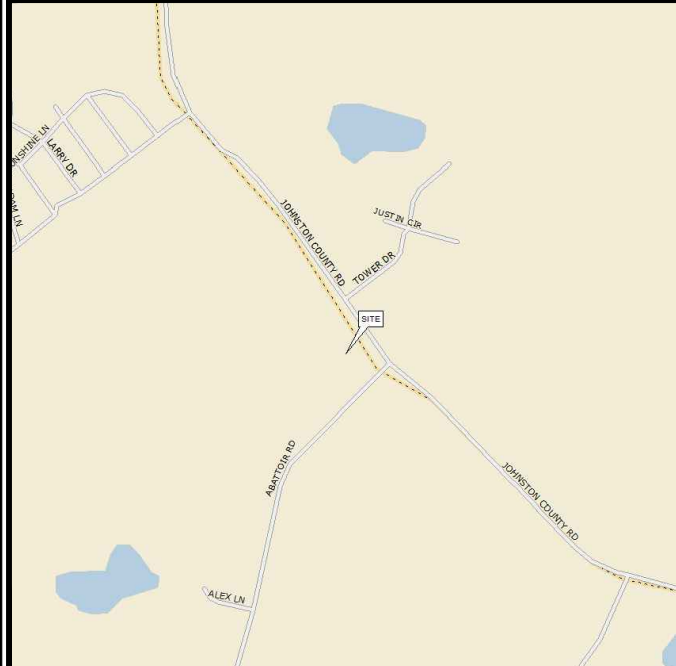


AT&T SITE NAME: 368-754
 PROJECT DESCRIPTION: CO-LOCATION ON AN EXISTING GUYED TOWER
 TOWER TYPE: 287' GUYED
 SITE ADDRESS: 2135 JOHNSTON COUNTY RD ANGIER, NC 27501 (HARNETT COUNTY)
 JURISDICTION: HARNETT COUNTY
 AREA OF CONSTRUCTION: 230 ± SQ. FT. (LEASE AREA)
 PRESENT OCC. TYPE: TELECOMMUNICATIONS FACILITY
 CURRENT ZONING: UNKNOWN
 PARCEL #: 1602-55-5858.000

PROJECT INFORMATION

LATITUDE: N 35° 27' 58.90" (35.4663)
 LONGITUDE: W 78° 38' 44.20" (-78.6456)
 GROUND ELEVATION: ±315' (AMSL)

TOWER COORDINATES



LOCATION MAP

TAKE 27E FROM BENSON, NC. TURN RIGHT ONTO ABATTIOR RD. AND GO TO THE END. TURN LEFT ONTO JOHNSTON COUNTY RD AND TOWER IS IMMEDIATELY ON LEFT SIDE.

DRIVING DIRECTIONS



2002 PISGAH CHURCH RD, STE 300
 GREENSBORO, NC 27455

AT&T SITE NAME: 368-754
 AT&T SITE ID: ECL02540
 AT&T PACE NUMBER: MRCAR033546,
 MRVWN006339, MRVWN006341, MRVWN006338,
 MRVWN006342, MRVWN006340
 AT&T FA CODE: 12682186
 USID: 145174
 NSB - GUYED TOWER
 LTE 1C/2C/3C/4C/5C/5G NR 1DR-2

TOWER OWNER:
 NAME: AMERICAN TOWER CORPORATION
 ADDRESS: 3500 REGENCY PKWY #100
 CITY, STATE, ZIP: CARY, NC 27518
 CONTACT: AARON DIAL
 PHONE: (919) 466-5383
 SITE ID: 372926
 SITE NAME: ANGIER

APPLICANT/LESSEE:
 NAME: AT&T MOBILITY
 ADDRESS: 2002 PISGAH CHURCH RD, STE 300
 CITY, STATE, ZIP: GREENSBORO, NC 27455
 CONTACT: KEN WELKER
 PHONE: (336) 549-9987
 NOC #: (800) 638-2822

SITE CONSTRUCTION MANAGER:
 NAME: AT&T
 ADDRESS: 2002 PISGAH CHURCH RD, STE 300
 CITY, STATE, ZIP: GREENSBORO, NC 27455
 CONTACT: UNKNOWN
 PHONE: UNKNOWN

CIVIL ENGINEER:
 NAME: TOWER ENGINEERING PROFESSIONALS
 ADDRESS: 326 TRYON ROAD
 CITY, STATE, ZIP: RALEIGH, NC 27603
 CONTACT: JOHN H. BEST III, P.E.
 PHONE: (919) 661-6351

ELECTRICAL ENGINEER:
 NAME: TOWER ENGINEERING PROFESSIONALS
 ADDRESS: 326 TRYON ROAD
 CITY, STATE, ZIP: RALEIGH, NC 27603
 CONTACT: MARK S. QUAKENBUSH, P.E.
 PHONE: (919) 661-6351

CONTACT INFORMATION

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING:
 1. NORTH CAROLINA BUILDING CODE (2018 EDITION)
 2. NORTH CAROLINA CODE COUNCIL
 3. ANSI/TIA-222-H
 4. 2017 NCEC (2017 NEC & NC ADDENDUM)
 5. LOCAL BUILDING CODE
 6. CITY/COUNTY ORDINANCES

CODE COMPLIANCE

UTILITIES:
 POWER COMPANY: SOUTH RIVER EMC
 CONTACT: CUSTOMER SERVICE
 PHONE: (910) 892-8071
 METER # NEAR SITE: UNKNOWN

TELEPHONE COMPANY: SPRINT SPECTRUM L.P.
 CONTACT: CUSTOMER SERVICE
 PHONE: (866) 866-7509
 PHONE # NEAR SITE: (919) 625-5412
 PEDESTAL # NEAR SITE: UNKNOWN

PROPERTY OWNER:
 NAME: GTP TOWERS VIII LLC
 ADDRESS: 2225 JOHNSTON COUNTY RD
 CITY, STATE, ZIP: ANGIER, NC 27501

RFDS DATA

DESIGN PACKAGE BASED ON RF DATA SHEET
 RFDS NAME: ECL02540
 REVISION: 1.00
 ISSUED: 9/11/2020 4:33:37 PM
 DATE UPDATED: 9/21/2020 5:37:00 PM
 NUMBER OF SECTORS: 3
 NUMBER OF ANTENNAS: 6
 NUMBER OF TMAs: 0
 NUMBER OF RRHS: 15
 NUMBER OF FIBER/DC SQUIDS: 2
 NUMBER OF DC SQUIDS: 0
 NUMBER OF FIBER TRUNK CABLES: 2
 NUMBER OF DC TRUNK CABLES: 6
 NUMBER OF RF CABLES: 0

SCOPE OF WORK

THE PURPOSE OF THIS PROJECT IS AS FOLLOWS:
 TOWER SCOPE OF WORK:
 • INSTALL (6) ANTENNAS
 • INSTALL (15) RRHS
 • INSTALL (2) SQUIDS
 • INSTALL (2) FIBER TRUNKS
 • INSTALL (6) DC TRUNKS
 GROUND SCOPE OF WORK:
 • INSTALL (1) W.I.C. SHELTER PAD
 • INSTALL (1) GENERATOR PAD
 • INSTALL (1) W.I.C. SHELTER
 • INSTALL (1) GENERATOR
 • INSTALL (1) H-FRAME
 • INSTALL METER AND DISCONNECT
 • INSTALL FIBER BOX
 NSB - GUYED
 LTE - LTE 1C/2C/3C/4C/5C/5G NR 1DR-2

AMERICAN TOWER®
 ATC SITE NAME: ANGIER
 ATC SITE NUMBER: 372926
 SITE ADDRESS: 2135 JOHNSTON COUNTY RD ANGIER, NC 27501 (HARNETT COUNTY)

NOTICE TO CONTRACTOR
 05/07/2021
 Harnett COUNTY NORTH CAROLINA

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
 326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
 www.tepgroup.net
 N.C. LICENSE # P-1403

| REV | DATE | ISSUED FOR: |
|-----|----------|-------------------|
| 0 | 02-16-21 | 100% CONSTRUCTION |
| A | 12-28-20 | PRELIMINARY |

DRAWN BY: SRZ CHECKED BY: EGG

SEAL:

February 16, 2021

SEAL:

February 16, 2021

| SHEET | DESCRIPTION | REV |
|-------|--|-----|
| T1 | TITLE SHEET | 0 |
| T2-T6 | APPENDIX B | 0 |
| N1 | GENERAL NOTES | 0 |
| SP1 | SITE PLAN | 0 |
| C1 | PROPOSED COMPOUND DETAIL | 0 |
| C2 | TOWER ELEVATION | 0 |
| C3 | WIC ELEVATIONS | 0 |
| C4A | FOUNDATION DETAILS I | 0 |
| C4B | FOUNDATION DETAILS II | 0 |
| C5 | ICE BRIDGE DETAILS I | 0 |
| C6 | ICE BRIDGE DETAILS II | 0 |
| C7A | GENERATOR SPECIFICATIONS I | 0 |
| C7B | GENERATOR SPECIFICATIONS II | 0 |
| C7C | GENERATOR SPECIFICATIONS III | 0 |
| C8 | GENERATOR FOUNDATION & SIGNAGE DETAILS | 0 |
| C9 | ANTENNA MOUNTING DETAILS | 0 |
| C10 | SIGNAGE DETAILS | 0 |
| E1 | ELECTRICAL NOTES | 0 |
| E2A | ONE-LINE DIAGRAM | 0 |
| E2B | PANEL SCHEDULE | 0 |
| E3 | SERVICE ROUTING PLAN | 0 |
| E4 | GROUNDING PLAN | 0 |
| E5 | GROUNDING DETAILS I | 0 |
| E6 | GROUNDING DETAILS II | 0 |

INDEX OF SHEETS

SHEET NUMBER: **T-1** REVISION: **0**
 TEP#: 55699.245455

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: ANGIER
 Address: 2135 JOHNSTON COUNTY RD, ANGIER, NC Zip Code 27501
 Owner/Authorized Agent: CHERYL RUSSELL Phone # (-) - - - - E-Mail Cheryl.Russell@AmericanTower.com
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City County HARNETT State

CONTACT: Tower Engineering Professionals

| DESIGNER | FIRM | NAME | LICENSE # | TELEPHONE # | E-MAIL |
|--------------------------|---------------------------------|--------------------|-----------|----------------|--------------------------|
| Architectural | | | | () | |
| Civil | Tower Engineering Professionals | John H. Best III | 043120 | (919) 661-6351 | jbest@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 | | | | () | |

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

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 | | 115 SQ FT CONCRETE PAD | |
| Basement | | N/A | |
| TOTAL | | 115 SQ FT CONCRETE PAD | |

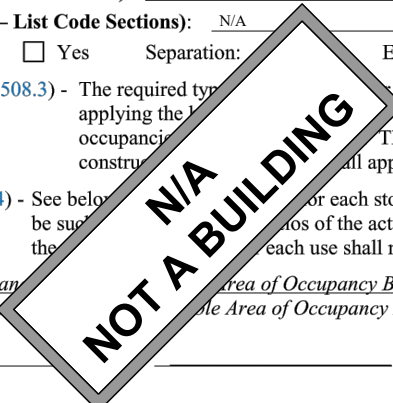
ALLOWABLE AREA

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 provisions for each of the applicable occupancies. 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 supported by a separate structural frame. The ratio of the actual floor area of each use divided by the allowable area of occupancy for each use shall not exceed 1.

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



PLANS PREPARED FOR:



2002 PISGAH CHURCH ROAD, SUITE 300
 GREENSBORO, NC 27455

PLANS PREPARED FOR:




3500 REGENCY PKWY #100
 CARY, NC 27518

PROJECT INFORMATION:


AT&T SITE NAME: 368-754
AT&T FA CODE: 12682186
AT&T PACE#:
MRCAR033546
ATC #: 372926
ANGIER
 2135 JOHNSTON COUNTY RD
 ANGIER, NC 27501
 (HARNETT COUNTY)
 EXISTING 287' GUYED TOWER

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
 326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
 www.tepgroup.net
 N.C. LICENSE # P-1403

SEAL:



February 16, 2021

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| 0 | 02-16-21 | 100% CONSTRUCTION |
| A | 12-28-20 | PRELIMINARY |
| REV | DATE | ISSUED FOR: |

DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

APPENDIX B

SHEET NUMBER: **T-2** REVISION: **0**
 TEP#: 55699.245455

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:
- Perimeter which fronts a public way: $\text{Perimeter} \times W/30 = \text{Frontage Area}$ (F) feet minimum width = _____ (F)
 - Total Building Perimeter
 - Ratio (F/P) = _____ (F/P)
 - W = Minimum width of public way (feet)
 - Percent of frontage increase = $\frac{\text{Frontage Area} - \text{Table 506.2 Area}}{\text{Table 506.2 Area}} \times 100 = \text{Percent}$ (%)
- 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 garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.2.1.
- ⁵ Frontage increase is based on the un-sprinklered 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 blank.

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:



2002 PISGAH CHURCH ROAD, SUITE 300
GREENSBORO, NC 27455

PLANS PREPARED FOR:



AMERICAN TOWER®
3500 REGENCY PKWY #100
CARY, NC 27518

PROJECT INFORMATION:

AT&T SITE NAME: 368-754
AT&T FA CODE: 12682186
AT&T PACE#:
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ATC #: 372926
ANGIER
2135 JOHNSTON COUNTY RD
ANGIER, NC 27501
(HARNETT COUNTY)
EXISTING 287' GUYED TOWER

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326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



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DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

APPENDIX B

| | |
|-----------------------------|---|
| SHEET NUMBER: T-3 | REVISION: 0 TEP#: 55699.245455 |
|-----------------------------|---|

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: Yes No
- Exit Signs: Yes No
- Fire Alarm: Yes No
- Smoke Detection Systems: Yes Partial No
- Panic Hardware: Yes No

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 that can accommodate based on egress width (1005.3)
- Actual occupant load for each exit
- A separate schematic plan indicating floor/ceiling and/or roof structure is provided for purposes of occupancy separation (1010)
- 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 |
|-------------|---------------------------|---------------------------|-----------------------|-----------------------|-----------------------|---------------------------------|
| | | | | | | |

ACCESSIBLE PARKING

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

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

| USE | SPACE | WATERCLOSETS | | | URINALS | LAVATORIES | | | SHOWERS /TUBS | DRINKING FOUNTAINS | |
|-----|---------|--------------|--------|--------|---------|------------|-----|--------|---------------|--------------------|------------|
| | | MALE | FEMALE | UNISEX | | MALE | FEM | UNISEX | | REGULAR | ACCESSIBLE |
| | EXIST'G | | | | | | | | | | |
| | NEW | | | | | | | | | | |
| | REQ'D | | | | | | | | | | |

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Health, Fire Department, etc., describe below)

PLANS PREPARED FOR:



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DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

APPENDIX B

SHEET NUMBER: **T-4** REVISION: **0**

TEP#: 55699.245455

ENERGY SUMMARY

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 of _____ remainder of this section is not applicable)

Exempt Building: No Yes (Provide code of _____)

Climate Zone: 3A 4A _____

Method of Compliance: Energy _____ Prescriptive
 ASHRAE _____ 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:

Provide the following Seismic Design Risk Category (Table 1601-1):
 Risk Category (Table 1601-1): I II III IV
 Spectral Response Acceleration Coefficient (S₁) _____ %g

Site Classification (ASCE 7.9.6): 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:



2002 PISGAH CHURCH ROAD, SUITE 300
 GREENSBORO, NC 27455

PLANS PREPARED FOR:



AMERICAN TOWER®
 3500 REGENCY PKWY #100
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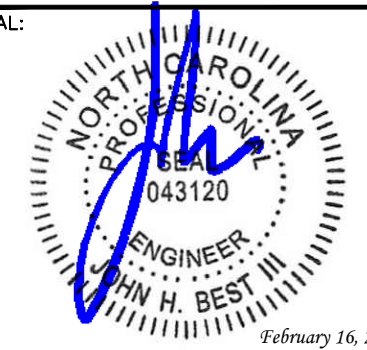
PROJECT INFORMATION:

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SHEET TITLE:
APPENDIX B

SHEET NUMBER: **T-5** REVISION: **0**
 TEP#: 55699.245455

**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 Prescriptive
ASHRAE 90.1 Performance Prescriptive

Lighting schedule (each fixture type)

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

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:



2002 PISGAH CHURCH ROAD, SUITE 300
GREENSBORO, NC 27455

PLANS PREPARED FOR:



AMERICAN TOWER®

3500 REGENCY PKWY #100
CARY, NC 27518

PROJECT INFORMATION:

AT&T SITE NAME: 368-754
AT&T FA CODE: 12682186
AT&T PACE#:
MRCAR033546
ATC #: 372926
ANGIER
2135 JOHNSTON COUNTY RD
ANGIER, NC 27501
(HARNETT COUNTY)
EXISTING 287' GUYED TOWER

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



February 16, 2021

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| 0 | 02-16-21 | 100% CONSTRUCTION |
| A | 12-28-20 | PRELIMINARY |
| REV | DATE | ISSUED FOR: |

DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:
APPENDIX B

| | |
|-----------------------------|-----------------------|
| SHEET NUMBER: T-6 | REVISION: 0 |
| TEP#: 55699.245455 | |

1. ALL REFERENCES MADE TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED AT&T OR IT'S 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 THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF NORTH CAROLINA.
3. THE STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-H. THIS CONFORMS TO THE REQUIREMENTS OF THE NORTH CAROLINA BUILDING CODE, 2018 EDITION.
4. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE, 2018 EDITION.
5. 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.
6. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
7. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND IT'S 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.
8. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS 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 OWNER AND THE OWNER'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 OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
9. 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 OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK. RENTAL CHARGES, SAFETY, PROTECTION AND MAINTENANCE OF RENTED EQUIPMENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
11. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE AT&T PROJECT MANAGER.
12. BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR/OWNER. CONTRACTOR/OWNER SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
13. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
14. 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
15. 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 PROOFROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED OR REPLACED.
16. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PIPES, DITCHES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
17. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.

18. ANY BUILDINGS ON THIS SITE ARE INTENDED TO SHELTER EQUIPMENT WHICH WILL ONLY BE PERIODICALLY MAINTAINED AND ARE NOT INTENDED FOR HUMAN OCCUPANCY.
19. TEMPORARY FACILITIES FOR PROTECTION OF TOOLS AND EQUIPMENT SHALL CONFORM TO LOCAL REGULATIONS AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
20. THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL CARRY LIABILITY INSURANCE IN THE AMOUNTS AND FORM IN ACCORDANCE WITH AT&T SPECIFICATIONS. CERTIFICATES DEMONSTRATING PROOF OF COVERAGE SHALL BE PROVIDED TO AT&T PRIOR TO THE START OF THE WORK ON THE PROJECT.
21. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY SERVICES TO VERIFY LOCATIONS OF EXISTING UTILITIES AND REQUIREMENTS FOR NEW UTILITY CONNECTIONS PRIOR TO EXCAVATING.
22. THE CONTRACTOR SHALL MAINTAIN THE JOB CLEAR OF TRASH AND DEBRIS. ALL WASTE MATERIALS SHALL BE REMOVED FROM THE SITE PRIOR TO SUBSTANTIAL COMPLETION AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL FURNISH ONE 55 GALLON BARREL, AND TRASH BAGS, AND SHALL REMOVE TRASH, DEBRIS, ETC., ON A DAILY BASIS.
23. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS WITH THOSE AT THE SITE. ANY VARIATION WHICH REQUIRES PHYSICAL CHANGE SHALL BE BROUGHT TO THE ATTENTION OF THE AT&T PROJECT ENGINEER FOR FACILITIES/CONSTRUCTION.
24. 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 RETAINAGE. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.

GENERAL NOTES

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SEAL:



February 16, 2021

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DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

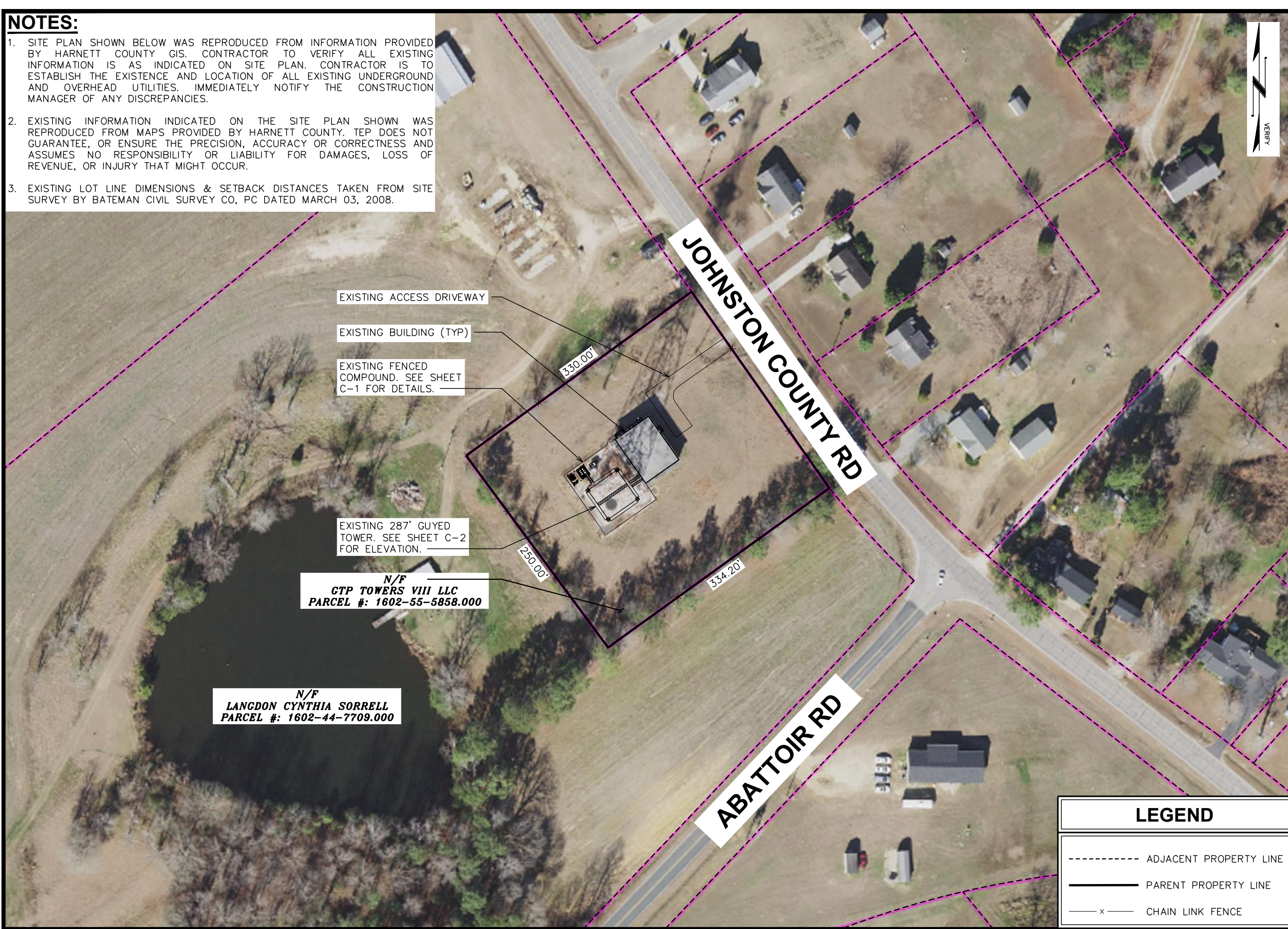
GENERAL NOTES

SHEET NUMBER: **N-1** REVISION: **0**

TEP#: 55699.245455

NOTES:

1. SITE PLAN SHOWN BELOW WAS REPRODUCED FROM INFORMATION PROVIDED BY HARNETT COUNTY GIS. CONTRACTOR TO VERIFY ALL EXISTING INFORMATION IS AS INDICATED ON SITE PLAN. CONTRACTOR IS TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.
2. EXISTING INFORMATION INDICATED ON THE SITE PLAN SHOWN WAS REPRODUCED FROM MAPS PROVIDED BY HARNETT COUNTY. TEP DOES NOT GUARANTEE, OR ENSURE THE PRECISION, ACCURACY OR CORRECTNESS AND ASSUMES NO RESPONSIBILITY OR LIABILITY FOR DAMAGES, LOSS OF REVENUE, OR INJURY THAT MIGHT OCCUR.
3. EXISTING LOT LINE DIMENSIONS & SETBACK DISTANCES TAKEN FROM SITE SURVEY BY BATEMAN CIVIL SURVEY CO, PC DATED MARCH 03, 2008.



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SHEET TITLE:

SITE PLAN

SHEET NUMBER: **SP-1** REVISION: **0**

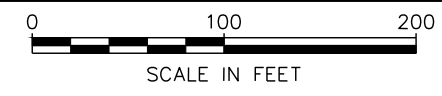
TEP#: 55699.245455

LEGEND

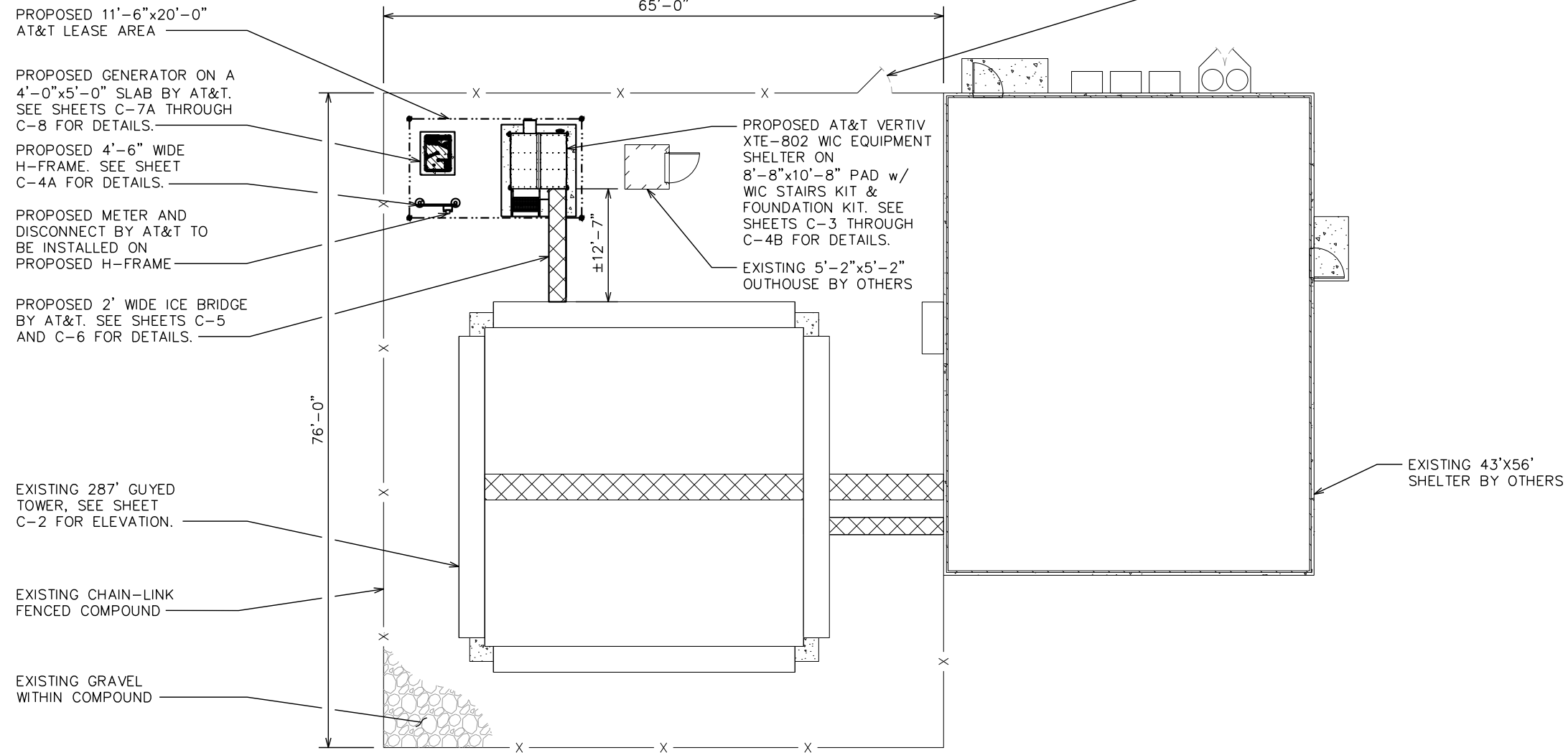
----- ADJACENT PROPERTY LINE

———— PARENT PROPERTY LINE

— x — CHAIN LINK FENCE



SITE PLAN
SCALE: 1" = 100'



PROPOSED 11'-6" x 20'-0" AT&T LEASE AREA

PROPOSED GENERATOR ON A 4'-0" x 5'-0" SLAB BY AT&T. SEE SHEETS C-7A THROUGH C-8 FOR DETAILS.

PROPOSED 4'-6" WIDE H-FRAME. SEE SHEET C-4A FOR DETAILS.

PROPOSED METER AND DISCONNECT BY AT&T TO BE INSTALLED ON PROPOSED H-FRAME

PROPOSED 2' WIDE ICE BRIDGE BY AT&T. SEE SHEETS C-5 AND C-6 FOR DETAILS.

EXISTING 287' GUYED TOWER, SEE SHEET C-2 FOR ELEVATION.

EXISTING CHAIN-LINK FENCED COMPOUND

EXISTING GRAVEL WITHIN COMPOUND

65'-0"

76'-0"

PROPOSED AT&T VERTIV XTE-802 WIC EQUIPMENT SHELTER ON 8'-8" x 10'-8" PAD w/ WIC STAIRS KIT & FOUNDATION KIT. SEE SHEETS C-3 THROUGH C-4B FOR DETAILS.

