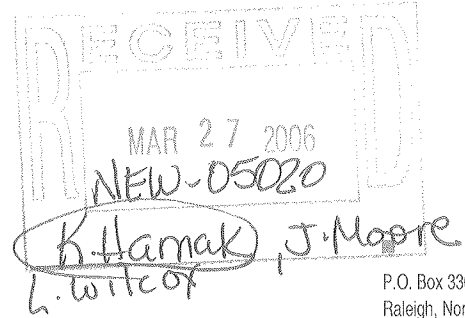




Kimley-Horn  
and Associates, Inc.



March 24, 2006

P.O. Box 33068  
Raleigh, North Carolina  
27636-3068

Mr. Kevin Hamak  
The John R. McAdams Co.  
2905 Meridian Parkway  
Durham, NC 27713

Re: Briar Chapel – Andrews Store Road Analysis

Dear Kevin:

Enclosed is the traffic analysis we prepared for the revised access on Andrews Store Road to be included in your submittal to the County. Please let us know if you have any questions about it.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Travis Fluitt, EI  
Project Analyst

*H:\PN\011270015 Briar Chapel\correspondence\Trans Hamak 3-24-06.doc*



Kimley-Horn  
and Associates, Inc.

March 24, 2006

■  
P.O. Box 33068  
Raleigh, North Carolina  
27636-3068

Mr. Keith Megginson  
Chatham County Planning Department  
12 East Street  
Pittsboro, NC 27312

Re: Briar Chapel – Andrews Store Road Access

Dear Mr. Megginson:

Kimley-Horn and Associates, Inc. has prepared this addendum to the *Briar Chapel Transportation Impact Assessment* of June 2004 to account for the revised driveway configuration on Andrews Store Road. Although the original site plan showed four (4) access points on Andrews Store Road, one of which would align with Parker Herndon Road, to provide a conservative analysis, only two (2) access points were assumed in the Transportation Impact Assessment (TIA) of June 2004.

It is our understanding that due to legal constraints, the access point to align with Parker Herndon Road will not be constructed, leaving three (3) access points on Andrews Store Road. The revised site plan is attached. We have met with the NCDOT District Office about eliminating this access point, and they have informed us that this change meets with their approval. Please find the attached letter dated March 3, 2006 from the NCDOT District Engineer confirming their concurrence with this change.

In order to provide further support for this change in access to Andrews Store Road, we have re-analyzed the operational analysis for this road with the access changed as proposed. To account for these changes, the site traffic volumes were reassigned at the site access points on Andrews Store Road. The revised traffic volumes are shown on Figures 1 and 2, attached, and are detailed on the attached intersection spreadsheets.

Capacity analyses were performed for Andrews Store Road at the site access roads and at Parker Herndon Road using Synchro Version 5 software. Table 1 below summarizes the operation for each of these intersections in the AM and PM peak hours at project build-out in 2014. Synchro LOS reports are attached.

■  
TEL 919 677 2000  
FAX 919 677 2050



<b>Table 1 Operation Summary</b>		
<b>Condition</b>	<b>AM Peak-Hour</b>	<b>PM Peak-Hour</b>
<b>Andrews Store Road at East Access Road (Unsignalized)</b>		
Build-Out Traffic	Moderate delays for minor street approach	Short delays for minor street approach
<b>Andrews Store Road at Parker Herndon Road (Unsignalized)</b>		
Build-Out Traffic	Short delays for minor street approach	Short delays for minor street approach
<b>Andrews Store Road at Central Access Road (Unsignalized)</b>		
Build-Out Traffic	Short delays for minor street approach	Short delays for minor street approach
<b>Andrews Store Road at West Access Road (Unsignalized)</b>		
Build-Out Traffic	Short delays for minor street approach	Short delays for minor street approach

