

**REQUEST FOR BOARD ACTION**

**HENDERSON COUNTY**

**BOARD OF ADJUSTMENT**

**MEETING: ZBA 5-31-23**

**SUBJECT: Special Use Permit and Major Site Plan – Etowah Golf & RV Park SUP-23-02**

**PRESENTER: Matt Champion**

**ATTACHMENTS: Staff Report, Applications, & Site Plan**

**SUMMARY OF REQUEST: Special Use Permit for Recreational Vehicle Park**

**SUGGESTED MOTION:**

**I move to approve SUP-23-02 because the use will:**

- a. Not materially endanger the public health, safety or welfare;
- b. Not substantially injure the value of property or improvements in the area; and
- c. Be in harmony with the surrounding area.

**I move to deny SUP-23-02 because the use will:**

- a. Materially endanger the public health, safety or welfare;
- b. Substantially injure the value of property or improvements in the area; and
- c. Not be in harmony with the surrounding area.



## Henderson County, North Carolina Code Enforcement Services

### **1. Committee Request**

- 1.1. **Applicant:** Tribute Investment & Development, Inc. (Matt Maynard)
- 1.2. **Request:** Special Use Permit & Major Site Plan Review
- 1.3. **PIN:** 9529-52-4218
- 1.4. **Size:** 173.84
- 1.5. **Location:** 470 Brickyard Rd, Etowah, NC 28729
- 1.6. **Supplemental Requirements:**

### ***SR 4.15. Recreational Vehicle Park***

(1) Site Plan. Major *Site Plan* required in accordance with §42-331 (Major Site Plan Review).

(2) Lighting. *Lighting mitigation* required.

(3) Perimeter Setback. Fifty (50) feet.

(4) Recreational Vehicle Spaces. *Recreational vehicle* spaces shall be a minimum of 2,000 square feet and shall have dimensions no less than 40 feet by 50 feet. A *recreational vehicle* space may contain up to four (4) campsites for tent set-up. No *recreational vehicle* space is permitted in the 100-year *floodplain*.

(5) Common Area. A *common area* shall be provided, that is equivalent in square footage to 25 percent the total square footage in: *recreational vehicle/park model home* spaces, *structures* on site, parking areas and *driveways*. *Common area* shall be accessible for the use and enjoyment of *recreational vehicle park* occupants, located as to be free of traffic hazards and maintained in good condition by the *applicant*.

(6) Operations. The *recreational vehicle park*: a. Shall provide rental spaces;

1. For the location of *recreational vehicles, park model homes* and/or tent set-up,  
2. Which may contain an open or covered porch not exceeding 15 feet in height and not to exceed 400 square feet in area, and 3. Which have no point of direct access not indicated on the *site plan*; a. May contain *structures* ancillary to the use; b. Shall be permitted one (1) store, exclusively for the sale of incidental gifts and foodstuffs; and c. Shall provide, at the time of application, an evacuation plan for a natural disaster event.

(7) Solid Waste Collection. The facility shall provide a suitable method of solid waste disposal and collection consisting of either private collection from individual *uses* or the *use* of dumpsters (installed and/or operated to meet all local and state statutes, ordinances and regulations (including Chapter 95 of the Henderson County Code, *Solid Waste*) and thereafter certified by the Department of Public Health). Where dumpsters are used, Screen Class One (1), Two (2) or Three (3) shall be provided consistent with the requirements of §42-182 (Screen Classification).

(8) Sewage System. *Recreational vehicle/park model home* spaces shall not be provided individual hookups to a septic tank, *approved public or community sewage disposal system* or *municipal sewage disposal system*; instead, a central dump station shall be provided for the *use* of all occupants. A *recreational vehicle park* shall connect to a *municipal sewage disposal system* when the system is located within a distance equal to the product of 50 feet multiplied by the number of spaces proposed for the *recreational vehicle park*. If a *park* is located more than 2,500 feet from an existing *municipal sewage disposal system*, such connection shall not be required.

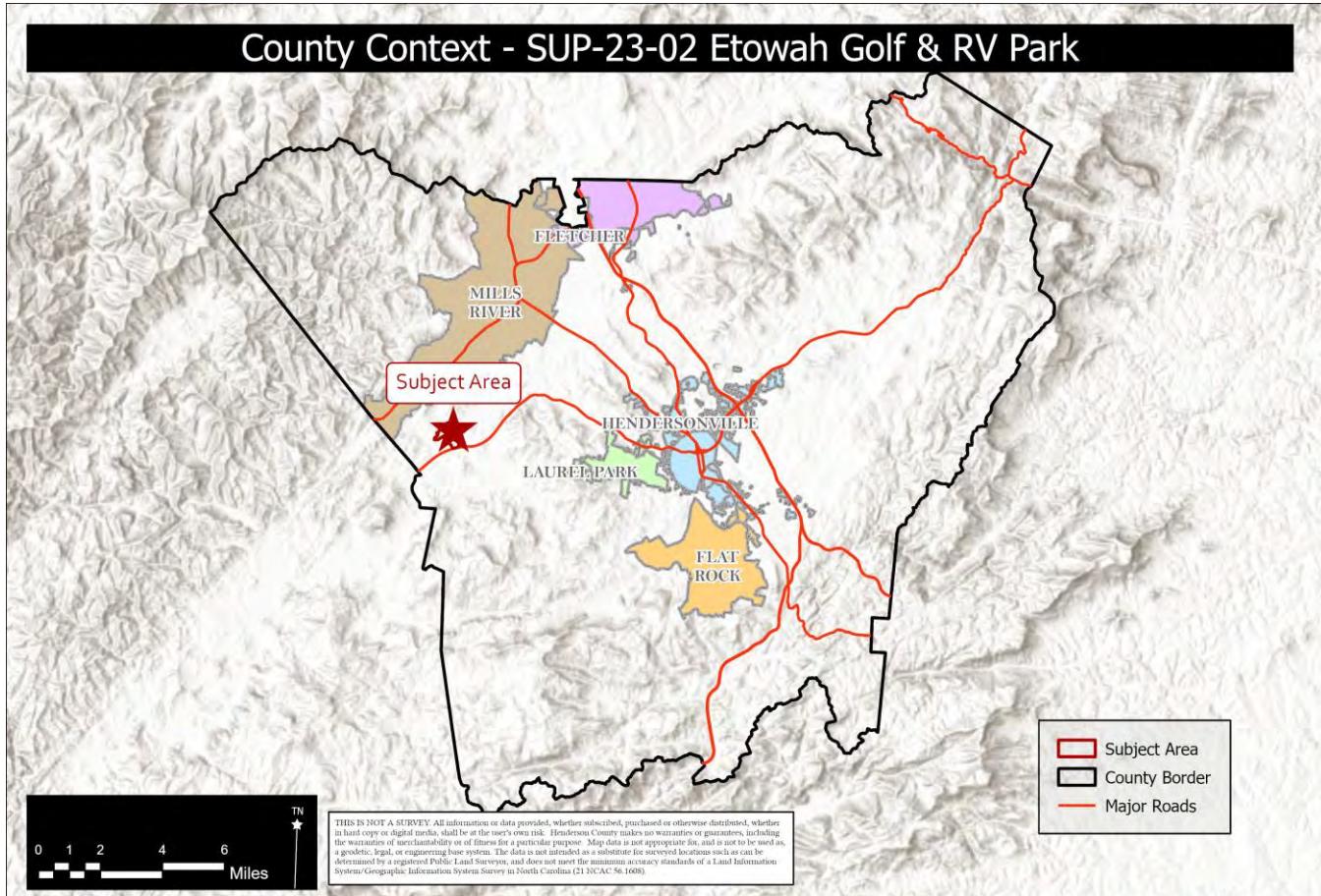
(9) *Common Area Recreation and Service Facilities*. Those facilities within the *recreational vehicle park* shall be for the sole purpose of serving the overnight guests in the *park*, and shall adhere to the development standards established in SR 4.6 (*Common Area Recreation and Service Facilities*).

**Recreational Vehicle (RV) Park.** An establishment primarily engaged in operating sites to accommodate *park model homes* or *recreational vehicles*. These establishments may provide access to facilities, such as laundry rooms, recreational halls, playgrounds, stores and snack bars. An RV park will generally contain three (3) or more *park model homes* or *recreational vehicles*.

### **SR 9.18. Wastewater Treatment Plant**

- (1) Site Plan. Major *Site Plan* required in accordance with §42-330 (Major Site Plan Review).
- (2) Security. The operations of a *wastewater treatment plant* shall be totally enclosed by: (1) a security fence at least eight (8) feet in height; (2) a wall at least eight (8) feet in height; or (3) a fireproof building. Entrances and exits should be secured and locked.
- (3) Screening. Screen Class Three (3) shall be provided consistent with the requirements of §42-181 (Screen Classification).

**Map A: County Context Map**



Property Owner: WNC Resort Properties, LLC Agent: Civil Design Concepts

Assessed Acreage: 173.84 Acres PIN: 9529-52-4218

Current Zoning: Residential One (R1)



## **2. History & Characteristics:**

- 2.1. **Current Property Owners:** WNC Resort Properties LLC. The NC Special Warranty Deed was recorded on December 19, 2014.
- 2.2. **Former Property Owners:** Etowah Sports, LLC.
- 2.3. **Natural Resources:**
  - 2.3.1. **Streams:** The subject area contains a Class C designated surface water called Gash Creek and is part of the French Broad basin.
  - 2.3.2. **Slopes:** The subject area contains approximately 167.7 acres of slopes between 0% to 16% and 6.22 acres with slopes between 16% and 25%. There is approximately 0.79 acres of slopes greater than 25%.

### Map B: Aerial Map



Property Owner: WNC Resort Properties, LLC Agent: Civil Design Concepts

Assessed Acreage: 173.84 Acres PIN: 9529-52-4218

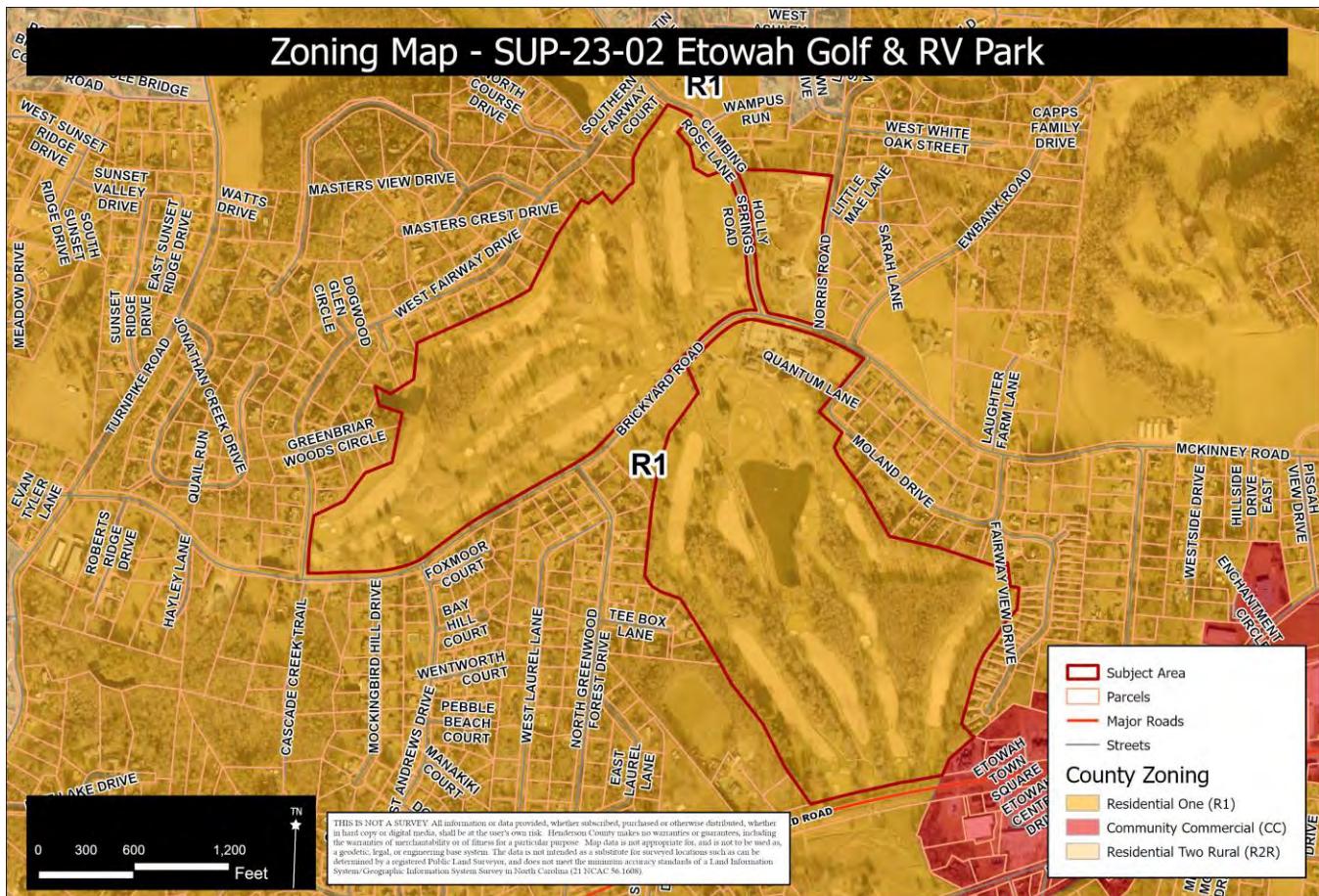
Current Zoning: Residential One (R1)



### 3. Current Conditions

- 3.1. **Current Use:** The subject area is currently part of the Etowah Valley Golf and Resort. The existing golf course contains 27 holes, but the subject area included in this application only contains 18 holes. The golf course club house and several amenities are located on the subject area. The existing amenities include a pool with a pool house, tennis courts, 3 multi-family structures for lodging, a standalone restaurant/event center outside of the clubhouse, and a garage/maintenance workshop. The golf course and amenities were established prior to the adoption of the Land Development Code in September of 2007. Aerial images from the mid 1980's show the club house and original 18-hole golf course.
- 3.2. **Adjacent Area Uses:** The surrounding properties contain residential structures, agricultural land, and commercial uses primarily located along Brevard Rd (US 64). The Salty Landing restaurant is located southeast of the subject area. Etowah United Methodist Church and the Etowah Public Library is located east of the subject area.

