

WILLIAMS MULLEN

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February 1, 2024

Chris Timberlake
Director
Catawba County Planning Dept.
25 Government Dr.
Newton, NC 28658

RE: 5198 N. N.C. Hwy. 16, Claremont, NC 28610
Our File No.: 092839.0002

Dear Mr. Timberlake,

On behalf of Towerco 2013 LLC ("***TowerCo***"), please accept this application for a proposed wireless telecommunication facility. Included are the associated responses and exhibits. The required payment has been mailed by TowerCo.

Please let me know if you have any questions or need anything else to move this application forward. I look forward to working with you on this project. Thank you.

Sincerely,



Anthony J. Bologna

Enclosures

CC:
David Hockey
Director of Business Development Mid-South Region
TowerCo
dhockey@towerco.com

Thomas H. Johnson, Jr., Attorney
Williams Mullen
tjohnson@williamsmullen.com

Table of Contents

This package includes:

1. A Cover Letter
2. The Initial Application Responses
3. The Ordinance Responses
 - a. Exhibit 1: Wireless Tower Application
 - b. Exhibit 2: Zoning Drawings
 - c. Exhibit 3: Certification Statements
 - d. Exhibit 4: Authority for Appointment of Person to Act on My Behalf
 - e. Exhibit 5: Impact Study
 - f. Exhibit 6: Ground Lease Agreement
 - g. Exhibit 7: FCC Licenses
 - h. Exhibit 8: Photo Simulations
 - i. Exhibit 9: FAA Report
 - j. Exhibit 10: Search Ring
 - k. Exhibit 11: Structural Design Report
 - l. Exhibit 12: Fall Zone Letter
 - m. Exhibit 13: Zone of Visibility Map
 - n. Exhibit 14: Certificate of Authorization

Applicant: Thomas H. Johnson, Jr., Attorney on behalf of Towerco 2013 LLC

Application: Special Use Permit; Antenna Array Reduction (4); Buildable Height Increase

Site Name: Claudette

Address: 5198 N. N.C. Hwy. 16, Claremont, NC 28610

PIN ID #: 375415631766

Zoning District: R-30

Landowner: Lee A. Setzer

1. The proposed Tower will not materially endanger public health or safety.

The proposed Tower will not materially endanger public health or safety. Thomas H. Johnson, Jr., attorney on behalf of Towerco 2013 LLC (*“Applicant”*), acknowledges that the proposed tower (the *“proposed Tower”*) will be designed and installed so as to improve, rather than endanger, the public health and safety of those in Catawba County. The proposed Tower is being constructed to provide greater connectivity and cellular coverage to those in the rural area of Catawba County surrounding the proposed Tower. Greater cellular coverage will increase public health and safety in that greater cellular coverage will provide access to emergency services and weather alerts, as well as greater communication avenues among families, business owners, and residents in the area.

2. The proposed tower will not substantially injure the value of adjoining property or, if so, is a public necessity;

An impact study, dated January 14, 2024 (the *“Impact Study”*), was conducted and performed by Michael Berkowitz, a licensed North Carolina real estate appraiser. There, it was found that the proposed development would not substantially injure the value of adjacent/abutting properties. Evidence of and support for the findings are attached as Exhibit 5.

3. The proposed tower will be in harmony with or compatible with its neighbors and generally consistent with the comprehensive plan; and

Per case law, if a tower is permitted as a special use in the zoning district, it’s presumed to be in harmony. With that said, the proposed Tower is to be sited among properties zoned for agricultural and low-density residential use. Per the Impact Study, telecommunications towers are common along corridors like Highway 16, and the property is located among sites that are used for agricultural and low-density residential purposes. Presently, the site is used for tree farming, and the property across the highway is a solar farm. The site is heavily wooded, and the base of the proposed Tower will be shielded from view by the existing vegetation. Applicant intends only to remove vegetation necessary for the construction of the access and utility easement, and for the space for the proposed Tower to be constructed.

Catawba County’s Comprehensive Plan contemplates concerns about traffic throughout the County. Applicant affirms that after the completion of construction, the proposed

Tower will rarely be visited or attended by maintenance or service personnel. Thus, the proposed Tower will result in an insignificant increase in traffic.

4. The proposed tower will meet all required conditions and specifications.

Applicant is seeking an increase in the buildable height allowed, as well as a reduction in the required number of antenna arrays from six (6) to four (4), each pursuant to the opportunity for relief included in Sec. 44-685.03. Otherwise, the proposed Tower will meet all required conditions and specifications required by law and pronounced in the Catawba County Unified Development Ordinance. Please the responses to each ordinance requirement attached.

DIVISION 4. - WIRELESS FACILITIES

Sec. 44-685. - Applicability.

- (a) No person shall be permitted to site, place, build, construct, modify, collocate, substantially modify or prepare any site for the placement or use of wireless facilities and wireless support structures as of the effective date of this division (July 1, 2003) without having first obtained a zoning authorization permit for wireless facilities and wireless support structures. Notwithstanding anything to the contrary in this section, no zoning authorization permit under this division is required for those non-commercial exceptions noted in the definition of wireless facilities and wireless support structures.

Thomas H. Johnson, Jr., attorney on behalf of Towerco 2013 LLC (the “*Applicant*”), acknowledges the process and goals above. The Applicant’s proposed tower (the “*proposed Tower*”) does not meet any of the exceptions mentioned. The Applicant has applied for a special use permit for a wireless telecommunications facility as required.

- (b) The holder of a special use permit must notify the county of any intended changes that constitute an eligible facilities request or a substantial modification of a wireless telecommunication facility and apply to the county to modify, relocate or rebuild a wireless telecommunications facility. Nothing in this division shall be deemed to require an approval of a permit for maintenance of existing antennas or base station electronic equipment at a wireless transmission facility.

Acknowledged and agreed.

- (c) The collocation and/or shared use of antennas on existing wireless support structures or compatible use structures, such as utility poles, water towers, and other towers must comply with this division and are subject to administrative review by the county.

Not applicable.

- (d) Construction of new wireless facilities and wireless support structures must comply with the requirements of this division.

Acknowledged and agreed.

- (e) All wireless facilities and wireless support structures existing on or before the date of adoption of this division (July 1, 2003) will be allowed to continue as they presently exist. If any modification to existing wireless facilities and wireless support structure is done, the entire wireless telecommunication facility must comply with section 44-685.16.

Not applicable.

- (f) The maintenance of any components of a wireless facility, where the replacement is identical to the component being replaced, or that involve routine repair and maintenance of the facility is exempt from the review process. Maintenance, by definition cannot increase the height of the antennae or structure, increase the footprint of the facility, increase the weight load on the tower or structure or involve additional construction or site modification.

Acknowledged and agreed.

- (g) Facilities used exclusively for private, non-commercial radio and television reception and private citizen's bands, licensed amateur radio and other similar non-commercial telecommunications which are 90 feet or less in height are exempt from this division, except for meeting setback requirements shown in section 44-685.11.

Not applicable.

- (h) State and federal applicants are exempt from the regulations in this division.

Not applicable.

- (i) Facilities used exclusively for providing unlicensed spread spectrum technologies, such as IEEE 802.11a,b,g services (i.e. Wi-Fi and Bluetooth) where the facility does not require a new tower or increase the structure height to which it is being attached.

Not applicable.

- (j) Facilities used for non-profit fire and/or rescue departments, in conjunction with county emergency 911 operations are exempt from this division, except for meeting setback requirements shown in section 44-685.11. The facility can be exempted from setback requirements if the following conditions are met:
 - 1. The adjacent landowner signs a written, notarized acknowledgment of their consent to the waiver of the setback;
 - 2. The waiver is recorded at the register of deeds in both the grantor's and grantee's names, and a copy of the recorded document is given to the planning department; and
 - 3. There is no dwelling located within the communication facility setback area.
- (k) The installation of battery backup systems to existing facilities, is exempt from this division, but must meet building inspection requirements.

Not applicable.

- (l) Any and all representations made by the applicant on the record during the application process, whether written or verbal, will be deemed a part of the application and may be relied upon in good faith.

Acknowledged and agreed.

- (m) Micro wireless facilities and small wireless facilities located on utility poles and/or wireless support structures within NCDOT's right-of-way are exempt from this division.

Not applicable.

Sec. 44-685.01. - Definitions of terms specific to this division.

No response required.

Sec. 44-685.02. - Site visit.

A site visit is required, unless waived by the county. The purpose of the site visit is to address issues which will help to expedite the review and permitting process. The applicant will be provided a written or electronic copy of the instructions for completing an application before the site visit.

A site visit was conducted on Monday, December 11, 2023.

Sec. 44-685.03. - Relief. Any applicant or permittee (person party to the zoning authorization permit) desiring relief or exemption from any aspect or requirement of this division may request such from the county at a pre-application meeting, provided that the relief or exemption is contained in the original application for either a special use permit, or in the case of an existing or previously granted special use permit, a request for a substantial modification of its tower and/or facilities. Such relief may be temporary or permanent, partial or complete, at the sole discretion of the county. However, the burden of proving the need for the requested relief or exemption is solely on the applicant to prove to the satisfaction of the county. The applicant must bear all costs of the county in considering the request and the relief is not transferable to a new or different holder of the permit or owner of the tower or facilities without prior written authorization from the county. Authorization will not be unreasonably withheld or delayed. No such relief or exemption shall be approved unless the applicant demonstrates by clear and convincing evidence that, if granted, the relief or exemption will have no significant affect on the health, safety and welfare of the county, its residents or other service providers.

Applicant is seeking an increase in the allowable height of the proposed Tower. The proposed Tower will have a height of one hundred and ninety-nine feet (199'), four feet (4') of which will consist of a lightning rod. Additionally, the Applicant is seeking a reduction in the number of antenna arrays required under this Ordinance. The increase in allowable height will allow for greater coverage among providers that will install antennas on the proposed Tower. The proposed Tower is in a rural area requiring the proposed Tower to be taller to provide the necessary service and to fill Verizon's coverage gap. The additional height also allows more room for collocators to locate and clear existing vegetation which blocks signal. Greater cell coverage will facilitate communication among residents, businesses, and first responders.

Applicant is seeking to construct and design the proposed Tower to accommodate four (4) antenna arrays. Applicant is seeking a reduction in the required antennas because four (4) antenna arrays will provide opportunity for effective and useful collocation among the major service providers and designing the proposed Tower to accommodate six (6) antenna arrays will result in incurred and unnecessary expense to Applicant for locations that, because of lower height and lack of potential customers, will not likely be used in the foreseeable future. Four (4) antenna arrays will be more than sufficient to provide greater access to coverage in an area that is currently neighbored by low-density residential and agricultural properties. If at any time in the future more than three (3) additional collocators are interested in the proposed Tower, the proposed Tower can be modified to accommodate additional collocations.

Sec. 44-685.04. - Shared use of wireless facilities and wireless support structures and other structures.

- (a) Shared use of existing wireless facilities and wireless support structures is preferred by the county, as opposed to the construction of a new telecommunications support facility. Where such shared use is unavailable, location of antennas on other pre-existing structures is preferred. The applicant must submit a comprehensive report inventorying existing towers and other appropriate compatible structures within the search ring of any proposed new tower site, unless the applicant can show that some other distance is more reasonable, outlining opportunities for the shared use of existing facilities and the use of other pre-existing compatible structures as a preferred alternative to new construction.

Pursuant to the search ring attached as Exhibit 10, there are no facilities eligible for collocation within the search ring radius.

- (b) An application must address collocation as an option. If such option is not proposed, the applicant must explain to the reasonable satisfaction of the county why collocation is commercially or otherwise impracticable including if the owner of the tower is unwilling to enter into a contract for such use at fair market value. The county will require information necessary to determine whether collocation on existing structures is reasonably feasible.

Pursuant to the search ring attached as Exhibit 10, there are no facilities eligible for collocation within the search ring radius.

- (c) An applicant intending to locate on an existing telecommunications tower or other compatible structure is required to document the intent of the existing owner to permit its use by the applicant.

Not applicable.

- (d) Such shared use must consist only of the minimum antenna array technologically required to provide service primarily and essentially within the county, to the extent practicable, unless good cause is shown.

Not applicable.

Sec. 44-685.05. - Location of wireless facilities and wireless support structures.

- (a) Applicants for wireless facilities and wireless support structures must locate, site and erect said wireless facilities and wireless support structures in accordance with the following priorities, one being the highest priority and four being the lowest priority.
 - (1) On existing wireless support structures or compatible use buildings or structures;
 - (2) On other industrial, commercial, or residential property, located outside a major subdivision;
 - (3) In a major subdivision; and
 - (4) In the mixed use overlay (MUC-O), on Bakers Mountain, on Anderson Mountain.

The proposed Tower will be located on a residential property outside of a major subdivision.

- (b) If the proposed property site is not the highest priority listed above, then a detailed explanation must be provided as to why a site of a higher priority was not selected. The person seeking such an exception must satisfactorily demonstrate the reason or reasons why such a permit should be granted for the proposed site, and the hardship that would be incurred by the applicant if the permit were not granted for the proposed site.

Pursuant to the search ring attached as Exhibit 10, there are no facilities eligible for collocation. The proposed Tower will be located on a site designated as the second highest priority.

- (c) An applicant may not by-pass sites of higher priority by stating the site proposed is the only site leased or selected. An application must address collocation as an option. If such option is not proposed, the applicant must explain to the reasonable satisfaction of the county why collocation is commercially or otherwise impracticable including if the owner of the tower is unwilling to enter into a contract for such use at fair market value. The county will require information necessary to determine whether collocation on existing structures is reasonably feasible.

Acknowledged and agreed.

- (d) An existing lease or lease option for a particular piece of property is not, in and of itself, grounds for locating a tower or wireless facility where the county deems it not to be in the best interest of the county and the public.

Acknowledged and agreed.

- (e) Notwithstanding the above, the county may approve any site within an area in the above list of priorities, provided that the county finds that the proposed site is in the best interest of the health, safety and welfare of the county and its inhabitants and will not have a negative effect on the nature and character of the community and neighborhood so long as it is consistent with state law.

No response required.

- (f) The applicant must submit a written report demonstrating the applicant's review of the above locations in order of priority, demonstrating the technological reason for the site selection. If appropriate, based on selecting a site of lower priority, a detailed written explanation as to why sites of a higher priority were not selected must be included with the application.

Pursuant to the search ring attached as Exhibit 10, there are no existing opportunities for collocation within the search ring radius. This site is heavily wooded and is currently used for timber farming. The only trees to be removed are those necessary to build the site. Thus, installation of the proposed Tower would be noninvasive to the surrounding area and properties. Additionally, given the rural nature of the surrounding area, this site is situated so that the proposed Tower would provide needed access to cellular coverage in an area that is currently underserved.

- (g) Notwithstanding that a potential site may be situated in an area of highest priority or highest available priority, the county may disapprove an application for any of the following reasons:
- (1) Conflict with safety and safety-related codes and requirements;
 - (2) Conflict with traffic laws or adverse impact upon traffic needs or definitive plans for changes in traffic flow;
 - (3) Adverse impact upon historic nature or character of a neighborhood or historical district provided an alternative location is available which serves the applicant's needs;
 - (4) The use or construction of wireless facilities and wireless support structures, which are contrary to an already stated purpose of a specific zoning or land use designation;
 - (5) The placement and location of wireless facilities and wireless support structures which would create an unacceptable risk, or the reasonable probability of such, to residents, the public, employees and agents of the county, or employees of the service provider or other service providers; or
 - (6) Conflicts with the provisions of this division, state or federal law.

Acknowledged and agreed.

- (h) Notwithstanding anything to the contrary in this division, for good cause shown, such as the ability to utilize a shorter or less intrusive facility elsewhere and still accomplish the primary service objective stated on the application, the county may require the relocation of a proposed site. The existence of a lease that was entered into prior to the approval of an application does not constitute justification for the requested location.

Acknowledged and agreed.

Sec. 44-685.06. - Height of wireless support structure.

- (a) The maximum permitted total height of a new tower is 120 feet above pre-construction ground level, unless it can be proven that additional height is necessary to provide service in the intended service area.

The Applicant is seeking an increase in the allowable height of the proposed Tower. The proposed Tower will be one hundred and ninety-nine feet (199') in height, of which four feet (4') is a lightning rod. The additional height will provide greater coverage in the area and will allow for the opportunity for more effective collocation in the future. In turn, this will reduce the number of towers required in the future.

- (b) All new towers must be designed to structurally support a total of at least six wireless facilities similar in size, scope and weight to those of the initial carrier attaching to the tower.

The Applicant is seeking a reduction in the number of antenna arrays from six (6) to four (4). Four (4) antenna arrays will provide an opportunity for the collocation of three (3) antenna arrays in addition to the antenna array that Verizon seeks to install. Four (4) antenna arrays will provide sufficient coverage for the area and will provide an opportunity for the existing major carriers to install antennas. Increasing the number of antenna arrays on the proposed Tower will result in significant expense, and will unnecessarily burden the Applicant, as four (4) antenna arrays will provide sufficient coverage and connectivity to support an area such as this rural part of Catawba County. Tower modifications can be made in the future should additional carriers wish to locate on the proposed Tower.

Sec. 44-685.07. - Type and appearance of wireless facilities and wireless support structures.

- (a) Wireless facilities and wireless support structures cannot be artificially lighted or marked, except as required by law.

Acknowledged and agreed.

- (b) Wireless facilities must be constructed as a freestanding lattice or monopole structures. New guyed towers will not be permitted after November 19, 2007.

The proposed Tower will be a one hundred and ninety-nine foot (199') tower of the monopole type.

- (c) Towers must be of a galvanized finish or painted with a rust-preventive paint of an appropriate color to harmonize with the surroundings, as approved by the board of adjustment, and must be maintained in accordance with the requirements of this division.

Acknowledged and agreed. Please see the certification statements attached as Exhibit 3.

- (d) For any wireless facility for which lighting is required under the FAA's regulations, or any legal requirements has lights attached, the lighting must be a fast flashing strobe, and include technology that enables the light to be seen as intended from the air, but that prevents the ground scatter effect so that it is not able to be seen from the ground to a height of at least 12 degrees vertical for a distance of at least one mile in a level terrain situation. Such device must be compliant with FAA regulations. A physical shield may be used with the strobe, as long as the light is able to be seen from the air, as required by the FAA.

The proposed Tower will have a height of less than two hundred feet (200') and will not require lighting to comply with FAA requirements. The FAA determination is attached as Exhibit 9.

Sec. 44-685.08. - Security of wireless facilities and wireless support structures.

All wireless facilities and wireless support structures and antennas must be located, fenced or otherwise secured in a manner that prevents unauthorized access. Specifically:

- (1) All antennas, towers and other supporting structures, including guy wires, must be made inaccessible to individuals and constructed or shielded in such a manner that they cannot be climbed or run into; and

The proposed Tower will be fenced as shown across Sheets Z-1, Z-3, and Z-4 of Exhibit 2.

- (2) Transmitters and telecommunications control points must be installed in such a manner that they are readily accessible only to persons authorized to operate or service them.

Acknowledged and agreed.

Sec. 44-685.09. - Signage.

Wireless facilities and wireless support structures must contain signs to provide adequate notification to persons in the immediate area of the presence of an antenna that has transmission capabilities.

- (1) A sign on the equipment compound must contain the FCC registration site, the name(s) of the owner(s) of the facility as well as emergency phone number(s).

The requisite signage may be seen on Sheet Z-5 of Exhibit 2.

- (2) A sign must be on the equipment shelter or shed of each service provider and when possible, be located so as to be visible from the access point of the site and must identify the equipment shelter of the applicant. The sign must contain the name(s) of the owner(s) of the equipment as well as emergency phone number(s).

The requisite signage may be seen on Sheet Z-5 of Exhibit 2.

- (3) Signs cannot be larger than four square feet in area. Signs cannot be lit unless the lighting is required by applicable provisions of law. No other signage, including advertising, is permitted on any facilities, antennas, or antenna supporting structures, unless required by law.

The requisite signage may be seen on Sheet Z-5 of Exhibit 2.

Sec. 44-685.10. - Utilities.

- (a) Prior to the issuance of a zoning authorization permit, the applicant may be required, as a condition to the special use permit, to submit an approval from the FCC based upon the National Environmental Policy Act (NEPA).

Acknowledged and agreed.

- (b) All utilities at a wireless facility must be installed underground and in compliance with all laws, ordinances, rules and regulations of the county, including specifically, but not limited to, the National Electrical Safety Code and the National Electrical Code where appropriate. The county may waive or vary the requirements of underground installation of utilities when, in the opinion of the county such variance or waiver shall not be detrimental to the health, safety, general welfare and environment, including the visual and scenic characteristics of the area.

Applicant acknowledges that all utilities will be installed underground and in compliance with all laws, ordinances, rules, and regulations of the county, including specifically, but not limited to, the National Electrical Safety Code and the National Electrical Code where appropriate. Additional information regarding the Applicant's installation of utilities may be found on Sheet N-2 of Exhibit 2.

Sec. 44-685.11. - Lot size and setbacks.

All proposed wireless facilities and wireless support structures must be set back from abutting parcels, recorded rights-of-way and road and street lines by the greater of the following distances:

- (1) A distance equal to the height of the tower or other wireless telecommunications facility structure plus ten percent of that height; or
- (2) The existing setback requirements of the underlying zoning district.

The setbacks are reflected on Sheet Z-1 of Exhibit 2, whereby the proposed Tower's minimum setback is two hundred and twenty feet (220') and is designed in accordance with this section.

Sec. 44-685.12. - Fees.

County fees, which are set by the board of commissioners and subject to change as may be warranted and justified, will be charged for the following:

- (1) The application fee for construction of a new wireless facility and/or wireless support structure is due and payable to the county at the time the application is submitted prior to the site visit. The zoning authorization permit fee for construction of a new wireless facility and/or wireless support structure is due at the time of permit issuance.

The application fee has been mailed and will arrive in connection with this application.

- (2) The fee for modifying or collocating on an existing tower or structure is due and payable to the county at the time of the application submission.

Not applicable.

Sec. 44-685.13. - Retention of expert assistance

- (a) The county may hire a consultant and/or expert necessary to assist the county in reviewing and evaluating the application for a proposed tower, collocation, or modification. The county may also request expert assistance for other issues, in order to ensure the general health, safety and welfare of the public.

Acknowledged and agreed.

- (b) The cost of the expert assistance shall be consistent with state law and will be paid by the applicant. The cost is included in the zoning authorization permit fee.

Acknowledged and agreed.

Sec. 44-685.14. - Extent and parameters of special use permits, zoning authorization permits and zoning compliance certificates for wireless facilities and wireless support structures.

The extent and parameters of a special use permit for wireless facilities and wireless support structures are as follows:

- (1) No public hearing is required for an application for an eligible facilities request or a substantial modification.

Acknowledged and agreed.

- (2) A special use permit runs with the land and is enforceable upon successive owners.

Acknowledged and agreed.

- (3) A permit may be revoked for a violation of the conditions and provisions of the permit.

Acknowledged and agreed.

- (4) A special use permit to allow for construction of a new wireless support structure, expires 24 months from the date of approval, unless tower construction is complete. After obtaining a special use permit from the board of adjustment, but prior to beginning construction, the applicant must submit a signed agreement with a service provider who will commence using the facility within 60 days after tower construction is completed.

Acknowledged and agreed.

- (5) After a zoning authorization permit is issued, the applicant must meet all requirements of the county building inspection department. After the final approval from the building inspection department, the applicant must contact the county planning department for the final approval, and submit a signed and stamped "as-built" certification from a PE certifying that 1) the project was built according to the submitted plan, and 2) the project is complete. The new facility or collocation not previously on the structure is not permitted to have power, or provide service, until the zoning compliance certificate has been issued. Providers already on the tower will continue to have power; however, the county must be contacted prior to obtaining final zoning approval, and a PE certified "as-built" must be submitted, in order to determine compliance.

Acknowledged and agreed.

- (6) A bond or security must be submitted to the county within 30 days after tower construction is completed, as outlined in section 44-685.17.

A bond or security is forthcoming and will be submitted to the County within thirty (30) days after tower construction is completed.

- (7) Abandoned wireless facilities and support structures must be removed at the tower owner's expense.

Acknowledged and agreed.

Sec. 44-685.15. - Submittal requirements—New wireless support structures and wireless facilities.

Complete applications and accompanying forms for a special use permit or a zoning authorization permit for wireless facilities and wireless support structures, must comply with the requirements of this division and provide all requested information. Any required certifications must be done by a qualified North Carolina licensed professional engineer. Application packets must include:

- (1) Documentation of the site visit.

The site visit was performed on December 11, 2023.

- (2) The wireless facility owner, and when applicable, the provider's written authorization designating an agent on their behalf.

The Authority for Appointment of Person to Act on My Behalf is attached as Exhibit 4. The redacted Ground Lease Agreement is attached as Exhibit 6.

(3) Site plans showing:

- a. The zoning district or designation in which the property is situated;

The zoning district is contained on Sheet T-1 of Exhibit 2.

- b. A survey of the property showing all parcel lines, parcel line dimensions, existing structures and the proposed wireless facility and wireless support structure;

The envelope of the property is illustrated in Exhibit 2.

- c. An elevation drawing showing the vertical rendition of the wireless support structure identifying all provider names and locations and attachments to the structure and all related fixtures, structures, appurtenances and apparatus, including height above pre-existing grade, materials, color and lighting;

The elevation of the tower and any structures to be located on the compound can be found on Sheet Z-3 of Exhibit 2.

- d. A plan drawing showing names and locations of other providers in the equipment compound; location of ground equipment, and centerline height location of all proposed and existing antennae on the supporting structure;

The elevation of the tower and any structures to be located on the compound can be found on Sheet Z-3 of Exhibit 2.

- e. The azimuth, size and centerline height location of all proposed and existing antennae on the supporting structure;

The azimuth, size and centerline height location of all proposed antennae are shown on Sheet Z-3 of Exhibit 2.

- f. The type, locations and dimensions of all proposed and existing landscaping, and fencing.

Fence details are contained on Sheet Z-4 of Exhibit 2.

(4) A copy of the FCC license applicable for the intended use of the structure.

The FCC licenses are attached as Exhibit 7.

- (5) All structures must contain a demonstration that the structure be sited so as to be the least visually intrusive as reasonably possible and thereby have the least adverse visual effect on the environment and its character, on existing vegetation, and on the community in the area of the structure. The county reserves the right to require the use of stealth or camouflage technology or technologies such as distributive antenna system technology (DAS) or its functional equivalent to achieve this goal, subject to approval by the board of adjustment. This may require the placement of two visually unobtrusive towers, as opposed to one tower which compromises the viewshed.

All antennas attached to a tower must be flush mounted or as near to flush mounted as is possible without prohibiting or having the effect of prohibiting the provision of service, or prove technically with hard data and a detailed narrative, that flush mounting cannot be used and would serve to prohibit or have the effect of prohibiting the provision of service.

The Tower will be sited so as to be the least visually intrusive as reasonably possible and thereby have the least adverse visual effect on the environment and its character, on existing vegetation, and on the community in the area of the structure, specifically, the Tower will be a monopole with a galvanized finish (per Sec. 44-685.07), will not be lighted and is to be located on a heavily wooded lot. The only trees to be removed are those necessary to construct the access and utility easement and tower compound. Because of the number of antennas required on each array and the Tower-mounted remote radio units (RRUs) located behind the antennas, the antennas cannot be flush mounted without having the effect of prohibiting the wireless service.

- (6) A visual impact assessment must be furnished which must include:
- a. A computer generated "zone of visibility map," with a minimum of one-mile radius from the proposed structure illustrating locations from which the tower may be seen.

A "zone of visibility map" is attached as Exhibit 13.

- b. Pictorial representations (photo simulations) of "before and after" views from key viewpoints both inside and outside of the county, as may be appropriate, including state highways and other major roads; state and local parks; other public lands; historic districts; preserves and historic sites normally open to the public; and from any other location where the site is visible to a large number of visitors, travelers or residents. Guidance will be provided concerning the appropriate key sites at the pre-application meeting. The applicant must provide a map showing the locations of where the pictures were taken and the distance(s) of each location from the proposed structure.

Photo simulations are attached as Exhibit 8.

- c. The applicant must submit a drawing demonstrating how the base and all related structural facilities will be screened from vehicular rights-of-way or adjacent properties in accordance with section 44-523(f)(3).

Photo simulations, attached as Exhibit 8, demonstrate that the site's wooded nature will shield the base of the proposed Tower from Highway 16, as well as from surrounding properties. Fencing can be across Sheets Z-1, Z-2, Z-3 and Z-4 of Exhibit 2.

- d. A written certification that the structure will be effectively grounded, bonded and installed with appropriate surge protectors to protect persons and property.

Please see the certifications attached as Exhibit 3.

- (7) The wireless support structure must maximize the use of building materials, colors and textures designed to harmonize with the natural surroundings. This includes the utilization of stealth or concealment technology as may be required by the board of adjustment.

The Applicant certifies that it will take measures to conceal the Tower as required by the Board of Adjustment.

- (8) If deemed appropriate by the planning director, an access road, turn-around space and parking may be required to assure adequate emergency and service access. Maximum use of existing roads, whether public or private, must be made to the extent practicable. If the current access road or turn around space is deemed in disrepair or in need of remedial work to make it serviceable and safe, as determined at a site visit, the application must contain a commitment to remedy or restore the road or turn around space so that is serviceable, safe and in compliance with applicable regulations. Road construction must at all times minimize ground disturbance and vegetation cutting. Road grades must closely follow natural contours to assure minimal visual disturbance and reduce soil erosion. Road construction must comply with all applicable regulations.

The proposed Tower may be accessed by maintenance, service, and emergency personnel by a thirty-foot (30') wide access and utility easement leading from NC Hwy. 16 to the proposed Tower. The Applicant commits to remedy and/or restore the road or turn-around space so that the road or turn-around space is serviceable, safe and in compliance with all applicable regulations. See the Applicant's certifications attached as Exhibit 3.

- (9) The permit holder must construct, operate, maintain, repair, provide for removal of, modify or restore the permitted wireless facility and wireless support structure in strict compliance with all current applicable technical, construction, safety and safety-related codes adopted by the county, state, or United States, including but not limited to the most recent editions of the National Electrical Safety Code and the National Electrical Code, as well as accepted and responsible workmanlike industry practices and recommended practices of the National Association of Tower Erectors. (The codes referred to are codes that include, but are not limited to, construction, building, electrical, fire, safety, health, and land use codes. In the event of a conflict between or among any of the preceding the more stringent shall apply.)

Acknowledged and agreed. Please see the certification statements attached as Exhibit 3.

- (10) A holder of a special use permit or other authorization granted under the provisions of this division, must obtain, at its own expense, all permits and licenses required by applicable law, rule, regulation or code, and must maintain the same, in full force and effect, for as long as required by the county or other governmental entity or agency having jurisdiction over the permit holder.

Acknowledged and agreed.

- (11) The wireless support structure must be structurally designed to accommodate at least six antenna arrays in regard to the load and stress created on the structure, with each array to be sited in such a manner as to provide for flush attachments to the greatest extent possible with the minimum separation necessary without causing interference. An intermodulation study must be submitted to justify design claims related to interference. A claim of interference because of a need to have greater than six feet of vertical clearance between facilities, measured from the vertical centerline of one array to the vertical centerline of another, must be proven by technical data showing that there is no technological alternative that would enable the service to be provided that would require less vertical space. This requirement may be waived, provided the applicant, in writing, demonstrates that the provisions of future shared usage of the wireless facility is not feasible or if collocation is technically or commercially impracticable.

Applicant is seeking relief from the required number of antenna arrays pursuant to 44-685.03. Applicant is seeking to install four (4) antenna arrays. A radio frequency report is forthcoming and will be submitted once delivered.

- (12) The proposed wireless facility and wireless support structure must be maintained in a safe manner, and in compliance with all conditions of the zoning authorization permit, without exception, unless specifically granted relief by the board of adjustment in writing, as well as all applicable and permissible local codes, ordinances, and regulations, including any and all applicable county, state and federal laws, rules, and regulations;

Acknowledged and agreed. Please see the certification statements attached as Exhibit 3.

- (13) Verification that the construction of the wireless facility and wireless support structure is legally permissible, including, but not limited to the fact that the applicant is authorized to do business in the state.

The Certificate of Authorization for TowerCo is attached as Exhibit 14. The redacted Ground Lease Agreement is attached as Exhibit 6.

- (14) The application must be signed by an authorized individual on behalf of the applicant.

The application has been signed by Thomas H. Johnson, Jr., attorney on behalf of Towerco 2013 LLC. Please see the application attached as Exhibit 1.

- (15) The applicant must disclose in writing any agreement in existence prior to submission of the application that would limit or preclude the ability of the applicant to share any new telecommunication tower that it constructs;

There are no existing agreements that would preclude the Applicant's ability to share the proposed Tower.

- (16) A written report demonstrating meaningful efforts to secure shared use of existing wireless support structures or the use of alternative buildings or other structures within the county that are at or above the surrounding tree height or the tallest obstruction and are within one mile of the proposed tower. Copies of written requests and responses for shared use must be provided along with any letters of rejection stating the reason for rejection.

Pursuant to the search ring attached as Exhibit 10, there are no facilities eligible for collocation within the search ring radius. Pursuant to NCGS §160D-933(a)(3), the local government can only require an applicant "to evaluate to evaluate the reasonable feasibility of collocating new antennas and equipment on an existing wireless support structure or structures within the applicant's search ring."

- (17) Wireless support structures must be located in accordance with section 44-685.05.

Acknowledged and agreed.

- (18) As a condition to the special use permit, a structural report certified by a professional engineer licensed in the state, along with a structural analysis report, including calculations, that prove that the structure and its foundation as proposed to be utilized are designed to meet all local, state, and federal structural requirements for loads, including wind and ice loads and have the ability for the support structure to accommodate a minimum total of six antenna arrays.

The Structural Design Report is attached as Exhibit 11. Additionally, a Fall Zone Letter is attached as Exhibit 12.

- (19) A map identifying any wireless support structures within the search ring which have been approved but not yet constructed.

Please see the search ring attached as Exhibit 10.

- (20) The applicant for a new wireless support structure must submit a letter of intent committing the owner of the proposed new structure, and his/her successors in interest, to negotiate in good faith for the shared use of the proposed tower by other providers in the future. This letter is a condition of the permit. Failure to abide by the conditions outlined in the letter may be grounds for revocation of the special use permit. The letter must commit the new owner and their successors in interest to:
- a. Respond within 60 days to a request for information from a potential shared-use applicant;
 - b. Negotiate in good faith concerning future requests for shared use of the structure by other providers; and
 - c. Allow shared use of the new structure if another provider agrees in writing to pay reasonable charges.
 - d. Failure to abide by the conditions outlined above may be grounds for revocation of the special use permit.
- (21) The holder of a special use permit must notify the county of any intended modification of a wireless support structure and shall apply to the county to modify, relocate or rebuild a wireless facility or structure.

Acknowledged and agreed.

- (22) Lighting. The applicant must provide a written copy of an analysis, completed by a qualified individual or organization, to determine if the telecommunications tower or existing structure intended to support wireless facilities requires lighting under Federal Aviation Regulation Part 77. If this analysis determines that the FAA must be contacted, then all filings with, and all responses from the FAA, along with any related correspondence must be provided before an application can be considered complete.
- a. For any wireless facility for which lighting is required under the FAA's regulations, or for any reason has lights attached, all lighting must be a fast flashing strobe, acceptable to the FAA, affixed with technology that enables the light to be seen as intended from the air, but that prevents the ground scatter effect so that it is not able to be seen from the ground to a height of at least 12 degrees vertical for a distance of at least one mile in a level terrain situation. Such device must be compliant with or not in conflict with FAA regulations. A physical shield may be used with the strobe, as long as the light is able to be seen from the air, as intended by the FAA.

The FAA's report determined that there was not a need for lighting, as the proposed Tower is to be under two hundred feet (200'), and evidence of this determination can be seen in Exhibit 9.

- b. In the event a tower that is lighted is modified, at the time of the modification the county may require that the tower be retrofitted with the technology set forth in subsection (22)a above.

The FAA's report determined that there was not a need for lighting, as the proposed Tower is to be under two hundred feet (200'), and evidence of this determination can be seen in Exhibit 9.

Sec. 44-685.16. - Submittal requirements—Eligible facilities request (collocations or modifications) or substantial modifications on existing or approved towers and attachments to existing structures.

No response required.

- (1) Requirements—When attaching to an existing structure except for a tower. A site plan showing the location of the wireless support structure on the property and the location of the wireless facility on the wireless support structure, and the structural analysis report.

No response required.

- (2) A zoning authorization permit will be issued within 45 days of the county receiving a complete application. In the case of an incomplete application, the county will identify the deficiencies and notify the applicant on what is necessary to make the application complete. The application shall be deemed complete on resubmission of the additional required materials.

No response required.

Sec. 44-685.17. - Performance and removal security.

- (a) The applicant, and the owner of record of any new wireless support structure, must, jointly or separately, at its cost and expense, be required to place with the county a bond, or other form of security acceptable to the county in an amount of at least \$75,000.00 when constructing a wireless support structure.

Acknowledged and agreed. The Applicant's bond, in the requisite amount, is forthcoming and will be posted prior to the construction of the proposed Tower.

- (b) The full amount of the bond or security must remain in full force and effect throughout the term of the special use permit or zoning authorization permit and/or until the removal of the wireless support structures, and any necessary site restoration is completed. The failure to pay any annual premium for the renewal of any such security shall be a violation of the provisions of the permit. If written proof of the bond or security is not provided to the county within 60 days of the notice, the county shall have the right to revoke the permit.

Acknowledged and agreed.

Sec. 44-685.18. - Removal of wireless facilities and wireless support structures.

- (a) Under the following circumstances, the county may determine that the health, safety, and welfare interests of the county warrant and require the removal of the wireless facility and/or wireless support structures:
- (1) Have been abandoned for a period of at least five years;
 - (2) Situations caused by acts of God, in which case, repair or removal must be completed within 90 days;
 - (3) Have fallen into such a state of disrepair that it creates a health, safety or welfare hazard;
 - (4) Have been located, constructed, or modified without first obtaining a permit, or in a manner not authorized.

Acknowledged and agreed.

- (b) If the county makes a determination of a health, safety or welfare issue under this division, then the county shall notify the holder of the permit within 48 hours that the structure must be removed.

Acknowledged and agreed.

- (c) The holder of the permit, or its successors or assigns, must dismantle and remove the wireless support structure and facilities, from the site and restore the site to as close to its original condition as is possible within 90 days of receipt of written notice from the county.

Acknowledged and agreed.

- (d) If the wireless support structure is not removed or substantial progress has not been made to remove the wireless facilities and wireless support structures within 90 days after the permit holder has been sent notice, then the county may order officials or representatives of the county to remove the wireless facilities and wireless support structures at the sole expense of the owner or permit holder.

Acknowledged and agreed.

- (e) If, the county removes, or causes a wireless support structure to be removed, the county may sell any part or component. Any expense associated with removal is the responsibility of the tower owner.

Acknowledged and agreed.

- (f) Notwithstanding anything in this division to the contrary, the county may approve a temporary use permit/agreement for the wireless telecommunications facility, for no more than 90 days, during which time a suitable plan for removal, conversion, or re-location of the affected wireless telecommunications facility must be developed by the holder of the permit, subject to the approval of the county and an agreement to such plan must be executed by the holder of the permit and the county. If such a plan is not developed, approved and executed within the 90 day time period, then the county may take possession of and dispose of the affected wireless support structure in accordance with this division.

Acknowledged and agreed.

Sec. 44-685.19. - Reservation of authority to inspect wireless facilities and wireless support structures.

In order to verify that the holder of a special use/zoning authorization permit and any lessees, renters, and/or licensees of a wireless facilities and wireless support structures, place and construct such structures and facilities, in accordance with all applicable technical, safety, fire, building, and zoning codes, laws, ordinances and regulations and other applicable requirements, the county may perform inspections.

No response required.

Sec. 44-685.20. - Adherence to state and/or federal rules and regulations.

- (a) To the extent that the holder of a permit for wireless facilities and wireless support structures has not received relief, or is otherwise exempt, from appropriate state and/or federal agency rules or regulations, then the holder of the permit must adhere to, and comply with, all applicable rules, regulations, standards, and provisions of any state or federal agency, including, but not limited to, the FAA and the FCC. Specifically included in this requirement are any rules and regulations regarding height, lighting, security, electrical and RF emission standards.

Acknowledged and agreed.

- (b) To the extent that applicable rules, regulations, standards, and provisions of any state or federal agency, including but not limited to, the FAA and the FCC, and specifically including any rules and regulations regarding height, lighting, and security are changed and/or are modified during the duration of a permit issued pursuant to this division then the holder of the permit must comply with the amended requirements.

Acknowledged and agreed.

Exhibit 1

Wireless Tower Application

**Catawba County Application for a Wireless Communication New Tower or Combination New Tower/Collocation
(Quasi-Judicial Hearing - Board of Adjustment)**

Type of Facility (please check one): _____ New Tower Only x Combination New Tower/Collocation

Owner of Tower/Applicant

Tower Owner/Applicant Thomas H. Johnson, Jr., Attorney
Tower Owner's Mailing Address 301 Fayetteville St., Suite 1700 City, State, Zip Raleigh, NC 27601
Tower Owner's Contact Person Thomas H. Johnson, Jr. Phone # (919) 981-4006
Parcel 911 Address 5198 N. N.C. Hwy. 16, Claremont, NC 28610 PIN # 375415631766
Tower Enclosure 911 Address 5198 N. N.C. Hwy. 16, Claremont, NC 28610
Tower Location: Latitude N 35° 46' 33.23" Longitude W 81° 10' 16.37"
Wireless Owner's Tower Identification Information: Number NC0313 Site Name Claudette
FCC Registration Number of Tower: Not yet assigned.
Type of Tower Construction (please check one): _____ Lattice _____ Guyed x Monopole
Tower Total Height 199' Height of Collocation (if proposed) N/A
Applicant's Signature: Tom Johnson

Wireless Provider/Co-Applciant of the Proposed Collocation (This section does not apply if there is not a collocation at this time.)

Provider/Applicant _____
Provider's Mailing Address _____ City, State, Zip _____
Provider's Contact Person _____ (Typically not the same person preparing the application or the primary contact prior to construction.)
Contact's Phone # _____ Contact's E-mail _____
Provider's Identification Information for Site: Number _____ Site Name _____
Co-Applciant's Signature: _____

Land Owner of Parcel where Tower is Proposed (This is the owner of the land which is being leased to the tower company.)

Land Owner Lee A. Setzer Phone # (919) 653-5710
Land Owner's Mailing Address 5156 N. N.C. Hwy. 16 City, State, Zip Claremont, NC 28610
Land Owner's Signature: Lee Setzer

Person Preparing Application/Site Acquisition or Zoning Specialist (Primary Contact in Obtaining Permit)

Contact Person Thomas H. Johnson, Jr. Company Williams Mullen Phone # (919) 981-4006
Contact's Mailing Address 301 Fayetteville St., Suite 1700 City, State, Zip Raleigh, NC 27601
Contact's Fax (919) 981-4300 Email tjohnson@williamsmullen.com
This person will follow project through: _____ Obtaining Permit only, or x Through Facility Construction
If only through Zoning Authorization Permit, who will be the contact through construction? (Name, Company, Address, Phone, E-mail address) _____

Please describe the request, proposed work and the reason for the work (e.g. gap in coverage, capacity, change in technology). The installation and construction of one (1) wireless telecommunications tower is proposed.

The proposed tower will provide greater coverage for those in Catawba County.

Exhibit 2
Zoning Drawings

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: CLAUDETTE
Address: NC HWY 16, CLAREMONT, NC Zip Code 28610
Owner/Authorized Agent: PAM HENDERSON Phone # (919) 653 - 5700 E-Mail PHENDERSON@TOWERCO.COM
Owned By: ☐ City/County ☒ Private ☐ State
Code Enforcement Jurisdiction: ☐ City ☒ County CATAWBA ☐ State

CONTACT: Tower Engineering Professionals					
DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural				()	
Civil	Tower Engineering Professionals	Scott C. Brantley	048226	(919) 661-6351	sbrantley@tepgroup.net
Electrical	Tower Engineering Professionals	Mark S. Quakenbush	042109	(919) 661-6351	mquakenbush@tepgroup.net
Fire Alarm				()	
Plumbing				()	
Mechanical				()	
Sprinkler-Standpipe				()	
Structural				()	
Retaining Walls >5' High				()	
Other				()	

2018 NC BUILDING CODE: ☐ New Building ☒ Addition ☐ Renovation
☐ 1st Time Interior Completion
☐ Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements
☐ Phased Construction - Shell/Core- Contact the local inspection jurisdiction for possible additional procedures and requirements

2018 NC EXISTING BUILDING CODE: EXISTING: ☐ Prescriptive ☐ Repair ☐ Chapter 14
Alteration: ☐ Level I ☐ Level II ☐ Level III
☐ Historic Property ☐ Change of Use

CONSTRUCTED: (date) CURRENT OCCUPANCY(S) (Ch. 3):
RENOVATED: (date) PROPOSED OCCUPANCY(S) (Ch. 3):
OCCUPANCY CATEGORY (Table 1604.5): Current: ☐ I ☐ II ☐ III ☐ IV
Proposed: ☐ I ☐ II ☐ III ☐ IV

BASIC BUILDING DATA
Construction Type: ☒ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A
(check all that apply) ☐ I-B ☐ II-B ☐ III-B ☐ V-B
Sprinklers: ☒ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☒ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ☐ No ☐ Yes Flood Hazard Area: ☒ No ☐ Yes
Special Inspections Required: ☐ No ☐ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

2018 NC Administrative Code and Policies

Gross Building Area Table			
FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3 rd Floor		N/A	
2 nd Floor		N/A	
Mezzanine		N/A	
1 st Floor		40 SQ FT CONCRETE PAD, 28 SQ FT CONCRETE PAD	
Basement		N/A	
TOTAL		40 SQ FT CONCRETE PAD, 28 SQ FT CONCRETE PAD	

ALLOWABLE AREA
Primary Occupancy Classification(s): Select one Select one Select one Select one Select one Select one
Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☐
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 Condition ☐ 1 ☐ 2
☐ I-2 Condition ☐ 1 ☐ 2
☐ I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ I-4
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☒ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Accessory Occupancy Classification(s): N/A

Incidental Uses (Table 509): N/A

Special Uses (Chapter 4 – List Code Sections): N/A

Special Provisions: (Chapter 5 – List Code Sections): N/A

Mixed Occupancy: ☒ No ☐ Yes Separation: Exception:

☐ Non-Separated Use (508.3) - The required type of construction for the building shall be determined by applying the requirements for each of the applicable occupancy classifications. The most restrictive type of construction shall apply to the entire building.

☐ Separated Use (508.4) - See below. For each story, the area of the occupancy shall be subdivided into areas of the actual floor area of each use divided by the number of stories. Each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

NOT A BUILDING

PLANS PREPARED FOR:



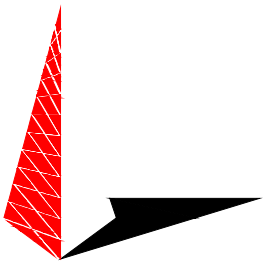
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313

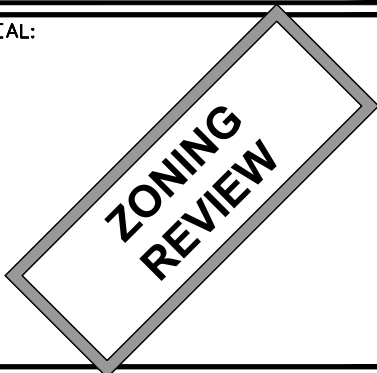
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



O	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

APPENDIX B

SHEET NUMBER: T-2 REVISION: 0
TEP #: 333496

2018 NC Administrative Code and Policies

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 ⁴ AREA	(C) AREA FOR FRONTAGE INCREASE ^{1,5}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{2,3}

- ¹ Frontage area increases from Section 506.2 are:
- a. Perimeter which fronts a public way
 - b. Total Building Perimeter
 - c. Ratio (F/P) = _____ (F/P)
 - d. W = Minimum width of public way
 - e. Percent of frontage increase = $\frac{F}{P} \times W/30 = \text{_____} (\%)$
- ² Unlimited area applicable under conditions of Section 507.
- ³ Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
- ⁴ The maximum area of open parking garage must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
- ⁵ Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT			
	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)			
Building Height in Stories (Table 504.4)			

¹ Provide code reference if the "Shown on Plans" quantity is not based on the code.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING		DETAIL # AND SHEET	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
		REQ'D	PROVIDED (w/REDUCTION) *				
Structural Frame, including columns, girders, trusses							
Bearing Walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions							
Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction							
Including supporting beams and joists							
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof Construction, including supporting beams and joists							
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

PLANS PREPARED FOR:



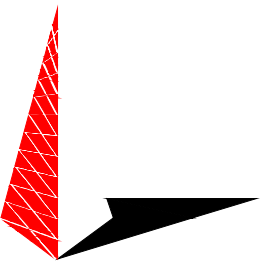
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

**CLAUDETTE
SITE #: NC0313**

(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



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N.C. LICENSE # P-1403

SEAL:

**ZONING
REVIEW**

0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

APPENDIX B

SHEET NUMBER: T-3	REVISION: 0 TEP #: 333496
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PERCENTAGE OF WALL OPENING CALCULATIONS			
FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)

LIFE SAFETY PLAN REQUIREMENTS

Emergency Lighting:

Exit Signs:

Fire Alarm:

Smoke Detection Systems:

Panic Hardware:

☐

☐

☐

☐

☐

Yes

Partial

Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #:

☐ Fire and/or smoke rated wall locations (Chapter 7)

☐ Assumed and real property line locations (if not on the site plan)

☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)

☐ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)

☐ Occupant loads for each area

☐ Exit access travel distances (1017)

☐ Common path of travel distances (Tables 1006)

☐ Dead end lengths (1020.4)

☐ Clear exit widths for each exit door

☐ Maximum calculated occupant load and whether the area can accommodate based on egress width (1005.3)

☐ Actual occupant load for each exit

☐ A separate schematic plan indicating whether floor/ceiling and/or roof structure is provided for purposes of occupancy separation

☐ Location of doors with panic hardware (1010)

☐ Location of doors with delayed egress and the amount of delay (1010.1.9.7)

☐ Location of doors with electromagnetic egress locks (1010.1.9.9)

☐ Location of doors equipped with hold-open devices

☐ Location of emergency escape windows (1030)

☐ The square footage of each fire area (202)

☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)

☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (SECTION 1107)						
TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

LOT OR PARKING AREA	TOTAL # OF PARKING REQUIRED		ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
			WITH AISLE	VAN SPACES WITH		
				132" ACCESS AISLE	8' ACCESS AISLE	
TOTAL						

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)											
USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEM	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXIST'G										
	NEW										
	REQ'D										

SPECIAL APPROVAL

Special approval: (Local Jurisdiction, Department of Social Services, DPI, DHHS, etc., describe below)

PLANS PREPARED FOR:



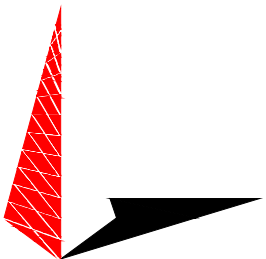
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SHEET TITLE:

APPENDIX B

SHEET NUMBER:	REVISION:
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	TEP #: 333496

ENERGY REQUIREMENTS:

The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: ☐ No ☐ Yes (Provide code on _____ remainder of this section is not applicable)

Exempt Building: ☐ No ☐ Yes (Provide code on _____)

Climate Zone: ☐ 3A ☐ 4A ☐ _____

Method of Compliance: Energy _____ ☐ Prescriptive
ASAP _____ ☐ Prescriptive
(Provide source here) _____

THERMAL ENVELOPE (Prescriptive)

Roof/ceiling Assembly (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Openings (windows or doors with glazing)
U-Value of assembly: _____
Solar heat gain coefficient: _____
projection factor: _____
Door R-Values: _____

Walls below grade (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors slab on grade

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement: _____
slab heated: _____

2018 APPENDIX B

BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

STRUCTURAL DESIGN

(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_s) _____
Seismic (I_E) _____

Live Loads: Roof _____ psf
Mezzanine _____ psf
Floor _____ psf

Ground Snow Load: _____ psf

Wind Load: Basic Wind Speed _____ (ASCE-7)
Exposure Category _____

SEISMIC DESIGN CATEGORY: ☐ I ☐ II ☐ III ☐ IV

Provide the following Seismic Design Risk Category (Table 1601-ASCE 7) _____ %g

Spectral Response Acceleration Coefficient (S_a) _____ %g

Site Classification (ASCE 7) ☐ B ☐ C ☐ D ☐ E ☐ F

Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data

Basic structural system ☐ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum

Analysis Procedure: ☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic

Architectural, Mechanical, Components anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☐

SOIL BEARING CAPACITIES:

Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity _____ psf
Pile size, type, and capacity _____

PLANS PREPARED FOR:



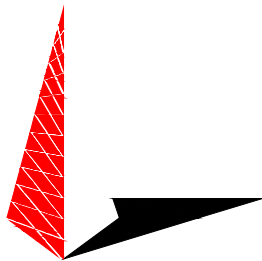
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313

(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



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2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone

winter dry bulb: _____
summer dry bulb: _____

Interior design conditions

winter dry bulb: _____
summer dry bulb: _____
relative humidity: _____

Building heating load:

Building cooling load:

Mechanical Spacing Conditioning System

Unitary
description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____

Boiler

Size category. If oversized, state reason.: _____

Chiller

Size category. If oversized, state reason.: _____

List equipment efficiencies: _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code ☐ Performance
ASHRAE 90.1 ☐ Prescriptive

Lighting schedule (each fixture type)

lamp type required in fixture _____
number of lamps in fixture _____
ballast type used in the fixture _____
number of ballasts _____
total wattage per fixture _____
total interior wattage _____ (whole building or space by space)
total exterior wattage _____ allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

- ☐ C406.2 More Efficient HVAC Equipment Performance
☐ C406.3 Reduced Lighting Power Density
☐ C406.4 Enhanced Digital Lighting Controls
☐ C406.5 On-Site Renewable Energy
☐ C406.6 Dedicated Outdoor Air System
☐ C406.7 Reduced Energy Use in Service Water Heating

PLANS PREPARED FOR:



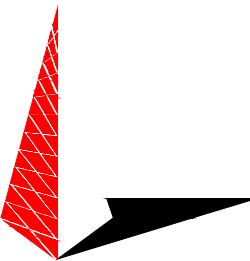
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GENERAL NOTES:

1. ALL REFERENCES MADE TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED TOWERCOM OR ITS DESIGNATED REPRESENTATIVE. ALL REFERENCES MADE TO LESSEE (VZW) IN THESE DOCUMENTS SHALL BE CONSIDERED VERIZON WIRELESS OR ITS DESIGNATED REPRESENTATIVE.
2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING TO HAVE SUFFICIENT EXPERIENCE AND ABILITY, IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF NORTH CAROLINA.
3. WORK SHALL BE COMPLETED IN ACCORDANCE WITH ANSI/TIA 222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES AND THE 2018 NORTH CAROLINA BUILDING CODE.
4. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
5. ALL HARDWARE ASSEMBLY MANUFACTURER’S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
6. IT IS THE CONTRACTOR’S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
7. THE LESSEE SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS PRIOR TO SUBMITTING THE PROPOSAL. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS (LATEST REVISION) SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATION. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LESSEE AND THE LESSEE’S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE LESSEE AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.
8. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE LESSEE (VZW) AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
9. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. SAFETY, CARE OF ADJACENT PROPERTIES, AND COMPLIANCE WITH LOCAL, PROVINCIAL AND FEDERAL REGULATIONS REGARDING SAFETY, SHALL BE THE CONTRACTOR’S RESPONSIBILITY, AND THIS, PER THE INTERNATIONAL CODE – REGULATORS RESPECTING OCCUPATIONAL SAFETY & HEALTH THE SUCCESSFUL CONTRACTOR WILL SUBMIT HIS SAFETY MANUAL AT THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
10. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE LESSEE (VZW)’S PROJECT MANAGER.
11. BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR/LESSEE (VZW). CONTRACTOR/LESSEE (VZW) SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
12. THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN ITS PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOF-ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED OR REPLACED.
13. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PIPES, DITCHES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE LESSEE. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
14. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.
15. ANY BUILDINGS ON THIS SITE ARE INTENDED TO SHELTER EQUIPMENT WHICH WILL ONLY BE PERIODICALLY MAINTAINED, AND ARE NOT INTENDED FOR HUMAN OCCUPANCY.
16. TEMPORARY FACILITIES FOR PROTECTION OF TOOLS AND EQUIPMENT SHALL CONFORM TO LOCAL REGULATIONS AND SHALL BE THE CONTRACTOR’S RESPONSIBILITY.
17. RENTAL CHARGES, SAFETY, PROTECTION AND MAINTENANCE OF RENTED EQUIPMENT SHALL BE THE CONTRACTOR’S RESPONSIBILITY.
18. THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL CARRY LIABILITY INSURANCE IN THE AMOUNTS AND FORM IN ACCORDANCE WITH SPECIFICATIONS. CERTIFICATES DEMONSTRATING PROOF OF COVERAGE SHALL BE PROVIDED TO PRIOR TO THE START OF THE WORK ON THE PROJECT.

19. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY SERVICES TO VERIFY LOCATIONS OF EXISTING UTILITIES AND REQUIREMENTS FOR NEW UTILITY CONNECTIONS PRIOR TO EXCAVATING. CONTRACTOR WILL BE RESPONSIBLE TO ASSIST IN COORDINATING AND OBTAINING PRIMARY POWER TO THE SITE PRIOR TO TOWER ERECTION BEFORE PROJECT COMPLETION. (ON SITE VISITS WITH UTILITY COMPANY REPRESENTATIVES AS NECESSARY, ETC...)
21. THE CONTRACTOR SHALL GUARANTEE THE WORK PERFORMED ON THE PROJECT BY THE CONTRACTOR AND ANY OR ALL OF THE SUBCONTRACTORS WHO PERFORMED WORK FOR THE CONTRACTOR ON THIS PROJECT. THE GUARANTEE SHALL BE FOR A FULL YEAR FOLLOWING ISSUANCE OF THE FINAL PAYMENT OF HOLDBACK.
22. AWARDED CONTRACTOR WILL BE REQUIRED TO SIGN AND RETURN A COPY OF AN AWARD LETTER FOR THE LESSEE (VZW)’S FILE.
23. CONTRACTOR WILL BE REQUIRED TO PROVIDE PROOF OF LICENSE TO PERFORM WORK IN JURISDICTION AT TIME OF BID AWARD.
24. CONTRACTOR WILL PROVIDE A CONSTRUCTION SCHEDULE PRIOR TO CONSTRUCTION STARTING AND WILL PROVIDE UPDATE/CHANGES (WITH EXPLANATIONS) TO THAT SCHEDULE WHEN/IF ITEMS ARE DELAYED OR PUSHED OUT.
25. CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE PROJECT MANAGERS WITH PHOTOS OF THE MAJOR CONSTRUCTION MILESTONES AS THEY OCCUR.
26. CONTRACTOR SHOULD BE PREPARED FOR RANDOM SAFETY INSPECTIONS AT ALL TIMES.
27. CONTRACTOR IS EXPECTED TO MAINTAIN PROPER WORKING CONDITIONS AND PROCEDURES PER LOCAL AND FEDERAL STANDARDS AT ALL TIMES.
28. CONTRACTOR WILL BE REQUIRED TO OBTAIN THE NECESSARY ELECTRICAL PERMITS AND INSPECTIONS AS REQUIRED BY JURISDICTION.
29. CONTRACTOR IS RESPONSIBLE FOR CONCRETE COMPRESSION TESTING.
30. CONTRACTOR IS RESPONSIBLE FOR GROUND MEG TESTING AND PROVIDING PROOF OF RESULT.
31. WHEN REQUESTED, PROVIDE 3 COPIES OF FABRICATION AND ERECTION DRAWINGS PRIOR TO FABRICATION. ALLOW UP TO 1 WEEK FOR REVIEW BY CONSULTANT.
32. IN ADDITION TO CONTRACTOR’S QUALITY CONTROL PROGRAM, INDEPENDENT TESTING AND INSPECTION MAY BE PERFORMED BY LESSEE (VZW) OR LESSEE (VZW)’S REPRESENTATIVE.
33. SUBMIT RED-LINES COPY OF CONSTRUCTION DRAWINGS UPON COMPLETION OF CONSTRUCTION HIGHLIGHTING CHANGES IN THE STAMPED AND SIGNED AS-BUILT CONDITION FROM SHOWN ON THE DRAWINGS.
34. CONTRACTOR WILL BE RESPONSIBLE FOR ALL GRADING AND FILL COMPACTION TESTING REQUIRED AS SET FORTH IN THE GEO TECHNOLOGICAL REPORT PROVIDED BY LESSEE (VZW).

CONCRETE:

1. ALL CONCRETE AND CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE 2018 NORTH CAROLINA BUILDING CODE.
2. THE CONTRACTOR SHALL TAKE SAMPLES OF THE CONCRETE POURED UNDER THE CONDITIONS OUTLINED IN THE 2018 NORTH CAROLINA BUILDING CODE.
3. ANY FAILURE OF A CONCRETE TEST CYLINDER TO MEET THE SPECIFIED STRENGTH REQUIREMENTS MUST BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY. CORRECTIVE ACTION MUST BE APPROVED BY THE ENGINEER AND ALL RELATED COSTS SHALL BE AT THE CONTRACTOR’S EXPENSE.
4. THE MINIMUM 28-DAY COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE A MINIMUM OF 3,000 PSI (21 MPA), EXCEPT AS NOTED OR DIRECTED IN THE SOIL REPORT. THE CONCRETE, WHEN POURED, SHALL CONTAIN 7% AIR ENTRAINMENT WITH AN ALLOWABLE VARIATION OF +2%.
5. CONTRACTOR MUST TAKE SLUMP TEST AT LEAST ONCE FROM EACH TRANSIT MIXER AFTER A MINIMUM OF 5% CONCRETE LOAD HAD BEEN DISCHARGED. SLUMP, UNLESS NOTED OTHERWISE ON THE DRAWINGS, SHALL BE 75 MM (2.95 INCHES).
6. MIXED CONCRETE ON SITE (REMOTE AREAS) WITH THE CORRECT PROPORTION OF CEMENT, SAND, GRAVEL, AND AIR-ENTRAINING AGENT ALREADY ADDED, THE DRY PREMIX IS TO BE MIXED IN A CONCRETE BATCHER IN STRICT ACCORDANCE WITH THE MANUFACTURER’S INSTRUCTIONS.
7. BEFORE POURING CONCRETE, THE TRANSPORTING EQUIPMENT AND FORMS SHALL BE CLEANED AND ALL DEBRIS AND ICE SHALL BE REMOVED FROM PLACES TO BE OCCUPIED BY THE CONCRETE. ANY WATER THAT HAS ACCUMALATED IN THE FORMS SHALL BE REMOVED.
8. ALL CONCRETE SHALL BE VIBRATED AND WORKED AROUND THE REINFORCEMENTS, EMBEDDED FIXTURES AND INTO THE CORNERS OF THE FORMS. ANY EXCESS WATER THAT ACCUMULATES WHILE THE CONCRETE IS BEING POURED SHALL BE REMOVED.

PLANS PREPARED FOR:



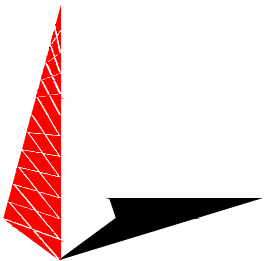
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CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313

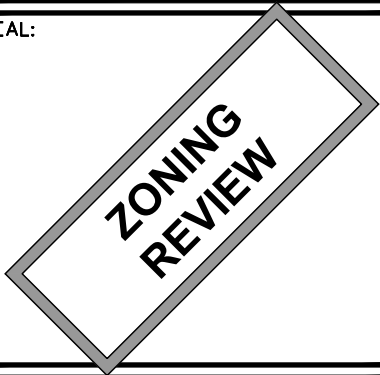
(E911 ADDRESS T.B.D.)
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PLANS PREPARED BY:



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CONCRETE (CONTINUED):

9. THE DESIGN ENGINEER SHALL RECEIVE A MINIMUM OF 24 HOURS NOTICE OF EVERY POUR.
10. THE CONCRETE IN FOUNDATIONS MUST BE POURED IN CONTINOUS POURS BETWEEN CONSTRUCTION JOINTS. NO CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON SITE SPECIFIC DRAWINGS WILL BE PERMITTED. THE CONTRACTOR SHALL PROVIDE EFFICIENT EQUIPMENT TO COMPLETE THE POURING OF EACH SECTION IN ONE CONTINOUS POUR.
11. ALL FRAMEWORK SHALL BE BUILT IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE SHALL BE THOROUGHLY BRACED AND PLUMBED SO THAT THE FINISHED CONCRETE WILL CONFORM TO THE SHAPES, LINES, GRADES, AND DIMENSIONS INDICATED ON THE SITE DRAWINGS.
12. FORMS AND SHORING SHALL NOT BE REMOVED UNTIL THE CONCRETE IS ADEQUATELY SET. THEIR REMOVAL SHALL BE DONE IN SUCH A MANNER AS TO ENSURE THE COMPLETE SAFETY OF THE STRUCTURE.
13. FORMS WHICH SUPPORT THE WEIGHT OF THE CONCRETE, OR OF SUPERIMPOSED LOADS, SHALL NOT BE REMOVED UNTIL THE CONCRETE IS STRONG ENOUGH TO CARRY ITS OWN WEIGHT, AND SUCH SUPERIMPOSED LOADS AS MAY BE PLACED UPON IT.
14. THE CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR AT LEAST 5 DAYS AFTER IT HAS BEEN POURED.
15. ALL SURFACES WHICH ARE NOT PROTECTED BY FORMS OR A SEALED WATERPROOF COATING SHALL BE KEPT MOIST BY CONTINOUS SPRINKLING, OR OTHER MEANS SUCH AS COVERING WITH MOIST SAND, SAWDUST, OR BURLAP.
16. WHERE NECESSARY, THE CONCRETE SHALL BE PROTECTED AGAINST THE WEATHER BY A FRAMED HOUSING, TARPAULINS, OR OTHER SUITABLE COVERING.

REINFORCING STEEL (REBAR):

1. REINFORCING STEEL SHALL MEET CODE AND BE PLACED ACCORDING TO THE, APPLICABLE DRAWINGS. THE MINIMUM THICKNESS OF CONCRETE OVER THE STEEL SHALL BE AT LEAST 3".
2. ALL REINFORCEMENTS THAT ARE REQUIRED FOR A DAYS POUR ON CONCRETE SHALL BE SECURELY FIXED IN PLACE IN SUFFICIENT TIME TO PERMIT INSPECTION BEFORE CONCRETING BEGINS.
3. THE DESIGN ENGINEER SHALL BE GIVEN 24 HOURS NOTICE BEFORE THE CONCRETE IS TO BE POURED. FAILURE TO COMPLY MAY NECESSITATE, BUT NOT BE LIMITED TO, THE REMOVAL OF THE POURED CONCRETE AT THE CONTRACTOR'S EXPENSE.

GROUTING:

1. WHERE GROUT IS INDICATED ON THE DRAWINGS UNDER STRUCTURAL BASE PLATES, THIS SHALL BE A NON-SHRINK, NON-FERROUS TYPE. METHODS OF MIXING AND PLACING MUST BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

COLD WEATHER CONCRETING:

1. THE CONTRACTOR SHALL PROVIDE AND HAVE ON THE SITE READY FOR USE, ADEQUATE EQUIPMENT FOR HEATING CONCRETE MATERIALS AND PROTECTING FRESH CONCRETE DURING FREEZING OR NEAR FREEZING WEATHER CONDITIONS, ACCORDING TO THE NORTH CAROLINA UNIFORM STATEWIDE BUILDING CODE.
2. ALL CONCRETE MATERIALS, REBAR, FORMS, FILLERS, AND THE EARTH WITH WHICH THE CONCRETE IS TO COME INTO CONTACT WITH, SHALL BE FREE FROM FROST AND ICE.
3. WHENEVER THE SURROUNDING TEMPERATURE IS BELOW 39°F, ALL CONCRETE POURED IN THE FORMS SHALL HAVE A TEMPERATURE OF 68°F FOR 4 DAYS.
4. THE HOUSING, COVERING, OR OTHER PROTECTION USED FOR THE CURING SHALL REMAIN IN PLACE AND INTACT FOR AT LEAST 24 HOURS AFTER THE ARTIFICIAL HEATING IS DISCONTINUED.
5. SALT, CALCIUM CHLORIDE, OR OTHER CHEMICALS SHALL NOT BE USED IN THE CONCRETE MIX TO PREVENT THE WATER CONTENT FROM FREEZING.

UTILITIES:

1. CONTRACTOR SHALL CONTACT A SUBSURFACE UTILITY LOCATOR FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. LOCATION OF EXISTING SEWER, WATER LINES, GAS LINES, CONDUITS OR OTHER STRUCTURES ACROSS, UNDERNEATH, OR OTHERWISE ALONG THE LINE OF PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS, AND IF SHOWN ARE ONLY APPROXIMATELY CORRECT. CONTRACTOR ASSUMES SOLE RESPONSIBILITY FOR VERIFYING LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES (INCLUDING TEST PITS BY HAND IF NECESSARY) IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION OF ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLANS, OR IF THERE APPEARS TO BE A CONFLICT.
2. CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS WITH APPROPRIATE UTILITY LESSEES AND CONSTRUCTION MANAGER.
3. DAMAGE BY THE CONTRACTOR TO UTILITIES OR PROPERTY OF OTHERS, INCLUDING EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE LESSEE (VZW). FOR GRASSES AREAS, SEED AND MULCH SHALL BE ACCEPTABLE.
4. THE CONTRACTOR SHALL COORDINATE WITH THE LESSEE (VZW) THE REQUIREMENTS FOR AND LIMITS OF OVERHEAD AND/OR UNDERGROUND ELECTRICAL SERVICE.
5. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF NEW UNDERGROUND TELEPHONE SERVICE WITH THE TELEPHONE UTILITY AND THE LESSEE (VZW)'S REQUIREMENTS.
6. ALL UNDERGROUND UTILITIES SHALL BE INSTALLED AND TESTED SATISFACTORY PRIOR TO COMMENCING ANY PAVING OPERATIONS WHERE SUCH UTILITIES ARE WITHIN THE LIMITS OF PAVEMENT.

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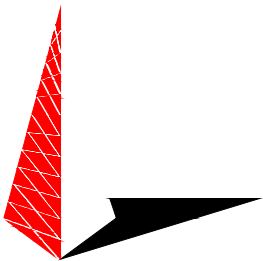
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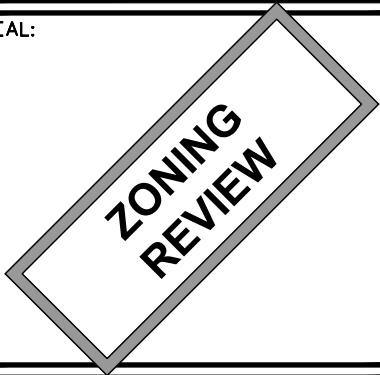
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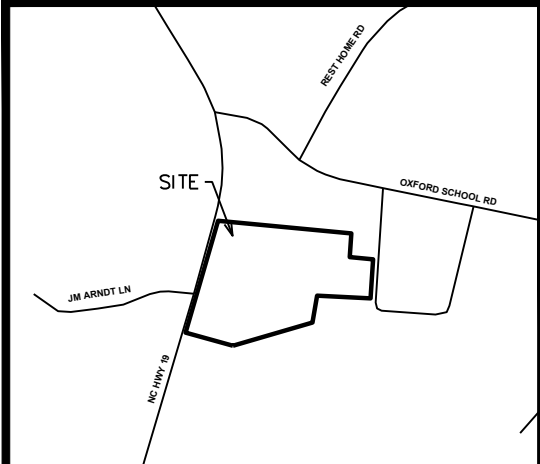
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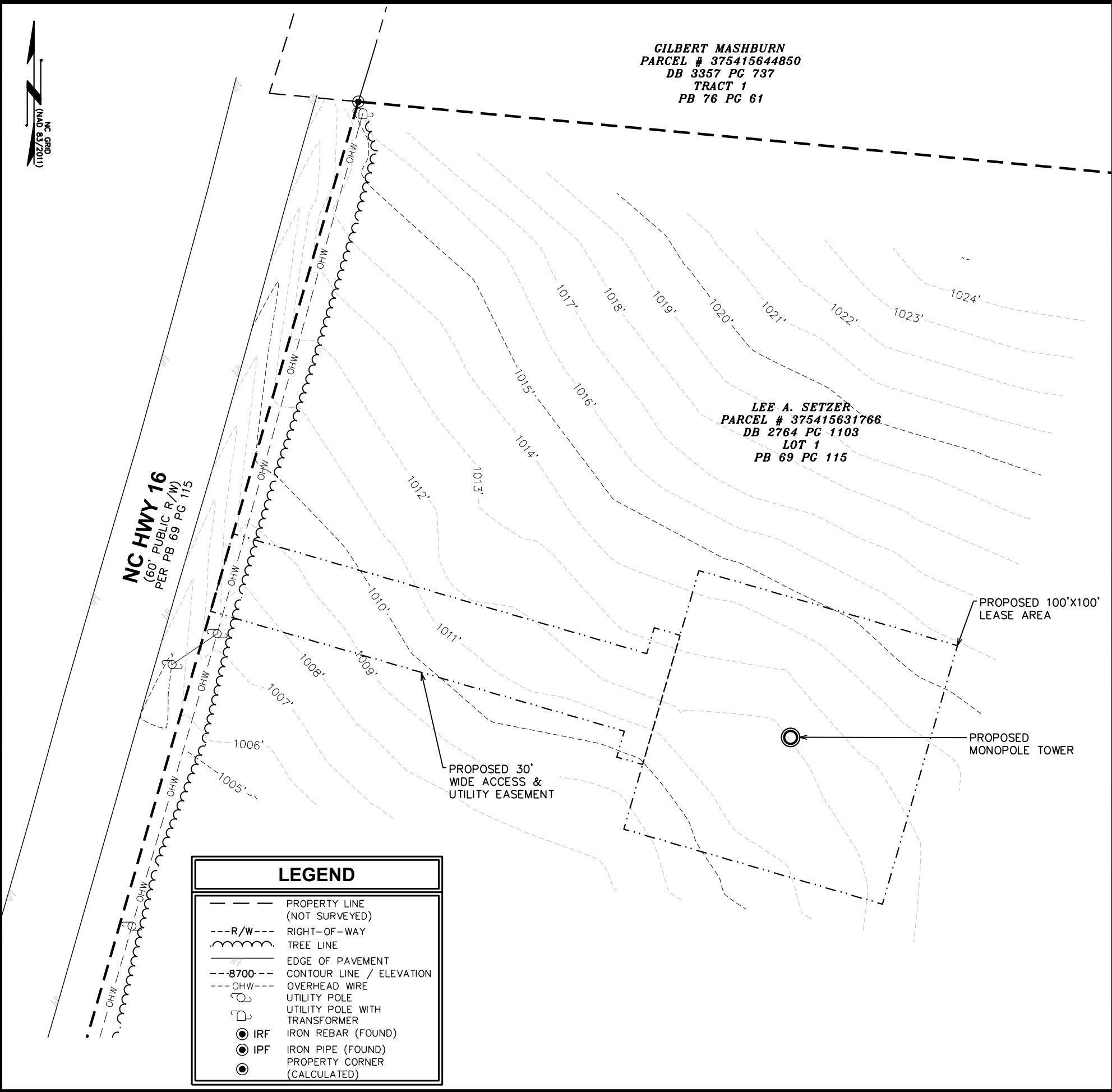


VICINITY MAP n.t.s.

- NOTES:
1. BASIS OF THE BEARINGS AND COORDINATES IS THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, REFERENCED TO THE NATIONAL SPATIAL REFERENCE SYSTEM (NSRS), NORTH AMERICAN DATUM (NAD 83/2011) BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON OCTOBER 3, 2023; TIED TO THE NORTH CAROLINA GNSS CORS AND RTK NETWORK; AND EXPRESSED IN US SURVEY FEET. ALL DISTANCES ARE NC GRID DISTANCES.
 2. THIS SURVEY IS FOR THE PRELIMINARY PLAT OF PROPOSED TELECOMMUNICATION LEASE AREA AND EASEMENTS ONLY, TO BE SURVEYED UPON FINAL CONSTRUCTION. THIS SURVEY SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE FEE SIMPLE TRANSFERAL OF THE PARENT PARCEL NOR ANY PORTION OR PORTIONS THEREOF. BOUNDARY INFORMATION SHOWN HEREON HAS BEEN COMPILED FROM TAX MAPS AND DEED DESCRIPTIONS ONLY. NO BOUNDARY SURVEY OF THE PARENT PARCEL WAS PERFORMED, EXCEPT AS PORTIONS SHOWN HEREON.
 3. AREA COMPUTED BY COORDINATE GEOMETRY
 4. DEED REFERENCE: DEED BOOK 2764, PAGE 1163
 5. PLAT REFERENCE: PLAT BOOK 69 PAGE 115
 6. PIN # : 375415631766
 7. THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT, WHICH MAY REVEAL ADDITIONAL CONVEYANCES, EASEMENTS, RIGHTS-OF-WAY, ABANDONMENTS, OR RESTRICTIONS NOT SHOWN AND IS NOT AN ALTA/NSPS LAND TITLE SURVEY.
 8. NO UNDERGROUND UTILITIES OBSERVED AT TIME OF SURVEY.
 9. ALL PROPERTY OWNERSHIPS WERE TAKEN FROM CURRENT COUNTY TAX MAP RECORDS AND/OR RECORDED PLATS ONLY
 10. BY GRAPHIC DETERMINATION THE SUBJECT PROPERTY LIES IN FLOOD ZONE "X", AREA DETERMINED TO BE OUTSIDE 0.2% CHANCE OF ANNUAL FLOOD BASED UPON FEMA COMMUNITY PANEL# 3710375400J, EFFECTIVE SEPTEMBER 05, 2007.
 11. LESSEE INFORMATION:
TOWER CO.
5000 VALLEYSTONE DRIVE
CARY, NC 27519
 12. PROPERTY OWNER INFORMATION:
LEE A. SETZER
5156 N. NC HWY 16
CONOVER, NC 28613

REV	DATE	ISSUED FOR	INITIALS
0	10/06/2023	PRELIMINARY	JCS
1	10/19/2023	PROPOSED SITE	DDS

THIS MAP MAY NOT BE A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS AND HAS NOT BEEN REVIEWED FOR COMPLIANCE WITH RECORDING REQUIREMENTS FOR PLATS (G.S. 47-30(n))



TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
(919) 661-6351
COA # P-1403

SHEET #: 1 OF 3 TEP #: 333496

PRELIMINARY SURVEY

I, Alan H. Allbert, certify that this plat was drawn under my supervision from an actual survey performed under my supervision (deed description recorded in Book 2764, page 1103, etc.) (other); that the boundaries not surveyed are clearly indicated as drawn from information found in Plat Book 69, page 115; that the ratio of precision as calculated is 0.04; that the Global Positioning System (GPS) survey and the following information was used to perform the GPS (GNSS if dual constellations are used) survey:
Class of survey: Class B
Positional accuracy: 0.04 (h), 0.05 (v)
95% Confidence Level
Type of GPS field procedure: Network Real-Time Kinematic
Dates of survey: October 03, 2023
Datum/Epoch: Horizontal Datum is NAD 83/2011
Vertical Datum is NAVD88
Published/Fixed-control use: CORS
Geoid model: GEOID18
Combined grid factor(s): 0.9998696
Units: U.S. Survey Foot
That this map meets the requirements of the standards of practice for land surveying in North Carolina (21 NCAC 56.1600).
Witness my original signature and seal this the 19th day of October, 2023.

NORTH CAROLINA
PROFESSIONAL
SEAL
L-3738
LAND SURVEYOR
ALAN H. ALLBERT

DocuSigned by:

B572AD03BBF4BC...
ALAN H. ALLBERT
NORTH CAROLINA PLS # L-3738

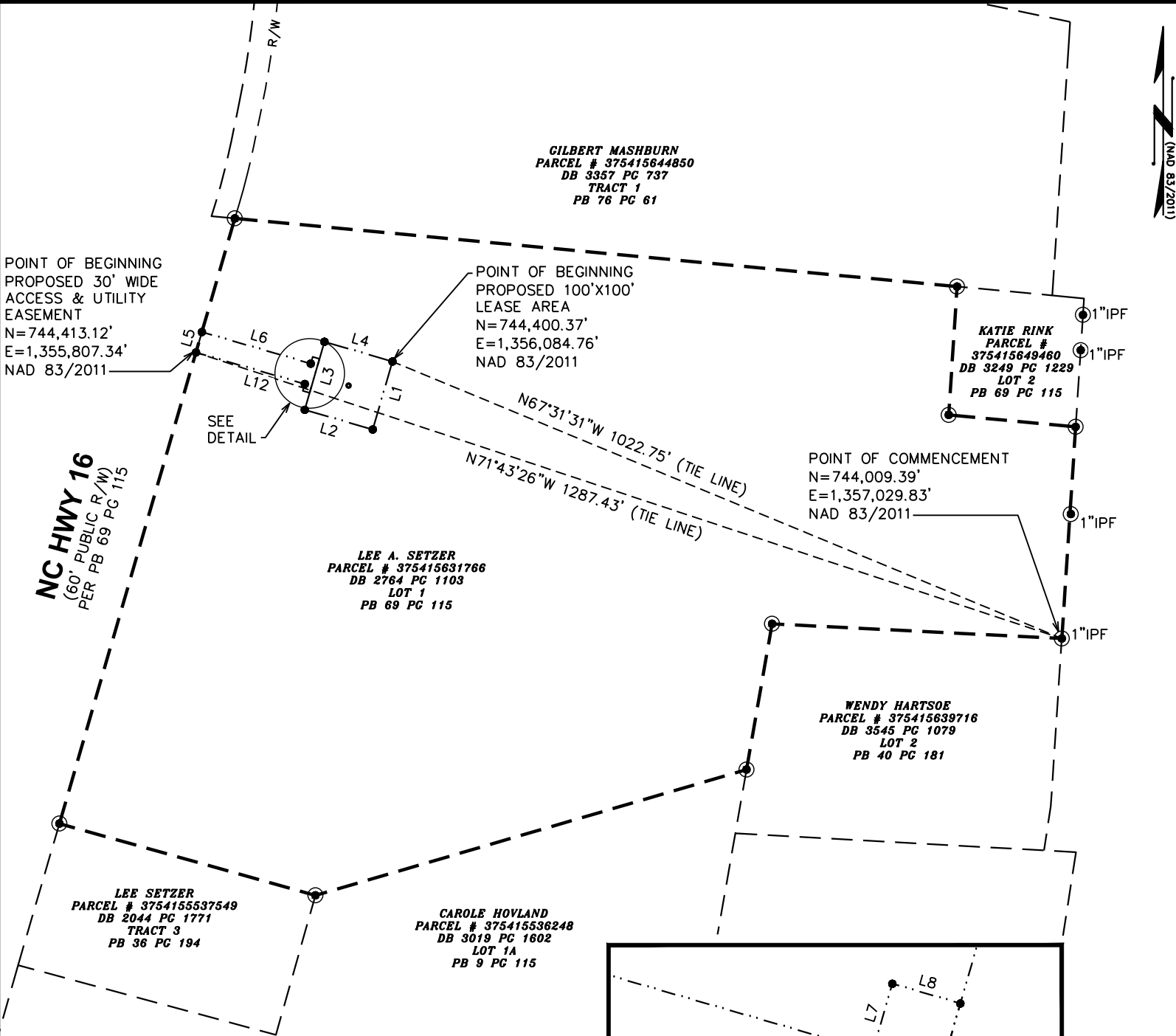
PROJECT INFORMATION:
**NC0313
CLAUDETTE**
5198 N. NC HWY 16
CLAREMONT, NC 28610
CLINES TOWNSHIP
CATAWBA COUNTY

PRELIMINARY PLAT OF PROPOSED
TELECOMMUNICATIONS SITE SURVEY
PREPARED FOR:

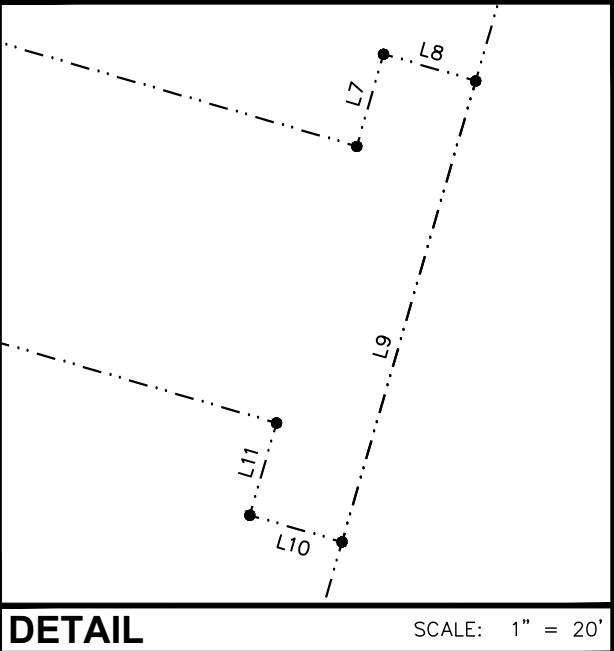
5000 VALLEYSTONE DRIVE
CARY, NC 27519
(919) 653-5700
FIELD WORK PERFORMED ON: 10/03/23

0' 40' 80'

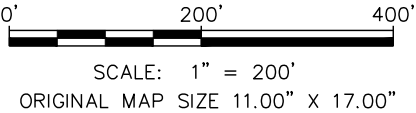
SCALE: 1" = 40'
ORIGINAL MAP SIZE 11.00" X 17.00"



LINE TABLE			LINE TABLE		
LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	S16°10'08"W	100.00'	L7	N16°10'08"E	10.00'
L2	N73°49'52"W	100.00'	L8	S73°49'52"E	10.00'
L3	S16°10'08"W	100.00'	L9	S16°10'08"W	50.00'
L4	S73°49'52"E	100.00'	L10	N73°49'52"W	10.00'
L5	N16°10'08"E	30.00'	L11	N16°10'08"E	10.00'
L6	S73°49'52"E	160.00'	L12	N73°49'52"W	160.00'



LEGEND	
— — —	PROPERTY LINE (NOT SURVEYED)
---R/W---	RIGHT-OF-WAY
● IPF	IRON PIPE (FOUND)
●	PROPERTY CORNER (CALCULATED)
●	LEASE/EASEMENT CORNER (CALCULATED)



LEGAL DESCRIPTION OF PROPOSED 100' X 100' LEASE AREA

ALL THAT CERTAIN LEASE AREA, SITUATED, LYING AND BEING IN CLINES TOWNSHIP, CATAWBA COUNTY, NORTH CAROLINA, BEING A PORTION OF THE LANDS DESCRIBED IN DEED BOOK 2764 AT PAGE 1103 OF THE CATAWBA COUNTY REGISTER OF DEEDS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT AN EXISTING IRON PIPE, SAID IRON BEING A SOUTHEASTERLY CORNER OF THE PARCEL DESCRIBED IN SAID DEED BOOK 2764, PAGE 1103, HAVING NORTH CAROLINA STATE PLANE COORDINATES OF NORTHING = 744,009.39', AND EASTING = 1,357,029.83'; THENCE, FROM THE POINT OF COMMENCEMENT, NORTH 67°31'31" WEST A DISTANCE OF 1,022.75 FEET TO A POINT ON THE NORTHEAST CORNER OF THE HEREIN DESCRIBED 100' X 100' LEASE AREA, SAID POINT BEING THE TRUE POINT OF BEGINNING, HAVING NORTH CAROLINA STATE PLANE COORDINATES OF NORTHING = 744,400.37', AND EASTING = 1,356,084.76'; THENCE, FROM THE POINT OF BEGINNING, SOUTH 16°10'08" WEST A DISTANCE OF 100.00 FEET TO A POINT; THENCE NORTH 73°49'52" WEST A DISTANCE OF 100.00 FEET TO A POINT; THENCE NORTH 16°10'08" EAST A DISTANCE OF 100.00 FEET TO A POINT; THENCE SOUTH 73°49'52" EAST A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING.

SAID LEASE AREA CONTAINING 10,000 SQUARE FEET OR 0.23 ACRES MORE OR LESS.

LEGAL DESCRIPTION OF PROPOSED 30' ACCESS & UTILITY EASEMENT

ALL THAT CERTAIN EASEMENT AREA, SITUATED, LYING AND BEING IN CLINES TOWNSHIP, CATAWBA COUNTY, NORTH CAROLINA, BEING A PORTION OF THE LANDS DESCRIBED IN DEED BOOK 2764 AT PAGE 1103 OF THE CATAWBA COUNTY REGISTER OF DEEDS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT AN EXISTING IRON PIPE, SAID IRON BEING A SOUTHEASTERLY CORNER OF THE PARCEL DESCRIBED IN SAID DEED BOOK 2764, PAGE 1103, HAVING NORTH CAROLINA STATE PLANE COORDINATES OF NORTHING = 744,009.39', AND EASTING = 1,357,029.83'; THENCE, FROM THE POINT OF COMMENCEMENT, NORTH 71°43'26" WEST A DISTANCE OF 1,287.43 FEET TO A POINT ON THE EASTERLY RIGHT OF WAY NC HIGHWAY 16, SAID POINT BEING THE TRUE POINT OF BEGINNING HAVING NORTH CAROLINA STATE PLANE COORDINATES OF: NORTHING = 744,413.12'; AND EASTING = 1,355,807.34'; THENCE, FROM THE POINT OF BEGINNING AND WITH SAID EASTERLY RIGHT OF WAY, NORTH 16°10'08" EAST A DISTANCE OF 30.00 FEET TO A POINT; THENCE, LEAVING SAID RIGHT OF WAY, SOUTH 73°49'52" EAST A DISTANCE OF 160.00 FEET TO A POINT; THENCE NORTH 16°10'08" EAST A DISTANCE OF 10.00 FEET TO A POINT; THENCE SOUTH 73°49'52" EAST A DISTANCE OF 10.00 FEET TO A POINT; THENCE SOUTH 16°10'08" WEST A DISTANCE OF 50.00 FEET TO A POINT; THENCE NORTH 73°49'52" WEST A DISTANCE OF 10.00 FEET TO A POINT; THENCE NORTH 16°10'08" EAST A DISTANCE OF 10.00 FEET TO A POINT; THENCE NORTH 73°49'52" WEST A DISTANCE OF 160.00 FEET TO THE POINT OF BEGINNING.

SAID EASEMENT AREA CONTAINING 5,300.00 SQUARE FEET OR 0.12 ACRES MORE OR LESS.

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
(919) 661-6351
COA # P-1403

SHEET #: 2 OF 3 TEP #: 333496

I, Alan H. Allbert, certify that this plat was drawn under my supervision from an actual survey performed under my supervision (deed description recorded in Book 2764, page 1103, etc.) (other); that the boundaries not surveyed are clearly indicated as drawn from information found in Plat Book 69, page 115; that the ratio of precision as calculated is 0.04; that the Global Positioning System (GPS) survey and the following information was used to perform the GPS (GNSS if dual constellations are used) survey:

Class of survey: Class B
Positional accuracy: 0.04 (h), 0.05 (v)
95% Confidence Level
Type of GPS field procedure: Network Real-Time Kinematic
Dates of survey: October 03, 2023
Datum/Epoch: Horizontal Datum is NAD 83/2011
Vertical Datum is NAVD88
Published/Fixed-control use: CORS
Geoid model: GEOID18
Combined grid factor(s): 0.9998696
Units: U.S. Survey Foot
That this map meets the requirements of the standards of practice for land surveying in North Carolina (21 NCAC 56.1600).
Witness my original signature and seal this the 19th day of October, 2023.



DocuSigned by:
ALAN H. ALLBERT
B572AD03BBF4BC...
ALAN H. ALLBERT
NORTH CAROLINA PLS # L-3738

PROJECT INFORMATION:
NC0313
CLAUDETTE
5198 N. NC HWY 16
CLAREMONT, NC 28610
CLINES TOWNSHIP
CATAWBA COUNTY

PRELIMINARY PLAT OF PROPOSED
TELECOMMUNICATIONS SITE SURVEY
PREPARED FOR:



5000 VALLEYSTONE DRIVE
CARY, NC 27519
(919) 653-5700

FIELD WORK PERFORMED ON: 10/03/23

REV	DATE	ISSUED FOR	INITIALS
0	10/06/2023	PRELIMINARY	JCS
1	10/19/2023	PROPOSED SITE	DDS

SCHEDULE B - SECTION II EXCEPTIONS

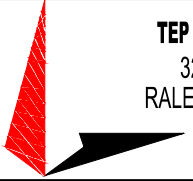
U.S. TITLE SOLUTIONS
COMMITMENT FOR TITLE INSURANCE
COMMITMENT NO: UST76020
COMMITMENT EFFECTIVE DATE: AUGUST 24, 2023
SCHEDULE B – SECTION II

1. MORTGAGES, DEEDS OF TRUST AND UCCS
NONE FOUND WITHIN PERIOD SEARCHED.
2. JUDGMENTS AND LIENS
NONE FOUND WITHIN PERIOD SEARCHED.
3. COVENANTS AND RESTRICTIONS
NONE FOUND WITHIN PERIOD SEARCHED.
4. EASEMENTS AND RIGHTS OF WAY
- 4.1 EASEMENT BY H. M. ARNDT AND WIFE, GRACE Y. ARNDT TO DUKE POWER COMPANY, DATED JULY 18, 1962, RECORDED JULY 27, 1962, IN BOOK 721, PAGE 19.
NOTES: UTILITY EASEMENT (AFFECT PARENT PARCEL. CANNOT DETERMINE LOCATION.)
5. OTHER RECORDED DOCUMENTS
- 5.1 A FAMILY SUBDIVISION FOR: LEE A. SETZER RECORDED FEBRUARY 25, 2010, IN BOOK 69, PAGE 115.
(AFFECT PARENT PARCEL.)
- 5.2 A MINOR SUBDIVISION FOR: JACK M. ARNDT RECORDED JULY 06, 2006, IN BOOK 64, PAGE 15.
(AFFECT PARENT PARCEL.)
- 5.3 MINOR SUBDIVISION HARRY M ARNDT EST RECORDED NOVEMBER 13, 1997, IN BOOK 43, PAGE 165.
(AFFECT PARENT PARCEL.)
- 5.4 MINOR SUBDIVISION HARRY M. ARNDT RECORDED JANUARY 06, 1995, IN BOOK 36, PAGE 194. (AFFECT PARENT PARCEL.)

TITLE LEGAL DESCRIPTION (AS FURNISHED)

SITUATED IN CLINES TOWNSHIP, CATAWBA COUNTY, NORTH CAROLINA, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEING ALL OF LOT 1 OF A PLAT ENTITLED "A FAMILY SUBDIVISION FOR LEE A. SETZER," DATED OCTOBER 29, 2009 PREPARED BY J. MIKE HONEYCUTT, LAND SURVEYING, N.C.P.L.S., L–1360, RECORDED IN PLAT BOOK 69 AT PAGE 115, CATAWBA COUNTY REGISTRY.



TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
(919) 661-6351
COA # P-1403

SHEET #: 3 OF 3 TEP #: 333496

I, Alan H. Allbert, certify that this plat was drawn under my supervision from an actual survey performed under my supervision (deed description recorded in Book 2764, page 1103, etc.) (other); that the boundaries not surveyed are clearly indicated as drawn from information found in Plat Book 69, page 115; that the ratio of precision as calculated is 0.04; that the Global Positioning System (GPS) survey and the following information was used to perform the GPS (GNSS if dual constellations are used) survey:
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Positional accuracy: 0.04 (h), 0.05 (v)
95% Confidence Level
Type of GPS field procedure: Network Real-Time Kinematic
Dates of survey: October 03, 2023
Datum/Epoch: Horizontal Datum is NAD 83/2011
Vertical Datum is NAVD88
Published/Fixed-control use: CORS
Geoid model: GEOID18
Combined grid factor(s): 0.9998696
Units: U.S. Survey Foot
That this map meets the requirements of the standards of practice for land surveying in North Carolina (21 NCAC 56.1600).
Witness my original signature and seal this the 19th day of October, 2023.



DocuSigned by:

ALAN H. ALLBERT

B572AD03BBBF4BC...

ALAN H. ALLBERT
NORTH CAROLINA PLS # L-3738

PROJECT INFORMATION:

NC0313
CLAUDETTE
5198 N. NC HWY 16
CLAREMONT, NC 28610
CLINES TOWNSHIP
CATAWBA COUNTY

PRELIMINARY PLAT OF PROPOSED
TELECOMMUNICATIONS SITE SURVEY
PREPARED FOR:



5000 VALLEYSTONE DRIVE
CARY, NC 27519
(919) 653–5700

FIELD WORK PERFORMED ON: 10/03/23

REV	DATE	ISSUED FOR	INITIALS
0	10/06/2023	PRELIMINARY	JCS
1	10/19/2023	PROPOSED SITE	DDS

N.T.S.

ORIGINAL MAP SIZE 11.00” X 17.00”

NOTES:

1.

BASIS OF THE BEARINGS AND COORDINATES IS THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM (NAD 83/2011) BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON OCTOBER 3, 2023; TIED TO THE NATIONAL SPATIAL REFERENCE SYSTEM VIA CORS STATIONS; AND EXPRESSED IN US SURVEY FEET. ALL DISTANCES ARE NC GRID DISTANCES.
2.

VERTICAL INFORMATION SHOWN, BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) IN FEET.
3.

ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.
4.

THE TOWER IS LOCATED IN ZONE "X". AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #3710375400J, DATED 09/05/2007.
5.

PROPOSED TREE CLEARING SHALL ONLY BE PERMITTED OUTSIDE OF THE SUMMER ROOTING PERIOD FOR PROTECTED BAT SPECIES. CONTRACTOR TO ENSURE THAT ANY/ALL CLEARING REQUIRED ON SITE SHALL NOT BE COMPLETED BETWEEN APRIL 1 THROUGH SEPTEMBER 30. PLEASE CONTACT TEP FOR FURTHER GUIDANCE.
6.

EXISTING VEGETATION TO BE USED IN LIEU OF REQUIRED LANDSCAPING PER ARTICLE 5, DIVISION 4, SEC. 44-523, SECTION B.2 OF THE CATAWBA COUNTY ORDINANCE.
7.

PROPOSED TOWER SHALL BE SET BACK THE TOWER HEIGHT PLUS 20' FROM ANY ADJOINING PROPERTIES PER CATAWBA COUNTY ORDINANCE.
8.

APPROXIMATE DISTANCE FROM EXISTING BUILDING LOCATED TO THE SOUTH TO PROPOSED TOWER LOCATION = 680'±.
9.

CONTRACTOR TO ENSURE ALL PROPOSED UTILITIES ARE TO BE ROUTED UNDERGROUND.

