

**DATE:** May 21, 2019

**SUBJECT:** Special Use Permit  
New Wireless Telecommunications Tower

**CASE:** SUP-02-19

**APPLICANT:** Lee Chapman, SCI Towers, LLC

**LOCATION:** 446 Brookwood Ave. NE  
PIN 5621-95-5209

**AREA:** 6.19 +/- Acres

**EXISTING LAND USE:** Vacant land

**EXISTING ZONING:** O-I (Office-Institutional)

**REPORT PREPARED BY:** Scott Sherrill, AICP  
Senior Planner

**BACKGROUND**

The applicant is requesting to construct a new 192' stealth communications tower, monopole, which requires a Special Use Permit per CDO Section 8.7. The subject property annexed effective on August 15, 1966. The subject parcel is currently zoned O-I (Office-Institutional). The subject parcel is 6.19 acres that is currently vacant and owned by International Church of Foursquare Gospel.

Section 8.7.3 sets forth the following dimensional requirements for Wireless Support Structures:

- A. Height: Freestanding concealed wireless communication facilities (WCFs) are limited in all nonresidential districts to a maximum height of 199 feet. This measure includes the foundation of the WCF, but does not include the lightning rods for the dissipation of lightning or lights required by the FAA that do not provide support for any antennae.

*The application meets this standard.*

- B. Setbacks: For WCFs shall be determined according to the underlying zoning district, plus an additional eighteen inches for every one-foot of tower height. The approving authority may grant reductions to this setback requirement as a part of the special use permit approval.

*The applicant is requesting a reduction in setback to 100' from the west property line, 176' from the rear property line, and 289' from the east property line. Without the reduction, the required setback would be 298' (10' for underlying zoning district*

+ 1.5\* height of the tower). To justify this request, the applicant has provided additional engineering on the tower as described in the fall zone letter that the upper 100' of the pole is designed to support 4 carriers and withstand a 3-second gusted wind of 90 mph ( $V_{asd}$ ) or an equivalent ultimate design speed of 116 mph ( $V_{ult}$ ). The lower section of the tower will be designed with a minimum 10% extra capacity. The engineer notes, "Assuming the pole will be fabricated according to my design and well maintained, in the event of a failure due to extreme wind and a comparable appurtenance antenna loads (winds in excess of the design wind load), it would yield/buckle at the 95' elevation. The yielded section would result in a maximum 100' fall radius, but would most likely remain connected and hang from the standing section."

The applicant had originally requested a 195' tall tower; however, this height was reduced to 192' to keep the adjacent retirement home entirely out of the fall radius.

C. Buffers:

1. A landscaped buffer shall surround the base of the WCF equipment compound. Existing trees and shrubs on the site should be preserved and may be used in lieu of required landscaping where approved by the Administrator. Grading shall be minimized and limited only to the area necessary for the new WCF.
2. If the proposed WCF is the principal use of the property then landscaping per Article 11, Landscaping and Buffering, shall be applicable. Additionally a buffer equivalent to that required for an Industrial use adjoining a Residential use shall be provided around the WCF equipment compound.

The applicant's plan proposes to use existing 20'-30' tall trees with a 50' buffer between the equipment compound and the western property line and maintain a 15' buffer with existing trees along the entire western property line.

D. Aesthetics:

2. Freestanding concealed WCFs shall be designed so as to be compatible with adjacent structures and landscapes to the extent feasible with specific design considerations as to height, scale, color and texture.

The applicant has provided photo simulations for their project.

- E. Collocation Capacity: Freestanding nonconcealed structures between 151 feet and 199 feet shall be engineered and constructed to accommodate at least four antenna arrays.

The site has been designed to provide for four antenna arrays.

The applicant has provided a letter that states that the proposed wireless facility will not interfere with normal radio and television reception, but that a study for interference will be part of their construction. They have stated that no lighting is required by the FAA, no commercial messages will be displayed, and no storage of any type will be allowed at the site. The applicant has provided a copy of the TOWAIR report, stating that FCC registration is not required and no airports are within 5 miles of the tower location. Documentation of compliance with ANSI

standards for power output cannot be provided until antenna permits are applied for; seismic analysis will be provided at the building permit stage.

Verizon is the intended user of the tower, although space is available for three other tenants.

#### **PROPOSED FINDINGS OF FACT**

1. The applicant is Lee Chapman, SCI Towers, LLC and the subject property is located at 446 Brookwood Ave., NE.
2. The property is owned by International Church of the Foursquare Gospel.
3. The subject property is zoned O-I (Office-Institutional).
4. The property consists of +/- 6.19 acres of land.
5. The adopted Land Use Plan designates the property as Suburban Neighborhood.
6. The applicant submitted an application to construct a new wireless communication facility (WCF) at 446 Brookwood Ave. NE. (Exhibit A)
7. The applicant submitted a site plan, dated by file name April 8, 2019 (Exhibit B)
8. The applicant submitted a letter, dated February 11, 2019, which describes efforts to secure colocation within the search area and documentation provided to meet application requirements and supplementary documentation from Towair regarding FCC licensing and from the FAA regarding minimum lighting requirements (Exhibit C).
9. The applicant submitted an engineer's letter regarding the structural integrity of the tower (Exhibit D).
10. The applicant submitted photo simulations (Exhibit E).

#### **APPROVAL CRITERIA (Potential Conclusions of Law)**

##### **Standard Conditions (6.2.3)**

- A. The proposed special use conforms to the character of the neighborhood, considering the location, type, and height of buildings or structures and the type and extent of landscaping and screening on the site.

*The applicant has submitted visualizations of the tower from surrounding intersections to demonstrate the impact of the Tower as well as a site plan demonstrating that it meets the landscaping and screening requirements of the CDO. The applicant asserts that the monopole design and construction as a concealed structure will minimize the visual impact and not require lighting.*

- B. Adequate measures shall be taken to provide ingress and egress so designed as to minimize traffic hazards and to minimize traffic congestion on the public roads.

*The proposed unstaffed facility is a passive use which does not create any significant increase in traffic or adverse impacts that would hinder the use of surrounding properties. The facility will use the proposed access route as indicated on the drawings provided for non-exclusive ingress/egress.*

- C. The proposed use shall not be noxious or offensive by reason of vibration, noise, odor, dust, smoke or gas.

*The proposed unstaffed facility does not create any significant glare, noise, traffic or other adverse impacts.*

- D. The establishment of the proposed use shall not impede the orderly development and improvement of surrounding property for uses permitted within the zoning district.

*The majority of surrounding properties are already developed, and the applicant asserts that the proposed facility will not hinder the use of the surrounding properties. The only adjacent property that is not currently developed is under the same ownership as the subject property. The proposed Wireless Communication Facility (WCF) will be constructed as a concealed structure to minimize visual impact.*

- E. The establishment, maintenance, or operation of the proposed use shall not be detrimental to or endanger the public health, safety, or general welfare.