EXISTING 5'-2" x 5'-2" OUTHOUSE BY OTHERS

EXISTING 4'-0" WIDE ACCESS GATE

EXISTING 43' x 56' SHELTER BY OTHERS

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DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

**PROPOSED
COMPOUND DETAIL**

| | |
|-----------------------------|-----------------------|
| SHEET NUMBER: C-1 | REVISION: 0 |
| TEP#: 55699.245455 | |

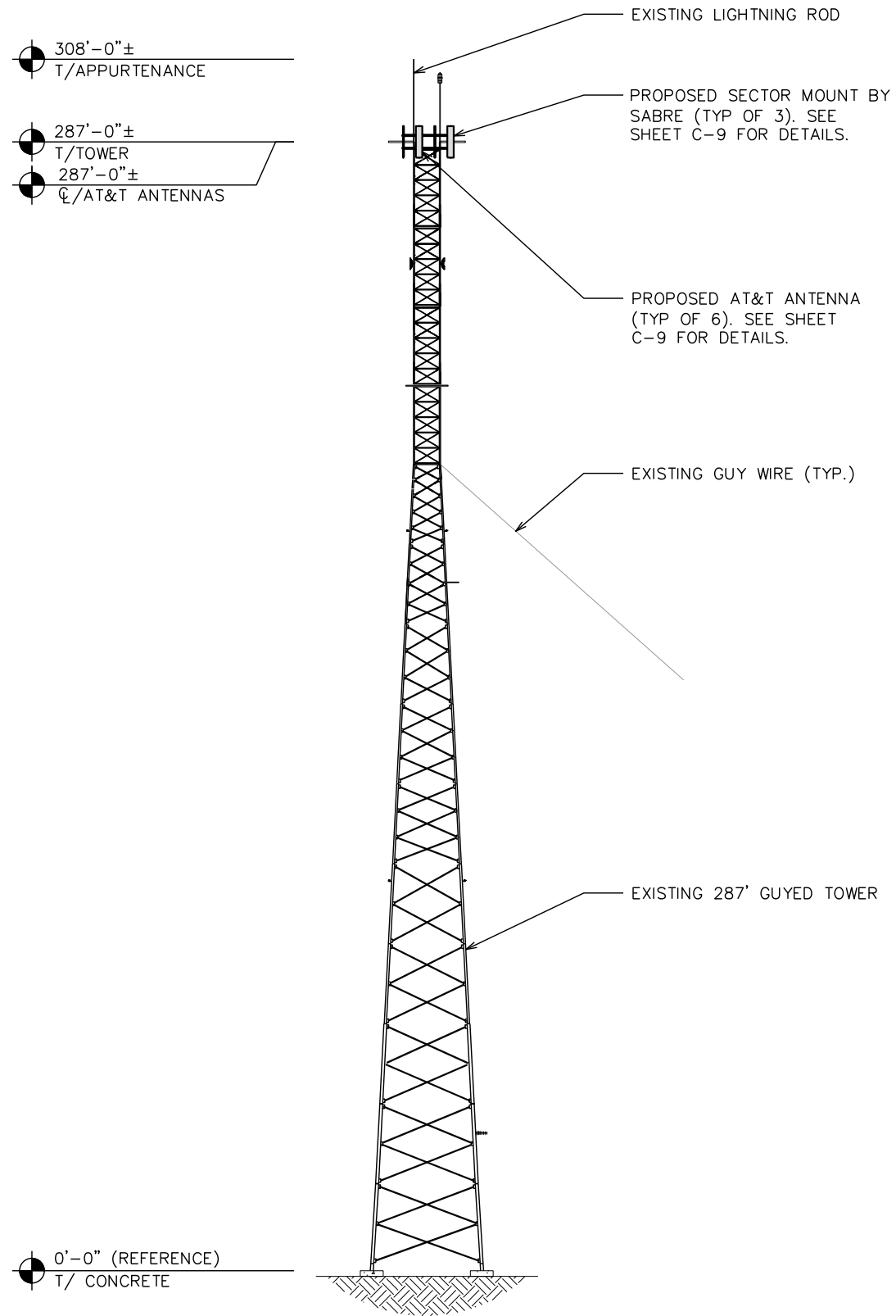
PROPOSED COMPOUND DETAIL

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



NOTES:

1. PROPOSED CABLES TO BE ROUTED PER SPECIFICATIONS OF STRUCTURAL ANALYSIS.
2. TOWER DRAWING IS ONLY A GRAPHIC REPRESENTATION OF THE STRUCTURE. THE ACTUAL TANK IN THE FIELD MAY VARY.



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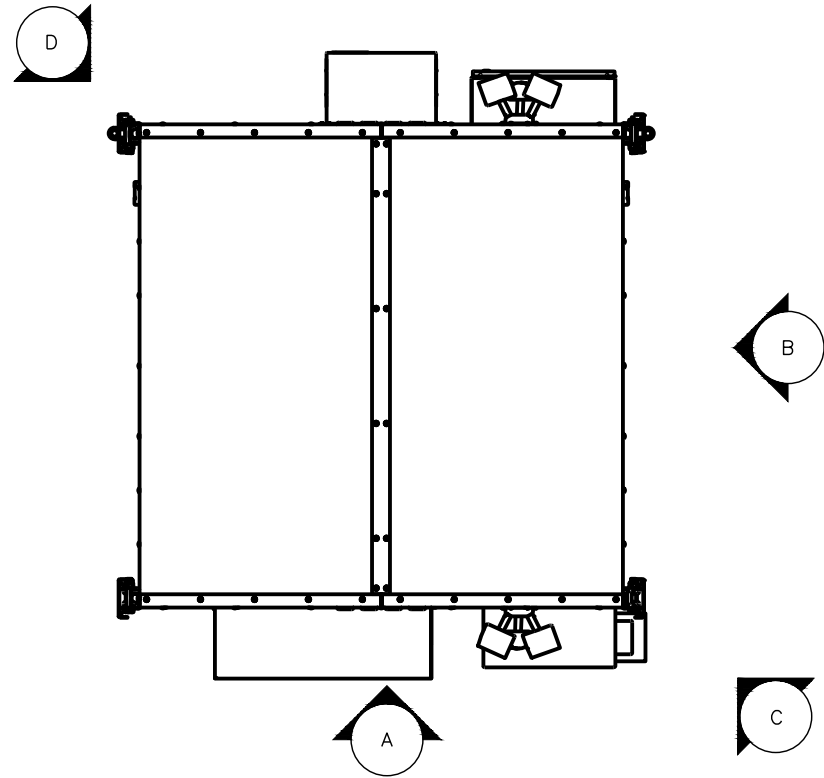
TOWER ELEVATION

SHEET NUMBER: **C-2** REVISION: **0**
TEP#: 55699.245455

TOWER ELEVATION

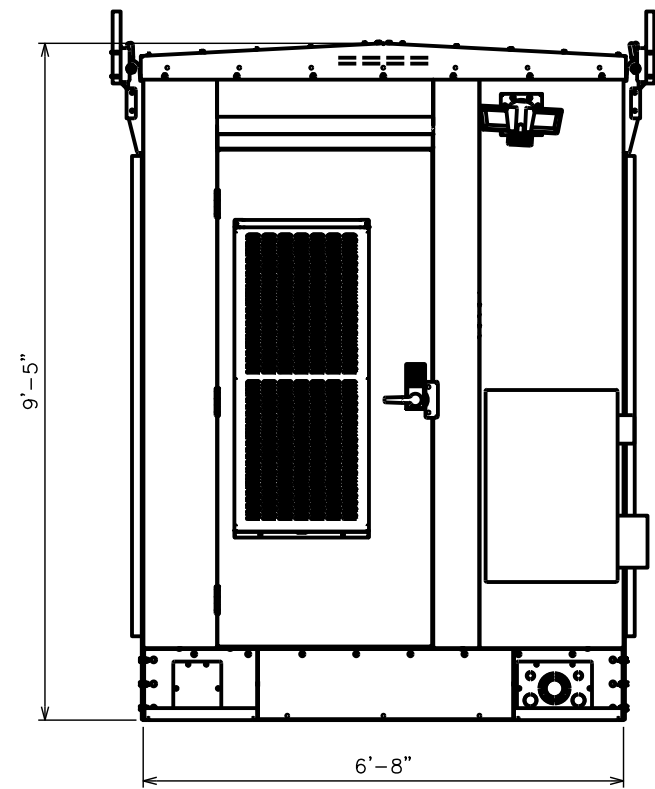
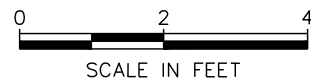
SCALE: 1" = 40'-0"





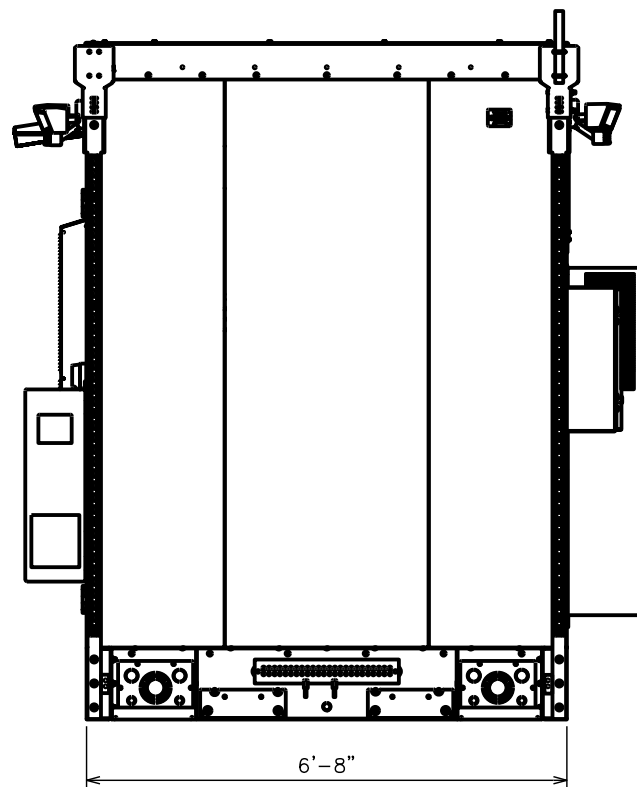
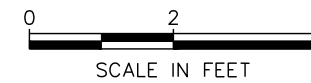
EQUIPMENT LAYOUT

SCALE: 3/8" = 1'-0"



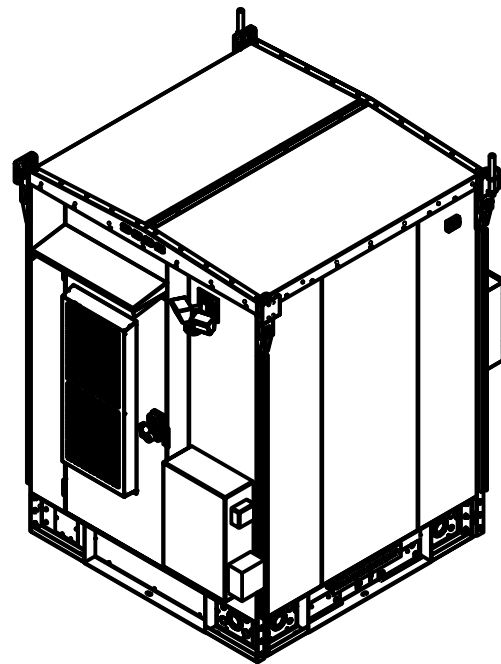
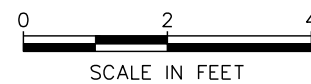
ELEVATION A

SCALE: 3/8" = 1'-0"



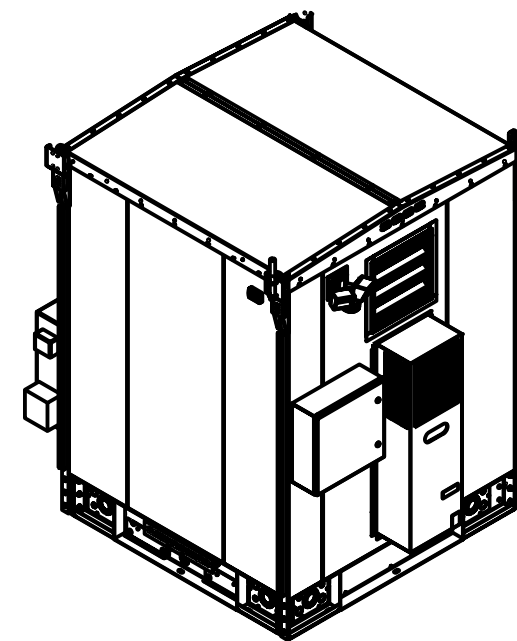
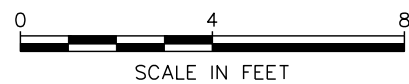
ELEVATION B

SCALE: 3/8" = 1'-0"



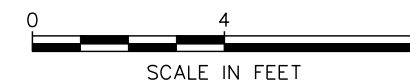
ELEVATION C

SCALE: 1/4" = 1'-0"



ELEVATION D

SCALE: 1/4" = 1'-0"



PLANS PREPARED FOR:



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PROJECT INFORMATION:

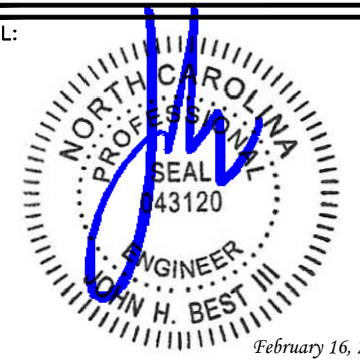
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DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

**WIC
ELEVATIONS**

SHEET NUMBER:

C-3

REVISION:

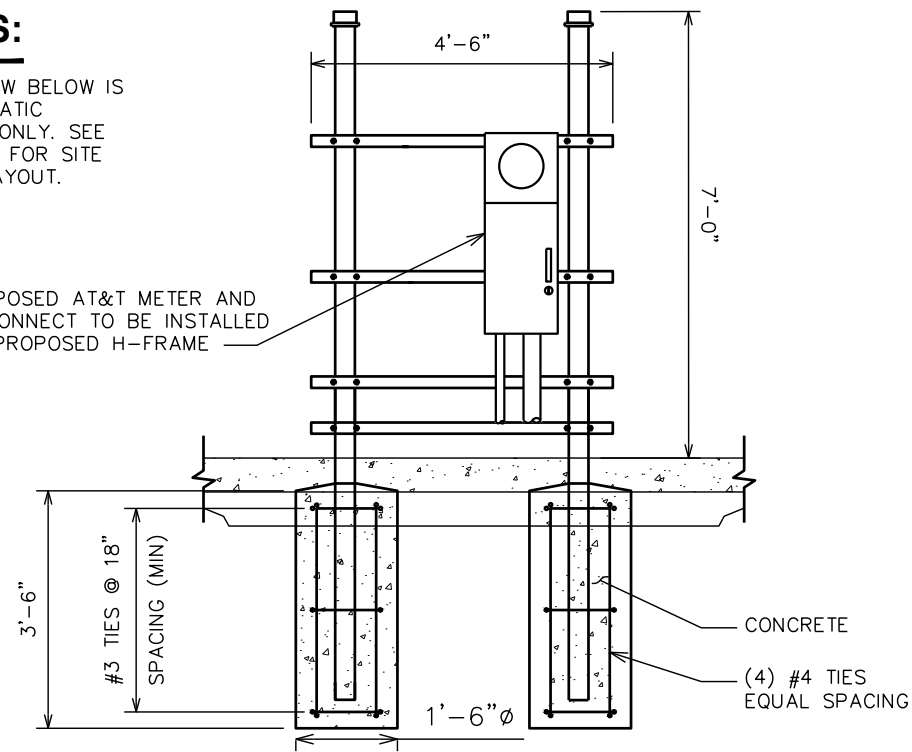
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TEP#: 55699.245455

NOTES:

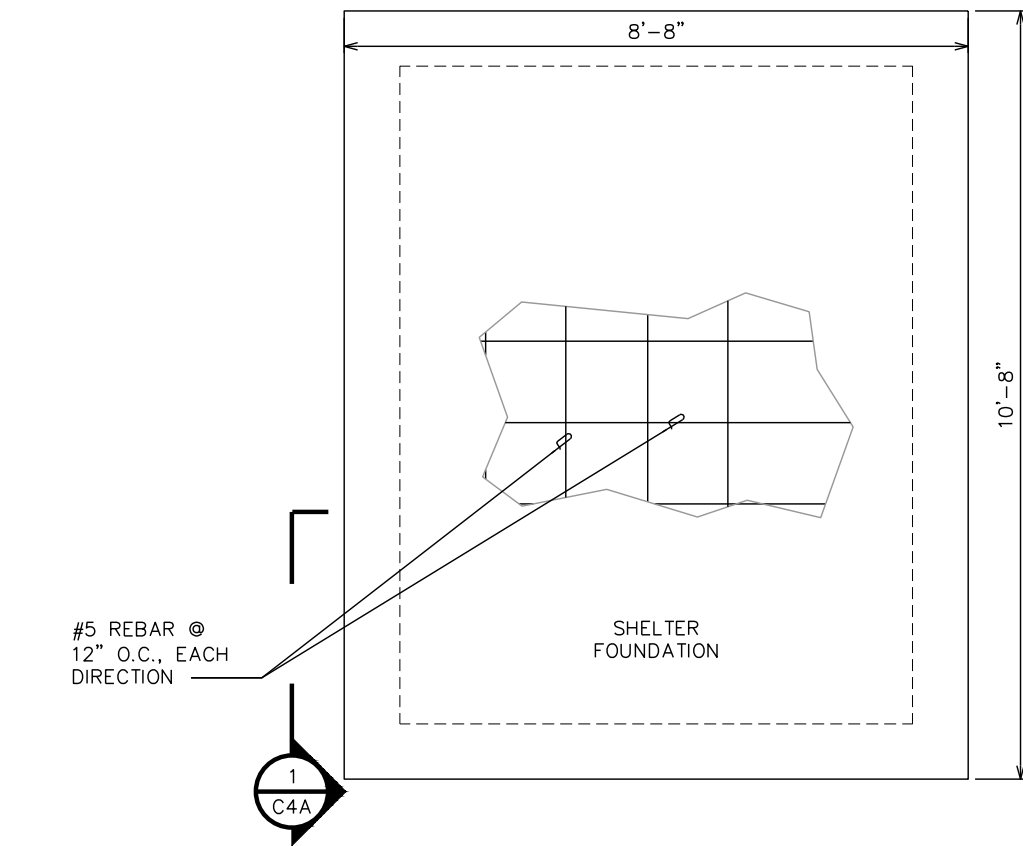
DETAIL SHOW BELOW IS FOR SCHEMATIC PURPOSES ONLY. SEE SHEET C-3 FOR SITE SPECIFIC LAYOUT.

PROPOSED AT&T METER AND DISCONNECT TO BE INSTALLED ON PROPOSED H-FRAME



H-FRAME DETAIL

SCALE: N.T.S.



FOUNDATION PLAN

SCALE: N.T.S.

GENERAL STRUCTURAL NOTES:

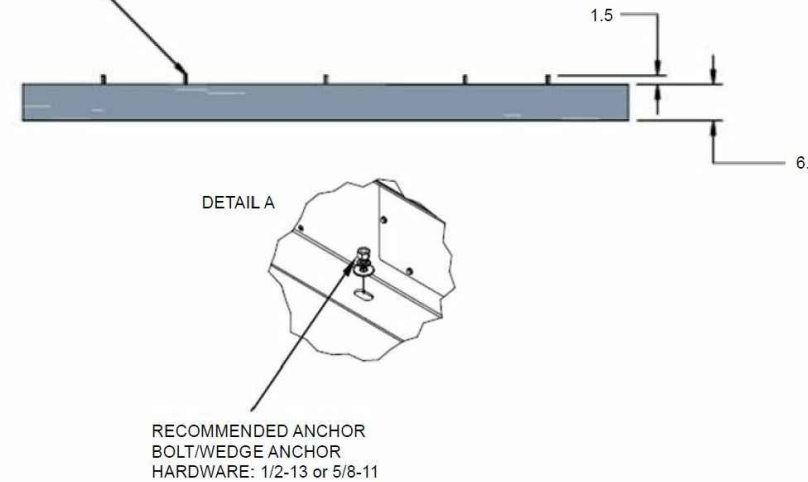
SPECIFICATION/CODES:

1. CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE ACI CODE.
2. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE".
3. DESIGN SHALL BE PER NORTH CAROLINA BUILDING CODE, 2018 EDITION.

FOUNDATION NOTES:

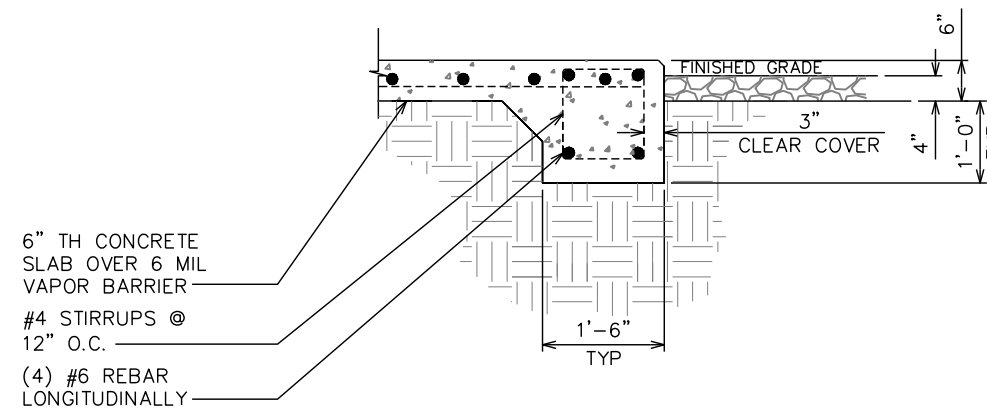
1. FOUNDATION DESIGN BASED ON 2,000 PSF SOIL BEARING CAPACITY.
2. CONCRETE SHALL BE 3,000 PSI @ 28 DAYS.
3. REINFORCING STEEL $F_y = 60,000$ PSI.
4. ALL BACKFILL SHALL BE THOROUGHLY COMPACTED TO A MINIMUM OF 95% DENSITY USING THE MODIFIED PROCTOR METHOD.
5. SURFACE OF FINISHED SLAB SHALL BE LEVEL AND FLAT WITHIN $\frac{1}{4}$ ".
6. CONTRACTOR SHALL VERIFY WITH MANUFACTURER ACTUAL DIMENSIONS OF EQUIPMENT PRIOR TO LAYING OUT FOUNDATION.
7. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 318-14.

ANCHOR BOLT SHOWN. WEDGE TYPE ANCHOR IS ALSO ACCEPTABLE.



CONNECTION DETAIL

SCALE: N.T.S.



SHELTER FOUNDATION SECTION CUT DETAIL

SCALE: N.T.S.

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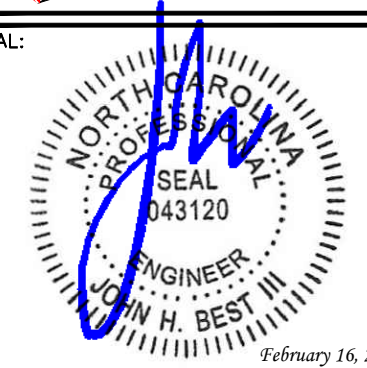
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326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

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| 0 | 02-16-21 | 100% CONSTRUCTION |
| A | 12-28-20 | PRELIMINARY |
| REV | DATE | ISSUED FOR: |

DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

FOUNDATION DETAILS I

SHEET NUMBER: REVISION:

C-4A 0
TEP#: 55699.245455

PLANS PREPARED FOR:



2002 PISGAH CHURCH ROAD, SUITE 300
GREENSBORO, NC 27455

PLANS PREPARED FOR:



AMERICAN TOWER®

3500 REGENCY PKWY #100
CARY, NC 27518

PROJECT INFORMATION:

AT&T SITE NAME: 368-754

AT&T FA CODE: 12682186

AT&T PACE#:

MRCAR033546

ATC #: 372926

ANGIER

2135 JOHNSTON COUNTY RD
ANGIER, NC 27501

(HARNETT COUNTY)

EXISTING 287' GUYED TOWER

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD

RALEIGH, NC 27603-3530

OFFICE: (919) 661-6351

www.tepgroup.net

N.C. LICENSE # P-1403

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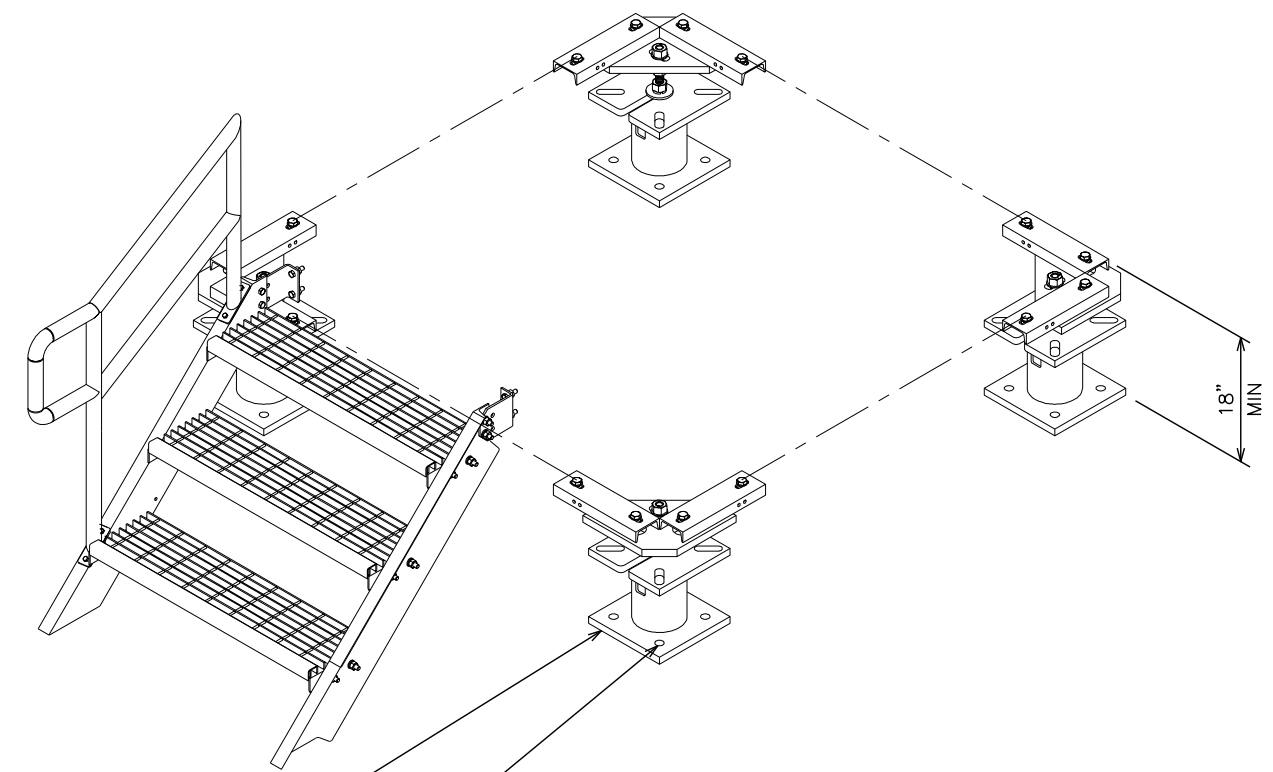
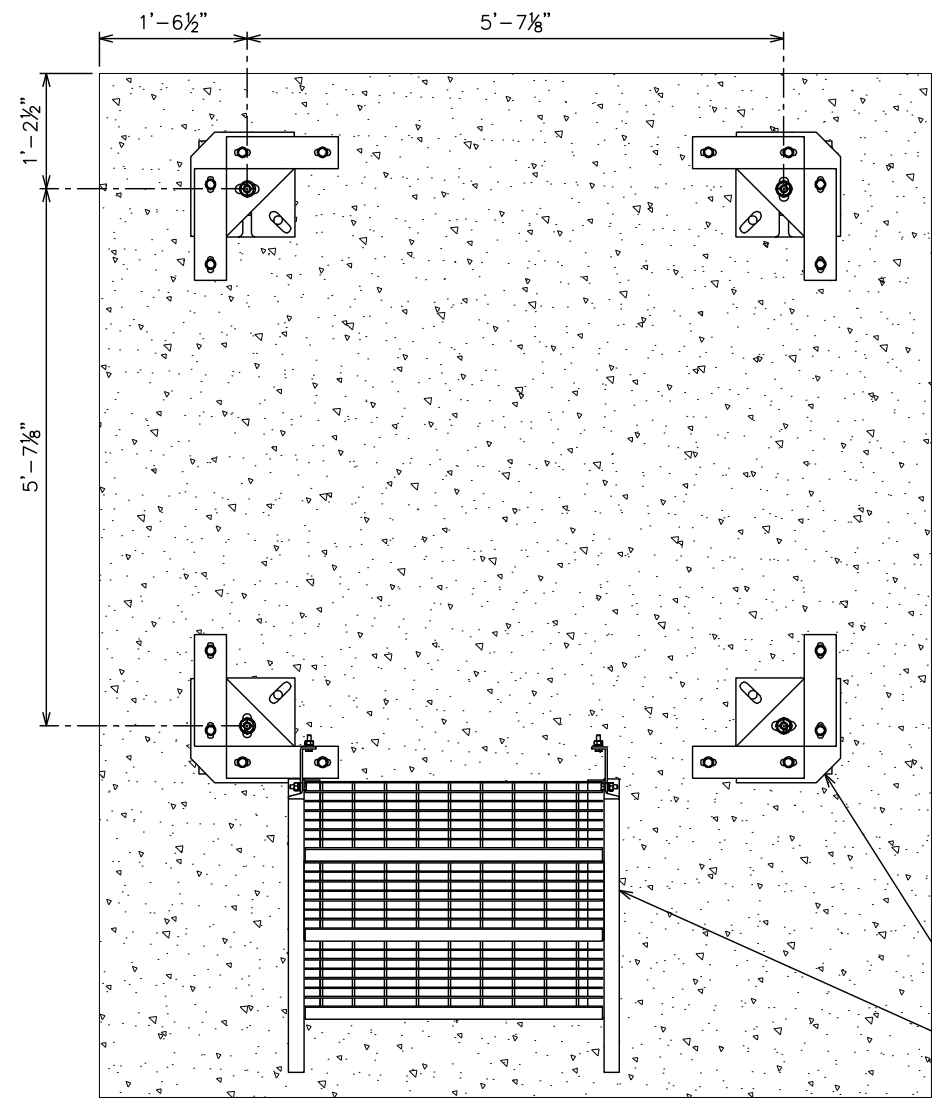
FOUNDATION DETAILS II

SHEET NUMBER: REVISION:

C-4B

0

TEP#: 55699.245455



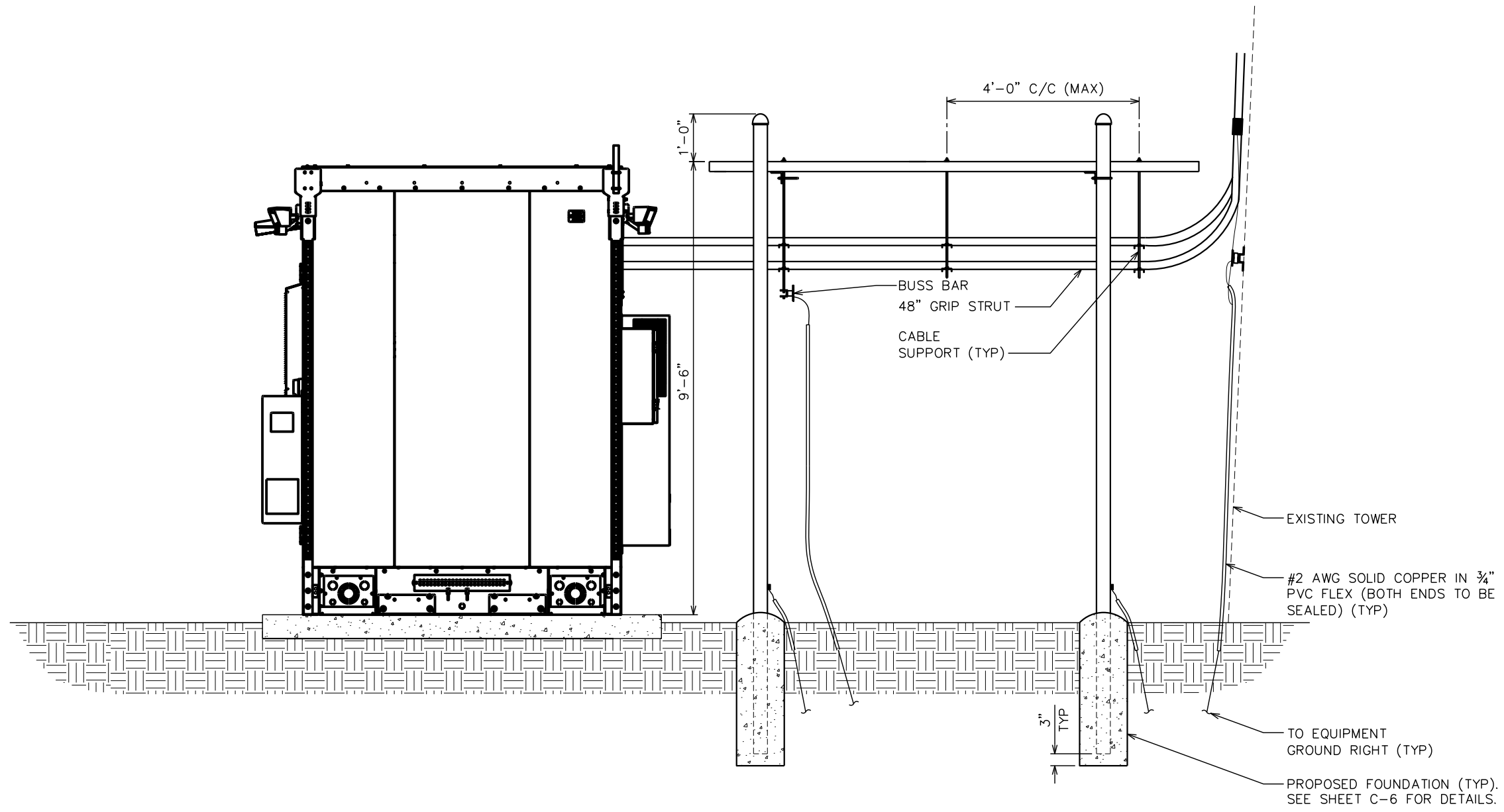
- SUPPORT LEG (TYP)
- STAIRS W/ HANDRAIL
- 5/8"Ø HILTI KWIK BOLT
TZ-SS304 ANCHOR
BOLT W/ 4" EMBEDMENT
(TYP OF ALL ANCHORS)

NOTES:

1. CONTRACTOR TO REFER TO MANUFACTURER'S SPECIFICATIONS FOR FURTHER DETAILS.
2. INSTALL FOUNDATION KIT PER MANUFACTURER'S SPECIFICATIONS.
3. CONTRACTOR TO ENSURE MINIMUM 18" CLEARANCE FROM TOP OF FOUNDATION TO BASE OF WIC SHELTER.
4. DETAILS SHOWN ON THIS PAGE WERE PROVIDED BY OTHERS AND ARE NOT DESIGNED NOR CARRIED UNDER SIGNATURE AND SEAL OF TOWER ENGINEERING PROFESSIONALS' ENGINEERING SERVICES AND/OR ITS ENGINEERS.

WIC CONCRETE MOUNT FOUNDATION KIT DETAILS

SCALE: N.T.S.




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SEAL:

 JOHN H. BEST
 ENGINEER
 February 16, 2021

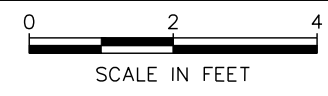
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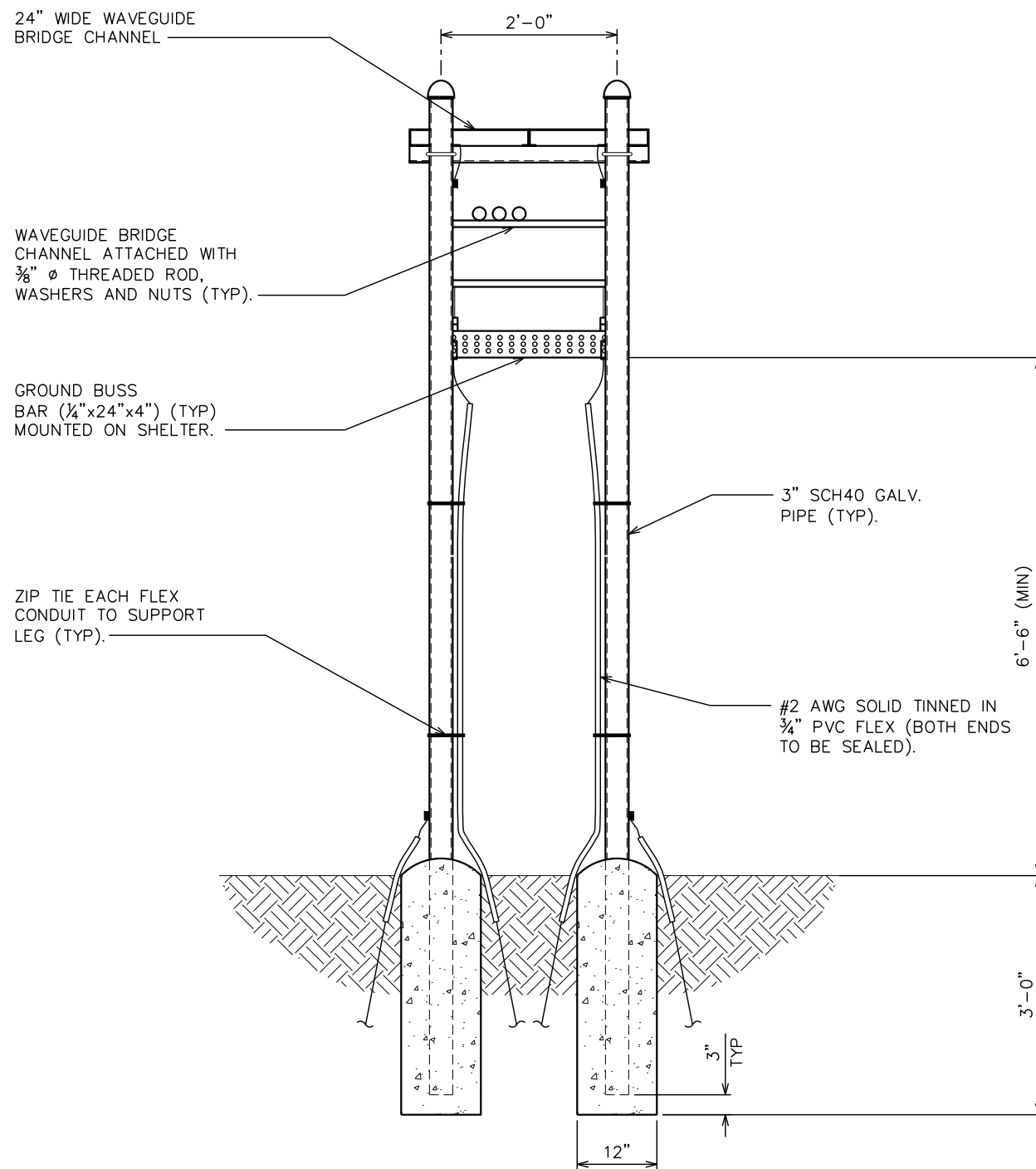
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SHEET TITLE:
ICE BRIDGE DETAILS I

SHEET NUMBER: **C-5** REVISION: **0**
 TEP#: 55699.245455

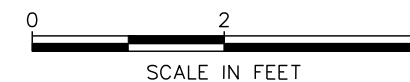
ICE BRIDGE DETAILS - SIDE VIEW
 SCALE: 3/8" = 1'-0"





ICE BRIDGE DETAILS - FRONT VIEW

SCALE: 1/2" = 1'-0"



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SHEET TITLE:

**ICE BRIDGE
DETAILS II**

SHEET NUMBER:

C-6

REVISION:

0

TEP#: 55699.245455

SDC20 | 2.5L | 20 kW - AC
INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



Model G007098-0 (Steel)

Standby Power Rating
 20 kW AC, 60 Hz



Image used for illustration purposes only



Codes and Standards

Generac products are designed to the following standards:

UL2200, UL508, UL142, UL489

NFPA 37, 70, 99, 110

NEC700, 701, 702, 708

ISO 3046, 7637, 8528, 9001

NEMA ICS10, MG1, 250, ICS6, AB1

ANSI C62.41

Powering Ahead

For over 50 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SPEC SHEET

1 of 5

SDC20 | 2.5L | 20 kW - AC

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



Model G007098-0 (Steel)

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner with Service Indicator
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Exhaust Silencer with Drain
- Factory Filled Oil & Coolant

Fuel System

- Primary Fuel Filter

Cooling System

- 120V AC Coolant Heater
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

Electrical System

- Battery Charging Alternator
- AGM Spill Proof Battery
- Battery Cables
- Sealed/Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor
- Output Circuit Breaker

ALTERNATOR SYSTEM

- Class H Insulation Material
- Vented Rotor
- 2/3 Pitch
- Skewed Stator
- Amortisseur Winding
- Brushless Excitation
- Sealed Bearings
- Rotor Dynamically Spin Balanced
- Full Load Capacity Alternator
- Protective Thermal Shutdown

GENERATOR SET

- Single Side Service
- Internal Genset Vibration Isolators
- Separation of Circuits- High/Low Voltage
- Silencer Heat Shield
- High Heat Wrapped Exhaust Piping
- Silencer Enclosed Within Generator
- 5 Year Extended Warranty
- Extended Factory Testing
- 12 Gallon System Spill Containment
- 2.5 Gallon Fuel Fill Spill Containment

ENCLOSURE

- Serviceable Items Accessible Through Lift-Off Door
- High Performance Sound-Absorbing Material
- Gasketed Door
- Stamped Air-Intake Louvers
- Single Door Latch Lockable with Key & Padlock
- Rhino Coat™ - Textured Polyester Powder Coat
- 150 MPH Wind Rating
- 36" Snow Rating

FUEL TANK

- UL 142 Compliant
- Double Wall Construction
- Factory Pressure Tested (5 psi)
- Rupture Basin Alarm
- Fuel Level Gauge and Sender
- Check Valve in Supply Line
- Rhino Coat™ - Textured Polyester Powder Coat
- Stainless Steel Hardware
- Integrated Fork Pockets

CONTROL SYSTEM

- Digital H Control Panel - Dual 4x20 Display
- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable PLC
- RS-232/485 Communications
- All-Phase Sensing Voltage Regulator
- Full System Status
- 2-Wire Start Compatible
- Power Output (kW)
- Power Factor
- kW Hours, Total & Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage

- Frequency
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground Connections
- 15 Channel Data Logging
- 0.2 msec High Speed Data Logging
- Alarm Information Automatically Comes Up On the Display

Alarms

MODEL OPTIONS

CONTROL SYSTEM

- 21 Light Annunciator- Shipped Loose Kit and Field Installed
- External E-Stop-Shipped Loose Kit and Field Installed

ENCLOSURE

- Aluminum Enclosure
- Extreme Cold Weather Kit - Shipped Loose Kit and Field Installed

TANKS

- External Fuel Vent- Shipped Loose Kit and Field Installed

SPEC SHEET

2 of 5

PLANS PREPARED FOR:



2002 PISGAH CHURCH ROAD, SUITE 300
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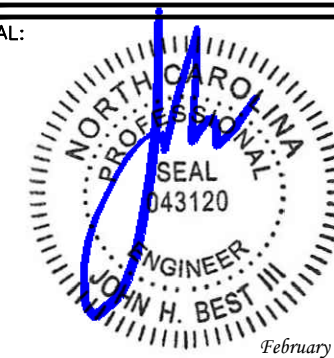
EXISTING 287' GUYED TOWER

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS

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SHEET TITLE:
GENERATOR SPECIFICATIONS I

SHEET NUMBER: **C-7A** REVISION: **0**
 TEP#: 55699.245455

GENERATOR SPECIFICATIONS

SCALE: N.T.S.

SDC20 | 2.5L | 20 kW - AC INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

| General | | Cooling System | |
|-------------------------------------|----------------------------|-----------------------------|----------------------------|
| Make | Mitsubishi | Cooling System Type | Forced Circulation |
| EPA Emissions Compliance | Interim Tier 4 | Water Pump Type | Centrifugal Pump |
| Cylinder # | 4 | Fan Type | Pusher |
| Type | In-Line | Fan Speed (rpm) | 2100 |
| Displacement - L (Cu In) | 2.5 (158) | Fan Diameter - mm (in) | 431.8 (17) |
| Bore - mm (in) | 88 (3.5) | Coolant Heater Wattage | 1000 |
| Stroke - mm (in) | 103 (4.1) | Coolant Heater Voltage | 120 |
| Compression Ratio | 22:1 | | |
| Intake Air Method | Naturally Aspirated | | |
| Engine Governing | | Fuel System | |
| Governor | Electronic Isochronous | Fuel Type | Ultra Low Sulfur Diesel #2 |
| Frequency Regulation (Steady State) | ± 0.25% | Fuel Specifications | ASTM |
| | | Fuel Filtering (microns) | 6 |
| | | Fuel Inject Pump Make | Bosch |
| | | Injector Type | Engine Driven Gear |
| | | Engine Type | Diesel |
| | | Fuel Supply Line - mm (in.) | 6.6 (0.26) |
| Lubrication System | | Engine Electrical System | |
| Oil Pump Type | Trochoid Gear Pump | System Voltage | 12 VDC |
| Oil Filter Type | Filtering Paper, Full Flow | Battery Charger Alternator | 12V-50A |
| Crankcase Capacity - L (qts) | 6.5 (6.9) | Battery Size | 650 CCA |
| | | Battery Group | 35 |
| | | Battery Voltage | 12 VDC |
| | | Ground Polarity | Negative |

ALTERNATOR SPECIFICATIONS

| | | | |
|-------------------------------------|-----------------------|------------------------------------|--------------|
| Standard Model | Mecc Alte ECP 28-2L/4 | Bearings | Dual Sealed |
| Poles | 4 | Coupling | Belt, Pulley |
| Field Type | Revolving | Load Capacity - Standby | 100% |
| Insulation Class - Rotor | H | Prototype Short Circuit Test | Yes |
| Insulation Class - Stator | H | Voltage Regulator Type | Digital |
| Total Harmonic Distortion | <5% | Number of Sensed Phases | All |
| Telephone Interference Factor (TIF) | <45 | Regulation Accuracy (Steady State) | ±0.5% |
| Standard Excitation | Brushless | | |

RATING DEFINITIONS

Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.