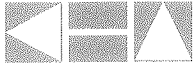
Analyses indicate that each of the site access points on Andrews Store Road as well as Parker Herndon Road are expected to operate at an acceptable level-of-service in both the AM and PM peak hours. The following roadway improvements are recommended to accommodate site traffic volumes:

At the intersection of Andrews Store Road at East Access Road:

- Construct an exclusive eastbound left-turn lane on Andrews Store Road
- Construct an exclusive westbound right-turn lane on Andrews Store Road
- Provide separate left- and right-turn lanes on the East Access Road

At the intersection of Andrews Store Road at Central Access Road:

- Construct an exclusive eastbound left-turn lane on Andrews Store Road
- Construct an exclusive westbound right-turn lane on Andrews Store Road
- Provide separate left- and right-turn lanes on the Central Access Road



Kimley-Horn  
and Associates, Inc.

At the intersection of Andrews Store Road at West Access Road:

- Construct an exclusive eastbound left-turn lane on Andrews Store Road
- Construct an exclusive westbound right-turn lane on Andrews Store Road
- Provide separate left- and right-turn lanes on the West Access Road

The recommended roadway improvements are shown on Figure 3, attached.

Please feel free to contact me with any questions or comments.

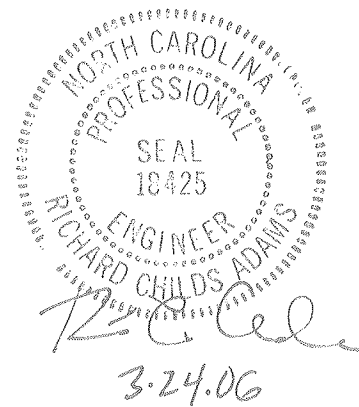
Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

A handwritten signature in cursive script, appearing to read "R.C. Adams".

Richard C. Adams, P.E.  
Vice-President

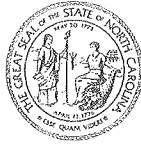
RCA\jtf



Attachments: Revised Site Plan; NCDOT Letter dated March 3, 2006; Figures 1-3; Intersection Spreadsheets; Synchro LOS Reports

CC: Mr. Mitch Barron, Newland Communities  
Mr. Jeff Picklesimer, P.E., NCDOT

*H:\PN\011270015 Briar Chapel\report\Addendum 2.doc*



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY,  
GOVERNOR

DIVISION OF HIGHWAYS

LYNDO TIPPETT  
SECRETARY

March 3, 2006

Chatham County

Subject: Briar Chapel

Mr. Richard C. Adams, P.E.  
Kimley-Horn and Associates, Inc.  
P.O. Box 33068  
Raleigh, N.C. 27636-3068

Dear Mr. Adams:

This office is in favor of the deletion of the proposed Briar Chapel street that was to connect onto our roadway system north of the intersection of SR 1526 (Parker Herndon Road) and SR 1528 (Andrews store Road). We believe this will improve the safety to the traveling public as it will eliminate one point of possible conflict on our roadway system.

If you have any questions please call this office at (336) 629-1423.