*The applicant has provided documentation regarding additional engineering on the tower, and additional documentation will be provided that the site meets all federal, state, and local requirements. The applicant states that the site will contribute to the health, safety and welfare of the surrounding community by facilitating 911 calls and provided essential communication to first responders in the event of accidents, crime, natural disasters or other emergencies.*

- F. Compliance with any other applicable Sections of this Ordinance:

Per CDO Section 8.7.7 Approval Authority, subsection B.:

All freestanding non-qualifying WCFs shall be subject to a special use permit. In addition to the requirements for use permits, the approving authority, in determining whether a non-qualifying WCF is in harmony with the area or the effects and general compatibility of a non-qualifying WCF with adjacent properties may consider the aesthetic effects of the non-qualifying WCF as well as mitigating factors concerning aesthetics.

#### **Aesthetics**

The Planning and Zoning Commission may disapprove an application on the grounds that the non-qualifying WCFs aesthetic effects are unacceptable, or may condition approval on changes in non-qualifying WCF height, design, style, buffers, or other features of the non-qualifying WCF or its surrounding area. Such changes need not result in performance identical to that of the original application.

Factors relevant to aesthetic effects are: the protection of the view in sensitive or particularly scenic areas and areas specially designated in adopted plans such as unique natural features, scenic roadways and historic sites, the concentration of non-qualifying WCFs in the proposed area, and whether the height, design, placement or other characteristics of the proposed non-qualifying WCF could be modified to have a less intrusive visual impact.

*The applicant has provided visual simulations for the proposed equipment and asserts that the concealed monopole will minimize visual intrusiveness. Included in the application is analysis regarding the City's hierarchy of preferences for wireless telecommunications towers included in Section 8.7.2 regarding siting. A new freestanding concealed tower is the second least-desirable facility/structure type (of four alternatives).*

#### **Electromagnetic Field**

The approving authority, when considering a use permit for freestanding non-qualifying WCFs, shall not be required to make a determination of the electromagnetic field (EMF) effects of the

non-qualifying WCF on the health of the public. The documentation required by this section that stipulates that the non-qualifying WCF not exceed the federal limits for power density requirements shall satisfy the applicant's compliance with this required finding.

*This application will be conditioned on antenna applicants (tenants) supplying verification that their proposed installations will meet EMF/power output standards.*

### **Siting Alternatives and Ordinance Purpose**

If the approval authority determines that the proposed additional service, coverage, or capacity to be achieved by the location of the proposed non-qualifying WCF can be achieved by use of one or more alternative non-qualifying WCFs sited in alternative locations that better serve the stated purposes set forth in this section, it may disapprove the proposed non-qualifying WCF application.

The purposes of the section are:

1. Minimize the impacts of wireless communication facilities (WCFs) on surrounding areas by establishing standards for location, structural integrity and compatibility;
2. Encourage the location and collocation of wireless communication equipment on existing structures thereby minimized new visual, aesthetic and public safety impacts, effects upon the natural environment and wildlife, and to reduce the need for additional antenna-supporting structures;
3. Encourage coordination between suppliers of wireless communication services in the City of Concord;
4. Respond to the policies embodied in the Telecommunications Act of 1996 and section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, 47 U.S.C. § 1455(a) and in accordance with the rules promulgated by the Federal Communications Commission;
5. Protect the unique natural beauty and rural character of the City while meeting the needs of its citizens to enjoy the benefits of wireless communications services; and
6. Encourage the use of public lands, buildings and structures as locations for wireless telecommunications infrastructure as a method to establish a precedence of quality concealment products that will minimize the aesthetic impact of related infrastructure while generating revenue for the City.

*The applicants have provided their search area, and the lack of other available sites within the search area. The application requests an exception to siting requirements, specifically setback, based on enhanced engineering of the tower. The application does meet the City's buffer and landscaping requirements.*

### **RECOMMENDATION AND SUGGESTED CONDITIONS**

If the Commission votes to approve the special use permit, staff recommends the Commission consider adopting of the following conditions:

- 1) Development shall be in accordance with the "SCI Towers Brand Site" site plan dated 4-08-2019.
- 2) Technical Site Plan approval will be required for this project.
- 3) Seismic analysis will be submitted in conjunction with Building Permit application.

- 4) Tenants on tower will be responsible for submitting documentation that power outputs do not exceed maximum standards.



# Aerial Map SUP-02-19

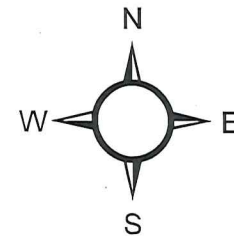
Lee Chapman,  
SCI Towers, LLC

Special Use Permit

446 Brookwood Ave. NE

wireless  
communications tower

PIN 5621-95-5209



Source: City of Concord  
Planning Department

### Disclaimer

These maps and products are designed for general reference only and data contained herein is subject to change. The City Of Concord, its employees or agents make no warranty of merchantability or fitness for any purpose, expressed or implied, and assume no legal responsibility for the information contained therein. Data used is from multiple sources with various scales and accuracy. Additional research such as field surveys may be necessary to determine actual conditions.



**Legend**

 Subject Parcel

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



# LUP Map SUP-02-19

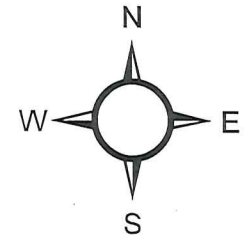
Lee Chapman,  
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Special Use Permit