LEGEND

EXIST. PROPERTY LINE

ADJ. PROPERTY LINE

EXIST. UTILITY POLE

EXIST. LIGHT POLE

EXIST. HYDRANT

EXIST. TELCO PEDESTAL

PROPERTY CORNER

LEASE/EASE. CORNER

EXIST. CONTOUR LINE

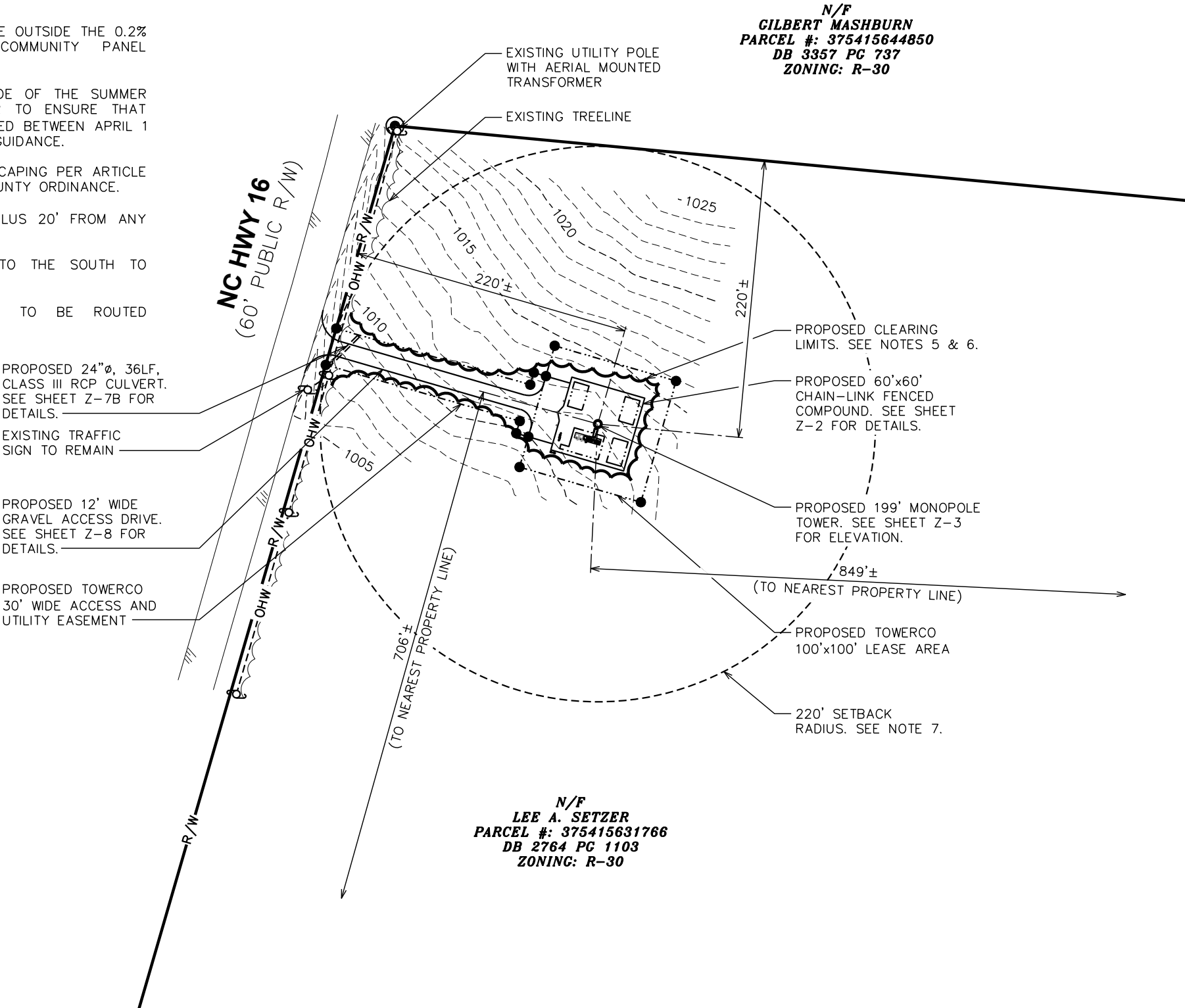
EDGE OF PAVEMENT

OVERHEAD WIRE

RIGHT-OF-WAY

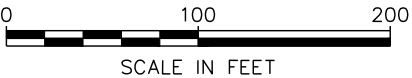
CHAIN LINK FENCE

EXISTING TREE LINE



SITE PLAN

SCALE: 1" = 100'



PLANS PREPARED FOR:



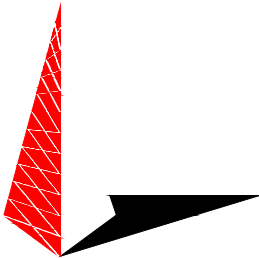
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313

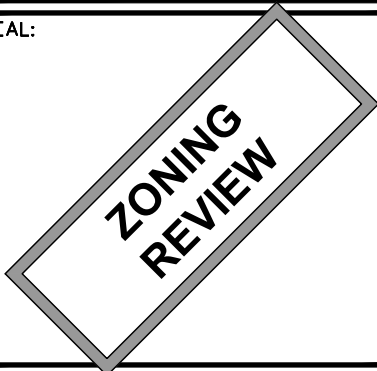
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



3	01-11-24	ZONING
2	01-05-24	ZONING
1	10-20-23	ZONING
0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

Z-1

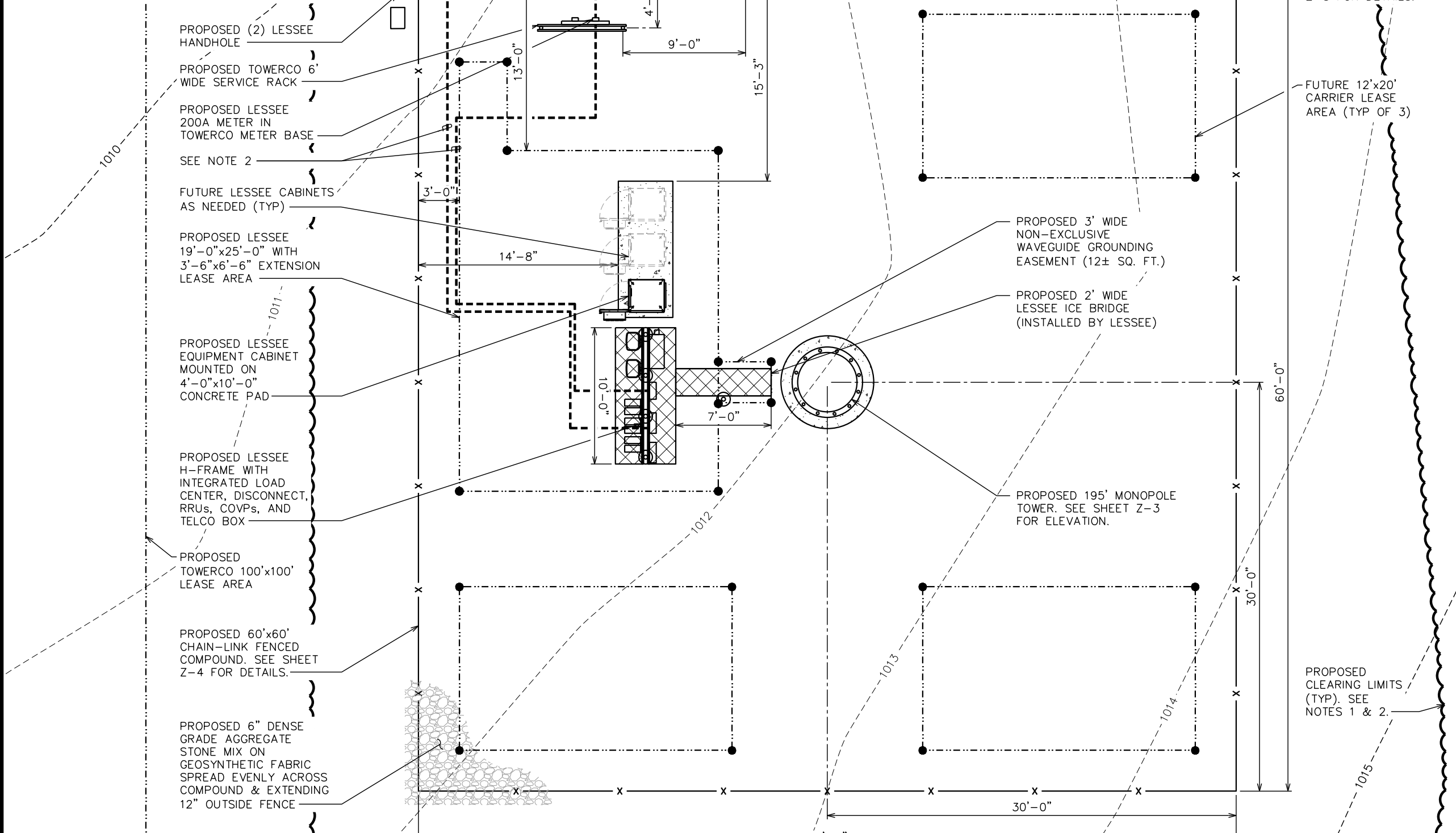
REVISION:

3

TEP #: 333496

NOTES:

1. PROPOSED TREE CLEARING SHALL ONLY BE PERMITTED OUTSIDE OF THE SUMMER ROOSTING PERIOD FOR PROTECTED BAT SPECIES. CONTRACTOR TO ENSURE THAT ANY/ALL CLEARING REQUIRED ON SITE SHALL NOT BE COMPLETED BETWEEN APRIL 1 THROUGH SEPTEMBER 30. PLEASE CONTACT TEP FOR FURTHER GUIDANCE.
2. EXISTING VEGETATION TO BE USED IN LIEU OF REQUIRED LANDSCAPING PER ARTICLE 5, DIVISION 4, SEC. 44-523, SECTION B.2 OF THE CATAWBA COUNTY ORDINANCE.
3. CONTRACTOR TO ENSURE ALL PROPOSED UTILITIES ARE TO BE ROUTED UNDERGROUND.



COMPOUND DETAIL

SCALE: 1/8" = 1'-0"

PLANS PREPARED FOR:

TowerCo

5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:

ZONING REVIEW

3	01-11-24	ZONING
2	01-05-24	ZONING
1	10-20-23	ZONING
0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

COMPOUND DETAIL

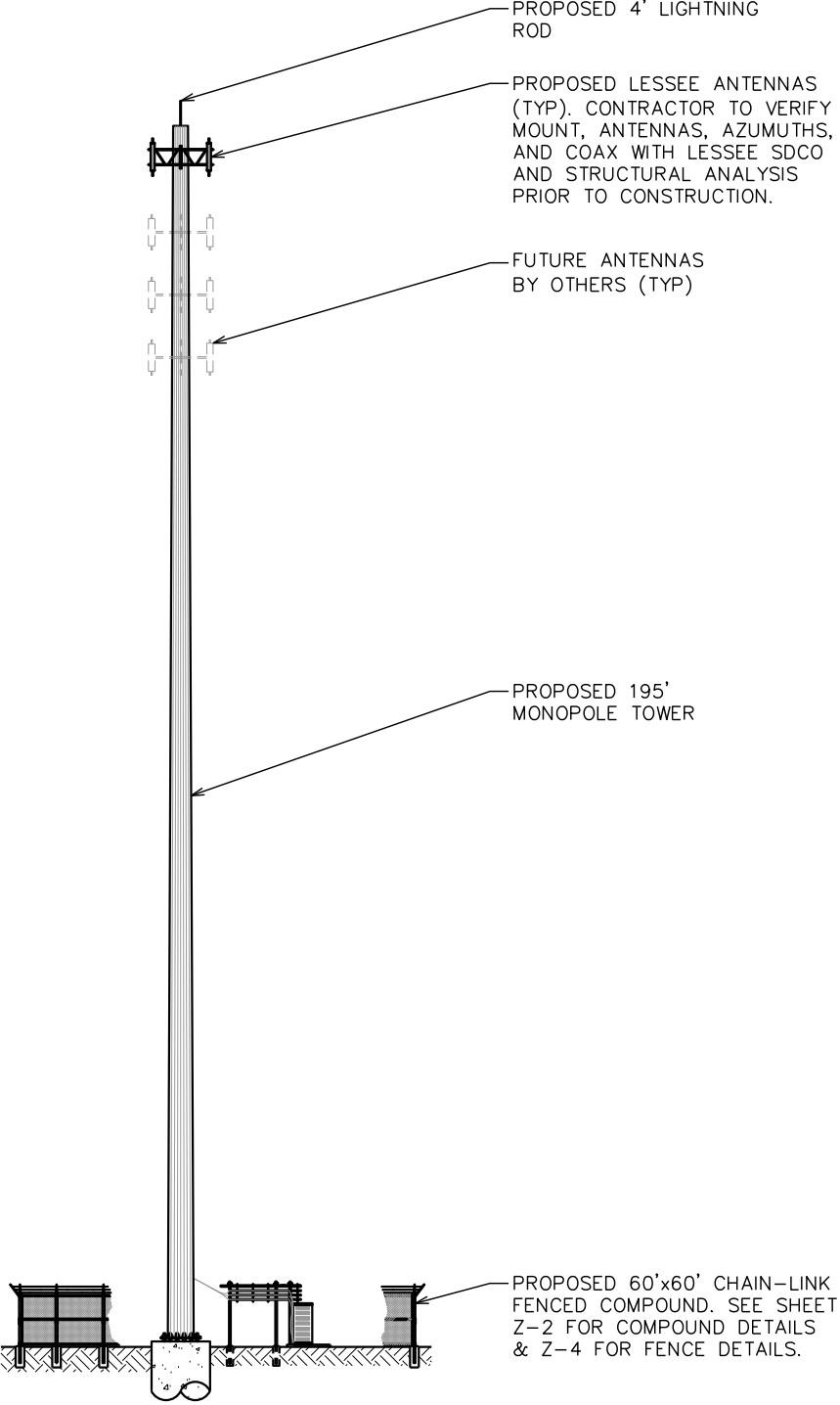
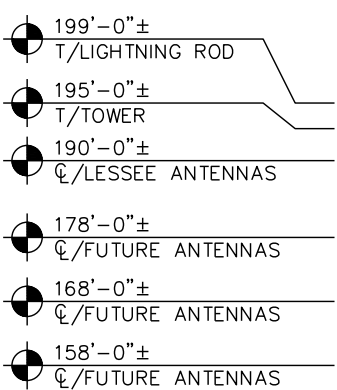
SHEET NUMBER: **Z-2**

REVISION: **3**

TEP #: 333496

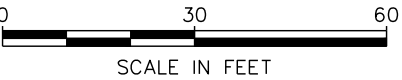
NOTES:

1. TOWER ELEVATION SHOWN FOR REFERENCE ONLY. VERIFY ACTUAL TOWER DESIGN & LOADING WITH TOWER DRAWINGS FROM MANUFACTURER AND/OR PASSING STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION.
2. PROPOSED COAX TO BE ROUTED INSIDE TOWER PER PASSING STRUCTURAL ANALYSIS.
3. LIGHTNING ROD AND CLIMBING LADDER TO BE PROVIDED BY TOWER MANUFACTURER.
4. TOWER SHALL BE CONSTRUCTED OF GALVANIZED STEEL OR PAINTED PER APPLICABLE STANDARDS OF THE FAA OR OTHER APPLICABLE FEDERAL OR STATE AGENCY.



TOWER ELEVATION

SCALE: 1" = 30'



PLANS PREPARED FOR:



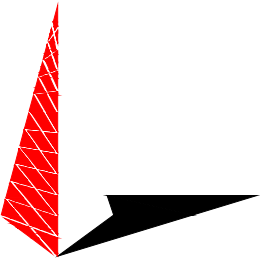
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313

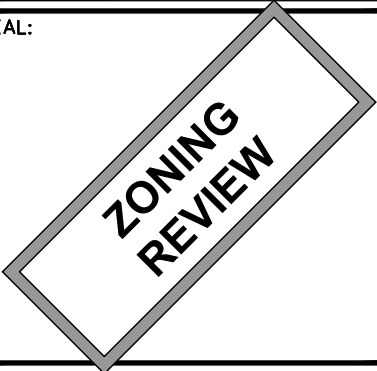
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



3	01-11-24	ZONING
2	01-05-24	ZONING
1	10-20-23	ZONING
0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

TOWER
ELEVATION

SHEET NUMBER:

Z-3

REVISION:

3

TEP #: 333496

GENERAL NOTES:

- 1. THE ANTENNA ORIENTATION PLAN IS A SCHEMATIC. THE CONTRACTOR SHALL VERIFY TOWER ORIENTATION AND FIELD COORDINATE REQUIRED ADJUSTMENTS TO ACHIEVE THE DESIRED ANTENNA AZIMUTHS.
- 2. ANTENNA CENTERLINE HEIGHT BASED ON TOP OF FINISHED GRADE.
- 3. ALL ANTENNAS, CABLES AND MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH THE STRUCTURAL ENGINEER'S RECOMMENDATIONS IN A MANNER CONSISTENT WITH THE STRUCTURAL ANALYSIS REPORT.
- 4. ALL INFORMATION THIS SHEET TO BE CONFIRMED WITH VERIZON RF DESIGN PRIOR TO INSTALLATION.
- 5. TEP DID NOT PERFORM A STRUCTURAL ANALYSIS ON THE MOUNT OR THE TOWER. IT IS THE CARRIER'S RESPONSIBILITY TO ENSURE MOUNT AND TOWER CAN SUPPORT PROPOSED LOADS.

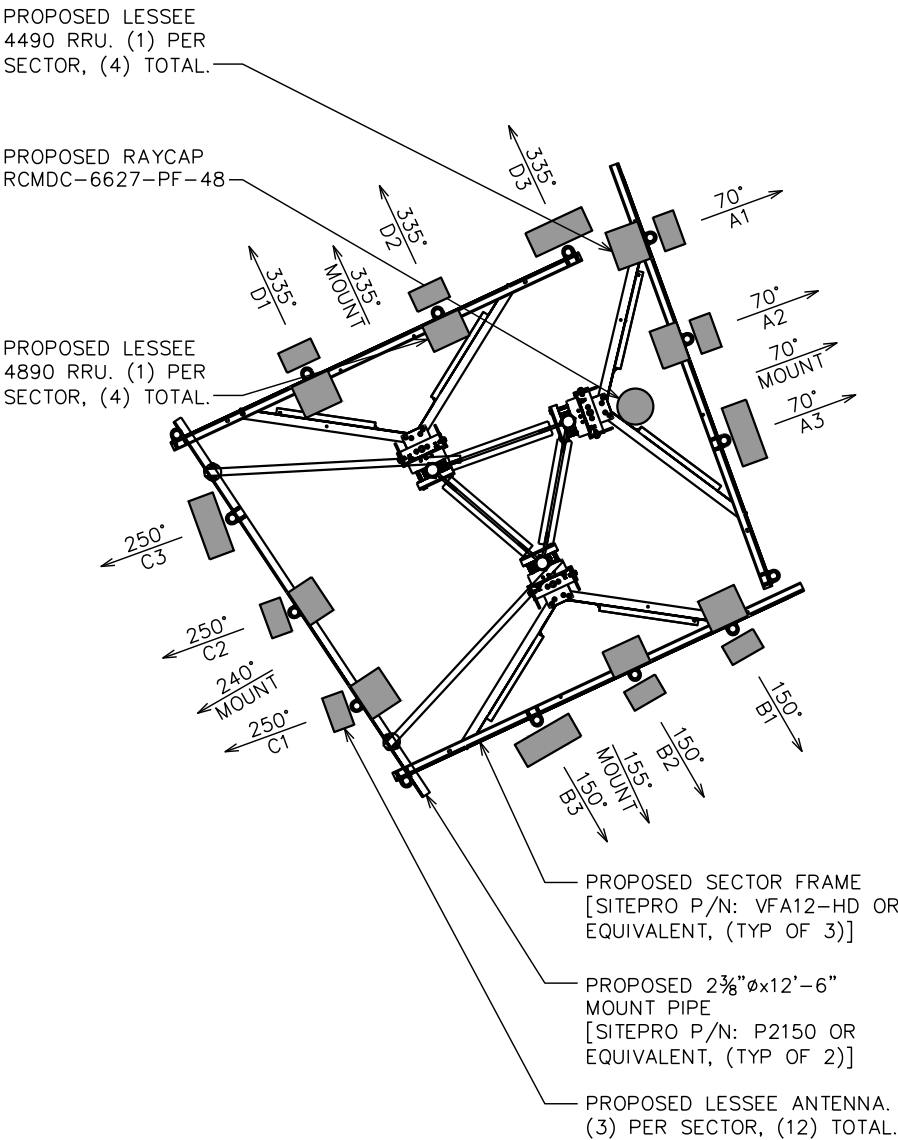
PROPOSED ANTENNA/CABLE SCHEDULE

ANTENNA POSITION	AZIMUTH IN DEGREES	MECH. DOWN TILT	ELEC. DOWN TILT	LICENSED FREQUENCY/ TECH	ANTENNA (QTY) MAKE/MODEL	EQUIPMENT	COMPOSITION CABLES			TOTAL HYBRID
							LENGTH	QTY	COAX SIZE	
A1	70°	0°	2°	700, 850	COMMSCOPE NHH-65C-R2B	(1) 4490 RRU	330'±	-	-	
	70°	0°	2°	1900, AWS						
A2	70°	0°	2°	700, 850	COMMSCOPE NHH-65C-R2B	(1) 4890 RRU	330'±	-	-	
	70°	0°	2°	1900, AWS			330'±	-	-	
A3	70°	0°	6°	L-SUB6	ERICSSON AIR6419	-	330'±	-	-	
B1	150°	0°	2°	700, 850	COMMSCOPE NHH-65C-R2B	(1) 4490 RRU	330'±	-	-	
	150°	0°	2°	1900, AWS						
B2	150°	0°	2°	700, 850	COMMSCOPE NHH-65C-R2B	(1) 4890 RRU	330'±	-	-	
	150°	0°	2°	1900, AWS			330'±	-	-	
B3	150°	0°	6°	L-SUB6	ERICSSON AIR6419	-	330'±	-	-	
C1	250°	0°	2°	700, 850	COMMSCOPE NHH-65C-R2B	(1) 4490 RRU	330'±	-	-	
	250°	0°	2°	1900, AWS						
C2	250°	0°	2°	700, 850	COMMSCOPE NHH-65C-R2B	(1) 4890 RRU	330'±	-	-	
	250°	0°	2°	1900, AWS			330'±	-	-	
C3	250°	0°	6°	L-SUB6	ERICSSON AIR6419	-	330'±	-	-	
D2	335°	0°	2°	700, 850	COMMSCOPE NHH-65C-R2B	(1) 4490 RRU	330'±	-	-	
	335°	0°	2°	1900, AWS						
D3	335°	0°	2°	700, 850	COMMSCOPE NHH-65C-R2B	(1) 4890 RRU	330'±	-	-	
	335°	0°	2°	1900, AWS			330'±	-	-	
D4	335°	0°	6°	L-SUB6	ERICSSON AIR6419	-	330'±	-	-	

2

NOTES:

- 1. TEP DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.
- 2. SEE SHEET THIS SHEET FOR PROPOSED ANTENNA SCHEDULE.
- 3. CONTRACTOR TO VERIFY PROPOSED LOADING WITH TOWER STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION.
- 4. ASSUMED 4" ANTENNA STAND OFF FROM MOUNT PIPE. CONTRACTOR TO VERIFY NO ANTENNA INTERFERENCE OCCURS WITH PROPOSED CONFIGURATION SHOWN. ROTATE MOUNTS AS NEEDED.



PLANS PREPARED FOR:



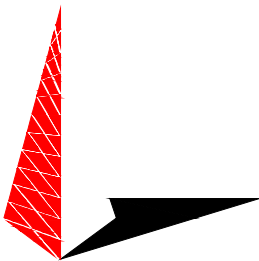
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

**CLAUDETTE
SITE #: NC0313**

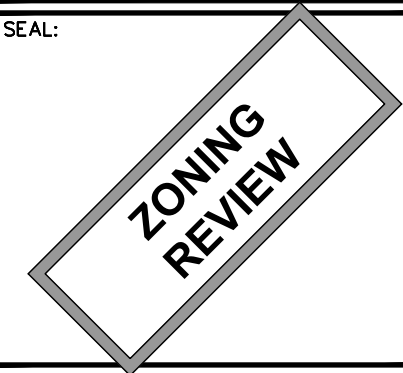
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



2	01-05-24	ZONING
1	10-20-23	ZONING
0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

**PROPOSED
ANTENNA/CABLE
SCHEDULE & DETAILS**

SHEET NUMBER: Z-3A	REVISION: 2 TEP #: 333496
------------------------------	--

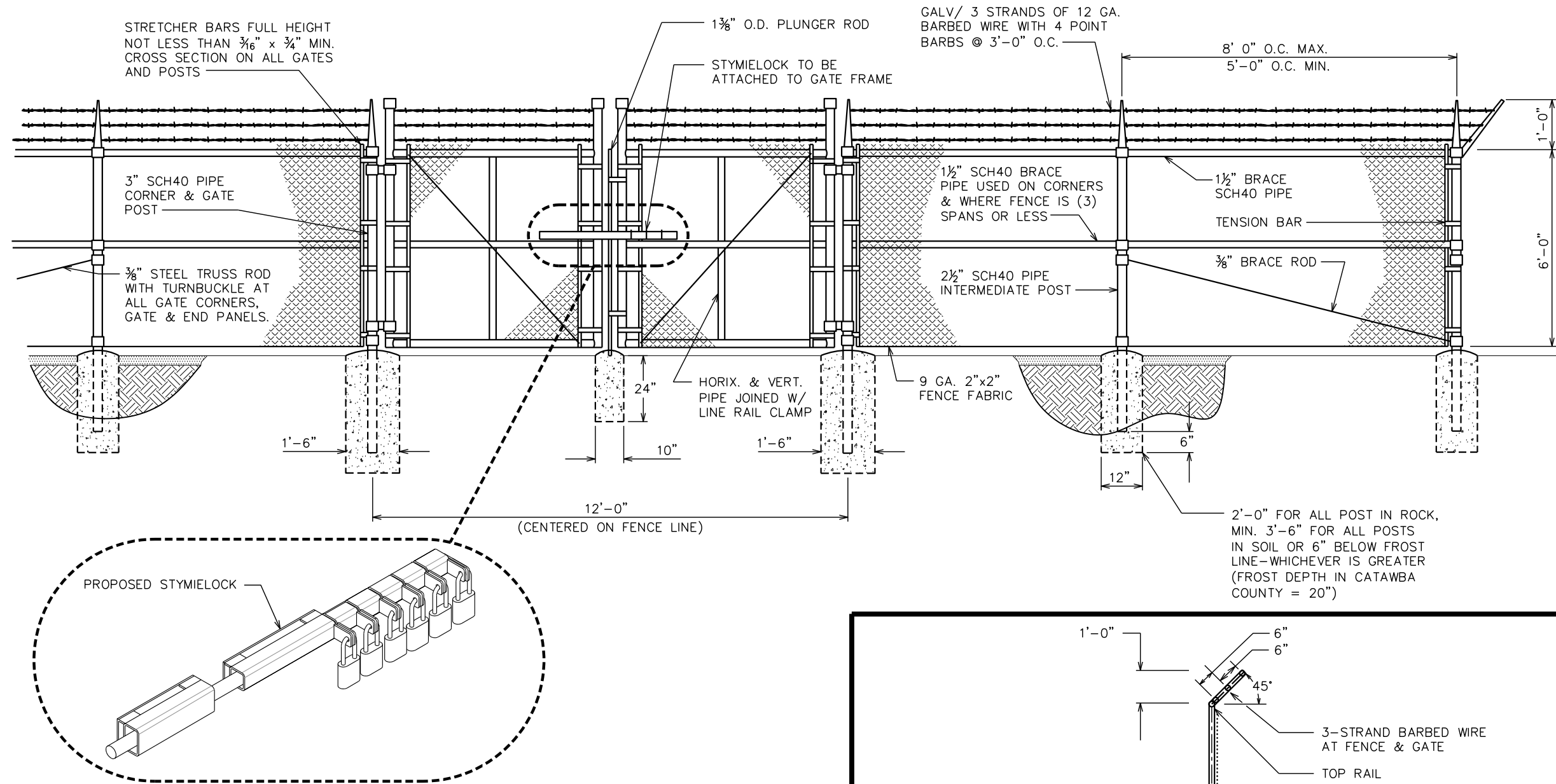
ANTENNA PLAN

SCALE: 3/16" = 1'-0"



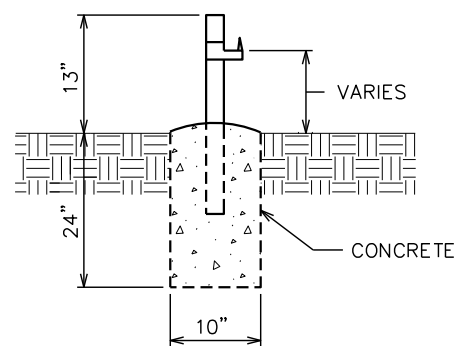
PROPOSED ANTENNA/CABLE SCHEDULE

SCALE: N.T.S.



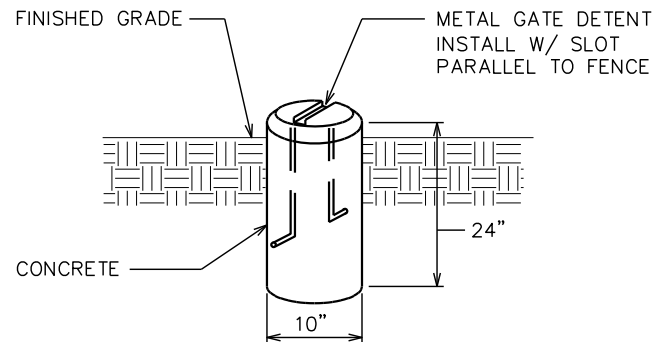
TYPICAL FENCE ELEVATION

SCALE: N.T.S.



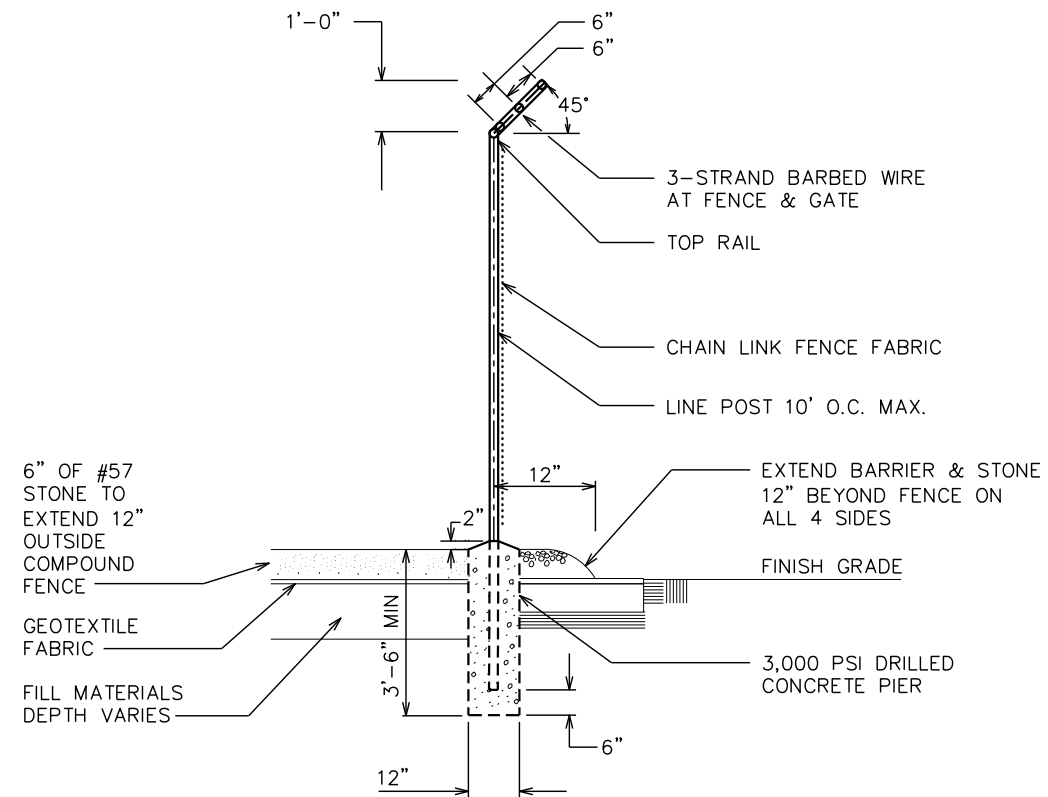
GATE STOP / KEEPER DETAIL

SCALE: N.T.S.



GATE DETENT DETAIL

SCALE: N.T.S.



FENCE / BARBED WIRE ARM DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:



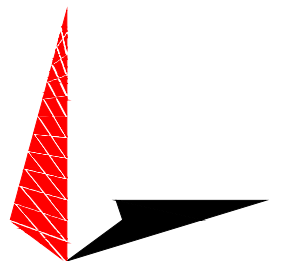
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE SITE #: NC0313

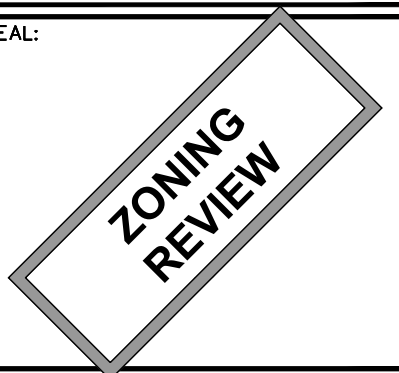
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

FENCE DETAIL

SHEET NUMBER:

Z-4

REVISION:

0

TEP #: 333496

NOTES:

1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.
3. ADDITIONAL E911 ADDRESS SIGNS ARE REQUIRED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF.
4. ADDITIONAL FCC REGISTRATION # SIGNS ARE REQUIRED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF. SIGN SHALL MEASURE (20" LONG x 4" TALL). THE LETTERS SHALL BE 1" AND THE NUMBERS SHALL BE 2".
5. RECOMMENDED SOURCES FOR OBTAINING SIGNAGE:

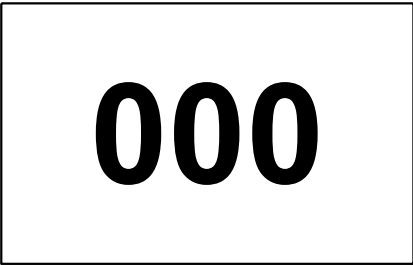
ST. CLAIR SIGNS
3184 WADE HAMPTON BOULEVARD
TAYLORS, SC 29687
(864) 244-0040

RF EXPOSURE SIGNS
RICHARD TELL ASSOCIATES
3433 RINGSTAR ROAD, SUITE 3
NORTH LAS VEGAS, NV 89030
(702) 645-3338

EXCEL SIGN & DECAL
1509 NORTH MILPITAS BLVD.
MILPITAS, CA 95035
(408) 942-8881

- ① SITE IDENTIFICATION SIGN (TYP)
- ② FCC/RF EXPOSURE SIGN
- ③ STREET ADDRESS SIGN
- ④ TOWER REGISTRATION SIGN

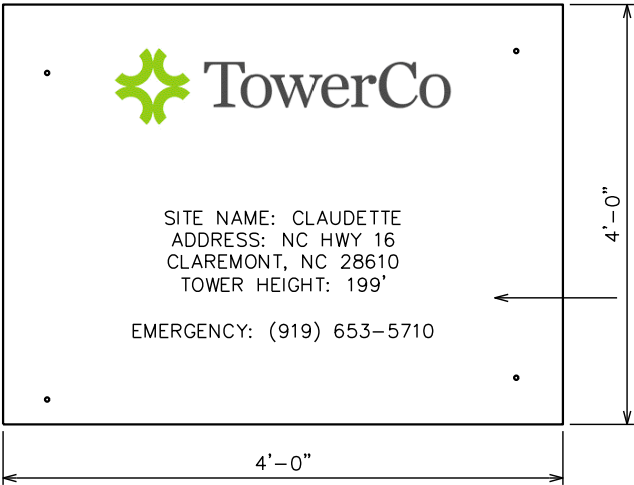
6. POST ADDRESS NUMBERS WITH AT LEAST 4" NUMBERS WITH THE COLOR CONTRASTING WITH THE BACKGROUND; ADDRESS NUMBERS SHOULD BE POSTED SO THAT THEY ARE VISIBLE FROM THE NEAREST PUBLIC RIGHT OF WAY.



- ③ WHITE BACKGROUND W/ BLACK LETTERING
E911 STREET # (CONTRACTOR TO VERIFY)
QUANTITY: (1 TYP)
LETTERS MUST BE A MINIMUM 6" TALL
(TO BE MOUNTED ON THE GATE OF COMPOUND
& AT THE DRIVEWAY ENTRANCE IN THE R/W)
SEE NOTE 6.

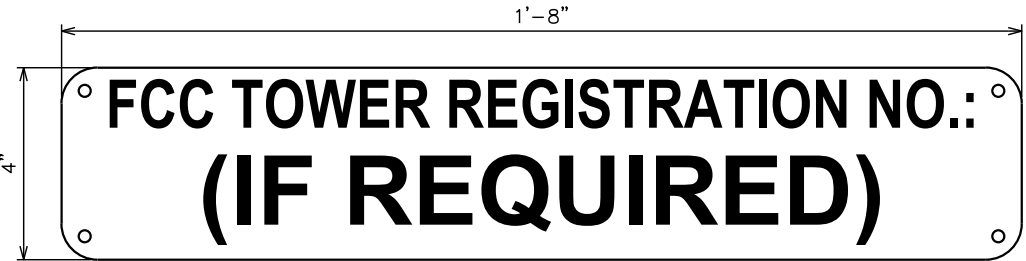


- ① VERIZON AND FCC REGISTRATION SIGN
SIZE: 12"x 24" (0.063" ALUMINUM)
(TO BE MOUNTED ON GATE)



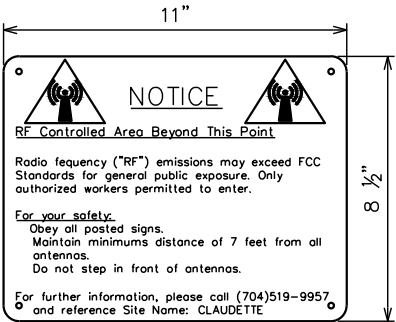
- ① SITE IDENTIFICATION
48" X 48" ALUMINUM SIGN WITH 1/4" DRILLED HOLDER IN EACH CORNER
THICKNESS: 0.04" (1/16") OR CLOSEST STANDARD THICKNESS
QUANTITY: 1

VERIFY E911 ADDRESS PRIOR TO SIGN FABRICATION AND INSTALLATION



- ④ WHITE BACKGROUND WITH BLACK LETTERING
QUANTITY: (2)
TO BE MOUNTED ON: COMPOUND ACCESS GATE
ACCESS DRIVE GATE
(SEE NOTE 4)

NOTE:
NUMBER SHOWN IS GENERIC,
CONTACT CONSTRUCTION MANAGER
FOR ACTUAL FCC TOWER REG. #.



- ② WHITE BACKGROUND W/ BLACK LETTERING

TYPICAL SIGNS AND SPECIFICATIONS

SCALE: N.T.S.

PLANS PREPARED FOR:



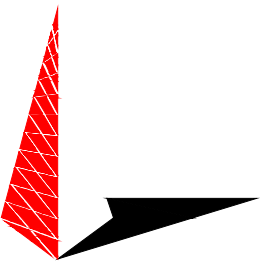
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313

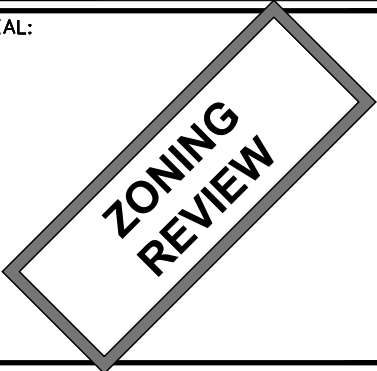
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



2	01-05-24	ZONING
1	10-20-23	ZONING
0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

SIGNAGE DETAILS

SHEET NUMBER:

Z-5

REVISION:

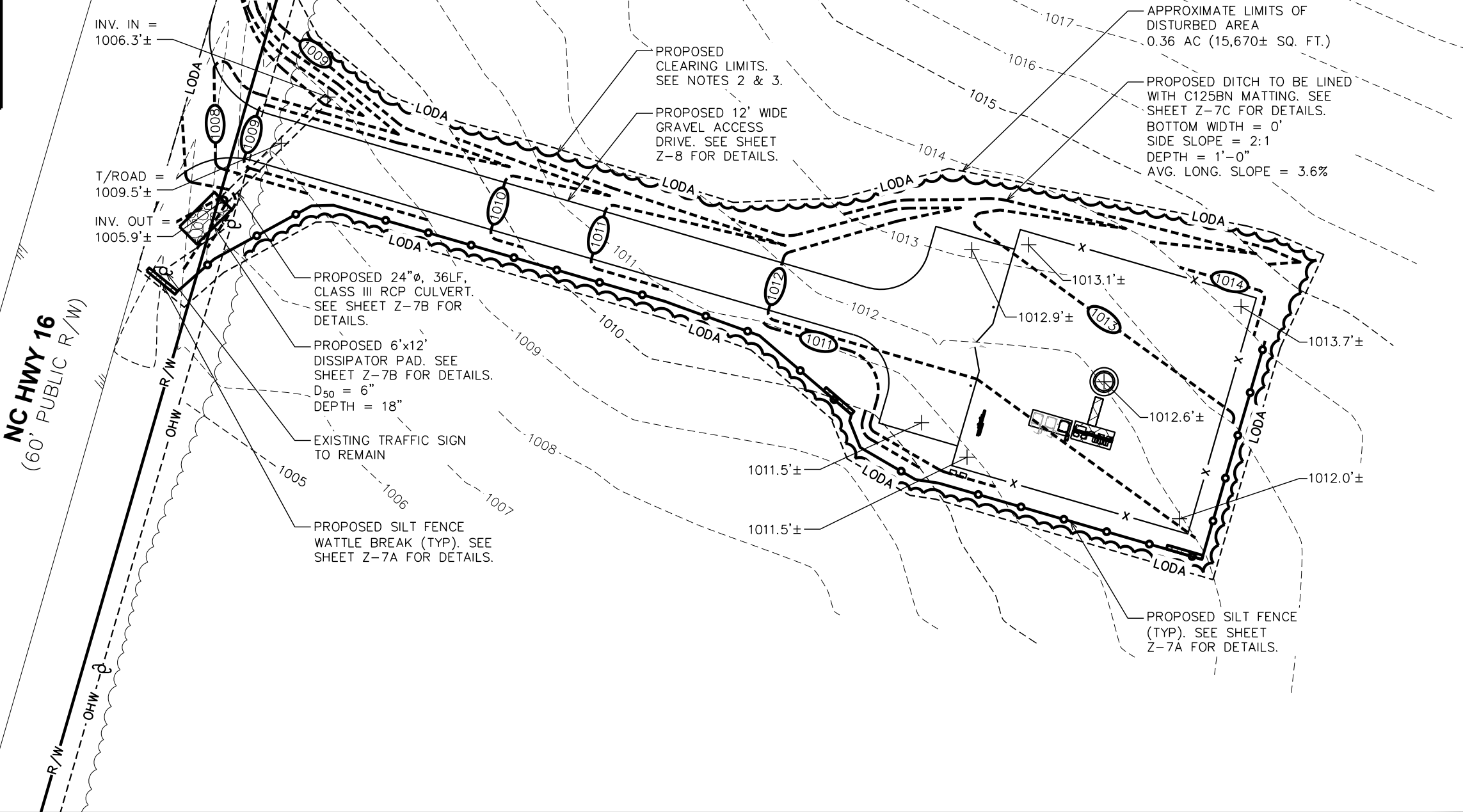
2

TEP #: 333496

NOTES:

1. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ACROSS COMPOUND.
2. PROPOSED TREE CLEARING SHALL ONLY BE PERMITTED OUTSIDE OF THE SUMMER ROOTING PERIOD FOR PROTECTED BAT SPECIES. CONTRACTOR TO ENSURE THAT ANY/ALL CLEARING REQUIRED ON SITE SHALL NOT BE COMPLETED BETWEEN APRIL 1 THROUGH SEPTEMBER 30. PLEASE CONTACT TEP FOR FURTHER GUIDANCE.
3. EXISTING VEGETATION TO BE USED IN LIEU OF REQUIRED LANDSCAPING PER ARTICLE 5, DIVISION 4, SEC. 44-523, SECTION B.2 OF THE CATAWBA COUNTY ORDINANCE.
4. ALL SIDE SLOPES SHALL BE 2:1 UNLESS SPECIFIED OTHERWISE.

LEGEND	
SILT FENCE	
LODA	



PLANS PREPARED FOR:



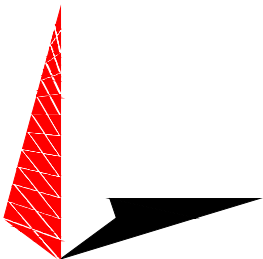
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313

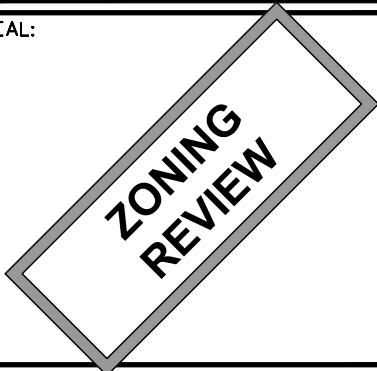
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
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SEAL:



REV	DATE	ISSUED FOR:
2	01-05-24	ZONING
1	10-20-23	ZONING
0	10-13-23	ZONING

DRAWN BY: THD CHECKED BY: ANG

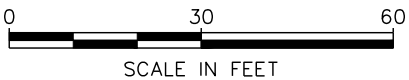
SHEET TITLE:

GRADING & EROSION
CONTROL PLAN

SHEET NUMBER:	REVISION:
Z-6	2
	TEP #: 333496

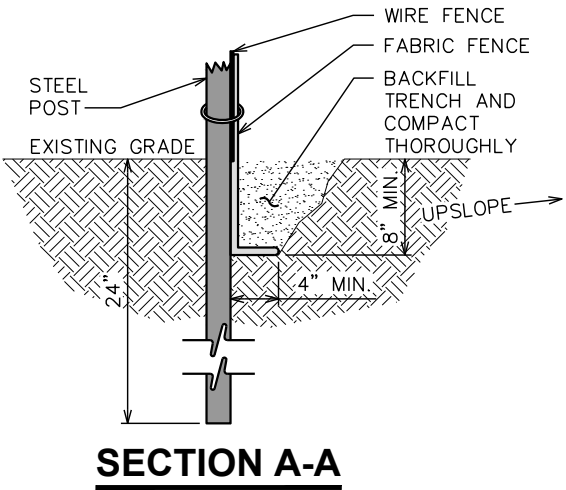
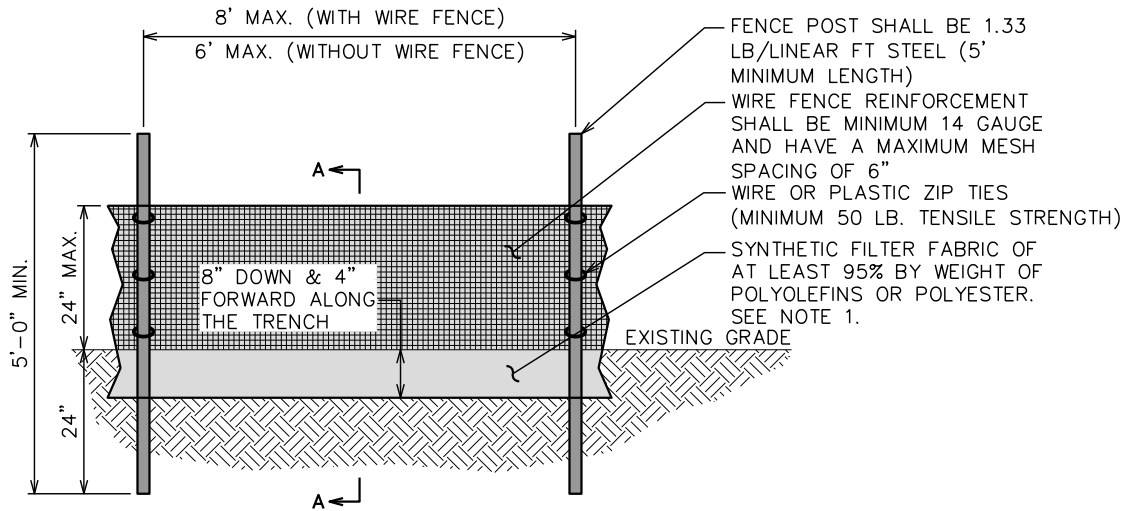
GRADING & EROSION CONTROL PLAN

SCALE: 1" = 30'



NOTES:

- 1. FILTER FABRIC SHALL CONFORM TO THE REQUIREMENTS LISTED IN ASTM D 6461.
- 2. ENDS OF INDIVIDUAL FILTER FABRIC SHALL BE SECURELY FASTENED AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST
- 3. PLACE 10 INCHES OF FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
- 4. INSPECT SEDIMENT FENCE(S) AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL.
- 5. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE.
- 6. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE AND PROPERLY STABILIZE THE SITE.



SILT FENCE DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:



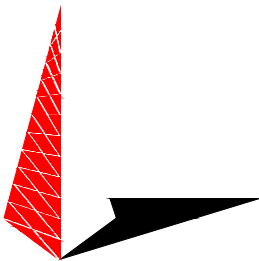
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

**CLAUDETTE
SITE #: NC0313**

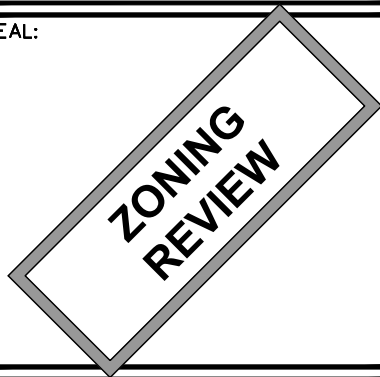
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



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326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



O	10-13-23	ZONING
REV	DATE	ISSUED FOR:

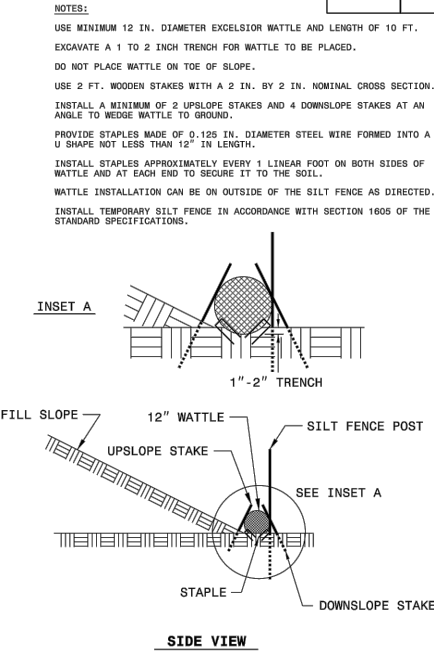
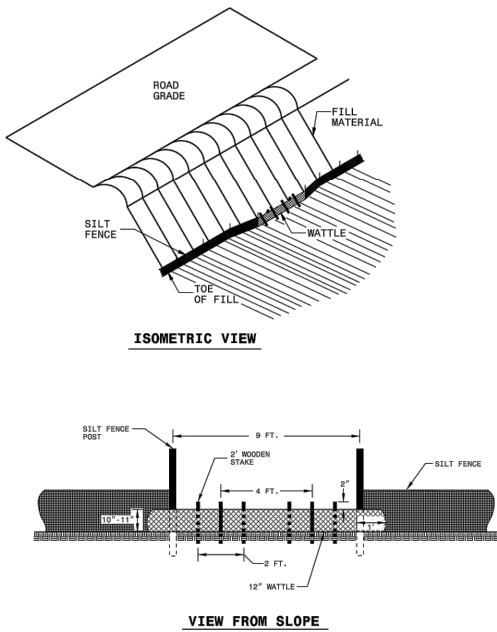
DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

**SILT FENCE
DETAILS**

SHEET NUMBER:	REVISION:
Z-7A	0
TEP #:	333496

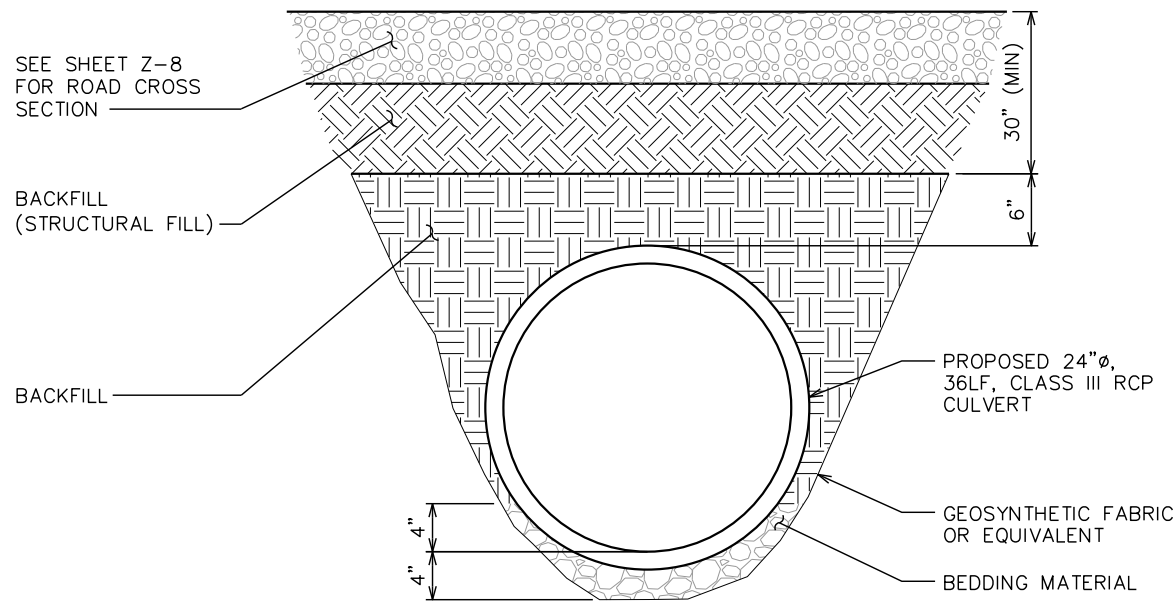
SILT FENCE WATTLE BREAK DETAIL



NOTES:
USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE AND LENGTH OF 10 FT.
EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
DO NOT PLACE WATTLE ON TOE OF SLOPE.
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

STANDARD SILT FENCE WATTLE BREAK DETAIL

SCALE: N.T.S.