### Map C: Zoning Map



Property Owner: WNC Resort Properties, LLC Agent: Civil Design Concepts

Assessed Acreage: 173.84 Acres PIN: 9529-52-4218

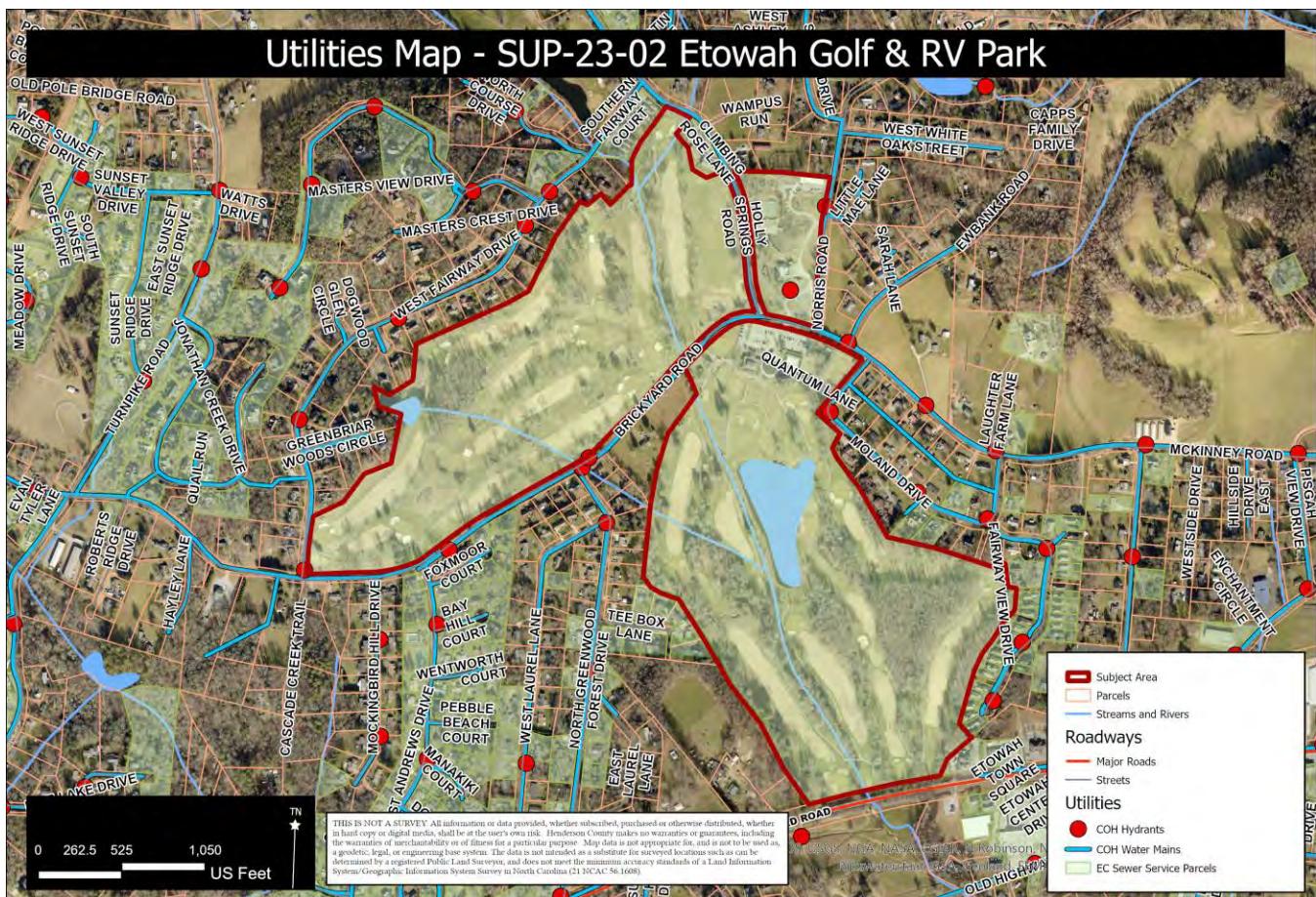
Current Zoning: Residential One (R1)



**3. Zoning** The subject area is located within the Residential One (R1) zoning district.

- 3.1 **Residential One (R1):** The purpose of Residential One (R1) is to foster orderly growth where the *principal use* of land is residential. The intent of this district is to allow for medium to high-density *residential development* consistent with the recommendations of the *Comprehensive Plan*. This general *use district* is typically meant to be utilized in areas designated as Urban (USA) in the *Comprehensive Plan*. (LDC §42-29)
- 3.2 **Adjacent Zoning:** Residential One (R1) is found in all directions of the subject area except for the Community Commercial (CC) zoning district found to the southeast.

### Map D: Public Utilities Map



Property Owner: WNC Resort Properties, LLC Agent: Civil Design Concepts

Assessed Acreage: 173.84 Acres PIN: 9529-52-4218

Current Zoning: Residential One (R1)



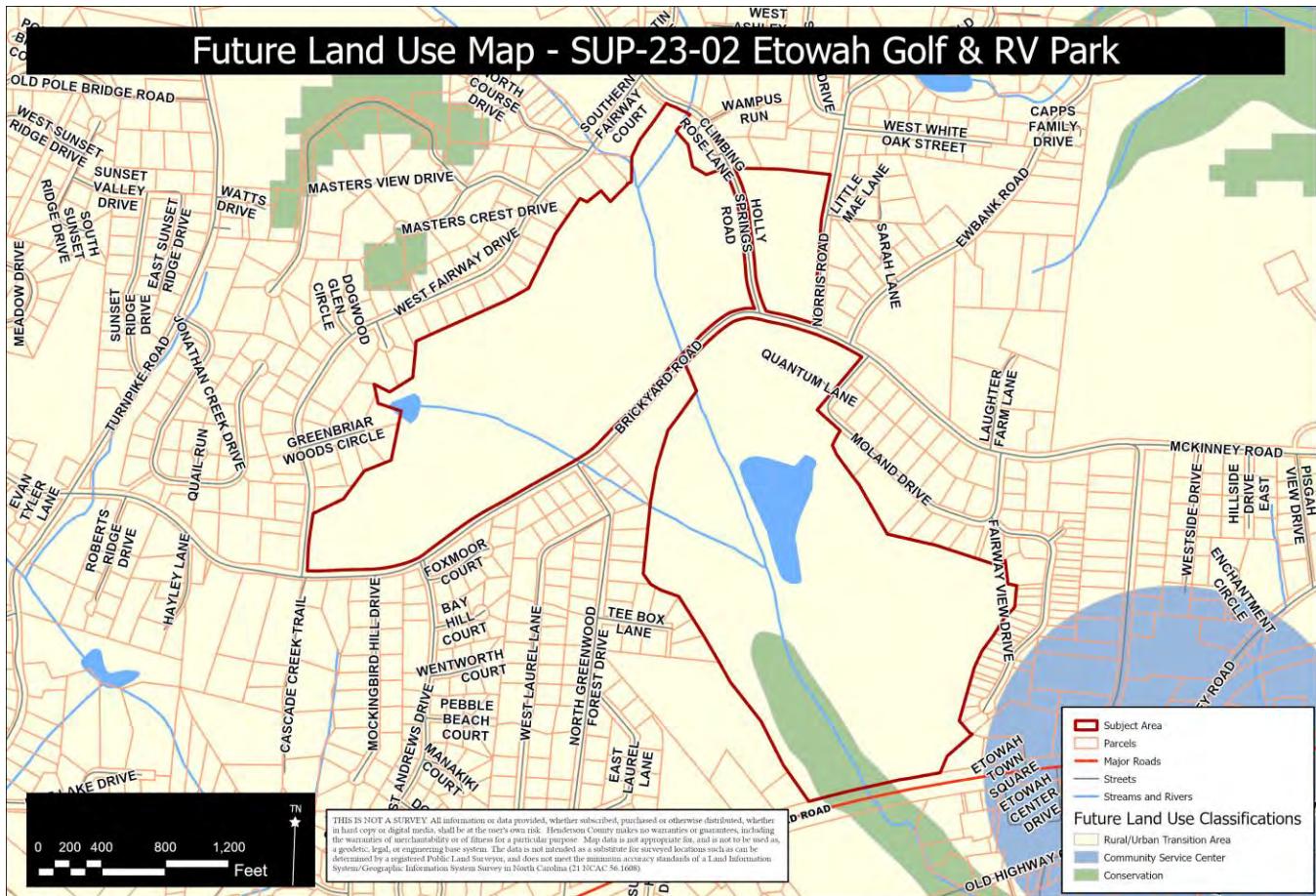
4. **Floodplain /Watershed Protection** The subject area is partially encumbered by a Special Flood Hazard Area. The 100-year flood hazard area is shown along Gash Creek, below the existing pond, running south towards Brevard Rd. The property is not in a Water Supply Watershed district. Any surface waters found on the subject area will require a 30' stream buffer setback that is void of any impervious surfaces.

5. **Water and Sewer** This property will be served by public water and a community sewer system for the amenities, and a central dump station for the RV spaces.

**Public Water:** City of Hendersonville

**Public Sewer:** Etowah Community Sewer System

### Map E: CCP Future Land Use Map



Property Owner: WNC Resort Properties, LLC Agent: Civil Design Concepts

Assessed Acreage: 173.84 Acres PIN: 9529-52-4218

Current Zoning: Residential One (R1)



**6. The Henderson County Comprehensive Plan (CCP)** The CCP Future Land Use Map identifies the subject area as being in a Conservation and Rural/Urban Transition Area (See Map E).

- Conservation:** "This category includes land areas that are intended to remain largely in their natural state, with only limited development. Such areas should be targeted for protection through regulations and incentives.
- Rural Transition Area:** The CCP states that, "The RTA is currently rural in character, with existing pockets of limited higher density residential and commercial development. The primary factor preventing urban development in the RTA is the absence of sewer and water service. The RTA will continue to experience extensive development." (CCP, Pg. 134).

**7. Proposal** The applicant is proposing to develop the subject area as a recreational vehicle park with a total of 343 RV sites. The existing 18-golf holes found on the subject area will be reconfigured and reduced for a new total of 9-golf holes. The existing amenities serving the Etowah Valley Golf and Resort will remain as indicated on the major site plan. The RV Park will have access to a new clubhouse and a leasing office for the facility. The application indicates that the proposed sewer treatment facility will be constructed to serve the subject area amenities and will be deeded

over to Etowah Sewer Company after completion. Amenity areas will have their own dedicated parking areas with ADA accessible parking spaces. The RV spaces will be served by a central dump station. The major site plan shows the following elements:

- Approximately 57 acres of disturbance
- 6,500SQFT 2-story leasing office
- 45,000SQFT 2-story clubhouse
- 30,000SQFT 2-story sewer treatment facility
- 25% open space (43.46 acres)
- RV spaces are approximately 2,000SQFT
- Gravel driveway off internal roadways to each RV space
- 725 vehicular parking spaces
- 13,400LF of new roadway
- 40' easement over roadways
- 20' wide travel way width
- New access to Brevard Rd (US 64)
- Additional access to Brickyard Rd (SR 1323)

8. **Technical Review Committee:** The TRC reviewed the major site plan and special use permit application during their Tuesday, May 16, 2023, meeting. The TRC moved to forward the special use permit to the ZBA with the following conditions:

Conditions required by the TRC include:

1. NCDOT Traffic Impact Analysis
2. NCDOT driveway permit for all proposed driveway cuts including the new emergency access cut
3. NCDOT encroachment agreements for utilities in the right-of-way
4. Copy of letter from Etowah Community Sewer System accepting the treated water to their existing discharge and letter from NCDEQ allowing this pretreatment plant to utilize the Etowah Sewer permit for discharge
5. Floodplain Development Permit for the proposed entrance off Brevard Rd (US64)
6. Site Development soil erosion and sedimentation control permit
7. Site Development stormwater control permit
8. Secondary Emergency Access for portion of RV Park north of Brickyard Rd (does not have to meet gate code requirements)
9. Fire hydrants to provide fire suppression for proposed clubhouse
10. City of Hendersonville public water allocation and utility connection approvals

9. **Landscaping & Buffering Requirements** The subject area is not required to buffer the permitter of the property since the surrounding properties all fall within the Residential One (R1) zoning district. The subject area will have to provide a landscaping plan for the following elements:

- 9.1. **Parking area landscaping** is required for new parking areas with 10 or more dedicated parking spaces. The parking area standards requires 1 small or large deciduous tree for every 5 parking spaces. Additionally, when no buffer is required along the property lines and parking is proposed within 20' of a property line, a planting strip is required. The planting strip is a minimum of 10' in width and shall contain 2 small or large deciduous or evergreen trees per 100 linear feet.

