



*Traffic Impact Analysis*

# Burlington Mills Residential Wake Forest, NC

Prepared for:  
Greenberg Gibbons Properties

**Kimley»Horn**

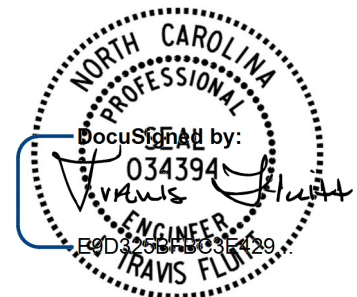
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Traffic Impact Analysis for  
**Burlington Mills Residential**  
Wake Forest, North Carolina

Prepared for:  
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## Executive Summary

Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis for the Burlington Mills Residential site, which is proposed to be located in the southwest quadrant of Burlington Mills Road at Urial Drive in Wake Forest, NC. The property is currently vacant and as currently envisioned, will include up to 325 multifamily residential units. The applicant also controls the parcel in the southeast quadrant of Burlington Mills Road at Urial Drive. While there are no development plans for this outparcel at this time, it was assumed for purposes of this traffic study to consist of a drive-in bank and a fast-food restaurant with a drive-through window. The site is proposed to be accessed by one full-movement driveway onto Urial Drive and a connection to the intersection of Meadstone Way and Clover Bank Street. Build-out of the development is anticipated by 2024.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the development. The traffic conditions studied include the existing (2022) traffic condition and the projected (2024) background and build-out traffic conditions. The weekday AM and PM peak hours were studied.

As shown in [Table ES-1](#), the proposed development has the potential to generate 2,696 net new daily trips, 185 net new trips during the AM peak hour, and 179 net new trips during the PM peak hour on a typical weekday.

<b>Table ES-1</b> <b>ITE Traffic Generation (Vehicles)</b>									
Land Use Code	Land Use	Intensity		Daily		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
220	Multifamily Housing (Low-Rise)	324	d.u.	1,076	1,076	30	93	101	59
912	Drive-In Bank	3	lanes	194	194	15	10	40	41
934	Fast-Food Restaurant with Drive-Through Window	3,500	s.f.	818	818	80	76	60	56
Subtotal				2,088	2,088	125	179	201	156
<i>Internal Capture Reduction</i>				391	391	22	22	65	65
<i>Pass-By Reduction</i>				349	349	36	39	28	20
<b>Total Net New Trips</b>				<b>1,348</b>	<b>1,348</b>	<b>67</b>	<b>118</b>	<b>108</b>	<b>71</b>

Capacity analyses were performed using Synchro Version 10 software. [Table ES-2](#) summarizes the operation of the study intersections for the AM and PM peak hour traffic conditions.

