix Road			Westbound New Phoenix Road		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Tuesday, June 15, 2021, 7:15-8:15)	7	3	10		30	4	34	2	86	88
COVID-19 adjustment	0.0%	0.0%			0.0%	0.0%		0.0%	0.0%	
Existing, Adjusted Volumes	7	3	10		30	4	34	2	86	88
Total Annual Background Growth	0.0%	0.0%			0.0%	0.0%		0.0%	0.0%	
Remaining Phoenix Crossing Homes Trips	10	3	13		0	4	4	1	0	1
No-Build Volumes	17	6	23		30	8	38	3	86	89
Proposed Old Phoenix Road Subdivision Trips	0	2	2		0	0	0	1	0	1
Build Volumes	17	8	25		30	8	38	4	86	90

Weekday P.M. Peak Hour	Northbound Garrett Drive				Eastbound New Phoenix Road			Westbound New Phoenix Road		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Tuesday, June 15, 2021, 5:00-6:00)	6	4	10		97	4	101	4	45	49
COVID-19 adjustment	0.0%	0.0%			0.0%	0.0%		0.0%	0.0%	
Existing, Adjusted Volumes	6	4	10		97	4	101	4	45	49
Total Annual Background Growth	0.0%	0.0%			0.0%	0.0%		0.0%	0.0%	
Remaining Phoenix Crossing Homes Trips	6	2	8		0	12	12	4	0	4
No-Build Volumes	12	6	18		97	16	113	8	45	53
Proposed Old Phoenix Road Subdivision Trips	0	1	1		0	0	0	2	0	2
Build Volumes	12	7	19		97	16	113	10	45	55

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**Old Phoenix Road Subdivision Traffic Impact Study**  
Putnam County, Georgia

June 2021

**Intersection: 4. Old Phoenix Road at Proposed Old Phoenix Road Subdivision Access**

Weekday A.M. Peak Hour	Northbound Old Phoenix Road			Southbound Old Phoenix Road			Westbound Project Access		
	T	R	Tot	L	T	Tot	L	R	Tot
Counted Volumes (Tuesday, June 15, 2021, 7:30-8:30)	297		297		110	110			
COVID-19 adjustment	0.0%				0.0%				
Existing, Adjusted Volumes	297		297		110	110			
Total Annual Background Growth	0.0%				0.0%				
Remaining Phoenix Crossing Homes Trips	3		3		9	9			
No-Build Volumes	300		300		119	119			
Proposed Old Phoenix Road Subdivision Trips	0	3	3	6	0	6	11	19	30
Build Volumes	300	3	303	6	119	125	11	19	30

Weekday P.M. Peak Hour	Northbound Old Phoenix Road			Southbound Old Phoenix Road			Westbound Project Access		
	T	R	Tot	L	T	Tot	L	R	Tot
Counted Volumes (Tuesday, June 15, 2021, 4:45-5:45)	121		121		305	305			
COVID-19 adjustment	0.0%				0.0%				
Existing, Adjusted Volumes	121		121		305	305			
Total Annual Background Growth	0.0%				0.0%				
Remaining Phoenix Crossing Homes Trips	9		9		5	5			
No-Build Volumes	130		130		310	310			
Proposed Old Phoenix Road Subdivision Trips	0	13	13	20	0	20	7	12	19
Build Volumes	130	13	143	20	310	330	7	12	19

**Old Phoenix Road at project access to Tuesday, June 15, 2021  
Peak Hour Calculation**

	NB	Hourly	SB	Hourly	2-Way	Hourly
07:00 AM	54		11		65	
07:15 AM	51		27		78	
<b>07:30 AM</b>	<b>93</b>		<b>26</b>		<b>119</b>	
<b>07:45 AM</b>	<b>80</b>	<b>278</b>	<b>21</b>	<b>85</b>	<b>101</b>	<b>363</b>
<b>08:00 AM</b>	<b>65</b>	<b>289</b>	<b>35</b>	<b>109</b>	<b>100</b>	<b>398</b>
<b>08:15 AM</b>	<b>59</b>	<b>297</b>	<b>28</b>	<b>110</b>	<b>87</b>	<b>407</b>
08:30 AM	75	279	30	114	105	393
08:45 AM	50	249	23	116	73	365
04:00 PM	21		42		63	241
04:15 PM	25		54		79	215
04:30 PM	25		65		90	232
04:45 PM	26	97	61	222	87	319
<b>05:00 PM</b>	<b>32</b>	<b>108</b>	<b>74</b>	<b>254</b>	<b>106</b>	<b>362</b>
<b>05:15 PM</b>	<b>32</b>	<b>115</b>	<b>89</b>	<b>289</b>	<b>121</b>	<b>404</b>
<b>05:30 PM</b>	<b>29</b>	<b>119</b>	<b>82</b>	<b>306</b>	<b>111</b>	<b>425</b>
<b>05:45 PM</b>	<b>28</b>	<b>121</b>	<b>60</b>	<b>305</b>	<b>88</b>	<b>426</b>
06:00 PM	22	111	43	274	65	385
06:15 PM	22	101	48	233	70	334
24-Hour	2226		2123		4349	
COVID 19 adjustm		0%				
				NB	SB	2-Way
am peak increased by COVID 19 adjust				297	110	407
pm peak increased by COVID 19 adjust				121	305	426
24 hour increased by COVID 19 adjust				2226	2123	4349

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TMC Data  
 Old Phoenix Rd @ New Phoenix Rd  
 Eatonton, GA  
 7-9 AM | 4-6 PM

File Name : 45040001  
 Site Code : 45040001  
 Start Date : 6/15/2021  
 Page No : 1

**Groups Printed- Cars, Buses and Trucks**

Start Time	Old Phoenix Rd Northbound					Old Phoenix Rd Southbound					New Phoenix Rd Eastbound					New Phoenix Rd Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	5	48	0	0	53	2	9	0	0	11	1	1	1	0	3	1	5	9	0	15	82
07:15 AM	2	61	0	0	63	5	19	1	0	25	0	3	3	0	6	1	11	12	0	24	118
07:30 AM	0	68	1	0	69	2	26	1	0	29	3	5	1	0	9	0	6	15	0	21	128
07:45 AM	1	80	0	0	81	2	17	1	0	20	0	2	3	0	5	1	7	25	0	33	139
<b>Total</b>	<b>8</b>	<b>257</b>	<b>1</b>	<b>0</b>	<b>266</b>	<b>11</b>	<b>71</b>	<b>3</b>	<b>0</b>	<b>85</b>	<b>4</b>	<b>11</b>	<b>8</b>	<b>0</b>	<b>23</b>	<b>3</b>	<b>29</b>	<b>61</b>	<b>0</b>	<b>93</b>	<b>467</b>
08:00 AM	4	72	0	0	76	9	32	0	0	41	1	6	3	0	10	0	1	18	0	19	146
08:15 AM	1	64	0	0	65	6	25	0	0	31	1	5	1	0	7	1	3	20	0	24	127
08:30 AM	0	52	0	0	52	4	26	0	0	30	2	1	2	0	5	4	1	10	0	15	102
08:45 AM	3	55	1	0	59	7	17	2	0	26	2	1	2	0	5	0	2	13	0	15	105
<b>Total</b>	<b>8</b>	<b>243</b>	<b>1</b>	<b>0</b>	<b>252</b>	<b>26</b>	<b>100</b>	<b>2</b>	<b>0</b>	<b>128</b>	<b>6</b>	<b>13</b>	<b>8</b>	<b>0</b>	<b>27</b>	<b>5</b>	<b>7</b>	<b>61</b>	<b>0</b>	<b>73</b>	<b>480</b>
*** BREAK ***																					
04:00 PM	2	25	2	0	29	11	43	0	0	54	2	2	2	0	6	0	2	8	0	10	99
04:15 PM	1	16	1	0	18	12	56	4	0	72	0	3	0	0	3	1	4	6	0	11	104
04:30 PM	2	26	1	0	29	15	58	1	0	74	1	7	1	0	9	2	3	2	0	7	119
04:45 PM	1	29	0	0	30	13	56	3	0	72	0	7	3	0	10	1	3	6	0	10	122
<b>Total</b>	<b>6</b>	<b>96</b>	<b>4</b>	<b>0</b>	<b>106</b>	<b>51</b>	<b>213</b>	<b>8</b>	<b>0</b>	<b>272</b>	<b>3</b>	<b>19</b>	<b>6</b>	<b>0</b>	<b>28</b>	<b>4</b>	<b>12</b>	<b>22</b>	<b>0</b>	<b>38</b>	<b>444</b>
05:00 PM	1	22	0	0	23	18	71	0	0	89	2	5	1	0	8	1	5	6	0	12	132
05:15 PM	3	33	1	0	37	18	93	2	0	113	2	5	1	0	8	1	3	8	0	12	170
05:30 PM	2	27	5	0	34	20	77	3	0	100	2	6	5	0	13	2	5	9	0	16	163
05:45 PM	1	20	1	0	22	12	58	1	0	71	1	10	2	0	13	1	5	6	0	12	118
<b>Total</b>	<b>7</b>	<b>102</b>	<b>7</b>	<b>0</b>	<b>116</b>	<b>68</b>	<b>299</b>	<b>6</b>	<b>0</b>	<b>373</b>	<b>7</b>	<b>26</b>	<b>9</b>	<b>0</b>	<b>42</b>	<b>5</b>	<b>18</b>	<b>29</b>	<b>0</b>	<b>52</b>	<b>583</b>
<b>Grand Total</b>	<b>29</b>	<b>698</b>	<b>13</b>	<b>0</b>	<b>740</b>	<b>156</b>	<b>683</b>	<b>19</b>	<b>0</b>	<b>858</b>	<b>20</b>	<b>69</b>	<b>31</b>	<b>0</b>	<b>120</b>	<b>17</b>	<b>66</b>	<b>173</b>	<b>0</b>	<b>256</b>	<b>1974</b>
<b>Apprch %</b>	<b>3.9</b>	<b>94.3</b>	<b>1.8</b>	<b>0</b>		<b>18.2</b>	<b>79.6</b>	<b>2.2</b>	<b>0</b>		<b>16.7</b>	<b>57.5</b>	<b>25.8</b>	<b>0</b>		<b>6.6</b>	<b>25.8</b>	<b>67.6</b>	<b>0</b>		
<b>Total %</b>	<b>1.5</b>	<b>35.4</b>	<b>0.7</b>	<b>0</b>	<b>37.5</b>	<b>7.9</b>	<b>34.6</b>	<b>1</b>	<b>0</b>	<b>43.5</b>	<b>1</b>	<b>3.5</b>	<b>1.6</b>	<b>0</b>	<b>6.1</b>	<b>0.9</b>	<b>3.3</b>	<b>8.8</b>	<b>0</b>	<b>13</b>	

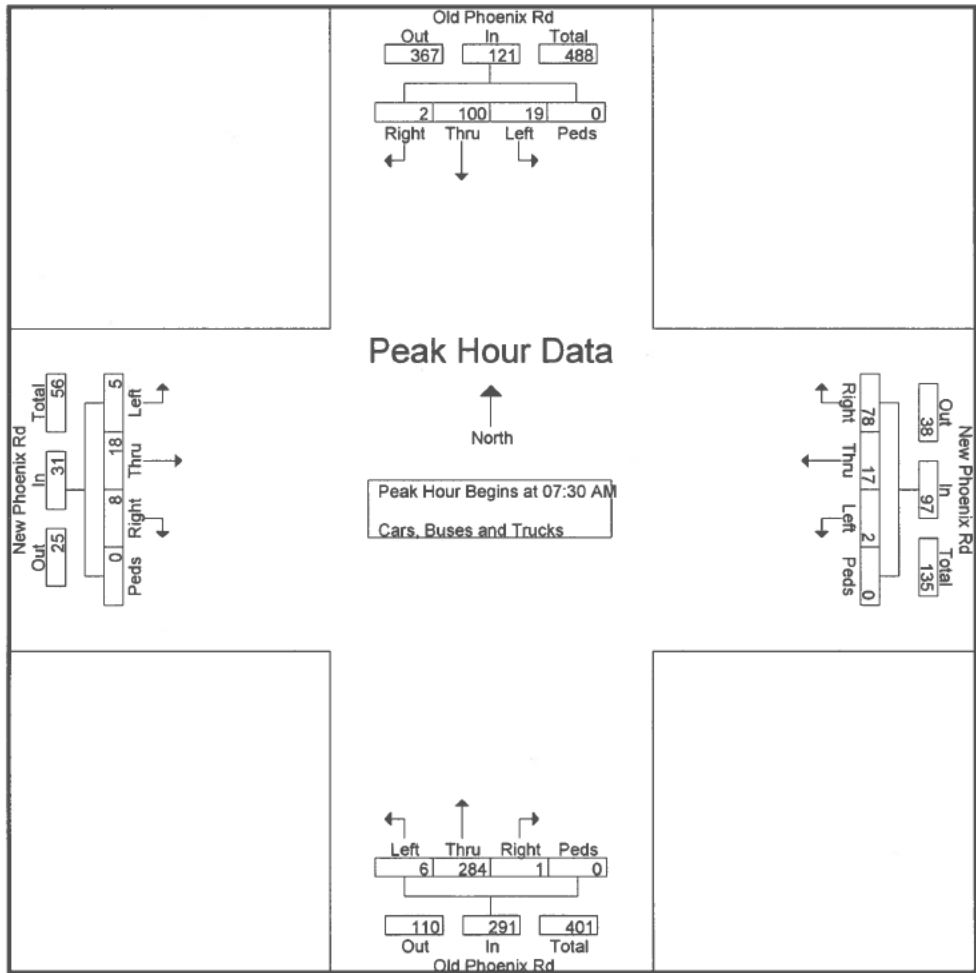
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TMC Data  
 Old Phoenix Rd @ New Phoenix Rd  
 Eatonton, GA  
 7-9 AM | 4-6 PM

File Name : 45040001  
 Site Code : 45040001  
 Start Date : 6/15/2021  
 Page No : 2

Start Time	Old Phoenix Rd Northbound					Old Phoenix Rd Southbound					New Phoenix Rd Eastbound					New Phoenix Rd Westbound					Int. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 07:30 AM																						
07:30 AM	0	68	1	0	69	2	26	1	0	29	3	5	1	0	9	0	6	15	0	21	128	
07:45 AM	1	80	0	0	81	2	17	1	0	20	0	2	3	0	5	1	7	25	0	33	139	
08:00 AM	4	72	0	0	76	9	32	0	0	41	1	6	3	0	10	0	1	18	0	19	146	
08:15 AM	1	64	0	0	65	6	25	0	0	31	1	5	1	0	7	1	3	20	0	24	127	
Total Volume	6	284	1	0	291	19	100	2	0	121	5	18	8	0	31	2	17	78	0	97	540	
% App. Total	97.6					15.7	82.6						16.1	58.1	25.8	17.5					80.4	
PHF	.375	.888	.250	.000	.898	.528	.781	.500	.000	.738	.417	.750	.667	.000	.775	.500	.607	.780	.000	.735	.925	





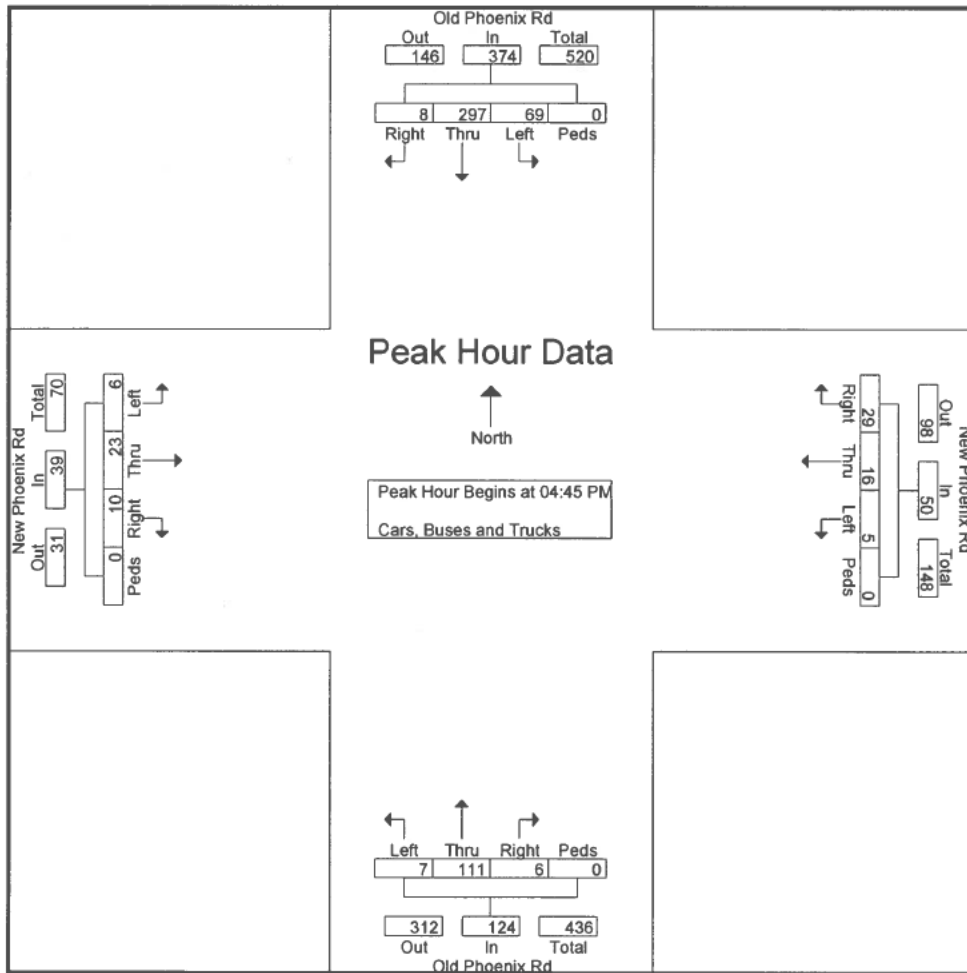
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TMC Data  
 Old Phoenix Rd @ New Phoenix Rd  
 Eatonton, GA  
 7-9 AM | 4-6 PM

File Name : 45040001  
 Site Code : 45040001  
 Start Date : 6/15/2021  
 Page No : 3

Start Time	Old Phoenix Rd Northbound					Old Phoenix Rd Southbound					New Phoenix Rd Eastbound					New Phoenix Rd Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	29	0	0	30	13	56	3	0	72	0	7	3	0	10	1	3	6	0	10	122
05:00 PM	1	22	0	0	23	18	71	0	0	89	2	5	1	0	8	1	5	6	0	12	132
05:15 PM	3	33	1	0	37	18	93	2	0	113	2	5	1	0	8	1	3	8	0	12	170
05:30 PM	2	27	5	0	34	20	77	3	0	100	2	6	5	0	13	2	5	9	0	16	163
Total Volume	7	111	6	0	124	69	297	8	0	374	6	23	10	0	39	5	16	29	0	50	587
% App. Total	89.5					18.4	79.4					15.4	25.6								
PHF	.583	.841	.300	.000	.838	.863	.798	.667	.000	.827	.750	.821	.500	.000	.750	.625	.800	.806	.000	.781	.863



**Reliable Traffic Data Services**

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TMC Data  
 New Phoenix Rd @ Garrett Dr  
 Eatonton, GA  
 7-9 AM | 4-6 PM

File Name : 45040002  
 Site Code : 45040002  
 Start Date : 6/15/2021  
 Page No : 1

**Groups Printed- Cars, Buses and Trucks**

Start Time	Garrett Dr Northbound					Southbound					New Phoenix Rd Eastbound					New Phoenix Rd Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	1	0	0	0	1	0	0	0	0	0	0	4	0	0	4	0	18	0	0	18	23
07:15 AM	1	0	0	0	1	0	0	0	0	0	0	5	3	0	8	2	18	0	0	20	29
07:30 AM	1	0	0	0	1	0	0	0	0	0	0	6	1	0	7	0	23	0	0	23	31
07:45 AM	2	0	2	0	4	0	0	0	0	0	0	4	0	0	4	0	28	0	0	28	36
<b>Total</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>23</b>	<b>2</b>	<b>87</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>119</b>
08:00 AM	3	0	1	0	4	0	0	0	0	0	0	15	0	0	15	0	17	0	0	17	36
08:15 AM	1	0	0	0	1	0	0	0	0	0	0	8	1	0	9	0	19	0	0	19	29
08:30 AM	1	0	0	0	1	0	0	0	0	0	0	7	1	0	8	0	15	0	0	15	24
08:45 AM	4	0	0	0	4	0	0	0	0	0	0	6	1	0	7	1	12	0	0	13	24
<b>Total</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>3</b>	<b>0</b>	<b>39</b>	<b>1</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>113</b>
<b>*** BREAK ***</b>																					
04:00 PM	1	0	0	0	1	0	0	0	0	0	0	15	1	0	16	0	9	0	0	9	26
04:15 PM	1	0	1	0	2	0	0	0	0	0	0	17	1	0	18	0	11	0	0	11	31
04:30 PM	2	0	0	0	2	0	0	0	0	0	0	20	2	0	22	0	5	0	0	5	29
04:45 PM	2	0	0	0	2	0	0	0	0	0	0	18	1	0	19	1	8	0	0	9	30
<b>Total</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>5</b>	<b>0</b>	<b>75</b>	<b>1</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>116</b>
05:00 PM	1	0	3	0	4	0	0	0	0	0	0	20	1	0	21	0	11	0	0	11	36
05:15 PM	2	0	0	0	2	0	0	0	0	0	0	22	2	0	24	3	10	0	0	13	39
05:30 PM	2	0	1	0	3	0	0	0	0	0	0	29	1	0	30	0	12	0	0	12	45
05:45 PM	1	0	0	0	1	0	0	0	0	0	0	26	0	0	26	1	12	0	0	13	40
<b>Total</b>	<b>6</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>97</b>	<b>4</b>	<b>0</b>	<b>101</b>	<b>4</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>160</b>
<b>Grand Total</b>	<b>26</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>222</b>	<b>16</b>	<b>0</b>	<b>238</b>	<b>8</b>	<b>228</b>	<b>0</b>	<b>0</b>	<b>236</b>	<b>508</b>
<b>Apprch %</b>	<b>76.5</b>	<b>0</b>	<b>23.5</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>93.3</b>	<b>6.7</b>	<b>0</b>		<b>3.4</b>	<b>96.6</b>	<b>0</b>	<b>0</b>		
<b>Total %</b>	<b>5.1</b>	<b>0</b>	<b>1.6</b>	<b>0</b>	<b>6.7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43.7</b>	<b>3.1</b>	<b>0</b>	<b>46.9</b>	<b>1.6</b>	<b>44.9</b>	<b>0</b>	<b>0</b>	<b>46.5</b>	

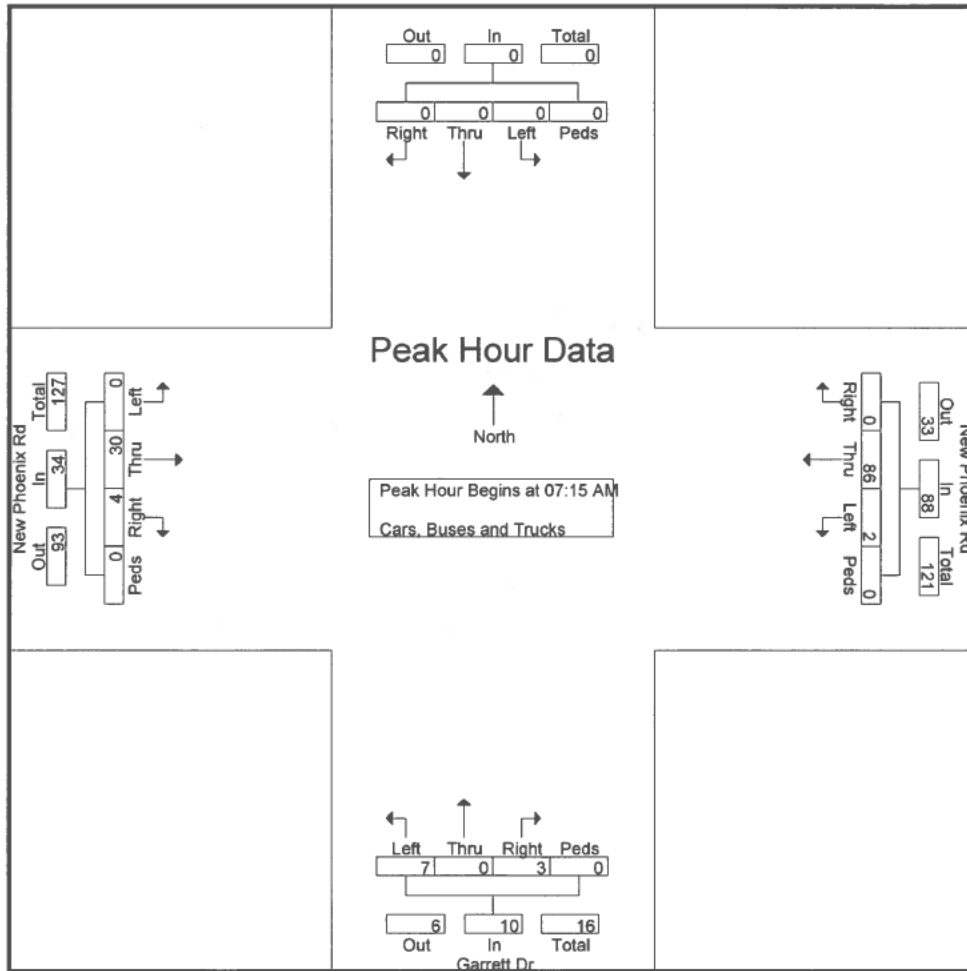
# Reliable Traffic Data Services

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TMC Data  
 New Phoenix Rd @ Garrett Dr  
 Eatonton, GA  
 7-9 AM | 4-6 PM

File Name : 45040002  
 Site Code : 45040002  
 Start Date : 6/15/2021  
 Page No : 2

Start Time	Garrett Dr Northbound					Southbound					New Phoenix Rd Eastbound					New Phoenix Rd Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	1	0	0	0	1	0	0	0	0	0	0	5	3	0	8	2	18	0	0	20	29
07:30 AM	1	0	0	0	1	0	0	0	0	0	0	6	1	0	7	0	23	0	0	23	31
07:45 AM	2	0	2	0	4	0	0	0	0	0	0	4	0	0	4	0	28	0	0	28	36
08:00 AM	3	0	1	0	4	0	0	0	0	0	0	15	0	0	15	0	17	0	0	17	36
Total Volume	7	0	3	0	10	0	0	0	0	0	0	30	4	0	34	2	86	0	0	88	132
% App. Total												88.2	11.8				97.7				
PHF	.583	.000	.375	.000	.625	.000	.000	.000	.000	.000	.000	.500	.333	.000	.567	.250	.768	.000	.000	.786	.917



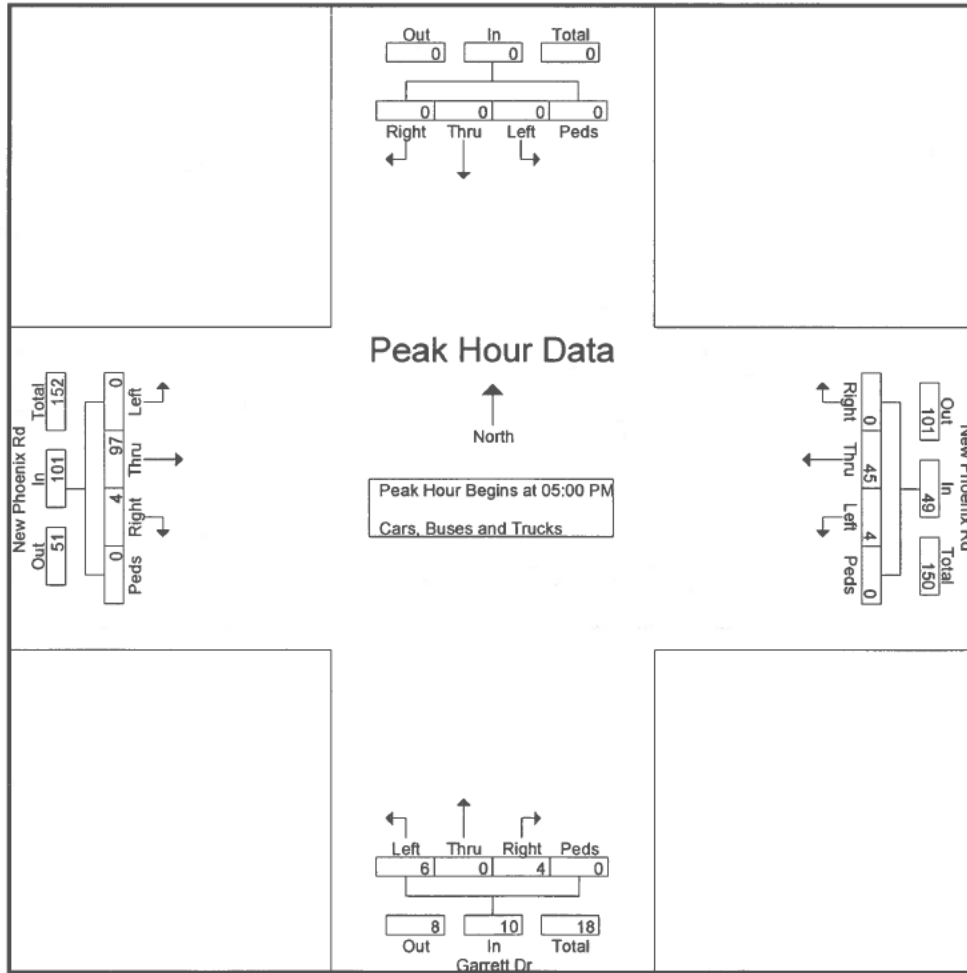
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TMC Data  
 New Phoenix Rd @ Garrett Dr  
 Eatonton, GA  
 7-9 AM | 4-6 PM

File Name : 45040002  
 Site Code : 45040002  
 Start Date : 6/15/2021  
 Page No : 3

Start Time	Garrett Dr Northbound					Southbound					New Phoenix Rd Eastbound					New Phoenix Rd Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	1	0	3	0	4	0	0	0	0	0	0	20	1	0	21	0	11	0	0	11	36
05:15 PM	2	0	0	0	2	0	0	0	0	0	0	22	2	0	24	3	10	0	0	13	39
05:30 PM	2	0	1	0	3	0	0	0	0	0	0	29	1	0	30	0	12	0	0	12	45
05:45 PM	1	0	0	0	1	0	0	0	0	0	0	26	0	0	26	1	12	0	0	13	40
Total Volume	6	0	4	0	10	0	0	0	0	0	0	97	4	0	101	4	45	0	0	49	160
% App. Total																91.8					
PHF	.750	.000	.333	.000	.625	.000	.000	.000	.000	.000	.000	.836	.500	.000	.842	.333	.938	.000	.000	.942	.889



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TMC Data  
 Old Phoenix Rd @ Sparta Hwy (GA16)  
 Eatonton, GA  
 7-9 AM | 4-6 PM

File Name : 45040003  
 Site Code : 45040003  
 Start Date : 6/15/2021  
 Page No : 1

### Groups Printed- Cars, Buses and Trucks

Start Time	Private Drwy (Gated) Northbound					Old Phoenix Rd Southbound					Sparta Hwy (GA16) Eastbound					Sparta Hwy (GA16) Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	12	0	12	55	9	0	0	64	0	28	1	0	29	105
07:15 AM	0	0	0	0	0	1	0	24	0	25	65	10	0	0	75	0	23	1	0	24	124
07:30 AM	0	0	0	0	0	0	0	28	0	28	66	18	0	0	84	0	19	1	0	20	132
07:45 AM	0	0	0	0	0	1	0	21	0	22	84	20	0	0	104	0	20	0	0	20	146
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>85</b>	<b>0</b>	<b>87</b>	<b>270</b>	<b>57</b>	<b>0</b>	<b>0</b>	<b>327</b>	<b>0</b>	<b>90</b>	<b>3</b>	<b>0</b>	<b>93</b>	<b>507</b>
08:00 AM	0	0	0	0	0	0	0	31	0	31	58	6	0	0	64	0	17	0	0	17	112
08:15 AM	0	0	0	0	0	1	0	27	0	28	65	13	0	0	78	0	17	0	0	17	123
08:30 AM	0	0	0	0	0	0	0	29	0	29	68	4	0	0	72	0	15	1	0	16	117
08:45 AM	0	0	0	0	0	0	0	23	0	23	47	18	0	0	65	0	18	2	0	20	108
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>110</b>	<b>0</b>	<b>111</b>	<b>238</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>279</b>	<b>0</b>	<b>67</b>	<b>3</b>	<b>0</b>	<b>70</b>	<b>460</b>
*** BREAK ***																					
04:00 PM	0	0	0	0	0	1	0	39	0	40	16	25	0	0	41	0	23	0	0	23	104
04:15 PM	0	0	0	0	0	1	0	52	0	53	30	22	0	0	52	0	27	0	0	27	132
04:30 PM	0	0	0	0	0	0	0	63	0	63	27	26	1	0	54	0	22	1	0	23	140
04:45 PM	0	0	0	0	0	2	0	64	0	66	23	37	0	0	60	0	23	1	0	24	150
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>218</b>	<b>0</b>	<b>222</b>	<b>96</b>	<b>110</b>	<b>1</b>	<b>0</b>	<b>207</b>	<b>0</b>	<b>95</b>	<b>2</b>	<b>0</b>	<b>97</b>	<b>526</b>
05:00 PM	0	1	0	0	1	2	0	79	0	81	33	27	0	0	60	0	27	0	0	27	169
05:15 PM	0	0	0	0	0	0	0	86	0	86	29	34	0	0	63	0	15	2	0	17	166
05:30 PM	0	0	0	0	0	1	0	69	0	70	23	31	0	0	54	0	20	3	0	23	147
05:45 PM	0	0	0	0	0	1	0	62	0	63	28	24	0	0	52	0	26	0	0	26	141
<b>Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>296</b>	<b>0</b>	<b>300</b>	<b>113</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>229</b>	<b>0</b>	<b>88</b>	<b>5</b>	<b>0</b>	<b>93</b>	<b>623</b>
Grand Total	0	1	0	0	1	11	0	709	0	720	717	324	1	0	1042	0	340	13	0	353	2116
Apprch %	0	100	0	0		1.5	0	98.5	0		68.8	31.1	0.1	0		0	96.3	3.7	0		
Total %	0	0	0	0	0	0.5	0	33.5	0	34	33.9	15.3	0	0	49.2	0	16.1	0.6	0	16.7	

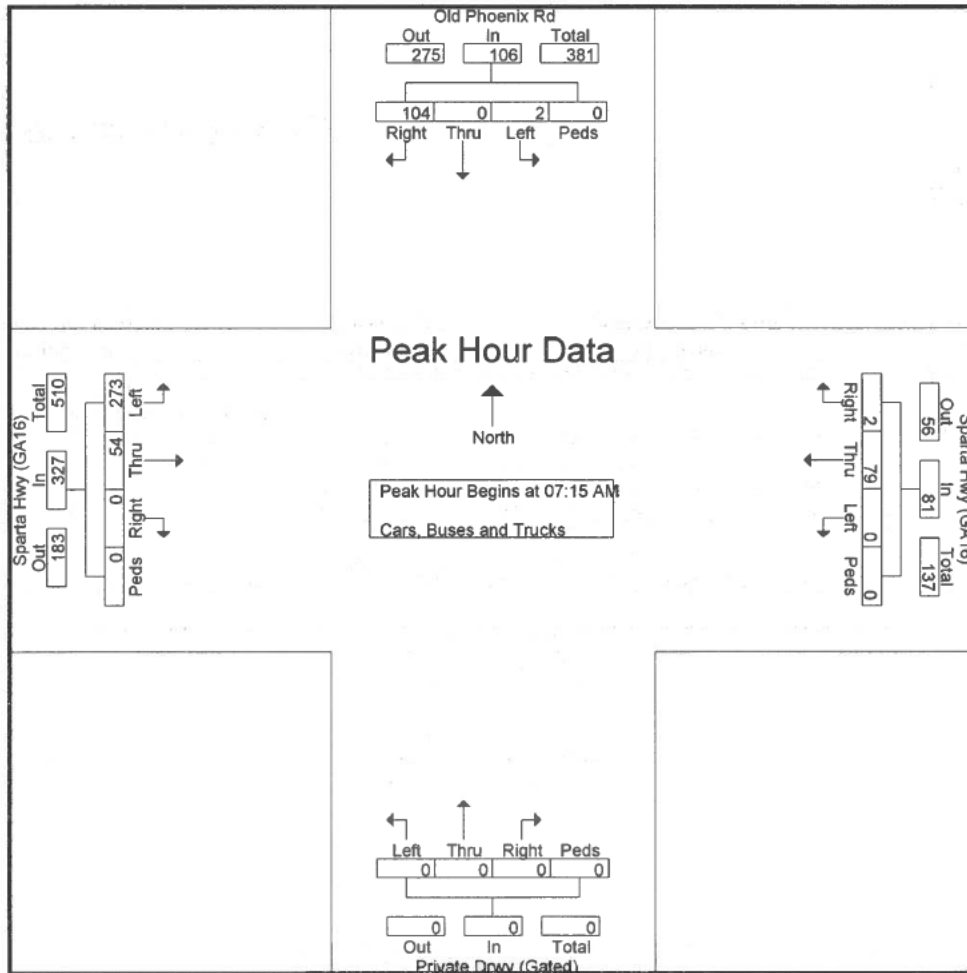
**Reliable Traffic Data Services**

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TMC Data  
 Old Phoenix Rd @ Sparta Hwy (GA16)  
 Eatonton, GA  
 7-9 AM | 4-6 PM

File Name : 45040003  
 Site Code : 45040003  
 Start Date : 6/15/2021  
 Page No : 2

Start Time	Private Drwy (Gated) Northbound					Old Phoenix Rd Southbound					Sparta Hwy (GA16) Eastbound					Sparta Hwy (GA16) Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	0	0	0	1	0	24	0	25	65	10	0	0	75	0	23	1	0	24	124
07:30 AM	0	0	0	0	0	0	0	28	0	28	66	18	0	0	84	0	19	1	0	20	132
07:45 AM	0	0	0	0	0	1	0	21	0	22	84	20	0	0	104	0	20	0	0	20	146
08:00 AM	0	0	0	0	0	0	0	31	0	31	58	6	0	0	64	0	17	0	0	17	112
Total Volume	0	0	0	0	0	2	0	104	0	106	273	54	0	0	327	0	79	2	0	81	514
% App. Total								98.1			83.5	16.5					97.5				
PHF	.000	.000	.000	.000	.000	.500	.000	.839	.000	.855	.813	.675	.000	.000	.786	.000	.859	.500	.000	.844	.880





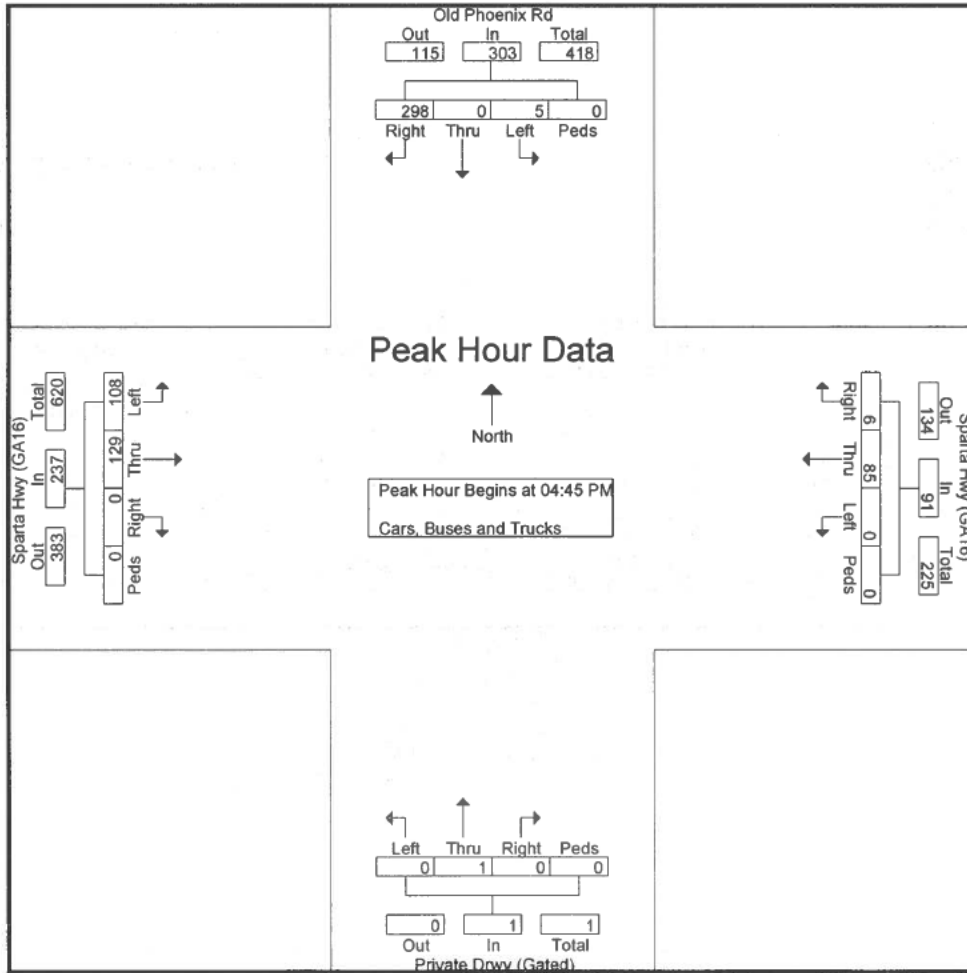
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TMC Data  
 Old Phoenix Rd @ Sparta Hwy (GA16)  
 Eatonton, GA  
 7-9 AM | 4-6 PM

File Name : 45040003  
 Site Code : 45040003  
 Start Date : 6/15/2021  
 Page No : 3

Start Time	Private Drwy (Gated) Northbound					Old Phoenix Rd Southbound					Sparta Hwy (GA16) Eastbound					Sparta Hwy (GA16) Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	2	0	64	0	66	23	37	0	0	60	0	23	1	0	24	150
05:00 PM	0	1	0	0	1	2	0	79	0	81	33	27	0	0	60	0	27	0	0	27	169
05:15 PM	0	0	0	0	0	0	0	86	0	86	29	34	0	0	63	0	15	2	0	17	166
05:30 PM	0	0	0	0	0	1	0	69	0	70	23	31	0	0	54	0	20	3	0	23	147
Total Volume	0	1	0	0	1	5	0	298	0	303	108	129	0	0	237	0	85	6	0	91	632
% App. Total								98.3			45.6	54.4					93.4				
PHF	.000	.250	.000	.000	.250	.625	.000	.866	.000	.881	.818	.872	.000	.000	.940	.000	.787	.500	.000	.843	.935



### Reliable Traffic Data Services

ADT Data

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Site Code: 45040101  
 Old Phoenix Rd south of Garrett Dr  
 Eatonton, GA

Start Time	15-Jun-21 Tue	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	38			0	32				
12:15		0	25			4	38				
12:30		0	31			1	40				
12:45		0	38	0	132	1	22	6	132	6	264
01:00		0	30			1	35				
01:15		0	41			1	26				
01:30		0	38			1	32				
01:45		0	37	0	146	0	37	3	130	3	276
02:00		0	29			1	42				
02:15		1	30			2	32				
02:30		0	32			0	36				
02:45		0	30	1	121	0	31	3	141	4	262
03:00		0	40			0	34				
03:15		1	31			0	54				
03:30		2	24			0	35				
03:45		3	45	6	140	0	57	0	180	6	320
04:00		0	21			1	42				
04:15		2	25			3	54				
04:30		1	25			1	65				
04:45		1	26	4	97	1	61	6	222	10	319
05:00		8	32			3	74				
05:15		12	32			5	89				
05:30		13	29			0	82				
05:45		22	28	55	121	3	60	11	305	66	426
06:00		22	22			4	43				
06:15		26	22			9	48				
06:30		38	30			9	31				
06:45		53	23	139	97	7	21	29	143	168	240
07:00		54	15			11	30				
07:15		51	14			27	26				
07:30		93	24			26	28				
07:45		80	8	278	61	21	13	85	97	363	158
08:00		65	10			35	14				
08:15		59	22			28	13				
08:30		75	16			30	19				
08:45		50	7	249	55	23	16	116	62	365	117
09:00		44	7			15	8				
09:15		40	7			31	13				
09:30		47	6			29	5				
09:45		40	9	171	29	30	16	105	42	276	71
10:00		36	9			25	8				
10:15		35	11			28	11				
10:30		32	9			34	11				
10:45		41	3	144	32	27	11	114	41	258	73
11:00		34	7			25	5				
11:15		34	2			36	10				
11:30		37	3			31	8				
11:45		30	1	135	13	29	6	121	29	256	42
Total		1182	1044			599	1524			1781	2568
Percent		53.1%	46.9%			28.2%	71.8%			41.0%	59.0%
Grand Total		1182	1044			599	1524			1781	2568
Percent		53.1%	46.9%			28.2%	71.8%			41.0%	59.0%

ADT

ADT 4,349

AADT 4,349

### Reliable Traffic Data Services

Tel: (770) 578-8158 | Fax: (770) 578-8159  
 Info@reliabletraffic.org | www.reliabletraffic.org

ADT Data

Site Code: 45040102  
 Sparta Hwy (GA16) east of Old Phoenix Rd  
 Eatonton, GA

Start Time	15-Jun-21 Tue	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	14			1	24				
12:15		1	18			0	15				
12:30		1	18			1	19				
12:45		0	19	2	69	0	9	2	67	4	136
01:00		1	16			0	14				
01:15		1	14			0	25				
01:30		1	28			0	16				
01:45		0	18	3	76	0	23	0	78	3	154
02:00		1	17			1	15				
02:15		0	19			0	19				
02:30		0	17			0	19				
02:45		0	26	1	79	0	17	1	70	2	149
03:00		0	19			2	28				
03:15		1	24			1	16				
03:30		1	17			1	15				
03:45		7	32	9	92	0	20	4	79	13	171
04:00		3	23			3	24				
04:15		1	31			2	25				
04:30		3	24			4	26				
04:45		0	35	7	113	10	24	19	99	26	212
05:00		2	32			5	25				
05:15		5	33			11	22				
05:30		6	39			16	25				
05:45		3	26	16	130	14	26	46	98	62	228
06:00		16	22			17	17				
06:15		6	16			24	15				
06:30		16	24			15	10				
06:45		9	9	47	71	26	12	82	54	129	125
07:00		9	17			25	20				
07:15		10	17			27	11				
07:30		19	15			24	11				
07:45		22	10	60	59	20	9	96	51	156	110
08:00		10	8			15	9				
08:15		12	15			19	9				
08:30		12	9			17	6				
08:45		17	7	51	39	20	4	71	28	122	67
09:00		18	8			18	3				
09:15		16	12			26	5				
09:30		17	8			10	5				
09:45		16	10	67	38	22	7	76	20	143	58
10:00		16	11			21	0				
10:15		14	6			18	7				
10:30		20	2			20	5				
10:45		15	6	65	25	17	1	76	13	141	38
11:00		22	6			9	2				
11:15		14	2			18	0				
11:30		18	3			24	3				
11:45		8	2	62	13	18	1	69	6	131	19
Total		390	804			542	663			932	1467
Percent		32.7%	67.3%			45.0%	55.0%			38.8%	61.2%
Grand Total		390	804			542	663			932	1467
Percent		32.7%	67.3%			45.0%	55.0%			38.8%	61.2%

ADT

ADT 2,399

AADT 2,399

Appendix B

Intersection Analysis Methodology

## Intersection Analysis Methodology

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board’s *Highway Capacity Manual*, 2016 edition (HCM 6). Synchro 10 software, which emulates the HCM 6 methodology, was used for all analyses. The following is an overview of the methodology employed for the analysis of signalized intersections and roundabouts and stop-sign controlled (unsignalized) intersections. Levels of service (LOS) are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay.

**Signalized Intersections and Roundabouts** – Level of service for a signalized intersection and a roundabout is defined in terms of control delay per vehicle. For signalized intersections and roundabouts, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections and roundabouts than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals/roundabouts, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections and roundabouts are shown in Table A.

**Table A – Level of Service Criteria for Signalized Intersections and Roundabouts**

Control Delay (s/veh)	LOS
≤ 10	A
> 10 and ≤ 20	B
> 20 and ≤ 35	C
> 35 and ≤ 55	D
> 55 and ≤ 80	E
> 80	F

Source: *Highway Capacity Manual 6*

**Unsignalized Intersections** – Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory, factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream. The level of service criteria for unsignalized intersections are presented in Table B.

**Table B – Level of Service Criteria for Unsignalized Intersections**

Control Delay (s/veh)	LOS
0 – 10	A
> 10 and ≤ 15	B
> 15 and ≤ 25	C
> 25 and ≤ 35	D
> 35 and ≤ 50	E
> 50	F

Source: *Highway Capacity Manual 6*

Appendix C

Existing Intersection Operational Analysis



Old Phoenix Road Subdivision  
 1: Old Phoenix Road & New Phoenix Road

existing a.m.

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+			+			+			+	
Traffic Vol, veh/h	5	18	8	2	17	78	6	284	1	19	100	2
Future Vol, veh/h	5	18	8	2	17	78	6	284	1	19	100	2
Peak Hour Factor	0.78	0.78	0.78	0.74	0.74	0.74	0.90	0.90	0.90	0.74	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	4	2
Mvmt Flow	6	23	10	3	23	105	7	316	1	26	135	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	8.6	10.7	9.1
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		2%	16%	2%
Vol Thru, %		98%	58%	18%
Vol Right, %		0%	26%	80%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		291	31	97
LT Vol		6	5	2
Through Vol		284	18	17
RT Vol		1	8	78
Lane Flow Rate		323	40	131
Geometry Grp		1	1	1
Degree of Util (X)		0.407	0.056	0.168
Departure Headway (Hd)		4.531	5.109	4.626
Convergence, Y/N		Yes	Yes	Yes
Cap		792	697	772
Service Time		2.571	3.169	2.676
HCM Lane V/C Ratio		0.408	0.057	0.17
HCM Control Delay		10.7	8.5	8.6
HCM Lane LOS		B	A	A
HCM 95th-tile Q		2	0.2	0.6

Old Phoenix Road Subdivision  
2: GA 16 & Old Phoenix Road

existing a.m.

**Intersection**

Int Delay, s/veh 6.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↗		↘	↗
Traffic Vol, veh/h	273	54	79	2	2	104
Future Vol, veh/h	273	54	79	2	2	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	320	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	79	84	84	86	86
Heavy Vehicles, %	4	19	19	4	4	4
Mvmt Flow	346	68	94	2	2	121

**Major/Minor**

	Major1	Major2	Minor2
Conflicting Flow All	96	0	855
Stage 1	-	-	95
Stage 2	-	-	760
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1485	-	326
Stage 1	-	-	924
Stage 2	-	-	458
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1485	-	250
Mov Cap-2 Maneuver	-	-	250
Stage 1	-	-	709
Stage 2	-	-	458

**Approach**

	EB	WB	SB
HCM Control Delay, s	6.8	0	9.5
HCM LOS			A

**Minor Lane/Major Mvmt**

	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1485	-	-	-	250	956
HCM Lane V/C Ratio	0.233	-	-	-	0.009	0.126
HCM Control Delay (s)	8.2	-	-	-	19.5	9.3
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.9	-	-	-	0	0.4



Old Phoenix Road Subdivision  
 3: Garrett Drive & New Phoenix Road

existing a.m.

**Intersection**

Int Delay, s/veh 0.9

**Movement** EBT EBR WBL WBT NBL NBR

Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	30	4	2	86	7	3
Future Vol, veh/h	30	4	2	86	7	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	79	79	63	63
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	7	3	109	11	5

**Major/Minor** Major1 Major2 Minor1

Conflicting Flow All	0	0	60	0	168	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	115	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1544	-	822	1014
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	910	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1544	-	820	1014
Mov Cap-2 Maneuver	-	-	-	-	820	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	908	-

**Approach** EB WB NB

HCM Control Delay, s	0	0.2	9.2
HCM LOS			A

**Minor Lane/Major Mvmt** NBLn1 EBT EBR WBL WBT

Capacity (veh/h)	870	-	-	1544	-
HCM Lane V/C Ratio	0.018	-	-	0.002	-
HCM Control Delay (s)	9.2	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Old Phoenix Road Subdivision  
 1: Old Phoenix Road & New Phoenix Road

existing p.m.

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	23	10	5	16	29	7	111	6	69	297	8
Future Vol, veh/h	6	23	10	5	16	29	7	111	6	69	297	8
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78	0.84	0.84	0.84	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	4	2
Mvmt Flow	8	31	13	6	21	37	8	132	7	83	358	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.6	8.9	12.8
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	15%	10%	18%
Vol Thru, %	90%	59%	32%	79%
Vol Right, %	5%	26%	58%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	124	39	50	374
LT Vol	7	6	5	69
Through Vol	111	23	16	297
RT Vol	6	10	29	8
Lane Flow Rate	148	52	64	451
Geometry Grp	1	1	1	1
Degree of Util (X)	0.193	0.076	0.09	0.553
Departure Headway (Hd)	4.696	5.252	5.029	4.42
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	762	679	709	816
Service Time	2.741	3.312	3.086	2.455
HCM Lane V/C Ratio	0.194	0.077	0.09	0.553
HCM Control Delay	8.9	8.7	8.6	12.8
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.7	0.2	0.3	3.4



Old Phoenix Road Subdivision  
2: GA 16 & Old Phoenix Road

existing p.m.

Intersection

Int Delay, s/veh 6.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	108	129	85	6	5	298
Future Vol, veh/h	108	129	85	6	5	298
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	320	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	84	84	88	88
Heavy Vehicles, %	4	19	19	4	4	4
Mvmt Flow	115	137	101	7	6	339

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	108	0	0 472 105
Stage 1	-	-	- 105 -
Stage 2	-	-	- 367 -
Critical Hdwy	4.14	-	- 6.44 6.24
Critical Hdwy Stg 1	-	-	- 5.44 -
Critical Hdwy Stg 2	-	-	- 5.44 -
Follow-up Hdwy	2.236	-	- 3.536 3.336
Pot Cap-1 Maneuver	1470	-	- 547 944
Stage 1	-	-	- 914 -
Stage 2	-	-	- 696 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1470	-	- 504 944
Mov Cap-2 Maneuver	-	-	- 504 -
Stage 1	-	-	- 843 -
Stage 2	-	-	- 696 -

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1470	-	-	-	504	944
HCM Lane V/C Ratio	0.078	-	-	-	0.011	0.359
HCM Control Delay (s)	7.7	-	-	-	12.2	10.9
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0	1.6

Old Phoenix Road Subdivision  
 3: Garrett Drive & New Phoenix Road

existing p.m.

**Intersection**

Int Delay, s/veh 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	97	4	4	45	6	4
Future Vol, veh/h	97	4	4	45	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	94	94	63	63
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	115	5	4	48	10	6

**Major/Minor**

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	120	0	171
Stage 1	-	-	-	-	115
Stage 2	-	-	-	-	56
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1468	-	819
Stage 1	-	-	-	-	910
Stage 2	-	-	-	-	967
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1468	-	817
Mov Cap-2 Maneuver	-	-	-	-	817
Stage 1	-	-	-	-	910
Stage 2	-	-	-	-	964

**Approach**

	EB	WB	NB
HCM Control Delay, s	0	0.6	9.3
HCM LOS			A

**Minor Lane/Major Mvmt**

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	861	-	-	1468	-
HCM Lane V/C Ratio	0.018	-	-	0.003	-
HCM Control Delay (s)	9.3	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Appendix D

No-Build Intersection Operational Analysis

Old Phoenix Road Subdivision  
 1: Old Phoenix Road & New Phoenix Road

no-build a.m.

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	19	9	2	19	86	9	293	1	22	103	2
Future Vol, veh/h	5	19	9	2	19	86	9	293	1	22	103	2
Peak Hour Factor	0.78	0.78	0.78	0.74	0.74	0.74	0.90	0.90	0.90	0.74	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	4	2
Mvmt Flow	6	24	12	3	26	116	10	326	1	30	139	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8.8	11.1	9.3
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	15%	2%	17%
Vol Thru, %	97%	58%	18%	81%
Vol Right, %	0%	27%	80%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	303	33	107	127
LT Vol	9	5	2	22
Through Vol	293	19	19	103
RT Vol	1	9	86	2
Lane Flow Rate	337	42	145	172
Geometry Grp	1	1	1	1
Degree of Util (X)	0.429	0.061	0.188	0.229
Departure Headway (Hd)	4.589	5.179	4.688	4.794
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	781	687	761	745
Service Time	2.636	3.249	2.746	2.848
HCM Lane V/C Ratio	0.431	0.061	0.191	0.231
HCM Control Delay	11.1	8.6	8.8	9.3
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.2	0.2	0.7	0.9

Old Phoenix Road Subdivision  
2: GA 16 & Old Phoenix Road

no-build a.m.

**Intersection**

Int Delay, s/veh 6.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↗		↘	↗
Traffic Vol, veh/h	275	54	79	3	4	111
Future Vol, veh/h	275	54	79	3	4	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	320	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	79	84	84	86	86
Heavy Vehicles, %	4	19	19	4	4	4
Mvmt Flow	348	68	94	4	5	129

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	98	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.236	-	-
Pot Cap-1 Maneuver	1483	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1483	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1483	-	-	-	248	955
HCM Lane V/C Ratio	0.235	-	-	-	0.019	0.135
HCM Control Delay (s)	8.2	-	-	-	19.8	9.4
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.9	-	-	-	0.1	0.5



Old Phoenix Road Subdivision  
 3: Garrett Drive & New Phoenix Road

no-build a.m.

**Intersection**

Int Delay, s/veh 1.6

**Movement** EBT EBR WBL WBT NBL NBR

Lane Configurations	↑	↑		↑	↑	
Traffic Vol, veh/h	30	8	3	86	17	6
Future Vol, veh/h	30	8	3	86	17	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	79	79	67	67
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	14	4	109	25	9

**Major/Minor** Major1 Major2 Minor1

Conflicting Flow All	0	0	67	0	170	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	117	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1535	-	820	1014
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1535	-	818	1014
Mov Cap-2 Maneuver	-	-	-	-	818	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	905	-

**Approach** EB WB NB

HCM Control Delay, s	0	0.2	9.4
HCM LOS			A

**Minor Lane/Major Mvmt** NBLn1 EBT EBR WBL WBT

Capacity (veh/h)	861	-	-	1535	-
HCM Lane V/C Ratio	0.04	-	-	0.002	-
HCM Control Delay (s)	9.4	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Old Phoenix Road Subdivision  
 1: Old Phoenix Road & New Phoenix Road

no-build p.m.

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	26	13	5	17	34	9	117	6	78	307	8
Future Vol, veh/h	6	26	13	5	17	34	9	117	6	78	307	8
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78	0.84	0.84	0.84	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	4	2
Mvmt Flow	8	35	17	6	22	44	11	139	7	94	370	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	8.8	9.1	13.8
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %		7%	13%	9%	20%
Vol Thru, %		89%	58%	30%	78%
Vol Right, %		5%	29%	61%	2%
Sign Control		Stop	Stop	Stop	Stop
Traffic Vol by Lane		132	45	56	393
LT Vol		9	6	5	78
Through Vol		117	26	17	307
RT Vol		6	13	34	8
Lane Flow Rate		157	60	72	473
Geometry Grp		1	1	1	1
Degree of Util (X)		0.209	0.089	0.102	0.59
Departure Headway (Hd)		4.78	5.326	5.108	4.482
Convergence, Y/N		Yes	Yes	Yes	Yes
Cap		746	668	696	805
Service Time		2.834	3.399	3.18	2.523
HCM Lane V/C Ratio		0.21	0.09	0.103	0.588
HCM Control Delay		9.1	8.9	8.8	13.8
HCM Lane LOS		A	A	A	B
HCM 95th-tile Q		0.8	0.3	0.3	3.9



Old Phoenix Road Subdivision  
2: GA 16 & Old Phoenix Road

no-build p.m.

**Intersection**

Int Delay, s/veh 6.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↗		↘	↗
Traffic Vol, veh/h	115	129	85	6	6	302
Future Vol, veh/h	115	129	85	6	6	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	320	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	84	84	88	88
Heavy Vehicles, %	4	19	19	4	4	4
Mvmt Flow	122	137	101	7	7	343

**Major/Minor**

	Major1	Major2	Minor2			
Conflicting Flow All	108	0	-	0	486	105
Stage 1	-	-	-	-	105	-
Stage 2	-	-	-	-	381	-
Critical Hdwy	4.14	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.236	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	1470	-	-	-	537	944
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	686	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1470	-	-	-	492	944
Mov Cap-2 Maneuver	-	-	-	-	492	-
Stage 1	-	-	-	-	838	-
Stage 2	-	-	-	-	686	-

**Approach**

	EB	WB	SB
HCM Control Delay, s	3.6	0	11
HCM LOS			B

**Minor Lane/Major Mvmt**

	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1470	-	-	-	492	944
HCM Lane V/C Ratio	0.083	-	-	-	0.014	0.364
HCM Control Delay (s)	7.7	-	-	-	12.4	11
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0	1.7



Old Phoenix Road Subdivision  
 3: Garrett Drive & New Phoenix Road

no-build p.m.

**Intersection**

Int Delay, s/veh 1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	97	16	8	45	12	6
Future Vol, veh/h	97	16	8	45	12	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	94	94	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	115	19	9	48	18	9

**Major/Minor**

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	134	0	181
Stage 1	-	-	-	-	115
Stage 2	-	-	-	-	66
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1451	-	808
Stage 1	-	-	-	-	910
Stage 2	-	-	-	-	957
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1451	-	803
Mov Cap-2 Maneuver	-	-	-	-	803
Stage 1	-	-	-	-	910
Stage 2	-	-	-	-	951

**Approach**

	EB	WB	NB
HCM Control Delay, s	0	1.1	9.4
HCM LOS			A

**Minor Lane/Major Mvmt**

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	843	-	-	1451	-
HCM Lane V/C Ratio	0.033	-	-	0.006	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Appendix E

Future Intersection Operational Analysis

Old Phoenix Road Subdivision  
 1: Old Phoenix Road & New Phoenix Road

future a.m.

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	19	10	2	19	86	11	310	1	22	108	2
Future Vol, veh/h	5	19	10	2	19	86	11	310	1	22	108	2
Peak Hour Factor	0.78	0.78	0.78	0.74	0.74	0.74	0.90	0.90	0.90	0.74	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	4	2
Mvmt Flow	6	24	13	3	26	116	12	344	1	30	146	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	9	11.5	9.4
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	15%	2%	17%
Vol Thru, %	96%	56%	18%	82%
Vol Right, %	0%	29%	80%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	322	34	107	132
LT Vol	11	5	2	22
Through Vol	310	19	19	108
RT Vol	1	10	86	2
Lane Flow Rate	358	44	145	178
Geometry Grp	1	1	1	1
Degree of Util (X)	0.458	0.063	0.191	0.239
Departure Headway (Hd)	4.605	5.235	4.756	4.824
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	780	678	749	740
Service Time	2.657	3.313	2.819	2.886
HCM Lane V/C Ratio	0.459	0.065	0.194	0.241
HCM Control Delay	11.5	8.7	9	9.4
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.4	0.2	0.7	0.9



Old Phoenix Road Subdivision  
2: GA 16 & Old Phoenix Road

future a.m.

Intersection						
Int Delay, s/veh	6.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	277	54	79	4	7	119
Future Vol, veh/h	277	54	79	4	7	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	320	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	79	84	84	86	86
Heavy Vehicles, %	4	19	19	4	4	4
Mvmt Flow	351	68	94	5	8	138

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	99	0	867
Stage 1	-	-	97
Stage 2	-	-	770
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1481	-	321
Stage 1	-	-	922
Stage 2	-	-	453
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1481	-	245
Mov Cap-2 Maneuver	-	-	245
Stage 1	-	-	703
Stage 2	-	-	453

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1481	-	-	-	245	954
HCM Lane V/C Ratio	0.237	-	-	-	0.033	0.145
HCM Control Delay (s)	8.2	-	-	-	20.2	9.4
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.9	-	-	-	0.1	0.5

Old Phoenix Road Subdivision  
 3: Garrett Drive & New Phoenix Road

future a.m.

**Intersection**

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	30	8	4	86	17	8
Future Vol, veh/h	30	8	4	86	17	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	79	79	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	14	5	109	24	11

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	67	0	172
Stage 1	-	-	-	-	53
Stage 2	-	-	-	-	119
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1535	-	818
Stage 1	-	-	-	-	970
Stage 2	-	-	-	-	906
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1535	-	816
Mov Cap-2 Maneuver	-	-	-	-	816
Stage 1	-	-	-	-	970
Stage 2	-	-	-	-	903

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	870	-	-	1535	-
HCM Lane V/C Ratio	0.041	-	-	0.003	-
HCM Control Delay (s)	9.3	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Old Phoenix Road Subdivision  
 4: Old Phoenix Road & project access

future a.m.

**Intersection**

Int Delay, s/veh 0.9

**Movement** WBL WBR NBT NBR SBL SBT

Lane Configurations	Y		↑	↑		↑
Traffic Vol, veh/h	11	19	300	3	6	119
Future Vol, veh/h	11	19	300	3	6	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	90	90	74	74
Heavy Vehicles, %	2	2	4	2	2	4
Mvmt Flow	14	24	333	3	8	161

**Major/Minor** Minor1 Major1 Major2

Conflicting Flow All	510	333	0	0	336	0
Stage 1	333	-	-	-	-	-
Stage 2	177	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	523	709	-	-	1223	-
Stage 1	726	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	519	709	-	-	1223	-
Mov Cap-2 Maneuver	519	-	-	-	-	-
Stage 1	726	-	-	-	-	-
Stage 2	848	-	-	-	-	-

**Approach** WB NB SB

HCM Control Delay, s	11.1	0	0.4
HCM LOS	B		

**Minor Lane/Major Mvmt** NBT NBRWBLn1 SBL SBT

Capacity (veh/h)	-	-	625	1223	-
HCM Lane V/C Ratio	-	-	0.06	0.007	-
HCM Control Delay (s)	-	-	11.1	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Old Phoenix Road Subdivision  
 1: Old Phoenix Road & New Phoenix Road

future p.m.

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	26	15	5	17	34	10	128	6	78	325	8
Future Vol, veh/h	6	26	15	5	17	34	10	128	6	78	325	8
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78	0.84	0.84	0.84	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	4	2
Mvmt Flow	8	35	20	6	22	44	12	152	7	94	392	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	8.9	9.3	14.7
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		7%	13%	9%
Vol Thru, %		89%	55%	30%
Vol Right, %		4%	32%	61%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		144	47	56
LT Vol		10	6	5
Through Vol		128	26	17
RT Vol		6	15	34
Lane Flow Rate		171	63	72
Geometry Grp		1	1	1
Degree of Util (X)		0.229	0.094	0.104
Departure Headway (Hd)		4.819	5.393	5.198
Convergence, Y/N		Yes	Yes	Yes
Cap		741	659	683
Service Time		2.88	3.471	3.275
HCM Lane V/C Ratio		0.231	0.096	0.105
HCM Control Delay		9.3	9	8.9
HCM Lane LOS		A	A	A
HCM 95th-tile Q		0.9	0.3	0.3

Old Phoenix Road Subdivision  
2: GA 16 & Old Phoenix Road

future p.m.

Intersection						
Int Delay, s/veh	6.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗		↖	↗
Traffic Vol, veh/h	124	129	85	12	8	307
Future Vol, veh/h	124	129	85	12	8	307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	320	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	84	84	88	88
Heavy Vehicles, %	4	19	19	4	4	4
Mvmt Flow	132	137	101	14	9	349

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	115	0	-	0	509 108
Stage 1	-	-	-	-	108 -
Stage 2	-	-	-	-	401 -
Critical Hdwy	4.14	-	-	-	6.44 6.24
Critical Hdwy Stg 1	-	-	-	-	5.44 -
Critical Hdwy Stg 2	-	-	-	-	5.44 -
Follow-up Hdwy	2.236	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1462	-	-	-	520 940
Stage 1	-	-	-	-	911 -
Stage 2	-	-	-	-	672 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1462	-	-	-	473 940
Mov Cap-2 Maneuver	-	-	-	-	473 -
Stage 1	-	-	-	-	829 -
Stage 2	-	-	-	-	672 -

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1462	-	-	-	473	940
HCM Lane V/C Ratio	0.09	-	-	-	0.019	0.371
HCM Control Delay (s)	7.7	-	-	-	12.8	11.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.1	1.7



Old Phoenix Road Subdivision  
 3: Garrett Drive & New Phoenix Road

future p.m.

**Intersection**

Int Delay, s/veh 1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	97	16	10	45	12	7
Future Vol, veh/h	97	16	10	45	12	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	94	94	67	67
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	115	19	11	48	18	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	134	0	185 115
Stage 1	-	-	-	-	115 -
Stage 2	-	-	-	-	70 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1451	-	804 937
Stage 1	-	-	-	-	910 -
Stage 2	-	-	-	-	953 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1451	-	798 937
Mov Cap-2 Maneuver	-	-	-	-	798 -
Stage 1	-	-	-	-	910 -
Stage 2	-	-	-	-	945 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	844	-	-	1451	-
HCM Lane V/C Ratio	0.034	-	-	0.007	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Old Phoenix Road Subdivision  
 4: Old Phoenix Road & project access

future p.m.

**Intersection**

Int Delay, s/veh 0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑	↑		↑
Traffic Vol, veh/h	7	12	130	13	20	310
Future Vol, veh/h	7	12	130	13	20	310
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	84	84	83	83
Heavy Vehicles, %	2	2	4	2	2	4
Mvmt Flow	10	17	155	15	24	373

**Major/Minor**

	Minor1	Major1	Major2			
Conflicting Flow All	576	155	0	0	170	0
Stage 1	155	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	479	891	-	-	1407	-
Stage 1	873	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	468	891	-	-	1407	-
Mov Cap-2 Maneuver	468	-	-	-	-	-
Stage 1	873	-	-	-	-	-
Stage 2	647	-	-	-	-	-

**Approach**

	WB	NB	SB
HCM Control Delay, s	10.6	0	0.5
HCM LOS	B		

**Minor Lane/Major Mvmt**

	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	668	1407
HCM Lane V/C Ratio	-	-	0.041	0.017
HCM Control Delay (s)	-	-	10.6	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1





**Watts & Browning  
Engineers, Inc.**

*Civil Engineering · Land Planning · Land Surveying*

**June 24, 2021** (revised 6/29/2021- open space)

**IMPACT ANALYSIS (IA)  
PUTNAM COUNTY PLANNING & DEVELOPMENT  
OLD PHOENIX TRACT**

- 1.a. The proposed use is consistent with the stated purpose of single-family residential development, effectively an additional phase to the adjoining development “Phoenix Crossing” Phases I and II.
- 1.b. The proposed use of the subject property is generally the same use and conditions of the adjoining “Phoenix Crossing” development approved and constructed a few years ago.
- 1.c. In my professional opinion the proposed use, identical to the adjacent development to the north. Said development has been quite the success and an additional phase intended to the south will likely benefit the “Phoenix Crossing” development. Likewise, the proposed development will have no adverse impact to the undeveloped property to the south and east, rather it will likely stimulate further like kind of a development which too will meet or exceed protection of streams, wetlands and stormwater management.
- 1.d. I believe the intent of the Comprehensive Plan would welcome such low to mid density developments as proposed and previously approved in the past, thus it should be accepted as compatible.
- 1.e. This vacant property could certainly remain in its current state; however, the current state does not depict the best and economical use of said property, thus the property currently as it effectively has no marketable use.

1.f. Based on recent developments adjacent and near this property a similar development as proposed will not have any excessive or burdensome use of public facilities or services or exceed the present or funded capabilities, included but not limited to streets, water or sewer utilities and police or fire protection. Rather, this proposed development will provide safe streets, setbacks and additional access to the adjacent community, creating open space, preservation of environmental resources. The streets will be sufficient to allow appropriate public safety (fire/police) access to new homeowners. All proposed infrastructure of streets, sanitary sewer, fire and domestic water, stormwater facilities and such will be funded solely by the developer. No city or county funds will be requested or needed.

1.g. In my professional opinion the proposed use is supported by the approval of similar developments nearby and adjacent. The proposed use is consistent with Comp Plan and precedence.

1.h. The proposed use as indicated on the zoning exhibits, traffic study, environmental study as well as my experience with the design and engineering of such developments are purposely conceived with a reasonable balance with the promotion of public health, safety, and a reasonable use of the property.

2. A Traffic Impact Study at Proposed Old Phoenix Road Residential Subdivision has been prepared by Marc R. Acampora, Traffic Engineering and provided with the entire zoning package.

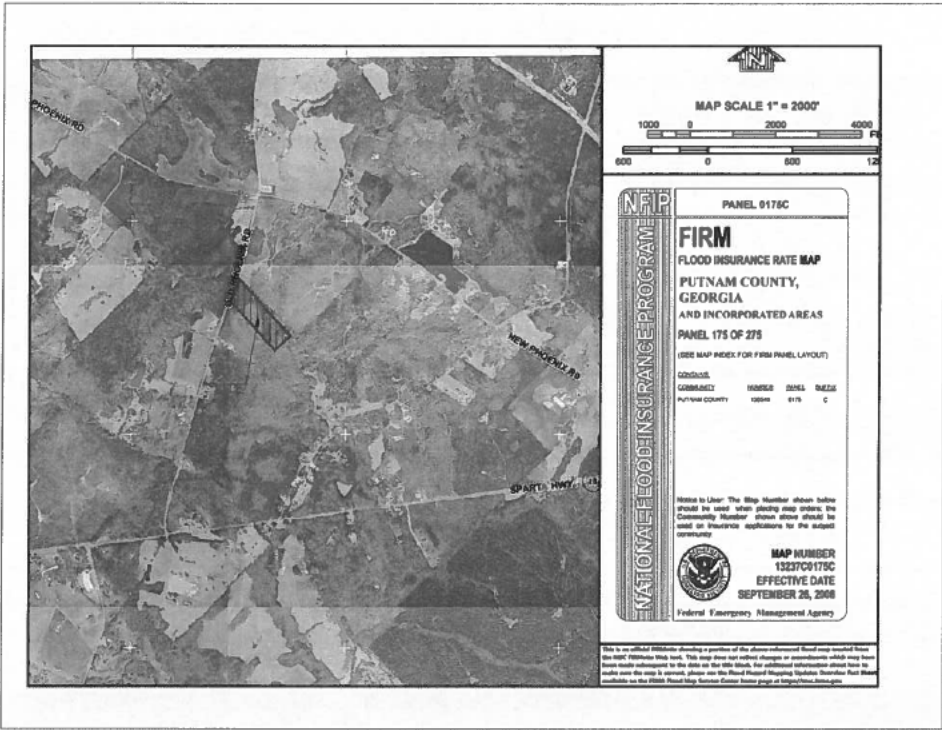
3. The number of proposed dwelling units is 53 total. We believe the development would likely reflect approximately 32% open space net of storm water management areas. In any case, a minimum of 20% will be provided.

4. The environmental study prepared by a consultant indicated that there is a small stream and limited wetland areas (sources indicated in study to per provided as part of the application docs) which will be prepared and corroborated with the US Army Corps of Engineers prior to any land disturbance. Further Storm Water Management and erosion control BMP will be designed and implemented such that there would be no adverse to the environment, natural or historic, of surrounding the area to be rezoned.

5. The proposed development will have streets wider than that required per Appendix D of the Fire Apparatus Access Roads document. On street parking will not be allowed and ample parking on each home site will allow free and easy access to fire routes and access to homes.
6. The topography of the property is gentle and quite conducive to such a development. The one stream identified by the environmental consultant indicates a small relatively gentle gradient and will be protected and preserved during development. The road crossing of said creek will be coordinated and separately permitted by the USACOE.
7. The land use to the north is the essentially built out development named Phoenix Crossing, zoned R-1R and parcels to the south are generally vacant and zoned AG-1

Daryl R. Cook, P.E.  
Watts & Browning Engineers, Inc.





**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0175C

**FIRM**  
FLOOD INSURANCE RATE MAP  
PUTNAM COUNTY,  
GEORGIA  
AND INCORPORATED AREAS  
PANEL 175 OF 275

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

COMMUNITY	NUMBER	DATE	DATE
PUTNAM COUNTY	1324	01/15	C

MAP NUMBER  
13237C0175C  
EFFECTIVE DATE  
SEPTEMBER 26, 2008

Federal Emergency Management Agency

WATTS & BROWNING ENGINEERS, INC. HAS EXAMINED THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP (FIRM) AND BY GRAPHICALLY PLOTTING THE LOCATION OF THE SUBJECT PROPERTY ONTO PUTNAM COUNTY FIRM MAP NUMBER 13237C0175C, DATED SEPTEMBER 26, 2008 THE REFERENCED PROPERTY IS LOCATED IN THE ZONE LISTED BELOW.

ZONE X (UNSHADED) AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

THE FLOOD LINE, IF SHOWN, IS APPROXIMATE AND THE ACTUAL LIMITS OF FLOOD LINE BASED ON PUBLISHED ELEVATIONS MAY EXTEND BEYOND THOSE SHOWN HEREON.



**OWNER/APPLICANT:**

SDI ATLANTA, LLC  
110 VILLAGE TRAIL, SUITE 215  
WOODSTOCK, GA 30188  
PHONE (404) 557-8309

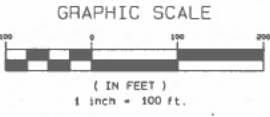
**ENGINEER:**

WATTS & BROWNING ENGINEERS, INC.  
1349 OLD 41 HWY NW, SUITE #225  
MARIETTA, GA 30060  
PHONE: (678) 324-6192  
FAX: (770) 694-6870  
CONTACT: DARYL COOK

**REFERENCE MATERIAL**

1. SURVEY PLAT OF PROPERTY OF FRANK MADDOX EST. LOCATED IN GEORGIA G.M.D. 308, PUTNAM COUNTY, GEORGIA. PREPARED BY ROBERT HARWELL, R.L.S. NO. 1663, DATED NOVEMBER 15 1998, REVISED ON OCTOBER 16, 2002.
2. WETLANDS & CREEK DELINEATION PROVIDED BY AN AQUATIC RESOURCES FINDINGS REPORT BY CORBLU ECOLOGY GROUP, DATED JUNE 14, 2021.

DEVELOPMENT DATA	
TOTAL SITE AREA	± 29.5 AC
OPEN SPACE REQUIRED	5.9 AC (20%)
OPEN SPACE PROVIDED (NET STORMWATER MANAGEMENT AREA)	± 9.3 AC (32%)
LOTS:	53
DENSITY:	1.8 UNITS/AC
EXISTING ZONING	AG-1
PROPOSED ZONING	R-PUD
SETBACKS (MINIMUM)	
FRONT-	15'
SIDE-	10'
REAR-	20'



CONCEPT PLAN / REZONING EXHIBIT  
FOR  
OLD PHOENIX ROAD TRACT  
G.M.D. 308  
PUTNAM COUNTY, GEORGIA

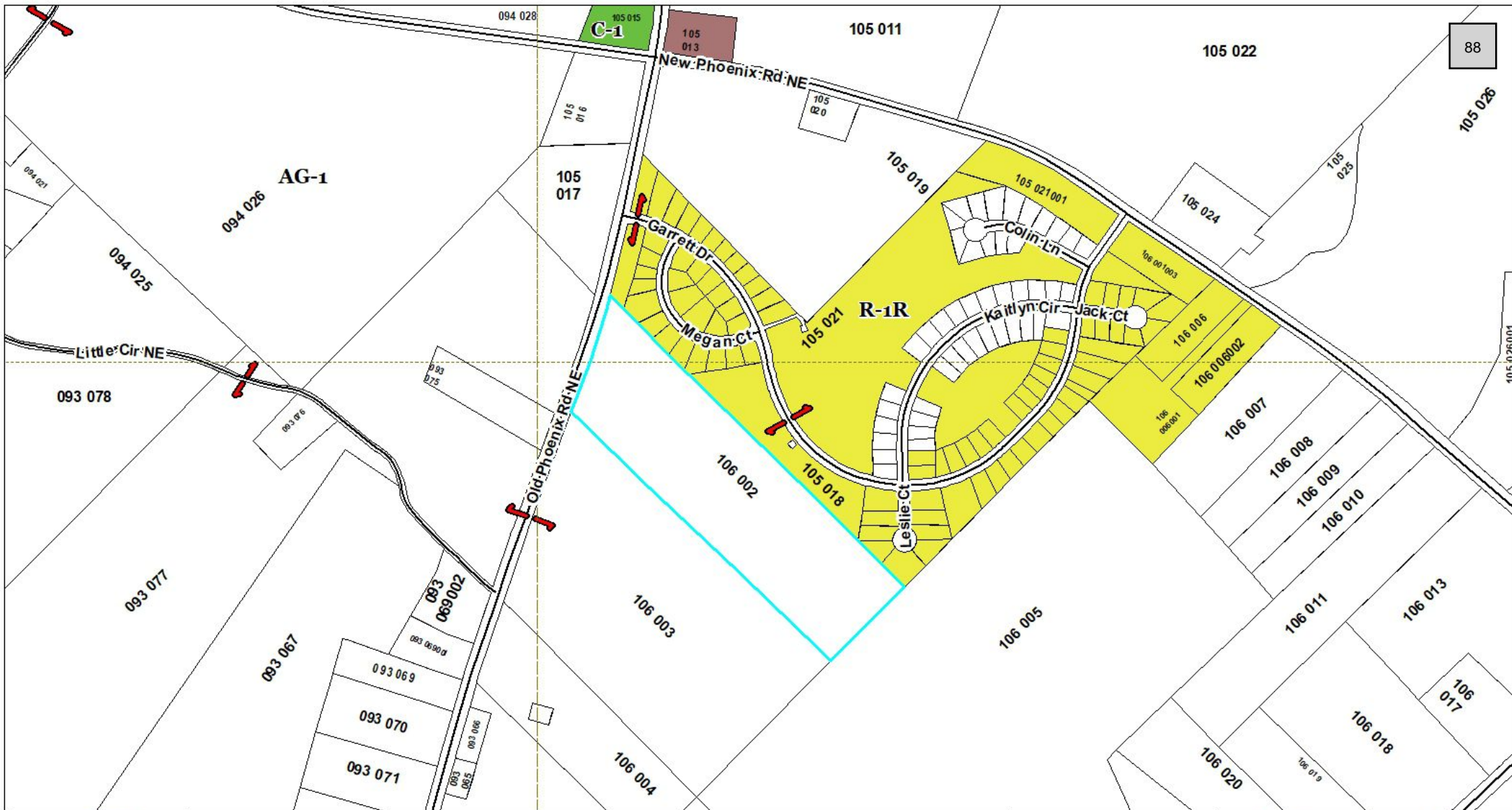


NO.	DATE	BY	DESCRIPTION
1.	06/15/21	JAT	REVISE LOTS & ADD WETLANDS.
2.	06/23/21	JAT	ADD 15' BUFFERS.
3.	06/29/21	JAT	ADD OPEN SPACE CALCULATIONS.

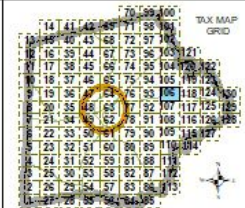
**WATTS & BROWNING ENGINEERS, INC.**  
CIVIL ENGINEERS & LAND SURVEYORS  
1349 OLD 41 HWY NW, SUITE #225  
MARIETTA, GEORGIA 30060  
PHONE: (678) 324-6192  
FAX: (770) 694-6870  
WWW.WBENGR.COM  
LSF000429 - PEF000714

SCALE:	1" = 100'
DESIGNED BY:	DRC
DRAWN BY:	JJT
CHECKED BY:	DRC
INITIAL ISSUE DATE:	05/25/2021
JOB NUMBER:	210408

SHEET NUMBER:  
1



88



### GEOGRAPHIC FEATURE LEGEND

Eatonton Limits	Overlay District	AG-2	C-2 CITY	IND-2 CITY	R - 1 CITY	RM-2
County Boundary	No Code	C-1	I-M	MHP	R - 2 CITY	RM-3
Roads	AG-1	C-1 CITY	IND-1 CITY	R - 3 CITY	R-2	VILLAGE
Parcels	AG-1 CITY	C-2	IND-2	R - 4 CITY	RM-1	
Parcel Hooks			PUBLIC CITY			

**MGR**  
Middle Georgia Regional Commission  
175 Emery Hwy  
Suite C  
Macon, Georgia 31217  
(478) 751-6160  
Web:  
[www.middlegeorgia.org](http://www.middlegeorgia.org)

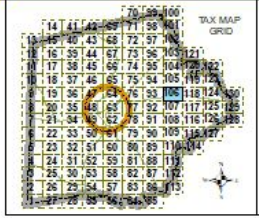
PUTNAM COUNTY, GEORGIA  
ZONING MAPS

W  
N  
E  
S

# MAP 106

MAP SCALE: 1" = 500'    SCALE RATIO: 1:5,000    DATE: JULY 2021





**GEOGRAPHIC FEATURE LEGEND**

Eatonton Limits	Agriculture/Forestry	Park/Recreation/Conservation	Residential
County Boundary	Commercial	Public/Institutional	Transportation/Communication/Utilities
Roads	Industrial	Undeveloped/Vacant	
Parcels			
Parcel_Hooks			
	Mixed Use		

**LMGRC**  
Middle Georgia Regional Commission  
175 Emery Hwy  
Suite C  
Macon, Georgia 31217  
(478) 751-6160  
Web:  
[www.middlegeorgiaarc.org](http://www.middlegeorgiaarc.org)

PUTNAM COUNTY, GEORGIA  
FUTURE LAND USE MAPS

**MAP 106**

MAP SCALE: 1" = 500'  
SCALE RATIO: 1:6,000  
DATE: JULY 2021

**File Attachments for Item:**

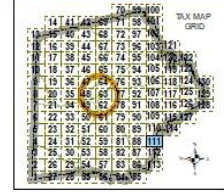
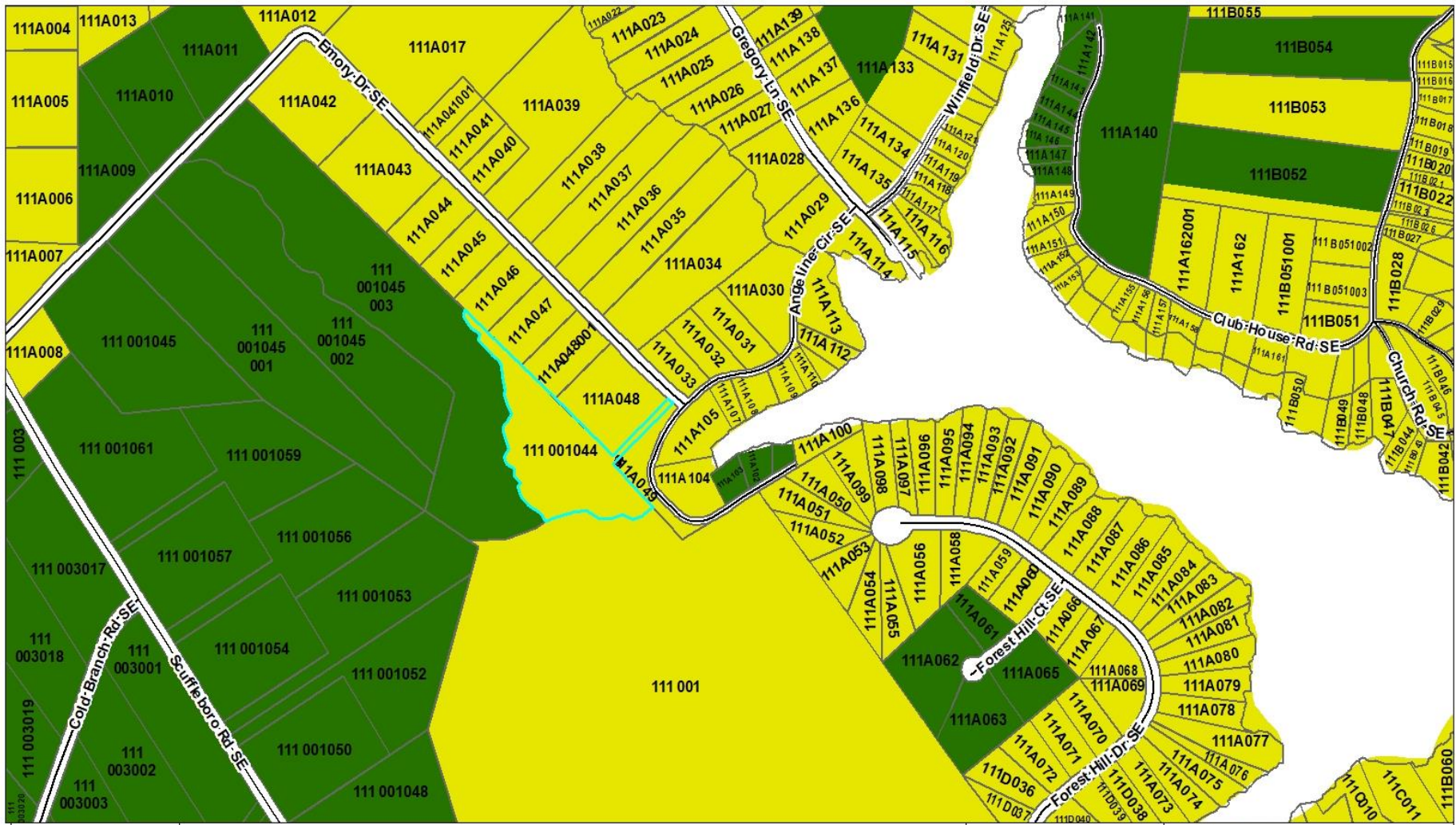
7. Request by Duane Gentes to rezone 5.40 acres on Emory Drive from R-1 to R-2 [Map 111, Parcel 001044, District 4] (staff-P&D)



**Request by Duane Gentes to rezone 5.40 acres on Emory Drive from R-1 to R-2. [Map 111, Parcel 001044, District 4].**

**PLANNING & DEVELOPMENT-LISA JACKSON STAFF RECOMMENDATION:**

The applicant is requesting to rezone 5.40 acres from R-1 to R-2. He plans to combine this lot with the adjacent R-2 property he owns, identified as Map 111, Parcel 049. To combine the parcels, they must be the same zoning status. The surrounding lots on this street are all zoned R-2 with an R-1 neighborhood directly behind them. The proposed use is consistent with the allowed uses, as listed in Sec. 66-84-Uses allowed of the R-2 zoning district. This rezoning to R-2 will not adversely impact the use of public facilities or services. The Future Land Use Concept plan lists the property as residential. Additionally, the proposed use will not adversely the existing use, value, or useability of adjacent or nearby properties.



**GEOGRAPHIC FEATURE LEGEND**

Eatonton Limits	Agriculture/Forestry	Mixed Use	Residential
County Boundary	Commercial	Park/Recreation/Conservation	Transportation/Communication/Utilities
Roads	Industrial	Public/Institutional	Undeveloped/Vacant
Parcels			
Parcel_Hooks			

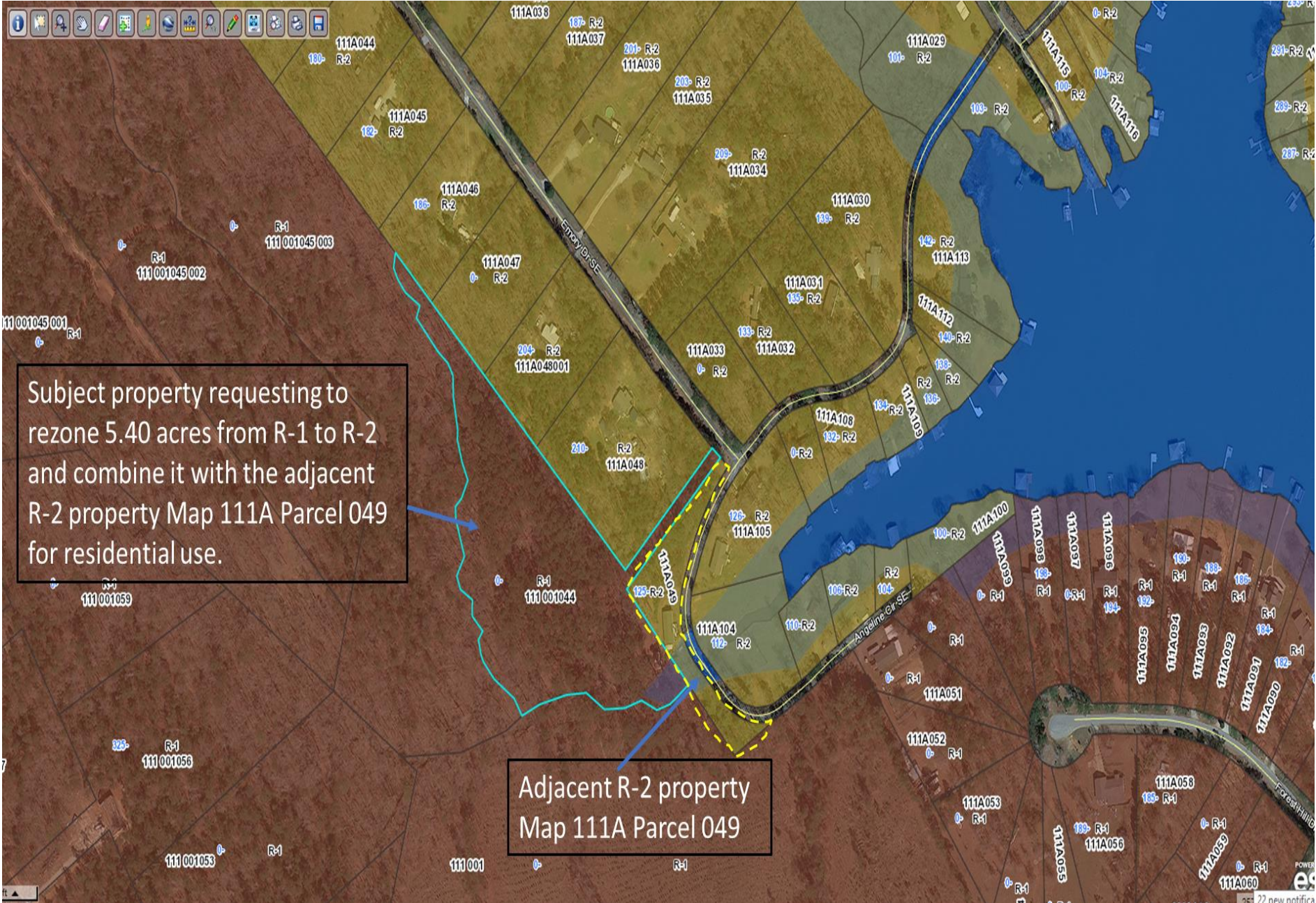
**MGRC**  
Middle Georgia Regional Commission  
175 Emory Hwy  
Suite C  
Macon, Georgia 31217  
(478) 751-6100  
Web: [www.middlegeorgia.org](http://www.middlegeorgia.org)

PUTNAM COUNTY, GEORGIA  
FUTURE LAND USE MAPS

# MAP 111

MAP SCALE: 1" = 400'    SCALE RATIO: 14,800    DATE: JULY 2021





**Staff recommendation is for approval to rezone 5.40 acres from R-1 to R-2 on Emory Drive [Map 111, Parcel 001044, District 4].**

**PLANNING & ZONING COMMISSION RECOMMENDATION:**

*The Planning & Zoning Commission's recommendation is for approval to rezone 5.40 acres from R-1 to R-2 on Emory Drive [Map 111, Parcel 001044, District 4].*

**PLANNING & ZONING COMMISSION MINUTES:**

The Putnam County Planning & Zoning Commission conducted a public hearing on Thursday, August 5, 2021 at 6:30 PM in the Putnam County Administration Building, 117 Putnam Drive, Room 203, Eatonton, Georgia.

**Present: Martha Farley, Maurice Hill, Jr., Tim Pierson, John Mitchell**

**Staff Present: Lisa Jackson, Courtney Andrews and Kenteria Williams**

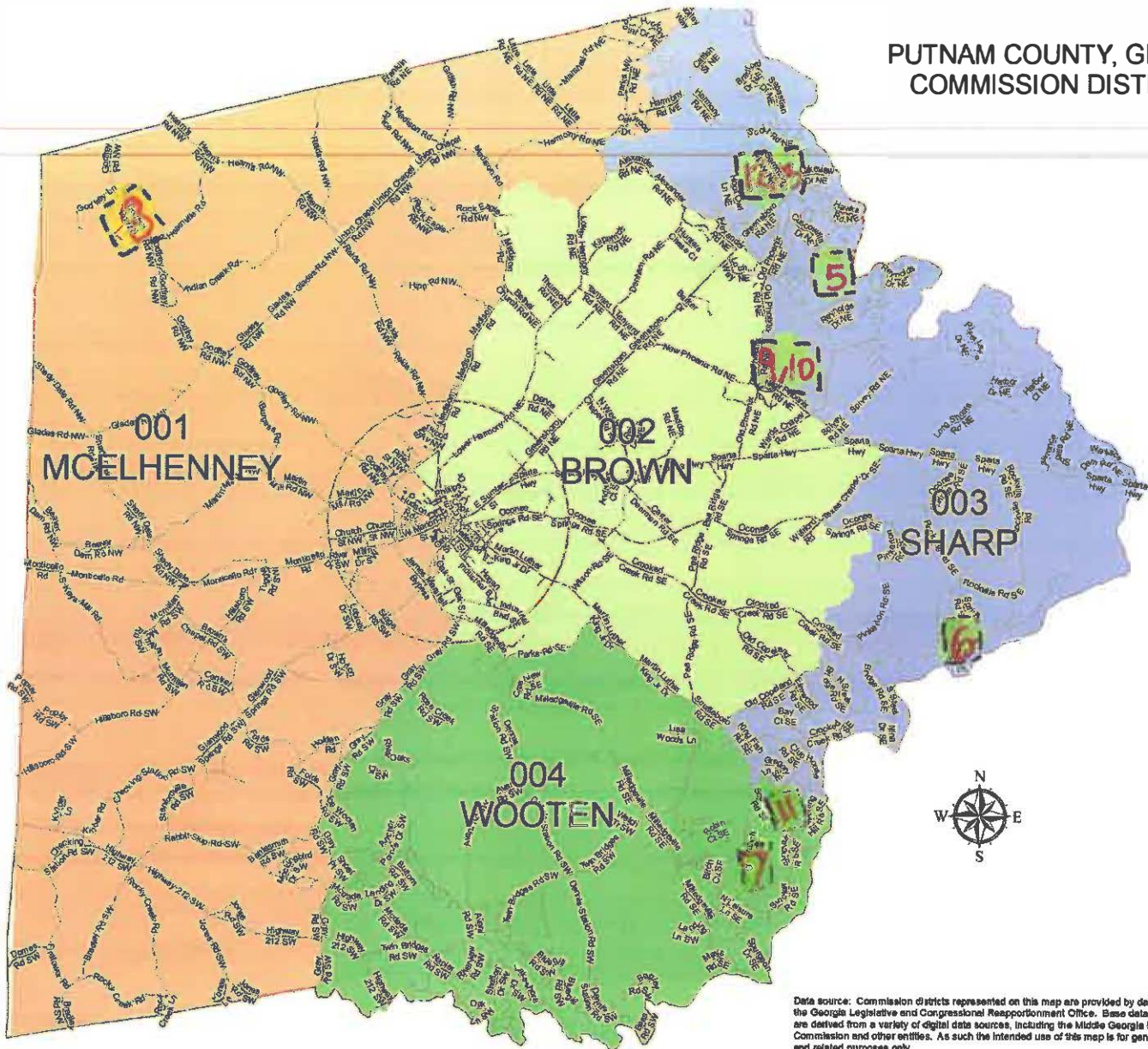
Request by **Duane Gentes** to rezone 5.40 acres on Emory Drive from R-1 to R-2. **[Map 111, Parcel 001044, District 4]. \* Mr. Duane Gentes** represented this request. He stated that he owns two pieces of property, and he would like to join them together. He would like to rezone the 5.40 acres to R-2. He added that he wanted to place a garage on the property, but he couldn't because the 5.40-acre lot didn't have a primary residence. It will be the same zoning as the property where his home is located. No one spoke in opposition of this request.

**Staff recommendation is for approval to rezone 5.40 acres from R-1 to R-2 on Emory Drive [Map 111, Parcel 001044, District 4].**

Motion to approve the request by **Duane Gentes** to rezone 5.40 acres on Emory Drive from R-1 to R-2 made by **Member Mitchell** and seconded by **Member Hill**.