Yours very truly,

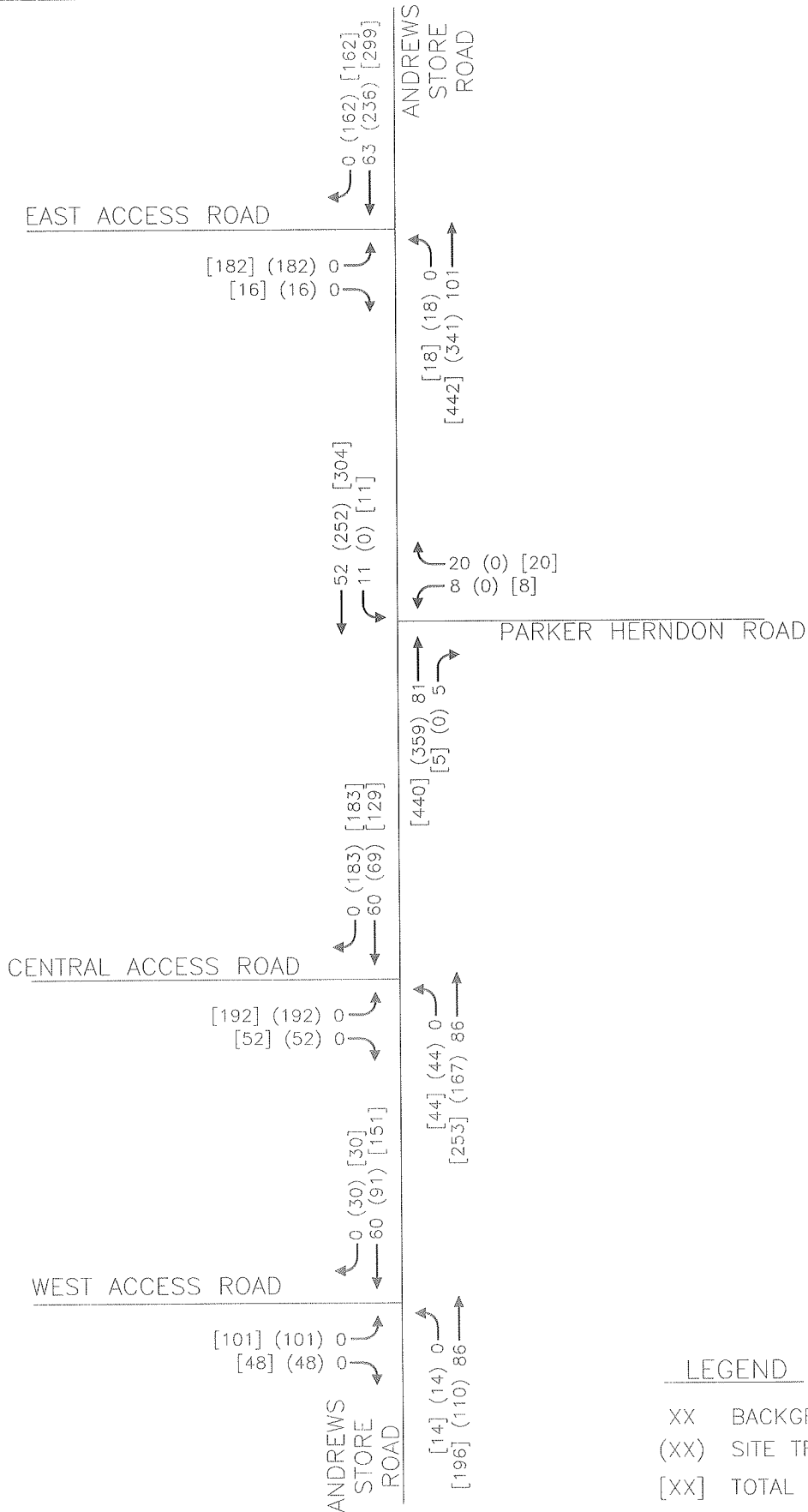
A handwritten signature in black ink, appearing to read "J.L. Picklesimer". To the right of the signature is the handwritten initials "SAW".

J.L. Picklesimer, P.E., P.L.S.  
District Engineer

JLP/saw

c: Timothy Johnson, P.E. Division Engineer  
R Stone, P.E. Division Traffic Engineer  
Keith Megginson, Chatham County  
File