- 9.2. **Dumpster screening** is required for a proposed solid waste collection facility. The dumpster will require a Screen Class One (1) Two (2) or Three (3) that are outlined in Section 42-181 Screen Classifications.
- 9.3. **Wastewater Treatment Facility** requires a Screen Class 3 with an 8' tall fence.

## 10. Photos













## View from East



02/07/2023

## View from East



02/07/2023

**View from North**



02/07/2023

**View from North**



02/07/2023

**View from US64**



© All EagleView Technology Corporation

02/07/2023

**View from South**



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02/07/2023

**View from West**



02/07/2023

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Application No. \_\_\_\_\_

**HENDERSON COUNTY**  
**SPECIAL USE PERMIT APPLICATION FORM**

**GENERAL INFORMATION**

Date of Application: 4/4/2023

Previously Submitted (Circle One): Yes  No

Date of Pre-Application Conference: 8/18/2022

Site Plan Attached (Circle One): Yes  No

Traffic Impact Study Required (Circle One): Yes  No

**SPECIAL USE PERMIT INFORMATION**

Type of use to be permitted: RV Lots SR #: 4.15

Existing Structures or Uses on property: Existing golf course and country club

Road System (Circle): Public  Private

Water System (Circle): Individual  Community  Public (Municipal or County)

Sewer System (Circle): Individual  Community  Public (Municipal or County)

**SITE PLAN REQUIREMENTS**

If a minor or major site plan is not specifically required, the applicant shall submit a site plan with the following items:

- Dimensions of property.
- Location of existing and proposed structures (including accessory structures), and general use thereof.
- Setbacks of existing and proposed structures from property lines and edge of right-of-way for roads (from centerline of roads for uses located in the R-40, WR, or SW districts).
- Separation of existing and proposed structures from one another.
- Parking and off/on loading areas
- Location of signs (including sign dimensions, height, type of material, lighting).
- Location and dimensions of existing and proposed roads / driveways and their entrance/exits.
- Location of dumpsters.
- Location and general description of any fences, landscaping or other buffering (proposed or existing).

Site plan not to exceed 11 X 17 size. Anything submitted larger than 11 X 17, the applicant must provide 12 copies with the application form.

**PARCEL INFORMATION**

PIN: 9529-52-4218 Deed Book/Page: 1601/251 Tract Size (Acres): 173.84

Zoning District: R1 Fire District: Etowah/Horseshoe Watershed: French Broad Floodplain: A portion

Location of property to be developed: 470 Brickyard Road

**CONTACT INFORMATION**

**Property Owner:**

Name: WNC Resort Properties, LLC Phone: \_\_\_\_\_

Address: 1310-A Patton Avenue City, State, and Zip: Asheville, NC 28806

**Applicant:**

Name: Tribute Investment & Development, Inc Phone: (910) 251-2388

Application No. \_\_\_\_\_

Address: 10 South Cardinal Drive

City, State, and Zip: Wilmington, NC 28403

**Agent:**

Name: Civil Design Concepts

Phone: (828) 252-5388

Address: 168 Patton Avenue

City, State, and Zip: Asheville, NC 28801

Agent Form (Circle One): Yes  No

**Plan Preparer:**

Name: Civil Design Concepts

Phone: (828) 252-5388

Address: 168 Patton Avenue

City, State, and Zip: Asheville, NC 28801

## STANDARDS FOR REVIEW

The Land Development Code imposes the following GENERAL REQUIREMENTS on the use requested by the applicant. Under each requirement, the applicant should explain, where applicable, how the proposed use satisfies these requirements:

- A. General Requirement #1: The use will not materially endanger the public health, safety or welfare:  
This will not endanger the public due to it is being strategically placed in the center of the existing development, so that the existing neighbors will maintain their existing views and scenery of the golf course that they currently have, while improving the less used areas of the existing course.
- B. General Requirement #2. The use will not substantially injure the value of property or improvements in the area.  
This will not injure property values or area improvements due to it being strategically placed in the center of the existing development, so that the existing neighbors will maintain their existing views and scenery of the golf course that they currently have, while improving the less used areas of the existing course.
- C. General Requirement #3. The use will be in harmony with the surrounding area.  
This use will remain in harmony with the surrounding area by keeping the existing perimeter of the golf course the same while providing the area the opportunity to bring in more tourists to their area, which will provide additional revenue. This will also allow the course to improve their property for existing long time players with the additional revenue brought in.

The Land Development Code also imposes the following SPECIFIC REQUIREMENTS on the use requested by the applicant. The applicant should be prepared to demonstrate that satisfactory provisions have been made for the following, where applicable.

The proposed use shall be located and developed in such a manner as to:

- a. Comply with all applicable local, state and federal statutes, ordinance and regulations.  
This project intends to comply with all applicable local, state and federal statutes/ordinances/regulations.
- b. Be in accordance with the Comprehensive Plan, Long Range Transportation Plans and Comprehensive Transportation Plans of the county and/or Long Range Transportation Plans and comprehensive Transportation Plans of nay municipality of the County.  
This project plans to work with officials of local county/municipalities to coordinate all proposed work and will incorporate all requested additions/subtractions where possible.

Application No. \_\_\_\_\_

- c. Minimize the effects of noise, glare, dust, solar access and odor on those persons residing or working in the neighborhood of the proposed use.

The project will not generate impacts that are materially distinguishable from nearby residential and commercial uses in terms of noise, glare, dust, solar and odor. Adequate buffers will be maintained.

- d. Minimize the environmental impacts on the neighborhood including the following groundwater, surface water, wetlands, endangered/threatened species, archeological sites, historic preservation sites and unique natural areas.

This project will meet County stormwater standards for post-development stormwater controls and will also meet County erosion control standards for during-construction controls.

Environmental consultants have been engaged to investigate items such as streams, wetlands and endangered/threatened species and all applicable standards and permitting will apply.

Show that satisfactory provision/arrangement has been made (where applicable or required) concerning:

- a. Ingress and egress to property and proposed structures thereon (with particular reference to automotive/pedestrian safety/convenience and traffic flow/control).

This project will construct a new entrance road off of Brevard to keep from over utilizing existing ingress/egress to the site while keeping the traffic clear and constructing all new infrastructure to overall improve access. The project will submit to and receive driveway permits from NCDOT

- b. Off-street parking and loading areas.

This project will be constructing RV lots with a leasing office and clubhouse, all of which will be providing its own parking/loading areas to keep from interfering with existing business and providing unblocked access through the duration of construction.

- c. Utilities (with particular reference to locations, availability and compatibility).

The project will extend and be served by local and/or State approved community or public utilities.

- d. Buffering and landscaping (with particular reference to type, location and dimensions).

The project will maintain existing buffering along the perimeter of the site so that views from neighboring properties should be minimally impacted. The project will comply with all County ordinances.

- e. Structures (with particular reference to location, size and use).

This project plans to only add a leasing office and clubhouse structure along with RV Lots, so the height of the structures will be of normal size and out of the views of the adjacent neighbors.

I certify that the information shown above is true and accurate and is in conformance with the Land Development regulations of Henderson County.

WNC Resort Properties LLC by PARRELL REDMOND

Print Applicant (Owner or Agent)

1  
Signature Applicant (Owner or Agent)

3/23/23  
Date

**County Use Only**

Fee: \$ \_\_\_\_\_ Paid: \_\_\_\_\_ Method: \_\_\_\_\_ Received by: \_\_\_\_\_

Authority to grant the requested permit is contained in the Land Development Code, Sections: \_\_\_\_\_

Community Planning Area: \_\_\_\_\_

Application No. \_\_\_\_\_

- c. Minimize the effects of noise, glare, dust, solar access and odor on those persons residing or working in the neighborhood of the proposed use.

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Tribute Investment & Development, Inc - Matthew Maynard

Print Applicant (Owner or Agent)



3/27/23

Signature Applicant (Owner or Agent)

Date

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**County Use Only**

Fee: \$ \_\_\_\_\_ Paid: \_\_\_\_\_ Method: \_\_\_\_\_ Received by: \_\_\_\_\_

Authority to grant the requested permit is contained in the Land Development Code, Sections: \_\_\_\_\_

Community Planning Area: \_\_\_\_\_

**HENDERSON COUNTY**  
**MAJOR SITE PLAN REVIEW APPLICATION**

**CONTACT INFORMATION**

**Property Owner:**

Name: WNC Resort Properties, LLC Phone: \_\_\_\_\_  
Complete Address: 1310-A Patton Avenue, Asheville, NC 28806

**Applicant:**

Name: Tribute Investment & Development, Inc. Phone: (910) 251-2388  
Complete Address: 10 South Cardinal Drive, Wilmington, NC 28403

**Agent:**

Name: Civil Design Concepts Phone: (828) 252-5388  
Complete Address: 168 Patton Avenue, Asheville, NC 28801

Agent Form (Circle One): Yes No

**Plan Preparer:**

Name: Civil Design Concepts Phone: (828) 252-5388  
Complete Address: 168 Patton Avenue, Asheville, NC 28801