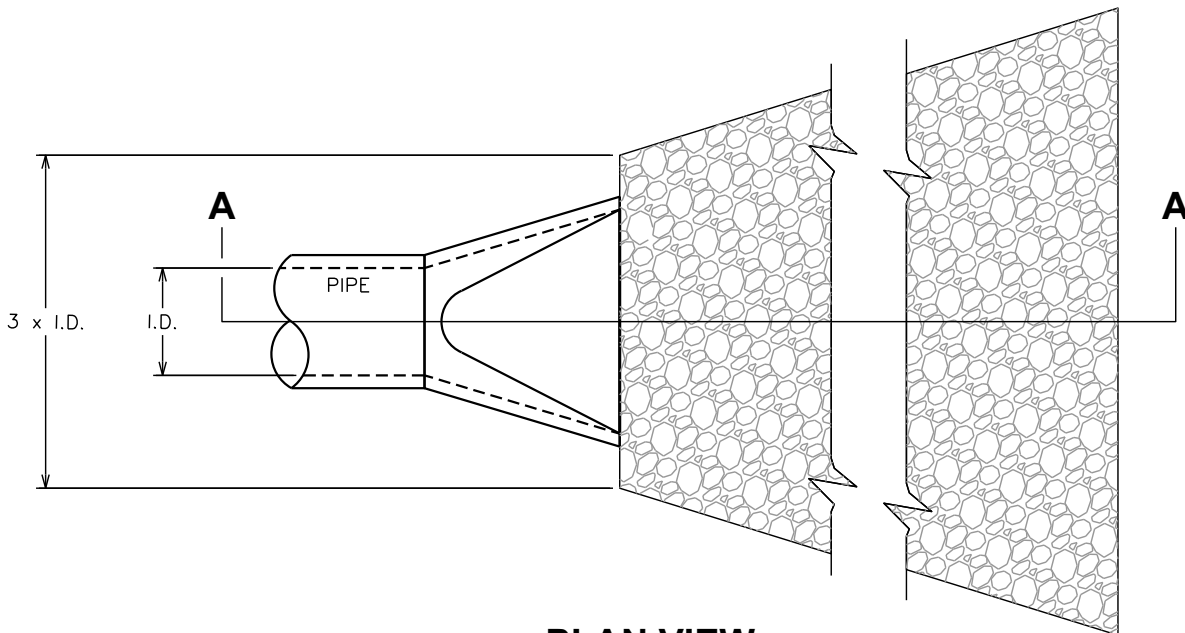
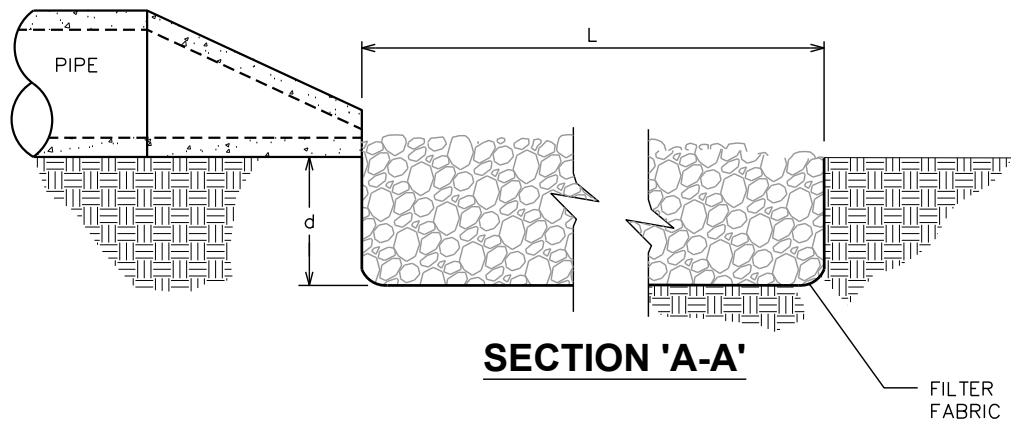
18"Ø CULVERT DETAIL

SCALE: N.T.S.

NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

DISSIPATOR PAD SIZING					
RIP-RAP APRON NO.	CULVERT DIAMETER (IN)	WIDTH (FT)	LENGTH (FT)	DEPTH (IN)	D ₅₀ (IN)
1	24	6	12	18	6



PROPOSED DISSIPATOR PAD DETAILS

SCALE: N.T.S.

PLANS PREPARED FOR:



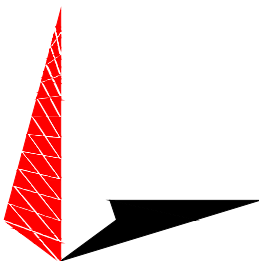
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

**CLAUDETTE
SITE #: NC0313**

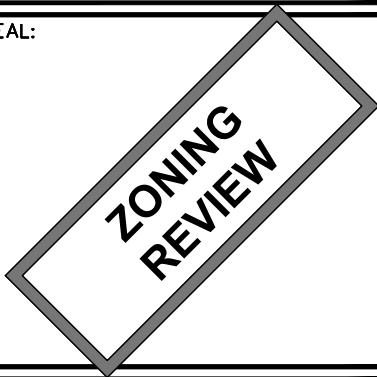
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
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N.C. LICENSE # P-1403

SEAL:



0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

**CULVERT &
DISSIPATOR PAD
DETAILS**

SHEET NUMBER:

Z-7B

REVISION:

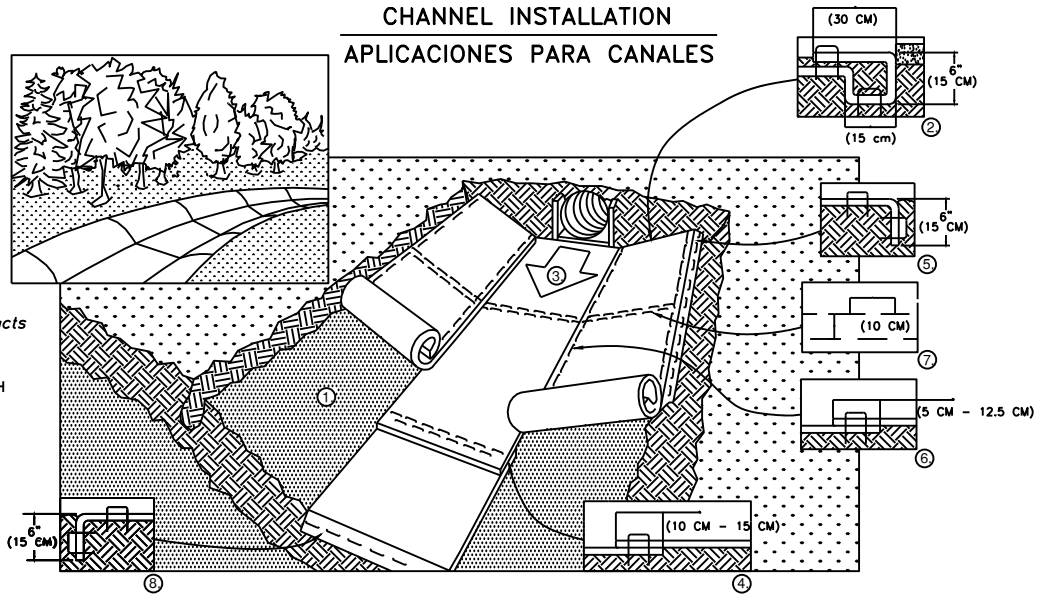
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TEP #: 333496

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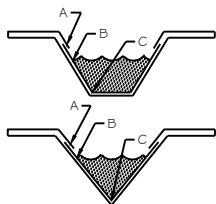
14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800-772-2040
www.nogreen.com



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMAPCT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE RECP's.
3. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" - 6" (10 CM - 15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE RECP's.
5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) (DEPENDING ON RECP's TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M - 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE:

* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.



CRITICAL POINTS

- A. OVERLAPS AND SEAMS
- B. PROJECTED WATER LINE
- C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

PUNTOS CRITICOS

- A. TRASLAPES Y JUNTAS
- B. LINEAS DE AGUA PROYECTADA
- C. FONDO DEL CANAL/VERTICES DE LAS PENDIENTES LATERALES

NOTE:

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

NOTA:

* LA SEPARACION HORIZONTAL DE LAS GRAPAS SE DEBE ALTERAR SI SE NECESITA, PARA PERMITIR QUE LAS GRAPAS ASEGUEN LOS PUNTOS CRITICOS A LO LARGO DE LA SUPERFICIE DEL CANAL.

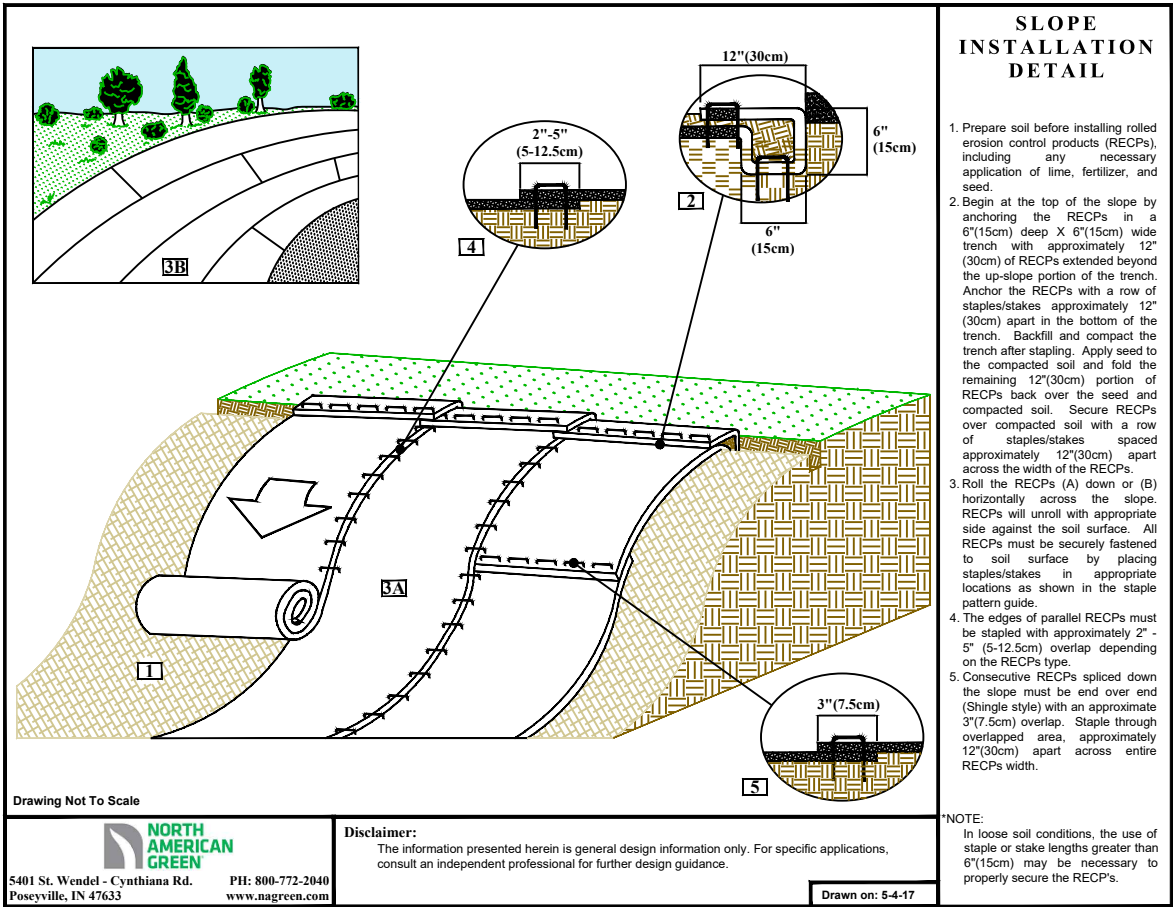
** EN CONDICIONES DE SUELO SUELTO, PUEDE QUE SE NECESITEN GRAPAS O ESTACAS DE MAS DE 6" (15 CM) DE LARGO PARA ASEGURAR LAS MANTAS CORRECTAMENTE.

1. PREPARE EL SUELO DE COLOCAR LAS MANTAS, INCLUYENDO LA APLICACION DE CAL, FERTILIZANTE SEMILLA. NOTA: CUANDO ESTE USANDO CELL-O-SEED NO SIEMBRE EL AREA PREPARADA. CELL-O-SEED TIENE QUE INSTALARSE CON EL LADO DE PAPEL HACIA ABAJO.
2. COMIENCE EN LA CABECERA DEL CANAL SUJETANDO LA MANTA EN UNA ZANJA DE 6" (15 CM) DE PROFUNDIDAD POR 6" (15 CM). DE ANCHO CON APROXIMADAMENTE 12" (30 CM) DE LA MANTA EXTENDIDA MAS ALLA DE LA PENDIENTE ALTA DE LA ZANJA. SUJETE RELLENE Y COMPACTE LA ZANJA DESPUES DEL ENGRAPE. RIEGUE LA SEMILLA EN EL SUELO COMPACTADO Y DOBLE LAS 12" (30 CM) REMANENTES DE MANTA SOBRE LA SEMILLA Y EL SUELO COMPACTADO. ASEGURE LA MANTA SOBRE EL SUELO CON UNA LINEADE GRAPAS O ESTACAS APROXIMADAMENTE 12" (30 CM) UNA DE LA OTRA A TRAVES DEL ANCHO DE LA MANTA.
3. DESENROLLE LA MANTA DEL MEDIO EN EL FONDO DEL CANAL Y EN LA DIRECCION DEL FLUJO DE AGUA CON EL LADO APROPIADO HACIA LA SUPERFICIE DEL SUELO. TODAS LAS MANTAS DEBERAN ASEGURARSE A LA SUPERFICIE DEL SUELO POR MEDIO DE GRAPAS O ESTACAS EN LUGARES APROPIADOS TAL Y COMO SE INDICA EN EL PATRON GUIA DE ENGRAPADO. CUANDO ESTE USANDO EL DOT SYSTEM, LAS GRAPAS O ESTACAS DEBEN COLOCARSE A TRAVES DE CADA UNO DE LOS PUNTOS CON COLOR CORRESPONDIENTES AL PATRON DE ENGRAPADO APROPIADO.
4. COLOQUE LAS MANTAS CONSECUTIVAS BORDE SOBRE BORDE (TIPO ESCALONADO) CON UN TRASLAP DE 4" - 6" (10 CM - 15 CM). USE UNA LINEA DOBLE DE GRAPAS ESCALONADAS, SEPARADAS POR 4" (10 CM) Y CADA 4" (10 CM) SOBRE EL CENTRO PARA ASEGURAR LAS MANTAS.
5. EN EL TOPE DE LAS DOS PENDIENTES LATERALES DEL CANAL, SE DEBE SUJETAR TODO EL LARGO DE LA ORILLA DE LAS MANTAS CON UNA LINEA DE GRAPAS O ESTACAS APROXIMADAMENTE CADA 12" (30 CM) UNA DE LA OTRA EN UNA ZANJA DE 6" (15 CM) DE PROFUNDIDAD POR 6" (15 CM) DE ANCHO. RELLENE Y COMPACTE LA ZANJA DESPUES DEL ENGRAPE.
6. LAS MANTAS ADYACENTES DEBEN TRASLAPARSE APROXIMADAMENTE DE 2" - 5" (5 CM - 12.5 CM) (DEPENDIENDO DEL TIPO DE MANTA) Y ENGRAPPARSE.
7. EN APLICACIONES PARA CANALES DE FLUJO ALTO, SE RECOMIENDA DEJAR UNA RANURA PARA EL CHEQUEO DE LAS GRAPAS A INTERVALOS DE 30 A 40 PIES (9 M - 12 M). USE UNA LINEA DOBLE DE PRAPAS ESCALONADAS, SEPARADAS POR 4" (10 CM) Y CADA 4" (10 CM) SOBRE EL CENTRO A TRAVES DE TODO EL ANCHO DEL CANAL.
8. LOS BORDES FINALES DE LAS MANTAS DEBEN SUJETARSE CON UNA LINEA DE GRAPAS O ESTACAS APROXIMADAMENTE CADA 12" 30 CM) UNA DE LA OTRA EN UNA ZANJA DE 6" (15 CM) DE PROFUNDIDAD POR 6" (15 CM) DE ANCHO. RELLENE Y COMPACTE DESPUES DEL ENGRAPADO.

NOTA:

* EN CONDICIONES DE SUELTO, PUEDE QUE SE NECESITEN GRAPAS O ESTACAS DE MAS DE 6" (15 CM) DE LARGO PARA ASEGURAR LAS MANTAS CORRECTAMENTE.

REV. 01/05



SLOPE INSTALLATION DETAIL

1. Prepare soil before installing rolled erosion control products (RECP's), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the RECP's in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12" (30cm) of RECP's extended beyond the up-slope portion of the trench. Anchor the RECP's with a row of staples/stakes approximately 12" (30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECP's back over the seed and compacted soil. Secure RECP's over compacted soil with a row of staples/stakes spaced approximately 12"(30cm) apart across the width of the RECP's.
3. Roll the RECP's (A) down or (B) horizontally across the slope. RECP's will unroll with appropriate side against the soil surface. All RECP's must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. The edges of parallel RECP's must be stapled with approximately 2" - 5" (5-12.5cm) overlap depending on the RECP's type.
5. Consecutive RECP's spliced down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire RECP's width.

*NOTE:

In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECP's.

Drawing Not To Scale



5401 St. Wendel - Cynthiana Rd.
Poseyville, IN 47633

PH: 800-772-2040
www.nagreen.com

Disclaimer:

The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.

Drawn on: 5-4-17

PLANS PREPARED FOR:



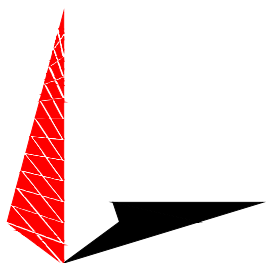
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

**CLAUDETTE
SITE #: NC0313**

(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD

RALEIGH, NC 27603

OFFICE: (919) 661-6351

www.tepgroup.net

N.C. LICENSE # P-1403

SEAL:

**ZONING
REVIEW**

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SHEET TITLE:

**EROSION CONTROL
MATTING DETAILS**

SHEET NUMBER:

Z-7C

REVISION:

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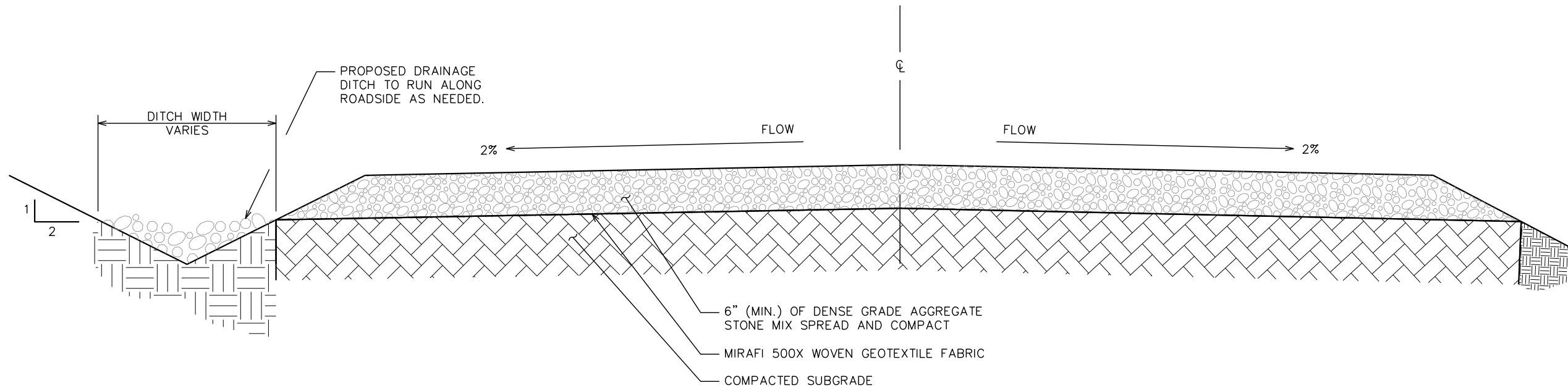
TEP #: 333496

EROSION CONTROL MATTING DETAILS

SCALE: N.T.S.

NOTE:

CONTRACTOR TO ENSURE EXISTING SITE CONDITIONS ARE IN COMPLIANCE WITH ALL REQUIREMENTS PER NC FIRE CODE SECTION 503.2.3. PLEASE CONTACT TEP FOR FURTHER GUIDANCE.



STANDARD GRAVEL ROAD SECTION

SCALE: N.T.S.

PLANS PREPARED FOR:



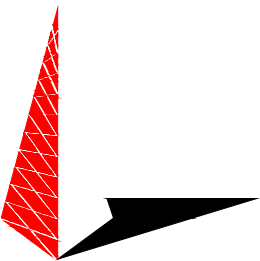
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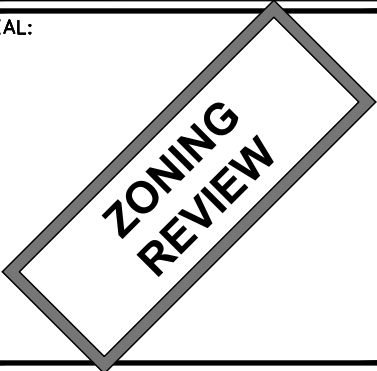
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SEAL:



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1	10-20-23	ZONING
0	10-13-23	ZONING
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DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

ACCESS DRIVE
DETAILS

SHEET NUMBER:

Z-8

REVISION:

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TEP #: 333496

ELECTRICAL NOTES:

SCOPE:

1. PROVIDE LABOR, MATERIALS, INSPECTION, AND TESTING TO PROVIDE CODE COMPLIANCE FOR ELECTRIC, TELEPHONE, AND GROUNDING/LIGHTNING SYSTEMS.

CODES:

1. THE INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND CODES. THESE INCLUDE BUT ARE NOT LIMITED TO THE LATEST ADOPTED EDITIONS OF:
- A. THE NATIONAL ELECTRICAL SAFETY CODE

B. THE NATIONAL ELECTRIC CODE – NFPA–70

C. REGULATIONS OF THE SERVING UTILITY COMPANY

D. LOCAL AND STATE AMENDMENTS

E. THE INTERNATIONAL ELECTRIC CODE – IEC (WHERE APPLICABLE)
2. PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR.
3. AFTER COMPLETION AND FINAL INSPECTION OF THE WORK, THE OWNER SHALL BE FURNISHED A CERTIFICATE OF COMPLETION AND APPROVAL.

TESTING:

1. UPON COMPLETION OF THE INSTALLATION, OPERATE AND ADJUST THE EQUIPMENT AND SYSTEMS TO MEET SPECIFIED PERFORMANCE REQUIREMENTS. THE TESTING SHALL BE DONE BY QUALIFIED PERSONNEL.

GUARANTEE:

1. IN ADDITION TO THE GUARANTEE OF THE EQUIPMENT BY THE MANUFACTURER, EACH PIECE OF EQUIPMENT SPECIFIED HEREIN SHALL ALSO BE GUARANTEED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE OWNER AND WITHOUT EXPENSE TO THE OWNER.
2. THE WARRANTEE CERTIFICATES & GUARANTEES FURNISHED BY THE MANUFACTURERS SHALL BE TURNED OVER TO THE OWNER.

UTILITY CO-ORDINATION:

1. CONTRACTOR SHALL COORDINATE WORK WITH THE POWER AND TELEPHONE COMPANIES AND SHALL COMPLY WITH THE SERVICE REQUIREMENTS OF EACH UTILITY COMPANY.

EXAMINATION OF SITE:

1. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE JOB AND SHALL FAMILIARIZE HIMSELF WITH THE CONDITIONS AFFECTING THE PROPOSED ELECTRICAL INSTALLATION AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. FAILURE TO COMPLY WITH THE INTENT OF THIS SECTION WILL IN NO WAY RELIEVE THE CONTRACTOR OF PERFORMING THE WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM OR SYSTEMS.

CUTTING, PATCHING AND EXCAVATION:

1. COORDINATION OF SLEEVES, CHASES, ETC., BETWEEN SUBCONTRACTORS WILL BE REQUIRED PRIOR TO THE CONSTRUCTION OF ANY PORTION OF THE WORK. CUTTING AND PATCHING OF WALLS, PARTITIONS, FLOORS, AND CHASES IN CONCRETE, WOOD, STEEL OR MASONRY SHALL BE DONE AS PROVIDED ON THE DRAWINGS.
2. NECESSARY EXCAVATIONS AND BACKFILLING INCIDENTAL TO THE ELECTRICAL WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWING.
3. SEAL PENETRATIONS THROUGH RATED WALLS, FLOORS, ETC., WITH APPROVED METHOD AS LISTED BY UL.

RACEWAYS / CONDUITS GENERAL:

1. CONDUCTORS SHALL BE INSTALLED IN LISTED RACEWAYS. CONDUIT SHALL BE RIGID STEEL, EMT, SCH40 PVC, OR SCH80PVC AS INDICATED ON THE DRAWINGS. THE RACEWAY SYSTEM SHALL BE COMPLETE COMPLETE BEFORE INSTALLING CONDUCTORS.
2. EXTERIOR RACEWAYS AND GROUNDING SLEEVES SHALL BE SEALED AT POINTS OF ENTRANCE AND EXIT. THE RACEWAY SYSTEM SHALL BE BONDED PER NEC.

EXTERIOR CONDUIT:

1. EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.
2. THE CONDUIT SHALL BE RIGID STEEL AT GRADE TRANSITIONS OR WHERE EXPOSED TO DAMAGE.
3. UNDERGROUND CONDUITS SHALL BE RIGID STEEL, SCH40 PVC, OR SCH80 PVC AS INDICATED ON THE DRAWINGS.
4. BURIAL DEPTH OF CONDUITS SHALL BE AS REQUIRED BY CODE FOR EACH SPECIFIC CONDUIT TYPE AND APPLICATION, BUT SHALL NOT BE LESS THAN THE FROST DEPTH AT THE SITE.

INTERIOR CONDUIT:

1. CONCEALED CONDUIT IN WALLS OR INTERIOR SPACES ABOVE GRADE MAY BE EMT OR PVC.
2. CONDUIT RUNS SHALL USE APPROVED COUPLINGS AND CONNECTORS. PROVIDE INSULATED BUSHING FOR ALL CONDUIT TERMINATIONS. CONDUIT RUNS IN A WET LOCATION SHALL HAVE WATERPROOF FITTINGS.
3. PROVIDE SUPPORTS FOR CONDUITS IN ACCORDANCE WITH NEC REQUIREMENTS. CONDUITS SHALL BE SIZED AS REQUIRED BY NEC.

EQUIPMENT:

1. DISCONNECT SWITCHES SHALL BE SERVICE ENTRANCE RATED, HEAVY DUTY TYPE.
2. CONTRACTOR SHALL VERIFY MAXIMUM AVAILABLE FAULT CURRENT AND COORDINATE INSTALLATION WITH THE LOCAL UTILITY BEFORE STARTING WORK. CONTRACTOR WILL VERIFY THAT EXISTING CIRCUIT BREAKERS ARE RATED FOR MORE THAN AVAILABLE FAULT CURRENT AND REPLACE AS NECESSARY.
3. NEW CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AS DETERMINED BY THE LOCAL UTILITY.

CONDUCTORS:

1. FURNISH AND INSTALL CONDUCTORS SPECIFIED IN THE DRAWINGS. CONDUCTORS SHALL BE COPPER AND SHALL HAVE TYPE THWN (MIN) (75° C) INSULATION, RATED FOR 600 VOLTS.
2. THE USE OF ALUMINUM CONDUCTORS SHALL BE LIMITED TO THE SERVICE FEEDERS INSTALLED BY THE UTILITY.
3. CONDUCTORS SHALL BE PROVIDED AND INSTALLED AS FOLLOWS:
- A. MINIMUM WIRE SIZE SHALL BE #12 AWG.

B. CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS SIZED #10 AND #12 MAY BE SOLID OR STRANDED.

C. CONNECTION FOR #10 AWG #12 AWG SHALL BE BY TWISTING TIGHT AND INSTALLING INSULATED PRESSURE OR WIRE NUT CONNECTIONS.

D. CONNECTION FOR #8 AWG AND LARGER SHALL BE BY USE OF STEEL CRIMP–ON SLEEVES WITH NYLON INSULATOR.
3. CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC STANDARDS.

UL COMPLIANCE:

1. ELECTRICAL MATERIALS, DEVICES, CONDUCTORS, APPLIANCES, AND EQUIPMENT SHALL BE LABELED/LISTED BY UL OR ACCEPTED BY JURISDICTION (I.E., LOCAL COUNTY OR STATE) APPROVED THIRD PARTY TESTING AGENCY.

GROUNDING:

1. ELECTRICAL NEUTRALS, RACEWAYS AND NON–CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT AND ASSOCIATED ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. THIS SHALL INCLUDE NEUTRAL CONDUCTORS, CONDUITS, SUPPORTS, CABINETS, BOXES, GROUND BUSSES, ETC. THE NEUTRAL CONDUCTOR FOR EACH SYSTEM SHALL BE GROUNDED AT A SINGLE POINT.
2. PROVIDE GROUND CONDUCTOR IN RACEWAYS PER NEC.
3. PROVIDE BONDING AND GROUND TO MEET NFPA 780 – "LIGHTNING PROTECTION" AS A MINIMUM.
4. PROVIDE GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS, AS REQUIRED BY THE NATIONAL ELECTRIC CODE, RADIO EQUIPMENT MANUFACTURERS, AND MOTOROLA R56 (AS APPLICABLE).


ABBREVIATIONS AND LEGEND		
A	–	AMPERE
AFG	–	ABOVE FINISHED GRADE
ATS	–	AUTOMATIC TRANSFER SWITCH
AWG	–	AMERICAN WIRE GAUGE
BCW	–	BARE COPPER WIRE
BFG	–	BELOW FINISHED GRADE
BKR	–	BREAKER
C	–	CONDUIT
CKT	–	CIRCUIT
DISC	–	DISCONNECT
EGR	–	EXTERNAL GROUND RING
EMT	–	ELECTRIC METALLIC TUBING
FSC	–	FLEXIBLE STEEL CONDUIT
GEN	–	GENERATOR
GPS	–	GLOBAL POSITIONING SYSTEM
GRD	–	GROUND
IGB	–	ISOLATED GROUND BAR
IGR	–	INTERIOR GROUND RING (HALO)
KW	–	KILOWATTS
NEC	–	NATIONAL ELECTRIC CODE
PCS	–	PERSONAL COMMUNICATION SYSTEM
PH	–	PHASE
PNL	–	PANEL
PNLBD	–	PANELBOARD
PVC	–	RIGID NON–METALLIC CONDUIT
RGS	–	RIGID GALVANIZED STEEL CONDUIT
SW	–	SWITCH
TGB	–	TOWER GROUND BAR
UL	–	UNDERWRITERS LABORATORIES
V	–	VOLTAGE
W	–	WATTS
XFMR	–	TRANSFORMER
XMTR	–	TRANSMITTER

-----E-----

UNDERGROUND ELECTRICAL CONDUIT


-----T-----

UNDERGROUND TELEPHONE CONDUIT




KILOWATT–HOUR METER


UNDERGROUND BONDING AND GROUNDING CONDUCTOR.



GROUND ROD



CADWELD



GROUND ROD WITH INSPECTION WELL

PLANS PREPARED FOR:



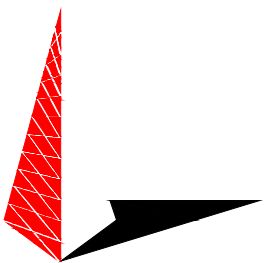
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CARY, NC 27519
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PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313

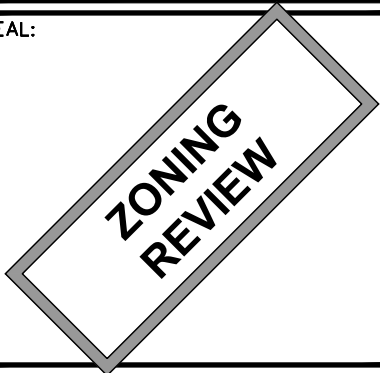
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PLANS PREPARED BY:



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DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

ELECTRICAL
NOTES

SHEET NUMBER:

Z-9

REVISION:

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TEP #: 333496

VERIZON GROUNDING NOTES:

1. THE GROUND RING SHALL CONSIST OF #2 AWG BARE SOLID TINNED COPPER (STC) CONDUCTOR, UNLESS NOTED OTHERWISE, BURIED AT 30" BELOW FINISHED GRADE (OR BELOW FROST LINE). LOCATE 24" MINIMUM AND 36" MAXIMUM FROM EQUIPMENT AREA AND FROM TOWER FOUNDATION. ALL CONNECTIONS SHALL BE MADE USING A PARALLEL TYPE EXOTHERMIC WELD, UNLESS NOTED OTHERWISE.

2. INSTALL GROUND RODS AS SHOWN AND AS REQUIRED. GROUND RODS TO BE COPPER CLAD STEEL, 5/8" DIAMETER AND 10FT IN LENGTH. SPACING BETWEEN GROUND RODS SHALL BE 10FT MINIMUM AND 15FT MAXIMUM. TOP OF GROUND ROD TO BE 30" MINIMUM BELOW GRADE (OR BELOW FROST LINE). BOND TOP OF GROUND ROD TO GROUND WIRE WITH EXOTHERMIC WELD. DO NOT EXOTHERMICALLY WELD ANYTHING TO GROUND ROD EXCEPT GROUND WIRE WHICH PASSES OVER TOP OF GROUND ROD (CLAMPED CONNECTIONS TO GROUND ROD PER TOWER MANUFACTURERS DETAILS ARE ACCEPTABLE).

3. EQUIPMENT GROUND RING SHALL HAVE A MINIMUM OF 4 GROUND RODS, INSTALLED AT THE CORNERS OF THE GROUND RING PLUS ADDITIONAL RODS AS REQUIRED TO COMPLY WITH THE SPACING REQUIREMENTS. TOWER GROUND RING SHALL HAVE A MINIMUM OF 3 GROUND RODS, EXCEPT USE 4 RODS AT A MONOPOLE TOWER. WHERE SPREAD TOWER FOOTING WOULD PREVENT GROUND RODS FROM BEING DRIVEN INTO SOIL ADJACENT TO TOWER, PROVIDE VERTICAL 1" DIAMETER PVC SLEEVES EMBEDDED IN FOOTING TO ALLOW INSTALLATION OF GROUND RODS.

4. EQUIPMENT GROUND RING AND TOWER GROUND RING SHALL BE BONDED TOGETHER WITH TWO #2 STC GROUND LEADS, TYPICALLY ONE ON EACH SIDE OF ICE BRIDGE.

5. BOND TOWER TO TOWER GROUND RING AT THREE LOCATIONS WITH #2 STC GROUND LEAD. SELF SUPPORT TOWERS SHALL HAVE EACH LEG BONDED TO GROUND RING, MONOPOLES AND GUYED TOWERS SHALL HAVE GROUND LEADS EQUALLY SPACED AROUND TOWER. EXOTHERMICALLY WELD GROUND LEADS TO TOP OF BASE PLATES, OR ATTACH TO TOWER USING TOWER MANUFACTURER PROVIDED DETAIL.

6. PROVIDE #2 STC RADIALS FROM THE TOWER GROUND RING TO EACH FENCE CORNER POST. RADIALS SHALL HAVE GROUND RODS AS PER THE REQUIRED SPACING. THE GROUND ROD AT THE END OF EACH RADIAL SHALL BE 24" MAXIMUM FROM FENCE CORNER POST. EQUIPMENT AREA GROUND RING AND CONNECTING GROUND LEADS [BETWEEN EQUIPMENT AREA AND TOWER GROUND RINGS] MAY BE USED AS PART OF THE RADIAL GOING TO THE FENCE CORNER POST CLOSEST TO THE EQUIPMENT AREA.

7. MINIMUM BEND RADIUS FOR #2 AWG GROUND WIRE IS 12", EXCEPT USE 24" FOR TOWER GROUND RINGS AND EQUIPMENT PAD GROUND RINGS.
8. GROUND ALL EXTERIOR EXPOSED METAL OBJECTS. USE TWO HOLE LUGS FOR CONNECTION TO FLAT METAL SURFACES. USE ONLY STAINLESS STEEL HARDWARE ON ALL MECHANICAL CONNECTIONS. CLEAN ALL SURFACES (AND STRIP PAINTED SURFACES) TO BARE BRIGHT METAL PRIOR TO MAKING GROUND CONNECTIONS. APPLY ANTI-OXIDE COMPOUND TO ALL CONNECTIONS. APPLY ZINC RICH PAINT (COLD GALV.) TO ALL EXOTHERMIC WELDS, AND TO ANY METAL EXPOSED BY CLEANING, STRIPPING, GRINDING, CUTTING OR DRILLING.

9. ALL GROUNDING CONDUCTORS ABOVE GRADE SHALL BE RUN IN 3/4" FLEXIBLE PVC CONDUIT. CONDUIT SHALL BEGIN WITHIN 3/4" OF ABOVE GROUND CONNECTION POINT, SHALL EXTEND 24" BELOW GRADE MINIMUM, AND SHALL BE FILLED WITH SEALANT AT ABOVE GROUND CONNECTION POINT. SECURE CONDUIT EVERY 24" ON VERTICAL RUNS AND EVERY 36" ELSEWHERE WITH NON-METALLIC TIES.

10A. AT GUYED AND SELF SUPPORT TOWERS MOUNT TDSCA-PA14 TOWER BOTTOM GROUND BAR ON DEDICATED POST DIRECTLY BELOW COAX CABLES COMING OFF TOWER. POST TO BE 3.5" OD GALVANIZED SCHEDULE 40 PIPE WITH GALVANIZED PIPE CAP. TOP OF POST TO BE 78" ABOVE GRADE. EMBED POST 30" MINIMUM IN 12" DIAMETER BY 36" DEEP MINIMUM CONCRETE FOOTING WITH TOP OF FOOTING 6" BELOW GRADE. IF TOWER FOUNDATION OBSTRUCTS AUGERED FOOTING, USE POST WITH 10" SQUARE GALVANIZED STEEL FLANGE PLATE WELDED TO BOTTOM AND BOLT FLANGE TO TOP OF CONCRETE TOWER FOOTING.

10B. AT MONOPOLE TOWERS CLAMP TDSCA-BC14 TOWER BOTTOM GROUND BAR DIRECTLY TO TOWER. IF RUNNING COAX INSIDE MONOPOLE, CLAMP ONTO BOTTOM LIP OF EXIT PORT. IF BANDING COAX TO OUTSIDE OF TOWER, CLAMP ONTO STEEL ANGLE WHICH IS Banded TO TOWER. BOND TDSCA-BC14 TO TOWER GROUND RING WITH TWO #2 STC LEADS LUGGED TO GROUND BAR AND EXOTHERMICALLY WELDED TO GROUND RING.

11. AT EQUIPMENT AREA, INSTALL TDSCA-PA14 EXTERIOR GROUND BAR (THRU-BOLTED STYLE) AT BASE OF (2) INTERIOR H-FRAME POSTS AND AT TOP OF ICE BRIDGE POST WHICH IS NEAREST TO (BUT CLOSER TO TOWER THAN) THE COAX CABLE TERMINATION. MOUNT GROUND BAR TO H-FRAME POSTS AT 6" ABOVE GRAVEL AND TO ICE BRIDGE POST AT 6FT ABOVE GRAVEL.

12. ALL ICE BRIDGE SECTIONS ARE TO BE JUMPERED TOGETHER WITH #2 WIRE, EITHER BARE TINNED COPPER OR GREEN INSULATED STRANDED. ICE BRIDGE SHALL BE GROUNDED AT EACH END WITH #2 STC WIRE LUGGED TO ICE BRIDGE AND EXOTHERMICALLY WELDED TO UPPER PORTION OF NEAREST ICE BRIDGE POST. ICE BRIDGE SECTIONS ABOVE H-FRAME SHALL BE BONDED TO EACH OTHER WITH JUMPERS AT EACH END - THIS ASSEMBLY WILL BE CONSIDERED AS A SINGLE ICE BRIDGE SECTION FOR GROUNDING PURPOSES.

13. BOND EACH ICE BRIDGE POST, H-FRAME POST OR DEDICATED GROUNDING POST TO BURIED GROUNDING SYSTEM WITH #2 STC LEAD EXOTHERMICALLY WELDED TO POST BELOW TOP OF GRAVEL AND EXOTHERMICALLY WELDED TO GROUND RING. EACH POST TO HAVE SEPARATE GROUND LEAD DIRECTLY TO GROUND RING - DO NOT DAISY CHAIN POSTS TOGETHER.
14. BOND EACH RF CABINET TO EQUIPMENT GROUND RING WITH #2 AWG TINNED SOLID BARE COPPER CONDUCTOR LUGGED TO CABINET BODY AND EXOTHERMICALLY WELDED TO GROUND RING. LUG TO CABINET BODY USING LOCATION AT WHICH STUDS ON CABINET CHASSIS HAVE DIRECT GROUND WIRE CONNECTION TO CABINET INTERNAL GROUND BAR. RUN CONDUIT AND CONDUCTOR ACROSS BACK OF CABINET (DO NOT RUN TOWARDS NEAREST CORNER OF CABINET AND THEN BEND GROUND WIRE SHARPLY), ACROSS CONCRETE PAD BELOW CABLE LADDER, THEN DOWN INTO GRAVEL AREA.

15. BOND EACH BATTERY CABINET (WHERE USED) TO GROUND RING WITH #2 AWG TINNED SOLID BARE COPPER CONDUCTOR LUGGED TO CABINET BODY AND EXOTHERMICALLY WELDED TO GROUND RING. RUN GROUND LEAD IN FLEX CONDUIT ALONG BACK OF RBA84 CABINET, ACROSS CONCRETE PAD BELOW CABLE LADDER, THEN DOWN INTO GRAVEL AREA. CONNECT TWO HOLE LUG TO BACK OF CABINET AT FACTORY PROVIDED GROUNDING STUDS.

16. BOND GENERATOR TO GROUND RING WITH #2 STC AT TWO DIAGONALLY OPPOSITE LOCATIONS BY DRILLING AND BOLTING TWO HOLE LUG TO FINS ON GENERATOR BASE STRUCTURE. GROUND LEADS SHOULD TAKE SHORTEST PATH ACROSS CONCRETE PAD TO GRAVEL AREA, THEN CONTINUE TO GROUND RING.

17. WHERE PROPANE TANK IS INSTALLED TO FUEL GENERATOR, BOND PROPANE TANK TO GROUND RING WITH A SINGLE #2 STC CLAMPED TO FILLER PIPE OF PROPANE TANK AND EXOTHERMICALLY WELDED TO GROUND RING. GROUND LEAD SHOULD RUN TO TANK SUPPORT AND TAKE SHORTEST PATH ACROSS CONCRETE PAD TO GRAVEL AREA, THEN CONTINUE TO GROUND RING. IF PROPANE TANK FUEL LINE IS METALLIC AND CROSSES EQUIPMENT GROUND RING, BOND FUEL LINE TO EQUIPMENT GROUND RING WHERE THE TWO LINES CROSS WITH A SINGLE #2 STC CLAMPED TO FUEL LINE AND EXOTHERMICALLY WELDED TO GROUND RING.

18. BOND GPS ANTENNA AND GPS ANTENNA MOUNT TO TSDGA GROUND BAR AT BOTTOM OF H-FRAME POST WITH #2 GREEN INSULATED STRANDED GROUND WIRE.

19. PROVIDE TWO GROUND RODS OUTSIDE GATES OF COMPOUND. DISTANCE BETWEEN GROUND RODS SHALL MATCH WIDTH OF GATE OPENING, AND DISTANCE FROM FENCE SHALL MATCH LENGTH OF LONGEST INDIVIDUAL GATE LEAF. BOND GATE POSTS TOGETHER WITH #2 STC LEAD WHICH RUNS PAST AND CONNECTS TO GROUND RODS OUTSIDE GATES.

20. BOND EACH GATE POST WITH #2 STC TO NEAREST PORTION OF GROUNDING SYSTEM INSIDE COMPOUND.

21. BOND EACH GATE TO GATE POST WITH FLEXIBLE INSULATED OR BRAIDED #4/0 COPPER STRAP. EXOTHERMICALLY WELD STRAP TO BOTH GATE AND GATE POST.

22. ANY METAL FENCE POST WITHIN 6FT OF A GROUNDED METAL OBJECT SHALL BE BONDED TO THE NEAREST GROUND RING. ANY METAL FENCE WITHIN 6FT OF A GROUND RING SHALL HAVE THE LINE POSTS BONDED TO THE GROUND RING AT 20FT MAXIMUM INTERVALS AS MEASURED ALONG THE LENGTH OF THE FENCE.
23. WHERE GROUND BASED RRU'S, RAYCAP OVP'S OR DIPLEXERS ARE INSTALLED AT THE EQUIPMENT AREA, BOND EACH COMPONENT TO NEAREST TDSCA GROUND BAR BELOW THE COMPONENT WITH #2 GREEN INSULATED STRANDED GROUND WIRE. SINGLE HOLE LUG OR RING TYPE CONNECTOR IS SUITABLE FOR CONNECTION TO GROUNDING STUD ON EACH COMPONENT.

24. NOTIFY CM TO INSPECT GROUND RING BEFORE BACKFILLING. CONTRACTOR SHALL HIRE A 3RD PARTY TO PERFORM AN IEEE81 FALL OF POTENTIAL METHOD GROUND TEST. MAXIMUM ALLOWABLE RESISTANCE TO GROUND IS 5 OHMS. PROVIDE ADDITIONAL GROUND SYSTEM COMPONENTS AS REQUIRED TO ACHIEVE THIS VALUE.

25. REFER TO TOWER GROUNDING DIAGRAM AND NOTES FOR GROUND SYSTEM REQUIREMENTS ON THE TOWER.

26. GROUNDING OF ALL ELECTRICAL EQUIPMENT SHALL BE AS PER NEC, MUNICIPAL AND UTILITY COMPANY REQUIREMENTS.

PLANS PREPARED FOR:



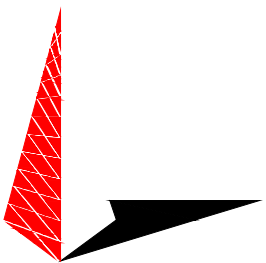
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313

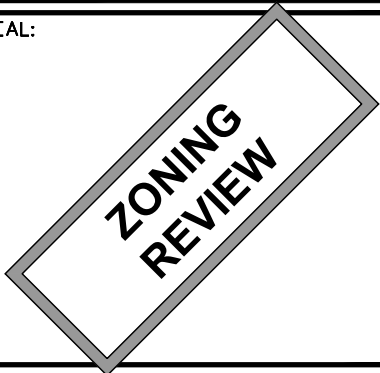
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



2	01-05-24	ZONING
1	10-20-23	ZONING
0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

GROUNDING NOTES

SHEET NUMBER:

Z-10

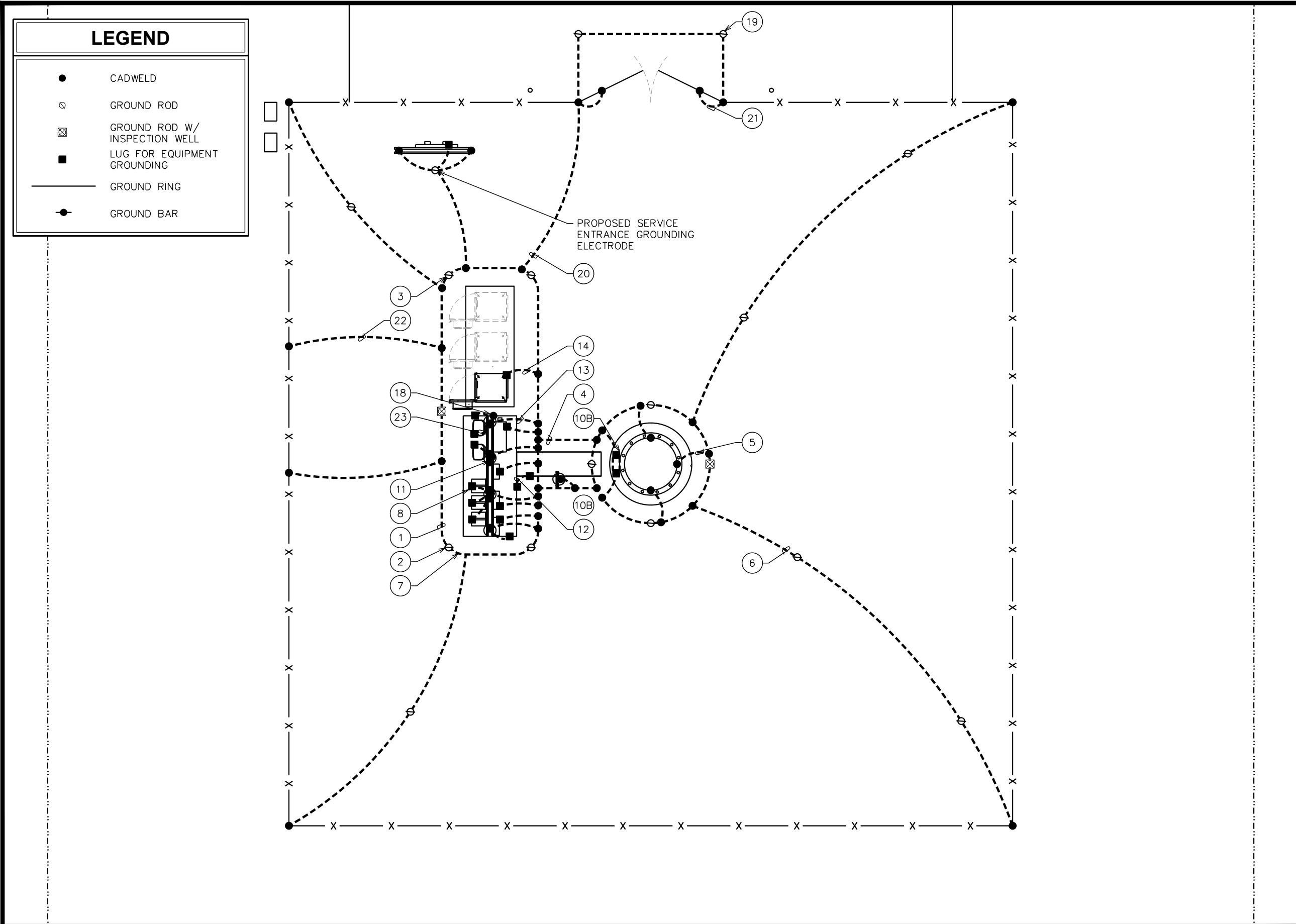
REVISION:

2

TEP #: 333496

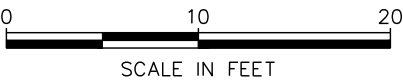
GROUNDING NOTES

SCALE: N.T.S.



