



621 Hillsborough Street
Suite 500
Raleigh, NC 27603
919. 361. 5000

CPR24002.00

March 31, 2025

Austin Williams
Crosland Southeast
4700 Six Forks Road, Suite 150
Raleigh, North Carolina 27609
704.621.6430

RE: 4724 Burlington Mills Road Rezoning – Parking Reduction Study

Dear Mr. Williams,

Parking Reduction Study

This letter presents the findings of a parking reduction study for the proposed mixed-use development in Rolesville, North Carolina. The purpose of the parking reduction study is to provide data supporting alternative parking requirements to accommodate the peak parking demand for the proposed development at full build out based on data published within the Institute of Transportation Engineers (ITE) Parking Generation Manual. This development is located east of Rolesville Middle School, along Burlington Mills Road and is expected to consist of 264 multifamily dwelling units (Site Area A) as well as a commercial parcel (Site Area B). The focus of this study is the residential use located within Site Area A. There is sidewalk present on the Burlington Mills Road which will facilitate walk/bike to school. Per section 6.4.3.K of the Town of Rolesville (Town) Land Development Ordinance (LDO) It is our understanding that an alternative parking plan could be utilized to justify the parking reduction to reflect the needs of the proposed development.

ROLESVILLE LAND DEVELOPMENT ORDINANCE

The Town LDO provides parking requirements for various developments within Chapter 6.4.3.J. Refer to Table 1 for a summary of the development density as currently proposed and the associated Town parking requirements.

| TABLE 1: PARKING REQUIREMENTS (PER TOWN LDO) | | | |
|--|------------------------------|--------------------|-------------------------|
| Proposed Use | Parking Rate | Size | Parking Spaces Required |
| Mixed Use Residential – Town Center District | 2.0 Spaces Per Dwelling Unit | 264 Dwelling Units | 528 Spaces |

As shown in Table 1, without a parking reduction the Wallbrook Flats development would be required to provide 528 parking spaces to accommodate the proposed development density of the residential use of the site.

SIMILAR SITE DATA

Data published by the Institute of Transportation Engineers (ITE) Parking Generation Manual, 6th Edition was reviewed to determine the peak parking demand and parking supplies of similar developments based on the number of total dwelling units provided. The ITE land use code 221 – “*multi-family housing – 2+ bedrooms (mid-rise) – not close to rail transit*” was utilized for these calculations based on comparable site and development parameters. These calculations are provided according to data collected at 44 similar sites for weekday calculations and 2 similar sites for Saturday calculations. Refer

to Table 2, for a summary of these calculations. Excerpts of this parking demand data from the ITE Parking Generation Manual is provided as an attachment.

| TABLE 1: ITE PARKING DATA | | | | |
|------------------------------|-----------------------------|----------------------|-----------------------------|----------------------|
| | Weekday | | Saturday | |
| | Rate | Total Parking Spaces | Rate | Total Parking Spaces |
| Average Parking Period Rate | 1.23 Spaces / Dwelling Unit | 325 spaces | 1.04 Spaces / Dwelling Unit | 275 spaces |
| Average Peak Period Equation | $P = 1.32(X) - 19.46$ | 329 spaces | -- | -- |

P = number of parking spaces

X = number of dwelling units

Based on review of the data found in the ITE manual, peak parking demand is expected to occur 12 AM – 4 AM on a typical weekday. The calculation for peak parking demand was based on the total number of dwelling units as the independent variable with “General Urban/Suburban (no nearby rail transit)” as the location. The peak parking demand for a development of this size was found to be 329 parking spaces during a peak typical weekday period.

In order to allow for sufficient parking on-site, additional parking beyond the peak parking demand is typically recommended for motorist convenience and for additional buffer during times of exceptional demand. A parking buffer of 20% over peak parking demand would equate to a parking need of 395 parking spaces or approximately 1.5 parking spaces per dwelling unit. Due to these reasons, a minimum parking supply of 1.5 parking spaces per dwelling unit is expected to adequately serve the residential land use of the proposed site.