NOT TO SCALE



**LEGEND**

XX BACKGROUND TRAFFIC  
 (XX) SITE TRAFFIC  
 [XX] TOTAL TRAFFIC



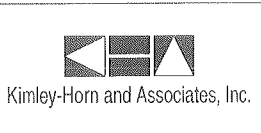
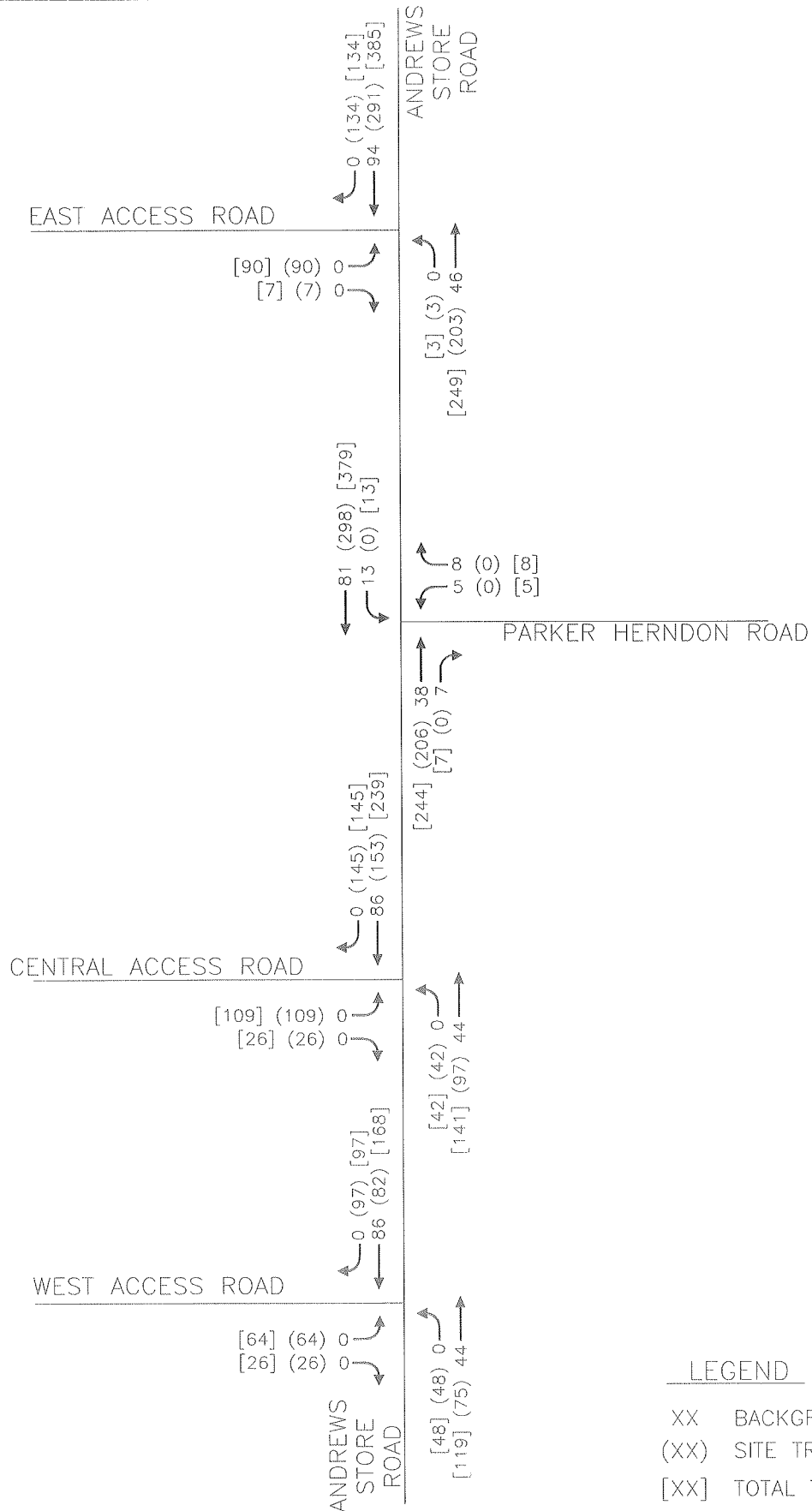
BRIAR CHAPEL TRANSPORTATION  
 IMPACT ASSESSMENT  
 ADDENDUM 2