Voting Yea: **Vice-Chairman Pierson, Member Hill, Member Farley, Member Mitchell**





MAP SCALE: 1" = 5,897.26' SCALE RATIO: 1:88,387.34 DATE: JANUARY 2021

5. Request by **Wallace Gerald Wright** for a side yard setback variance at 149 Collis Marina Road. Presently zoned R-1 [Map 104B, Parcel 013, District 3].
6. Request by **Thomas & Gwen Ralston** for a rear yard setback variance at 189 S. Spring Road. Presently zoned R-2 [Map 115C, Parcel 019, District 3].
7. Request by **Thomas W Gardner** for a side and rear yard setback variance at 348A Cold Branch Road. Presently zoned R-2 [Map 112C, Parcel 009, District 4].
8. Request by **Mt. Pleasant Baptist Church** for a side yard setback variance at 1628 Godfrey Road NW. Presently zoned AG. [Map 016, Parcel 015, District 1].
9. Request by **SDH Atlanta LLC, Agent for Maddox Family Partnership LLLP** for a side yard setback variance on Old Phoenix Road. Presently zoned AG. [Map 106, Parcel 002, District 2].
10. Request by **SDH Atlanta LLC, agent for Maddox Family Partnership LLLP** to rezone 29.54 on Old Phoenix Road from AG to R-PUD. [Map 106, Parcel 002, District 2].\*
11. Request by **Duane Gentes** to rezone 5.40 acres on Emory Drive from R-1 to R-2. [Map 111, Parcel 001044, District 4].\*
12. Request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 66.56 acres at 916 Harmony Road from AG to C-PUD. [Map 103, Parcel 001001, District 3].\*
13. Request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 5 acres at 916 Harmony Road Parcel A from AG to C-PUD. [Map 103, Parcel 001, District 3].\*



# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ www.putnamcountyga.us

## APPLICATION FOR REZONING

REZONING

APPLICATION NO. PLAN 2021-01334 DATE: 6/24/21

MAP 111 PARCEL 001044 ZONING DISTRICT R1

1. Owner Name: Duane A. Gentes

2. Applicant Name (If different from above): N/A

3. Mailing Address: 125 Angelina Ln Eatonton GA 31024

4. Email Address: \_\_\_\_\_

5. Phone: (home) \_\_\_\_\_ (office) \_\_\_\_\_ (cell) [REDACTED]

6. The location of the subject property, including street number, if any: EMORY DR

7. The area of land proposed to be rezoned (stated in square feet if less than one acre): 5,40

8. The proposed zoning district desired: R-2

9. The purpose of this rezoning is (Attach Letter of Intent)  
To put my property in one lot. I own both  
lots & both

10. Present use of property: R1 Desired use of property: R2

11. Existing zoning district classification of the property and adjacent properties:  
Existing: \_\_\_\_\_  
North: R2 South: R1 East: R2 West: R1

12. Copy of warranty deed for proof of ownership and if not owned by applicant, please attach a signed and notarized letter of agency from each property owner for all property sought to be rezoned.

13. Legal description and recorded plat of the property to be rezoned.

14. The Comprehensive Plan Future Land Use Map category in which the property is located. (If more than one category applies, the areas in each category are to be illustrated on the concept plan. See concept plan insert.): \_\_\_\_\_

15. A detailed description of existing land uses: RAW LAND

16. Source of domestic water supply: well \_\_\_\_\_, community water , or private provider \_\_\_\_\_.  
If source is not an existing system, please provide a letter from provider.

2021 JUN 24  
*AG*



# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ www.putnamcountyga.us

- 17. Provision for sanitary sewage disposal: septic system  or sewer . If sewer, please provide name of company providing same, or, if new development, provide a letter from sewer provider.
- 18. Complete attachment of Disclosure of Campaign Contributions Form by the applicant and/or the applicant's attorney as required by the Georgia Conflict of Interest in Zoning Act (O.C.G.A. 36-67A).
- 19. The application designation, date of application and action taken on all prior applications filed for rezoning for all or part of the subject property. (Please attach on separate sheet.)
- 20. Proof that property taxes for the parcel(s) in question have been paid.
- 21. Concept plan.
  - If the application is for less than 25 single-family residential lots, a concept plan need not be submitted. (See attachment.)
  - A concept plan may be required for commercial development at director's discretion
- 22. Impact analysis.
  - If the application is for less than 25 single-family residential lots, an impact analysis need not be submitted. (See attachment.)
  - An Impact analysis (including a traffic study) is required when rezoning from residential zoned or used property to commercial or industrial districts.

THE ABOVE STATEMENTS AND ACCOMPANYING MATERIALS ARE COMPLETE AND ACCURATE. APPLICANT HEREBY GRANTS PERMISSION FOR PLANNING AND DEVELOPMENT PERSONNEL OR ANY LEGAL REPRESENTATIVE OF PUTNAM COUNTY TO ENTER UPON AND INSPECT THE PROPERTY FOR ALL PURPOSES ALLOWED AND REQUIRED BY THE PUTNAM COUNTY CODE OF ORDINANCES.

Doree A. Bent 6-24-21  
Signature (Property Owner) (Date)

Doree A. Bent 6-24-21  
Signature (Applicant) (Date)

Dorothy Evans  
Notary Public

Dorothy Evans  
Notary Public

**Office Use**

Paid: \$ 27500 (cash) \_\_\_\_\_ (check) 3141 (credit card) \_\_\_\_\_  
 Receipt No. \_\_\_\_\_ Date Paid: 6-24-21  
 Date Application Received: \_\_\_\_\_  
 Reviewed for completeness by: \_\_\_\_\_  
 Date of BOC hearing: \_\_\_\_\_ Date submitted to newspaper: \_\_\_\_\_  
 Date sign posted on property: \_\_\_\_\_ Picture attached: yes \_\_\_\_\_ no \_\_\_\_\_

REC'D 2021 JUN 24  
REC'D 2021 JUN 24  
DE



06-24-2021

My name is Duane Gentes, I own the property at 000 Emory Dr. Map 111 Parcel 001044. I would like to rezone it from R1 to R2 so that I can combine it to the adjacent property which I own Map 111A Parcel 049.

Thanks



Duane Gentes

RCMD 2021 JUN 24





DOC# 004995  
FILED IN OFFICE  
11/03/2009 03:38 PM  
BK:684 PG:681-682  
SHEILA H. PERRY  
CLERK OF SUPERIOR  
COURT  
Putnam Co Clerk of Court  
*Sheila H. Perry*

After recording, please return to:  
Dorothy J. Adams, Esq.  
ADAMS & FORD, LLP  
108 West Marion Street  
Eatonton, Georgia 31024  
706.485.2003  
dja@adamsfordlaw.com

SPACE ABOVE THIS LINE RESERVED FOR USE OF CLERK

REAL ESTATE TRANSFER TAX  
PAID: \$9.00  
PT# 117-2009-001365

**WARRANTY DEED**

State of Georgia, County of Putnam

**THIS INDENTURE**, made this **23<sup>RD</sup>** day of **October, 2009**, between **SHIRLEY TURNER, F/K/A SHIRLEY WANDA NOGALES AND SHIRLEY LEE NOGALES**, of Gwinnett County, Georgia, as party of the first part, hereinafter called Grantor, and **DUANE GENTES**, as party of the second part, hereinafter called Grantee, (the words "Grantor" and "Grantee" to include their respective heirs, successors, and assigns where the context requires or permits).

**WITNESSETH:** Grantor, for and in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration, in hand paid at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, has granted, bargained, sold, aliened, conveyed, and confirmed, and by these presents does hereby grant, bargain, sell, alien, convey, and confirm unto the said Grantee, the following described property, to-wit:

[See Exhibit "A" attached hereto]


**TO HAVE AND TO HOLD** the said lot, tract, or parcel of land, with all and singular the rights, members, and appurtenances thereof, to the same being, belonging, or in anywise appertaining, to the only proper use, benefit, and behoof of the said Grantee forever in **FEE SIMPLE**.

**AND THE SAID** Grantor will warrant and forever defend the right and title to the above-described property unto the said Grantee against the claims of all persons whomsoever.

**IN WITNESS WHEREOF**, the Grantor has signed and sealed this deed, the day and year first above written.

*Shirley Turner* [seal]  
**SHIRLEY TURNER**

Signed, sealed, and delivered in the presence of:

*[Signature]*  
Ordinary Witness  
*[Signature]*  
Notary Public  


*[Handwritten initials]*

EXHIBIT "A"

All that tract or parcel of land, together with any improvements located thereon, situate, lying, and being in the 313<sup>th</sup> GMD, Putnam County, Georgia, known and designated as 1.158 acres as shown on that certain property survey prepared by Marshall Company, dated August 20, 1987 and recorded in Plat Book 14, Page 134, Clerk's Office, Putnam Superior Court, said plat and the record thereof incorporated herein and made a part hereof by reference thereto.

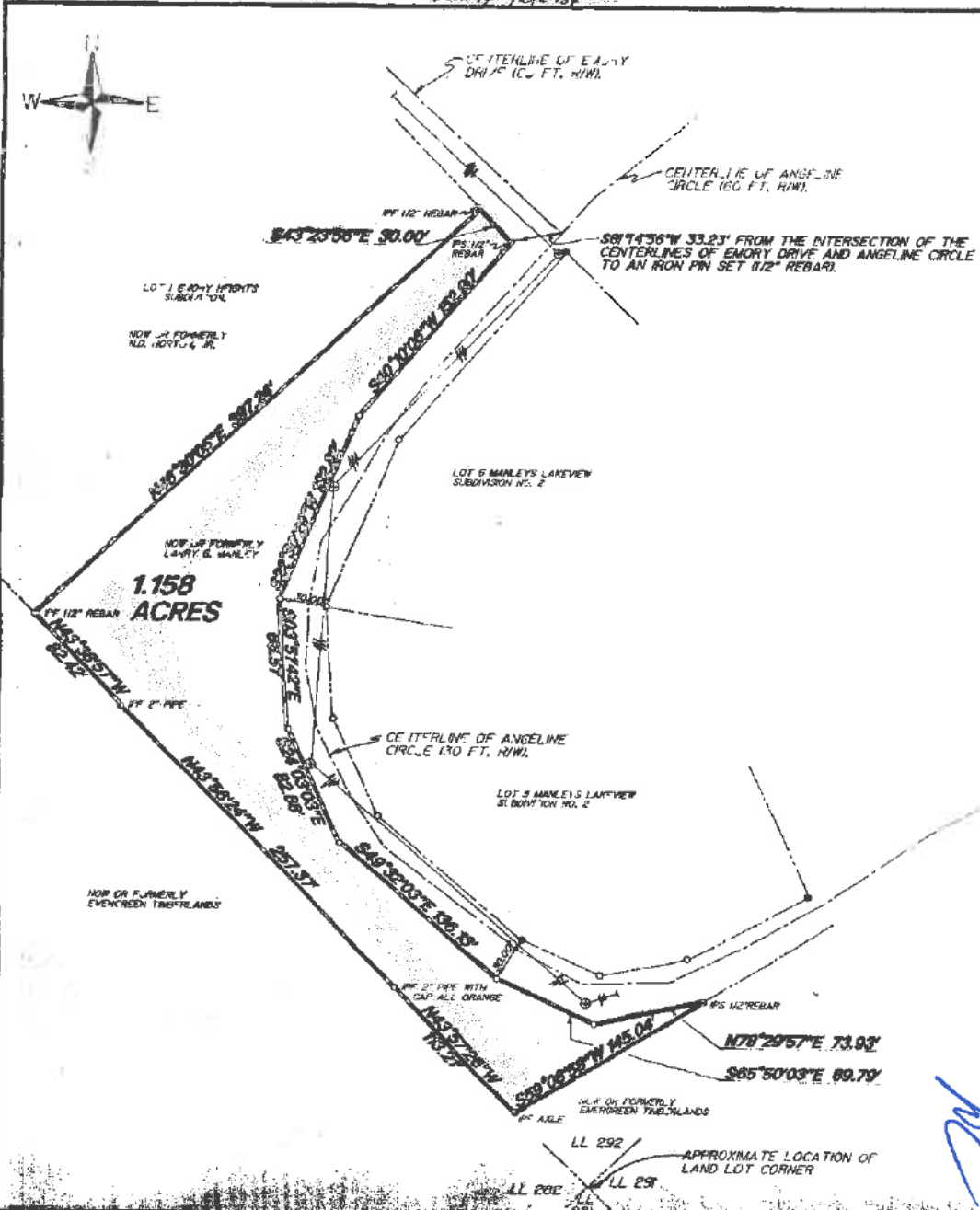
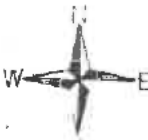
This is the same property as that described in that certain warranty deed recorded in Deed Book 7-C, Page 304, aforesaid records; this conveyance includes the interest in the access area shown on plat at Plat Book 12, Page 79 as set out in that warranty deed (.06 share per acre owned), and this property and conveyance is subject to the protective covenants set out in said deed.

611 1027021 JEM/SLH



August 28, 1987

Book 14, Page 134



1. THE DISTANCE OF ONE FOOT IN 424.70 FEET AND AN ANGULAR ERROR OF 9.0" PER ANGLE POINT, AND WAS ADJUSTED USING THE COMPASS RULE. FIELD DATA WAS OBTAINED USING A TOPCON GTS-2S ORGANIC TOTAL STATION.

2. THE EXTERIOR BOUNDARY SHOWN ON THIS PLAT HAS BEEN COMPUTED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 202.25 FEET.

3. THIS PLAT BASED ON MAGNETIC NORTH AS DETERMINED BY FIELD OBSERVATIONS ON 17 AUGUST 1987. BEARINGS SHOWN ON THIS PLAT WERE COMPUTED FROM ANGLES TURNED.

4. THE PUBLIC RECORDS REFERENCED HEREIN REFLECT ONLY THOSE RECORDS NECESSARY TO ESTABLISH THE BOUNDARIES SHOWN HEREON AND REFERENCE TO THE SAME DOES NOT CONSTITUTE AND IS NOT INTENDED TO CONSTITUTE A TITLE SEARCH OR TITLE OPINION.

- REFERENCES:**
1. THE BARNWELL TRACT, G.S. # 1275 PLAT BOOK 12 PAGE 731.
  2. COMPANY TO EVERGREEN TIMBERLANDS CORP. DEED BOOK 58 PAGE 1-520L.
  3. PLAT OF PROPERTY OF INTERNATIONAL PAPER COMPANY DATED 7 JUNE 1969, BY JAMES E. SMITH R.L.S. # 1995 PLAT BOOK 10 PAGE 148L.
  4. PLAT OF PROPERTY OF OWENS-ILLINOIS GLASS CO. DATED 12 JULY 1959, BY W.A. LAUGHRELL, G.A.L.S. # 896 PLAT BOOK 4 PAGE 263L.
  5. DEED OF CORRECTION DATED 18 SEPTEMBER 1986, LARRY G. MANLEY TO MR. NORTON, JR. DEED BOOK 64 PAGE 499L.
  6. PLAT OF PROPERTY OF LARRY G. MANLEY, DATED 1 MAY 1986, BY ALLEN CHELSEY BRITTON, G.A. R.L.S. # 188 PLAT BOOK 12 PAGE 102L.
  7. PLAT OF EMORY HEIGHTS SUBDIVISION DATED 8 MAY 1986, BY ALLEN CHELSEY BRITTON, G.A. R.L.S. # 188 PLAT BOOK 12 PAGE 73L.

- LEGEND:**
- U.S. MAIL PIN SET
  - PROPERTY CORNER
  - POWER POLE
  - OVERHEAD ELECTRIC SERVICE
  - PROPERTY LINE
  - CENTERLINE OF ROAD
  - ALIQUOTS

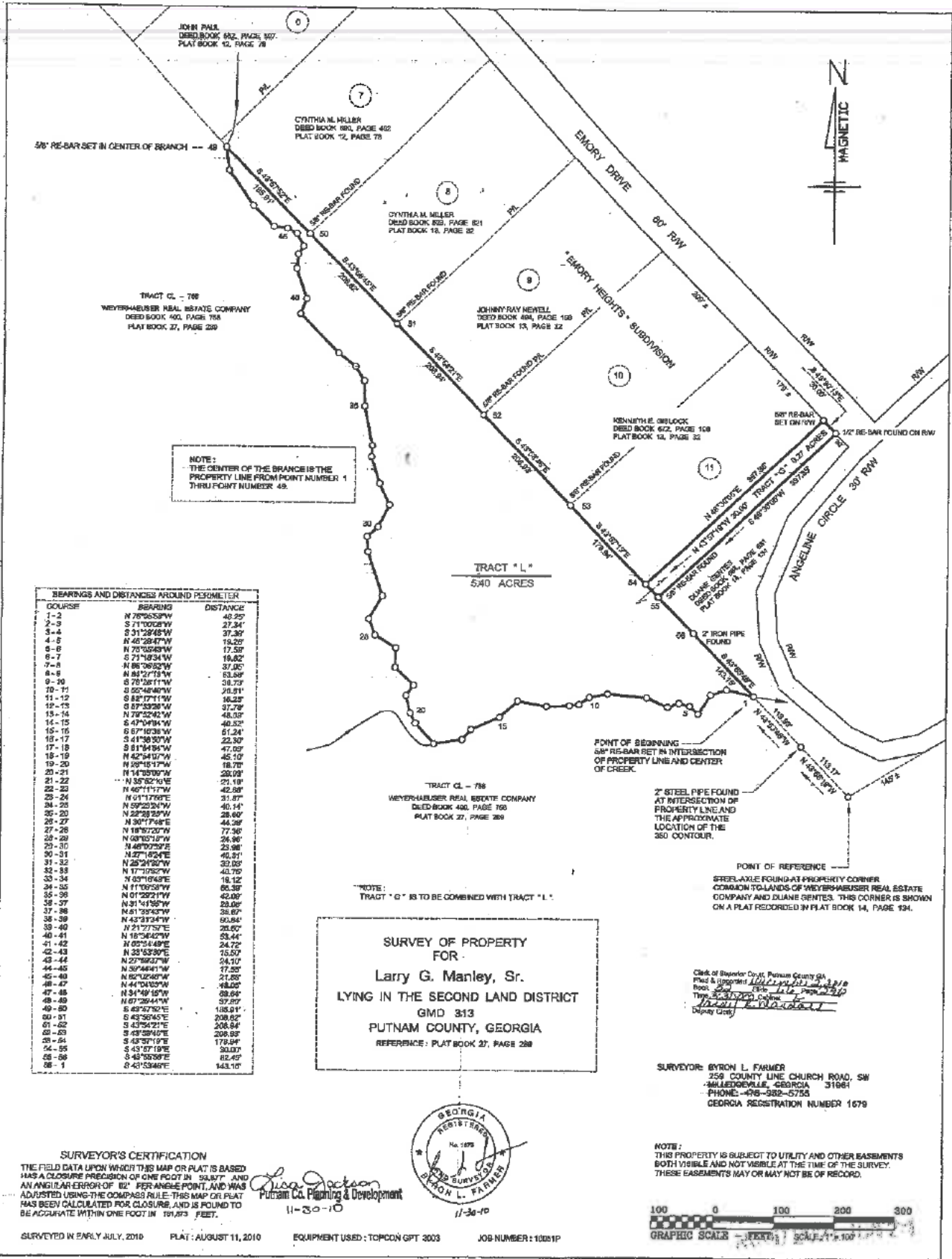
SURVEY FOR  
**VEDA L. MANLEY**

GMD 313 LAND LOT 292, 2ND DISTRICT  
PUTNAM COUNTY, GEORGIA  
DATE 20 AUGUST 1987 SCALE 1"=50'



SURVEY BY  
**MARSHALL CO.**  
ENGINEERS, SURVEYORS  
MANAGERS, CONSTRUCTORS  
P.O. BOX 27 (404) 455-7285  
EASTONTON, GEORGIA 31024

*Handwritten signature in blue ink.*







# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ www.putnamcountyga.us

## DISCLOSURE OF APPLICANT'S CAMPAIGN CONTRIBUTION

The *Putnam County Code of Ordinances*, Section 66-167(c) states as follows:

“When any applicant or his attorney for a rezoning action has made, within two years immediately preceding the filing of that applicant’s application for the rezoning action, campaign contributions aggregating \$250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

a. The name and official position of the local government official to whom the campaign contribution was made; and

b. The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution. The disclosures required by this section shall be filed within ten days after an application for the rezoning action is first filed.”

1. Name: DUANE A Gentes

2. Address: POA

3. Have you given contributions that aggregated \$250.00 or more within two years immediately preceding the filing of the attached application to a candidate that will hear the proposed application?  Yes  No If-yes, who did you make the contributions to? : \_\_\_\_\_

Signature of Applicant: *Duane Gentes*

Date: 6/24/21

60372091311124  
*DE*

2020 008245 ACCT # 7903R LT 10 ANGELINE CIR  
 GENTES DUANE 111A 049

DESCRIPTION	AMOUNT	DESCRIPTION	AMOUNT	TOTAL TAX DUE
FAIR MARKET VALUE	21,886	GROSS ASSESSMENT	8,754	212.09
COUNTY EXEMPTION		NET COUNTY ASSESSMENT	8,754	INTEREST
SCHOOL EXEMPTION		NET SCHOOL ASSESSMENT	8,754	
COUNTY SCHOOL SPEC SERV.	70.71 138.07 3.31			COLLECTION COST
				FIFA CHARGE
DUE 12/01/20	212.09	PAID IN FULL	10/21/2020	PENALTY
				TOTAL
				212.09

00000 01 T GENTES DUANE  
 O

1421 BROMLEY DR  
 SNELLVILLE GA 30078

FROM PAMELA K. LANCASTER  
 PUTNAM COUNTY TAX COMM  
 100 S JEFFERSON ST # 207  
 EATONTON GA 31024

DUE IN FULL BY 12/01/2020

2020 008245 ACCT # 7903R LT 10 ANGELINE CIR  
 GENTES DUANE 111A 049

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DUE IN FULL BY 12/01/2020

2020 008246 ACCT # 19696R TRACT L & TRACT G  
 GENTES DUANE 111 001 044

DESCRIPTION	AMOUNT	DESCRIPTION	AMOUNT	TOTAL TAX DUE
FAIR MARKET VALUE	37,537	GROSS ASSESSMENT	15,015	363.79
COUNTY EXEMPTION		NET COUNTY ASSESSMENT	15,015	INTEREST
SCHOOL EXEMPTION		NET SCHOOL ASSESSMENT	15,015	1.00
COUNTY SCHOOL	121.29 236.82			COLLECTION COST
SPEC SERV	5.68			FIFA CHARGE
DUE 12/01/20	363.79	PAID IN FULL	01/11/2021	PENALTY
				TOTAL
				364.79

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FROM PAMELA K. LANCASTER  
 PUTNAM COUNTY TAX COMM  
 100 S JEFFERSON ST # 207  
 EATONTON GA 31024

DUE IN FULL BY 12/01/2020

RCVD 2021 JUN 24

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SPEC SERV	5.68			FIFA CHARGE
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				364.79

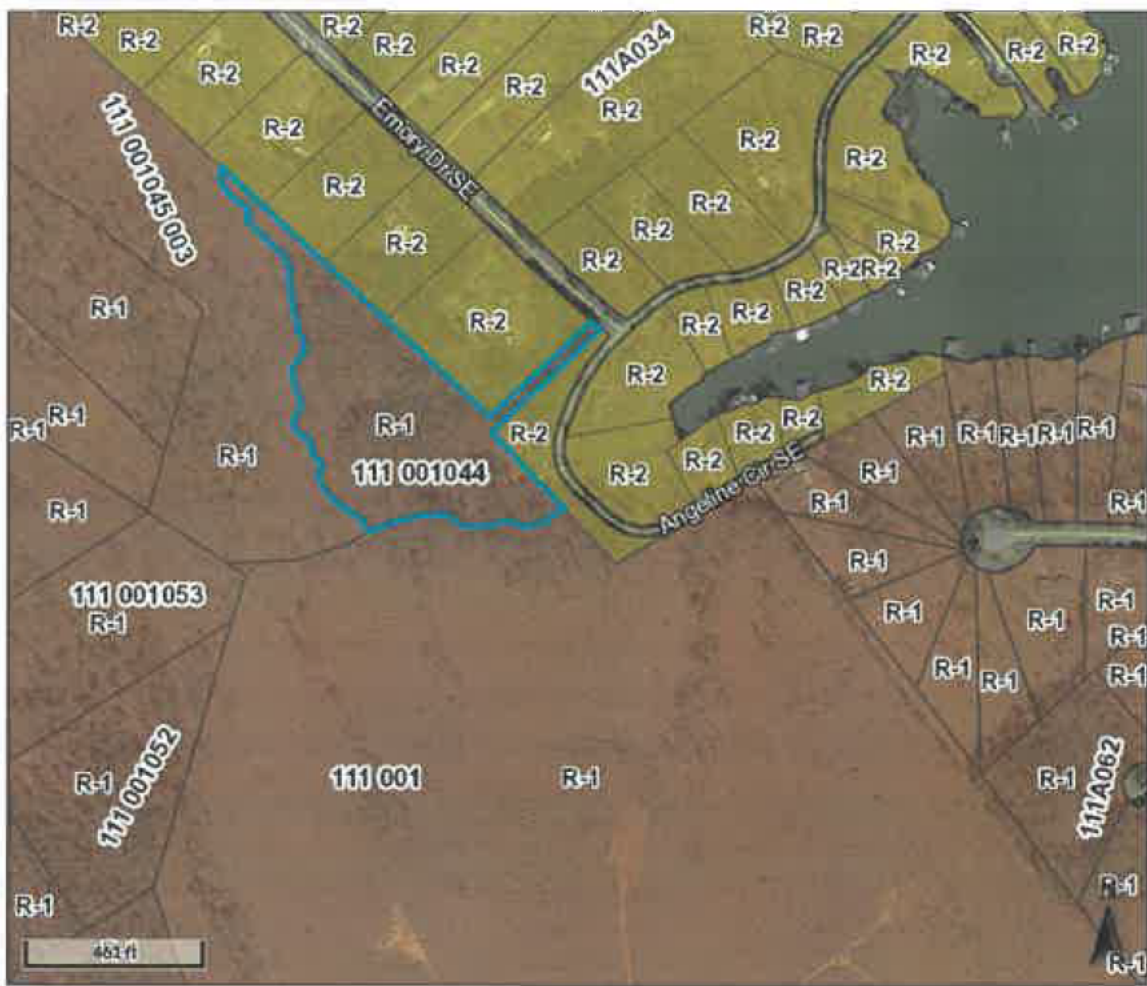
00000 01 T GENTES DUANE  
 O

1421 BROMELY DR  
 SNELLVILLE GA 30078

FROM PAMELA K. LANCASTER  
 PUTNAM COUNTY TAX COMM  
 100 S JEFFERSON ST # 207  
 EATONTON GA 31024

DUE IN FULL BY 12/01/2020





**Overview**



**Legend**

- City Limit
- Parcels
- Parcel Numbers**
- Zoning**
- A-1 CITY
- A-1 and AG-1
- AG-1
- AG-2
- C-1
- C-1 CITY
- C-2
- C-2 CITY
- C-2 PUD
- I-1 CITY
- I-2 CITY
- IM
- MHP
- PUBLIC
- PUBLIC CITY
- R-1 CITY
- R-2 CITY
- R-3 CITY
- R-4 CITY
- R-1
- R-1R
- R-2
- RM-1
- RM-2
- RM-3
- VILLAGE
- Roads**

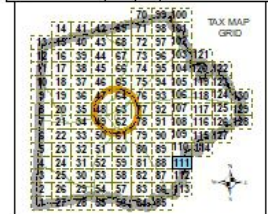
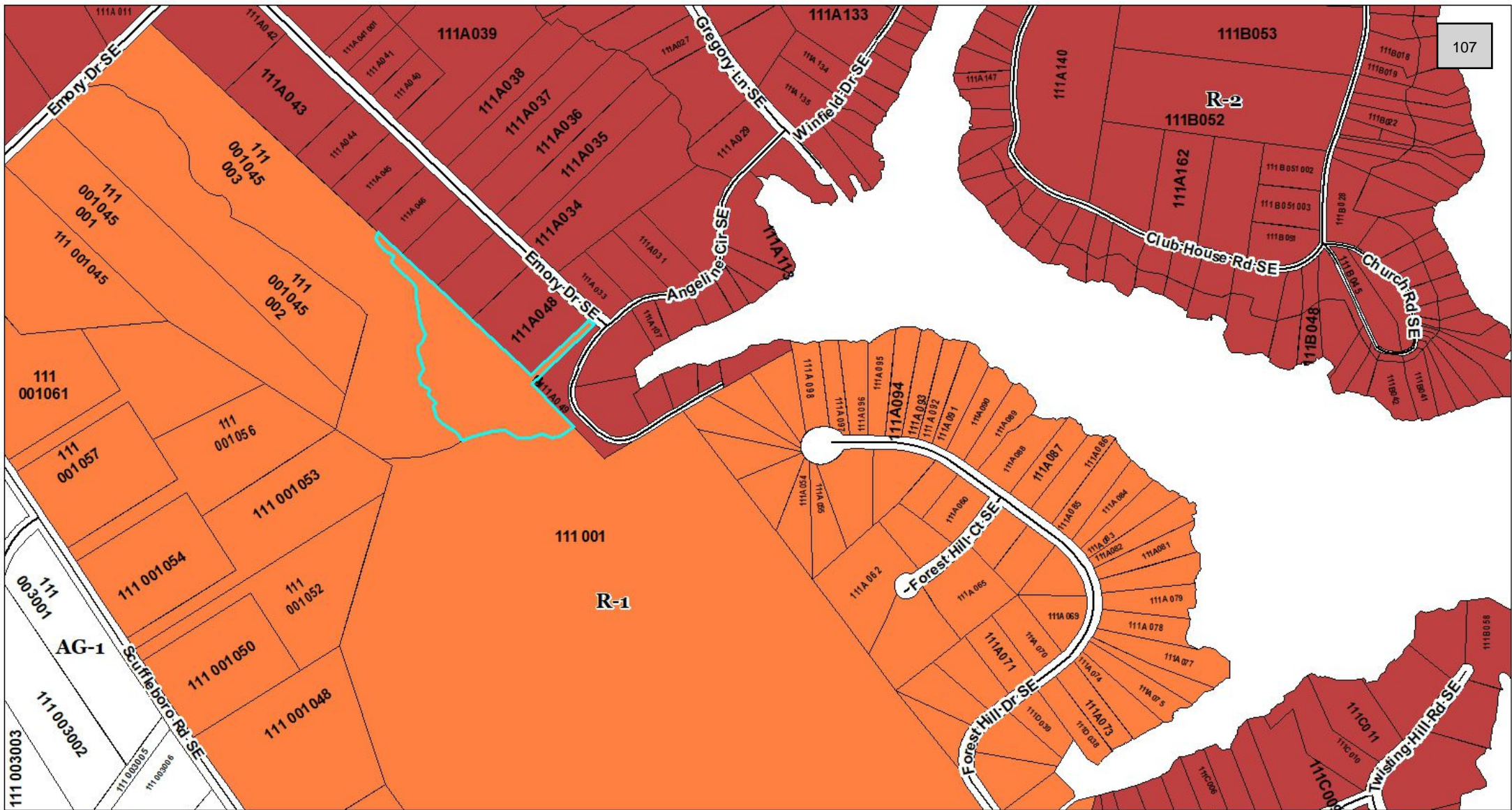
RCUD 2021

Parcel ID 111001044  
 Real Key / Acct 19696  
 Class Code Residential  
 Taxing District PUTNAM  
 Acres 5.67

Owner GENTES DUANE  
 1421 BROMELY DR  
 SNELLVILLE, GA 30078  
 Physical Address EMORY DR  
 Land Value \$37537  
 Improvement Value  
 Accessory Value

Last 2 Sales			
Date	Price	Reason	Qual
7/28/2011	\$20000	FM	Q
12/10/2010	\$5000	NF	U





**GEOGRAPHIC FEATURE LEGEND**

Eatonton Limits	Overlay District	AG-2	C-2 CITY	IND-2 CITY	R - 1 CITY	RM-2
County Boundary	No Code	C-1	I-M	MHP	R - 2 CITY	RM-3
Roads	AG-1	C-1 CITY	IND-1 CITY	PUBLIC	R - 3 CITY	VILLAGE
Parcels	AG-1 CITY	C-2	IND-2	PUBLIC CITY	R - 4 CITY	RM-1
Parcel_Hooks						

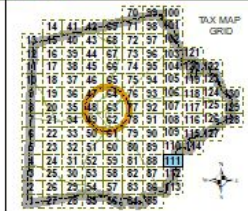
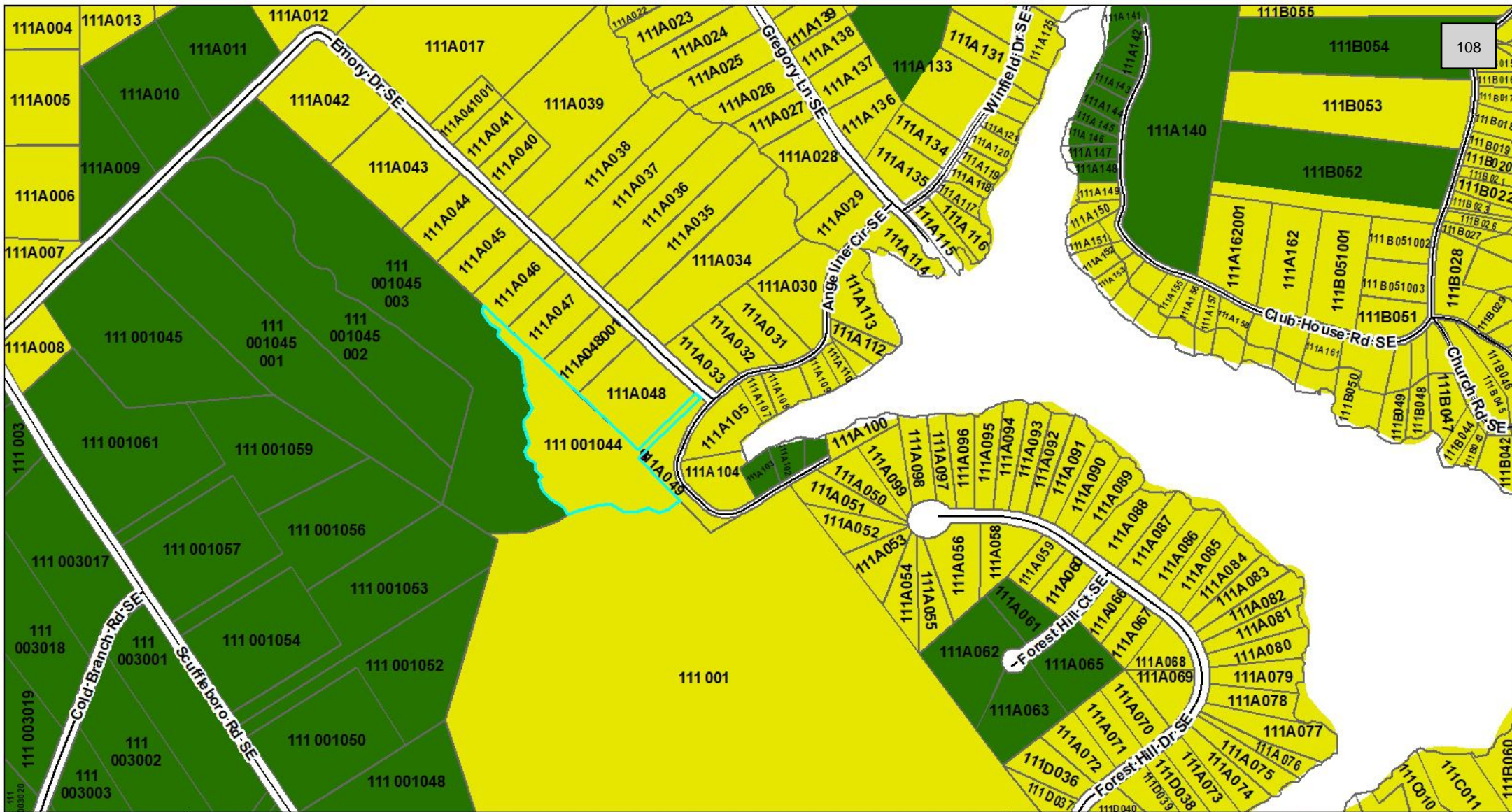
**LYMGR**  
Middle Georgia Regional Commission  
175 Emery Hwy  
Suite C  
Macon, Georgia 31217  
(478) 751-6160  
Web:  
[www.middlegeorgia.org](http://www.middlegeorgia.org)

PUTNAM COUNTY, GEORGIA  
ZONING MAPS

**MAP 111**

MAP SCALE: 1" = 400' SCALE RATIO: 1:4,800 DATE: JULY 2021





**GEOGRAPHIC FEATURE LEGEND**

- Eatonton Limits
- Agriculture/Forestry
- Park/Recreation/Conservation
- Public/Institutional
- County Boundary
- Commercial
- Industrial
- Mixed Use
- Public/Institutional
- Residential
- Transportation/Communication/Utilities
- Undeveloped/Vacant
- Parcels
- Parcel Hooks



Middle Georgia Regional Commission  
 175 Emory Hwy  
 Suite C  
 Macon, Georgia 31217  
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**PUTNAM COUNTY, GEORGIA  
 FUTURE LAND USE MAPS**



**MAP 111**

**File Attachments for Item:**

8. Request by James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox to rezone 66.56 acres at 916 Harmony Road from AG to C-PUD [Map 103, Parcel 001001, District 3] (staff-P&D)

**Request by James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox to rezone 66.56 acres at 916 Harmony Road from AG-C-PUD. [Map 103, Parcel 001001, District 3].**

**PLANNING & DEVELOPMENT-LISA JACKSON STAFF RECOMMENDATION:**

The applicant is requesting to rezone 66.56 acres from AG to C-PUD. If approved, the subject property will be combined with the interior property (Map 103, Parcel 001). The purpose of rezoning this property is to develop a new, mixed-use development to support the non-profit mission and vision of Goodwill Industries of Middle Georgia's Helms College expansion. Helms Career Institute was established in 2007 as a private, independent, post-secondary career school that provides experiential learning and career education for workforce development. The proposed development is a part of a strategic plan for expansion that supports the college's future growth to meet local talent needs in high-demand occupations. The proposed development will include retail and hotel components supporting and complimenting degrees sponsored by Helms College, residential units for students, recreation amenities such as tennis courts, jogging trails, agritourism, a conference retreat center with restaurants. The agritourism aspect will include gardens and farms that will provide hands-on experience for students and community members to learn about the farm-to-table philosophies and offerings.

According to the traffic study, the proposed development will consist of the following: a Goodwill store; Helms College for 50 students; Edgar's Bakery; retailing including a spa; a high-turn-over sit-down restaurant; a supermarket; 127 multi-family residential units; 18 student housing units; 41 vacation villas; an event/banquet hall, and a 175-room hotel. Piedmont Water will provide water and sewer. As proposed, the development will be completed in four phases as determined by the market conditions and demand. Phase one will consist of the Goodwill store, Helms College for 25 students, Edgar's Bakery, and 3,400 square feet of retail is to be completed by 2023. The second phase will include an additional 25 students to the college, 11,200 square feet of retail, 42 multi-family units, and 6 student housing units to be finished in 2024. Phases three and four will consist of 12,320 square feet of retail, 10,600 square feet of a sit-down restaurant, a supermarket, 85 Multi-family residential units, 12 student housing units, 41 vacation villas, an event/banquet hall, and a 175-room hotel.

The traffic analysis projects that the total site-generated trips will be 10,975, and the mixed-use reduction is 1,814. Thus the 24-hour total volume of two-way traffic will be 9,161. However, it concludes that the most significant impact from the proposed development will be during the am and pm peak hours. There will be a maximum of 29 vehicles turning left at either driveway, 35 vehicles turning right at the northern driveway, and 140 at the southern driveway. The turning movement will average approximately 1 to 2 vehicles per minute, according to the study. It further adds that the intersection of Harmony Rd., SR 44, and Old Phoenix Rd. currently has a large volume of right-turn movement during peak hours. There are long delays at this intersection, given that there is no dedicated

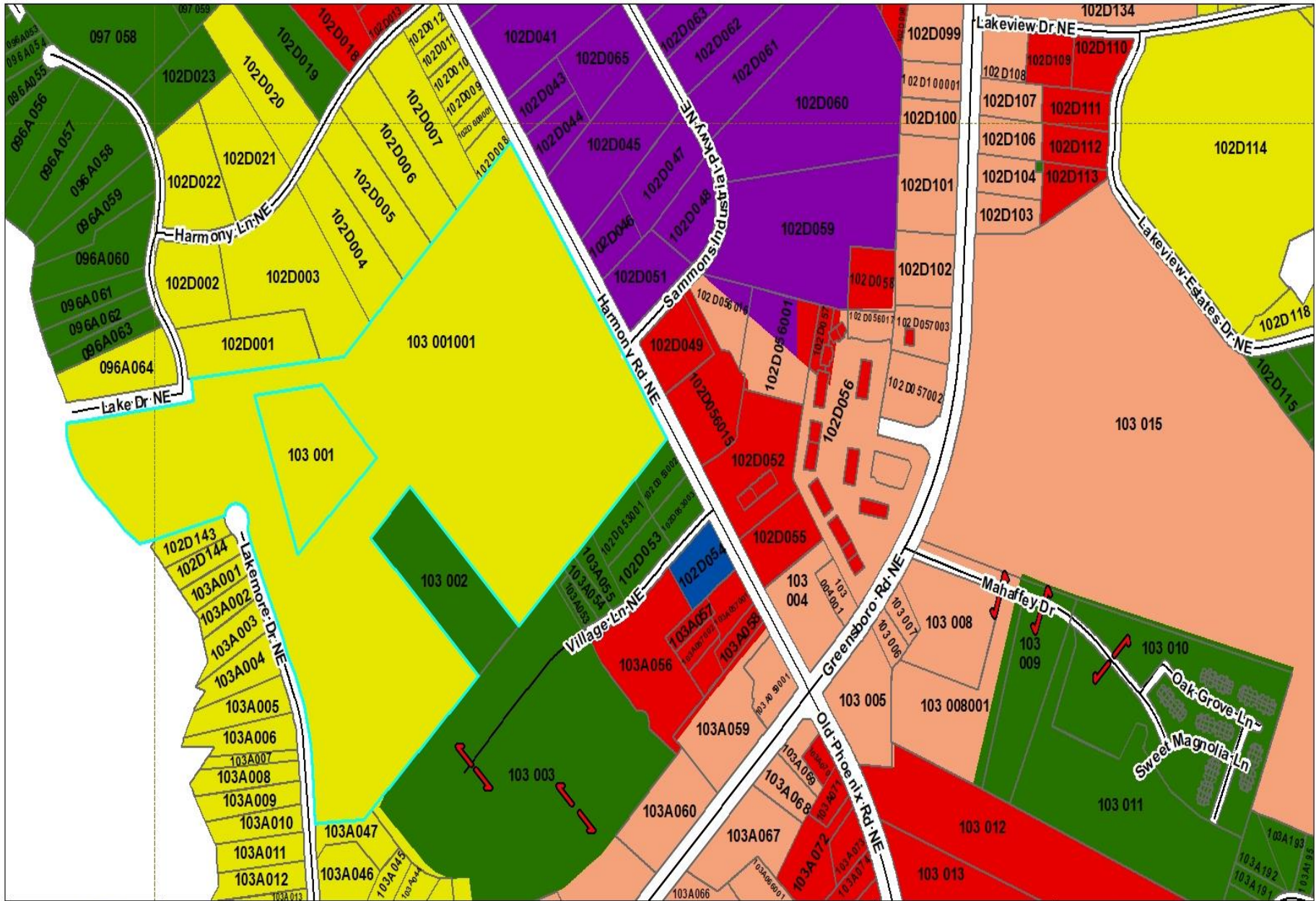


right-turn lane. Although delays are in occurrence, the study states that there will be no significant impact on the traffic if the developer will construct left-turn lanes and deceleration lanes. In addition, the current delays will improve once GDOT completes the proposed SR 44 widening project.

There will be two full-access entrances on Harmony Road identified as Driveway One (southern) and Driveway Two (northern). The study further recommends that the first driveway has two entering and two exit lanes while the second driveway has one entering and two exit lanes. The following is recommended for each driveway: the eastbound lane approach should have a separate left and right-turn lane for exiting traffic; a northbound left-turn lane to be constructed on Harmony Road for entering traffic; a southbound deceleration lane to be installed on Harmony Road for entering traffic. The subject property is adjacent to a combination of residential, commercial, and agriculture zoned properties. It fronts Harmony Road, which is a main arterial road. The property also has frontage on Lake Drive and Lakemore Drive.

As stated in Sec. 66-115(b) of the Putnam County Code of Ordinances, the C-PUD zoning allows more than one type of use in a building or set of buildings, including some combination of residential and selective nonresidential uses such as commercial, office and institutional uses. Furthermore, the proposed development is consistent with the existing residential, multi-family, and commercial developments in this area. The comprehensive plan matches the proposed use for future residential and mixed-use development. In the final DRI report, the Middle Georgia Regional Commission noted that the proposed development site lies within an area of projected rapid growth as identified in the 2016 Regional Plan. The report recommends that the local government take action early to ensure that growth occurs in a manner that makes it possible to provide necessary public services.

By implementing the required conditions, the proposed project should have minimal impact on the adjacent properties, roads, and nearby intersections. There is no evidence that the proposed development would cause excessive or burdensome use of public services, nor should it adversely affect police, fire protection, or sewer services. If approved, the staff recommends that the developer should install a deceleration lane and left-turn lane at the main entrances of the development. There shall be no entrance on Lakemore Drive and only an emergency gated entrance on Lake Drive.



TAX MAP GRID

14	15	16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31	32	33
34	35	36	37	38	39	40	41	42	43
44	45	46	47	48	49	50	51	52	53
54	55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72	73
74	75	76	77	78	79	80	81	82	83
84	85	86	87	88	89	90	91	92	93
94	95	96	97	98	99	100	101	102	103

**GEOGRAPHIC FEATURE LEGEND**

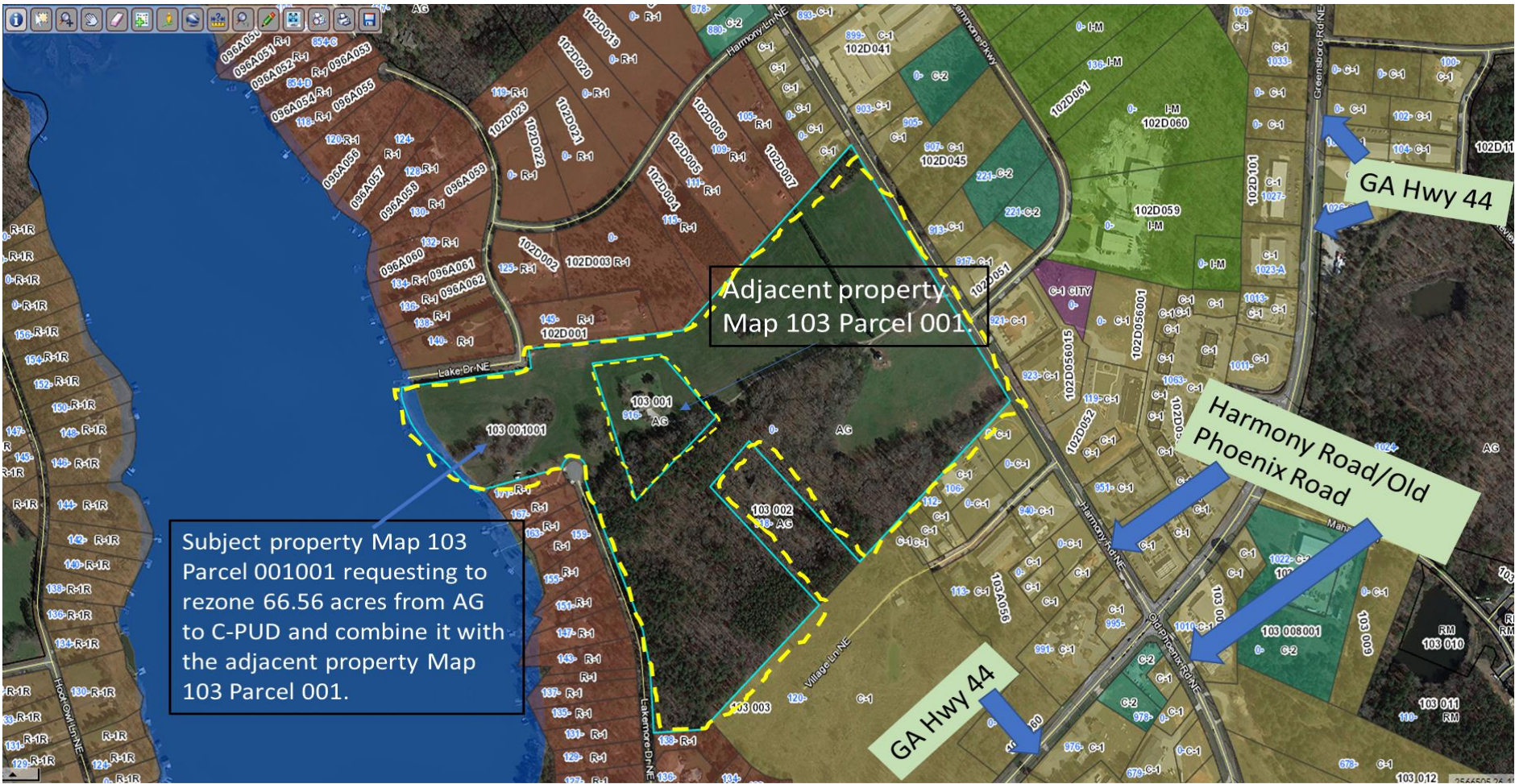
Eatonton Limits	Agriculture/Forestry	Mixed Use	Residential
County Boundary	Commercial	Park/Recreation/Conservation	Transportation/Communication/Utilities
Roads			

**MGRC**  
Middle Georgia Regional Commission  
175 Emery Hwy  
Suite C  
Macon, Georgia 31217

PUTNAM COUNTY, GEORGIA  
FUTURE LAND USE MAPS

**MAP 103**





Subject property Map 103 Parcel 001001 requesting to rezone 66.56 acres from AG to C-PUD and combine it with the adjacent property Map 103 Parcel 001.

Adjacent property Map 103 Parcel 001

GA Hwy 44

Harmony Road/Old Phoenix Road

GA Hwy 44

**Staff recommendation is for approval to rezone 66.56 acres from AG to C-PUD at 916 Harmony Road [Map 103, Parcel 001001, District 3] with the following conditions:**

- (1) The developer shall construct a deceleration lane and turn lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the two main entrances on Harmony Road. Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the county. It shall be completed by the developer prior to the completion of phase one.

- (2) The developer shall direct construction traffic through the second main entrance located the farthest away from the intersection of Harmony Road and Hwy 44.
- (3) There shall be no car or truck entrance/exit located on Lakemore Road. There shall be a locked gate for golf cart entrance only.
- (4) Only a gated and locked Emergency Exit shall be located on Lake Drive.

**PLANNING & ZONING COMMISSION RECOMMENDATION:**

*The Planning & Zoning Commission’s recommendation is for approval to rezone 66.56 acres from AG to C-PUD at 916 Harmony Road [Map 103, Parcel 001001, District 3] with the following conditions:*

- (1) The developer shall construct a deceleration lane and turn lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the two main entrances on Harmony Road. Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the county. It shall be completed by the developer prior to the completion of phase one.*
- (2) The developer shall direct construction traffic through the second main entrance located the farthest away from the intersection of Harmony Road and Hwy 44.*
- (3) There shall be no car or truck entrance/exit located on Lakemore Road. There shall be a locked gate for golf cart entrance only.*
- (4) Only a gated and locked Emergency Exit shall be located on Lake Drive.*

**PLANNING & ZONING COMMISSION MINUTES:**

The Putnam County Planning & Zoning Commission conducted a public hearing on Thursday, August 5, 2021 at 6:30 PM in the Putnam County Administration Building, 117 Putnam Drive, Room 203, Eatonton, Georgia.

**Present: Martha Farley, Maurice Hill, Jr., Tim Pierson, John Mitchell**  
**Staff Present: Lisa Jackson, Courtney Andrews and Kenteria Williams**

**The following items 12-13 were heard as one before the board.**

Request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 66.56 acres at 916 Harmony Road from AG to C-PUD. **[Map 103, Parcel 001001, District 3]. \* Mr.**



**James Stiff** represented this request. He stated that he was the president of Goodwill Industries of Middle Georgia. They are requesting to rezone the 71 acres so that they can complete the purchase of the property on Harmony Road, to create a campus for Goodwill and Helms College. Helms College is affiliated with Goodwill. He added that they came to Putnam County in 2010 with the Goodwill store and has since expanded to Milledgeville. They would like to grow their presence on the lake. They had a plan to create an agritourism campus, where the students could learn about culinary agriculture and be involved with an agritourism business. They would also have applied learning on the farm that would be a part of the campus, and an applied learning area for students in the school of hospitality. He explained that they are developing a bachelor's degree in hospitality management. It would be applied learning in a hotel and villas. **Mr. Stiff** stated that they were working on an agreement to develop a hotel that would allow for planned applied learning for the students. The front of the property would have a town center where they would create new economic energy for the community. He added that they would also have Goodwill businesses and relocate the Goodwill retail store from Lake Oconee Parkway. He stated that he has had community outreach meetings and gained a lot of insight on the project. **Mrs. Ellen Garland** explained that the proposed development includes: a town center, green space for community gatherings, retail, restaurants, institutional use for Helms College, Hotel and Retreat Center, gardens, plants, outdoor amenities, as well as a housing component. She added that the project is expected to move forward in multiple stages and will be completed based on market conditions. **Mrs. Garland** stated that they intend on implementing staff recommendations based on the traffic study. She added that the only additional request they had was to use Lakemore for gated golf cart access. **Member Mitchell** asked Mrs. Garland to explain the duration of the phases. **Mrs. Garland** stated that they were expecting a 3-4-year buildout with multiple phases. This will be based on the market conditions for the various uses.

At this time those who signed in to speak in favor of the request, were given 3 minutes.

**Rush Atly**  
**Tom Fry**

At this time those who signed in to speak in opposition of the request, were given 3 minutes.

**Tammy Calloway**

At this time Mr. Stiff used the remainder of his time. He thanked those who spoke on their behalf and assured the homeowners in opposition that they will follow all requirements of the county. He stated that they own a farm in Grovetown and are involved in some of the things Mrs. Calloway mentioned. He added that they are working with a third party for the hotel. Mr. Stiff explained that the students will only be there when they have applied learning

when it is appropriate for their curriculum. There will be professional teams that will operate the various enterprises. He stated that their goal is to exceed expectations.

**Staff recommendation is for approval to rezone 66.56 acres from AG to C-PUD at 916 Harmony Road [Map 103, Parcel 001001, District 3] with the following conditions:**

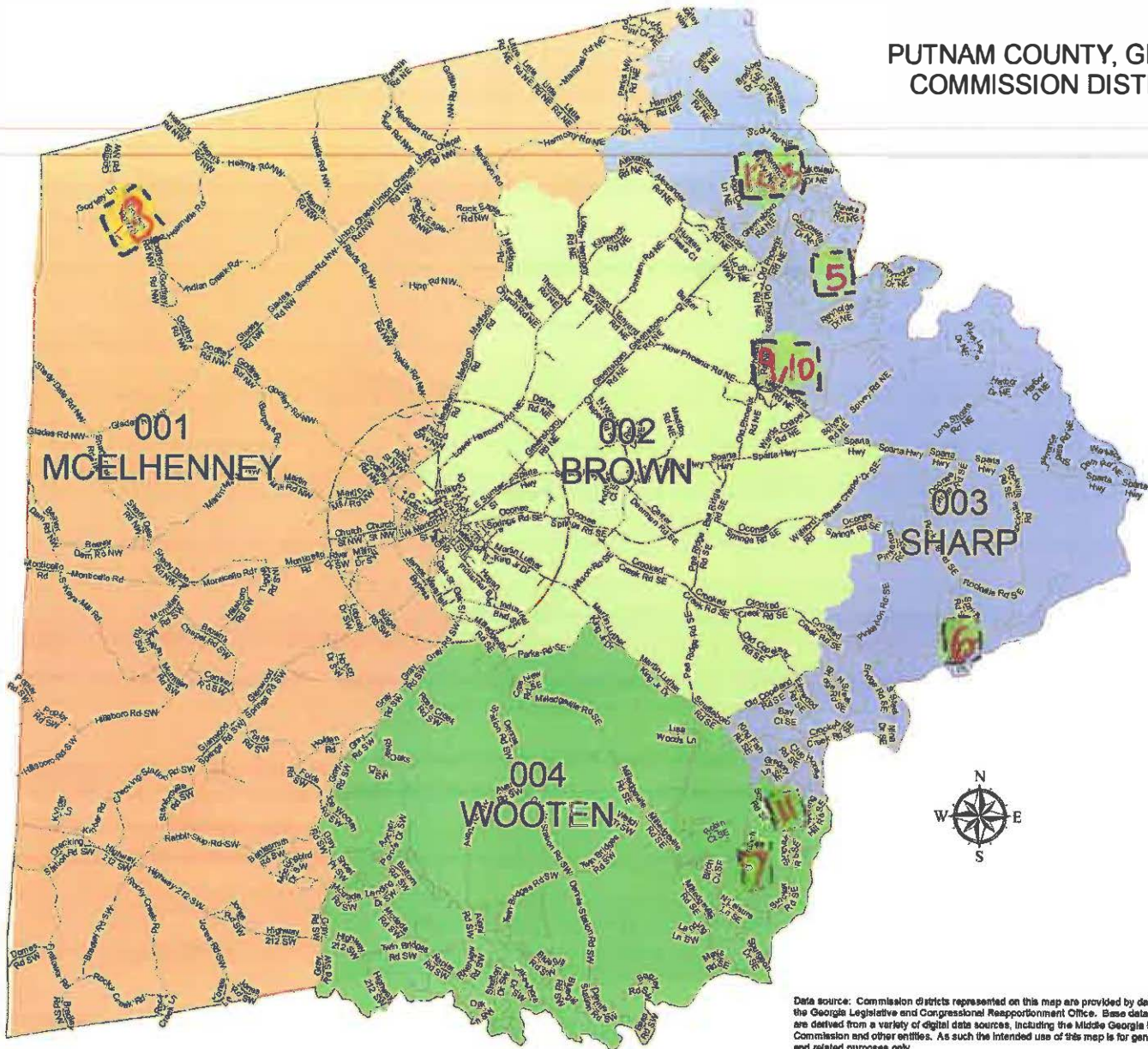
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- (2) The developer shall direct construction traffic through the second main entrance located the farthest away from the intersection of Harmony Road and Hwy 44.**
- (3) There shall be no car or truck entrance/exit located on Lakemore Road. There shall be a locked gate for golf cart entrance only.**
- (4) Only a gated and locked Emergency Exit shall be located on Lake Drive.**

Motion to approve the request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 66.56 acres at 916 Harmony Road from AG to C-PUD with the following conditions:

- (1) The developer shall construct a deceleration lane and turn lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the two main entrances on Harmony Road. Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the county. It shall be completed by the developer prior to the completion of phase one.
- (2) The developer shall direct construction traffic through the second main entrance located the farthest away from the intersection of Harmony Road and Hwy 44.
- (3) There shall be no car or truck entrance/exit located on Lakemore Road. There shall be a locked gate for golf cart entrance only.
- (4) Only a gated and locked Emergency Exit shall be located on Lake Drive.

made by **Member Hill** and seconded by **Member Mitchell**.

Voting Yea: **Vice-Chairman Pierson, Member Hill, Member Farley, Member Mitchell**



5. Request by **Wallace Gerald Wright** for a side yard setback variance at 149 Collis Marina Road. Presently zoned R-1 [Map 104B, Parcel 013, District 3].
6. Request by **Thomas & Gwen Ralston** for a rear yard setback variance at 189 S. Spring Road. Presently zoned R-2 [Map 115C, Parcel 019, District 3].
7. Request by **Thomas W Gardner** for a side and rear yard setback variance at 348A Cold Branch Road. Presently zoned R-2 [Map 112C, Parcel 009, District 4].
8. Request by **Mt. Pleasant Baptist Church** for a side yard setback variance at 1628 Godfrey Road NW. Presently zoned AG. [Map 016, Parcel 015, District 1].
9. Request by **SDH Atlanta LLC, Agent for Maddox Family Partnership LLLP** for a side yard setback variance on Old Phoenix Road. Presently zoned AG. [Map 106, Parcel 002, District 2].
10. Request by **SDH Atlanta LLC, agent for Maddox Family Partnership LLLP** to rezone 29.54 on Old Phoenix Road from AG to R-PUD. [Map 106, Parcel 002, District 2].\*
11. Request by **Duane Gentes** to rezone 5.40 acres on Emory Drive from R-1 to R-2. [Map 111, Parcel 001044, District 4].\*
12. Request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 66.56 acres at 916 Harmony Road from AG to C-PUD. [Map 103, Parcel 001001, District 3].\*
13. Request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 5 acres at 916 Harmony Road Parcel A from AG to C-PUD. [Map 103, Parcel 001, District 3].\*

APPLICATION FOR REZONING

REZONING

PERMIT# PLAN2021-01330

APPLICATION NO. \_\_\_\_\_

DATE: June 24, 2021

MAP \_\_\_\_\_ PARCEL 103 001001

ZONING DISTRICT A5 - Agricultural AG 138

1. Owner Name: Peggy Allen, Susan Fox

2. Applicant Name (If different from above): James Stiff, Goodwill Industries of Middle Georgia, Inc.

3. Mailing Address: 3145 Washington Road, Augusta GA 30907

4. Email Address: jstiff@goodwillworks.org

5. Phone: (home) \_\_\_\_\_ (office) 706.854.4769 (cell) [REDACTED]

6. The location of the subject property, including street number, if any: 916 Harmony Road, Eatonton, GA 31024  
Parcel B

7. The area of land proposed to be rezoned (stated in square feet if less than one acre):  
66.557 Acres

8. The proposed zoning district desired: C-PUD

9. The purpose of this rezoning is (Attach Letter of Intent)  
Please see enclosed Letter of Intent, Purpose and Impact Statement.

10. Present use of property: Agricultural & Residential Desired use of property: Mixed Use

11. Existing zoning district classification of the property and adjacent properties:  
Existing: Agricultural & Residential 138  
North: Residential South: Agricultural East: Commercial West: Residential

12. Copy of warranty deed for proof of ownership and if not owned by applicant, please attach a signed and notarized letter of agency from each property owner for all property sought to be rezoned.

13. Legal description and recorded plat of the property to be rezoned.

14. The Comprehensive Plan Future Land Use Map category in which the property is located. (If more than one category applies, the areas in each category are to be illustrated on the concept plan. See concept plan insert.): \_\_\_\_\_

15. A detailed description of existing land uses: \_\_\_\_\_  
Existing zoning is agricultural with a residential unit on-site. There is a single family home on the property and a horse barn and pasture.

16. Source of domestic water supply: well \_\_\_\_\_, community water \_\_\_\_\_, or private provider X.  
If source is not an existing system, please provide a letter from provider.





# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

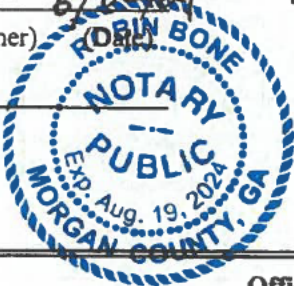
Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ www.putnamcountyga.us

- 17. Provision for sanitary sewage disposal: septic system , or sewer . If sewer, please provide name of company providing same, or, if new development, provide a letter from sewer provider.
- 18. Complete attachment of Disclosure of Campaign Contributions Form by the applicant and/or the applicant's attorney as required by the Georgia Conflict of Interest in Zoning Act (O.C.G.A. 36-67A).
- 19. The application designation, date of application and action taken on all prior applications filed for rezoning for all or part of the subject property. (Please attach on separate sheet.)
- 20. Proof that property taxes for the parcel(s) in question have been paid.
- 21. Concept plan.
  - If the application is for less than 25 single-family residential lots, a concept plan need not be submitted. (See attachment.)
  - A concept plan may be required for commercial development at director's discretion
- 22. Impact analysis.
  - If the application is for less than 25 single-family residential lots, an impact analysis need not be submitted. (See attachment.)
  - An Impact analysis (including a traffic study) is required when rezoning from residential zoned or used property to commercial or industrial districts.

THE ABOVE STATEMENTS AND ACCOMPANYING MATERIALS ARE COMPLETE AND ACCURATE. APPLICANT HEREBY GRANTS PERMISSION FOR PLANNING AND DEVELOPMENT PERSONNEL OR ANY LEGAL REPRESENTATIVE OF PUTNAM COUNTY TO ENTER UPON AND INSPECT THE PROPERTY FOR ALL PURPOSES ALLOWED AND REQUIRED BY THE PUTNAM COUNTY CODE OF ORDINANCES.

[Signature] 6/23/21  
 Signature (Property Owner)  
[Signature]  
 Notary Public

James H. Stitt 6/22/21  
 Signature (Applicant) (Date)  
[Signature]  
 Notary Public



**ELLEN H. HARPER**  
 NOTARY PUBLIC  
 Columbia County  
 State of Georgia  
 My Comm. Expires February 18, 2025

Office Use	
Paid: \$ <u>55000</u> (cash) _____ (check) x _____ (credit card) <input checked="" type="checkbox"/>	
Receipt No. _____	Date Paid: <u>6/24/21</u>
Date Application Received: _____	
Reviewed for completeness by: _____	
Date of BOC hearing: _____	Date submitted to newspaper: _____
Date sign posted on property: _____	Picture attached: yes _____ no _____



# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ www.putnamcountyga.us

- 17. Provision for sanitary sewage disposal: septic system , or sewer . If sewer, please provide name of company providing same, or, if new development, provide a letter from sewer provider.
- 18. Complete attachment of Disclosure of Campaign Contributions Form by the applicant and/or the applicant's attorney as required by the Georgia Conflict of Interest in Zoning Act (O.C.G.A. 36-67A).
- 19. The application designation, date of application and action taken on all prior applications filed for rezoning for all or part of the subject property. (Please attach on separate sheet.)
- 20. Proof that property taxes for the parcel(s) in question have been paid.
- 21. Concept plan.
  - If the application is for less than 25 single-family residential lots, a concept plan need not be submitted. (See attachment.)
  - A concept plan may be required for commercial development at director's discretion
- 22. Impact analysis.
  - If the application is for less than 25 single-family residential lots, an impact analysis need not be submitted. (See attachment.)
  - An Impact analysis (including a traffic study) is required when rezoning from residential zoned or used property to commercial or industrial districts.

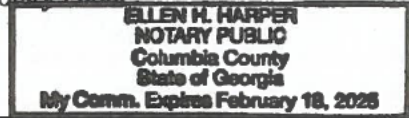
THE ABOVE STATEMENTS AND ACCOMPANYING MATERIALS ARE COMPLETE AND ACCURATE. APPLICANT HEREBY GRANTS PERMISSION FOR PLANNING AND DEVELOPMENT PERSONNEL OR ANY LEGAL REPRESENTATIVE OF PUTNAM COUNTY TO ENTER UPON AND INSPECT THE PROPERTY FOR ALL PURPOSES ALLOWED AND REQUIRED BY THE PUTNAM COUNTY CODE OF ORDINANCES.

Auson Jx 6/23/2021      James H. Smith 6/22/21  
 Signature (Property Owner)      Signature (Applicant)      (Date)

[Signature]  
 Notary Public



[Signature]  
 Notary Public



Office Use	
Paid: \$ _____ (cash) _____ (check) <input checked="" type="checkbox"/> _____ (credit card) _____	
Receipt No. _____	Date Paid: _____
Date Application Received: _____	
Reviewed for completeness by: _____	
Date of BOC hearing: _____	Date submitted to newspaper: _____
Date sign posted on property: _____	Picture attached: yes _____ no _____

# Item 9: Letter of Intent

**LETTER OF INTENT – PURPOSE OF REZONING APPLICATION**

*Updated: June 22, 2021*

This letter and its enclosed components detail the intent to rezone two (2) parcels in Eatonton, Georgia, along Harmony Road.

The purpose of this rezoning application is to support a new, mixed-use development to support the non-profit mission and vision of [Goodwill Industries](#) of Middle Georgia’s Helms College expansion. Since its creation as the Helms Career Institute in 2007, the modern-day [Helms College](#) is a private, independent, postsecondary career school that provides experiential learning and career education for workforce development.

As a part of its strategic plan, Goodwill wishes to expand Helms College with a new, mixed-use development on Harmony Road in Eatonton, Georgia, to support the College’s future growth to meet local talent needs in high demand occupation areas. Hereby referenced as the Lake Oconee Helms College campus, the proposed development will include:

- Educational buildings and classrooms.
- Retail and hotel components that support and complement degrees sponsored by Helms College.
- Residential units for students and others.
- Recreation amenities for guests and possibly nearby residents via a private club membership, such as tennis courts, jogging trails, and agritourism offerings.
- A conference retreat center with restaurant venues.

Intertwined throughout the campus is an agritourism theme, including gardens and farms, to provide hands-on experience for students and members of the community to learn about farm-to-table philosophies and offerings.



# Item 12: Recorded Deeds & Letter of Agency

DOCM 004361  
FILED IN OFFICE  
08/21/2008 02:26 PM  
BK=647 PG=198-198  
SHEILA H. PERRY  
CLERK OF SUPERIOR  
COURT  
Putnam Co Clerk of Court  
*Sheila H. Perry*  
REAL ESTATE TRANSFER TAX  
PAID: \$0.00  
PT-117-2008-001193

After Recording Return to:  
Blasingame, Burch, Garrard & Ashley, P.C.  
1040 Founders Row, Suite B  
Greensboro, Georgia 30642  
15668-0004/jvd

QUITCLAIM DEED

STATE OF GEORGIA, GREENE COUNTY

THIS INDENTURE, made the 30<sup>th</sup> day of July, 2008, by and between Nancy J. Allen, as party of the first part, hereinafter called Grantor, and Allen Investment Partners, LLLP, its heirs, successors and assigns, as party of the second part, hereinafter called Grantee, (the words "Grantor" and "Grantee" to include their respective heirs, successors and assigns where the context requires or permits).

WITNESSETH:

That Grantor, for and in consideration of the sum of One Dollar (\$1.00) and other valuable consideration in hand paid at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, by these presents does hereby remise, convey and forever QUITCLAIM unto the said Grantee, all of its entire right, title and interest passing hereunder, whatever the same be, in and to that certain property described as follows, to wit:

All that tract or parcel of land situate, lying, and being in 389<sup>th</sup> GM District, 3<sup>rd</sup> Land District, and Land Lots 341 and 352 of Putnam County, Georgia more particularly described as Parcel "B", containing 66.557 acres, more or less, as shown on that certain plat of survey prepared for Nancy Johnson Allen by James E. Smith, Jr., RLSN 1895, dated June 16, 2008 and recorded at Plat Book 32, Page 76, Putnam County, Georgia real estate records. Said plat of survey and the recorded copy thereof are incorporated herein by reference for all purposes.

This Conveyance is SUBJECT TO a reservation of 20' Ingress & Egress Easement as shown on the plat of survey referenced in the paragraph immediately above to Grantor, her heirs, successors and assigns that shall be appurtenant to and run with the title to Parcel "A", containing 5.000 acres, more or less, as shown on said plat of survey. Said 20' Ingress & Egress Easement shall be for the purpose of vehicular and pedestrian access to and from Parcel "A" and Harmony-Davis Road, being a public road with a 80' right-of-way.

TO HAVE AND TO HOLD the said described premises to Grantee, so that neither Grantor nor any person or persons claiming under Grantor shall at any time, by any means or ways, have, claim or demand any right or title to said premises or appurtenances, or any rights thereof.

IN WITNESS WHEREOF, Grantor has signed and sealed this deed, the day and year first above written.

Signed, sealed and delivered  
in the presence of:

*Sandra W. Ray*  
Unofficial Witness  
*[Signature]*  
Notary Public  
My Commission Expires:  
(AFFIX NOTARY SEAL)



*Nancy J. Allen* (SEAL)  
Nancy J. Allen

E:\DATA\WPDOCS\15668\WQCD Allen Investment Partners.doc

045046

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When recorded, please return to:  
Bussart & Liu, LLC  
2500 Windy Ridge Parkway, Ste 320  
Atlanta, GA 30339  
B&L File #88-0312

GEORGIA, PUTNAM COUNTY  
CLERK OF SUPERIOR COURT  
FILED 12-14-98  
TIME 11:10 AM  
RECORDED 12-14-98  
BOOK 1205 PAGE 859-957  
Clyde M. White  
DEPUTY CLERK

PUTNAM COUNTY, GEORGIA  
Real Estate Transfer Tax  
Paid \$ 0  
Date 12-14-98  
Clyde M. White  
(Deputy Clerk of Superior Court)

ASSENT OF EXECUTOR TO DEVISE

State of Georgia  
County of Fulton

WHEREAS, CHARLES MITCHELL ALLEN ("Decedent") died a resident of Fulton County, Georgia, leaving a will which was probated in solemn form in said County on August 30, 1995; and

WHEREAS, the undersigned, NANCY JOHNSON ALLEN, was qualified as Executrix of said Estate and was issued Letters Testamentary, which are recorded at LT Book 151, Page 157, Fulton County Records; and

WHEREAS, under the terms of said will the following described property was devised to NANCY J. ALLEN:

SEE EXHIBIT "A" ATTACHED HERETO AND INCORPORATED HEREIN BY REFERENCE.

WHEREAS, the undersigned duly qualified as Executor of the estate of the Decedent and is now administering the estate under the terms of said will; and it has been determined that all debts and claims against the estate have been fully paid.

NOW, THEREFORE, the undersigned, as Executor of the Will of the Decedent, hereby assents to the devise of said property under the terms of said will, so that full fee simple title thereto is vested in NANCY J. ALLEN, as provided in said will.

WITNESS my hand and seal, this 21<sup>st</sup> day of July, 1998.

Signed, sealed and delivered  
in the presence of:

*Lori Alexander*  
Witness  
*Paul E. Frank*  
Notary Public

*Nancy Johnson Allen* (seal)  
NANCY JOHNSON ALLEN, as Executrix  
under the Last Will and Testament of  
Charles M. Allen, deceased

(Affix Notarial Seal)



458

458

EXHIBIT "A"

ALL THAT TRACT or parcel of land lying and being in Land Lot 341 of the 3<sup>rd</sup> Land District, 389<sup>th</sup> G.M. District, Putnam County, Georgia, and being more particularly described as follows:

TO FIND THE TRUE POINT OF BEGINNING, commence at a point located at the intersection of the westerly right of way of Harmony-Davis Road (80 foot right of way) and the northerly right of way of Georgia State Road 44; thence in a northerly direction along the westerly right of way of Harmony-Davis Road a distance of 1,188.8 feet to an iron pin found; thence south 45 degrees 22 minutes 07 seconds west a distance of 1,049.91 feet to an iron pin set and the TRUE POINT OF BEGINNING; thence south 45 degrees 22 minutes 07 seconds west a distance of 286.87 feet to an iron pin set; thence north 43 degrees 37 minutes 02 seconds west a distance of 792.18 feet to an iron pin set; thence north 48 degrees 22 minutes 58 seconds east a distance of 286.82 feet to an iron pin set; thence south 43 degrees 37 minutes 02 seconds east a distance of 787.10 feet to an iron pin set and the point of beginning; containing approximately 5.20 acres and being more particularly shown on a survey prepared for Peggy Allen by James E. Smith, Jr., Georgia Registered Land Surveyor No. 1895, dated November 7, 1997.

Being a portion of the property conveyed from John E. Singleton to Charles M. Allen and Nancy J. Allen by warranty deed dated October 4, 1984 and recorded at Deed Book 84, Page 156, Putnam County, Georgia Records.

TOGETHER WITH A 20-FOOT WIDE EASEMENT FOR INGRESS AND EGRESS TO AND FROM HARMONY-DAVIS ROAD, and being more particularly described as follows:

TO FIND THE CENTERLINE OF THE EASEMENT, commence at a point located at the intersection of the westerly right of way of Harmony-Davis Road (80 foot right of way) and the northerly right of way of Georgia State Road 44; thence in a northerly direction along the westerly right of way of Harmony-Davis Road a distance of 1,188.8 feet to an iron pin found; thence north 32 degrees 57 minutes 18 seconds west along the westerly right of way of Harmony-Davis Road a distance of 556.70 to the centerline of a 10-foot drive and the CENTERLINE OF THE EASEMENT; thence the following calls along the centerline of said easement: south 80 degrees 34 minutes 20 seconds west 64.20 feet to a point; south 69 degrees 50 minutes 05 seconds west 22.18 feet to a point; south 54 degrees 03 minutes 54 seconds west 63.70 feet to a point; south 57 degrees 25 minutes 44 seconds west 97.12 feet to a point; south 57 degrees 07 minutes 38 seconds west 57.23 feet to a point; south 61 degrees 18 minutes 59 seconds west 92.08 feet to a point; south 70 degrees 27 minutes 06 seconds west 46.04 feet to a point; south 74 degrees 46 minutes 22 seconds west 19.00 feet to a point; south 16 degrees 31 minutes 51 seconds east 88.64 feet to a point; south 22 degrees 52 minutes 57 seconds west 143.24 feet to a point; south 33 degrees 34 minutes 26 seconds west 77.61 feet to a point; south 35 degrees 23 minutes 26 seconds west 193.38 feet to a point; south 50 degrees 29 minutes 35 seconds east 80.97 feet to a point; south 35 degrees 43 minutes 13 seconds west 71.40 feet to a point; south 44 degrees 47 minutes 48 seconds west 108.76 feet to a point; and south 26 degrees 33 minutes 55 seconds west 93.40 feet to a point located at the edge of the 5.20 property described above; all as more particularly shown on a survey prepared for Peggy Allen by James E. Smith, Jr., Georgia Registered Land Surveyor No. 1895, dated November 7, 1997.



DOC# 000177  
FILED IN OFFICE  
01/17/2012 01:50 PM  
BK:740 PG:112-114  
SHEILA H. PERRY  
CLERK OF COURT  
PUTNAM COUNTY

After Recording Return to:

Lantz & Reeves, P.C.  
3735 Cherokee Street  
Kennesaw, Georgia 30144  
770 424-8131

*Sheila H. Perry* SRM

REAL ESTATE TRANSFER T

AX PAID: \$0.00

—Above This Line Reserved For Official Use Only—

DEED PREPARED ONLY.  
NO TITLE EXAMINATION PERFORMED.

PT61-117-2012-000053

EXECUTOR'S DEED

STATE OF GEORGIA  
COUNTY OF PUTNAM

THIS INDENTURE, made this the 13<sup>th</sup> day of December, 2011, between JANET ALLEN CRITTENDEN, as Executor of the Last Will and Testament of NANCY JOHNSON ALLEN, late of the State of Georgia and County of Putnam, deceased, as party of the first part (the "Grantor"), and ALLEN INVESTMENT PARTNERS, LLLP, a Georgia limited liability limited partnership, as party of the second part (the "Grantee"); the words "Grantor" and "Grantee" to include their respective heirs, successors and assigns where the context requires or permits.

WITNESSETH: That the said Grantor (acting under and by virtue of the power and authority contained in the said Will, the same having been duly probated and recorded in the Probate Court of Putnam County, Georgia (estate no. 11ES0074), said Will having been proven in solemn form), for and in consideration of the sum of TEN AND 00/100 DOLLARS (\$10.00) and other good and valuable consideration, in hand paid at and before the sealing and delivery of the presents (the receipt of which is hereby acknowledged), has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell and convey unto the said Grantee, all that tract or parcel of land lying and being in Putnam County, Georgia and more particularly described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

See copy of Death Certificate (Exhibit "B") attached hereto and made a part hereof.

TO HAVE AND TO HOLD the said tract or parcel of land, with all and singular the rights, members and appurtenances thereof, to the same being, belonging, or in anywise appertaining, to the only proper use, benefit and behoof of the said Grantee, forever, IN FEE SIMPLE; in as full and ample a manner as the same was held, possessed and enjoyed, or might have been held, possessed and enjoyed, by the said decedent.

IN WITNESS WHEREOF, Grantor has signed and sealed this deed, the day and year first above written.

Signed, sealed and delivered  
in the presence of:

*[Signature]*  
Unofficial Witness

*[Signature]* (Seal)  
JANET ALLEN CRITTENDEN, as Executor as aforesaid

Signed, sealed and delivered  
in the presence of:

Notary Public

My commission expires:

[Notary seal here.]

*please see attached California  
Notary Acknowledgement*

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT**

State of California  
County of *Siskiyou*

} SS:

On December 13, 2011, before me,  
Kellie A. Sanders,  
a Notary Public, personally appeared,  
Tarot Allen Crittenden

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Kellie Sanders  
SIGNATURE OF NOTARY

MY COMMISSION EXPIRES ON: Aug. 27, 2014



(SEAL.)

748.113

admir

**EXHIBIT "A"**

ALL THAT TRACT OR PARCEL OF LAND SITUATE, LYING AND BEING IN 389TH GM DISTRICT, 3RD LAND DISTRICT, AND LAND LOT 341 OF PUTNAM COUNTY, GEORGIA MORE PARTICULARLY DESCRIBED AS PARCEL "A" CONTAINING 5.00 ACRES, MORE OR LESS, AS SHOWN ON THAT CERTAIN PLAT OF SURVEY PREPARED FOR NANCY JOHNSON ALLEN BY JAMES E. SMITH, JR., RLSN 1895, DATED JUNE 16, 2008 AND RECORDED AT PLAT BOOK 32, PAGE 76, PUTNAM COUNTY, GEORGIA REAL ESTATE RECORDS. SAID PLAT OF SURVEY AND THE RECORDED COPY THEREOF ARE INCORPORATED HEREIN BY REFERENCE FOR ALL PURPOSES.

INCLUDING A 20' INGRESS & EGRESS EASEMENT AS SHOWN ON THE PLAT OF SURVEY REFERENCED IN THE PARAGRAPH IMMEDIATELY ABOVE THAT IS APPURTENANT TO AND RUNS WITH THE TITLE TO PARCEL "A". SAID 20' INGRESS & EGRESS EASEMENT SHALL BE FOR THE PURPOSE OF VEHICULAR AND PEDESTRIAN ACCESS ACROSS PARCEL "B" TO AND FROM PARCEL "A" AND HARMONY-DAVIS ROAD, BEING A PUBLIC ROAD WITH AN 80' RIGHT-OF-WAY.

748.114

044597

273  
652

GEORGIA, PUTNAM COUNTY  
CLERK OF SUPERIOR COURT  
FILED 11-16-98  
TIME 11:59am  
RECORDED 11-16-98  
BOOK 213 PAGE 652-653  
*Charm G. Billie*  
(DEPUTY) CLERK

When recorded, please return to:  
Bussari & Litt, LLC  
2500 Windy Ridge Parkway, Suite 320  
Atlanta, GA 30339  
B&L File No. 98-0312

Putnam County, Georgia  
Real Estate Transfer Tax  
Paid \$ 10.40  
Date 11-16-98  
*Charm G. Billie*  
(Deputy) Clerk of Superior

### QUITCLAIM DEED

STATE OF GEORGIA  
COUNTY OF Fulton

THIS INDENTURE made this 21<sup>st</sup> day of July, 1998, between

NANCY J. ALLEN,

of the State of Georgia, as party or parties of the first part, hereinafter called Grantor, and

PEGGY ALLEN,

as party or parties of the second part, hereinafter called Grantee (the words "Grantor" and "Grantee" to include their respective heirs, successors and assigns where the context requires or permits).

WITNESSETH that: Grantor, for Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby remise, convey and forever QUITCLAIM unto the said grantee:

ALL THAT TRACT or parcel of land lying and being in Land 341 of the 3<sup>rd</sup> Land District, 389<sup>th</sup> G.M. District, Putnam County, Georgia and being more particularly described in Exhibit "A" attached hereto and incorporated herein by reference.

TO HAVE AND TO HOLD the said described premises to Grantee, so that neither Grantor nor any person or persons claiming under Grantor shall at any time, by any means or ways, have, claim or demand any right of title to said premises or appurtenances, or any rights thereof.

IN WITNESS WHEREOF, the Grantor has signed and sealed this deed, the day and year first above written.

Signed, sealed and delivered in the presence of:

*Jai Alexander*  
Unofficial Witness

*Nancy J. Allen* (SEAL)  
NANCY J. ALLEN

*Paul E. Frans*  
Notary Public  
(Affix Notarial Seal)



*less Excepted  
w/ easement  
TMP 103-002  
7B26-135*



273  
653

EXHIBIT "A"

ALL THAT TRACT or parcel of land lying and being in Land Lot 341 of the 3<sup>rd</sup> Land District, 389<sup>th</sup> G.M. District, Putnam County, Georgia, and being more particularly described as follows:

TO FIND THE TRUE POINT OF BEGINNING, commence at a point located at the intersection of the westerly right of way of Harmony-Davis Road (80 foot right of way) and the northerly right of way of Georgia State Road 44; thence in a northerly direction along the westerly right of way of Harmony-Davis Road a distance of 1,188.8 feet to an iron pin found; thence south 45 degrees 22 minutes 07 seconds west a distance of 1,049.91 feet to an iron pin set and the TRUE POINT OF BEGINNING; thence south 45 degrees 22 minutes 07 seconds west a distance of 286.87 feet to an iron pin set; thence north 43 degrees 37 minutes 02 seconds west a distance of 792.18 feet to an iron pin set; thence north 48 degrees 22 minutes 58 seconds east a distance of 286.82 feet to an iron pin set; thence south 43 degrees 37 minutes 02 seconds east a distance of 787.10 feet to an iron pin set and the point of beginning; containing approximately 5.20 acres and being more particularly shown on a survey prepared for Peggy Allen by James E. Smith, Jr., Georgia Registered Land Surveyor No. 1895, dated November 7, 1997.

Being a portion of the property conveyed from John E. Singleton to Charles M. Allen and Nancy J. Allen by warranty deed dated October 4, 1984 and recorded at Deed Book 84, Page 156, Putnam County, Georgia Records.

TOGETHER WITH A 20-FOOT WIDE EASEMENT FOR INGRESS AND EGRESS TO AND FROM HARMONY-DAVIS ROAD, and being more particularly described as follows;

TO FIND THE CENTERLINE OF THE EASEMENT, commence at a point located at the intersection of the westerly right of way of Harmony-Davis Road (80 foot right of way) and the northerly right of way of Georgia State Road 44; thence in a northerly direction along the westerly right of way of Harmony-Davis Road a distance of 1,188.8 feet to an iron pin found; thence north 32 degrees 57 minutes 18 seconds west along the westerly right of way of Harmony-Davis Road a distance of 656.70 to the centerline of a 10-foot drive and the CENTERLINE OF THE EASEMENT; thence the following calls along the centerline of said easement: south 80 degrees 34 minutes 20 seconds west 64.20 feet to a point; south 69 degrees 50 minutes 05 seconds west 22.18 feet to a point; south 54 degrees 03 minutes 54 seconds west 63.70 feet to a point; south 57 degrees 25 minutes 44 seconds west 97.12 feet to a point; south 57 degrees 07 minutes 39 seconds west 57.23 feet to a point; south 61 degrees 18 minutes 59 seconds west 92.08 feet to a point; south 70 degrees 27 minutes 06 seconds west 46.04 feet to a point; south 74 degrees 46 minutes 22 seconds west 19.00 feet to a point; south 16 degrees 31 minutes 51 seconds east 88.64 feet to a point; south 22 degrees 52 minutes 57 seconds west 143.24 feet to a point; south 33 degrees 34 minutes 26 seconds west 77.61 feet to a point; south 35 degrees 23 minutes 28 seconds west 193.38 feet to a point; south 50 degrees 29 minutes 35 seconds east 80.97 feet to a point; south 35 degrees 43 minutes 13 seconds west 71.40 feet to a point; south 44 degrees 47 minutes 48 seconds west 108.76 feet to a point; and south 26 degrees 33 minutes 55 seconds west 93.40 feet to a point located at the edge of the 5.20 property described above; all as more particularly shown on a survey prepared for Peggy Allen by James E. Smith, Jr., Georgia Registered Land Surveyor No. 1895, dated November 7, 1997.



# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B 0 Eatonton, GA 31024

Tel: 706-485-2776 0 706-485-0552 fax [www.putnamcountyga.us](http://www.putnamcountyga.us)

LETTER OF AGENCY-\_\_\_\_\_

WE, THE UNDERSIGNED OWNERS OF REAL PROPERTY LOCATED IN THE CITY OF EATONTON/PUTNAM COUNTY, GEORGIA, HEREBY APPOINT James Stiff TO BY MY AGENT FOR THE PURPOSE OF APPLYING FOR rezoning OF PROPERTY DESCRIBED AS MAP 103 PARCELS 001001 and 001, CONSISTING OF 71.554 ACRES, WHICH HAS THE FOLLOWING ADDRESS: 916 Harmony Road EATONTON, GEORGIA 31024. ATTACHED IS A COPY OF A DEED AND OR LAT OF SURVEY DESCRIBING THE PROPERTY OWNED BY THE PROPERTY OWNER(S) TO WHICH THIS LETTER OF AGENCY APPLIES.

THE ABOVE-NAMED AGENT HEREBY IS AUTHORIZED TO COMPLETE AND SIGN THE CITY OF EATONTON/PUTNAM COUNTY APPLICATION FOR rezoning ON OUR BEHALF. WE UNDERSTAND THAT THIS LETTER OF AGENCY WILL BE ATTACHED TO AND MADE PART OF SAID FORM AND WILL BE RELIED UPON BY THE CITY OF EATONTON/PUTNAM COUNTY. FOR AND IN CONSIDERATION OF THE CITY OF EATONTON/PUTNAM COUNTY ACCEPTING THIS LETTER OF AGENCY, WE HEREBY INDEMNIFY AND HOLD HARMLESS THE CITY OF EATONTON/PUTNAM COUNTY AND ITS AGENTS AND/OR EMPLOYEES IN THE EVEN THAT THE ABOVE NAMED AGENT SHOULD MISUSE THIS LETTER OF AGENCY AND WE SUFFER DAMAGES AS A RESULT.

THIS 22nd DAY OF June, 2021.

PROPERTY OWNER(S): Peggy Allen

Peggy Allen  
NAME (PRINTED)

[Signature]  
SIGNATURE

ADDRESS: 918 Harmony Road, Eatonton, GA 31024

PHONE: \_\_\_\_\_

ALL SIGNATURES WERE HEREBY SWORN TO AND SUBSCRIBED BEFORE ME THIS

23 DAY OF June, 2021.

[Signature]

NOTARY

MY COMMISSION EXPIRES: \_\_\_\_\_





# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B 0 Eatonton, GA 31024

Tel: 706-485-2776 0 706-485-0552 fax [www.putnamcountyga.us](http://www.putnamcountyga.us)

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THIS 22nd DAY OF June, 2021.

PROPERTY OWNER(S): Sue Fox

Susan Fox  
NAME (PRINTED)

Susan Fox  
SIGNATURE

ADDRESS: 108 Walking Horse Lane, Eatonton, GA 31024

PHONE: \_\_\_\_\_

ALL SIGNATURES WERE HEREBY SWORN TO AND SUBSCRIBED BEFORE ME THIS 23 DAY OF June, 2021.

[Signature]  
NOTARY

MY COMMISSION EXPIRES: \_\_\_\_\_



# Item 13: Legal Description & Recorded Plat



**LEGAL DESCRIPTION**  
**PARCEL "B"**

---

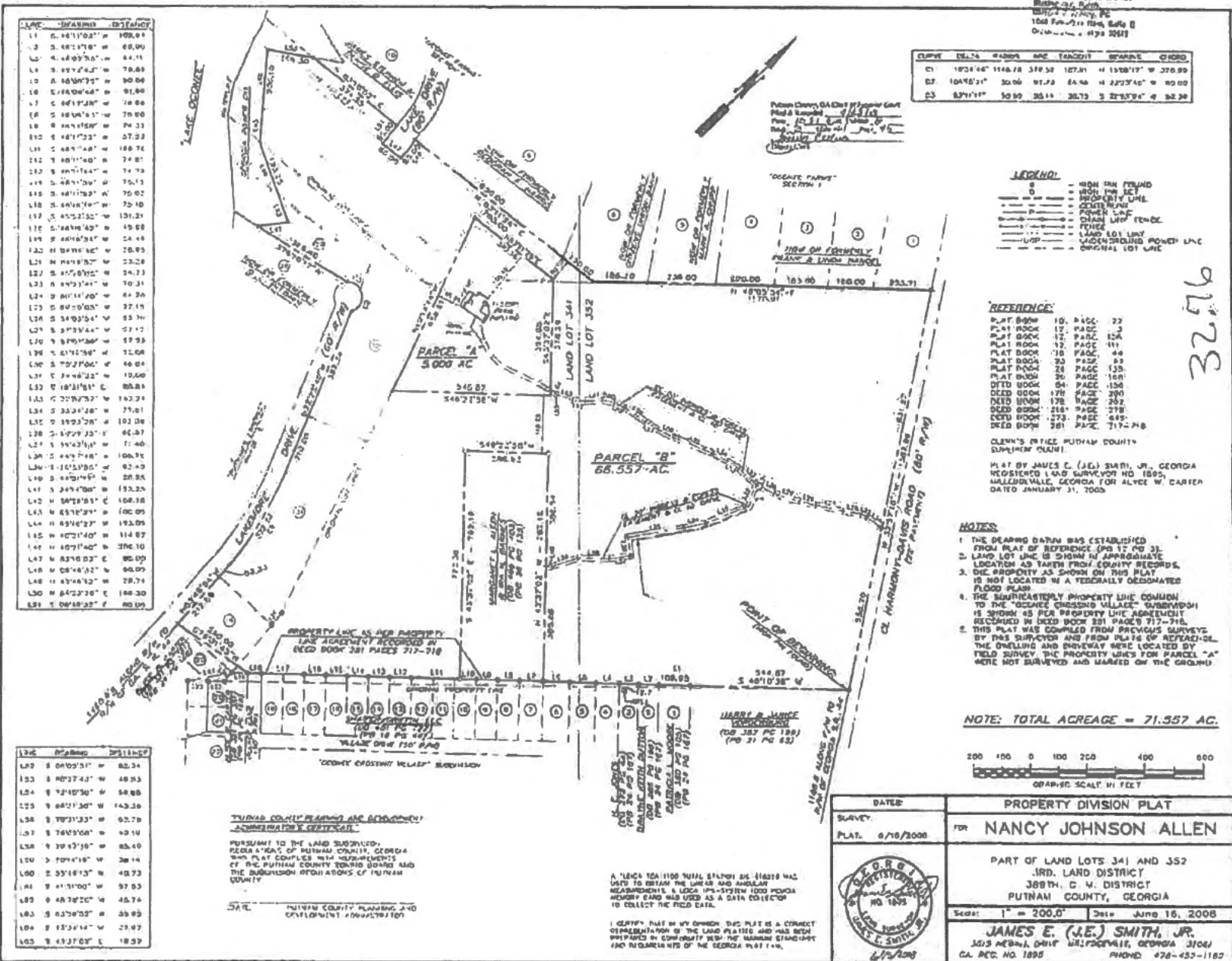
All that Tract or Parcel of land, lying and being located in Land Lot 341 and Land Lot 352 of the 3rd District, in the 389th G.M. District, Putnam County, Georgia, containing 71.554 Acres (3,116,910 SQ.FT.), more or less and being more particularly described as follows:

**BEGINNING** at 1/2" rebar set on the southwestern most 80 foot Right of Way of Harmony Road, said 1/2" rebar set being located 1188.80 feet northwest from the right of way intersection of Georgia State Route No. 44; thence departing said right of way, proceed the following: South 45 degrees 05 minutes 27 seconds West for a distance of 544.83 feet to a 3/4" rebar found; thence South 45 degrees 03 minutes 46 seconds West for a distance of 108.94 feet to a point; thence South 45 degrees 07 minutes 02 seconds West for a distance of 69.90 feet to a point; thence South 44 degrees 55 minutes 38 seconds West for a distance of 64.11 feet to a point; thence South 45 degrees 05 minutes 26 seconds West for a distance of 79.87 feet to 3/4" rebar found; thence South 45 degrees 05 minutes 49 seconds West for a distance of 90.18 feet to a 3/4" rebar found; thence South 45 degrees 03 minutes 10 seconds West for a distance of 91.80 feet to a 1/2" rebar found; thence North 44 degrees 43 minutes 28 seconds West for a distance of 385.81 feet to a point; thence North 44 degrees 43 minutes 28 seconds West for a distance of 386.54 feet to a 1/2" rebar found; thence South 45 degrees 17 minutes 08 seconds West for a distance of 286.82 feet to a 1/2" rebar found; thence South 44 degrees 42 minutes 23 seconds East for a distance of 773.30 feet to a 3/8" rebar found; thence South 45 degrees 04 minutes 17 seconds West for a distance of 166.53 feet to a 3/8" rebar found; thence South 45 degrees 12 minutes 34 seconds West for a distance of 74.99 feet to a 3/8" rebar found; thence South 45 degrees 04 minutes 43 seconds West for a distance of 74.72 feet to a 3/8" rebar found; thence South 45 degrees 11 minutes 16 seconds West for a distance of 75.21 feet to a 3/8" rebar found; thence South 45 degrees 02 minutes 05 seconds West for a distance of 74.95 feet to a 3/8" rebar found; thence South 45 degrees 15 minutes 52 seconds West for a distance of 75.08 feet to a 3/8" rebar found; thence South 44 degrees 40 minutes 57 seconds West for a distance of 151.27 feet to a 1/2" rebar found; thence South 45 degrees 09 minutes 02 seconds West for a distance of 49.90 feet to a 1/2" rebar found; thence South 78 degrees 25 minutes 46 seconds West for a distance of 290.03 feet to a 5/8" rebar found on the easternmost 60 foot Right of Way of Lakemore Drive; thence proceed along the easternmost 60 foot Right of Way of Lakemore Drive, the following: thence North 04 degrees 54 minutes 06 seconds West for a distance of 265.91 feet to a point; thence with a curve turning to the left with an arc length of 372.52 feet, a radius of 1148.78 feet, a chord bearing of North 14 degrees 12 minutes 07 seconds West and a chord length of 370.89 feet to a point; thence North 23 degrees 29 minutes 30 seconds West for a distance of 597.34 feet to a point; thence with a curve turning to the left with an arc length of 92.74 feet, a radius of 50.00 feet, a chord bearing of North 23 degrees 29 minutes 07 seconds West and a chord length of 80.00 feet to a 1/2" rebar found; thence with a compound curve turning to the left with an arc length of 55.08 feet, a radius of 50.00 feet, a chord bearing of South 71 degrees 59 minutes 02 seconds West and a chord length of 52.34 feet to a

1/2" rebar found; thence departing said right of way, proceed the following: thence South 75 degrees 04 minutes 32 seconds West for a distance of 369.44 feet to a 1/2" rebar found; thence North 37 degrees 25 minutes 08 seconds East for a distance of 109.73 feet to a 1/2" rebar found; thence North 66 degrees 24 minutes 57 seconds West for a distance of 100.04 feet to a 1/2" rebar found; thence North 66 degrees 24 minutes 57 seconds West for a distance of 192.96 feet to a 1/2" rebar found; thence North 41 degrees 27 minutes 58 seconds West for a distance of 321.06 feet to a 1/2" ebar set; thence North 53 degrees 15 minutes 07 seconds East for a distance of 166.41 feet to a 1/2" rebar found; thence North 82 degrees 04 minutes 50 seconds East for a distance of 374.44 feet to a 1/2" rebar set on the westernmost 80 foot Right of Way of Lake Drive; thence proceed along the westernmost, southernmost and eastern most 80 foot Right of Way of Lake Drive, the following: thence South 07 degrees 53 minutes 44 seconds East for a distance of 80.00 feet to a 1/2" rebar set; thence North 82 degrees 04 minutes 50 seconds East for a distance of 80.00 feet to a 1/2" rebar set; thence North 07 degrees 53 minutes 44 seconds West for a distance of 80.00 feet to a 3/4" rebar found; thence North 82 degrees 06 minutes 16 seconds East for a distance of 649.94 feet to a 1/2" rebar found; thence North 82 degrees 06 minutes 16 seconds East for a distance of 130.06 feet to a 5/8" rebar found; thence North 44 degrees 59 minutes 20 seconds East for a distance of 186.04 feet to a 5/8" rebar found; thence North 44 degrees 59 minutes 20 seconds East for a distance of 236.20 feet to a 3/4" rebar found; thence North 44 degrees 59 minutes 20 seconds East for a distance of 384.74 feet to a nail found; thence North 44 degrees 59 minutes 20 seconds East for a distance of 159.93 feet to a 3/4" rebar found; thence North 44 degrees 59 minutes 20 seconds East for a distance of 204.00 feet to a 1/2" rebar found on the southwestern most 80 foot Right of Way of Harmony Road; thence proceed along the southwestern most 80 foot Right of Way of Harmony Road, the following: thence South 34 degrees 03 minutes 08 seconds East for a distance of 831.27 feet to a point; thence South 34 degrees 03 minutes 08 seconds East for a distance of 556.70 feet to a 1/2" rebar set and the **TRUE POINT OF BEGINNING**.

Said property contains 71.554 Acres (3,116,910 SQ.FT.),

Less and except Parcel "A" as described.