446 Brookwood Ave. NE

wireless  
communications tower

PIN 5621-95-5209



Source: City of Concord  
Planning Department

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



# Zoning Map SUP-02-19

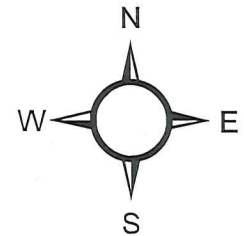
Lee Chapman,  
SCI Towers, LLC

Special Use Permit

446 Brookwood Ave. NE

wireless  
communications tower

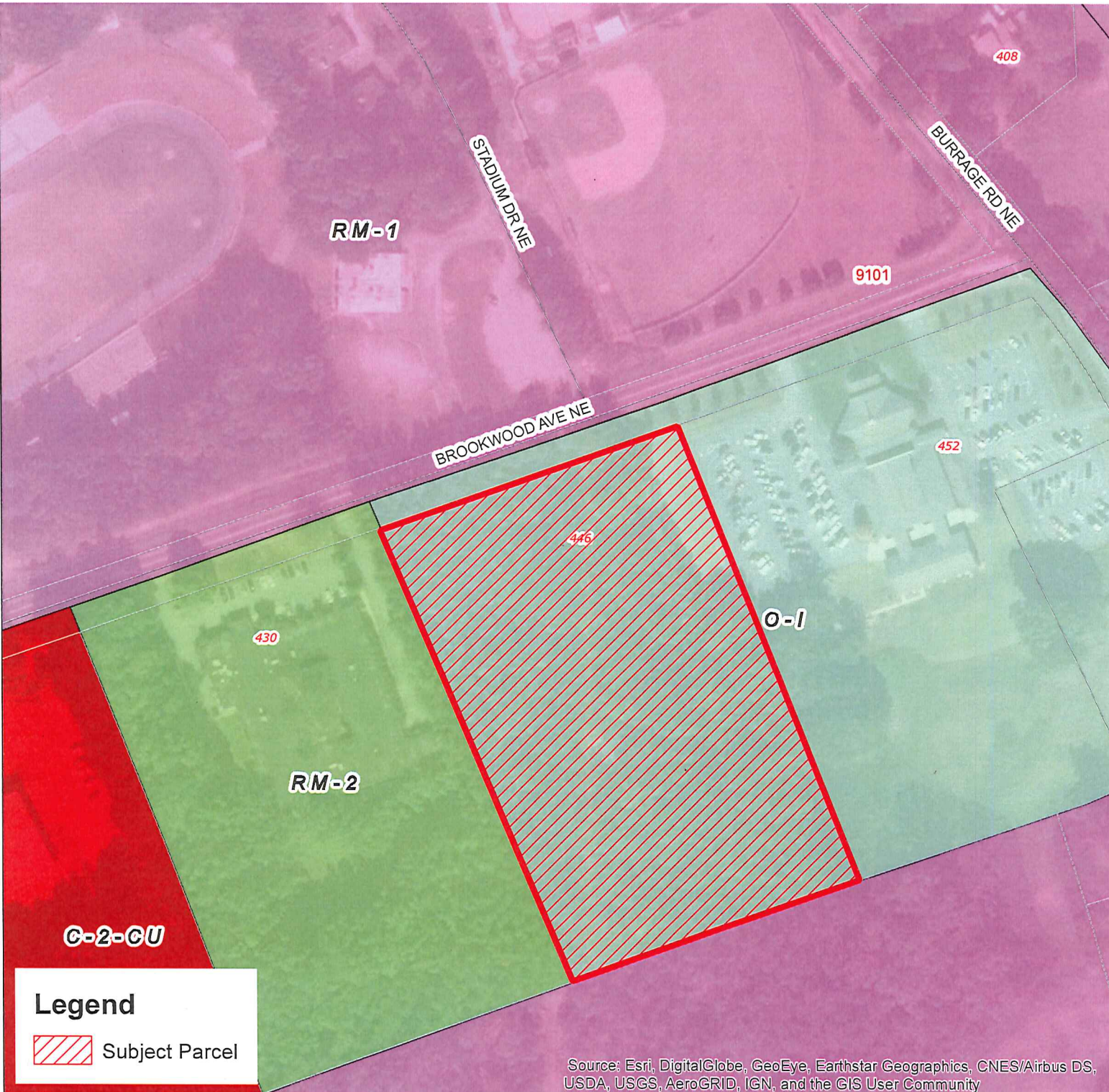
PIN 5621-95-5209



Source: City of Concord  
Planning Department

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**Legend**

 Subject Parcel

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Required Attachments/ Submittals:



1. Typed metes and bounds description of the property (or portion of property). A recorded deed is sufficient, if the deed describes only the subject property.



2. Cabarrus County Land Records printout of names and addresses of all immediately adjacent landowners, including any directly across the street.



3. 6 copies of a plan drawn to scale (conditional district plan) for the initial submittal to be reviewed by internal City Staff. 16 folded copies, with all plan review comments address, are required to be submitted for Planning and Zoning Commission meetings. (Check with staff for final submittal dates)



4. Money Received by \_\_\_\_\_ Date: \_\_\_\_\_

Check # \_\_\_\_\_ Amount: \$ 600.00 Cash: \_\_\_\_\_

*The application fee is nonrefundable.*

**Planning & Neighborhood Development**

66 Union St S • P. O. Box 308 • Concord, NC 28025  
Phone (704) 920-5152 • Fax (704) 786-1212 • [www.concordnc.gov](http://www.concordnc.gov)



Date 2/11/19

APPLICANT NAME: Lee Chapman COMPANY NAME: SCI Towers, LLC

APPLICANT ADDRESS: 2604 S.W. 3rd Place

CITY: Gainesville STATE Florida ZIP 32607

PHONE NUMBER OF APPLICANT: 888-318-2803

OWNER OF PROPERTY (if different from applicant) New Hope Worship Center

OWNER ADDRESS: 452 Brookwood Ave., N.E. CITY Concord STATE NC ZIP 28025

PROJECT ADDRESS (if an address exist): 446 Brookwood Avenue N.E., Concord, NC 28025

P.I.N.: 5621 9552 090000

Area of Subject Property (in acres, or square feet): 6.19 acres

Lot Width: 400 ft Lot Depth: 629 ft

Current Zoning Classification: O-1


Existing Land Use: Vacant Raw Land

Description of Use Requested:

SCI Towers, LLC is submitting application for a 192' multi-tenant concealed monopole with Verizon Wireless as the anchor tenant. The facility will include a 65' x 65' fenced in compound to accommodate the ground equipment for all future tenants. The facility will use the proposed access route as indicated on the drawings for non-exclusive ingress/egress. The drawings show the site plan in detail. Additional documentation reflecting compliance with all applicable regulations is being included.

**Certification**

I hereby acknowledge and say that the information contained herein and herewith is true, and this application shall not be scheduled for official consideration until all of the required contents are submitted in proper form to the Development Services Department.

Date: 2/11/19 Applicant Signature: 

**General Requirements**

The Concord Development Ordinance (CDO) imposes the following general requirements. Under each requirement, the applicant should explain, with reference to the attached plans (when applicable) how the proposed use satisfies these requirements.