REVISED 2014 AM  
 PEAK HOUR  
 TRAFFIC VOLUMES

FIGURE  
 1

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

NOT TO SCALE



BRIAR CHAPEL TRANSPORTATION  
 IMPACT ASSESSMENT  
 ADDENDUM 2

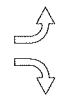
REVISED 2014 PM  
 PEAK HOUR  
 TRAFFIC VOLUMES

FIGURE  
 2



NOT TO SCALE

EAST ACCESS ROAD

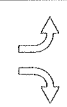


ANDREWS STORE ROAD

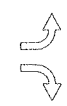


PARKER HERNDON ROAD

CENTRAL ACCESS ROAD



WEST ACCESS ROAD



ANDREWS STORE ROAD



LEGEND

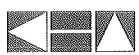


EXISTING LANEAGE



RECOMMENDED LANEAGE

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Kimley-Horn and Associates, Inc.

BRIAR CHAPEL TRANSPORTATION  
IMPACT ASSESSMENT  
ADDENDUM 2

RECOMMENDED ROADWAY  
LANEAGE

FIGURE  
3



Briar Chapel TIA  
Chatham County

INTERSECTION ANALYSIS SHEET

East Access Road @ Andrews Store Road  
AM PEAK HOUR

Description	East Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
Observed 9/9/2004			75		47	
Growth Factor	1.34	1.34	1.34	1.34	1.34	1.34
2014 Background Traffic	0	0	0	101	63	0
Committed Projects						
Chatham Downs						
The Homestead						
Farrington Village						
Total Committed	0	0	0	0	0	0
Pass-By	0	0	0	0	0	0
2014 Non-Project Traffic	0	0	0	101	63	0
Total Project Traffic	182	16	18	341	236	162
Buildout Total	182	16	18	442	299	162

	East Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
North Neighborhood						
East Neighborhood						
West Neighborhood				46	12	3
Central Neighborhood	9	5		18	4	4
Traditional Neighborhood	173	11	18	229	197	155
North Garden				11	11	
South Mixed-Use				37	12	
Total	182	16	18	341	236	162

**Briar Chapel TIA  
Chatham County**

**INTERSECTION ANALYSIS SHEET**

**Parker Herndon Road @ Andrews Store Road  
AM PEAK HOUR**

Description	Parker Herndon Road			NA			Andrews Store Road			Andrews Store Road		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 9/9/2004	6		15				60		4	8		39
Growth Factor	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
2014 Background Traffic	8	0	20	0	0	0	81	5		11	52	0
<b>Committed Projects</b> Chatham Dowas The Homestead Fearrington Village												
Total Committed	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By	0	0	0	0	0	0	0	0	0	0	0	0
2014 Non-Project Traffic	8	0	20	0	0	0	81	5		11	52	0
Total Project Traffic	0	0	0	0	0	0	359	0	0	0	252	0
<b>Buildout Total</b>	<b>8</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>440</b>	<b>5</b>	<b>0</b>	<b>11</b>	<b>304</b>	<b>0</b>

Description	Parker Herndon Road			NA			Andrews Store Road			Andrews Store Road		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
North Neighborhood												
East Neighborhood												
West Neighborhood							46				12	
Central Neighborhood							18				9	
Traditional Neighborhood							247				208	
North Garden							11				11	
South Mixed-Use							37				12	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>359</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>252</b>	<b>0</b>

Briar Chapel TIA  
Chatham County

INTERSECTION ANALYSIS SHEET

Central Access Road @ Andrews Store Road  
AM PEAK HOUR

Description	Central Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
Observed 9/9/2004				64	45	
Growth Factor	1.34	1.34	1.34	1.34	1.34	1.34
2014 Background Traffic	0	0	0	86	60	0
Committed Projects Chatham Downs The Homestead Fearrington Village						
Total Committed Pass-By	0	0	0	0	0	0
2014 Non-Project Traffic	0	0	0	86	60	0
Total Project Traffic	192	52	44	167	69	183
Buildout Total	192	52	44	253	129	183