**GENERAL INFORMATION**

Date of Application: 4/4/2023

Site Plan Attached (Circle One): Yes   No

**PARCEL INFORMATION**

PIN: 9529-52-4218

Tract Size (Acres): 173.84

Zoning District: R-1

Fire District: Horseshoe Fire

Supplemental Requirement# \_\_\_\_\_

Watershed: French Broad River Basin

Permitted by Right \_\_\_\_\_

Floodplain: Yes \_\_\_\_\_

Special Use Permit \_\_\_\_\_

Location / Property to be developed: 470 Brickyard Road, Etowah, NC

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**County Use Only**

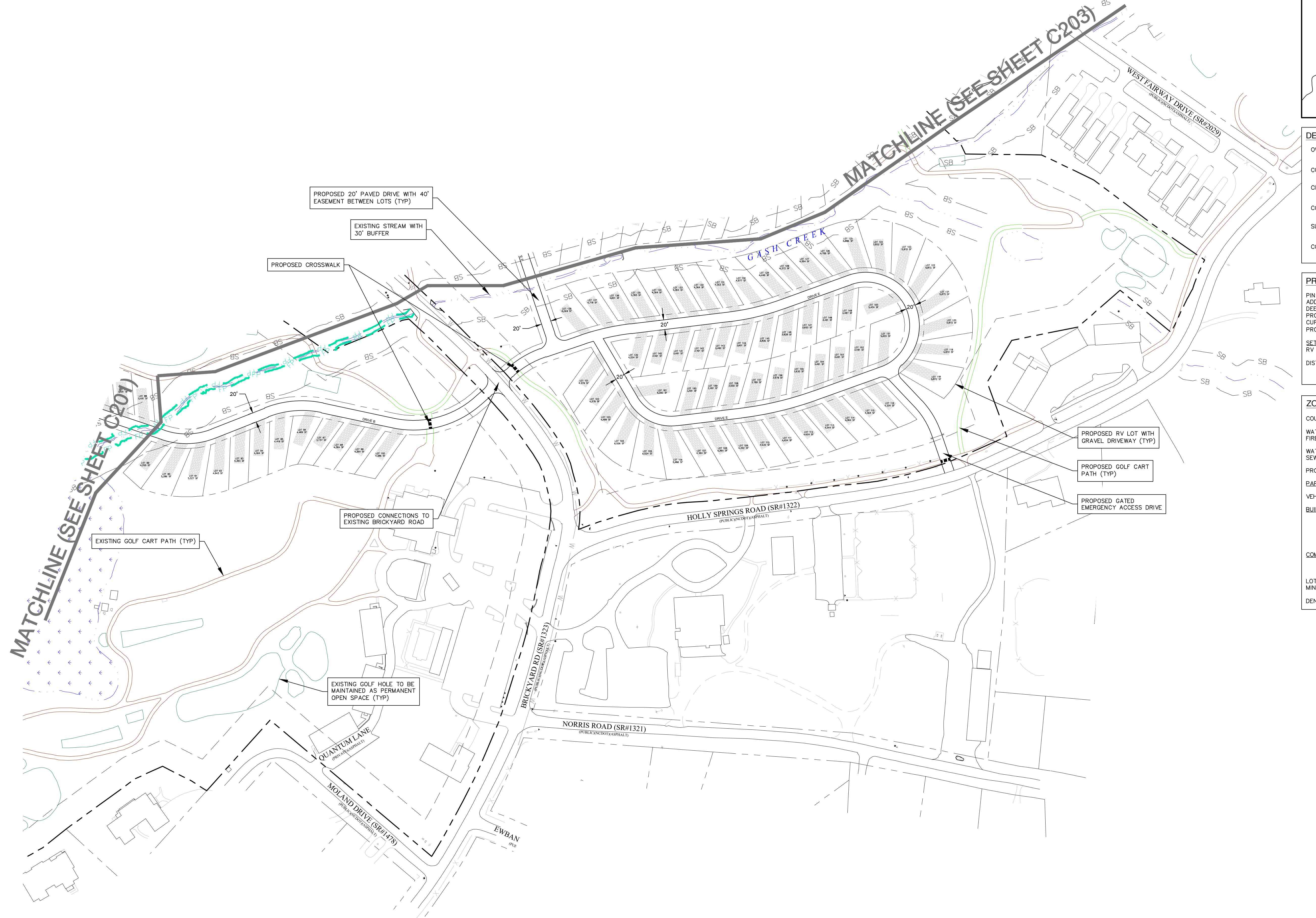
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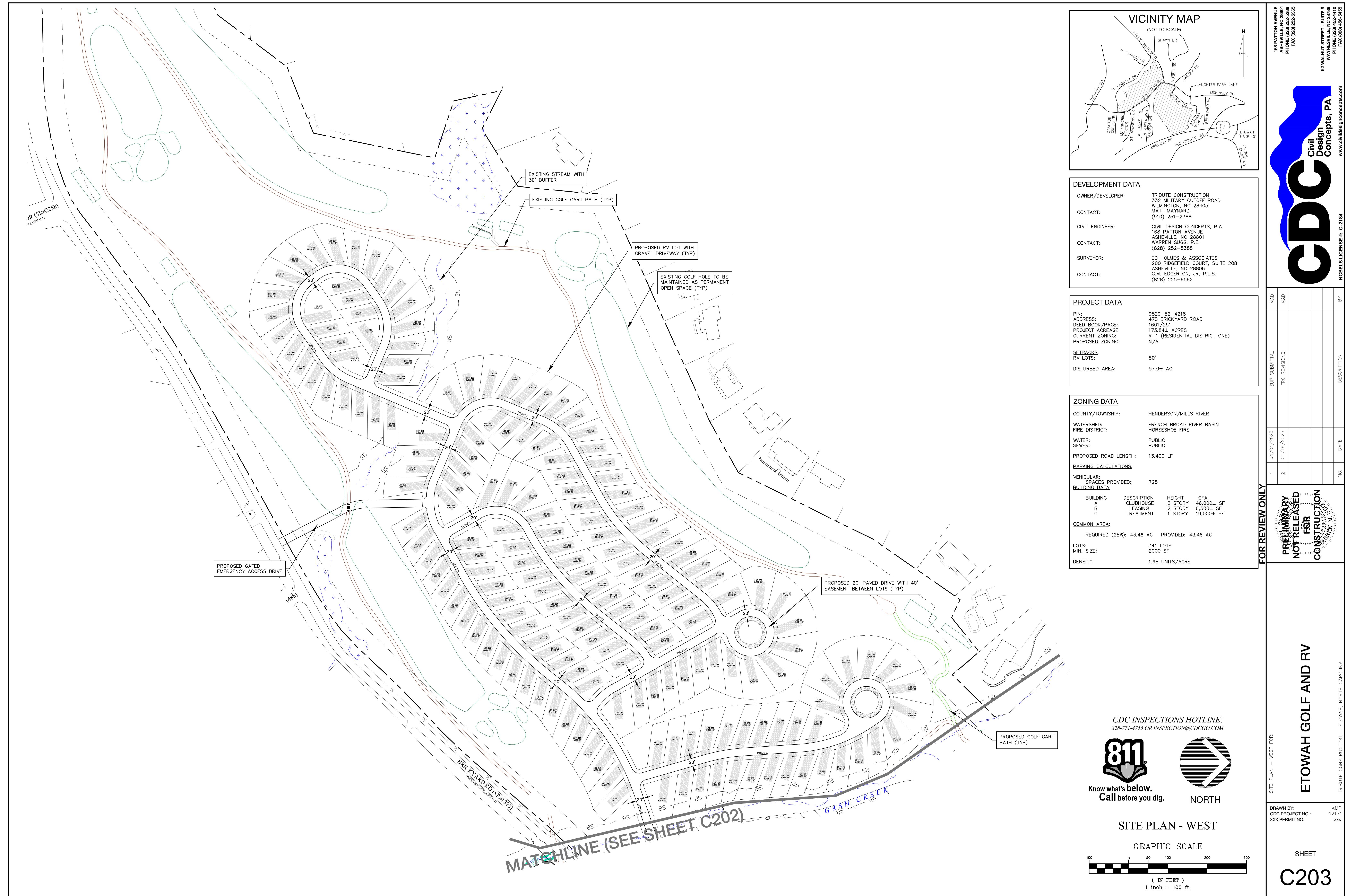