LINE	BEARING	DISTANCE
11	S 84°11'02" W	108.91
12	S 48°17'18" W	66.00
13	S 48°09'50" W	64.11
14	S 89°24'42" W	78.63
15	S 48°09'50" W	66.00
16	S 84°11'02" W	108.91
17	S 84°11'02" W	108.91
18	S 84°11'02" W	108.91
19	S 84°11'02" W	108.91
20	S 84°11'02" W	108.91
21	S 84°11'02" W	108.91
22	S 84°11'02" W	108.91
23	S 84°11'02" W	108.91
24	S 84°11'02" W	108.91
25	S 84°11'02" W	108.91
26	S 84°11'02" W	108.91
27	S 84°11'02" W	108.91
28	S 84°11'02" W	108.91
29	S 84°11'02" W	108.91
30	S 84°11'02" W	108.91
31	S 84°11'02" W	108.91
32	S 84°11'02" W	108.91
33	S 84°11'02" W	108.91
34	S 84°11'02" W	108.91
35	S 84°11'02" W	108.91
36	S 84°11'02" W	108.91
37	S 84°11'02" W	108.91
38	S 84°11'02" W	108.91
39	S 84°11'02" W	108.91
40	S 84°11'02" W	108.91
41	S 84°11'02" W	108.91
42	S 84°11'02" W	108.91
43	S 84°11'02" W	108.91
44	S 84°11'02" W	108.91
45	S 84°11'02" W	108.91
46	S 84°11'02" W	108.91
47	S 84°11'02" W	108.91
48	S 84°11'02" W	108.91
49	S 84°11'02" W	108.91
50	S 84°11'02" W	108.91
51	S 84°11'02" W	108.91

LINE	BEARING	DISTANCE
126	S 84°11'02" W	108.91
127	S 84°11'02" W	108.91
128	S 84°11'02" W	108.91
129	S 84°11'02" W	108.91
130	S 84°11'02" W	108.91
131	S 84°11'02" W	108.91
132	S 84°11'02" W	108.91
133	S 84°11'02" W	108.91
134	S 84°11'02" W	108.91
135	S 84°11'02" W	108.91
136	S 84°11'02" W	108.91
137	S 84°11'02" W	108.91
138	S 84°11'02" W	108.91
139	S 84°11'02" W	108.91
140	S 84°11'02" W	108.91
141	S 84°11'02" W	108.91
142	S 84°11'02" W	108.91
143	S 84°11'02" W	108.91
144	S 84°11'02" W	108.91
145	S 84°11'02" W	108.91
146	S 84°11'02" W	108.91
147	S 84°11'02" W	108.91
148	S 84°11'02" W	108.91
149	S 84°11'02" W	108.91
150	S 84°11'02" W	108.91
151	S 84°11'02" W	108.91

CURVE	BEARING	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C1	104°46'	1466.78	378.52	107.01	1158.97	W 378.52
C2	104°46'	30.00	87.52	84.96	1273.46	W 80.00
C3	87°11'	50.00	35.11	20.73	32.93	W 32.93

**LEGEND:**  
 - IRON PIN FOUND  
 - IRON NAIL SET  
 - PROPERTY LINE  
 - CENTERLINE  
 - POWER LINE  
 - LAND LOT BOUNDARY  
 - FENCE  
 - LAND LOT LINE  
 - UNDEVELOPED POWER LINE  
 - ORIGINAL LOT LINE

**REFERENCE:**  
 PLAT BOOK 10, PAGE 22  
 PLAT BOOK 12, PAGE 3  
 PLAT BOOK 12, PAGE 124  
 PLAT BOOK 12, PAGE 141  
 PLAT BOOK 18, PAGE 64  
 PLAT BOOK 20, PAGE 63  
 PLAT BOOK 26, PAGE 133  
 PLAT BOOK 26, PAGE 168  
 DTD BOOK 04, PAGE 158  
 DTD BOOK 178, PAGE 290  
 DTD BOOK 178, PAGE 292  
 DTD BOOK 218, PAGE 278  
 DTD BOOK 273, PAGE 645  
 DTD BOOK 281, PAGE 717-718

CLAREN'S OFFICE PUTNAM COUNTY SURVEYOR GENERAL  
 W. H. JAMES E. (J.E.) SMITH, JR., GEORGIA REGISTERED LAND SURVEYOR NO. 1895, HALLSBURG, GEORGIA FOR ALYCE W. CARTER DATED JANUARY 31, 2008.

**NOTES:**  
 1. THE BEARING DATUM WAS ESTABLISHED FROM PLAT OF REFERENCE (PG 17 PG 31).  
 2. LAND LOT LINE IS SHOWN IN APPROXIMATE LOCATION AS TAKEN FROM COUNTY RECORDS.  
 3. THE PROPERTY AS SHOWN ON THIS PLAT IS NOT LOCATED IN A FEDERALLY DESIGNATED FLOOD PLAIN.  
 4. THE SOUTHEASTERN PROPERTY LINE COMMON TO THE "GEORGE CROSSING VILLAGE" SUBDIVISION IS SHOWN AS PER PROPERTY LINE AGREEMENT RECORDED IN DEED BOOK 281 PAGE 717-718.  
 5. THIS PLAT WAS COMPILED FROM PREVIOUS SURVEYS BY THIS SURVEYOR AND FROM PLATS OF REFERENCE. THE SHEDDING AND DRIVEWAY WERE LOCATED BY FIELD SURVEY. THE PROPERTY LINES FOR PARCEL "A" WERE NOT SURVEYED AND MARKED ON THE GROUND.

**NOTE: TOTAL ACREAGE = 71.557 AC.**

200 100 0 100 200 400 600  
 GRAPHIC SCALE IN FEET

DATE:	PROPERTY DIVISION PLAT
SURVEY:	FOR NANCY JOHNSON ALLEN
PLAT: 6/10/2008	
PART OF LAND LOTS 341 AND 352 1RD. LAND DISTRICT 388TH. C. W. DISTRICT PUTNAM COUNTY, GEORGIA Scale: 1" = 200.0' Date: June 16, 2008 <b>JAMES E. (J.E.) SMITH, JR.</b> 3025 WOODLAND DR. WILKESBORO, GEORGIA 31061 GA. REG. NO. 1895 PHONE: 478-453-1182	

32.76

https://search.gisccca.org/Imaging/HTML5Viewer.aspx?id=2496461&key1=22&key2=788&county=117&countyname=PUTNAM&userid=386456&appid=28





# Items 16 & 17: Source of Domestic Water & Sewer Supply Provider Letter



**georgia civil**  
CIVIL ENGINEERING  
LANDSCAPE ARCHITECTURE  
LAND SURVEYING

June 23, 2021

Lisa Jackson, MPA  
Planning Director  
Putnam County Planning & Development  
117 Putnam Drive, Suite B  
Eatonton, GA 31024

Re: Helms Farm Campus at Harmony Rd – Proposed Provider for Domestic Water Service & Sanitary Sewage Disposal

Dear Lisa,

As you are aware, Goodwill Industries of Middle Georgia is currently submitting an application to rezone two parcels in Eatonton, Georgia, along Harmony Road. The application requests information about the source of domestic water supply as well as sanitary sewer disposal. It is our understanding that Piedmont Water is the local provider in this area, and we have confirmed this with Brent Hurst, the Chief Operating Officer with Piedmont Water Company. Piedmont will provide both the domestic water as well as service sanitary sewage disposal. We are currently consulting with Piedmont Water to determine the anticipated demand so they can determine if the proposed development will have to pump sewage to an existing lift station with no upgrades, one with upgrades, or directly to the plant.

Please let us know if we can assist further in this matter or if you have any questions.

Sincerely,

  
Jason Brown, P.E.  
President  
PE#031684





# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ www.putnamcountyga.us

## DISCLOSURE OF APPLICANT'S CAMPAIGN CONTRIBUTION

The *Putnam County Code of Ordinances*, Section 66-167(c) states as follows:

“When any applicant or his attorney for a rezoning action has made, within two years immediately preceding the filing of that applicant’s application for the rezoning action, campaign contributions aggregating \$250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

a. The name and official position of the local government official to whom the campaign contribution was made; and

b. The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution. The disclosures required by this section shall be filed within ten days after an application for the rezoning action is first filed.”

1. Name: Peggy Allen

2. Address: 978 Harmond Rd  
Eatonton 31024

3. Have you given contributions that aggregated \$250.00 or more within two years immediately preceding the filing of the attached application to a candidate that will hear the proposed application?  Yes  No If yes, who did you make the contributions to? \_\_\_\_\_

Signature of Applicant:   
Date: 10/19/21





# PUTNAM COUNTY PLANNING & DEVELOPMENT

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a. The name and official position of the local government official to whom the campaign contribution was made; and

b. The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution. The disclosures required by this section shall be filed within ten days after an application for the rezoning action is first filed.”

1. Name: Susan Fox \_\_\_\_\_

2. Address: 108 Walking Horse Lane  
Eatonton, Georgia 31024 \_\_\_\_\_

3. Have you given contributions that aggregated \$250.00 or more within two years immediately preceding the filing of the attached application to a candidate that will hear the proposed application? \_\_\_\_\_ Yes  No \_\_\_\_\_ If yes, who did you make the contributions to? : \_\_\_\_\_

Signature of Applicant: *Susan Fox* dotloop verified  
06/18/21 4:16 PM EDT  
Q3Y5-ZVRN-LNXV-OVMZ \_\_\_\_\_  
Date: 06/18/2021 / \_\_\_\_\_



# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

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## DISCLOSURE OF APPLICANT'S CAMPAIGN CONTRIBUTION

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a. The name and official position of the local government official to whom the campaign contribution was made; and

b. The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution. The disclosures required by this section shall be filed within ten days after an application for the rezoning action is first filed.”

1. Name: James K. Stiff

2. Address: 3 Shadowbrooks Circle  
Augusta, GA. 30909

3. Have you given contributions that aggregated \$250.00 or more within two years immediately preceding the filing of the attached application to a candidate that will hear the proposed application?  Yes  No If yes, who did you make the contributions to? : \_\_\_\_\_

Signature of Applicant: James K. Stiff

Date: 6 / 18 / 21  
CEO  
Goodwill Industries Middle Georgia, Inc.

# Item 20: Property Taxes





INTERNET TAX RECEIPT

2020 000315  
ALLEN INVESTMENT PARTNERS LLLP

PARCEL B HARMONY RD  
103 001 001

DESCRIPTION	TAX AMOUNT	EXEMPTION	MILLAGE
FAIR MARKET VALUE	\$629,824		
COUNTY	\$2,034.44	\$0.00	8.078
SCHOOL	\$3,972.18	\$0.00	15.772
SPEC SERV	\$95.20	\$0.00	0.378

<b>ORIGINAL TAX DUE</b>
\$6,101.82
<b>INTEREST</b>
<b>COLLECTION COST</b>
<b>FIFA CHARGE</b>
<b>PENALTY</b>
<b>TOTAL PAID</b>
\$6,101.82
<b>TOTAL DUE</b>
\$0.00

TO ALLEN INVESTMENT PARTNERS LLLP  
108 WALKING HORSE LANE  
EATONTON, GA 31024

FROM Putnam County Tax Commissioner  
100 South Jefferson Ave Suite 207  
Eatonton, GA 31024-1061  
(706) 485-5441



Date Paid: 12/3/2020



Scan this code with  
your mobile phone  
to view this bill

INTERNET TAX RECEIPT

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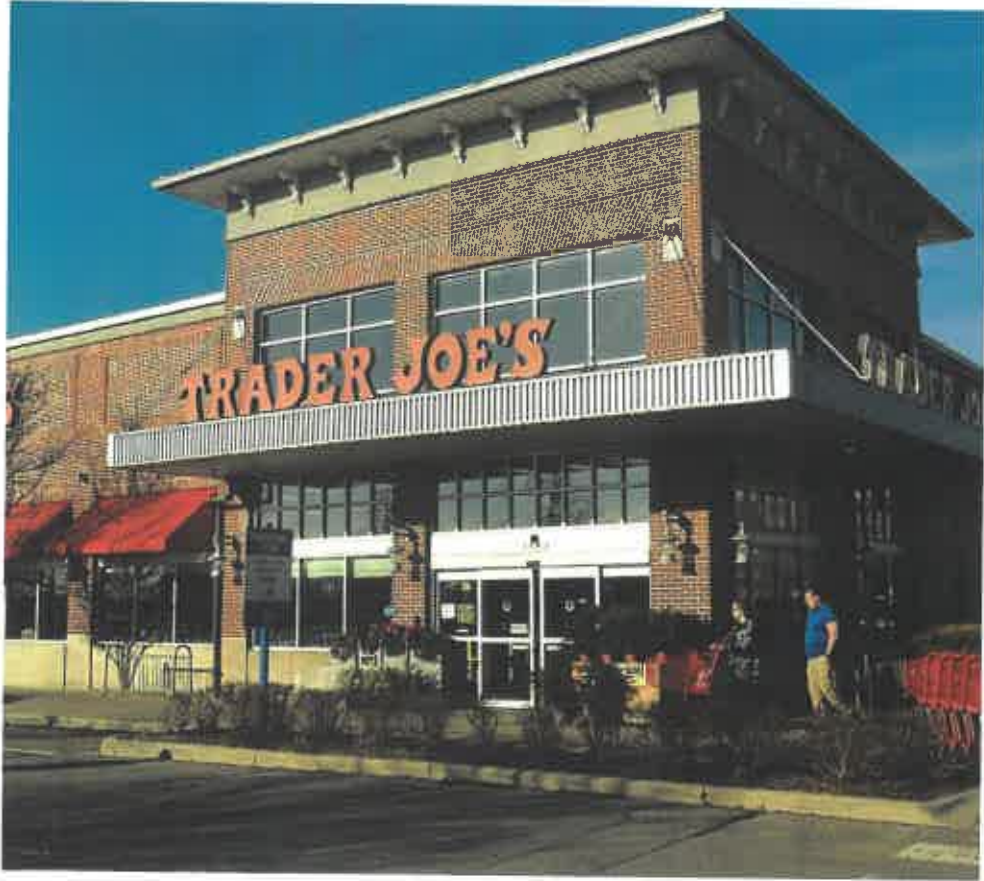
# Item 21: Concept Plan & Project Inspiration















## Item 22: Impact Analysis

IMPACT ANALYSIS

**Impact analysis.** An impact analysis is required for all applications unless the application will result in fewer than 25 single-family residential lots. The impact analysis shall be prepared by a professional engineer, a registered land surveyor, a landscape architect, a land planner or any other person professionally involved in and familiar with land development activities.

1. The application must be accompanied by a written, documented analysis of the proposed zoning change with regard to each of the standards governing consideration, (which are enumerated under Putnam County Code of Ordinances, Chapter 66-Zoning, Sec. 66-165(d)) and are as follows:

- a. Is the proposed use consistent with the stated purpose of the zoning district that is being requested?
- b. Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?
- c. Will the proposed use adversely affect the existing use, value or usability of adjacent or nearby property?
- d. Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?
- e. Are there substantial reasons why the property cannot or should not be used as currently zoned?
- f. Will the proposed use cause an excessive or burdensome use of public facilities or services or exceed the present or funded capabilities, included but not limited to streets, water or sewer utilities, and police or fire protection?
- g. Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?
- h. Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, and a reasonable private use of the subject property?

2. A traffic impact analysis is to include the existing average daily traffic on road/streets leading to the nearest intersection and the projected average daily traffic. Additional requirements for the analysis may be provided by the Planning and Development Department and included with the application.

3. The estimated number of dwelling units and total floor area of non-residential uses (if applicable) of the proposed development.

4. Effect on the environment surrounding the area to be rezoned including the effect on all natural and historic resources. (State source of the information)

5. Impact on fire protection with respect to the need for additional firefighting equipment or personnel. (State source of the information)

6. What are the physical characteristics of the site with respect to topography and drainage courses?

7. Adjacent and nearby zoning and land use.



**IMPACT ANALYSIS**

1. The application must be accompanied by a written, documented analysis of the proposed zoning change with regard to each of the standards governing consideration, (which are enumerated under Putnam County Code of Ordinances, Chapter 66-Zoning, Sec. 66-165(d)) and are as follows:

a. Is the proposed use consistent with the stated purpose of the zoning district that is being requested?

**Yes. The purpose of the planned unit development zoning is "to encourage the development of large tracts of land to produce logically organized development with compatible land uses." The proposed development meets this purpose.**

b. Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

**Yes. Adjacent and nearby uses include commercial, residential, and agricultural, all components that will be incorporated into the planned unit development to serve as a bridge and connection to adjacent parcels.**

c. Will the proposed use adversely affect the existing use, value or usability of adjacent or nearby property?

**No.**

d. Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

**Yes.**

e. Are there substantial reasons why the property cannot or should not be used as currently zoned?

**The current zoning does not allow for the proposed mixed-use program.**

f. Will the proposed use cause an excessive or burdensome use of public facilities or services or exceed the present or funded capabilities, included but not limited to streets, water or sewer utilities, and police or fire protection?

**No.**

g. Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

**Yes.**

h. Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, and a reasonable private use of the subject property?

**Yes.**

2. A traffic impact analysis is to include the existing average daily traffic on road/streets leading to the nearest intersection and the projected average daily traffic. Additional requirements for the analysis may be provided by the Planning and Development Department and included with the application.

**The traffic impact analysis is attached as Item 22a: Traffic Impact Analysis.**

3. The estimated number of dwelling units and total floor area of non-residential uses (if applicable) of the proposed development.

**The development program may include up to approximately 150 dwelling units. The total floor area for the non-residential uses may include up to 250,550 square feet.**



**TRAFFIC STUDY  
FOR  
HELMS FARM CAMPUS AT HARMONY ROAD  
PUTNAM COUNTY, GEORGIA**



***Prepared for:***

***Goodwill of Middle Georgia & The CSRA  
5171 Eisenhower Parkway  
Macon, GA 31206***

***Prepared By:***



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June 14, 2021  
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A & R Project # 21-082

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# 1.0 INTRODUCTION

The purpose of this study is to determine the traffic impact that will result from the proposed Helms Farm Campus development that will be located on Harmony Road across from Sammons Industrial Parkway (South), north of Village Lane in Putnam County, Georgia. The traffic analysis evaluates the current operations compared to the future conditions with the traffic generated by the development. The development will consist of:

- Goodwill Store: 16,800 sf
- Helms College: 50 Students
- Edgar’s Bakery: 7,000 sf
- Retail including Spa: 26,920 sf
- High-Turn-over Sit-Down Restaurant: 13,100 sf
- Super Market: 14,500 sf
- Multi-family (mid-rise) Residential: 127 Units
- Student Housing: 18 Units
- Vacation Villas (Resorts): 41 Units
- Event Hall or Banquet Hall: 22,000 sf
- Hotel: 175 Rooms



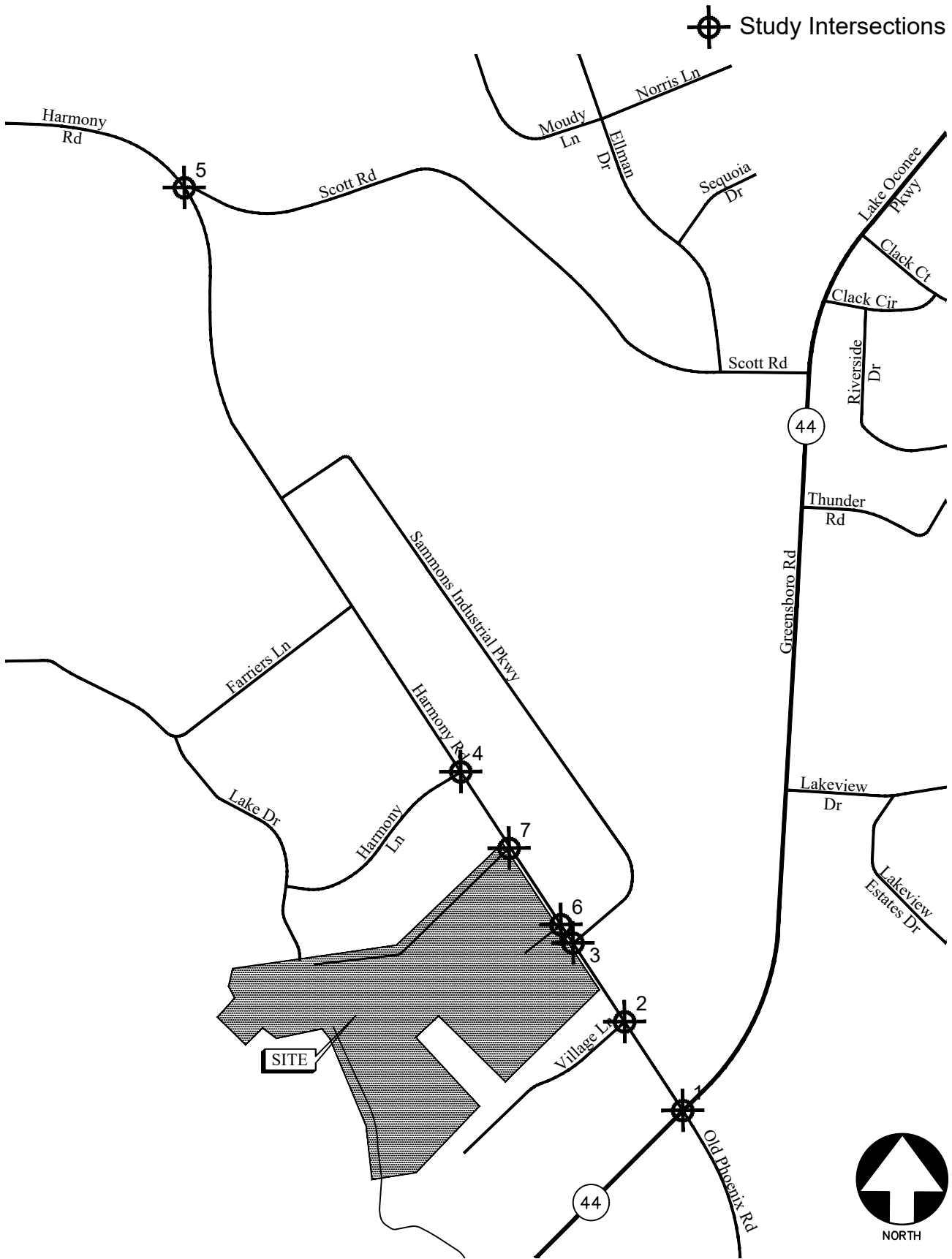
The development proposes two site driveways at the following locations:

- Site Driveway 1: Full-access (Southern) driveway on Harmony Road
- Site Driveway 2: Full-access (Northern) driveway on Harmony Road

Existing and future operations after completion of the project were analyzed at the intersections of:

- Harmony Road at SR 44 (Greensboro Road) / Old Phoenix Road
- Harmony Road at Village Lane
- Harmony Road at Sammons Industrial Parkway (South)
- Harmony Road at Harmony Lane
- Harmony Road at Scott Road / Private Driveway
- Harmony Road at Site Driveway 1 (Southern)
- Harmony Road at Site Driveway 2 (Northern) / Private Driveway

Recommendations to improve traffic operations have been identified as appropriate and are discussed in detail in the following sections of the report. The location of the development and the surrounding study network is shown in Figure 1.



LOCATION MAP

FIGURE 1

A&R Engineering Inc.



## 2.0 EXISTING FACILITIES / CONDITIONS

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

### 2.1.1 SR 44 (Greensboro Road)

SR 44 (Greensboro Road) is an east-west, two-lane, undivided roadway with a posted speed limit of 45 mph in the vicinity of the site. Georgia Department of Transportation (GDOT) traffic counts (Station ID 237-0146) indicate that the daily traffic volume on SR 44 (Greensboro Road) in 2019 was 15,200 vehicles per day north of Harmony Road. GDOT classifies SR 44 (Greensboro Road) as a Rural Minor Arterial roadway.

### 2.1.2 Harmony Road

Harmony Road is a north-south, two-lane, undivided roadway with a posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID 237-0181) indicate that the daily traffic volume on Harmony Road in 2019 was 3,570 vehicles per day north of Scott Road. GDOT classifies Harmony Road as a Rural Minor Collector roadway.

### 2.1.3 Village Lane

Village Lane is an east-west, two-lane, undivided roadway with a posted speed limit of 25 mph in the vicinity of the site.

### 2.1.4 Sammons Industrial Parkway

Sammons Industrial Parkway is an east-west, two-lane, undivided roadway with a posted speed limit of 25 mph in the vicinity of the site.

### 2.1.5 Harmony Lane

Harmony Lane is an east-west, two-lane, undivided roadway with a posted speed limit of 25 mph in the vicinity of the site.

### 2.1.6 Scott Road

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

### 3.0 STUDY METHODOLOGY

In this study, the methodology used for evaluating traffic operations at each of the subject intersections is based on the criteria set forth in the Transportation Research Board’s Highway Capacity Manual, 6<sup>th</sup> edition (HCM 6). Synchro software, which utilizes the HCM methodology, was used for the analysis. The following is a description of the methodology employed for the analysis of unsignalized and signalized intersections. At specific intersections in which HCM 6 is unable to report results due to limitations of the software version, HCM 2000 will be used instead. The following is a description of the methodology employed for the analysis of unsignalized and signalized intersections.

#### 3.1 Unsignalized Intersections

For unsignalized intersections at which the side street or minor street is controlled by a stop sign, the criteria for evaluating traffic operations are the level-of-service (LOS) for the turning movements at the intersection and the level-of-service for the overall intersection. Level-of-service is based on the average controlled delay incurred at the intersection. Controlled delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the controlled delay for unsignalized intersections, such as the availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue.

Level-of-service is assigned a letter designation from “A” through “F”. Level-of-service “A” indicates excellent operations with little delay to motorists, while level-of-service “F” exists when there are insufficient gaps of acceptable size to allow vehicles on the side street to cross safely, resulting in extremely long total delays and long queues. The level-of-service criteria for two-way stop-controlled and all-way stop-controlled (unsignalized) intersections are given in Table 1.

Level-of-service	Average Delay (sec)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: Highway Capacity Manual

#### 3.2 Signalized Intersections

For signalized intersections, it is necessary to evaluate both capacity and level-of-service in order to evaluate the overall operation of the intersection. The capacity analysis of an intersection is performed by comparing the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This results in a volume/capacity (v/c) ratio for each lane group. A v/c ratio greater

than 1.0 indicates that the volume of traffic has exceeded the capacity available, resulting in a temporary excess of demand. Although the capacity of the entire intersection is not defined, a composite v/c ratio for the sum of the critical lane groups within the intersection is computed. This composite v/c ratio is an indication of the overall intersection sufficiency.

Level-of-service for a signalized intersection is defined in terms of average controlled delay per vehicle, which is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The level-of-service criteria for signalized intersections, based on average controlled delay, are shown in Table 2. Level-of-service “A” indicates operations with very low controlled delay, while level-of-service “F” describes operations with extremely high average-controlled delay. Level-of-service “E” is typically considered to be the limit of acceptable delay, and level-of-service “F” is considered unacceptable by most drivers.

TABLE 2 – LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS	
Level-of-service	Average Control Delay (sec)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Source: Highway Capacity Manual

## 4.0 EXISTING 2021 TRAFFIC ANALYSIS

### 4.1 Existing Traffic Volumes

Traffic counts were obtained at the following study intersections:

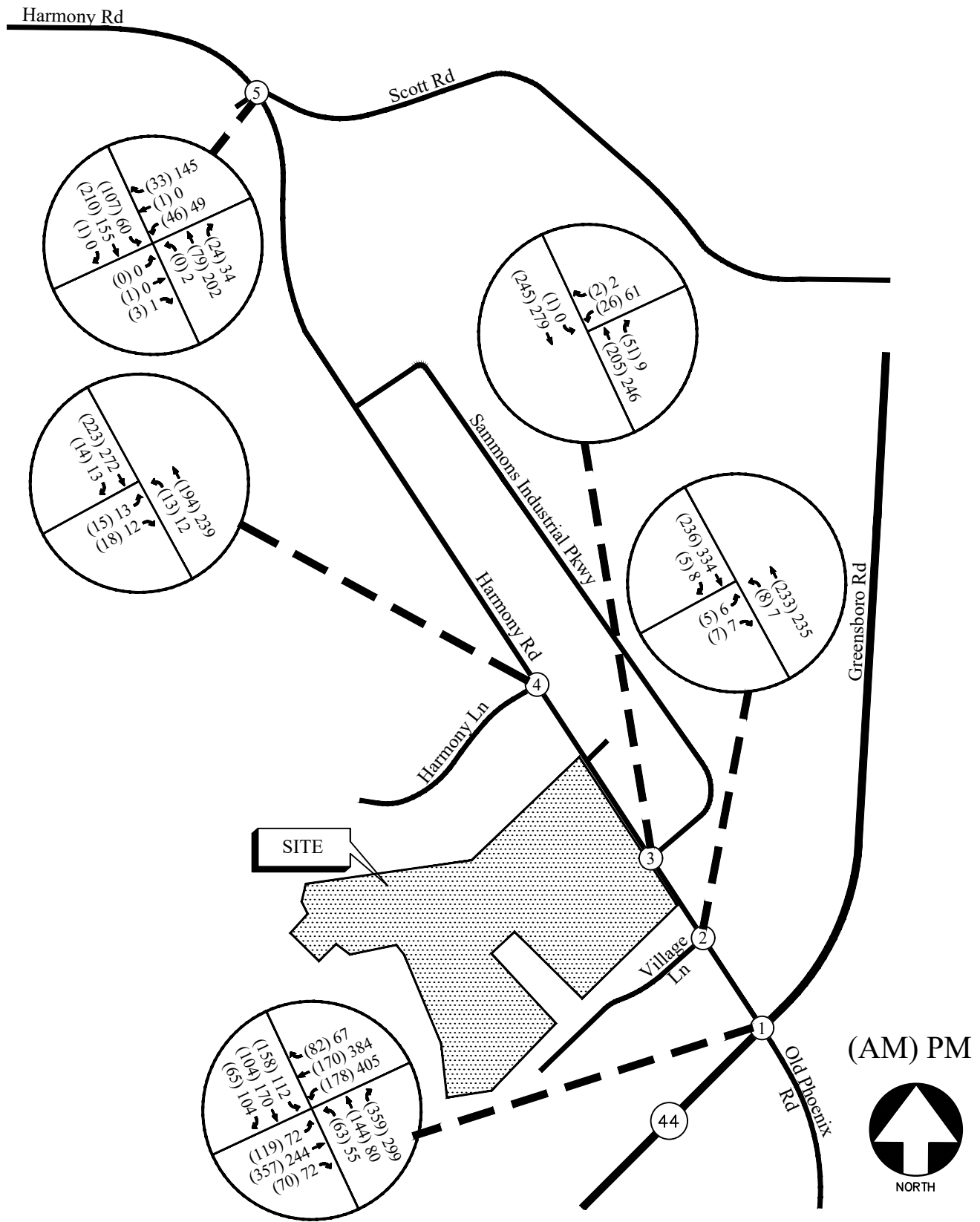
- Harmony Road at SR 44 (Greensboro Road) / Old Phoenix Road
- Harmony Road at Village Lane
- Harmony Road at Sammons Industrial Parkway (South)
- Harmony Road at Harmony Lane
- Harmony Road at Scott Road / Private Driveway

Turning movement counts were collected on Thursday, May 27, 2021, at all the study intersections. A 24-hour bi-directional volume count was also collected on Harmony Road north of Scott Road at the same location where GDOT had collected historic ADT in the past. All turning movement counts were recorded during the AM and PM peak hours between 7:00am to 9:00am and 4:00pm to 6:00pm, respectively. The four consecutive 15-minute interval volumes that summed to produce the highest volume at the intersections were then determined. These volumes make up the peak hour traffic volumes for the intersections counted and are shown in Figure 2.

### 4.2 Adjusted 2021 Traffic Volumes

To account for the abnormal traffic pattern due to COVID-19, an adjustment factor was determined by calculating the difference between GDOT historical turning movements counts and current bi-directional counts at Harmony Road north of Scott Road. The historic 2017 turning movement counts from GDOT's (Station ID 237-0181) were increased by an annual growth rate of 2.5% for four years and compared to the existing bi-directional counts collected on Thursday, May 27, 2021, at the same location. The comparison of the two counts revealed that the adjusted historic traffic counts are 9% higher in the AM peak hour and 1% higher in the PM peak hour. Therefore, the 2021 AM and PM peak hour counts shown in Figure 2 were increased by 9% and 1%, respectively. The projected and/or adjusted existing peak hour volumes are shown in Figure 3.

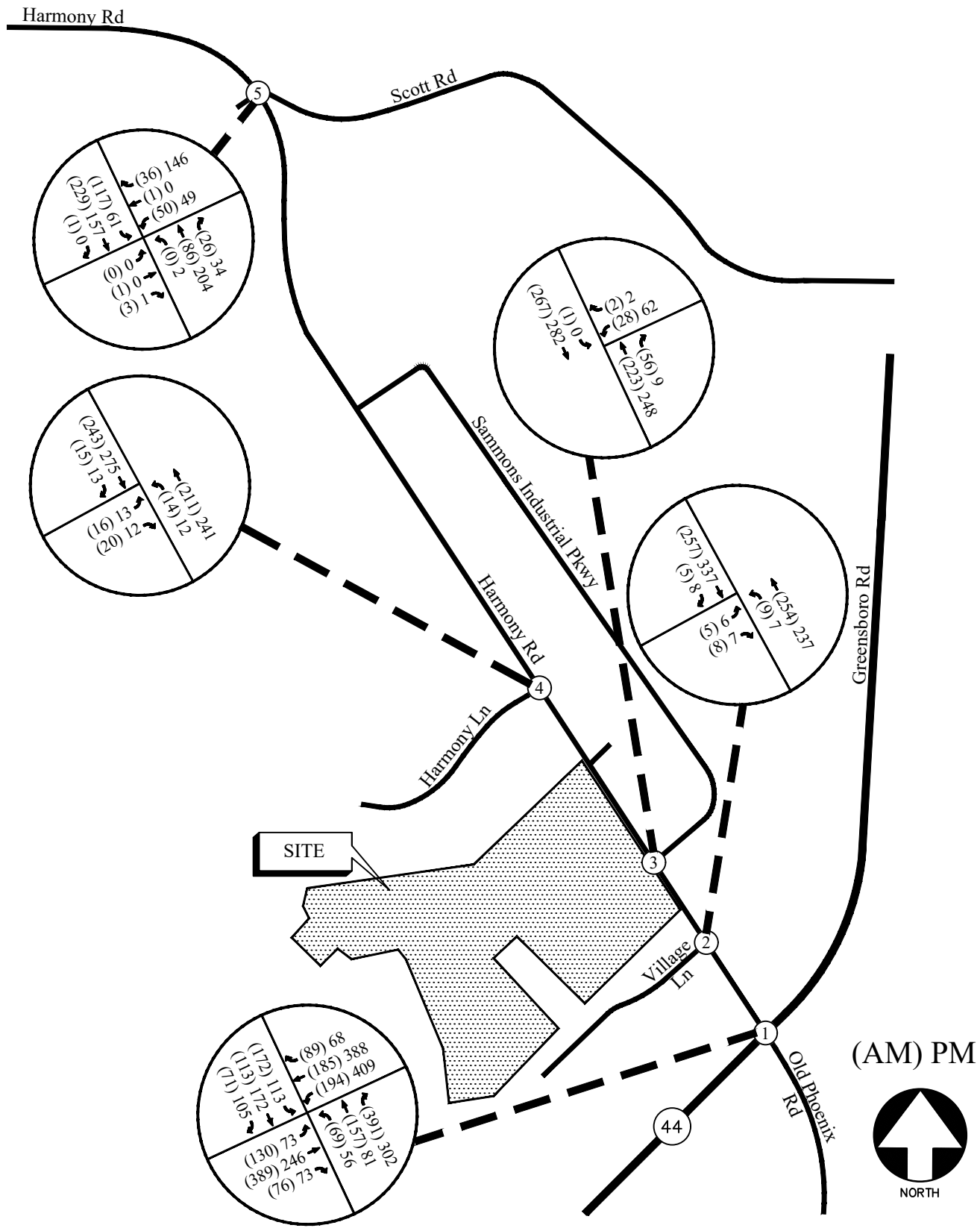




EXISTING WEEKDAY PEAK-HOUR VOLUMES (DURING COVID-19)

FIGURE 2

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ADJUSTED EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 3

A&R Engineering Inc.




### 4.3 Existing Traffic Operations

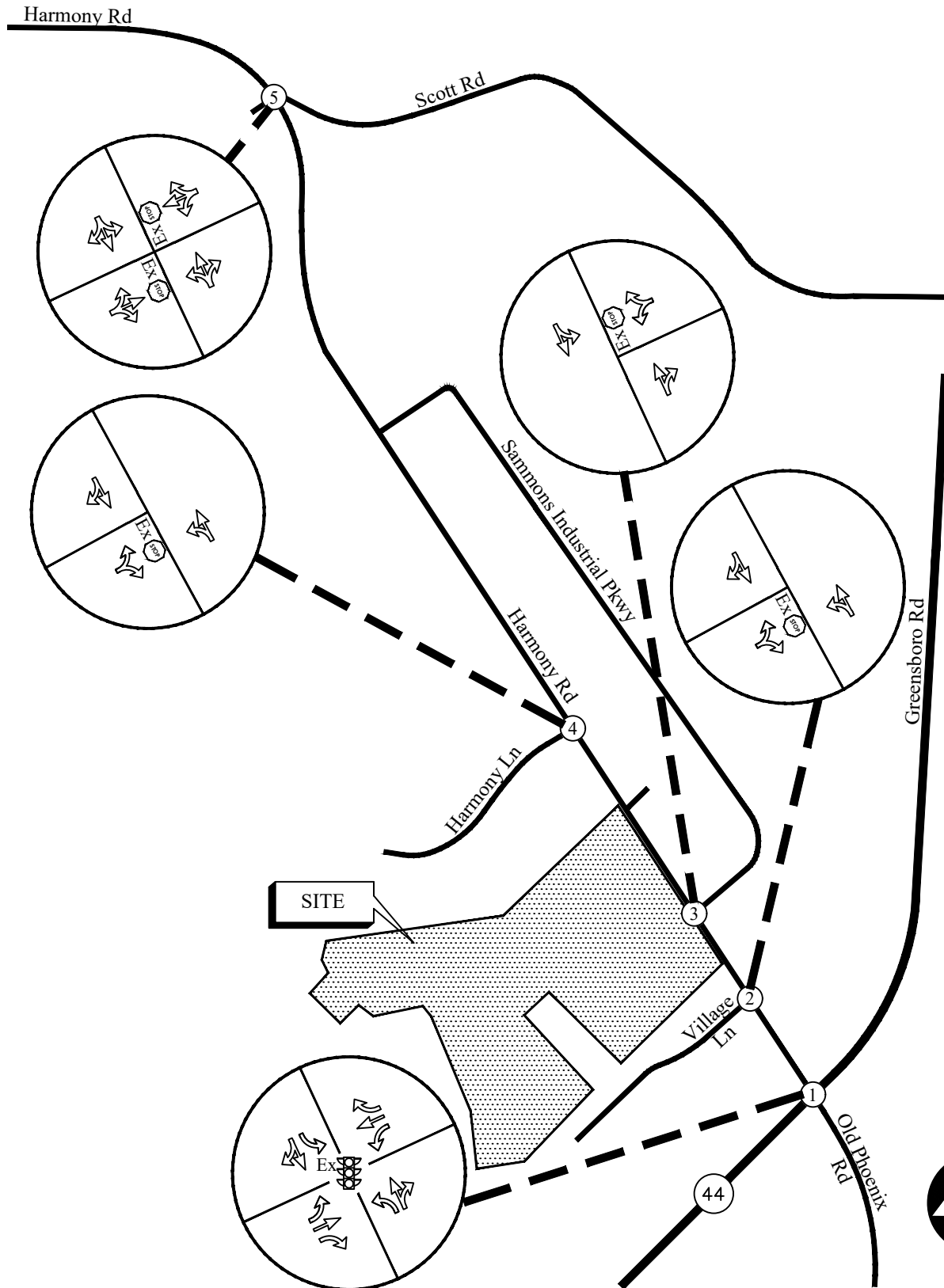
Existing 2021 traffic operations were analyzed at the study intersections in accordance with the HCM methodology using the volumes in Figure 3. The results of the analyses are shown in Table 3. The existing traffic control and lane geometry for the intersections are shown in Figure 4.

TABLE 3 – EXISTING INTERSECTION OPERATIONS				
Intersection		Traffic Control	LOS (Delay)	
			AM Peak Hour	PM Peak Hour
1	<b><u>SR 44 (Greensboro Road) @ Harmony Road / Old Phoenix Road</u></b>	Signalized	<b><u>D (47.7)</u></b>	<b><u>D (37.2)</u></b>
	-Eastbound Approach		D (44.3)	C (32.5)
	-Westbound Approach		C (29.4)	B (19.0)
	-Northbound Approach		E (68.6)	E (69.0)
	-Southbound Approach		D (36.1)	D (42.3)
2	<b><u>Harmony Road @ Village Lane</u></b>	Stop Controlled on Eastbound Approach	B (11.2)	B (12.4)
	-Eastbound Approach		A (7.9)	A (8.2)
3	<b><u>Harmony Road @ Sammons Industrial Parkway (S)</u></b>	Stop Controlled on Westbound Approach	B (14.2)	B (14.8)
	-Westbound Approach		A (7.9)	A (0.0)
4	<b><u>Harmony Road @ Harmony Lane</u></b>	Stop Controlled on Eastbound Approach	B (11.2)	B (12.0)
	-Eastbound Approach		A (7.8)	A (8.0)
5	<b><u>Harmony Road @ Scott Road / Private Driveway</u></b>	Stop Controlled on Eastbound and Westbound Approaches	B (11.0)	A (9.1)
	-Eastbound Approach		B (14.1)	B (13.3)
	-Westbound Approach		A (0.0)	A (7.6)
	-Northbound Left		A (7.7)	A (7.9)
	-Southbound Left			

The results of existing traffic operations analysis indicate that all the study intersections are operating at an level-of-service “D” or better in both AM and PM peak hours.

**LEGEND**

- Ex  Existing Signed Lane Closure
-  Existing Lane Closure
- Ex  Existing Traffic Signal



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 4

A&R Engineering Inc.



## 5.0 PROPOSED DEVELOPMENT

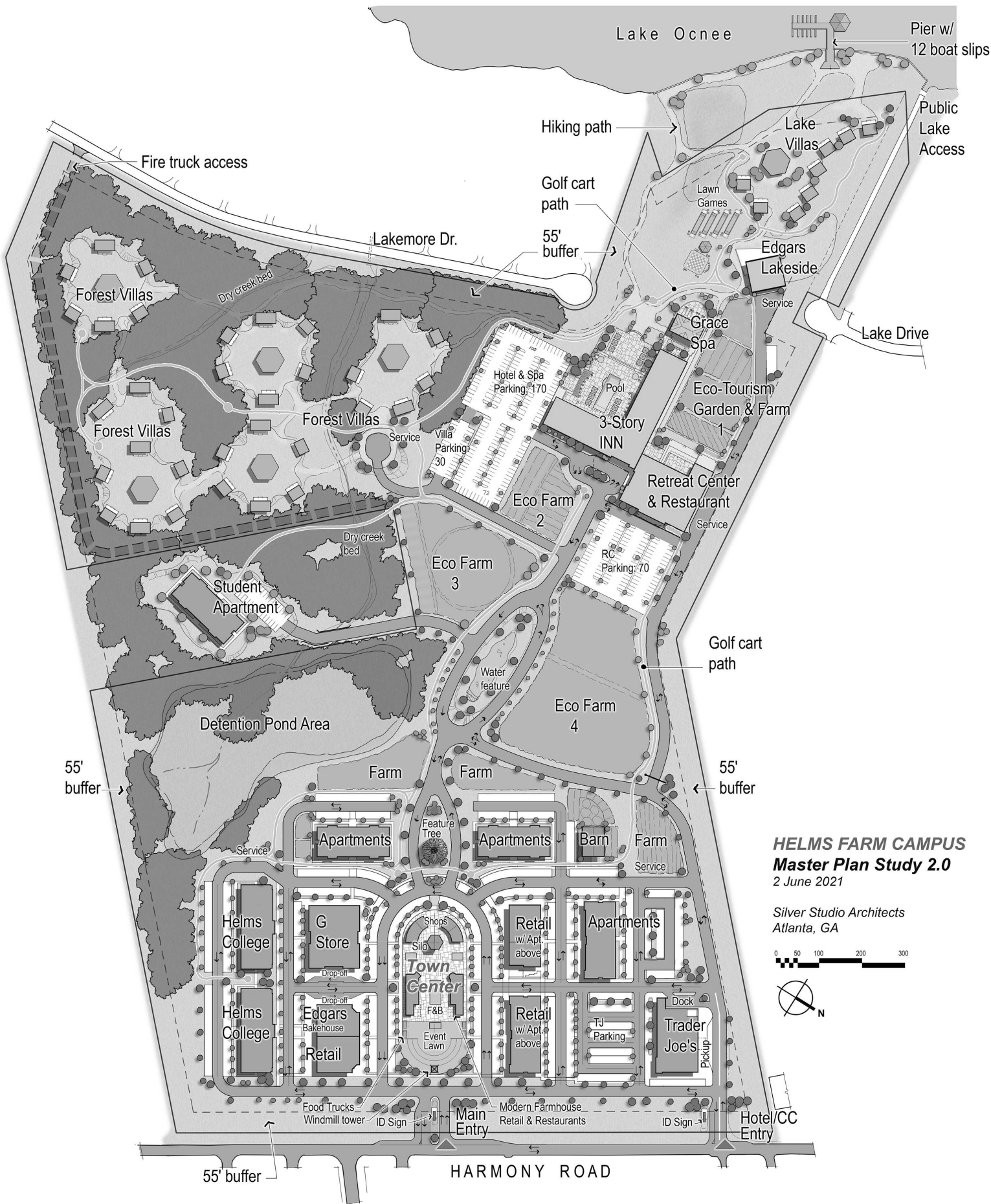
The proposed Helms Farm Campus that will be located on Harmony Road at Sammons Industrial Parkway (South), northeast of Harmony Road at Village Lane and southwest of Harmony Road at Harmony Lane in City of Eatonton, Putnam County, Georgia. The traffic analysis evaluates the current operations compared to the future conditions with the traffic generated by the development. A site plan is shown in Figure 5. The development will consist of:

- Goodwill Store: 16,800 sf
- Helms College: 50 Students
- Edgar’s Bakery: 7,000 sf
- Retail including Spa: 26,920 sf
- High-Turn-over Sit-Down Restaurant: 13,100 sf
- Super Market: 14,500 sf
- Multi-family (mid-rise) Residential: 127 Units
- Student Housing: 18 Units
- Vacation Villas (Resorts): 41 Units
- Event Hall or Banquet Hall: 22,000 sf
- Hotel: 175 Rooms

The development proposes two site driveways at the following locations:

- Site Driveway 1: Full-access (Southern) driveway on Harmony Road
- Site Driveway 2: Full-access (Northern) driveway on Harmony Road

A site plan is included in Figure 5.



**HELMS FARM CAMPUS**  
**Master Plan Study 2.0**  
 2 June 2021

Silver Studio Architects  
 Atlanta, GA



## 5.1 Trip Generation

Trip generation estimates for the project were based on the rates and equations published in the 10<sup>th</sup> edition of the Institute of Transportation Engineers (ITE) Trip Generation report for the daily, AM and PM peak hours. This reference contains traffic volume count data collected at similar facilities nationwide. The calculated total trip generation for the proposed developments are shown in Table 4.

TABLE 4 – TRIP GENERATION								
Land Use	Size	AM Peak Hour			PM Peak Hour			24 Hour
		Enter	Exit	Total	Enter	Exit	Total	Two-way
<b>815 – Free-Standing Discount Store</b>	16,800 sf	14	6	20	40	41	81	892
	<b>Mixed-Use Reduction</b>	-3	-1	-2	-3	-3	-4	-7
	<b>Pass-by Trips (0%) 17%</b>	0	0	0	0	-6	-6	-12
<b>930 – Fast Casual Restaurant</b>	7,000 sf	10	4	14	54	45	99	2,206
	<b>Mixed-Use Reduction</b>	-9	-4	-4	-8	-8	-9	-17
	<b>Pass-by Trips (49%) 50%</b>	-66	-3	0	-3	-23	-18	-41
<b>820 – Shopping Center</b>	26,920 sf	15	10	25	49	54	103	1,016
	<b>Mixed-Use Reduction</b>	-3	-2	-2	-4	-4	-4	-8
	<b>Pass-by Trips (0%) 34%</b>	0	0	0	0	-15	-17	-32
<b>932 -High-Turnover (Sit-Down) Rest.</b>	13,100 sf	71	59	130	79	49	128	1,470
	<b>Mixed-Use Reduction</b>	-4	-2	-3	-5	-5	-6	-11
	<b>Pass-by Trips (0%) 43%</b>	0	0	0	0	-32	-18	-50
<b>850 – Supermarket</b>	14,500 sf	33	22	55	68	66	134	2,241
	<b>Mixed-Use Reduction</b>	-6	-4	-4	-8	-8	-9	-17
	<b>Pass-by Trips (0%) 36%</b>	0	0	0	0	-22	-21	-43
<b>550 - University/Colleges</b>	50 Students	6	2	8	2	6	8	78
	<b>Mixed-Use Reduction</b>	-2	-2	0	-2	-1	-1	-2
<b>221- Multifamily Housing (Mid-Rise)</b>	127 Units	11	32	43	34	22	56	690
	<b>Mixed-Use Reduction</b>	-6	-3	-3	-6	-7	-6	-13
<b>225 - Off-Campus Student Apartment</b>	18 Beds	3	4	7	3	4	7	57
	<b>Mixed-Use Reduction</b>	-1	0	0	0	-1	-1	-2
<b>260 - Recreational Homes</b>	41 Rooms	6	3	9	4	7	11	142
	<b>Mixed-Use Reduction</b>	-1	-1	-1	-2	-2	-1	-3
<b>495 - Recreational Community Center</b>	22,000 sf	26	13	39	24	27	51	634
	<b>Mixed-Use Reduction</b>	-6	-2	-2	-4	-6	-5	-11
<b>310 –Hotel</b>	175 Rooms	48	34	82	53	52	105	1,549
	<b>Mixed-Use Reduction</b>	-14	-6	-7	-13	-16	-13	-29
	<b>Total Trips (without Reductions)</b>	<b>243</b>	<b>190</b>	<b>433</b>	<b>410</b>	<b>373</b>	<b>783</b>	<b>10,975</b>
	<b>New External Trips (with Reductions)</b>	<b>213</b>	<b>162</b>	<b>375</b>	<b>251</b>	<b>234</b>	<b>485</b>	<b>7,382</b>

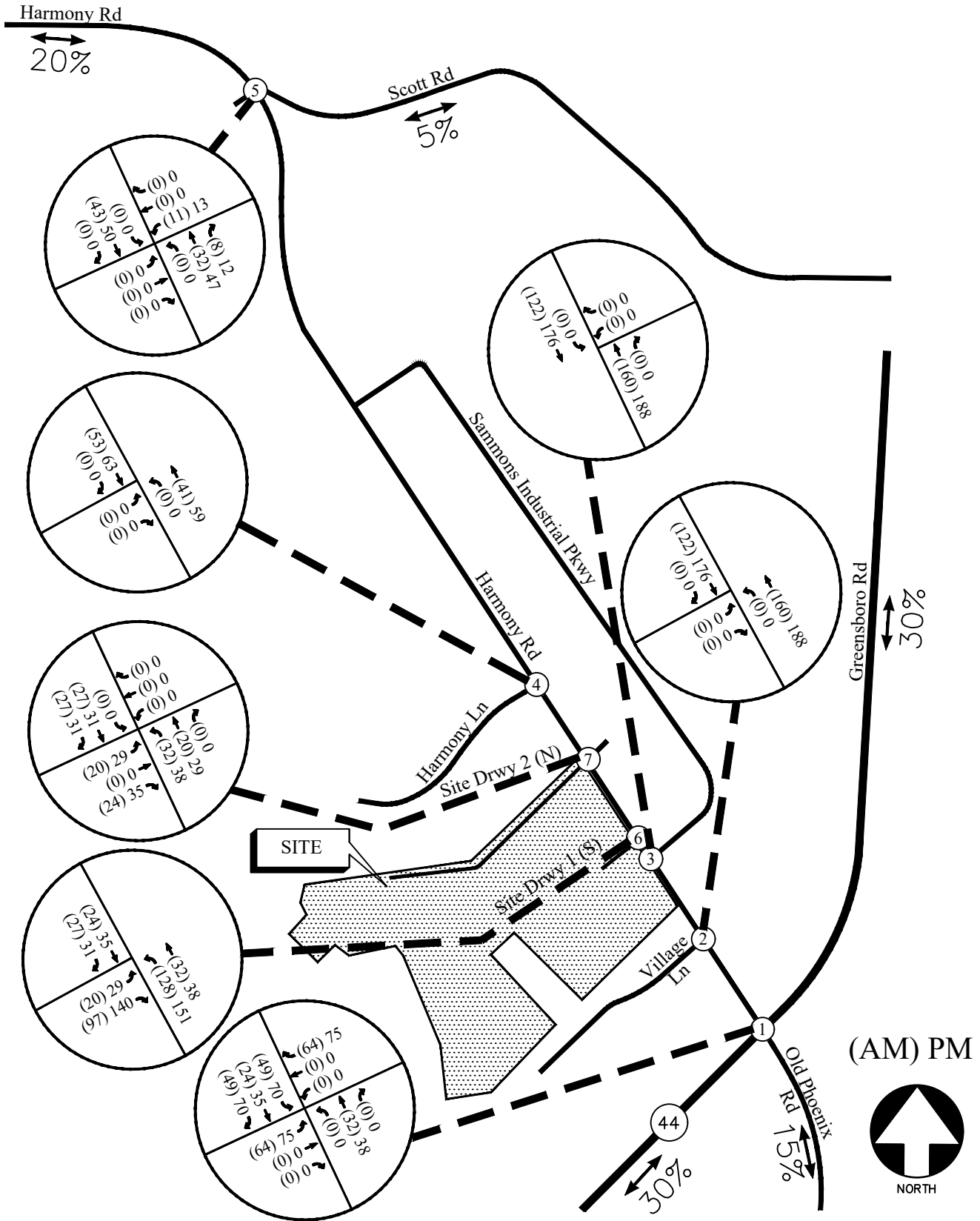
Daily pass-by reduction estimated to be ten times the PM pass-by volume.

The trip generation was based on the following ITE Land Uses: 221 – Multifamily Housing (Mid-Rise), 225 – Off-Campus Student Apartment, 260 – Recreational Homes, 310 – Hotel, 495 - Recreational Community Center, 550 - University/Colleges, 815 - Free-Standing Discount Store, 820 – Shopping center, 850 – Supermarket, 932 - High-Turnover (Sit-Down) Restaurant and 930 – Fast Casual Restaurant. Due to the nature of the development, pass-by and mixed-use reductions have been applied per ITE standards.

## 5.2 Trip Distribution

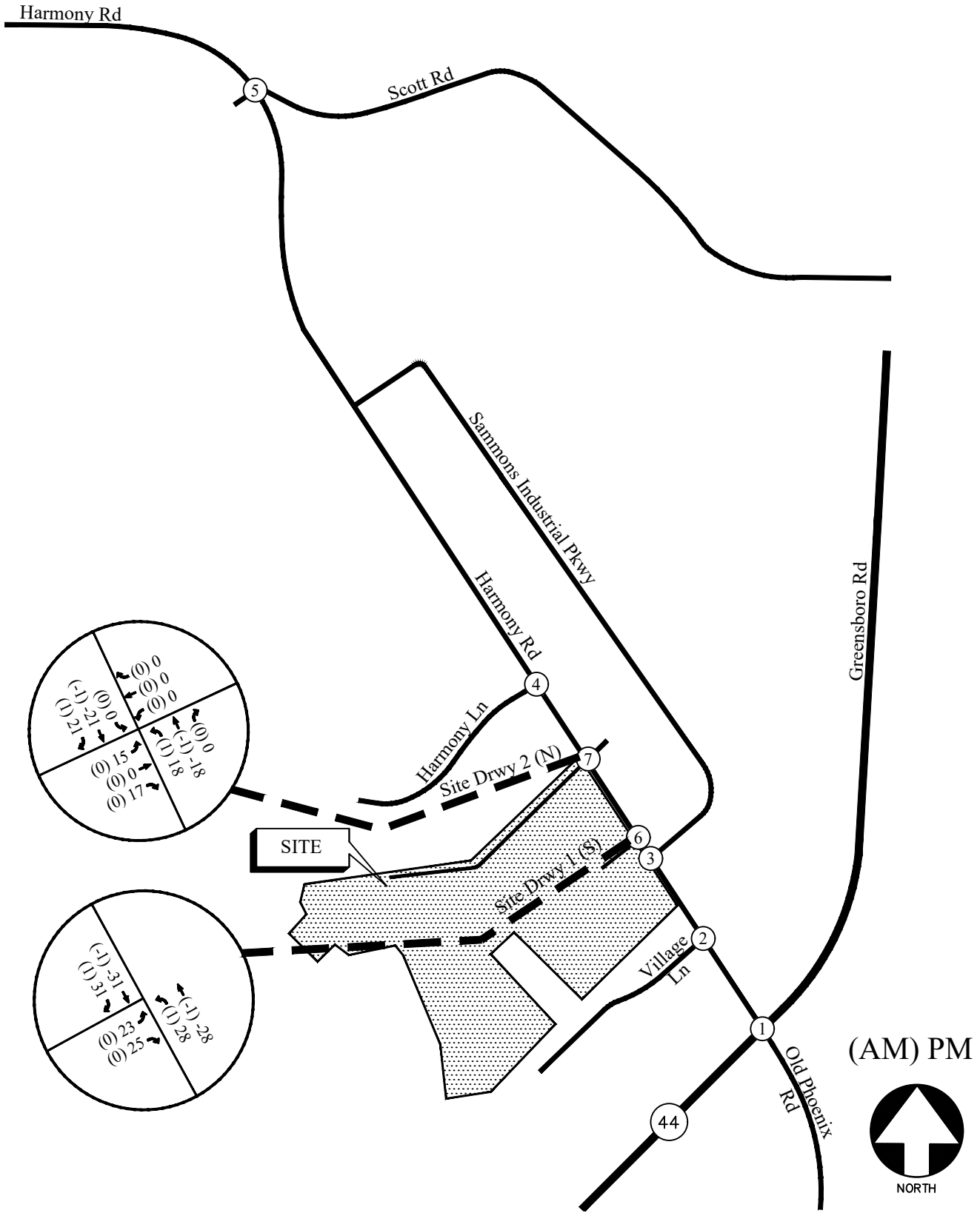
The trip distribution describes how traffic arrives and departs from the site. An overall trip distribution was developed for the site based on a review of GDOT ADT volumes and the locations of major roadways and highways that will serve the development. The site-generated peak hour traffic volumes, shown in Table 4, were assigned to the study area intersections based on this distribution. The outer-leg distribution and AM and PM peak hour new traffic generated by the site are shown in Figure 6. Pass-by volumes have also been distributed based on existing travel patterns and are shown in Figure 7.





TRIP DISTRIBUTION AND SITE-GENERATED WEEKDAY PEAK HOUR VOLUMES

FIGURE 6 A&R Engineering Inc.



SITE PEAK HOUR PASS-BY VOLUMES

(AM) PM  
NORTH

FIGURE 7

A&R Engineering Inc.

## 6.0 FUTURE 2022 TRAFFIC ANALYSIS

The future 2025 traffic operations are analyzed for the “Build” and “No-Build” conditions. This provides a basis of reference for determining both the contribution of the site to overall traffic conditions and the additional improvements needed to provide sufficient site access and capacity for passing traffic. Note that survey and construction drawings would be needed to verify the feasibility and extent of additional right-of-way required for any recommended improvements.

Improvements that are identified as “System Improvements” address deficiencies that are found within the existing road network prior to any impacts from the proposed development’s added traffic. Improvements that are identified as “Site Mitigation Improvements” address further impacts that are a result of the proposed development’s added traffic.

### 6.1 Future “No-Build” Conditions

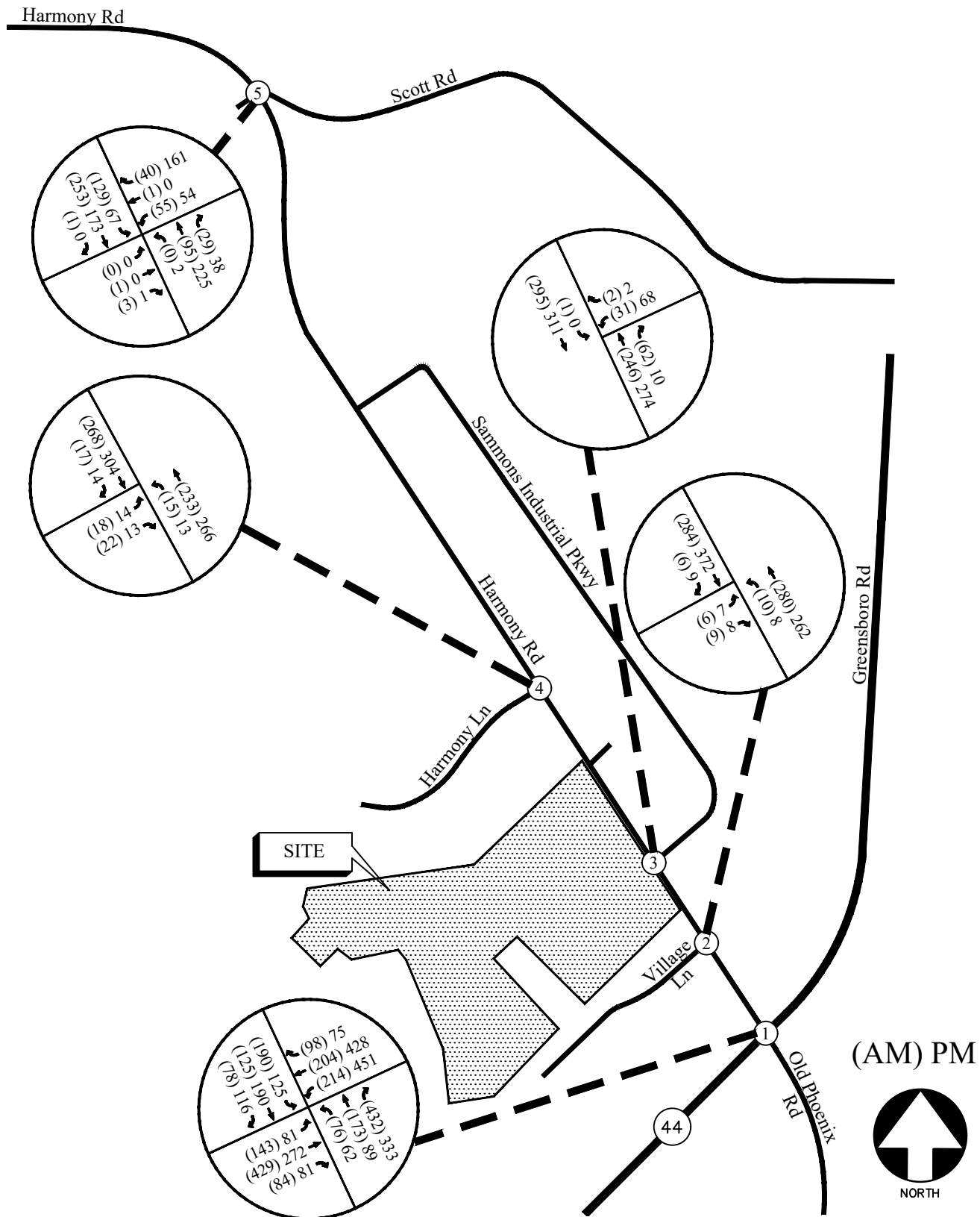
The “No-Build” (or background) conditions provide an assessment of how traffic will operate in the study horizon year without the study site being developed as proposed, with projected increases in through traffic volumes due to normal annual growth. The Future “No-Build” volumes consist of the adjusted existing traffic volumes (Figure 3) plus increases for annual growth of through traffic.

#### 6.1.1 Annual Traffic Growth

In order to evaluate future traffic operations in this area, a projection of normal traffic growth was applied to the existing volumes. The Georgia Department of Transportation recorded average daily traffic volumes at several locations in the vicinity of the site. Reviewing the growth over the last three years revealed growth of approximately 2.5% in the area. This growth factor was applied to the existing traffic volumes between collector and arterial roadways in order to estimate the future year traffic volumes prior to the addition of site-generated traffic. The resulting Future “No-Build” volumes on the roadway are shown in Figure 8.

### Future “Build” Conditions

The “Build” or development conditions include the estimated background traffic from the “No-Build” conditions plus the added traffic from the proposed development. In order to evaluate future traffic operations in this area, the additional traffic volumes from the site (Figure 6) and pass-by volumes (Figure 7) were added to base traffic volumes (Figure 8) to calculate the future traffic volumes after the construction of the development. These total future traffic volumes are shown in Figure 9.

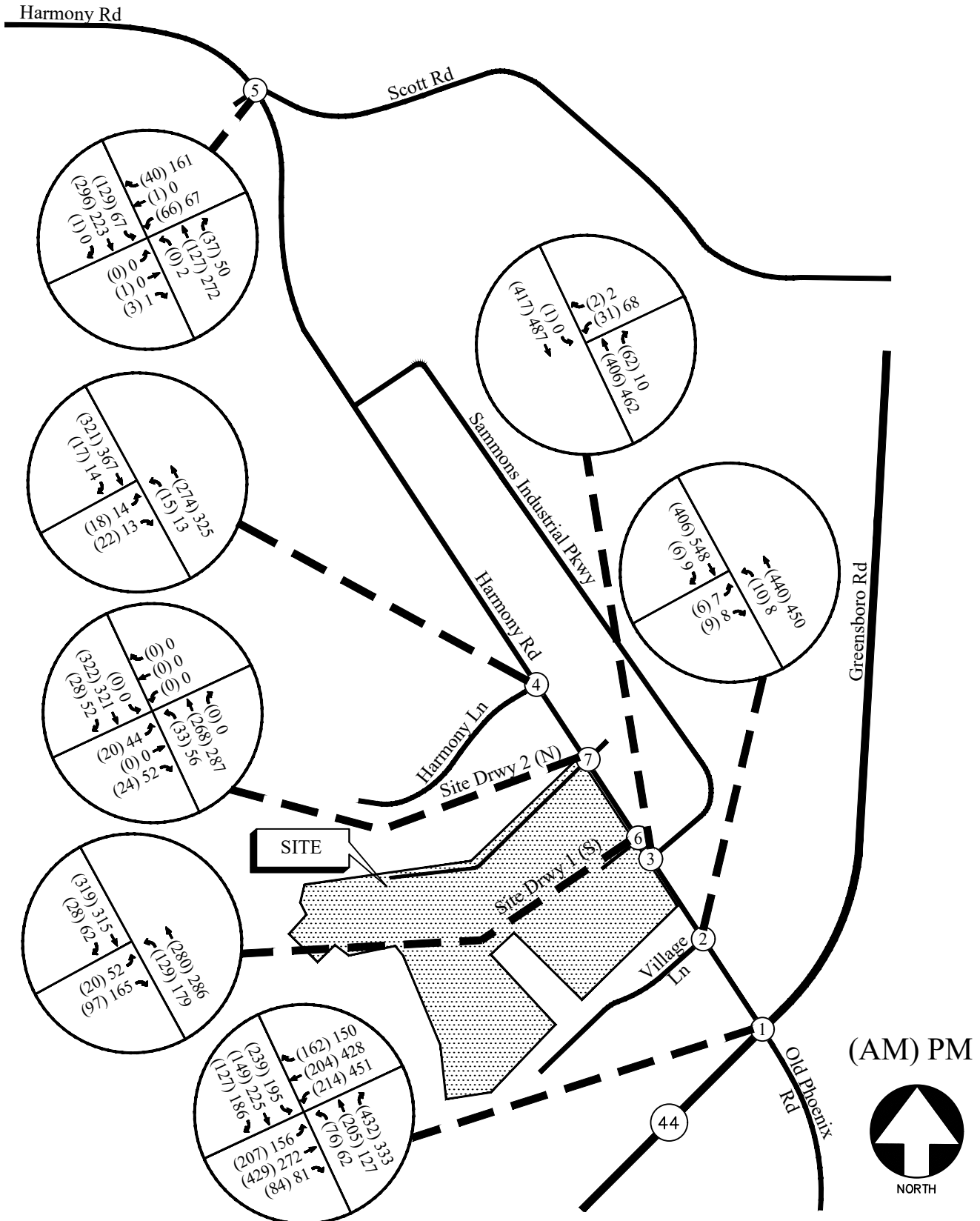


FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 8

A&R Engineering Inc.





FUTURE (BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 9

A&R Engineering Inc.

**6.1.2 Auxiliary Lane Analysis**

Included below are analyses for left-turn lanes and deceleration lanes for all site driveways per GDOT standards. The analyses below are based off the “trip distribution”. According to the trip distribution, the total site generated trips is 10,975 and the mixed-use reduction is 1,814. Therefore, the 24-hour two-way volume the site is 9,161 vehicles.

**6.1.3 Left Turn Lane Analysis**

For two lane roadways with AADT’s less than 6,000 vehicles and a posted speed limit of 45 mph, the daily site generated left-turn threshold to warrant a left-turn lane is 250 left-turning vehicles. The projected left-turn volumes per day for each driveway is included below.

TABLE 5 - GDOT REQUIREMENTS FOR LEFT TURN LANES				
Intersection	Left- turn traffic (% entering)	Left-turn Volume (vehicle/day)	Roadway Speed/ # lanes / ADT	GDOT Threshold (vehicle/day)
Harmony Road @ Site Driveway 1 (S)	60%	<b>2,748</b> (Total trips – mixed use) ÷ 2 × 0.60 = (10,975 – 1,814) ÷ 2 × 0.60 = 2,748	45 mph / 2-lane/ <6,000	250
Harmony Road @ Site Driveway 2 (N)	15%	<b>687</b> (Total trips – mixed use) ÷ 2 × 0.15 = (10,975 – 1,814) ÷ 2 × 0.15 = 687	45 mph / 2-lane/ <6,000	250

Since the projected number of left-turning vehicles at Site Driveway 1 and Site Driveway 2 exceed the threshold of 250 left turning vehicles, a left-turn lane is warranted at both site driveways per GDOT standards.

**6.1.4 Deceleration Turn Lane Analysis**

For two lane roadways with AADT’s less than 6,000 vehicles and a posted speed limit of 45 mph, the daily site generated right-turn threshold to warrant a deceleration lane is 150 right turning vehicles. The projected right-turn volumes per day for each driveway is included in Table 6.

TABLE 6 - GDOT REQUIREMENTS FOR DECELERATION LANES				
Intersection	Right-turn traffic (% total entering)	Right-turn Volume (vehicle/day)	Roadway Speed/ # lanes / ADT	GDOT Threshold (vehicle/day)
Harmony Road @ Site Driveway 1 (S)	12.5%	<b>573</b> (Total trips – mixed use) ÷ 2 × 0.125 = (10,975 – 1,814) ÷ 2 × 0.125 = 573	45 mph / 2-lane/ <6,000	150
Harmony Road @ Site Driveway 2 (N)	12.5%	<b>573</b> (Total trips – mixed use) ÷ 2 × 0.125 = (10,975 – 1,814) ÷ 2 × 0.125 = 573	45 mph / 2-lane/ <6,000	150

Since the projected number of right turning vehicles at Site Driveway 1 and Site Driveway 2 exceed the threshold of 150 right turning vehicles, a deceleration lane is warranted at both site driveways per GDOT standards.

## 6.2 Future Traffic Conditions

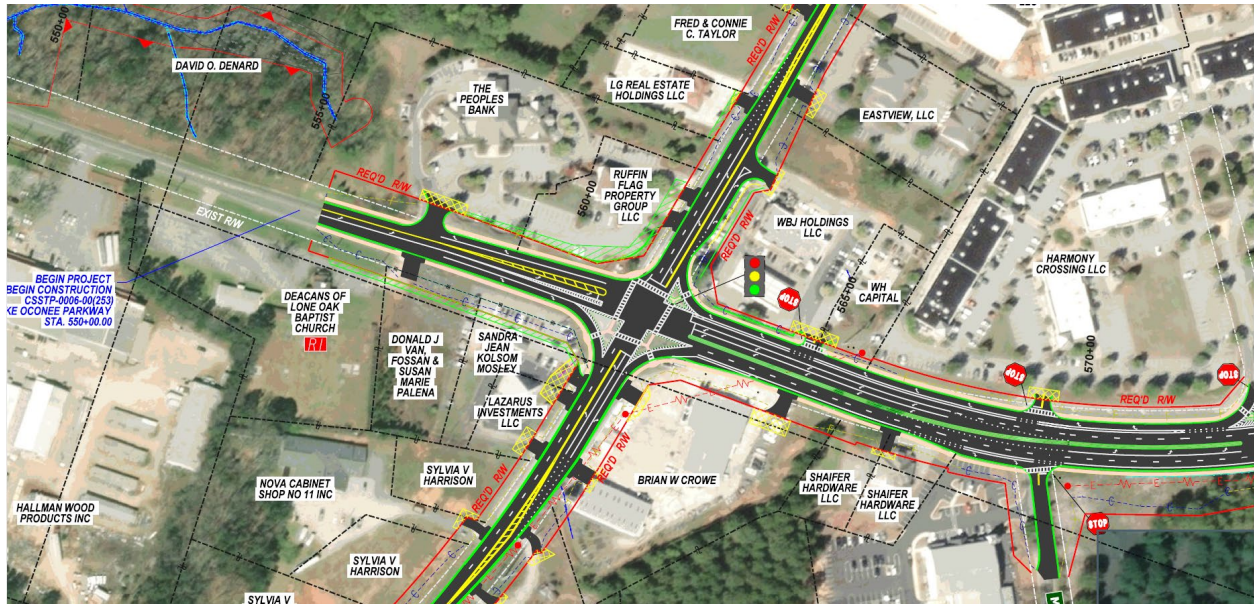
The future 2025 “No-Build” and “Build” traffic operations were analyzed using the volumes in Figure 8 and Figure 9, respectively, and the results are shown in Table 7.

TABLE 7 – FUTURE INTERSECTION OPERATIONS					
Intersection		Future Condition: LOS (Delay)			
		NO-BUILD		BUILD	
		AM Peak	PM Peak	AM Peak	PM Peak
1	<b><u>SR 44 (Greensboro Road) @ Harmony Road</u></b>	<b><u>E (62.5)</u></b>	<b><u>D (41.0)</u></b>	<b><u>E (75.4)</u></b>	<b><u>D (50.0)</u></b>
	-Eastbound Approach	D (47.4)	D (39.2)	E (64.7)	D (44.6)
	-Westbound Approach	D (35.9)	C (23.7)	E (67.2)	D (36.1)
	-Northbound Approach	F (102.9)	F (80.8)	F (110.6)	F (91.7)
	-Southbound Approach	D (42.9)	D (32.7)	D (46.5)	D (38.0)
2	<b><u>Harmony Road @ Village Lane</u></b>				
	-Eastbound Approach	B (11.7)	B (13.1)	B (14.4)	C (18.5)
	-Northbound Left	A (8.0)	A (8.3)	A (8.3)	A (8.9)
3	<b><u>Harmony Road @ Sammons Industrial Parkway (South)</u></b>				
	-Westbound Approach	C (15.2)	C (16.1)	C (21.8)	D (29.9)
	-Southbound Left	A (8.0)	A (0.0)	A (8.4)	A (0.0)
4	<b><u>Harmony Road @ Harmony Lane</u></b>				
	-Eastbound Approach	B (11.7)	B (12.6)	B (12.6)	B (14.0)
	-Northbound Left	A (7.9)	A (8.1)	A (8.1)	A (8.3)
5	<b><u>Harmony Road @ Scott Road / Private Driveway</u></b>				
	-Eastbound Approach	B (11.4)	A (9.2)	B (12.0)	A (9.5)
	-Westbound Approach	C (15.4)	B (14.5)	C (18.5)	C (18.0)
	-Northbound Left	A (0.0)	A (7.6)	A (0.0)	A (7.7)
	-Southbound Left	A (7.8)	A (8.0)	A (7.9)	A (8.2)
6	<b><u>Harmony Road @ Site Driveway 1 (S)</u></b>				
	-Eastbound Approach	-	-	B (12.6)	C (15.8)
	-Northbound Left			A (8.5)	A (8.8)
7	<b><u>Harmony Road @ Site Driveway 2 (N) / Private Driveway</u></b>				
	-Eastbound Approach			B (13.1)	C (14.6)
	-Westbound Approach	-	-	A (0.0)	A (0.0)
	-Northbound Left			A (8.2)	A (8.3)
	-Southbound Left			A (0.0)	A (0.0)

The results of future ‘No-Build’ traffic operations analysis indicate that the intersection of SR 44 (Greensboro Road) and Harmony Road will operate at level-of-service “E” in AM peak hour and the northbound approach of Old Phoenix Road will operate at level-of-service “F”. This approach has a large volume of right-turn movement but does not have a dedicated right-turn lane causing this approach experience longer delays. As part of GDOT’s SR 44 Widening project PI 0006253 this intersection will be improved by constructing a northbound right-turn lane on Old Phoenix Road and dual westbound left-turn lanes on SR 44 and an additional southbound through lane on Harmony Road. With these improvements, the intersection should operate at satisfactory levels-of service. Since the project



completion dates are not available, we did not include these 'System Improvements' in our analysis. All other intersections will be operating at satisfactory levels-of-service in both peak hours. GDOT's intersection improvement plan is shown below and in Figure 10. In future "Build" conditions all intersections will be operating at similar levels-of-service as in "No-Build" conditions. Recommendations for future traffic control and lane geometry is shown in Figure 11.

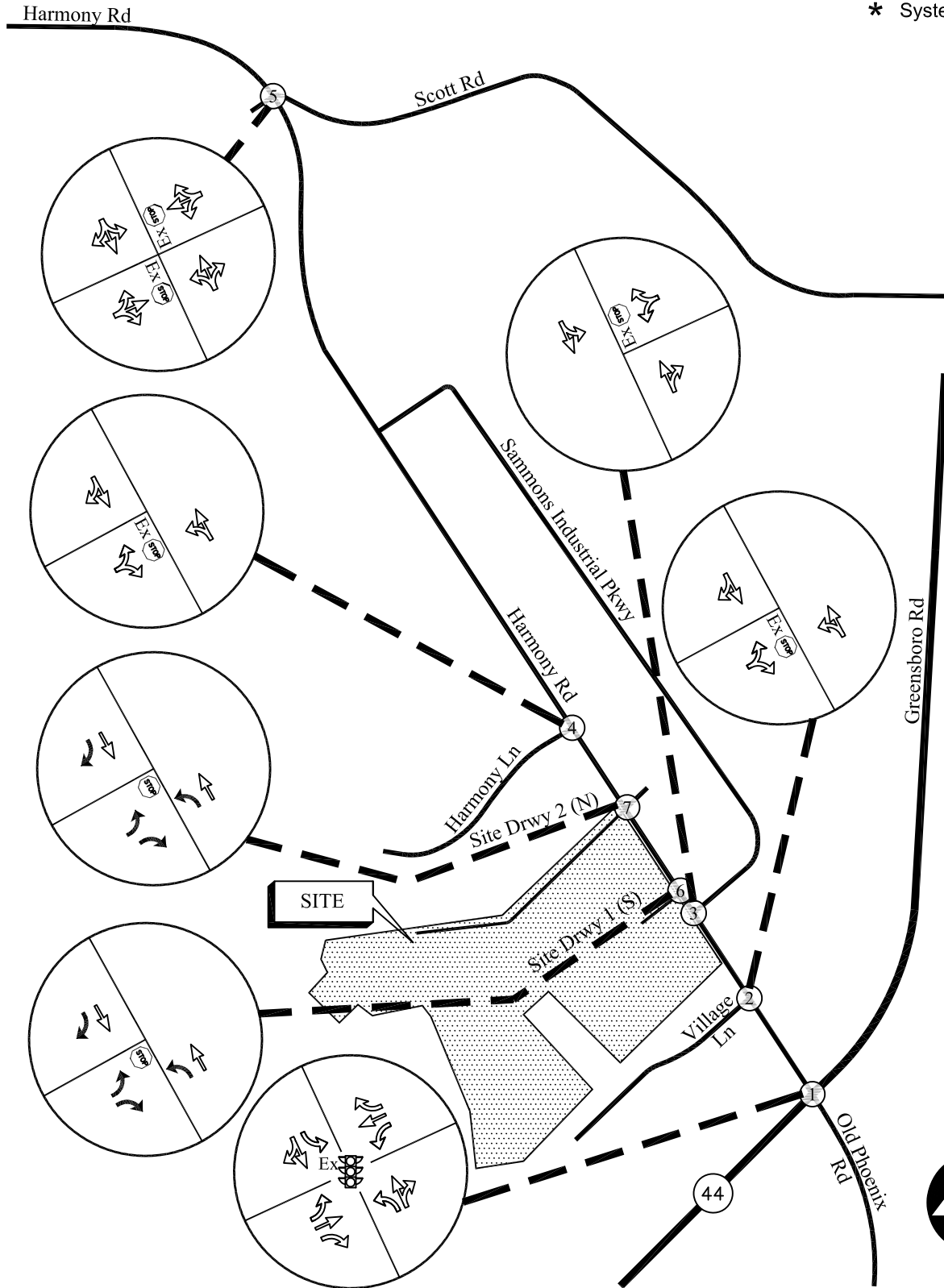




LEGEND

- Ex Existing Signed Approach
- Proposed Signed Approach
- Ex Existing Lane Geometry
- Proposed Lane Geometry
- Ex Existing Traffic Signal
- Proposed Traffic Signal
- \* System Improvement

185 ch



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 11

A&R Engineering Inc.

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study is to determine the traffic impact that will result from the proposed Helms Farm Campus development that will be located on Harmony Road across from Sammons Industrial Parkway (South), north of Village Lane in City of Eatonton, Putnam County, Georgia. The traffic analysis evaluates the current operations compared to the future conditions with the traffic generated by the development. The development will consist of:

- Goodwill Store: 16,800 sf
- Helms College: 50 Students
- Edgar’s Bakery: 7,000 sf
- Retail including Spa: 26,920 sf
- High-Turn-over Sit-Down Restaurant: 13,100 sf
- Super Market: 14,500 sf
- Multi-family (mid-rise) Residential: 127 Units
- Student Housing: 18 Units
- Vacation Villas (Resorts): 41 Units
- Event Hall or Banquet Hall: 22,000 sf
- Hotel: 175 Rooms

The development proposes three site accesses at the following locations:

- Site Driveway 1: Full-access (Southern) driveway on Harmony Road
- Site Driveway 2: Full-access (Northern) driveway on Harmony Road

Both AM and PM peak hours have been analyzed in this study. This study includes the evaluation of traffic operations at the intersections of:

- Harmony Road at SR 44 (Greensboro Road) / Old Phoenix Road
- Harmony Road at Village Lane
- Harmony Road at Sammons Industrial Parkway (South)
- Harmony Road at Harmony Lane
- Harmony Road at Scott Road / Private Driveway
- Harmony Road at Site Driveway 1 (Southern)
- Harmony Road at Site Driveway 2 (Northern) / Private Driveway



The analysis included the evaluation of “Existing” operations and future operations for “No-Build” and “Build” conditions, both of which account for increases in annual growth of through traffic. The results of the analysis are listed below:

**Recommendations for Site Access Configuration**

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

- Site Driveway 1: Full-access (Southern) driveway on Harmony Road
  - The driveway to have two entering and two exiting lanes. The eastbound (driveway) approach to have separate left and right-turn lane for exiting traffic.
  - The intersection to be unsignalized with a STOP sign on the eastbound approach.
  - A northbound left-turn lane to be constructed on Harmony Road for entering traffic.
  - A southbound deceleration lane to be constructed on Harmony Road for entering traffic.
  
- Site Driveway 2: Full-access (Northern) driveway on Harmony Road
  - The driveway to have one entering and two exiting lanes. The eastbound (driveway) approach to have separate left and right-turn lane for exiting traffic.
  - The intersection to be unsignalized with a STOP sign on the eastbound approach.
  - A northbound left-turn lane to be constructed on Harmony Road for entering traffic.
  - A southbound deceleration lane is recommended to be constructed on Harmony Road for entering traffic.

The proposed Helms Farm Campus development will be completed in different phases as determined by the market conditions and demand. The projected phasing of the entire development is given below. This study was evaluated to determine improvements for the full build out in year 2025.

LAND USE	UNITS	PHASE 1 2023	PHASE 2 2024	PHASE 3 Early 2025	PHASE 4 Late 2025
Goodwill Store	16,800 sf	16,800 sf	-	-	-
Helms College	50 Students	25 Students	25 Students	-	-
Edgar’s Bakery	7,000 sf	7,000 sf	-	-	-
Retail	26,920 sf	3400	11,200 sf	12,320 sf	-
Sit-Down Restaurant	13,100 sf	-	2,500 sf	2,500 sf	8,100 sf
Super Market	14,500 sf	-	-	14,500 sf	-
Multi-family Apartments	127 Units	-	42	64	21
Student Housing	18 Units	-	6	9	3
Vacation Villas	41 Units	-	-	20 Units	21 Units
Event Hall/Banquet	22,000 sf	-	-	-	22,000 sf
Hotel	175 Rooms	-	-	175 Rooms	-

The most traffic impact from the project occurs during the AM and PM peak hours. The traffic volumes generated by the project during these peak hours in different directions is shown graphically in figure 6 on page 16. As shown on this figure, a maximum of 29 vehicles are projected to turn left at any of the two driveways. The northern driveway has only 35 vehicles turning right while the southern driveway will have 140 vehicles turning right. These turning movements amount to 1 or 2 vehicles per minute. This magnitude of traffic volumes will not create any significant impact on traffic on Harmony Road especially the development will construct left-turn lanes and deceleration lanes per our recommendations.

The results of future traffic operations analysis indicate that after addition of the new traffic generated by the proposed Helms Farm Campus development, all study intersections will continue to operate at similar levels-of-service as before. The existing delays at Old Phoenix Road at SR 44 (Greensboro Road) intersection will improve after the proposed SR 44 Widening project (PI 0006253) 10 is completed by GDOT.

# Appendix

- Existing Intersection Traffic Counts .....
- Linear Regression of Daily Traffic.....
- Existing Intersection Analysis.....
- Future "No-Build" Intersection Analysis .....
- Future "Build" Intersection Analysis.....
- Traffic Volume Worksheets .....