	Central Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
North Neighborhood						
East Neighborhood		2	1			
West Neighborhood	10			36	10	2
Central Neighborhood	9	10	5	9	7	2
Traditional Neighborhood	173	40	38	74	29	179
North Garden				11	11	
South Mixed-Use				37	12	
Total	192	52	44	167	69	183

Briar Chapel TIA  
Chatham County

INTERSECTION ANALYSIS SHEET

West Access Road @ Andrews Store Road  
AM PEAK HOUR

Description	West Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
Observed 9/9/2004				64	45	
Growth Factor	1.34	1.34	1.34	1.34	1.34	1.34
2014 Background Traffic	0	0	0	86	60	0
Committed Projects						
Chatham Downs						
The Homestead						
Farrington Village						
Total Committed	0	0	0	0	0	0
Pass-By	0	0	0	0	0	0
2014 Non-Project Traffic	0	0	0	86	60	0
Total Project Traffic	101	48	14	110	91	30
Buildout Total	101	48	14	196	151	30

	West Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
North Neighborhood						
East Neighborhood		2		1	2	
West Neighborhood	36	11	3			10
Central Neighborhood	9	15	5	5	15	2
Traditional Neighborhood	56	20	6	56	51	18
North Garden				11	11	
South Mixed-Use				37	12	
Total	101	48	14	110	91	30

Briar Chapel TIA  
Chatham County

INTERSECTION ANALYSIS SHEET

East Access Road @ Andrews Store Road  
PM PEAK HOUR

Description	East Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
Observed 9/9/2004				34		70
Growth Factor	1.34	1.34	1.34	1.34	1.34	1.34
2014 Background Traffic	0	0	0	46	94	0
Committed Projects Chatham Downs The Homestead Farrington Village						
Total Committed Pass-By	0	0	0	0	0	0
2014 Non-Project Traffic	0	0	0	46	94	0
Total Project Traffic	90	7	3	203	291	134
Buildout Total	90	7	3	249	385	134

	East Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
North Neighborhood						
East Neighborhood						
West Neighborhood				29	41	8
Central Neighborhood	5	3		10	14	13
Traditional Neighborhood	77	4	3	127	180	106
North Garden				3	4	
South Mixed-Use	8			34	52	7
Total	90	7	3	203	291	134

Briar Chapel TIA  
Chatham County

INTERSECTION ANALYSIS SHEET

Parker Herndon Road @ Andrews Store Road  
PM PEAK HOUR

Description	Parker Herndon Road			NA			Andrews Store Road			Andrews Store Road		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 9/9/2004	4		6				28		5	10		60
Growth Factor	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
2014 Background Traffic	5	0	8	0	0	0	38	7		13	81	0
Committed Projects Chatham Downs The Homestead Fearington Village												
Total Committed	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By	0	0	0	0	0	0	0	0	0	0	0	0
2014 Non-Project Traffic	5	0	8	0	0	0	38	7		13	81	0
Total Project Traffic	0	0	0	0	0	0	206	0	0	0	298	0
Buildout Total	5	0	8	0	0	0	244	7		13	379	0

	Parker Herndon Road			NA			Andrews Store Road			Andrews Store Road		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
North Neighborhood												
East Neighborhood							29				41	
West Neighborhood							10				17	
Central Neighborhood							130				184	
Traditional Neighborhood							3				4	
North Garden							34				52	
South Mixed-Use							206	0	0	0	298	0
Total	0	0	0	0	0	0	206	0	0	0	298	0