Table ES-2 - Level of Service Summary

Intersection and Approach/Movement	Traffic Control	Existing (2022) Traffic		Background (2024) Traffic		Build-out (2024) Traffic		Build-out (2024) Traffic - Improved	
		AM	PM	AM	PM	AM	PM	AM	PM
<b>Capital Boulevard at Burlington Mills Road</b>	Signalized	<b>D (50.0)</b>	<b>D (45.1)</b>	<b>F (87.0)</b>	<b>E (62.3)</b>	<b>F (98.7)</b>	<b>E (68.2)</b>	N/A	
Eastbound		E (67.3)	F (105.9)	E (66.1)	F (127.5)	E (65.8)	F (149.4)		
Westbound		E (69.9)	F (86.2)	E (65.6)	F (96.8)	E (65.7)	F (98.7)		
Northbound		D (44.3)	C (33.0)	E (74.3)	D (48.0)	F (88.0)	D (49.8)		
Southbound		D (49.0)	D (46.4)	F (103.8)	E (65.8)	F (117.9)	E (77.1)		
<b>Burlington Mills Road at Urial Drive</b>	Unsignalized/ Signalized	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	<b>B (13.0)</b>	<b>B (10.2)</b>
Northbound		D (31.5)	C (24.1)	F (71.1)	E (44.5)	F (223.7)	F (70.4)	C (25.1)	B (19.6)
Westbound*		A (8.8)	A (8.9)	A (9.6)	A (9.4)	B (9.9)	A (9.7)	B (11.9)	A (9.1)
Eastbound		N/A						B (10.4)	A (8.6)
<b>Burlington Mills Road at 1 World Way</b>	Signalized	<b>B (17.3)</b>	<b>B (11.6)</b>	<b>D (39.3)</b>	<b>B (11.6)</b>	<b>D (39.5)</b>	<b>B (11.8)</b>	N/A	
Eastbound		B (15.6)	A (7.5)	E (66.1)	A (8.2)	E (65.0)	A (8.3)		
Westbound		B (17.8)	B (17.8)	C (24.1)	B (18.8)	C (24.3)	B (18.9)		
Southbound		B (18.5)	B (11.5)	C (24.7)	A (9.7)	C (26.0)	B (10.3)		
<b>Iyar Way/Urial Drive at Meadstone Way</b>	Unsignalized	<b>A (7.4)</b>	<b>A (7.6)</b>	<b>A (7.4)</b>	<b>A (7.7)</b>	<b>A (7.5)</b>	<b>A (7.8)</b>	N/A	
Eastbound		A (7.6)	A (7.9)	A (7.6)	A (8.0)	A (7.7)	A (8.1)		
Northbound		A (7.5)	A (7.6)	A (7.5)	A (7.7)	A (7.6)	A (7.8)		
Southbound		A (7.1)	A (7.4)	A (7.1)	A (7.5)	A (7.2)	A (7.5)		
<b>Capital Boulevard at U-Haul Driveway/Shearon Farms</b>	Unsignalized	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	N/A	
Eastbound		E (39.4)	C (21.7)	F (53.8)	D (27.4)	F (55.8)	D (28.0)		
Westbound		C (22.9)	D (27.3)	D (30.8)	E (36.0)	E (36.6)	E (42.3)		
Northbound Left		D (31.2)	C (18.2)	E (43.8)	C (23.3)	E (45.6)	C (23.7)		
Southbound Left		C (18.8)	C (22.7)	D (25.3)	D (29.2)	D (26.3)	D (32.4)		
<b>Shearon Farms at Clover Bank Street</b>	Roundabout*	<b>A (3.0)</b>	<b>A (3.2)</b>	<b>A (3.0)</b>	<b>A (3.2)</b>	<b>A (3.2)</b>	<b>A (3.5)</b>	N/A	
Eastbound		V/C - 0.033	V/C - 0.078	V/C - 0.034	V/C - 0.083	V/C - 0.064	V/C - 0.125		
Westbound		A (3.1)	A (3.3)	A (3.1)	A (3.4)	A (3.1)	A (3.7)		
Northbound		A (3.0)	A (3.0)	A (3.0)	A (3.0)	A (3.1)	A (3.2)		
Southbound		A (2.9)	A (3.1)	A (2.9)	A (3.1)	A (2.9)	A (3.3)		
<b>Meadstone Way at Clover Bank Street/Site Driveway 1</b>	Unsignalized	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	N/A	
Northbound		A (8.7)	A (8.7)	A (8.7)	A (8.8)	A (9.3)	A (9.7)		
Southbound		N/A	N/A	N/A	N/A	B (10.2)	B (9.9)		
Eastbound Left		A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (7.3)	A (7.3)		
Westbound Left		A (4.8)	A (5.5)	A (4.8)	A (5.4)	A (7.3)	A (7.4)		
<b>Urial Drive at Site Driveway 2</b>	Unsignalized	N/A				- (-)	- (-)	N/A	
Eastbound						B (12.7)	B (12.3)		
Westbound						A (9.7)	A (9.8)		
Northbound Left						A (7.4)	A (7.5)		
Southbound Left						A (7.6)	A (7.6)		

\*Major street left delay reported in unsignalized scenarios

The proposed Burlington Mills Residential site development is in the immediate vicinity of NCDOT Project # U-5307 which proposes to convert the existing intersection of US 1 at Burlington Mills Road to an interchange. Plans for this project are not yet finalized; therefore, NCDOT Project # U-5307 will not be analyzed in this study.

The following roadway improvements are recommended to be performed to accommodate existing traffic and the projected Burlington Mills Residential site traffic for the study year 2024 based on the capacity analysis presented herein:

Burlington Mills Road at Urial Drive:

- Provide exclusive northbound left and right-turn lanes on Urial Drive extending back to Site Driveway 2
- Monitor for a traffic signal and install when warranted

Meadstone Way at Clover Bank Street/Site Driveway 1:

- Construct a full-movement site driveway for the planned development north of Meadstone with one ingress and one egress lane

Urial Drive at Site Driveway 2:

- Construct a full-movement site driveway for the planned development west of Urial with one ingress and one egress lane
- Construct a full-movement site driveway for the outparcel east of Urial to tie into this intersection with one ingress lane and one egress lane whenever the outparcel is developed

Analysis indicates that with the recommended improvements in place, all of the study intersections are expected to operate at an acceptable LOS in the projected (2024) build-out traffic condition with the exception of US 1 at Burlington Mills Road. The intersection of US 1 at Burlington Mills Road is projected to operate with unacceptable LOS starting in the projected (2024) traffic condition. As previously discussed, NCDOT Project #U-5307 proposes to convert this intersection to an interchange, therefore, no mitigation is recommended to be performed at this intersection as part of the Burlington Mills Residential project.

The recommended laneage is shown on **Figure ES-1**.