Model G007098-0 (Steel)

SDC20 | 2.5L | 20 kW - AC

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



Model G007098-0 (Steel)

OPERATING DATA

POWER RATINGS

| | | |
|---------------------------------|-------|----------|
| Single-Phase 120/240 VAC @1.0pf | 20 kW | Amps: 83 |
| Circuit Breaker Size | 100A | |

FUEL CONSUMPTION RATES*

| Percent Load | Diesel - gph (lph) | |
|--------------|--------------------|--|
| | Standby | |
| 25% | 0.74 (2.80) | |
| 50% | 0.99 (3.75) | |
| 75% | 1.41 (5.30) | |
| 100% | 1.90 (7.19) | |

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

| | | Standby |
|--|---------------------|------------|
| Coolant Flow per Minute | gpm (lpm) | 11.9 (45) |
| Coolant System Capacity | gal (L) | 3.5 (13.2) |
| Heat Rejection to Coolant | BTU/hr | 238,200 |
| Inlet Air | cfm (m³/min) | 2365 (67) |
| Max. Operating Ambient Temperature (Before Derate) | °F (°C) | 77° (25°) |
| Maximum Radiator Backpressure | in H ₂ O | 0.50 |

COMBUSTION AIR REQUIREMENTS

| | Standby |
|----------------------------------|-----------|
| Flow at Rated Power cfm (m³/min) | 88 (2.49) |

ENGINE

| | | Standby |
|--------------------------|--------|---------|
| Rated Engine Speed | rpm | 1800 |
| Horsepower at Rated kW** | hp | 33.5 |
| Piston Speed | ft/min | 1220.47 |
| BMEP | psi | 96.5 |

EXHAUST

| | | Standby |
|---|--------------|-------------|
| Exhaust Flow (Rated Output) | cfm (m³/min) | 193 (328) |
| Max. Backpressure (Post Silencer) | inHg (kPa) | 1.38 (4.67) |
| Exhaust Temp (Rated Output - Post Silencer) | °F (°C) | 928 (497.7) |

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration - Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

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**GENERATOR
SPECIFICATIONS II**

SHEET NUMBER: REVISION:

C-7B

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TEP#: 55699.245455

GENERATOR SPECIFICATIONS

SCALE: N.T.S.

SPEC SHEET

3 of 5

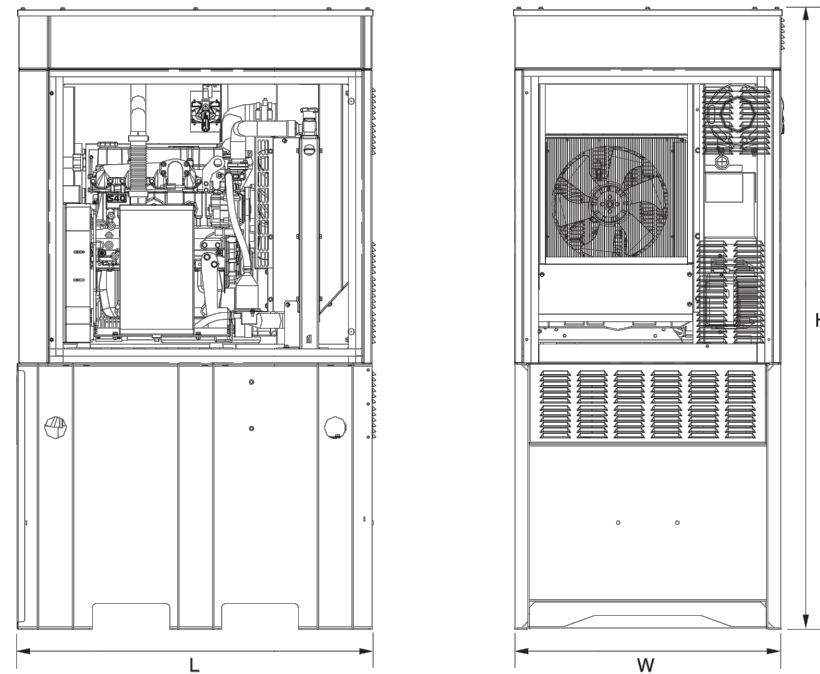
SPEC SHEET

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SDC20 | 2.5L | 20 kW - AC
INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

DIMENSIONS AND WEIGHTS*



GENERAC | INDUSTRIAL POWER
 Model G007098-0 (Steel)

SDC20 | 2.5L | 20 kW - AC
 INDUSTRIAL DIESEL GENERATOR SET
 EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER
 Model G007098-0 (Steel)

Level 2 Sound Attenuation Enclosure

| | |
|-------------------------|---|
| Run Time Hours | 48 |
| Usable Capacity Gal (L) | 92 (348.2) |
| L x W x H in (mm) | 48 x 36 x 90 (1219.2 x 914.4 x 2286) |
| Weight lbs (kg) | 2400 (1089) |
| Sound Level | 71 dBA |

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

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 P: (262) 544-4811 ©2016 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Document No. 1000009019
 Rev. WIP 11/04/16

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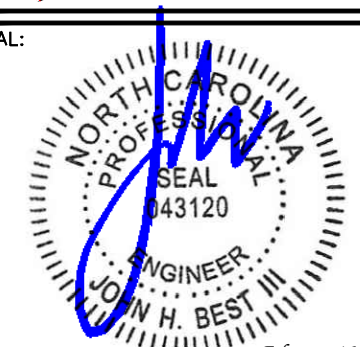
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GENERATOR SPECIFICATIONS III

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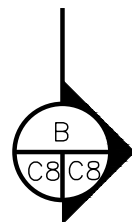
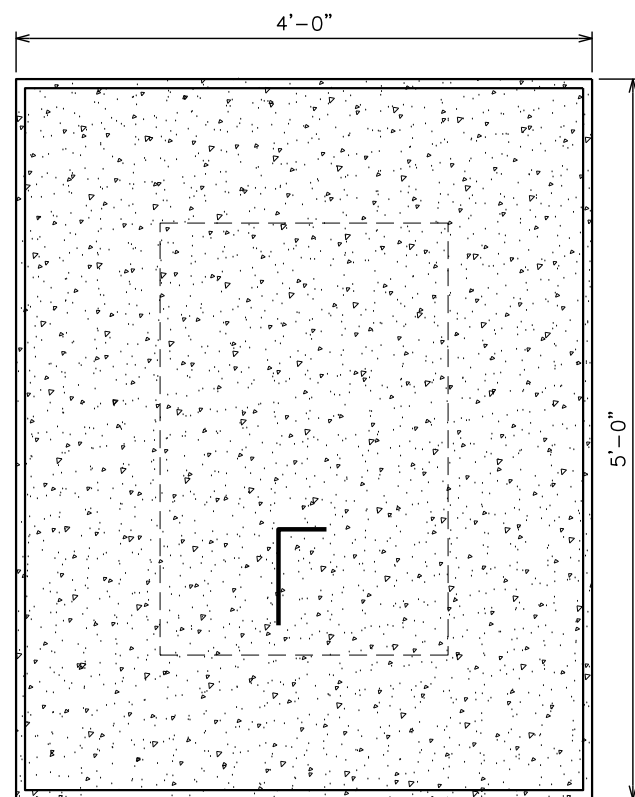
C-7C | **0**
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SPEC SHEET

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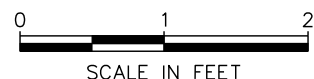
SPEC SHEET

6 of 5



GENERATOR FOUNDATION

SCALE: 3/4" = 1'-0"



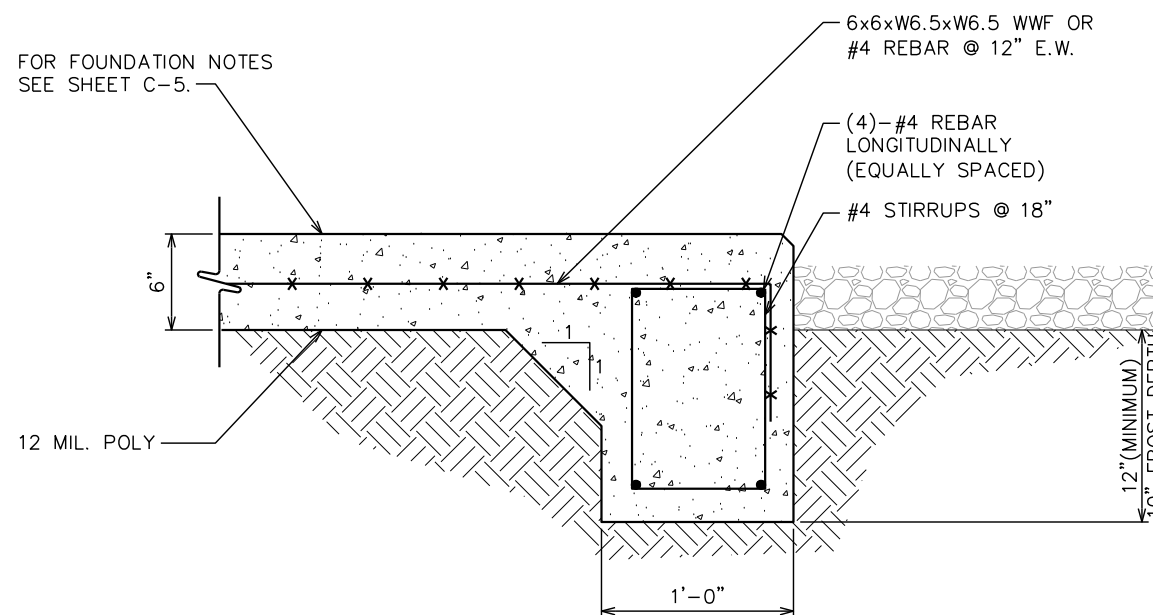
NOTE:

THESE PLACARDS ARE REQUIRED TO BE INSTALLED ON PROPOSED GENERATOR FREE OF ANY OBSTRUCTION AS TO BE CLEARLY VISIBLE WITHIN COMPOUND



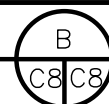
PROPOSED GENERATOR SIGNAGE

SCALE: N.T.S.



SECTION

SCALE: 1" = 1'-0"



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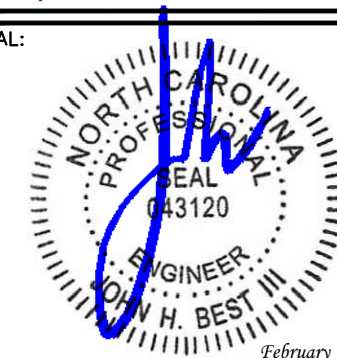
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SHEET TITLE:

GENERATOR FOUNDATION & SIGNAGE DETAILS

SHEET NUMBER:

C-8

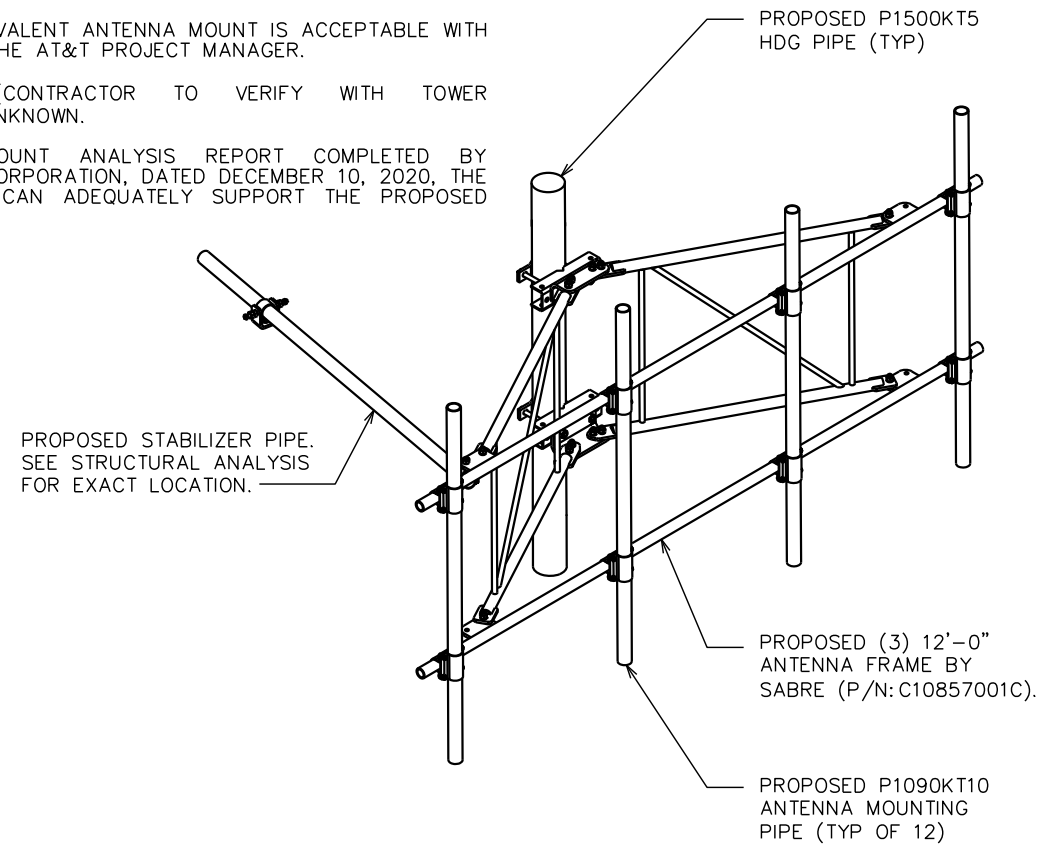
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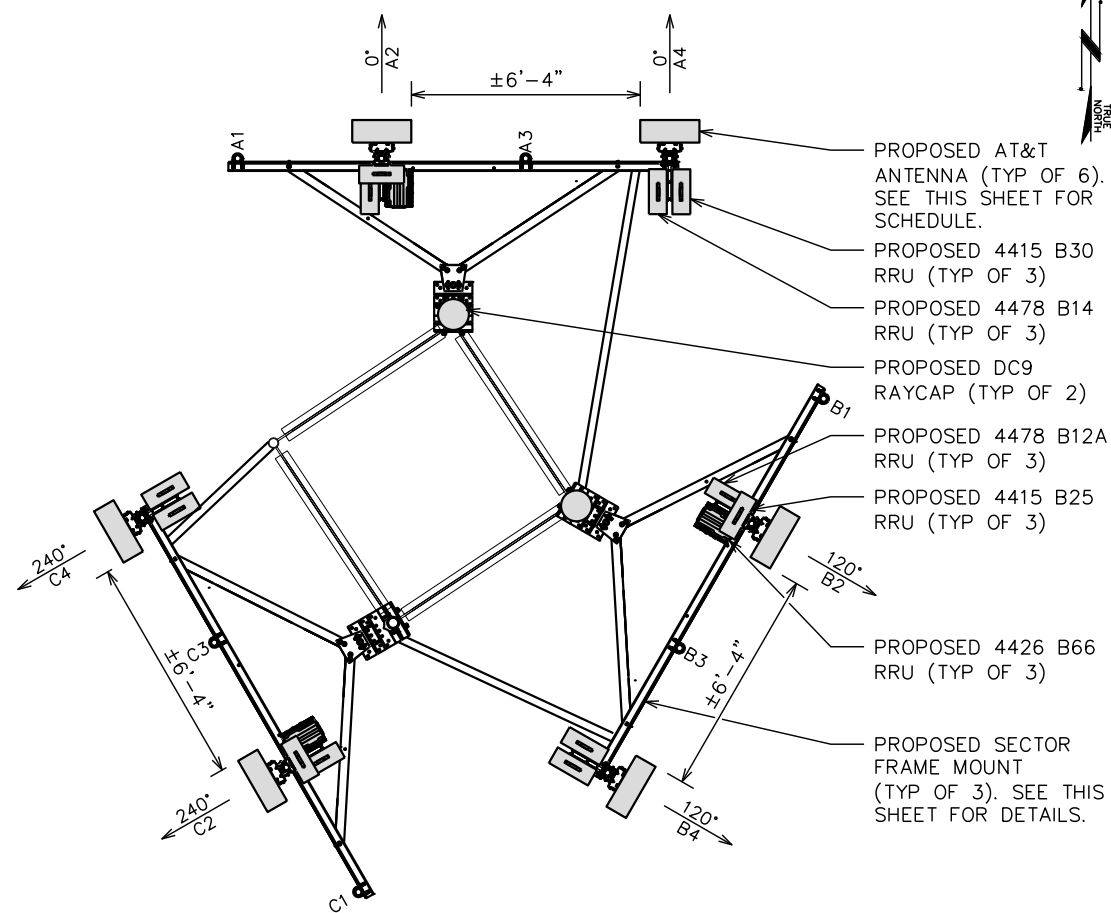
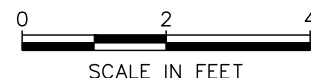
NOTES:

1. AN APPROVED EQUIVALENT ANTENNA MOUNT IS ACCEPTABLE WITH APPROVAL FROM THE AT&T PROJECT MANAGER.
2. LEG DIAMETER (CONTRACTOR TO VERIFY WITH TOWER MANUFACTURER): UNKNOWN.
3. PER ANTENNA MOUNT ANALYSIS REPORT COMPLETED BY AMERICAN TOWER CORPORATION, DATED DECEMBER 10, 2020, THE PROPOSED MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



PROPOSED MOUNT DETAIL

SCALE: 3/8" = 1'-0"



PROPOSED ANTENNA ORIENTATION

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



PLANS PREPARED FOR:



2002 PISGAH CHURCH ROAD, SUITE 300
GREENSBORO, NC 27455

PLANS PREPARED FOR:



AMERICAN TOWER
3500 REGENCY PKWY #100
CARY, NC 27518

PROJECT INFORMATION:

AT&T SITE NAME: 368-754
AT&T FA CODE: 12682186
AT&T PACE#: MRCAR033546
ATC #: 372926
ANGIER
2135 JOHNSTON COUNTY RD
ANGIER, NC 27501
(HARNETT COUNTY)
EXISTING 287' GUYED TOWER

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:

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| 0 | 02-16-21 | 100% CONSTRUCTION |
| A | 12-28-20 | PRELIMINARY |
| REV | DATE | ISSUED FOR: |

DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:
ANTENNA MOUNTING DETAILS

SHEET NUMBER: **C-9** REVISION: **0**
TEP#: 55699.245455

GENERAL NOTES:

1. THIS 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 FOOTING ELEVATION.
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 ANTENNA BRACKETS PER ANTENNA MANUFACTURER, OR EQUAL, CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWN TILT WITH AT&T.
5. ALL ANTENNA INFORMATION TO BE CONFIRMED WITH AT&T RF DESIGN PRIOR TO INSTALLATION.
6. 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 ADDITIONAL LOADS.
7. EXISTING LOADING INFORMATION PROVIDED BY ATC, AT&T RFDS ID: 4153318.
8. CABLE LENGTH TAKEN FROM AT&T RFDS. CONTRACTOR TO VERIFY LENGTH PRIOR TO ORDERING MATERIALS.


PROPOSED ANTENNA/CABLE SCHEDULE

| ANT. MARK | SECTOR | TECH. | STATUS | MANUFACTURER/ MODEL # | DIMS (HxWxD) | AZIMUTH (TN) | RAD CENTER | ELEC. D-TILT | COAX/ CABLE | CABLE LENGTH | SURGE PROTECTION | RRU MODEL |
|-----------|--------|--|----------|--|------------------------------|--------------|------------|----------------------|---------------------------|--------------|------------------------|---|
| A2 | ALPHA | LTE 700 LTE 1900 LTE AWS 5G AWS | PROPOSED | ACE TECHNOLOGY XXQLH-654L8H8-IVT-V2 | H 96.0" W 19.7" D 7.5" | 0° | 287' | 2° 2° 2° 2° | (1) FIBER (3) DC POWER | 360'± | (1) DC9-48-60-24-8C-EV | (1) 4478 B12A (1) 4415 B25 (1) 4426 B66 |
| A4 | ALPHA | LTE 700 LTE WCS | PROPOSED | ACE TECHNOLOGY XXQLH-654L8H8-IVT-V2 | H 96.0" W 19.7" D 7.5" | 0° | 287' | 2° 2° | | | | (1) 4478 B14 (1) 4415 B30 |
| B2 | BETA | LTE 700 LTE 1900 LTE AWS 5G AWS | PROPOSED | ACE TECHNOLOGY XXQLH-654L8H8-IVT-V2 | H 96.0" W 19.7" D 7.5" | 120° | 287' | 2° 2° 2° 2° | (1) FIBER (3) DC POWER | 360'± | (1) DC9-48-60-24-8C-EV | (1) 4478 B12A (1) 4415 B25 (1) 4426 B66 |
| B4 | BETA | LTE 700 LTE WCS | PROPOSED | ACE TECHNOLOGY XXQLH-654L8H8-IVT-V2 | H 96.0" W 19.7" D 7.5" | 120° | 287' | 2° 2° | | | | (1) 4478 B14 (1) 4415 B30 |
| C2 | GAMMA | LTE 700 LTE 1900 LTE AWS 5G AWS | PROPOSED | ACE TECHNOLOGY XXQLH-654L8H8-IVT-V2 | H 96.0" W 19.7" D 7.5" | 240° | 287' | 2° 2° 2° 2° | | | | (1) 4478 B12A (1) 4415 B25 (1) 4426 B66 |
| C4 | GAMMA | LTE 700 LTE WCS | PROPOSED | ACE TECHNOLOGY XXQLH-654L8H8-IVT-V2 | H 96.0" W 19.7" D 7.5" | 240° | 287' | 2° 2° | | | | (1) 4478 B14 (1) 4415 B30 |

PROPOSED ANTENNA/CABLE SCHEDULE

SCALE: N.T.S.

property of



**AUTHORIZED
PERSONNEL
ONLY!**


In case of emergency or prior to performing maintenance on this site, call 1-800-638-2822 and reference cell site number:

- ① WHITE/BLUE BACKGROUND W/ BLACK LETTERING
 QUANTITY: (1)
 SIZE: 9"x12"
 (TO BE MOUNTED ON EQUIPMENT SHELTER DOOR ADJACENT TO COMPOUND ENTRY - SEE NOTE 3)

**DO NOT CLIMB
TOWER WITHOUT
OWNER'S WRITTEN
PERMISSION**

- ③ WHITE BACKGROUND W/ RED LETTERING
 QUANTITY: (1)
 (TO BE MOUNTED AT EYE LEVEL ON TOWER NEAR SAFETY CLIMB)

NOTICE



Radio Frequency fields beyond this point may exceed the FCC general public exposure limit.

OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RADIO FREQUENCY ENVIRONMENTS.

In accordance with Federal Communications Commission rules on radio frequency exposure 47 CFR 1.1307(b)

- ② WHITE/BLUE BACKGROUND W/ BLACK LETTERING
 QUANTITY: (1)
 (TO BE MOUNTED AT EYE LEVEL ON TOWER NEAR SAFETY CLIMB)

000

- ④ WHITE BACKGROUND W/ BLACK LETTERING
 E911 STREET #
 QUANTITY: (1 TYP)
 LETTERS MUST BE A MINIMUM 6" TALL
 (TO BE MOUNTED ON THE GATE OF COMPOUND)

- ① SITE IDENTIFICATION SIGN
 ② FCC/RF EXPOSURE SIGN
 ③ TOWER CLIMBING SIGN
 ④ STREET ADDRESS SIGN

NOTES:

- SIGNS SHALL MEASURE 8"x12", BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
- 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.
- AT&T SITE # AND EMERGENCY CONTACT # SHALL BE MOUNTED ON THE EQUIPMENT SHELTER DOOR ADJACENT TO THE COMPOUND ENTRY WITH PERMANENT SET ADHESIVE. TWO-SIDED TAPE SHALL BE UTILIZED AT EACH CORNER ON THE BACKSIDE TO AID PLACEMENT UNTIL ADHESIVE SETS.
- ADDITIONAL E911 ADDRESS SIGNS ARE REQUIRED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF. LETTERING ON 911 ADDRESS SIGNS MUST BE A MINIMUM OF 6" TALL.
- ADDITIONAL FCC REGISTRATION # SIGNS ARE REQUIRED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF.
- RECOMMENDED SOURCE FOR OBTAINING SIGNAGE:

ST. CLAIR SIGNS
 3184 WADE HAMPTON BLVD.
 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

PLANS PREPARED FOR:



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 GREENSBORO, NC 27455

PLANS PREPARED FOR:




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| A | 12-28-20 | PRELIMINARY |
| REV | DATE | ISSUED FOR: |

DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

**SIGNAGE
DETAILS**

| | |
|---------------|--------------------|
| SHEET NUMBER: | REVISION: |
| C-10 | 0 |
| | TEP#: 55699.245455 |

TYPICAL SIGNS AND SPECIFICATIONS

SCALE: N.T.S.

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 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.
5. CONDUIT ROUTES ARE SCHEMATIC. CONTRACTOR SHALL FIELD VERIFY ROUTES BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND/OR BUILDING OWNER.

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 | PNLBD | - PANELBOARD |
| AFG | - ABOVE FINISHED GRADE | PVC | - RIGID NON-METALLIC CONDUIT |
| ATS | - AUTOMATIC TRANSFER SWITCH | RGS | - RIGID GALVANIZED STEEL CONDUIT |
| AWG | - AMERICAN WIRE GAUGE | SW | - SWITCH |
| BCW | - BARE COPPER WIRE | TGB | - TOWER GROUND BAR |
| BFG | - BELOW FINISHED GRADE | UL | - UNDERWRITERS LABORATORIES |
| BKR | - BREAKER | V | - VOLTAGE |
| C | - CONDUIT | W | - WATTS |
| CKT | - CIRCUIT | XFMR | - TRANSFORMER |
| DISC | - DISCONNECT | XMTR | - TRANSMITTER |
| 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 | | |

| | | |
|------|---------------|--|
| ---- | E ---- | UNDERGROUND ELECTRICAL CONDUIT |
| ---- | T ---- | UNDERGROUND TELEPHONE CONDUIT |
| | | KILOWATT-HOUR METER |
| ---- | ---- | UNDERGROUND BONDING AND GROUNDING CONDUCTOR. |
| | ∅ | GROUND ROD |
| | ● | CADWELD |
| | ⊠ | GROUND ROD WITH INSPECTION WELL |

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DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:
ELECTRICAL NOTES

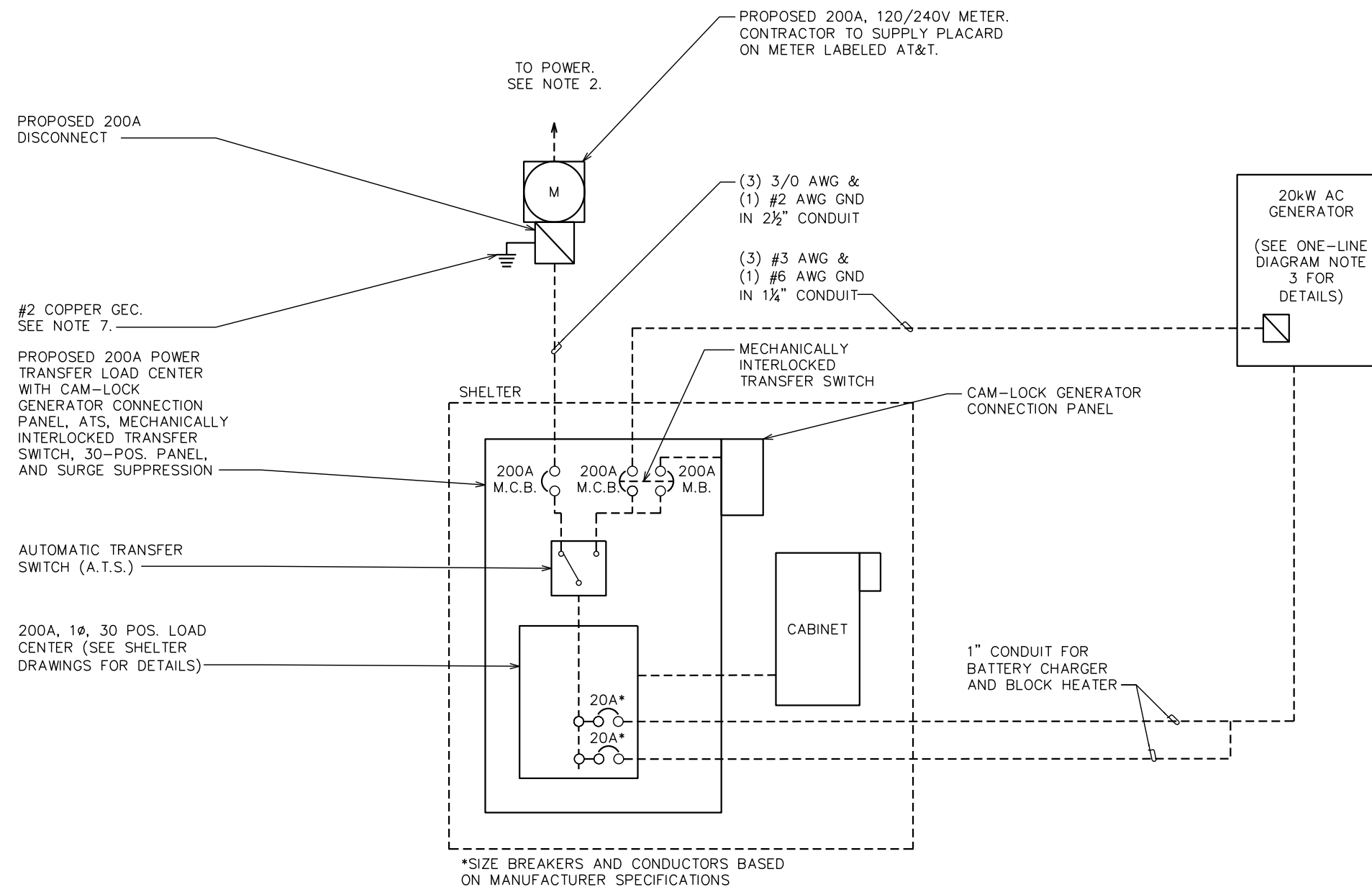
SHEET NUMBER: **E-1** REVISION: **0**
TEP#: 55699.245455

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY AVAILABLE FAULT CURRENT WITH POWER COMPANY AND ENSURE ALL ELECTRICAL EQUIPMENT IS SUITABLE FOR AVAILABLE FAULT CURRENT.
2. CONTRACTOR SHALL COORDINATE UTILITY SERVICES WITH LOCAL UTILITY COMPANIES. VERIFY ALL REQUIREMENTS WITH UTILITY COMPANY STANDARDS.
3. ONE-LINE DIAGRAM IS FOR SCHEMATIC PURPOSES ONLY AND IS NOT INDICATIVE OF THE ACTUAL EQUIPMENT LAYOUT.
4. CONTRACTOR SHALL LABEL METER SOCKET WITH SERVICE OWNER NAMEPLATE WITH 1/2" HEIGHT MINIMUM LETTERS.
5. ALL EQUIPMENT WILL HAVE A MINIMUM AIC OF 10 KA. CONTRACTOR TO DETERMINE AVAILABLE FAULT CURRENT BEFORE ENERGIZING EQUIPMENT. THE AMOUNT OF AVAILABLE FAULT CURRENT SHALL BE MARKED ON THE SERVICE EQUIPMENT PER NEC 110.24.
6. CONTRACTOR WILL NOTIFY UTILITY COMPANY OF CHANGES IN ELECTRICAL LOAD.