**EXISTING INTERSECTION TRAFFIC COUNTS**



# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Village Lane  
7-9 am | 4-6 pm

File Name : 20210171  
Site Code : 20210171  
Start Date : 5/27/2021  
Page No : 1

**Groups Printed- Cars,Buses & Trucks**

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Village Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	52	0	53	0	38	1	39	2	0	1	3	0	0	0	0	95
07:15 AM	2	48	0	50	0	50	2	52	1	0	1	2	0	0	0	0	104
07:30 AM	2	58	0	60	0	53	1	54	1	0	2	3	0	0	0	0	117
07:45 AM	1	75	0	76	0	61	1	62	1	0	2	3	0	0	0	0	141
Total	6	233	0	239	0	202	5	207	5	0	6	11	0	0	0	0	457
08:00 AM	2	54	0	56	0	59	2	61	2	0	1	3	0	0	0	0	120
08:15 AM	3	46	0	49	0	63	1	64	1	0	2	3	0	0	0	0	116
08:30 AM	1	42	0	43	0	56	0	56	2	0	1	3	0	0	0	0	102
08:45 AM	1	47	0	48	0	59	2	61	1	0	3	4	0	0	0	0	113
Total	7	189	0	196	0	237	5	242	6	0	7	13	0	0	0	0	451
*** BREAK ***																	
04:00 PM	1	66	0	67	0	68	1	69	2	0	2	4	0	0	0	0	140
04:15 PM	1	46	0	47	0	55	2	57	1	0	2	3	0	0	0	0	107
04:30 PM	2	57	0	59	0	60	1	61	3	0	1	4	0	0	0	0	124
04:45 PM	1	55	0	56	0	64	1	65	1	0	1	2	0	0	0	0	123
Total	5	224	0	229	0	247	5	252	7	0	6	13	0	0	0	0	494
05:00 PM	3	69	0	72	0	100	2	102	2	0	2	4	0	0	0	0	178
05:15 PM	2	63	0	65	0	91	3	94	1	0	1	2	0	0	0	0	161
05:30 PM	1	48	0	49	0	79	2	81	2	0	3	5	0	0	0	0	135
05:45 PM	1	47	0	48	0	64	1	65	3	0	2	5	0	0	0	0	118
Total	7	227	0	234	0	334	8	342	8	0	8	16	0	0	0	0	592
Grand Total	25	873	0	898	0	1020	23	1043	26	0	27	53	0	0	0	0	1994
Apprch %	2.8	97.2	0		0	97.8	2.2		49.1	0	50.9		0	0	0		
Total %	1.3	43.8	0	45	0	51.2	1.2	52.3	1.3	0	1.4	2.7	0	0	0	0	

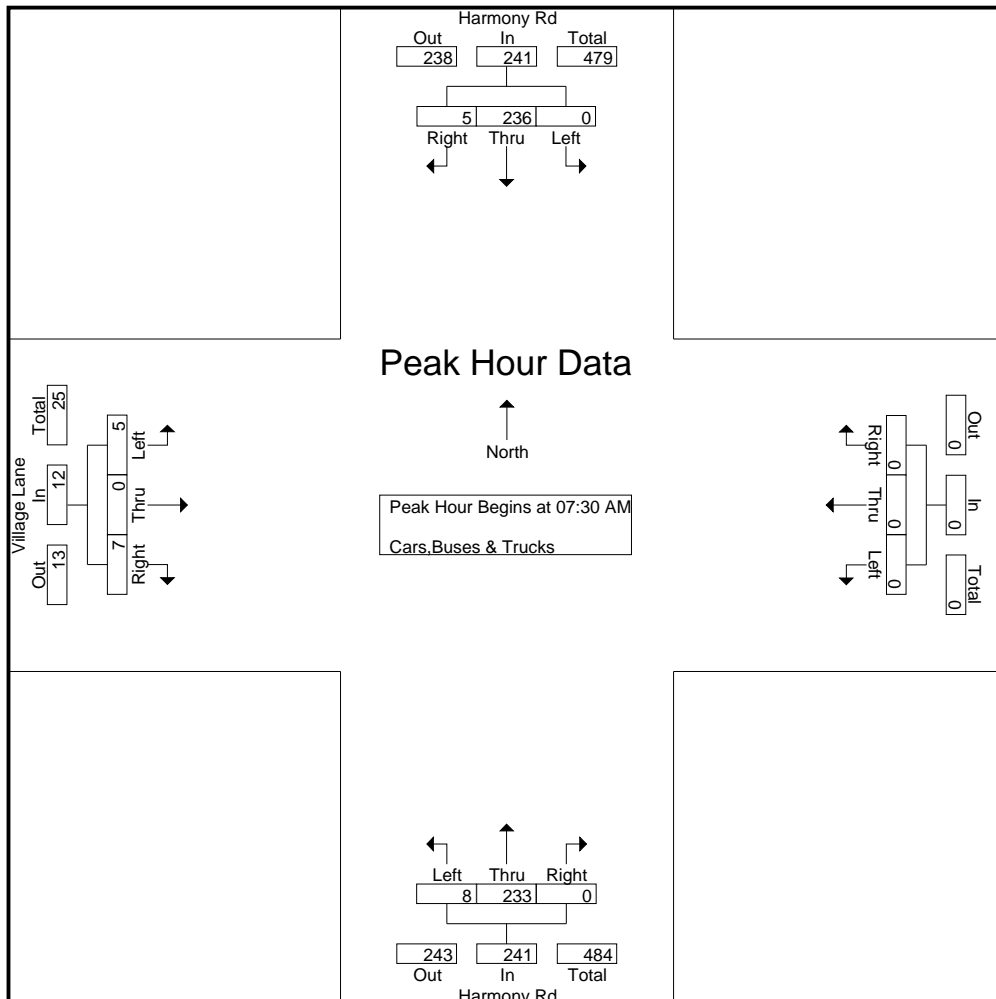
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2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Village Lane  
7-9 am | 4-6 pm

File Name : 20210171  
Site Code : 20210171  
Start Date : 5/27/2021  
Page No : 2

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Village Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	58	0	60	0	53	1	54	1	0	2	3	0	0	0	0	117
07:45 AM	1	75	0	76	0	61	1	62	1	0	2	3	0	0	0	0	141
08:00 AM	2	54	0	56	0	59	2	61	2	0	1	3	0	0	0	0	120
08:15 AM	3	46	0	49	0	63	1	64	1	0	2	3	0	0	0	0	116
Total Volume	8	233	0	241	0	236	5	241	5	0	7	12	0	0	0	0	494
% App. Total	3.3	96.7	0		0	97.9	2.1		41.7	0	58.3		0	0	0		
PHF	.667	.777	.000	.793	.000	.937	.625	.941	.625	.000	.875	1.00	.000	.000	.000	.000	.876



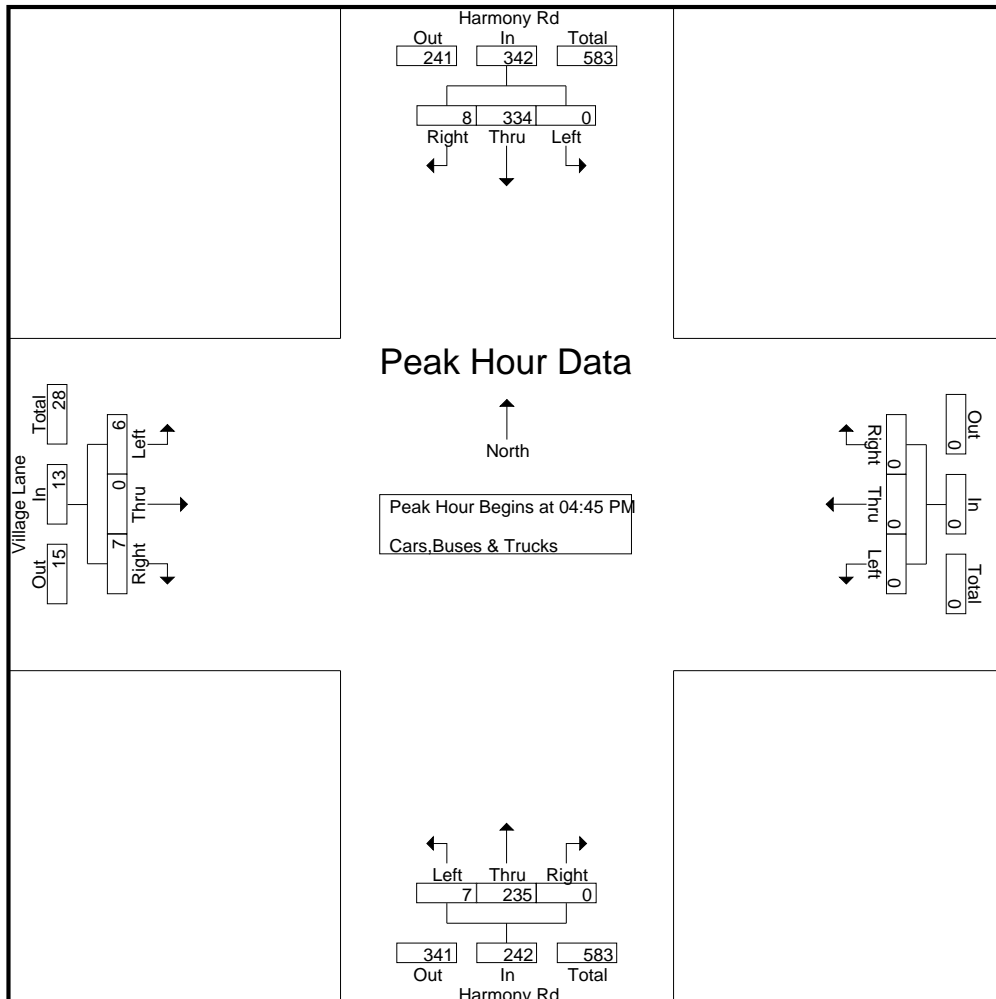
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TMC Data  
Harmony Rd @ Village Lane  
7-9 am | 4-6 pm

File Name : 20210171  
Site Code : 20210171  
Start Date : 5/27/2021  
Page No : 3

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Village Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	55	0	56	0	64	1	65	1	0	1	2	0	0	0	0	123
05:00 PM	3	69	0	72	0	100	2	102	2	0	2	4	0	0	0	0	178
05:15 PM	2	63	0	65	0	91	3	94	1	0	1	2	0	0	0	0	161
05:30 PM	1	48	0	49	0	79	2	81	2	0	3	5	0	0	0	0	135
Total Volume	7	235	0	242	0	334	8	342	6	0	7	13	0	0	0	0	597
% App. Total	2.9	97.1	0		0	97.7	2.3		46.2	0	53.8		0	0	0		
PHF	.583	.851	.000	.840	.000	.835	.667	.838	.750	.000	.583	.650	.000	.000	.000	.000	.838



# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ SR 44 Greens boro Rd  
7-9 am | 4-6 pm

File Name : 20210170  
Site Code : 20210170  
Start Date : 5/27/2021  
Page No : 1

Groups Printed- Cars, Buses - Trucks

Start Time	Old Phonix Rd Northbound				Harmony Rd Southbound				Eastbound				SR 44 ( Greensboro Rd ) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	5	36	40	81	19	14	10	43	29	51	9	89	30	36	12	78	291
07:15 AM	18	32	69	119	27	15	16	58	25	68	13	106	37	42	10	89	372
07:30 AM	12	37	68	117	44	22	15	81	28	81	20	129	42	45	10	97	424
07:45 AM	16	43	99	158	34	21	16	71	47	95	12	154	35	41	20	96	479
<b>Total</b>	<b>51</b>	<b>148</b>	<b>276</b>	<b>475</b>	<b>124</b>	<b>72</b>	<b>57</b>	<b>253</b>	<b>129</b>	<b>295</b>	<b>54</b>	<b>478</b>	<b>144</b>	<b>164</b>	<b>52</b>	<b>360</b>	<b>1566</b>
08:00 AM	12	33	85	130	34	16	15	65	28	108	28	164	37	52	19	108	467
08:15 AM	13	30	97	140	54	36	17	107	28	76	16	120	53	36	27	116	483
08:30 AM	22	38	78	138	36	31	17	84	16	78	14	108	53	41	16	110	440
08:45 AM	6	33	85	124	45	28	16	89	15	70	15	100	64	42	19	125	438
<b>Total</b>	<b>53</b>	<b>134</b>	<b>345</b>	<b>532</b>	<b>169</b>	<b>111</b>	<b>65</b>	<b>345</b>	<b>87</b>	<b>332</b>	<b>73</b>	<b>492</b>	<b>207</b>	<b>171</b>	<b>81</b>	<b>459</b>	<b>1828</b>
*** BREAK ***																	
04:00 PM	10	36	69	115	40	45	17	102	14	51	12	77	90	77	20	187	481
04:15 PM	7	26	65	98	33	35	19	87	21	57	17	95	91	71	18	180	460
04:30 PM	14	20	64	98	31	27	22	80	18	46	17	81	95	77	25	197	456
04:45 PM	18	17	67	102	32	27	24	83	0	0	0	0	82	84	29	195	380
<b>Total</b>	<b>49</b>	<b>99</b>	<b>265</b>	<b>413</b>	<b>136</b>	<b>134</b>	<b>82</b>	<b>352</b>	<b>53</b>	<b>154</b>	<b>46</b>	<b>253</b>	<b>358</b>	<b>309</b>	<b>92</b>	<b>759</b>	<b>1777</b>
05:00 PM	23	15	78	116	40	53	29	122	22	56	17	95	95	87	26	208	541
05:15 PM	0	19	77	96	32	47	26	105	19	57	18	94	99	91	17	207	502
05:30 PM	16	24	76	116	21	38	25	84	17	68	22	107	112	105	13	230	537
05:45 PM	16	22	68	106	19	32	24	75	14	63	15	92	99	101	11	211	484
<b>Total</b>	<b>55</b>	<b>80</b>	<b>299</b>	<b>434</b>	<b>112</b>	<b>170</b>	<b>104</b>	<b>386</b>	<b>72</b>	<b>244</b>	<b>72</b>	<b>388</b>	<b>405</b>	<b>384</b>	<b>67</b>	<b>856</b>	<b>2064</b>
<b>Grand Total</b>	<b>208</b>	<b>461</b>	<b>1185</b>	<b>1854</b>	<b>541</b>	<b>487</b>	<b>308</b>	<b>1336</b>	<b>341</b>	<b>1025</b>	<b>245</b>	<b>1611</b>	<b>1114</b>	<b>1028</b>	<b>292</b>	<b>2434</b>	<b>7235</b>
Apprch %	11.2	24.9	63.9		40.5	36.5	23.1		21.2	63.6	15.2		45.8	42.2	12		
Total %	2.9	6.4	16.4	25.6	7.5	6.7	4.3	18.5	4.7	14.2	3.4	22.3	15.4	14.2	4	33.6	
Cars, Buses	200	444	1159	1803	496	459	297	1252	331	948	237	1516	1087	986	261	2334	6905
% Cars, Buses	96.2	96.3	97.8	97.2	91.7	94.3	96.4	93.7	97.1	92.5	96.7	94.1	97.6	95.9	89.4	95.9	95.4
Trucks	8	17	26	51	45	28	11	84	10	77	8	95	27	42	31	100	330
% Trucks	3.8	3.7	2.2	2.8	8.3	5.7	3.6	6.3	2.9	7.5	3.3	5.9	2.4	4.1	10.6	4.1	4.6



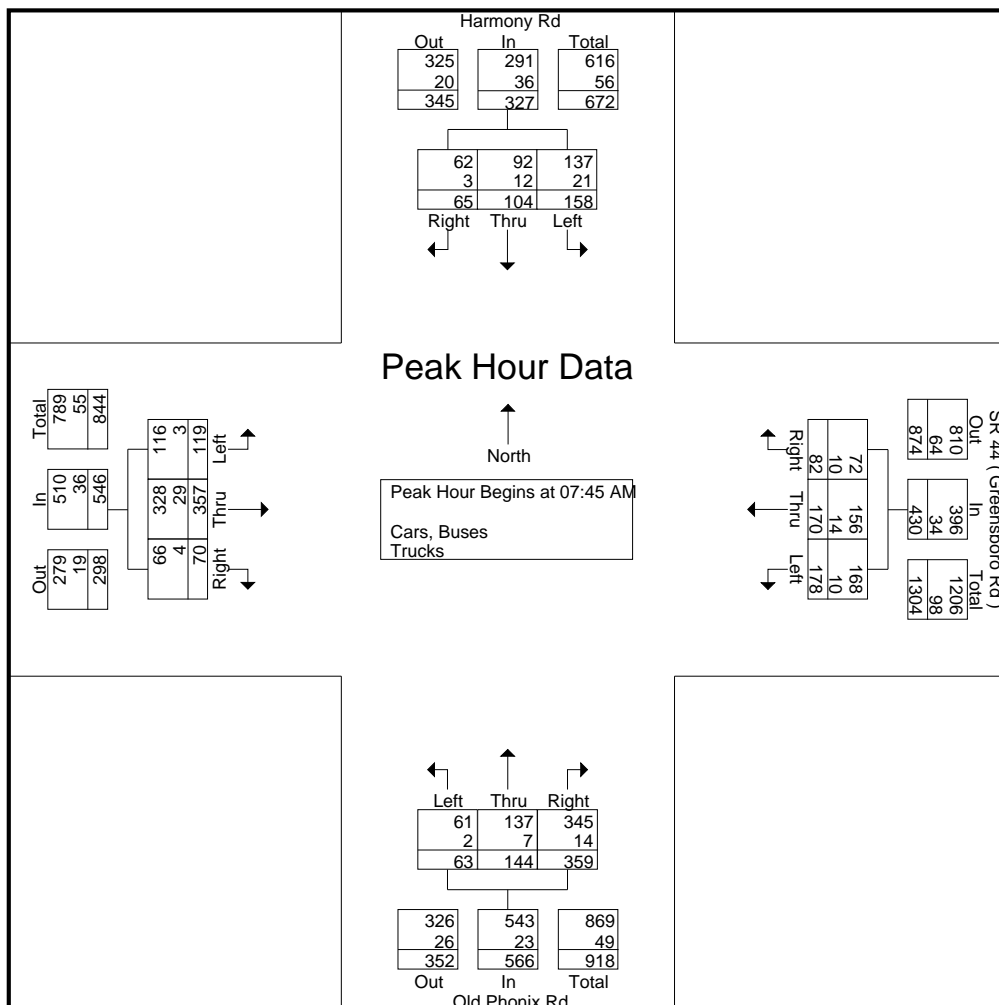
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ SR 44 Greens boro Rd  
7-9 am | 4-6 pm

File Name : 20210170  
Site Code : 20210170  
Start Date : 5/27/2021  
Page No : 2

Start Time	Old Phonix Rd Northbound				Harmony Rd Southbound				Eastbound				SR 44 ( Greensboro Rd ) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	16	<b>43</b>	<b>99</b>	<b>158</b>	34	21	16	71	<b>47</b>	95	12	154	35	41	20	96	479
08:00 AM	12	33	85	130	34	16	15	65	28	<b>108</b>	<b>28</b>	<b>164</b>	37	<b>52</b>	19	108	467
08:15 AM	13	30	97	140	<b>54</b>	<b>36</b>	<b>17</b>	<b>107</b>	28	76	16	120	<b>53</b>	36	<b>27</b>	<b>116</b>	<b>483</b>
08:30 AM	<b>22</b>	38	78	138	36	31	17	84	16	78	14	108	53	41	16	110	440
Total Volume	63	144	359	566	158	104	65	327	119	357	70	546	178	170	82	430	1869
% App. Total	11.1	25.4	63.4		48.3	31.8	19.9		21.8	65.4	12.8		41.4	39.5	19.1		
PHF	.716	.837	.907	.896	.731	.722	.956	.764	.633	.826	.625	.832	.840	.817	.759	.927	.967
Cars, Buses	61	137	345	543	137	92	62	291	116	328	66	510	168	156	72	396	1740
% Cars, Buses	96.8	95.1	96.1	95.9	86.7	88.5	95.4	89.0	97.5	91.9	94.3	93.4	94.4	91.8	87.8	92.1	93.1
Trucks	2	7	14	23	21	12	3	36	3	29	4	36	10	14	10	34	129
% Trucks	3.2	4.9	3.9	4.1	13.3	11.5	4.6	11.0	2.5	8.1	5.7	6.6	5.6	8.2	12.2	7.9	6.9



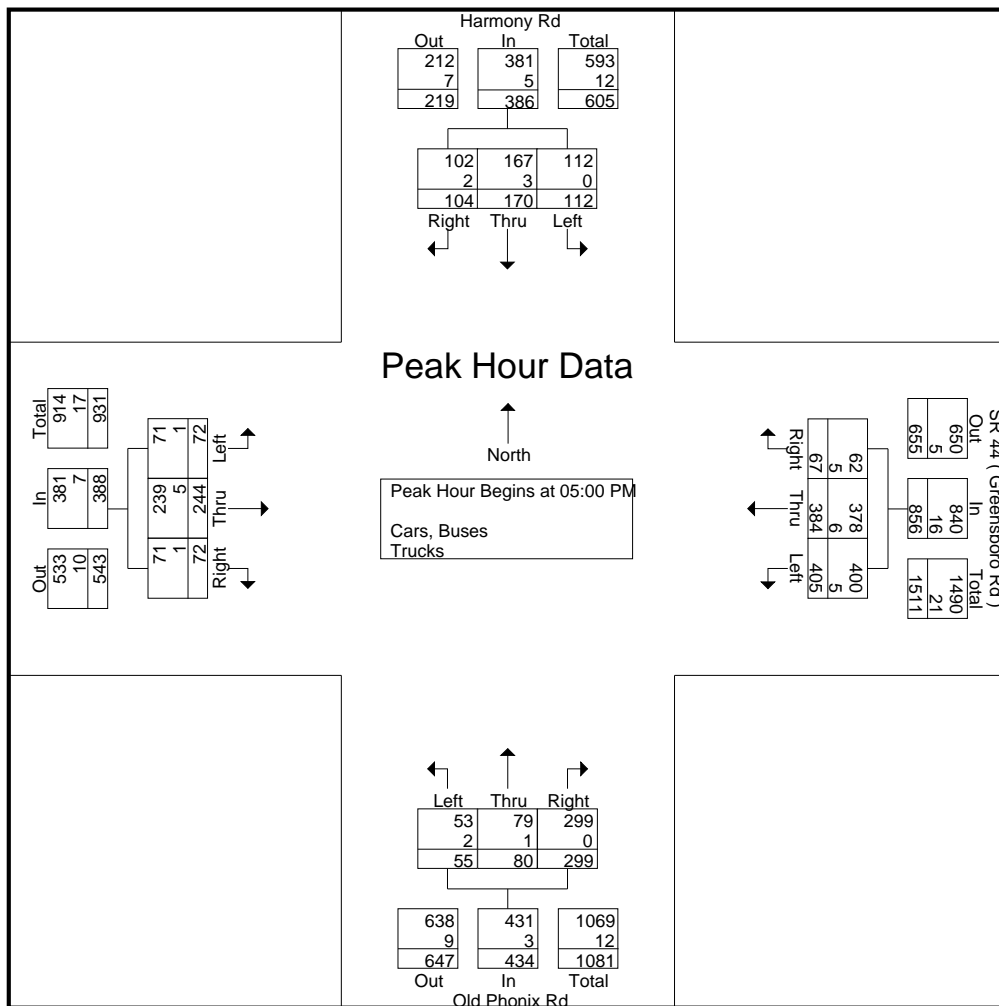
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ SR 44 Greens boro Rd  
7-9 am | 4-6 pm

File Name : 20210170  
Site Code : 20210170  
Start Date : 5/27/2021  
Page No : 3

Start Time	Old Phonix Rd Northbound				Harmony Rd Southbound				Eastbound				SR 44 ( Greensboro Rd ) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	23	15	78	116	40	53	29	122	22	56	17	95	95	87	26	208	541
05:15 PM	0	19	77	96	32	47	26	105	19	57	18	94	99	91	17	207	502
05:30 PM	16	24	76	116	21	38	25	84	17	68	22	107	112	105	13	230	537
05:45 PM	16	22	68	106	19	32	24	75	14	63	15	92	99	101	11	211	484
Total Volume	55	80	299	434	112	170	104	386	72	244	72	388	405	384	67	856	2064
% App. Total	12.7	18.4	68.9		29	44	26.9		18.6	62.9	18.6		47.3	44.9	7.8		
PHF	.598	.833	.958	.935	.700	.802	.897	.791	.818	.897	.818	.907	.904	.914	.644	.930	.954
Cars, Buses	53	79	299	431	112	167	102	381	71	239	71	381	400	378	62	840	2033
% Cars, Buses	96.4	98.8	100	99.3	100	98.2	98.1	98.7	98.6	98.0	98.6	98.2	98.8	98.4	92.5	98.1	98.5
Trucks	2	1	0	3	0	3	2	5	1	5	1	7	5	6	5	16	31
% Trucks	3.6	1.3	0	0.7	0	1.8	1.9	1.3	1.4	2.0	1.4	1.8	1.2	1.6	7.5	1.9	1.5



# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Sammons Ind Pkwy (South)  
7-9 am | 4-6 pm

File Name : 20210169  
Site Code : 20210169  
Start Date : 5/27/2021  
Page No : 1

Groups Printed- Cars, Buses - Trucks

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Eastbound				Sammons Ind Pkwy (South) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	44	10	54	1	38	0	39	0	0	0	0	5	0	0	5	98
07:15 AM	0	42	8	50	4	51	0	55	0	0	0	0	7	0	1	8	113
07:30 AM	0	45	18	63	0	52	0	52	0	0	0	0	6	0	0	6	121
07:45 AM	0	61	17	78	0	62	0	62	0	0	0	0	5	0	0	5	145
<b>Total</b>	<b>0</b>	<b>192</b>	<b>53</b>	<b>245</b>	<b>5</b>	<b>203</b>	<b>0</b>	<b>208</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>1</b>	<b>24</b>	<b>477</b>
08:00 AM	0	51	8	59	0	62	0	62	0	0	0	0	7	0	2	9	130
08:15 AM	0	48	8	56	1	69	0	70	0	0	0	0	8	0	0	8	134
08:30 AM	0	38	10	48	0	55	0	55	0	0	0	0	9	0	0	9	112
08:45 AM	0	47	6	53	1	59	0	60	0	0	0	0	7	0	0	7	120
<b>Total</b>	<b>0</b>	<b>184</b>	<b>32</b>	<b>216</b>	<b>2</b>	<b>245</b>	<b>0</b>	<b>247</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>2</b>	<b>33</b>	<b>496</b>
*** BREAK ***																	
04:00 PM	0	67	5	72	0	64	0	64	0	0	0	0	7	0	1	8	144
04:15 PM	0	50	3	53	0	55	0	55	0	0	0	0	3	0	1	4	112
04:30 PM	0	59	3	62	0	61	0	61	0	0	0	0	2	0	0	2	125
04:45 PM	0	57	7	64	0	59	0	59	0	0	0	0	8	0	1	9	132
<b>Total</b>	<b>0</b>	<b>233</b>	<b>18</b>	<b>251</b>	<b>0</b>	<b>239</b>	<b>0</b>	<b>239</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>3</b>	<b>23</b>	<b>513</b>
05:00 PM	0	76	0	76	0	78	0	78	0	0	0	0	23	0	0	23	177
05:15 PM	0	66	1	67	0	81	0	81	0	0	0	0	11	0	1	12	160
05:30 PM	0	47	1	48	0	61	0	61	0	0	0	0	19	0	0	19	128
05:45 PM	0	46	4	50	0	62	0	62	0	0	0	0	4	0	0	4	116
<b>Total</b>	<b>0</b>	<b>235</b>	<b>6</b>	<b>241</b>	<b>0</b>	<b>282</b>	<b>0</b>	<b>282</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>57</b>	<b>0</b>	<b>1</b>	<b>58</b>	<b>581</b>
<b>Grand Total</b>	<b>0</b>	<b>844</b>	<b>109</b>	<b>953</b>	<b>7</b>	<b>969</b>	<b>0</b>	<b>976</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>131</b>	<b>0</b>	<b>7</b>	<b>138</b>	<b>2067</b>
Apprch %	0	88.6	11.4		0.7	99.3	0		0	0	0		94.9	0	5.1		
Total %	0	40.8	5.3	46.1	0.3	46.9	0	47.2	0	0	0	0	6.3	0	0.3	6.7	
Cars, Buses	0	798	75	873	6	923	0	929	0	0	0	0	97	0	5	102	1904
% Cars, Buses	0	94.5	68.8	91.6	85.7	95.3	0	95.2	0	0	0	0	74	0	71.4	73.9	92.1
Trucks	0	46	34	80	1	46	0	47	0	0	0	0	34	0	2	36	163
% Trucks	0	5.5	31.2	8.4	14.3	4.7	0	4.8	0	0	0	0	26	0	28.6	26.1	7.9

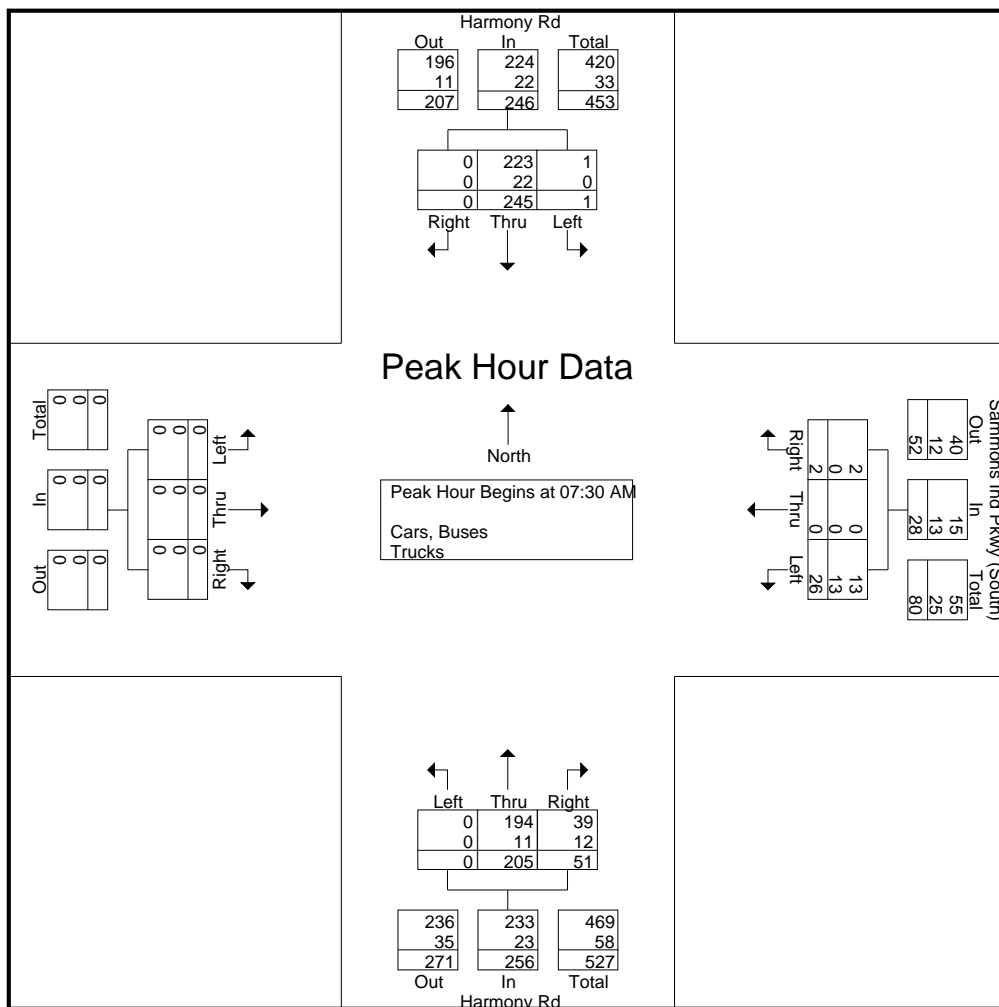
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Sammons Ind Pkwy (South)  
7-9 am | 4-6 pm

File Name : 20210169  
Site Code : 20210169  
Start Date : 5/27/2021  
Page No : 2

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Eastbound				Sammons Ind Pkwy (South) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	45	18	63	0	52	0	52	0	0	0	0	6	0	0	6	121
07:45 AM	0	61	17	78	0	62	0	62	0	0	0	0	5	0	0	5	145
08:00 AM	0	51	8	59	0	62	0	62	0	0	0	0	7	0	2	9	130
08:15 AM	0	48	8	56	1	69	0	70	0	0	0	0	8	0	0	8	134
Total Volume	0	205	51	256	1	245	0	246	0	0	0	0	26	0	2	28	530
% App. Total	0	80.1	19.9		0.4	99.6	0		0	0	0		92.9	0	7.1		
PHF	.000	.840	.708	.821	.250	.888	.000	.879	.000	.000	.000	.000	.813	.000	.250	.778	.914
Cars, Buses	0	194	39	233	1	223	0	224	0	0	0	0	13	0	2	15	472
% Cars, Buses	0	94.6	76.5	91.0	100	91.0	0	91.1	0	0	0	0	50.0	0	100	53.6	89.1
Trucks	0	11	12	23	0	22	0	22	0	0	0	0	13	0	0	13	58
% Trucks	0	5.4	23.5	9.0	0	9.0	0	8.9	0	0	0	0	50.0	0	0	46.4	10.9



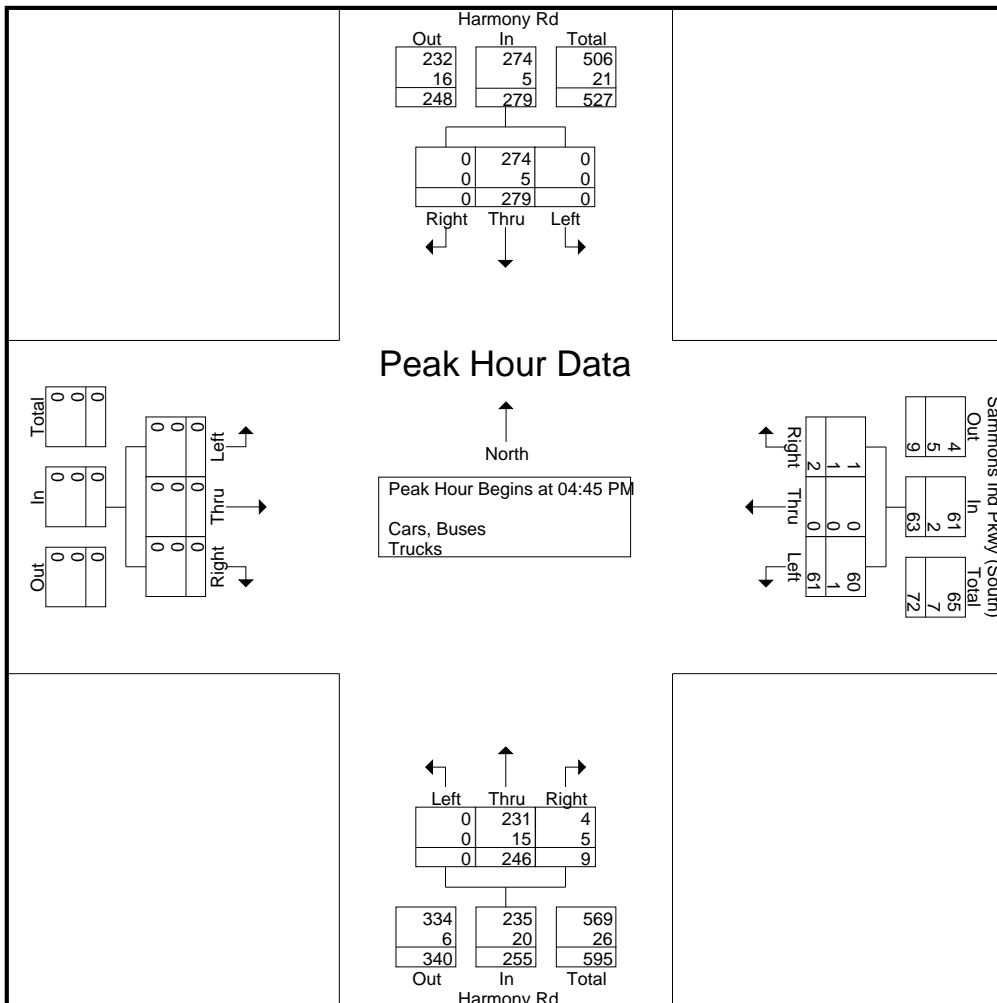
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Sammons Ind Pkwy (South)  
7-9 am | 4-6 pm

File Name : 20210169  
Site Code : 20210169  
Start Date : 5/27/2021  
Page No : 3

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Eastbound				Sammons Ind Pkwy (South) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	57	7	64	0	59	0	59	0	0	0	0	8	0	1	9	132
05:00 PM	0	76	0	76	0	78	0	78	0	0	0	0	23	0	0	23	177
05:15 PM	0	66	1	67	0	81	0	81	0	0	0	0	11	0	1	12	160
05:30 PM	0	47	1	48	0	61	0	61	0	0	0	0	19	0	0	19	128
Total Volume	0	246	9	255	0	279	0	279	0	0	0	0	61	0	2	63	597
% App. Total	0	96.5	3.5		0	100	0		0	0	0		96.8	0	3.2		
PHF	.000	.809	.321	.839	.000	.861	.000	.861	.000	.000	.000	.000	.663	.000	.500	.685	.843
Cars, Buses	0	231	4	235	0	274	0	274	0	0	0	0	60	0	1	61	570
% Cars, Buses	0	93.9	44.4	92.2	0	98.2	0	98.2	0	0	0	0	98.4	0	50.0	96.8	95.5
Trucks	0	15	5	20	0	5	0	5	0	0	0	0	1	0	1	2	27
% Trucks	0	6.1	55.6	7.8	0	1.8	0	1.8	0	0	0	0	1.6	0	50.0	3.2	4.5





# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC DATA  
Harmony Rd @ Scott Rd  
7 am - 7 pm

File Name : 20210168  
Site Code : 20210168  
Start Date : 5/27/2021  
Page No : 1

**Groups Printed- Cars,Buses & Trucks**

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Private Drwy Eastbound				Scott Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	17	3	20	9	24	0	33	0	0	1	1	3	0	6	9	63
07:15 AM	0	18	4	22	27	48	0	75	0	1	1	2	10	0	7	17	116
07:30 AM	0	23	5	28	23	59	0	82	0	0	2	2	10	1	4	15	127
07:45 AM	0	20	7	27	35	58	0	93	0	0	0	0	10	0	11	21	141
<b>Total</b>	0	78	19	97	94	189	0	283	0	1	4	5	33	1	28	62	447
08:00 AM	0	18	8	26	22	45	1	68	0	0	0	0	16	0	11	27	121
08:15 AM	0	25	5	30	17	48	0	65	0	0	1	1	7	0	9	16	112
08:30 AM	0	14	4	18	16	30	0	46	0	0	0	0	6	0	11	17	81
08:45 AM	0	19	9	28	18	53	0	71	0	0	0	0	6	0	14	20	119
<b>Total</b>	0	76	26	102	73	176	1	250	0	0	1	1	35	0	45	80	433
09:00 AM	1	27	4	32	27	44	0	71	1	0	1	2	14	0	5	19	124
09:15 AM	0	19	9	28	21	30	0	51	0	0	0	0	5	0	10	15	94
09:30 AM	0	24	7	31	14	26	0	40	0	0	0	0	8	0	6	14	85
09:45 AM	0	24	8	32	16	40	0	56	0	0	0	0	12	0	12	24	112
<b>Total</b>	1	94	28	123	78	140	0	218	1	0	1	2	39	0	33	72	415
10:00 AM	0	19	9	28	13	25	0	38	0	0	0	0	7	0	12	19	85
10:15 AM	0	22	8	30	14	38	0	52	0	0	0	0	9	0	18	27	109
10:30 AM	0	28	4	32	12	29	0	41	0	0	0	0	6	0	18	24	97
10:45 AM	0	22	12	34	22	33	0	55	0	0	0	0	7	0	10	17	106
<b>Total</b>	0	91	33	124	61	125	0	186	0	0	0	0	29	0	58	87	397
11:00 AM	0	18	7	25	16	22	0	38	0	0	0	0	4	0	18	22	85
11:15 AM	0	20	6	26	17	34	0	51	0	0	0	0	7	0	17	24	101
11:30 AM	0	34	12	46	16	40	0	56	0	0	1	1	7	0	14	21	124
11:45 AM	0	31	8	39	14	28	0	42	0	0	0	0	11	0	17	28	109
<b>Total</b>	0	103	33	136	63	124	0	187	0	0	1	1	29	0	66	95	419
12:00 PM	1	22	10	33	14	20	0	34	0	0	0	0	8	0	18	26	93
12:15 PM	0	27	4	31	12	31	0	43	0	0	0	0	7	0	17	24	98
12:30 PM	0	19	9	28	20	34	0	54	0	0	1	1	14	0	20	34	117
12:45 PM	0	27	5	32	14	37	0	51	0	0	0	0	14	0	18	32	115
<b>Total</b>	1	95	28	124	60	122	0	182	0	0	1	1	43	0	73	116	423
01:00 PM	0	33	8	41	18	28	0	46	0	0	0	0	15	0	11	26	113
01:15 PM	0	29	5	34	16	31	0	47	0	0	0	0	6	0	14	20	101
01:30 PM	0	35	6	41	12	33	0	45	0	0	0	0	10	0	17	27	113
01:45 PM	0	18	11	29	13	31	0	44	0	0	0	0	11	0	11	22	95
<b>Total</b>	0	115	30	145	59	123	0	182	0	0	0	0	42	0	53	95	422
02:00 PM	0	32	7	39	8	23	0	31	0	0	0	0	9	0	18	27	97
02:15 PM	0	30	4	34	14	44	0	58	0	0	0	0	11	0	11	22	114
02:30 PM	1	19	8	28	16	30	0	46	0	0	0	0	6	0	19	25	99
02:45 PM	0	46	8	54	12	38	0	50	0	0	0	0	10	0	21	31	135
<b>Total</b>	1	127	27	155	50	135	0	185	0	0	0	0	36	0	69	105	445
03:00 PM	0	42	12	54	19	44	0	63	0	0	0	0	11	0	10	21	138
03:15 PM	0	26	11	37	15	51	0	66	0	0	0	0	10	0	19	29	132
03:30 PM	0	26	7	33	22	36	0	58	0	0	0	0	11	0	25	36	127
03:45 PM	0	32	11	43	18	51	0	69	0	0	0	0	6	0	23	29	141
<b>Total</b>	0	126	41	167	74	182	0	256	0	0	0	0	38	0	77	115	538
04:00 PM	0	28	9	37	12	31	0	43	0	0	0	0	6	0	20	26	106
04:15 PM	0	30	9	39	12	31	0	43	0	0	0	0	6	0	20	26	108

# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC DATA  
Harmony Rd @ Scott Rd  
7 am - 7 pm

File Name : 20210168  
Site Code : 20210168  
Start Date : 5/27/2021  
Page No : 2

**Groups Printed- Cars,Buses & Trucks**

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Private Drwy Eastbound				Scott Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	0	37	8	45	21	31	0	52	0	0	0	0	15	0	19	34	131
04:45 PM	1	44	7	52	19	37	0	56	0	0	1	1	10	0	30	40	149
Total	1	139	33	173	64	130	0	194	0	0	1	1	37	0	89	126	494
05:00 PM	1	61	6	68	10	35	0	45	0	0	0	0	18	0	29	47	160
05:15 PM	0	53	12	65	18	40	0	58	0	0	0	0	12	0	46	58	181
05:30 PM	0	44	9	53	13	43	0	56	0	0	0	0	9	0	40	49	158
05:45 PM	0	27	10	37	8	44	0	52	0	0	0	0	8	0	23	31	120
Total	1	185	37	223	49	162	0	211	0	0	0	0	47	0	138	185	619
06:00 PM	1	32	8	41	11	31	0	42	0	0	0	0	6	0	11	17	100
06:15 PM	0	37	4	41	17	30	0	47	0	0	0	0	9	0	22	31	119
06:30 PM	2	27	5	34	23	27	0	50	1	0	0	1	6	0	20	26	111
06:45 PM	2	15	2	19	6	31	0	37	0	0	0	0	4	0	11	15	71
Total	5	111	19	135	57	119	0	176	1	0	0	1	25	0	64	89	401
Grand Total	10	1340	354	1704	782	1727	1	2510	2	1	9	12	433	1	793	1227	5453
Apprch %	0.6	78.6	20.8		31.2	68.8	0		16.7	8.3	75		35.3	0.1	64.6		
Total %	0.2	24.6	6.5	31.2	14.3	31.7	0	46	0	0	0.2	0.2	7.9	0	14.5	22.5	

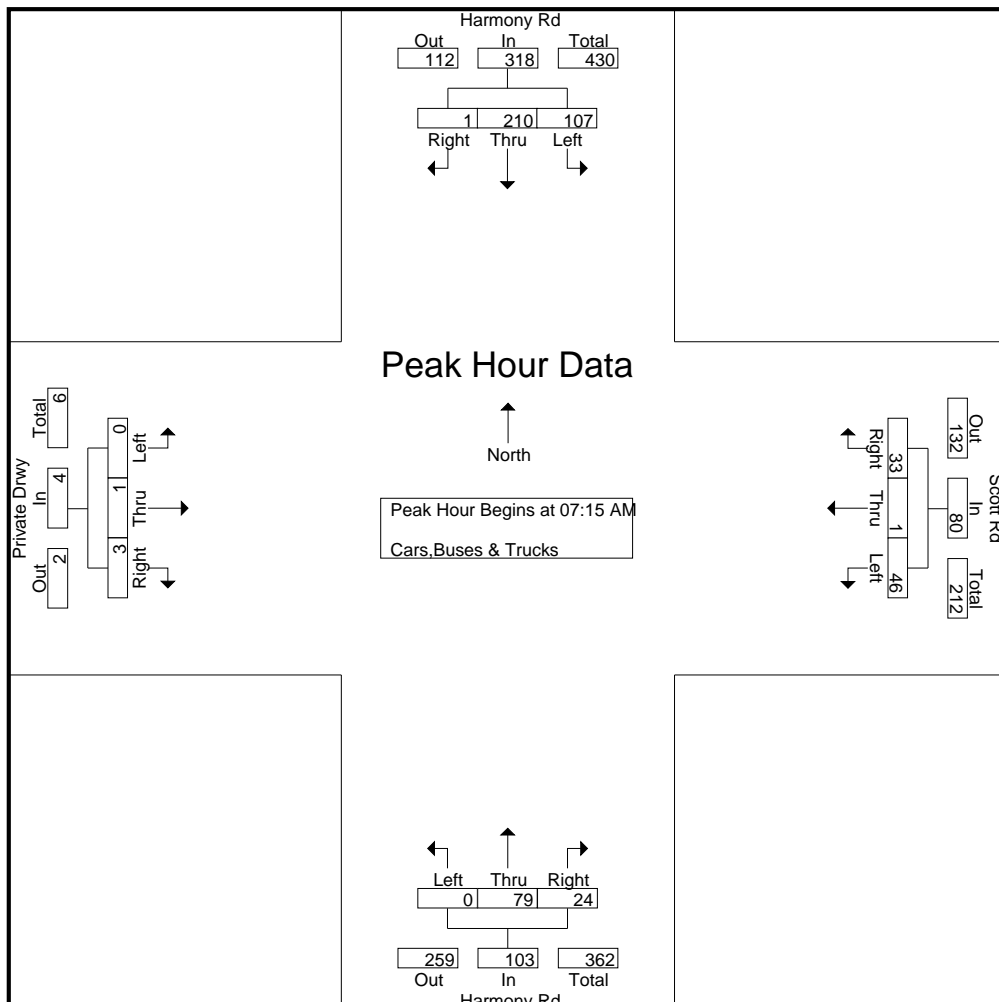
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC DATA  
Harmony Rd @ Scott Rd  
7 am - 7 pm

File Name : 20210168  
Site Code : 20210168  
Start Date : 5/27/2021  
Page No : 3

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Private Drwy Eastbound				Scott Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	18	4	22	27	48	0	75	0	1	1	2	10	0	7	17	116
07:30 AM	0	23	5	28	23	59	0	82	0	0	2	2	10	1	4	15	127
07:45 AM	0	20	7	27	35	58	0	93	0	0	0	0	10	0	11	21	141
08:00 AM	0	18	8	26	22	45	1	68	0	0	0	0	16	0	11	27	121
Total Volume	0	79	24	103	107	210	1	318	0	1	3	4	46	1	33	80	505
% App. Total	0	76.7	23.3		33.6	66	0.3		0	25	75		57.5	1.2	41.2		
PHF	.000	.859	.750	.920	.764	.890	.250	.855	.000	.250	.375	.500	.719	.250	.750	.741	.895



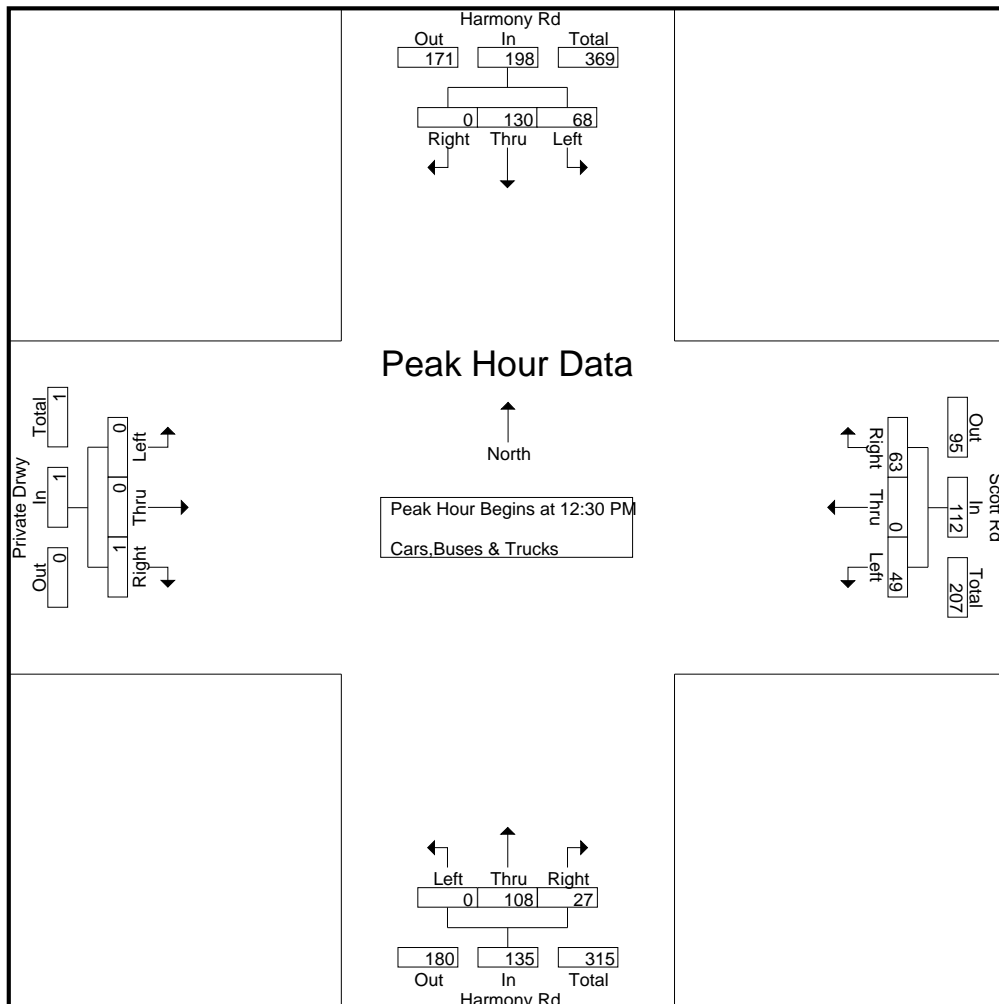
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC DATA  
Harmony Rd @ Scott Rd  
7 am - 7 pm

File Name : 20210168  
Site Code : 20210168  
Start Date : 5/27/2021  
Page No : 4

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Private Drwy Eastbound				Scott Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	19	9	28	20	34	0	54	0	0	1	1	14	0	20	34	117
12:45 PM	0	27	5	32	14	37	0	51	0	0	0	0	14	0	18	32	115
01:00 PM	0	33	8	41	18	28	0	46	0	0	0	0	15	0	11	26	113
01:15 PM	0	29	5	34	16	31	0	47	0	0	0	0	6	0	14	20	101
Total Volume	0	108	27	135	68	130	0	198	0	0	1	1	49	0	63	112	446
% App. Total	0	80	20		34.3	65.7	0		0	0	100		43.8	0	56.2		
PHF	.000	.818	.750	.823	.850	.878	.000	.917	.000	.000	.250	.250	.817	.000	.788	.824	.953



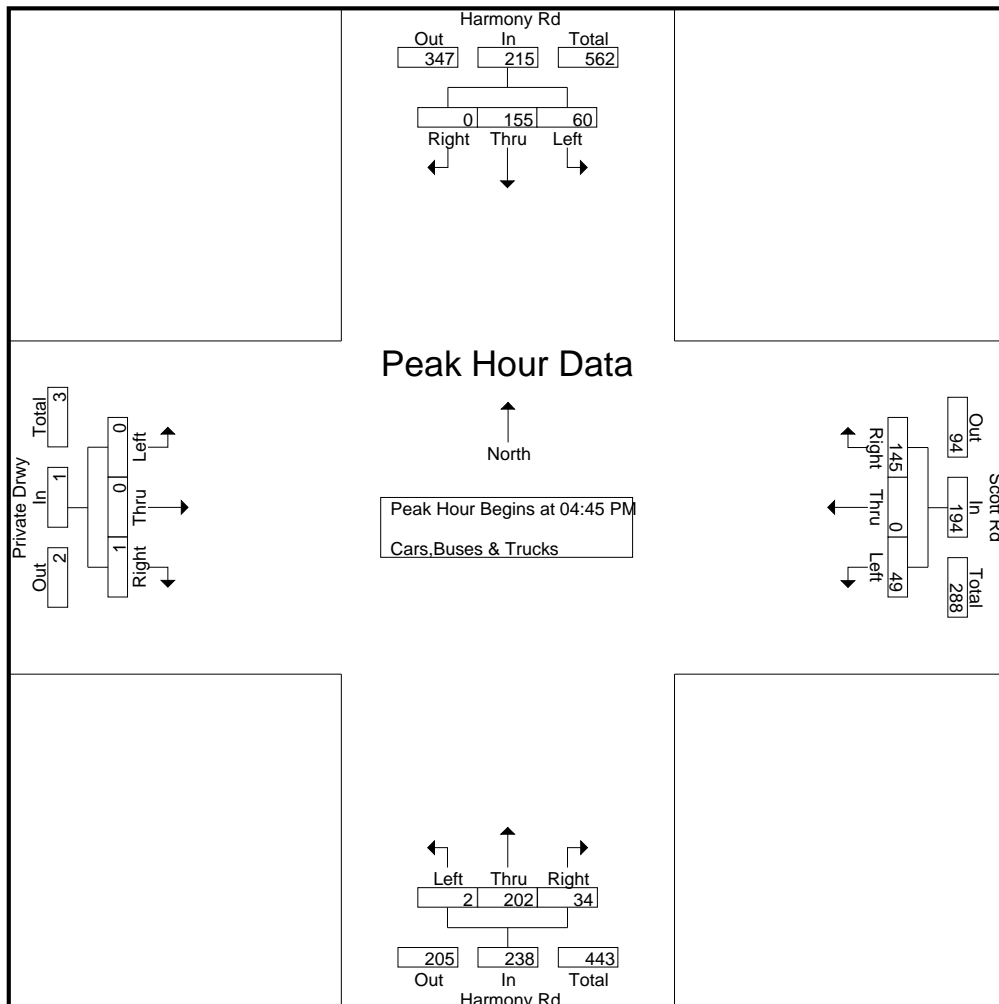
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC DATA  
Harmony Rd @ Scott Rd  
7 am - 7 pm

File Name : 20210168  
Site Code : 20210168  
Start Date : 5/27/2021  
Page No : 5

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Private Drwy Eastbound				Scott Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	44	7	52	19	37	0	56	0	0	1	1	10	0	30	40	149
05:00 PM	1	61	6	68	10	35	0	45	0	0	0	0	18	0	29	47	160
05:15 PM	0	53	12	65	18	40	0	58	0	0	0	0	12	0	46	58	181
05:30 PM	0	44	9	53	13	43	0	56	0	0	0	0	9	0	40	49	158
Total Volume	2	202	34	238	60	155	0	215	0	0	1	1	49	0	145	194	648
% App. Total	0.8	84.9	14.3		27.9	72.1	0		0	0	100		25.3	0	74.7		
PHF	.500	.828	.708	.875	.789	.901	.000	.927	.000	.000	.250	.250	.681	.000	.788	.836	.895





# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Harmony Lane  
7-9 am | 4-6 pm

File Name : 20210172  
Site Code : 20210172  
Start Date : 5/27/2021  
Page No : 1

**Groups Printed- Cars,Buses & Trucks**

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Harmony Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	3	44	0	47	0	35	2	37	2	0	3	5	0	0	0	0	89
07:15 AM	4	41	0	45	0	46	3	49	3	0	5	8	0	0	0	0	102
07:30 AM	4	42	0	46	0	49	4	53	4	0	5	9	0	0	0	0	108
07:45 AM	1	60	0	61	0	60	2	62	4	0	4	8	0	0	0	0	131
Total	12	187	0	199	0	190	11	201	13	0	17	30	0	0	0	0	430
08:00 AM	4	48	0	52	0	55	3	58	4	0	5	9	0	0	0	0	119
08:15 AM	4	44	0	48	0	59	5	64	3	0	4	7	0	0	0	0	119
08:30 AM	2	38	0	40	0	54	3	57	5	0	4	9	0	0	0	0	106
08:45 AM	2	43	0	45	0	57	4	61	2	0	3	5	0	0	0	0	111
Total	12	173	0	185	0	225	15	240	14	0	16	30	0	0	0	0	455
*** BREAK ***																	
04:00 PM	4	63	0	67	0	64	4	68	3	0	5	8	0	0	0	0	143
04:15 PM	3	45	0	48	0	52	5	57	4	0	4	8	0	0	0	0	113
04:30 PM	2	55	0	57	0	58	3	61	4	0	3	7	0	0	0	0	125
04:45 PM	3	52	0	55	0	57	3	60	5	0	2	7	0	0	0	0	122
Total	12	215	0	227	0	231	15	246	16	0	14	30	0	0	0	0	503
05:00 PM	4	69	0	73	0	77	4	81	2	0	5	7	0	0	0	0	161
05:15 PM	3	63	0	66	0	80	3	83	2	0	2	4	0	0	0	0	153
05:30 PM	4	47	0	51	0	60	4	64	3	0	4	7	0	0	0	0	122
05:45 PM	4	44	0	48	0	60	5	65	4	0	4	8	0	0	0	0	121
Total	15	223	0	238	0	277	16	293	11	0	15	26	0	0	0	0	557
Grand Total	51	798	0	849	0	923	57	980	54	0	62	116	0	0	0	0	1945
Apprch %	6	94	0		0	94.2	5.8		46.6	0	53.4		0	0	0		
Total %	2.6	41	0	43.7	0	47.5	2.9	50.4	2.8	0	3.2	6	0	0	0	0	

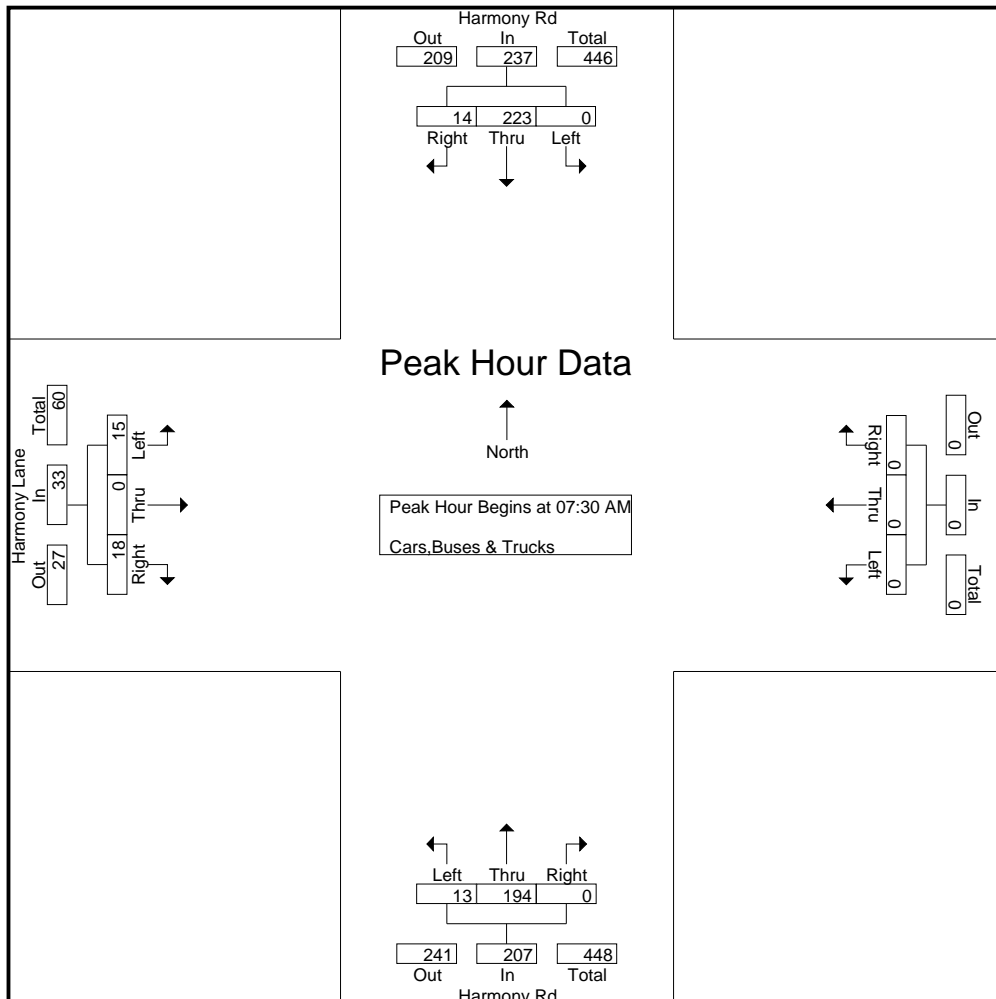
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Harmony Lane  
7-9 am | 4-6 pm

File Name : 20210172  
Site Code : 20210172  
Start Date : 5/27/2021  
Page No : 2

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Harmony Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	42	0	46	0	49	4	53	4	0	5	9	0	0	0	0	108
07:45 AM	1	60	0	61	0	60	2	62	4	0	4	8	0	0	0	0	131
08:00 AM	4	48	0	52	0	55	3	58	4	0	5	9	0	0	0	0	119
08:15 AM	4	44	0	48	0	59	5	64	3	0	4	7	0	0	0	0	119
Total Volume	13	194	0	207	0	223	14	237	15	0	18	33	0	0	0	0	477
% App. Total	6.3	93.7	0		0	94.1	5.9		45.5	0	54.5		0	0	0		
PHF	.813	.808	.000	.848	.000	.929	.700	.926	.938	.000	.900	.917	.000	.000	.000	.000	.910



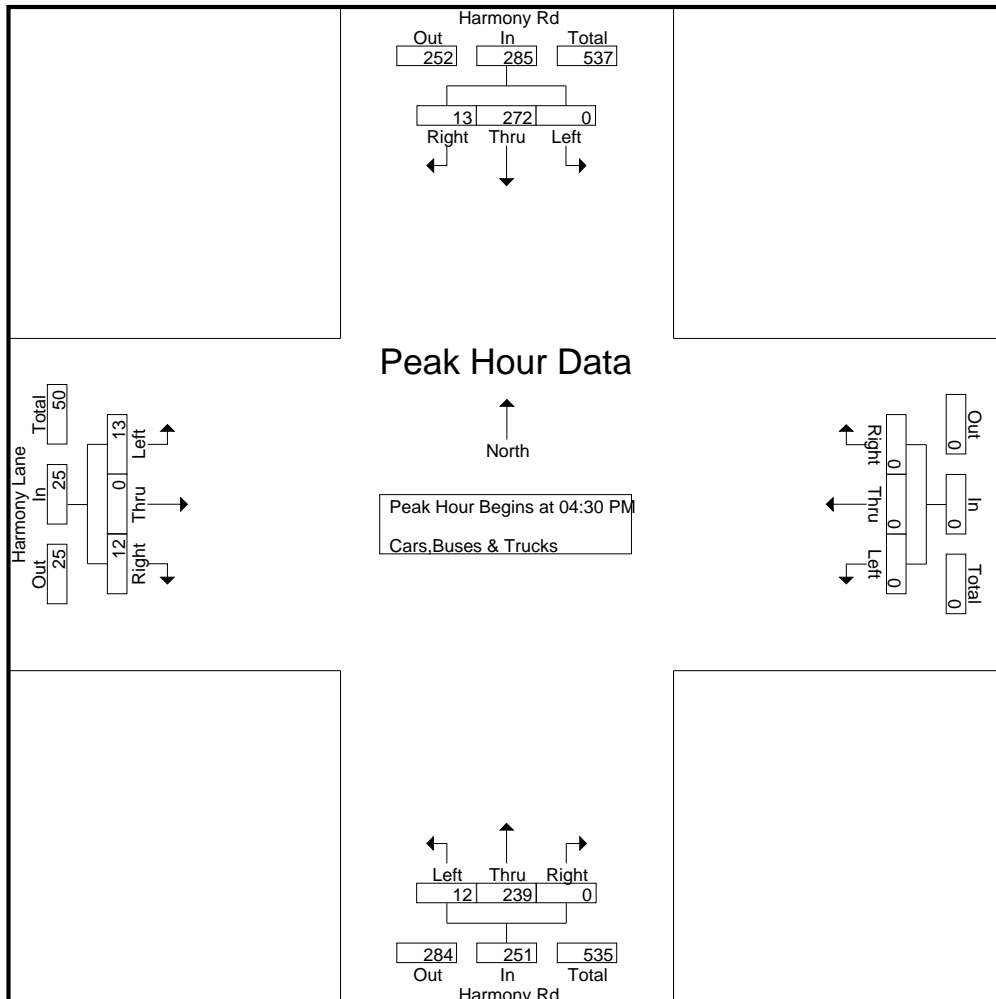
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Harmony Lane  
7-9 am | 4-6 pm

File Name : 20210172  
Site Code : 20210172  
Start Date : 5/27/2021  
Page No : 3

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Harmony Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	55	0	57	0	58	3	61	4	0	3	7	0	0	0	0	125
04:45 PM	3	52	0	55	0	57	3	60	5	0	2	7	0	0	0	0	122
05:00 PM	4	69	0	73	0	77	4	81	2	0	5	7	0	0	0	0	161
05:15 PM	3	63	0	66	0	80	3	83	2	0	2	4	0	0	0	0	153
Total Volume	12	239	0	251	0	272	13	285	13	0	12	25	0	0	0	0	561
% App. Total	4.8	95.2	0		0	95.4	4.6		52	0	48		0	0	0		
PHF	.750	.866	.000	.860	.000	.850	.813	.858	.650	.000	.600	.893	.000	.000	.000	.000	.871



# A&R Engineering, Inc.

2160 Kingston Court, Suite O  
Marietta, GA 30067

24-Hour Bi-Directional Counts on Harmony  
Rd North of Scott Road  
Site Code: 20210173  
Date Start: 27-May-21  
Date End: 27-May-21

Start Time	27-May-2 Thu	Northbou	Southbou							Total
12:00 AM		3	2							5
01:00		5	5							10
02:00		4	4							8
03:00		3	3							6
04:00		11	15							26
05:00		21	33							54
06:00		81	91							172
07:00		106	<b>222</b>							328
08:00		121	211							<b>332</b>
09:00		127	179							306
10:00		149	154							303
11:00		<b>169</b>	153							322
12:00 PM		168	165							333
01:00		168	175							343
02:00		196	171							367
03:00		203	<b>220</b>							423
04:00		228	167							395
05:00		<b>323</b>	209							<b>532</b>
06:00		175	144							319
07:00		125	95							220
08:00		79	68							147
09:00		51	35							86
10:00		36	28							64
11:00		15	17							32
Total		2567	2566							5133
Percent		50.0%	50.0%							
AM Peak	-	11:00	07:00	-	-	-	-	-	-	08:00
Vol.	-	169	222	-	-	-	-	-	-	332
PM Peak	-	17:00	15:00	-	-	-	-	-	-	17:00
Vol.	-	323	220	-	-	-	-	-	-	532
Grand Total		2567	2566							5133
Percent		50.0%	50.0%							
ADT		ADT 5,133	AADT 5,133							

# LINEAR REGRESSION OF DAILY TRAFFIC



Location	Growth Rate	R Squared	Station ID	Route	2017	2018	2019	
Harmony Road (north of Scott f	-0.7%	0.75	237-0181	00021800	3,620	3,570	3,570	Major Collector (Rural)
SR 44 (North of Harmony Rd)	4.2%	0.81	237-0146	00004400	14,000	14,100	15,200	Minor Arterial (Rural)
SR 44 (North of Loch Way)	1.3%	0.65	237-0145	00004400	5,760	5,740	5,910	Minor Arterial (Rural)
Harmony Road (Northeast of H.	0.4%	0.75	237-0183	00021800	2,430	2,450	2,450	Major Collector (Rural)

Weighted Average 2.5% 0.78 Sum of Count Stations = 25,810 25,860 27,130

Location	Traffic Counter	RCLINK	2017	2018	2019
Harmony Road (north of Scott Road)	237-0181	00021800	3,620	3,570	3,570

**Growth Rate** **Trend Line**

**-0.7%** Intercept 54,037 Slope -25.00  
3,612 3,587 3,562

Sum X  
Sum Y  
Sum XY  
Sum X<sup>2</sup>  
Count  
a  
b  
Mean Y  
SS<sub>tot</sub>  
SS<sub>res</sub>  
R<sup>2</sup>

Location	Traffic Counter	RCLINK	2017	2018	2019
SR 44 (North of Harmony Rd)	237-0146	00004400	14,000	14,100	15,200

**Growth Rate** **Trend Line**

**4.2%** Intercept -1,196,367 Slope 600.00  
13,833 14,433 15,033

Sum X  
Sum Y  
Sum XY  
Sum X<sup>2</sup>  
Count  
a  
b  
Mean Y  
SS<sub>tot</sub>  
SS<sub>res</sub>  
R<sup>2</sup>

Location	Traffic Counter	RCLINK	2017	2018	2019
SR 44 (North of Loch Way)	237-0145	00004400	5,760	5,740	5,910

**Growth Rate** **Trend Line**

**1.3%** Intercept -145,547 Slope 75.00  
5,728 5,803 5,878

Sum X  
Sum Y  
Sum XY  
Sum X<sup>2</sup>  
Count  
a  
b  
Mean Y  
SS<sub>tot</sub>  
SS<sub>res</sub>  
R<sup>2</sup>

Location	Traffic Counter	RCLINK	2017	2018	2019
Harmony Road (Northeast of Harmony Drive)	237-0183	00021800	2,430	2,450	2,450

**Growth Rate** **Trend Line**

**0.4%** Intercept -17,737 Slope 10.00  
2,433 2,443 2,453

Sum X  
Sum Y  
Sum XY  
Sum X<sup>2</sup>  
Count  
a  
b  
Mean Y  
SS<sub>tot</sub>  
SS<sub>res</sub>  
R<sup>2</sup>

Location	Traffic Counter	RCLINK	2017	2018	2019
0	0	0	0	0	0

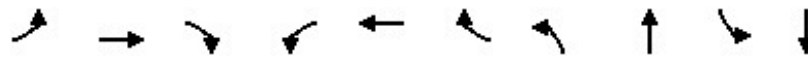
**Growth Rate** **Trend Line**

**#DIV/0!** Intercept 0 Slope 0.00  
0 0 0

Sum X  
Sum Y  
Sum XY  
Sum X<sup>2</sup>  
Count  
a  
b  
Mean Y  
SS<sub>tot</sub>  
SS<sub>res</sub>  
R<sup>2</sup>

## EXISTING INTERSECTION ANALYSIS

Timings  
1: Harmony Rd & SR 44

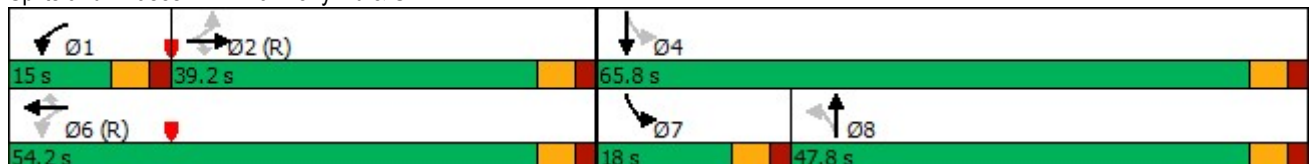


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↘	↙	↕	↘	↙	↕	↘	↕
Traffic Volume (vph)	130	389	76	194	185	89	69	157	172	113
Future Volume (vph)	130	389	76	194	185	89	69	157	172	113
Lane Group Flow (vph)	134	401	78	200	191	92	71	565	177	189
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	39.2	39.2	39.2	15.0	54.2	54.2	47.8	47.8	18.0	65.8
Total Split (%)	32.7%	32.7%	32.7%	12.5%	45.2%	45.2%	39.8%	39.8%	15.0%	54.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.37	0.74	0.14	0.70	0.25	0.14	0.19	0.94	0.80	0.24
Control Delay	37.5	47.6	1.9	38.8	23.7	5.0	29.2	55.0	52.7	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	47.6	1.9	38.8	23.7	5.0	29.2	55.0	52.7	14.8
Queue Length 50th (ft)	84	289	0	103	97	0	38	336	84	62
Queue Length 95th (ft)	146	#445	11	#182	154	32	74	#547	#199	108
Internal Link Dist (ft)		1244			234			548		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	364	545	557	284	765	679	415	647	222	846
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.74	0.14	0.70	0.25	0.14	0.17	0.87	0.80	0.22

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 75 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Harmony Rd & SR 44



# HCM 6th Signalized Intersection Summary

## 1: Harmony Rd & SR 44

Existing AM  
06/10/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	389	76	194	185	89	69	157	391	172	113	71
Future Volume (veh/h)	130	389	76	194	185	89	69	157	391	172	113	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1781	1811	1811	1781	1722	1856	1826	1841	1707	1737	1826
Adj Flow Rate, veh/h	134	401	0	200	191	0	71	162	403	177	116	73
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	8	6	6	8	12	3	5	4	13	11	5
Cap, veh/h	415	534		289	757		478	164	407	202	482	303
Arrive On Green	0.30	0.30	0.00	0.08	0.42	0.00	0.35	0.35	0.35	0.09	0.48	0.48
Sat Flow, veh/h	1183	1781	1535	1725	1781	1459	1185	464	1154	1626	997	627
Grp Volume(v), veh/h	134	401	0	200	191	0	71	0	565	177	0	189
Grp Sat Flow(s),veh/h/ln	1183	1781	1535	1725	1781	1459	1185	0	1618	1626	0	1624
Q Serve(g_s), s	10.7	24.4	0.0	9.5	8.3	0.0	5.0	0.0	41.7	8.1	0.0	8.2
Cycle Q Clear(g_c), s	10.7	24.4	0.0	9.5	8.3	0.0	5.0	0.0	41.7	8.1	0.0	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.39
Lane Grp Cap(c), veh/h	415	534		289	757		478	0	570	202	0	785
V/C Ratio(X)	0.32	0.75		0.69	0.25		0.15	0.00	0.99	0.88	0.00	0.24
Avail Cap(c_a), veh/h	415	534		289	757		478	0	570	233	0	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	37.9	0.0	28.5	22.2	0.0	26.8	0.0	38.7	28.8	0.0	18.1
Incr Delay (d2), s/veh	2.1	9.4	0.0	7.0	0.8	0.0	0.1	0.0	35.2	26.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	11.6	0.0	4.3	3.5	0.0	1.4	0.0	21.2	4.4	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	47.3	0.0	35.4	23.0	0.0	26.9	0.0	73.8	55.2	0.0	18.3
LnGrp LOS	D	D		D	C		C	A	E	E	A	B
Approach Vol, veh/h		535	A		391	A		636			366	
Approach Delay, s/veh		44.3			29.4			68.6			36.1	
Approach LOS		D			C			E			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	15.0	41.5		63.5		56.5	15.7	47.8				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	33.7		60.3		48.7	12.5	42.3				
Max Q Clear Time (g_c+l1), s	11.5	26.4		10.2		10.3	10.1	43.7				
Green Ext Time (p_c), s	0.0	4.2		0.7		4.9	0.1	0.0				

### Intersection Summary

HCM 6th Ctrl Delay	47.7
HCM 6th LOS	D

### Notes

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

**Intersection**

Int Delay, s/veh 0.4

**Movement** EBL EBR NBL NBT SBT SBR

Lane Configurations

Traffic Vol, veh/h 5 8 9 254 257 5

Future Vol, veh/h 5 8 9 254 257 5

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 88 88 88 88 88 88

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 6 9 10 289 292 6

**Major/Minor** Minor2 Major1 Major2

Conflicting Flow All 604 295 298 0 - 0

Stage 1 295 - - - - -

Stage 2 309 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 461 744 1263 - - -

Stage 1 755 - - - - -

Stage 2 745 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 457 744 1263 - - -

Mov Cap-2 Maneuver 457 - - - - -

Stage 1 748 - - - - -

Stage 2 745 - - - - -

**Approach** EB NB SB

HCM Control Delay, s 11.2 0.3 0

HCM LOS B

**Minor Lane/Major Mvmt** NBL NBTEBLn1 SBT SBR

Capacity (veh/h) 1263 - 599 - -

HCM Lane V/C Ratio 0.008 - 0.025 - -

HCM Control Delay (s) 7.9 0 11.2 - -

HCM Lane LOS A A B - -

HCM 95th %tile Q(veh) 0 - 0.1 - -



**Intersection**

Int Delay, s/veh 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	28	2	223	56	1	267
Future Vol, veh/h	28	2	223	56	1	267
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	50	2	5	24	2	9
Mvmt Flow	31	2	245	62	1	293

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	571	276	0
Stage 1	276	-	-
Stage 2	295	-	-
Critical Hdwy	6.9	6.22	-
Critical Hdwy Stg 1	5.9	-	-
Critical Hdwy Stg 2	5.9	-	-
Follow-up Hdwy	3.95	3.318	-
Pot Cap-1 Maneuver	411	763	-
Stage 1	672	-	-
Stage 2	658	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	411	763	-
Mov Cap-2 Maneuver	411	-	-
Stage 1	672	-	-
Stage 2	657	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	424	1254
HCM Lane V/C Ratio	-	-	0.078	0.001
HCM Control Delay (s)	-	-	14.2	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

**Intersection**

Int Delay, s/veh 1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	1	
Traffic Vol, veh/h	16	20	14	211	243	15
Future Vol, veh/h	16	20	14	211	243	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	22	15	232	267	16

**Major/Minor**

	Minor2	Major1	Major2		
Conflicting Flow All	537	275	283	0	0
Stage 1	275	-	-	-	-
Stage 2	262	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	505	764	1279	-	-
Stage 1	771	-	-	-	-
Stage 2	782	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	498	764	1279	-	-
Mov Cap-2 Maneuver	498	-	-	-	-
Stage 1	761	-	-	-	-
Stage 2	782	-	-	-	-

**Approach**

	EB	NB	SB
HCM Control Delay, s	11.2	0.5	0
HCM LOS	B		

**Minor Lane/Major Mvmt**

	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	1279	-	617	-
HCM Lane V/C Ratio	0.012	-	0.064	-
HCM Control Delay (s)	7.8	0	11.2	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0	-	0.2	-

**Intersection**

Int Delay, s/veh 4

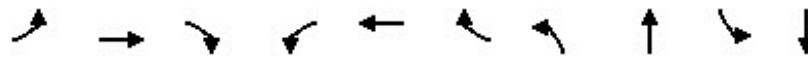
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	1	3	50	1	36	0	86	26	117	229	1
Future Vol, veh/h	0	1	3	50	1	36	0	86	26	117	229	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	3	56	1	40	0	96	29	127	249	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	635	629	250	617	615	111	250	0	0	125	0	0
Stage 1	504	504	-	111	111	-	-	-	-	-	-	-
Stage 2	131	125	-	506	504	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	391	399	789	402	407	942	1316	-	-	1462	-	-
Stage 1	550	541	-	894	804	-	-	-	-	-	-	-
Stage 2	873	792	-	549	541	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	344	359	789	369	366	942	1316	-	-	1462	-	-
Mov Cap-2 Maneuver	344	359	-	369	366	-	-	-	-	-	-	-
Stage 1	550	486	-	894	804	-	-	-	-	-	-	-
Stage 2	835	792	-	490	486	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	14.1	0	2.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1316	-	-	607	493	1462	-
HCM Lane V/C Ratio	-	-	-	0.007	0.196	0.087	-
HCM Control Delay (s)	0	-	-	11	14.1	7.7	0
HCM Lane LOS	A	-	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.7	0.3	-

Timings  
1: Harmony Rd & SR 44



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↗	↘	↘	↗	↘	↘	↗	↘	↗
Traffic Volume (vph)	73	246	73	409	388	68	56	81	113	172
Future Volume (vph)	73	246	73	409	388	68	56	81	113	172
Lane Group Flow (vph)	77	259	77	431	408	72	59	403	119	292
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	33.0	33.0	33.0	34.0	67.0	67.0	38.0	38.0	15.0	53.0
Total Split (%)	27.5%	27.5%	27.5%	28.3%	55.8%	55.8%	31.7%	31.7%	12.5%	44.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.22	0.39	0.12	0.65	0.37	0.08	0.48	0.88	0.66	0.51
Control Delay	34.9	34.8	1.9	19.9	15.5	3.4	52.8	48.6	62.2	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	34.8	1.9	19.9	15.5	3.4	52.8	48.6	62.2	31.8
Queue Length 50th (ft)	42	151	0	173	159	0	40	195	67	163
Queue Length 95th (ft)	98	272	10	296	271	23	80	300	101	220
Internal Link Dist (ft)		1244			234			548		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	350	669	647	712	1105	917	165	557	204	713
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.39	0.12	0.61	0.37	0.08	0.36	0.72	0.58	0.41

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Harmony Rd & SR 44



# HCM 6th Signalized Intersection Summary

## 1: Harmony Rd & SR 44

Existing PM 219  
06/10/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	246	73	409	388	68	56	81	302	113	172	105
Future Volume (veh/h)	73	246	73	409	388	68	56	81	302	113	172	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1781	1841	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	259	0	431	408	0	59	85	318	119	181	111
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	8	4	2	2	2	2	2
Cap, veh/h	385	621		627	1038		200	90	337	147	384	235
Arrive On Green	0.33	0.33	0.00	0.18	0.55	0.00	0.26	0.26	0.26	0.05	0.35	0.35
Sat Flow, veh/h	978	1870	1585	1781	1870	1510	1070	345	1292	1781	1085	665
Grp Volume(v), veh/h	77	259	0	431	408	0	59	0	403	119	0	292
Grp Sat Flow(s),veh/h/ln	978	1870	1585	1781	1870	1510	1070	0	1638	1781	0	1751
Q Serve(g_s), s	6.9	12.9	0.0	18.2	14.9	0.0	6.1	0.0	29.0	3.7	0.0	15.5
Cycle Q Clear(g_c), s	6.9	12.9	0.0	18.2	14.9	0.0	21.6	0.0	29.0	3.7	0.0	15.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.38
Lane Grp Cap(c), veh/h	385	621		627	1038		200	0	427	147	0	619
V/C Ratio(X)	0.20	0.42		0.69	0.39		0.29	0.00	0.94	0.81	0.00	0.47
Avail Cap(c_a), veh/h	385	621		735	1038		211	0	444	204	0	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	31.1	0.0	19.3	15.2	0.0	47.9	0.0	43.5	55.3	0.0	30.1
Incr Delay (d2), s/veh	1.2	2.1	0.0	2.2	1.1	0.0	0.8	0.0	28.5	15.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	6.0	0.0	7.3	6.2	0.0	1.6	0.0	14.7	4.1	0.0	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	33.1	0.0	21.5	16.3	0.0	48.7	0.0	72.0	70.9	0.0	30.6
LnGrp LOS	C	C		C	B		D	A	E	E	A	C
Approach Vol, veh/h		336	A		839	A		462			411	
Approach Delay, s/veh		32.5			19.0			69.0			42.3	
Approach LOS		C			B			E			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	26.7	45.4		47.9		72.1	11.1	36.8				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	28.5	27.5		47.5		61.5	9.5	32.5				
Max Q Clear Time (g_c+l1), s	20.2	14.9		17.5		16.9	5.7	31.0				
Green Ext Time (p_c), s	1.0	4.3		1.0		12.7	0.1	0.3				

### Intersection Summary

HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D

### Notes

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



**Intersection**

Int Delay, s/veh 0.3

**Movement** EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			4	4	
Traffic Vol, veh/h	6	7	7	237	337	8
Future Vol, veh/h	6	7	7	237	337	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	8	8	282	401	10

**Major/Minor** Minor2 Major1 Major2

Conflicting Flow All	704	406	411	0	-	0
Stage 1	406	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	403	645	1148	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	400	645	1148	-	-	-
Mov Cap-2 Maneuver	400	-	-	-	-	-
Stage 1	668	-	-	-	-	-
Stage 2	753	-	-	-	-	-

**Approach** EB NB SB

HCM Control Delay, s 12.4 0.2 0  
HCM LOS B

**Minor Lane/Major Mvmt** NBL NBTEBLn1 SBT SBR

Capacity (veh/h)	1148	-	503	-	-
HCM Lane V/C Ratio	0.007	-	0.031	-	-
HCM Control Delay (s)	8.2	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	62	2	248	9	0	282
Future Vol, veh/h	62	2	248	9	0	282
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	50	6	56	2	2
Mvmt Flow	74	2	295	11	0	336

**Major/Minor**

	Minor1	Major1	Major2		
Conflicting Flow All	637	301	0	0	306
Stage 1	301	-	-	-	-
Stage 2	336	-	-	-	-
Critical Hdwy	6.42	6.7	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.75	-	-	2.218
Pot Cap-1 Maneuver	441	639	-	-	1255
Stage 1	751	-	-	-	-
Stage 2	724	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	441	639	-	-	1255
Mov Cap-2 Maneuver	441	-	-	-	-
Stage 1	751	-	-	-	-
Stage 2	724	-	-	-	-

**Approach**

	WB	NB	SB
HCM Control Delay, s	14.8	0	0
HCM LOS	B		

**Minor Lane/Major Mvmt**

	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	445	1255
HCM Lane V/C Ratio	-	-	0.171	-
HCM Control Delay (s)	-	-	14.8	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0

**Intersection**

Int Delay, s/veh 0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	1	
Traffic Vol, veh/h	13	12	12	241	275	13
Future Vol, veh/h	13	12	12	241	275	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	14	14	277	316	15

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	629	324	331	0	-	0
Stage 1	324	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	446	717	1228	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	440	717	1228	-	-	-
Mov Cap-2 Maneuver	440	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	1228	-	540	-
HCM Lane V/C Ratio	0.011	-	0.053	-
HCM Control Delay (s)	8	0	12	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0	-	0.2	-

**Intersection**

Int Delay, s/veh 4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	0	1	49	0	146	2	204	34	61	157	0
Future Vol, veh/h	0	0	1	49	0	146	2	204	34	61	157	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	54	0	162	2	227	38	66	171	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	634	572	171	554	553	246	171	0	0	265	0	0
Stage 1	303	303	-	250	250	-	-	-	-	-	-	-
Stage 2	331	269	-	304	303	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	392	430	873	443	441	793	1406	-	-	1299	-	-
Stage 1	706	664	-	754	700	-	-	-	-	-	-	-
Stage 2	682	687	-	705	664	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	298	405	873	423	415	793	1406	-	-	1299	-	-
Mov Cap-2 Maneuver	298	405	-	423	415	-	-	-	-	-	-	-
Stage 1	705	627	-	752	699	-	-	-	-	-	-	-
Stage 2	541	686	-	665	627	-	-	-	-	-	-	-

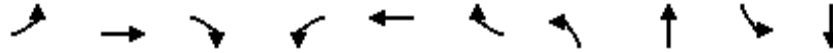
Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	13.3	0.1	2.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	873	650	1299	-
HCM Lane V/C Ratio	0.002	-	-	0.001	0.333	0.051	-
HCM Control Delay (s)	7.6	0	-	9.1	13.3	7.9	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	1.5	0.2	-

**FUTURE "NO-BUILD" INTERSECTION  
ANALYSIS**



Timings  
1: Harmony Rd & SR 44

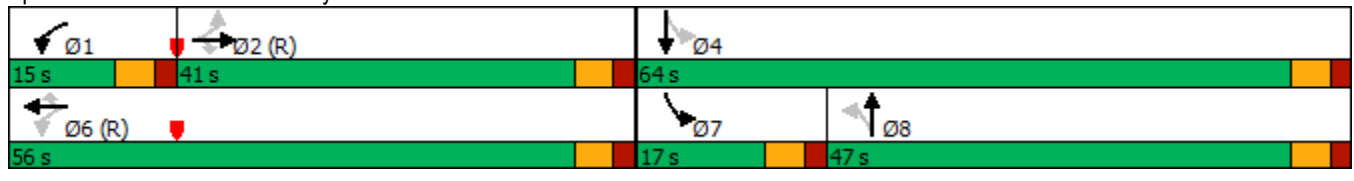


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↘
Traffic Volume (vph)	143	429	84	214	204	98	76	173	190	125
Future Volume (vph)	143	429	84	214	204	98	76	173	190	125
Lane Group Flow (vph)	147	442	87	221	210	101	78	623	196	209
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	41.0	41.0	41.0	15.0	56.0	56.0	47.0	47.0	17.0	64.0
Total Split (%)	34.2%	34.2%	34.2%	12.5%	46.7%	46.7%	39.2%	39.2%	14.2%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.42	0.82	0.16	0.90	0.27	0.15	0.20	0.98	0.94	0.26
Control Delay	38.3	53.1	2.6	63.5	23.9	4.6	29.3	63.5	78.3	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	53.1	2.6	63.5	23.9	4.6	29.3	63.5	78.3	15.7
Queue Length 50th (ft)	91	319	0	112	105	0	42	407	106	75
Queue Length 95th (ft)	155	#482	17	#231	163	33	82	#656	#255	126
Internal Link Dist (ft)		1244			234			548		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	353	539	554	245	767	687	400	637	209	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.82	0.16	0.90	0.27	0.15	0.20	0.98	0.94	0.25

Intersection Summary

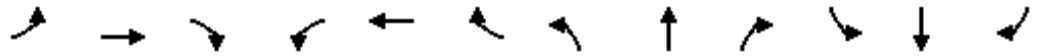
Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 90 (75%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Harmony Rd & SR 44



HCM 6th Signalized Intersection Summary  
1: Harmony Rd & SR 44

No-Build AM  
06/14/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗		↖	↗	
Traffic Volume (veh/h)	143	429	84	214	204	98	76	173	432	190	125	78
Future Volume (veh/h)	143	429	84	214	204	98	76	173	432	190	125	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1930	1853	1884	1884	1853	1791	1856	1826	1841	1707	1737	1826
Adj Flow Rate, veh/h	147	442	0	221	210	0	78	178	445	196	129	80
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	8	6	6	8	12	3	5	4	13	11	5
Cap, veh/h	418	548		274	780		462	160	400	216	489	303
Arrive On Green	0.30	0.30	0.00	0.08	0.42	0.00	0.35	0.35	0.35	0.10	0.49	0.49
Sat Flow, veh/h	1209	1853	1596	1794	1853	1518	1163	462	1156	1626	1003	622
Grp Volume(v), veh/h	147	442	0	221	210	0	78	0	623	196	0	209
Grp Sat Flow(s),veh/h/ln	1209	1853	1596	1794	1853	1518	1163	0	1618	1626	0	1625
Q Serve(g_s), s	11.7	26.5	0.0	9.5	8.9	0.0	5.6	0.0	41.5	9.8	0.0	9.1
Cycle Q Clear(g_c), s	11.7	26.5	0.0	9.5	8.9	0.0	5.6	0.0	41.5	9.8	0.0	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.38
Lane Grp Cap(c), veh/h	418	548		274	780		462	0	560	216	0	792
V/C Ratio(X)	0.35	0.81		0.81	0.27		0.17	0.00	1.11	0.91	0.00	0.26
Avail Cap(c_a), veh/h	418	548		274	780		462	0	560	216	0	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	39.1	0.0	31.4	22.7	0.0	27.5	0.0	39.3	32.1	0.0	18.1
Incr Delay (d2), s/veh	2.3	12.0	0.0	16.2	0.8	0.0	0.2	0.0	73.1	37.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	13.4	0.0	5.4	3.9	0.0	1.5	0.0	27.0	5.4	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	51.1	0.0	47.6	23.5	0.0	27.7	0.0	112.4	69.3	0.0	18.3
LnGrp LOS	D	D		D	C		C	A	F	E	A	B
Approach Vol, veh/h		589	A		431	A		701			405	
Approach Delay, s/veh		47.4			35.9			102.9			42.9	
Approach LOS		D			D			F			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	15.0	41.0		64.0		56.0	17.0	47.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	35.5		58.5		50.5	11.5	41.5				
Max Q Clear Time (g_c+I1), s	11.5	28.5		11.1		10.9	11.8	43.5				
Green Ext Time (p_c), s	0.0	4.4		0.7		5.6	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E




Notes

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

**Intersection**

Int Delay, s/veh 0.4

**Movement** EBL EBR NBL NBT SBT SBR

Lane Configurations						
Traffic Vol, veh/h	6	9	10	280	284	6
Future Vol, veh/h	6	9	10	280	284	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	10	11	318	323	7

**Major/Minor** Minor2 Major1 Major2

Conflicting Flow All	667	327	330	0	-	0
Stage 1	327	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	424	714	1229	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	721	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	419	714	1229	-	-	-
Mov Cap-2 Maneuver	419	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	721	-	-	-	-	-

**Approach** EB NB SB

HCM Control Delay, s 11.7 0.3 0  
HCM LOS B

**Minor Lane/Major Mvmt** NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1229	-	557	-	-
HCM Lane V/C Ratio	0.009	-	0.031	-	-
HCM Control Delay (s)	8	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	2	246	62	1	295
Future Vol, veh/h	31	2	246	62	1	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	50	2	5	24	2	9
Mvmt Flow	34	2	270	68	1	324

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	630	304	0	0	338
Stage 1	304	-	-	-	-
Stage 2	326	-	-	-	-
Critical Hdwy	6.9	6.22	-	-	4.12
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.95	3.318	-	-	2.218
Pot Cap-1 Maneuver	377	736	-	-	1221
Stage 1	651	-	-	-	-
Stage 2	635	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	377	736	-	-	1221
Mov Cap-2 Maneuver	377	-	-	-	-
Stage 1	651	-	-	-	-
Stage 2	634	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	388	1221
HCM Lane V/C Ratio	-	-	0.093	0.001
HCM Control Delay (s)	-	-	15.2	8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	18	22	15	233	268	17
Future Vol, veh/h	18	22	15	233	268	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	24	16	256	295	19

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	593	305	314	0	-	0
Stage 1	305	-	-	-	-	-
Stage 2	288	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	468	735	1246	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	461	735	1246	-	-	-
Mov Cap-2 Maneuver	461	-	-	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	761	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1246	-	580	-	-
HCM Lane V/C Ratio	0.013	-	0.076	-	-
HCM Control Delay (s)	7.9	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-



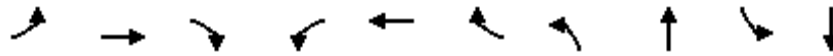
Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	1	3	55	1	40	0	95	29	129	253	1
Future Vol, veh/h	0	1	3	55	1	40	0	95	29	129	253	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	3	61	1	44	0	106	32	140	275	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	701	694	276	680	678	122	276	0	0	138	0	0
Stage 1	556	556	-	122	122	-	-	-	-	-	-	-
Stage 2	145	138	-	558	556	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	353	366	763	365	374	929	1287	-	-	1446	-	-
Stage 1	515	513	-	882	795	-	-	-	-	-	-	-
Stage 2	858	782	-	514	513	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	306	324	763	331	331	929	1287	-	-	1446	-	-
Mov Cap-2 Maneuver	306	324	-	331	331	-	-	-	-	-	-	-
Stage 1	515	455	-	882	795	-	-	-	-	-	-	-
Stage 2	816	782	-	452	455	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		15.4		0		2.6	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1287	-	-	570	452	1446	-	-
HCM Lane V/C Ratio	-	-	-	0.008	0.236	0.097	-	-
HCM Control Delay (s)	0	-	-	11.4	15.4	7.8	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.9	0.3	-	-

Timings  
1: Harmony Rd & SR 44

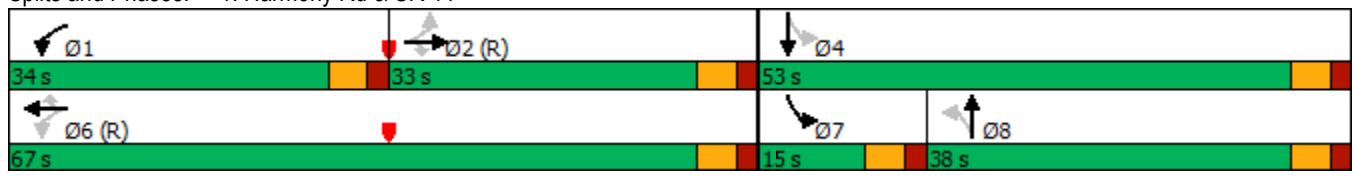


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↘
Traffic Volume (vph)	81	272	81	451	428	75	62	89	125	190
Future Volume (vph)	81	272	81	451	428	75	62	89	125	190
Lane Group Flow (vph)	85	286	85	475	451	79	65	445	132	322
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	33.0	33.0	33.0	34.0	67.0	67.0	38.0	38.0	15.0	53.0
Total Split (%)	27.5%	27.5%	27.5%	28.3%	55.8%	55.8%	31.7%	31.7%	12.5%	44.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.29	0.49	0.15	0.76	0.42	0.09	0.28	0.90	0.66	0.51
Control Delay	39.6	40.5	2.8	26.0	18.0	3.5	39.4	51.4	42.4	29.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	40.5	2.8	26.0	18.0	3.5	39.4	51.4	42.4	29.8
Queue Length 50th (ft)	52	189	0	220	202	0	41	226	69	172
Queue Length 95th (ft)	108	298	17	329	302	24	80	#380	111	248
Internal Link Dist (ft)		1244			234			548		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	293	584	582	659	1073	896	280	557	201	713
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.49	0.15	0.72	0.42	0.09	0.23	0.80	0.66	0.45

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Harmony Rd & SR 44



HCM 6th Signalized Intersection Summary  
1: Harmony Rd & SR 44



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	272	81	451	428	75	62	89	333	125	190	116
Future Volume (veh/h)	81	272	81	451	428	75	62	89	333	125	190	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1945	1945	1945	1945	1945	1853	1841	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	286	0	475	451	0	65	94	351	132	200	122
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	8	4	2	2	2	2	2
Cap, veh/h	333	544		604	1019		316	94	350	181	418	255
Arrive On Green	0.28	0.28	0.00	0.20	0.52	0.00	0.27	0.27	0.27	0.07	0.38	0.38
Sat Flow, veh/h	977	1945	1648	1853	1945	1570	1041	346	1292	1781	1088	663
Grp Volume(v), veh/h	85	286	0	475	451	0	65	0	445	132	0	322
Grp Sat Flow(s),veh/h/ln	977	1945	1648	1853	1945	1570	1041	0	1638	1781	0	1751
Q Serve(g_s), s	8.2	14.9	0.0	20.9	17.2	0.0	6.0	0.0	32.5	6.2	0.0	16.6
Cycle Q Clear(g_c), s	8.2	14.9	0.0	20.9	17.2	0.0	9.0	0.0	32.5	6.2	0.0	16.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.38
Lane Grp Cap(c), veh/h	333	544		604	1019		316	0	444	181	0	673
V/C Ratio(X)	0.26	0.53		0.79	0.44		0.21	0.00	1.00	0.73	0.00	0.48
Avail Cap(c_a), veh/h	333	544		677	1019		316	0	444	201	0	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.1	36.5	0.0	22.6	17.7	0.0	36.4	0.0	43.8	31.9	0.0	27.9
Incr Delay (d2), s/veh	1.8	3.6	0.0	5.5	1.4	0.0	0.3	0.0	43.5	11.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	7.4	0.0	9.4	7.6	0.0	1.5	0.0	18.0	3.1	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.0	40.1	0.0	28.2	19.1	0.0	36.7	0.0	87.3	43.3	0.0	28.4
LnGrp LOS	D	D		C	B		D	A	F	D	A	C
Approach Vol, veh/h		371	A		926	A		510				454
Approach Delay, s/veh		39.2			23.7			80.8				32.7
Approach LOS		D			C			F				C
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	29.3	39.0		51.6		68.4	13.6	38.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	28.5	27.5		47.5		61.5	9.5	32.5				
Max Q Clear Time (g_c+I1), s	22.9	16.9		18.6		19.2	8.2	34.5				
Green Ext Time (p_c), s	0.9	4.2		1.1		14.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

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

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	8	8	262	372	9
Future Vol, veh/h	7	8	8	262	372	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	10	312	443	11

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	781	449	454	0	-	0
Stage 1	449	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	363	610	1107	-	-	-
Stage 1	643	-	-	-	-	-
Stage 2	727	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	359	610	1107	-	-	-
Mov Cap-2 Maneuver	359	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	727	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1107	-	460	-	-
HCM Lane V/C Ratio	0.009	-	0.039	-	-
HCM Control Delay (s)	8.3	0	13.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	68	2	274	10	0	311
Future Vol, veh/h	68	2	274	10	0	311
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	50	6	56	2	2
Mvmt Flow	81	2	326	12	0	370

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	702	332	0	0	338
Stage 1	332	-	-	-	-
Stage 2	370	-	-	-	-
Critical Hdwy	6.42	6.7	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.75	-	-	2.218
Pot Cap-1 Maneuver	404	612	-	-	1221
Stage 1	727	-	-	-	-
Stage 2	699	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	404	612	-	-	1221
Mov Cap-2 Maneuver	404	-	-	-	-
Stage 1	727	-	-	-	-
Stage 2	699	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	408	1221
HCM Lane V/C Ratio	-	-	0.204	-
HCM Control Delay (s)	-	-	16.1	0
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.8	0



Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	14	13	13	266	304	14
Future Vol, veh/h	14	13	13	266	304	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	15	15	306	349	16

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	693	357	365	0	-	0
Stage 1	357	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	409	687	1194	-	-	-
Stage 1	708	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	403	687	1194	-	-	-
Mov Cap-2 Maneuver	403	-	-	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	724	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1194	-	503	-	-
HCM Lane V/C Ratio	0.013	-	0.062	-	-
HCM Control Delay (s)	8.1	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	54	0	161	2	225	38	67	173	0
Future Vol, veh/h	0	0	1	54	0	161	2	225	38	67	173	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	60	0	179	2	250	42	73	188	0

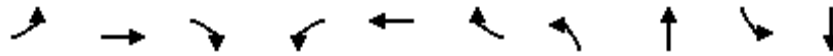
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	699	630	188	610	609	271	188	0	0	292	0	0
Stage 1	334	334	-	275	275	-	-	-	-	-	-	-
Stage 2	365	296	-	335	334	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	354	399	854	407	410	768	1386	-	-	1270	-	-
Stage 1	680	643	-	731	683	-	-	-	-	-	-	-
Stage 2	654	668	-	679	643	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	258	373	854	386	383	768	1386	-	-	1270	-	-
Mov Cap-2 Maneuver	258	373	-	386	383	-	-	-	-	-	-	-
Stage 1	679	602	-	730	682	-	-	-	-	-	-	-
Stage 2	501	667	-	635	602	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.2		14.5		0.1		2.2	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1386	-	-	854	615	1270	-	-
HCM Lane V/C Ratio	0.002	-	-	0.001	0.388	0.057	-	-
HCM Control Delay (s)	7.6	0	-	9.2	14.5	8	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1.8	0.2	-	-

**FUTURE "BUILD" INTERSECTION ANALYSIS**

Timings  
1: Harmony Rd & SR 44

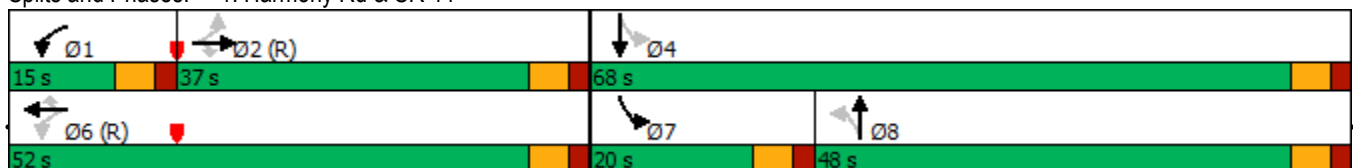


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↗	↖	↗
Traffic Volume (vph)	207	429	84	214	204	162	76	205	239	149
Future Volume (vph)	207	429	84	214	204	162	76	205	239	149
Lane Group Flow (vph)	213	442	87	221	210	167	78	656	246	285
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	37.0	37.0	37.0	15.0	52.0	52.0	48.0	48.0	20.0	68.0
Total Split (%)	30.8%	30.8%	30.8%	12.5%	43.3%	43.3%	40.0%	40.0%	16.7%	56.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.70	0.96	0.18	1.13	0.31	0.25	0.20	1.02	0.99	0.33
Control Delay	54.0	77.0	3.0	131.3	27.2	4.6	28.8	74.3	88.2	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	77.0	3.0	131.3	27.2	4.6	28.8	74.3	88.2	14.5
Queue Length 50th (ft)	150	338	0	~147	112	0	42	~487	146	98
Queue Length 95th (ft)	#255	#543	18	#309	175	44	81	#720	#316	157
Internal Link Dist (ft)		1249			234			550		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	303	461	490	196	681	661	382	642	248	876
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.96	0.18	1.13	0.31	0.25	0.20	1.02	0.99	0.33

Intersection Summary

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

Splits and Phases: 1: Harmony Rd & SR 44



HCM 6th Signalized Intersection Summary  
1: Harmony Rd & SR 44



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	429	84	214	204	162	76	205	432	239	149	127
Future Volume (veh/h)	207	429	84	214	204	162	76	205	432	239	149	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1781	1811	1811	1781	1722	1856	1826	1841	1707	1737	1826
Adj Flow Rate, veh/h	213	442	0	221	210	0	78	211	445	246	154	131
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	8	6	6	8	12	3	5	4	13	11	5
Cap, veh/h	365	468		214	690		444	185	391	256	451	384
Arrive On Green	0.26	0.26	0.00	0.08	0.39	0.00	0.35	0.35	0.35	0.12	0.52	0.52
Sat Flow, veh/h	1162	1781	1535	1725	1781	1459	1086	523	1104	1626	867	737
Grp Volume(v), veh/h	213	442	0	221	210	0	78	0	656	246	0	285
Grp Sat Flow(s),veh/h/ln	1162	1781	1535	1725	1781	1459	1086	0	1627	1626	0	1604
Q Serve(g_s), s	19.9	29.2	0.0	9.5	9.8	0.0	6.0	0.0	42.5	13.6	0.0	12.4
Cycle Q Clear(g_c), s	19.9	29.2	0.0	9.5	9.8	0.0	6.0	0.0	42.5	13.6	0.0	12.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	1.00		0.46
Lane Grp Cap(c), veh/h	365	468		214	690		444	0	576	256	0	836
V/C Ratio(X)	0.58	0.95		1.03	0.30		0.18	0.00	1.14	0.96	0.00	0.34
Avail Cap(c_a), veh/h	365	468		214	690		444	0	576	256	0	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	43.4	0.0	35.5	25.5	0.0	27.0	0.0	38.8	35.8	0.0	16.8
Incr Delay (d2), s/veh	6.7	30.0	0.0	70.2	1.1	0.0	0.2	0.0	81.8	44.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	16.2	0.0	8.5	4.2	0.0	1.5	0.0	29.1	7.1	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.6	73.4	0.0	105.7	26.7	0.0	27.1	0.0	120.5	80.7	0.0	17.0
LnGrp LOS	D	E		F	C		C	A	F	F	A	B
Approach Vol, veh/h		655	A		431	A		734				531
Approach Delay, s/veh		64.7			67.2			110.6				46.5
Approach LOS		E			E			F				D
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	15.0	37.0		68.0		52.0	20.0	48.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	31.5		62.5		46.5	14.5	42.5				
Max Q Clear Time (g_c+I1), s	11.5	31.2		14.4		11.8	15.6	44.5				
Green Ext Time (p_c), s	0.0	0.2		1.0		5.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	75.4
HCM 6th LOS	E

Notes

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



Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	9	10	440	406	6
Future Vol, veh/h	6	9	10	440	406	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	10	11	500	461	7

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	987	465	468	0	-	0
Stage 1	465	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	274	597	1094	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	270	597	1094	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	623	-	-	-	-	-
Stage 2	595	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1094	-	402	-	-
HCM Lane V/C Ratio	0.01	-	0.042	-	-
HCM Control Delay (s)	8.3	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC  
 3: Harmony Rd & Sammons Industrial Pkwy

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		B			A
Traffic Vol, veh/h	31	2	406	62	1	417
Future Vol, veh/h	31	2	406	62	1	417
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	50	2	5	24	2	9
Mvmt Flow	34	2	446	68	1	458

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	940	480	0	0	514
Stage 1	480	-	-	-	-
Stage 2	460	-	-	-	-
Critical Hdwy	6.9	6.22	-	-	4.12
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.95	3.318	-	-	2.218
Pot Cap-1 Maneuver	241	586	-	-	1052
Stage 1	534	-	-	-	-
Stage 2	546	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	241	586	-	-	1052
Mov Cap-2 Maneuver	241	-	-	-	-
Stage 1	534	-	-	-	-
Stage 2	545	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	250	1052
HCM Lane V/C Ratio	-	-	0.145	0.001
HCM Control Delay (s)	-	-	21.8	8.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.5	0

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	22	15	274	321	17
Future Vol, veh/h	18	22	15	274	321	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	24	16	301	353	19

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	696	363	372	0	-	0
Stage 1	363	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	408	682	1186	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	401	682	1186	-	-	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	726	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1186	-	518	-	-
HCM Lane V/C Ratio	0.014	-	0.085	-	-
HCM Control Delay (s)	8.1	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	1	3	66	1	40	0	127	37	129	296	1
Future Vol, veh/h	0	1	3	66	1	40	0	127	37	129	296	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	3	73	1	44	0	141	41	140	322	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	787	785	323	767	765	162	323	0	0	182	0	0
Stage 1	603	603	-	162	162	-	-	-	-	-	-	-
Stage 2	184	182	-	605	603	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	309	325	718	319	333	883	1237	-	-	1393	-	-
Stage 1	486	488	-	840	764	-	-	-	-	-	-	-
Stage 2	818	749	-	485	488	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	265	285	718	287	292	883	1237	-	-	1393	-	-
Mov Cap-2 Maneuver	265	285	-	287	292	-	-	-	-	-	-	-
Stage 1	486	428	-	840	764	-	-	-	-	-	-	-
Stage 2	776	749	-	423	428	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12		18.5		0		2.4	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1237	-	-	520	384	1393	-	-
HCM Lane V/C Ratio	-	-	-	0.009	0.31	0.101	-	-
HCM Control Delay (s)	0	-	-	12	18.5	7.9	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1.3	0.3	-	-

**Intersection**

Int Delay, s/veh 3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↗	↗	↘
Traffic Vol, veh/h	20	97	129	280	319	28
Future Vol, veh/h	20	97	129	280	319	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	105	140	304	347	30

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	931	347	377	0	-	0
Stage 1	347	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	296	696	1181	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	261	696	1181	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	557	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	2.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1181	-	261	696	-	-
HCM Lane V/C Ratio	0.119	-	0.083	0.151	-	-
HCM Control Delay (s)	8.5	-	20	11.1	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.3	0.5	-	-



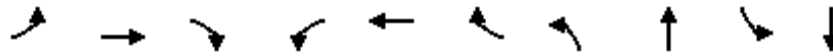
Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↗			↕	↗
Traffic Vol, veh/h	20	0	24	0	0	0	33	268	0	0	322	28
Future Vol, veh/h	20	0	24	0	0	0	33	268	0	0	322	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	235	-	-	-	-	175
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	0	26	0	0	0	36	291	0	0	350	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	713	713	350	741	743	291	380	0	0	291	0	0
Stage 1	350	350	-	363	363	-	-	-	-	-	-	-
Stage 2	363	363	-	378	380	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	347	357	693	332	343	748	1178	-	-	1271	-	-
Stage 1	666	633	-	656	625	-	-	-	-	-	-	-
Stage 2	656	625	-	644	614	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	339	346	693	312	332	748	1178	-	-	1271	-	-
Mov Cap-2 Maneuver	339	346	-	312	332	-	-	-	-	-	-	-
Stage 1	645	633	-	636	606	-	-	-	-	-	-	-
Stage 2	636	606	-	620	614	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	0	0.9	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1178	-	-	339	693	-	1271	-	-
HCM Lane V/C Ratio	0.03	-	-	0.064	0.038	-	-	-	-
HCM Control Delay (s)	8.2	-	-	16.3	10.4	0	0	-	-
HCM Lane LOS	A	-	-	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	-	0	-	-

Timings  
1: Harmony Rd & SR 44

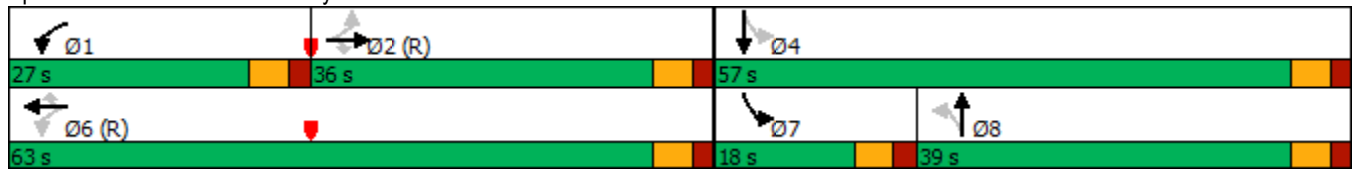


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↘
Traffic Volume (vph)	156	272	81	451	428	150	62	127	195	225
Future Volume (vph)	156	272	81	451	428	150	62	127	195	225
Lane Group Flow (vph)	164	286	85	475	451	158	65	485	205	433
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	36.0	36.0	36.0	27.0	63.0	63.0	39.0	39.0	18.0	57.0
Total Split (%)	30.0%	30.0%	30.0%	22.5%	52.5%	52.5%	32.5%	32.5%	15.0%	47.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.65	0.57	0.16	0.93	0.49	0.19	0.27	0.94	0.83	0.58
Control Delay	53.3	43.7	2.8	49.8	22.9	3.2	37.4	61.0	55.1	27.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	43.7	2.8	49.8	22.9	3.2	37.4	61.0	55.1	27.7
Queue Length 50th (ft)	115	196	0	255	233	0	39	291	102	223
Queue Length 95th (ft)	#213	290	17	#414	329	36	80	#491	#231	327
Internal Link Dist (ft)		1249			234			550		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	253	504	518	511	923	820	260	541	246	769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.57	0.16	0.93	0.49	0.19	0.25	0.90	0.83	0.56