Summary

This parking demand study was conducted to provide alternative parking rates required to accommodate the expected peak parking demand for the proposed site. With review of the peak parking demand expected for the proposed development, a minimum parking supply of 1.5 parking spaces / dwelling unit is expected to adequately serve the residential use of the proposed site.

If you should have any questions or comments relative to this study, please feel free to contact me at 919.961.4065.

Sincerely,
McAdams

Nate Bouquin, PE | Practice Lead, Traffic Engineering
 bouquin@mcadamsco.com | 919. 961.4065



WALLBROOK FLATS CONCEPT PLAN



| SITE DATA TABLE | |
|----------------------------|----------------------|
| Total Site Area | 15.82 acres |
| Site Area 'A' | 10.64 acres |
| Site Area 'B' | 5.18 acres |
| Proposed Zoning | Town Center District |
| Proposed Residential Units | ~264 units |
| Density | 16.68 units/acre |
| Proposed Parking ratio | 1.5/du |
| Tree Save Required | ~1.58 acres |
| Open Space Required | ~2.37 acres |

Land Use: 221 Multifamily Housing— 2+ BR (Mid-Rise)

Description

Mid-rise multifamily housing with two or more bedrooms is a residential building with between four and 10 floors (levels) of residence that contain at least one dwelling unit with two or more bedrooms. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Land Use Subcategory

Data are separated into two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Time-of-Day Distribution for Parking Demand

The following table presents a composite (weekday and Saturday) Time-of-Day distribution of parking demand for three general urban/suburban study sites.

| Hour Beginning | Percent of Peak Parking Demand |
|-----------------|--------------------------------|
| | Weekday/Saturday Composite |
| 12:00-4:00 a.m. | 100 |
| 5:00 a.m. | 96 |
| 6:00 a.m. | 86 |
| 7:00 a.m. | 77 |
| 8:00 a.m. | 66 |
| 9:00 a.m. | 60 |
| 10:00 a.m. | 57 |
| 11:00 a.m. | 55 |
| 12:00 p.m. | 52 |
| 1:00 p.m. | 50 |
| 2:00 p.m. | 52 |
| 3:00 p.m. | 51 |
| 4:00 p.m. | 57 |
| 5:00 p.m. | 62 |
| 6:00 p.m. | 65 |
| 7:00 p.m. | 68 |
| 8:00 p.m. | 75 |
| 9:00 p.m. | 82 |
| 10:00 p.m. | 87 |
| 11:00 p.m. | 91 |

Multifamily Housing - 2+ BR (Mid-Rise) Not Close to Rail Transit (221)