- (a) The Planning and Zoning Commission must find that “the establishment, maintenance, or operation of the proposed use shall not be detrimental to, or endanger, the public health, safety or general welfare.”  
The tower meets all federal, state and local requirement and will not present any hazard to the public. The site will contribute to the health, safety and welfare of the surrounding community by facilitating 911 calls and providing essential communication to first responders in the event of accidents, crime, natural disasters or other emergencies.
- (b) The Planning and Zoning Commission must find that the proposed use “conforms to the character of the neighborhood, considering the location, type, and height of buildings or structures, and the type and extent of landscaping and screening on the site.”  
The concealed monopole structure is designed to minimize the visual impact of the tower and does not require lighting per FAA standards.
- (c) The Planning and Zoning Commission must find that the proposed use “provides ingress and egress so designed as to minimize traffic hazards and to minimize congestion on the public roads.”  
The proposed unstaffed facility is a passive use which does not create any significant increase in traffic or adverse impacts that would hinder the use of surrounding properties. The facility will use the proposed access route as indicated on the drawings provided for non-exclusive ingress/egress.
- (d) The Planning and Zoning Commission must find that the proposed use “shall not be noxious or offensive by reason of vibration, noise, odor, dust, smoke or gas.”  
The proposed unstaffed facility does not create any significant glare, noise, traffic or other adverse impacts.
- (e) The Planning and Zoning Commission must find that “the establishment of the proposed use shall not impede the orderly development and improvement of surrounding property for uses permitted within the zoning district.”  
The proposed facility will not create any adverse impacts that would hinder the use of the surrounding properties. Also, the proposed Wireless Communication Facility (WCF) will be constructed as a concealed structure that minimizes any potential adverse impact it may create.

**Specific Requirements**

The Concord Development Ordinance also imposes SPECIFIC REQUIREMENTS on the proposed use(s) requested by the applicant. The applicant should be prepared to demonstrate that, if the land is used in a manner consistent with the plans, specifications, and other information presented to the Planning and Zoning Commission, the proposed use(s) will comply with specific requirements concerning the following:

- (1) Nature of use(s) (type, number of units, and/or area):  
The 192' multi-tenant concealed monopole tower is intended for a minimum of four (4) carriers.
- (2) Accessory uses (if any):  
Ground equipment will be installed in the compound as required by the carriers for their signal distribution.
- (3) Setback provisions: Setbacks as stipulated in 8.7.3.2, are determined by the underlying setbacks, which are 10' from front property line for O-I zoned properties, plus 18 inches for every foot of tower. The approving authority may grant reductions and we are requested relief from the setback provision.
- (4) Height provisions:

192'

The proposed WCF is on a parcel zoned O-I and has a maximum height allowance of 199'. Our proposed height of 192' is under the maximum allowed height.

(5) Off-street parking and loading provisions:

There are no off-street parking provisions required for Wireless Communication Facilities.

(6) Sign provisions:

There are no sign provisions other than required placarding of compound by federal, state and local ordinances.

(7) Provisions for screening, landscaping and buffering:

The parcel being developed is heavily wooded and we are proposing that the landscape buffer consist of existing trees and shrubs as we will limit removal during site development.

(8) Provisions for vehicular circulation and access to streets:

The site plans address vehicular access and turnaround provisions.

(9) Adequate and safe design for grades, paved curbs and gutters, drainage systems, and treatment or turf to handle storm water, prevent erosion, and subdue dust:

This will be addressed with our building plans. We ask that these items be a condition of our building permit. Once the tower and its location is approved, these requirements will be met.

(10) Adequate, safe and convenient arrangement of pedestrian circulation facilities, roadways, driveways, off-street parking and loading spaces, facilities for waste disposal, and illumination:

Not applicable for this development.

(11) An adequate amount, and safe location of, play areas for children and other recreational uses, according to the concentration of residential occupancy:

Not applicable for this development.

(12) Fences, walls, or year-round screen planting abutting residential districts, to protect residences from parking lot illumination, headlights, fumes, heat, blowing papers, and dust (to reduce the visual encroachment on privacy and residents):

Please refer to our zoning plans submitted as part of this application.

(13) Open space (including flood hazard area):

NOT applicable

(14) Improvements within the common open space:

I don't believe this is applicable to our application but the only potential improvements within the common open space would be our access drive.

(15) Parking Areas:

Parking is not needed as this an unmanned facility. When service to the site is required, parking is facilitated by the existing access road and turn around area.

(16) Sidewalks, trails and bikeways:

Not applicable

(17) Lighting and utilities:

No additional lighting will be added and utilities will include electrical and fiber optic connections.

(18) Site furnishings:

No additional site furnishings will be added other than ground equipment for each carrier.

(19) Adequate fire, police, water and sewer services:



Application for  
Special Use Permit

No water and sewer services will be required for this project. Fire and police will have access through  
non-exclusive ingress/egress.

(20) Other requirements as may be requested by the applicant or specified by the City Council for protection of the  
public health, safety, welfare and convenience:  
TBD

**Staff Use Only:**

1. Scheduled for Planning and Zoning Commission consideration:  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_ Location: \_\_\_\_\_
2. Date advertised, written notice(s) sent, and property posted: \_\_\_\_\_
3. Record of decision: Motion to: \_\_\_ Approve \_\_\_ Deny  
 \_\_\_\_\_ Yea \_\_\_ Nay  
 \_\_\_\_\_ Yea \_\_\_ Nay  
 \_\_\_\_\_ Yea \_\_\_ Nay  
 \_\_\_\_\_ Yea \_\_\_ Nay  
 \_\_\_\_\_ Yea \_\_\_ Nay  
 \_\_\_\_\_ Yea \_\_\_ Nay  
 \_\_\_\_\_ Yea \_\_\_ Nay
4. Planning and Zoning Commission recommendation: \_\_\_ Approved \_\_\_ Denied  
 If denied, was an appeal filed? \_\_\_\_\_
5. Date applicant notified of Planning and Zoning Commission action: \_\_\_\_\_
6. Scheduled for City Council consideration:  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_ Location: \_\_\_\_\_
7. Dates advertised: (a) First notice: \_\_\_\_\_ (b) Second notice: \_\_\_\_\_
8. City Council recommendation: \_\_\_ Approved \_\_\_ Denied
9. Date applicant notified of City Council action: \_\_\_\_\_
10. Comments: *(see minutes for details)*  
 \_\_\_\_\_  
 \_\_\_\_\_

**PROJECT DESCRIPTION**  
 INSTALLATION OF A 192' STEALTH COMMUNICATIONS TOWER FOR WIRELESS COMMUNICATIONS SERVICES

**APPLICANT**  
 SCI TOWERS LLC  
 P.O. BOX 3469  
 CARY, NC 27519  
 888-318-2803

**PROPERTY OWNER**  
 INTERNATIONAL CHURCH OF FOURSQUARE GOSPEL  
 446 BROOKWOOD AVENUE NE  
 CONCORD, NC 28025

**ZONING**  
 O-1

**FIRE PROTECTION**  
 FIRE PROTECTION NOT REQUIRED, STRUCTURE IS NOT FLAMMABLE

**PARKING**  
 PARKING FOR SERVICE TECHNICIANS WILL BE IN ACCESS EASEMENT ADJACENT TO TOWER COMPOUND.

**PROPERTY INFORMATION**  
 CABARRUS COUNTY PARCEL ID #12-056-0026.30  
 ADDRESS: 446 BROOKWOOD AVENUE NE  
 CONCORD, NORTH CAROLINA 28025  
 TOTAL PROPERTY ACREAGE: 6.192 ACRES (269,723 SF)  
 TOTAL PROJECT ACREAGE: 0.539 ACRES (23,499 SF)

**TRAFFIC STATEMENT**  
 EXPECTED NUMBER OF TRIPS PER CARRIER PER MONTH WILL BE 2 FOR EQUIPMENT MAINTENANCE. THIS PROJECT WILL NOT AFFECT OVERALL PERFORMANCE OF ADJACENT ROADWAY.