GROUNDING PLAN

SCALE: 1" = 10'



PLANS PREPARED FOR:

TowerCo

5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

CLAUDETTE
SITE #: NC0313
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:

ZONING REVIEW

2	01-05-24	ZONING
1	10-20-23	ZONING
0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

GROUNDING PLAN

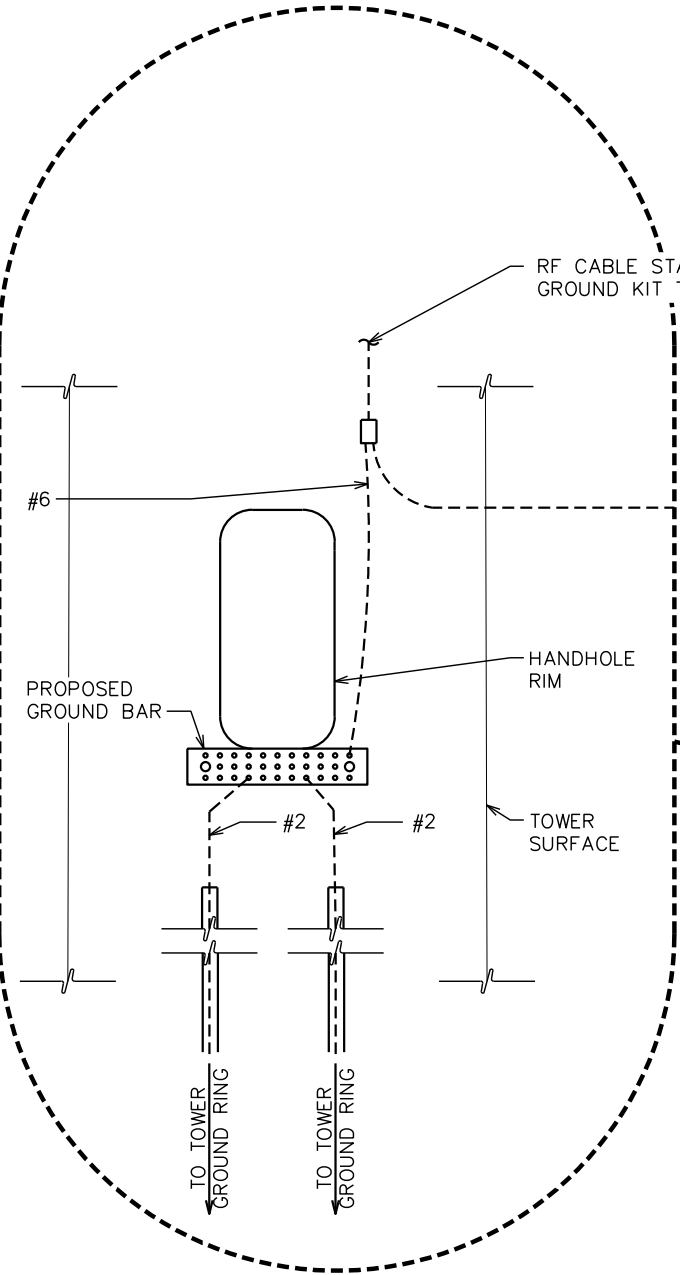
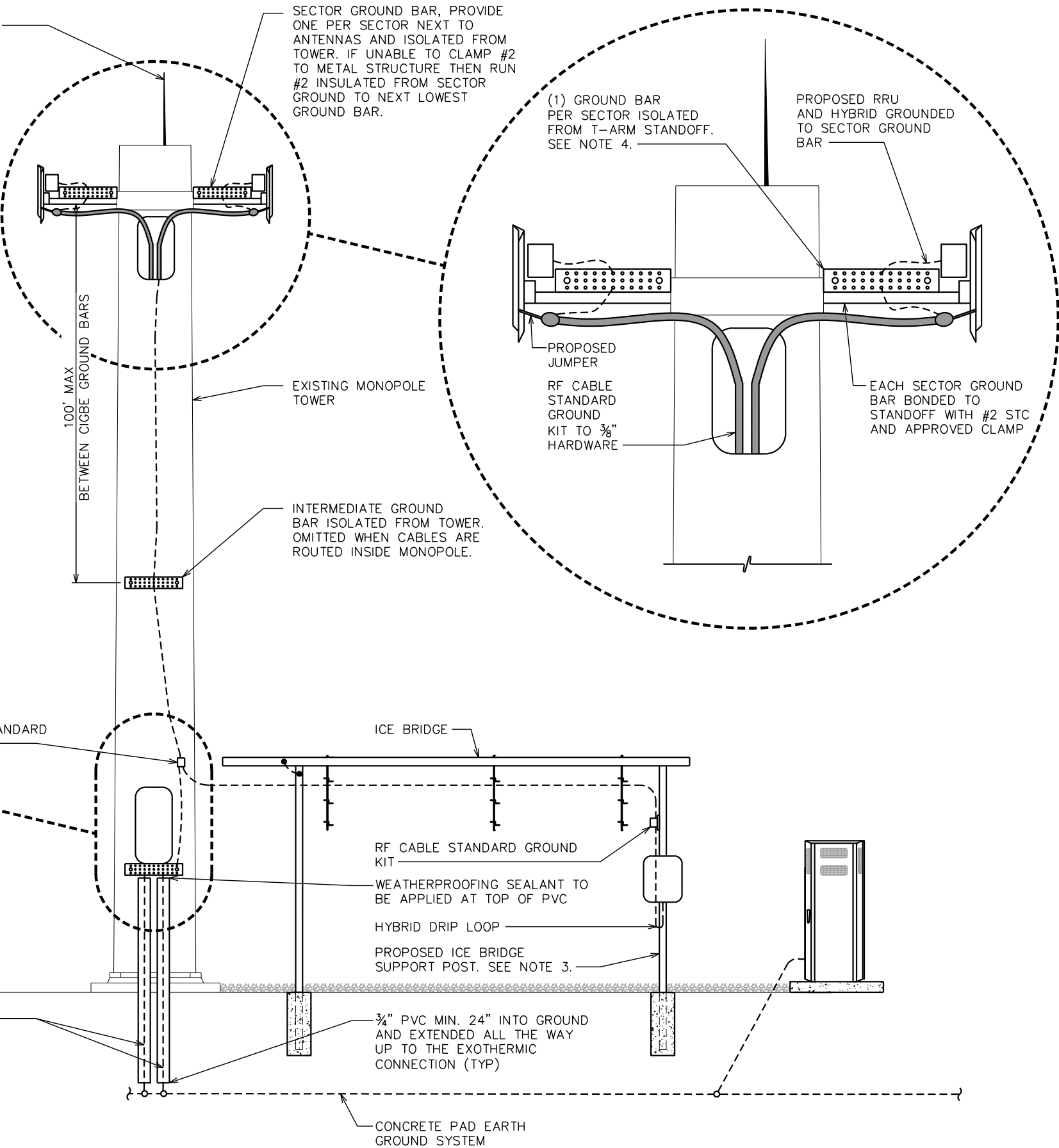
SHEET NUMBER: **Z-11**

REVISION: **2**

TEP #: 333496

NOTES:

- 1. MINIMUM BEND RADIUS OF #2 SOLID CONDUCTOR IS 12", EXCEPT MINIMUM FOR 24" FOR BUILDING OR TOWER GROUND RING.
- 2. ALL GROUND BARS SHALL BE INSTALLED WITH TAMPER RESISTANT MOUNTING HARDWARE.
- 3. TOP OF ICE BRIDGE POST FOOTINGS SHALL BE SET 6" BELOW TOP OF GRAVEL AND CADWELD LEADS TO POSTS BELOW TOP OF GRAVEL.
- 4. SECTOR GROUND BARS ARE TO BE ISOLATED FROM TOWER STEEL, BUT THEN BONDED TO TOWER STEEL WITH #2 STC AND APPROVED CLAMP. SEE SHEET E-11 FOR GROUND BAR DETAIL.



ICE BRIDGE, COAX, STANCHION, AND TOWER GROUNDING DETAIL (TYP)

SCALE: N.T.S.

PLANS PREPARED FOR:



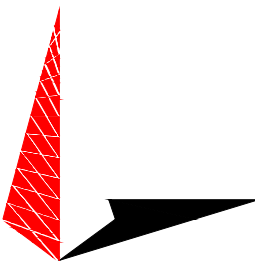
5000 VALLEYSTONE DRIVE, SUITE 200
CARY, NC 27519
(919) 653-5700

PROJECT INFORMATION:

**CLAUDETTE
SITE #: NC0313**

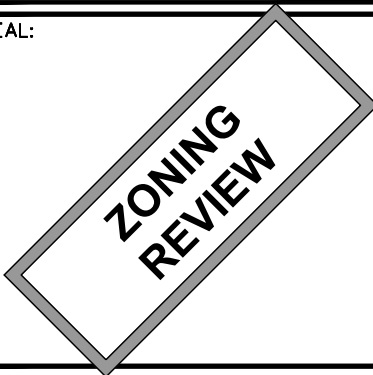
(E911 ADDRESS T.B.D.)
NC HWY 16
CLAREMONT, NC 28610
(CATAWBA COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



2	01-05-24	ZONING
1	10-20-23	ZONING
0	10-13-23	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: THD CHECKED BY: ANG

SHEET TITLE:

**ICE BRIDGE & TOWER
GROUNDING DETAIL**

SHEET NUMBER:

Z-12

REVISION:

2

TEP #: 333496

Exhibit 3
Certification Statements

Certification Statements

The undersigned representative of Towerco 2013 LLC (the “**TowerCo**”), with respect to the application for a Special Use Permit for a one hundred and ninety-nine foot (199’) wireless telecommunication tower being proposed by TowerCo to be constructed at 5198 N. N.C. Hwy. 16, Claremont, NC 28610 in Catawba County, North Carolina (the “**Tower**”), hereby certifies:

1. The Tower will be designed to support at least four (4) antenna arrays collocations, including the antenna array that TowerCo intends to install.
2. The Tower will be located, fenced and secured in a manner that prevents unauthorized access.
3. The Tower will be sited so as to be the least visually intrusive as reasonably possible and thereby have the least adverse visual effect on the environment and its character, on existing vegetation, and on the community in the area of the structure, specifically, the Tower will be a monopole with a galvanized finish (per Sec. 44-685.07), will not be lighted and is to be located on a heavily wooded lot. The only trees to be removed are those necessary to construct the access and utility easement and tower compound. Because of the number of antennas required on each array and the Tower-mounted remote radio units (RRUs) located behind the antennas, the antennas cannot be flush mounted without having the effect of prohibiting the wireless service.
4. The site access road and turn-around space will be created, maintained and repaired so as to ensure adequate emergency and service access.
5. TowerCo will construct, operate, maintain, repair, provide for removal of, modify or restore the Tower in strict compliance with all current applicable technical, construction, safety and safety-related codes adopted by the county, state, or United States, including but not limited to the most recent editions of the National Electrical Safety Code and the National Electrical Code, as well as accepted and responsible workmanlike industry practices and recommended practices of the National Association of Tower Erectors.
6. TowerCo will obtain all permits and licenses required by applicable law, rule, regulation or code.
7. The Tower will be constructed and maintained in a safe manner and in compliance with all County, state and federal regulations.
8. TowerCo is authorized to do business in the State of North Carolina.
9. There are no agreements that would limit or preclude the ability of TowerCo to share the Tower.
10. TowerCo will negotiate in good faith for the shared use of the Tower by other providers in the future.
11. The Catawba County Planning Department will be notified if any tower or collocation modification takes place.
12. TowerCo will post a bond of sufficient amount within thirty (30) days after construction of the Tower is completed.
13. An “as-built” certification can be added as a condition to the issuance of the Special Use Permit and that TowerCo will submit the “as-built” certification after completion of construction, but before the Certificate of Compliance is issued. The certification will show that the project was built according to submitted plans and has been completed.
14. The proposed Tower will be grounded, bonded and installed with appropriate surge protectors to protect persons and property.

Certification Statements
[Signature Page]

Towerco 2013 LLC


By: 
Name: Carrie Lynn Fazzolari (print)
Title: National Director of Zoning (print)
Date: 1/25/24

Exhibit 4

Authority for Appointment of Person to Act on My Behalf

AUTHORITY FOR APPOINTMENT OF PERSON
TO ACT ON MY BEHALF

The undersigned landowner, Lee A. Setzer (the "**Owner**"), and the undersigned tenant, Towerco 2013 LLC (the "**Tenant**"), do hereby appoint Thomas H. Johnson, Jr. of Williams Mullen to act on their behalf for the purpose of petitioning the Catawba County Board of Adjustment (the "**Board**") for a Special Use Permit.

The Owner and the Tenant do hereby covenant and agree with the Board that Thomas H. Johnson, Jr. (the "**Appointee**") has the authority to do the following acts for and on behalf of the Owner and the Tenant:

- (1) To submit an application for a Special Use Permit and the required supplemental materials;
- (2) To appear at public meetings to give testimony and make commitments on behalf of the Owner and the Tenant;
- (3) To accept conditions or recommendations made for the issuance of the Special Use Permit on the Owner's property; and
- (4) To act on the Owner's and the Tenant's behalf without limitations with regard to any and all things directly or indirectly connected with or arising out of any petition.

This appointment agreement shall continue in effect until the final disposition of the Special Use Permit application is submitted in conjunction with this appointment.

[SIGNATURE PAGE FOLLOWS]

AUTHORITY FOR APPOINTMENT OF PERSON
TO ACT ON MY BEHALF
[Signature Page]

Appointee's Name, Address & Telephone:

Thomas H. Johnson, Jr., Attorney
Williams Mullen
301 Fayetteville Street, Suite 1700
Raleigh, NC 27601
tjohnson@williamsmullen.com
(919) 981-4006

Landowner's Name, Address & Telephone:

Lee A. Setzer
5156 N. N.C. Hwy. 16
Claremont, NC 28610
(828) 409-6540

Landowner's Signature:



By: Lee A. Setzer

Date: 12-29-23

Tenant's Name, Address & Telephone:

Towerco 2013 LLC
5000 Vallestone Drive, Suite 200
Cary, NC 27519
(919) 653-5710

Tenant's Signature:



By: Carrie L. Fazzolari

Role: Zoning Director

Date: 1-5-24

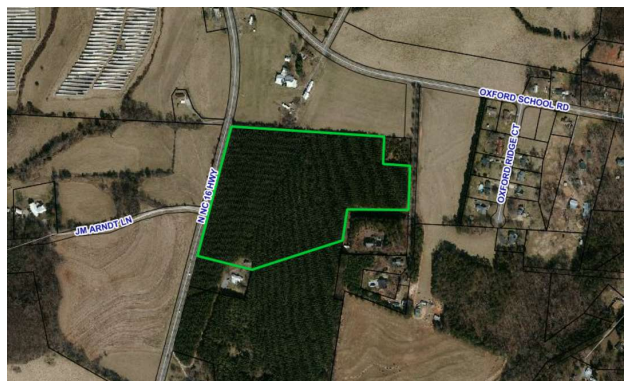
Exhibit 5
Impact Study

IMPACT STUDY

***Impact Study - Cell Tower
Claudette
5198 N. NC Highway 16
Claremont, Catawba County,
NC 28610***

Type Report: Impact Study

***Effective Date
December 29, 2023***



January 14, 2024

Ms. Jennifer Jack
TowerCo
Director of Site Development
5000 Valleystone Drive
Cary, NC 27519

RE: Impact Study for Proposed Telecommunications Facility located at 5198 N. NC Highway 16, Catawba County, North Carolina.

Dear Ms. Jack:

I have completed a study of the proposed tower. The scope of the assignment is to provide an analysis and conclusions addressing whether the proposed tower will substantially injure the value of adjacent or abutting properties. The study is intended to assist Catawba County officials for a special use permit for the development of a telecommunications tower.

The location of the proposed tower is on a site consisting of 21.13 acres used for tree farming. The proposed tower will be carved out of the tree farm. Telecommunications towers are common along primary transportation corridors like NC Highway 16. The surrounding land uses include agricultural and low-density residential uses. Across the street from the proposed tower is a solar farm. The surrounding land uses and location along NC 16 corridor are contributing factors to the scope of work and conclusions of this study.

The impact study is intended to conform to the Uniform Standards of Professional Appraisal Practice (USPAP), the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute. The impact study is not an appraisal as it does not report the value of any property; however, the study employs appraisal methodology to reach our conclusions of the impact of the proposed development. The impact study is of real property as this is the field of our expertise.

The conclusions of this study are supported by the data and reasoning set forth in the attached narrative. Your attention is invited to the Assumptions and Limiting Conditions section of this report. The analysts certify that we have no present or contemplated future interest in the proposed development, and that our fee for this assignment is in no way contingent upon the conclusions of this study.

EXTRAORDINARY ASSUMPTIONS AND HYPOTHETICAL CONDITIONS:

It is an extraordinary assumption of this report that the improvements as described within this report are compliant with the appropriate ordinance including but not necessarily limited to setbacks, landscaping, access, wetlands, and other items outside our field of expertise for this

assignment. These items will be addressed as part of the application by others with expertise within their respective fields.

It is an extraordinary assumption of this report that the proposed development will be constructed as detailed in the report. Further, it is an assumption of the study that the proposed access will be in accordance with all local and state regulations. Maintenance will occur through a non-exclusive easement that we assume is legal access. Given access will be required for the development, we consider the assumption reasonable for the purpose and intended use of this study.

The content and conclusions of this report are intended for our client and for the specified intended uses only. They are also subject to the assumptions and limiting conditions as well as the specific extraordinary assumption set forth in this report.

It is our opinion that the proposed development will not substantially injure the value of adjacent/abutting properties.

Thank you for the opportunity to be of service. If you have any questions or comments, please contact our office.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Michael P. Berkowitz", with a stylized flourish at the end.

MICHAEL P. BERKOWITZ
MPB REAL ESTATE, LLC

TABLE OF CONTENTS

SCOPE OF THE ASSIGNMENT	6
PREMISES OF THE STUDY	7
Identification of Subject.....	7
Client, Purpose, and Intended Use and Intended Users	7
Analyst.....	7
Property Inspection.....	7
Extraordinary Assumptions of Report	7
Effective Date of Study.....	8
Date of Report.....	8
Type Report.....	8
Study Development and Reporting Process.....	8
PROPOSED FACILITY	8
Tower.....	8
Site Improvements	9
Access	9
Location	10
SURROUNDING LAND USES.....	11
CATAWBA COUNTY ZONING ORDINANCE	13
MARKET RESEARCH	14
ADDENDA	27
Certifications	28
Qualifications of the Analyst.....	36

SCOPE OF THE ASSIGNMENT

In accordance with our agreement with the client, this impact study is specific to the needs of our client as part of an application for a special use permit to be considered by Catawba County Officials. Our study and the reporting of our study is in agreement with our client as follows:

The proposed development requires a special use permit. The report is intended to address items relevant to the application. The following criteria for approval were extracted from the Catawba County Unified Development Ordinance (UDO).

1. The use will not materially endanger the public health, safety, and general welfare, if located where proposed and developed and operated according to the application;
2. The use, which is listed as a special use in the district in which it is proposed to be located, complies with all required regulations and standards of this chapter, unless greater or different regulations are contained in the individual standards for that special use;
3. The use will not substantially injure the value of adjoining or abutting property; and
4. The use is consistent with any adopted area plans that encompass the property subject to the application.

The scope of the assignment includes research of existing towers in the neighborhood. The neighborhoods and their surrounding developments are researched to determine whether the proposed development, referred to as the “Claudette” site, is consistent with the location of other towers and their impact, if any, on property values.

The impact study provides an analysis of the surrounding properties. The analysis includes existing improvements, zoning designations and likely development patterns. The existing uses as of the effective date of this report in concert with the market data provided are contributing factors to the conclusions of this study.

PREMISES OF THE STUDY

Identification of Subject

“Claudette” site

5198 N. NC Highway 16
Claremont, Catawba County, NC 28610
REID: 401774

**Client, Purpose, and
Intended Use and Intended
Users**

Ms. Jennifer Jack
TowerCo
Director of Site Development
5000 Valleystone Drive
Cary, NC 27519

The client and intended user are Ms. Jennifer Jack and representatives. The intended use is as an aid to assist Catawba County officials in rendering a decision regarding an application for a special use permit for the proposed development. The study is not intended for any other use or users.

Analyst

Michael P. Berkowitz

MPB Real Estate, LLC
1100 Sundance Drive
Concord, NC 28027

Property Inspection

Michael Berkowitz inspected the property and neighborhood surrounding the proposed development. Details of surrounding land uses, and observations are provided throughout the report. I also performed off-site visual inspections of several towers located in Catawba County. I consider my observations in the context of the market data. They are a contributing factor to my conclusions.

**Extraordinary
Assumptions of Report**

It is an extraordinary assumption of this report that the improvements as described within this report are compliant with the appropriate ordinance including but not necessarily limited to setbacks, landscaping, access, wetlands, and other items outside our field of expertise for this assignment. These items will be addressed as part of the application by others with expertise within the respective fields.

It is an extraordinary assumption of this report that the proposed development will be constructed as detailed in the report. Further, it is an assumption of the study that the proposed access will be in accordance with all local and state regulations. Maintenance will occur through a non-exclusive easement that we assume is legal access. Given access will be required for the development, we consider the assumption reasonable for the purpose and intended use of this report.

Should the extraordinary assumptions not exist, we reserve the right to amend this study.

Effective Date of Study December 29, 2023

Date of Report January 13, 2024

Type Report Impact Study Report

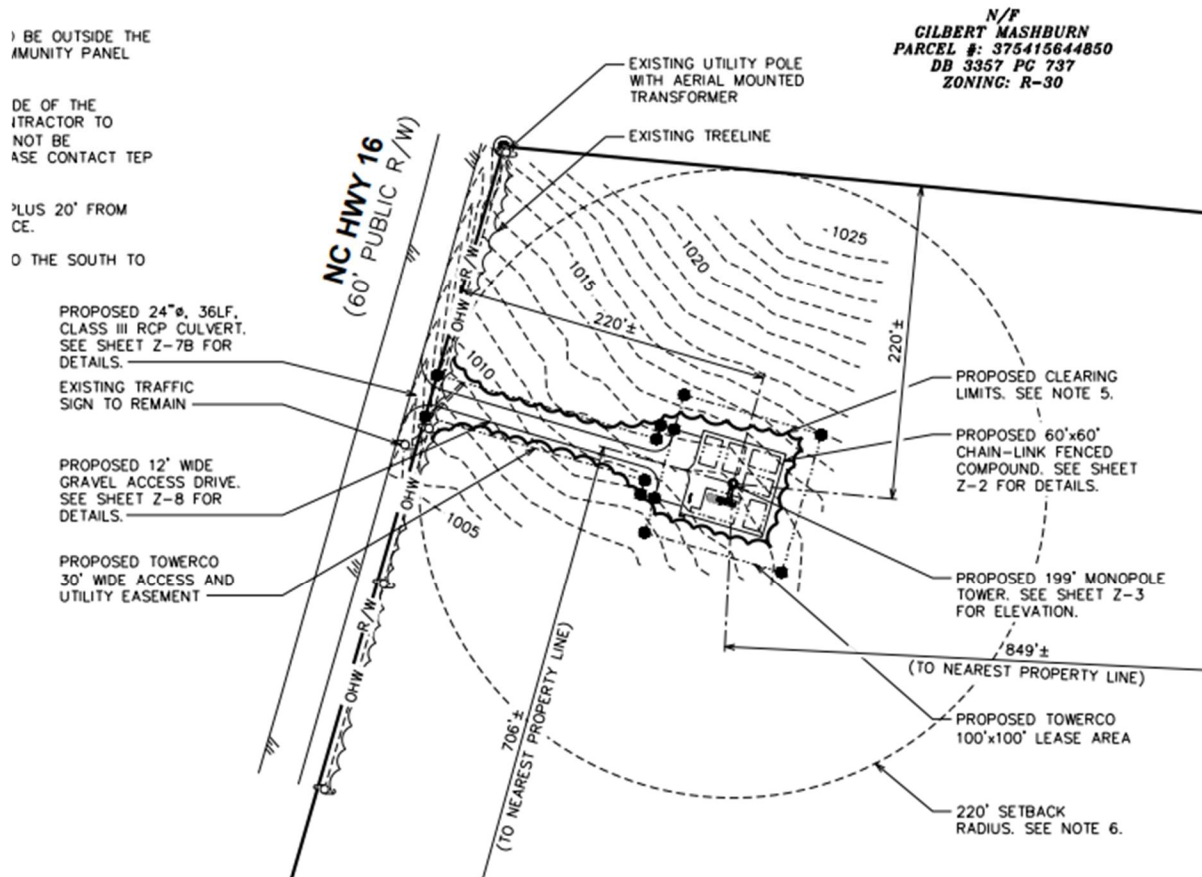
Study Development and Reporting Process In preparing this study, the analyst:

- Analyzes physical affects, if any, of the proposed construction on adjacent/abutting properties;
- Reviews plans for the proposed development to determine whether it is compliant with the Catawba County UDO for items within my field of expertise;
- Reviews site plan provided by our client with respect to the physical characteristics of the proposed development;
- Reviews Section 44-332 of the Catawba County UDO regarding the approval process for a special use permit;
- Research market data around existing cell towers in Catawba County to determine whether the proposed development is in accordance with the other similar developments in the area.

PROPOSED FACILITY

Tower Based on information provided to the analyst, the proposed tower will consist of a 199-foot “monopole”

communications tower. The proposed tower will be nestled amongst the existing trees, which will reduce the visual footprint of the tower.



SITE PLAN

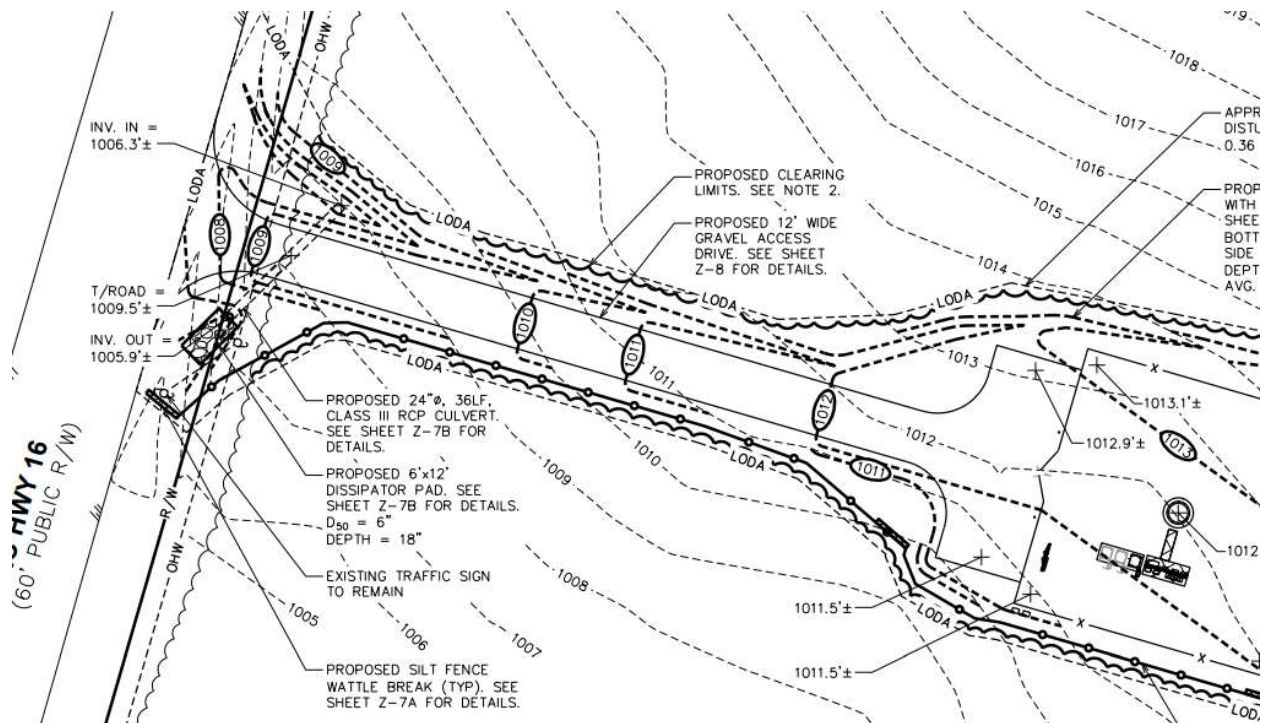
Site Improvements

The site improvements include an eight-foot chain link fence with three strands of barbed wire. The site improvements will include the extension of utilities to serve the tower. The site plan appears to include provisions for environmental and water drainage. These improvements are intended to minimize the impact of the construction on the agricultural use of the property.

Access

The access to the proposed tower will require a curb cut off NC Highway 16. The site plan shows a flared driveway at the entrance. The construction will include a 12-foot-wide gravel drive consistent with other driveways in the area. The access will be over a 30-foot-wide access/utility easement.

The following is the drawing provided showing access to the proposed tower.



We assume that the access for the proposed development is in accordance with all local and state regulations. Given the access is comparable to other driveways in the area, the assumption is reasonable.

Location

The proposed tower is in the northwestern portion of the site with a conservation/residential (CR) zoning designation. As noted, the proposed development includes erosion control and consideration for potential environmental impact. While we will detail the surrounding developments later in the study, the uses in the area include a mixture of residential and agricultural uses. There are some sporadic commercial and industrial uses nearby along the Highway NC 16 corridor. The current zoning district is consistent with surrounding land uses.

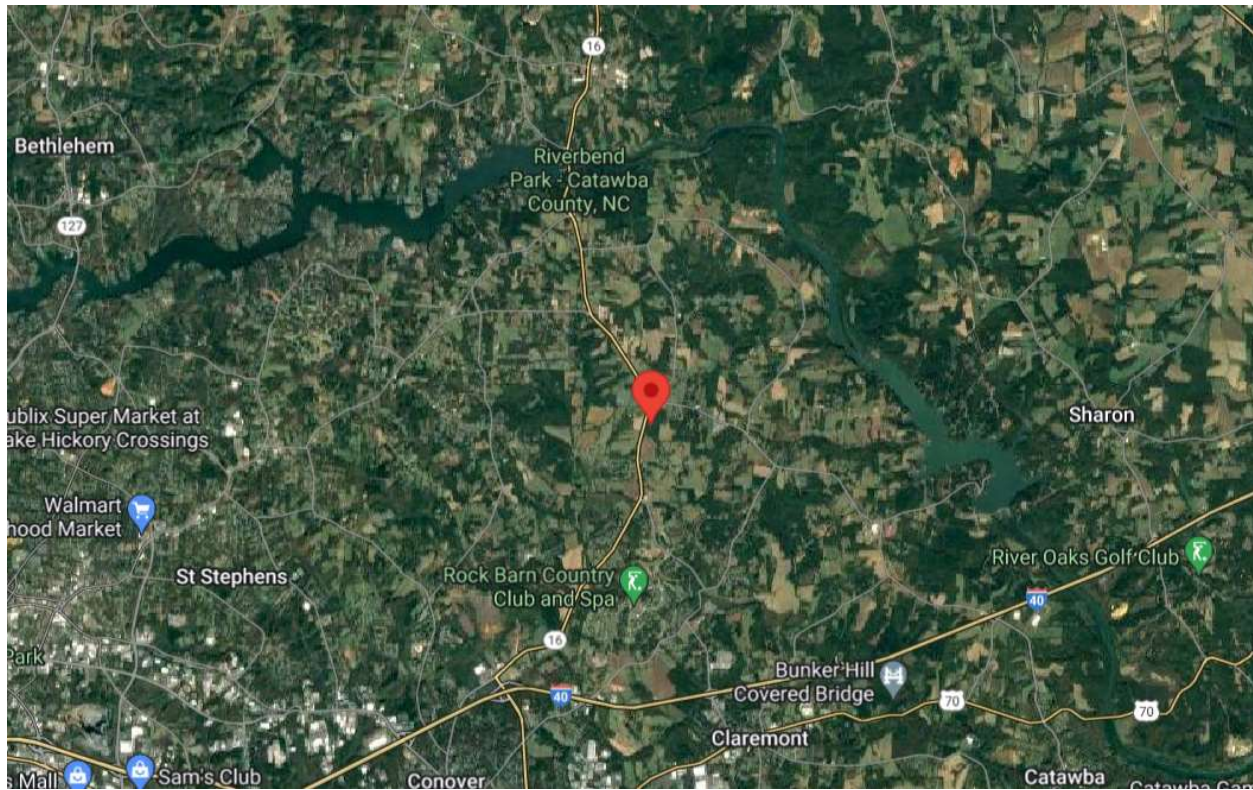
SURROUNDING LAND USES

The proposed development is located on a 21.13-acre tract of land used as a tree farm. The neighborhood is the NC Highway 16 corridor extending from I-40 and Conover to the south and Lake Hickory to the north. This is the primary transportation corridor for this section of Catawba County and a factor in the likely future uses along the corridor.

Our tour of the neighborhood showed primarily agricultural, low-density residential and institutional uses along the subject's section of the corridor. The proposed tower will be between Oxford Elementary School to the southeast and the Oxford Volunteer Fire Station to the northwest. Schools and other public gathering places are common demand sources for wireless service. Coverage is pertinent to first responders who use wireless communications for public safety.

The following chart provides a summary of the adjacent or abutting properties. Several of the properties are under related ownership. Partitioning of family property is common in the rural areas of North Carolina. We would typically exclude properties under related ownership, but the visual impact of the tower is comparable to the other adjacent/abutting properties. Therefore, the study and its conclusions are applicable to all the adjacent/abutting properties.

Adjacent/Abutting Properties				
REID	Owner	Address	Acres	Land Use
54666	Nellie & Gilbert Mashburn	6359 Oxford School Road	14.55	Residential
54668	Eubert Allen Jr. Trust	5355 N. NC Highway 16	57.4	Solar Farm
54669	Marie Aiken	5321 N. NC Highway 16	0.82	Residential
404072	Philip & Marjorie Setzer	N. NC Highway 16	32	Agricultural
404107	Philip & Marjorie Setzer	2540 JM Arndt Lane	2.25	Residential
54665	Lynn Brittain	5155 N. NC Highway 16	22.95	Agricultural
601102	Virginia & Lee Setzer	5156 N. NC Highway 16	1.78	Residential
601101	Carole Setzer Hovland	5146 N. NC Highway 16	20.03	Agricultural
91428	Wendy Hartsoe	6275 Oxford School Road	2.91	Residential
400463	Annette Hollar	6251 Oxford School Road	7.35	Agricultural
404378	Francisco & Esther Hernandez	Off Oxford School Road	0.75	Vacant Land



The proposed tower will be just south of the intersection of Oxford School Road and NC Highway 16. This is a signaled intersection, which acknowledges that this intersection will likely represent a nodal development pattern in the future growth patterns along the corridor. Across the street is a solar farm that poses a larger visual impact than the proposed tower albeit horizontally rather than vertically.

The remaining adjacent or abutting properties are used for residential or agricultural purposes. Agricultural properties are common locations for telecommunications towers. Many farmers have turned to leasing the land for tower construction to supplement their agricultural income.

As we will detail later in this report, the impact of the proposed development focuses on the visual impact of the proposed tower. The existing vegetation and agricultural/residential uses are a factor in the analysis. Future growth along the NC Highway 16 corridor will likely continue. The location of the subject near a signaled intersection would indicate that higher intensity of development will focus around the intersection including the

subject.

As we will discuss in the following section, the scope of the assignment is to determine whether the proposed development is in accordance with the Catawba County UDO regarding the approval of a special use permit. The items within our field of expertise are detailed in the following section.

CATAWBA COUNTY UNIFIED DEVELOPMENT ORDINANCE (UDO)

As part of the assignment, I reviewed applicable items of Section of the Catawba County UDO regarding the approval process for a special use permit. This section identifies several items that will be addressed by others and included in the application. Therefore, the remainder of the report focuses on the items provided in the Scope of Work section.

1. The **use** will not materially endanger the public health, safety, and general welfare, if located where proposed and developed and operated according to the application;
2. The **use**, which is listed as a **special use** in the district in which it is proposed to be located, complies with all required regulations and standards of this chapter, unless greater or different regulations are contained in the individual standards for that **special use**;
3. The **use** will not substantially injure the value of adjoining or abutting property; and
4. The **use** is consistent with any adopted area plans that encompass the property subject to the application.

Based on our review of the ordinance, the remainder of the study focuses on the visual impact on adjacent or abutting properties and potentially injurious effect of the tower on real property values. The potential impact on these properties is the visual impact of the proposed tower.

We will discuss property values later in the report. We acknowledge that the proposed 199-foot tower will have a height more than any structure in the immediate area. However, the siting and surrounding developments will minimize, to the extent possible, the visual impact on surrounding properties.

Summary

The items within our field of expertise focus on the aesthetic impact of the proposed development on values of adjacent or abutting properties. This is based on the existing

developments as detailed earlier in the study. The existing infrastructure, location and property uses reduces the impact of the tower.

MARKET RESEARCH

A potential issue associated with the impact of the proposed development is on real property values in the immediate vicinity and the neighborhood. We researched towers in Catawba County and identified the development patterns around these towers. After analyzing the market data, we compare this information to the proposed site and the physical characteristics and development patterns surrounding the proposed development.

Catawba County Towers

During our research, we visited several towers in Catawba County. The comparability of towers to the proposed development is a significant factor in developing a credible conclusion of the study. Towers are selected for a variety of reasons including but not necessarily limited to:

- *Location* – The proposed location is along the primary transportation corridor for this portion of Catawba County.
- *Surrounding Developments* – The surrounding developments include residential and agricultural uses. There is a solar farm across the street from the proposed tower.
- *Construction Type/Height* – The proposed tower is a monopole tower with a height of 195 feet.
- *Intersection Influence* – Other intersections along the NC Highway 16 corridor are commercial nodes. Future development patterns would likely take advantage of the location.

For the research of towers, we rely on information from antennasearch.com, which we consider a reliable source of

information. We cross-referenced this data with information on the Catawba County GIS. Some of the towers were not visible from the street or aerial photos. We exclude these towers as some towers receive approval without construction and the information available does not show a date of construction. We have excluded the towers listed with a height of under 100 feet. The following map shows the location of towers within three miles of the proposed tower.



The search provided two registered towers and five unregistered towers. Of the seven towers only two were visible from a public right-of-way or aerial photos. The closest tower is on a half-acre site owned by the State of North Carolina. This tower does not appear to conform to current development requirements as the tower is approximately 40 feet from the boundary. The adjacent property, a 29.43-acre vacant tract, is owned by Catawba County. The market data around this tower was inadequate

to develop a credible analysis isolating the visual impact of the tower.



The second tower is located at a commercial node at the intersection of NC Highway 16 and St. Peters Church Road. The tower is located behind Golf Carts of Hickory, which is sandwiched between a convenience store and a dollar store. The commercial development at a signaled intersection is the logical next step of development along the corridor should population increases warrant. The commercial properties adjacent to the tower are not comparable to the residential and agricultural properties adjacent to the proposed tower.

The towers in the area do not provide adequate quality or quantity of data to perform a credible quantitative analysis. Physical characteristics including location, tower construction and other external factors impugn the credibility of isolating the impact of the tower. Therefore, we have provided the results of several studies performed in areas with similar surrounding developments.

Rural Towers

As with most rural areas, the absence of quality and quantity of data makes any analysis subjective, which impugns its credibility. The following provides examples where the market provides data adequate to isolate the impact, if any, of a telecommunications tower. The paired sales analyses presented are for rural areas and the impact on land and/or residential property values.

1852 County Line Road, Gaston County, NC

There are residential developments across the street from this tower. This tower is the same height and construction type as the proposed tower. As with most rural areas of North Carolina, the market data is limited. The following data consists of some modular homes that sold along County Line Road across the street from the tower to some modular homes that sold in Lewis Farm Estates. The following chart provides a summary of the sales.



Property Sales Summary

Address	Sale Date	Sales Price	Acres	SF	Price/SF	Year Built
1848 County Line Road	5/24/11	\$ 100,000	1	1,908	\$ 52.41	1999
1846 County Line Road	11/16/07	\$ 90,000	1.03	1,512	\$ 59.52	2004
1519 Lewis Farm Road	3/5/15	\$ 116,000	2.42	1,842	\$ 62.98	1999
1526 Lewis Farm Road	8/29/07	\$ 170,000	2.88	2,881	\$ 59.01	2006

In the analysis of these sales, there are several factors that contribute to the price paid. The most compelling comparison is between the two sales that closed in 2007. The Lewis Farm Sale would warrant a downward adjustment for lot size offset by the size of the improvements. The offsetting characteristics result in a nominal variance paid per square foot. The indication is that the visual impact of the cell tower did not impact the price paid.

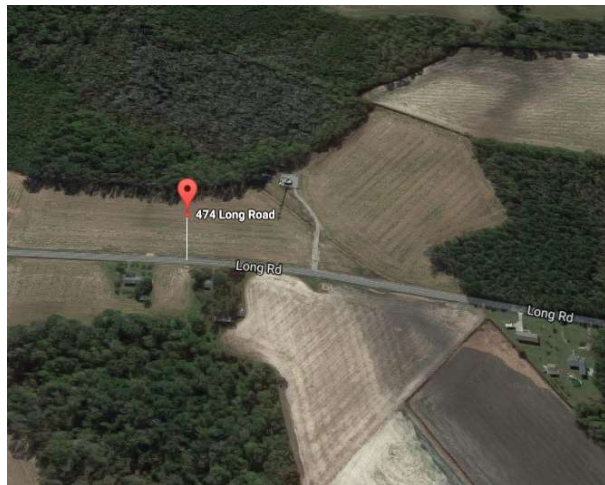
NC Highway 238, Stanly County, NC

Another tower on a residentially zoned property is located along the NC Highway 138 corridor in Stanly County. The tower is a monopole with a height of 195 feet. Research of the market for the adjacent properties revealed a sale of the adjacent property to the north of the property improved with the tower. The following chart provides a summary of sales found in the area. The sale of the adjacent property is highlighted in yellow. The other sales are for other properties providing similar utility.

Matched Pair Analysis								
Sale Date	Address	Acres	Size (SF)	Year Built	BR	BA	Sale Price	Price/SF
3/12/20	12483 NC Hwy 138	2	1,500	1955	3	1	\$ 140,000	\$ 93.33
1/30/20	12514 NC Hwy 138	1.91	1,070	1954	2	1	\$ 103,000	\$ 96.26
6/13/19	32621 Chapel Rd.	2.59	1,734	1993	3	2	\$ 150,000	\$ 86.51
10/26/17	32612 Chapel Rd.	2.04	1,421	1981	2	1	\$ 114,000	\$ 80.23
5/10/20	33515 S. Stanly School Rd.	14.46	1,008	1959	2	1	\$ 117,000	\$ 116.07
1/17/19	12028 NC Hwy 138	1.06	1,860	1947	3	2	\$ 160,000	\$ 86.02
4/16/19	12018 NC Hwy 138	0.95	1,501	1949	3	1	\$ 149,000	\$ 99.27
6/18/18	11636 NC Hwy 138	0.68	1,709	1945	3	1	\$ 115,000	\$ 67.29
6/16/19	12273 Old Aquadale Rd.	1.2	1,865	1965	3	1.5	\$ 170,000	\$ 91.15

As shown on the previous chart, the sale of the property adjacent to the tower site is on the upper end of the range on a price per square foot as well as price point. After researching and adjusting these sales for physical and market variances in comparison to the sale adjacent to the tower, the analysis indicates that there is no diminution in value caused by the presence of a tower on the adjacent property.

The following three data sets were found for towers in Robeson County. The market data is segregated into two categories: single family homes and vacant land. For all the data sets, the properties highlighted in yellow are those properties along the same corridor as the tower. These properties are compared to properties highlighted in green, which are along similar streets without a tower. We include additional market data as background for the paired sales analyses.



474 Long Road, Robeson County

This tower is the most comparable to the proposed tower at 180 feet. As with the surrounding developments for the other towers selected for comparison in this study, the land uses in the area are primarily agricultural. The low-density residential developments include homes constructed over a wide time span including some estate style homes. The market data for single family dwellings are summarized in the following chart.

SFD SALES						
Address	Sale Date	Sales Price	Year Built	SF	Acres	\$/SF
46 SURRY	5/25/2005	\$68,000	1986	1,152	2.34	\$ 59.03
121 SURRY	10/29/2007	\$93,000	1978	1,443	1	\$ 64.45
285 JUNE	5/15/2009	\$41,000	2000	1,632	1	\$ 25.12
992 LONG RD	8/20/2007	\$57,500	1978	972	1	\$ 59.16
867 LONG RD	11/5/2009	\$27,000	1962	800	1.52	\$ 33.75
719 LONG RD	6/8/2015	\$87,000	1989	1,437	4.37	\$ 60.54
1148 LONG RD	8/14/2015	\$227,500	2005	2,029	1.8	\$ 112.12

The analysis of these sales as well as other sales presented later in this section includes several factors including but not necessarily limited to size, age, and lot size. The most compelling market data is the consistency in the prices paid per square foot for the highlighted properties. The comparison of the data shows some offsetting characteristics but does provide evidence that the cell tower does not injure property values in the area.

The second data set is for land sales found in the same neighborhood. The highlighted properties are for residential lots consistent with the low-density development patterns in the neighborhood.

LAND SALES				
Address	Sale Date	Sales Price	Acres	\$/Acre
181 TROY DR	6/11/2010	\$150,000	19.63	\$ 7,641
WILKES RD	5/1/2013	\$20,000	7.39	\$ 2,706
859 LONG RD	8/22/2012	\$15,000	1.24	\$ 12,097
OFF LONG RD	3/24/2015	\$22,000	3.43	\$ 6,414

Contrary to the market data for single family dwellings, the most compelling information from this data set is the price point for the residential lots. The size of the lots is the most influential factor on price point. Again, the market data

indicates that the tower has not impeded demand for land, nor has it injured land values in the area.



7746 E Hwy 211, Robeson County



This tower as well as all the remaining towers have heights of 300-feet or higher. I have applied the same methodology with the previous analyses and segregated the data into single family dwellings and vacant land. The sales for single family dwellings are summarized in the following chart.

SFD SALES						
Address	Sale Date	Sales Price	Year Built	SF	Acres	\$/SF
913 HARRIS RD	1/31/2017	\$65,000	2005	1,443	1	\$ 45.05
4642 OLD ALLENTON	12/7/2015	\$64,000	1950	912	1	\$ 70.18
146 BEAR BAY	11/13/2014	\$48,000	1980	1,456	2.69	\$ 32.97
877 OLD ALLENTON	6/25/2013	\$46,500	1969	1,506	1.5	\$ 30.88
9697 NC 211	6/26/2012	\$61,000	1955	1,170	1.24	\$ 52.14
8355 E NC HWY 211	6/3/2015	\$75,000	1988	1,152	4.22	\$ 65.10

The physical variance in this data set would require a higher level of adjustment. Notwithstanding this fact, the sales along the 211 corridor provide a similar price point and price paid per square foot. The offsetting nature of the variances is reflected in the similar price point for the majority of sales with the property closest to the tower having the highest price point. The analysis of this data set provides further evidence to our conclusion.

The following chart provides a summary of land sales for the area. Again, applying the same methodology as the previous analyses.

LAND SALES				
Address	Sale Date	Sales Price	Acres	\$/Acre
NC HWY 211	12/17/2014	\$17,500	0.59	\$ 29,661
699 BAY BEAR	6/18/2015	\$17,000	8.13	\$ 2,091
HARRIS RD	5/14/2015	\$8,500	1	\$ 8,500
HARRIS RD	8/17/2015	\$9,000	1.27	\$ 7,087
3 PITTMAN	4/4/2014	\$250,000	93.22	\$ 2,682
WILKES	5/1/2013	\$20,000	7.39	\$ 2,706
481 HARRIS RD	2/8/2013	\$25,500	0.92	\$ 27,717
538 DERWOOD	9/17/2012	\$45,000	17.74	\$ 2,537
DERWOOD	7/19/2012	\$80,000	24.84	\$ 3,221
PITTMAN	5/21/2012	\$15,000	14.08	\$ 1,065

The best matched pair in this data set is from the sales of two mobile home lots. While the price point was higher for the sale on Harris Road, the price per acre was higher for the lot on Highway 211. This indicates that size was a significant factor in the price paid. The size variance would be the most significant factor. The only other sale found lies on the lower end of the range of the data set, which is considered reasonable given its physical characteristics including some areas that appear undevelopable.



Kinlaw Road. Robeson County

The land sales in the area provide the most compelling evidence in the neighborhood for this tower. The following chart provides a summary of land sales in the area.

LAND SALES				
Address	Sale Date	Sales Price	Acres	\$/Acre
HOWELL RD	5/25/2012	\$98,000	47	\$ 2,085
TARHEEL RD	12/12/2012	\$13,000	3.37	\$ 3,858
346 BARNHILL	9/3/2013	\$28,500	8	\$ 3,563
5168 TARHEEL	1/3/2014	\$30,000	9.15	\$ 3,279
KINLAW RD	9/4/2014	\$27,000	6.87	\$ 3,930

The sale closest to the tower sold for the highest price per

acre. Again, the market data for land around this cell tower indicates that the tower does not injure the prices paid for land in the neighborhood.

The following is a summary of single-family dwelling sales found in the neighborhood.

SFD SALES						
Address	Sale Date	Sales Price	Year Built	SF	Acres	\$/SF
88 BARNHILL	4/30/2012	\$76,000	1995	1,458	2.01	\$ 52.13
6876 HOWELL	5/22/2012	\$55,000	1988	1,344	1.98	\$ 40.92
7889 HOWELL	12/17/2012	\$37,500	1950	1,454	1.86	\$ 19.23
5168 TARHEEL	5/9/2013	\$125,000	1958	1,980	5	\$ 63.84
6225 HOWELL	8/10/2016	\$200,000	1999	2,837	1.01	\$ 100.05
6257 HOWELL	2/10/2017	\$225,000	2007	3,303	1	\$ 112.11
306 TARHEEL	10/17/2013	\$177,500	1953	3,087	5.03	\$ 90.89
3647 TARHEEL	9/5/2014	\$46,000	1992	1,296	0.92	\$ 23.09
5478 TARHEEL	10/3/2014	\$125,000	2002	1,920	8.4	\$ 62.44
8191 HOWELL	11/10/2014	\$71,000	1980	1,032	1.02	\$ 35.86
470 KINLAW RD	12/31/2014	\$42,500	1982	1,338	1.5	\$ 21.44
KINLAW RD	6/15/2015	\$73,500	1962	1,485	0.89	\$ 37.46

Sales of single-family dwellings reveal that age and condition of the improvements is the most significant factor in the prices paid. Development in the area is sparse and supply side pressures in the market and low number of transactions indicates that the neighborhood is in the stable phase of its economic development, similar to the subject's neighborhood. The sales price paid for the properties along the corridor of the tower and other corridors is consistent.



Gaston Drive, Bladen County

This tower is in Bladen County. The surrounding developments are comparable to the subject and is included in this analysis. The tower is located off Gaston Drive. The single-family dwelling sales in the neighborhood were insufficient quantity (two sales found), to provide a credible analysis. However, the sales of land as shown on the following chart provide a reflection of the market. The following chart is a summary of the sales. Note the two first sales in the chart are for mobile home lots.

LAND SALES				
Address	Sale Date	Sales Price	Acres	\$/Acre
2392 GUYTON	7/19/2012	\$10,000	1	\$ 10,000
300 GASTON DR	2/23/2015	\$19,000	1.7	\$ 11,176
MASSEY RD	10/16/2012	\$25,000	15.35	\$ 1,629
GUYTON ROAD	5/31/2013	\$9,000	0.98	\$ 9,184
GUYTON RD	10/18/2013	\$20,000	5.57	\$ 3,591
MASSEY RD	12/3/2013	\$6,000	0.9	\$ 6,667
MASSEY RD	4/23/2014	\$31,500	12.37	\$ 2,546
1023 STORMS RD	3/20/2015	\$9,000	2	\$ 4,500
303 GASTON DR	8/29/2015	\$11,000	0.89	\$ 12,360

The land sales for lots near the tower are consistent with other lot sales found with no visual influence from the tower. The two lots highlighted in yellow reflect the upper end of the range for vacant land. The market data indicates that development near the tower has not influenced the normal course of development for the immediate area. Further, the market data indicates that buyers are paying similar prices for lots within the visual sphere of influence of a cell tower.

The recent studies I have performed provide no credible empirical evidence that the proposed tower will injure property values for adjacent or abutting properties. The studies provided are for larger areas of potential influence than adjacent or abutting properties.

Other Considerations

Other potential impacts to the surrounding area include noise, traffic, and lighting. The operation of a cell tower is essentially silent and would not influence the surrounding developments. The additional traffic caused by the proposed development is nominal and would likely occur for routine

maintenance. Any increases in traffic do not impact the adjacent/abutting properties.

Conclusions

The market activity in the area reflects a community poised for a growth phase of its economic life cycle after a long term of stability. Based on the market data presented, the development of a cell tower will not impede development of the neighborhood. The results of studies including those included in this report show consistency between prices paid for land and single-family dwellings in rural and suburban areas where cell towers are present. Therefore, I conclude that the proposed development of a cell tower will not be a detriment to property values of adjacent/abutting properties or other properties in the area.

Subject Neighborhood

In addition to the market activity for existing towers, we also consider the surrounding developments for the subject. The question posed for this study is “would the development of the monopole telecommunications tower warrant a downward adjustment to adjacent/abutting properties?”

When considering an adjustment in an appraisal, the appraiser must consider all factors that could contribute to an adjustment. The aesthetics and location of the proposed development as well as the existing developments are a factor in developing our opinion. The factors considered in developing our opinion include but are not necessarily limited to:

- The market has not shown a detrimental impact on development patterns in areas with visual influence from a tower.
- The surrounding developments include a solar farm that poses a larger visual footprint than the subject.
- The siting of the proposed tower in conjunction with the vegetative buffer will obscure most if not all the tower from nearby properties.

- The existing above-ground infrastructure poses a larger visual footprint than the proposed tower because of distance and screening.
- The location is just south of a signaled intersection along the primary transportation corridor for the area. The likely development patterns at the intersection will likely include commercial development once the population reaches the critical mass to develop neighborhood-oriented retail to serve the increasing population.

All these factors would contribute to the aesthetic appeal and a hypothetical valuation of properties in the neighborhood. The multitude of factors would indicate that multicollinearity for aesthetics exists for adjacent/abutting properties. Multicollinearity arises when multiple items correlate with each other. The combining of multiple factors can cause a distortion of the impact of any of the factors individually without consideration for all the factors that contribute to the common issue.

In the case of the proposed development, all the residentially zoned properties include significant tree cover between the proposed tower and their respective improvements. To attribute any adjustment to the proposed development would be misleading and not result in a credible adjustment. In other words, any adjustment for the development of a tower on a nearby property without consideration of the numerous other aesthetic influences would not be credible. The market data provided includes towers with higher levels of visual impact and provide no empirical evidence of an adverse impact on value.