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Harmony Rd & SR 44



HCM 6th Signalized Intersection Summary  
1: Harmony Rd & SR 44

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	272	81	451	428	150	62	127	333	195	225	186
Future Volume (veh/h)	156	272	81	451	428	150	62	127	333	195	225	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1781	1841	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	164	286	0	475	451	0	65	134	351	205	237	196
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	8	4	2	2	2	2	2
Cap, veh/h	306	490		520	911		275	128	334	232	399	330
Arrive On Green	0.26	0.26	0.00	0.18	0.49	0.00	0.28	0.28	0.28	0.10	0.42	0.42
Sat Flow, veh/h	940	1870	1585	1781	1870	1510	940	457	1198	1781	947	783
Grp Volume(v), veh/h	164	286	0	475	451	0	65	0	485	205	0	433
Grp Sat Flow(s),veh/h/ln	940	1870	1585	1781	1870	1510	940	0	1655	1781	0	1729
Q Serve(g_s), s	18.7	16.0	0.0	21.5	19.6	0.0	6.9	0.0	33.5	9.5	0.0	23.2
Cycle Q Clear(g_c), s	18.7	16.0	0.0	21.5	19.6	0.0	13.0	0.0	33.5	9.5	0.0	23.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		0.45
Lane Grp Cap(c), veh/h	306	490		520	911		275	0	462	232	0	729
V/C Ratio(X)	0.54	0.58		0.91	0.50		0.24	0.00	1.05	0.88	0.00	0.59
Avail Cap(c_a), veh/h	306	490		520	911		275	0	462	246	0	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.6	38.6	0.0	28.0	20.8	0.0	38.4	0.0	43.3	30.5	0.0	26.8
Incr Delay (d2), s/veh	6.6	5.0	0.0	20.7	1.9	0.0	0.4	0.0	55.6	28.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	7.8	0.0	12.4	8.5	0.0	1.6	0.0	20.2	5.7	0.0	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	43.6	0.0	48.8	22.7	0.0	38.8	0.0	98.8	58.9	0.0	28.0
LnGrp LOS	D	D		D	C		D	A	F	E	A	C
Approach Vol, veh/h		450	A		926	A		550			638	
Approach Delay, s/veh		44.6			36.1			91.7			38.0	
Approach LOS		D			D			F			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	27.0	36.9		56.1		63.9	17.1	39.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	21.5	30.5		51.5		57.5	12.5	33.5				
Max Q Clear Time (g_c+I1), s	23.5	20.7		25.2		21.6	11.5	35.5				
Green Ext Time (p_c), s	0.0	4.4		1.6		13.0	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	50.0
HCM 6th LOS	D

Notes

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

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	7	8	8	450	548	9
Future Vol, veh/h	7	8	8	450	548	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	10	536	652	11

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1214	658	663	0	-	0
Stage 1	658	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	201	464	926	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	198	464	926	-	-	-
Mov Cap-2 Maneuver	198	-	-	-	-	-
Stage 1	507	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	926	-	285	-	-
HCM Lane V/C Ratio	0.01	-	0.063	-	-
HCM Control Delay (s)	8.9	0	18.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

HCM 6th TWSC  
3: Harmony Rd & Sammons Industrial Pkwy

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	68	2	462	10	0	487
Future Vol, veh/h	68	2	462	10	0	487
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	50	6	56	2	2
Mvmt Flow	81	2	550	12	0	580

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1136	556	0	0	562
Stage 1	556	-	-	-	-
Stage 2	580	-	-	-	-
Critical Hdwy	6.42	6.7	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.75	-	-	2.218
Pot Cap-1 Maneuver	223	449	-	-	1009
Stage 1	574	-	-	-	-
Stage 2	560	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	223	449	-	-	1009
Mov Cap-2 Maneuver	223	-	-	-	-
Stage 1	574	-	-	-	-
Stage 2	560	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.9	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	226	1009
HCM Lane V/C Ratio	-	-	0.369	-
HCM Control Delay (s)	-	-	29.9	0
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	1.6	0



Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	14	13	13	325	367	14
Future Vol, veh/h	14	13	13	325	367	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	15	15	374	422	16

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	834	430	438	0	-	0
Stage 1	430	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	338	625	1122	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	332	625	1122	-	-	-
Mov Cap-2 Maneuver	332	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	674	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1122	-	429	-	-
HCM Lane V/C Ratio	0.013	-	0.072	-	-
HCM Control Delay (s)	8.3	0	14	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	67	0	161	2	272	50	67	223	0
Future Vol, veh/h	0	0	1	67	0	161	2	272	50	67	223	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	74	0	179	2	302	56	73	242	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	812	750	242	723	722	330	242	0	0	358	0	0
Stage 1	388	388	-	334	334	-	-	-	-	-	-	-
Stage 2	424	362	-	389	388	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	298	340	797	342	353	712	1324	-	-	1201	-	-
Stage 1	636	609	-	680	643	-	-	-	-	-	-	-
Stage 2	608	625	-	635	609	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	211	316	797	323	328	712	1324	-	-	1201	-	-
Mov Cap-2 Maneuver	211	316	-	323	328	-	-	-	-	-	-	-
Stage 1	635	566	-	679	642	-	-	-	-	-	-	-
Stage 2	454	624	-	590	566	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	18	0	1.9
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1324	-	-	797	526	1201	-	-
HCM Lane V/C Ratio	0.002	-	-	0.001	0.482	0.061	-	-
HCM Control Delay (s)	7.7	0	-	9.5	18	8.2	0	-
HCM Lane LOS	A	A	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	2.6	0.2	-	-

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↗	↗	↗
Traffic Vol, veh/h	52	165	179	286	315	62
Future Vol, veh/h	52	165	179	286	315	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	179	195	311	342	67

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1043	342	409	0	-	0
Stage 1	342	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	254	701	1150	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	211	701	1150	-	-	-
Mov Cap-2 Maneuver	211	-	-	-	-	-
Stage 1	597	-	-	-	-	-
Stage 2	492	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.8	3.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1150	-	211	701	-	-
HCM Lane V/C Ratio	0.169	-	0.268	0.256	-	-
HCM Control Delay (s)	8.8	-	28.2	11.9	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.6	-	1	1	-	-

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↗			↕	↗
Traffic Vol, veh/h	44	0	52	0	0	0	56	287	0	0	321	52
Future Vol, veh/h	44	0	52	0	0	0	56	287	0	0	321	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	235	-	-	-	-	175
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	0	57	0	0	0	61	312	0	0	349	57

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	783	783	349	840	840	312	406	0	0	312	0	0
Stage 1	349	349	-	434	434	-	-	-	-	-	-	-
Stage 2	434	434	-	406	406	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	311	325	694	285	302	728	1153	-	-	1248	-	-
Stage 1	667	633	-	600	581	-	-	-	-	-	-	-
Stage 2	600	581	-	622	598	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	299	308	694	251	286	728	1153	-	-	1248	-	-
Mov Cap-2 Maneuver	299	308	-	251	286	-	-	-	-	-	-	-
Stage 1	632	633	-	568	550	-	-	-	-	-	-	-
Stage 2	568	550	-	571	598	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.6	0	1.4	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1153	-	-	299	694	-	1248	-	-
HCM Lane V/C Ratio	0.053	-	-	0.16	0.081	-	-	-	-
HCM Control Delay (s)	8.3	-	-	19.3	10.6	0	0	-	-
HCM Lane LOS	A	-	-	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0.3	-	0	-	-

# TRAFFIC VOLUME WORKSHEETS



**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**1.Harmony Rd @ SR 44**

**A.M. Peak Hour**

Condition	Old Phoenix Road Northbound				Harmony Road Southbound				SR 44 (Greensboro Road) Eastbound				SR 44 (Greensboro Road) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	63	144	359	566	158	104	65	327	119	357	70	546	178	170	82	430
Adjusted Existing 2021 Volumes:	69	157	391	617	172	113	71	356	130	389	76	595	194	185	89	468
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	76	173	432	681	190	125	78	393	143	429	84	656	214	204	98	516
Total New Trips:	0	32	0	32	49	24	49	122	64	0	0	64	0	0	64	64
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	76	205	432	713	239	149	127	515	207	429	84	720	214	204	162	580

**P.M. Peak Hour**

Condition	Old Phoenix Road Northbound				Harmony Road Southbound				SR 44 (Greensboro Road) Eastbound				SR 44 (Greensboro Road) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	55	80	299	434	112	170	104	386	72	244	72	388	405	384	67	856
Adjusted Existing 2021 Volumes:	56	81	302	439	113	172	105	390	73	246	73	392	409	388	68	865
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	62	89	333	484	125	190	116	431	81	272	81	434	451	428	75	954
Total New Trips:	0	38	0	38	70	35	70	175	75	0	0	75	0	0	75	75
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	62	127	333	522	195	225	186	606	156	272	81	509	451	428	150	1029

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**2. Harmony Rd @ Village Ln**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Village Lane Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	8	233	0	241	0	236	5	241	5	0	7	12	0	0	0	0
Adjusted Existing 2021 Volumes:	9	254	0	263	0	257	5	262	5	0	8	13	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	10	280	0	290	0	284	6	290	6	0	9	15	0	0	0	0
Total New Trips:	0	160	0	160	0	122	0	122	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	10	440	0	450	0	406	6	412	6	0	9	15	0	0	0	0

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Village Lane Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	7	235	0	242	0	334	8	342	6	0	7	13	0	0	0	0
Adjusted Existing 2021 Volumes:	7	237	0	244	0	337	8	345	6	0	7	13	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	8	262	0	270	0	372	9	381	7	0	8	15	0	0	0	0
Total New Trips:	0	188	0	188	0	176	0	176	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	8	450	0	458	0	548	9	557	7	0	8	15	0	0	0	0

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**3. Harmony Rd @ Sammons I Pkwy**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				- Eastbound				Sammons Industrial Parkway (South) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	0	205	51	256	1	245	0	246	0	0	0	0	26	0	2	28
Adjusted Existing 2021 Volumes:	0	223	56	279	1	267	0	268	0	0	0	0	28	0	2	30
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	0	246	62	308	1	295	0	296	0	0	0	0	31	0	2	33
Total New Trips:	0	160	0	160	0	122	0	122	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	406	62	468	1	417	0	418	0	0	0	0	31	0	2	33

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				- Eastbound				Sammons Industrial Parkway (South) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	0	246	9	255	0	279	0	279	0	0	0	0	61	0	2	63
Adjusted Existing 2021 Volumes:	0	248	9	257	0	282	0	282	0	0	0	0	62	0	2	64
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	0	274	10	284	0	311	0	311	0	0	0	0	68	0	2	70
Total New Trips:	0	188	0	188	0	176	0	176	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	462	10	472	0	487	0	487	0	0	0	0	68	0	2	70

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**4. Harmony Rd @ Harmony Ln**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Harmony Lane Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	13	194	0	207	0	223	14	237	15	0	18	33	0	0	0	0
Adjusted Existing 2021 Volumes:	14	211	0	225	0	243	15	258	16	0	20	36	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	15	233	0	248	0	268	17	285	18	0	22	40	0	0	0	0
Total New Trips:	0	41	0	41	0	53	0	53	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	15	274	0	289	0	321	17	338	18	0	22	40	0	0	0	0

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Harmony Lane Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	12	239	0	251	0	272	13	285	13	0	12	25	0	0	0	0
Adjusted Existing 2021 Volumes:	12	241	0	253	0	275	13	288	13	0	12	25	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	13	266	0	279	0	304	14	318	14	0	13	27	0	0	0	0
Total New Trips:	0	59	0	59	0	63	0	63	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	13	325	0	338	0	367	14	381	14	0	13	27	0	0	0	0

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**5. Harmony Rd @ Scott Rd**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Private Drwy Eastbound				Scott Rd Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	0	79	24	103	107	210	1	318	0	1	3	4	46	1	33	80
Adjusted Existing 2021 Volumes:	0	86	26	112	117	229	1	347	0	1	3	4	50	1	36	87
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	0	95	29	124	129	253	1	383	0	1	3	4	55	1	40	96
Total New Trips:	0	32	8	40	0	43	0	43	0	0	0	0	11	0	0	11
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	127	37	164	129	296	1	426	0	1	3	4	66	1	40	107

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Private Drwy Eastbound				Scott Rd Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	2	202	34	238	60	155	0	215	0	0	1	1	49	0	145	194
Adjusted Existing 2021 Volumes:	2	204	34	240	61	157	0	218	0	0	1	1	49	0	146	195
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	2	225	38	265	67	173	0	240	0	0	1	1	54	0	161	215
Total New Trips:	0	47	12	59	0	50	0	50	0	0	0	0	13	0	0	13
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	2	272	50	324	67	223	0	290	0	0	1	1	67	0	161	228



**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**6. Harmony Rd @ Site Drwy 1(S)**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Site Driveway 1 (Southern) Eastbound				- Westbound				
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	
Existing 2021 Counts during Covid-19:	0	207	0	207	0	246	0	246	0	0	0	0	0	0	0	0	0
Adjusted Existing 2021 Volumes:	0	226	0	226	0	268	0	268	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		
No-Build 2025 Volumes:	0	249	0	249	0	296	0	296	0	0	0	0	0	0	0	0	0
Total New Trips:	128	32	0	160	0	24	27	51	20	0	97	117	0	0	0	0	0
Pass-by's Trips:	1	-1	0	0	0	-1	1	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	129	280	0	409	0	319	28	347	20	0	97	117	0	0	0	0	0

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Site Driveway 1 (Southern) Eastbound				- Westbound				
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	
Existing 2021 Counts during Covid-19:	0	248	0	248	0	279	0	279	0	0	0	0	0	0	0	0	0
Adjusted Existing 2021 Volumes:	0	250	0	250	0	282	0	282	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		
No-Build 2025 Volumes:	0	276	0	276	0	311	0	311	0	0	0	0	0	0	0	0	0
Total New Trips:	151	38	0	189	0	35	31	66	29	0	140	169	0	0	0	0	0
Pass-by's Trips:	28	-28	0	0	0	-31	31	0	23	0	25	48	0	0	0	0	0
Future 2025 Traffic Volumes:	179	286	0	465	0	315	62	377	52	0	165	217	0	0	0	0	0

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**7. Harmony Rd @ Site Drwy 2(N)**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Site Driveway 2(Northern) Eastbound				Private Driveway Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	0	207	0	207	0	246	0	246	0	0	0	0	0	0	0	0
Adjusted Existing 2021 Volumes:	0	226	0	226	0	268	0	268	0	0	0	0	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	0	249	0	249	0	296	0	296	0	0	0	0	0	0	0	0
Total New Trips:	32	20	0	52	0	27	27	54	20	0	24	44	0	0	0	0
Pass-by's Trips:	1	-1	0	0	0	-1	1	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	33	268	0	301	0	322	28	350	20	0	24	44	0	0	0	0

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Site Driveway 2(Northern) Eastbound				Private Driveway Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	0	248	0	248	0	279	0	279	0	0	0	0	0	0	0	0
Adjusted Existing 2021 Volumes:	0	250	0	250	0	282	0	282	0	0	0	0	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	0	276	0	276	0	311	0	311	0	0	0	0	0	0	0	0
Total New Trips:	38	29	0	67	0	31	31	62	29	0	35	64	0	0	0	0
Pass-by's Trips:	18	-18	0	0	0	-21	21	0	15	0	17	32	0	0	0	0
Future 2025 Traffic Volumes:	56	287	0	343	0	321	52	373	44	0	52	96	0	0	0	0



July 23, 2021

Ms. Lisa Jackson  
Deputy County Manager  
117 Putnam Drive  
Eatonton, GA 31024

**Re: DRI #3377, Lake Oconee Helms College**

Dear Ms. Jackson:

The Middle Georgia Regional Commission (MGRC) has completed its review of the Development of Regional Impact (DRI) for the Lake Oconee Helms College Development in Putnam County. MGRC conducted a careful review of the information submitted by the local government and comments received from potentially affected agencies. Two positive comments were received from the Putnam County Board of Commissioners and from the City of Eatonton. These comments are provided below:

- *Putnam County:*

The BOC feels the project will generate sufficient revenue to offset any additional requirements for services that the project may require. The project will provide the potential for both county employment opportunities and additional sales tax revenue.

- *City of Eatonton:*

This project will have significant positive impact on our community in several different ways. The increase in property tax revenue along with the educational opportunities as well as the housing and retail components are all welcomed additions to our community and region.

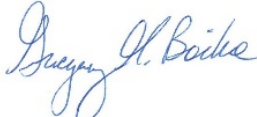
MGRC also reviewed the proposed project's potential regional and interjurisdictional impact and consistency with the Department of Community Affairs Quality Community Objectives, Middle Georgia Regional Plan, and Middle Georgia Regionally Important Resources Plan. After reviewing the information, MGRC staff notes that the proposed development site lies within an area of projected rapid growth as identified in the 2016 Regional Plan. It is recommended that local governments "take action early to ensure that growth occurs in a manner which makes it possible to provide necessary public services," (2016-2036 Plan for a Thriving Middle Georgia, pg. 17-18).

Ms. Lisa Jackson  
Re: DRI 3377  
July 23, 2021  
Page Two

This project will also help the region take advantage of the identified opportunity for “coordination with technical colleges and universities ... to provide job skills training to low-skill employees,” (2016-2036 Plan for a Thriving Middle Georgia, pg. 45).

**Please be advised that this concludes the DRI Review Process** and Putnam County may proceed with the final official action it deems appropriate regarding the proposed project. It is encouraged that Putnam County takes the materials presented in the DRI report into consideration when rendering its decision. The enclosed information is advisory in nature and under no circumstances should be considered as binding or infringing upon the host jurisdiction’s right to determine for itself the appropriateness of development within its boundaries.

Sincerely,



Greg Boike  
Director of Public Administration

Enclosure

cc: Affected Local Governments and Other Interested Parties (via email)  
Georgia Department of Community Affairs (via email)

# Development of Regional Impact Comments from Affected Parties

*Project ID: DRI #3377 – Lake Oconee Helms College (Putnam County)*

PUTNAM COUNTY BOARD OF COMMISSIONERS

Commenting Organization: \_\_\_\_\_

Street Address: 117 PUTNAM DR  
EATONTON, GA 31024

City: EATONTON State: GA Zip Code: 31024

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Contact Person: BILLY WEBSTER Phone: 478-288-2188 Email: bwebster@putnamcountyga.us

Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Do you believe your jurisdiction will be affected by the proposed development? YES  NO

Please describe the effects (positive or negative) that the proposed project could have on your jurisdiction:

The BOC feels the project will generate sufficient revenue to offset any additional requirements for services that the project may require, The project will provide the potential for both county employment opportunities and additional sales tax revenue.

Form Completed by: Billy Webster

Signature: Billy Webster

Title: Chairman

Date: July 19, 2021

Mail, Fax, or Email this form to: Greg Boike  
Middle Georgia Regional Commission  
175 Emery Highway, Suite C  
Macon, GA 31217  
P: 478-751-6160  
F: 478-751-6517  
E: [gboike@mg-rc.org](mailto:gboike@mg-rc.org)

Comments on DRI #3377 will be accepted beginning on Wednesday, July 7, 2021.

All comments are due by Thursday, July 22, 2021.

This request for comments has been sent to the following potentially affected parties: MGRC Council; City/county chief elected officials and key staff in the following counties: Putnam, Baldwin, Greene, Hancock, Jasper, Jones, and Morgan; School superintendents in the preceding counties; Development authorities of the preceding counties; GA Department of Natural Resources; GA Department of Transportation; Georgia Environmental Finance Authority; GA Department of Public Health; U.S. Fish & Wildlife Service; Northeast Georgia Regional Commission, and Central Savannah River Area Regional Commission.

# Development of Regional Impact Comments from Affected Parties

Project ID: DRI #3377 – Lake Oconee Helms College (Putnam County)

Commenting Organization: City of Eatonton

Street Address: 201 North Jefferson Ave.

City: Eatonton State: GA Zip Code: 31024

Contact Person: Gary Sanders Phone: (706) 485-3311 Email: gsanders@eatontonga.us

Do you believe your jurisdiction will be affected by the proposed development? YES  NO

Please describe the effects (positive or negative) that the proposed project could have on your jurisdiction:

This project will have significant positive impact on our community in several different ways. The increase in property tax revenue along with the educational opportunities as well as the housing and retail components are all welcomed additions to our community and region.

Form Completed by: John Reid Title: Mayer

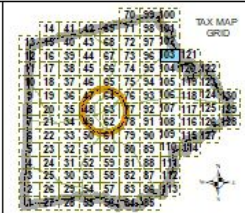
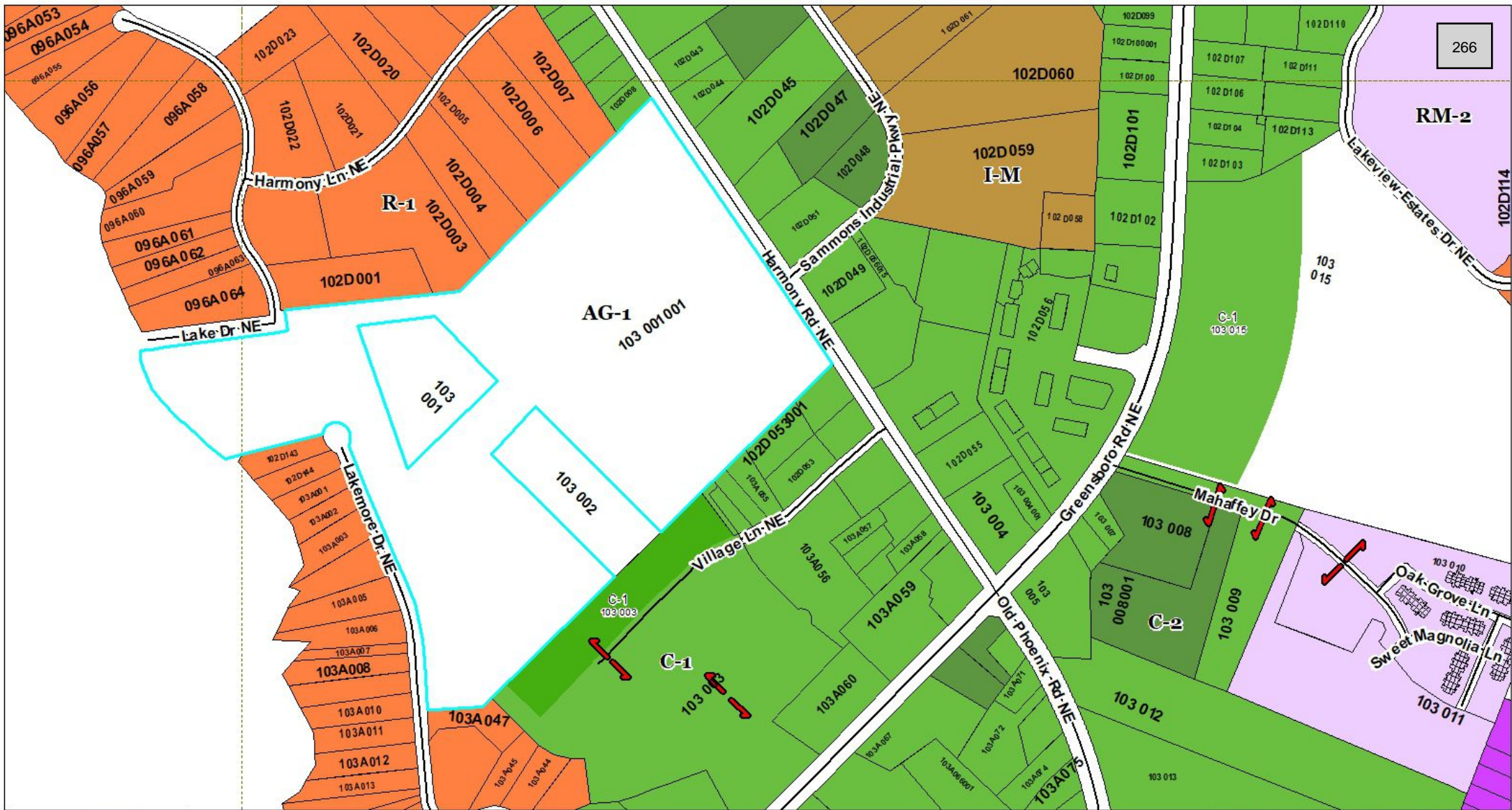
Signature: [Handwritten Signature] Date: 07/22/2021

Mail, Fax, or Email this form to: Greg Boike  
Middle Georgia Regional Commission  
175 Emery Highway, Suite C  
Macon, GA 31217  
P: 478-751-6160  
F: 478-751-6517  
E: [gboike@mg-rc.org](mailto:gboike@mg-rc.org)

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**GEOGRAPHIC FEATURE LEGEND**

Eatonton Limits	Overlay District	AG-2	C-2 CITY	IND-2 CITY	R - 1 CITY	RM-2
County Boundary	No Code	C-1	I-M	MHP	R - 2 CITY	RM-3
Roads	AG-1	C-1 CITY	IND-1 CITY	PUBLIC	R-1R	RM-1
Parcels	AG-1 CITY	C-2	IND-2	PUBLIC CITY	R - 4 CITY	VILLAGE
Parcel Hooks						

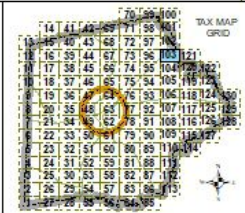
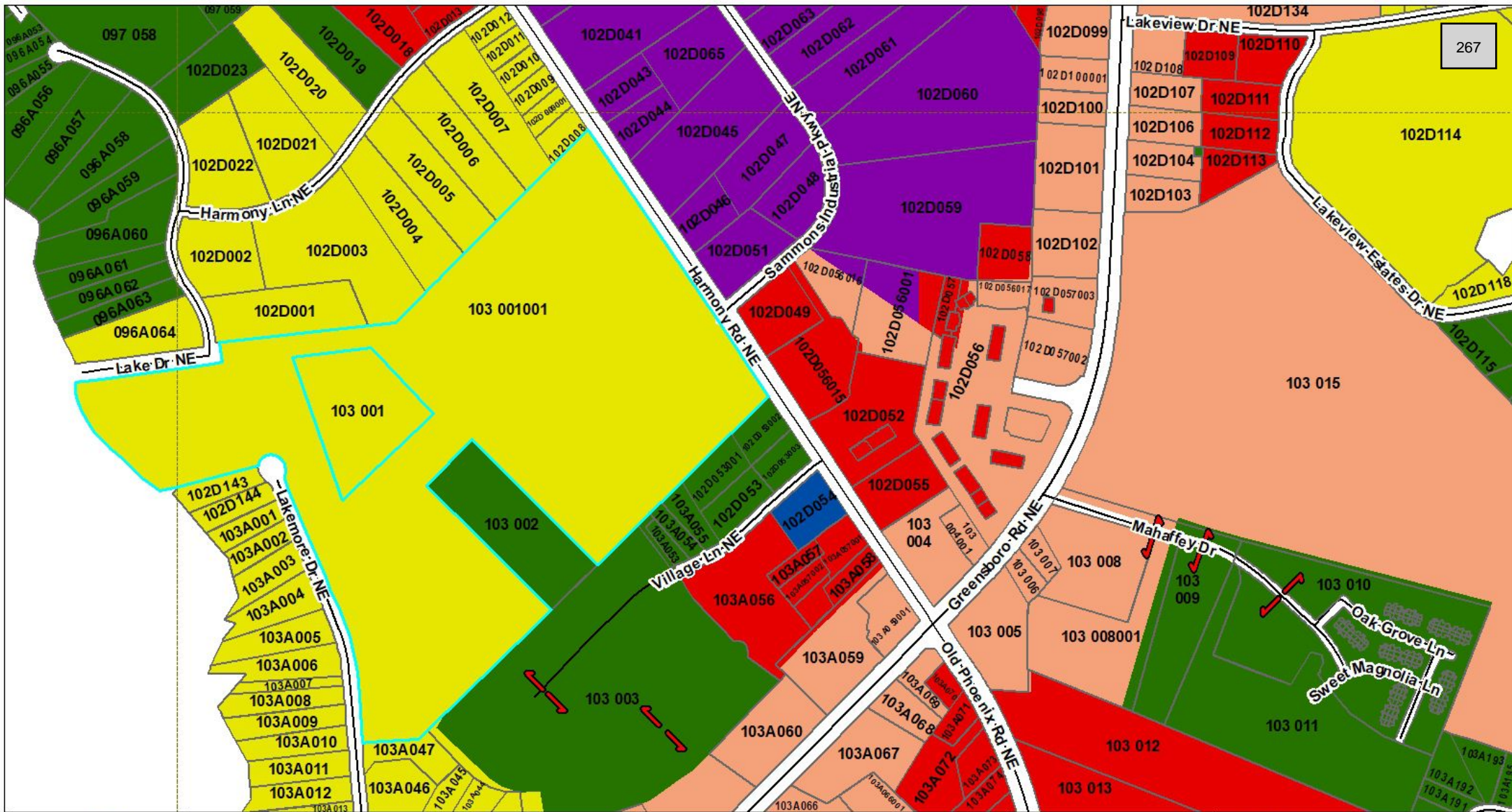
**MGRC**  
Middle Georgia Regional Commission  
175 Emery Hwy  
Suite C  
Macon, Georgia 31217  
(478) 751-6160  
Web:  
[www.middlegeorgia.org](http://www.middlegeorgia.org)

PUTNAM COUNTY, GEORGIA  
ZONING MAPS

**MAP 103**

MAP SCALE: 1" = 400'    SCALE RATIO: 1:4,800    DATE: JULY 2021





**GEOGRAPHIC FEATURE LEGEND**

Eatonton Limits	Agriculture/Forestry	Mixed Use	Residential
County Boundary	Commercial	Park/Recreation/Conservation	Transportation/Communication/Utilities
Roads	Industrial	Public/Institutional	Undeveloped/Vacant
Parcels			
Parcel Hooks			

**MGRCA**  
 Middle Georgia Regional Commission  
 175 Emery Hwy  
 Suite C  
 Macon, Georgia 31217  
 (478) 751-6160  
 Web:  
[www.middlegeorgiairc.org](http://www.middlegeorgiairc.org)

**PUTNAM COUNTY, GEORGIA**  
**FUTURE LAND USE MAPS**

# MAP 103

MAP SCALE: 1" = 400'    SCALE RATIO: 1:4,800    DATE: JULY 2021

**File Attachments for Item:**

9. Request by James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox to rezone 5 acres at 916 Harmony Road Parcel A from AG to C-PUD [Map 103, Parcel 001, District 3] (staff-P&D)

**Request by James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox to rezone 5 acres at 916 Harmony Road Parcel A from AG-C-PUD. [Map 103, Parcel 001, District 3].**

**PLANNING & DEVELOPMENT-LISA JACKSON STAFF RECOMMENDATION:**

The applicant is requesting to rezone 5 acres from AG to C-PUD. If approved, the subject property will be combined with the exterior property (Map 103, Parcel 001001). The purpose of rezoning this property is to develop a new, mixed-use development to support the non-profit mission and vision of Goodwill Industries of Middle Georgia’s Helms College expansion. Helms Career Institute was established in 2007 as a private, independent, post-secondary career school that provides experiential learning and career education for workforce development. The proposed development is a part of a strategic plan for expansion that supports the college’s future growth to meet local talent needs in high-demand occupations. The proposed development will include retail and hotel components supporting and complimenting degrees sponsored by Helms College, residential units for students, recreation amenities such as tennis courts, jogging trails, agritourism, a conference retreat center with restaurants. The agritourism aspect will include gardens and farms that will provide hands-on experience for students and community members to learn about the farm-to-table philosophies and offerings.

According to the traffic study, the proposed development will consist of the following: a Goodwill store; Helms College for 50 students; Edgar’s Bakery; retailing including a spa; a high-turn-over sit-down restaurant; a supermarket; 127 multi-family residential units; 18 student housing units; 41 vacation villas; an event/banquet hall, and a 175-room hotel. Piedmont Water will provide water and sewer. As proposed, the development will be completed in four phases as determined by the market conditions and demand. Phase one will consist of the Goodwill store, Helms College for 25 students, Edgar’s Bakery, and 3,400 square feet of retail is to be completed by 2023. The second phase will include an additional 25 students to the college, 11,200 square feet of retail, 42 multi-family units, and 6 student housing units to be finished in 2024. Phases three and four will consist of 12,320 square feet of retail, 10,600 square feet of a sit-down restaurant, a supermarket, 85 Multi-family residential units, 12 student housing units, 41 vacation villas, an event/banquet hall, and a 175-room hotel.

The traffic analysis projects that the total site-generated trips will be 10,975, and the mixed-use reduction is 1,814. Thus the 24-hour total volume of two-way traffic will be 9,161. However, it concludes that the most significant impact from the proposed development will be during the am and pm peak hours. There will be a maximum of 29 vehicles turning left at either driveway, 35 vehicles turning right at the northern driveway, and 140 at the southern driveway. The turning movement will average approximately 1 to 2 vehicles per minute, according to the study. It further adds that the intersection of Harmony Rd., SR 44, and Old Phoenix Rd. currently has a large volume of right-turn movement during peak hours. There are long delays at this intersection, given that there is no dedicated

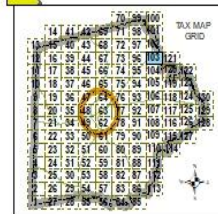
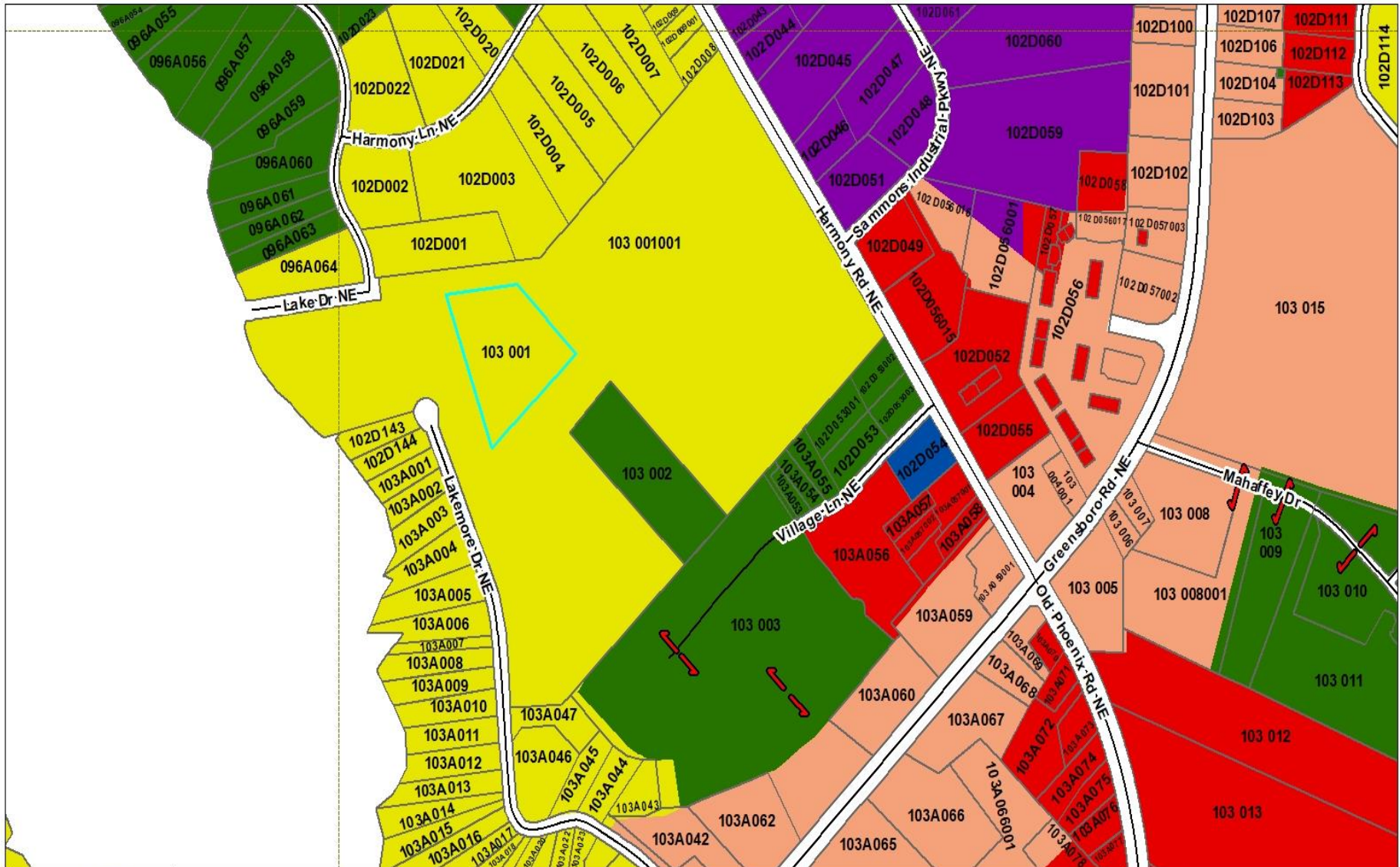
right-turn lane. Although delays are in occurrence, the study states that there will be no significant impact on the traffic if the developer will construct left-turn lanes and deceleration lanes. In addition, the current delays will improve once GDOT completes the proposed SR 44 widening project.

There will be two full-access entrances on Harmony Road identified as Driveway One (southern) and Driveway Two (northern). The study further recommends that the first driveway has two entering and two exit lanes while the second driveway has one entering and two exit lanes. The following is recommended for each driveway: the eastbound lane approach should have a separate left and right-turn lane for exiting traffic; a northbound left-turn lane to be constructed on Harmony Road for entering traffic; a southbound deceleration lane to be installed on Harmony Road for entering traffic. The subject property is adjacent to a combination of residential, commercial, and agriculture zoned properties. It fronts Harmony Road, which is a main arterial road. The property also has frontage on Lake Drive and Lakemore Drive.

As stated in Sec. 66-115(b) of the Putnam County Code of Ordinances, the C-PUD zoning allows more than one type of use in a building or set of buildings, including some combination of residential and selective nonresidential uses such as commercial, office and institutional uses. Furthermore, the proposed development is consistent with the existing residential, multi-family, and commercial developments in this area. The comprehensive plan matches the proposed use for future residential and mixed-use development. In the final DRI report, the Middle Georgia Regional Commission noted that the proposed development site lies within an area of projected rapid growth as identified in the 2016 Regional Plan. The report recommends that the local government take action early to ensure that growth occurs in a manner that makes it possible to provide necessary public services.

By implementing the required conditions, the proposed project should have minimal impact on the adjacent properties, roads, and nearby intersections. There is no evidence that the proposed development would cause excessive or burdensome use of public services, nor should it adversely affect police, fire protection, or sewer services. If approved, the staff recommends that the developer should install a deceleration lane and left-turn lane at the main entrances of the development. There shall be no entrance on Lakemore Drive and only an emergency gated entrance on Lake Drive.





**GEOGRAPHIC FEATURE LEGEND**

Eatonton Limits	Agriculture/Forestry	Mixed Use	Residential
County Boundary	Commercial	Park/Recreation/Conservation	Transportation/Communication/Utilities
Roads	Industrial	Public/Institutional	Undeveloped/Vacant
Parcels			
Parcel Hooks			

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PUTNAM COUNTY, GEORGIA  
FUTURE LAND USE MAPS

**MAP 103**

MIP SCALE: 1"=400'    SCALE RATIO: 1:4,800    DATE: JULY 2021





**Staff recommendation is for approval to rezone 5 acres from AG to C-PUD at 916 Harmony Road [Map 103, Parcel 001, District 3] with the following conditions:**

- (1) The developer shall construct a deceleration lane and turn lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the two main entrances on Harmony Road. Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the county. It shall be completed by the developer prior to the completion of phase one.

- (2) The developer shall direct construction traffic through the second main entrance located the farthest away from the intersection of Harmony Road and Hwy 44.
- (3) There shall be no car or truck entrance/exit located on Lakemore Road. There shall be a locked gate for golf cart entrance only.
- (4) Only a gated and locked Emergency Exit shall be located on Lake Drive.

**PLANNING & ZONING COMMISSION RECOMMENDATION:**

*The Planning & Zoning Commission’s recommendation is for approval to rezone 5 acres from AG to C-PUD at 916 Harmony Road [Map 103, Parcel 001, District 3] with the following conditions:*

- (1) The developer shall construct a deceleration lane and turn lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the two main entrances on Harmony Road. Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the county. It shall be completed by the developer prior to the completion of phase one.*
- (2) The developer shall direct construction traffic through the second main entrance located the farthest away from the intersection of Harmony Road and Hwy 44.*
- (3) There shall be no car or truck entrance/exit located on Lakemore Road. There shall be a locked gate for golf cart entrance only.*
- (4) Only a gated and locked Emergency Exit shall be located on Lake Drive.*

**PLANNING & ZONING COMMISSION MINUTES:**

The Putnam County Planning & Zoning Commission conducted a public hearing on Thursday, August 5, 2021 at 6:30 PM in the Putnam County Administration Building, 117 Putnam Drive, Room 203, Eatonton, Georgia.

**Present: Martha Farley, Maurice Hill, Jr., Tim Pierson, John Mitchell**  
**Staff Present: Lisa Jackson, Courtney Andrews and Kenteria Williams**

**The following items 12-13 were heard as one before the board.**

Request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 5 acres at 916 Harmony Road Parcel A from AG to C-PUD. **[Map 103, Parcel 001, District 3]. \***

**Mr. James Stiff** represented this request. He stated that he was the president of Goodwill Industries of Middle Georgia. They are requesting to rezone the 71 acres so that they can complete the purchase of the property on Harmony Road, to create a campus for Goodwill and Helms College. Helms College is affiliated with Goodwill. He added that they came to Putnam County in 2010 with the Goodwill store and has since expanded to Milledgeville. They would like to grow their presence on the lake. They had a plan to create an agritourism campus, where the students could learn about culinary agriculture and be involved with an agritourism business. They would also have applied learning on the farm that would be a part of the campus, and an applied learning area for students in the school of hospitality. He explained that they are developing a bachelor's degree in hospitality management. It would be applied learning in a hotel and villas. **Mr. Stiff** stated that they were working on an agreement to develop a hotel that would allow for planned applied learning for the students. The front of the property would have a town center where they would create new economic energy for the community. He added that they would also have Goodwill businesses and relocate the Goodwill retail store from Lake Oconee Parkway. He stated that he has had community outreach meetings and gained a lot of insight on the project. **Mrs. Ellen Garland** explained that the proposed development includes: a town center, green space for community gatherings, retail, restaurants, institutional use for Helms College, Hotel and Retreat Center, gardens, plants, outdoor amenities, as well as a housing component. She added that the project is expected to move forward in multiple stages and will be completed based on market conditions. **Mrs. Garland** stated that they intend on implementing staff recommendations based on the traffic study. She added that the only additional request they had was to use Lakemore for gated golf cart access. **Member Mitchell** asked Mrs. Garland to explain the duration of the phases. **Mrs. Garland** stated that they were expecting a 3-4-year buildout with multiple phases. This will be based on the market conditions for the various uses.

At this time those who signed in to speak in favor of the request, were given 3 minutes.

**Rush Atly**  
**Tom Fry**

At this time those who signed in to speak in opposition of the request, were given 3 minutes.

**Tammy Calloway**

At this time Mr. Stiff used the remainder of his time. He thanked those who spoke on their behalf and assured the homeowners in opposition that they will follow all requirements of the county. He stated that they own a farm in Grovetown and are involved in some of the things Mrs. Calloway mentioned. He added that they are working with a third party for the hotel. Mr. Stiff explained that the students will only be there when they have applied learning

when it is appropriate for their curriculum. There will be professional teams that will operate the various enterprises. He stated that their goal is to exceed expectations.

**Staff recommendation is for approval to rezone 5 acres from AG to C-PUD at 916 Harmony Road [Map 103, Parcel 001001, District 3] with the following conditions:**

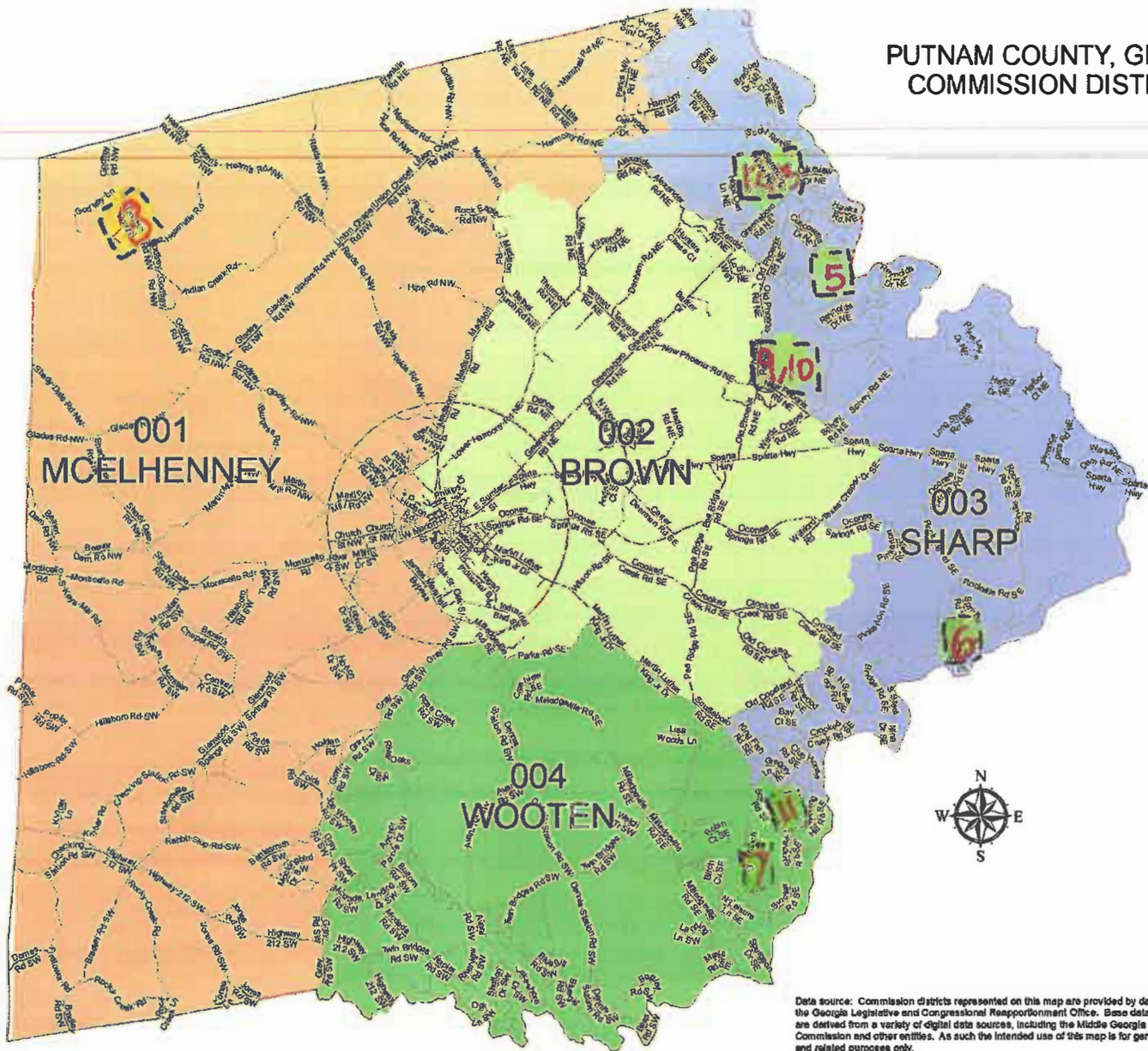
- (1) The developer shall construct a deceleration lane and turn lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the two main entrances on Harmony Road. Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the county. It shall be completed by the developer prior to the completion of phase one.**
- (2) The developer shall direct construction traffic through the second main entrance located the farthest away from the intersection of Harmony Road and Hwy 44.**
- (3) There shall be no car or truck entrance/exit located on Lakemore Road. There shall be a locked gate for golf cart entrance only.**
- (4) Only a gated and locked Emergency Exit shall be located on Lake Drive.**

**Motion to approve the request by James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox to rezone 5 acres at 916 Harmony Road from AG to C-PUD with the following conditions:**

- (1) The developer shall construct a deceleration lane and turn lane in accordance with the Georgia Department of Transportation Regulations for Driveway & Encroachment Control to service the two main entrances on Harmony Road. Additional right-of-way to accommodate the deceleration lane and a ten-foot shoulder shall be dedicated by the developer to the county. It shall be completed by the developer prior to the completion of phase one.**
  - (2) The developer shall direct construction traffic through the second main entrance located the farthest away from the intersection of Harmony Road and Hwy 44.**
  - (3) There shall be no car or truck entrance/exit located on Lakemore Road. There shall be a locked gate for golf cart entrance only.**
  - (4) Only a gated and locked Emergency Exit shall be located on Lake Drive.**
- made by Member Hill and seconded by Member Mitchell.**

**Voting Yea: Vice-Chairman Pierson, Member Hill, Member Farley, Member Mitchel**





5. Request by **Wallace Gerald Wright** for a side yard setback variance at 149 Collis Marina Road. Presently zoned R-1 [Map 104B, Parcel 013, District 3].
6. Request by **Thomas & Gwen Ralston** for a rear yard setback variance at 189 S. Spring Road. Presently zoned R-2 [Map 115C, Parcel 019, District 3].
7. Request by **Thomas W Gardner** for a side and rear yard setback variance at 348A Cold Branch Road. Presently zoned R-2 [Map 112C, Parcel 009, District 4].
8. Request by **Mt. Pleasant Baptist Church** for a side yard setback variance at 1628 Godfrey Road NW. Presently zoned AG. [Map 016, Parcel 015, District 1].
9. Request by **SDH Atlanta LLC, Agent for Maddox Family Partnership LLLP** for a side yard setback variance on Old Phoenix Road. Presently zoned AG. [Map 106, Parcel 002, District 2].
10. Request by **SDH Atlanta LLC, agent for Maddox Family Partnership LLLP** to rezone 29.54 on Old Phoenix Road from AG to R-PUD. [Map 106, Parcel 002, District 2].\*
11. Request by **Duane Gentes** to rezone 5.40 acres on Emory Drive from R-1 to R-2. [Map 111, Parcel 001044, District 4].\*
12. Request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 66.56 acres at 916 Harmony Road from AG to C-PUD. [Map 103, Parcel 001001, District 3].\*
13. Request by **James Stiff, Goodwill Industries of Middle Georgia, Inc., Agent for Peggy Allen & Susan Fox** to rezone 5 acres at 916 Harmony Road Parcel A from AG to C-PUD. [Map 103, Parcel 001, District 3].\*

APPLICATION FOR REZONING

REZONING

PERMIT# PLAN 2021-01329

APPLICATION NO. \_\_\_\_\_

DATE: June 24, 2021

MAP \_\_\_\_\_ PARCEL 103 001

ZONING DISTRICT A5 - Agricultural AG-AC

1. Owner Name: Peggy Allen, Susan Fox

2. Applicant Name (If different from above): James Stiff, Goodwill Industries of Middle Georgia, Inc.

3. Mailing Address: 3145 Washington Road, Augusta GA 30907

4. Email Address: jstiff@goodwillworks.org

5. Phone: (home) \_\_\_\_\_ (office) 706.854.4769 (cell) [REDACTED]

6. The location of the subject property, including street number, if any: 916 Harmony Road, Eatonton, GA 31024  
Parcel A

7. The area of land proposed to be rezoned (stated in square feet if less than one acre):  
5,000 Acres

8. The proposed zoning district desired: C-PUD

9. The purpose of this rezoning is (Attach Letter of Intent)  
Please see enclosed Letter of Intent, Purpose and Impact Statement.

REC'D 2021 JUN 24 AC

10. Present use of property: Agricultural & Residential Desired use of property: Mixed Use

11. Existing zoning district classification of the property and adjacent properties:  
Existing: Agricultural & Residential  
North: Residential South: Agricultural East: Commercial West: Residential

12. Copy of warranty deed for proof of ownership and if not owned by applicant, please attach a signed and notarized letter of agency from each property owner for all property sought to be rezoned.

13. Legal description and recorded plat of the property to be rezoned.

14. The Comprehensive Plan Future Land Use Map category in which the property is located. (If more than one category applies, the areas in each category are to be illustrated on the concept plan. See concept plan insert.): \_\_\_\_\_

15. A detailed description of existing land uses: \_\_\_\_\_  
Existing zoning is agricultural with a residential unit on-site. There is a single family home on the property and a horse barn and pasture.

16. Source of domestic water supply: well \_\_\_\_\_, community water \_\_\_\_\_, or private provider x.  
If source is not an existing system, please provide a letter from provider.





# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ◊ Eatonton, GA 31024

Tel: 706-485-2776 ◊ 706-485-0552 fax ◊ www.putnamcountyga.us

- 17. Provision for sanitary sewage disposal: septic system \_\_\_\_\_, or sewer . If sewer, please provide name of company providing same, or, if new development, provide a letter from sewer provider.
- 18. Complete attachment of Disclosure of Campaign Contributions Form by the applicant and/or the applicant's attorney as required by the Georgia Conflict of Interest in Zoning Act (O.C.G.A. 36-67A).
- 19. The application designation, date of application and action taken on all prior applications filed for rezoning for all or part of the subject property. (Please attach on separate sheet.)
- 20. Proof that property taxes for the parcel(s) in question have been paid.
- 21. Concept plan.
  - If the application is for less than 25 single-family residential lots, a concept plan need not be submitted. (See attachment.)
  - A concept plan may be required for commercial development at director's discretion
- 22. Impact analysis.
  - If the application is for less than 25 single-family residential lots, an impact analysis need not be submitted. (See attachment.)
  - An Impact analysis (including a traffic study) is required when rezoning from residential zoned or used property to commercial or industrial districts.

THE ABOVE STATEMENTS AND ACCOMPANYING MATERIALS ARE COMPLETE AND ACCURATE. APPLICANT HEREBY GRANTS PERMISSION FOR PLANNING AND DEVELOPMENT PERSONNEL OR ANY LEGAL REPRESENTATIVE OF PUTNAM COUNTY TO ENTER UPON AND INSPECT THE PROPERTY FOR ALL PURPOSES ALLOWED AND REQUIRED BY THE PUTNAM COUNTY CODE OF ORDINANCES.

[Signature] 6/23/21  
Signature (Property Owner)

James H. Stitt 6/22/21  
Signature (Applicant) (Date)

[Signature]  
Notary Public



[Signature]  
Notary Public



Office Use	
Paid: \$ <u>275<sup>00</sup></u> (cash) _____ (check) <input checked="" type="checkbox"/> (credit card) <input checked="" type="checkbox"/>	
Receipt No. _____	Date Paid: <u>06/24/21</u>
Date Application Received: _____	
Reviewed for completeness by: _____	
Date of BOC hearing: _____	Date submitted to newspaper: _____
Date sign posted on property: _____	Picture attached: yes _____ no _____



# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ◊ Eatonton, GA 31024

Tel: 706-485-2776 ◊ 706-485-0552 fax ◊ www.putnamcountyga.us

- 17. Provision for sanitary sewage disposal: septic system \_\_\_\_\_, or sewer . If sewer, please provide name of company providing same, or, if new development, provide a letter from sewer provider.
- 18. Complete attachment of Disclosure of Campaign Contributions Form by the applicant and/or the applicant's attorney as required by the Georgia Conflict of Interest in Zoning Act (O.C.G.A. 36-67A).
- 19. The application designation, date of application and action taken on all prior applications filed for rezoning for all or part of the subject property. (Please attach on separate sheet.)
- 20. Proof that property taxes for the parcel(s) in question have been paid.
- 21. Concept plan.
  - If the application is for less than 25 single-family residential lots, a concept plan need not be submitted. (See attachment.)
  - A concept plan may be required for commercial development at director's discretion
- 22. Impact analysis.
  - If the application is for less than 25 single-family residential lots, an impact analysis need not be submitted. (See attachment.)
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Dusan Ak 6/22/2021      James H. Smith 6/22/21  
 Signature (Property Owner)      Signature (Applicant)      (Date)

[Signature]  
 Notary Public



[Signature]  
 Notary Public

**ELLEN H. HARPER**  
 NOTARY PUBLIC  
 Columbia County  
 State of Georgia  
 My Comm. Expires February 18, 2025

Office Use	
Paid: \$ _____ (cash) _____ (check) <input checked="" type="checkbox"/> _____ (credit card) _____	
Receipt No. _____	Date Paid: _____
Date Application Received: _____	
Reviewed for completeness by: _____	
Date of BOC hearing: _____	Date submitted to newspaper: _____
Date sign posted on property: _____	Picture attached: yes _____ no _____



# Item 9: Letter of Intent

**LETTER OF INTENT – PURPOSE OF REZONING APPLICATION**

*Updated: June 22, 2021*

This letter and its enclosed components detail the intent to rezone two (2) parcels in Eatonton, Georgia, along Harmony Road.

The purpose of this rezoning application is to support a new, mixed-use development to support the non-profit mission and vision of [Goodwill Industries](#) of Middle Georgia’s Helms College expansion. Since its creation as the Helms Career Institute in 2007, the modern-day [Helms College](#) is a private, independent, postsecondary career school that provides experiential learning and career education for workforce development.

As a part of its strategic plan, Goodwill wishes to expand Helms College with a new, mixed-use development on Harmony Road in Eatonton, Georgia, to support the College’s future growth to meet local talent needs in high demand occupation areas. Hereby referenced as the Lake Oconee Helms College campus, the proposed development will include:

- Educational buildings and classrooms.
- Retail and hotel components that support and complement degrees sponsored by Helms College.
- Residential units for students and others.
- Recreation amenities for guests and possibly nearby residents via a private club membership, such as tennis courts, jogging trails, and agritourism offerings.
- A conference retreat center with restaurant venues.

Intertwined throughout the campus is an agritourism theme, including gardens and farms, to provide hands-on experience for students and members of the community to learn about farm-to-table philosophies and offerings.

# Item 12: Recorded Deeds & Letter of Agency



After Recording Return to:  
Blasingame, Burch, Garrard & Ashley, P.C.  
1040 Founders Row, Suite B  
Greensboro, Georgia 30642  
15668-0004jvd

DOCH 004341  
FILED IN OFFICE  
08/21/2008 02:26 PM  
BK=647 PG=198-198  
SHEILA H. PERRY  
CLERK OF SUPERIOR  
COURT  
Putnam Co Clerk of Court  
*Sheila H. Perry*  
REAL ESTATE TRANSFER TAX  
PAID= \$0.00  
PT-let 117-2008-001193

QUITCLAIM DEED

STATE OF GEORGIA, GREENE COUNTY

THIS INDENTURE, made the 30<sup>th</sup> day of July, 2008, by and between Nancy J. Allen, as party of the first part, hereinafter called Grantor, and Allen Investment Partners, L.L.P., its heirs, successors and assigns, as party of the second part, hereinafter called Grantee, (the words "Grantor" and "Grantee" to include their respective heirs, successors and assigns where the context requires or permits).

WITNESSETH:

That Grantor, for and in consideration of the sum of One Dollar (\$1.00) and other valuable consideration in hand paid at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, by these presents does hereby remise, convey and forever QUITCLAIM unto the said Grantee, all of its entire right, title and interest passing hereunder, whatever the same be, in and to that certain property described as follows, to wit:


All that tract or parcel of land situate, lying, and being in 389<sup>th</sup> GM District, 3<sup>rd</sup> Land District, and Land Lots 341 and 352 of Putnam County, Georgia more particularly described as Parcel "B", containing 66.557 acres, more or less, as shown on that certain plat of survey prepared for Nancy Johnson Allen by James E. Smith, Jr., RLSN 1895, dated June 16, 2008 and recorded at Plat Book 32, Page 76, Putnam County, Georgia real estate records. Said plat of survey and the recorded copy thereof are incorporated herein by reference for all purposes.

This Conveyance is SUBJECT TO a reservation of 20' Ingress & Egress Easement as shown on the plat of survey referenced in the paragraph immediately above to Grantor, her heirs, successors and assigns that shall be appurtenant to and run with the title to Parcel "A", containing 5.000 acres, more or less, as shown on said plat of survey. Said 20' Ingress & Egress Easement shall be for the purpose of vehicular and pedestrian access to and from Parcel "A" and Harmony-Davis Road, being a public road with a 80' right-of-way.

TO HAVE AND TO HOLD the said described premises to Grantee, so that neither Grantor nor any person or persons claiming under Grantor shall at any time, by any means or ways, have, claim or demand any right or title to said premises or appurtenances, or any rights thereof.

IN WITNESS WHEREOF, Grantor has signed and sealed this deed, the day and year first above written.

Signed, sealed and delivered  
in the presence of:

*Sandra W. Page*  
Sandra W. Page  
Notary Public  
My Commission Expires:  
(AFFIX NOTARY SEAL)  


*Nancy J. Allen* (SEAL)  
Nancy J. Allen

E:\DATA\WPDOCS\15668\4\QCD Allen Investment Partners.doc

045046

276  
457

When recorded, please return to:  
Bursart & Liu, LLC  
2500 Windy Ridge Parkway, Ste 320  
Atlanta, GA 30339  
B&L File #98-0312

GEORGIA, PUTNAM COUNTY  
CLERK OF SUPERIOR COURT  
FILED 12-14-98  
TIME 11:10 AM  
RECORDED 12-14-98  
BOOK 1225 PAGE 457  
ALLEN M. J. ALLEN  
DEPUTY CLERK

Putnam County, Georgia  
Real Estate Transfer Tax  
Paid \$ 0  
Date 12-14-98  
Allyn M. J. Allen  
Deputy Clerk of Superior Court

ASSENT OF EXECUTOR TO DEVISE

State of Georgia  
County of Fulton

WHEREAS, CHARLES MITCHELL ALLEN ("Decedent") died a resident of Fulton County, Georgia, leaving a will which was probated in solemn form in said County on August 30, 1995; and

WHEREAS, the undersigned, NANCY JOHNSON ALLEN, was qualified as Executrix of said Estate and was issued Letters Testamentary, which are recorded at LT Book 151, Page 157, Fulton County Records; and

WHEREAS, under the terms of said will the following described property was devised to NANCY J. ALLEN:

SEE EXHIBIT "A" ATTACHED HERETO AND INCORPORATED HEREIN BY REFERENCE.

WHEREAS, the undersigned duly qualified as Executor of the estate of the Decedent and is now administering the estate under the terms of said will; and it has been determined that all debts and claims against the estate have been fully paid.

NOW, THEREFORE, the undersigned, as Executor of the Will of the Decedent, hereby assents to the devise of said property under the terms of said will, so that full fee simple title thereto is vested in NANCY J. ALLEN, as provided in said will.

WITNESS my hand and seal, this 21<sup>st</sup> day of July, 1998.

Signed, sealed and delivered  
in the presence of:

*Don Alexander*  
Witness  
*Paul E. Frank*  
Notary Public

*Nancy Johnson Allen* (seal)  
NANCY JOHNSON ALLEN, as Executrix  
under the Last Will and Testament of  
Charles M. Allen, deceased

(Affix Notarial Seal)



102

458

EXHIBIT "A"

ALL THAT TRACT or parcel of land lying and being in Land Lot 341 of the 3<sup>rd</sup> Land District, 389<sup>th</sup> G.M. District, Putnam County, Georgia, and being more particularly described as follows:

TO FIND THE TRUE POINT OF BEGINNING, commence at a point located at the intersection of the westerly right of way of Harmony-Davis Road (80 foot right of way) and the northerly right of way of Georgia State Road 44; thence in a northerly direction along the westerly right of way of Harmony-Davis Road a distance of 1,188.8 feet to an iron pin found; thence south 45 degrees 22 minutes 07 seconds west a distance of 1,049.91 feet to an iron pin set and the TRUE POINT OF BEGINNING; thence south 45 degrees 22 minutes 07 seconds west a distance of 286.87 feet to an iron pin set; thence north 43 degrees 37 minutes 02 seconds west a distance of 782.18 feet to an iron pin set; thence north 48 degrees 22 minutes 58 seconds east a distance of 286.82 feet to an iron pin set; thence south 43 degrees 37 minutes 02 seconds east a distance of 787.10 feet to an iron pin set and the point of beginning; containing approximately 5.20 acres and being more particularly shown on a survey prepared for Peggy Allen by James E. Smith, Jr., Georgia Registered Land Surveyor No. 1895, dated November 7, 1997.

Being a portion of the property conveyed from John E. Singleton to Charles M. Allen and Nancy J. Allen by warranty deed dated October 4, 1984 and recorded at Deed Book 84, Page 156, Putnam County, Georgia Records.

TOGETHER WITH A 20-FOOT WIDE EASEMENT FOR INGRESS AND EGRESS TO AND FROM HARMONY-DAVIS ROAD, and being more particularly described as follows:

TO FIND THE CENTERLINE OF THE EASEMENT, commence at a point located at the intersection of the westerly right of way of Harmony-Davis Road (80 foot right of way) and the northerly right of way of Georgia State Road 44; thence in a northerly direction along the westerly right of way of Harmony-Davis Road a distance of 1,188.8 feet to an iron pin found; thence north 32 degrees 57 minutes 18 seconds west along the westerly right of way of Harmony-Davis Road a distance of 556.70 to the centerline of a 10-foot drive and the CENTERLINE OF THE EASEMENT; thence the following calls along the centerline of said easement: south 80 degrees 34 minutes 20 seconds west 64.20 feet to a point; south 69 degrees 50 minutes 05 seconds west 22.18 feet to a point; south 54 degrees 03 minutes 54 seconds west 63.70 feet to a point; south 57 degrees 25 minutes 44 seconds west 97.12 feet to a point; south 57 degrees 07 minutes 39 seconds west 57.23 feet to a point; south 81 degrees 19 minutes 59 seconds west 92.08 feet to a point; south 70 degrees 27 minutes 06 seconds west 46.04 feet to a point; south 74 degrees 46 minutes 22 seconds west 19.00 feet to a point; south 16 degrees 31 minutes 51 seconds east 88.64 feet to a point; south 22 degrees 52 minutes 57 seconds west 143.24 feet to a point; south 33 degrees 34 minutes 26 seconds west 77.61 feet to a point; south 35 degrees 23 minutes 28 seconds west 193.38 feet to a point; south 50 degrees 29 minutes 35 seconds east 80.97 feet to a point; south 35 degrees 43 minutes 13 seconds west 71.40 feet to a point; south 44 degrees 47 minutes 48 seconds west 108.76 feet to a point; and south 26 degrees 33 minutes 55 seconds west 93.40 feet to a point located at the edge of the 5.20 property described above; all as more particularly shown on a survey prepared for Peggy Allen by James E. Smith, Jr., Georgia Registered Land Surveyor No. 1895, dated November 7, 1997.

DOC# 000177  
FILED IN OFFICE  
01/17/2012 01:50 PM  
BK:740 PG:112-114  
SHEILA H. PERRY  
CLERK OF COURT  
PUTNAM COUNTY

After Recording Return to:

Lantz & Reeves, P.C.  
3735 Cherokee Street  
Kennesaw, Georgia 30144  
770 424-8131

*Sheila H. Perry* SEM

REAL ESTATE TRANSFER T  
AX

—Above This Line Reserved For Official Use Only—

DEED PREPARED ONLY.  
NO TITLE EXAMINATION PERFORMED.

PT61-117-2012-000053

EXECUTOR'S DEED

STATE OF GEORGIA  
COUNTY OF PUTNAM

THIS INDENTURE, made this the 13<sup>th</sup> day of December, 2011, between JANET ALLEN CRITTENDEN, as Executor of the Last Will and Testament of NANCY JOHNSON ALLEN, late of the State of Georgia and County of Putnam, deceased, as party of the first part (the "Grantor"), and ALLEN INVESTMENT PARTNERS, LLLP, a Georgia limited liability limited partnership, as party of the second part (the "Grantee"); the words "Grantor" and "Grantee" to include their respective heirs, successors and assigns where the context requires or permits.

WITNESSETH: That the said Grantor (acting under and by virtue of the power and authority contained in the said Will, the same having been duly probated and recorded in the Probate Court of Putnam County, Georgia (estate no. 11ES0074), said Will having been proven in solemn form), for and in consideration of the sum of TEN AND 00/100 DOLLARS (\$10.00) and other good and valuable consideration, in hand paid at and before the sealing and delivery of the presents (the receipt of which is hereby acknowledged), has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell and convey unto the said Grantee, all that tract or parcel of land lying and being in Putnam County, Georgia and more particularly described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

See copy of Death Certificate (Exhibit "B") attached hereto and made a part hereof.

TO HAVE AND TO HOLD the said tract or parcel of land, with all and singular the rights, members and appurtenances thereof, to the same being, belonging, or in anywise appertaining, to the only proper use, benefit and behoof of the said Grantee, forever, IN FEE SIMPLE; in as full and ample a manner as the same was held, possessed and enjoyed, or might have been held, possessed and enjoyed, by the said decedent.

IN WITNESS WHEREOF, Grantor has signed and sealed this deed, the day and year first above written.

Signed, sealed and delivered  
in the presence of:

Unofficial Witness

*Janet Allen Crittenden* (Seal)  
JANET ALLEN CRITTENDEN, as Executor as aforesaid

Signed, sealed and delivered  
in the presence of:

Notary Public

My commission expires:

(Notary seal here.)

*please see attached California  
Notary Acknowledgement*

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT**

State of California  
County of *Siskiyou*

} SS:

on December 13 2011 before me,  
Kellie A. Sanders  
a Notary Public, personally appeared,  
Taret Allen Crittenden

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Kellie Sanders  
SIGNATURE OF NOTARY

MY COMMISSION EXPIRES ON: Aug. 27, 2014

(SEAL)

1748.113

ackn11v



**EXHIBIT "A"**

ALL THAT TRACT OR PARCEL OF LAND SITUATE, LYING AND BEING IN 389TH GM DISTRICT, 3RD LAND DISTRICT, AND LAND LOT 341 OF PUTNAM COUNTY, GEORGIA MORE PARTICULARLY DESCRIBED AS PARCEL "A" CONTAINING 5.00 ACRES, MORE OR LESS, AS SHOWN ON THAT CERTAIN PLAT OF SURVEY PREPARED FOR NANCY JOHNSON ALLEN BY JAMES E. SMITH, JR., RLSN 1895, DATED JUNE 16, 2008 AND RECORDED AT PLAT BOOK 32, PAGE 76, PUTNAM COUNTY, GEORGIA REAL ESTATE RECORDS. SAID PLAT OF SURVEY AND THE RECORDED COPY THEREOF ARE INCORPORATED HEREIN BY REFERENCE FOR ALL PURPOSES.

INCLUDING A 20' INGRESS & EGRESS EASEMENT AS SHOWN ON THE PLAT OF SURVEY REFERENCED IN THE PARAGRAPH IMMEDIATELY ABOVE THAT IS APPURTENANT TO AND RUNS WITH THE TITLE TO PARCEL "A". SAID 20' INGRESS & EGRESS EASEMENT SHALL BE FOR THE PURPOSE OF VEHICULAR AND PEDESTRIAN ACCESS ACROSS PARCEL "B" TO AND FROM PARCEL "A" AND HARMONY-DAVIS ROAD, BEING A PUBLIC ROAD WITH AN 80' RIGHT-OF-WAY.

740.114

044597

273  
652

GEORGIA, PUTNAM COUNTY  
CLERK OF SUPERIOR COURT  
FILED 11-16-98  
TIME 11:59 am  
RECORDED 11-16-98  
BOOK 103 PAGE 652-653  
Alvin G. Ballew  
(DEPUTY) CLERK

When recorded, please return to:  
Bussard & Lht, LLC  
2500 Windy Ridge Parkway, Suite 320  
Atlanta, GA 30339  
B&L File No. 98-0312

Putnam County, Georgia  
Real Estate Transfer Tax  
Paid \$ 10.40  
Date 11-16-98  
Alvin G. Ballew  
(Deputy) Clerk of Superior

QUITCLAIM DEED

STATE OF GEORGIA  
COUNTY OF Putnam

THIS INDENTURE made this 21<sup>st</sup> day of July, 1998, between

NANCY J. ALLEN,

of the State of Georgia, as party or parties of the first part, hereinafter called Grantor, and

PEGGY ALLEN,

as party or parties of the second part, hereinafter called Grantee (the words "Grantor" and "Grantee" to include their respective heirs, successors and assigns where the context requires or permits).

WITNESSETH that; Grantor, for Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby remise, convey and forever QUITCLAIM unto the said grantee:

ALL THAT TRACT or parcel of land lying and being in Land 341 of the 3<sup>rd</sup> Land District, 385<sup>th</sup> G.M. District, Putnam County, Georgia and being more particularly described in Exhibit "A" attached hereto and incorporated herein by reference.

TO HAVE AND TO HOLD the said described premises to Grantee, so that neither Grantor nor any person or persons claiming under Grantor shall at any time, by any means or ways, have, claim or demand any right of title to said premises or appurtenances, or any rights thereof.

IN WITNESS WHEREOF, the Grantor has signed and sealed this deed, the day and year first above written.

Signed, sealed and delivered in the presence of:

Jai Alexander  
Unofficial Witness

Nancy J. Allen (SEAL)  
NANCY J. ALLEN

Paul E. Franks  
Notary Public

(Affix Notarial Seal)



less Excepted  
w/ easement  
TMP 103-002  
PB 26-135

273  
653

EXHIBIT "A"

ALL THAT TRACT or parcel of land lying and being in Land Lot 341 of the 3<sup>rd</sup> Land District, 389<sup>th</sup> G.M. District, Pulnam County, Georgia, and being more particularly described as follows:

TO FIND THE TRUE POINT OF BEGINNING, commence at a point located at the intersection of the westerly right of way of Harmony-Davis Road (80 foot right of way) and the northerly right of way of Georgia State Road 44; thence in a northerly direction along the westerly right of way of Harmony-Davis Road a distance of 1,188.8 feet to an iron pin found; thence south 45 degrees 22 minutes 07 seconds west a distance of 1,049.91 feet to an iron pin set and the TRUE POINT OF BEGINNING; thence south 45 degrees 22 minutes 07 seconds west a distance of 286.87 feet to an iron pin set; thence north 43 degrees 37 minutes 02 seconds west a distance of 792.16 feet to an iron pin set; thence north 48 degrees 22 minutes 58 seconds east a distance of 286.82 feet to an iron pin set; thence south 43 degrees 37 minutes 02 seconds east a distance of 787.10 feet to an iron pin set and the point of beginning; containing approximately 5.20 acres and being more particularly shown on a survey prepared for Peggy Allen by James E. Smith, Jr., Georgia Registered Land Surveyor No. 1895, dated November 7, 1997.

Being a portion of the property conveyed from John E. Singleton to Charles M. Allen and Nancy J. Allen by warranty deed dated October 4, 1984 and recorded at Deed Book 84, Page 156, Pulnam County, Georgia Records.

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# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B 0 Eatonton, GA 31024

Tel: 706-485-2776 0 706-485-0552 fax [www.putnamcountyga.us](http://www.putnamcountyga.us)

LETTER OF AGENCY-\_\_\_\_\_

WE, THE UNDERSIGNED OWNERS OF REAL PROPERTY LOCATED IN THE CITY OF EATONTON/PUTNAM COUNTY, GEORGIA, HEREBY APPOINT James Stiff TO BY MY AGENT FOR THE PURPOSE OF APPLYING FOR rezoning OF PROPERTY DESCRIBED AS MAP 103 PARCELS 001001 and 001, CONSISTING OF 71.554 ACRES, WHICH HAS THE FOLLOWING ADDRESS: 916 Harmony Road EATONTON, GEORGIA 31024. ATTACHED IS A COPY OF A DEED AND OR LAT OF SURVEY DESCRIBING THE PROPERTY OWNED BY THE PROPERTY OWNER(S) TO WHICH THIS LETTER OF AGENCY APPLIES.

THE ABOVE-NAMED AGENT HEREBY IS AUTHORIZED TO COMPLETE AND SIGN THE CITY OF EATONTON/PUTNAM COUNTY APPLICATION FOR rezoning ON OUR BEHALF. WE UNDERSTAND THAT THIS LETTER OF AGENCY WILL BE ATTACHED TO AND MADE PART OF SAID FORM AND WILL BE RELIED UPON BY THE CITY OF EATONTON/PUTNAM COUNTY. FOR AND IN CONSIDERATION OF THE CITY OF EATONTON/PUTNAM COUNTY ACCEPTING THIS LETTER OF AGENCY, WE HEREBY INDEMNIFY AND HOLD HARMLESS THE CITY OF EATONTON/PUTNAM COUNTY AND ITS AGENTS AND/OR EMPLOYEES IN THE EVEN THAT THE ABOVE NAMED AGENT SHOULD MISUSE THIS LETTER OF AGENCY AND WE SUFFER DAMAGES AS A RESULT.

THIS 22nd DAY OF June, 2021.

PROPERTY OWNER(S): Peggy Allen

Peggy Allen  
NAME (PRINTED)

[Signature]  
SIGNATURE

ADDRESS: 918 Harmony Road, Eatonton, GA 31024

PHONE: \_\_\_\_\_

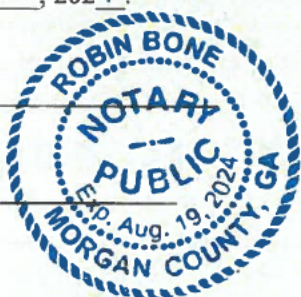
ALL SIGNATURES WERE HEREBY SWORN TO AND SUBSCRIBED BEFORE ME THIS

23 DAY OF June, 2021.

[Signature]

NOTARY

MY COMMISSION EXPIRES: \_\_\_\_\_







# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B 0 Eatonton, GA 31024

Tel: 706-485-2776 0 706-485-0552 fax [www.putnamcountyga.us](http://www.putnamcountyga.us)

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THIS 22nd DAY OF June, 2021.

PROPERTY OWNER(S): Sue Fox

Susan Fox  
NAME (PRINTED)

Susan Fox  
SIGNATURE

ADDRESS: 108 Walking Horse Lane, Eatonton, GA 31024

PHONE: \_\_\_\_\_

ALL SIGNATURES WERE HEREBY SWORN TO AND SUBSCRIBED BEFORE ME THIS 23 DAY OF June, 2021.

[Signature]

NOTARY

MY COMMISSION EXPIRES: \_\_\_\_\_





# Item 13: Legal Description & Recorded Plat

**LEGAL DESCRIPTION**  
**PARCEL "A"**

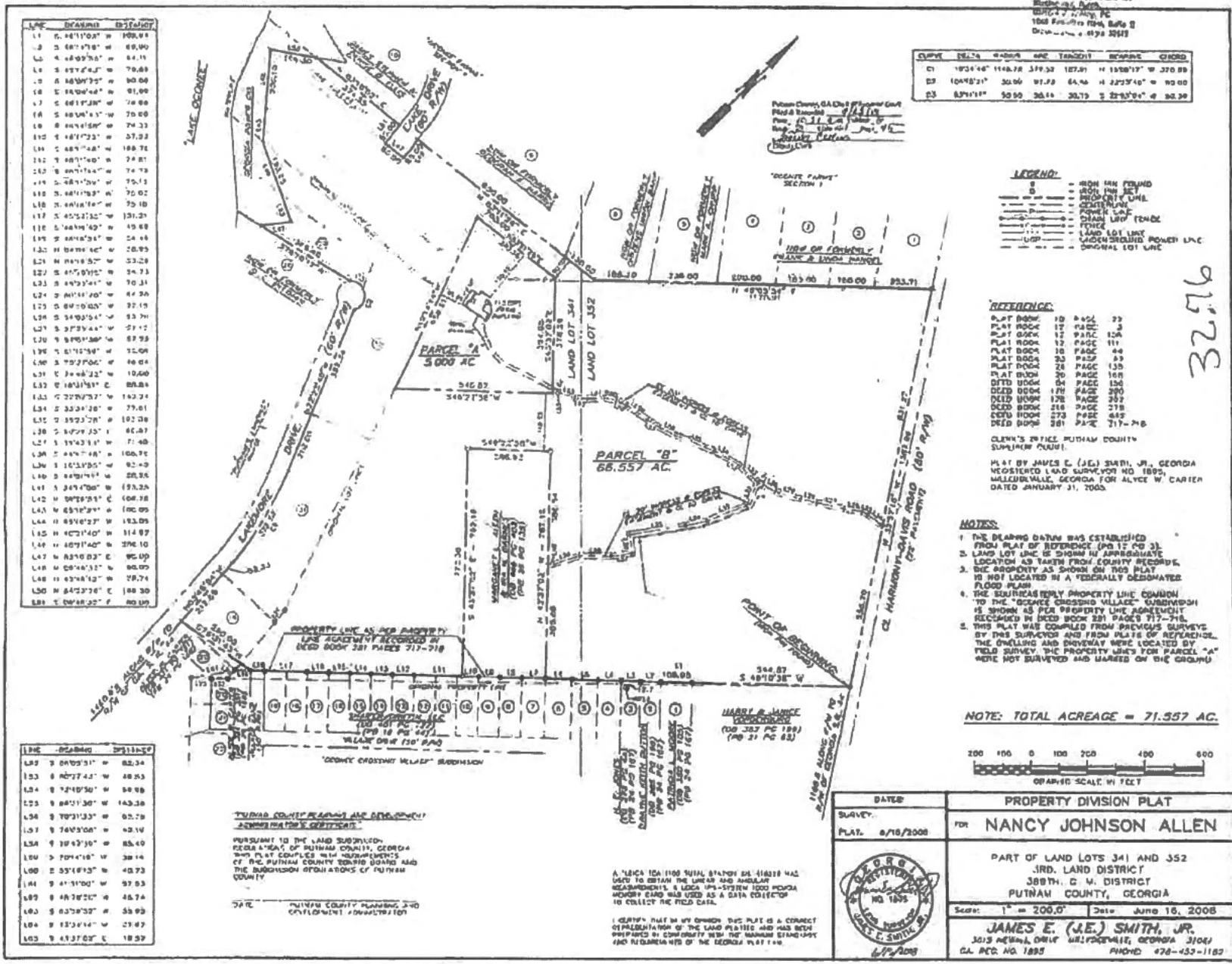
All that Tract or Parcel of land, lying and being located in Land Lot 341 of the 3rd District, in the 389th G.M. District, Putnam County, Georgia, containing 5.000 Acres (217,801 SQ.FT.), more or less and being more particularly described as follows:

To find the **TRUE POINT OF BEGINNING**, commence from a 1/2" rebar set on the southwestern most 80 foot Right of Way of Harmony Road, said 1/2" rebar set being located 1188.80 feet northwest from the right of way intersection of Georgia State Route No. 44; thence from said 1/2" rebar set, proceed along the southwestern most 80 foot Right of Way of Harmony Road the following: North 34 degrees 03 minutes 08 seconds West a distance of 556.70 feet to a point; thence North 34 degrees 03 minutes 08 seconds West a distance of 831.27 feet to a point; thence departing said right of way, proceed the following: thence South 44 degrees 59 minutes 20 seconds West a distance of 204.00 feet to a 3/4" rebar found; thence South 44 degrees 59 minutes 20 seconds West a distance of 159.93 feet to a nail found; thence South 44 degrees 59 minutes 20 seconds West a distance of 384.74 feet to a 3/4" rebar found; thence South 44 degrees 59 minutes 20 seconds West a distance of 236.20 feet to a 5/8" rebar found; thence South 44 degrees 59 minutes 20 seconds West a distance of 186.04 feet to a 5/8" rebar found; thence South 82 degrees 06 minutes 16 seconds West a distance of 130.06 feet to a 1/2" rebar found; thence South 22 degrees 14 minutes 14 seconds East a distance of 82.52 feet to the **TRUE POINT OF BEGINNING**.

Thence, from said **TRUE POINT OF BEGINNING**, proceed the following: South 44 degrees 42 minutes 55 seconds East for a distance of 378.29 feet to a point; thence South 44 degrees 42 minutes 55 seconds East for a distance of 16.59 feet to a point; thence South 45 degrees 17 minutes 08 seconds West for a distance of 545.82 feet to a point; thence North 20 degrees 20 minutes 04 seconds West for a distance of 658.61 feet to a point; thence North 82 degrees 05 minutes 38 seconds East for a distance of 342.16 feet, back to the **TRUE POINT OF BEGINNING**.

Together with and subject to covenants, easements, and restrictions of record. Said property contains 5.000 Acres (217,801 Square feet), more or less.





32.76

https://search.gscoca.org/imaging/HTML5Viewer.aspx?id=24986461&key1=22&key2=76&county=117&countyname=PUTNAM&userid=386456&appid=28





# Items 16 & 17: Source of Domestic Water & Sewer Supply Provider Letter





**georgia civil**  
CIVIL ENGINEERING  
LANDSCAPE ARCHITECTURE  
LAND SURVEYING

June 23, 2021

Lisa Jackson, MPA  
Planning Director  
Putnam County Planning & Development  
117 Putnam Drive, Suite B  
Eatonton, GA 31024

Re: Helms Farm Campus at Harmony Rd – Proposed Provider for Domestic Water Service & Sanitary Sewage Disposal

Dear Lisa,

As you are aware, Goodwill Industries of Middle Georgia is currently submitting an application to rezone two parcels in Eatonton, Georgia, along Harmony Road. The application requests information about the source of domestic water supply as well as sanitary sewer disposal. It is our understanding that Piedmont Water is the local provider in this area, and we have confirmed this with Brent Hurst, the Chief Operating Officer with Piedmont Water Company. Piedmont will provide both the domestic water as well as service sanitary sewage disposal. We are currently consulting with Piedmont Water to determine the anticipated demand so they can determine if the proposed development will have to pump sewage to an existing lift station with no upgrades, one with upgrades, or directly to the plant.

Please let us know if we can assist further in this matter or if you have any questions.

Sincerely,

  
Jason Brown, P.E.  
President  
PE#031684

# Item 18: Disclosure of Campaign Contributions Forms



# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ www.putnamcountyga.us

## DISCLOSURE OF APPLICANT'S CAMPAIGN CONTRIBUTION

The *Putnam County Code of Ordinances*, Section 66-167(c) states as follows:

“When any applicant or his attorney for a rezoning action has made, within two years immediately preceding the filing of that applicant’s application for the rezoning action, campaign contributions aggregating \$250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

a. The name and official position of the local government official to whom the campaign contribution was made; and

b. The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution. The disclosures required by this section shall be filed within ten days after an application for the rezoning action is first filed.”

1. Name: Peggy Allen

2. Address: 918 Harmon Rd  
Eatonton 31024

3. Have you given contributions that aggregated \$250.00 or more within two years immediately preceding the filing of the attached application to a candidate that will hear the proposed application?  Yes  No If yes, who did you make the contributions to? : \_\_\_\_\_

Signature of Applicant:   
Date: 10/19/21





# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ◊ Eatonton, GA 31024

Tel: 706-485-2776 ◊ 706-485-0552 fax ◊ www.putnamcountyga.us

## DISCLOSURE OF APPLICANT'S CAMPAIGN CONTRIBUTION

The *Putnam County Code of Ordinances*, Section 66-167(c) states as follows:

“When any applicant or his attorney for a rezoning action has made, within two years immediately preceding the filing of that applicant’s application for the rezoning action, campaign contributions aggregating \$250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

a. The name and official position of the local government official to whom the campaign contribution was made; and

b. The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution. The disclosures required by this section shall be filed within ten days after an application for the rezoning action is first filed.”

1. Name: Susan Fox

2. Address: 108 Walking Horse Lane  
Eatonton, Georgia 31024

3. Have you given contributions that aggregated \$250.00 or more within two years immediately preceding the filing of the attached application to a candidate that will hear the proposed application?        Yes  No        If yes, who did you make the contributions to? :       

Signature of Applicant: *Susan Fox* dotloop verified  
06/18/21 4:16 PM EDT  
Q3YS-ZVRN-LNXV-OVMZ  
Date: 06/18/2021 /





# Item 20: Property Taxes



INTERNET TAX RECEIPT

2020 000314  
ALLEN INVESTMENT PARTNERS LLLP

PARCEL A HARMONY RD  
103 001

DESCRIPTION	TAX AMOUNT	EXEMPTION	MILLAGE
FAIR MARKET VALUE	\$326,364		
COUNTY	\$1,054.55	\$0.00	8.078
SCHOOL	\$2,058.97	\$0.00	15.772
SPEC SERV	\$49.35	\$0.00	0.378

<b>ORIGINAL TAX DUE</b>
\$3,162.87
<b>INTEREST</b>
<b>COLLECTION COST</b>
<b>FIFA CHARGE</b>
<b>PENALTY</b>
<b>TOTAL PAID</b>
\$3,162.87
<b>TOTAL DUE</b>
\$0.00

TO ALLEN INVESTMENT PARTNERS LLLP  
108 WALKING HORSE LANE  
EATONTON, GA 31024

FROM Putnam County Tax Commissioner  
100 South Jefferson Ave Suite 207  
Eatonton, GA 31024-1061  
(706) 485-5441



Date Paid: 12/3/2020



Scan this code with  
your mobile phone  
to view this bill

INTERNET TAX RECEIPT

Search: 103 001 001



12 records returned

Page 1 of 1

Owner Name	Bill #	Paid
ALLEN INVESTMENT PARTNERS LLLP	000315	
ALLEN INVESTMENT PARTNERS LLLP	000311	
ALLEN INVESTMENT PARTNERS LLLP	000309	
ALLEN INVESTMENT PARTNERS LLLP	000307	
ALLEN INVESTMENT PARTNERS LLLP	000303	
ALLEN INVESTMENT PARTNERS LLLP	000312	
ALLEN INVESTMENT PARTNERS LLLP	000316	
ALLEN INVESTMENT PARTNERS LLLP	000311	
ALLEN INVESTMENT PARTNERS LLLP	000311	
ALLEN INVESTMENT PARTNERS LLLP	000315	
ALLEN INVESTMENT PARTNERS LLLP	000302	
ALLEN INVESTMENT PARTNERS LLLP	000385	

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# Item 21: Concept Plan & Project Inspiration





### HELMS FARM

### Campus Master Plan Study 3.0

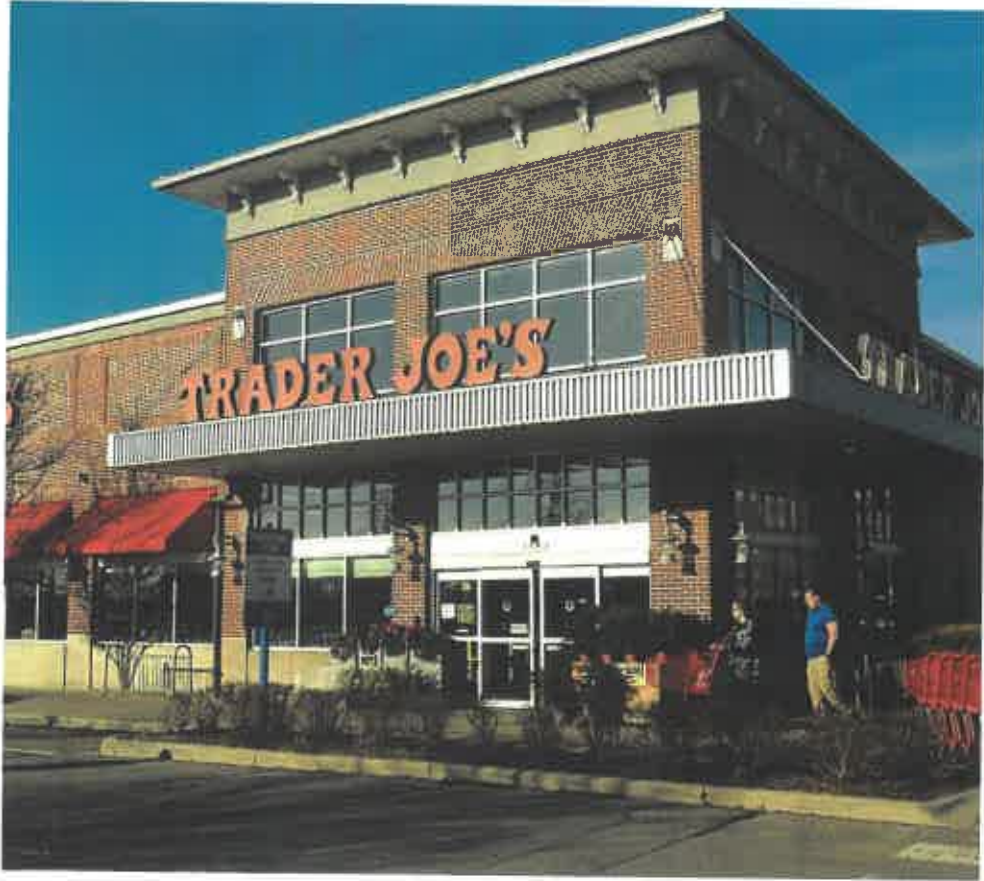
Issue: 23 June 2021  
Silver Studio Architects















## Item 22: Impact Analysis



IMPACT ANALYSIS

**Impact analysis.** An impact analysis is required for all applications unless the application will result in fewer than 25 single-family residential lots. The impact analysis shall be prepared by a professional engineer, a registered land surveyor, a landscape architect, a land planner or any other person professionally involved in and familiar with land development activities.

1. The application must be accompanied by a written, documented analysis of the proposed zoning change with regard to each of the standards governing consideration, (which are enumerated under Putnam County Code of Ordinances, Chapter 66-Zoning, Sec. 66-165(d)) and are as follows:

- a. Is the proposed use consistent with the stated purpose of the zoning district that is being requested?
- b. Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?
- c. Will the proposed use adversely affect the existing use, value or usability of adjacent or nearby property?
- d. Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?
- e. Are there substantial reasons why the property cannot or should not be used as currently zoned?
- f. Will the proposed use cause an excessive or burdensome use of public facilities or services or exceed the present or funded capabilities, included but not limited to streets, water or sewer utilities, and police or fire protection?
- g. Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?
- h. Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, and a reasonable private use of the subject property?

2. A traffic impact analysis is to include the existing average daily traffic on road/streets leading to the nearest intersection and the projected average daily traffic. Additional requirements for the analysis may be provided by the Planning and Development Department and included with the application.

3. The estimated number of dwelling units and total floor area of non-residential uses (if applicable) of the proposed development.

4. Effect on the environment surrounding the area to be rezoned including the effect on all natural and historic resources. (State source of the information)

5. Impact on fire protection with respect to the need for additional firefighting equipment or personnel. (State source of the information)

6. What are the physical characteristics of the site with respect to topography and drainage courses?

7. Adjacent and nearby zoning and land use.

**IMPACT ANALYSIS**

1. The application must be accompanied by a written, documented analysis of the proposed zoning change with regard to each of the standards governing consideration, (which are enumerated under Putnam County Code of Ordinances, Chapter 66-Zoning, Sec. 66-165(d)) and are as follows:
  - a. Is the proposed use consistent with the stated purpose of the zoning district that is being requested?  
**Yes. The purpose of the planned unit development zoning is "to encourage the development of large tracts of land to produce logically organized development with compatible land uses." The proposed development meets this purpose.**
  - b. Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?  
**Yes. Adjacent and nearby uses include commercial, residential, and agricultural, all components that will be incorporated into the planned unit development to serve as a bridge and connection to adjacent parcels.**
  - c. Will the proposed use adversely affect the existing use, value or usability of adjacent or nearby property?  
**No.**
  - d. Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?  
**Yes.**
  - e. Are there substantial reasons why the property cannot or should not be used as currently zoned?  
**The current zoning does not allow for the proposed mixed-use program.**
  - f. Will the proposed use cause an excessive or burdensome use of public facilities or services or exceed the present or funded capabilities, included but not limited to streets, water or sewer utilities, and police or fire protection?  
**No.**
  - g. Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?  
**Yes.**
  - h. Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, and a reasonable private use of the subject property?  
**Yes.**
2. A traffic impact analysis is to include the existing average daily traffic on road/streets leading to the nearest intersection and the projected average daily traffic. Additional requirements for the analysis may be provided by the Planning and Development Department and included with the application.  
**The traffic impact analysis is attached as Item 22a: Traffic Impact Analysis.**
3. The estimated number of dwelling units and total floor area of non-residential uses (if applicable) of the proposed development.  
**The development program may include up to approximately 150 dwelling units. The total floor area for the non-residential uses may include up to 250,550 square feet.**

- 4. Effect on the environment surrounding the area to be rezoned including the effect on all natural and historic resources. (State source of the information)

**Studies for a Phase I Environmental Assessment and delineation of Waters of the State and wetlands disclosed no issues.**

- 5. Impact on fire protection with respect to the need for additional firefighting equipment or personnel. (State source of the information)

**Per Georgia Civil, the site infrastructure being provided as part of this development will have adequate fire water service and protection with fire suppression systems to meet all life safety codes and provide access for all fire vehicle apparatus.**

- 6. What are the physical characteristics of the site with respect to topography and drainage courses?

**An ALTA Survey is enclosed, the site generally slopes from Harmony Road to the lake.**

- 7. Adjacent and nearby zoning and land use:



**TRAFFIC STUDY  
FOR  
HELMS FARM CAMPUS AT HARMONY ROAD  
PUTNAM COUNTY, GEORGIA**



**Prepared for:**  
**Goodwill of Middle Georgia & The CSRA**  
**5171 Eisenhower Parkway**  
**Macon, GA 31206**

**Prepared By:**



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June 14, 2021  
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A & R Project # 21-082

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# 1.0 INTRODUCTION

The purpose of this study is to determine the traffic impact that will result from the proposed Helms Farm Campus development that will be located on Harmony Road across from Sammons Industrial Parkway (South), north of Village Lane in Putnam County, Georgia. The traffic analysis evaluates the current operations compared to the future conditions with the traffic generated by the development. The development will consist of:

- Goodwill Store: 16,800 sf
- Helms College: 50 Students
- Edgar’s Bakery: 7,000 sf
- Retail including Spa: 26,920 sf
- High-Turn-over Sit-Down Restaurant: 13,100 sf
- Super Market: 14,500 sf
- Multi-family (mid-rise) Residential: 127 Units
- Student Housing: 18 Units
- Vacation Villas (Resorts): 41 Units
- Event Hall or Banquet Hall: 22,000 sf
- Hotel: 175 Rooms



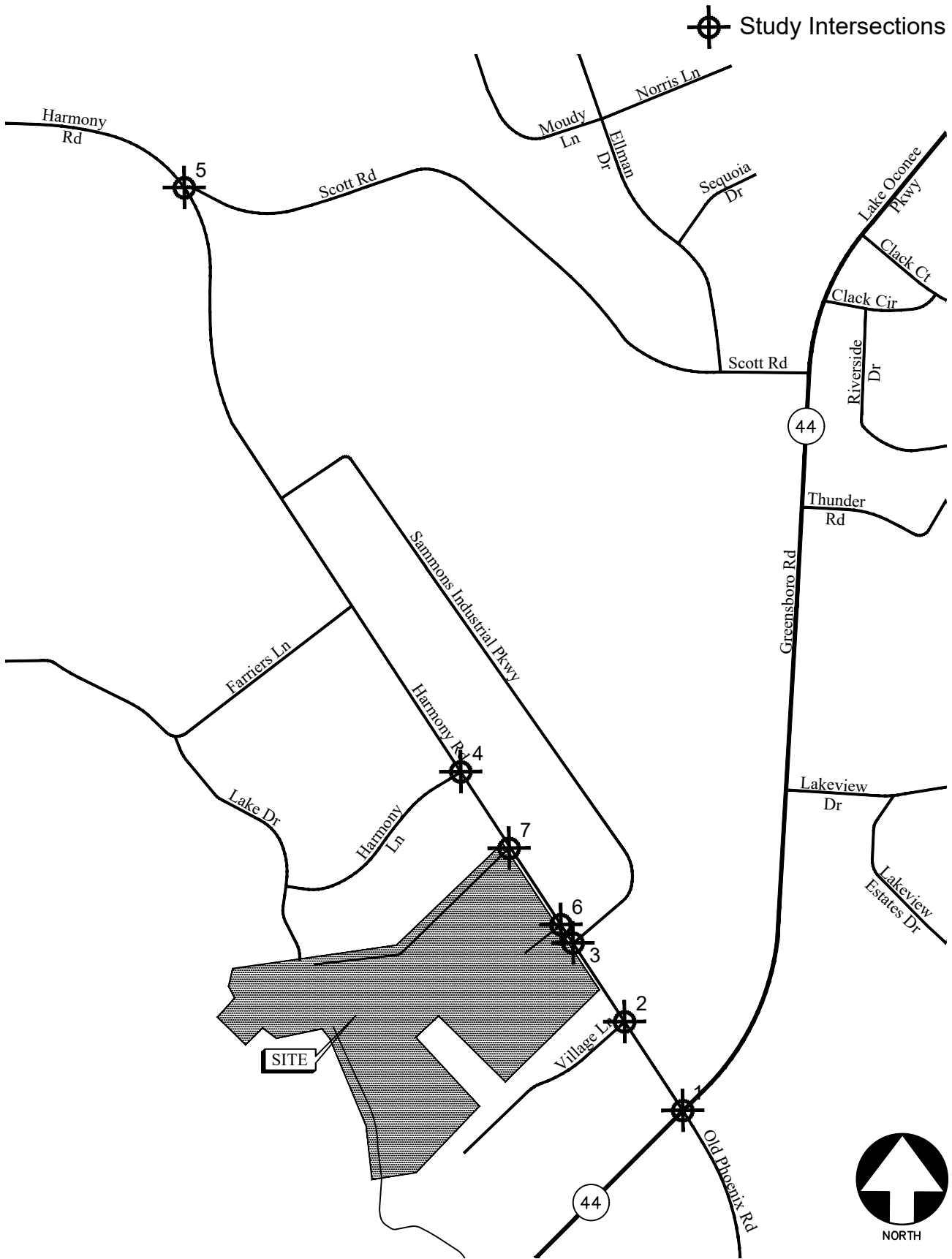
The development proposes two site driveways at the following locations:

- Site Driveway 1: Full-access (Southern) driveway on Harmony Road
- Site Driveway 2: Full-access (Northern) driveway on Harmony Road

Existing and future operations after completion of the project were analyzed at the intersections of:

- Harmony Road at SR 44 (Greensboro Road) / Old Phoenix Road
- Harmony Road at Village Lane
- Harmony Road at Sammons Industrial Parkway (South)
- Harmony Road at Harmony Lane
- Harmony Road at Scott Road / Private Driveway
- Harmony Road at Site Driveway 1 (Southern)
- Harmony Road at Site Driveway 2 (Northern) / Private Driveway

Recommendations to improve traffic operations have been identified as appropriate and are discussed in detail in the following sections of the report. The location of the development and the surrounding study network is shown in Figure 1.