**IMPERVIOUS SPACE PROPOSED**  
 TOTAL AMOUNT OF PROPOSED IMPERVIOUS AREA WILL BE APPROXIMATELY 11,100 SF ON THE 6.192 ACRE PARENT TRACT (269,723 SF). ACCESS ROAD WILL BE APPROXIMATELY 10100 SF AND THE EQUIPMENT COMPOUND IMPERVIOUS SPACE WILL BE APPROXIMATELY 1000 SF WHICH INCLUDES FUTURE CARRIER EQUIPMENT PADS AND THE TOWER FOUNDATION.

**DRIVEWAY PERMIT**  
 DRIVEWAY PERMIT WILL BE REQUIRED FOR NEW ACCESS ROAD TO TOWER SITE TO TIE INTO BROOKWOOD AVE NE

**AREA OF DISTURBANCE**  
 TOTAL AREA OF DISTURBANCE, INCLUDING ACCESS ROAD, TURN AROUND AREAS, PARKING SPACES AND TOWER COMPOUND IS 20,555 SF

**SITE INFORMATION**

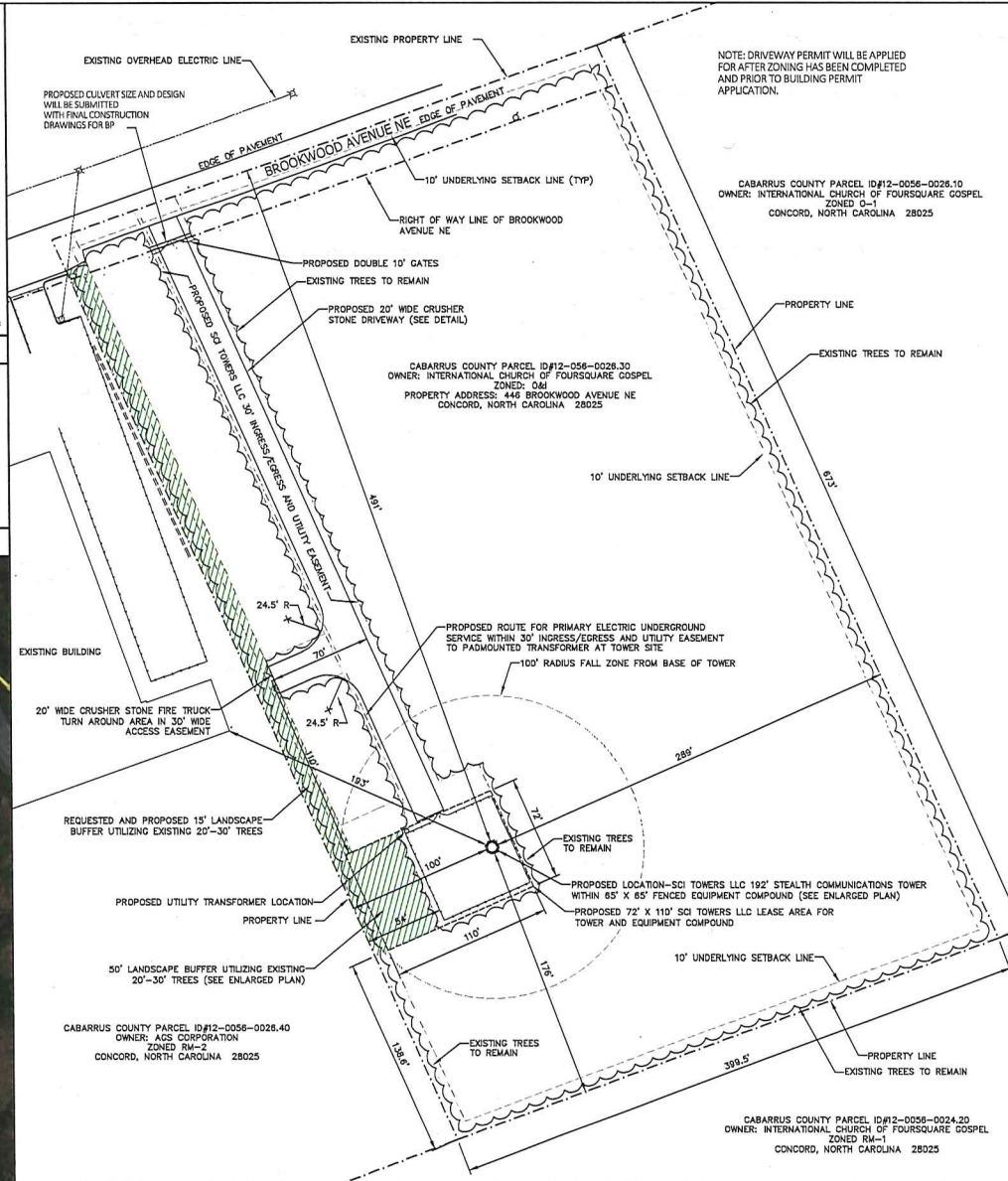
PROPOSED TOWER HEIGHT = 192' AGL

DIRECTION	PROPOSED SETBACK TO FOUNDATION OF TOWER	REQUIRED SETBACK TO FOUNDATION OF TOWER
NORTHEAST	289'	298'
SOUTHEAST	176'	298'
NORTHWEST	491'	298'
SOUTHWEST	100'	298'

**TOWER SETBACK INFORMATION**



**AERIAL MAP**



**OVERALL SITE PLAN-INTERNATIONAL CHURCH OF FOURSQUARE GOSPEL (BRAND)-CONCORD, NC**  
 SITE PLAN BASED ON SURVEY PROVIDED BY CORDELL LAND SURVEYING, MURPHY, NC



NOTE: DRIVEWAY PERMIT WILL BE APPLIED FOR AFTER ZONING HAS BEEN COMPLETED AND PRIOR TO BUILDING PERMIT APPLICATION.