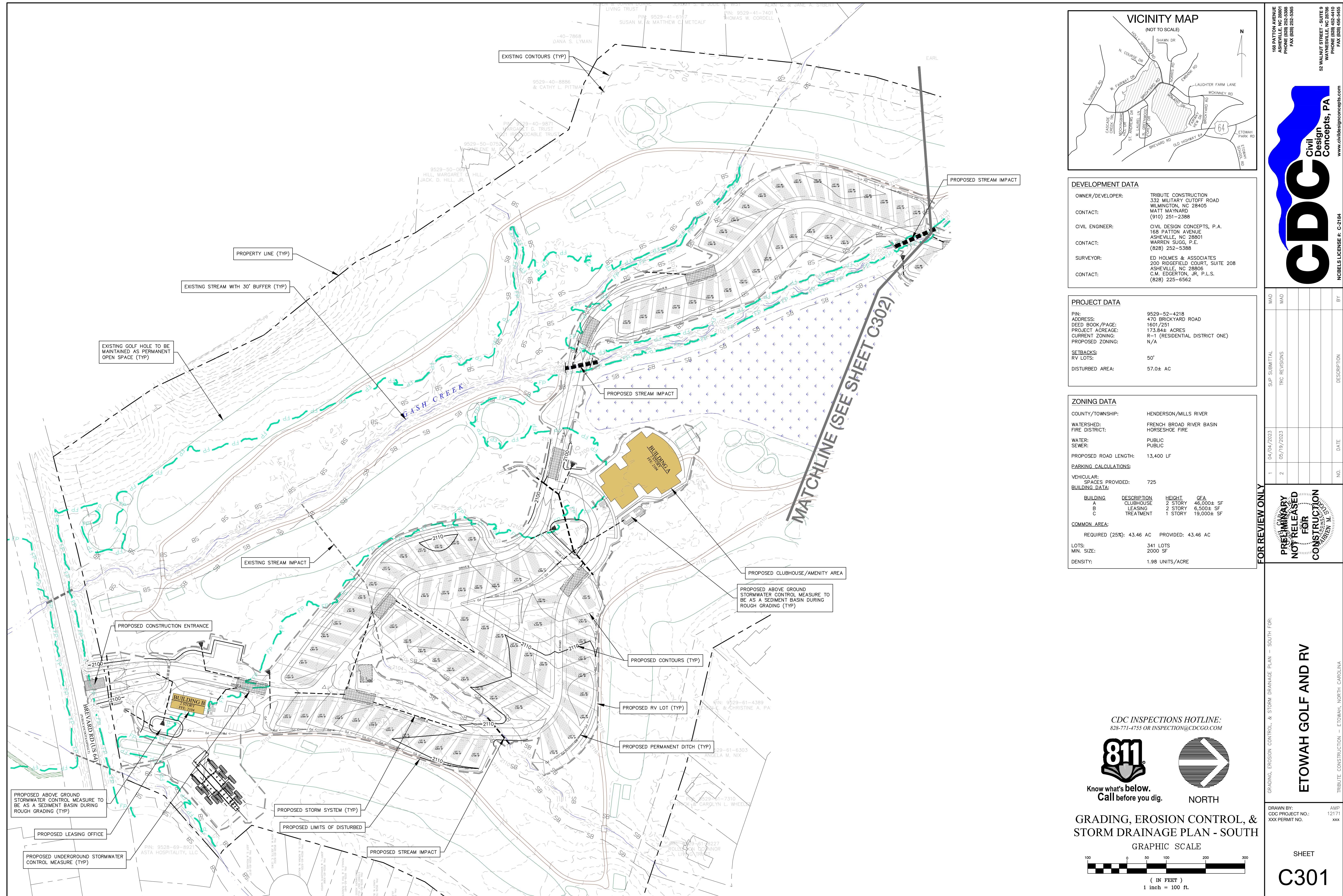




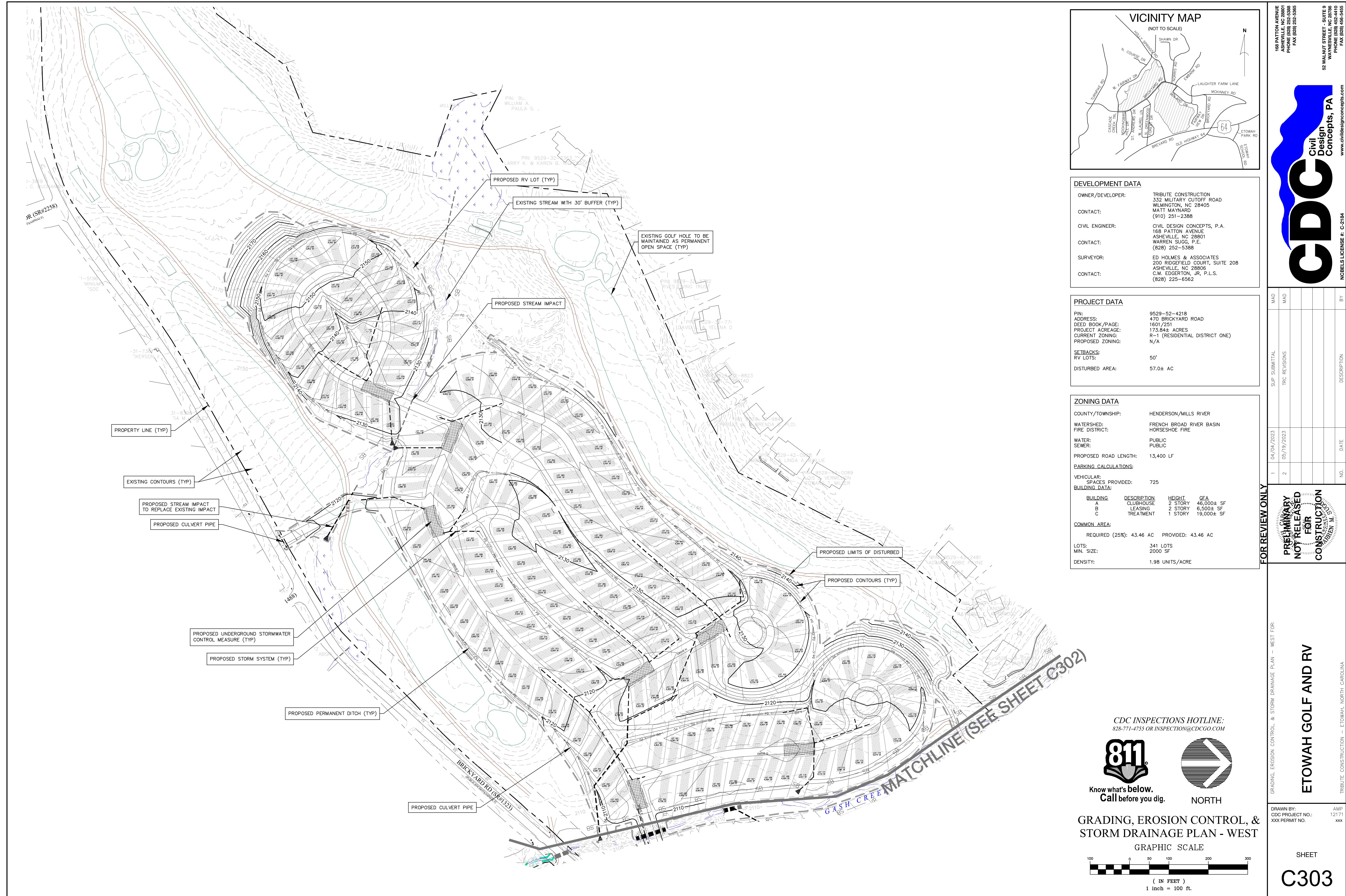


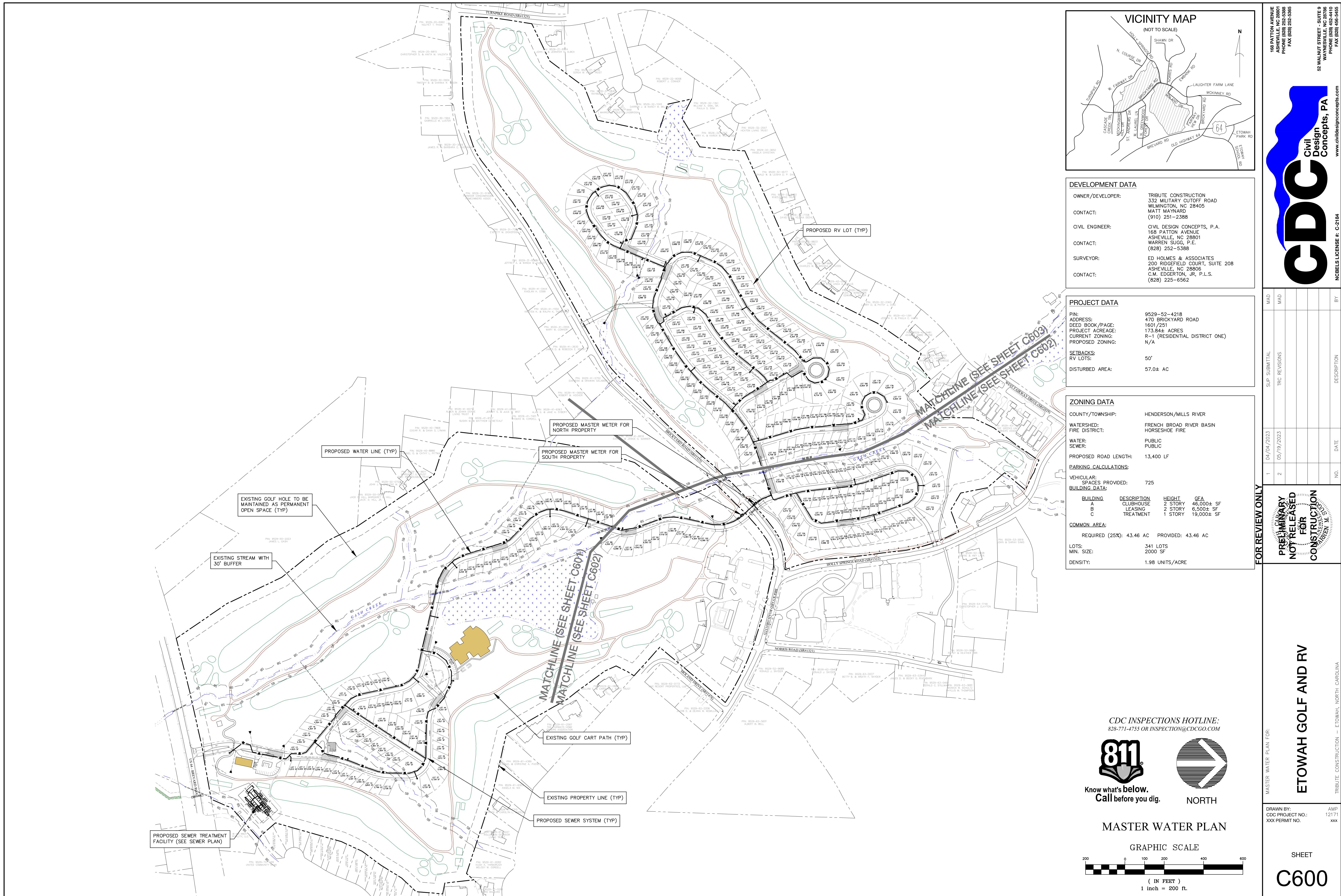


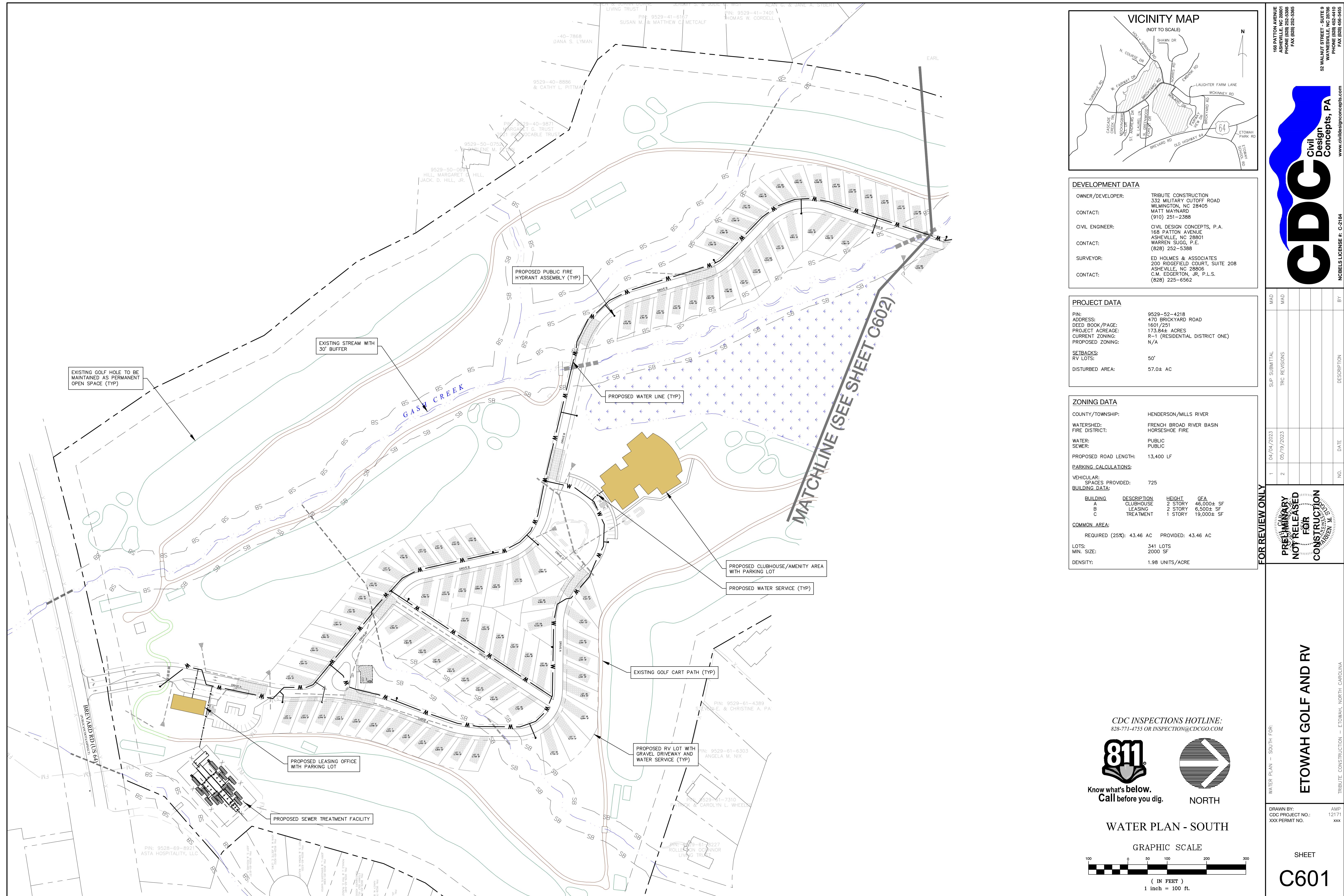






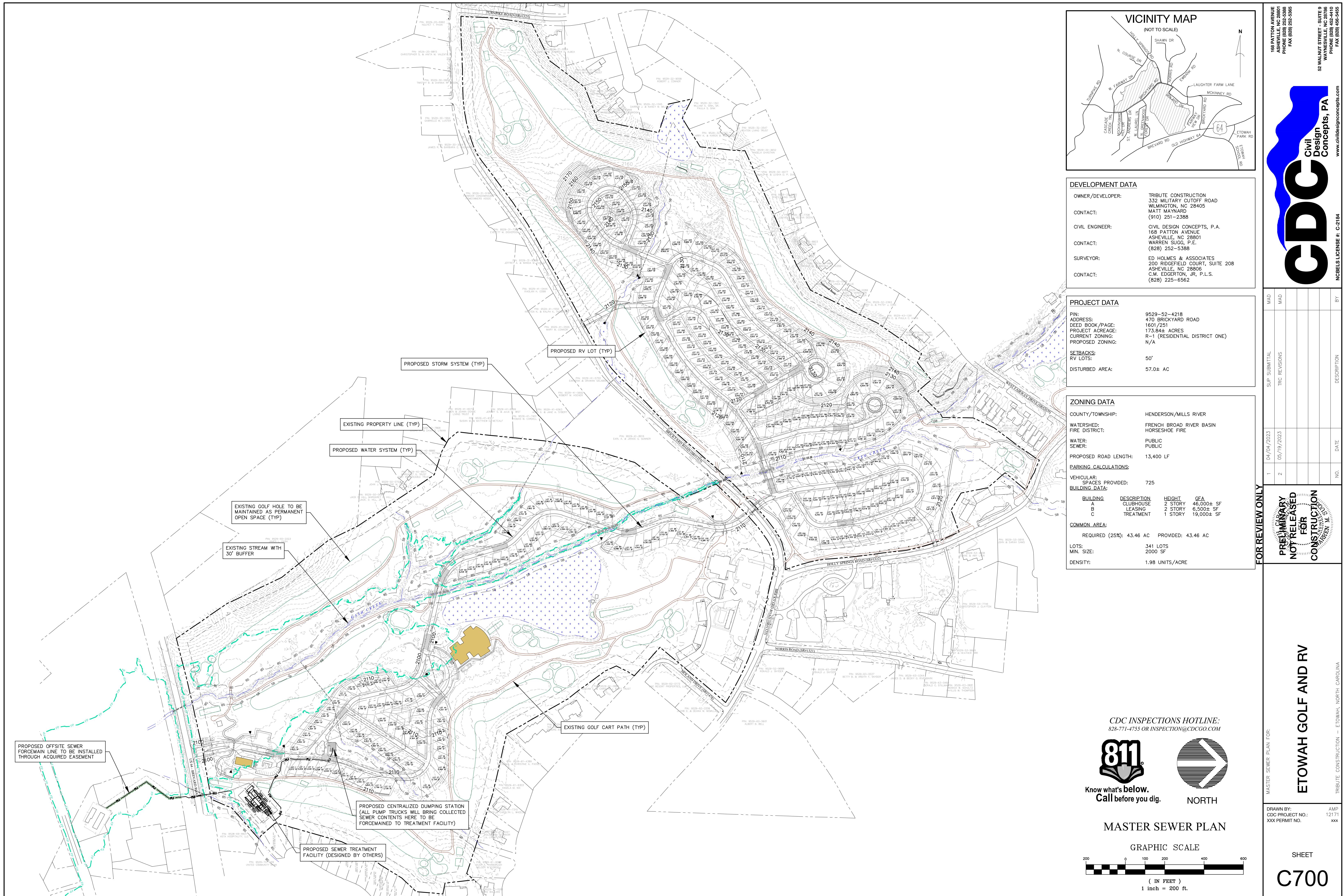












# TECHNICAL MEMORANDUM

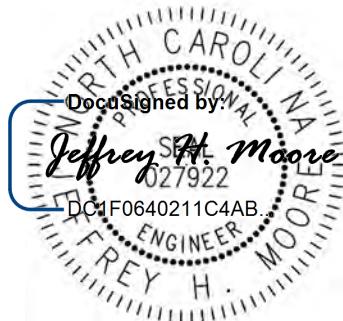
For  
**Etowah RV Park**  
Etowah, North Carolina

Prepared For:  
**Civil Design Concepts, P. A.**  
168 Patton Avenue  
Asheville, NC 28801

Prepared By:



22 S. Pack Square  
Suite 800  
Asheville, NC 28801  
NC Licensure No. F-0270



30 March 2023  
(Gannett Fleming Project No. 074773)

*CONFIDENTIALITY STATEMENT: The information contained in the document is confidential in nature and not intended for public release prior to approval by the Client and Henderson County, NC. This document contains trade secrets and proprietary methods and techniques.*