Briar Chapel TIA  
Chatham County

INTERSECTION ANALYSIS SHEET

Central Access Road @ Andrews Store Road  
PM PEAK HOUR

Description	Central Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
Observed 9/9/2004				33	64	
Growth Factor	1.34	1.34	1.34	1.34	1.34	1.34
2014 Background Traffic	0	0	0	44	86	0
Committed Projects Chatham Downs The Homestead Farrington Village						
Total Committed	0	0	0	0	0	0
Pass-By	0	0	0	0	0	0
2014 Non-Project Traffic	0	0	0	44	86	0
Total Project Traffic	109	26	42	97	153	145
Buildout Total	109	26	42	141	239	145

	Central Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
North Neighborhood						
East Neighborhood		1	1			
West Neighborhood	5			24	33	8
Central Neighborhood	5	6	14	5	10	7
Traditional Neighborhood	92	19	27	38	61	123
North Garden				3	4	
South Mixed-Use	7			27	45	7
Total	109	26	42	97	153	145

Briar Chapel TIA  
Chatham County

INTERSECTION ANALYSIS SHEET

West Access Road @ Andrews Store Road  
PM PEAK HOUR

Description	West Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
Observed 9/9/2004				33	64	
Growth Factor	1.34	1.34	1.34	1.34	1.34	1.34
2014 Background Traffic	0	0	0	44	86	0
Committed Projects						
Chatham Downs						
The Homestead						
Farrington Village						
Total Committed	0	0	0	0	0	0
Pass-By	0	0	0	0	0	0
2014 Non-Project Traffic	0	0	0	44	86	0
Total Project Traffic	64	26	48	75	82	97
Buildout Total	64	26	48	119	168	97

	West Access Road Southbound		Andrews Store Road Eastbound		Andrews Store Road Westbound	
	Left	Right	Left	Through	Through	Right
North Neighborhood						
East Neighborhood		1	2	1	1	
West Neighborhood	24	7	11			33
Central Neighborhood	5	8	15	14	9	7
Traditional Neighborhood	35	10	20	30	23	57
North Garden				3	4	
South Mixed-Use				27	45	
Total	64	26	48	75	82	97





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↑	↗	↙	↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	18	442	299	162	182	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (veh/h)	20	491	332	180	202	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	512				863	332
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	512				863	332
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				37	97
cM capacity (veh/h)	1053				319	709

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	20	491	332	180	220
Volume Left	20	0	0	0	202
Volume Right	0	0	0	180	18
cSH	1053	1700	1700	1700	342
Volume to Capacity	0.02	0.29	0.20	0.11	0.64
Queue Length (ft)	1	0	0	0	106
Control Delay (s)	8.5	0.0	0.0	0.0	32.6
Lane LOS	A				D
Approach Delay (s)	0.3		0.0		32.6
Approach LOS					D

Intersection Summary					
Average Delay			5.9		
Intersection Capacity Utilization			43.7%	ICU Level of Service	A

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↘	
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	440	5	11	304	8	20
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (veh/h)	489	6	12	338	9	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			494		854	492
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			494		854	492
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		97	96
cM capacity (veh/h)			1069		325	577

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	494	350	31
Volume Left	0	12	9
Volume Right	6	0	22
cSH	1700	1069	473
Volume to Capacity	0.29	0.01	0.07
Queue Length (ft)	0	1	5
Control Delay (s)	0.0	0.4	13.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.4	13.2
Approach LOS			B

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		36.1%	ICU Level of Service
			A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↑	↗	↘	↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	44	253	129	183	192	52
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (veh/h)	49	281	143	203	213	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	347				522	143
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	347				522	143
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				57	94
cM capacity (veh/h)	1212				494	904

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	49	281	143	203	271
Volume Left	49	0	0	0	213
Volume Right	0	0	0	203	58
cSH	1212	1700	1700	1700	628
Volume to Capacity	0.04	0.17	0.08	0.12	0.43
Queue Length (ft)	3	0	0	0	54
Control Delay (s)	8.1	0.0	0.0	0.0	15.9
Lane LOS	A				C
Approach Delay (s)	1.2		0.0		15.9
Approach LOS					C