CABARRUS COUNTY PARCEL ID#12-0056-0028.10  
 OWNER: INTERNATIONAL CHURCH OF FOURSQUARE GOSPEL  
 ZONED O-1  
 CONCORD, NORTH CAROLINA 28025

CABARRUS COUNTY PARCEL ID#12-056-0028.30  
 OWNER: INTERNATIONAL CHURCH OF FOURSQUARE GOSPEL  
 ZONED O-1  
 PROPERTY ADDRESS: 446 BROOKWOOD AVENUE NE  
 CONCORD, NORTH CAROLINA 28025

PROPOSED CULVERT SIZE AND DESIGN WILL BE SUBMITTED WITH FINAL CONSTRUCTION DRAWINGS FOR BP

**OWNER/APPLICANT:**



P.O. BOX 3469  
 CARY, NC 27519  
 888-318-2803

**PROJECT NAME AND LOCATION:**

SCI TOWERS LLC-BRAND  
 446 BROOKWOOD AVENUE NE  
 CONCORD, NC 28025

**PROJECT ENGINEER**



**WAYPOINT**

ENGINEERING PLLC  
 870 W. INDIANTOWN ROAD, SUITE 105  
 JUPITER, FLORIDA 33458  
 PHONE: 561-252-1220  
 NORTH CAROLINA CA#P-1015

**ENGINEER SEAL**



**DATE OF ISSUE**

APRIL 8, 2019

**ISSUED FOR**

ZONING PLANS

**SUBMITTALS**

REV. DATE DESCRIPTION

REV.	DATE	DESCRIPTION

**PROJECT NUMBER**

L201902-10

**DRAWN BY CHECKED APPROVED**

RCM RCM RCM

**APPROVING AGENCY**

CITY OF CONCORD, NORTH CAROLINA

**BUILDING CODE**

2018 NORTH CAROLINA STATE BUILDING CODE

**SHEET TITLE**

SITE PLAN

**SHEET NUMBER**

Z-1



PROPOSED STEALTH CONCEALMENT WRAP AROUND ANTENNAS (ANTENNAS NOT VISIBLE BEHIND WRAP)



CENTERLINE OF ANCHOR TENANT (VERIZON) ANTENNAS TBD' AGL

CENTERLINE OF FUTURE CARRIER ANTENNAS TBD' AGL

CENTERLINE OF FUTURE CARRIER ANTENNAS TBD' AGL

CENTERLINE OF FUTURE CARRIER ANTENNAS TBD' AGL

CENTERLINE OF FUTURE CARRIER ANTENNAS TBD' AGL

PROPOSED 192' STEALTH COMMUNICATIONS TOWER

EQUIPMENT COMPOUND FENCE

GROUND ELEVATION 0' AGL



TOWER ELEVATION  
TOWER DESIGNED BY OTHERS

**OWNER/APPLICANT:**

**SCI TOWERS**  
P.O. BOX 3469  
CARY, NC 27519  
888-318-2803

**PROJECT NAME AND LOCATION:**

SCI TOWERS LLC-BRAND  
446 BROOKWOOD AVENUE NE  
CONCORD, NC 28025

**PROJECT ENGINEER**

**WAYPOINT**  
ENGINEERING PLLC  
820 W. INDIANTOWN ROAD, SUITE 105  
JUPITER, FLORIDA 33458  
PHONE: 561-252-1929  
NORTH CAROLINA CA#P-1015

**ENGINEER SEAL**



**DATE OF ISSUE**

APRIL 8, 2019

**ISSUED FOR**

ZONING PLANS

**SUBMITTALS**

REV.	DATE	DESCRIPTION

**PROJECT NUMBER**

L201902-10

**DRAWN BY CHECKED APPROVED**

RCM RCM RCM

**APPROVING AGENCY**

CITY OF CONCORD, NORTH CAROLINA

**BUILDING CODE**

2018 NORTH CAROLINA STATE BUILDING CODE

**SHEET TITLE**

TOWER ELEVATION

**SHEET NUMBER**

Z-3



Po Box 3469  
Cary, North Carolina 27519

T 888.318.2803  
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February 11, 2019

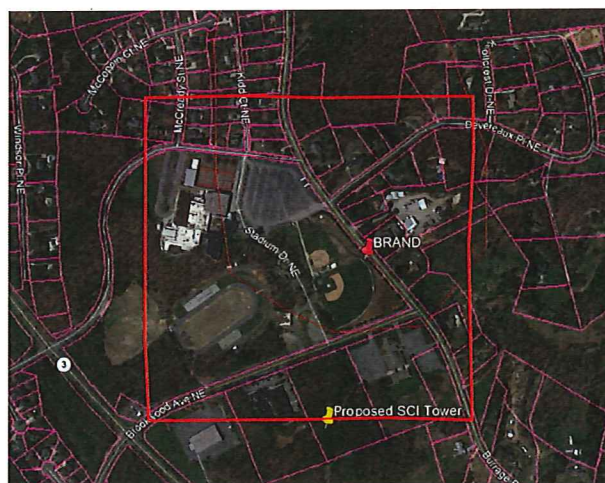
City of Concord  
Planning and Neighborhood Development  
35 Cabarrus Avenue West  
Concord, NC 28026

RE: Special Use Permit application for a 195-foot tall Concealed Free Standing Communications Tower  
Located at 446 Brookwood Avenue NE, Concord, North Carolina

To Whom It May Concern:

This letter is part of our application and details the required documentation for our application. As referenced above, our application is for a concealed 195-foot tall Wireless Communications Facility (WCF) to be located on the property owned by New Hope Worship Center. While the church's house of worship is located at 452 Brookwood Avenue and our proposed site is on a separate parcel located to the west of the church at 446 Brookwood Avenue NE in Concord, NC. This is an unimproved wooded parcel that is 6.19 acres in size. Our proposed use is in the center area of the parcel. These plans and proposals have been developed following the guidelines set forth in the City of Concord Ordinance Use Regulations Article 8, Section 8.7. This application is being made for a WCF that will initially be occupied by Verizon Wireless. While Verizon is the initial tenant, our proposed structure will accommodate up to at least three (3) additional wireless providers.

After review of Section 8.7.2 (Siting), we sought to follow the siting hierarchy required within the parameters provided by Verizon's preferred search area. This search area is shown below. As can be seen, the primary target is the Concord High School. The target search area is comprised of a mix of institutional, commercial and residential properties.



In this search area there are no existing structures that will provide a sufficient height and/or elevation for a potential wireless service providers collocation of antennas and equipment. Secondly, there were no structures to meet the "Concealed Attached Wireless Communication Facility" or the "Collocation or Combining on Existing

Antenna Supporting Structure” for Verizon to use as an alternative facility. The “Freestanding Concealed or Non-concealed Attached WCF” was the next alternative facility per the ordinance. We are applying for a Free Standing Concealed WCF. Given the scale of our tower, we are proposing a stealth design to conceal the antennas with a wrap around on each array of antennas. We are proposing a circular wrap to maintain uniformity as other tenants install on the proposed WCF. Below is a photo of this concealed application that SCI Towers constructed in Charlotte.