## **TECHNICAL MEMORANDUM**

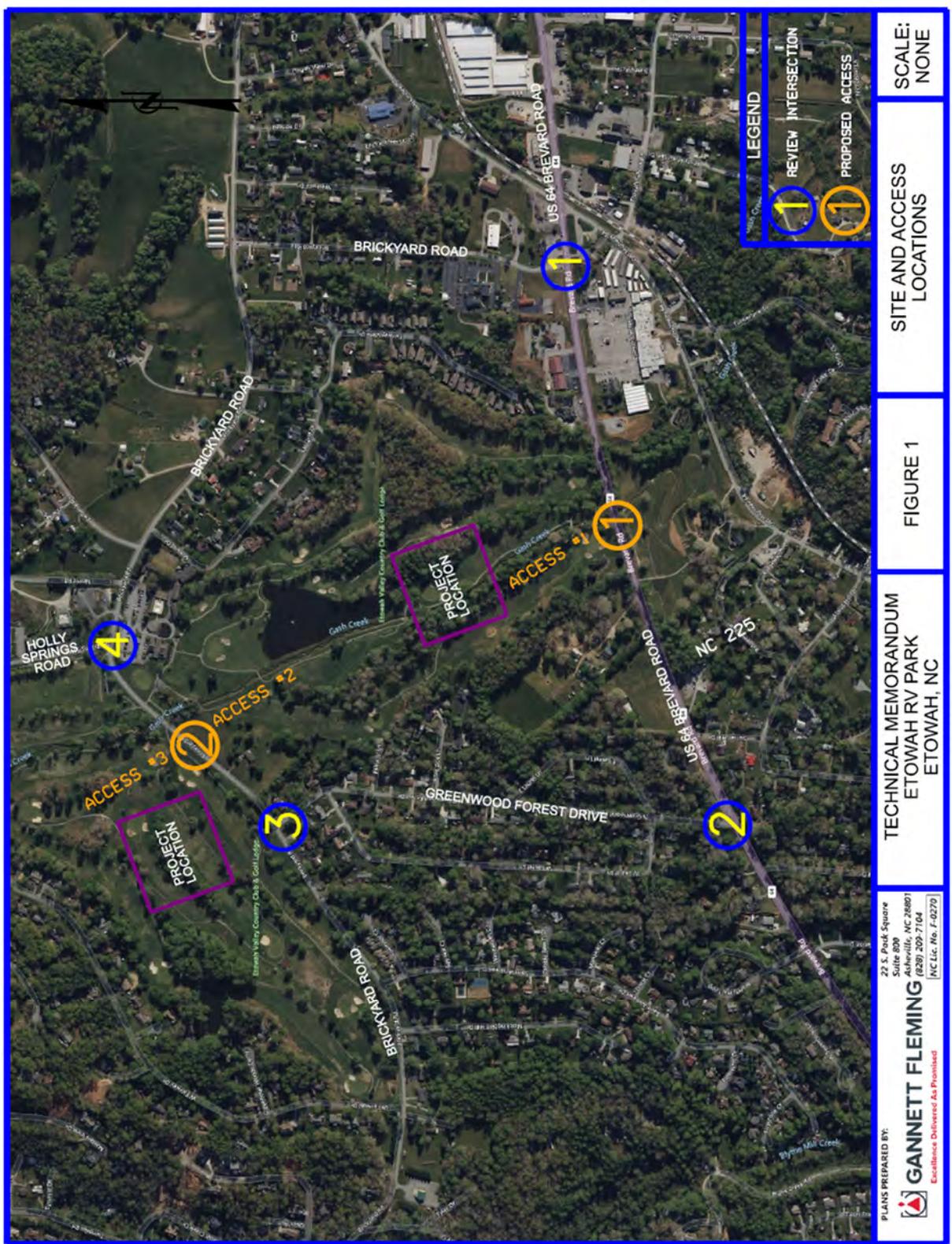
The purpose of this Memorandum is to discuss the anticipated traffic impact of a proposed 343 space Recreational Vehicle Park (ITE Land Use Code (LUC) 416) development on US 64 in Etowah, NC. The proposed Recreational Vehicle Park is known as the Etowah RV Park.

### **EXECUTIVE SUMMARY**

A 343 space Recreational Vehicle Park (ITE Land Use Code (LUC) 416) known as Etowah RV Park is proposed to be constructed in Etowah, NC. The project is proposed to have its main access along its frontage on US 64 and two secondary opposing accesses on SR 1424 (Brickyard Road), which divides the project into two sections. The main access, which will be approximately 1,700 feet west of SR 1424 (Brickyard Road). All three accesses are proposed to have full access.

Gannett Fleming was engaged by Civil Design Concepts, P. A., to discuss the traffic impact on the roadways near the Etowah RV Park. This discussion is submitted in the form of a Technical Memorandum. The project location is depicted on Figure 1 and the site plan is illustrated on Figure 2.

**Figure 1 - Site and Access Locations**



**Figure 2 - Site Plan**

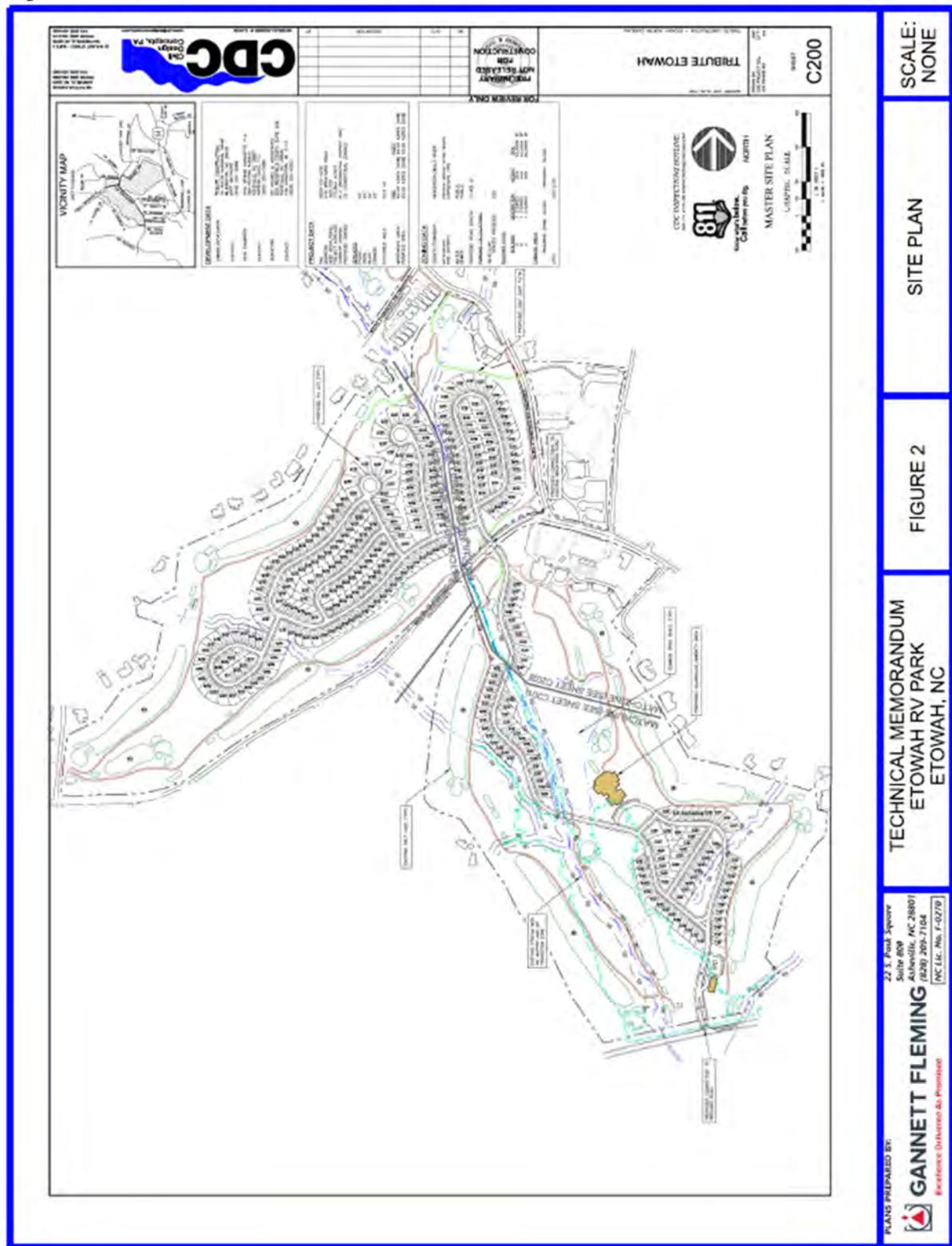
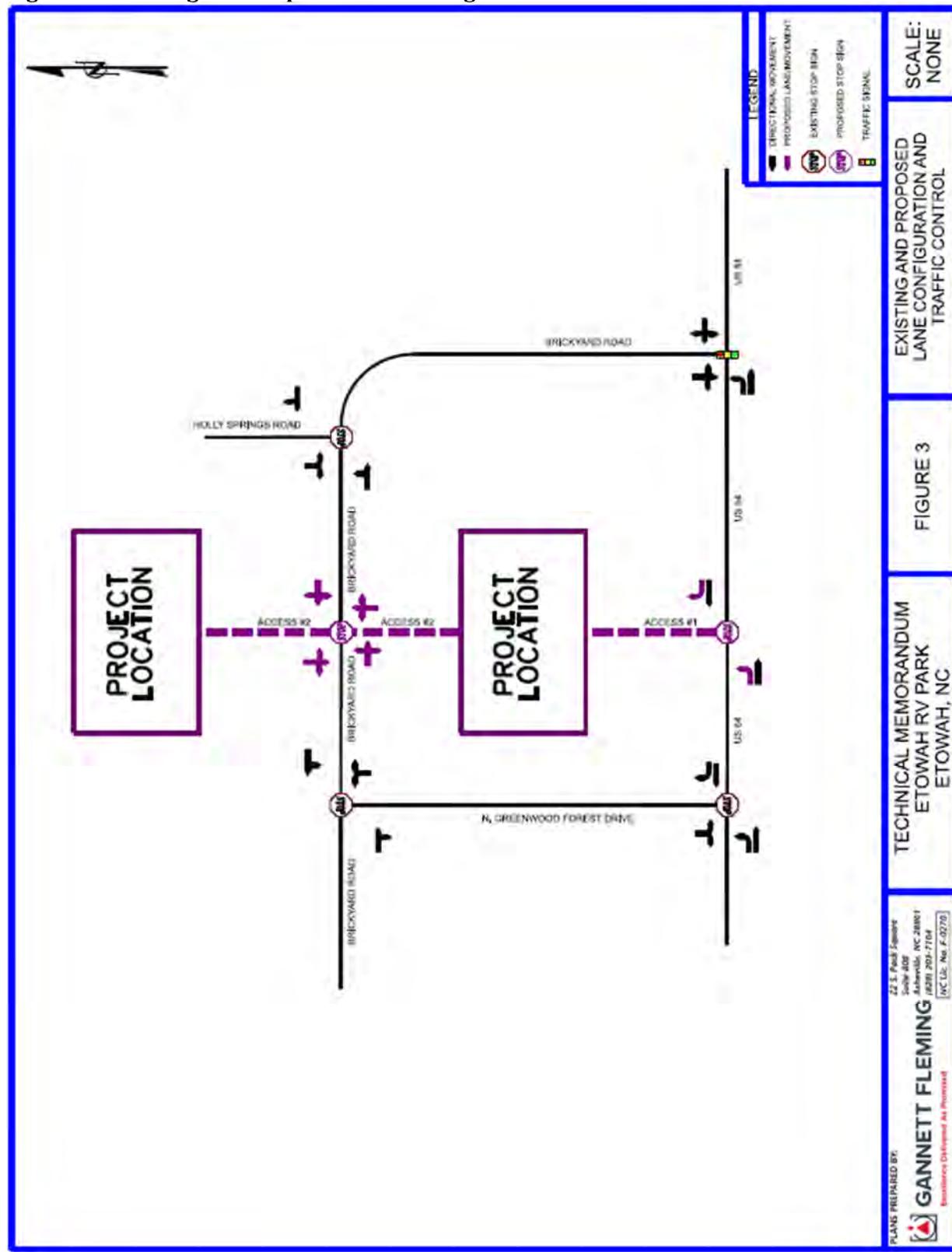


Figure 3 – Existing and Proposed Lane Configuration and Traffic Control



## **INVENTORY OF TRAFFIC CONDITIONS**

### **A. Study Area**

Gannett Fleming reviewed the following intersections to determine if there are any obvious accessibility issues and if there are concerns associated with potential impacts from the proposed development (See Figure 1):

US 64 at SR 1424 (Brickyard Road) (signalized intersection)

US 64 at SR 1488 (North Greenwood Forest Drive) (unsignalized intersection)

SR 1424 (Brickyard Road) at SR 1488 (North Greenwood Forest Drive) (unsignalized intersection)

SR 1424 (Brickyard Road) at SR 1322 (Holly Springs Road) (unsignalized intersection)

### **B. Existing Conditions**

A description of facilities in the general vicinity of this proposed development is as follows:

US 64 is maintained by NCDOT as part of the US Highway System. The 2021 AADT was measured at 11,500 vehicles per day east of SR 1424 (Brickyard Road) and the 8,600 west of SR 1424 (Brickyard Road). US 64 is classified a “Minor Arterial” in the project area.

SR 1424 (Brickyard Road) is maintained by NCDOT as a secondary road and has a cross section of two lanes in the subject area. The 2019 AADT was measured at 3,000 vehicles per day. SR 1424 (Brickyard Road) is classified as a “Local Road” by NCDOT’s Functional Classification Map.

SR 1488 (North Greenwood Forest Drive) is maintained by NCDOT as a secondary road with a two-lane cross section. It has residential uses along its length. The 2019 AADT was measured at 2,200 vehicles per day. SR 1488 (North Greenwood Forest Drive) is classified as a “Local Road” by NCDOT’s Functional Classification Map.

SR 1322 (Holly Springs Road) is maintained by NCDOT as a secondary road with a two-lane cross section. It has agricultural and residential uses along its length. The 2019 AADT was measured at 3,000 vehicles per day. SR 1322 (Holly Springs Road) is classified as a “Local Road” by NCDOT’s Functional Classification Map.

