

# TRAFFIC IMPACT ANALYSIS

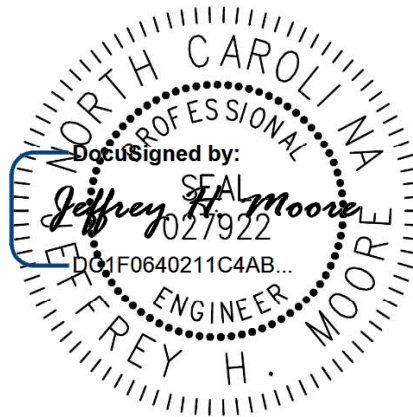
For  
**Etowah Residential**  
Etowah, North Carolina

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## I. Executive Summary

### INTRODUCTION

A residential development known as *Etowah Residential* is proposed on US 64 (Brevard Road) and SR 1323 (Brickyard Road) in Etowah, NC. The total project will consist of 299 Single Family Attached Housing (Duplexes) (ITE LUC 215). The total number of proposed dwelling units is 598.

According to the site plan dated July 2023 by Civil Design Concepts Access #1 to the development is proposed as a full access intersection with US 64 (Brevard Road). The Access #2 is proposed as a full access intersection with SR 1323 (Brickyard Road).

### TRIP GENERATION

The amount of traffic generated by a new development is a function of the size and type of development. Trip generation data for this report was conducted in accordance with the procedures outlined in the Institute of Transportation Engineers (ITE) report entitled ***Trip Generation 11<sup>th</sup> Edition***<sup>1</sup>. Table 1 illustrates the total number of daily, AM peak hour, and PM peak hour trips expected to be generated by the proposed development.

### CAPACITY ANALYSIS

Capacity analyses were performed for 2023 Existing Conditions, 2026 Background Condition, and 2026 Future Buildout Condition for the following intersection:

1. US 64 (Brevard Road) / SR 1424 (Brickyard Road)
2. US 64 (Brevard Road) / SR 1488 (N Greenwood Forest Drive)
3. SR 1323 (Brickyard Road) / SR 1325 (Turnpike Road)
4. SR 1323 (Brickyard Road) / SR 1488 (N Greenwood Forest Drive)
5. SR 1323 (Brickyard Road) / SR 1322 (Holly Springs Road)
6. SR 1424 (Brickyard Road) / SR 1323 (McKinney Road)
7. US 64 (Brevard Road) / Access #1
8. SR 1323 (Brickyard Road) / Access #2



## RECOMMENDED IMPROVEMENTS

To mitigate the traffic-related impacts caused by the *Etowah Residential* and to provide for safe, efficient, and reliable traffic flow, Gannett Fleming recommends the following:

### **US 64 (Brevard Road) / SR 1424 (Brickyard Road)**

Gannett Fleming recommends no changes to this intersection.

### **US 64 (Brevard Road) / SR 1488 (N Greenwood Forest Drive)**

Gannett Fleming recommends no changes to this intersection.

### **SR 1323 (Brickyard Road) / SR 1325 (Turnpike Road)**

Gannett Fleming recommends no changes to this intersection.

### **SR 1323 (Brickyard Road) / SR 1488 (N Greenwood Forest Drive)**

Gannett Fleming recommends no changes to this intersection.

### **SR 1323 (Brickyard Road) / SR 1322 (Holly Springs Road)**

Gannett Fleming recommends no changes to this intersection.

### **SR 1424 (Brickyard Road) / SR 1323 (McKinney Road)**

Gannett Fleming recommends no changes to this intersection.

### **Access #1 / US 64 (Brevard Road)**

Gannett Fleming recommends the proposed Site Drive be constructed as shown on the site plan (included in Appendix C) with full access stop control and at least 100 feet of stem length as per NCDOT Guidelines. Gannett Fleming recommends a dedicated left turn lane with 100 feet of full storage be constructed on US 64 (Brevard Road) with an appropriate taper. Gannett Fleming recommends a dedicated right turn lane with 100 feet of full storage be constructed on US 64 (Brevard Road) with an appropriate taper.

### **Access #2 / SR 1323 (Brickyard Road)**

Gannett Fleming recommends the proposed Site Drive be constructed as shown on the site plan (included in Appendix C) with full access stop control and at least 100 feet of stem length as per NCDOT Guidelines.

## CONCLUSIONS

This Traffic Impact Analysis shows that the proposed *Etowah Residential* impacts on the traffic operations at the study area intersections will be mitigated by the recommended improvements. It is the opinion of Gannett Fleming that with the recommended improvements in place, the proposed development will not negatively impact the health, safety, and welfare of the traveling public.

## II. Introduction

A residential development known as *Etowah Residential* is proposed on SR 1323 (Brickyard Road) in Etowah, NC. The total project will consist of 299 Multifamily Attached Housing (ITE LUC 220). The total number of proposed dwelling units is 598.

According to the site plan developed by Civil Design Concepts. One of the Site Drives to the development is proposed as a full access intersection with US 64 (Brevard Road). The other Site Drive is a proposed full access intersection with SR 1323 (Brickyard Road).

The purpose of this report is to evaluate the traffic impacts from the proposed *Etowah Residential* and to recommend transportation improvements needed to mitigate congestion that may result from the additional site traffic. This report presents trip generation, trip distribution, traffic analyses, and recommendations for transportation improvements needed to meet anticipated traffic demands. This report examines existing 2023 existing conditions, 2026 Background conditions, and 2026 Future Buildout conditions.



Figure 1 – Site and Count Locations