Peak Period Parking Demand vs: Dwelling Units

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban

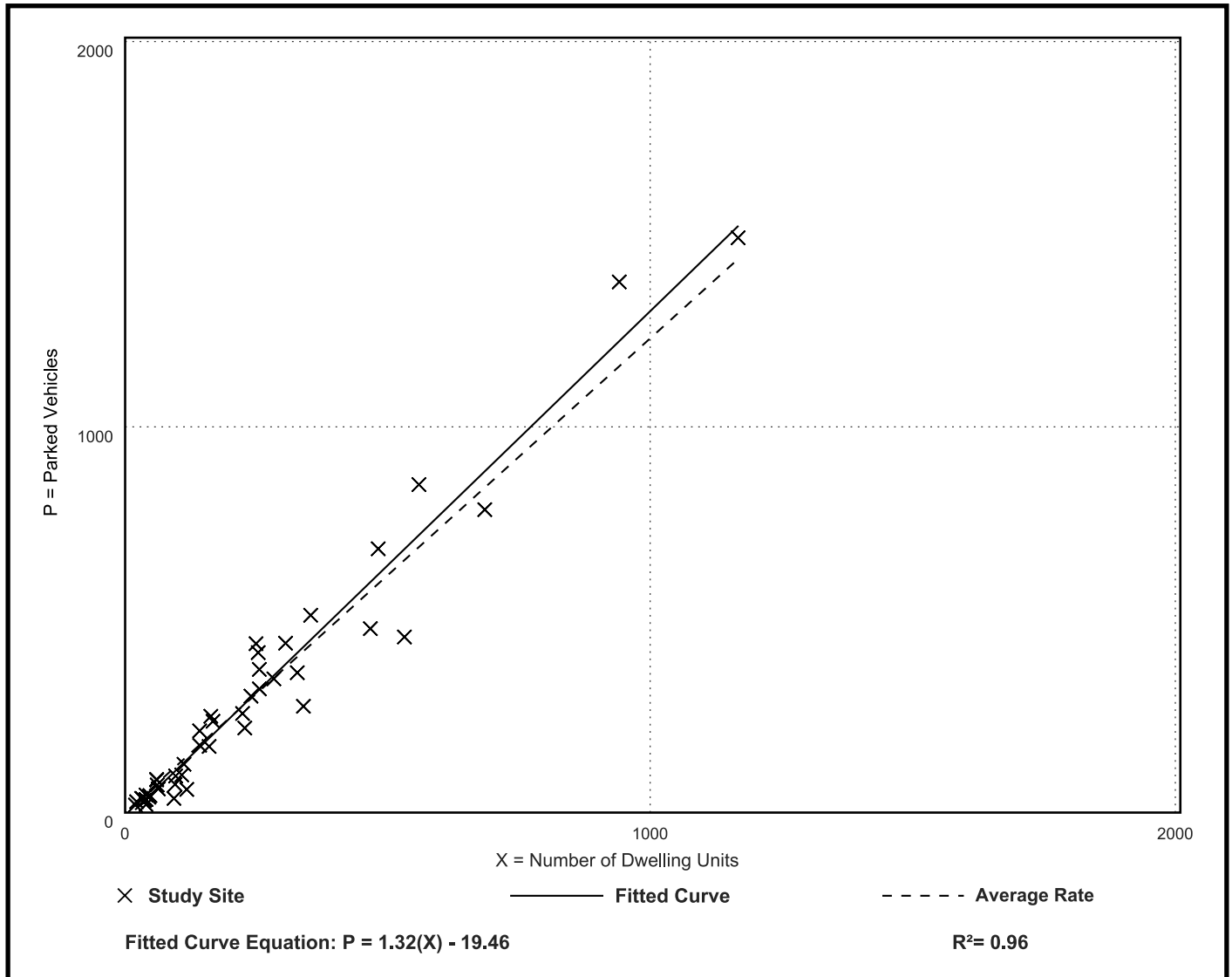
Number of Studies: 44

Avg. Num. of Dwelling Units: 231

Peak Period Parking Demand per Dwelling Unit

| Average Rate | Range of Rates | 33rd / 85th Percentile | 95% Confidence Interval | Standard Deviation (Coeff. of Variation) |
|--------------|----------------|------------------------|-------------------------|--|
| 1.23 | 0.39 - 1.75 | 0.98 / 1.45 | 1.15 - 1.31 | 0.27 (22%) |

Data Plot and Equation



Multifamily Housing - 2+ BR (Mid-Rise) Not Close to Rail Transit (221)

Peak Period Parking Demand vs: Dwelling Units

On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Dwelling Units: 486

Peak Period Parking Demand per Dwelling Unit

| Average Rate | Range of Rates | 33rd / 85th Percentile | 95% Confidence Interval | Standard Deviation (Coeff. of Variation) |
|--------------|----------------|------------------------|-------------------------|--|
| 1.04 | 0.92 - 1.14 | *** / *** | *** | *** (***) |

Data Plot and Equation

Caution – Small Sample Size