The existing and proposed lane configurations and traffic control for the study area intersections are shown in Figure 3.

## **TRIP GENERATION**

Based on information from the Developer, Gannett Fleming conducted a Trip Generation Exercise using the data and procedures recommended by the Institute of Transportation Engineers<sup>1</sup>. Campground/RV Park, ITE Land Use Code (LUC) 416, was used for the Exercise. Gannett Fleming also followed the recommendations contained in the NCDOT Rate vs Equation Spreadsheet provided by NCDOT Congestion Management Section. The expected volume AM Peak Hour trips generated by this project are 26 entering and 46 exiting for a total of 72. The predicted volume of PM Peak Hour trips generated by this facility are 60 entering and 32 exiting for a total of 92. The average number of trips generated by the development will be 920 on a typical weekday.



Figure 4A - Land Use Traffic Distribution South Area

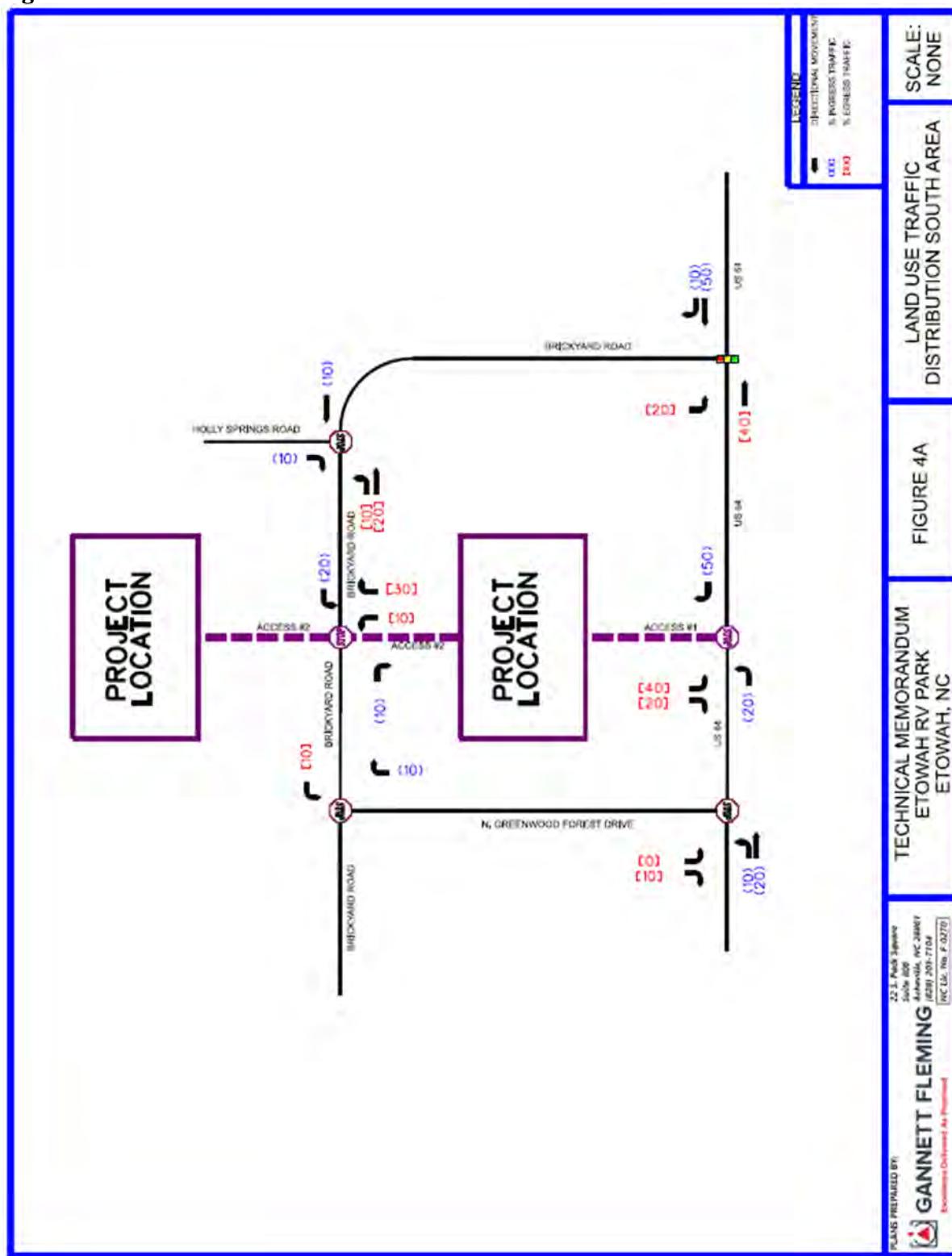


Figure 4B – Land Use Traffic Distribution North Area

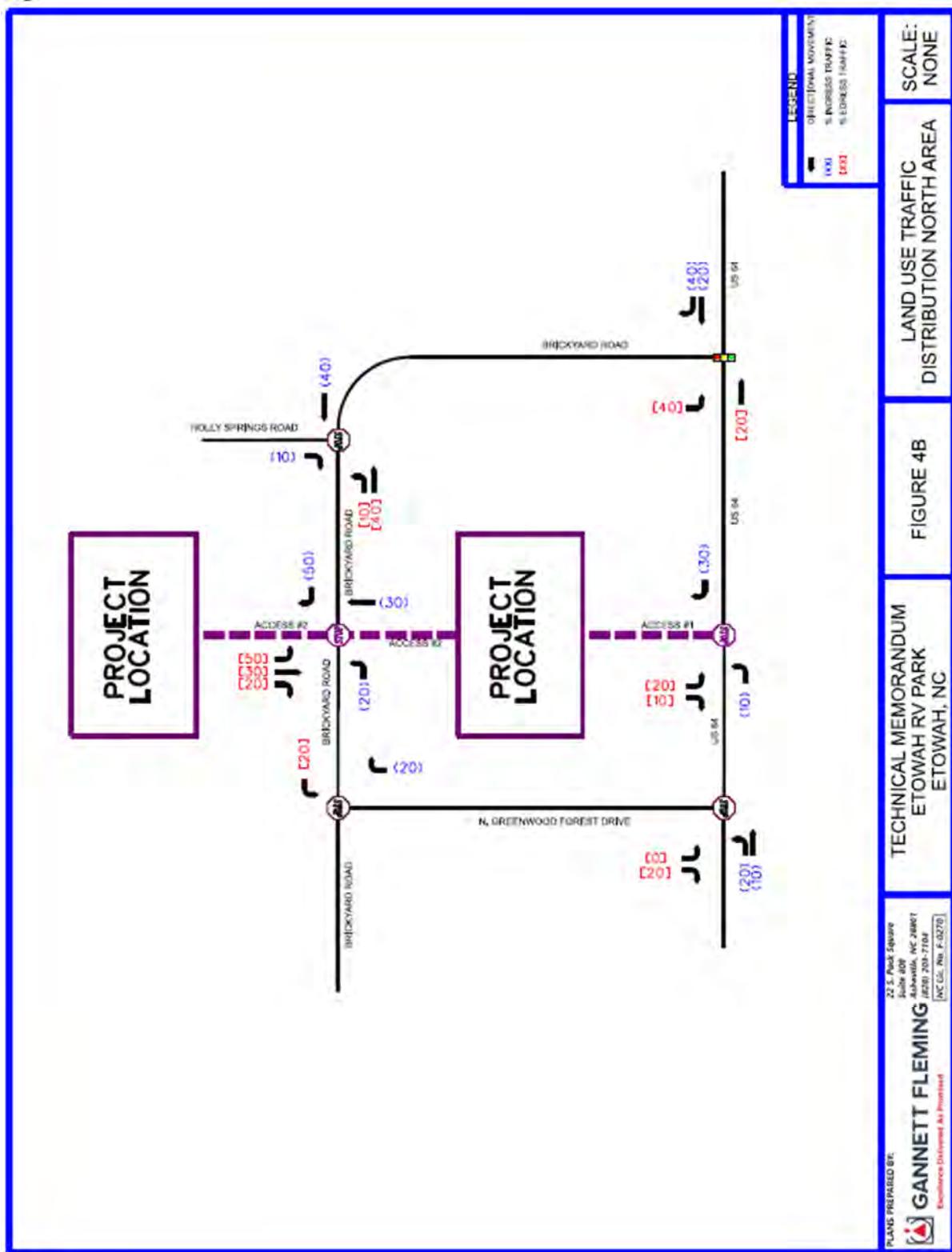


Figure 5A - Land Use Traffic Volumes South Area

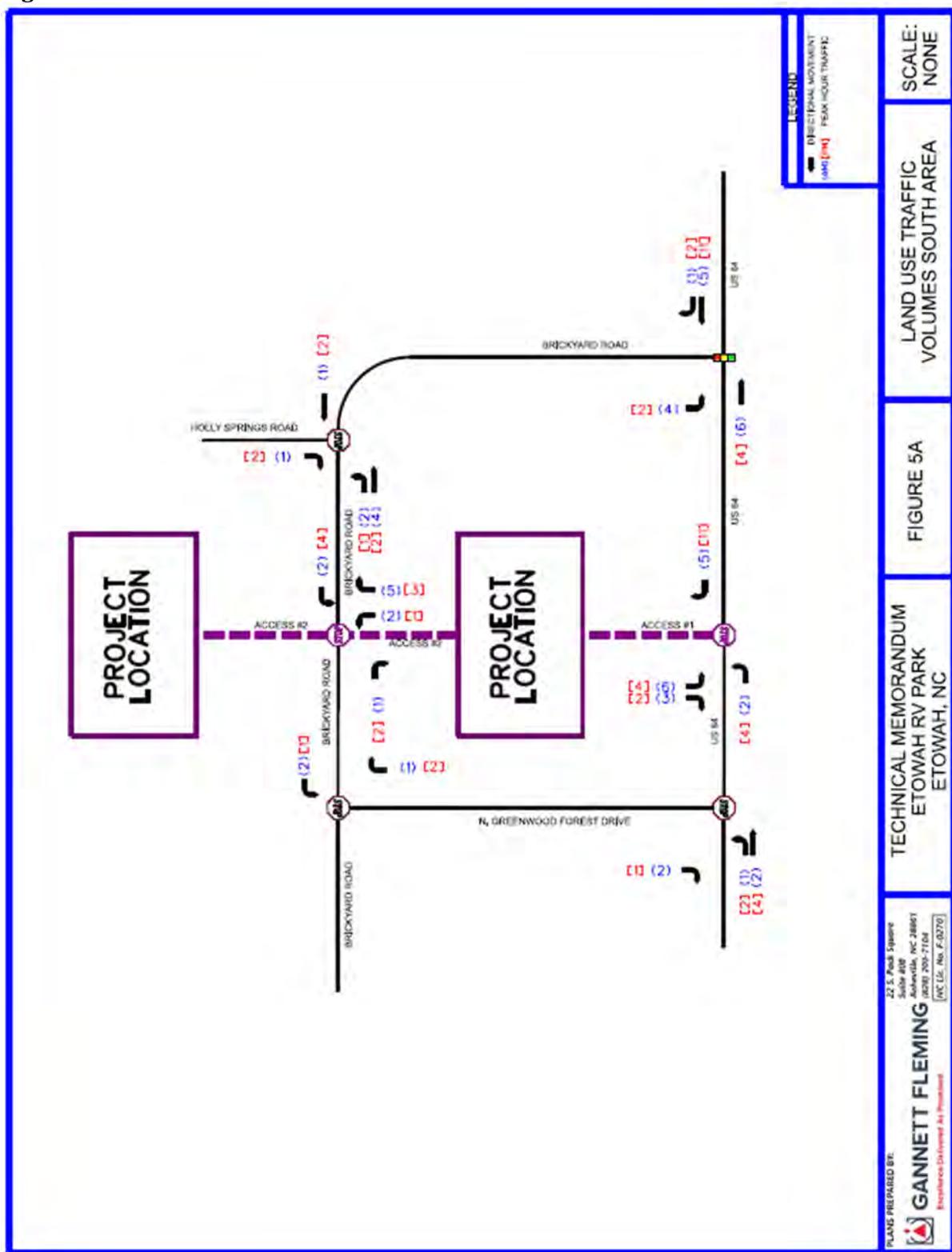


Figure 5B – Land Use Traffic Volumes North Area

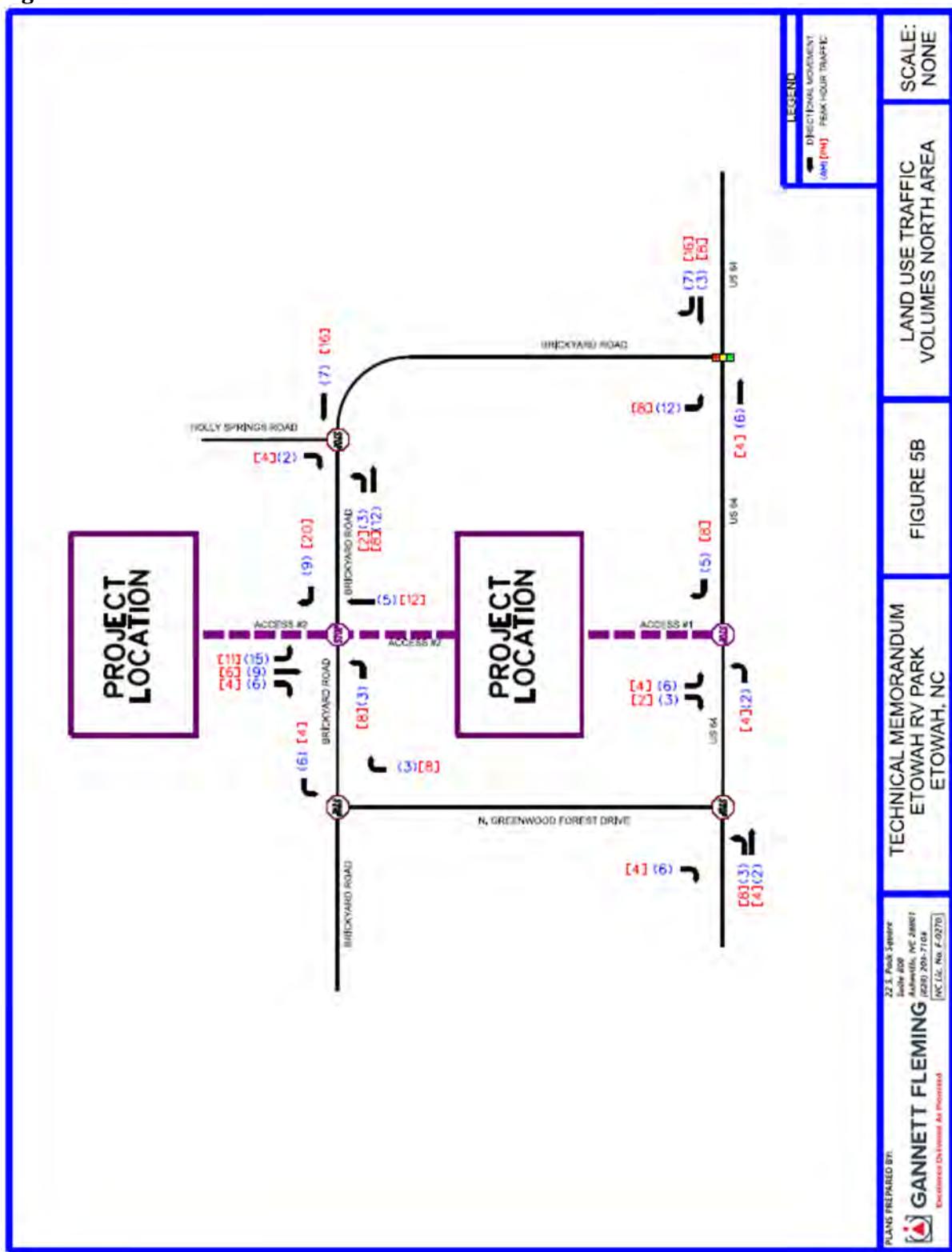
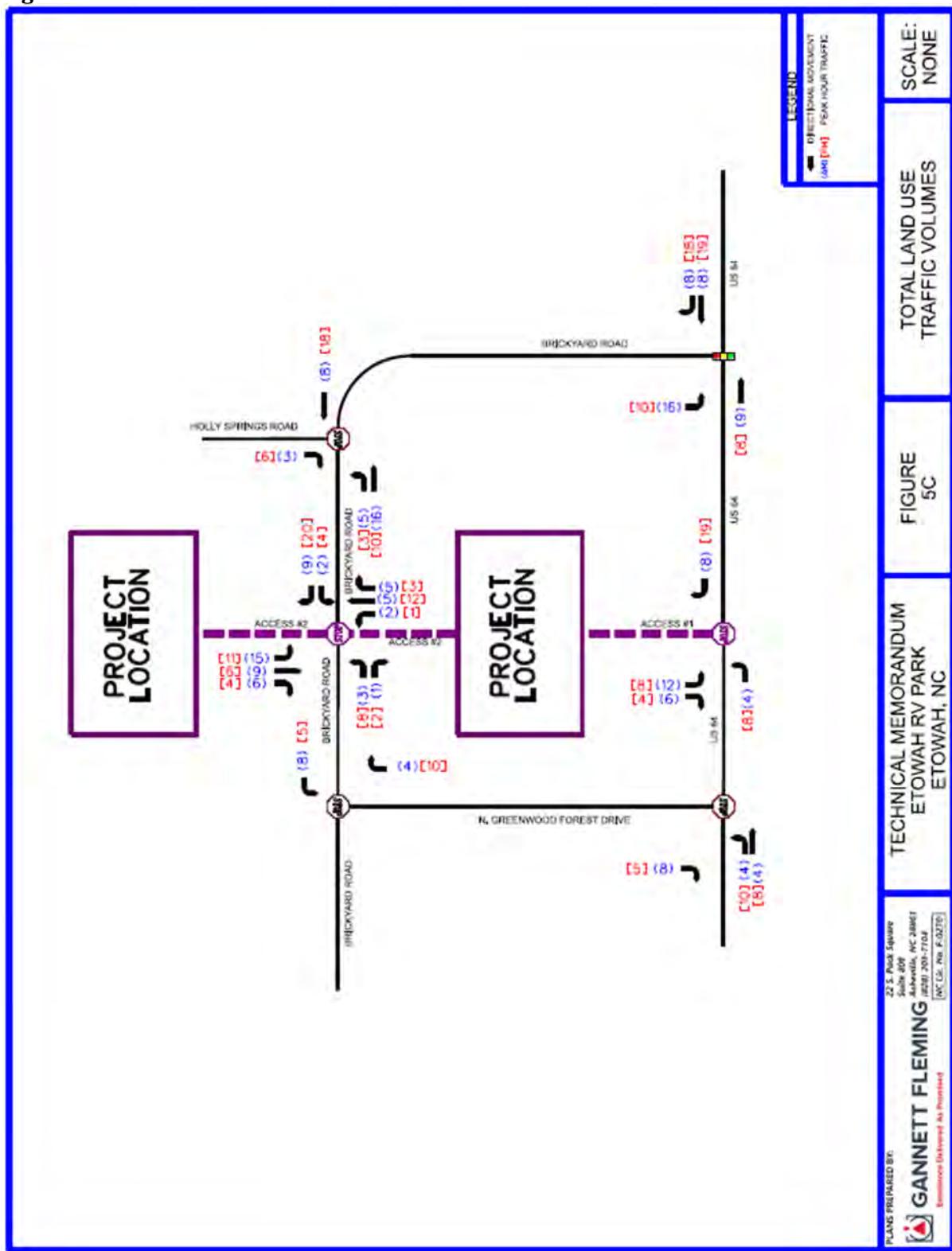


Figure 5C – Total Land Use Traffic Volumes



## **SITE CONSIDERATIONS**

The following considerations were considered by Gannett Fleming when determining the conclusions contained in this Memorandum:

1. The proposed facility is located on property with the main access and frontage along US 64. Secondary access is proposed on and SR 1424 (Brickyard Road).
2. The site is divided by SR 1424 (Brickyard Road). Some site traffic will traverse through the south area and cross SR 1424 (Brickyard Road) to access the north area.
3. There were no apparent sight distance issues noted at the driveways for the proposed driveway locations.
4. The volume of traffic expected to be generated by the proposed facility is approximately 920 trips per day.

## **ROADWAY CONSIDERATIONS**

1. US 64: This roadway will be the primary access to the interstate. Additionally, US 64 provides access to the far western counties of NC. The lane width appears to be adequate for RVs. It is a school bus route.
2. SR 1488 (North Greenwood Forest Drive): This serves as an access to US 64 which doesn't require vehicles to traverse through the south area. The road is posted for 10,000 lbs per axle max weight. Larger RVs may not be able to use this road. No roadway deficiencies or concerns were noted. It is a school bus route
3. SR 1424 (Brickyard Road): This road provides access to US 64 and SR 1322 (Holly Springs Road), which in turn provides access to NC 280. No roadway deficiencies or concerns were noted. It is a school bus route
4. SR 1322 (Holly Springs Road): This road provides access to NC 280, which in turn provides access to I-26. It has significant curves and crosses a narrow bridge which is posted at a limit of 13 tons for a single vehicle. It is a school bus route.

## **INTERSECTION CONSIDERATIONS**

1. US 64 at SR 1424 (Brickyard Road): There were no roadway deficiencies or concerns were noted. The turn radii appear adequate.
2. US 64 at SR 1488 (North Greenwood Forest Drive): There were no roadway deficiencies or concerns were noted. The turn radii appear adequate.
3. SR 1424 (Brickyard Road) at SR 1488 (North Greenwood Forest Drive): There were no roadway deficiencies or concerns were noted. The turn radii appear adequate.
4. SR 1424 (Brickyard Road) at SR 1322 (Holly Springs Road): There were no roadway deficiencies or concerns were noted. The turn radii appear adequate.

## **TURN LANE CONSIDERATIONS**

The NCDOT Warrant for Left and Right Turn Lanes for at grade unsignalized intersections contains guidance for choosing when to install turn lanes. When high volumes of traffic are making a turning movement into a development, especially a left turn, it is beneficial to have a dedicated lane for them to stage while waiting to turn. It is generally accepted that if a development generates less than 50 left or right turns in a Peak Hour turn lanes are not required. The Etowah RV Park should generate 4 left turns in the AM Peak Hour and 8 left turns in the PM Peak Hour from US 64, which falls below the threshold. The development should generate 6 right