The proposed development has siting and existing buffers to minimize to the extent possible the visual impact of the proposed tower. The development of telecommunications towers along major roadways near schools and other institutional uses is common. It is my opinion that the

proposed development will not substantially detract from the aesthetics or character of the neighborhood because of its location, existing uses and existing vegetative buffer. The proposed development will not substantially injure the value of adjacent/abutting properties.

A handwritten signature in black ink, appearing to read "Michael P. Berkowitz". The signature is fluid and cursive, with the first name "Michael" and last name "Berkowitz" being more legible than the middle initial "P".

Michael P. Berkowitz

ADDENDA

Certifications

CERTIFICATION OF THE ANALYST

I, Michael P. Berkowitz, certify that, to the best of my knowledge and belief,

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
4. I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
5. I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
6. My engagement in this assignment was not contingent upon developing or reporting predetermined results.
7. My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this study.
8. The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice*.
9. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
10. I have made a personal inspection of the property that is the subject of this report.
11. No one provided significant real property appraisal assistance to the person(s) signing this certification other than those individuals having signed the attached report.



A handwritten signature in black ink, appearing to read "Michael P. Berkowitz".

Michael P. Berkowitz
(NC State Certified General Real Estate Appraiser #A6169)
(SC State Certified General Real Estate Appraiser #CG6277)

January 14, 2024

Date

(Rev: 06/18/12)

ASSUMPTIONS AND LIMITING CONDITIONS

ASSUMPTIONS AND LIMITING CONDITIONS

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Confidentiality

This report is to be used only in its entirety and no part is to be used without the whole report. All conclusions and opinions concerning the analysis as set forth in the report were prepared by MPB REAL ESTATE, LLC whose signatures appear on the report. No change of any item in the report shall be made by anyone other than MPB REAL ESTATE, LLC. MPB REAL ESTATE, LLC shall have no responsibility if any such unauthorized change is made.

MPB REAL ESTATE, LLC may not divulge the material contents of the report, analytical findings or conclusions, or give a copy of the report to anyone other than the client or his designee as specified in writing except as may be required by the Appraisal Institute as they may request in confidence for ethics enforcement, or by a court of law or body with the power of subpoena.

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Information Used

No responsibility is assumed for accuracy of information furnished by or work of others, the client, his designee, or public records. We are not liable for such information or the work of subcontractors. The comparable data relied upon in this report has been confirmed with one or more parties familiar with the transaction or from affidavit or other sources thought reasonable; all are considered appropriate for inclusion to the best of our factual judgment and knowledge. An impractical and uneconomic expenditure of time would be required in attempting to furnish unimpeachable verification in all instances, particularly as to engineering and market-related information. It is suggested that the client consider independent verification as a prerequisite to any transaction involving sale, lease, or other significant commitment of funds for the subject property.

Financial Information

Our value opinion(s) have been based on unaudited financials, and other data provided to us by management and/or owners. If these reports are found to be inaccurate, we reserve the right to revise our value opinion(s). It is noted we are depending on these accounting statements as being accurate and our interpretation of these statements as being accurate as well. If these assumptions later prove to be false, we reserve the right to amend our opinions of value.

Testimony, Consultation, Completion of Contract for Report Services

The contract for report, consultation, or analytical service is fulfilled and the total fee payable upon completion of the report, unless otherwise specified. MPB REAL ESTATE, LLC or those assisting in preparation of the report will not be asked or required to give testimony in court or hearing because of having made the report, in full or in part, nor engage in post report consultation with client or third parties except under separate and special arrangement and at an additional fee. If testimony or deposition is required because of any subpoena, the client shall be responsible for any additional time, fees, and charges, regardless of issuing party.

Exhibits

The illustrations and maps in this report are included to assist the reader in visualizing the property and are not necessarily to scale. Various photographs, if any, are included for the same purpose as of the date of the photographs. Site plans are not surveys unless so designated.

Legal, Engineering, Financial, Structural or Mechanical Nature, Hidden Components, Soil

No responsibility is assumed for matters legal in character or nature, nor matters of survey, nor of any architectural, structural, mechanical, or engineering nature. No opinion is rendered as to the title, which is presumed to be good and marketable. The property is appraised as if free and clear, unless otherwise stated in particular parts of the report. The legal description is assumed to be correct as used in this report as furnished by the client, his designee, or as derived by MPB REAL ESTATE, LLC.

MPB REAL ESTATE, LLC has inspected as far as possible, by observation, the land, and the improvements; however, it was not possible to personally observe conditions beneath the soil, or hidden structural, mechanical, or other components, and MPB REAL ESTATE, LLC shall not be responsible for defects in the property which may be related.

The report is based on there being no hidden, unapparent, or apparent conditions of the property site, subsoil or structures or toxic materials which would render it more or less valuable. No

responsibility is assumed for any such conditions or for any expertise or engineering to discover them. All mechanical components are assumed to be in operable condition and status standard for properties of the subject type. Conditions of heating, cooling, ventilation, electrical, and plumbing equipment are considered to be commensurate with the condition of the balance of the improvements unless otherwise stated. We are not experts in this area, and it is recommended, if appropriate, the client obtain an inspection of this equipment by a qualified professional.

If MPB REAL ESTATE, LLC has not been supplied with a termite inspection, survey or occupancy permit, no responsibility or representation is assumed or made for any costs associated with obtaining same or for any deficiencies discovered before or after they are obtained. No representation or warranties are made concerning obtaining the above-mentioned items.

MPB REAL ESTATE, LLC assumes no responsibility for any costs or consequences arising due to the need, or the lack of need, for flood hazard insurance. An agent for The Federal Flood Insurance Program should be contacted to determine the actual need for Flood Hazard Insurance.

Legality of Use

The report is based on the premise that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless otherwise stated in the report; further, that all applicable zoning, building and use regulations, and restrictions of all types have been complied with unless otherwise stated in the report. Further, it is assumed that all required licenses, consents, permits, or other legislative or administrative authority, local, state, federal and/or private entity or organization have been or may be obtained or renewed for any use considered in the value estimate.

Component Values

The distribution of the total valuation in this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and building must not be used in conjunction with any other report and are invalid if so used.

Auxiliary and Related Studies

No environmental or impact studies, special market study or analysis, highest and best use analysis, study, or feasibility study has been required or made unless otherwise specified in an agreement for services or in the report.

Dollar Values, Purchasing Power

The market value estimated, and the costs used are as of the date of the estimate of value, unless otherwise indicated. All dollar amounts are based on the purchasing power and price of the dollar as of the date of the value estimate.

Inclusions

Furnishings and equipment or personal property or business operations, except as specifically indicated and typically considered as a part of real estate, have been disregarded with only the real estate being considered in the value estimate, unless otherwise stated. In some property types, business and real estate interests and values are combined.

Proposed Improvements, Conditional Value

Improvements proposed, if any, onsite or offsite, as well as any repairs required, are considered for purposes of this report to be completed in a timely, good, and workmanlike manner, according to information submitted and/or considered by MPB REAL ESTATE, LLC. In cases of proposed construction, the report is subject to change upon inspection of property after construction is completed.

Value Change, Dynamic Market, Influences, Alteration of Estimate

The estimated value, which is defined in the report, is subject to change with market changes over time. Value is highly related to exposure, time, promotional effort, terms, motivation, and conditions surrounding the offering. The value estimate considers the productivity and relative attractiveness of the property physically and economically in the marketplace.

In cases of reports involving the capitalization of income benefits, the estimate of market value or investment value or value in use reflects such benefits and MPB REAL ESTATE, LLC' interpretation of income and yields and other factors derived from general and specific client and market information. Such estimates are as of the date of the estimate of value; thus, they are subject to change as the market and value is naturally dynamic.

The “estimate of market value” in the report is not based in whole or in part upon the race, color, or national origin of the present owners or occupants of the properties in the vicinity of the property appraised.

Report and Value Estimate

Report and value estimate are subject to change if physical or legal entity or financing differ from that envisioned in this report.

Management of the Property

It is assumed that the property which is the subject of this report will be under prudent and competent ownership and management.

Hazardous Materials

Unless otherwise stated in this report, the existence of hazardous substances, including without limitation, asbestos, polychlorinated biphenyls, petroleum leakage, or agricultural chemicals, which may or may not be present on the property, or other environmental conditions, were not called to the attention of nor did MPB REAL ESTATE, LLC become aware of such during their inspection. MPB REAL ESTATE, LLC had no knowledge of the existence of such materials on or in the property unless otherwise stated. MPB REAL ESTATE, LLC, however, is not qualified to test such substances or conditions. If the presence of such substances such as asbestos, urea formaldehyde foam insulation, or other hazardous substances or environmental conditions, may affect the value of the property, the value estimate is predicated on the assumption that there is no such condition on or in the property or in the proximity that it would cause a loss in value. No responsibility is assumed for any such conditions, nor for any expertise or engineering knowledge required to discover them.

Soil and Subsoil Conditions

Unless otherwise stated in this report, MPB REAL ESTATE, LLC does not warrant the soil or subsoil conditions for toxic or hazardous waste materials. Where any suspected materials might

be present, we have indicated in the report; however, MPB REAL ESTATE, LLC are not experts in this field and recommend appropriate engineering studies to monitor the presence or absence of these materials.

Americans with Disabilities Act (ADA)

“MPB REAL ESTATE, LLC has not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the Americans with Disabilities Act (ADA), which became effective January 26, 1992. It is possible that a compliance survey of the property together with a detailed analysis of the requirements of the ADA could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this fact could have a negative effect upon the value of the property. Since MPB REAL ESTATE, LLC has no direct evidence relating to this issue, we did not consider possible non-compliance with the requirements of ADA in estimating the value of the property.”

Qualifications of the Analyst

QUALIFICATIONS OF THE ANALYST***Michael P. Berkowitz***

MPB Real Estate, LLC
1430 South Mint Street, Suite 102
Charlotte, North Carolina 28203
(704) 334-4686
FAX (704) 334-2759

EDUCATION AND CREDENTIALS

- **Duke University**
Major: Economics 1985-1989
- **Central Piedmont Community College**
 - R-1 - Introduction to Real Estate Appraisal, 2002
 - R-2 - Valuation Principles and Procedures, 2002
 - R-3 - Applied Residential Property Valuation, 2002
 - G-1 - Introduction to Income Property Appraisal, 2003
- **Bob Ipock and Associates**
 - G-2 - Advanced Income Capitalization Procedures, 2003
 - G-3 - Applied Property Income Valuation 2004
- **Appraisal Institute**
 - 520 Highest and Best Use and Market Analysis, 2004
 - Seminar Rates, Multipliers and Ratios 2005
 - 530 Advanced Sales Comparison and Cost Approaches 2006
 - Seminar Apartment Appraisal, Concepts & Applications 2009
 - Seminar Appraising Distresses Commercial Real Estate 2009
 - Seminar Appraising Convenience Stores 2011
 - Seminar Analyzing Operating Expenses 2011

AFFILIATIONS AND ACTIVITIES

- **Association Memberships**
North Carolina State Certified General Real Estate Appraiser, October 2006, Certificate No. A6169

RELATED EXPERIENCE

- Provided real estate consulting services for a variety of clients including real estate brokers, property owners and financial planners
- Performed financial feasibility studies for multiple property types including golf communities, and renovation projects.
- Developed plan for self-contained communities.
- Racetrack expertise

APPRAISAL EXPERIENCE

A partial list of types of properties appraised include:
Retail Properties, Single and Multi-Tenant, Proposed and Existing
Office Single and Multi-Tenant Proposed and Existing
Mixed-Use Properties, Proposed and Existing
Industrial Properties, Warehouse, Flex and Manufacturing
Vacant Land
Condemnation
C-Stores
Racetracks

CLIENTELE

Bank of America
Transylvania County
Cabarrus County
Mecklenburg County
City of Statesville
NC Department of Transportation
Henry County, GA
Town of Loudon, NH
First Citizens Bank
RBC Centura Bank
City of Charlotte
City of Concord
Union County
BB & T
Aegon USA Realty Advisors
Sun Trust Bank
First Charter Bank
Regions Bank
Charlotte Housing Authority
Alliance Bank and Trust
Broadway Bank
Duke Energy Corporation
Jim R. Funderburk, PLLC
Hamilton, Fay, Moon, Stephens, Steele & Martin
Senator Marshall A. Rauch
Perry, Bundy, Plyler & Long, LLP
Robinson, Bradshaw & Hinson
CSX Real Property
Baucom, Clayton, Burton, Morgan & Wood, PA
City of Mount Holly
Our Towns Habitat for Humanity
Parker, Poe, Adams & Bernstein, LLP
Central Carolina Bank

Southern Community Bank and Trust

Exhibit 6
Ground Lease Agreement

GROUND LEASE AGREEMENT

THIS GROUND LEASE AGREEMENT ("Lease") is effective as of the later of the signature dates below ("Effective Date") by and between **Lee A. Setzer and Virginia K. Setzer**, husband and wife ("Lessor") and **TOWERCO 2013 LLC**, a Delaware limited liability company ("Lessee").

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. Premises. Lessor is the owner of certain real property located in the Township of Clines, County of Catawba, State of North Carolina, commonly known as 5198 N NC 16 Hwy, Claremont, NC 28610 (the "Parent Parcel"), as more particularly described in Exhibit A annexed hereto. Lessor hereby leases to Lessee and Lessee leases from Lessor approximately 100'x100' (10,000) square feet of the Parent Parcel and all access and utility easements if any, (the "Premises") as described in Exhibit B annexed hereto.
2. Use. The Premises may be used by Lessee and Lessee's tenants and licensees for the transmission and receipt of wireless communication signals in any and all frequencies, the construction, maintenance, operation, subleasing and licensing of a free-standing tower or towers, antennas, and buildings, and related facilities and activities, and for any other uses which are incidental thereto ("Intended Use"). Lessor agrees to cooperate with Lessee in obtaining, at Lessee's expense, all licenses and permits required for Lessee's use of the Premises (the "Governmental Approvals"). Lessor further agrees to cooperate with Lessee in executing and delivering any documents requested by Lessee to obtain Government Approvals necessary for its Intended Use. In the event that Lessee's Intended Use of the Premises is actually or constructively prohibited then, in addition to any other remedies available to Lessee, Lessee shall have the option to terminate this Lease with notice to Lessor.
3. Term. The term of this Lease shall be five (5) years commencing on the date Lessee begins commercial operation of the Improvements (as defined in Paragraph 6(a)) or the 3rd anniversary of the Effective Date, whichever first occurs ("Commencement Date") and terminating on the fifth (5th) anniversary of the Commencement Date (the "Term") unless otherwise provided in Paragraph 8.
4. Renewal Terms. Lessee shall have the right to extend this Lease for nine (9) additional five (5) year terms ("Renewal Terms"). Each Renewal Term shall be on the same terms and conditions as set forth in this Lease except that Rent shall increase as provided in paragraph 5. This Lease shall automatically be renewed for each successive Renewal Term unless Lessee notifies Lessor in writing of Lessee's intention not to renew the Lease at least thirty (30) days prior to the expiration of the Term or the Renewal Term which is then in effect.
5. Consideration. During the Term, Lessee shall pay Lessor the monthly sum of [REDACTED] ("Rent"). Rent shall be payable on the first day of each month in advance to Lessor at Lessor's address as specified in paragraph 17 below. Rent shall be increased on the commencement of each Renewal Term by [REDACTED] over the Rent payable during the immediately preceding term. If this Lease is terminated at a time other than on the anniversary of the Commencement Date, Rent shall be prorated as of the date of termination and all Rent paid in advance of the termination date shall be refunded to Lessee.

As further consideration for Lessor to enter into this Lease, Lessee shall pay to Lessor within ten (10) days of the Effective Date of this Lease, a one-time signing bonus of [REDACTED].

6. Improvements; Utilities; Access.

(a) Lessee shall have the right, at Lessee's sole cost and expense, to erect and maintain on the Premises improvements, personal property and facilities necessary or desired for its Intended Use (collectively the "Improvements"). The Improvements shall remain the exclusive property of the Lessee throughout the term and after the termination of this Lease. Lessee may construct, alter, demolish, reconstruct, restore, replace, supplement, modify and reconfigure the Improvements at any time during the Term or any Renewal Term of this Lease.

Lessee shall remove all of the above-ground portions of the Improvements not later than one hundred eighty (180) days following any termination of this Lease. Lessor grants Lessee the right to clear all trees, undergrowth, or other obstructions and to trim, cut, and keep trimmed and cut all tree limbs which may interfere with or fall upon the Improvements or Premises. Lessor grants Lessee a non-exclusive temporary easement in, over, across and through other real property owned by Lessor as reasonably required for construction, installation, maintenance, and operation of the Improvements.

(b) Lessee shall have the right to install power, telecommunications, cables, conduit, and any other utilities, including cabinets, vaults and improvements directly related to such utilities, on the Premises (or through third party easements, if necessary), at Lessee's sole expense, and to improve present utilities on the Parent Parcel or Premises (including but not limited to the installation of emergency power generators on the Premises). Lessee shall have the right to permanently place utilities on (or to bring utilities across or under) the Premises and the Improvements. In the event that utilities necessary to serve the equipment of Lessee or the equipment of Lessee's licensee(s) or sublessee(s) cannot be located within the Premises, Lessor agrees to cooperate with Lessee and to act reasonably in allowing the location of utilities on the Parent Parcel or other real property owned by Lessor without requiring additional compensation from Lessee or Lessee's licensee(s) or sublessee(s). Lessor shall, upon Lessee's request, execute within fifteen (15) days a separate written easement to the utility company providing the service or Lessee in a form which may be filed of record evidencing this right.

(c) Lessor grants to Lessee, its officers, agents, employees, sublessees, licensees and their independent contractors, the right and privilege to enter upon the Premises and the Parent Tract, to perform or cause to be performed test borings of the soil, environmental audits, engineering studies and to conduct a survey of the Premises and all or part of the Parent Tract.

(d) Lessor represents and warrants to Lessee that Lessee shall at all times during this Lease enjoy ingress, egress and access from the Premises twenty-four (24) hours a day, seven (7) days a week to an open and improved public road which presently exists, and which shall be adequate to service the Premises and the Improvements. If no such public road exists or ceases to exist in the future, Lessor will grant an exclusive easement to Lessee, Lessee's sublessees and assigns so that Lessee may, at its own expense, construct a suitable private access drive to the Premises and the Improvements. To the degree such access is across other property owned by Lessor, Lessor shall execute an easement within fifteen (15) days of evidencing this right and Lessor shall maintain access to the Easement in a free and open condition so that no interference is caused to Lessee by other lessees, licensees, invitees, or agents of the Lessor which may utilize the Easement.

7. Lessor's Representations and Warranties. As an inducement for Lessee to enter into and be bound by the terms of this Lease, Lessor represents and warrants to Lessee and Lessee's successors and assigns that Lessor (i) has good and marketable title to the Premises, (ii) has the authority to enter into and be bound by the terms of this Lease, (iii) to the best of Lessor's knowledge, there are no pending or threatened lawsuits, administrative actions (including bankruptcy or insolvency proceedings), suits, claims or causes of action against Lessor or which may otherwise affect the Premises, and (iv) the Premises are not presently subject to an option, lease, agreement or other contract which may adversely affect Lessor's ability to fulfill its obligations under this Lease.

8. Termination. Except as otherwise provided herein, this Lease may be terminated, without any penalty or further liability upon written notice as follows:

(a) By either party upon a default of any covenant or term hereof by the other party which default is not cured within sixty (60) days of receipt of written notice of default (without, however, limiting any other rights available to the parties pursuant to any other provisions hereof); provided, that if the defaulting party commences good faith efforts to cure the default within such period the cure period may be extended upon mutual agreement, in writing, of the parties hereto;

(b) Upon thirty (30) days' written notice by Lessee to Lessor if (i) Lessee is unable to obtain or maintain any license, permit or other Governmental Approval necessary for the construction and operation of the Improvements or Lessee's business or (ii) Lessee's Intended Use of the Premises is actually or constructively interfered with; or

(c) By Lessee for any reason upon written notice from Lessee to Lessor.

9. Subleases. Lessee at its sole discretion shall have the right, without the consent of or notice to Lessor, to license, sublease or otherwise allow the occupancy of all or a portion of the Premises and the Improvements. Lessee's licensee(s) and sublessee(s) shall be entitled to modify the tower and Improvements, and erect and install additional improvements and personal property on the Premises and Improvements, including but not limited to antennas, dishes, cabling, utilities, emergency or back up power, generators, and equipment shelters. Lessee's licensee(s) and sublessee(s) shall be entitled to all rights of ingress and egress to the Premises, the right to install utilities on the Premises and the right to use the Premises for the Intended Use as if said licensee or sublessee were the Lessee under this Lease.

10. Taxes. Lessee shall pay any property taxes assessed solely against the Improvements. Lessor shall pay when due all property taxes and all other fees and assessments attributable to the Premises. In the event that Lessor fails to pay when due any taxes affecting the Premises or the Easement, Lessee shall have the right but not the obligation to pay such taxes and deduct the full amount of the taxes paid by Lessee on Lessor's behalf from future payments of Rent. Lessor agrees to provide to Lessee a copy of any notice, assessment or billing relating to any real or personal property taxes for which Lessee is responsible under this Lease within thirty (30) days of receipt of same by Lessor. Lessee shall not be obligated to reimburse Lessor for any applicable taxes unless Lessor requests such reimbursement within one (1) year after the date such taxes became due. Lessee shall have no obligation to make payment of any real or personal property taxes until Lessee has received notice, assessment or billing relating to such payment in accordance herewith. Lessee shall have the right, at its sole option, and at its sole cost and expense, to appeal, challenge or seek modification of any real or personal property tax assessment or billing for which Lessee is wholly or partly responsible for payment under this Lease. Lessor shall reasonably cooperate with Lessee in filing, prosecuting, and perfecting any appeal or challenge to real or personal property taxes as set forth herein, including but not limited to executing consent to appeal or other similar document.

11. Damage or Destruction. If the Premises or the Improvements are destroyed or damaged so as to hinder the effective use of the Improvements in Lessee's judgment, Lessee may elect to terminate this Lease as of the date of the damage or destruction by so notifying the Lessor.

12. Condemnation. If a condemning authority takes all of the Premises, or a portion sufficient in Lessee's determination, to render the Premises in the opinion of Lessee unsuitable for the use which Lessee was then making of the Premises, this Lease shall terminate the earlier of (i) the date title vests in the condemning authority or (ii) the date the condemning authority takes possession of the Premises or a portion of it. Lessor and Lessee shall share in the condemnation proceeds in proportion to the values of their respective interests in the Premises (which for Lessee shall include, where applicable, the value of its Improvements, moving expenses, prepaid rent, lost business, goodwill, and business relocation expenses). A sale of all or part of the Premises to a purchaser with the power of eminent domain in the face of the exercise of eminent domain power shall be treated as a taking by condemnation for the purposes of this paragraph. Except as provided in this paragraph, generally applicable condemnation law will apply in the event of a condemnation.

13. Insurance. Lessee, at Lessee's sole cost and expense, shall procure and maintain on the Premises and on the Improvements, bodily injury and property damage insurance with a combined single limit of at least One Million and 00/100 Dollars (\$1,000,000.00) per occurrence. Such insurance shall insure, on an occurrence basis, against liability of Lessee, its employees and agents arising out of or in connection with Lessee's use of the Premises and Improvements. Lessor, at Lessor's sole cost and expense, shall procure and maintain on the Parent Parcel, bodily injury and property damage insurance with a combined single limit of at least One Million Dollars (\$1,000,000) per occurrence. Such insurance shall insure, on an occurrence basis, against liability of Lessor, its employees and agents arising out of or in connection with Lessor's use, occupancy and maintenance of the Parent Parcel.

14. Interference. Lessor shall not, nor shall Lessor permit its lessees, licensees, invitees, or agents, to use any portion of the Parent Parcel or adjacent real property owned or controlled by Lessor in any way which interferes with Lessee's Intended Use of the Premises. Such interference shall be deemed a material breach of this Lease by Lessor and Lessor shall have the responsibility to immediately terminate such interference. In the event such interference is not immediately rectified, Lessor acknowledges that continuing interference will cause irreparable injury to Lessee, and Lessee shall have the right, in addition to any other rights that it may have at law or in equity, to bring an action to enjoin such interference or to terminate this Lease with notice to Lessor.

15. Environmental Compliance. Lessor represents, warrants and agrees (i) that neither Lessor nor, to Lessor's knowledge, any third party has used, generated, stored or disposed of, or permitted the use, generation, storage or disposal of, any contaminants, oils, asbestos, PCBs, hazardous substances or wastes as defined by federal, state or local environmental laws, regulations or administrative orders or other materials the removal of which is required or the maintenance of which is prohibited, regulated or penalized by any federal, state or local government authority ("Hazardous Materials") on, under, about or within the Parent Parcel and/or Easement in violation of any law or regulation, and (ii) that Lessor will not, and will not permit any third party to use, generate, store or dispose of any Hazardous Materials on, under, about or within the Parent Parcel and/or Easement in violation of any law or regulation. Lessee agrees that it will not use, generate, store or dispose of any Hazardous Material on, under, about or within the Premises in violation of any law or regulation.

16. Environmental Indemnities.

(a) Lessor, its heirs, grantees, successors, and assigns shall indemnify, defend, reimburse and hold harmless Lessee from and against any and all environmental damages arising from the presence of Hazardous Materials upon, about or beneath the Parent Parcel and/or Easement, or migrating to or from the Parent Parcel and/or Easement, or arising in any manner whatsoever out of the violation of any environmental requirements pertaining to the Parent Parcel and/or Easement and any activities thereon, which conditions exist or existed prior to or at the time of the execution of this Lease or which may occur at any time in the future through no fault of Lessee.

(b) Lessee, its heirs, grantees, successors, and assigns shall indemnify, defend, reimburse and hold harmless Lessor from and against environmental damages caused by the presence of Hazardous Materials on the Premises arising solely as the result of Lessee's activities after the execution of this Lease.

(c) The duties and indemnifications in this paragraph shall survive expiration or earlier termination of this Lease.

17. Notices. All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed given if personally delivered or mailed, certified mail, return receipt requested, or via a nationally recognized overnight delivery service to the following addresses or to such other addresses as may be specified in writing at any time during the term of this Lease:

If to Lessor, to:

Lee A. Setzer and Virginia K. Setzer
5156 N NC 16 Hwy
Claremont, NC 28610
828-409-6540
leeroy@embarqmail.com

If to Lessee, to:

TowerCo 2013 LLC
5000 Valleystone Drive, Suite 200
Cary, NC 27519
Attn: Property Management
Site ID #: NC0313

18. Title and Quiet Enjoyment. Lessor warrants and represents that (i) it has the full right, power, and authority to execute this Lease; (ii) it has good and marketable fee simple title to the Premises free and clear of any liens and encumbrances or mortgages; (iii) there are no easements, licenses, rights, covenants or restrictions on use related to or affecting the Premises which will interfere with Lessee's Intended Use of the Premises; and (iv) the execution of this Lease by Lessor will not cause a breach or an event of default of any other agreement(s) to which Lessor is a party, and (v) the Premises constitutes a legal lot that may be leased without the need for any subdivision or platting approval. Lessor covenants that it shall comply with all applicable laws, regulations and requirements related to the Premises and that Lessee shall have the quiet enjoyment of the Premises during the term of this Lease. Lessor shall indemnify Lessee from and against any loss, cost, expense or damage including attorneys' fees associated with a breach of the foregoing covenants. In the event that Lessor fails to keep the Premises free and clear of any liens and encumbrances, Lessee shall have the right but not the obligation to satisfy such lien or encumbrance and deduct the full amount paid by Lessee on Lessor's behalf from future installments of Rent. Lessor agrees to indemnify and hold harmless Lessee from any and all claims and/or notices of non-compliance brought against Lessor for any breach by Lessor of this warranty, and Lessor agrees to allow Lessee to continue to quietly enjoy the use of Lessor's Premises while Lessor remedies any such non-compliance. Should Lessee's use of the Premises become compromised due to any breach of the warranty and covenants contained in this paragraph, Lessor acknowledges that Lessee shall be substantially harmed and Lessee will seek to recover from Lessor any damages Lessee may sustain.

19. Occurrence of Lessor Default. The covenants, representations and conditions in this Lease are mutual and dependent. Upon the occurrence of any breach or nonperformance of any representation, warranty, covenant, agreement or undertaking made by Lessor in this Lease ("Default"), Lessee shall have the option to pursue any one or more of the following remedies without notice or demand: (a) Lessee, may, at its sole election, terminate the Lease; (b) Lessee, may, without being obligated and without waiving the Default, cure the Default, whereupon Lessor shall pay to Lessee, upon demand, all costs expenses, and disbursements incurred by Lessee to cure the Default. Lessee shall be permitted to offset said costs, expenses and disbursements incurred by Lessee against Rent or any other amounts due or becoming due by Lessee to Lessor under this Lease; or (c) Lessee shall be entitled to pursue any and all other rights or remedies available at law or equity, including specific performance of this Lease, with respect to Lessor's default.

20. Assignment. Lessee may assign this Lease without the consent of or notice to Lessor. From and

after the date this Lease has been sold, assigned, or transferred by Lessee to a third party agreeing to be subject to the terms hereof, Lessee shall immediately be released from any and all liability under this Lease, including the payment of any rental or other sums due, without any further action. Additionally, Lessee may mortgage or grant a security interest in this Lease and the Improvements and may assign this Lease and the Improvements to any such mortgagees or holders of security interests including their successors and assigns (hereinafter collectively referred to as "Secured Parties"). If requested, Lessor shall execute such consent to leasehold financing as may reasonably be required by Secured Parties. Lessor agrees to notify Lessee and Lessee's Secured Parties simultaneously of any default by Lessee and to give Secured Parties the same right to cure any default as Lessee except that the cure period for any Secured Party shall not be less than ten (10) days after the receipt of the default notice. If a termination, disaffirmance or rejection of the Lease pursuant to any laws (including any bankruptcy or insolvency laws) by Lessee shall occur, or if Lessor shall terminate this Lease for any reason, Lessor will give to the Secured Parties prompt notice thereof and Lessor will give the Secured Parties the right to enter upon the Premises during a thirty (30)-day period commencing upon the Secured Party's receipt of such notice for the purpose of removing any Improvements. Lessor acknowledges that the Secured Parties shall be third-party beneficiaries of this Lease.

21. Successors and Assigns. This Lease shall run with the Premises and shall be binding upon and inure to the benefit of the parties, their respective heirs, successors, personal representatives, and assigns.

22. Liability and Indemnity. Lessee shall indemnify and hold Lessor harmless from all claims (including reasonable attorneys' fees, costs, and expenses of defending against such claims) arising from the negligence or willful misconduct of Lessee or Lessee's agents or employees in or about the Premises. Lessor shall indemnify and hold Lessee harmless from all claims (including reasonable attorneys' fees, costs, and expenses of defending against such claims) arising from the negligence or willful misconduct of Lessor or Lessor's agents, employees, lessees, invitees, contractors or other tenants occurring in or about the Parent Parcel. The duties described herein survive termination of this Lease.

23. Right of First Refusal; Sale of the Premises. If Lessor elects to (i) sell or otherwise transfer all or any portion of the Premises or Parent Parcel, or (ii) grant to an easement, or other legal right or interest, in and to any portion of the Premises to a third party who is (a) in the business of acquiring rent or revenue streams related directly, or indirectly, to wireless infrastructure assets or (b) in the tower management business, with or without an assignment of this agreement (including but not limited to assignments of rental streams associated with this agreement), Lessee shall have the right of first refusal to meet any bona fide offer of sale, assignment, or any other transfer on the same terms and conditions as such offer. Lessor shall immediately provide the Lessee with a copy of the bona fide offer together with a notice describing the offer in sufficient detail. If Lessee fails to accept such bona fide offer within thirty (30) days after receipt of the foregoing, Lessor may sell or grant the easement or interest in the Premises in accordance with the terms of such bona fide offer.

24. Miscellaneous.

(a) The substantially prevailing party in any litigation arising hereunder shall be entitled to its reasonable attorney's fees and court costs, including appeals, if any.

(b) Each party agrees to furnish to the other, within ten (10) days after request, such truthful estoppel information as the other may reasonably request.

(c) This Lease constitutes the entire agreement and understanding of the parties with respect to the subject matter of this Lease, and supersedes all offers, negotiations, and other agreements. There are no representations or understandings of any kind not set forth herein. Any amendments to said Lease must be in writing and executed by the parties.

(d) If either party is represented by a real estate broker in this transaction, that party shall be fully responsible for any fees due such broker and shall hold the other party harmless from any claims for commission by such broker.

(e) Lessor agrees to cooperate with Lessee in executing any documents necessary to protect Lessee's rights under this Lease or Lessee's use of the Premises, including but not limited to affidavits relating to title curative measures and subordination and non-disturbance agreements and to take any further action which Lessee may reasonably require as to effect the intent of this Lease.

(f) This Lease shall be construed in accordance with the laws of the state in which the Premises is situated.

(g) If any term of this Lease is found to be void or invalid, such invalidity shall not affect the remaining terms of this Lease, which shall continue in full force and effect.

(h) Upon request of Lessee, Lessor shall promptly execute and deliver to Lessee such documents as Lessee requests to evidence Lessee's rights in the Premises, including a memorandum of option and a memorandum of lease and/or amendments thereto. Lessee may file such documents of record in the property records in the county in which the Premises are located.

(i) Lessee may obtain title insurance on its interest in the Premises and Easement, and Lessor shall cooperate by executing documentation required by the title insurance company. In the event the Premises is encumbered by a mortgage or deed of trust, Lessor agrees to obtain and furnish, within thirty (30) days written request by Lessee, a non-disturbance agreement to the effect that Lessee and Lessee's sublessees or licensees will not be disturbed in the occupancy of the Premises by any foreclosure; provided that the rights and interests of Lessee under this Lease shall be subject and subordinate to such mortgage or deed of trust.

(j) Lessor hereby irrevocably appoints Lessee or Lessee's agent as Lessor's agent to file applications on behalf of Lessor with federal, state, and local governmental authorities which applications relate to Lessee's Intended Use of the Premises including but not limited to land use and zoning applications.

(k) This Lease may be executed in two or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties, it being understood that all parties need not sign the same counterpart and that scanned, or electronically reproduced copies of this Lease shall have the same force and effect as originals.

(l) Lessor will not, during the term of this Lease together with any extensions thereof, enter into any other lease, license, or other agreement for a similar purpose as set forth herein, on or adjacent to the Premises.

(m) In any case where the approval or consent of one party hereto is required, requested or otherwise to be given under this Lease, such party shall not unreasonably condition, delay or withhold its approval or consent.

27. Confidentiality. Lessor shall not disclose to any third party the Rent payable by Lessee under this Lease and shall treat such information as confidential, except that Lessor may disclose such information to prospective buyers, prospective or existing lenders, to Lessor's affiliates and attorneys, or as may be required by law or as may be necessary for the enforcement of Lessor's rights under this Lease. Lessor acknowledges that the disclosure of such information to any other parties may cause Lessee irreparable harm, and in the event of such disclosure, as an additional remedy, Lessee shall have the right to terminate this Lease upon giving thirty (30) days written notice thereof to Lessor.

[SIGNATURES BEGIN ON NEXT PAGE]

IN WITNESS WHEREOF, Lessor and Lessee have executed this Lease as of the date affixed to their signatures below.

LESSOR:

LEE A. SETZER and VIRGINIA K. SETZER, husband and wife

By: Lee A. Setzer
Name: Lee A. Setzer
Title: Owner
Date: 6/20/23

By: Virginia K. Setzer
Name: Virginia K. Setzer
Title: Owner
Date: 6/20/23

LESSOR ACKNOWLEDGEMENT:

STATE OF NORTH CAROLINA)
COUNTY OF CATAWBA)

Before me, Jeremy J Holt the undersigned, a Notary Public for the State, personally appeared Lee A. Setzer, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument.

WITNESS my hand and official seal, this 20th day of June, 2023.

Jeremy J Holt
Notary Public
Print Name Jeremy J Holt
Title (and Rank):
My commission expires: march 7th 2024

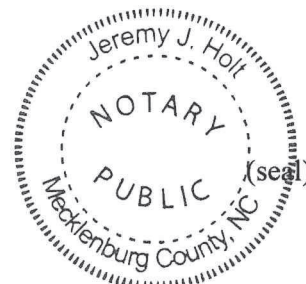


STATE OF NORTH CAROLINA)
COUNTY OF CATAWBA)

Before me, Jeremy J Holt the undersigned, a Notary Public for the State, personally appeared Virginia K. Setzer, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument.

WITNESS my hand and official seal, this 20th day of June, 2023.

Jeremy J Holt
Notary Public
Print Name Jeremy J Holt
Title (and Rank):
My commission expires: march 7th 2024



LESSEE:

TOWERCO 2013 LLC, a Delaware limited liability company

By: [Signature]
Name: Mike Smith
Title: CFO
Date: 8/17/23

LESSEE ACKNOWLEDGEMENT:

STATE OF NORTH CAROLINA)
)
COUNTY OF WAKE)

Before me, Jill E. Harvey the undersigned, a Notary Public for the State, personally appeared Mike Smith, who is the CFO of TowerCo 2013 LLC, a Delaware limited liability company, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument, the entity upon behalf of which he acted, executed the instrument.

WITNESS my hand and official seal, this 17th day of August, 2023.

[Signature]
Notary Public
Print Name Jill E. Harvey
Title (and Rank): Paralegal / Notary Public
My commission expires: 7/26/2025

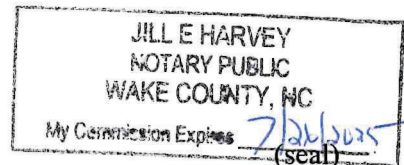


EXHIBIT A
DESCRIPTION OF PARENT PARCEL

The Parent Parcel is described and/or depicted as follows:

Situated in Clines Township, Catawba County, North Carolina, and more particularly described as follows:

Being all of Lot 1 of a Plat entitled "A family subdivision for Lee A. Setzer," dated October 29, 2009 prepared by J. Mike Honeycutt, Land Surveying, N.C.P.L.S., L-1360, recorded in Plat Book 69 at Page 115, Catawba County Registry.

EXHIBIT B
DESCRIPTION OR DEPICTION OF PREMISES

An approximately 100' x 100' (10,000) square foot tract of land, together with easements for ingress, egress and utilities described or depicted as follows:

LEGAL DESCRIPTION OF 100' X 100' LEASE AREA:

ALL THAT CERTAIN LEASE AREA, SITUATED, LYING AND BEING IN CLINES TOWNSHIP, CATAWBA COUNTY, NORTH CAROLINA, BEING A PORTION OF THE LANDS DESCRIBED IN DEED BOOK 2764 AT PAGE 1103 OF THE CATAWBA COUNTY REGISTER OF DEEDS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT AN EXISTING IRON PIPE, SAID IRON BEING A SOUTHEASTERLY CORNER OF THE PARCEL DESCRIBED IN SAID DEED BOOK 2764, PAGE 1103, HAVING NORTH CAROLINA STATE PLANE COORDINATES OF NORTHING = 744,009.39', AND EASTING = 1,357,029.83'; THENCE, FROM THE POINT OF COMMENCEMENT, NORTH 67°31'31" WEST A DISTANCE OF 1,022.75 FEET TO A POINT ON THE NORTHEAST CORNER OF THE HEREIN DESCRIBED 100' X 100' LEASE AREA, SAID POINT BEING THE TRUE POINT OF BEGINNING, HAVING NORTH CAROLINA STATE PLANE COORDINATES OF NORTHING = 744,400.37', AND EASTING = 1,356,084.76'; THENCE, FROM THE POINT OF BEGINNING, SOUTH 16°10'08" WEST A DISTANCE OF 100.00 FEET TO A POINT; THENCE NORTH 73°49'52" WEST A DISTANCE OF 100.00 FEET TO A POINT; THENCE NORTH 16°10'08" EAST A DISTANCE OF 100.00 FEET TO A POINT; THENCE SOUTH 73°49'52" EAST A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING.

SAID LEASE AREA CONTAINING 10,000 SQUARE FEET OR 0.23 ACRES MORE OR LESS.

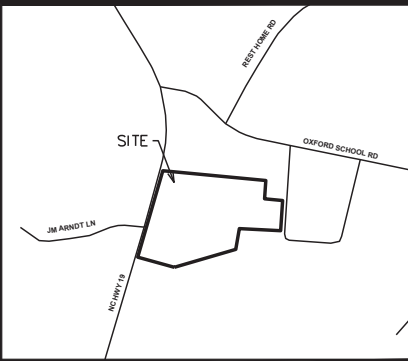
LEGAL DESCRIPTION OF 30' WIDE ACCESS & UTILITY EASEMENT:

ALL THAT CERTAIN EASEMENT AREA, SITUATED, LYING AND BEING IN CLINES TOWNSHIP, CATAWBA COUNTY, NORTH CAROLINA, BEING A PORTION OF THE LANDS DESCRIBED IN DEED BOOK 2764 AT PAGE 1103 OF THE CATAWBA COUNTY REGISTER OF DEEDS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT AN EXISTING IRON PIPE, SAID IRON BEING A SOUTHEASTERLY CORNER OF THE PARCEL DESCRIBED IN SAID DEED BOOK 2764, PAGE 1103, HAVING NORTH CAROLINA STATE PLANE COORDINATES OF NORTHING = 744,009.39', AND EASTING = 1,357,029.83'; THENCE, FROM THE POINT OF COMMENCEMENT, NORTH 71°43'26" WEST A DISTANCE OF 1,287.43 FEET TO A POINT ON THE EASTERLY RIGHT OF WAY NC HIGHWAY 16, SAID POINT BEING THE TRUE POINT OF BEGINNING HAVING NORTH CAROLINA STATE PLANE COORDINATES OF: NORTHING = 744,413.12'; AND EASTING = 1,355,807.34'; THENCE, FROM THE POINT OF BEGINNING AND WITH SAID EASTERLY RIGHT OF WAY, NORTH 16°10'08" EAST A DISTANCE OF 30.00 FEET TO A POINT; THENCE, LEAVING SAID RIGHT OF WAY, SOUTH 73°49'52" EAST A DISTANCE OF 160.00 FEET TO A POINT; THENCE NORTH 16°10'08" EAST A DISTANCE OF 10.00 FEET TO A POINT; THENCE SOUTH 73°49'52" EAST A DISTANCE OF 10.00 FEET TO A POINT; THENCE SOUTH 16°10'08" WEST A DISTANCE OF 50.00 FEET TO A POINT; THENCE NORTH 73°49'52" WEST A DISTANCE OF 10.00 FEET TO A POINT; THENCE NORTH 16°10'08" EAST A DISTANCE OF 10.00 FEET TO A POINT; THENCE NORTH 73°49'52" WEST A DISTANCE OF 160.00 FEET TO THE POINT OF BEGINNING.

SAID EASEMENT AREA CONTAINING 5,300.00 SQUARE FEET OR 0.12 ACRES MORE OR LESS.

(see attached survey)

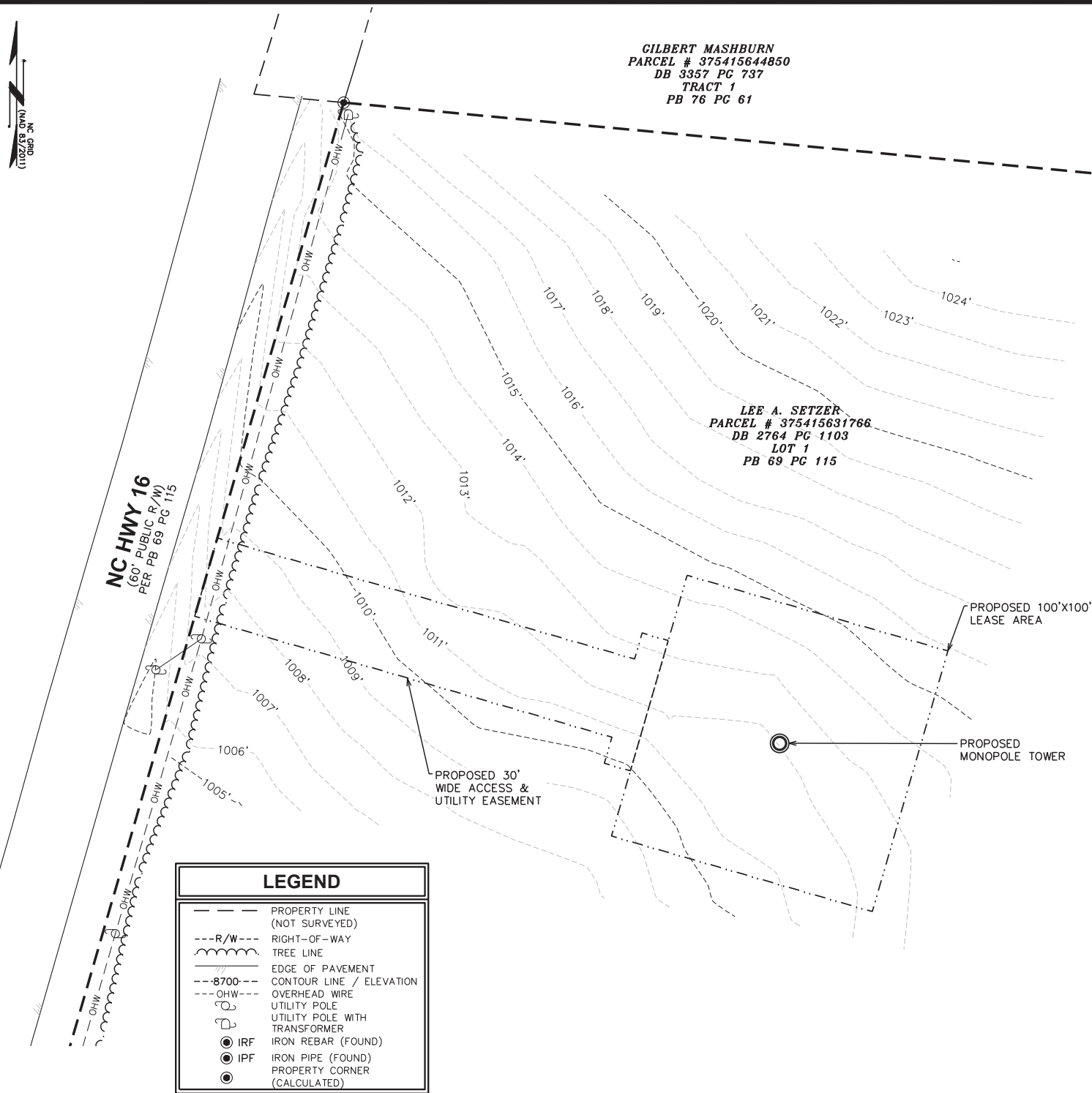


VICINITY MAP n.t.s.

- NOTES:**
1. BASIS OF THE BEARINGS AND COORDINATES IS THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, REFERENCED TO THE NATIONAL SPATIAL REFERENCE SYSTEM (NSRS), NORTH AMERICAN DATUM (NAD 83/2011) BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON OCTOBER 3, 2023; TIED TO THE NORTH CAROLINA GNSS CORS AND RTK NETWORK; AND EXPRESSED IN US SURVEY FEET. ALL DISTANCES ARE NC GRID DISTANCES.
 2. THIS SURVEY IS FOR THE PRELIMINARY PLAT OF PROPOSED TELECOMMUNICATION LEASE AREA AND EASEMENTS ONLY, TO BE SURVEYED UPON FINAL CONSTRUCTION. THIS SURVEY SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE FEE SIMPLE TRANSFERAL OF THE PARENT PARCEL NOR ANY PORTION OR PORTIONS THEREOF. BOUNDARY INFORMATION SHOWN HEREON HAS BEEN COMPILED FROM TAX MAPS AND DEED DESCRIPTIONS ONLY. NO BOUNDARY SURVEY OF THE PARENT PARCEL WAS PERFORMED, EXCEPT AS PORTIONS SHOWN HEREON.
 3. AREA COMPUTED BY COORDINATE GEOMETRY
 4. DEED REFERENCE: DEED BOOK 2764, PAGE 1163
 5. PLAT REFERENCE: PLAT BOOK 69 PAGE 115
 6. PIN # : 375415631766
 7. THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT, WHICH MAY REVEAL ADDITIONAL CONVEYANCES, EASEMENTS, RIGHTS-OF-WAY, ABANDONMENTS, OR RESTRICTIONS NOT SHOWN AND IS NOT AN ALTA/NSPS LAND TITLE SURVEY.
 8. NO UNDERGROUND UTILITIES OBSERVED AT TIME OF SURVEY.
 9. ALL PROPERTY OWNERSHIPS WERE TAKEN FROM CURRENT COUNTY TAX MAP RECORDS AND/OR RECORDED PLATS ONLY
 10. BY GRAPHIC DETERMINATION THE SUBJECT PROPERTY LIES IN FLOOD ZONE "X". AREA DETERMINED TO BE OUTSIDE 0.2% CHANCE OF ANNUAL FLOOD BASED UPON FEMA COMMUNITY PANEL# 3710375400J, EFFECTIVE SEPTEMBER 05, 2007.
 11. LESSEE INFORMATION:
TOWER CO.
5000 VALLEYSTONE DRIVE
CARY, NC 27519
 12. PROPERTY OWNER INFORMATION:
LEE A. SETZER
5156 N. NC HWY 16
CONOVER, NC 28613

REV	DATE	ISSUED FOR	INITIALS
0	10/06/2023	PRELIMINARY	JCS
1	10/19/2023	PROPOSED SITE	DDS

THIS MAP MAY NOT BE A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS AND HAS NOT BEEN REVIEWED FOR COMPLIANCE WITH RECORDING REQUIREMENTS FOR PLATS (G.S. 47-30(n))



LEGEND

- PROPERTY LINE (NOT SURVEYED)
- R/W --- RIGHT-OF-WAY
- TREE LINE
- EDGE OF PAVEMENT
- 8700 --- CONTOUR LINE / ELEVATION
- OHW --- OVERHEAD WIRE
- UTILITY POLE
- UTILITY POLE WITH TRANSFORMER
- IRF IRON REBAR (FOUND)
- IPF IRON PIPE (FOUND)
- PROPERTY CORNER (CALCULATED)

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
(919) 661-6351
COA # P-1403

SHEET #: 1 OF 3 TEP #: 333496
PRELIMINARY SURVEY

I, Alan H. Allbert, certify that this plat was drawn under my supervision from an actual survey performed under my supervision (deed description recorded in Book 2764, page 1103, etc.) (other); that the boundaries not surveyed are clearly indicated as drawn from information found in Plat Book 69, page 115; that the ratio of precision as calculated is 0.04; that the Global Positioning System (GPS) survey and the following information was used to perform the GPS (GNSS if dual constellations are used) survey:
Class of survey: Class B
Positional accuracy: 0.04 (h), 0.05 (v)
95% Confidence Level
Type of GPS field procedure: Network Real-Time Kinematic
Dates of survey: October 03, 2023
Datum/Epoch: Horizontal Datum is NAD 83/2011
Vertical Datum is NAVD88
Published/Fixed-control use: CORS
Geoid model: GEOID18
Combined grid factor(s): 0.9998696
Units: U.S. Survey Foot
That this map meets the requirements of the standards of practice for land surveying in North Carolina (21 NCAC 58.1600).
Witness my original signature and seal this the 19th day of October, 2023.