Intersection Summary					
Average Delay			5.0		
Intersection Capacity Utilization			33.3%	ICU Level of Service	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↑	↗	↙	↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	14	196	151	30	101	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (veh/h)	16	218	168	33	112	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	201				417	168
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	201				417	168
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				81	94
cM capacity (veh/h)	1371				586	876

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	16	218	168	33	166
Volume Left	16	0	0	0	112
Volume Right	0	0	0	33	53
cSH	1371	1700	1700	1700	864
Volume to Capacity	0.01	0.13	0.10	0.02	0.19
Queue Length (ft)	1	0	0	0	18
Control Delay (s)	7.7	0.0	0.0	0.0	11.6
Lane LOS	A				B
Approach Delay (s)	0.5		0.0		11.6
Approach LOS					B

Intersection Summary					
Average Delay			3.4		
Intersection Capacity Utilization			24.3%	ICU Level of Service	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↑	↗	↙	↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	249	385	134	90	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (veh/h)	3	277	428	149	100	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	577				711	428
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	577				711	428
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				75	99
cM capacity (veh/h)	997				398	627

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	3	277	428	149	108
Volume Left	3	0	0	0	100
Volume Right	0	0	0	149	8
cSH	997	1700	1700	1700	429
Volume to Capacity	0.00	0.16	0.25	0.09	0.25
Queue Length (ft)	0	0	0	0	25
Control Delay (s)	8.6	0.0	0.0	0.0	16.6
Lane LOS	A				C
Approach Delay (s)	0.1		0.0		16.6
Approach LOS					C

Intersection Summary					
Average Delay			1.9		
Intersection Capacity Utilization			34.7%	ICU Level of Service	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	244	7	13	379	5	8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (veh/h)	271	8	14	421	6	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			279		725	275
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			279		725	275
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	99
cM capacity (veh/h)			1284		388	764

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	279	436	14
Volume Left	0	14	6
Volume Right	8	0	9
cSH	1700	1284	556
Volume to Capacity	0.16	0.01	0.03
Queue Length (ft)	0	1	2
Control Delay (s)	0.0	0.4	11.6
Lane LOS		A	B
Approach Delay (s)	0.0	0.4	11.6
Approach LOS			B

Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization		39.2%	ICU Level of Service
			A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↑	↗	↙	↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	42	141	239	145	109	26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (veh/h)	47	157	266	161	121	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	427				516	266
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	427				516	266
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				76	96
cM capacity (veh/h)	1133				498	773

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	47	157	266	161	150
Volume Left	47	0	0	0	121
Volume Right	0	0	0	161	29
cSH	1133	1700	1700	1700	617
Volume to Capacity	0.04	0.09	0.16	0.09	0.24
Queue Length (ft)	3	0	0	0	24
Control Delay (s)	8.3	0.0	0.0	0.0	13.6
Lane LOS	A				B
Approach Delay (s)	1.9		0.0		13.6
Approach LOS					B

Intersection Summary

Average Delay		3.1			
Intersection Capacity Utilization		27.4%		ICU Level of Service	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↑	↗	↙	↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	48	119	168	97	64	26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (veh/h)	53	132	187	108	71	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	294				426	187
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	294				426	187
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				87	97
cM capacity (veh/h)	1267				561	855

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	53	132	187	108	100
Volume Left	53	0	0	0	71
Volume Right	0	0	0	108	29
cSH	1267	1700	1700	1700	789
Volume to Capacity	0.04	0.08	0.11	0.06	0.13
Queue Length (ft)	3	0	0	0	11
Control Delay (s)	8.0	0.0	0.0	0.0	11.5
Lane LOS	A				B
Approach Delay (s)	2.3		0.0		11.5
Approach LOS					B

Intersection Summary

Average Delay		2.7			
Intersection Capacity Utilization		20.4%		ICU Level of Service	A