turns in the AM Peak Hour and 14 in the PM Peak Hour from US 64. These numbers fall below the right turn lane warrants. Based on this information, Gannett Fleming does not recommend the addition of dedicated left and right turn lanes on US 64.

## CONCLUSIONS AND RECOMMENDATIONS

This Memorandum was prepared to discuss the anticipated traffic impact of a proposed 343 space Recreational Vehicle Park (ITE Land Use Code (LUC) 416) development on US 64 in Etowah, NC. Based on the information available and the results of Trip Generation Exercises, it is the opinion of Gannett Fleming that there is no indication that the development of Etowah RV Park will have an adverse impact on the surrounding roadways if the accesses are constructed as indicated in the site plan.

Sincerely,



JEFFREY H. MOORE, P. E.  
Traffic Engineering Manager  
Gannett Fleming

## ATTACHMENT

ITE Land Use Code 416 Description

## REFERENCES

<sup>1</sup> **Trip Generation Manual**, Institute of Transportation Engineers, 11<sup>th</sup> Edition, Washington, D.C., 2017

<sup>2</sup> NCDOT Interactive Traffic Volume Map:

<http://ncdot.maps.arcgis.com/apps/webappviewer/index.html?id=5f6fe58c1d90482ab9107ccc03026280>

# Land Use: 416

## Campground/Recreational Vehicle Park

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### Description

A campground/recreational vehicle park is a recreational site that accommodates campers, trailers, tents, and recreational vehicles on a transient basis. They are found in a variety of locations and provide a variety of facilities, often including restrooms with showers and recreational facilities, such as a swimming pool, convenience store, and laundromat.

### Additional Data

The sites were surveyed in the 1990s, the 2000s, and the 2010s in Rhode Island, Vermont, and Washington.

### Source Numbers

401, 559, 728

### **SR 4.3. *Campground***

- (1) Site Plan. Major *Site Plan* required in accordance with §42-330 (Major Site Plan Review).
- (2) Lighting. *Lighting mitigation* required.
- (3) Size. No *campground* located on/adjacent to a *residential zoning district* shall contain more than 200 campsites. Individual campsites shall be a minimum of 500 square feet.
- (4) Perimeter Setback. Fifty (50) feet.
- (5) Common Area. A *common area* shall be provided, that is equivalent in square footage to 25 percent the total square footage in: campsites, *structures* on site, parking areas and *driveways*. *Common area* shall be accessible for the *use* and enjoyment of *campground* occupants, located as to be free of traffic hazards and maintained in good condition by the *applicant*.
- (6) Operations. The *campground*: a. May contain *structures* ancillary to the *use*; and b. Shall be permitted one (1) store, exclusively for the sale of incidental gifts and foodstuffs.
- (7) Solid Waste Collection. The facility shall provide a suitable method of solid waste disposal and collection consisting of either private collection from individual *uses* or the *use* of dumpsters (installed and/or operated to meet all local and state statutes, ordinances and regulations (including Chapter 195 of the Henderson County Code, *Solid Waste*) and thereafter certified by the Department of Public Health). Where dumpsters are used, Screen Class One (1), Two (2) or Three (3) shall be provided consistent with the requirements of §42-181 (Screen Classification).
- (8) Common Area Recreation and Service Facilities. Those facilities within the *campground* shall be for the sole purpose of serving the overnight guests in the *campground*, and shall adhere to the development standards established therefore in SR 4.5 (*Common Area Recreation and Service Facilities*).

**Campground.** An establishment primarily engaged in operating/accommodating campsites. These establishments may provide access to facilities, such as laundry rooms, recreational halls and playgrounds, stores, and snack bars.