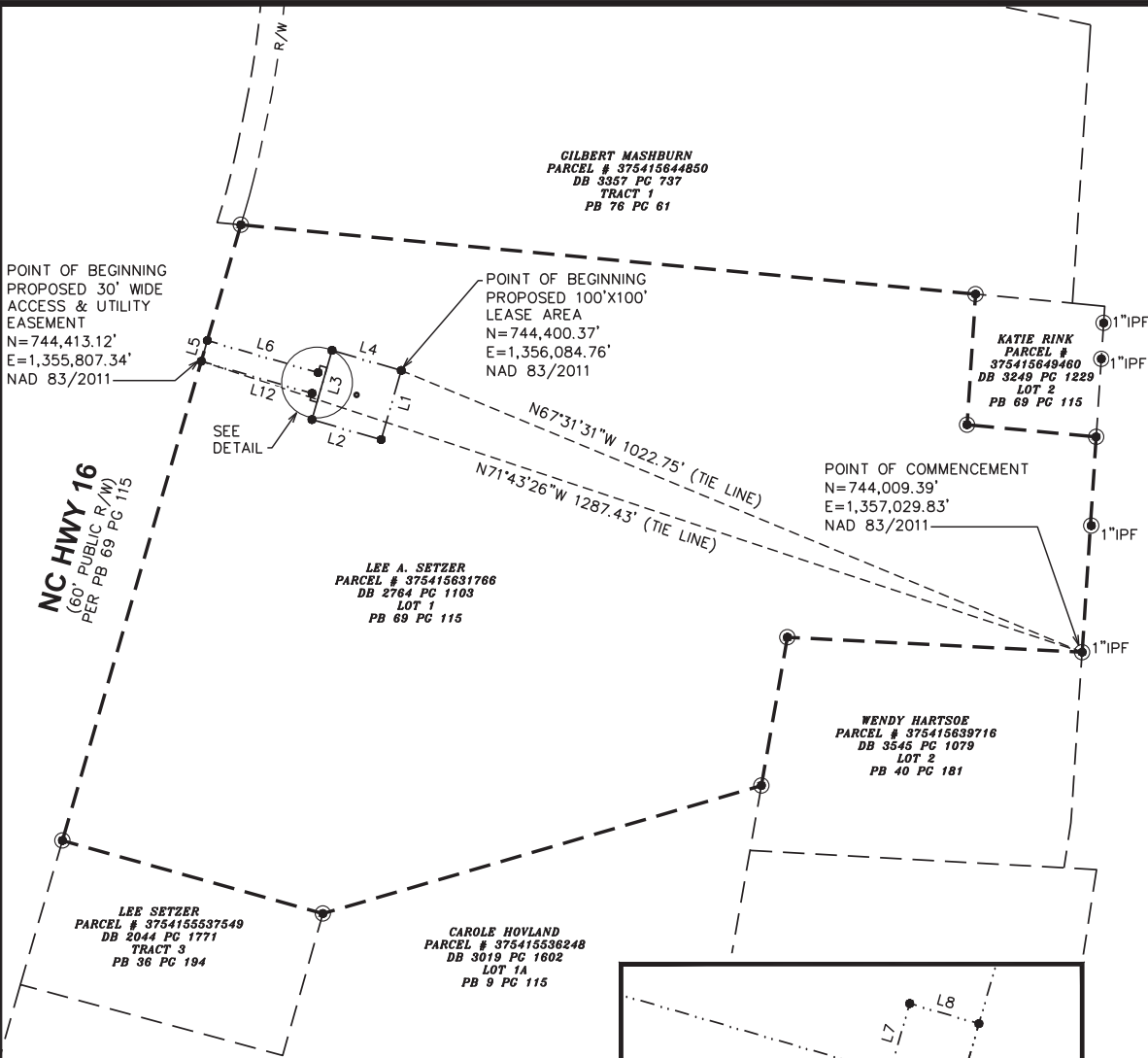
DocuSigned by:
ALAN H. ALLBERT
6572AD03B5BF4BC...
ALAN H. ALLBERT
NORTH CAROLINA PLS # L-3738

PROJECT INFORMATION:
NC0313
CLAUDETTE
5198 N. NC HWY 16
CLAREMONT, NC 28610
CLINES TOWNSHIP
CATAWBA COUNTY

PRELIMINARY PLAT OF PROPOSED TELECOMMUNICATIONS SITE SURVEY PREPARED FOR:

TowerCo
simplicity. found.
5000 VALLEYSTONE DRIVE
CARY, NC 27519
(919) 653-5700

FIELD WORK PERFORMED ON: 10/03/23
0' 40' 80'
SCALE: 1" = 40'
ORIGINAL MAP SIZE 11.00" X 17.00"



LINE TABLE			LINE TABLE		
LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	S16°10'08"W	100.00'	L7	N16°10'08"E	10.00'
L2	N73°49'52"W	100.00'	L8	S73°49'52"E	10.00'
L3	S16°10'08"W	100.00'	L9	S16°10'08"W	50.00'
L4	S73°49'52"E	100.00'	L10	N73°49'52"W	10.00'
L5	N16°10'08"E	30.00'	L11	N16°10'08"E	10.00'
L6	S73°49'52"E	160.00'	L12	N73°49'52"W	160.00'

LEGAL DESCRIPTION OF PROPOSED 100' X 100' LEASE AREA

ALL THAT CERTAIN LEASE AREA, SITUATED, LYING AND BEING IN CLINES TOWNSHIP, CATAWBA COUNTY, NORTH CAROLINA, BEING A PORTION OF THE LANDS DESCRIBED IN DEED BOOK 2764 AT PAGE 1103 OF THE CATAWBA COUNTY REGISTER OF DEEDS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

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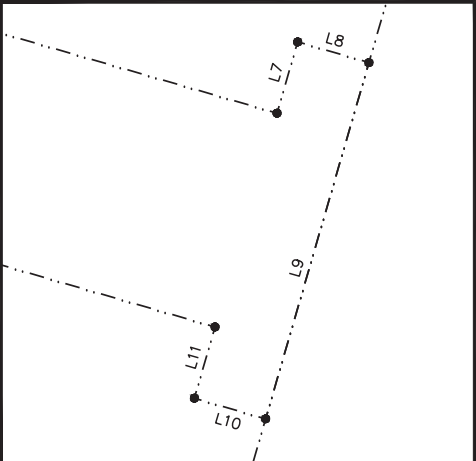
SAID LEASE AREA CONTAINING 10,000 SQUARE FEET OR 0.23 ACRES MORE OR LESS.

LEGAL DESCRIPTION OF PROPOSED 30' ACCESS & UTILITY EASEMENT

ALL THAT CERTAIN EASEMENT AREA, SITUATED, LYING AND BEING IN CLINES TOWNSHIP, CATAWBA COUNTY, NORTH CAROLINA, BEING A PORTION OF THE LANDS DESCRIBED IN DEED BOOK 2764 AT PAGE 1103 OF THE CATAWBA COUNTY REGISTER OF DEEDS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

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SAID EASEMENT AREA CONTAINING 5,300.00 SQUARE FEET OR 0.12 ACRES MORE OR LESS.



DETAIL SCALE: 1" = 20'

LEGEND

— — —

PROPERTY LINE (NOT SURVEYED)

---R/W---

RIGHT-OF-WAY

● IPF

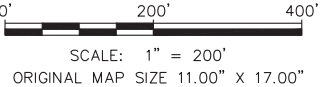
IRON PIPE (FOUND)

●

PROPERTY CORNER (CALCULATED)

●

LEASE/EASEMENT CORNER (CALCULATED)



TEP ENGINEERING, PLLC

326 TRYON ROAD

RALEIGH, NC 27603-3530

(919) 661-6351

COA # P-1403

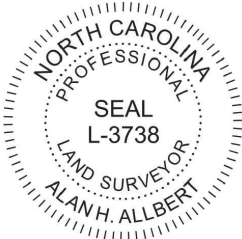
SHEET #:

2 OF 3

TEP #:

333496

I, Alan H. Allbert, certify that this plat was drawn under my supervision from an actual survey performed under my supervision (deed description recorded in Book 2764, page 1103, etc.) (other); that the boundaries not surveyed are clearly indicated as drawn from information found in Plat Book 69, page 115; that the ratio of precision as calculated is 0.04; that the Global Positioning System (GPS) survey and the following information was used to perform the GPS (GNSS if dual constellations are used) survey:
Class of survey: Class B
Positional accuracy: 0.04 (h), 0.05 (v)
95% Confidence Level
Type of GPS field procedure: Network Real-Time Kinematic
Dates of survey: October 03, 2023
Datum/Epoch: Horizontal Datum is NAD 83/2011
Vertical Datum is NAVD88
Published/Fixed-control use: CORS
Geoid model: GEOID18
Combined grid factor(s): 0.9998696
Units: U.S. Survey Foot
That this map meets the requirements of the standards of practice for land surveying in North Carolina (21 NCAC 56.1600).
Witness my original signature and seal this the 19th day of October, 2023.



DocuSigned by:

B572AD03B8BF4BC...
ALAN H. ALLBERT
NORTH CAROLINA PLS # L-3738

PROJECT INFORMATION:
NC0313 CLAUDETTE
5198 N. NC HWY 16
CLAREMONT, NC 28610
CLINES TOWNSHIP
CATAWBA COUNTY

PRELIMINARY PLAT OF PROPOSED TELECOMMUNICATIONS SITE SURVEY PREPARED FOR:

TowerCo
simplicity. found..
5000 VALLEYSTONE DRIVE
CARY, NC 27519
(919) 653-5700

FIELD WORK PERFORMED ON: 10/03/23

REV	DATE	ISSUED FOR	INITIALS
0	10/06/2023	PRELIMINARY	JCS
1	10/19/2023	PROPOSED SITE	DDS

SCHEDULE B - SECTION II EXCEPTIONS

U.S. TITLE SOLUTIONS
COMMITMENT FOR TITLE INSURANCE
COMMITMENT NO: UST76020
COMMITMENT EFFECTIVE DATE: AUGUST 24, 2023
SCHEDULE B – SECTION II

1. MORTGAGES, DEEDS OF TRUST AND UCCS
NONE FOUND WITHIN PERIOD SEARCHED.
2. JUDGMENTS AND LIENS
NONE FOUND WITHIN PERIOD SEARCHED.
3. COVENANTS AND RESTRICTIONS
NONE FOUND WITHIN PERIOD SEARCHED.
4. EASEMENTS AND RIGHTS OF WAY

4.1 EASEMENT BY H. M. ARNDT AND WIFE, GRACE Y. ARNDT TO DUKE POWER COMPANY, DATED JULY 18, 1962, RECORDED JULY 27, 1962, IN BOOK 721, PAGE 19.
NOTES: UTILITY EASEMENT (AFFECT PARENT PARCEL. CANNOT DETERMINE LOCATION.)

5. OTHER RECORDED DOCUMENTS

5.1 A FAMILY SUBDIVISION FOR: LEE A. SETZER RECORDED FEBRUARY 25, 2010, IN BOOK 69, PAGE 115. (AFFECT PARENT PARCEL.)

5.2 A MINOR SUBDIVISION FOR: JACK M. ARNDT RECORDED JULY 06, 2006, IN BOOK 64, PAGE 15. (AFFECT PARENT PARCEL.)

5.3 MINOR SUBDIVISION HARRY M ARNDT EST RECORDED NOVEMBER 13, 1997, IN BOOK 43, PAGE 165. (AFFECT PARENT PARCEL.)

5.4 MINOR SUBDIVISION HARRY M. ARNDT RECORDED JANUARY 06, 1995, IN BOOK 36, PAGE 194. (AFFECT PARENT PARCEL.)

TITLE LEGAL DESCRIPTION (AS FURNISHED)

SITUATED IN CLINES TOWNSHIP, CATAWBA COUNTY, NORTH CAROLINA, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEING ALL OF LOT 1 OF A PLAT ENTITLED "A FAMILY SUBDIVISION FOR LEE A. SETZER," DATED OCTOBER 29, 2009 PREPARED BY J. MIKE HONEYCUTT, LAND SURVEYING, N.C.P.L.S., L-1360, RECORDED IN PLAT BOOK 69 AT PAGE 115, CATAWBA COUNTY REGISTRY.



TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
(919) 661-6351
COA # P-1403

SHEET #: 3 OF 3 TEP #: 333496

I, Alan H. Allbert, certify that this plat was drawn under my supervision from an actual survey performed under my supervision (deed description recorded in Book 2764, page 1103, etc.) (other); that the boundaries not surveyed are clearly indicated as drawn from information found in Plat Book 69, page 115; that the ratio of precision as calculated is 0.04; that the Global Positioning System (GPS) survey and the following information was used to perform the GPS (GNSS if dual constellations are used) survey:
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Dates of survey: October 03, 2023
Datum/Epoch: Horizontal Datum is NAD 83/2011
Vertical Datum is NAVD88
Published/Fixed-control use: CORS
Geoid model: GEOID18
Combined grid factor(s): 0.9998696
Units: U.S. Survey Foot
That this map meets the requirements of the standards of practice for land surveying in North Carolina (21 NCAC 56.1600).
Witness my original signature and seal this the 19th day of October, 2023.



DocuSigned by:

B672AD038BBF4BC...
ALAN H. ALLBERT
NORTH CAROLINA PLS # L-3738

PROJECT INFORMATION:
NC0313
CLAUDETTE
5198 N. NC HWY 16
CLAREMONT, NC 28610
CLINES TOWNSHIP
CATAWBA COUNTY

PRELIMINARY PLAT OF PROPOSED
TELECOMMUNICATIONS SITE SURVEY
PREPARED FOR:



5000 VALLEYSTONE DRIVE
CARY, NC 27519
(919) 653-5700

FIELD WORK PERFORMED ON: 10/03/23

REV	DATE	ISSUED FOR	INITIALS
0	10/06/2023	PRELIMINARY	JCS
1	10/19/2023	PROPOSED SITE	DDS

N.T.S.
ORIGINAL MAP SIZE 11.00" X 17.00"

Exhibit 7
FCC Licenses

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign KNLG280	File Number 0007639973
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003290673

Grant Date 04-04-2017	Effective Date 04-04-2017	Expiration Date 04-28-2027	Print Date 04-05-2017
Market Number BTA189	Channel Block F	Sub-Market Designator 0	
Market Name Hickory-Lenoir-Morganton, NC			
1st Build-out Date 04-28-2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.716 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNLG280

File Number: 0007639973

Print Date: 04-05-2017

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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**Federal Communications Commission
Wireless Telecommunications Bureau**

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign KNKA770	File Number 0008341881
Radio Service CL - Cellular	
Market Numer CMA166	Channel Block A
Sub-Market Designator 0	

FCC Registration Number (FRN): 0003290673

Market Name Hickory, NC				
Grant Date 10-23-2018	Effective Date 10-23-2018	Expiration Date 11-27-2028	Five Yr Build-Out Date	Print Date 10-23-2018

Site Information:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
2	35-43-23.5 N	081-36-27.3 W	79.3		

Address: HIGH PEAK: 4900 HIGH PEAK MOUNTAIN ROAD
City: VALDESE **County:** BURKE **State:** NC **Construction Deadline:**

Antenna: 1

Maximum Transmitting ERP in Watts: 35.000

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	320.700	323.100	282.200	283.500	241.400	121.000	325.500	326.400
Transmitting ERP (watts)	0.600	1.200	2.900	0.030	0.010	0.030	3.100	1.200

Antenna: 2

Maximum Transmitting ERP in Watts: 278.000

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	320.700	323.100	282.200	283.500	241.400	121.000	325.500	326.400
Transmitting ERP (watts)	0.000	0.100	2.200	7.400	6.300	7.300	2.100	0.100

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA770

File Number: 0008341881

Print Date: 10-23-2018

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
3	35-41-20.5 N	081-25-17.3 W	365.2		

Address: ROUTE 4, BOX 146

City: HICKORY County: CATAWBA State: NC Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts: 87.310

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	109.700	109.100	141.700	144.200	113.400	83.500	46.900	86.600
Transmitting ERP (watts)	87.310	87.310	87.310	87.310	87.310	87.310	87.310	87.310

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	35-37-05.5 N	081-09-25.3 W	312.4		

Address: 3034 PROVIDENCE MILL ROAD

City: MAIDEN County: CATAWBA State: NC Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts: 93.570

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	115.500	121.900	115.800	97.800	119.200	132.900	120.100	109.700
Transmitting ERP (watts)	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
6	35-42-44.5 N	081-42-10.3 W	95.1		

Address: MORGANTON: 207 GARRISON ROAD

City: MORGANTON County: BURKE State: NC Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts: 100.000

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	139.000	122.200	4.300	32.000	-136.600	103.900	108.800	114.900
Transmitting ERP (watts)	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
7	35-45-15.5 N	081-31-52.3 W			

Address: 110 Benfield Street

City: Rutherford County: BURKE State: NC Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts: 97.800

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	89.300	84.100	123.100	132.000	135.300	121.300	53.900	43.300
Transmitting ERP (watts)	18.000	22.100	47.300	70.000	70.000	70.000	53.100	24.800

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA770

File Number: 0008341881

Print Date: 10-23-2018

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	35-53-24.5 N	081-11-22.3 W	92.4		

Address: MILLERSVILLE: ROUTE 6, BOX 5 - 5

City: TAYLORSVILLE County: ALEXANDER State: NC Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts: 70.000

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	46.900	88.400	115.200	125.900	131.700	110.600	53.300	51.500
Transmitting ERP (watts)	18.000	22.100	47.300	70.000	70.000	70.000	53.100	24.800

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
11	35-57-02.5 N	081-12-16.3 W	366.4		

Address: ATOP LINNEY MOUNTAIN, FOOT MOOSE ROAD

City: TAYLORVILLE County: ALEXANDER State: NC Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts: 100.000

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	-43.900	4.300	72.200	73.500	98.800	39.000	-4.900	-13.400
Transmitting ERP (watts)	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
12	35-41-40.0 N	081-49-50.0 W	393.5	78.9	1052479

Address: (Silver Creek I40) 4029 SMAWLEY STREET (021132 / Silver Creek)

City: MORGANTON County: BURKE State: NC Construction Deadline: 11-14-2013

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	100.400	121.600	111.900	-56.600	42.200	-14.100	76.700	57.900
Transmitting ERP (watts)	41.200	188.340	153.090	10.350	0.420	0.420	0.420	0.420

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	100.400	121.600	111.900	-56.600	42.200	-14.100	76.700	57.900
Transmitting ERP (watts)	0.420	0.420	2.980	88.090	211.320	88.090	0.770	0.420

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	100.400	121.600	111.900	-56.600	42.200	-14.100	76.700	57.900
Transmitting ERP (watts)	5.310	0.420	0.420	0.420	0.420	56.880	201.810	133.330

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA770

File Number: 0008341881

Print Date: 10-23-2018

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
13	35-46-23.3 N	081-48-44.5 W	414.5	41.8	

Address: (Crescent Woods site) 3208 Hwy 126

City: Morganton County: BURKE State: NC Construction Deadline: 11-20-2013

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	61.000	85.900	115.000	111.500	88.800	79.000	29.200	-131.400
Transmitting ERP (watts)	204.170	263.030	48.980	0.620	0.620	0.620	0.620	23.440

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	61.000	85.900	115.000	111.500	88.800	79.000	29.200	-131.400
Transmitting ERP (watts)	0.620	0.620	66.070	263.030	199.530	14.130	0.620	0.620

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	61.000	85.900	115.000	111.500	88.800	79.000	29.200	-131.400
Transmitting ERP (watts)	1.620	0.620	0.620	0.620	5.620	131.830	288.400	120.230

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
14	35-46-41.4 N	081-45-31.3 W	405.4	50.0	

Address: (Oak Hill) 2834 Frank Whisnant Rd

City: Morganton County: BURKE State: NC Construction Deadline: 05-09-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	26.800	101.100	129.100	89.800	110.800	102.400	51.300	8.400
Transmitting ERP (watts)	38.160	75.990	62.010	15.560	0.680	0.630	0.630	0.630

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	26.800	101.100	129.100	89.800	110.800	102.400	51.300	8.400
Transmitting ERP (watts)	0.630	0.630	0.630	73.870	196.040	132.280	8.190	0.630

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	26.800	101.100	129.100	89.800	110.800	102.400	51.300	8.400
Transmitting ERP (watts)	132.280	8.190	0.630	0.630	0.630	0.630	73.870	196.040

Control Points:

Control Pt. No. 1

Address: 500 W. Dove Road

City: Southlake County: TARRANT State: TX Telephone Number: (800)264-6620

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA770

File Number: 0008341881

Print Date: 10-23-2018

Waivers/Conditions:

NONE

Reference Copy

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**Federal Communications Commission
Wireless Telecommunications Bureau****RADIO STATION AUTHORIZATION**

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WQEE473	
Radio Service	
CW - PCS Broadband	

FCC Registration Number (FRN): 0003290673

Grant Date 12-11-2015	Effective Date 06-07-2018	Expiration Date 01-06-2026	Print Date
Market Number BTA189	Channel Block C	Sub-Market Designator 3	
Market Name Hickory-Lenoir-Morganton, NC			
1st Build-out Date 01-06-2011	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQEE473

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WQEM945	File Number
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003290673

Grant Date 03-15-2016	Effective Date 11-01-2016	Expiration Date 03-08-2026	Print Date
Market Number BTA189	Channel Block C	Sub-Market Designator 5	
Market Name Hickory-Lenoir-Morganton, NC			
1st Build-out Date 03-08-2011	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Conditions:

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQEM945

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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**Federal Communications Commission
Wireless Telecommunications Bureau****RADIO STATION AUTHORIZATION****LICENSEE:** CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WQEM945	
Radio Service	
CW - PCS Broadband	

FCC Registration Number (FRN): 0003290673

Grant Date 03-15-2016	Effective Date 11-01-2016	Expiration Date 03-08-2026	Print Date
Market Number BTA189	Channel Block C	Sub-Market Designator 5	
Market Name Hickory-Lenoir-Morganton, NC			
1st Build-out Date 03-08-2011	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQEM945

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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**Federal Communications Commission
Wireless Telecommunications Bureau****RADIO STATION AUTHORIZATION****LICENSEE: CELLCO PARTNERSHIP**

CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WQGA716	
Radio Service	
AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003290673

Grant Date 12-14-2021	Effective Date 12-14-2021	Expiration Date 11-29-2036	Print Date
Market Number REA002	Channel Block F		Sub-Market Designator 25
Market Name Southeast			
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQGA716

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WQGA939	File Number 0009774995
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003290673

Grant Date 12-21-2021	Effective Date 12-21-2021	Expiration Date 11-29-2036	Print Date 12-21-2021
Market Number BEA046	Channel Block B	Sub-Market Designator 0	
Market Name Hickory-Morganton, NC-TN			
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQGA939

File Number: 0009774995

Print Date: 12-21-2021

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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**Federal Communications Commission
Wireless Telecommunications Bureau****RADIO STATION AUTHORIZATION****LICENSEE:** CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WQJQ690	
Radio Service	
WU - 700 MHz Upper Band (Block C)	

FCC Registration Number (FRN): 0003290673

Grant Date 10-04-2019	Effective Date 09-05-2023	Expiration Date 06-13-2029	Print Date
Market Number REA002	Channel Block C	Sub-Market Designator 0	
Market Name Southeast			
1st Build-out Date 06-13-2013	2nd Build-out Date 06-13-2019	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This authorization is conditioned upon compliance with section 27.16 of the Commission's rules

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQJQ690

File Number:

Print Date:

This authorization is subject to the condition that the station license limits the effective radiated power relative to a dipole (ERPd) antenna to 1238 watts per 10 MHz bandwidth at 333.7 degrees true azimuth bearing for all antennas associated with location no.1 (Lexington, VA) with coordinates of 37-47-19.5 N, 79-29-15.1 W. See Quiet Zone Notification authorized with grant of FN 0004834212.

This authorization is subject to the condition that the station license limits the effective radiated power to 196 watts per 10 MHz bandwidth at 7 degrees true azimuth bearing for all antennas associated with location no. 5 (Covington, VA) with coordinates of 37-47-35.1 N, 79-55-58.4 W. See Quiet Zone Notification authorized with grant of FN 0004880708.

This authorization is subject to the condition that the station license limits the effective radiated power to 856 watts per 10 MHz bandwidth at 320 degrees true azimuth bearing for all antennas associated with location no. 6 (Fairfield, VA) with coordinates of 37-53-48.4 N, 79-15-59.1 W. See Quiet Zone Notification authorized with grant of FN 0004880708.

This authorization is subject to the condition that the station license limits the effective radiated power to 9.8 watts per 10 MHz bandwidth at 359 degrees true azimuth bearing for all antennas associated with location no. 12 (Eagle Rock, VA) with coordinates of 37-37-55.8 N, 79-49-50.0 W. See Quiet Zone Notification authorized with grant of FN 0004880708.

This authorization is subject to the condition that the station license limits the effective radiated power relative to a dipole (ERPd) antenna to 918 watts per 10 MHz unit bandwidth at 29.6 degrees true azimuth bearing for all antennas associated with location no. 17 (White Sulphur Spring, WV) with coordinates of 37-47-19.6 N, 80-18-22.7 W. See Quiet Zone Notification authorized with grant of FN 0004880708.

This authorization is subject to the condition that the station license limits the effective radiated power relative to a dipole (ERPd) antenna to 264 watts per 10 MHz unit bandwidth at 352.4 degrees true azimuth bearing for all antennas associated with location no. 19 (Buchanan, VA) with coordinates of 37-33-45.0 N, 79-41-21.9 W. See Quiet Zone Notification authorized with grant of FN 0004908392.

This authorization is subject to the condition that the station license limits the effective radiated power relative to a dipole (ERPd) to 781 watts per 10 MHz unit bandwidth at 293.93 degrees true azimuth bearing for all antennas associated with location no. 21 (Waynesboro, VA) with coordinates of 38-06-55.6 N, 78-54-55.5 W. See Quiet Zone Notification authorized with grant of FN 0004970422.

This authorization is subject to the condition that the station license limits the effective radiated power to 20.23 dBW per 10 MHz bandwidth at 297.4 degrees true azimuth bearing for all antennas associated with location no. 24 (Waynesboro, VA) with coordinates of 38-02-29.4 N, 78-52-11.6 W. See Quiet Zone Notification authorized with grant of FN 0005104523.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQJQ690

File Number:

Print Date:

This authorization is subject to the condition that the station license limits the effective radiated power (ERP) to 12.9 watts per 10 MHz bandwidth at 9.1 degrees true azimuth bearing for all antennas associated with location no. 31 (Covington, VA) with coordinates of 37-51-51.4 N, 79-57-22.4 W. See Quiet Zone Notification authorized with grant of FN 0005178701.

This authorization is subject to the condition that the station license limits the effective radiated power to 1327 watts per 10 MHz bandwidth at 291.8 degrees true azimuth bearing for all antennas associated with location no. 30 (Staunton, VA) with coordinates of 38-09-23.7 N, 78-57-02.9 W. See Quiet Zone Notification authorized with grant of FN 0005168812.

This authorization is subject to the condition that the station license limits the effective radiated power to 712 watts per 10 MHz bandwidth at 37.5 degrees true azimuth bearing for all antennas associated with location no. 28 (Lewisburg, WV) with coordinates of 37-48-42.7 N, 80-26-54.5 W. See Quiet Zone Notification authorized with grant of FN 0005223750.

This authorization is subject to the condition that the station license limits the effective radiated power to 877 watts per 10 MHz bandwidth at 296.22 degrees true azimuth bearing for all antennas associated with location no. 29 (Waynesboro, VA) with coordinates of 38-05-37.6 N, 78-57-05.3 W. See Quiet Zone Notification authorized with grant of FN 0005223750.

This authorization is subject to the condition that the station license limits the effective radiated power to 126 watts per 10 MHz bandwidth at 29.7 degrees true azimuth bearing for all antennas associated with location no. 53 (White Sulphur Spring, WV) with coordinates of 37-48-05.7 N, 80-17-54.5 W. See Quiet Zone Notification authorized with grant of FN 0005271165.

This authorization is subject to the condition that the station license limits the effective radiated power to 1129 watts per 10 MHz bandwidth at 35 degrees true azimuth bearing for all antennas associated with location no. 52 (Lewisburg, WV) with coordinates of 37-48-47.3 N, 80-23-33.9 W. See Quiet Zone Notification authorized with grant of FN 0005272906.

This authorization is subject to the condition that the station license limits the effective radiated power to 763 watts per 10 MHz bandwidth at 36.99 degrees true azimuth bearing for all antennas associated with location no. 52 (Fairlea, WV) with coordinates of 37-47-03.0 N, 80-27-55.6 W. See Quiet Zone Notification authorized with grant of FN 0005287264.

This authorization is subject to the condition that the station license limits the effective radiated power to 83 watts per 10 MHz bandwidth at 27.85 degrees true azimuth bearing for all antennas associated with location no. 53 (White Sulphur Springs, WV) with coordinates of 37-47-29.0 N, 80-16-23.30 W. See Quiet Zone Notification authorized with grant of FN 0005287264.

This authorization is subject to the condition that the station license limits the effective radiated power to 592 watts per 10 MHz bandwidth at 284.9 degrees true azimuth bearing for all antennas associated with location no. 62 (Mount Sidney, VA) with coordinates of 38-15-18.1 N, 78-58-22.3 W. See Quiet Zone Notification authorized with grant of FN 0005690131.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQJQ690

File Number:

Print Date:

This authorization is subject to the condition that the station license limits the effective radiated power to 87 watts 700LTE at 298.03 degrees true azimuth bearing for all antennas associated with location no. 62 (Afton, VA) with coordinates of 38-01-43.5 N, 78-51-37.8 W. See Quiet Zone Notification authorized with grant of FN 0005669760.

Reference Copy

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQJQ690

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WRNG749	File Number
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block A1	Sub-Market Designator 0	
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG749

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission

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RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNG750	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block A2	Sub-Market Designator 0	
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

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Conditions:

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG750

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNG751	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block A3	Sub-Market Designator 0	
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

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Conditions:

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG751

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNG751	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block A3		Sub-Market Designator 0
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG751

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNG751	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block A3	Sub-Market Designator 0	
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

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Conditions:

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG751

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WRNG753	File Number
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block A5	Sub-Market Designator 0	
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG753

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WRNG753	File Number
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block A5	Sub-Market Designator 0	
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG753

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
---------------	--------------------	--------------------------	------------------------------	---------------

REFERENCE COPY

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WRNG754	File Number
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block B1	Sub-Market Designator 0	
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG754

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
---------------	--------------------	--------------------------	------------------------------	---------------

REFERENCE COPY

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**Federal Communications Commission
Wireless Telecommunications Bureau****RADIO STATION AUTHORIZATION****LICENSEE:** CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNG755	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block B2	Sub-Market Designator 0	
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG755

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
---------------	--------------------	--------------------------	------------------------------	---------------

REFERENCE COPY

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**Federal Communications Commission
Wireless Telecommunications Bureau****RADIO STATION AUTHORIZATION****LICENSEE:** CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNG756	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block B3		Sub-Market Designator 0
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG756

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign WRNG756	File Number
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA215	Channel Block B3	Sub-Market Designator 0	
Market Name Hickory, NC			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG756

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Exhibit 8
Photo Simulations

Proposed Tower Location



An aerial photograph of a rural landscape. In the upper left, there are several large, rectangular solar panel arrays. A road runs vertically through the center of the image. To the right of the road, there is a large field of green corn. Four red location pins are numbered 1 through 4. Pin 1 is at the top of the road. Pin 2 is to the right of the road, near a small cluster of buildings. Pin 3 is further to the right, near a residential area. Pin 4 is on the road, below the corn field. A red arrow points to the corn field, labeled 'Proposed Tower Location'.

PHOTOGRAPHIC LOCATION MAP
NC-0313 CLAUDETTE
5198 NC-16
CLAREMONT, NC



EXISTING VIEW

199' MONOPOLE TOWER SIMULATION
NC-0313 CLAUDETTE
5198 NC-16
CLAREMONT, NC

As viewed from approximately 1,050' Northwest of the
site near the intersection of NC-16 and Oxford School Rd.,
looking Southeast toward the site.



EXISTING VIEW



199' MONOPOLE TOWER SIMULATION
NC-0313 CLAUDETTE
5198 NC-16
CLAREMONT, NC

As viewed from approximately 900' North of the site near the intersection of Oxford School Rd. and Rest Home Rd., looking South toward the site.



EXISTING VIEW



199' MONOPOLE TOWER SIMULATION
NC-0313 CLAUDETTE
5198 NC-16
CLAREMONT, NC

As viewed from approximately 1,400' Northeast of the site
near Oxford School Rd., looking Southwest toward the site.



EXISTING VIEW

199' MONOPOLE TOWER SIMULATION
NC-0313 CLAUDETTE
5198 NC-16
CLAREMONT, NC

As viewed from approximately 1,000' South of the site
near NS-16, looking North toward the site.

Exhibit 9
FAA Report



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASO-31413-OE

Issued Date: 01/30/2024

Henry Byrne
TowerCo 2013 LLC
5000 Valley Stone Drive
Suite 200
Cary, NC 27519

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Monopole NC0313 Claudette
Location:	Clarmont, NC
Latitude:	35-46-33.23N NAD 83
Longitude:	81-10-16.37W
Heights:	1012 feet site elevation (SE) 199 feet above ground level (AGL) 1211 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Emissions from this site must be in compliance with the parameters set by collaboration between the FAA and telecommunications companies and reflected in the FAA 5G C band compatibility evaluation process (such as power, frequencies, and tilt angle). Operational use of this frequency band is not objectionable provided the Wireless Providers (WP) obtain and adhere to the parameters established by the FAA 5G C band compatibility evaluation process. **Failure to comply with this condition will void this determination of no hazard.**

See attachment for additional condition(s) or information.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 07/30/2025 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within

6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination does not constitute authority to transmit on the frequency(ies) identified in this study. The proponent is required to obtain a formal frequency transmit license from the Federal Communications Commission (FCC) or National Telecommunications and Information Administration (NTIA), prior to on-air operations of these frequency(ies).

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (404) 305-6064, or James.Marek@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ASO-31413-OE.

Signature Control No: 605072012-611017091

(DNE)

James Marek
Specialist

Attachment(s)
Additional Information
Frequency Data

Map(s)

cc: FCC

Part 77 authorizes the FAA to evaluate a structure or object's potential electromagnetic effects on air navigation, communication facilities, and other surveillance systems. It also authorizes study of impact on arrival, departure, and en route procedures for aircraft operating under visual or instrument flight rules, as well as the impact on airport traffic capacity at existing public use airports. Broadcast in the 3.7 to 3.98 GHz frequency (5G C band) currently causes errors in certain aircraft radio altimeters and the FAA has determined they cannot be relied upon to perform their intended function when experiencing interference from wireless broadband operations in the 5G C band. The FAA has adopted Airworthiness Directives for all transport and commuter category aircraft equipped with radio altimeters that prohibit certain operations when in the presence of 5G C band.

This determination of no hazard is based upon those mitigations implemented by the FAA and operators of transport and commuter category aircraft, and helicopters operating in the vicinity of your proposed location. It is also based on telecommunication industry and FAA collaboration on acceptable power levels and other parameters as reflected in the FAA 5G C band evaluation process.

The FAA 5G C band compatibility evaluation is a data analytics system used by FAA to evaluate operational hazards related to aircraft design. The FAA 5G C band compatibility evaluation process refers to the process in which the telecommunication companies and the FAA have set parameters, such as power output, locations, frequencies, and tilt angles for antenna that mitigate the hazard to aviation. As the telecommunication companies and FAA refine the tools and methodology, the allowable frequencies and power levels may change in the FAA 5G C band compatibility evaluation process. Therefore, your proposal will not have a substantial adverse effect on the safe and efficient use of the navigable airspace by aircraft provided the equipment and emissions are in compliance with the parameters established through the FAA 5G C band compatibility evaluation process.

Any future changes that are not consistent with the parameters listed in the FAA 5G C band compatibility evaluation process will void this determination of no hazard.

Frequency Data for ASN 2023-ASO-31413-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	2000	W
614	698	MHz	1000	W
698	806	MHz	1000	W
806	824	MHz	500	W
806	901	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W
3700	3980	MHz	3280	W
3700	3980	MHz	1640	W



Exhibit 10
Search Ring

VZW - Claudette - Candidate E - TowerCo NC 0313 Colo - Search Ring Map with Site Marked

1.0 mile radius

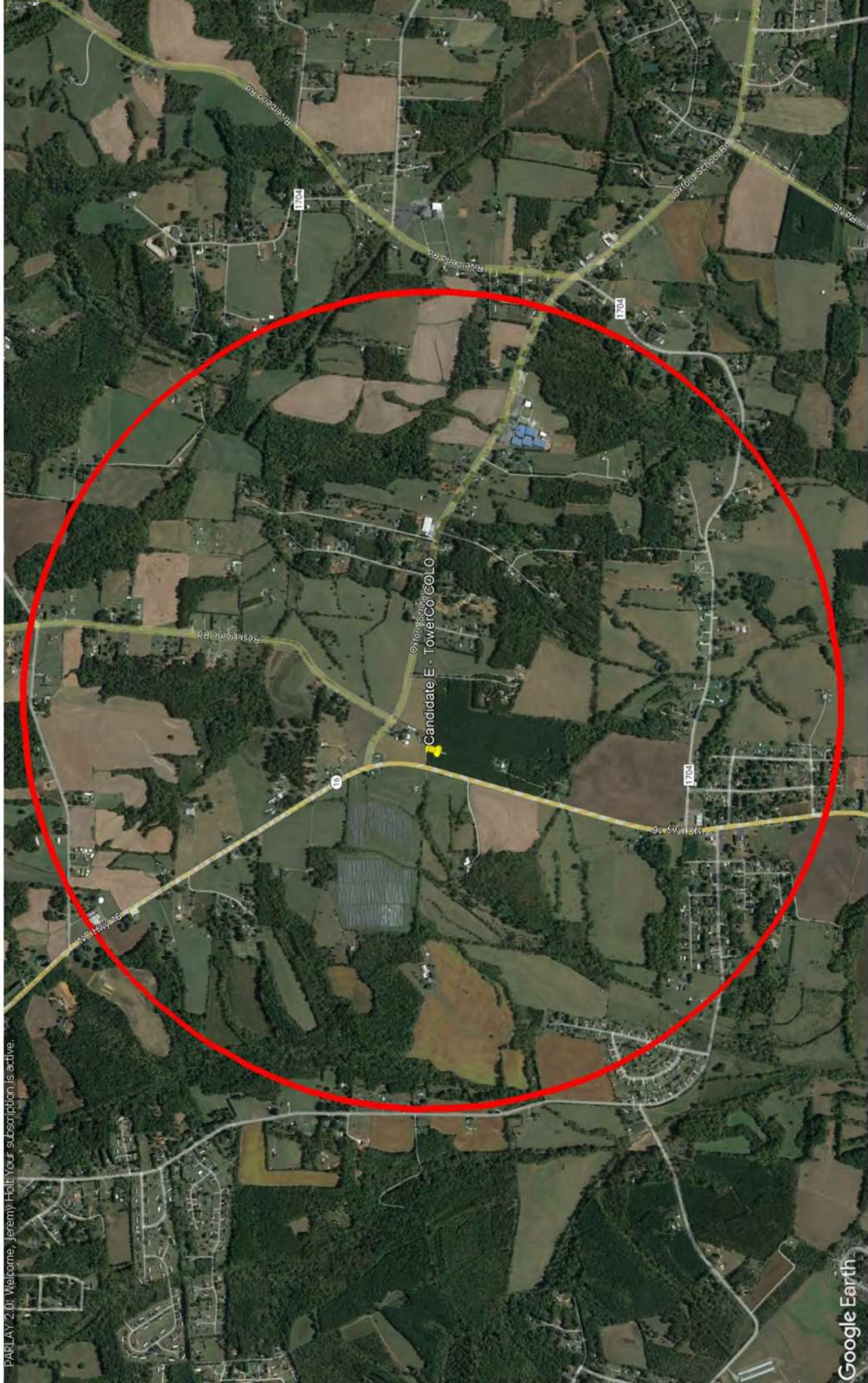


Exhibit 11
Structural Design Report



Structural Design Report

195' Monopole

Site: Claudette, NC

Site Number: NC0313

Prepared for: TOWERCO LLC

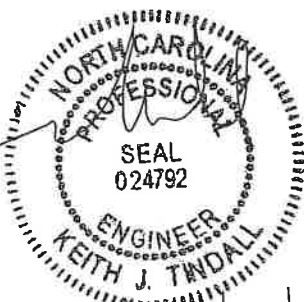
by: Sabre Industries™

Job Number: 24-1727-JDS-R1

Revision A

January 25, 2024

Monopole Profile.....	1
Foundation Design Summary (Preliminary) (Option 1).....	2
Foundation Design Summary (Preliminary) (Option 2).....	3
Pole Calculations.....	4-18
Foundation Calculations.....	19-27

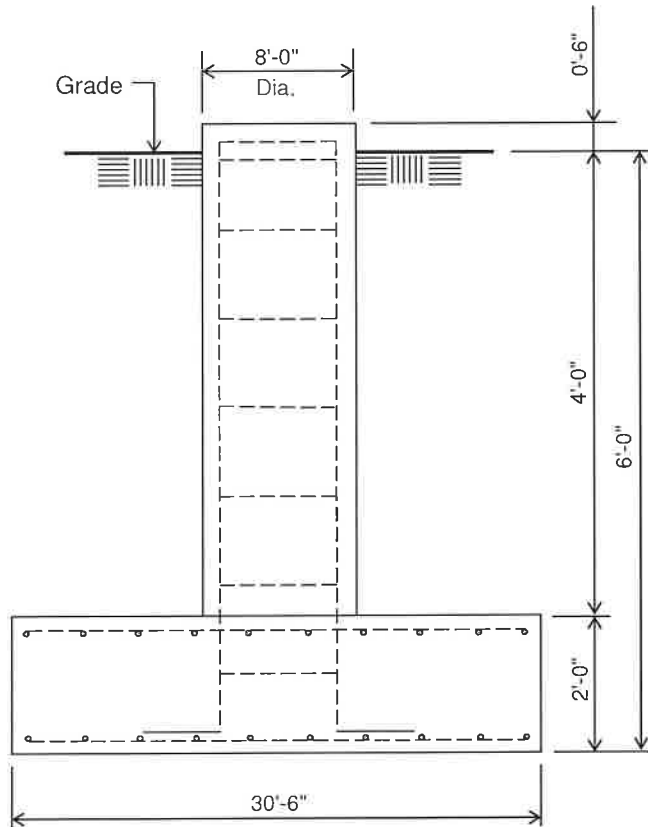


1/25/24

Digitally Signed By Keith Tindall
DN: c=US, st=Texas,
l=Alvarado, o=SABRE
INDUSTRIES, INC., cn=Keith
Tindall,
email=kjtindall@sabreindustries
.com Date: 2024.01.25
15:59:29

Customer: TOWERCO LLC
Site: Claudette, NC NC0313
195' Monopole

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW
(77.28 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

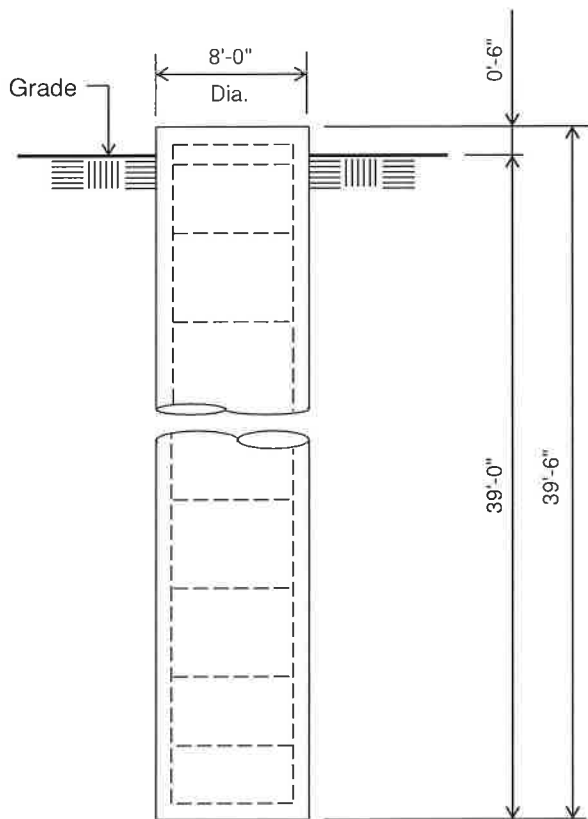
- 1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-11.
- 2) Rebar to conform to ASTM specification A615 Grade 60.
- 3) All rebar to have a minimum of 3" concrete cover.
- 4) All exposed concrete corners to be chamfered 3/4".
- 5) The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-G-2005. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
- 6) 4 ft of soil cover is required over the entire area of the foundation slab.
- 7) The foundation is based on the following factored loads:
Moment = 7,777.57 k-ft
Axial = 84.33 k
Shear = 49.03 k

Rebar Schedule for Pad and Pier	
Pier	(54) #8 vertical rebar w/ hooks at bottom w/ #5 ties, (2) within top 5" of pier, then 12" C/C
Pad	(63) #9 horizontal rebar evenly spaced each way top and bottom (252 total)

Information contained herein is the sole property of Sabre Industries, constitutes a trade secret as defined by Iowa Code Ch. 550 and shall not be reproduced, copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Industries.

Customer: TOWERCO LLC
Site: Claudette, NC NC0313
195' Monopole

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW

(73.54 Cu. Yds.)

(1 REQUIRED; NOT TO SCALE)

Notes:

- 1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-11.
- 2) Rebar to conform to ASTM specification A615 Grade 60.
- 3) All rebar to have a minimum of 3" concrete cover.
- 4) All exposed concrete corners to be chamfered 3/4".
- 5) The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-G-2005. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
- 6) The foundation is based on the following factored loads:
Moment = 7,777.57 k-ft
Axial = 84.33 k
Shear = 49.03 k

Rebar Schedule for Pier	
Pier	(40) #10 vertical rebar w/ #5 ties, (2) within top 5" of pier, then 7" C/C

Information contained herein is the sole property of Sabre Industries, constitutes a trade secret as defined by Iowa Code Ch. 550 and shall not be reproduced, copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Industries.

=====

(USA 222-G) - Monopole Spatial Analysis (c)2015 Guymast Inc.

Tel:(416)736-7453 Fax:(416)736-4372 Web:www.guymast.com

Processed under license at:

Sabre Towers and Poles on: 25 jan 2024 at: 15:38:04

=====

195' Monopole / Claudette, NC

* All pole diameters shown on the following pages are across corners.
See profile drawing for widths across flats.