Our proposed WCF will be constructed and maintained in conformance with all applicable building code requirements. Our proposed WCF will not interfere with normal radio and television reception in the vicinity. We will conduct a study for interference as part of our construction. We have consulted the FAA and we are not a hazard to aviation at this location and height and no lighting is required. We will not allow commercial messages to be displayed. The WCF compound will be used only to contain the radio equipment for our tower tenants broadcast equipment. No storage of any type will be allowed at our site.

After review of Section 8.7.3 (Dimensions), we find that our proposed height of 195' is below the maximum allowable height of 199' for properties zoned O-1. Our request is driven by Verizon's need for proper radio signal propagation.

Setbacks for freestanding WCF shall be determined according to the underlying zoning district, plus an additional eighteen inches for every foot of tower height. In our instance, this setback would be 302.5 feet. It would require a rectangular parcel over 8 acres in size to meet this requirement. As allowed in Section 8.7.3(B)(2), we are requesting that the approving authority grant a reduction to this setback requirement. Our proposed WCF is being presented as a tower with an engineered break point to control the radius of any tower collapse. Our proposed tower will have a maximum fall radius of 100 feet so that any collapse will remain on the parcel that we are proposing our use. This should be a condition of our building permit to include a tower with a fall radius of no more than 100 feet. This fall radius is shown on our submitted zoning drawing.

With regards to buffers and aesthetics, we believe the use of existing trees and shrubs will best conceal the WCF from view of surrounding properties. As part of this application, we have presented simulated photographic evidence of the proposed structure's appearance from various point that can have a view of the proposed WCF. Below is a computer-generated map of the areas in the immediate neighborhood that would have direct view of our tower. The light green areas on this map are areas with direct view. As you can see, homes that will have direct views of this WCF are very limited and supports our site selection.



We have had Waypoint Engineering, a certified professional engineer, prepare a site plan that demonstrates our application complies with the standards of the requirement of Section 8.7. The parcel we have proposed our WCF is 6.19 acres in size. We have sited our proposed use on this property to best conceal its existence. We are proposing a tower that can accommodate a minimum of four (4) wireless providers to limit tower proliferation. As SCI Towers is a tower company, we certify our tower will be open to any carriers willing to collocate.

We searched the surrounding neighborhood for existing towers near the proposed tower and found no existing towers within a mile of this proposed site. There are no existing structures that can be utilized to provide an alternative to the tower proposed. The proposed tower provides two coverage objectives as it helps off load the wireless traffic on the existing towers and provides better service to the surrounding residential and business neighborhoods.

Accordingly, this letter serves to summarize that we have met the requirements of Section 8.7.4 (Application Requirements) as follows:

1. A complete site plan, certified by a professional engineer, which demonstrates that the site and wireless support structure complies as proposed with the standards set forth in Section 8.7.
2. As previously indicated, Verizon Wireless is the initial tenant and they have been included as part of the initial WCF design and related application. This WCF will be built to accommodate a minimum of four (4) wireless service providers as we seek to maximize its use.
3. Documentation is attached showing the Notice Criteria Tool indicates tower at 195' will not require registration or additional lighting.
4. A copy of the redacted lease agreement.
5. A copy of the certificate of insurance showing general liability coverage of at least \$1,000,000.
6. A copy of the TOWAIR is attached indicating FCC registration is not required and there are no airports within 5 miles of the tower location.
7. Certificate from a professional engineer that the structure has been designed to withstand 100 miles per hour wind velocity.

8. Name and contact information of all contractors and consultants.
9. Delineation of the fall zone for the structure.
10. Simulated photographic evidence of the proposed structure's appearance from all residential areas within 1500 feet, and from other vantage points suggested by the city.

With this letter and included supporting information, we meet and exceed the requirements set forth by the Concord Development Ordinance as related to Wireless Communications Facilities. We believe that we are in harmony with the area neighborhood and less intrusive than some of the neighboring developments. We are not asking for any variance of these required regulations only the reduction of setback requirements that may be authorized by the Administrator for the proposed freestanding concealed tower. As such, we are asking for an approval for our proposed project.

We look forward to working with you towards the conclusion of this approval. Please do not hesitate to contact us for any clarification needed.

Sincerely,



H. Lee Chapman  
SCI Towers, LLC



Federal Aviation Administration

The Federal Aviation Administration (FAA) Obstruction Evaluation Group (OEG) is currently closed. Unfortunately, due to this closure we will not be able to accept new or process previously submitted applications for off-airport filings under 14 CFR Part 77. Upon our return, the OEG staff will immediately begin accepting e-filings via this website and process applications as quickly as possible in the order of the date they were/are filed. Thank you for your patience and understanding.

<< OE/AAA

Pending a formal determination, all submittals should be considered a hazard to air navigation until advised otherwise. If you already have a valid FAA issued determination, and you are calling to have a NOTAM issued, please call: (404) 305-6462.

Notice Criteria Tool

Notice Criteria Tool - Desk Reference Guide V\_2018.2.0

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference CFR Title 14 Part 77.9.

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
• your structure will be in proximity to an airport and will exceed the slope ratio
• your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...) and once adjusted upward with the appropriate vertical distance would exceed a standard of 77.9(a) or (b)
• your structure will emit frequencies, and does not meet the conditions of the FAA Co-location Policy
• your structure will be in an instrument approach area and might exceed part 77 Subpart C
• your proposed structure will be in proximity to a navigation facility and may impact the assurance of navigation signal reception
• your structure will be on an airport or heliport
• filing has been requested by the FAA