LOCATION MAP

FIGURE 1

A&R Engineering Inc.

## 2.0 EXISTING FACILITIES / CONDITIONS

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

### 2.1.1 SR 44 (Greensboro Road)

SR 44 (Greensboro Road) is an east-west, two-lane, undivided roadway with a posted speed limit of 45 mph in the vicinity of the site. Georgia Department of Transportation (GDOT) traffic counts (Station ID 237-0146) indicate that the daily traffic volume on SR 44 (Greensboro Road) in 2019 was 15,200 vehicles per day north of Harmony Road. GDOT classifies SR 44 (Greensboro Road) as a Rural Minor Arterial roadway.

### 2.1.2 Harmony Road

Harmony Road is a north-south, two-lane, undivided roadway with a posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID 237-0181) indicate that the daily traffic volume on Harmony Road in 2019 was 3,570 vehicles per day north of Scott Road. GDOT classifies Harmony Road as a Rural Minor Collector roadway.

### 2.1.3 Village Lane

Village Lane is an east-west, two-lane, undivided roadway with a posted speed limit of 25 mph in the vicinity of the site.

### 2.1.4 Sammons Industrial Parkway

Sammons Industrial Parkway is an east-west, two-lane, undivided roadway with a posted speed limit of 25 mph in the vicinity of the site.

### 2.1.5 Harmony Lane

Harmony Lane is an east-west, two-lane, undivided roadway with a posted speed limit of 25 mph in the vicinity of the site.

### 2.1.6 Scott Road

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



### 3.0 STUDY METHODOLOGY

In this study, the methodology used for evaluating traffic operations at each of the subject intersections is based on the criteria set forth in the Transportation Research Board’s Highway Capacity Manual, 6<sup>th</sup> edition (HCM 6). Synchro software, which utilizes the HCM methodology, was used for the analysis. The following is a description of the methodology employed for the analysis of unsignalized and signalized intersections. At specific intersections in which HCM 6 is unable to report results due to limitations of the software version, HCM 2000 will be used instead. The following is a description of the methodology employed for the analysis of unsignalized and signalized intersections.

#### 3.1 Unsignalized Intersections

For unsignalized intersections at which the side street or minor street is controlled by a stop sign, the criteria for evaluating traffic operations are the level-of-service (LOS) for the turning movements at the intersection and the level-of-service for the overall intersection. Level-of-service is based on the average controlled delay incurred at the intersection. Controlled delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the controlled delay for unsignalized intersections, such as the availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue.

Level-of-service is assigned a letter designation from “A” through “F”. Level-of-service “A” indicates excellent operations with little delay to motorists, while level-of-service “F” exists when there are insufficient gaps of acceptable size to allow vehicles on the side street to cross safely, resulting in extremely long total delays and long queues. The level-of-service criteria for two-way stop-controlled and all-way stop-controlled (unsignalized) intersections are given in Table 1.

Level-of-service	Average Delay (sec)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: Highway Capacity Manual

#### 3.2 Signalized Intersections

For signalized intersections, it is necessary to evaluate both capacity and level-of-service in order to evaluate the overall operation of the intersection. The capacity analysis of an intersection is performed by comparing the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This results in a volume/capacity (v/c) ratio for each lane group. A v/c ratio greater

than 1.0 indicates that the volume of traffic has exceeded the capacity available, resulting in a temporary excess of demand. Although the capacity of the entire intersection is not defined, a composite v/c ratio for the sum of the critical lane groups within the intersection is computed. This composite v/c ratio is an indication of the overall intersection sufficiency.

Level-of-service for a signalized intersection is defined in terms of average controlled delay per vehicle, which is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The level-of-service criteria for signalized intersections, based on average controlled delay, are shown in Table 2. Level-of-service “A” indicates operations with very low controlled delay, while level-of-service “F” describes operations with extremely high average-controlled delay. Level-of-service “E” is typically considered to be the limit of acceptable delay, and level-of-service “F” is considered unacceptable by most drivers.

TABLE 2 – LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS	
Level-of-service	Average Control Delay (sec)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Source: Highway Capacity Manual

## 4.0 EXISTING 2021 TRAFFIC ANALYSIS

### 4.1 Existing Traffic Volumes

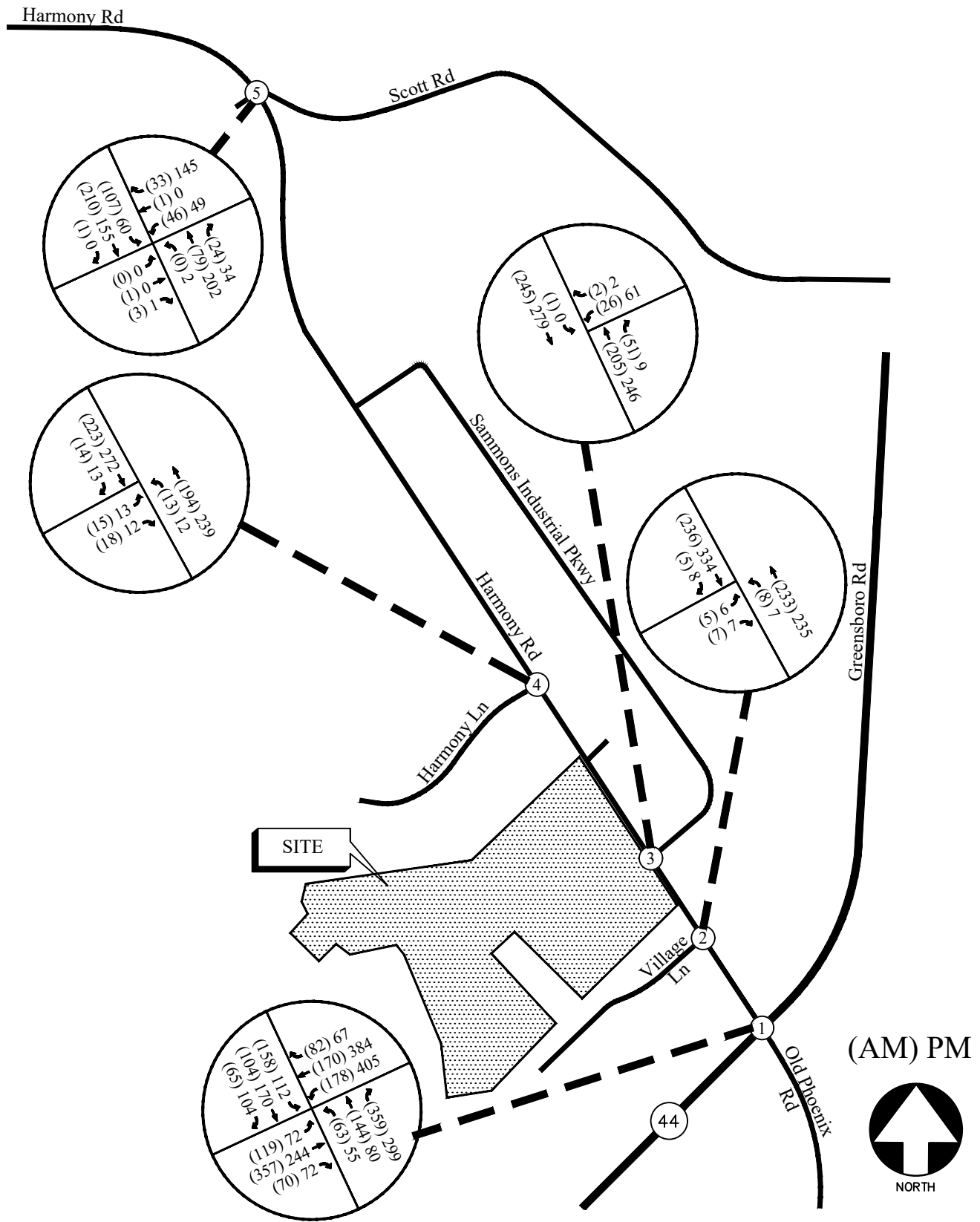
Traffic counts were obtained at the following study intersections:

- Harmony Road at SR 44 (Greensboro Road) / Old Phoenix Road
- Harmony Road at Village Lane
- Harmony Road at Sammons Industrial Parkway (South)
- Harmony Road at Harmony Lane
- Harmony Road at Scott Road / Private Driveway

Turning movement counts were collected on Thursday, May 27, 2021, at all the study intersections. A 24-hour bi-directional volume count was also collected on Harmony Road north of Scott Road at the same location where GDOT had collected historic ADT in the past. All turning movement counts were recorded during the AM and PM peak hours between 7:00am to 9:00am and 4:00pm to 6:00pm, respectively. The four consecutive 15-minute interval volumes that summed to produce the highest volume at the intersections were then determined. These volumes make up the peak hour traffic volumes for the intersections counted and are shown in Figure 2.

### 4.2 Adjusted 2021 Traffic Volumes

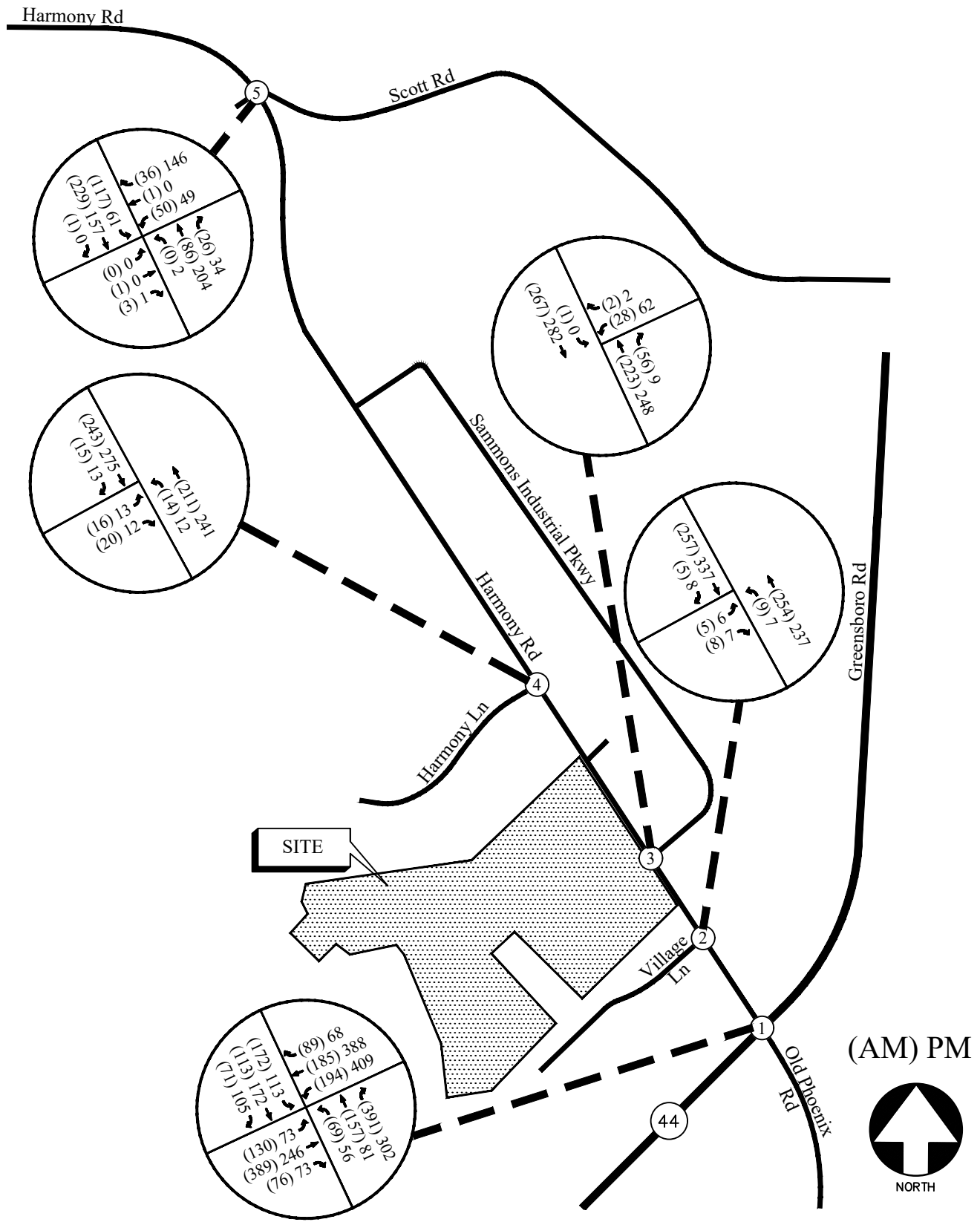
To account for the abnormal traffic pattern due to COVID-19, an adjustment factor was determined by calculating the difference between GDOT historical turning movements counts and current bi-directional counts at Harmony Road north of Scott Road. The historic 2017 turning movement counts from GDOT's (Station ID 237-0181) were increased by an annual growth rate of 2.5% for four years and compared to the existing bi-directional counts collected on Thursday, May 27, 2021, at the same location. The comparison of the two counts revealed that the adjusted historic traffic counts are 9% higher in the AM peak hour and 1% higher in the PM peak hour. Therefore, the 2021 AM and PM peak hour counts shown in Figure 2 were increased by 9% and 1%, respectively. The projected and/or adjusted existing peak hour volumes are shown in Figure 3.



EXISTING WEEKDAY PEAK-HOUR VOLUMES (DURING COVID-19)

FIGURE 2

A&R Engineering Inc.



ADJUSTED EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 3

A&R Engineering Inc.



### 4.3 Existing Traffic Operations

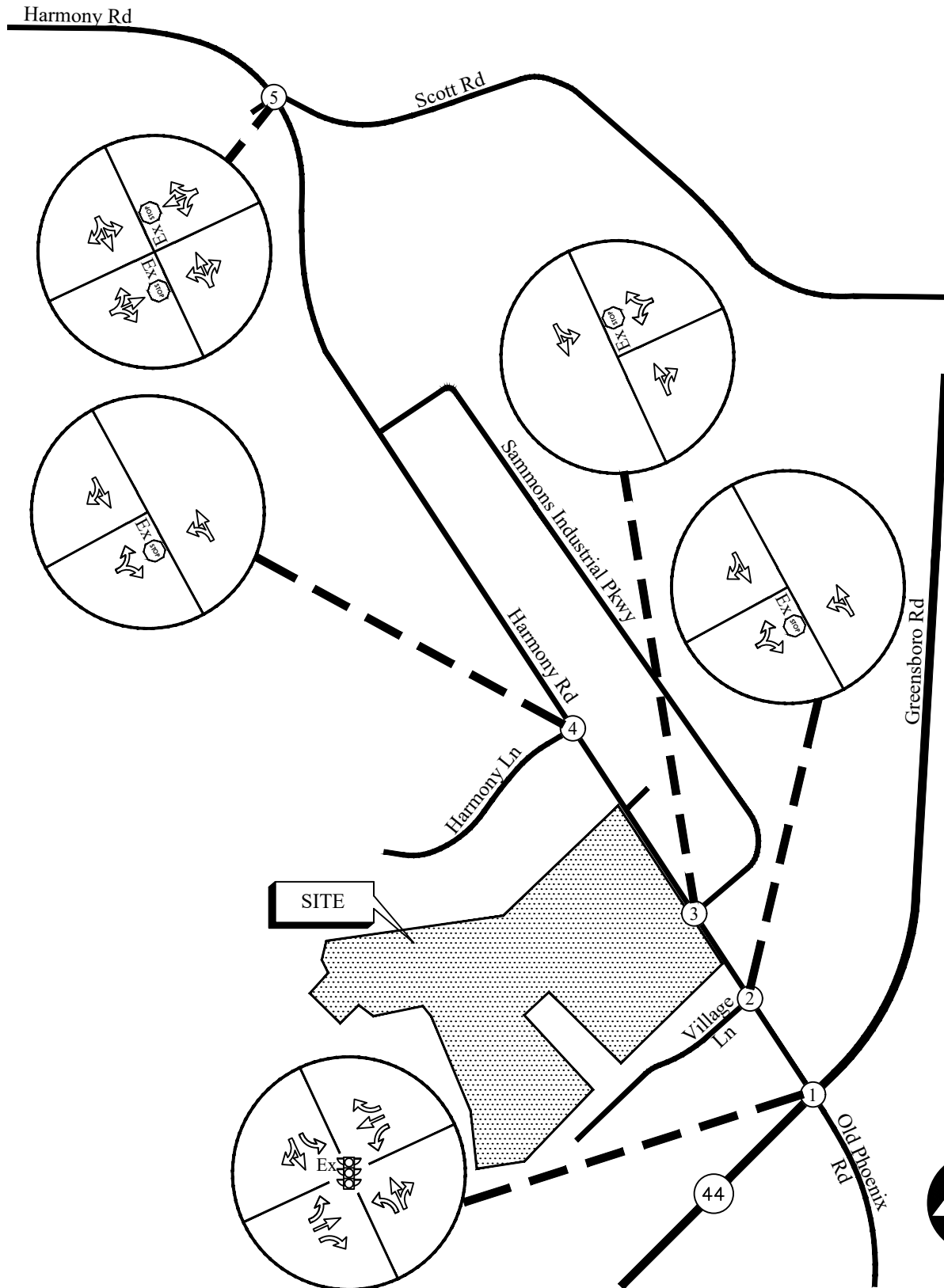
Existing 2021 traffic operations were analyzed at the study intersections in accordance with the HCM methodology using the volumes in Figure 3. The results of the analyses are shown in Table 3. The existing traffic control and lane geometry for the intersections are shown in Figure 4.

TABLE 3 – EXISTING INTERSECTION OPERATIONS				
Intersection		Traffic Control	LOS (Delay)	
			AM Peak Hour	PM Peak Hour
1	<b><u>SR 44 (Greensboro Road) @ Harmony Road / Old Phoenix Road</u></b>	Signalized	<b><u>D (47.7)</u></b>	<b><u>D (37.2)</u></b>
	-Eastbound Approach		D (44.3)	C (32.5)
	-Westbound Approach		C (29.4)	B (19.0)
	-Northbound Approach		E (68.6)	E (69.0)
	-Southbound Approach		D (36.1)	D (42.3)
2	<b><u>Harmony Road @ Village Lane</u></b>	Stop Controlled on Eastbound Approach	B (11.2)	B (12.4)
	-Eastbound Approach		A (7.9)	A (8.2)
3	<b><u>Harmony Road @ Sammons Industrial Parkway (S)</u></b>	Stop Controlled on Westbound Approach	B (14.2)	B (14.8)
	-Westbound Approach		A (7.9)	A (0.0)
4	<b><u>Harmony Road @ Harmony Lane</u></b>	Stop Controlled on Eastbound Approach	B (11.2)	B (12.0)
	-Eastbound Approach		A (7.8)	A (8.0)
5	<b><u>Harmony Road @ Scott Road / Private Driveway</u></b>	Stop Controlled on Eastbound and Westbound Approaches	B (11.0)	A (9.1)
	-Eastbound Approach		B (14.1)	B (13.3)
	-Westbound Approach		A (0.0)	A (7.6)
	-Northbound Left		A (7.7)	A (7.9)
	-Southbound Left			

The results of existing traffic operations analysis indicate that all the study intersections are operating at an level-of-service “D” or better in both AM and PM peak hours.

LEGEND

- Ex Existing Signed Intersection
- Existing Lane Configuration
- Ex Existing Traffic Signal



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 4

A&R Engineering Inc.

## 5.0 PROPOSED DEVELOPMENT

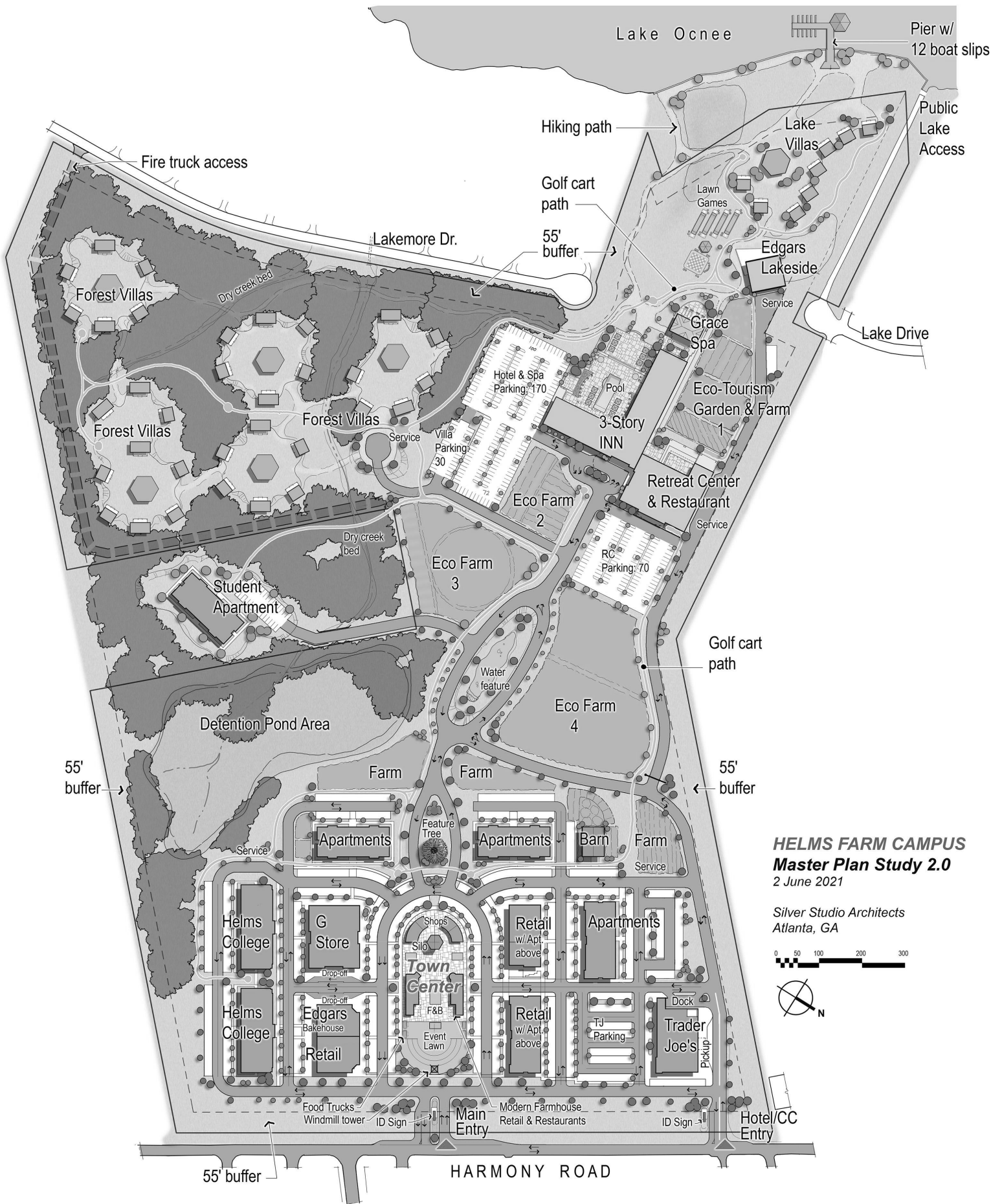
The proposed Helms Farm Campus that will be located on Harmony Road at Sammons Industrial Parkway (South), northeast of Harmony Road at Village Lane and southwest of Harmony Road at Harmony Lane in City of Eatonton, Putnam County, Georgia. The traffic analysis evaluates the current operations compared to the future conditions with the traffic generated by the development. A site plan is shown in Figure 5. The development will consist of:

- Goodwill Store: 16,800 sf
- Helms College: 50 Students
- Edgar’s Bakery: 7,000 sf
- Retail including Spa: 26,920 sf
- High-Turn-over Sit-Down Restaurant: 13,100 sf
- Super Market: 14,500 sf
- Multi-family (mid-rise) Residential: 127 Units
- Student Housing: 18 Units
- Vacation Villas (Resorts): 41 Units
- Event Hall or Banquet Hall: 22,000 sf
- Hotel: 175 Rooms

The development proposes two site driveways at the following locations:

- Site Driveway 1: Full-access (Southern) driveway on Harmony Road
- Site Driveway 2: Full-access (Northern) driveway on Harmony Road

A site plan is included in Figure 5.



**HELMS FARM CAMPUS**  
**Master Plan Study 2.0**  
 2 June 2021

Silver Studio Architects  
 Atlanta, GA



## 5.1 Trip Generation

Trip generation estimates for the project were based on the rates and equations published in the 10<sup>th</sup> edition of the Institute of Transportation Engineers (ITE) Trip Generation report for the daily, AM and PM peak hours. This reference contains traffic volume count data collected at similar facilities nationwide. The calculated total trip generation for the proposed developments are shown in Table 4.

TABLE 4 – TRIP GENERATION								
Land Use	Size	AM Peak Hour			PM Peak Hour			24 Hour
		Enter	Exit	Total	Enter	Exit	Total	Two-way
<b>815 – Free-Standing Discount Store</b>	16,800 sf	14	6	20	40	41	81	892
	<b>Mixed-Use Reduction</b>	-3	-1	-2	-3	-3	-4	-7
	<b>Pass-by Trips (0%) 17%</b>	0	0	0	0	-6	-6	-12
<b>930 – Fast Casual Restaurant</b>	7,000 sf	10	4	14	54	45	99	2,206
	<b>Mixed-Use Reduction</b>	-9	-4	-4	-8	-8	-9	-17
	<b>Pass-by Trips (49%) 50%</b>	-66	-3	0	-3	-23	-18	-41
<b>820 – Shopping Center</b>	26,920 sf	15	10	25	49	54	103	1,016
	<b>Mixed-Use Reduction</b>	-3	-2	-2	-4	-4	-4	-8
	<b>Pass-by Trips (0%) 34%</b>	0	0	0	0	-15	-17	-32
<b>932 -High-Turnover (Sit-Down) Rest.</b>	13,100 sf	71	59	130	79	49	128	1,470
	<b>Mixed-Use Reduction</b>	-4	-2	-3	-5	-5	-6	-11
	<b>Pass-by Trips (0%) 43%</b>	0	0	0	0	-32	-18	-50
<b>850 – Supermarket</b>	14,500 sf	33	22	55	68	66	134	2,241
	<b>Mixed-Use Reduction</b>	-6	-4	-4	-8	-8	-9	-17
	<b>Pass-by Trips (0%) 36%</b>	0	0	0	0	-22	-21	-43
<b>550 - University/Colleges</b>	50 Students	6	2	8	2	6	8	78
	<b>Mixed-Use Reduction</b>	-2	-2	0	-2	-1	-1	-2
<b>221- Multifamily Housing (Mid-Rise)</b>	127 Units	11	32	43	34	22	56	690
	<b>Mixed-Use Reduction</b>	-6	-3	-3	-6	-7	-6	-13
<b>225 - Off-Campus Student Apartment</b>	18 Beds	3	4	7	3	4	7	57
	<b>Mixed-Use Reduction</b>	-1	0	0	0	-1	-1	-2
<b>260 - Recreational Homes</b>	41 Rooms	6	3	9	4	7	11	142
	<b>Mixed-Use Reduction</b>	-1	-1	-1	-2	-2	-1	-3
<b>495 - Recreational Community Center</b>	22,000 sf	26	13	39	24	27	51	634
	<b>Mixed-Use Reduction</b>	-6	-2	-2	-4	-6	-5	-11
<b>310 –Hotel</b>	175 Rooms	48	34	82	53	52	105	1,549
	<b>Mixed-Use Reduction</b>	-14	-6	-7	-13	-16	-13	-29
<b>Total Trips (without Reductions)</b>		<b>243</b>	<b>190</b>	<b>433</b>	<b>410</b>	<b>373</b>	<b>783</b>	<b>10,975</b>
<b>New External Trips (with Reductions)</b>		<b>213</b>	<b>162</b>	<b>375</b>	<b>251</b>	<b>234</b>	<b>485</b>	<b>7,382</b>

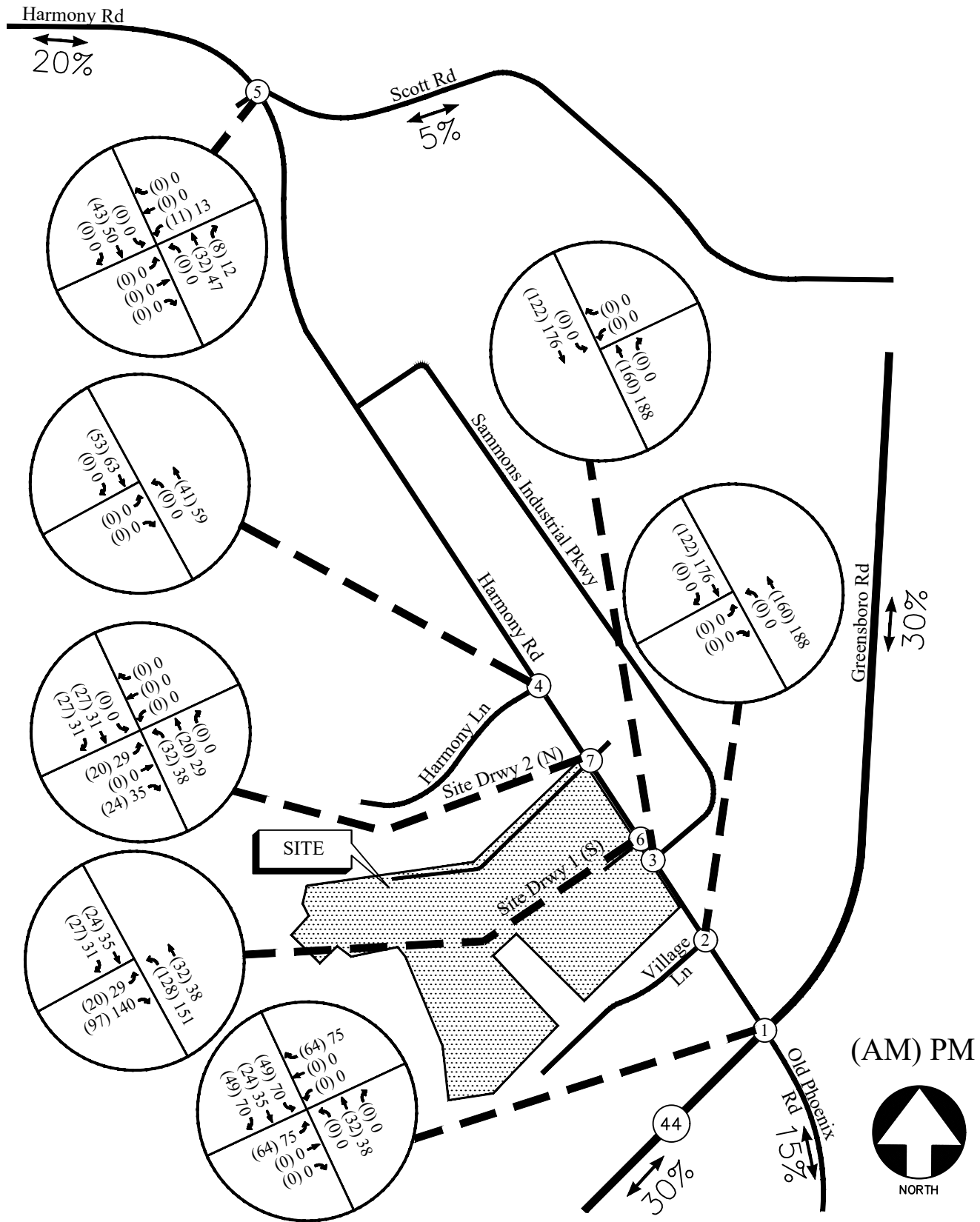
Daily pass-by reduction estimated to be ten times the PM pass-by volume.



The trip generation was based on the following ITE Land Uses: 221 – Multifamily Housing (Mid-Rise), 225 – Off-Campus Student Apartment, 260 – Recreational Homes, 310 – Hotel, 495 - Recreational Community Center, 550 - University/Colleges, 815 - Free-Standing Discount Store, 820 – Shopping center, 850 – Supermarket, 932 - High-Turnover (Sit-Down) Restaurant and 930 – Fast Casual Restaurant. Due to the nature of the development, pass-by and mixed-use reductions have been applied per ITE standards.

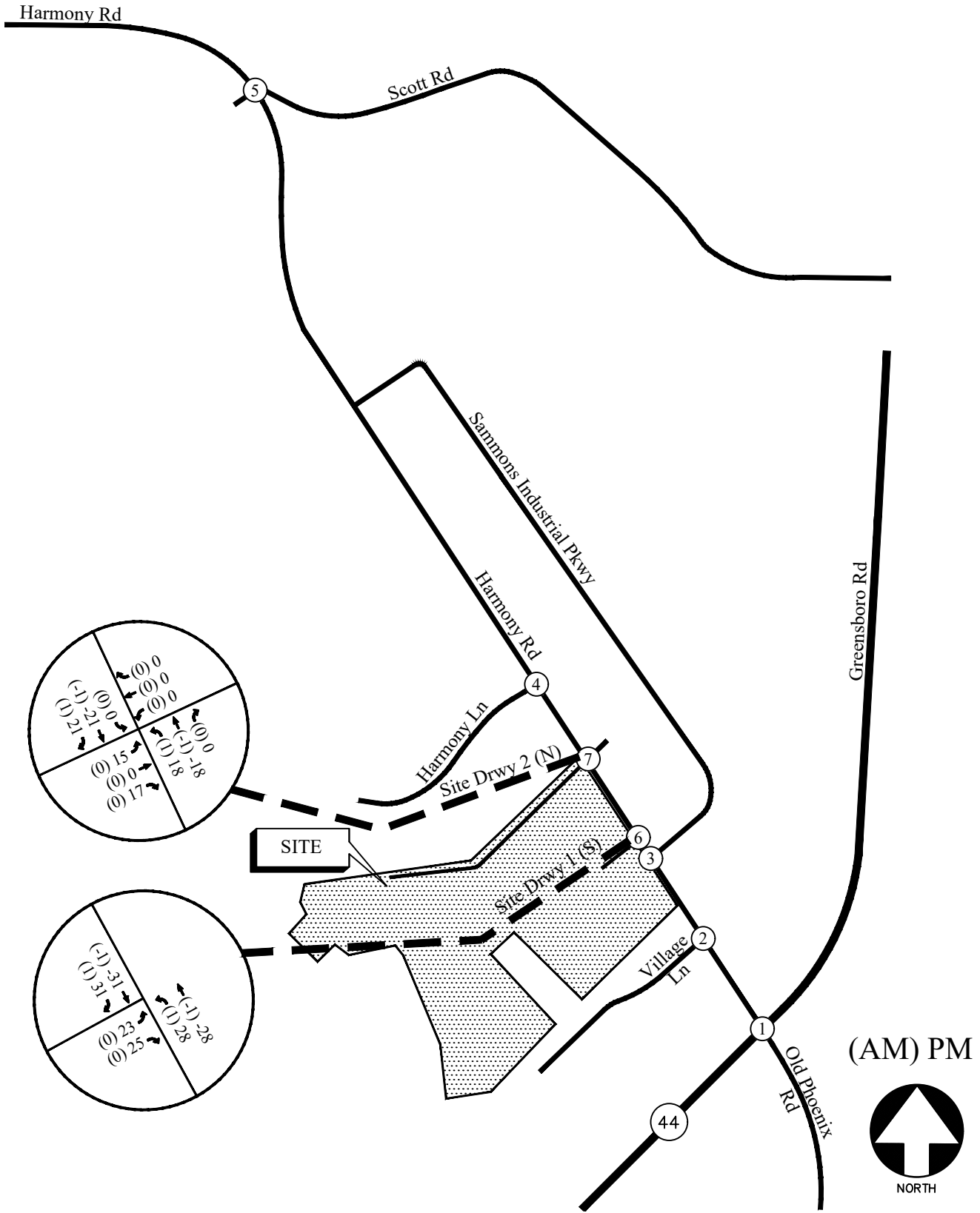
### **5.2 Trip Distribution**

The trip distribution describes how traffic arrives and departs from the site. An overall trip distribution was developed for the site based on a review of GDOT ADT volumes and the locations of major roadways and highways that will serve the development. The site-generated peak hour traffic volumes, shown in Table 4, were assigned to the study area intersections based on this distribution. The outer-leg distribution and AM and PM peak hour new traffic generated by the site are shown in Figure 6. Pass-by volumes have also been distributed based on existing travel patterns and are shown in Figure 7.



TRIP DISTRIBUTION AND SITE-GENERATED WEEKDAY PEAK HOUR VOLUMES

FIGURE 6 A&R Engineering Inc.



SITE PEAK HOUR PASS-BY VOLUMES

FIGURE 7

A&R Engineering Inc.

## 6.0 FUTURE 2022 TRAFFIC ANALYSIS

The future 2025 traffic operations are analyzed for the “Build” and “No-Build” conditions. This provides a basis of reference for determining both the contribution of the site to overall traffic conditions and the additional improvements needed to provide sufficient site access and capacity for passing traffic. Note that survey and construction drawings would be needed to verify the feasibility and extent of additional right-of-way required for any recommended improvements.

Improvements that are identified as “System Improvements” address deficiencies that are found within the existing road network prior to any impacts from the proposed development’s added traffic. Improvements that are identified as “Site Mitigation Improvements” address further impacts that are a result of the proposed development’s added traffic.

### 6.1 Future “No-Build” Conditions

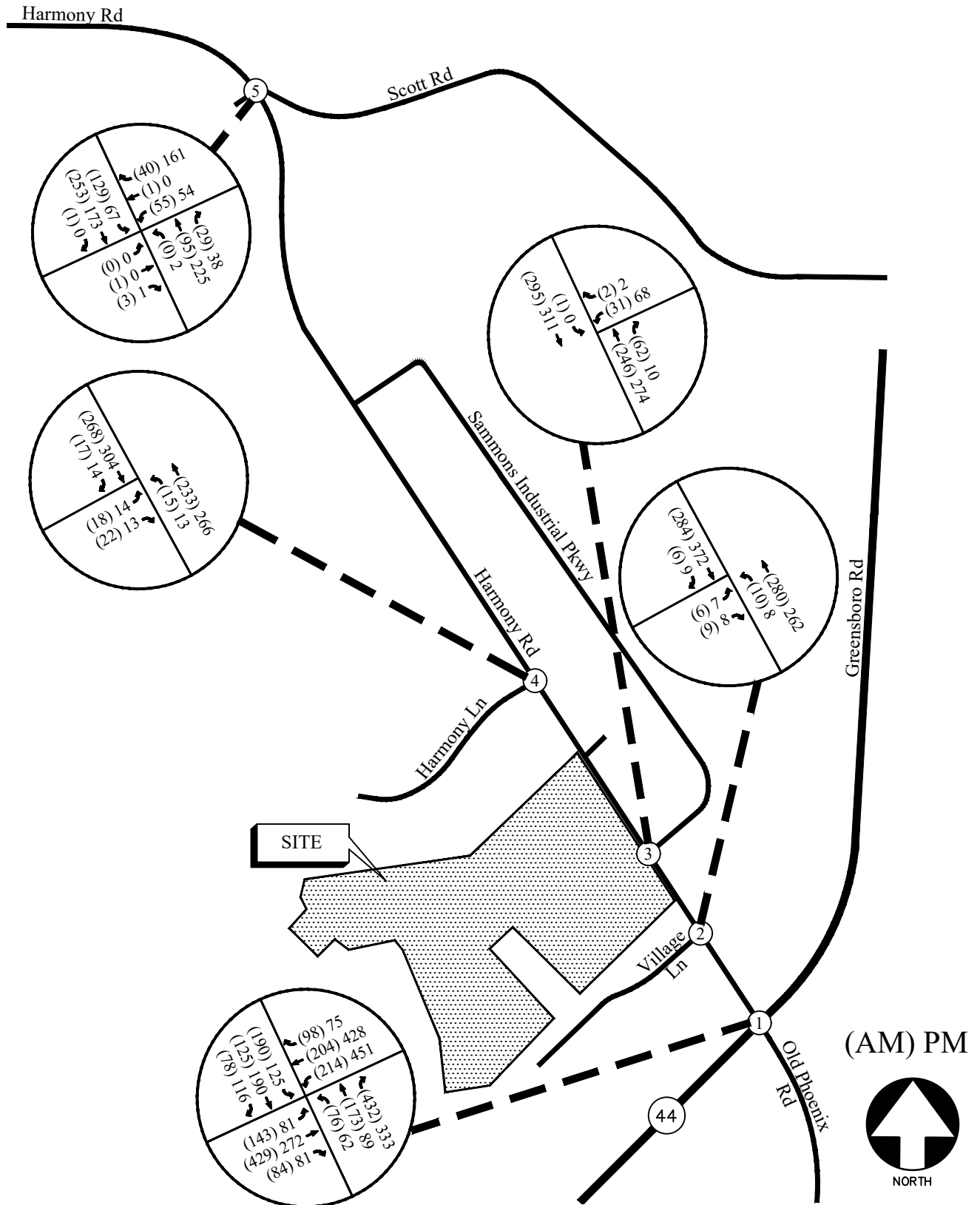
The “No-Build” (or background) conditions provide an assessment of how traffic will operate in the study horizon year without the study site being developed as proposed, with projected increases in through traffic volumes due to normal annual growth. The Future “No-Build” volumes consist of the adjusted existing traffic volumes (Figure 3) plus increases for annual growth of through traffic.

#### 6.1.1 Annual Traffic Growth

In order to evaluate future traffic operations in this area, a projection of normal traffic growth was applied to the existing volumes. The Georgia Department of Transportation recorded average daily traffic volumes at several locations in the vicinity of the site. Reviewing the growth over the last three years revealed growth of approximately 2.5% in the area. This growth factor was applied to the existing traffic volumes between collector and arterial roadways in order to estimate the future year traffic volumes prior to the addition of site-generated traffic. The resulting Future “No-Build” volumes on the roadway are shown in Figure 8.

### Future “Build” Conditions

The “Build” or development conditions include the estimated background traffic from the “No-Build” conditions plus the added traffic from the proposed development. In order to evaluate future traffic operations in this area, the additional traffic volumes from the site (Figure 6) and pass-by volumes (Figure 7) were added to base traffic volumes (Figure 8) to calculate the future traffic volumes after the construction of the development. These total future traffic volumes are shown in Figure 9.

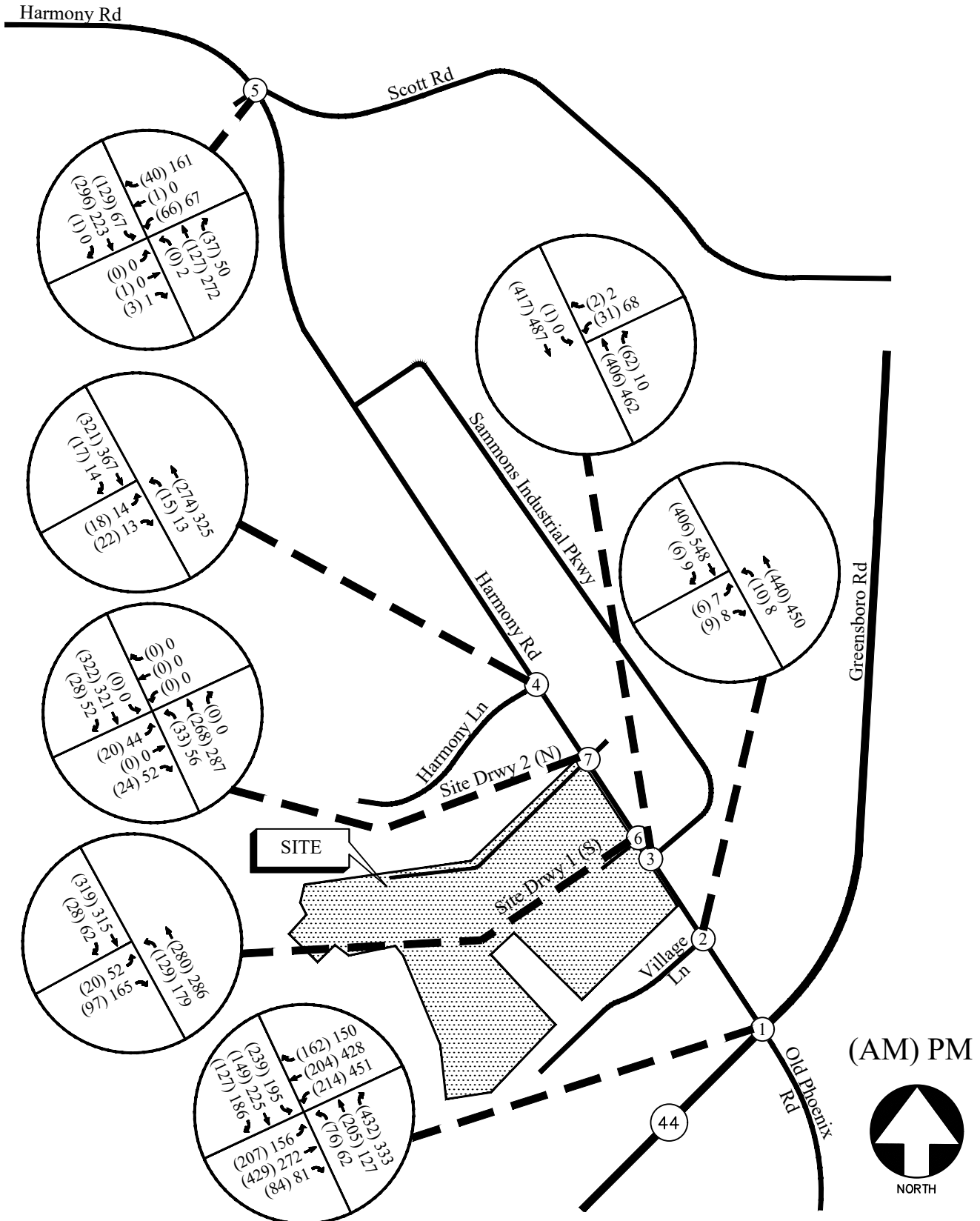


FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 8

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FUTURE (BUILD) WEEKDAY PEAK HOUR VOLUMES

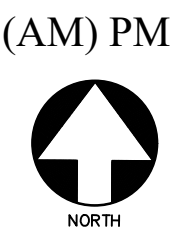


FIGURE 9

A&R Engineering Inc.

**6.1.2 Auxiliary Lane Analysis**

Included below are analyses for left-turn lanes and deceleration lanes for all site driveways per GDOT standards. The analyses below are based off the “trip distribution”. According to the trip distribution, the total site generated trips is 10,975 and the mixed-use reduction is 1,814. Therefore, the 24-hour two-way volume the site is 9,161 vehicles.

**6.1.3 Left Turn Lane Analysis**

For two lane roadways with AADT’s less than 6,000 vehicles and a posted speed limit of 45 mph, the daily site generated left-turn threshold to warrant a left-turn lane is 250 left-turning vehicles. The projected left-turn volumes per day for each driveway is included below.

TABLE 5 - GDOT REQUIREMENTS FOR LEFT TURN LANES				
Intersection	Left- turn traffic (% entering)	Left-turn Volume (vehicle/day)	Roadway Speed/ # lanes / ADT	GDOT Threshold (vehicle/day)
Harmony Road @ Site Driveway 1 (S)	60%	<b>2,748</b> (Total trips – mixed use) ÷ 2 × 0.60 = (10,975 – 1,814) ÷ 2 × 0.60 = 2,748	45 mph / 2-lane/ <6,000	250
Harmony Road @ Site Driveway 2 (N)	15%	<b>687</b> (Total trips – mixed use) ÷ 2 × 0.15 = (10,975 – 1,814) ÷ 2 × 0.15 = 687	45 mph / 2-lane/ <6,000	250

Since the projected number of left-turning vehicles at Site Driveway 1 and Site Driveway 2 exceed the threshold of 250 left turning vehicles, a left-turn lane is warranted at both site driveways per GDOT standards.

### 6.1.4 Deceleration Turn Lane Analysis

For two lane roadways with AADT's less than 6,000 vehicles and a posted speed limit of 45 mph, the daily site generated right-turn threshold to warrant a deceleration lane is 150 right turning vehicles. The projected right-turn volumes per day for each driveway is included in Table 6.

TABLE 6 - GDOT REQUIREMENTS FOR DECELERATION LANES				
Intersection	Right-turn traffic (% total entering)	Right-turn Volume (vehicle/day)	Roadway Speed/ # lanes / ADT	GDOT Threshold (vehicle/day)
Harmony Road @ Site Driveway 1 (S)	12.5%	<b>573</b> (Total trips – mixed use) ÷ 2 × 0.125 = (10,975 – 1,814) ÷ 2 × 0.125 = 573	45 mph / 2-lane/ <6,000	150
Harmony Road @ Site Driveway 2 (N)	12.5%	<b>573</b> (Total trips – mixed use) ÷ 2 × 0.125 = (10,975 – 1,814) ÷ 2 × 0.125 = 573	45 mph / 2-lane/ <6,000	150

Since the projected number of right turning vehicles at Site Driveway 1 and Site Driveway 2 exceed the threshold of 150 right turning vehicles, a deceleration lane is warranted at both site driveways per GDOT standards.

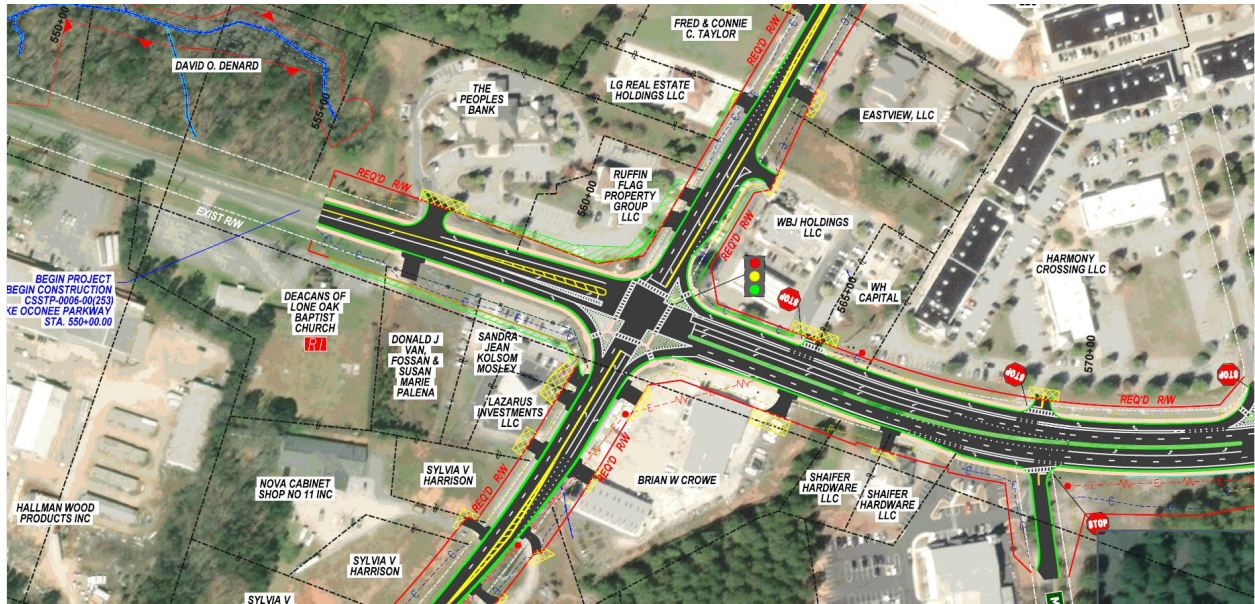
## 6.2 Future Traffic Conditions

The future 2025 “No-Build” and “Build” traffic operations were analyzed using the volumes in Figure 8 and Figure 9, respectively, and the results are shown in Table 7.

TABLE 7 – FUTURE INTERSECTION OPERATIONS					
Intersection		Future Condition: LOS (Delay)			
		NO-BUILD		BUILD	
		AM Peak	PM Peak	AM Peak	PM Peak
1	<b><u>SR 44 (Greensboro Road) @ Harmony Road</u></b>	<b><u>E (62.5)</u></b>	<b><u>D (41.0)</u></b>	<b><u>E (75.4)</u></b>	<b><u>D (50.0)</u></b>
	-Eastbound Approach	D (47.4)	D (39.2)	E (64.7)	D (44.6)
	-Westbound Approach	D (35.9)	C (23.7)	E (67.2)	D (36.1)
	-Northbound Approach	F (102.9)	F (80.8)	F (110.6)	F (91.7)
	-Southbound Approach	D (42.9)	D (32.7)	D (46.5)	D (38.0)
2	<b><u>Harmony Road @ Village Lane</u></b>				
	-Eastbound Approach	B (11.7)	B (13.1)	B (14.4)	C (18.5)
	-Northbound Left	A (8.0)	A (8.3)	A (8.3)	A (8.9)
3	<b><u>Harmony Road @ Sammons Industrial Parkway (South)</u></b>				
	-Westbound Approach	C (15.2)	C (16.1)	C (21.8)	D (29.9)
	-Southbound Left	A (8.0)	A (0.0)	A (8.4)	A (0.0)
4	<b><u>Harmony Road @ Harmony Lane</u></b>				
	-Eastbound Approach	B (11.7)	B (12.6)	B (12.6)	B (14.0)
	-Northbound Left	A (7.9)	A (8.1)	A (8.1)	A (8.3)
5	<b><u>Harmony Road @ Scott Road / Private Driveway</u></b>				
	-Eastbound Approach	B (11.4)	A (9.2)	B (12.0)	A (9.5)
	-Westbound Approach	C (15.4)	B (14.5)	C (18.5)	C (18.0)
	-Northbound Left	A (0.0)	A (7.6)	A (0.0)	A (7.7)
	-Southbound Left	A (7.8)	A (8.0)	A (7.9)	A (8.2)
6	<b><u>Harmony Road @ Site Driveway 1 (S)</u></b>				
	-Eastbound Approach	-	-	B (12.6)	C (15.8)
	-Northbound Left			A (8.5)	A (8.8)
7	<b><u>Harmony Road @ Site Driveway 2 (N) / Private Driveway</u></b>				
	-Eastbound Approach			B (13.1)	C (14.6)
	-Westbound Approach	-	-	A (0.0)	A (0.0)
	-Northbound Left			A (8.2)	A (8.3)
	-Southbound Left			A (0.0)	A (0.0)

The results of future ‘No-Build’ traffic operations analysis indicate that the intersection of SR 44 (Greensboro Road) and Harmony Road will operate at level-of-service “E” in AM peak hour and the northbound approach of Old Phoenix Road will operate at level-of-service “F”. This approach has a large volume of right-turn movement but does not have a dedicated right-turn lane causing this approach experience longer delays. As part of GDOT’s SR 44 Widening project PI 0006253 this intersection will be improved by constructing a northbound right-turn lane on Old Phoenix Road and dual westbound left-turn lanes on SR 44 and an additional southbound through lane on Harmony Road. With these improvements, the intersection should operate at satisfactory levels-of service. Since the project

completion dates are not available, we did not include these 'System Improvements' in our analysis. All other intersections will be operating at satisfactory levels-of-service in both peak hours. GDOT's intersection improvement plan is shown below and in Figure 10. In future "Build" conditions all intersections will be operating at similar levels-of-service as in "No-Build" conditions. Recommendations for future traffic control and lane geometry is shown in Figure 11.



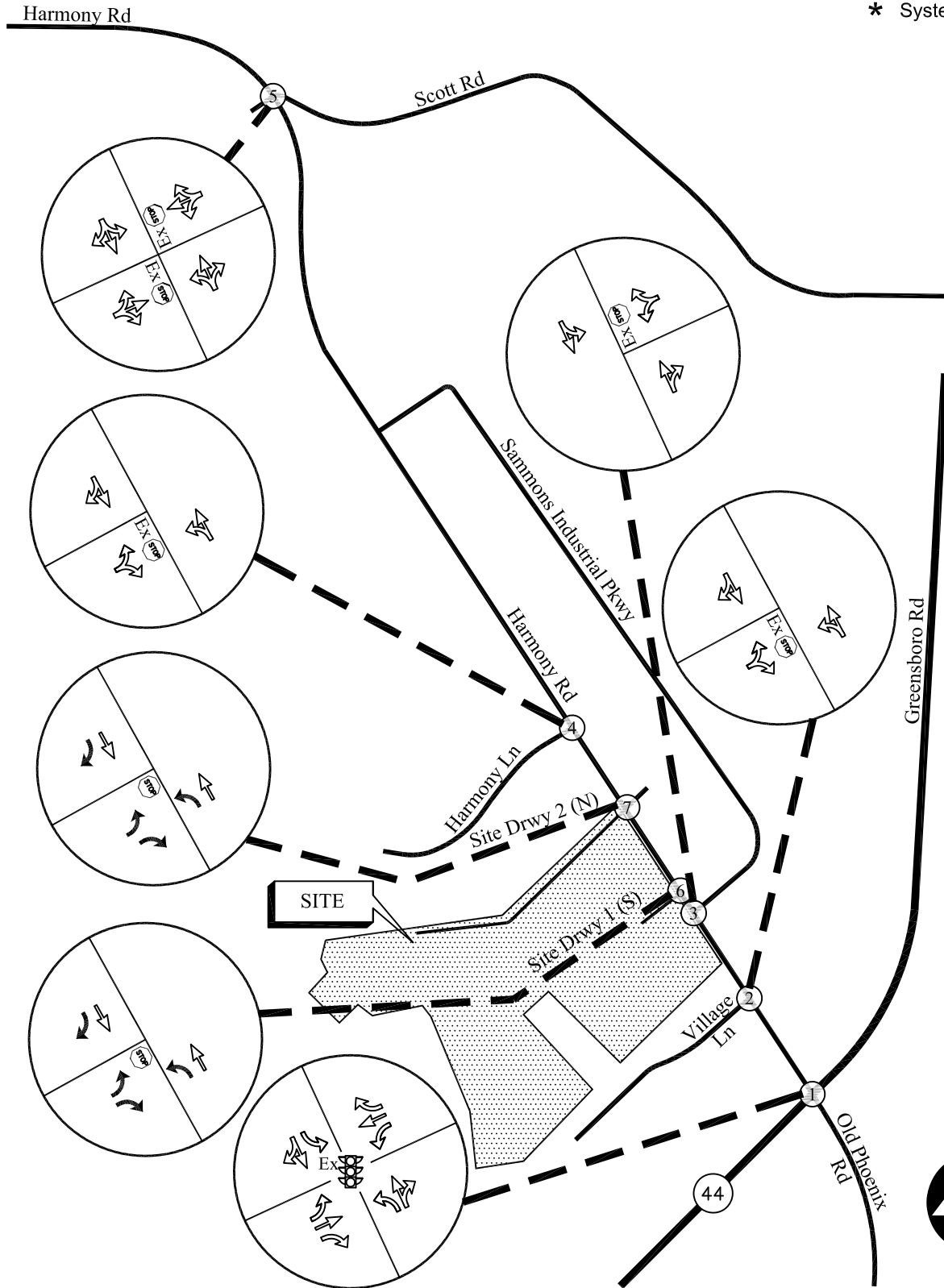




LEGEND

- Ex Existing Signed Approach
- Proposed Signed Approach
- Ex Existing Lane Geometry
- Proposed Lane Geometry
- Ex Existing Traffic Signal
- Proposed Traffic Signal
- \* System Improvement

344 ch



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 11

A&R Engineering Inc.

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study is to determine the traffic impact that will result from the proposed Helms Farm Campus development that will be located on Harmony Road across from Sammons Industrial Parkway (South), north of Village Lane in City of Eatonton, Putnam County, Georgia. The traffic analysis evaluates the current operations compared to the future conditions with the traffic generated by the development. The development will consist of:

- Goodwill Store: 16,800 sf
- Helms College: 50 Students
- Edgar’s Bakery: 7,000 sf
- Retail including Spa: 26,920 sf
- High-Turn-over Sit-Down Restaurant: 13,100 sf
- Super Market: 14,500 sf
- Multi-family (mid-rise) Residential: 127 Units
- Student Housing: 18 Units
- Vacation Villas (Resorts): 41 Units
- Event Hall or Banquet Hall: 22,000 sf
- Hotel: 175 Rooms

The development proposes three site accesses at the following locations:

- Site Driveway 1: Full-access (Southern) driveway on Harmony Road
- Site Driveway 2: Full-access (Northern) driveway on Harmony Road

Both AM and PM peak hours have been analyzed in this study. This study includes the evaluation of traffic operations at the intersections of:

- Harmony Road at SR 44 (Greensboro Road) / Old Phoenix Road
- Harmony Road at Village Lane
- Harmony Road at Sammons Industrial Parkway (South)
- Harmony Road at Harmony Lane
- Harmony Road at Scott Road / Private Driveway
- Harmony Road at Site Driveway 1 (Southern)
- Harmony Road at Site Driveway 2 (Northern) / Private Driveway

The analysis included the evaluation of “Existing” operations and future operations for “No-Build” and “Build” conditions, both of which account for increases in annual growth of through traffic. The results of the analysis are listed below:

**Recommendations for Site Access Configuration**

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

- Site Driveway 1: Full-access (Southern) driveway on Harmony Road
  - The driveway to have two entering and two exiting lanes. The eastbound (driveway) approach to have separate left and right-turn lane for exiting traffic.
  - The intersection to be unsignalized with a STOP sign on the eastbound approach.
  - A northbound left-turn lane to be constructed on Harmony Road for entering traffic.
  - A southbound deceleration lane to be constructed on Harmony Road for entering traffic.
  
- Site Driveway 2: Full-access (Northern) driveway on Harmony Road
  - The driveway to have one entering and two exiting lanes. The eastbound (driveway) approach to have separate left and right-turn lane for exiting traffic.
  - The intersection to be unsignalized with a STOP sign on the eastbound approach.
  - A northbound left-turn lane to be constructed on Harmony Road for entering traffic.
  - A southbound deceleration lane is recommended to be constructed on Harmony Road for entering traffic.

The proposed Helms Farm Campus development will be completed in different phases as determined by the market conditions and demand. The projected phasing of the entire development is given below. This study was evaluated to determine improvements for the full build out in year 2025.

LAND USE	UNITS	PHASE 1 2023	PHASE 2 2024	PHASE 3 Early 2025	PHASE 4 Late 2025
Goodwill Store	16,800 sf	16,800 sf	-	-	-
Helms College	50 Students	25 Students	25 Students	-	-
Edgar’s Bakery	7,000 sf	7,000 sf	-	-	-
Retail	26,920 sf	3400	11,200 sf	12,320 sf	-
Sit-Down Restaurant	13,100 sf	-	2,500 sf	2,500 sf	8,100 sf
Super Market	14,500 sf	-	-	14,500 sf	-
Multi-family Apartments	127 Units	-	42	64	21
Student Housing	18 Units	-	6	9	3
Vacation Villas	41 Units	-	-	20 Units	21 Units
Event Hall/Banquet	22,000 sf	-	-	-	22,000 sf
Hotel	175 Rooms	-	-	175 Rooms	-

The most traffic impact from the project occurs during the AM and PM peak hours. The traffic volumes generated by the project during these peak hours in different directions is shown graphically in figure 6 on page 16. As shown on this figure, a maximum of 29 vehicles are projected to turn left at any of the two driveways. The northern driveway has only 35 vehicles turning right while the southern driveway will have 140 vehicles turning right. These turning movements amount to 1 or 2 vehicles per minute. This magnitude of traffic volumes will not create any significant impact on traffic on Harmony Road especially the development will construct left-turn lanes and deceleration lanes per our recommendations.

The results of future traffic operations analysis indicate that after addition of the new traffic generated by the proposed Helms Farm Campus development, all study intersections will continue to operate at similar levels-of-service as before. The existing delays at Old Phoenix Road at SR 44 (Greensboro Road) intersection will improve after the proposed SR 44 Widening project (PI 0006253) 10 is completed by GDOT.



# Appendix

- Existing Intersection Traffic Counts .....
- Linear Regression of Daily Traffic.....
- Existing Intersection Analysis.....
- Future “No-Build” Intersection Analysis .....
- Future “Build” Intersection Analysis.....
- Traffic Volume Worksheets .....

# EXISTING INTERSECTION TRAFFIC COUNTS

# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Village Lane  
7-9 am | 4-6 pm

File Name : 20210171  
Site Code : 20210171  
Start Date : 5/27/2021  
Page No : 1

**Groups Printed- Cars,Buses & Trucks**

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Village Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	52	0	53	0	38	1	39	2	0	1	3	0	0	0	0	95
07:15 AM	2	48	0	50	0	50	2	52	1	0	1	2	0	0	0	0	104
07:30 AM	2	58	0	60	0	53	1	54	1	0	2	3	0	0	0	0	117
07:45 AM	1	75	0	76	0	61	1	62	1	0	2	3	0	0	0	0	141
Total	6	233	0	239	0	202	5	207	5	0	6	11	0	0	0	0	457
08:00 AM	2	54	0	56	0	59	2	61	2	0	1	3	0	0	0	0	120
08:15 AM	3	46	0	49	0	63	1	64	1	0	2	3	0	0	0	0	116
08:30 AM	1	42	0	43	0	56	0	56	2	0	1	3	0	0	0	0	102
08:45 AM	1	47	0	48	0	59	2	61	1	0	3	4	0	0	0	0	113
Total	7	189	0	196	0	237	5	242	6	0	7	13	0	0	0	0	451
*** BREAK ***																	
04:00 PM	1	66	0	67	0	68	1	69	2	0	2	4	0	0	0	0	140
04:15 PM	1	46	0	47	0	55	2	57	1	0	2	3	0	0	0	0	107
04:30 PM	2	57	0	59	0	60	1	61	3	0	1	4	0	0	0	0	124
04:45 PM	1	55	0	56	0	64	1	65	1	0	1	2	0	0	0	0	123
Total	5	224	0	229	0	247	5	252	7	0	6	13	0	0	0	0	494
05:00 PM	3	69	0	72	0	100	2	102	2	0	2	4	0	0	0	0	178
05:15 PM	2	63	0	65	0	91	3	94	1	0	1	2	0	0	0	0	161
05:30 PM	1	48	0	49	0	79	2	81	2	0	3	5	0	0	0	0	135
05:45 PM	1	47	0	48	0	64	1	65	3	0	2	5	0	0	0	0	118
Total	7	227	0	234	0	334	8	342	8	0	8	16	0	0	0	0	592
Grand Total	25	873	0	898	0	1020	23	1043	26	0	27	53	0	0	0	0	1994
Apprch %	2.8	97.2	0		0	97.8	2.2		49.1	0	50.9		0	0	0		
Total %	1.3	43.8	0	45	0	51.2	1.2	52.3	1.3	0	1.4	2.7	0	0	0	0	

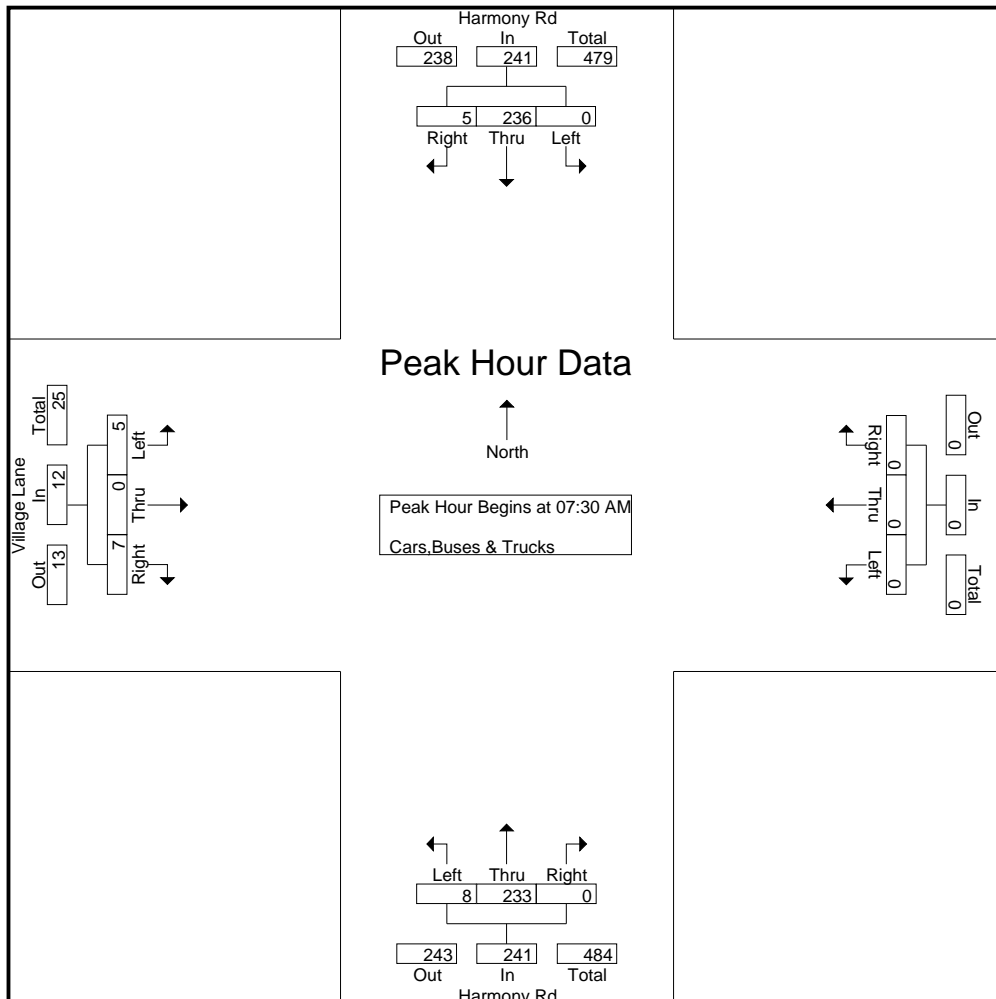
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Village Lane  
7-9 am | 4-6 pm

File Name : 20210171  
Site Code : 20210171  
Start Date : 5/27/2021  
Page No : 2

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Village Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	58	0	60	0	53	1	54	1	0	2	3	0	0	0	0	117
07:45 AM	1	75	0	76	0	61	1	62	1	0	2	3	0	0	0	0	141
08:00 AM	2	54	0	56	0	59	2	61	2	0	1	3	0	0	0	0	120
08:15 AM	3	46	0	49	0	63	1	64	1	0	2	3	0	0	0	0	116
Total Volume	8	233	0	241	0	236	5	241	5	0	7	12	0	0	0	0	494
% App. Total	3.3	96.7	0		0	97.9	2.1		41.7	0	58.3		0	0	0		
PHF	.667	.777	.000	.793	.000	.937	.625	.941	.625	.000	.875	1.00	.000	.000	.000	.000	.876



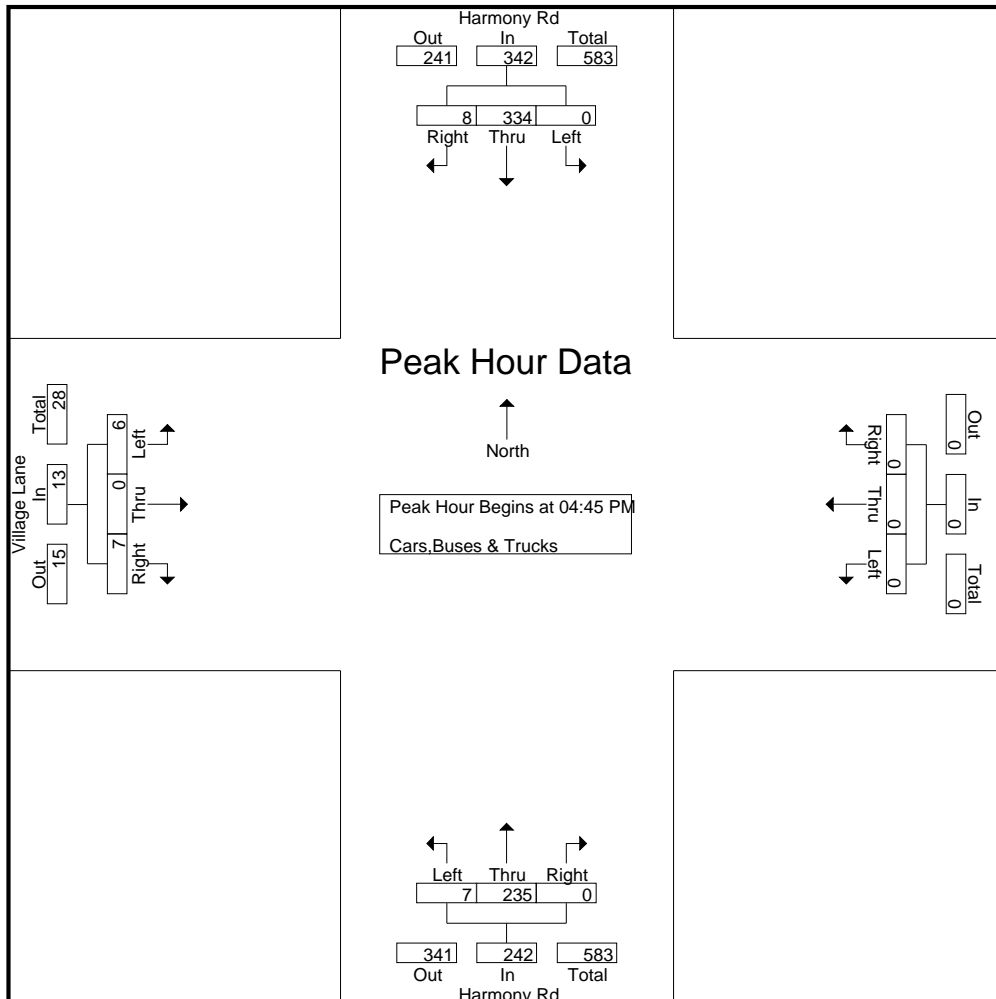
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2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Village Lane  
7-9 am | 4-6 pm

File Name : 20210171  
Site Code : 20210171  
Start Date : 5/27/2021  
Page No : 3

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Village Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	55	0	56	0	64	1	65	1	0	1	2	0	0	0	0	123
05:00 PM	3	69	0	72	0	100	2	102	2	0	2	4	0	0	0	0	178
05:15 PM	2	63	0	65	0	91	3	94	1	0	1	2	0	0	0	0	161
05:30 PM	1	48	0	49	0	79	2	81	2	0	3	5	0	0	0	0	135
Total Volume	7	235	0	242	0	334	8	342	6	0	7	13	0	0	0	0	597
% App. Total	2.9	97.1	0		0	97.7	2.3		46.2	0	53.8		0	0	0		
PHF	.583	.851	.000	.840	.000	.835	.667	.838	.750	.000	.583	.650	.000	.000	.000	.000	.838





# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ SR 44 Greens boro Rd  
7-9 am | 4-6 pm

File Name : 20210170  
Site Code : 20210170  
Start Date : 5/27/2021  
Page No : 1

Groups Printed- Cars, Buses - Trucks

Start Time	Old Phonix Rd Northbound				Harmony Rd Southbound				Eastbound				SR 44 ( Greensboro Rd ) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	5	36	40	81	19	14	10	43	29	51	9	89	30	36	12	78	291
07:15 AM	18	32	69	119	27	15	16	58	25	68	13	106	37	42	10	89	372
07:30 AM	12	37	68	117	44	22	15	81	28	81	20	129	42	45	10	97	424
07:45 AM	16	43	99	158	34	21	16	71	47	95	12	154	35	41	20	96	479
Total	51	148	276	475	124	72	57	253	129	295	54	478	144	164	52	360	1566
08:00 AM	12	33	85	130	34	16	15	65	28	108	28	164	37	52	19	108	467
08:15 AM	13	30	97	140	54	36	17	107	28	76	16	120	53	36	27	116	483
08:30 AM	22	38	78	138	36	31	17	84	16	78	14	108	53	41	16	110	440
08:45 AM	6	33	85	124	45	28	16	89	15	70	15	100	64	42	19	125	438
Total	53	134	345	532	169	111	65	345	87	332	73	492	207	171	81	459	1828
*** BREAK ***																	
04:00 PM	10	36	69	115	40	45	17	102	14	51	12	77	90	77	20	187	481
04:15 PM	7	26	65	98	33	35	19	87	21	57	17	95	91	71	18	180	460
04:30 PM	14	20	64	98	31	27	22	80	18	46	17	81	95	77	25	197	456
04:45 PM	18	17	67	102	32	27	24	83	0	0	0	0	82	84	29	195	380
Total	49	99	265	413	136	134	82	352	53	154	46	253	358	309	92	759	1777
05:00 PM	23	15	78	116	40	53	29	122	22	56	17	95	95	87	26	208	541
05:15 PM	0	19	77	96	32	47	26	105	19	57	18	94	99	91	17	207	502
05:30 PM	16	24	76	116	21	38	25	84	17	68	22	107	112	105	13	230	537
05:45 PM	16	22	68	106	19	32	24	75	14	63	15	92	99	101	11	211	484
Total	55	80	299	434	112	170	104	386	72	244	72	388	405	384	67	856	2064
Grand Total	208	461	1185	1854	541	487	308	1336	341	1025	245	1611	1114	1028	292	2434	7235
Apprch %	11.2	24.9	63.9		40.5	36.5	23.1		21.2	63.6	15.2		45.8	42.2	12		
Total %	2.9	6.4	16.4	25.6	7.5	6.7	4.3	18.5	4.7	14.2	3.4	22.3	15.4	14.2	4	33.6	
Cars, Buses	200	444	1159	1803	496	459	297	1252	331	948	237	1516	1087	986	261	2334	6905
% Cars, Buses	96.2	96.3	97.8	97.2	91.7	94.3	96.4	93.7	97.1	92.5	96.7	94.1	97.6	95.9	89.4	95.9	95.4
Trucks	8	17	26	51	45	28	11	84	10	77	8	95	27	42	31	100	330
% Trucks	3.8	3.7	2.2	2.8	8.3	5.7	3.6	6.3	2.9	7.5	3.3	5.9	2.4	4.1	10.6	4.1	4.6

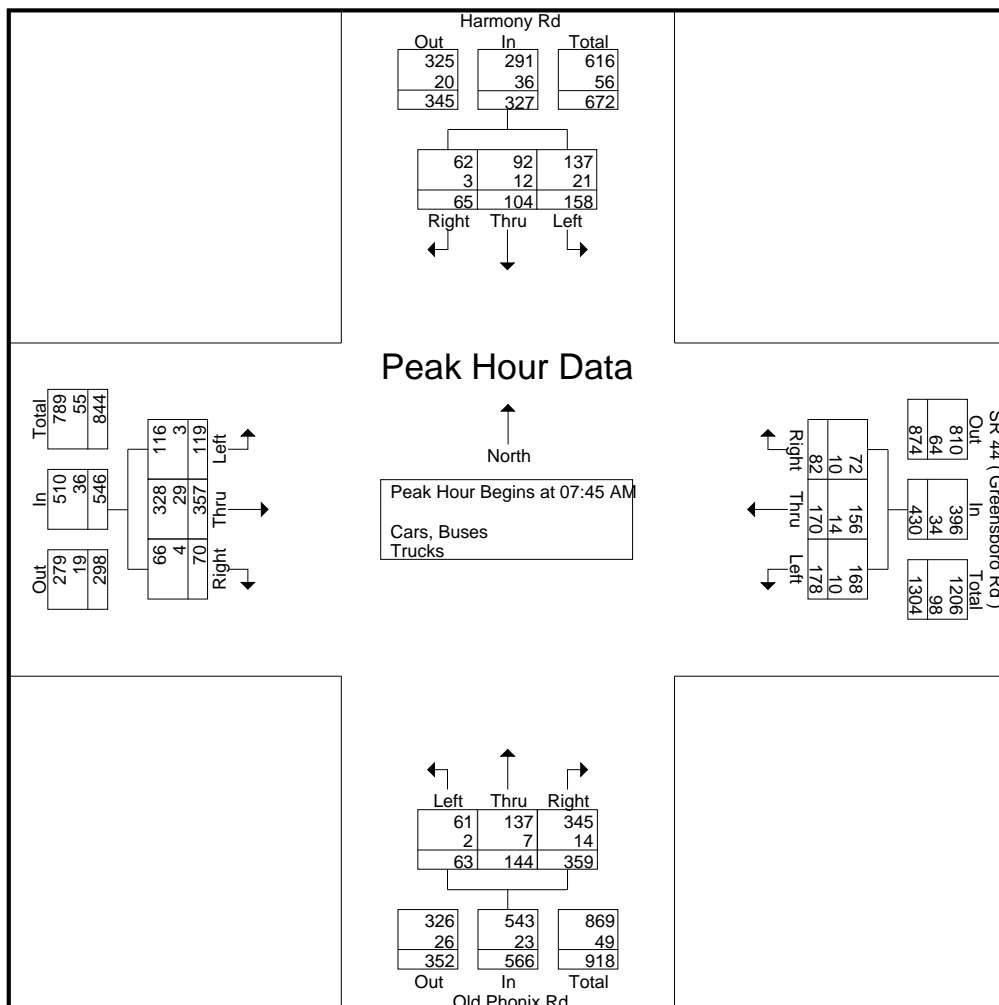
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Start Date : 5/27/2021  
Page No : 2

Start Time	Old Phonix Rd Northbound				Harmony Rd Southbound				Eastbound				SR 44 ( Greensboro Rd ) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	16	43	99	158	34	21	16	71	47	95	12	154	35	41	20	96	479
08:00 AM	12	33	85	130	34	16	15	65	28	108	28	164	37	52	19	108	467
08:15 AM	13	30	97	140	54	36	17	107	28	76	16	120	53	36	27	116	483
08:30 AM	22	38	78	138	36	31	17	84	16	78	14	108	53	41	16	110	440
Total Volume	63	144	359	566	158	104	65	327	119	357	70	546	178	170	82	430	1869
% App. Total	11.1	25.4	63.4		48.3	31.8	19.9		21.8	65.4	12.8		41.4	39.5	19.1		
PHF	.716	.837	.907	.896	.731	.722	.956	.764	.633	.826	.625	.832	.840	.817	.759	.927	.967
Cars, Buses	61	137	345	543	137	92	62	291	116	328	66	510	168	156	72	396	1740
% Cars, Buses	96.8	95.1	96.1	95.9	86.7	88.5	95.4	89.0	97.5	91.9	94.3	93.4	94.4	91.8	87.8	92.1	93.1
Trucks	2	7	14	23	21	12	3	36	3	29	4	36	10	14	10	34	129
% Trucks	3.2	4.9	3.9	4.1	13.3	11.5	4.6	11.0	2.5	8.1	5.7	6.6	5.6	8.2	12.2	7.9	6.9



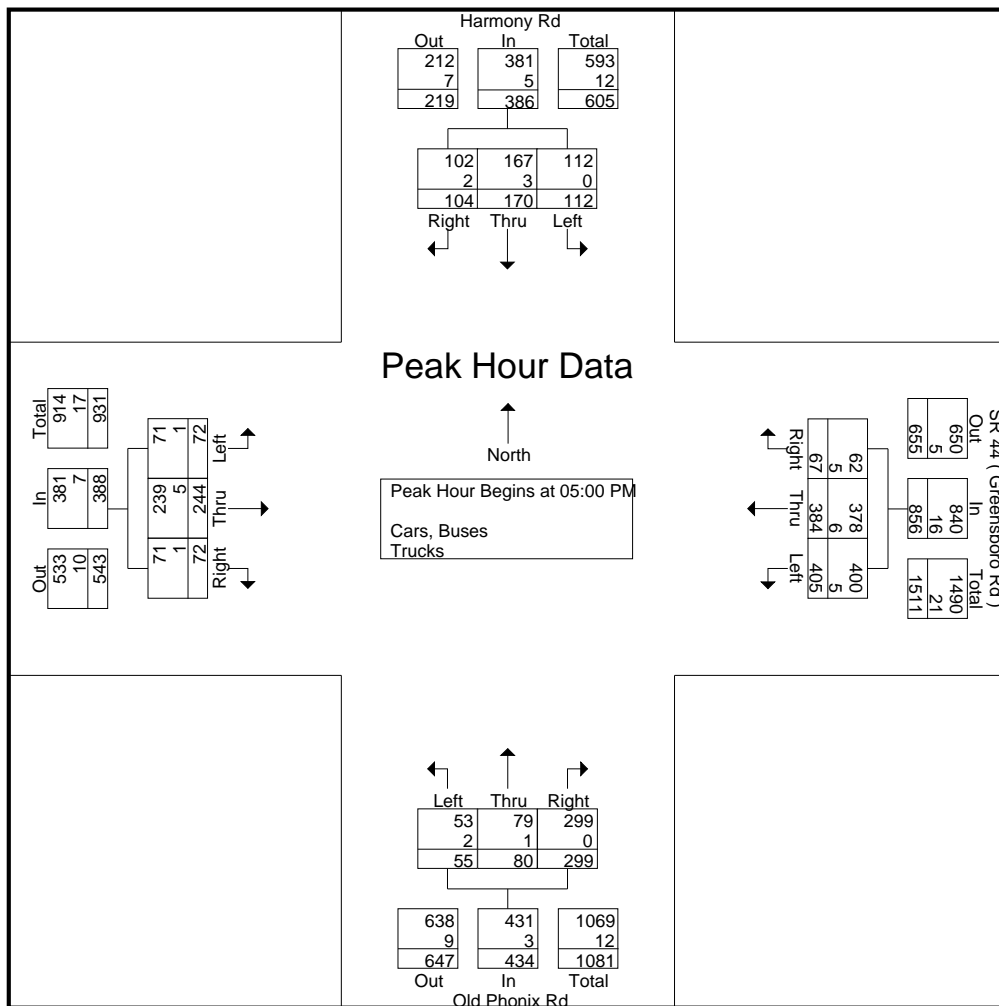
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ SR 44 Greens boro Rd  
7-9 am | 4-6 pm

File Name : 20210170  
Site Code : 20210170  
Start Date : 5/27/2021  
Page No : 3

Start Time	Old Phonix Rd Northbound				Harmony Rd Southbound				Eastbound				SR 44 ( Greensboro Rd ) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	23	15	78	116	40	53	29	122	22	56	17	95	95	87	26	208	541
05:15 PM	0	19	77	96	32	47	26	105	19	57	18	94	99	91	17	207	502
05:30 PM	16	24	76	116	21	38	25	84	17	68	22	107	112	105	13	230	537
05:45 PM	16	22	68	106	19	32	24	75	14	63	15	92	99	101	11	211	484
Total Volume	55	80	299	434	112	170	104	386	72	244	72	388	405	384	67	856	2064
% App. Total	12.7	18.4	68.9		29	44	26.9		18.6	62.9	18.6		47.3	44.9	7.8		
PHF	.598	.833	.958	.935	.700	.802	.897	.791	.818	.897	.818	.907	.904	.914	.644	.930	.954
Cars, Buses	53	79	299	431	112	167	102	381	71	239	71	381	400	378	62	840	2033
% Cars, Buses	96.4	98.8	100	99.3	100	98.2	98.1	98.7	98.6	98.0	98.6	98.2	98.8	98.4	92.5	98.1	98.5
Trucks	2	1	0	3	0	3	2	5	1	5	1	7	5	6	5	16	31
% Trucks	3.6	1.3	0	0.7	0	1.8	1.9	1.3	1.4	2.0	1.4	1.8	1.2	1.6	7.5	1.9	1.5



# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Sammons Ind Pkwy (South)  
7-9 am | 4-6 pm

File Name : 20210169  
Site Code : 20210169  
Start Date : 5/27/2021  
Page No : 1

Groups Printed- Cars, Buses - Trucks

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Eastbound				Sammons Ind Pkwy (South) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	44	10	54	1	38	0	39	0	0	0	0	5	0	0	5	98
07:15 AM	0	42	8	50	4	51	0	55	0	0	0	0	7	0	1	8	113
07:30 AM	0	45	18	63	0	52	0	52	0	0	0	0	6	0	0	6	121
07:45 AM	0	61	17	78	0	62	0	62	0	0	0	0	5	0	0	5	145
<b>Total</b>	<b>0</b>	<b>192</b>	<b>53</b>	<b>245</b>	<b>5</b>	<b>203</b>	<b>0</b>	<b>208</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>1</b>	<b>24</b>	<b>477</b>
08:00 AM	0	51	8	59	0	62	0	62	0	0	0	0	7	0	2	9	130
08:15 AM	0	48	8	56	1	69	0	70	0	0	0	0	8	0	0	8	134
08:30 AM	0	38	10	48	0	55	0	55	0	0	0	0	9	0	0	9	112
08:45 AM	0	47	6	53	1	59	0	60	0	0	0	0	7	0	0	7	120
<b>Total</b>	<b>0</b>	<b>184</b>	<b>32</b>	<b>216</b>	<b>2</b>	<b>245</b>	<b>0</b>	<b>247</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>2</b>	<b>33</b>	<b>496</b>
*** BREAK ***																	
04:00 PM	0	67	5	72	0	64	0	64	0	0	0	0	7	0	1	8	144
04:15 PM	0	50	3	53	0	55	0	55	0	0	0	0	3	0	1	4	112
04:30 PM	0	59	3	62	0	61	0	61	0	0	0	0	2	0	0	2	125
04:45 PM	0	57	7	64	0	59	0	59	0	0	0	0	8	0	1	9	132
<b>Total</b>	<b>0</b>	<b>233</b>	<b>18</b>	<b>251</b>	<b>0</b>	<b>239</b>	<b>0</b>	<b>239</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>3</b>	<b>23</b>	<b>513</b>
05:00 PM	0	76	0	76	0	78	0	78	0	0	0	0	23	0	0	23	177
05:15 PM	0	66	1	67	0	81	0	81	0	0	0	0	11	0	1	12	160
05:30 PM	0	47	1	48	0	61	0	61	0	0	0	0	19	0	0	19	128
05:45 PM	0	46	4	50	0	62	0	62	0	0	0	0	4	0	0	4	116
<b>Total</b>	<b>0</b>	<b>235</b>	<b>6</b>	<b>241</b>	<b>0</b>	<b>282</b>	<b>0</b>	<b>282</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>57</b>	<b>0</b>	<b>1</b>	<b>58</b>	<b>581</b>
<b>Grand Total</b>	<b>0</b>	<b>844</b>	<b>109</b>	<b>953</b>	<b>7</b>	<b>969</b>	<b>0</b>	<b>976</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>131</b>	<b>0</b>	<b>7</b>	<b>138</b>	<b>2067</b>
Apprch %	0	88.6	11.4		0.7	99.3	0		0	0	0		94.9	0	5.1		
Total %	0	40.8	5.3	46.1	0.3	46.9	0	47.2	0	0	0	0	6.3	0	0.3	6.7	
Cars, Buses	0	798	75	873	6	923	0	929	0	0	0	0	97	0	5	102	1904
% Cars, Buses	0	94.5	68.8	91.6	85.7	95.3	0	95.2	0	0	0	0	74	0	71.4	73.9	92.1
Trucks	0	46	34	80	1	46	0	47	0	0	0	0	34	0	2	36	163
% Trucks	0	5.5	31.2	8.4	14.3	4.7	0	4.8	0	0	0	0	26	0	28.6	26.1	7.9

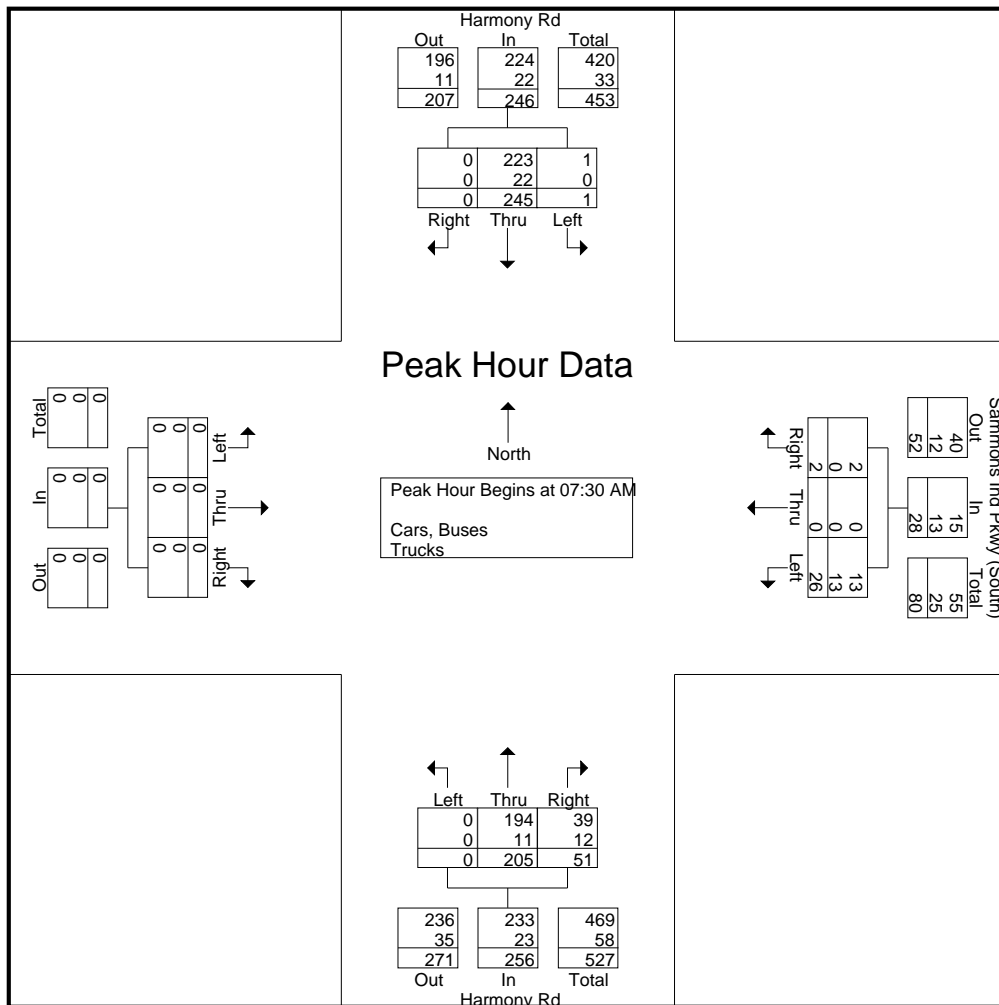
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Sammons Ind Pkwy (South)  
7-9 am | 4-6 pm

File Name : 20210169  
Site Code : 20210169  
Start Date : 5/27/2021  
Page No : 2

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Eastbound				Sammons Ind Pkwy (South) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	45	18	63	0	52	0	52	0	0	0	0	6	0	0	6	121
07:45 AM	0	61	17	78	0	62	0	62	0	0	0	0	5	0	0	5	145
08:00 AM	0	51	8	59	0	62	0	62	0	0	0	0	7	0	2	9	130
08:15 AM	0	48	8	56	1	69	0	70	0	0	0	0	8	0	0	8	134
Total Volume	0	205	51	256	1	245	0	246	0	0	0	0	26	0	2	28	530
% App. Total	0	80.1	19.9		0.4	99.6	0		0	0	0		92.9	0	7.1		
PHF	.000	.840	.708	.821	.250	.888	.000	.879	.000	.000	.000	.000	.813	.000	.250	.778	.914
Cars, Buses	0	194	39	233	1	223	0	224	0	0	0	0	13	0	2	15	472
% Cars, Buses	0	94.6	76.5	91.0	100	91.0	0	91.1	0	0	0	0	50.0	0	100	53.6	89.1
Trucks	0	11	12	23	0	22	0	22	0	0	0	0	13	0	0	13	58
% Trucks	0	5.4	23.5	9.0	0	9.0	0	8.9	0	0	0	0	50.0	0	0	46.4	10.9





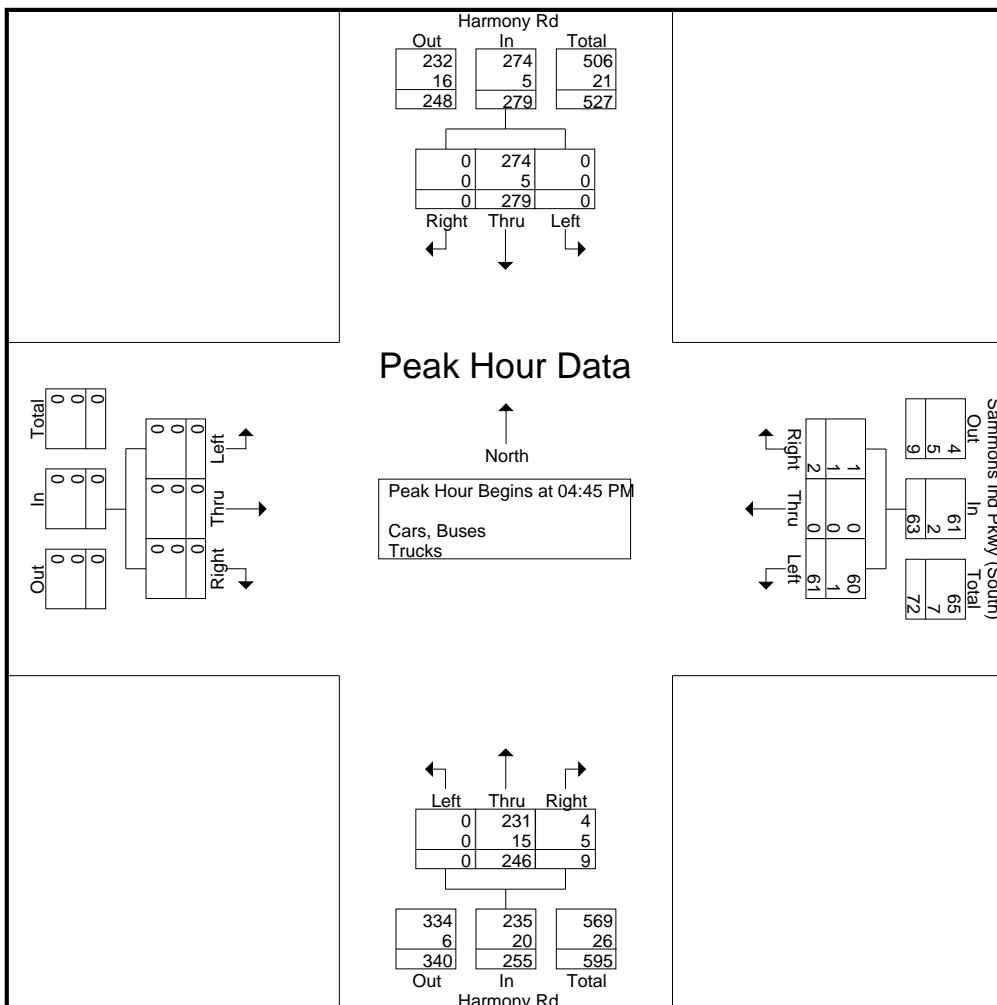
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Sammons Ind Pkwy (South)  
7-9 am | 4-6 pm

File Name : 20210169  
Site Code : 20210169  
Start Date : 5/27/2021  
Page No : 3

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Eastbound				Sammons Ind Pkwy (South) Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	57	7	64	0	59	0	59	0	0	0	0	8	0	1	9	132
05:00 PM	0	76	0	76	0	78	0	78	0	0	0	0	23	0	0	23	177
05:15 PM	0	66	1	67	0	81	0	81	0	0	0	0	11	0	1	12	160
05:30 PM	0	47	1	48	0	61	0	61	0	0	0	0	19	0	0	19	128
Total Volume	0	246	9	255	0	279	0	279	0	0	0	0	61	0	2	63	597
% App. Total	0	96.5	3.5		0	100	0		0	0	0		96.8	0	3.2		
PHF	.000	.809	.321	.839	.000	.861	.000	.861	.000	.000	.000	.000	.663	.000	.500	.685	.843
Cars, Buses	0	231	4	235	0	274	0	274	0	0	0	0	60	0	1	61	570
% Cars, Buses	0	93.9	44.4	92.2	0	98.2	0	98.2	0	0	0	0	98.4	0	50.0	96.8	95.5
Trucks	0	15	5	20	0	5	0	5	0	0	0	0	1	0	1	2	27
% Trucks	0	6.1	55.6	7.8	0	1.8	0	1.8	0	0	0	0	1.6	0	50.0	3.2	4.5



# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC DATA  
Harmony Rd @ Scott Rd  
7 am - 7 pm

File Name : 20210168  
Site Code : 20210168  
Start Date : 5/27/2021  
Page No : 1