POLE GEOMETRY

=====

ELEV ft	SECTION NAME	No. SIDE	OUTSIDE DIAM in	THICK -NESS in	RESISTANCES ♦*Pn kip	♦*Mn ft-kip	SPLICE TYPE	...OVERLAP... LENGTH ft	RATIO	w/t
194.0	A	18	19.80	0.312	1414.0	553.5				9.2
			32.72	0.312	2338.4	1532.0				
145.7	A/B	18	32.72	0.312	2338.4	1532.0	SLIP	4.75	1.73	
			33.38	0.375	2873.6	1913.9				
141.0	B	18	33.38	0.375	2873.6	1913.9				13.7
			44.68	0.375	3698.4	3316.3				
98.7	B/C	18	44.68	0.375	3698.4	3316.3	SLIP	6.50	1.73	
			45.68	0.438	4573.8	4183.2				
92.2	C	18	45.68	0.438	4573.8	4183.2				16.4
			56.11	0.438	5294.4	5969.1				
53.2	C/D	18	56.11	0.438	5294.4	5969.1	SLIP	8.00	1.70	
			57.39	0.438	5374.4	6199.9				
45.2	D	18	57.39	0.438	5374.4	6199.9				21.0
			69.50	0.438	6037.0	8456.9				
0.0										

POLE ASSEMBLY

=====

SECTION NAME	BASE ELEV ft	BOLTS NUMBER	AT BASE TYPE	OF SECTION DIAM in	STRENGTH ksi	THREADS IN SHEAR PLANE	CALC BASE ELEV ft
A	141.000	0	A325	0.00	92.0	0	141.000
B	92.250	0	A325	0.00	92.0	0	92.250
C	45.250	0	A325	0.00	92.0	0	45.250
D	0.000	0	A325	0.00	92.0	0	0.000

POLE SECTIONS

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SECTION NAME	No. of SIDES	LENGTH	OUTSIDE.DIAMETER		BEND RAD	MAT-ERIAL ID	FLANGE.ID		FLANGE.WELD	
			BOT	TOP			BOT	TOP	.GROUP.ID..	
			* ft	* in					BOT	TOP
A	18	53.00	34.00	19.80	0.000	1	0	0	0	0
B	18	53.50	46.43	32.10	0.000	2	0	0	0	0
C	18	53.50	58.26	43.93	0.000	3	0	0	0	0
D	18	53.25	69.50	55.23	0.000	4	0	0	0	0

* - Diameter of circumscribed circle

MATERIAL TYPES

TYPE OF SHAPE	TYPE NO	NO OF ELEM.	ORIENT	HEIGHT	WIDTH	.THICKNESS.		IRREGULARITY	
						WEB	FLANGE	.PROJECTION.	
						in	in	% OF AREA	ORIENT deg
PL	1	1	0.0	34.00	0.31	0.312	0.312	0.00	0.0
PL	2	1	0.0	46.43	0.38	0.375	0.375	0.00	0.0
PL	3	1	0.0	58.27	0.44	0.438	0.438	0.00	0.0
PL	4	1	0.0	69.50	0.44	0.438	0.438	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES

MATERIAL TYPE NO.	ELASTIC MODULUS ksi	UNIT WEIGHT pcf	.. STRENGTH ..		THERMAL COEFFICIENT /deg
			Fu ksi	Fy ksi	
1	29000.0	490.0	80.0	65.0	0.00001170
2	29000.0	490.0	80.0	65.0	0.00001170
3	29000.0	490.0	80.0	65.0	0.00001170
4	29000.0	490.0	80.0	65.0	0.00001170

* Only 5 condition(s) shown in full

LOADING CONDITION A

115 mph Ultimate wind with no ice. Wind Azimuth: 0° (1.2 D + 1.0 Wo)

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES.....		.....MOMENTS.....	
					HORIZ	DOWN	VERTICAL	TORSNAL
					kip	kip	ft-kip	ft-kip
C	189.000	0.00	0.0	0.0	0.0000	4.2457	0.0000	0.0000
C	189.000	0.00	0.0	0.0	15.2085	13.8396	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.0000	2.6508	0.0000	0.0000
C	177.000	0.00	0.0	0.0	7.5972	6.0396	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0000	2.5010	0.0000	0.0000
C	167.000	0.00	0.0	0.0	7.5053	6.0396	0.0000	0.0000

D	194.000	0.00	180.0	0.0	0.0582	0.0866	0.0000	0.0000
D	177.917	0.00	180.0	0.0	0.0582	0.0866	0.0000	0.0000
D	177.917	0.00	180.0	0.0	0.0683	0.1035	0.0000	0.0000
D	161.833	0.00	180.0	0.0	0.0683	0.1035	0.0000	0.0000
D	161.833	0.00	180.0	0.0	0.0779	0.1205	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0779	0.1205	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0838	0.2867	0.0000	0.0000
D	141.000	0.00	180.0	0.0	0.0838	0.2867	0.0000	0.0000
D	141.000	0.00	180.0	0.0	0.0873	0.1671	0.0000	0.0000
D	126.917	0.00	180.0	0.0	0.0873	0.1671	0.0000	0.0000
D	126.917	0.00	180.0	0.0	0.0944	0.1850	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.0944	0.1850	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.1009	0.2029	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.1009	0.2029	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.1051	0.4640	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.1051	0.4640	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.1070	0.2625	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.1070	0.2625	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.1110	0.2818	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.1110	0.2818	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.1138	0.3010	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1138	0.3010	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1150	0.6288	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.1150	0.6288	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.1132	0.3265	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.1132	0.3265	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.1100	0.3433	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.1050	0.3770	0.0000	0.0000

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LOADING CONDITION M =====

115 mph Ultimate wind with no ice. Wind Azimuth: 0° (0.9 D + 1.0 Wo)

LOADS ON POLE

=====

LOAD TYPE	ELEV ft	APPLY.. RADIUS ft	LOAD.. AZI	AT AZI	.....FORCES.....		.....MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	189.000	0.00	0.0	0.0	0.0000	3.1843	0.0000	0.0000
C	189.000	0.00	0.0	0.0	15.2085	10.3797	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.0000	1.9881	0.0000	0.0000
C	177.000	0.00	0.0	0.0	7.5972	4.5297	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0000	1.8757	0.0000	0.0000
C	167.000	0.00	0.0	0.0	7.5053	4.5297	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0582	0.0649	0.0000	0.0000
D	177.917	0.00	180.0	0.0	0.0582	0.0649	0.0000	0.0000
D	177.917	0.00	180.0	0.0	0.0683	0.0777	0.0000	0.0000
D	161.833	0.00	180.0	0.0	0.0683	0.0777	0.0000	0.0000
D	161.833	0.00	180.0	0.0	0.0779	0.0904	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0779	0.0904	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0838	0.2150	0.0000	0.0000
D	141.000	0.00	180.0	0.0	0.0838	0.2150	0.0000	0.0000
D	141.000	0.00	180.0	0.0	0.0873	0.1253	0.0000	0.0000
D	126.917	0.00	180.0	0.0	0.0873	0.1253	0.0000	0.0000
D	126.917	0.00	180.0	0.0	0.0944	0.1388	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.0944	0.1388	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.1009	0.1522	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.1009	0.1522	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.1051	0.3480	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.1051	0.3480	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.1070	0.1969	0.0000	0.0000

D	79.250	0.00	180.0	0.0	0.1070	0.1969	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.1110	0.2113	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.1110	0.2113	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.1138	0.2258	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1138	0.2258	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1150	0.4716	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.1150	0.4716	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.1132	0.2449	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.1132	0.2449	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.1100	0.2575	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.1050	0.2827	0.0000	0.0000

=====

LOADING CONDITION Y =====

30 mph wind with 0.75 ice. Wind Azimuth: 0° (1.2 D + 1.0 Di + 1.0 Wi)

LOADS ON POLE

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LOAD TYPE	ELEV ft	APPLY.. RADIUS ft	LOAD..AT AZI	LOAD AZIFORCES.....	MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	189.000	0.00	0.0	0.0	0.0000	4.2457	0.0000	0.0000
C	189.000	0.00	0.0	0.0	1.8727	33.9007	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.0000	2.6508	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.9227	14.4306	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0000	2.5010	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.9093	14.3822	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0089	0.1383	0.0000	0.0000
D	177.917	0.00	180.0	0.0	0.0089	0.1383	0.0000	0.0000
D	177.917	0.00	180.0	0.0	0.0102	0.1641	0.0000	0.0000
D	161.833	0.00	180.0	0.0	0.0102	0.1641	0.0000	0.0000
D	161.833	0.00	180.0	0.0	0.0114	0.1897	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0114	0.1897	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0121	0.3613	0.0000	0.0000
D	141.000	0.00	180.0	0.0	0.0121	0.3613	0.0000	0.0000
D	141.000	0.00	180.0	0.0	0.0126	0.2452	0.0000	0.0000
D	126.917	0.00	180.0	0.0	0.0126	0.2452	0.0000	0.0000
D	126.917	0.00	180.0	0.0	0.0135	0.2700	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.0135	0.2700	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.0143	0.2946	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0143	0.2946	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0148	0.5604	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.0148	0.5604	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.0150	0.3615	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.0150	0.3615	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.0155	0.3861	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.0155	0.3861	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.0158	0.4101	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0158	0.4101	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0159	0.7411	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0159	0.7411	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0157	0.4399	0.0000	0.0000
D	11.313	0.00	180.0	0.0	0.0145	0.4750	0.0000	0.0000
D	11.313	0.00	180.0	0.0	0.0144	0.4851	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0144	0.4851	0.0000	0.0000

=====

LOADING CONDITION AK =====

Seismic - Azimuth: 0° (1.2 D + 1.0 Ev + 1.0 Eh)

LOADS ON POLE

=====

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	LOAD AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	189.000	0.00	0.0	0.0	0.6742	14.3655	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.2068	4.4070	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.2580	6.2691	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.1133	2.7515	0.0000	0.0000
C	167.500	0.00	0.0	0.0	0.2145	5.8195	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.2297	6.2691	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0951	2.5960	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.1918	10.3105	0.0000	0.0000
C	72.000	0.00	0.0	0.0	0.1067	15.6684	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0178	19.0664	0.0000	0.0000
D	194.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

LOADING CONDITION AL

Seismic - Azimuth: 00 (0.9 D - 1.0 Ev + 1.0 Eh)

LOADS ON POLE

=====

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	LOAD AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	189.000	0.00	0.0	0.0	0.6742	9.8538	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.2068	3.0230	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.2580	4.3002	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.1133	1.8874	0.0000	0.0000
C	167.500	0.00	0.0	0.0	0.2145	3.9919	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.2297	4.3002	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0951	1.7808	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.1918	7.0722	0.0000	0.0000
C	72.000	0.00	0.0	0.0	0.1067	10.7475	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0178	13.0783	0.0000	0.0000
D	194.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

(USA 222-G) - Monopole Spatial Analysis

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195' Monopole / Claudette, NC

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	DEFLECTIONS (ft)			ROTATIONS (deg)		
	HORIZONTAL		DOWN	TILT		TWIST
	ALONG	ACROSS		ALONG	ACROSS	
194.0	18.23F	0.07Q	2.51F	11.35F	0.03Q	0.000
177.9	15.18F	0.06Q	1.91F	11.12F	0.03Q	0.000
161.8	12.28F	0.05Q	1.36F	10.21F	0.03Q	0.000
145.7	9.67F	0.05Q	0.93F	8.85F	0.03Q	0.000
141.0	8.97F	0.04Q	0.82F	8.48F	0.03Q	0.000
126.9	7.06F	0.04Q	0.56F	7.32F	0.03Q	0.000
112.8	5.43F	0.03Q	0.37F	6.19F	0.03Q	0.000
98.7	4.05F	0.02Q	0.23F	5.12F	0.03Q	0.000
92.2	3.50F	0.02Q	0.19F	4.71F	0.02Q	0.000
79.2	2.53F	0.01Q	0.11F	3.91F	0.02Q	0.000
66.2	1.73F	0.01Q	0.06F	3.16F	0.02Q	0.000
53.2	1.09F	0.01Q	0.03F	2.46F	0.01Q	0.000
45.2	0.78F	0.00Q	0.02F	2.06F	0.01Q	0.000
33.9	0.43F	0.00Q	0.01F	1.50F	0.01Q	0.000
22.6	0.19F	0.00Q	0.00F	0.97F	0.01Q	0.000
11.3	0.05F	0.00Q	0.00AI	0.47F	0.00Q	0.000
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL		SHEAR.w.r.t.WIND.DIR		MOMENT.w.r.t.WIND.DIR		TORSION
	kip		ALONG kip	ACROSS kip	ft-kip	ft-kip	
194.0	0.01 D		0.00 D	0.00 K	0.01 P	0.00 I	0.00 K
177.9	40.37 AB	16.13 P	0.00 K	-209.41 L	-0.04 I	0.04 W	
161.8	40.37 AB	16.13 K	0.00 N	-209.42 L	-0.04 I	0.04 W	
145.7	76.97 AB	32.32 N	0.00 N	-707.75 L	-0.15 I	0.13 W	
141.0	76.97 AB	32.32 U	0.01 X	-707.76 L	-0.15 I	0.13 W	
	80.02 AB	33.56 U	0.01 X	-1325.29 I	0.27 T	0.25 W	
	80.02 AB	33.70 Q	-0.06 L	-1325.28 L	0.38 T	0.26 W	
	81.74 AB	34.09 Q	-0.06 L	-1510.81 L	-0.39 I	0.25 W	
	81.74 AJ	34.20 F	0.30 Q	-1511.16 L	-0.33 I	0.29 W	

126.9	85.19 AJ	35.42 F	0.30 Q	-2072.52 F	-4.21 Q	-0.52 O
	85.19 AI	35.47 Q	0.29 Q	-2072.52 F	-4.22 Q	-0.52 O
112.8	89.00 AI	36.79 Q	0.29 Q	-2647.78 F	-8.30 Q	-0.92 O
	89.00 AI	36.80 Q	0.29 Q	-2647.79 F	-8.29 Q	-0.92 O
98.7	93.14 AI	38.22 Q	0.29 Q	-3236.17 F	-12.45 Q	-1.28 O
	93.14 AJ	38.19 Q	0.31 Q	-3236.15 F	-12.43 Q	-1.29 O
92.2	96.79 AJ	38.87 Q	0.31 Q	-3512.62 F	-14.45 Q	-1.40 O
	96.79 AI	38.90 F	0.32 Q	-3512.75 F	-14.48 Q	-1.40 O
79.2	101.49 AI	40.28 F	0.32 Q	-4076.92 F	-18.64 Q	-1.65 O
	101.48 AJ	40.30 F	0.29 Q	-4076.89 F	-18.61 Q	-1.65 O
66.2	106.50 AJ	41.74 F	0.29 Q	-4653.92 F	-22.46 Q	-1.86 O
	106.50 AJ	41.72 Q	0.29 Q	-4653.93 F	-22.47 Q	-1.86 O
53.2	111.83 AJ	43.20 Q	0.29 Q	-5243.48 F	-26.32 Q	-2.03 O
	111.83 AI	43.19 Q	0.29 Q	-5243.55 F	-26.37 Q	-2.03 O
45.2	117.76 AI	44.11 Q	0.29 Q	-5612.65 F	-28.74 Q	-2.12 O
	117.76 AJ	44.12 Q	0.31 Q	-5612.64 F	-28.72 Q	-2.12 O
33.9	122.81 AJ	45.40 Q	0.31 Q	-6142.78 F	-32.29 Q	-2.23 O
	122.81 AJ	45.39 F	0.29 Q	-6142.77 F	-32.30 Q	-2.23 O
22.6	127.98 AJ	46.62 F	0.29 Q	-6680.88 F	-35.61 Q	-2.30 O
	127.98 AJ	46.62 Q	0.30 Q	-6680.88 F	-35.61 Q	-2.30 O
11.3	133.29 AJ	47.84 Q	0.30 Q	-7225.94 F	-38.97 Q	-2.35 O
	133.29 AJ	47.84 O	0.29 Q	-7225.94 F	-38.97 Q	-2.35 O
	138.77 AJ	49.04 O	0.29 Q	-7777.57 F	-42.27 Q	-2.36 O
base reaction	138.77 AJ	-49.04 O	-0.29 Q	7777.57 F	42.27 Q	2.36 O

COMPLIANCE WITH 4.8.2 & 4.5.4

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ELEV	AXIAL	BENDING	SHEAR +	TOTAL	SATISFIED	D/t(w/t)	MAX
ft			TORSIONAL				ALLOWED
194.00	0.00D	0.00P	0.00D	0.00P	YES	9.24A	45.2
	0.02AB	0.25L	0.02P	0.26L	YES	11.63A	45.2
177.92	0.02AB	0.25L	0.02K	0.26L	YES	11.63A	45.2
	0.04AB	0.61L	0.03N	0.63B	YES	14.03A	45.2
161.83	0.04AB	0.61L	0.03U	0.63B	YES	14.03A	45.2

145.75	0.03AB	0.86I	0.03U	0.88I	YES	16.42A	45.2
	0.03AB	0.72L	0.02Q	0.74L	YES	13.39A	45.2
141.00	0.03AB	0.76L	0.02Q	0.77L	YES	13.98A	45.2
	0.03AJ	0.79L	0.02F	0.81L	YES	13.69A	45.2
126.92	0.03AJ	0.87F	0.02F	0.89F	YES	15.44A	45.2
	0.03AI	0.87F	0.02Q	0.89F	YES	15.44A	45.2
112.83	0.03AI	0.93F	0.02Q	0.94F	YES	17.18A	45.2
	0.03AI	0.93F	0.02Q	0.94F	YES	17.18A	45.2
98.75	0.03AI	0.98F	0.02Q	0.99F	YES	18.93A	45.2
	0.02AJ	0.80F	0.02Q	0.82F	YES	15.98A	45.2
92.25	0.02AJ	0.82F	0.02Q	0.83F	YES	16.67A	45.2
	0.02AI	0.84F	0.02Q	0.85F	YES	16.36A	45.2
79.25	0.02AI	0.86F	0.02Q	0.87F	YES	17.75A	45.2
	0.02AJ	0.86F	0.02Q	0.87F	YES	17.75A	45.2
66.25	0.02AJ	0.87F	0.02Q	0.88F	YES	19.13A	45.2
	0.02AJ	0.87F	0.02Q	0.88F	YES	19.13A	45.2
53.25	0.02AJ	0.88F	0.02Q	0.89F	YES	20.51A	45.2
	0.02AI	0.88F	0.02Q	0.89F	YES	20.51A	45.2
45.25	0.02AI	0.88F	0.02Q	0.90F	YES	21.36A	45.2
	0.02AJ	0.91F	0.02Q	0.92F	YES	21.01A	45.2
33.94	0.02AJ	0.91F	0.02Q	0.92F	YES	22.21A	45.2
	0.02AJ	0.91F	0.02Q	0.92F	YES	22.21A	45.2
22.62	0.02AJ	0.91F	0.02Q	0.93F	YES	23.42A	45.2
	0.02AJ	0.91F	0.02Q	0.93F	YES	23.42A	45.2
11.31	0.02AJ	0.92F	0.02Q	0.93F	YES	24.62A	45.2
	0.02AJ	0.92F	0.02Q	0.93F	YES	24.62A	45.2
0.00	0.02AJ	0.92F	0.02Q	0.93F	YES	25.82A	45.2

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)

DOWN	SHEAR.w.r.t.WIND.DIR	MOMENT.w.r.t.WIND.DIR	TORSION
kip	ALONG kip	ACROSS ft-kip	ft-kip
138.77	49.04	0.29	-7777.57
AJ	0	Q	F
			Q
			0

=====

(USA 222-G) - Monopole Spatial Analysis (c)2015 Guymast Inc.

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Sabre Towers and Poles on: 25 jan 2024 at: 15:38:19

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195' Monopole / Claudette, NC

***** Service Load Condition *****

* Only 1 condition(s) shown in full

LOADING CONDITION A =====

60 mph wind with no ice. Wind Azimuth: 00 (1.0 D + 1.0 Wo)

LOADS ON POLE

=====

LOAD TYPE	ELEV ft	APPLY..LOAD..AT		LOAD AZIFORCES.....	MOMENTS.....	
		RADIUS ft	AZI		HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	189.000	0.00	0.0	0.0	0.0000	3.5381	0.0000	0.0000
C	189.000	0.00	0.0	0.0	3.8653	11.5330	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.0000	2.2090	0.0000	0.0000
C	177.000	0.00	0.0	0.0	1.9309	5.0330	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0000	2.0842	0.0000	0.0000
C	167.000	0.00	0.0	0.0	1.9075	5.0330	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0148	0.0721	0.0000	0.0000
D	177.917	0.00	180.0	0.0	0.0148	0.0721	0.0000	0.0000
D	177.917	0.00	180.0	0.0	0.0174	0.0863	0.0000	0.0000
D	161.833	0.00	180.0	0.0	0.0174	0.0863	0.0000	0.0000
D	161.833	0.00	180.0	0.0	0.0198	0.1004	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0198	0.1004	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0213	0.2389	0.0000	0.0000
D	141.000	0.00	180.0	0.0	0.0213	0.2389	0.0000	0.0000
D	141.000	0.00	180.0	0.0	0.0222	0.1393	0.0000	0.0000
D	126.917	0.00	180.0	0.0	0.0222	0.1393	0.0000	0.0000
D	126.917	0.00	180.0	0.0	0.0240	0.1542	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.0240	0.1542	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.0256	0.1691	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0256	0.1691	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0267	0.3867	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.0267	0.3867	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.0272	0.2187	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.0272	0.2187	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.0282	0.2348	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.0282	0.2348	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.0289	0.2509	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0289	0.2509	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0292	0.5240	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0292	0.5240	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0288	0.2721	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.0288	0.2721	0.0000	0.0000

D	33.938	0.00	180.0	0.0	0.0279	0.2861	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0267	0.3141	0.0000	0.0000

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MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

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MAST ELEV ft	DEFLECTIONS (ft)			ROTATIONS (deg)		
	HORIZONTAL ALONG	ACROSS	DOWN	TILT ALONG	ACROSS	TWIST
194.0	4.72I	0.00B	0.17A	2.89I	0.00B	0.00L
177.9	3.91I	0.00B	0.13A	2.83I	0.00B	0.00L
161.8	3.15A	0.00H	0.09A	2.60I	0.00B	0.00L
145.7	2.47A	0.00B	0.06A	2.25I	0.00H	0.00L
141.0	2.29A	0.00B	0.06A	2.15I	0.00H	0.00L
126.9	1.80A	0.00B	0.04A	1.85I	0.00H	0.00L
112.8	1.38A	0.00B	0.03A	1.56I	0.00H	0.00L
98.7	1.03A	0.00K	0.02A	1.29A	0.00H	0.00L
92.2	0.89A	0.00K	0.01A	1.19A	0.00H	0.00L
79.2	0.64A	0.00K	0.01A	0.99A	0.00B	0.00L
66.2	0.44A	0.00K	0.01A	0.80A	0.00K	0.00L
53.2	0.28A	0.00K	0.00A	0.62A	0.00K	0.00L
45.2	0.20A	0.00K	0.00A	0.52A	0.00K	0.00L
33.9	0.11A	0.00K	0.00A	0.38A	0.00K	0.00L
22.6	0.05A	0.00K	0.00A	0.24A	0.00K	0.00L
11.3	0.01A	0.00K	0.00A	0.12A	0.00K	0.00L
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

=====

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

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MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR		MOMENT.w.r.t.WIND.DIR		TORSION
		ALONG kip	ACROSS kip	ALONG ft-kip	ACROSS ft-kip	ft-kip
194.0	0.00 I	0.00 F	0.00 B	0.00 C	0.00 B	0.00 L
177.9	16.23 C	4.10 F	0.00 B	-53.48 K	0.01 L	0.00 L
161.8	31.98 D	8.22 F	0.00 F	-180.50 K	0.02 L	0.01 L
145.7	33.59 I	8.54 L	0.00 L	-337.34 L	0.06 L	0.01 L

	33.59 L	8.57 C	0.02 I	-337.42 F	0.07 I	0.01 L
141.0	34.73 L	8.67 C	0.02 I	-384.33 A	0.07 K	0.01 L
	34.73 L	8.68 I	-0.02 I	-384.36 A	0.09 K	0.02 L
126.9	36.69 L	8.99 I	-0.02 I	-526.01 I	0.29 I	0.01 L
	36.69 C	8.97 I	-0.02 H	-526.00 I	0.28 I	0.01 L
112.8	38.86 C	9.31 I	-0.02 H	-670.46 I	0.47 H	0.02 L
	38.86 C	9.31 I	-0.02 H	-670.47 I	0.47 H	0.02 L
98.7	41.24 C	9.67 I	-0.02 H	-818.01 I	0.74 H	0.03 L
	41.24 C	9.67 A	-0.02 C	-818.04 I	0.78 H	0.03 L
92.2	43.75 C	9.85 A	-0.02 C	-887.37 I	0.78 H	0.03 L
	43.75 C	9.87 A	-0.02 B	-887.41 I	0.79 H	0.03 L
79.2	46.60 C	10.22 A	-0.02 B	-1028.74 I	1.03 H	0.04 L
	46.60 C	10.22 A	0.02 K	-1028.74 I	1.03 H	0.04 L
66.2	49.65 C	10.59 A	0.02 K	-1173.59 A	1.25 H	0.04 L
	49.65 C	10.58 A	0.02 K	-1173.59 A	1.25 H	0.04 L
53.2	52.91 C	10.96 A	0.02 K	-1321.81 A	1.43 H	0.05 L
	52.91 C	10.96 A	0.03 K	-1321.82 A	1.45 H	0.05 L
45.2	57.10 C	11.19 A	0.03 K	-1414.81 A	1.54 H	0.05 L
	57.10 C	11.19 A	0.03 K	-1414.81 A	1.53 H	0.05 L
33.9	60.18 C	11.52 A	0.03 K	-1548.45 A	-1.82 K	0.05 L
	60.18 C	11.52 A	0.03 K	-1548.45 A	-1.82 K	0.05 L
22.6	63.47 C	11.84 A	0.03 K	-1684.35 A	-2.15 K	0.05 L
	63.47 C	11.83 A	0.03 K	-1684.35 A	-2.15 K	0.05 L
11.3	66.87 C	12.14 A	0.03 K	-1822.28 A	-2.49 K	0.06 L
	66.87 C	12.15 A	0.03 K	-1822.27 A	-2.48 K	0.06 L
	70.37 C	12.45 A	0.03 K	-1962.20 A	-2.82 K	0.06 L
base						
reaction	70.37 C	-12.45 A	-0.03 K	1962.20 A	2.82 K	-0.06 L

COMPLIANCE WITH 4.8.2 & 4.5.4

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ELEV	AXIAL	BENDING	SHEAR +	TOTAL	SATISFIED	D/t(w/t)	MAX
ft			TORSIONAL				ALLOWED
194.00	0.00I	0.00C	0.00L	0.00I	YES	9.24A	45.2
	0.01C	0.06K	0.00F	0.07K	YES	11.63A	45.2
177.92							

	0.01D	0.06K	0.00F	0.07K	YES	11.63A	45.2
	0.02D	0.16K	0.01F	0.17K	YES	14.03A	45.2
161.83	0.02I	0.16K	0.01L	0.17A	YES	14.03A	45.2
	0.01I	0.22L	0.01L	0.23L	YES	16.42A	45.2
145.75	0.01L	0.18F	0.01C	0.20F	YES	13.39A	45.2
	0.01L	0.19A	0.01C	0.21A	YES	13.98A	45.2
141.00	0.01L	0.20A	0.01I	0.21A	YES	13.69A	45.2
	0.01L	0.22I	0.01I	0.23I	YES	15.44A	45.2
126.92	0.01C	0.22I	0.01I	0.23I	YES	15.44A	45.2
	0.01C	0.24I	0.01I	0.25I	YES	17.18A	45.2
112.83	0.01C	0.24I	0.01I	0.25I	YES	17.18A	45.2
	0.01C	0.25I	0.01I	0.26I	YES	18.93A	45.2
98.75	0.01C	0.20I	0.00A	0.21I	YES	15.98A	45.2
	0.01C	0.21I	0.00A	0.22I	YES	16.67A	45.2
92.25	0.01C	0.21I	0.00A	0.22I	YES	16.36A	45.2
	0.01C	0.22I	0.00A	0.23I	YES	17.75A	45.2
79.25	0.01C	0.22I	0.00A	0.23I	YES	17.75A	45.2
	0.01C	0.22A	0.00A	0.23A	YES	19.13A	45.2
66.25	0.01C	0.22A	0.00A	0.23A	YES	19.13A	45.2
	0.01C	0.22A	0.00A	0.23A	YES	20.51A	45.2
53.25	0.01C	0.22A	0.00A	0.23A	YES	20.51A	45.2
	0.01C	0.22A	0.00A	0.23A	YES	21.36A	45.2
45.25	0.01C	0.23A	0.00A	0.24A	YES	21.01A	45.2
	0.01C	0.23A	0.00A	0.24A	YES	22.21A	45.2
33.94	0.01C	0.23A	0.00A	0.24A	YES	22.21A	45.2
	0.01C	0.23A	0.00A	0.24A	YES	23.42A	45.2
22.62	0.01C	0.23A	0.00A	0.24A	YES	23.42A	45.2
	0.01C	0.23A	0.00A	0.24A	YES	24.62A	45.2
11.31	0.01C	0.23A	0.00A	0.24A	YES	24.62A	45.2
	0.01C	0.23A	0.00A	0.24A	YES	25.82A	45.2
0.00							

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)

=====

DOWN	SHEAR.w.r.t.WIND.DIR		MOMENT.w.r.t.WIND.DIR		TORSION
kip	ALONG	ACROSS	ALONG	ACROSS	
	kip	kip	ft-kip	ft-kip	ft-kip
70.37	12.45	0.03	-1962.20	-2.82	0.06

C A K A K L

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Seismic Load Effects
Equivalent Lateral Force Procedure
ANSI/TIA-222-G

Parameters

Risk Category	II
R	1.500
S _s	0.214
S ₁	0.094
Site Class	D (default)
T _L (sec)	8.000
F _a	1.600
F _v	2.400
S _{MS}	0.342
S _{M1}	0.226
S _{D5}	0.228
S _{D1}	0.150
T _s	0.658
I _e	1.000
Ω	1.500
C _s	0.030
E (ksi)	29,000
I _{top} (in ⁴)	888
I _{bot} (in ⁴)	55,322
I _{avg} (in ⁴)	28,105
g (in/s ²)	386.4
W ₁ (kips)	70.266
W ₀ (kips)	21.599
W _L (kips)	48.667
L _p (in)	2328
f ₁ (Hertz)	0.239
T (sec)	4.176
k _e	2.0000
V _s (kips)	2.108
Seismic Design Category	C

Description	h _i (ft.)	w _i (kips)	W _u (kips)	Vertical Distribution of Seismic Forces				
				$\frac{w_i h_i^3 k_e}{\sum w_i h_i^3 k_e}$	$F_{sx} \text{ or } E_{sh}$ (kips)	E_v (kips)	1.2 D + 1.0 E _v (kips)	0.9 D - 1.0 E _v (kips)
Line Deadload	189.00	3.5381	0.0000	126,384.4701	0.2068	0.1613	4.4070	3.0230
Mount/Antenna Load	189.00	11.5330	11.5330	411,970.2930	0.6742	0.5259	14.3655	9.8538
Line Deadload	177.00	2.2090	0.0000	69,205.7610	0.1133	0.1007	2.7515	1.8874
Mount/Antenna Load	177.00	5.0330	5.0330	157,678.8570	0.2580	0.2295	6.2691	4.3002
Structure - Section 1	167.50	4.6721	0.0000	131,081.6056	0.2145	0.2130	5.8195	3.9919
Line Deadload	167.00	2.0842	0.0000	58,126.2538	0.0951	0.0950	2.5960	1.7808
Mount/Antenna Load	167.00	5.0330	5.0330	140,365.3370	0.2297	0.2295	6.2691	4.3002
Structure - Section 2	119.00	8.2775	0.0000	117,217.6775	0.1918	0.3775	10.3105	7.0722
Structure - Section 3	72.00	12.5790	0.0000	65,209.5360	0.1067	0.5736	15.6684	10.7475
Structure - Section 4	26.62	15.3070	0.0000	10,846.9137	0.0178	0.6980	19.0664	13.0783
Σ		70.27	21.5990	1,288,086.70	2.11	3.20	87.52	60.04

Round Base Plate and Anchor Rods, per ANSI/TIA 222-G

Pole Data

Diameter: 68.450 in (flat to flat)
Thickness: 0.4375 in
Yield (Fy): 65 ksi
of Sides: 18 "0" IF Round
Strength (Fu): 80 ksi

Reactions

Moment, Mu: 7777.57 ft-kips
Axial, Pu: 84.33 kips
Shear, Vu: 49.03 kips

Anchor Rod Data

Quantity: 22
Diameter: 2.25 in
Rod Material: A615
Strength (Fu): 100 ksi
Yield (Fy): 75 ksi
BC Diam. (in): 75.75 BC Override: 75.75

Anchor Rod Results

Maximum Rod (Pu+ Vu/η): 232.3 Kips
Allowable Φ^*R_{nt} : 260.0 Kips (per 4.9.9)
Anchor Rod Interaction Ratio: **89.3% Pass**

Plate Data

Diameter (in): 81.5 Dia. Override: 81.5
Thickness: 2.25 in
Yield (Fy): 50 ksi
Eff Width/Rod: 9.88 in
Drain Hole: 2.625 in. diameter
Drain Location: 32 in. center of pole to center of drain hole
Center Hole: 56 in. diameter

Base Plate Results

Base Plate (Mu/Z): 42.8 ksi
Allowable Φ^*F_y : 45.0 ksi (per AISC)
Base Plate Interaction Ratio: **95.1% Pass**

MAT FOUNDATION DESIGN BY SABRE INDUSTRIES

195' Monopole TOWERCO LLC Claudette, NC (24-1727-JDS-R1) 01/25/24 KJT

Overall Loads:

Factored Moment (ft-kips)	7777.57
Factored Axial (kips)	84.33
Factored Shear (kips)	49.03
Bearing Design Strength (ksf)	3.75
Water Table Below Grade (ft)	999
Width of Mat (ft)	30.5
Thickness of Mat (ft)	2
Depth to Bottom of Slab (ft)	6
Quantity of Bolts in Bolt Circle	22
Bolt Circle Diameter (in)	75.75
Top of Concrete to Top of Bottom Threads (in)	60
Diameter of Pier (ft)	8
Ht. of Pier Above Ground (ft)	0.5
Ht. of Pier Below Ground (ft)	4
Quantity of Bars in Mat	63
Bar Diameter in Mat (in)	1.128
Area of Bars in Mat (in ²)	62.96
Spacing of Bars in Mat (in)	5.79
Quantity of Bars Pier	54
Bar Diameter in Pier (in)	1
Tie Bar Diameter in Pier (in)	0.625
Spacing of Ties (in)	12
Area of Bars in Pier (in ²)	42.41
Spacing of Bars in Pier (in)	5.11
f'c (ksi)	4.5
fy (ksi)	60
Unit Wt. of Soil (kcf)	0.11
Unit Wt. of Concrete (kcf)	0.15

Volume of Concrete (yd³) 77.28

Two-Way Shear Action:

Average d (in)	19.872
ϕv_c (ksi)	0.228
$\phi v_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}$	0.342
$\phi v_c = \phi(\alpha_s d/b_o + 2)f'_c{}^{1/2}$	0.239
$\phi v_c = \phi 4f'_c{}^{1/2}$	0.228
Shear perimeter, b_o (in)	364.02
β_c	1

One-Way Shear:

ϕV_c (kips)	829.4
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Stability:

Overturning Design Strength (ft-k)	10574.7
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Pier-Slab Transfer by Flexure:

b_{slab} (ft)	14.00
ϕM_n (ft-kips)	4817.6

Max. Net Bearing Press. (ksf)	3.34
Allowable Bearing Pressure (ksf)	2.50
Safety Factor	2.00
Ultimate Bearing Pressure (ksf)	5.00
Bearing Φ_s	0.75

Minimum Pier Diameter (ft)	7.65
Equivalent Square b (ft)	7.09
Square Pier? (Y/N)	N

Recommended Spacing (in)	5 to 12
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Minimum Pier A_s (in ²)	36.19
Recommended Spacing (in)	5 to 12

v_u (ksi)	0.193
-------------	-------

V_u (kips)	475.1
--------------	-------

Total Applied M (ft-k)	8096.3
------------------------	--------

$0.60M_{sc}$ (ft-kips)	4798.9
------------------------	--------

Pier Design:

ϕV_n (kips)	845.7	V_u (kips)	49.0
$\phi V_c = \phi 2(1 + N_u / (2000 A_g)) f'_c {}^{1/2} b_w d$	845.7		
V_s (kips)	0.0	*** $V_s \text{ max} = 4 f'_c {}^{1/2} b_w d$ (kips)	1978.3
Maximum Spacing (in)	7.62	(Only if Shear Ties are Required)	
Actual Hook Development (in)	18.74	Req'd Hook Development l_{dh} (in)	12.52
		*** Ref. To Spacing Requirements ACI 11.5.4.3	

Flexure in Slab:

ϕM_n (ft-kips)	5247.7	M_u (ft-kips)	3821.4
a (in)	2.70		
Steel Ratio	0.00866		
β_1	0.825		
Maximum Steel Ratio (ρ_t)	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	137.46	Required Development in Pad (in)	30.27

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram	1
Two-Way Shear Action	1
One-Way Shear Action	1
Overturning	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Hook Development	1

=====

LFile for Windows, Version 2019-11.009

Analysis of Individual Piles and Drilled Shafts
Subjected to Lateral Loading Using the p-y Method
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This copy of LFile is being used by:

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Serial Number of Security Device: 227885948

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Use of this program by any entity other than Sabre Communications Corporation
is a violation of the software license agreement.

Files Used for Analysis

Path to file locations:
\Program Files (x86)\Ensoft\Lfile2019\files\

Name of input data file:
24-1727-JDS-R1-RA.lp11d

Name of output report file:
24-1727-JDS-R1-RA.lp11o

Name of plot output file:
24-1727-JDS-R1-RA.lp11p

Name of runtime message file:
24-1727-JDS-R1-RA.lp11r

Date and Time of Analysis

Date: January 25, 2024

Time: 15:53:13

Problem Title

Site : Claudette, NC

Tower : 195' Monopole

Prepared for : TOWERCO LLC

Job Number : 24-1727-JDS-R1 Revision A

Engineer : KJT

Program Options and Settings

Computational Options:

- Conventional Analysis

Engineering Units Used for Data Input and Computations:

- US Customary System Units (pounds, feet, inches)

Analysis Control Options:

- Maximum number of iterations allowed = 999
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 100.0000 in
- Number of pile increments = 100

Loading Type and Number of Cycles of Loading:

- Static loading specified
- Use of p-y modification factors for p-y curves not selected
- Analysis uses layering correction (Method of Georgiadis)
- No distributed lateral loads are entered
- Loading by lateral soil movements acting on pile not selected
- Input of shear resistance at the pile tip not selected
- Input of moment resistance at the pile tip not selected
- Input of side resistance moment along pile not selected
- Computation of pile-head foundation stiffness matrix not selected
- Push-over analysis of pile not selected
- Buckling analysis of pile not selected

Output Options:

- Output files use decimal points to denote decimal symbols.
- Report only summary tables of pile-head deflection, maximum bending moment, and maximum shear force in output report file.
- No p-y curves to be computed and reported for user-specified depths
- Print using wide report formats

Pile Structural Properties and Geometry

Number of pile sections defined = 1
Total length of pile = 39.500 ft
Depth of ground surface below top of pile = 0.5000 ft

Pile diameters used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile. A summary of values of pile diameter vs. depth follows.

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	96.0000
2	39.500	96.0000

Input Structural Properties for Pile Sections:

Pile Section No. 1:

Section 1 is a round drilled shaft, bored pile, or CIDH pile
Length of section = 39.500000 ft
Shaft Diameter = 96.000000 in
Shear capacity of section = 0.0000 lbs

Ground Slope and Pile Batter Angles

Ground Slope Angle = 0.000 degrees
= 0.000 radians
Pile Batter Angle = 0.000 degrees
= 0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 1 layers

Layer 1 is stiff clay without free water

Distance from top of pile to top of layer = 0.500000 ft
Distance from top of pile to bottom of layer = 60.500000 ft
Effective unit weight at top of layer = 110.000000 pcf
Effective unit weight at bottom of layer = 110.000000 pcf
Undrained cohesion at top of layer = 1000.000000 psf
Undrained cohesion at bottom of layer = 1000.000000 psf
Epsilon-50 at top of layer = 0.010000
Epsilon-50 at bottom of layer = 0.010000

(Depth of the lowest soil layer extends 21.000 ft below the pile tip)

Summary of Input Soil Properties

Layer Num.	Soil Type Name (p-y Curve Type)	Layer Depth ft	Effective Unit Wt. pcf	Cohesion psf	E50 or krm
1	Stiff Clay w/o Free Water	0.5000 60.5000	110.0000 110.0000	1000.0000 1000.0000	0.01000 0.01000

Static Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 2

Load No.	Load Type	Condition 1	Condition 2	Axial Thrust Force, lbs	Compute Top y vs. Pile Length	Run Analysis
1	1	V = 65373. lbs	M = 124441120. in-lbs	112440.	No	Yes
2	1	V = 12450. lbs	M = 23546400. in-lbs	70370.	No	Yes

V = shear force applied normal to pile axis

M = bending moment applied to pile head

y = lateral deflection normal to pile axis

S = pile slope relative to original pile batter angle

R = rotational stiffness applied to pile head

Values of top y vs. pile lengths can be computed only for load types with specified shear loading (Load Types 1, 2, and 3).

Thrust force is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Drilled Shaft (Bored Pile):

Length of Section	=	39.500000 ft
Shaft Diameter	=	96.000000 in
Concrete Cover Thickness (to edge of long. rebar)	=	3.625000 in
Number of Reinforcing Bars	=	40 bars
Yield Stress of Reinforcing Bars	=	60000. psi
Modulus of Elasticity of Reinforcing Bars	=	29000000. psi
Gross Area of Shaft	=	7238. sq. in.
Total Area of Reinforcing Steel	=	50.670748 sq. in.
Area Ratio of Steel Reinforcement	=	0.70 percent
Edge-to-Edge Bar Spacing	=	5.593602 in
Maximum Concrete Aggregate Size	=	0.750000 in
Ratio of Bar Spacing to Aggregate Size	=	7.46
Offset of Center of Rebar Cage from Center of Pile	=	0.0000 in

Axial Structural Capacities:

Nom. Axial Structural Capacity = $0.85 F_c A_c + F_y A_s$	=	30532.657 kips
Tensile Load for Cracking of Concrete	=	-3334.042 kips
Nominal Axial Tensile Capacity	=	-3040.245 kips

Reinforcing Bar Dimensions and Positions Used in Computations:

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
1	1.270000	1.266769	43.740000	0.000000
2	1.270000	1.266769	43.201488	6.842444
3	1.270000	1.266769	41.599212	13.516403
4	1.270000	1.266769	38.972625	19.857544
5	1.270000	1.266769	35.386403	25.709727
6	1.270000	1.266769	30.928851	30.928851
7	1.270000	1.266769	25.709727	35.386403
8	1.270000	1.266769	19.857544	38.972625
9	1.270000	1.266769	13.516403	41.599212
10	1.270000	1.266769	6.842444	43.201488

11	1.270000	1.266769	0.00000	43.740000
12	1.270000	1.266769	-6.842444	43.201488
13	1.270000	1.266769	-13.516403	41.599212
14	1.270000	1.266769	-19.857544	38.972625
15	1.270000	1.266769	-25.709727	35.386403
16	1.270000	1.266769	-30.928851	30.928851
17	1.270000	1.266769	-35.386403	25.709727
18	1.270000	1.266769	-38.972625	19.857544
19	1.270000	1.266769	-41.599212	13.516403
20	1.270000	1.266769	-43.201488	6.842444
21	1.270000	1.266769	-43.740000	0.00000
22	1.270000	1.266769	-43.201488	-6.842444
23	1.270000	1.266769	-41.599212	-13.516403
24	1.270000	1.266769	-38.972625	-19.857544
25	1.270000	1.266769	-35.386403	-25.709727
26	1.270000	1.266769	-30.928851	-30.928851
27	1.270000	1.266769	-25.709727	-35.386403
28	1.270000	1.266769	-19.857544	-38.972625
29	1.270000	1.266769	-13.516403	-41.599212
30	1.270000	1.266769	-6.842444	-43.201488
31	1.270000	1.266769	0.00000	-43.740000
32	1.270000	1.266769	6.842444	-43.201488
33	1.270000	1.266769	13.516403	-41.599212
34	1.270000	1.266769	19.857544	-38.972625
35	1.270000	1.266769	25.709727	-35.386403
36	1.270000	1.266769	30.928851	-30.928851
37	1.270000	1.266769	35.386403	-25.709727
38	1.270000	1.266769	38.972625	-19.857544
39	1.270000	1.266769	41.599212	-13.516403
40	1.270000	1.266769	43.201488	-6.842444

NOTE: The positions of the above rebars were computed by LPile

Minimum spacing between any two bars not equal to zero = 5.594 inches
between bars 14 and 15.

Ratio of bar spacing to maximum aggregate size = 7.46

Concrete Properties:

Compressive Strength of Concrete	=	4500. psi
Modulus of Elasticity of Concrete	=	3823676. psi
Modulus of Rupture of Concrete	=	-503.115295 psi
Compression Strain at Peak Stress	=	0.002001
Tensile Strain at Fracture of Concrete	=	-0.0001152
Maximum Coarse Aggregate Size	=	0.750000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 2

Number	Axial Thrust Force kips
1	70.370
2	112.440

Summary of Results for Nominal Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
-------------	----------------------	-----------------------------	----------------------

1	70.370	126949.390	0.00300000
2	112.440	128446.068	0.00300000

Note that the values of moment capacity in the table above are not factored by a strength reduction factor (phi-factor).

In ACI 318, the value of the strength reduction factor depends on whether the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.75).

The above values should be multiplied by the appropriate strength reduction factor to compute ultimate moment capacity according to ACI 318, or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding bending stiffnesses computed for common resistance factor values used for reinforced concrete sections.

Axial Load No.	Resist. Factor	Nominal Ax. Thrust kips	Nominal Moment Cap in-kips	Ult. (Fac) Ax. Thrust kips	Ult. (Fac) Moment Cap in-kips	Bend. Stiff. at Ult Mom kip-in^2
1	0.65	70.370000	126949.	45.740500	82517.	3.0344E+09
2	0.65	112.440000	128446.	73.086000	83490.	3.0757E+09
1	0.75	70.370000	126949.	52.777500	95212.	2.9237E+09
2	0.75	112.440000	128446.	84.330000	96335.	2.9645E+09
1	0.90	70.370000	126949.	63.333000	114254.	1.8928E+09
2	0.90	112.440000	128446.	101.196000	115601.	1.9256E+09

Summary of Pile-head Responses for Conventional Analyses

Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, V, lbs, and Load 2 = Moment, M, in-lbs
Load Type 2: Load 1 = Shear, V, lbs, and Load 2 = Slope, S, radians
Load Type 3: Load 1 = Shear, V, lbs, and Load 2 = Rot. Stiffness, R, in-lbs/rad.
Load Type 4: Load 1 = Top Deflection, y, inches, and Load 2 = Moment, M, in-lbs
Load Type 5: Load 1 = Top Deflection, y, inches, and Load 2 = Slope, S, radians

Load Case No.	Load Type 1	Pile-head Load 1	Load Type 2	Pile-head Load 2	Axial Loading lbs	Pile-head Deflection inches	Pile-head Rotation radians	Max Shear in Pile lbs	Max Moment in Pile in-lbs
1	V, lb	65373.	M, in-lb	1.24E+08	112440.	19.9397	-0.08161	-564043.	1.27E+08
2	V, lb	12450.	M, in-lb	2.35E+07	70370.	0.05114	-3.40E-04	-97507.	2.38E+07

Maximum pile-head deflection = 19.9397441959 inches
Maximum pile-head rotation = -0.0816117683 radians = -4.676010 deg.

The analysis ended normally.

IBC 1807.3.2.1

Moment (ft-k)	7,777.57	
Shear (k)	49.03	
Caisson diameter (ft)	8	
Caisson height above ground (ft)	0.5	
Caisson height below ground (ft)	31	
Lateral soil pressure (lb/ft ²)	300.00	
Ground to application of force, h (ft)	159.13	
Applied lateral force, P (lb)	49,030	
Lateral soil bearing pressure, S ₁ (lb/ft)	3,100.00	
Diameter, b (ft)	8	
A	4.63	$= (2.34P)/(S_1 b)$
Minimum depth of embedment, d (ft)	30.73	$= 0.5A [1 + (1 + (4.36h / A))^{1/2}]$

Exhibit 12

Fall Zone Letter

January 25, 2024

Ms. Jennifer Jack
TowerCo, LLC
5000 Valleystone Dr, Suite 200
Cary, NC 27519

RE: Proposed 195' Monopole for #NC0313 Claudette, NC (Sabre #24-1727-JDS-R1)

Dear Ms. Jack,

As shown in our Structural Design Report #24-1727-JDS-R1 Revision A dated January 25, 2024, the above-referenced monopole has been designed for a Basic Wind Speed of 115 mph without ice and 30 mph with 3/4" ice, Structure Class II, Exposure Category C, and Topographic Category 1, in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-G, "Structural Standard for Antenna-Supporting Structures and Antennas".

When designed according to this standard, the wind pressures and steel strength capacities include several safety factors. Therefore, it is highly unlikely that the monopole will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be within the monopole shaft, above the base plate. Assuming that the wind pressure profile is similar to that used to design the monopole, the monopole will buckle at the location of the highest combined stress ratio within the monopole shaft. This is likely to result in the portion of the monopole above leaning over and remaining in a permanently deformed condition. *Please note that this letter only applies to the above-referenced monopole designed and manufactured by Sabre Industries.* This would effectively result in a fall radius less than or equal to 195'.

Sincerely,

Keith J. Tindall, P.E., S.E.
Vice President, Telecom Engineering

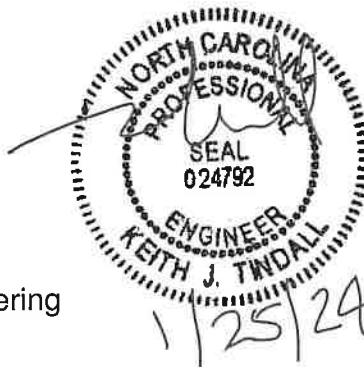
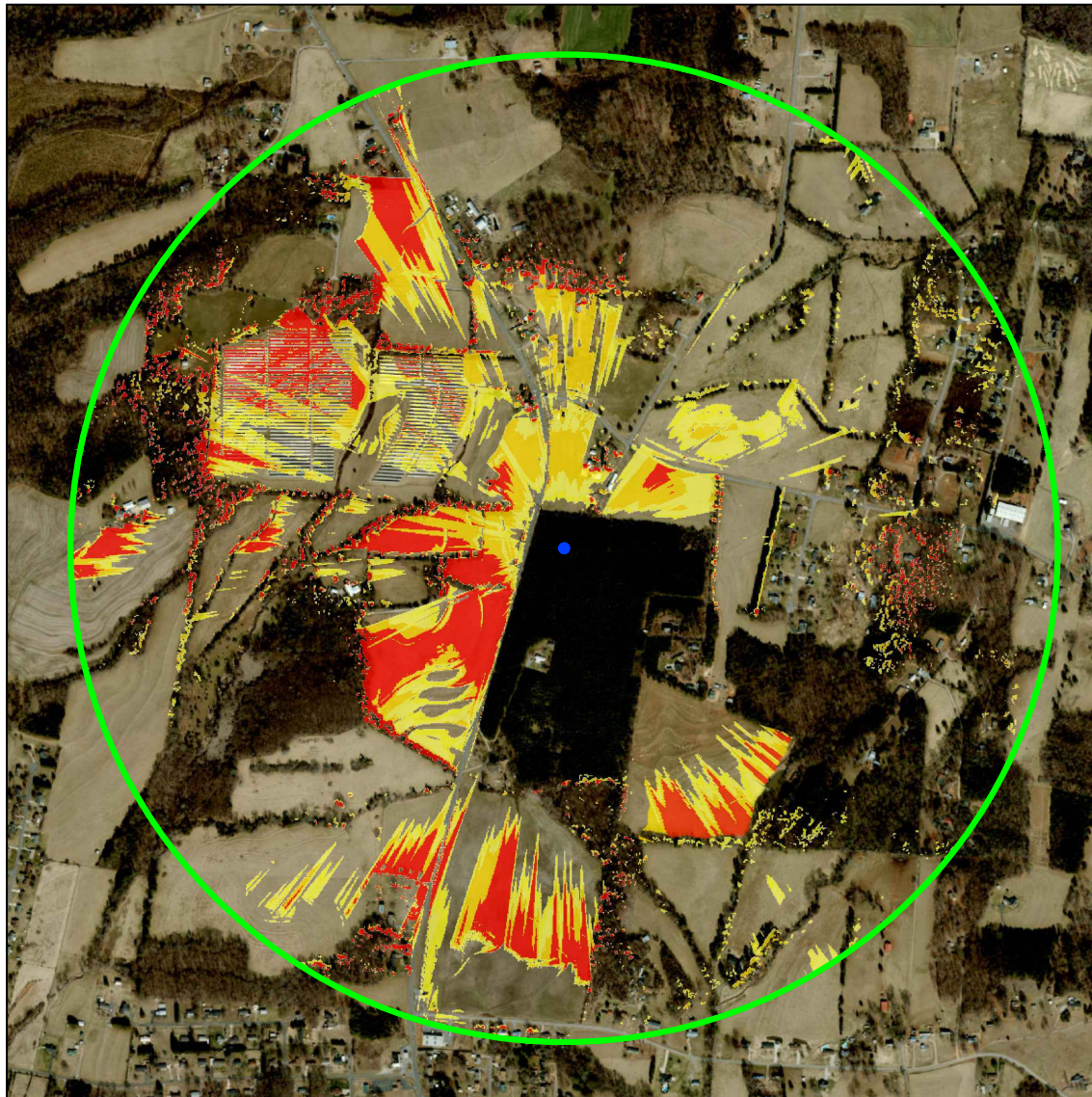
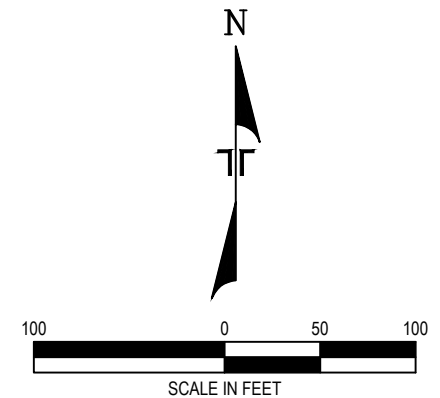
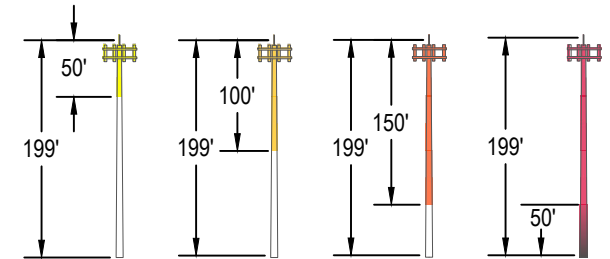


Exhibit 13
Zone of Visibility Map



LEGEND

- SITE LOCATION
- 1 MILE RADIUS
- TOWER VISIBLE FROM 150'-199'
- TOWER VISIBLE FROM 100'-199'
- TOWER VISIBLE FROM 50'-199'
- PORTIONS OF THE TOWER VISIBLE BELOW 50'



THE VIEWSHED ANALYSIS CONTAINED HEREIN IS INTENDED TO DEPICT WHERE PROPOSED FEATURES MAY BE VISIBLE. THESE CALCULATIONS ARE BASED ON THE BEST AND MOST RECENT PUBLICLY AVAILABLE DATA AT THE TIME THAT THIS CALCULATION WAS PERFORMED. TERRACON DOES NOT CLAIM THAT ALL LOCATIONS FROM WHICH THE PROPOSED FEATURES MAY BE VISIBLE ARE REPRESENTED AND MAY REQUIRE ADDITIONAL FIELD VERIFICATION.

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr: MRF
 Drawn By: MRF
 Checked By: MRF
 Approved By: ELK

Project No. 49237795B
 Scale: AS SHOWN
 File No. 49237955B LOS
 Date: JANUARY 2024



2105 Newpoint Place, Ste. 600 Lawrenceville, GA 30043
 (770) 623-0755 (770) 623-9628

ZONE OF VISIBILITY MAP

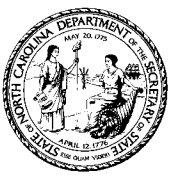
PROPOSED TELECOMMUNICATION SITE
 NC-0313 CLAUDETTE
 5198 NC-16
 CLAREMONT, CATAWBA COUNTY, NORTH CAROLINA

EXHIBIT

A

Exhibit 14

Certificate of Authorization



NORTH CAROLINA

Department of the Secretary of State

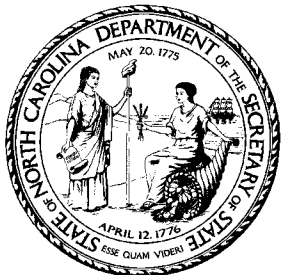
CERTIFICATE OF AUTHORIZATION (Limited Liability Company)

I, ELAINE F. MARSHALL, Secretary of State of the State of North Carolina, do hereby certify that

TOWERCO 2013 LLC

is a limited liability company formed under the laws of Delaware as Towerco 2013 LLC and was authorized to transact business in the State of North Carolina by issuance of a certificate of authority on 8th day of October, 2012.

I FURTHER certify that, as of the date of this certificate, (i) the said limited liability company has not withdrawn from the State of North Carolina, (ii) the said limited liability company's certificate of authority has not been suspended for failure to comply with the Revenue Act of the State of North Carolina, (iii) that said limited liability company is not administratively revoked for failure to comply with the provisions of the North Carolina Limited Liability Company Act, (iv) that this office has not filed any decree of judicial revocation, withdrawal, articles of merger, or articles of conversion for said limited liability company.



Scan to verify online.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Raleigh, this 26th day of September, 2023.

Elaine F. Marshall

Secretary of State