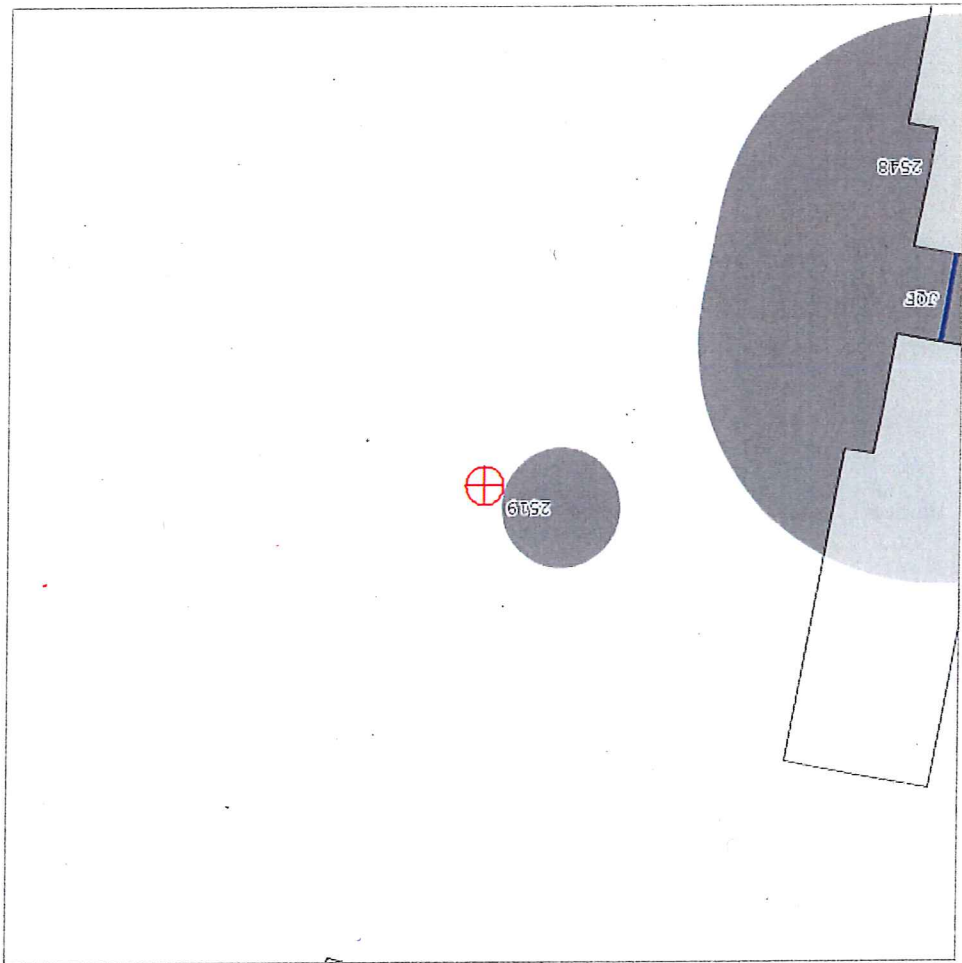
If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the Air Traffic Areas of Responsibility map for Off Airport construction, or contact the FAA Airports Region / District Office for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

Form with input fields for Latitude (35 Deg 25 M 47.32 S N), Longitude (80 Deg 34 M 46.81 S W), Horizontal Datum (NAD83), Site Elevation (SE) (685), Structure Height (199), Traverseway (No Traverseway), and Is structure on airport (No).

Results

You do not exceed Notice Criteria.



# TOWAIR Determination Results

## \*\*\* NOTICE \*\*\*

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

### DETERMINATION Results

**Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.**

### Your Specifications

#### NAD83 Coordinates

Latitude	35-25-47.3 north
Longitude	080-34-46.8 west

#### Measurements (Meters)

Overall Structure Height (AGL)	60.7
Support Structure Height (AGL)	60.7
Site Elevation (AMSL)	208.8

#### Structure Type

MTOWER - Monopole

### Tower Construction Notifications

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

**CLOSE WINDOW**



# Michael F. Plahovinsak, P.E.

18301 State Route 161, Plain City, Ohio 43064  
(614) 398-6250 • mike@mfpeng.com

February 9, 2019

SCI Towers  
City of Concord Planning & Neighborhood Development

Re: Proposed 195-ft Monopole  
Located in Cabarrus Co., NC: Brand Site  
446 Brookwood Avenue NE, Concord, NC 28025  
MFP #40919-013

I understand that there may be some concern on the part of local building officials regarding the potential for failure of the proposed communication monopole. Communication structures are designed in accordance with the Telecommunications Industry Association ANSI/TIA-222-G, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

I will design this monopole to support 4 carriers and withstand a 3-second gusted wind speed of 90 mph ( $V_{asd}$ ) in accordance with ANSI/TIA-222-G for Cabarrus County. *The design will also conform to the requirements of the 2012 North Carolina Building for an equivalent ultimate wind speed of 116 mph ( $V_{ult}$ ).*

This monopole will be intentionally designed to accommodate a theoretical fall radius. The upper 100' of the pole will be designed to meet the wind loads of the design, however, the lower portion of the pole will be designed with a minimum 10% extra capacity. Assuming the pole will be fabricated according to my design and well maintained, in the event of a failure due to extreme wind and a comparable appurtenance antenna loads (winds in excess of the design wind load), it would yield/buckle at the 95' elevation. The yielded section would result in a maximum 100' fall radius, but would most likely remain connected and hang from the standing section.

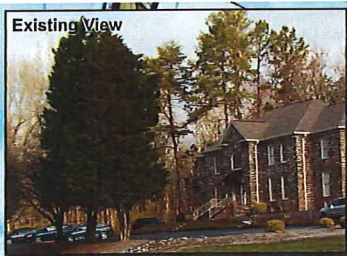
The structure will be designed with all of the applicable factors as required by the code. A properly designed, constructed and maintained pole has never collapsed; monopoles are safe structures with a long history of reliable operation.

I hope this review of the monopole design has given you a greater degree of comfort regarding the design capacity inherent in pole structures. If you have any additional questions please call me at 614-398-6250 or email [mike@mfpeng.com](mailto:mike@mfpeng.com).

Sincerely,

Michael F. Plahovinsak, P.E.  
Professional Engineer






  
**SCI TOWERS BRAND**
  
 452 Brookwood Ave, Concord, NC 28025
   
**195ft. MONOPOLE**



**SCI**  
TOWERS  
**BRAND**  
452 Brookwood Ave, Concord, NC 28025  
**195ft. MONOPOLE  
SIMULATION**  
View #2 from Burrage Road  
approx. 1,225ft. east-southeast of site



**SCI**  
TOWERS  
**BRAND**  
452 Brookwood Ave, Concord, NC 28025  
**195ft. MONOPOLE**



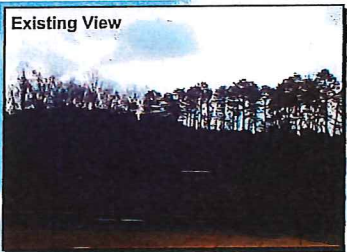
**SCI**  
TOWERS  
**BRAND**  
452 Brookwood Ave, Concord, NC 28025  
**195ft. MONOPOLE**  
**NOT VISIBLE**  
View #4 from Branchview Drive  
approx. 1,850ft. west-northwest of site



**SCI**  
TOWERS  
**BRAND**  
452 Brookwood Ave, Concord, NC 28025  
**195ft. MONOPOLE**



**SCI**  
TOWERS  
**BRAND**  
452 Brookwood Ave, Concord, NC 28025  
**195ft. MONOPOLE**  
**SIMULATION**  
View #6 from Burrage Road  
approximately 900ft. northeast of site



**SCI**  
TOWERS  
**BRAND**  
452 Brookwood Ave, Concord, NC 28025  
**195ft. MONOPOLE**