**Groups Printed- Cars,Buses & Trucks**

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Private Drwy Eastbound				Scott Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	17	3	20	9	24	0	33	0	0	1	1	3	0	6	9	63
07:15 AM	0	18	4	22	27	48	0	75	0	1	1	2	10	0	7	17	116
07:30 AM	0	23	5	28	23	59	0	82	0	0	2	2	10	1	4	15	127
07:45 AM	0	20	7	27	35	58	0	93	0	0	0	0	10	0	11	21	141
<b>Total</b>	0	78	19	97	94	189	0	283	0	1	4	5	33	1	28	62	447
08:00 AM	0	18	8	26	22	45	1	68	0	0	0	0	16	0	11	27	121
08:15 AM	0	25	5	30	17	48	0	65	0	0	1	1	7	0	9	16	112
08:30 AM	0	14	4	18	16	30	0	46	0	0	0	0	6	0	11	17	81
08:45 AM	0	19	9	28	18	53	0	71	0	0	0	0	6	0	14	20	119
<b>Total</b>	0	76	26	102	73	176	1	250	0	0	1	1	35	0	45	80	433
09:00 AM	1	27	4	32	27	44	0	71	1	0	1	2	14	0	5	19	124
09:15 AM	0	19	9	28	21	30	0	51	0	0	0	0	5	0	10	15	94
09:30 AM	0	24	7	31	14	26	0	40	0	0	0	0	8	0	6	14	85
09:45 AM	0	24	8	32	16	40	0	56	0	0	0	0	12	0	12	24	112
<b>Total</b>	1	94	28	123	78	140	0	218	1	0	1	2	39	0	33	72	415
10:00 AM	0	19	9	28	13	25	0	38	0	0	0	0	7	0	12	19	85
10:15 AM	0	22	8	30	14	38	0	52	0	0	0	0	9	0	18	27	109
10:30 AM	0	28	4	32	12	29	0	41	0	0	0	0	6	0	18	24	97
10:45 AM	0	22	12	34	22	33	0	55	0	0	0	0	7	0	10	17	106
<b>Total</b>	0	91	33	124	61	125	0	186	0	0	0	0	29	0	58	87	397
11:00 AM	0	18	7	25	16	22	0	38	0	0	0	0	4	0	18	22	85
11:15 AM	0	20	6	26	17	34	0	51	0	0	0	0	7	0	17	24	101
11:30 AM	0	34	12	46	16	40	0	56	0	0	1	1	7	0	14	21	124
11:45 AM	0	31	8	39	14	28	0	42	0	0	0	0	11	0	17	28	109
<b>Total</b>	0	103	33	136	63	124	0	187	0	0	1	1	29	0	66	95	419
12:00 PM	1	22	10	33	14	20	0	34	0	0	0	0	8	0	18	26	93
12:15 PM	0	27	4	31	12	31	0	43	0	0	0	0	7	0	17	24	98
12:30 PM	0	19	9	28	20	34	0	54	0	0	1	1	14	0	20	34	117
12:45 PM	0	27	5	32	14	37	0	51	0	0	0	0	14	0	18	32	115
<b>Total</b>	1	95	28	124	60	122	0	182	0	0	1	1	43	0	73	116	423
01:00 PM	0	33	8	41	18	28	0	46	0	0	0	0	15	0	11	26	113
01:15 PM	0	29	5	34	16	31	0	47	0	0	0	0	6	0	14	20	101
01:30 PM	0	35	6	41	12	33	0	45	0	0	0	0	10	0	17	27	113
01:45 PM	0	18	11	29	13	31	0	44	0	0	0	0	11	0	11	22	95
<b>Total</b>	0	115	30	145	59	123	0	182	0	0	0	0	42	0	53	95	422
02:00 PM	0	32	7	39	8	23	0	31	0	0	0	0	9	0	18	27	97
02:15 PM	0	30	4	34	14	44	0	58	0	0	0	0	11	0	11	22	114
02:30 PM	1	19	8	28	16	30	0	46	0	0	0	0	6	0	19	25	99
02:45 PM	0	46	8	54	12	38	0	50	0	0	0	0	10	0	21	31	135
<b>Total</b>	1	127	27	155	50	135	0	185	0	0	0	0	36	0	69	105	445
03:00 PM	0	42	12	54	19	44	0	63	0	0	0	0	11	0	10	21	138
03:15 PM	0	26	11	37	15	51	0	66	0	0	0	0	10	0	19	29	132
03:30 PM	0	26	7	33	22	36	0	58	0	0	0	0	11	0	25	36	127
03:45 PM	0	32	11	43	18	51	0	69	0	0	0	0	6	0	23	29	141
<b>Total</b>	0	126	41	167	74	182	0	256	0	0	0	0	38	0	77	115	538
04:00 PM	0	28	9	37	12	31	0	43	0	0	0	0	6	0	20	26	106
04:15 PM	0	30	9	39	12	31	0	43	0	0	0	0	6	0	20	26	108

# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC DATA  
Harmony Rd @ Scott Rd  
7 am - 7 pm

File Name : 20210168  
Site Code : 20210168  
Start Date : 5/27/2021  
Page No : 2

**Groups Printed- Cars,Buses & Trucks**

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Private Drwy Eastbound				Scott Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	0	37	8	45	21	31	0	52	0	0	0	0	15	0	19	34	131
04:45 PM	1	44	7	52	19	37	0	56	0	0	1	1	10	0	30	40	149
Total	1	139	33	173	64	130	0	194	0	0	1	1	37	0	89	126	494
05:00 PM	1	61	6	68	10	35	0	45	0	0	0	0	18	0	29	47	160
05:15 PM	0	53	12	65	18	40	0	58	0	0	0	0	12	0	46	58	181
05:30 PM	0	44	9	53	13	43	0	56	0	0	0	0	9	0	40	49	158
05:45 PM	0	27	10	37	8	44	0	52	0	0	0	0	8	0	23	31	120
Total	1	185	37	223	49	162	0	211	0	0	0	0	47	0	138	185	619
06:00 PM	1	32	8	41	11	31	0	42	0	0	0	0	6	0	11	17	100
06:15 PM	0	37	4	41	17	30	0	47	0	0	0	0	9	0	22	31	119
06:30 PM	2	27	5	34	23	27	0	50	1	0	0	1	6	0	20	26	111
06:45 PM	2	15	2	19	6	31	0	37	0	0	0	0	4	0	11	15	71
Total	5	111	19	135	57	119	0	176	1	0	0	1	25	0	64	89	401
Grand Total	10	1340	354	1704	782	1727	1	2510	2	1	9	12	433	1	793	1227	5453
Apprch %	0.6	78.6	20.8		31.2	68.8	0		16.7	8.3	75		35.3	0.1	64.6		
Total %	0.2	24.6	6.5	31.2	14.3	31.7	0	46	0	0	0.2	0.2	7.9	0	14.5	22.5	

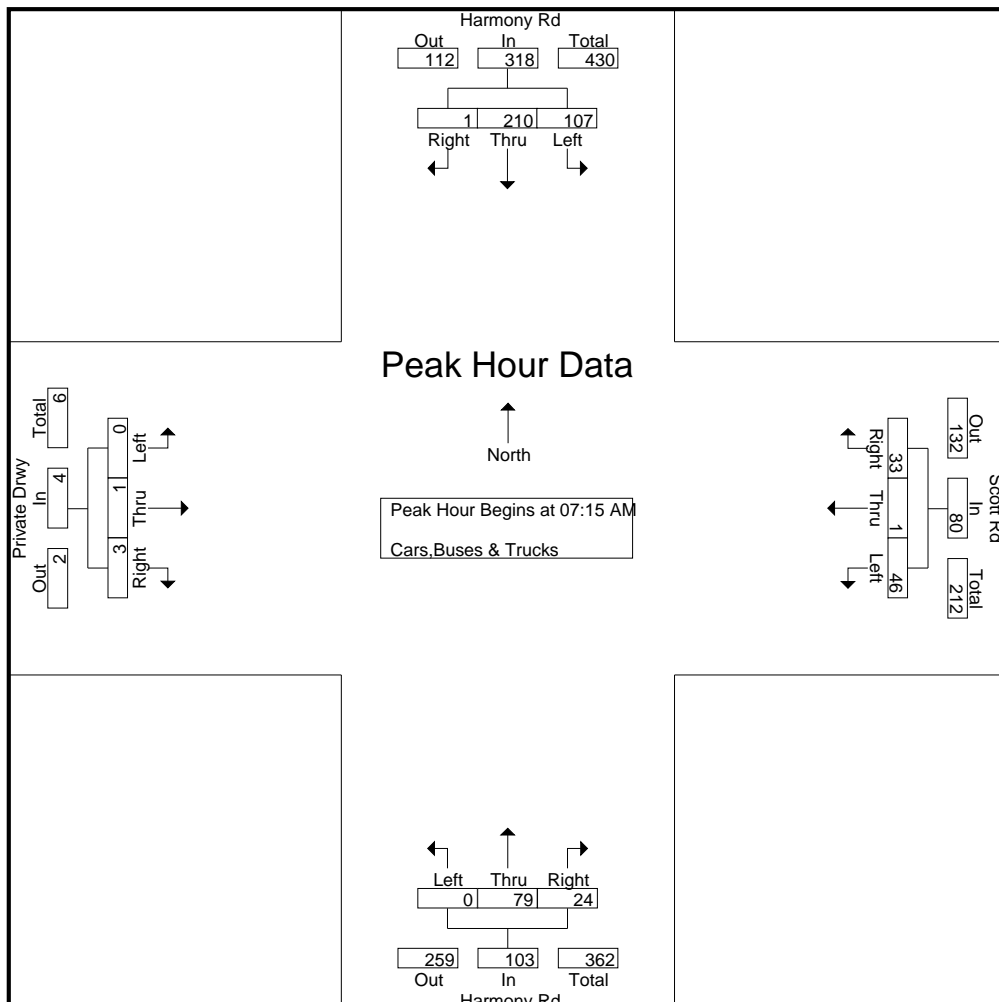
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC DATA  
Harmony Rd @ Scott Rd  
7 am - 7 pm

File Name : 20210168  
Site Code : 20210168  
Start Date : 5/27/2021  
Page No : 3

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Private Drwy Eastbound				Scott Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	18	4	22	27	48	0	75	0	1	1	2	10	0	7	17	116
07:30 AM	0	23	5	28	23	59	0	82	0	0	2	2	10	1	4	15	127
07:45 AM	0	20	7	27	35	58	0	93	0	0	0	0	10	0	11	21	141
08:00 AM	0	18	8	26	22	45	1	68	0	0	0	0	16	0	11	27	121
Total Volume	0	79	24	103	107	210	1	318	0	1	3	4	46	1	33	80	505
% App. Total	0	76.7	23.3		33.6	66	0.3		0	25	75		57.5	1.2	41.2		
PHF	.000	.859	.750	.920	.764	.890	.250	.855	.000	.250	.375	.500	.719	.250	.750	.741	.895



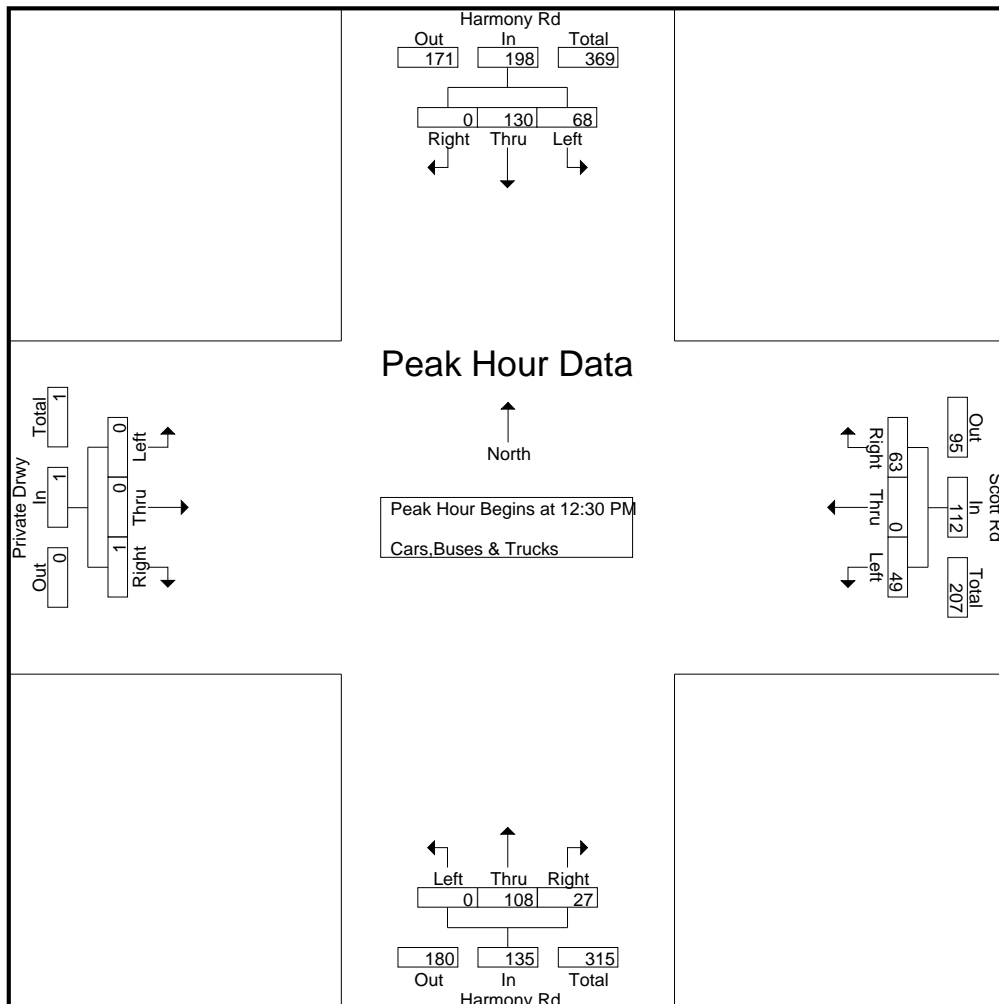
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC DATA  
Harmony Rd @ Scott Rd  
7 am - 7 pm

File Name : 20210168  
Site Code : 20210168  
Start Date : 5/27/2021  
Page No : 4

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Private Drwy Eastbound				Scott Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	19	9	28	20	34	0	54	0	0	1	1	14	0	20	34	117
12:45 PM	0	27	5	32	14	37	0	51	0	0	0	0	14	0	18	32	115
01:00 PM	0	33	8	41	18	28	0	46	0	0	0	0	15	0	11	26	113
01:15 PM	0	29	5	34	16	31	0	47	0	0	0	0	6	0	14	20	101
Total Volume	0	108	27	135	68	130	0	198	0	0	1	1	49	0	63	112	446
% App. Total	0	80	20		34.3	65.7	0		0	0	100		43.8	0	56.2		
PHF	.000	.818	.750	.823	.850	.878	.000	.917	.000	.000	.250	.250	.817	.000	.788	.824	.953



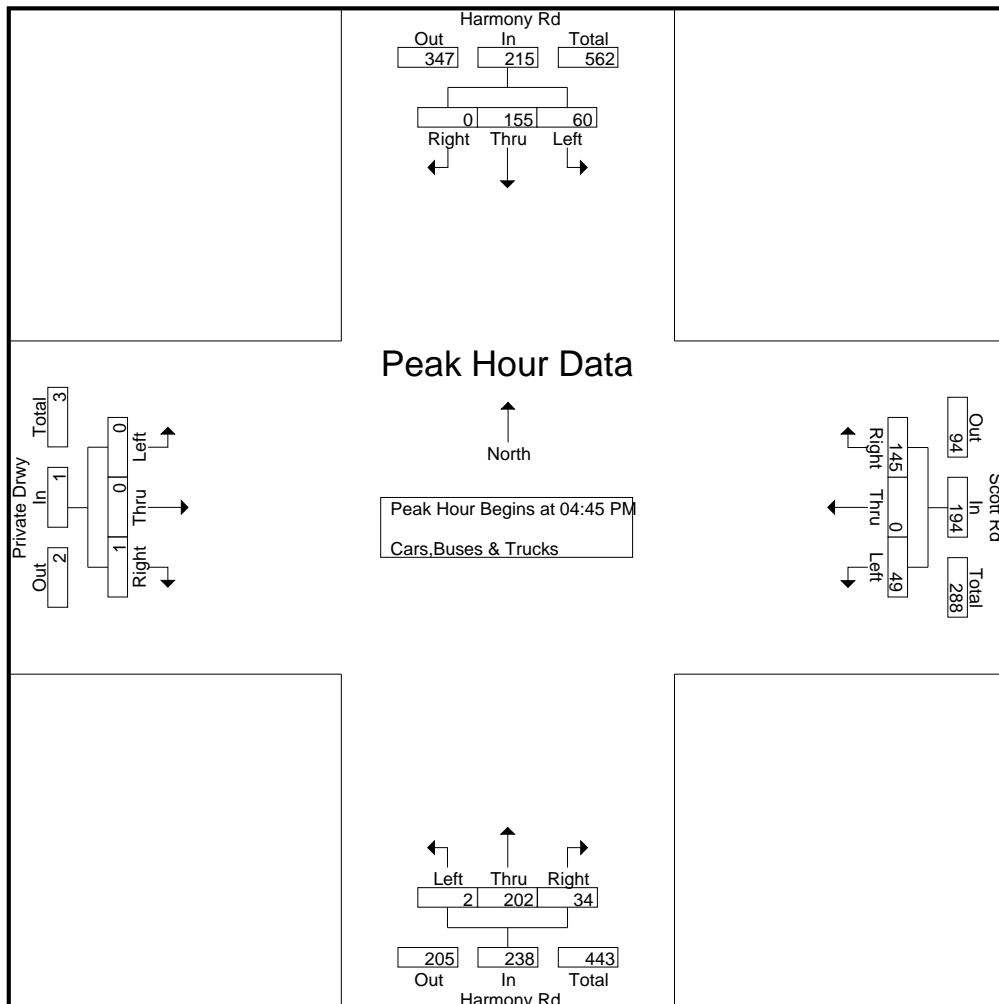
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC DATA  
Harmony Rd @ Scott Rd  
7 am - 7 pm

File Name : 20210168  
Site Code : 20210168  
Start Date : 5/27/2021  
Page No : 5

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Private Drwy Eastbound				Scott Rd Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	44	7	52	19	37	0	56	0	0	1	1	10	0	30	40	149
05:00 PM	1	61	6	68	10	35	0	45	0	0	0	0	18	0	29	47	160
05:15 PM	0	53	12	65	18	40	0	58	0	0	0	0	12	0	46	58	181
05:30 PM	0	44	9	53	13	43	0	56	0	0	0	0	9	0	40	49	158
Total Volume	2	202	34	238	60	155	0	215	0	0	1	1	49	0	145	194	648
% App. Total	0.8	84.9	14.3		27.9	72.1	0		0	0	100		25.3	0	74.7		
PHF	.500	.828	.708	.875	.789	.901	.000	.927	.000	.000	.250	.250	.681	.000	.788	.836	.895





# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Harmony Lane  
7-9 am | 4-6 pm

File Name : 20210172  
Site Code : 20210172  
Start Date : 5/27/2021  
Page No : 1

**Groups Printed- Cars,Buses & Trucks**

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Harmony Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	3	44	0	47	0	35	2	37	2	0	3	5	0	0	0	0	89
07:15 AM	4	41	0	45	0	46	3	49	3	0	5	8	0	0	0	0	102
07:30 AM	4	42	0	46	0	49	4	53	4	0	5	9	0	0	0	0	108
07:45 AM	1	60	0	61	0	60	2	62	4	0	4	8	0	0	0	0	131
Total	12	187	0	199	0	190	11	201	13	0	17	30	0	0	0	0	430
08:00 AM	4	48	0	52	0	55	3	58	4	0	5	9	0	0	0	0	119
08:15 AM	4	44	0	48	0	59	5	64	3	0	4	7	0	0	0	0	119
08:30 AM	2	38	0	40	0	54	3	57	5	0	4	9	0	0	0	0	106
08:45 AM	2	43	0	45	0	57	4	61	2	0	3	5	0	0	0	0	111
Total	12	173	0	185	0	225	15	240	14	0	16	30	0	0	0	0	455
*** BREAK ***																	
04:00 PM	4	63	0	67	0	64	4	68	3	0	5	8	0	0	0	0	143
04:15 PM	3	45	0	48	0	52	5	57	4	0	4	8	0	0	0	0	113
04:30 PM	2	55	0	57	0	58	3	61	4	0	3	7	0	0	0	0	125
04:45 PM	3	52	0	55	0	57	3	60	5	0	2	7	0	0	0	0	122
Total	12	215	0	227	0	231	15	246	16	0	14	30	0	0	0	0	503
05:00 PM	4	69	0	73	0	77	4	81	2	0	5	7	0	0	0	0	161
05:15 PM	3	63	0	66	0	80	3	83	2	0	2	4	0	0	0	0	153
05:30 PM	4	47	0	51	0	60	4	64	3	0	4	7	0	0	0	0	122
05:45 PM	4	44	0	48	0	60	5	65	4	0	4	8	0	0	0	0	121
Total	15	223	0	238	0	277	16	293	11	0	15	26	0	0	0	0	557
Grand Total	51	798	0	849	0	923	57	980	54	0	62	116	0	0	0	0	1945
Apprch %	6	94	0		0	94.2	5.8		46.6	0	53.4		0	0	0		
Total %	2.6	41	0	43.7	0	47.5	2.9	50.4	2.8	0	3.2	6	0	0	0	0	

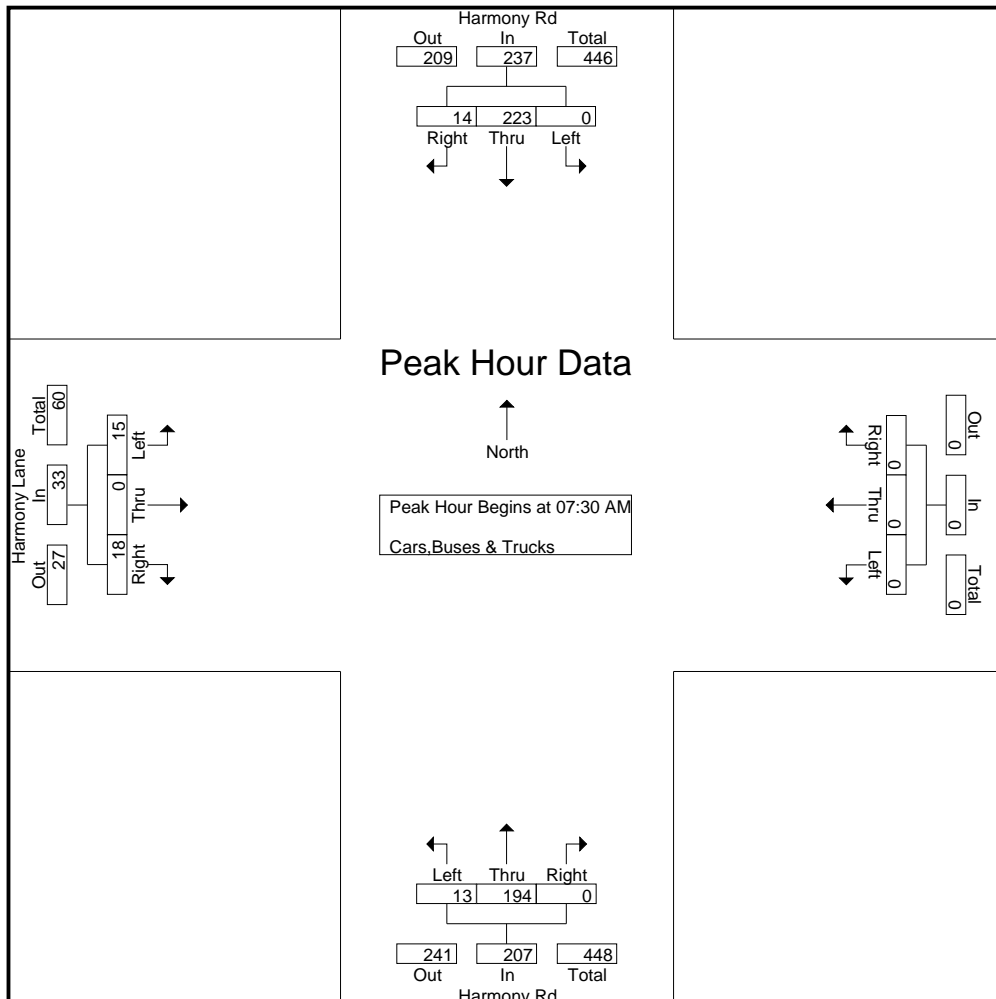
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Harmony Lane  
7-9 am | 4-6 pm

File Name : 20210172  
Site Code : 20210172  
Start Date : 5/27/2021  
Page No : 2

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Harmony Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	42	0	46	0	49	4	53	4	0	5	9	0	0	0	0	108
07:45 AM	1	60	0	61	0	60	2	62	4	0	4	8	0	0	0	0	131
08:00 AM	4	48	0	52	0	55	3	58	4	0	5	9	0	0	0	0	119
08:15 AM	4	44	0	48	0	59	5	64	3	0	4	7	0	0	0	0	119
Total Volume	13	194	0	207	0	223	14	237	15	0	18	33	0	0	0	0	477
% App. Total	6.3	93.7	0		0	94.1	5.9		45.5	0	54.5		0	0	0		
PHF	.813	.808	.000	.848	.000	.929	.700	.926	.938	.000	.900	.917	.000	.000	.000	.000	.910



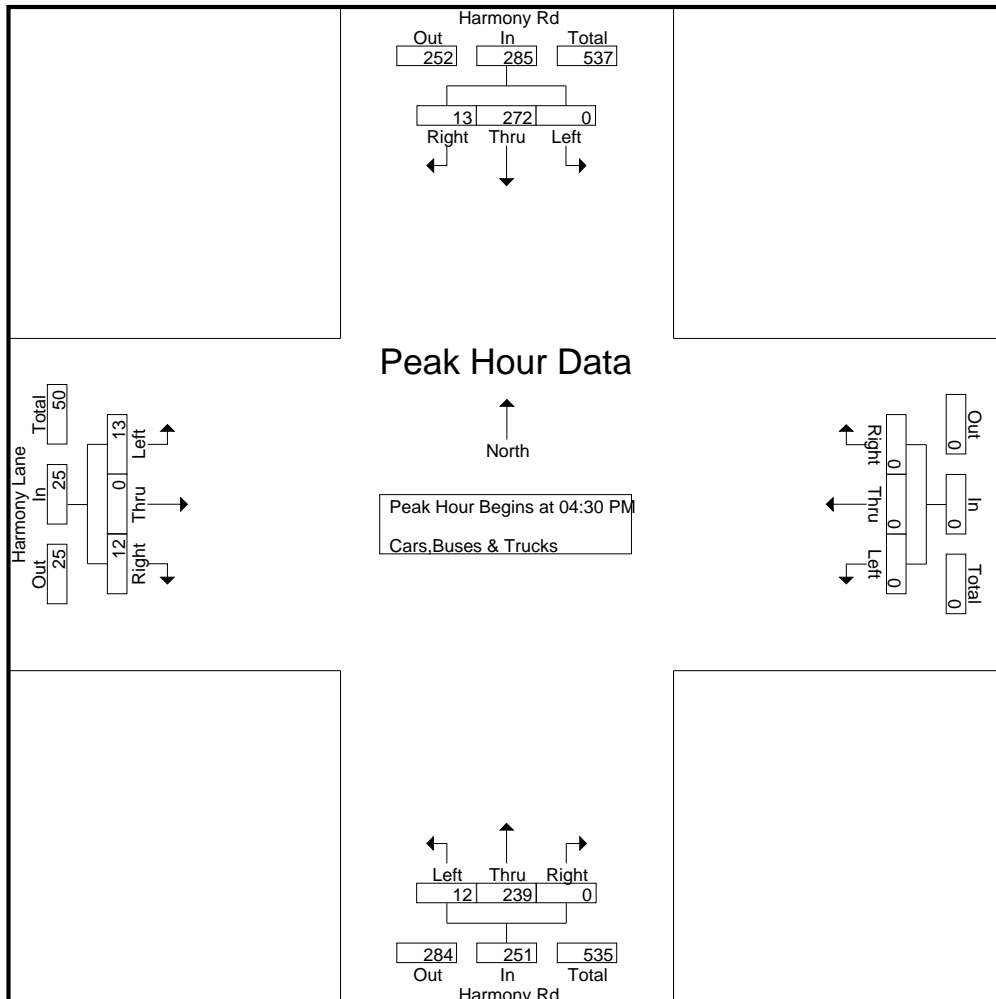
# A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',  
Marietta, GA 30067

TMC Data  
Harmony Rd @ Harmony Lane  
7-9 am | 4-6 pm

File Name : 20210172  
Site Code : 20210172  
Start Date : 5/27/2021  
Page No : 3

Start Time	Harmony Rd Northbound				Harmony Rd Southbound				Harmony Lane Eastbound				Westbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	55	0	57	0	58	3	61	4	0	3	7	0	0	0	0	125
04:45 PM	3	52	0	55	0	57	3	60	5	0	2	7	0	0	0	0	122
05:00 PM	4	69	0	73	0	77	4	81	2	0	5	7	0	0	0	0	161
05:15 PM	3	63	0	66	0	80	3	83	2	0	2	4	0	0	0	0	153
Total Volume	12	239	0	251	0	272	13	285	13	0	12	25	0	0	0	0	561
% App. Total	4.8	95.2	0		0	95.4	4.6		52	0	48		0	0	0		
PHF	.750	.866	.000	.860	.000	.850	.813	.858	.650	.000	.600	.893	.000	.000	.000	.000	.871



# A&R Engineering, Inc.

2160 Kingston Court, Suite O  
Marietta, GA 30067

24-Hour Bi-Directional Counts on Harmony  
Rd North of Scott Road  
Site Code: 20210173  
Date Start: 27-May-21  
Date End: 27-May-21

Start Time	27-May-2 Thu	Northbou	Southbou							Total
12:00 AM		3	2							5
01:00		5	5							10
02:00		4	4							8
03:00		3	3							6
04:00		11	15							26
05:00		21	33							54
06:00		81	91							172
07:00		106	<b>222</b>							328
08:00		121	211							<b>332</b>
09:00		127	179							306
10:00		149	154							303
11:00		<b>169</b>	153							322
12:00 PM		168	165							333
01:00		168	175							343
02:00		196	171							367
03:00		203	<b>220</b>							423
04:00		228	167							395
05:00		<b>323</b>	209							<b>532</b>
06:00		175	144							319
07:00		125	95							220
08:00		79	68							147
09:00		51	35							86
10:00		36	28							64
11:00		15	17							32
Total		2567	2566							5133
Percent		50.0%	50.0%							
AM Peak	-	11:00	07:00	-	-	-	-	-	-	08:00
Vol.	-	169	222	-	-	-	-	-	-	332
PM Peak	-	17:00	15:00	-	-	-	-	-	-	17:00
Vol.	-	323	220	-	-	-	-	-	-	532
Grand Total		2567	2566							5133
Percent		50.0%	50.0%							
ADT		ADT 5,133	AADT 5,133							

# LINEAR REGRESSION OF DAILY TRAFFIC

Location	Growth Rate	R Squared	Station ID	Route	2017	2018	2019	
Harmony Road (north of Scott f	-0.7%	0.75	237-0181	00021800	3,620	3,570	3,570	Major Collector (Rural)
SR 44 (North of Harmony Rd)	4.2%	0.81	237-0146	00004400	14,000	14,100	15,200	Minor Arterial (Rural)
SR 44 (North of Loch Way)	1.3%	0.65	237-0145	00004400	5,760	5,740	5,910	Minor Arterial (Rural)
Harmony Road (Northeast of H.	0.4%	0.75	237-0183	00021800	2,430	2,450	2,450	Major Collector (Rural)

Weighted Average 2.5% 0.78 Sum of Count Stations = 25,810 25,860 27,130

Location	Traffic Counter	RCLINK	2017	2018	2019
Harmony Road (north of Scott Road)	237-0181	00021800	3,620	3,570	3,570

**Growth Rate** **Trend Line**

**-0.7%** Intercept 54,037 Slope -25.00  
3,612 3,587 3,562

Sum X  
Sum Y  
Sum XY  
Sum X<sup>2</sup>  
Count  
a  
b  
Mean Y  
SS<sub>tot</sub>  
SS<sub>res</sub>  
R<sup>2</sup>

Location	Traffic Counter	RCLINK	2017	2018	2019
SR 44 (North of Harmony Rd)	237-0146	00004400	14,000	14,100	15,200

**Growth Rate** **Trend Line**

**4.2%** Intercept -1,196,367 Slope 600.00  
13,833 14,433 15,033

Sum X  
Sum Y  
Sum XY  
Sum X<sup>2</sup>  
Count  
a  
b  
Mean Y  
SS<sub>tot</sub>  
SS<sub>res</sub>  
R<sup>2</sup>

Location	Traffic Counter	RCLINK	2017	2018	2019
SR 44 (North of Loch Way)	237-0145	00004400	5,760	5,740	5,910

**Growth Rate** **Trend Line**

**1.3%** Intercept -145,547 Slope 75.00  
5,728 5,803 5,878

Sum X  
Sum Y  
Sum XY  
Sum X<sup>2</sup>  
Count  
a  
b  
Mean Y  
SS<sub>tot</sub>  
SS<sub>res</sub>  
R<sup>2</sup>

Location	Traffic Counter	RCLINK	2017	2018	2019
Harmony Road (Northeast of Harmony Drive)	237-0183	00021800	2,430	2,450	2,450

**Growth Rate** **Trend Line**

**0.4%** Intercept -17,737 Slope 10.00  
2,433 2,443 2,453

Sum X  
Sum Y  
Sum XY  
Sum X<sup>2</sup>  
Count  
a  
b  
Mean Y  
SS<sub>tot</sub>  
SS<sub>res</sub>  
R<sup>2</sup>

Location	Traffic Counter	RCLINK	2017	2018	2019
0	0	0	0	0	0

**Growth Rate** **Trend Line**

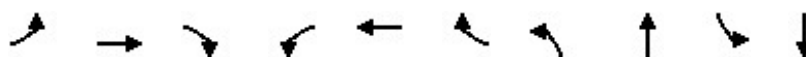
**#DIV/0!** Intercept 0 Slope 0.00  
0 0 0

Sum X  
Sum Y  
Sum XY  
Sum X<sup>2</sup>  
Count  
a  
b  
Mean Y  
SS<sub>tot</sub>  
SS<sub>res</sub>  
R<sup>2</sup>



## **EXISTING INTERSECTION ANALYSIS**

Timings  
1: Harmony Rd & SR 44

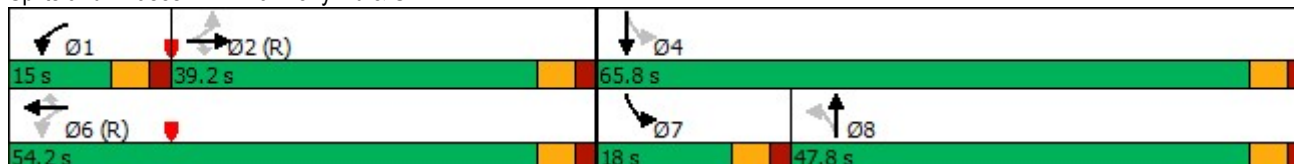


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↘	↙	↕	↘	↙	↕	↘	↕
Traffic Volume (vph)	130	389	76	194	185	89	69	157	172	113
Future Volume (vph)	130	389	76	194	185	89	69	157	172	113
Lane Group Flow (vph)	134	401	78	200	191	92	71	565	177	189
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	39.2	39.2	39.2	15.0	54.2	54.2	47.8	47.8	18.0	65.8
Total Split (%)	32.7%	32.7%	32.7%	12.5%	45.2%	45.2%	39.8%	39.8%	15.0%	54.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.37	0.74	0.14	0.70	0.25	0.14	0.19	0.94	0.80	0.24
Control Delay	37.5	47.6	1.9	38.8	23.7	5.0	29.2	55.0	52.7	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	47.6	1.9	38.8	23.7	5.0	29.2	55.0	52.7	14.8
Queue Length 50th (ft)	84	289	0	103	97	0	38	336	84	62
Queue Length 95th (ft)	146	#445	11	#182	154	32	74	#547	#199	108
Internal Link Dist (ft)		1244			234			548		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	364	545	557	284	765	679	415	647	222	846
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.74	0.14	0.70	0.25	0.14	0.17	0.87	0.80	0.22

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 75 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Harmony Rd & SR 44



# HCM 6th Signalized Intersection Summary

## 1: Harmony Rd & SR 44

Existing AM  
06/10/2021

372



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	389	76	194	185	89	69	157	391	172	113	71
Future Volume (veh/h)	130	389	76	194	185	89	69	157	391	172	113	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1781	1811	1811	1781	1722	1856	1826	1841	1707	1737	1826
Adj Flow Rate, veh/h	134	401	0	200	191	0	71	162	403	177	116	73
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	8	6	6	8	12	3	5	4	13	11	5
Cap, veh/h	415	534		289	757		478	164	407	202	482	303
Arrive On Green	0.30	0.30	0.00	0.08	0.42	0.00	0.35	0.35	0.35	0.09	0.48	0.48
Sat Flow, veh/h	1183	1781	1535	1725	1781	1459	1185	464	1154	1626	997	627
Grp Volume(v), veh/h	134	401	0	200	191	0	71	0	565	177	0	189
Grp Sat Flow(s),veh/h/ln	1183	1781	1535	1725	1781	1459	1185	0	1618	1626	0	1624
Q Serve(g_s), s	10.7	24.4	0.0	9.5	8.3	0.0	5.0	0.0	41.7	8.1	0.0	8.2
Cycle Q Clear(g_c), s	10.7	24.4	0.0	9.5	8.3	0.0	5.0	0.0	41.7	8.1	0.0	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.39
Lane Grp Cap(c), veh/h	415	534		289	757		478	0	570	202	0	785
V/C Ratio(X)	0.32	0.75		0.69	0.25		0.15	0.00	0.99	0.88	0.00	0.24
Avail Cap(c_a), veh/h	415	534		289	757		478	0	570	233	0	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	37.9	0.0	28.5	22.2	0.0	26.8	0.0	38.7	28.8	0.0	18.1
Incr Delay (d2), s/veh	2.1	9.4	0.0	7.0	0.8	0.0	0.1	0.0	35.2	26.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	11.6	0.0	4.3	3.5	0.0	1.4	0.0	21.2	4.4	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	47.3	0.0	35.4	23.0	0.0	26.9	0.0	73.8	55.2	0.0	18.3
LnGrp LOS	D	D		D	C		C	A	E	E	A	B
Approach Vol, veh/h		535	A		391	A		636			366	
Approach Delay, s/veh		44.3			29.4			68.6			36.1	
Approach LOS		D			C			E			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	15.0	41.5		63.5		56.5	15.7	47.8				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	33.7		60.3		48.7	12.5	42.3				
Max Q Clear Time (g_c+I1), s	11.5	26.4		10.2		10.3	10.1	43.7				
Green Ext Time (p_c), s	0.0	4.2		0.7		4.9	0.1	0.0				

### Intersection Summary

HCM 6th Ctrl Delay	47.7
HCM 6th LOS	D

### Notes

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

**Intersection**

Int Delay, s/veh 0.4

**Movement** EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			4	1	
Traffic Vol, veh/h	5	8	9	254	257	5
Future Vol, veh/h	5	8	9	254	257	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	9	10	289	292	6

**Major/Minor** Minor2 Major1 Major2

Conflicting Flow All	604	295	298	0	-	0
Stage 1	295	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	461	744	1263	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	457	744	1263	-	-	-
Mov Cap-2 Maneuver	457	-	-	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	745	-	-	-	-	-

**Approach** EB NB SB

HCM Control Delay, s 11.2 0.3 0  
HCM LOS B

**Minor Lane/Major Mvmt** NBL NBTEBLn1 SBT SBR

Capacity (veh/h)	1263	-	599	-	-
HCM Lane V/C Ratio	0.008	-	0.025	-	-
HCM Control Delay (s)	7.9	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	28	2	223	56	1	267
Future Vol, veh/h	28	2	223	56	1	267
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	50	2	5	24	2	9
Mvmt Flow	31	2	245	62	1	293

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	571	276	0
Stage 1	276	-	-
Stage 2	295	-	-
Critical Hdwy	6.9	6.22	-
Critical Hdwy Stg 1	5.9	-	-
Critical Hdwy Stg 2	5.9	-	-
Follow-up Hdwy	3.95	3.318	-
Pot Cap-1 Maneuver	411	763	-
Stage 1	672	-	-
Stage 2	658	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	411	763	-
Mov Cap-2 Maneuver	411	-	-
Stage 1	672	-	-
Stage 2	657	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	424	1254
HCM Lane V/C Ratio	-	-	0.078	0.001
HCM Control Delay (s)	-	-	14.2	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

**Intersection**

Int Delay, s/veh 1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	1	
Traffic Vol, veh/h	16	20	14	211	243	15
Future Vol, veh/h	16	20	14	211	243	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	22	15	232	267	16

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	537	275	283	0	-	0
Stage 1	275	-	-	-	-	-
Stage 2	262	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	505	764	1279	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	498	764	1279	-	-	-
Mov Cap-2 Maneuver	498	-	-	-	-	-
Stage 1	761	-	-	-	-	-
Stage 2	782	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	1279	-	617	-
HCM Lane V/C Ratio	0.012	-	0.064	-
HCM Control Delay (s)	7.8	0	11.2	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0	-	0.2	-



**Intersection**

Int Delay, s/veh 4

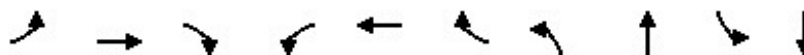
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	1	3	50	1	36	0	86	26	117	229	1
Future Vol, veh/h	0	1	3	50	1	36	0	86	26	117	229	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	3	56	1	40	0	96	29	127	249	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	635	629	250	617	615	111	250	0	0	125	0	0
Stage 1	504	504	-	111	111	-	-	-	-	-	-	-
Stage 2	131	125	-	506	504	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	391	399	789	402	407	942	1316	-	-	1462	-	-
Stage 1	550	541	-	894	804	-	-	-	-	-	-	-
Stage 2	873	792	-	549	541	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	344	359	789	369	366	942	1316	-	-	1462	-	-
Mov Cap-2 Maneuver	344	359	-	369	366	-	-	-	-	-	-	-
Stage 1	550	486	-	894	804	-	-	-	-	-	-	-
Stage 2	835	792	-	490	486	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	14.1	0	2.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1316	-	-	607	493	1462	-
HCM Lane V/C Ratio	-	-	-	0.007	0.196	0.087	-
HCM Control Delay (s)	0	-	-	11	14.1	7.7	0
HCM Lane LOS	A	-	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.7	0.3	-

Timings  
1: Harmony Rd & SR 44



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↗	↖	↘	↗	↖	↘	↗	↖	↘
Traffic Volume (vph)	73	246	73	409	388	68	56	81	113	172
Future Volume (vph)	73	246	73	409	388	68	56	81	113	172
Lane Group Flow (vph)	77	259	77	431	408	72	59	403	119	292
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	33.0	33.0	33.0	34.0	67.0	67.0	38.0	38.0	15.0	53.0
Total Split (%)	27.5%	27.5%	27.5%	28.3%	55.8%	55.8%	31.7%	31.7%	12.5%	44.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.22	0.39	0.12	0.65	0.37	0.08	0.48	0.88	0.66	0.51
Control Delay	34.9	34.8	1.9	19.9	15.5	3.4	52.8	48.6	62.2	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	34.8	1.9	19.9	15.5	3.4	52.8	48.6	62.2	31.8
Queue Length 50th (ft)	42	151	0	173	159	0	40	195	67	163
Queue Length 95th (ft)	98	272	10	296	271	23	80	300	101	220
Internal Link Dist (ft)		1244			234			548		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	350	669	647	712	1105	917	165	557	204	713
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.39	0.12	0.61	0.37	0.08	0.36	0.72	0.58	0.41

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Harmony Rd & SR 44



# HCM 6th Signalized Intersection Summary

## 1: Harmony Rd & SR 44

Existing PM  
06/10/2021

378



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	246	73	409	388	68	56	81	302	113	172	105
Future Volume (veh/h)	73	246	73	409	388	68	56	81	302	113	172	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1781	1841	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	259	0	431	408	0	59	85	318	119	181	111
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	8	4	2	2	2	2	2
Cap, veh/h	385	621		627	1038		200	90	337	147	384	235
Arrive On Green	0.33	0.33	0.00	0.18	0.55	0.00	0.26	0.26	0.26	0.05	0.35	0.35
Sat Flow, veh/h	978	1870	1585	1781	1870	1510	1070	345	1292	1781	1085	665
Grp Volume(v), veh/h	77	259	0	431	408	0	59	0	403	119	0	292
Grp Sat Flow(s),veh/h/ln	978	1870	1585	1781	1870	1510	1070	0	1638	1781	0	1751
Q Serve(g_s), s	6.9	12.9	0.0	18.2	14.9	0.0	6.1	0.0	29.0	3.7	0.0	15.5
Cycle Q Clear(g_c), s	6.9	12.9	0.0	18.2	14.9	0.0	21.6	0.0	29.0	3.7	0.0	15.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.38
Lane Grp Cap(c), veh/h	385	621		627	1038		200	0	427	147	0	619
V/C Ratio(X)	0.20	0.42		0.69	0.39		0.29	0.00	0.94	0.81	0.00	0.47
Avail Cap(c_a), veh/h	385	621		735	1038		211	0	444	204	0	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	31.1	0.0	19.3	15.2	0.0	47.9	0.0	43.5	55.3	0.0	30.1
Incr Delay (d2), s/veh	1.2	2.1	0.0	2.2	1.1	0.0	0.8	0.0	28.5	15.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	6.0	0.0	7.3	6.2	0.0	1.6	0.0	14.7	4.1	0.0	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	33.1	0.0	21.5	16.3	0.0	48.7	0.0	72.0	70.9	0.0	30.6
LnGrp LOS	C	C		C	B		D	A	E	E	A	C
Approach Vol, veh/h		336	A		839	A		462			411	
Approach Delay, s/veh		32.5			19.0			69.0			42.3	
Approach LOS		C			B			E			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	26.7	45.4		47.9		72.1	11.1	36.8				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	28.5	27.5		47.5		61.5	9.5	32.5				
Max Q Clear Time (g_c+l1), s	20.2	14.9		17.5		16.9	5.7	31.0				
Green Ext Time (p_c), s	1.0	4.3		1.0		12.7	0.1	0.3				

### Intersection Summary

HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D

### Notes

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

**Intersection**

Int Delay, s/veh 0.3

**Movement** EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			4	1	
Traffic Vol, veh/h	6	7	7	237	337	8
Future Vol, veh/h	6	7	7	237	337	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	8	8	282	401	10

**Major/Minor** Minor2 Major1 Major2

Conflicting Flow All	704	406	411	0	-	0
Stage 1	406	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	403	645	1148	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	400	645	1148	-	-	-
Mov Cap-2 Maneuver	400	-	-	-	-	-
Stage 1	668	-	-	-	-	-
Stage 2	753	-	-	-	-	-

**Approach** EB NB SB

HCM Control Delay, s 12.4 0.2 0  
HCM LOS B

**Minor Lane/Major Mvmt** NBL NBTEBLn1 SBT SBR

Capacity (veh/h)	1148	-	503	-	-
HCM Lane V/C Ratio	0.007	-	0.031	-	-
HCM Control Delay (s)	8.2	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	62	2	248	9	0	282
Future Vol, veh/h	62	2	248	9	0	282
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	50	6	56	2	2
Mvmt Flow	74	2	295	11	0	336

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	637	301	0
Stage 1	301	-	-
Stage 2	336	-	-
Critical Hdwy	6.42	6.7	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.75	-
Pot Cap-1 Maneuver	441	639	-
Stage 1	751	-	-
Stage 2	724	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	441	639	-
Mov Cap-2 Maneuver	441	-	-
Stage 1	751	-	-
Stage 2	724	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	445	1255
HCM Lane V/C Ratio	-	-	0.171	-
HCM Control Delay (s)	-	-	14.8	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0

**Intersection**

Int Delay, s/veh 0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	1	
Traffic Vol, veh/h	13	12	12	241	275	13
Future Vol, veh/h	13	12	12	241	275	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	14	14	277	316	15

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	629	324	331	0	-	0
Stage 1	324	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	446	717	1228	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	440	717	1228	-	-	-
Mov Cap-2 Maneuver	440	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	1228	-	540	-
HCM Lane V/C Ratio	0.011	-	0.053	-
HCM Control Delay (s)	8	0	12	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0	-	0.2	-



**Intersection**

Int Delay, s/veh 4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	0	1	49	0	146	2	204	34	61	157	0
Future Vol, veh/h	0	0	1	49	0	146	2	204	34	61	157	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	54	0	162	2	227	38	66	171	0

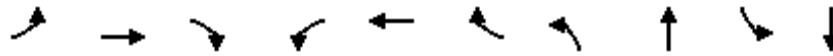
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	634	572	171	554	553	246	171	0	0	265	0	0
Stage 1	303	303	-	250	250	-	-	-	-	-	-	-
Stage 2	331	269	-	304	303	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	392	430	873	443	441	793	1406	-	-	1299	-	-
Stage 1	706	664	-	754	700	-	-	-	-	-	-	-
Stage 2	682	687	-	705	664	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	298	405	873	423	415	793	1406	-	-	1299	-	-
Mov Cap-2 Maneuver	298	405	-	423	415	-	-	-	-	-	-	-
Stage 1	705	627	-	752	699	-	-	-	-	-	-	-
Stage 2	541	686	-	665	627	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.1		13.3		0.1		2.2	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	873	650	1299	-
HCM Lane V/C Ratio	0.002	-	-	0.001	0.333	0.051	-
HCM Control Delay (s)	7.6	0	-	9.1	13.3	7.9	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	1.5	0.2	-

**FUTURE "NO-BUILD" INTERSECTION  
ANALYSIS**

Timings  
1: Harmony Rd & SR 44

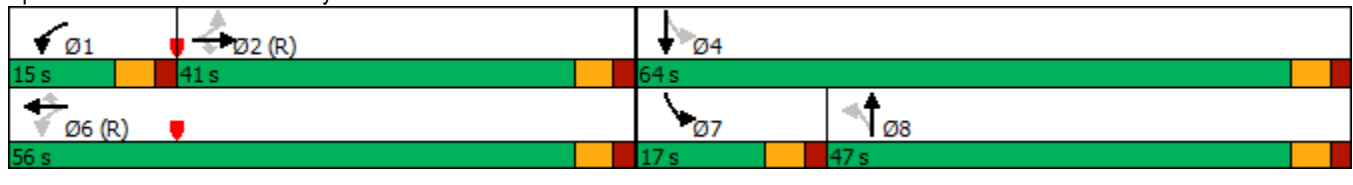


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↖	↗	↖	↖	↖	↖	↖
Traffic Volume (vph)	143	429	84	214	204	98	76	173	190	125
Future Volume (vph)	143	429	84	214	204	98	76	173	190	125
Lane Group Flow (vph)	147	442	87	221	210	101	78	623	196	209
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	41.0	41.0	41.0	15.0	56.0	56.0	47.0	47.0	17.0	64.0
Total Split (%)	34.2%	34.2%	34.2%	12.5%	46.7%	46.7%	39.2%	39.2%	14.2%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.42	0.82	0.16	0.90	0.27	0.15	0.20	0.98	0.94	0.26
Control Delay	38.3	53.1	2.6	63.5	23.9	4.6	29.3	63.5	78.3	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	53.1	2.6	63.5	23.9	4.6	29.3	63.5	78.3	15.7
Queue Length 50th (ft)	91	319	0	112	105	0	42	407	106	75
Queue Length 95th (ft)	155	#482	17	#231	163	33	82	#656	#255	126
Internal Link Dist (ft)		1244			234			548		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	353	539	554	245	767	687	400	637	209	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.82	0.16	0.90	0.27	0.15	0.20	0.98	0.94	0.25

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 90 (75%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Harmony Rd & SR 44



HCM 6th Signalized Intersection Summary  
1: Harmony Rd & SR 44



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗		↖	↗	
Traffic Volume (veh/h)	143	429	84	214	204	98	76	173	432	190	125	78
Future Volume (veh/h)	143	429	84	214	204	98	76	173	432	190	125	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1930	1853	1884	1884	1853	1791	1856	1826	1841	1707	1737	1826
Adj Flow Rate, veh/h	147	442	0	221	210	0	78	178	445	196	129	80
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	8	6	6	8	12	3	5	4	13	11	5
Cap, veh/h	418	548		274	780		462	160	400	216	489	303
Arrive On Green	0.30	0.30	0.00	0.08	0.42	0.00	0.35	0.35	0.35	0.10	0.49	0.49
Sat Flow, veh/h	1209	1853	1596	1794	1853	1518	1163	462	1156	1626	1003	622
Grp Volume(v), veh/h	147	442	0	221	210	0	78	0	623	196	0	209
Grp Sat Flow(s),veh/h/ln	1209	1853	1596	1794	1853	1518	1163	0	1618	1626	0	1625
Q Serve(g_s), s	11.7	26.5	0.0	9.5	8.9	0.0	5.6	0.0	41.5	9.8	0.0	9.1
Cycle Q Clear(g_c), s	11.7	26.5	0.0	9.5	8.9	0.0	5.6	0.0	41.5	9.8	0.0	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.38
Lane Grp Cap(c), veh/h	418	548		274	780		462	0	560	216	0	792
V/C Ratio(X)	0.35	0.81		0.81	0.27		0.17	0.00	1.11	0.91	0.00	0.26
Avail Cap(c_a), veh/h	418	548		274	780		462	0	560	216	0	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	39.1	0.0	31.4	22.7	0.0	27.5	0.0	39.3	32.1	0.0	18.1
Incr Delay (d2), s/veh	2.3	12.0	0.0	16.2	0.8	0.0	0.2	0.0	73.1	37.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	13.4	0.0	5.4	3.9	0.0	1.5	0.0	27.0	5.4	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	51.1	0.0	47.6	23.5	0.0	27.7	0.0	112.4	69.3	0.0	18.3
LnGrp LOS	D	D		D	C		C	A	F	E	A	B
Approach Vol, veh/h		589	A		431	A		701			405	
Approach Delay, s/veh		47.4			35.9			102.9			42.9	
Approach LOS		D			D			F			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	15.0	41.0		64.0		56.0	17.0	47.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	35.5		58.5		50.5	11.5	41.5				
Max Q Clear Time (g_c+I1), s	11.5	28.5		11.1		10.9	11.8	43.5				
Green Ext Time (p_c), s	0.0	4.4		0.7		5.6	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E

Notes

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

**Intersection**

Int Delay, s/veh 0.4

**Movement** EBL EBR NBL NBT SBT SBR

Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	6	9	10	280	284	6
Future Vol, veh/h	6	9	10	280	284	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	10	11	318	323	7

**Major/Minor** Minor2 Major1 Major2

Conflicting Flow All	667	327	330	0	-	0
Stage 1	327	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	424	714	1229	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	721	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	419	714	1229	-	-	-
Mov Cap-2 Maneuver	419	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	721	-	-	-	-	-

**Approach** EB NB SB

HCM Control Delay, s 11.7 0.3 0  
HCM LOS B

**Minor Lane/Major Mvmt** NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1229	-	557	-	-
HCM Lane V/C Ratio	0.009	-	0.031	-	-
HCM Control Delay (s)	8	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	2	246	62	1	295
Future Vol, veh/h	31	2	246	62	1	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	50	2	5	24	2	9
Mvmt Flow	34	2	270	68	1	324

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	630	304	0	0	338
Stage 1	304	-	-	-	-
Stage 2	326	-	-	-	-
Critical Hdwy	6.9	6.22	-	-	4.12
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.95	3.318	-	-	2.218
Pot Cap-1 Maneuver	377	736	-	-	1221
Stage 1	651	-	-	-	-
Stage 2	635	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	377	736	-	-	1221
Mov Cap-2 Maneuver	377	-	-	-	-
Stage 1	651	-	-	-	-
Stage 2	634	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	388	1221
HCM Lane V/C Ratio	-	-	0.093	0.001
HCM Control Delay (s)	-	-	15.2	8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0



Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	18	22	15	233	268	17
Future Vol, veh/h	18	22	15	233	268	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	24	16	256	295	19

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	593	305	314	0	-	0
Stage 1	305	-	-	-	-	-
Stage 2	288	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	468	735	1246	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	461	735	1246	-	-	-
Mov Cap-2 Maneuver	461	-	-	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	761	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1246	-	580	-	-
HCM Lane V/C Ratio	0.013	-	0.076	-	-
HCM Control Delay (s)	7.9	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

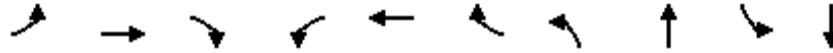
Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	1	3	55	1	40	0	95	29	129	253	1
Future Vol, veh/h	0	1	3	55	1	40	0	95	29	129	253	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	3	61	1	44	0	106	32	140	275	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	701	694	276	680	678	122	276	0	0	138	0	0
Stage 1	556	556	-	122	122	-	-	-	-	-	-	-
Stage 2	145	138	-	558	556	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	353	366	763	365	374	929	1287	-	-	1446	-	-
Stage 1	515	513	-	882	795	-	-	-	-	-	-	-
Stage 2	858	782	-	514	513	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	306	324	763	331	331	929	1287	-	-	1446	-	-
Mov Cap-2 Maneuver	306	324	-	331	331	-	-	-	-	-	-	-
Stage 1	515	455	-	882	795	-	-	-	-	-	-	-
Stage 2	816	782	-	452	455	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		15.4		0		2.6	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1287	-	-	570	452	1446	-	-
HCM Lane V/C Ratio	-	-	-	0.008	0.236	0.097	-	-
HCM Control Delay (s)	0	-	-	11.4	15.4	7.8	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.9	0.3	-	-

Timings  
1: Harmony Rd & SR 44

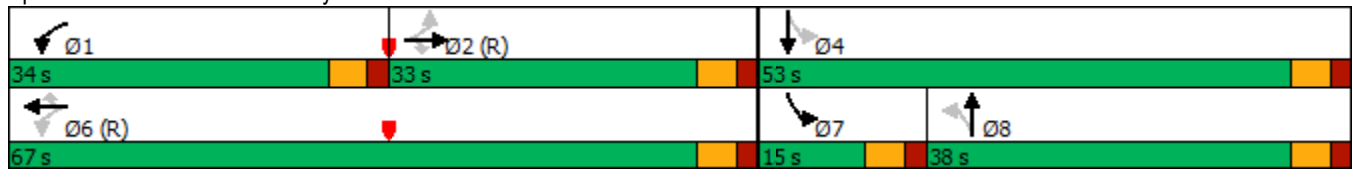


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↘
Traffic Volume (vph)	81	272	81	451	428	75	62	89	125	190
Future Volume (vph)	81	272	81	451	428	75	62	89	125	190
Lane Group Flow (vph)	85	286	85	475	451	79	65	445	132	322
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	33.0	33.0	33.0	34.0	67.0	67.0	38.0	38.0	15.0	53.0
Total Split (%)	27.5%	27.5%	27.5%	28.3%	55.8%	55.8%	31.7%	31.7%	12.5%	44.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.29	0.49	0.15	0.76	0.42	0.09	0.28	0.90	0.66	0.51
Control Delay	39.6	40.5	2.8	26.0	18.0	3.5	39.4	51.4	42.4	29.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	40.5	2.8	26.0	18.0	3.5	39.4	51.4	42.4	29.8
Queue Length 50th (ft)	52	189	0	220	202	0	41	226	69	172
Queue Length 95th (ft)	108	298	17	329	302	24	80	#380	111	248
Internal Link Dist (ft)		1244			234			548		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	293	584	582	659	1073	896	280	557	201	713
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.49	0.15	0.72	0.42	0.09	0.23	0.80	0.66	0.45

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Harmony Rd & SR 44



HCM 6th Signalized Intersection Summary  
1: Harmony Rd & SR 44



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	272	81	451	428	75	62	89	333	125	190	116
Future Volume (veh/h)	81	272	81	451	428	75	62	89	333	125	190	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1945	1945	1945	1945	1945	1853	1841	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	286	0	475	451	0	65	94	351	132	200	122
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	8	4	2	2	2	2	2
Cap, veh/h	333	544		604	1019		316	94	350	181	418	255
Arrive On Green	0.28	0.28	0.00	0.20	0.52	0.00	0.27	0.27	0.27	0.07	0.38	0.38
Sat Flow, veh/h	977	1945	1648	1853	1945	1570	1041	346	1292	1781	1088	663
Grp Volume(v), veh/h	85	286	0	475	451	0	65	0	445	132	0	322
Grp Sat Flow(s),veh/h/ln	977	1945	1648	1853	1945	1570	1041	0	1638	1781	0	1751
Q Serve(g_s), s	8.2	14.9	0.0	20.9	17.2	0.0	6.0	0.0	32.5	6.2	0.0	16.6
Cycle Q Clear(g_c), s	8.2	14.9	0.0	20.9	17.2	0.0	9.0	0.0	32.5	6.2	0.0	16.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.38
Lane Grp Cap(c), veh/h	333	544		604	1019		316	0	444	181	0	673
V/C Ratio(X)	0.26	0.53		0.79	0.44		0.21	0.00	1.00	0.73	0.00	0.48
Avail Cap(c_a), veh/h	333	544		677	1019		316	0	444	201	0	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.1	36.5	0.0	22.6	17.7	0.0	36.4	0.0	43.8	31.9	0.0	27.9
Incr Delay (d2), s/veh	1.8	3.6	0.0	5.5	1.4	0.0	0.3	0.0	43.5	11.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	7.4	0.0	9.4	7.6	0.0	1.5	0.0	18.0	3.1	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.0	40.1	0.0	28.2	19.1	0.0	36.7	0.0	87.3	43.3	0.0	28.4
LnGrp LOS	D	D		C	B		D	A	F	D	A	C
Approach Vol, veh/h		371	A		926	A		510				454
Approach Delay, s/veh		39.2			23.7			80.8				32.7
Approach LOS		D			C			F				C
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	29.3	39.0		51.6		68.4	13.6	38.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	28.5	27.5		47.5		61.5	9.5	32.5				
Max Q Clear Time (g_c+I1), s	22.9	16.9		18.6		19.2	8.2	34.5				
Green Ext Time (p_c), s	0.9	4.2		1.1		14.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

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

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	7	8	8	262	372	9
Future Vol, veh/h	7	8	8	262	372	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	10	312	443	11

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	781	449	454	0	-	0
Stage 1	449	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	363	610	1107	-	-	-
Stage 1	643	-	-	-	-	-
Stage 2	727	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	359	610	1107	-	-	-
Mov Cap-2 Maneuver	359	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	727	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1107	-	460	-	-
HCM Lane V/C Ratio	0.009	-	0.039	-	-
HCM Control Delay (s)	8.3	0	13.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 1.7

**Movement** WBL WBR NBT NBR SBL SBT

Lane Configurations						
Traffic Vol, veh/h	68	2	274	10	0	311
Future Vol, veh/h	68	2	274	10	0	311
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	50	6	56	2	2
Mvmt Flow	81	2	326	12	0	370

**Major/Minor** Minor1 Major1 Major2

Conflicting Flow All	702	332	0	0	338	0
Stage 1	332	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Critical Hdwy	6.42	6.7	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.75	-	-	2.218	-
Pot Cap-1 Maneuver	404	612	-	-	1221	-
Stage 1	727	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	404	612	-	-	1221	-
Mov Cap-2 Maneuver	404	-	-	-	-	-
Stage 1	727	-	-	-	-	-
Stage 2	699	-	-	-	-	-

**Approach** WB NB SB

HCM Control Delay, s	16.1	0	0
HCM LOS	C		

**Minor Lane/Major Mvmt** NBT NBRWBLn1 SBL SBT

Capacity (veh/h)	-	-	408	1221	-
HCM Lane V/C Ratio	-	-	0.204	-	-
HCM Control Delay (s)	-	-	16.1	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.8	0	-



Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	14	13	13	266	304	14
Future Vol, veh/h	14	13	13	266	304	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	15	15	306	349	16

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	693	357	365	0	-	0
Stage 1	357	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	409	687	1194	-	-	-
Stage 1	708	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	403	687	1194	-	-	-
Mov Cap-2 Maneuver	403	-	-	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	724	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1194	-	503	-	-
HCM Lane V/C Ratio	0.013	-	0.062	-	-
HCM Control Delay (s)	8.1	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	54	0	161	2	225	38	67	173	0
Future Vol, veh/h	0	0	1	54	0	161	2	225	38	67	173	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	60	0	179	2	250	42	73	188	0

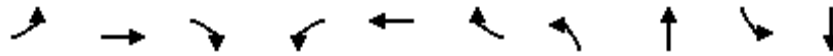
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	699	630	188	610	609	271	188	0	0	292	0	0
Stage 1	334	334	-	275	275	-	-	-	-	-	-	-
Stage 2	365	296	-	335	334	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	354	399	854	407	410	768	1386	-	-	1270	-	-
Stage 1	680	643	-	731	683	-	-	-	-	-	-	-
Stage 2	654	668	-	679	643	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	258	373	854	386	383	768	1386	-	-	1270	-	-
Mov Cap-2 Maneuver	258	373	-	386	383	-	-	-	-	-	-	-
Stage 1	679	602	-	730	682	-	-	-	-	-	-	-
Stage 2	501	667	-	635	602	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	14.5	0.1	2.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1386	-	-	854	615	1270	-	-
HCM Lane V/C Ratio	0.002	-	-	0.001	0.388	0.057	-	-
HCM Control Delay (s)	7.6	0	-	9.2	14.5	8	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1.8	0.2	-	-

**FUTURE "BUILD" INTERSECTION ANALYSIS**

Timings  
1: Harmony Rd & SR 44

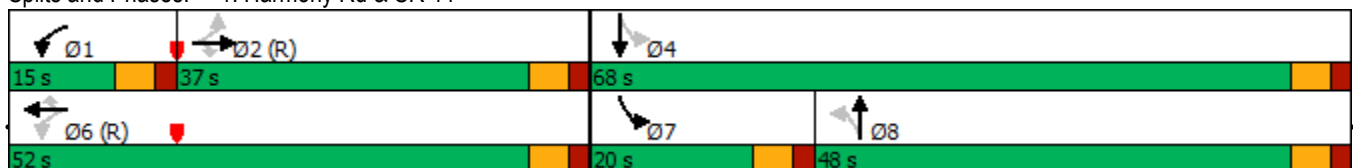


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↘
Traffic Volume (vph)	207	429	84	214	204	162	76	205	239	149
Future Volume (vph)	207	429	84	214	204	162	76	205	239	149
Lane Group Flow (vph)	213	442	87	221	210	167	78	656	246	285
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	37.0	37.0	37.0	15.0	52.0	52.0	48.0	48.0	20.0	68.0
Total Split (%)	30.8%	30.8%	30.8%	12.5%	43.3%	43.3%	40.0%	40.0%	16.7%	56.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.70	0.96	0.18	1.13	0.31	0.25	0.20	1.02	0.99	0.33
Control Delay	54.0	77.0	3.0	131.3	27.2	4.6	28.8	74.3	88.2	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	77.0	3.0	131.3	27.2	4.6	28.8	74.3	88.2	14.5
Queue Length 50th (ft)	150	338	0	~147	112	0	42	~487	146	98
Queue Length 95th (ft)	#255	#543	18	#309	175	44	81	#720	#316	157
Internal Link Dist (ft)		1249			234			550		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	303	461	490	196	681	661	382	642	248	876
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.96	0.18	1.13	0.31	0.25	0.20	1.02	0.99	0.33

Intersection Summary

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

Splits and Phases: 1: Harmony Rd & SR 44



HCM 6th Signalized Intersection Summary  
1: Harmony Rd & SR 44



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	429	84	214	204	162	76	205	432	239	149	127
Future Volume (veh/h)	207	429	84	214	204	162	76	205	432	239	149	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1781	1811	1811	1781	1722	1856	1826	1841	1707	1737	1826
Adj Flow Rate, veh/h	213	442	0	221	210	0	78	211	445	246	154	131
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	8	6	6	8	12	3	5	4	13	11	5
Cap, veh/h	365	468		214	690		444	185	391	256	451	384
Arrive On Green	0.26	0.26	0.00	0.08	0.39	0.00	0.35	0.35	0.35	0.12	0.52	0.52
Sat Flow, veh/h	1162	1781	1535	1725	1781	1459	1086	523	1104	1626	867	737
Grp Volume(v), veh/h	213	442	0	221	210	0	78	0	656	246	0	285
Grp Sat Flow(s),veh/h/ln	1162	1781	1535	1725	1781	1459	1086	0	1627	1626	0	1604
Q Serve(g_s), s	19.9	29.2	0.0	9.5	9.8	0.0	6.0	0.0	42.5	13.6	0.0	12.4
Cycle Q Clear(g_c), s	19.9	29.2	0.0	9.5	9.8	0.0	6.0	0.0	42.5	13.6	0.0	12.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	1.00		0.46
Lane Grp Cap(c), veh/h	365	468		214	690		444	0	576	256	0	836
V/C Ratio(X)	0.58	0.95		1.03	0.30		0.18	0.00	1.14	0.96	0.00	0.34
Avail Cap(c_a), veh/h	365	468		214	690		444	0	576	256	0	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	43.4	0.0	35.5	25.5	0.0	27.0	0.0	38.8	35.8	0.0	16.8
Incr Delay (d2), s/veh	6.7	30.0	0.0	70.2	1.1	0.0	0.2	0.0	81.8	44.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	16.2	0.0	8.5	4.2	0.0	1.5	0.0	29.1	7.1	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.6	73.4	0.0	105.7	26.7	0.0	27.1	0.0	120.5	80.7	0.0	17.0
LnGrp LOS	D	E		F	C		C	A	F	F	A	B
Approach Vol, veh/h		655	A		431	A		734				531
Approach Delay, s/veh		64.7			67.2			110.6				46.5
Approach LOS		E			E			F				D
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	15.0	37.0		68.0		52.0	20.0	48.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	31.5		62.5		46.5	14.5	42.5				
Max Q Clear Time (g_c+I1), s	11.5	31.2		14.4		11.8	15.6	44.5				
Green Ext Time (p_c), s	0.0	0.2		1.0		5.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	75.4
HCM 6th LOS	E

Notes

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

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	6	9	10	440	406	6
Future Vol, veh/h	6	9	10	440	406	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	10	11	500	461	7

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	987	465	468	0	-	0
Stage 1	465	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	274	597	1094	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	270	597	1094	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	623	-	-	-	-	-
Stage 2	595	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1094	-	402	-	-
HCM Lane V/C Ratio	0.01	-	0.042	-	-
HCM Control Delay (s)	8.3	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	31	2	406	62	1	417
Future Vol, veh/h	31	2	406	62	1	417
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	50	2	5	24	2	9
Mvmt Flow	34	2	446	68	1	458

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	940	480	0	0	514
Stage 1	480	-	-	-	-
Stage 2	460	-	-	-	-
Critical Hdwy	6.9	6.22	-	-	4.12
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.95	3.318	-	-	2.218
Pot Cap-1 Maneuver	241	586	-	-	1052
Stage 1	534	-	-	-	-
Stage 2	546	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	241	586	-	-	1052
Mov Cap-2 Maneuver	241	-	-	-	-
Stage 1	534	-	-	-	-
Stage 2	545	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	250	1052
HCM Lane V/C Ratio	-	-	0.145	0.001
HCM Control Delay (s)	-	-	21.8	8.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.5	0

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	18	22	15	274	321	17
Future Vol, veh/h	18	22	15	274	321	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	24	16	301	353	19

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	696	363	372	0	-	0
Stage 1	363	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	408	682	1186	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	401	682	1186	-	-	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	726	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1186	-	518	-	-
HCM Lane V/C Ratio	0.014	-	0.085	-	-
HCM Control Delay (s)	8.1	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	1	3	66	1	40	0	127	37	129	296	1
Future Vol, veh/h	0	1	3	66	1	40	0	127	37	129	296	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	3	73	1	44	0	141	41	140	322	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	787	785	323	767	765	162	323	0	0	182	0	0
Stage 1	603	603	-	162	162	-	-	-	-	-	-	-
Stage 2	184	182	-	605	603	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	309	325	718	319	333	883	1237	-	-	1393	-	-
Stage 1	486	488	-	840	764	-	-	-	-	-	-	-
Stage 2	818	749	-	485	488	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	265	285	718	287	292	883	1237	-	-	1393	-	-
Mov Cap-2 Maneuver	265	285	-	287	292	-	-	-	-	-	-	-
Stage 1	486	428	-	840	764	-	-	-	-	-	-	-
Stage 2	776	749	-	423	428	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12	18.5	0	2.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1237	-	-	520	384	1393	-	-
HCM Lane V/C Ratio	-	-	-	0.009	0.31	0.101	-	-
HCM Control Delay (s)	0	-	-	12	18.5	7.9	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1.3	0.3	-	-

**Intersection**

Int Delay, s/veh 3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↗	↗	↘
Traffic Vol, veh/h	20	97	129	280	319	28
Future Vol, veh/h	20	97	129	280	319	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	105	140	304	347	30

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	931	347	377	0	-	0
Stage 1	347	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	296	696	1181	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	261	696	1181	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	557	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	2.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1181	-	261	696	-	-
HCM Lane V/C Ratio	0.119	-	0.083	0.151	-	-
HCM Control Delay (s)	8.5	-	20	11.1	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.3	0.5	-	-

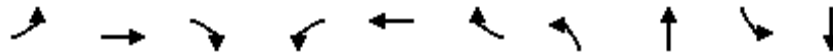
Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕		↕	↕			↕	↕
Traffic Vol, veh/h	20	0	24	0	0	0	33	268	0	0	322	28
Future Vol, veh/h	20	0	24	0	0	0	33	268	0	0	322	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	235	-	-	-	-	175
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	0	26	0	0	0	36	291	0	0	350	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	713	713	350	741	743	291	380	0	0	291	0	0
Stage 1	350	350	-	363	363	-	-	-	-	-	-	-
Stage 2	363	363	-	378	380	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	347	357	693	332	343	748	1178	-	-	1271	-	-
Stage 1	666	633	-	656	625	-	-	-	-	-	-	-
Stage 2	656	625	-	644	614	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	339	346	693	312	332	748	1178	-	-	1271	-	-
Mov Cap-2 Maneuver	339	346	-	312	332	-	-	-	-	-	-	-
Stage 1	645	633	-	636	606	-	-	-	-	-	-	-
Stage 2	636	606	-	620	614	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	0	0.9	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1178	-	-	339	693	-	1271	-	-
HCM Lane V/C Ratio	0.03	-	-	0.064	0.038	-	-	-	-
HCM Control Delay (s)	8.2	-	-	16.3	10.4	0	0	-	-
HCM Lane LOS	A	-	-	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	-	0	-	-

Timings  
1: Harmony Rd & SR 44

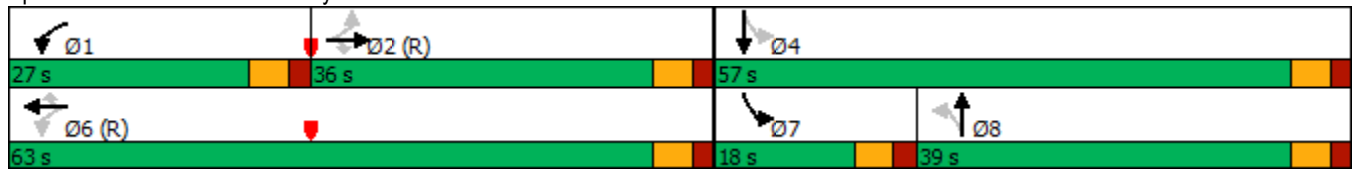


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↖	↗	↖	↖	↗	↖	↗
Traffic Volume (vph)	156	272	81	451	428	150	62	127	195	225
Future Volume (vph)	156	272	81	451	428	150	62	127	195	225
Lane Group Flow (vph)	164	286	85	475	451	158	65	485	205	433
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		2		1	6			8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	2	2	2	1	6	6	8	8	7	4
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0
Minimum Split (s)	23.5	23.5	23.5	15.0	23.5	23.5	23.5	23.5	15.0	23.5
Total Split (s)	36.0	36.0	36.0	27.0	63.0	63.0	39.0	39.0	18.0	57.0
Total Split (%)	30.0%	30.0%	30.0%	22.5%	52.5%	52.5%	32.5%	32.5%	15.0%	47.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.65	0.57	0.16	0.93	0.49	0.19	0.27	0.94	0.83	0.58
Control Delay	53.3	43.7	2.8	49.8	22.9	3.2	37.4	61.0	55.1	27.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	43.7	2.8	49.8	22.9	3.2	37.4	61.0	55.1	27.7
Queue Length 50th (ft)	115	196	0	255	233	0	39	291	102	223
Queue Length 95th (ft)	#213	290	17	#414	329	36	80	#491	#231	327
Internal Link Dist (ft)		1249			234			550		408
Turn Bay Length (ft)	580		250	265		225	255		300	
Base Capacity (vph)	253	504	518	511	923	820	260	541	246	769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.57	0.16	0.93	0.49	0.19	0.25	0.90	0.83	0.56

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Harmony Rd & SR 44





HCM 6th Signalized Intersection Summary  
1: Harmony Rd & SR 44

Build PM  
08/03/2021

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	272	81	451	428	150	62	127	333	195	225	186
Future Volume (veh/h)	156	272	81	451	428	150	62	127	333	195	225	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1781	1841	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	164	286	0	475	451	0	65	134	351	205	237	196
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	8	4	2	2	2	2	2
Cap, veh/h	306	490		520	911		275	128	334	232	399	330
Arrive On Green	0.26	0.26	0.00	0.18	0.49	0.00	0.28	0.28	0.28	0.10	0.42	0.42
Sat Flow, veh/h	940	1870	1585	1781	1870	1510	940	457	1198	1781	947	783
Grp Volume(v), veh/h	164	286	0	475	451	0	65	0	485	205	0	433
Grp Sat Flow(s),veh/h/ln	940	1870	1585	1781	1870	1510	940	0	1655	1781	0	1729
Q Serve(g_s), s	18.7	16.0	0.0	21.5	19.6	0.0	6.9	0.0	33.5	9.5	0.0	23.2
Cycle Q Clear(g_c), s	18.7	16.0	0.0	21.5	19.6	0.0	13.0	0.0	33.5	9.5	0.0	23.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		0.45
Lane Grp Cap(c), veh/h	306	490		520	911		275	0	462	232	0	729
V/C Ratio(X)	0.54	0.58		0.91	0.50		0.24	0.00	1.05	0.88	0.00	0.59
Avail Cap(c_a), veh/h	306	490		520	911		275	0	462	246	0	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.6	38.6	0.0	28.0	20.8	0.0	38.4	0.0	43.3	30.5	0.0	26.8
Incr Delay (d2), s/veh	6.6	5.0	0.0	20.7	1.9	0.0	0.4	0.0	55.6	28.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	7.8	0.0	12.4	8.5	0.0	1.6	0.0	20.2	5.7	0.0	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	43.6	0.0	48.8	22.7	0.0	38.8	0.0	98.8	58.9	0.0	28.0
LnGrp LOS	D	D		D	C		D	A	F	E	A	C
Approach Vol, veh/h		450	A		926	A		550				638
Approach Delay, s/veh		44.6			36.1			91.7				38.0
Approach LOS		D			D			F				D
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	27.0	36.9		56.1		63.9	17.1	39.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5	5.5	5.5				
Max Green Setting (Gmax), s	21.5	30.5		51.5		57.5	12.5	33.5				
Max Q Clear Time (g_c+I1), s	23.5	20.7		25.2		21.6	11.5	35.5				
Green Ext Time (p_c), s	0.0	4.4		1.6		13.0	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	50.0
HCM 6th LOS	D

Notes

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

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	8	8	450	548	9
Future Vol, veh/h	7	8	8	450	548	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	10	536	652	11

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1214	658	663	0	-	0
Stage 1	658	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	201	464	926	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	198	464	926	-	-	-
Mov Cap-2 Maneuver	198	-	-	-	-	-
Stage 1	507	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	926	-	285	-	-
HCM Lane V/C Ratio	0.01	-	0.063	-	-
HCM Control Delay (s)	8.9	0	18.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	68	2	462	10	0	487
Future Vol, veh/h	68	2	462	10	0	487
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	50	6	56	2	2
Mvmt Flow	81	2	550	12	0	580

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1136	556	0	0	562
Stage 1	556	-	-	-	-
Stage 2	580	-	-	-	-
Critical Hdwy	6.42	6.7	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.75	-	-	2.218
Pot Cap-1 Maneuver	223	449	-	-	1009
Stage 1	574	-	-	-	-
Stage 2	560	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	223	449	-	-	1009
Mov Cap-2 Maneuver	223	-	-	-	-
Stage 1	574	-	-	-	-
Stage 2	560	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.9	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	226	1009
HCM Lane V/C Ratio	-	-	0.369	-
HCM Control Delay (s)	-	-	29.9	0
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	1.6	0

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	14	13	13	325	367	14
Future Vol, veh/h	14	13	13	325	367	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	15	15	374	422	16

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	834	430	438	0	-	0
Stage 1	430	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	338	625	1122	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	332	625	1122	-	-	-
Mov Cap-2 Maneuver	332	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	674	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1122	-	429	-	-
HCM Lane V/C Ratio	0.013	-	0.072	-	-
HCM Control Delay (s)	8.3	0	14	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	67	0	161	2	272	50	67	223	0
Future Vol, veh/h	0	0	1	67	0	161	2	272	50	67	223	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	92	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	74	0	179	2	302	56	73	242	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	812	750	242	723	722	330	242	0	0	358	0	0
Stage 1	388	388	-	334	334	-	-	-	-	-	-	-
Stage 2	424	362	-	389	388	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	298	340	797	342	353	712	1324	-	-	1201	-	-
Stage 1	636	609	-	680	643	-	-	-	-	-	-	-
Stage 2	608	625	-	635	609	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	211	316	797	323	328	712	1324	-	-	1201	-	-
Mov Cap-2 Maneuver	211	316	-	323	328	-	-	-	-	-	-	-
Stage 1	635	566	-	679	642	-	-	-	-	-	-	-
Stage 2	454	624	-	590	566	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	18	0	1.9
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1324	-	-	797	526	1201	-	-
HCM Lane V/C Ratio	0.002	-	-	0.001	0.482	0.061	-	-
HCM Control Delay (s)	7.7	0	-	9.5	18	8.2	0	-
HCM Lane LOS	A	A	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	2.6	0.2	-	-

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↗	↗	↗
Traffic Vol, veh/h	52	165	179	286	315	62
Future Vol, veh/h	52	165	179	286	315	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	179	195	311	342	67

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1043	342	409	0	-	0
Stage 1	342	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	254	701	1150	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	211	701	1150	-	-	-
Mov Cap-2 Maneuver	211	-	-	-	-	-
Stage 1	597	-	-	-	-	-
Stage 2	492	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.8	3.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1150	-	211	701	-	-
HCM Lane V/C Ratio	0.169	-	0.268	0.256	-	-
HCM Control Delay (s)	8.8	-	28.2	11.9	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.6	-	1	1	-	-



Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↗			↕	↗
Traffic Vol, veh/h	44	0	52	0	0	0	56	287	0	0	321	52
Future Vol, veh/h	44	0	52	0	0	0	56	287	0	0	321	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	235	-	-	-	-	175
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	0	57	0	0	0	61	312	0	0	349	57

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	783	783	349	840	840	312	406	0	0	312	0	0
Stage 1	349	349	-	434	434	-	-	-	-	-	-	-
Stage 2	434	434	-	406	406	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	311	325	694	285	302	728	1153	-	-	1248	-	-
Stage 1	667	633	-	600	581	-	-	-	-	-	-	-
Stage 2	600	581	-	622	598	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	299	308	694	251	286	728	1153	-	-	1248	-	-
Mov Cap-2 Maneuver	299	308	-	251	286	-	-	-	-	-	-	-
Stage 1	632	633	-	568	550	-	-	-	-	-	-	-
Stage 2	568	550	-	571	598	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.6	0	1.4	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1153	-	-	299	694	-	1248	-	-
HCM Lane V/C Ratio	0.053	-	-	0.16	0.081	-	-	-	-
HCM Control Delay (s)	8.3	-	-	19.3	10.6	0	0	-	-
HCM Lane LOS	A	-	-	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0.3	-	0	-	-

# TRAFFIC VOLUME WORKSHEETS

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**1.Harmony Rd @ SR 44**

**A.M. Peak Hour**

Condition	Old Phoenix Road Northbound				Harmony Road Southbound				SR 44 (Greensboro Road) Eastbound				SR 44 (Greensboro Road) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	63	144	359	566	158	104	65	327	119	357	70	546	178	170	82	430
Adjusted Existing 2021 Volumes:	69	157	391	617	172	113	71	356	130	389	76	595	194	185	89	468
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	76	173	432	681	190	125	78	393	143	429	84	656	214	204	98	516
Total New Trips:	0	32	0	32	49	24	49	122	64	0	0	64	0	0	64	64
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	76	205	432	713	239	149	127	515	207	429	84	720	214	204	162	580

**P.M. Peak Hour**

Condition	Old Phoenix Road Northbound				Harmony Road Southbound				SR 44 (Greensboro Road) Eastbound				SR 44 (Greensboro Road) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	55	80	299	434	112	170	104	386	72	244	72	388	405	384	67	856
Adjusted Existing 2021 Volumes:	56	81	302	439	113	172	105	390	73	246	73	392	409	388	68	865
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	62	89	333	484	125	190	116	431	81	272	81	434	451	428	75	954
Total New Trips:	0	38	0	38	70	35	70	175	75	0	0	75	0	0	75	75
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	62	127	333	522	195	225	186	606	156	272	81	509	451	428	150	1029

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**2. Harmony Rd @ Village Ln**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Village Lane Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	8	233	0	241	0	236	5	241	5	0	7	12	0	0	0	0
Adjusted Existing 2021 Volumes:	9	254	0	263	0	257	5	262	5	0	8	13	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	10	280	0	290	0	284	6	290	6	0	9	15	0	0	0	0
Total New Trips:	0	160	0	160	0	122	0	122	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	10	440	0	450	0	406	6	412	6	0	9	15	0	0	0	0

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Village Lane Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	7	235	0	242	0	334	8	342	6	0	7	13	0	0	0	0
Adjusted Existing 2021 Volumes:	7	237	0	244	0	337	8	345	6	0	7	13	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	8	262	0	270	0	372	9	381	7	0	8	15	0	0	0	0
Total New Trips:	0	188	0	188	0	176	0	176	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	8	450	0	458	0	548	9	557	7	0	8	15	0	0	0	0

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**3. Harmony Rd @ Sammons I Pkwy**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				- Eastbound				Sammons Industrial Parkway (South) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	0	205	51	256	1	245	0	246	0	0	0	0	26	0	2	28
Adjusted Existing 2021 Volumes:	0	223	56	279	1	267	0	268	0	0	0	0	28	0	2	30
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	0	246	62	308	1	295	0	296	0	0	0	0	31	0	2	33
Total New Trips:	0	160	0	160	0	122	0	122	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	406	62	468	1	417	0	418	0	0	0	0	31	0	2	33

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				- Eastbound				Sammons Industrial Parkway (South) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	0	246	9	255	0	279	0	279	0	0	0	0	61	0	2	63
Adjusted Existing 2021 Volumes:	0	248	9	257	0	282	0	282	0	0	0	0	62	0	2	64
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	0	274	10	284	0	311	0	311	0	0	0	0	68	0	2	70
Total New Trips:	0	188	0	188	0	176	0	176	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	462	10	472	0	487	0	487	0	0	0	0	68	0	2	70

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**4. Harmony Rd @ Harmony Ln**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Harmony Lane Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	13	194	0	207	0	223	14	237	15	0	18	33	0	0	0	0
Adjusted Existing 2021 Volumes:	14	211	0	225	0	243	15	258	16	0	20	36	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	15	233	0	248	0	268	17	285	18	0	22	40	0	0	0	0
Total New Trips:	0	41	0	41	0	53	0	53	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	15	274	0	289	0	321	17	338	18	0	22	40	0	0	0	0

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Harmony Lane Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	12	239	0	251	0	272	13	285	13	0	12	25	0	0	0	0
Adjusted Existing 2021 Volumes:	12	241	0	253	0	275	13	288	13	0	12	25	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	13	266	0	279	0	304	14	318	14	0	13	27	0	0	0	0
Total New Trips:	0	59	0	59	0	63	0	63	0	0	0	0	0	0	0	0
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	13	325	0	338	0	367	14	381	14	0	13	27	0	0	0	0



**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**5. Harmony Rd @ Scott Rd**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Private Drwy Eastbound				Scott Rd Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	0	79	24	103	107	210	1	318	0	1	3	4	46	1	33	80
Adjusted Existing 2021 Volumes:	0	86	26	112	117	229	1	347	0	1	3	4	50	1	36	87
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	0	95	29	124	129	253	1	383	0	1	3	4	55	1	40	96
Total New Trips:	0	32	8	40	0	43	0	43	0	0	0	0	11	0	0	11
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	127	37	164	129	296	1	426	0	1	3	4	66	1	40	107

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Private Drwy Eastbound				Scott Rd Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	2	202	34	238	60	155	0	215	0	0	1	1	49	0	145	194
Adjusted Existing 2021 Volumes:	2	204	34	240	61	157	0	218	0	0	1	1	49	0	146	195
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	2	225	38	265	67	173	0	240	0	0	1	1	54	0	161	215
Total New Trips:	0	47	12	59	0	50	0	50	0	0	0	0	13	0	0	13
Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	2	272	50	324	67	223	0	290	0	0	1	1	67	0	161	228

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**6. Harmony Rd @ Site Drwy 1(S)**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Site Driveway 1 (Southern) Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	0	207	0	207	0	246	0	246	0	0	0	0	0	0	0	0
Adjusted Existing 2021 Volumes:	0	226	0	226	0	268	0	268	0	0	0	0	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	0	249	0	249	0	296	0	296	0	0	0	0	0	0	0	0
Total New Trips:	128	32	0	160	0	24	27	51	20	0	97	117	0	0	0	0
Pass-by's Trips:	1	-1	0	0	0	-1	1	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	129	280	0	409	0	319	28	347	20	0	97	117	0	0	0	0

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Site Driveway 1 (Southern) Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts during Covid-19:	0	248	0	248	0	279	0	279	0	0	0	0	0	0	0	0
Adjusted Existing 2021 Volumes:	0	250	0	250	0	282	0	282	0	0	0	0	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
No-Build 2025 Volumes:	0	276	0	276	0	311	0	311	0	0	0	0	0	0	0	0
Total New Trips:	151	38	0	189	0	35	31	66	29	0	140	169	0	0	0	0
Pass-by's Trips:	28	-28	0	0	0	-31	31	0	23	0	25	48	0	0	0	0
Future 2025 Traffic Volumes:	179	286	0	465	0	315	62	377	52	0	165	217	0	0	0	0

**21-082 - Helms Farm Campus - Harmony Road**  
**Traffic Volumes**

**A&R Engineering**  
**August 2021**

**7. Harmony Rd @ Site Drwy 2(N)**

**A.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Site Driveway 2(Northern) Eastbound				Private Driveway Westbound				
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	
Existing 2021 Counts during Covid-19:	0	207	0	207	0	246	0	246	0	0	0	0	0	0	0	0	0
Adjusted Existing 2021 Volumes:	0	226	0	226	0	268	0	268	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		
No-Build 2025 Volumes:	0	249	0	249	0	296	0	296	0	0	0	0	0	0	0	0	0
Total New Trips:	32	20	0	52	0	27	27	54	20	0	24	44	0	0	0	0	0
Pass-by's Trips:	1	-1	0	0	0	-1	1	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	33	268	0	301	0	322	28	350	20	0	24	44	0	0	0	0	0

**P.M. Peak Hour**

Condition	Harmony Road Northbound				Harmony Road Southbound				Site Driveway 2(Northern) Eastbound				Private Driveway Westbound				
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	
Existing 2021 Counts during Covid-19:	0	248	0	248	0	279	0	279	0	0	0	0	0	0	0	0	0
Adjusted Existing 2021 Volumes:	0	250	0	250	0	282	0	282	0	0	0	0	0	0	0	0	0
Growth Factor (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		
No-Build 2025 Volumes:	0	276	0	276	0	311	0	311	0	0	0	0	0	0	0	0	0
Total New Trips:	38	29	0	67	0	31	31	62	29	0	35	64	0	0	0	0	0
Pass-by's Trips:	18	-18	0	0	0	-21	21	0	15	0	17	32	0	0	0	0	0
Future 2025 Traffic Volumes:	56	287	0	343	0	321	52	373	44	0	52	96	0	0	0	0	0



July 23, 2021

Ms. Lisa Jackson  
Deputy County Manager  
117 Putnam Drive  
Eatonton, GA 31024

**Re: DRI #3377, Lake Oconee Helms College**

Dear Ms. Jackson:

The Middle Georgia Regional Commission (MGRC) has completed its review of the Development of Regional Impact (DRI) for the Lake Oconee Helms College Development in Putnam County. MGRC conducted a careful review of the information submitted by the local government and comments received from potentially affected agencies. Two positive comments were received from the Putnam County Board of Commissioners and from the City of Eatonton. These comments are provided below:

- *Putnam County:*

The BOC feels the project will generate sufficient revenue to offset any additional requirements for services that the project may require. The project will provide the potential for both county employment opportunities and additional sales tax revenue.

- *City of Eatonton:*

This project will have significant positive impact on our community in several different ways. The increase in property tax revenue along with the educational opportunities as well as the housing and retail components are all welcomed additions to our community and region.

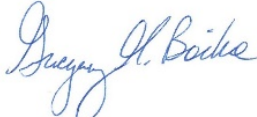
MGRC also reviewed the proposed project's potential regional and interjurisdictional impact and consistency with the Department of Community Affairs Quality Community Objectives, Middle Georgia Regional Plan, and Middle Georgia Regionally Important Resources Plan. After reviewing the information, MGRC staff notes that the proposed development site lies within an area of projected rapid growth as identified in the 2016 Regional Plan. It is recommended that local governments "take action early to ensure that growth occurs in a manner which makes it possible to provide necessary public services," (2016-2036 Plan for a Thriving Middle Georgia, pg. 17-18).

Ms. Lisa Jackson  
Re: DRI 3377  
July 23, 2021  
Page Two

This project will also help the region take advantage of the identified opportunity for “coordination with technical colleges and universities ... to provide job skills training to low-skill employees,” (2016-2036 Plan for a Thriving Middle Georgia, pg. 45).

**Please be advised that this concludes the DRI Review Process** and Putnam County may proceed with the final official action it deems appropriate regarding the proposed project. It is encouraged that Putnam County takes the materials presented in the DRI report into consideration when rendering its decision. The enclosed information is advisory in nature and under no circumstances should be considered as binding or infringing upon the host jurisdiction’s right to determine for itself the appropriateness of development within its boundaries.

Sincerely,



Greg Boike  
Director of Public Administration

Enclosure

cc: Affected Local Governments and Other Interested Parties (via email)  
Georgia Department of Community Affairs (via email)

## Development of Regional Impact Comments from Affected Parties

*Project ID: DRI #3377 – Lake Oconee Helms College (Putnam County)*

PUTNAM COUNTY BOARD OF COMMISSIONERS

Commenting Organization: \_\_\_\_\_

Street Address: 117 PUTNAM DR  
EATONTON, GA 31024

City: EATONTON State: GA Zip Code: 31024

Contact Person: BILLY WEBSTER Phone: 478-288-2188 Email: bwebster@putnamcountyga.us

Do you believe your jurisdiction will be affected by the proposed development? YES  NO

Please describe the effects (positive or negative) that the proposed project could have on your jurisdiction:

The BOC feels the project will generate sufficient revenue to offset any additional requirements for services that the project may require, The project will provide the potential for both county employment opportunities and additional sales tax revenue.

Form Completed by: Billy Webster

Signature: Billy Webster

Title: Chairman

Date: July 19, 2021

Mail, Fax, or Email this form to: Greg Boike  
Middle Georgia Regional Commission  
175 Emery Highway, Suite C  
Macon, GA 31217  
P: 478-751-6160  
F: 478-751-6517  
E: [gboike@mg-rc.org](mailto:gboike@mg-rc.org)

**Comments on DRI #3377 will be accepted beginning on Wednesday, July 7, 2021.  
All comments are due by Thursday, July 22, 2021.**

This request for comments has been sent to the following potentially affected parties: MGRC Council; City/county chief elected officials and key staff in the following counties: Putnam, Baldwin, Greene, Hancock, Jasper, Jones, and Morgan; School superintendents in the preceding counties; Development authorities of the preceding counties; GA Department of Natural Resources; GA Department of Transportation; Georgia Environmental Finance Authority; GA Department of Public Health; U.S. Fish & Wildlife Service; Northeast Georgia Regional Commission, and Central Savannah River Area Regional Commission.



# Development of Regional Impact Comments from Affected Parties

Project ID: DRI #3377 – Lake Oconee Helms College (Putnam County)

Commenting Organization: City of Eatonton

Street Address: 201 North Jefferson Ave.

City: Eatonton State: GA Zip Code: 31024

Contact Person: Gary Sanders Phone: (706) 485-3311 Email: gsanders@eatontonga.us

Do you believe your jurisdiction will be affected by the proposed development? YES  NO

Please describe the effects (positive or negative) that the proposed project could have on your jurisdiction:

This project will have significant positive impact on our community in several different ways. The increase in property tax revenue along with the educational opportunities as well as the housing and retail components are all welcomed additions to our community and region.

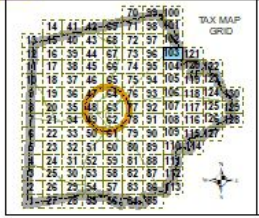
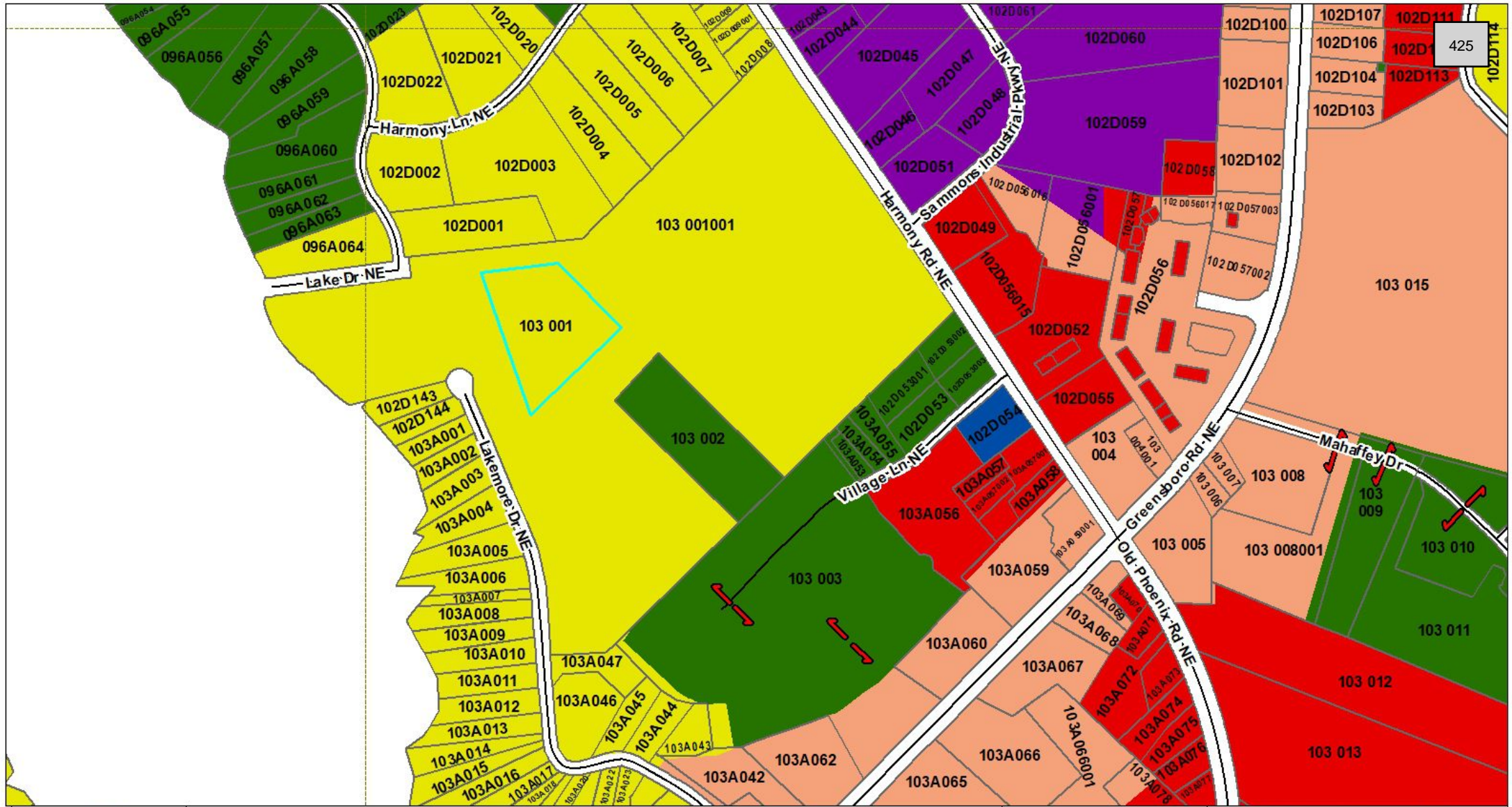
Form Completed by: John Reid Title: Mayer

Signature: [Handwritten Signature] Date: 07/22/2021

Mail, Fax, or Email this form to: Greg Boike  
Middle Georgia Regional Commission  
175 Emery Highway, Suite C  
Macon, GA 31217  
P: 478-751-6160  
F: 478-751-6517  
E: [gboike@mg-rc.org](mailto:gboike@mg-rc.org)

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**GEOGRAPHIC FEATURE LEGEND**

Eatonton Limits	Agriculture/Forestry	Mixed Use	Residential
County Boundary	Commercial	Park/Recreation/Conservation	Transportation/Communication/Utilities
Roads	Industrial	Public/Institutional	Undeveloped/Vacant
Parcels			
Parcel_Hooks			

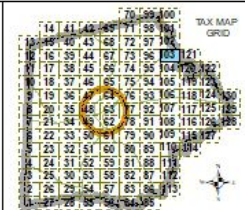
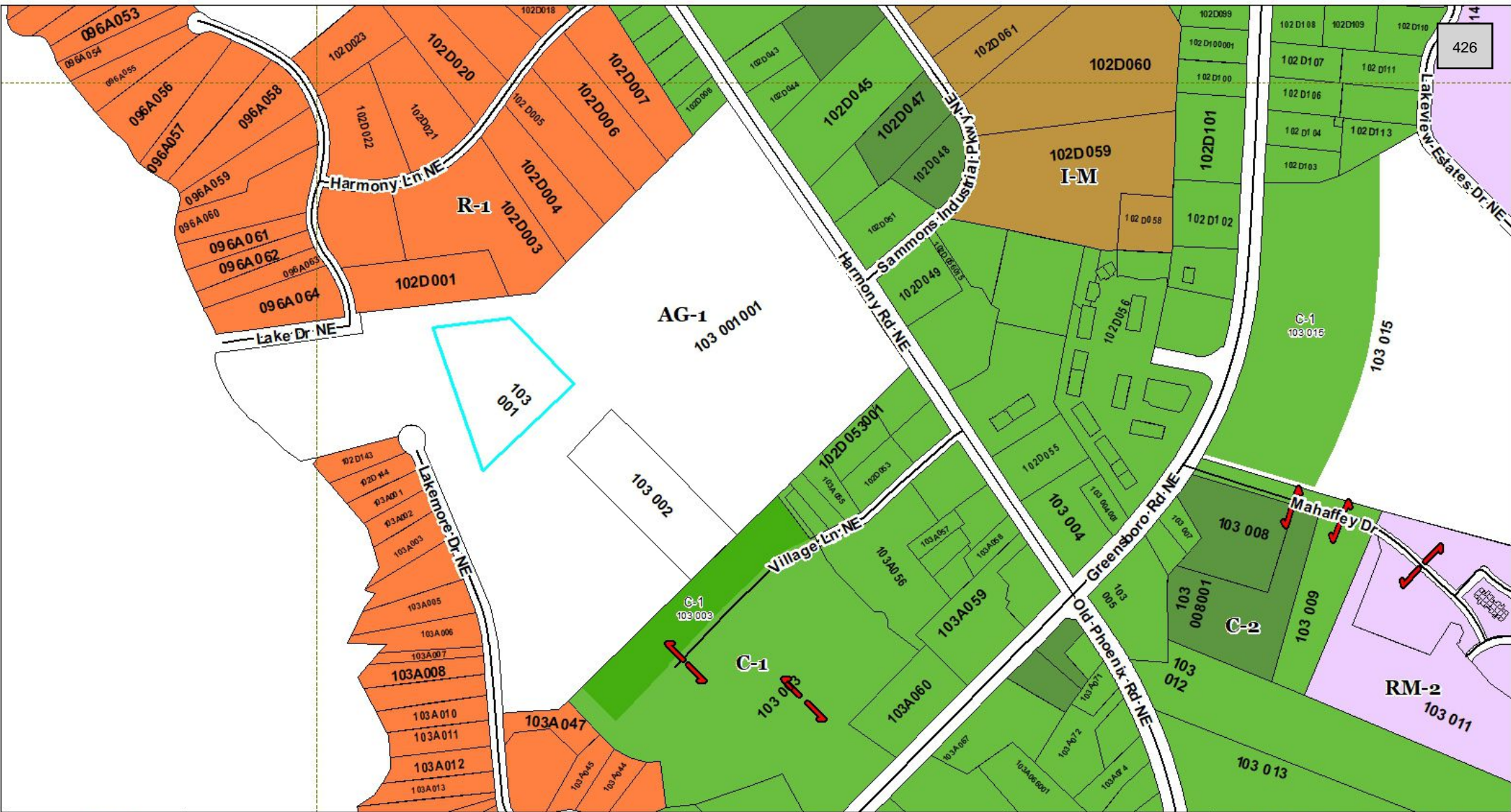
**MGRC**  
Middle Georgia Regional Commission  
175 Emery Hwy  
Suite C  
Macon, Georgia 31217  
(478) 751-6160  
Web:  
[www.middlegeorgia.org](http://www.middlegeorgia.org)

PUTNAM COUNTY, GEORGIA  
FUTURE LAND USE MAPS

**MAP 103**

MAP SCALE: 1" = 400'    SCALE RATIO: 1:4,800    DATE: JULY 2021





- Eatonton Limits
- County Boundary
- Roads
- Parcels
- Parcel Hooks

**GEOGRAPHIC FEATURE LEGEND**

Overlay District	AG-2	C-2 CITY	IND-2 CITY	R - 1 CITY	R-1	RM-2
No Code	C-1	I-M	MHP	R - 2 CITY	R-1R	RM-3
AG-1	C-1 CITY	IND-1 CITY	PUBLIC	R - 3 CITY	R-2	VILLAGE
AG-1 CITY	C-2	IND-2	PUBLIC CITY	R - 4 CITY	RM-1	



Middle Georgia Regional Commission  
 175 Emery Hwy  
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 Macon, Georgia 31217  
 (478) 751-6160

Web:  
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**PUTNAM COUNTY, GEORGIA  
 ZONING MAPS**



**MAP 103**

**File Attachments for Item:**

## 14. Consent Agenda

- a. Approval of Minutes - August 6, 2021 Regular Meeting (staff-CC)
- b. Approval of Minutes - August 6, 2021 Executive Session (staff-CC)
- c. Approval of Minutes - August 6, 2021 Budget Work Session (staff-CC)

# PUTNAM COUNTY BOARD OF COMMISSIONERS



117 Putnam Drive, Suite A ♦ Eatonton, GA 31024

## Minutes

Friday, August 6, 2021 ♦ 9:00 AM

Putnam County Administration Building – Room 203

The Putnam County Board of Commissioners met on Friday, August 6, 2021 at approximately 9:00 AM in the Putnam County Administration Building, 117 Putnam Drive, Room 203, Eatonton, Georgia.

### *PRESENT*

- Chairman Billy Webster
- Commissioner Gary McElhenney
- Commissioner Daniel Brown
- Commissioner Bill Sharp
- Commissioner Jeff Wooten

### *STAFF PRESENT*

- County Attorney Simon Williams
- County Manager Paul Van Haute
- County Clerk Lynn Butterworth

### **Opening**

1. Welcome - Call to Order

Chairman Webster called the meeting to order at approximately 9:00 a.m.  
(Copy of agenda made a part of the minutes on minute book page \_\_\_\_\_.)

2. Approval of Agenda

#### **Motion to approve the Agenda.**

**Motion made by Commissioner Sharp, Seconded by Commissioner Wooten.**

**Voting Yea: Commissioner McElhenney, Commissioner Brown, Commissioner Sharp, Commissioner Wooten**

3. Invocation - Mrs. Judy Fain

Mrs. Judy Fain gave the invocation.

4. Pledge of Allegiance (JW)

Commissioner Wooten led the Pledge of Allegiance.

Draft Minutes	Page 1 of 4	
August 6, 2021		

5. Special Presentation - Eatonton-Putnam Chamber of Commerce Bi-Annual Report  
Eatonton-Putnam Chamber of Commerce President Maggie Milner gave a report on the year-to-date activities of the Chamber. No action was taken.  
(Copy of report made a part of the minutes on minute book pages \_\_\_\_\_ to \_\_\_\_\_.)

**Regular Business Meeting**

6. Public Comments

Mr. Steve Sammons commented on Sammons Parkway and the new convenience center that is being built there. He submitted photos of the area.  
(Copy of photos made a part of the minutes on minute book pages \_\_\_\_\_ to \_\_\_\_\_.)

7. Consent Agenda

- a. Approval of Minutes - July 2, 2021 Regular Meeting (staff-CC)
- b. Approval of Minutes - July 12, 2021 Budget Work Session (staff-CC)
- c. Approval of Minutes - July 13, 2021 Budget Work Session (staff-CC)
- d. Approval of Minutes - July 20, 2021 Listening Session (staff-CC)
- e. Approval of Minutes - July 20, 2021 Executive Session (staff-CC)
- f. Authorization for Chairman to sign ACCG Group Self-Insurance Workers' Compensation Fund (GSIWCF) Safety Discount Verification Form (staff-HR)
- g. Authorization for Chairman to sign ACCG Interlocal Risk Management Agency (IRMA) Safety Discount Verification Form (staff-HR)

**Motion to approve the Consent Agenda.**

**Motion made by Commissioner McElhenney, Seconded by Commissioner Sharp.  
Voting Yea: Commissioner McElhenney, Commissioner Brown, Commissioner Sharp, Commissioner Wooten**

(Copy of documents made a part of the minutes on minute book pages \_\_\_\_\_ to \_\_\_\_\_.)

8. Appointment to the Central Georgia Joint Development Authority (staff-CC)  
**Commissioner Brown nominated Bill Sharp to continue serving on the Central Georgia Joint Development Authority.**

**Nomination made by Commissioner Brown, Seconded by Commissioner Wooten.  
Voting Yea: Commissioner McElhenney, Commissioner Brown, Commissioner Wooten  
Voting Abstaining: Commissioner Sharp**

9. Appointment of the Chairman of the Planning and Zoning Commission (staff-CC)  
**Chairman Webster nominated Alan Foster to serve as Chairman of the Planning & Zoning Commission.**

**Nomination made by Chairman Webster, Seconded by Commissioner Brown.  
Voting Yea: Commissioner Brown, Commissioner Sharp, Commissioner Wooten  
Voting Nay: Commissioner McElhenney**

**Reports/Announcements**

10. County Manager Report  
No report.

Draft Minutes	Page 2 of 4	
August 6, 2021		



11. County Attorney Report

No report, but an Executive Session is needed for litigation purposes.

12. Commissioner Announcements

Commissioner McElhenney: congratulated Commissioner Wooten for completing the commissioner training program

Commissioner Brown: congratulated Vincent Hancock on winning another gold medal in the Olympics

Commissioner Sharp: thanked the Fire Department, EMS and Sheriff's Office for participating in Sebastian Cove's National Night Out on August 3, 2021

Commissioner Wooten: none

Chairman Webster: announced that the Twin Bridges memorial ceremony for Mr. Wayne Moore has been postponed from August 7, 2021 to August 28, 2021

**Executive Session**

13. Enter Executive Session as allowed by O.C.G.A. 50-14-4 for Personnel, Litigation, or Real Estate

**Motion to enter Executive Session as allowed by O.C.G.A. 50-14-4 for Litigation.**

**Motion made by Commissioner Sharp, Seconded by Commissioner Brown.**

**Voting Yea: Commissioner McElhenney, Commissioner Brown, Commissioner Sharp, Commissioner Wooten**

Meeting closed at approximately 9:36 a.m.

14. Reopen meeting and execute Affidavit concerning the subject matter of the closed portion of the meeting

**Motion to reopen the meeting and execute the Affidavit concerning the subject matter of the closed portion of the meeting.**

**Motion made by Commissioner McElhenney, Seconded by Commissioner Wooten.**

**Voting Yea: Commissioner McElhenney, Commissioner Brown, Commissioner Sharp, Commissioner Wooten**

Meeting reopened at approximately 9:45 a.m.

15. Action, if any, resulting from the Executive Session

No action was taken.

Draft Minutes	Page 3 of 4	
August 6, 2021		

**Closing**

16. Adjournment

**Motion to adjourn the meeting.**

**Motion made by Commissioner Wooten, Seconded by Commissioner Sharp.**

**Voting Yea: Commissioner McElhenney, Commissioner Brown, Commissioner Sharp,  
Commissioner Wooten**

Meeting adjourned at approximately 9:46 a.m.

ATTEST:

Lynn Butterworth  
County Clerk

Billy Webster  
Chairman

# PUTNAM COUNTY BOARD OF COMMISSIONERS



---

Office of the County Clerk

117 Putnam Drive, Suite A ♦ Eatonton, GA 31024

706-485-5826 (main office) ♦ 706-485-1877 (direct line) ♦ 706-923-2345 (fax)

[lbutterworth@putnamcountyga.us](mailto:lbutterworth@putnamcountyga.us) ♦ [www.putnamcountyga.us](http://www.putnamcountyga.us)

The draft minutes of the August 6, 2021 Executive Session are available for Commissioner review in the Clerk's office.

# PUTNAM COUNTY BOARD OF COMMISSIONERS



117 Putnam Drive, Suite A ♦ Eatonton, GA 31024

## Budget Work Session

### Minutes

Friday, August 6, 2021 ♦ 9:00 AM\*

**\*To follow after regular board meeting  
which starts at 9:00 AM**

Putnam County Administration Building – Room 203

The Putnam County Board of Commissioners met for a Budget Work Session on Friday, August 6, 2021 at approximately 9:47 AM in the Putnam County Administration Building, 117 Putnam Drive, Room 203, Eatonton, Georgia.

#### *PRESENT*

- Chairman Billy Webster
- Commissioner Gary McElhenney
- Commissioner Daniel Brown
- Commissioner Bill Sharp
- Commissioner Jeff Wooten

#### *STAFF PRESENT*

- County Manager Paul Van Haute
- County Clerk Lynn Butterworth
- Finance Director Linda Cook

#### **Opening**

1. Call to Order

Chairman Webster called the Budget Work Session to order at approximately 9:47 a.m. (Copy of agenda made a part of the minutes on minute book page \_\_\_\_\_.)

#### **Work Session**

2. Budget Discussions

Two agencies requested additional funding for the FY22 budget. Comments were made by Bob Betzel, Alan Horton, Anita Morris (handout) and Pam Douglas for Putnam General Hospital and Walt Rocker III for Putnam Development Authority

Work Session was recessed at approximately 9:56 a.m. for the Board of Elections ribbon cutting. (After Mr. Horton spoke)

Work Session reconvened at approximately 10:11 a.m.

Draft Minutes	Page 1 of 2	
January 19, 2021		

County Manager Van Haute made a presentation regarding Putnam General Hospital.  
(Copy of handout and presentation made a part of the minutes on minute book pages  
\_\_\_\_\_ to \_\_\_\_\_.)

**Closing**

3. Adjournment

Chairman Webster announced the next budget related meeting is the Public Hearing on August 17, 2021 and the budget will be adopted on August 27, 2021.

**Motion to adjourn the meeting.**

**Motion made by Commissioner Sharp, Seconded by Commissioner Wooten.**

**Voting Yea: Commissioner McElhenney, Commissioner Brown, Commissioner Sharp, Commissioner Wooten**

Meeting adjourned at approximately 11:13 a.m.

ATTEST:

Lynn Butterworth  
County Clerk

Billy Webster  
Chairman

Draft Minutes	Page 2 of 2	
January 19, 2021		

**File Attachments for Item:**

15. Request for Final Plat Subdivision Approval for Eagles Rest at Cuscowilla Cottages (staff-P&D)





# PUTNAM COUNTY PLANNING & DEVELOPMENT

117 Putnam Drive, Suite B ♦ Eatonton, GA 31024

Tel: 706-485-2776 ♦ 706-485-0552 fax ♦ www.putnamcountyga.us

*PLAN 2021-01386*

## REQUEST FOR FINAL PLAT SUBDIVISION APPROVAL

THE UNDERSIGNED HEREBY REQUESTS AN INSPECTION OF SUBDIVISION FOR FINAL PLAT APPROVAL.

**APPLICANT:** Steve Eiberger - Hardeman Communities

**ADDRESS:** 1000 Dawson Village Road  
suite 220 Dawsonville, Ga 30534

**PHONE:** 770-616-7649

PROPERTY OWNER IS DIFFERENT FROM ABOVE: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
PHONE: \_\_\_\_\_

**PROPERTY:**

SUBDIVISION NAME: Eagles Rest at Cuscowilla Cottages  
LOCATION: Wingspan Way  
MAP 103B PARCEL \_\_\_\_\_ NUMBER OF ACRES 0.66 PHASE 2  
043047 -003 thru 006 and 043048 -018t hru 019

**SUPPORTING INFORMATION ATTACHED TO APPLICATION:**

- FOUR COPIES OF THE AS-BUILT SURVEY
- BOND FOR PERFORMANCE/MAINTENANCE
- DEDICATION DEEDS FOR EASEMENTS, STREETS, and RIGHT-OF-WAYS

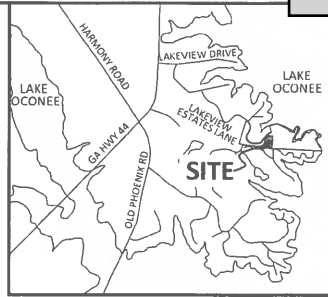
**\*APPLICANT HEREBY AFFIRMS THAT APPLICANT IS THE PROPERTY OWNER OR HAS THE LEGAL AUTHORITY TO SIGN THIS FORM ON OWNER'S BEHALF AND APPLICANT AGREES TO INDEMNIFY AND HOLD PUTNAM COUNTY HARMLESS IN THE EVENT IT IS DETERMINED APPLICANT DOES NOT HAVE SUCH LEGAL AUTHORITY.**

**\*SIGNATURE OF APPLICANT:** *[Signature]* **DATE:** 4/23/21

FOR OFFICE USE			
DATE FILED: _____	FILING FEE: \$330.00		
CHECK NO. _____	CASH: _____	CREDIT CARD <input checked="" type="checkbox"/>	RECEIPT# _____
BOC MEETING _____	DATE SIGNED: _____		

RCMD 2021 JUN 1  
*[Signature]*

SHEET 1 OF 2-PARCEL SURVEY  
FINAL PLAT FOR  
EAGLES REST AT CUSCOWILLA-PHASE 2  
COTTAGE AREA 1 - PHASE 2  
LAND LOT 366, DISTRICT 3  
GEORGIA MILITIA DISTRICT 380  
PUTNAM COUNTY, GEORGIA



Owner / Developer:  
**Hardeman Communities, Inc.**  
1000 Old Dawson Village Road, Ste 220  
Dawsonville, Georgia 30534  
(770) 871-1275

**SUBJECT PROPERTY INFORMATION:**  
CURRENT OWNER: HARDEMAN COMMUNITIES, INC.  
DEED RECORD: D.B. 1029, p. 270; D.B. 1029, p. 290; D.B. 1024, p. 513;  
PLAT RECORD: D.B. 1024, p. 517  
TAX RECORD: TAX PARCELS 103B043047 & 103B043048  
THIS PLAT CLOSURE ACCURACY IS 1 FOOT IN 294,000,000 FT.  
FIELD DATA WAS COLLECTED USING A LEICA TS12 ROBOTIC TOTAL STATION AND A JAVAD TRIUMPH IS DUAL-FREQUENCY RIK GLOBAL POSITIONING SYSTEM RECEIVER REFERENCING THE GPS STATEWIDE NETWORK AND HAVING A RELATIVE POSITIONAL ACCURACY OF LESS THAN 0.04 FEET.  
THE FIELD SURVEY WAS COMPLETED IN APRIL 2020.  
THE PROPERTY SHOWN HEREON IS NOT LOCATED WITHIN A FLOODPLAIN AS DETERMINED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY MAP PANELS 13237C 0075C AND 13237C 0100C FOR PUTNAM COUNTY, GEORGIA DATED 09/26/2008.  
EASEMENTS OR RIGHTS-OF-WAY MAY EXIST WHICH ARE NOT SHOWN HEREON AND MAY BE RECORDED OR UNRECORDED.  
HORIZONTAL: STATE PLANE, WEST ZONE, NAD83 (2011).  
VERTICAL DATUM: NAVD83.

SITE LOCATION MAP

(28)

NOF 103B043028  
EAGLES REST AT CUSCOWILLA, LLC  
D.B. 899, p. 306  
P.B. 35, p. 100

COTTAGE AREA 2  
COMMON AREA D  
2.29 AC  
FUTURE DEVELOPMENT  
NOF 103B043048  
EAGLES REST AT CUSCOWILLA, LLC  
P.B. 35, p. 100

WINGSPAN WAY  
40' R/W - PRIVATE DRIVE  
0.46 AC

COMMON AREA C  
0.14 AC

WINGSPAN WAY  
40' R/W - PRIVATE DRIVE  
0.44 AC

COTTAGE AREA 2  
COMMON AREA D  
2.29 AC

19  
0.11 ACRES

18  
0.11 ACRES

MARTIN OAKS BLVD  
40' R/W - PRIVATE DRIVE

EAGLES RUN  
40' R/W - PRIVATE DRIVE

COTTAGE AREA 1  
COMMON AREA A  
1.92 AC

WINGSPAN WAY  
40' R/W - PRIVATE DRIVE  
0.34 AC

COMMON AREA B  
0.10 AC

WINGSPAN WAY  
40' R/W - PRIVATE DRIVE  
0.34 AC

COTTAGE AREA 1  
COMMON AREA A  
1.92 AC

PHASE 1

PHASE 2

EAGLES WAY  
PRIVATE - 40' R/W

McGILLVRAV LANE NE

LINE LEGEND

(Symbol)	COTTAGE BUILDING ENVELOPE
(Symbol)	EASEMENT
(Symbol)	ADJOINING PROPERTY LINE
(Symbol)	CREEK OR SHORELINE
(Symbol)	ASPHALT PAVEMENT
(Symbol)	EDGE OF DIRT/GRAVEL COTTAGE BUILDING ENVELOPE (FUTURE DEVELOPMENT)
(Symbol)	BUILDING SETBACK LINE
(Symbol)	HOPKINS STORM PIPE
(Symbol)	WIRE FENCE
(Symbol)	UTIC UNDERGROUND FIBER/COMMUNICATION
(Symbol)	ULP UNDERGROUND POWER
(Symbol)	W WATER
(Symbol)	FM SANITARY FORCE MAIN
(Symbol)	OHP OVERHEAD POWER

LEGEND

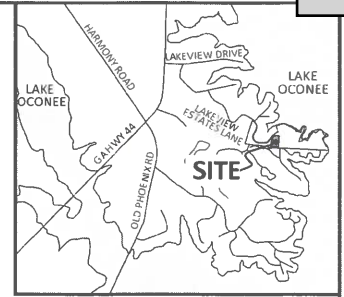
(Symbol)	OPEN-TOP PIPE FOUND	P.O.B.	POINT OF BEGINNING
(Symbol)	1/2" REBAR FOUND (UNLESS OTHERWISE NOTED)	P.O.R.	POINT OF REFERENCE
(Symbol)	1/2" SOLID ROD (REBAR) SET	NOF	NOW OR FORMERLY
(Symbol)	BEARING CHANGE (NO PIN SET)	D.B.	DEED BOOK
(Symbol)	SURVEYOR'S TRAVERSE NAIL	P.B.	PLAT BOOK
(Symbol)	SET SURVEYOR'S PK NAIL	LL	LAND LOT
(Symbol)	SET POWER POLE	O1P	OPEN TOP PIPE
(Symbol)	STORM STRUCTURE	CMF	CONCRETE MON. FD
(Symbol)	SIGN	W	WATER VALVE
(Symbol)	SANITARY MANHOLE	HY	HYDRANT

SCALE 1" = 40'  
JUNE 11, 2021



Corporate License No. 1381-000794  
**JORDAN ENGINEERING**  
144 N. WARREN ST. MONTICELLO, GA 31054  
(706) 458-8939 www.jordan-eng.com  
Engineering • Surveying • GIS • UAV Mapping

SHEET 2 OF 2-CERTIFICATIONS/DETAILS  
FINAL PLAT FOR  
EAGLES REST AT CUSCOWILLA-PHASE 2  
COTTAGE AREA 1 - PHASE 2  
LAND LOT 366, DISTRICT 3  
GEORGIA MILITIA DISTRICT 380  
PUTNAM COUNTY, GEORGIA



Owner / Developer:  
Hardeman Communities, Inc.  
1000 Old Dawson Village Road, Ste 220  
Dawsonville, Georgia 30534  
(770) 871-1275

SUBJECT PROPERTY INFORMATION:

CURRENT OWNER: HARDEMAN COMMUNITIES, INC.  
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PLAT RECORD: D.B. 1024, p. 517  
TAX RECORD: TAX PARCELS 1038043047 & 1038043048

THIS PLAT CLOSURE ACCURACY IS 1 FOOT IN 294,000,000 FT.

FIELD DATA WAS COLLECTED USING A LEICA TS12 ROBOTIC TOTAL STATION AND A JAVAD TRIUMPH L1 DUAL-FREQUENCY RTK GLOBAL POSITIONING SYSTEM RECEIVER REFERENCING THE U-GPS STATEWIDE NETWORK AND HAVING A RELATIVE POSITIONAL ACCURACY OF LESS THAN 0.04 FEET.

THE FIELD SURVEY WAS COMPLETED IN APRIL 2020.

THE PROPERTY SHOWN HEREON IS NOT LOCATED WITHIN A FLOODPLAIN AS DETERMINED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY MAP PANELS 13237C (0.75C AND) 13237C (1.00C) FOR PUTNAM COUNTY, GEORGIA DATED 09/16/2008.

EASEMENTS OR RIGHTS-OF-WAY MAY EXIST WHICH ARE NOT SHOWN HEREON AND MAY BE RECORDED OR UNRECORDED.

HORIZONTAL STATE PLANE, WEST ZONE, NAD83 (2011). VERTICAL DATUM: NAVD88.

OWNER'S ACKNOWLEDGEMENT AND DECLARATION:

STATE OF GEORGIA, PUTNAM COUNTY

THE OWNER OF THE LAND SHOWN ON THIS PLAT AND WHOSE NAME IS SUBSCRIBED THERETO, IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, ACKNOWLEDGES THAT THIS PLAT WAS MADE FROM AN ACTUAL SURVEY AND DEDICATES BY THIS ACKNOWLEDGEMENT AND DECLARATION TO THE USE OF THE PUBLIC FOREVER ALL STREETS, SEWER COLLECTORS, LIFT STATIONS, DRAINS, EASEMENTS, AND OTHER PUBLIC FACILITIES AND APPURTENANCES THEREON SHOWN.

SIGNATURE OF SUBDIVIDER: [Signature] DATE: 4/23/21  
SIGNATURE OF OWNER: Steve Eiberger DATE: 4/23/21

PRINTED NAME OF OWNER

FINAL PLAT APPROVAL:

THE DIRECTOR OF THE PLANNING AND DEVELOPMENT DEPARTMENT OR DESIGNEE CERTIFIES THAT THIS PLAT COMPLIES WITH THE PUTNAM COUNTY DEVELOPMENT REGULATIONS.

DATED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2021.

DIRECTOR, PLANNING AND DEVELOPMENT DEPARTMENT

INFRASTRUCTURE CERTIFICATIONS:

PUBLIC WORKS

I HEREBY CERTIFY THAT THE ROAD(S) MEET THE REQUIREMENTS OF THE PUTNAM COUNTY DEVELOPMENT REGULATIONS.

PUBLIC WORKS DIRECTOR DATE

PRIVATE WATER AND SEWER PROVIDER

I HEREBY CERTIFY THAT THE WATER SYSTEM MEETS THE REQUIREMENTS OF PIEDMONT WATER COMPANY AND THE GEORGIA DEPARTMENT OF NATURAL RESOURCES, EPD, FOR GRAVITY SEWER SYSTEMS.

SANITARIAN - PIEDMONT WATER COMPANY DATE

BOARD OF COMMISSIONERS:

THE PUTNAM COUNTY BOARD OF COMMISSIONERS HEREBY ACCEPTS THIS FINAL PLAT.

DATED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2021.

CHAIRMAN, BOARD OF COMMISSIONERS

AND

COUNTY CLERK

SITE DATA:

ZONING

ZONING JURISDICTION: PUTNAM COUNTY  
ZONING DISTRICT: RM-3 MULTI-FAMILY RESIDENTIAL

SETBACK SUMMARY

65' SETBACK FROM LAKE  
20' FRONT SETBACK  
20' REAR SETBACK  
15' SIDE SETBACK FROM COTTAGE PARCEL

DEVELOPMENT SUMMARY

PROPOSED TOWNHOMES: 19 UNITS TOTAL  
-PHASE 2 (LOTS 3, 18 & 19): 6 UNITS  
TOTAL SITE DENSITY: 2.57 UNITS/ACRE  
COTTAGE BUILDING ENVELOPES: 2.16 ACRES TOTAL - 2.93%  
MAX. DENSITY ALLOWABLE: 8 UNITS/ACRE  
BUILDING LOT COVERAGE PROVIDED: 25%  
MAX. BUILDING LOT COVERAGE: 35%  
MAX. BUILDING HEIGHT: 3 STORIES  
MIN. HEATED FLOOR AREA: 1,000 SF

OPEN SPACE SUMMARY

MIN. OPEN SPACE ALLOWABLE: 35% (2.58 ACRES)  
OPEN SPACE PROVIDED: 60% (4.50 ACRES)

ROAD SUMMARY

WINGSPIR WAY: 22' WIDE - 40' RIGHT OF WAY (PRIVATE)

UTILITY PROVIDERS

POWER: TRI COUNTY EMC  
WATER: PIEDMONT WATER COMPANY  
SEWER: PIEDMONT WATER COMPANY

EXISTING UTILITIES INCLUDE LOW PRESSURE SEWER AND WATER PROVIDED BY PIEDMONT WATER COMPANY. POWER AND STREET LIGHTS PROVIDED BY TRI COUNTY EMC.

LEGEND: OPEN TOP PIPE FOUND, 1/2" REBAR FOUND, 1/2" SOLID ROD (REBAR) SET, REBAR CHANGE (NO PIN SET), SURVEYOR'S TRAVERSE NAIL, SET SURVEYOR'S PIN NAIL, SET POWER POLE, STORM STRUCTURE, SIGN, SANITARY MANHOLE, P.O.B. POINT OF BEGINNING, P.O.R. POINT OF REFERENCE, N.O.D. NODOR CONFORMANCE, D.B. DEED BOOK, P.B. PLAT BOOK, L.L. LAND LOT, O.T.P. OPEN TOP PIPE, C.M.F. CONCRETE MON. FD, W.V. WATER VALVE, H. HYDRANT. LINE LEGEND: COTTAGE BUILDING ENVELOPE, EASEMENT, ADJOINING PROPERTY LINE, CREEK OR SHORELINE, ASPHALT PAVEMENT, EDGE OF DIRT/GRAVEL COTTAGE BUILDING ENVELOPE (FUTURE DEVELOPMENT), BUILDING SETBACK LINE, WIRE FENCE, UNDERGROUND FIBER/COMMUNICATION, UNDERGROUND POWER, WATER, SANITARY FORCE MAIN, OVERHEAD POWER.

GEORGIA 811 Utilities Protection Center, Inc. Know what's below. Call before you dig.

FINAL SURVEYOR'S CERTIFICATE:

IT IS HEREBY CERTIFIED THAT THIS PLAT IS TRUE AND CORRECT AS TO THE PROPERTY LINES AND ALL IMPROVEMENTS SHOWN THEREON, AND WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE BY ME OR UNDER MY SUPERVISION THAT ALL MONUMENTS SHOWN HEREON ACTUALLY EXIST, AND THEIR LOCATION, SIZE, TYPE, AND MATERIAL ARE CORRECTLY SHOWN. THE EQUIPMENT USED TO OBTAIN THE LINEAR AND ANGULAR MEASUREMENTS HEREIN WAS A LEICA TS12 ROBOTIC TOTAL STATION AND A JAVAD TRIUMPH L1 DUAL-FREQUENCY RTK GLOBAL POSITIONING SYSTEM RECEIVER REFERENCING THE U-GPS STATEWIDE NETWORK AND HAVING RELATIVE POSITIONAL ACCURACY OF LESS THAN 0.04 FEET. THIS PLAT HAS BEEN CALCULATED AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 294,000,000 FEET, AND CONTAINS A TOTAL OF 0.44 ACRES.

ROBERT O. JORDAN, RLS 2902

DATE OF EXPIRATION: 12-31

ROD 2021 1111, GEORGIA REGISTERED LAND SURVEYOR ROBERT O. JORDAN, No. 128 006708, JORDAN ENGINEERING, 140 N. WARREN ST., MONTICELLO, GA 31066, (706) 458-8999, www.jordan-eng.com, Engineering • Surveying • Bole • UAV Mapping

RECEIPT (TRC-001923-01-07-2021)

439



**BILLING CONTACT**

David Taylor  
Hardeman Communities  
1000 Old Dawson Village Road , 220  
Dawsonville, GA 30534

REFERENCE NUMBER	FEE NAME	TRANSACTION TYPE	PAYMENT METHOD	AMOUNT PAID
PLAN2021-01386	Final Plat/Inspection fee	Fee Payment	Credit Card	\$330.00
			<b>SUB TOTAL</b>	<b>\$330.00</b>
			<b>TOTAL</b>	<b>\$330.00</b>

**File Attachments for Item:**

16. Petition to waive final six-month time interval regarding the Application for Rezoning from Danny Copelan at 931 Pea Ridge Road [Map 092, Parcel 017001001] (DB)

Good morning. I hope all is well. I would like to add the following to the August 17<sup>th</sup>, Board of Commissioner’s Meeting:

Petition to waive final six-month time interval regarding the following re-Application for Rezoning:

Applicant/ Owner:	W. Davie (“Danny”) Copelan
Location:	931 Pea Ridge Road, Eatonton, GA 31024
Description:	Rezoning from A-2 to C-1
Tax Parcel:	Tax Parcel No.: 092 017001 001
Total Acreage:	Approximately 5.00 acres

Currently, Sec. 66-161. - Application for a zoning change, Putnam County Code of Ordinances, provides:

(a) Authority to initiate amendments. Applications to amend this chapter may be in the form of proposals to amend the text, or proposals to amend part or all of the official zoning maps (a rezoning) or by actions initiated by the board of commissioners. An application for an amendment to the official zoning map, affecting the same property, shall not be submitted more than once every 12 months. Such interval begins with the date of the final decision by the board of commissioners. The board of commissioners, in its discretion and by unanimous vote, may reduce or waive the final six-month time interval to amend the official zoning map affecting the same property. However, an application to alter conditions of rezoning as contemplated in subsection 66-166(b) of this division may be submitted at any time. Applications shall be the same as for a rezoning and shall comply with the requirements of this section, excluding subsections (b) and (c) hereof.

I would like to address the Board, on behalf of Mr. Copelan, to request that they waive the final six month time interval set forth in Sec. 66-161, so that we can re-apply for rezoning.

To be clear, this is NOT a vote to approve or deny the rezoning. This is simply a vote to consider allowing Mr. Copelan to re-apply for rezoning without the necessity of waiting until January of 2022. This will allow him to move on with his plans for the property, one way or another.

I can prepare a more formal letter before the meeting, but I just wanted to go ahead and get this over to you. Let me know if you need anything else. Thank you.

Best,  
Russell

Russell W. Wall  
Law Office of Russell W. Wall, LLC  
122 North Main Street, Suite B  
Greensboro, Georgia 30642  
(706) 453-0089 phone  
(706) 453-0094 fax



**RECEIVED**

442

By Lynn Butterworth at 12:36 pm, Aug 17, 2021



## LAW OFFICE OF RUSSELL W. WALL, LLC

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August 17<sup>th</sup>, 2021

**Sent via Email**

Mr. Billy Webster  
Chairman, Putnam Co. Board of Commissioners  
[Billy\\_webster@windstream.net](mailto:Billy_webster@windstream.net)

Mr. Daniel Brown  
District 2 Commissioner, Putnam Co. Board of Commissioners  
[dwbrown@reagan.com](mailto:dwbrown@reagan.com)

Mr. Gary McElhenney  
District 1 Commissioner, Putnam Co. Board of Commissioners  
[gmcElhenney@putnamcountyga.us](mailto:gmcElhenney@putnamcountyga.us)

Mr. Bill Sharp  
District 3 Commissioner, Putnam Co. Board of Commissioners  
[bsharp@putnamcountyga.us](mailto:bsharp@putnamcountyga.us)

Mr. Jeff Wooten  
District 4 Commissioner, Putnam Co. Board of Commissioners  
[jwooten@putnamcountyga.us](mailto:jwooten@putnamcountyga.us)

**RE: Applicant/ Owner:**  
**Location:**  
**Description:**  
**Tax Parcel:**  
**Total Acreage:**

**W. Davie ("Danny") Copelan**  
**931 Pea Ridge Road, Eatonton, GA 31024**  
**Rezoning from A-2 to C-1**  
**Tax Parcel No.: 092 017001 001**  
**Approximately 5.00 acres**

Dear Commissioners:

As you know, I am petitioning you to waive final six-month time interval regarding the above-referenced Application for Rezoning for Mr. Danny Copelan

Currently, Sec. 66-161. - Application for a zoning change, Putnam County Code of Ordinances, Subsection (a) provides:

An application for an amendment to the official zoning map, affecting the same property, **shall not be submitted more than once every 12 months**. Such interval begins with the date of the final decision by the board of commissioners. **The board of commissioners, in its discretion and by unanimous vote, may reduce or waive the final six-month time interval to amend the official zoning map affecting the same property.**

If you will recall, we previously appeared before you at the January 19<sup>th</sup>, 2021, Board of Commissioners' Meeting, where our original Application was denied by a vote of 3 to 1. Accordingly, unless the Board agrees to officially waive the final six-month time interval, we will be required to wait until January of 2022 to file our new Application, which means that we would likely appear before you at some point in the spring of 2022.


Among our reasons for the request:

- (1) Agreeing to the requested waiver is NOT an agreement that you will approve our new Application for Rezoning. We understand that. You would still have the opportunity to vote at a later date to approve or deny said Application. That decision will be left for another day. Accordingly, you are not losing anything by agreeing to the waiver.
- (2) Agreeing to the requested waiver would expedite a degree of "closure" over this matter for the County, Mr. Copelan, and any other concerned parties. In other words, the new Application will be filed either way, sooner or later. If the new Application is denied a second time, then Mr. Copelan will have the peace of mind knowing that he did everything he could, and, at that point, he could reassess his vision for the subject property. I would pose the question: Why not "get on with it"?

We listened attentively to the concerns of the Board at our last meeting, and we are eager to address them in our new Application. While, admittedly, emotions ran high (as they often do with situations like this, especially when the family farm is at stake), we respected the previous decision of the Board and took our lumps without any mudslinging, threat of lawsuit, etc. As you know, that's not always the case.

We are simply asking that the Board extend this small courtesy to a lifelong dairy-farming, tax-paying son of Putnam County. Thank you for your consideration.

Sincerely,  
Law Office of Russell W. Wall, LLC

By:   
\_\_\_\_\_  
Russell W. Wall

**File Attachments for Item:**

17. Approval of Changes to the Personnel Policy (staff-HR & CM)



**PUTNAM COUNTY  
PERSONNEL MANUAL**

**Employee Handbook**

Officials of Putnam County, Georgia  
At the time this policy was last amended:

- Billy Webster, Chairman
- ~~Kelvin Irvin,~~ Gary McElhenney, District One Commissioner
- Daniel Brown, District Two Commissioner
- B. W. “Bill” Sharp, District Three Commissioner
- ~~Vacant,~~ Jeff Wooten, District Four Commissioner

**ADMINISTRATION**

- Paul Van Haute, County Manager
- Lynn Butterworth, County Clerk
- Linda A. Cook, Finance Director
- Cynthia Miller, Human Resources Director
- Fleming & Nelson, LLP, General Counsel

Adopted August 19, 2003  
Amended December 5, 2003; June 3, 2005; November 20, 2007;  
December 2, 2011; May 1, 2015; July 5, 2019, October 2, 2020

**Proposed Changes August 17, 2021**

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## I. FOREWORD

### A. INTRODUCTION

The following policies have been developed and implemented to provide all employees with a clear and precise declaration of the policies and procedures relating to employees' employment, benefits, rights and actions. Any authority or responsibility not officially delegated to others is retained by the Putnam County Board of Commissioners.

This manual may be modified or changed by the Putnam County Board of Commissioners, through a resolution approved by the Board of Commissioners in a duly convened meeting. Employees will be notified of changes to this manual and required to sign an Acknowledgment of Receipt of the handbook.

The following policies shall be known collectively as the "Putnam County Personnel Manual" and is established to provide a fair, equitable, and productive work environment for all Putnam County employees. These policies recognize that the employees covered by the system should be selected and promoted according to their knowledge, skills and abilities, and regardless of factors extraneous to their performance and conduct.

### B. PURPOSE

The purpose of the Putnam County Personnel Policies is to establish a system of employment that implements and perpetuates the recognized merit principles of public employment. These principles include:

1. Recruitment, selection, and advancement of employees based on their knowledge, skills, and abilities;
2. The establishment of consistent pay rates and schedules which provide equitable and adequate compensation;
3. The retention of employees based on the adequacy of job performance, correction of inadequate performance when possible, and separation of employees when inadequacy cannot be corrected;
4. The assurance that Putnam County is an **equal opportunity employer** and that there is equal opportunity to applicants and employees alike in all aspects of personnel administration without regard to political affiliation, race, national origin, age, sex, handicap status, or religion and with proper regard for privacy and constitutional rights as citizens; and
5. The establishment of a uniform system for handling grievances and appeal rights based on the principles of due process.

These policies apply to the employees in all departments under the administration of the County Manager, and the County Manager, as the chief administrative officer, is responsible for administering these policies in an efficient, effective, and equitable manner.

Constitutional Officers, including Probate Judge, Superior Court Clerk, Tax Commissioner, and Sheriff, as well as employees under their authority, are not subject to the provisions of the Putnam County Personnel Manual. Constitutional Officers may, at their discretion, enforce any or all parts of the Personnel Manual.



C. DEFINITIONS

1. Adverse Action – An action taken for causes that result in a disciplinary suspension, disciplinary salary reduction, disciplinary demotion, or disciplinary dismissal.
2. Adverse Effect – The results of an action or decision that is not an adverse action but which deprives the employee of income or the opportunity to earn more income.
3. Anniversary Date – Used in calculating annual and sick leave, this is the day and date one calendar year after the date of original appointment and that same date in subsequent years.
4. Appointing Authority – The person who has, among other authorities, the authority to appoint and discharge all employees. The County Manager is the appointing authority for Putnam County.
5. County – The Putnam County Board of Commissioners, the County Manager, or their designee as management representatives or agents.
6. Days – When used as a means of counting, means calendar days unless otherwise stated.
7. Designee – The person or persons to whom the appointing authority delegates certain authority for the administration of the County.
8. Disabled – Any person who has a physical or mental impairment that substantially limits one or more major life activities, who has a record of such impairment, or who is regarded as having such impairment.
9. Employees – Employees who work for Putnam County and whose positions are included in the classification plan.
10. Employment Evaluation – Used in determining job performance. An employment evaluation is completed on an annual basis.
11. Gender Expression – An individual’s characteristics and behaviors (such as appearance, dress, mannerisms, speech patterns, and social interactions) that may be perceived as masculine or feminine.
12. Gender Identity – A person’s internal, deeply felt sense of being male, female, or something other or in-between, regardless of the sex they were assigned at birth. Everyone has a gender identity.
13. Gender Non-Conforming – This term describes people who have, or are perceived to have, gender characteristics and/or behaviors that do not conform to traditional

or societal expectations. Keep in mind that these expectations can vary across cultures and have changed over time.

14. Immediate Family – That part of an employee’s family which includes spouse, father, stepfather, grandfather, father-in-law, mother, stepmother, grandmother, mother-in-law, son, stepson, daughter, stepdaughter, brother, or sister.
15. LGBT – A common abbreviation that refers to the lesbian, gay, bisexual, and transgender community.
16. May – May is conditional and implies that there is discretion as to whether a condition exists, or an act or action will take place.
17. Separation – The termination of an employee from the services and payroll of the County.
18. Sexual Orientation – A person’s physical or emotional attraction to people of the same and/or other gender. Straight, gay, and bisexual are some ways to describe sexual orientation. It is important to note that sexual orientation is distinct from gender identity and expression. Transgender people can be gay, lesbian, bisexual, or straight, just like non-transgender people.
19. Shall/Will – Terms which are unconditional and imply that a condition exists or an act or action will take place.
20. Training Period – A six (6)-month period of time, during which a new employee or an employee who has been promoted to a higher position is tested on job capability and performance. Those new or promoted employees who are required to have state certification as a requirement for their continued employment in their respective positions must do so within the required timeframe, i.e. firefighters, code enforcement, tax assessors, etc.
21. Transgender – An umbrella term that can be used to describe people whose gender identity and/or expression is different from their sex assigned at birth. A person whose sex assigned at birth was female but who identifies as male is a transgender man (also known as female-to-male transgender person, or FTM). A person whose sex assigned at birth was male but who identifies as female is a transgender woman (also known as male-to-female transgender person, or MTF). Some people described by this definition do not consider themselves transgender – they may use other words or may identify simply as a man or woman. A person does not need to identify as transgender in order for the County’s nondiscrimination policies to apply to them.
22. Transition – The process of changing one’s gender from the sex assigned at birth to one’s gender identity. There are many different ways to transition. For some

people, it is a complex process that takes place over a long period of time, while for others it is a one- or two-step process that happens more quickly. Transition may include “coming out” (telling family, friends, and coworkers); changing the name and/or sex on legal documents; and, for many transgender people, accessing medical treatment such as hormones and surgery.

- 23. Unlawful Discrimination – Employment practices which are prohibited by state and/or federal laws and which include discrimination because of race, color, sex, religion, national origin, age, mental or physical disability, political affiliation, military status, or other characteristic protected by law.

D. PERSONNEL CATEGORIES

Each employee is designated as either “Nonexempt” or “Exempt” from federal and state wage and hour laws. Nonexempt employees are entitled to overtime pay under the specific provisions of federal and state laws. Exempt employees are excluded from specific provisions of federal and state wage and hour laws. An employee’s Exempt or Nonexempt status may be changed only upon written notification by the Putnam County Board of Commissioners. In addition to the above classifications, each County employee will fall under one of the following employment categories:

1. *Executive Personnel*

Generally, in order to qualify as an "executive" employee, an employee’s primary duties must involve the exercise of discretionary powers and take up 80 percent or more of his/her time, and must include (1) management of an organization or management of a subdivision or department of an organization, (2) supervision of two or more employees, and (3) the firing and hiring decisions. If the employee earns \$455 or more per week, manages an organization or department, and supervises the work of two or more employees, then the employee is automatically presumed to be an "executive" employee (29 C.F.R. Sec. 541.1).

2. *Administrative Personnel*

In order to qualify as an "administrative" employee, an employee’s primary duties which involve 80 percent or more of his/her time must (1) consist of non-manual work directly related to management policies or business operations or administrative work, and (2) involve the exercise of discretion or independent judgment. An administrator is automatically presumed to be an "administrative" employee if he/she makes \$455 or more per week (29 C.F.R. Sec. 541.2).

3. *Professional Personnel*

In order to qualify as a "professional" employee, an employee’s primary duties which take up 80 percent or more of his/her time must consist of (1) work requiring advanced knowledge of the type acquired through specialized study (e.g., accounting, law, medicine), or (2) original or creative work involving "artistic

endeavor." Additionally, the employee's work must (1) require the exercise of discretion and (2) be intellectual and varied in nature and involve output, which cannot be measured on the basis of standardized units of time. Generally, a person making \$455 or more per week whose duties include work involving advanced knowledge acquired through specialized training (e.g., accounting, law, medicine) will automatically be considered a "professional" employee (29 C.F.R. Sec. 541.3).

4. *Seasonal Personnel*

Employees hired to perform County functions on a seasonal basis. No hourly restrictions, maximum or minimum, apply to seasonal personnel. Seasonal personnel may include grass cutters, recreational personnel, amusement personnel, and any others deemed necessary by the Putnam County Board of Commissioners.

5. *Part-Time Personnel*

Employees hired for twenty-eight (28) or less hours per week averaged over a twenty-six (26) week period. Part-time employees are not eligible for County paid benefits. Firefighters and emergency medical service part-time employees may be hired as needed, not to exceed twenty-eight (28) hours per week averaged over a twenty-six (26) week period  
This type of personnel hiring does not have to be advertised.

6. *Temporary or Substitute Personnel*

Employees hired to fill intermittent positions. These may be current employees, temporary agency help, or others. Those temporaries hired for a long-term project may not work longer than twenty-four (24) hours per week averaged over a twenty-six (26) week period Firefighters and emergency medical service part-time employees may be hired as needed, not to exceed twenty-eight (28) hours per week averaged over a twenty-six (26) week period.

This type of personnel hiring does not have to be advertised.

7. *Personnel-in-Training*

Employees hired to fill a full-time position but who have not completed the initial training period as outlined in Section IV.

8. *Full-Time Personnel*

Employees who have successfully completed their training period and are eligible for full-time status and the benefits applicable under the classification as detailed in the Putnam County Personnel Manual.

9. *Contract Personnel*

Those individuals who enter into a contract with Putnam County to provide

specified services for a specified period of time.

10. *Intern*

Employees who are students, paid or unpaid, who work with Putnam County on a temporary basis as part of an academic program of study, either for credit or non-credit. An internship may be full-time or part-time and does not imply the promise of regular employment at the end of the internship period.

**II. RECRUITMENT**

**A. EQUAL EMPLOYMENT OPPORTUNITY AND PREJUDICIAL ACTS**

Policy Putnam County is an equal opportunity employer and is committed to the principles of non-discrimination and equality of employment opportunities. In accordance with applicable law, Putnam County prohibits and will not tolerate discrimination, harassment or retaliation against any applicant or employee based on any legally-recognized basis, including, but not limited to: race, color, religion, sex, pregnancy (including childbirth, lactation or related medical conditions), sexual orientation, gender identity or expression, age (40 and over), national origin or ancestry, physical or mental disability, genetic information (including testing and characteristics), veteran status, uniformed service-member status, or any other consideration protected by federal, state or local law. Such prohibition includes but is not limited to Georgia law’s prohibition against discrimination of employees and applicants for employment based on age (40-70) and disability, and against wage differentials based on sex.

Putnam County’s commitment to equal opportunity employment applies to all persons involved in County operations and prohibits unlawful discrimination, harassment, or retaliation by any employee, including supervisors and co-workers. In addition, any acts or threats of violence, property damage, harassment, intimidation, or other acts designed to infringe upon employees’ rights as described by federal anti-discrimination laws or Putnam County Personnel Policies will not be tolerated.

This policy is designed to strictly prohibit all discrimination and harassment, including sexual harassment, by or against supervisory officials, employees, nonemployees, as well as clients and customers. Please note that employees may be found to be in violation of this policy even if their conduct does not rise to the level of legally cognizable discrimination, harassment, or retaliation.

**B. TRANSGENDER NON-DISCRIMINATION IN EMPLOYMENT**

Putnam County does not discriminate in any way on the basis of sex, sexual orientation, gender identity, or gender expression. The purpose of this policy is to articulate Putnam County’s commitment to comply with all non-discrimination provisions pursuant to Title VII of the Civil Rights Act of 1964, as amended, and demonstrate the County’s desire to welcome and include transgender, gender non-conforming, and transitioning employees. This policy is designed to create a safe, productive, and inclusive workplace environment for all employees. This policy sets forth guidelines to address the needs of transgender and

gender non-conforming employees and clarifies how the relevant law and County policies should be implemented in situations where questions may arise about how to protect the rights or safety of such employees.

C. ANTI-DISCRIMINATION/HARASSMENT/RETALIATION

It is unlawful and a violation of County policy to discriminate in any way (including, but not limited to, failure to hire, failure to promote, or unlawful termination) against an employee because of the employee’s actual or perceived gender identity. Additionally, it is also unlawful and contrary to this policy to retaliate against any person objecting to, or supporting enforcement of legal protections against, gender identity discrimination in employment. The County is committed to creating a safe work environment for transgender and gender non-conforming employees. Any incident of discrimination, harassment, or violence based on gender identity or expression will be given immediate and effective attention, including, but not limited to, investigating the incident, taking suitable corrective action, and providing employees and staff with appropriate resources. These policies do not create a contract of employment. Employment for non-classified employees remains “at will”.

~~A. STATEMENT OF EQUAL EMPLOYMENT OPPORTUNITY (EEO) POLICY~~

~~It is the policy of Putnam County to foster, maintain, and promote equal employment opportunity. Putnam County is an Equal Opportunity Employer and shall select employees on the basis of applicants’ qualifications and ability to perform the duties of the job; without regard to race, color, sex, religion, national origin, age, mental or physical disability, political affiliation, military status, or other characteristic protected by law.~~

~~B. IMPLEMENTATION OF EEO POLICY~~

~~All personnel responsible for recruitment and employment shall continue to review regularly the implementation of this personnel policy and relevant practices to assure that equal employment opportunity based on reasonable performance-related job requirements is being actively observed to the end that no employee or applicant for employment shall suffer unlawful discrimination. The Human Resources Supervisor shall serve as Equal Employment Opportunity Officer. Notices with regard to equal employment matters shall be posted in conspicuous places on the premises in places where notices are customarily posted.~~

D. ANNOUNCEMENT OF VACANT POSITIONS

Upon the request of the Department Head, and with the approval of the County Manager, the County Clerk or Human Resources Supervisor shall publicize vacant full-time positions by advertising internally by posting a notice at the Putnam County Administration Office and at all departments for ten (10) working days. If a qualified applicant is not found internally after the initial ten (10) working days, Putnam County shall publicize vacant full-time positions by posting a notice at the Putnam County Administration Office and at all



departments for ten (10) working days, in addition to advertising for two (2) weeks in the designated Putnam County legal organ and on the Putnam County website. Additional efforts should be made to advertise for the position through additional avenues including but not limited to the Georgia Department of Labor, the Georgia Municipal Association, and the Association County Commissioners of Georgia. The announcement shall specify the title, salary dependent upon qualifications, skills, experience, position qualifications, application form availability, work hours, and position closing date.

E. APPLICATION FOR EMPLOYMENT

All persons expressing interest in employment with Putnam County shall be given the opportunity to file an application for employment. Standard application forms shall be available at the Human Resources office and the Putnam County website. In employment areas such as public safety and finance where the public has a compelling interest in the security of property and life, applicants for employment, promotion, and transfer may be asked to supply personal information that would not be needed in other employment areas. Applicants may be required to furnish various criminal histories and other documents as requested and is applicable to job requirements. The requested documents will be furnished at the applicant’s expense. All costs will be reimbursed upon hire.

All completed applications shall be returned to the Human Resources office.

F. TESTING

Putnam County reserves the right to require tests for selected positions. All such tests will be job related and fairly administered. Said tests will be given and evaluated by qualified, unbiased personnel.

G. DURATION OF APPLICATIONS

Applications will only be accepted for the position(s) advertised and only for the specific vacancy (ies). All qualified applications submitted for an advertised position will be kept for the duration of the training period (6 months) of the person hired. If the hired employee does not complete the training period, the applications on file can be reviewed in an attempt to fill the position instead of re-advertising the position.

H. TYPES OF RECRUITMENT

All full-time positions shall be filled as provided in Section II.C (Announcement of Vacant Positions). Temporary and part-time positions need not be advertised and may be filled as needed under the authorization of the County Manager.

I. QUALIFICATIONS

All applicants shall meet the qualifications and requirements established for the position in the job description. It is Putnam County’s desire to fill vacancies from within its current

workforce. County employees interested in a newly opened position must file an application indicating a desire to be considered during the internal advertising period.

### III. APPOINTMENTS

#### A. GENERAL

Appointments and promotions to all positions shall be solely on the basis of merit, which shall be determined by evaluation of the applicant's (1) training, education, experience, and physical fitness (if applicable); (2) oral interview; or (3) whenever practical, an examination or demonstration test. Position vacancies shall be filled by qualified applicants. Employees in the department where the vacancy occurs may apply for available positions if they possess the required qualifications.

#### B. APPLICATION REVIEW

The Human Resources Supervisor, once applications are reviewed for completeness, shall forward all applications to the proper Department Head and the County Manager for review. The Department Head will interview all qualified applicants, except as noted below, and present his/her findings to the County Manager with recommendations. It shall be the sole responsibility of the County Manager and Department Head to fill the vacancy. They may accept or reject any and all applications; the County Manager shall determine the proper grade/step salary rate for the position. The County Manager shall have the responsibility to hire and/or remove all employees, except those appointments made by the Board of Commissioners under current legislation. The Putnam County Board of Commissioners reserves the authority to appoint and/or remove those appointments made under current legislation. The County Manager shall notify the Board of Commissioners of his/her appointments and/or removals.

#### C. CONDITIONS

Job offers are subject to a pre-employment substance abuse screening by a qualified physician to be paid for by the County. Part-Time, temporary, and seasonal jobs will be subject to a substance abuse screening only. Full-time jobs will be subject to a substance abuse screening and physical. The physician must be presented with a general job description and must provide a statement of the applicant's ability to perform that job. The physician's statement and pre-employment substance abuse test results must be mailed or delivered directly to the Human Resources Supervisor. Other conditions of hiring may include, but not be limited to, written and/or performance tests and a physical examination. The Department Head and/or County Manager may require proof of education and/or certification.

Putnam County shall enroll in and participate in E-Verify, the electronic verification of work authorization program operated by the United States Department of Homeland Security, pursuant to the Illegal Immigration Reform and Immigration Responsibility Act of 1996. The Human Resources Supervisor shall ensure that the E-Verify process is applied to all persons to be hired by Putnam County as County employees.

Motor Vehicle Records (MVRs) will be examined prior to the date of employment and every one (1) year thereafter. Any job offer made where the job requires a valid driver's license will be contingent upon a MVR meeting the required standards. Continued employment with the County in a position requiring a valid driver's license will require a MVR meeting the specified standards. Also anyone subject to utilizing their personal cars on County business will require a MVR meeting the specified standards.

D. FORMS

All new employees must complete the Federal (I-9) "illegal alien" form as required by law, notice of Workers' Compensation procedures, the federal and State of Georgia tax withholding forms, and various other forms when applicable.

All new employees shall be briefed on their rights, benefits, disciplinary codes and all matters contained in this manual. A copy of this manual must be given to the new employee and his/her signature obtained as receipt of this manual for the personnel file. The Department Head will provide the employee with a job description, as well as introduction to fellow workers and County facilities.

**IV. TRAINING PERIOD**

A. INTENT

The training period shall be regarded as an integral part of the selection process and shall be utilized for closely observing the employee's work for securing the most effective adjustment of a new employee or his/her position and for rejecting any employee whose performance is not satisfactory.

B. CONDITIONS

All new Putnam County employees shall spend the first 180 working days (approximately 6 months) of their employment in a training period. All new employees hired to full-time positions shall serve this training period during which there shall be no responsibility on the part of the County for their continued employment. Employees in full-time positions who are promoted or laterally transferred shall also serve a training period associated with a new position but shall retain the benefits they received before promotion during the training period including the automatic right to appeal a termination. Employees serving a training period shall receive all benefits provided in accordance with this policy with the following exceptions.

1. Dismissal of a new employee during a training period shall deny the employee the right to appeal the dismissal. (In the case of an employee promoted to a higher position in the County service, failure to successfully perform the duties in the higher position does not deny the employee the right to return to the position formerly held, or similar position, if the position is vacant and necessary or in the extreme the right to appeal a dismissal.

2. If an employee is laid off during a training period, and performance of duties has been satisfactory, then if rehired to the same department, that employee shall be given credit for the portion of the training period completed prior to the layoff.
3. Should the employee's performance be deemed questionable, unsatisfactory or further evaluation deemed necessary, for any reason including injury or illness, the County Manager may extend the training period for an additional period of time, with entire training period to last no more than 365 days. If the training period is extended, the employee's personnel record must be so annotated and acknowledged by the employee. If deemed necessary, the employee may be terminated subject to the conditions contained in paragraph B. above.

C. REPORTS

The Department Head shall meet with the employee twice during the training period to inform the employee of his/her progress. The mid-point training period review shall be conducted at the end of the first ninety (90) days of the training period. At least twenty (20) working days prior to the end of the employee's training period, the Department Head shall notify the County Manager in writing:

1. Whether the employee is performing satisfactory work;
2. Whether the employee should be retained in the current position;
3. Whether the employee should be given full-time status;
4. Whether the employee, if a new hire, should be discharged;
5. Whether the employee, if in training following a promotion, should be reinstated to the employee's previous classification; or
6. Whether the training period should be extended.

The County Manager shall accept or reject the Department Head's recommendation. The County Manager's decision shall be final.

D. DISMISSAL

At any time during the training period, the Department Head may recommend the removal of an employee if, in his/her opinion, the training period indicates that such employee is unable or unwilling to perform the duties of the position satisfactorily or that his/her habits and lack of dependability do not merit his/her continuance with the service. Upon such recommendation, the Department Head shall immediately submit to the County Manager a written report establishing cause. Disciplinary decisions, including dismissal, are ultimately the responsibility of the County Manager. An employee serving their initial

training period does not have the right of appeal unless it is alleged that the civil rights of the employee as offered by the U.S. Constitution have been violated.

If an employee has committed an offense, which is considered cause for disciplinary action under the provisions of these regulations, the County Manager may dismiss the employee without prior notice. The written report described above is mandatory.

An employee found to have been hired through fraud or intentional error on the part of the employee shall be removed immediately.

**V. REMUNERATION**

**A. THE PAY PLAN**

The schedule of salary ranges and class titles assigned to salary ranges, as most recently adopted and subsequent amendments thereto is the pay plan for Putnam County. The County Manager, with assistance from the Finance Director and Human Resources Supervisor, shall be responsible for the administration and maintenance of the pay plan. The pay plan is intended to provide equitable compensation for all positions when considered in relation to each other, to general rates of pay for similar employment in the private sector and in other public jurisdictions in the area, to changes in the cost of living, to financial conditions of the County, and other factors. To this end, the County Manager shall from time to time make comparative studies of all factors affecting the level of salary ranges and shall recommend to the Board of Commissioners such changes in salary ranges as appears to be warranted.

**B. PAYMENT AT A LISTED RATE**

All employees covered by the pay plan shall be paid at an identified listed rate within the salary ranges established for their respective job classes except for employees whose present salaries are above the maximum rate following transition to a new or revised pay plan.

**C. PAY RATES IN PROMOTION, DEMOTION, AND TRANSFER**

When an employee is promoted, demoted, or transferred, the rate of pay for the new position will be established in accordance with the following rules:

1. An employee who is promoted to a position with a job classification higher than the previous position shall be placed at the minimum entry range but no lower than the employee’s current rate of pay. As deemed necessary, the County Manager may award an out-of-sequence increase in recognition of exemplary job performance.
2. An employee who is demoted shall receive a salary commensurate with the position’s responsibilities and level of difficulty.

- 3. An employee transferred from one position to another position having the same job classification shall continue to be paid at the same rate.

D. PAY RATES FOR PEAKED OUT EMPLOYEES

When an employee has served for a full year in the maximum range to which his/her position is assigned, that person may, by virtue of the annual employee evaluation process, be considered for a pay increase in the amount of the standard percentage established by the Board of Commissioners in the grade to which his/her position is assigned.

E. PAY FOR PART-TIME WORK

The pay plan established by this policy is for full-time service. An employee hired for less than full-time service will be paid an amount recommended by the Department Head and approved by the County Manager.

F. OVERTIME

Overtime work shall be that work performed by an employee which either exceeds the number of hours constituting the established work week for the employee's position (40 hours per week or hours worked which exceed the declared schedule for firefighters). Positions considered professional or managerial are exempt from overtime pay, and include at the minimum all Executive and Administrative Personnel as defined in Section I. Other positions as determined by the County Manager in accordance with the Fair Labor Standards Act may be declared exempt from recognized overtime compensation. For any exempt employee under this policy, if a natural or manmade disaster is declared, these employees become nonexempt and revert to an hourly rate until the said natural or manmade disaster is over.

Overtime opportunities will be distributed as equally as practicable based on level of skills and experience among employees in the same job class and department regardless of age, sex, race, color, creed, religion, national origin, mental or physical disability, political affiliation, military status, or other characteristic protected by law.

Employees required to work overtime may be compensated with time off determined at a rate of one and one-half hours off for every one hour of overtime worked. Otherwise, employees will be compensated at a rate of one and one-half times their normal rate of pay for approved overtime. All such overtime must be authorized by the Department Head and approved by the County Manager or their designee.

G. PAY PERIOD

Putnam County employees are paid biweekly (every other week) on the Friday following the close of the pay period. The pay period begins on Monday and ends on Sunday, two



weeks later. Should the Friday that employees are to be paid fall on a holiday, employees will be paid on the last working day prior to the holiday.

Checks will normally be distributed to the Department Head on the morning of the workday on payday. Employees on vacation may pick up their check at any time during the payday at the Payroll Office, provided an authorization from the Department Head or County Manager has been received by the Payroll office. Should an employee designate another individual to pick up his/her paycheck, the issuer must have written permission from the employee, and his/her check will be issued in the same manner, as it would be to the employee. Photo identification and signed acknowledgement of receipt of check will be required of the individual receiving check.

The County Manager or designee may require employees to provide photo identification prior to receiving their paycheck.

H. PAYROLL DEDUCTIONS

Federal and state income taxes, social security tax, other amounts required by law, and items authorized by the Board of Commissioners (i.e., benefits, Peace Officers Pension Plan, Firefighters Pension Plan) shall be deducted each pay period, monthly, or semi-weekly from the employee’s pay.

**VI. CONDITIONS OF EMPLOYMENT**

A. WORK HOURS

The workweek for full-time employees, except for firefighters will be forty (40) hours. Firefighters will be paid in accordance with the Fair Labor Standards Act (FLSA 29 USC 207).

B. WORKWEEK

The workweek shall be established by the Department Heads, with approval from the County Manager, and shall be in accordance with the needs of the service provided. The workweek shall be the same for all persons occupying full-time positions in the same class under the same conditions.

C. ATTENDANCE

Employees are required to be punctual. Repetitive tardiness must be documented by the Department Head and placed in the employee’s file. An employee who is on twenty-four (24) hour call and/or has a County vehicle at his/her residence is considered on the job when he/she leaves his/her residence/domicile in response to a call. Each Department Head is responsible for a complete attendance record for each departmental employee. Attendance records shall be submitted to the Payroll office, including attendance, leave time and unauthorized absence, on the Monday after the payroll week ends.

Employees must notify their respective Department Head within thirty (30) minutes prior to the regularly scheduled workday if they do not intend to be on the job for that day, including the reason for the absence. Employees who are absent from work for three (3) consecutive 8-hour periods without leave approval (or without having called in to report the absence) will be considered as having voluntarily abandoned his/her job. Insufficient notice, as stated above, is considered no notice. In some circumstances a doctor's excuse may be necessary prior to return to work. Anyone absent three consecutive 8-hour periods will be required to bring a doctors excuse prior to their return to work. The absence of an employee from duty, including any absence for a day or part of a day that is not authorized by a specific grant or leave request will be deemed to be an absence without leave and any such absence shall be deemed to be an absence without leave. Any such absence shall be without pay and may be cause for disciplinary action, including and up to termination. Absences of three consecutive 8-hour periods or longer or absences of leave without pay must be reported to the Human Resources Supervisor in writing.

D. BREAKS

Employees shall be given the opportunity to take one fifteen (15)-minute break within a continuous four-hour work period. Each Department Head shall schedule these breaks so that normal department operations are not jeopardized. Employees shall be given the opportunity to take a meal break for at least one-half hour, but not to exceed one (1) hour as close to the middle of the employee's shift as possible. Each Department Head shall schedule the meal breaks so that normal department operations are not jeopardized. Public Safety breaks will be determined by their supervisors.

Employees shall be given the opportunity to take an additional meal break should the shift be scheduled over eight (8) hours in a given twenty-four (24) hour period. Hours are under the same restrictions as the meal break. Any and all break time cannot be accumulated and in no instance can be saved for the purpose of leaving work early or accumulating sick or ~~vacation~~ **annual** time.

E. OVERTIME

The employee categories of executive personnel, administrative personnel, contract personnel and professional personnel, are exempt from the following overtime rules and will not be compensated for overtime. All other employees will be paid at one-and-one-half times their hourly rate in accordance with the provisions of the Fair Labor Standards Act (FLSA 29 USC 207). Hours worked will not include hours off the work site (i.e., sick time, ~~vacation~~ **annual leave**, holiday, etc.), except for time physically worked on a regularly scheduled holiday. Department Heads shall arrange work schedules to minimize overtime pay and allow an equitable distribution of the workload to current employees.

F. TESTING

Employees may be required and subject to periodic testing for job competency, physical ability to perform job, substance abuse, or other tests deemed appropriate by the County Manager.

An annual physical may be required for those positions that affect public welfare and safety. These positions are Firefighters, Emergency Medical Service personnel, Law Enforcement personnel, County vehicle operators, Transit System drivers, and personnel that perform maintenance on those vehicles.

Putnam County is a drug-free and alcohol-free workplace. The improper use of alcohol and controlled substances by Putnam County employees constitutes a direct threat to property and the safety of others. The work involved in many positions is inherently dangerous, and the safety of citizens and fellow employees depends upon the ability of employees to think clearly with unimpaired faculties.

It is the objective of Putnam County to provide safe and effective public service. To meet this objective, the problem of alcohol and controlled substance abuse must be identified, confronted, and defeated. In order to achieve this, Putnam County has developed a comprehensive alcohol and controlled substance policy. As used in this Manual, the term “controlled substance” shall have the meaning and include the substances defined as “controlled substances” in the Georgia Controlled Substance Act, O.C.G.A., S16-13-20, et seq., and especially O.C.G.A., S16-12-21(4) as said Section and said Act shall appear from time to time.

Substance abuse testing is required for each of the following circumstances:

1. *Pre-Employment Testing*

A pre-employment drug screening shall be conducted when an individual applies for an employment position with Putnam County. Any job applicant who refuses to submit to a pre-employment drug test or who has a confirmed positive test shall not be hired. An employee who transfers from one position covered by this manual to another position covered by this manual does not require pre-employment testing. Potential hires must go for testing at the specified time and place as directed. Once they are at the testing facility, they may not leave for any reason until testing is complete.

2. *Post-Accident Testing*

Following any accident that involves damage to property or personal injury, Putnam County will promptly test each surviving employee for alcohol and/or drugs.

Any employee who is involved in an accident while on duty or on County business in their personal vehicle must remain available for alcohol and drug testing. Each employee who is requested to submit to testing shall do so within two hours of the accident. Employees who have been involved in an accident may not consume alcohol for eight hours following the accident or until an alcohol test has been conducted.

An employee who is subject to post-accident testing and who fails to remain readily available for such testing may be deemed to have refused to submit to testing. An employee who leaves the scene of the accident prior to submission to an alcohol and drug test without first notifying his or her supervisor shall be deemed to have refused to submit to testing unless the employee left the scene to seek emergency medical attention or assistance in responding to the accident. If an employee who is subject to post-accident testing is hospitalized, the hospital or medical facility shall be asked to obtain samples for alcohol and/or drug testing.

If an alcohol test is required pursuant to this section and is not administered within two hours following the accident, the supervisor for the employee shall prepare a written report explaining why the test was not promptly administered and shall forward that report to the County Manager. If an alcohol test is required pursuant to this section and is not administered within eight hours following an accident, the County shall discontinue efforts to administer an alcohol test and the supervisor for that employee shall prepare a written report explaining why the alcohol test was not conducted. The written report shall be sent to the County Manager.

If a drug test is required pursuant to this section and is not administered within thirty-two (32) hours following an accident, the County shall discontinue efforts to administer a drug test, and the supervisor for that employee shall prepare a written report explaining why the drug test was not conducted. The written report shall be sent to the County Manager.

3. *Reasonable Suspicion Testing*

Reasonable suspicion testing is designed to identify alcohol or drug-affected employees who may pose a danger to themselves or to others in their job performance.

The decision to test an employee for alcohol or drugs pursuant to this section must be based on a reasonable and articulable suspicion of alcohol or drug use by the employee on the basis of specific contemporaneous physical, behavioral, or performance indicators. In addition, an employee’s close association with law enforcement identified drug dealers and/or drug users may be used as “reasonable suspicion” for a decision to test. The observations which underlie the decision to test on the basis of reasonable suspicion for alcohol must be made during, just before, or just after the performance of covered functions by the employee.

If a reasonable suspicion test is not administered within two hours following the determination that testing is appropriate, the supervisor shall prepare a written report explaining why the test was not promptly administered and forward the report to the County Manager. If the test is not performed within eight hours of the determination, then the County will discontinue efforts to administer a test, and the supervisor shall prepare a written report explaining why the test was not

administered and forward the report to the County Manager. Failure of the employee to have the test conducted could result in adverse action, up to and including dismissal.

Putnam County will not permit an employee to report for duty or to remain on duty requiring the performance of covered functions while the employee is under the influence of or impaired by alcohol or drugs, as shown by the behavioral, speech, or performance indicators of alcohol or drug misuse.

4. *Random Testing*

All employees who work in a position which is covered by this manual shall be subject to unannounced drug testing based on a random selection process. To insure that the selections are random, employees shall be placed in a common pool via their employee numbers, and the selections shall be computer-generated. Employees shall be tested at a rate to be determined by the County Manager. Test dates shall also be randomly selected. A person may be selected for drug testing more than once or not at all during the course of random testing.

G. ZERO TOLERANCE

Any Putnam County employee that has a verified positive drug or alcohol test will be removed from his/her position, informed of educational and rehabilitation programs available, referred to a Substance Abuse Professional (SAP) for assessment, and will be terminated.

**VII. OBSERVED HOLIDAYS**

HOLIDAYS

Putnam County observes the following holidays as paid holidays:

New Year's Day	January 1
Martin Luther King's Birthday	Third Monday/January
Good Friday	Friday before Easter
Memorial Day	Last Monday/May
Independence Day	July 4
Labor Day	First Monday/September
Veteran's Day	November 11
Thanksgiving Day	Fourth Thursday/November
Day after Thanksgiving Day	Fourth Friday/November
Christmas Eve Day	December 24
Christmas Day	December 25

When any of the above holidays fall on Sunday, it will be observed on the following Monday. When any of the above holidays fall on Saturday, it will be observed on the preceding Friday.

Some non-essential employees may be required to work. Employees required to work on the above holidays can elect to be compensated for the holiday pay (eight hours) plus time and a half pay for the time worked regardless of the overtime ruling or receive equal time off with holiday pay and regular (straight-time) pay. Any employee who has exhausted all sick and annual leave shall not be eligible for holiday pay if they do not work during the pay period in which the holiday falls.

All full-time employees in good standing are eligible for holiday pay as outlined above. Part-time, temporary, seasonal, contract or intern, and substitute employees are not eligible for holiday pay.

**VIII. LEAVE**

**A. VACATION ANNUAL LEAVE**

1. *General*

Vacations are for the purpose of rejuvenating both physical and mental faculties, and all employees are urged to avail themselves of vacation periods. No employee shall receive pay in lieu of vacation. No employee may take leave for more than two (2) consecutive weeks without the approval of the County Manager. Compensation for ~~vacation~~ **annual** leave shall not be paid for more than a normal shift on any given day.

All full-time employees shall be entitled to accrue annual leave with full pay after the first six (6) months of employment, in accordance with this policy. Five (5) days annual leave will be earned and available for use after the completion of six (6) months of service. The employee will then accrue an additional five (5) days of annual leave during the second six-months of employment. After completion of the first year of service, the employee will continue to accrue ten (10) days annually. After completion of five years of service, the employee will accrue 15 days annually. After completion of ten years of service, the employee will accrue 20 days annually.

2. *Carry Over Annual Leave*

Putnam County provides access to retirement investment with the option of converting excess annual carry-over leave (more than 240 hours) into a 457 Deferred Compensation Plan. This investment is only provided if funds are available. Employees can take advantage of this opportunity or elect to have their excess annual carry-over leave amount submitted to ACCG Retirement Services to count towards credited service in the Define Benefit Pension if applicable.



2. ~~Persons Entitled~~

~~All full time employees, after the completion of a six (6) month training period, may begin utilizing vacation leave. Part time, temporary, seasonal, contract or intern, and substitute employees are not eligible for vacation leave.~~

3. ~~Accrual of Vacation Leave~~

~~Full time eligible employees shall accrue four (4) hours leave per month (48 hours annually) beginning at the end of their six month training period. Full time eligible employees with at least five years' service shall accrue eight (8) hours per month (96 hours annually). Full time eligible employees with at least eight years' of service shall accrue twelve (12) hours leave per month (144 hours annually).~~

~~Employees who are promoted may continue to accumulate vacation and sick leave during the new training period.~~

~~Vacation leave will accrue to the credit of an eligible employee who is in a leave-with pay status for vacation, sick, civil, or military leave with pay. Employees who are not at work because of an on-the-job injury will not accrue leave beginning with the 11<sup>th</sup> consecutive day off the job. Employees shall continue to accrue vacation leave during the time that they are on vacation leave.~~

3. ~~Request for Vacation~~ Annual Leave

~~Vacation~~ Annual leave assignments will be made in accordance with the preferences of the employee when possible. A request for ~~vacation~~ annual leave shall be submitted to the respective Department Head as far in advance as possible. Leave may be taken only after approval of the appropriate Department Head so that, insofar as practical, the department can function without hiring additional temporary help. Requests for ~~vacation~~ annual leave for personal-business must be made as far in advance as possible. Department Heads must request leave to the County Manager as far in advance as possible.

5. ~~Holidays~~

~~Putnam County observes the following holidays as paid holidays:~~

<del>New Year's Day</del>	<del>January 1</del>
<del>Martin Luther King's Birthday</del>	<del>Third Monday/January</del>
<del>Good Friday</del>	<del>Friday before Easter</del>
<del>Memorial Day</del>	<del>Last Monday/May</del>
<del>Independence Day</del>	<del>July 4</del>
<del>Labor Day</del>	<del>First Monday/September</del>
<del>Veteran's Day</del>	<del>November 11</del>

<del>Thanksgiving Day</del>	<del>Fourth Thursday/November</del>
<del>Day after Thanksgiving Day</del>	<del>Fourth Friday/November</del>
<del>Christmas Eve Day</del>	<del>December 24</del>
<del>Christmas Day</del>	<del>December 25</del>

~~When any of the above holidays fall on Sunday, it will be observed on the following Monday. When any of the above holidays fall on Saturday, it will be observed on the preceding Friday.~~

~~Some non-essential employees may be required to work. Employees required to work on the above holidays can elect to be compensated for the holiday pay (eight hours) plus time and a half pay for the time worked regardless of the overtime ruling or receive equal time off with holiday pay and regular (straight-time) pay. Any employee who has exhausted all sick and vacation leave shall not be eligible for holiday pay if they do not work during the pay period in which the holiday falls.~~

~~All full-time employees in good standing are eligible for holiday pay as outlined above. Part-time, temporary, seasonal, contract or intern, and substitute employees are not eligible for holiday pay.~~

4. ~~Official Holidays and Vacation~~ *Annual Leave*

~~If an official holiday should fall during an employee's vacation annual leave period, that official holiday shall not count as vacation annual leave.~~

5. ~~Vacation~~ *Annual Leave Substituted for Sick Leave*

~~If an employee has used up his/her allotment of sick leave, the employee may substitute vacation annual leave in case of further sickness.~~

6. ~~Compensation for Vacation~~ *Annual Leave*

~~If an employee resigns or is dismissed by the County as an employee, the employee will be compensated for all accumulated vacation annual leave at the employee's ending rate of pay.~~

7. ~~Records of Vacation~~ *Annual Leave*

~~Records concerning vacation annual leave for employees shall be kept in the Human Resources office.~~

10. ~~Accumulation~~

~~Vacation leave may be accumulated up to two hundred forty (240) hours and carried from one calendar year to the next. Any employee who carries two hundred forty (240) hours forward from one year to the next will be allowed to accumulate leave~~

~~during the year but will in no case be allowed to carry more than two hundred forty (240) forward to the next calendar year. Unused vacation leave, which is not carried to the next calendar year, will be credited to time of service at retirement. Records of unused time will be maintained in the individual's personnel file. Leave is accrued on a bi-weekly basis.~~

C. SICK LEAVE

1. *General*

Sick leave shall be allowed to all eligible employees in the case of actual sickness, or disability of the employee or the sickness of a member of the employee's immediate family for medical, dental, or eye examination or treatment for which arrangements cannot be made outside of working hours. Please see definition of immediate family under C. Definitions. An employee shall report all instances of illness requiring absence. An employee may utilize his/her sick leave upon approval of the appropriate Department Head for absence due to illness or injury.

2. *Persons Entitled*

All full-time employees, after six (6) months' continuous employment, are eligible to use sick leave. Temporary, seasonal, and other part-time or substitute contract or intern employees are not eligible for sick leave.

3. *Accrual of Sick Leave*

Full-time eligible employees shall accrue sick leave at the rate of eight (8) hours per month, for a total of 96 hours per year. No employee shall be entitled to receive sick leave time until the employee shall have completed six (6) months training period. Sick leave shall not be accrued while an employee is on sick leave for more than one pay period.

4. *Accumulation of Sick Leave*

No employee shall accumulate more than 960 hours of sick leave without approval of the Board of Commissioners.

5. *Reporting of Sick Leave*

An employee who is absent from work because of illness is responsible for reporting to the employee's Department Head or supervisor prior to the regularly scheduled workday at the designated reporting time on the day of absence. Employees will be expected to keep the supervisor or Department Head informed of progress on a regular basis [every three (3) days unless written exemption is requested by a qualified physician]. Such leave will be charged against sick leave.

Where a relief employee is required in a department, which must provide 24 hours sustained service, the employee must report this absence two hours before the designated reporting time. In the event of failure of compliance with these provisions, the employee will be charged on the payroll with leave without pay.

6. *Use of Sick Leave*

Sick leave is not a right that an employee may use at his/her discretion, but a privilege not to be abused. Department Heads, after three (3) days, will require a medical certificate signed by a licensed physician to substantiate a request for sick leave. Abuse of sick leave may result in disciplinary action up to and including termination.

7. *Sick Leave for On-the-Job Injury*

An employee who sustains an injury on the job must at the time of the injury or as soon as possible thereafter notify the employee's Department Head or supervisor. If the injury necessitates the employee's absence from work, the employee shall receive only that compensation provided under Workers' Compensation. Workers' Compensation leave will not be charged against an employee's accrued sick leave. However, an employee may choose to be compensated for his/her accrued sick leave in lieu of Workers' Compensation, but under no circumstances by law can an employee be compensated by both the employer and Workers' Compensation. The employee must complete an "Employee's Statement of Injury" form and the Department Head must complete the Workers' Compensation Report of accident/injury and submit this form to the Human Resources Office within twenty-four (24) hours of the incident. Failure to complete the required report by the Department Head may result in disciplinary action.

8. *Forfeiture of Sick Leave*

Sick leave is a privilege; therefore, any employee who resigns or is terminated from County service before becoming eligible for retirement shall forfeit all unused sick leave, and shall not be paid for unused sick leave. Any employee leaving County employment and eligible for immediate retirement or deferred retirement shall have unused sick leave added as service time.

9. *Donation of Sick Leave*

The County Manager shall have the discretion to approve leave donation requests from prospective recipients or their supervisor. An approved announcement of the request may be circulated in order to encourage donations.

For the purpose of this section:

- a. A recipient means an eligible employee who has been authorized to receive donations of leave from other employees.

- b. A donor means an eligible employee who has elected to donate leave to another employee.

Leave donation shall be from employee to employee and shall be strictly voluntary. The identity of the donors shall be confidential and shall not be provided to the recipient or to any other individual unless necessary to administer the donation or required by law. An employee shall not be eligible to receive leave donations for any occupationally-related accident or illness, which is compensable under the Workers' Compensation benefits.

To be eligible to donate leave, a donor must:

- a. Have been employed by Putnam County for not less than twelve (12) months in a position entitled to earn sick leave;
- b. Have a balance of not less than forty-eight (48) hours of sick leave after the donation.

To be eligible to receive leave donations, a recipient must:

- a. Be an employee who is eligible to accrue sick leave;
- b. Have exhausted all accrued sick and ~~vacation~~ **annual** leave.

Donations in general:

- a. Donations may not exceed forty (40) hours per donor.
- b. Donations transferred to a recipient by all donors may not exceed four hundred eighty (480) hours.
- c. Once a recipient has returned to work, any donated leave not used by the recipient will be returned to the donors on a prorated basis.
- d. Multiple donations shall be permitted for the same recipient; provided, however, no recipient shall be credited with more than nine hundred sixty (960) hours of donated leave in any consecutive two-calendar-year period.

D. FUNERAL LEAVE

- ~~1. Funeral leave is limited to use for the immediate family as previously defined. Employees desiring to attend the funeral of persons other than immediate family must use vacation leave.~~
- ~~2. Request for funeral leave must be made twenty four (24) hours in advance. Funeral leave will be charged to sick leave first and vacation leave second, when sick leave time is not available.~~

~~3. Funeral leave shall not be granted for more than three (3) days. Additional time required for funerals will be charged to vacation leave.~~

BEREAVEMENT LEAVE

Bereavement leave with pay will be granted for an employee’s absence from duty in the event of a death in the immediate family. Please see definition of immediate family under C. Definitions. An employee may utilize such leave to make funeral arrangements, settle family affairs, attend the funeral or memorial services, and for bereavement.

Full-time employees shall receive up to three (3) days of bereavement leave with pay.

As with other unscheduled absences, employees are expected to notify their immediate supervisor and/or department head as soon as they learn of the need for bereavement leave. Such notification should, if possible, be made prior to the employee’s scheduled work shift or within 30 minutes after the start of the employee’s work shift. Failure to provide proper notification may result in the denial of bereavement pay. Upon requesting bereavement leave employees should also inform their immediate supervisor and/or department head of their expected return to work date.

E. MILITARY LEAVE

Leaves of absence to perform military duty in the Armed Forces of the United States, the Military Reserves, or the National Guard will be granted in accordance with applicable state and federal laws. The County will also comply with applicable federal and state laws in regards to the reemployment of individuals returning from military leave.

F. CIVIL LEAVE (JURY DUTY)

~~An employee serving in a full-time position shall be entitled to leave of absence from duties, without loss of pay or time, with the exception of fees received for serving as a juror or a witness, and without effect on his service rating, on all days during which he/she shall be subpoenaed by any court, federal, state, or political subdivision thereof, to serve as a juror or witness.~~

~~Employees must provide notification and a copy of the subpoena or notice to their supervisor upon receipt of such document. This document must then be forwarded to Human Resources.~~

Because jury duty is recognized as a civic responsibility, the County will continue to pay an employee serving in a full-time position regular salary when the employee is required to report for jury duty on a day, he/she is scheduled to work. An employee must report his/her need for jury duty/court leave in advance to his/her supervisor. Employees are required to present documentation from the court indicating jury service is required. Employees are not required to turn over to the County any fees received for participating



in jury duty. An employee is expected to return to work on any day he or she is dismissed from jury duty prior to 1:00 p.m. All employees subpoenaed or ordered to attend court or to appear as a witness in connection with the employee's County employment are working and will be paid accordingly.

G. PARENTAL LEAVE

Paid parental leave is granted to employees following the birth of an employee's child or the placement of a child with an employee in connection with adoption. An employee may receive up to six (6) weeks of paid parental leave during any "rolling" 12- month period, measured backward from the date that any Parental Leave was utilized, which will run concurrently with Family and Medical Leave Act (FMLA), as applicable during any "rolling" 12- month period, measured backward from the date that any FMLA leave is to be used. FMLA leave for the birth or placement of a child for adoption must be concluded within 12 months of the birth or placement.

All eligible employees must be employed full-time with at least one (1) full year of service, having worked at least 1,250 hours during the last 12 consecutive months.

Employee must have given birth to a child, be the spouse of the individual who has given birth to a child or adopted a child (adopted child must be age 17 or younger).

1. The employee will provide their supervisor with notice of the request for leave at least 30 days prior to the proposed date of the leave (or if the leave was not foreseeable, as soon as possible). The employee must complete the necessary leave forms and provide all required documentation as stated in Putnam County's Leave of Absence Policy.
2. Employee parents of the same child working in the same department may not use paid parental leave at the same time.
3. Each week of paid parental leave is compensated at 100 percent of the employee's regular, straight time weekly pay, to be paid on Putnam County's regularly scheduled pay dates.
4. Approved paid parental leave may be taken at any time during the three-month period immediately following the birth, adoption, or placement of the child for adoption. Paid parental leave may not be used or extended beyond the three-month time frame.
5. Employees must take paid parental leave in a three-month period from the date of the qualified event. Any unused paid parental leave will be forfeited at the end of the three-months.
6. Paid parental leave taken under this policy will run concurrently with leave under FMLA; thus, any leave taken under this policy that falls under the definition of

circumstances qualifying for leave due to the birth or placement of a child due to adoption, the leave will be counted toward the 12 weeks of available FMLA leave per a 12-month period. All other requirements and provisions under FMLA will apply. The total amount of leave granted to the employee under FMLA will not exceed 12 weeks during the 12-month FMLA period.

7. After the paid parental leave is exhausted, the balance of FMLA leave (if applicable) will be compensated through employee’s accrued sick, annual, or compensatory leave. Upon exhaustion of accrued sick, annual, or compensatory leave, any remaining leave will be unpaid leave.

8. If a holiday occurs while the employee is on paid parental leave, such day will be charged to holiday pay; however, such holiday pay will not extend the total paid leave entitlement.

9. Upon termination of employment with Putnam County, any unused paid parental leave for which the employee was eligible will not be paid out.

H. FAMILY MEDICAL LEAVE ACT

1. An eligible employee may take up to twelve (12) weeks of leave within a twelve-month period, defined by the calendar year, under the Family and Medical Leave Act of 1993 (FMLA), to care for a spouse, son, daughter, or parent with a serious health condition, or because of the employee’s own serious illness or chronic/episodic health conditions, which includes the birth or adoption of a child. The twelve (12) weeks may include accrued paid and unpaid leave.
2. An “eligible employee” is defined as someone who has worked for the County for a period of **at least** one (1) year, having worked 1,250 hours (minimum required by the FMLA) over the previous twelve (12) months.
3. “Serious injury or health condition” is defined as an “Illness, injury, impairment, or chronic physical condition involving either inpatient care or continuing treatment by a health care provider.”
4. An employee will take any reserve sick leave or ~~vacation~~ **annual** leave as part of the twelve-week FMLA period.
5. An employee may take leave intermittently or on a reduced leave schedule when medically necessary; however, an intermittent or reduced schedule to care for a newborn or newly adopted child must be approved by the Department Head and the County Manager.
6. An employee must request FMLA leave thirty (30) days in advance when possible.
7. An employee shall receive written notification of Putnam County’s designation of

time as FMLA leave.

- 8. An employee on FMLA leave is entitled to receive health benefits while on unpaid leave under the same terms and conditions as when working. However, Putnam County will recover health coverage premiums paid for an employee who fails to return to work.
- 9. Putnam County must provide service credit for the employee during unpaid FMLA leave, but only for the purpose of avoiding a break in service in regards to retirement benefits.
- 10. Putnam County shall guarantee an employee on unpaid FMLA leave the right to return to the previous or a “virtually identical” position.
- 11. Spouses who are both employed by Putnam County are entitled to a total of twelve (12) weeks FMLA leave to care for a new child or sick parent. If the leave is required for care for a sick child or the other spouse, each spouse is entitled to twelve (12) weeks FMLA leave.
- 12. A medical certificate supporting a request for FMLA leave and signed by a licensed physician will be required by the Resources Office. Employees who have used FMLA leave for their own serious illness will be required to submit a “fitness-for-duty” report before they can return to work.
- 13. After requesting FMLA leave to Department Head, employees will be referred to Human Resources.

I. LEAVE WITHOUT PAY

1. *Leave without Pay Defined*

When it is deemed in the best interest of the County, a full-time employee may be granted leave without pay for personal or other reasons, provided such leave is approved by the Department Head and approved by the County Manager. Non-full-time employees are not eligible for grants of leave without pay.

2. *Reasons for Granting*

The Department Head may, with the approval of the County Manager, grant leave without pay for a period not to exceed 120 days, when it is deemed to be in the best interest of the County. Valid reasons shall include, but not be confined to, prolonged illness or disability of the employee or a member of the employee's household, educational or training enrichment, pregnancy and childbirth, and military service.

3. *General Procedures*

All departments are required to adhere to the following practices in granting leave without pay.

- a. Failure of an employee to return to work at the expiration of approved leave shall be considered as absence without leave and grounds for dismissal.
- b. An employee granted leave without pay and who wishes to return before the leave period has expired, shall be required to give his/her Department Head at least three (3) days notice. Upon receipt of such written notice, the employee may be permitted to return to work at the discretion of the Department Head.
- c. The County Manager will determine whether or not sick leave, ~~vacation~~ **annual** leave, time of service or credit toward merit increases will be earned by an employee for the time that the employee is on leave without pay.
- d. An employee shall return from leave without pay to the same step of his/her salary grade as at the time of commencement of leave.
- e. An employee, while on an authorized leave of absence without pay, who obtains either part-time or full-time employment elsewhere, is required to notify his/her Department Head in writing within three (3) days of accepting such employment.
- f. The County Manager shall decide if an employee is entitled to keep health/insurance benefits when leave without pay is approved for a period of more than thirty (30) days.

4. *Procedure for Requesting Leave without Pay*

An application for leave without pay shall be submitted in writing one month in advance showing the employee's reason for requesting such leave and shall contain a statement that the employee intends to return to the County service upon expiration of such leave, and that the employee agrees to the terms and conditions as outlined in these policies. In emergency situations, when an employee does not have accrued leave and is unable to return to work as scheduled as a result of illness or emergency reasons, the employee's Department Head may recommend approval of the granting of leave without pay without prior application by the employee, or the County Manager may investigate and make such recommendations in the absence of the Department Head.

5. *Rights of Employee on Leave without Pay*

- a. Reinstatement of Former Position

For employees granted leave without pay, every effort will be made to return the employee to the former position or to a comparable one. If a position is not available, the employee shall be listed on re-employment lists in the same manner as employees who are laid off in good standing.

b. Continuity of Service

Employees granted leave without pay shall not be considered to have affected a break in service. Continuation of County insurance benefits for eligible employees during the time the employee is on leave without pay shall be in accordance with the provisions of the employee group insurance contracts and the approval of the Board of Commissioners.

6. *Temporary Filling of Position of Employee on Leave without Pay*

During the employee's approved leave of absence, the employee's position may be filled by temporary or substitution personnel. At the expiration of leave without pay, the employee is not guaranteed to receive the same position with the County.

J. NOTIFICATION OF COUNTY MANAGER

When an employee has taken leave of any kind or is absent without leave, his/her Department Head shall notify the Human Resources Office in writing within the same pay period in which the leave is taken or the absence without leave occurs. The Human Resources Supervisor may inform the County Manager. Such notification may be by notation on a time card or attendance sheet or by memo, giving specific information covering type of leave, dates and hours, and other pertinent data.

**File Attachments for Item:**

18. Approval of American Rescue Plan (ARP) Hazard Pay for Putnam County Employees (staff-CM)



# American Rescue Plan (ARP) Hazard Pay for Putnam County Employees

<b>Employees</b>	<b>Total Amount</b>
Full Time Public Safety	\$250,000
Full Time Non-Public Safety	\$151,875
Active Part Time	\$28,125

### 3. PREMIUM PAY FOR ESSENTIAL WORKERS

INTERIM FINAL RULE: REFERENCES P. 23-44, 119 | RULE DEFINITIONS P. 134

*Funds may be used by counties to provide premium pay to eligible workers performing essential work during the COVID-19 public health emergency or to provide grants to third-party employers within the county to compensate eligible workers for performing essential work.*

Recovery Funds may be used by recipients, including counties, to provide premium pay to eligible county workers performing essential work during the COVID-19 public health emergency or to provide grants to third-party employers within the county to compensate those eligible workers who perform essential work.

- **DEFINING THE CONCEPT OF PREMIUM PAY AND ESSENTIAL WORKERS:** To ensure that premium pay is targeted to workers that faced or face heightened risks due to the character of their work, the Interim Final Rule defines essential work *as work involving regular in-person interactions or regular physical handling of items that were also handled by others. An individual who teleworked from a residence may not receive premium pay*

- **PREMIUM PAY MAY BE PROVIDED RETROACTIVELY FOR WORK PERFORMED AT ANY TIME SINCE THE START OF THE COVID-19** public health emergency (January 27, 2020), where those workers have yet to be compensated adequately for work previously performed

- **WORKERS THAT ARE ELIGIBLE FOR PREMIUM PAY** include:

- Any work performed by an employee of the state, local or tribal government
- Staff at nursing homes, hospitals, and home care settings
- Workers at farms, food production facilities, grocery stores, and restaurants
- Janitors and sanitation workers
- Truck drivers, transit staff and warehouse workers
- Public health and safety staff
- Childcare workers, educators and other school staff
- Social service and human services staff

- **PREMIUM PAY DEFINITION:** Premium pay means an amount up to \$13 per hour in addition to wages or remuneration the worker otherwise receives and in an aggregate amount not to exceed \$25,000 per eligible worker

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**PREMIUM PAY MAY BE PROVIDED RETROSPECTIVELY FOR WORK PERFORMED AT ANY TIME SINCE THE START OF THE COVID-19 PUBLIC HEALTH EMERGENCY – JANUARY 27, 2020**

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- **TREASURY URGES COUNTIES TO PRIORITIZE PREMIUM PAY FOR LOW- AND MODERATE-INCOME PERSONS:** Counties should prioritize low- and moderate-income persons, with additional written justification needed for essential workers above 150 percent of the residing state’s average annual wage for all occupations or their residing county’s average annual wage, whichever is higher

**File Attachments for Item:**

19. Discussion on Projects for State Rescue Money (BW)

Subject: State Funds Available

The State of Georgia has received direct funding through the ARPA which is separate from the funding that counties and cities have received. The total allocation for the State of Georgia is \$4.8 billion. The state has received \$2.4 billion in its first tranche of funding.

**Counties may use the ARPA funding that they received directly from the U.S. Treasury as a match** to expand or extend projects that you have identified for broadband infrastructure, water/sewer infrastructure or other projects to address negative economic impacts OR apply for grants for new projects that meet the eligible criteria. At the current time, these state grant funds may not be used to support public health expenditures, to replace lost public sector revenue or to provide premium pay.

The application process ends **8/31/21**. Here is information and a short recording of their webinar [ACCG / OPB Webinar Recording](#)

Below are the grants we can apply for or partner with a business. We don't have to be the lead, but they want counties involved. If you want Putnam to apply for these funds, **we'll need someone knowledgeable about the project to help write the application.**

Broadband Infrastructure

Coronavirus State and Local Fiscal Recovery Funds may be used to invest in broadband infrastructure. Treasury's Interim Final Rule provides that investments in broadband be made in areas that are currently unserved or underserved—lacking a wireline connection that reliably delivers minimum speeds of 25 Mbps download and 3 Mbps upload.

Using these funds, applicants generally should propose broadband infrastructure projects with modern technologies in mind, specifically those projects that deliver services offering reliable 100 Mbps download and 100 8 Mbps upload speeds, unless impracticable due to topography, geography, or financial cost. In addition, applicants are encouraged to pursue fiber optic investments. In view of the wide disparities in broadband access, assistance to households to support internet access or digital literacy is an eligible use to respond to the public health and negative economic impacts of the pandemic, as detailed above.

Treasury's Interim Final Rule encourages recipients to ensure that broadband projects use strong labor standards, including project labor agreements and community benefits agreements that offer wages at or above the prevailing rate and include local hire provisions.

[Apply Now](#)

Negative Economic Impact

Coronavirus State and Local Fiscal Recovery Funds allow states to support industries that were particularly hard-hit by the COVID-19 emergency and are now beginning to mend, helping them to address financial challenges caused by the pandemic and to make investments in COVID-19 prevention and mitigation tactics. The Negative Economic Impact grant will aid in speeding the recovery of the tourism, travel, hospitality sectors, as well as other industries.

**Apply Now**

Water/Sewer Infrastructure

Coronavirus State and Local Fiscal Recovery Funds may be used to invest in necessary improvements to water and sewer infrastructures, including projects that address the impacts of climate change. Applicants may use this funding to invest in an array of drinking water infrastructure projects, such as building or upgrading facilities and transmission, distribution, and storage systems, including the replacement of lead service lines.

Applicants may also use this funding to invest in wastewater infrastructure projects, including constructing publicly owned treatment infrastructure, managing and treating stormwater or subsurface drainage water, facilitating water reuse, and securing publicly owned treatment works. Treasury’s Interim Final Rule encourages recipients to ensure that water and sewer projects use strong labor standards, including project labor agreements and community benefits agreements that offer wages at or above the prevailing rate and include local hire provisions.