ONE-LINE DIAGRAM NOTES:

1. ELECTRICAL SERVICE SHALL BE 200A, 120/240V, 1Ø, 3W.
2. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO VENDOR PRINTS PROVIDED BY EQUIPMENT MANUFACTURER.
3. ONE-LINE BASED ON MAXIMUM GENERATOR BREAKER SIZE OF 100A.



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DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

ONE-LINE DIAGRAM

SHEET NUMBER: **E-2A** REVISION: **0**

TEP#: 55699.245455

ONE-LINE DIAGRAM

SCALE: N.T.S.


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DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:
PANEL SCHEDULE

SHEET NUMBER: **E-2B** REVISION: **0**
 TEP#: 55699.245455

LOADING SHOWN TAKEN FROM VERTIV WIC DRAWINGS APPROVED JANUARY 16, 2017

| LOAD SERVED | VOLT AMPERES (WATTS) | | WIRE | BREAKER | | CKT # | PHASE | CKT # | BREAKER | | WIRE | VOLT AMPERES (WATTS) | | LOAD SERVED | | |
|-------------------|----------------------|------|------|---------|------|-------|-------|------------------|---------|------|-----------|----------------------|------|----------------------|---|----|
| | L1 | L2 | | P | TRIP | | | | TRIP | P | | L1 | L2 | | | |
| | RECTIFIER #1 | 2000 | | | 10 | | | | 2 | 30 | | 1 | A | | 2 | 20 |
| | | 2000 | | | | 3 | B | 4 | | | | | 2000 | RECTIFIER #3 | | |
| RECTIFIER #2 | 2000 | | 10 | 2 | 30 | 5 | A | 6 | 30 | 2 | 10 | 2000 | | | | |
| | | 2000 | | | | 7 | B | 8 | 20 | 1 | 12 | | 1200 | GEN. BATTERY CHARGER | | |
| BLANK | - | | - | - | - | 9 | A | 10 | 20 | 1 | 12 | 1000 | | GEN. BLOCK HEATER | | |
| | | - | | | | 11 | B | 12 | | | | | - | BLANK | | |
| BLANK | - | | - | - | - | 13 | A | 14 | | | | | - | BLANK | | |
| | | - | | | | 15 | B | 16 | | | | | - | BLANK | | |
| BLANK | - | | - | - | - | 17 | A | 18 | | | | | - | BLANK | | |
| | | - | | | | 19 | B | 20 | | | | | - | BLANK | | |
| BLANK | - | | - | - | - | 21 | A | 22 | | | | | - | BLANK | | |
| | | - | | | | 23 | B | 24 | | | | | - | BLANK | | |
| HVAC | 1920 | | 12 | 2 | 20 | 25 | A | 26 | | | | | - | BLANK | | |
| | | 1920 | | | | 27 | B | 28 | 20 | 1 | 12 | | 200 | FLOOD LIGHTS | | |
| APPLIANCE OUTLETS | 180 | | 12 | 2 | 20 | 29 | A | 30 | - | - | - | | | BLANK | | |
| VOLT AMPS | 6100 | 5920 | | | | | | | 3360 | 3400 | VOLT AMPS | | | | | |
| L1 VOLT AMPERES | | | | | | 9460 | 9320 | L2 VOLT AMPERES | | | | | | | | |
| L1 AMPS | | | | | | 78.8 | 77.7 | L2 AMPS | | | | | | | | |
| | | | | | | 78.8 | | MAX AMPS | | | | | | | | |
| | | | | | | 97.9 | | *MAX AMPS X 125% | | | | | | | | |

NOTE:
 CONTRACTOR TO LIMIT TOTAL AC LOAD TO 30,000 WATTS

PANEL SCHEDULE
 SCALE: N.T.S.

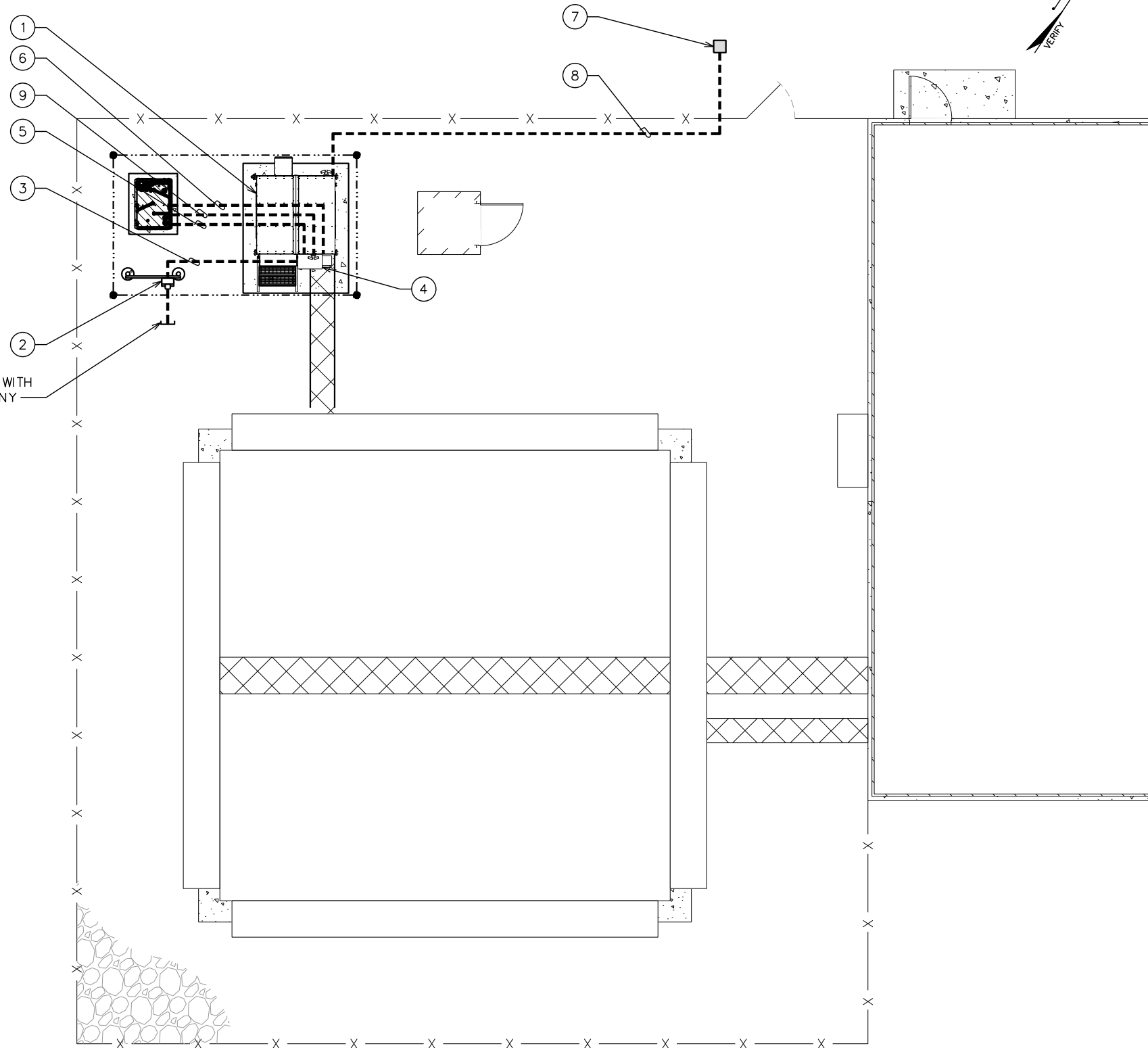
TRENCHING NOTES:

1. PRIOR TO ANY DIGGING, THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITIES ON SITE.
2. A MINIMUM SEPARATION OF 12" IS REQUIRED BETWEEN THE POWER AND FIBER CONDUITS

PLAN NOTES:

- 1 PROPOSED AT&T WIC EQUIPMENT SHELTER
- 2 PROPOSED 200A METER & DISCONNECT
- 3 (1) 2½" POWER CONDUIT FROM METER TO 200A LOAD CENTER
- 4 200A LOAD CENTER
- 5 (1) 1¼" POWER CONDUIT FROM ATS INSIDE LOAD CENTER TO PROPOSED 20kW AC GENERATOR
- 6 (1) 1" CONDUIT FROM LOAD CENTER TO PROPOSED 20kW AC GENERATOR FOR BATTERY CHARGER AND BLOCK HEATER
- 7 PROPOSED FIBER MEET-ME POINT. LOCATION IS TO BE ESTABLISHED WITH THE LEC PRIOR TO INSTALLATION
- 8 (1) 4" TELCO CONDUIT W/ (3) 1¼" FLEX INTERDUCT & PULL STRING FOR FIBER POWER LEADS STUBBED UP IN FIBER HANDHOLE. CONTRACTOR TO COORDINATE SERVICE WITH LOCAL TELEPHONE COMPANY.
- 9 (1) 1" PVC CONDUIT FOR GENERATOR ALARMS AND CONTROLS. CONTRACTOR TO INSTALL PER MANUFACTURER SPECIFICATIONS.

CONTRACTOR TO COORDINATE FIBER SERVICE WITH LOCAL POWER COMPANY



PLANS PREPARED FOR:



2002 PISGAH CHURCH ROAD, SUITE 300
GREENSBORO, NC 27455

PLANS PREPARED FOR:



AMERICAN TOWER®
3500 REGENCY PKWY #100
CARY, NC 27518

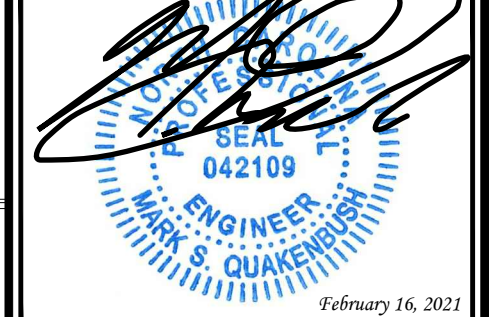
PROJECT INFORMATION:

AT&T SITE NAME: 368-754
AT&T FA CODE: 12682186
AT&T PACE#:
MRCAR033546
ATC #: 372926
ANGIER
2135 JOHNSTON COUNTY RD
ANGIER, NC 27501
(HARNETT COUNTY)
EXISTING 287' GUYED TOWER

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



| | | |
|-----|----------|-------------------|
| 0 | 02-16-21 | 100% CONSTRUCTION |
| A | 12-28-20 | PRELIMINARY |
| REV | DATE | ISSUED FOR: |

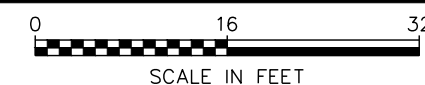
DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:
SERVICE ROUTING PLAN

| | |
|-----------------------------|-----------------------|
| SHEET NUMBER: E-3 | REVISION: 0 |
| TEP#: 55699.245455 | |

SERVICE ROUTING PLAN

SCALE: 3/32" = 1'-0"

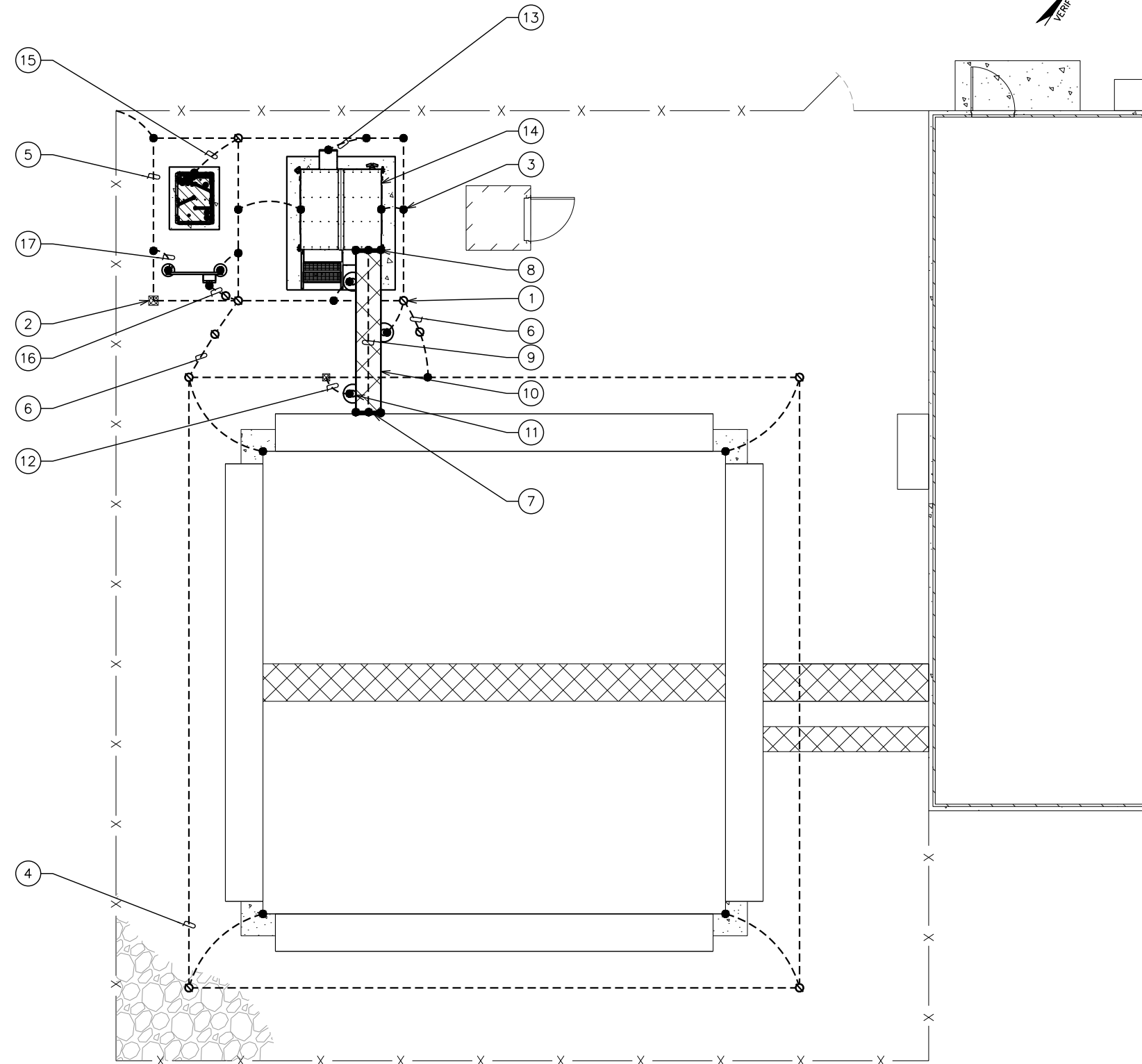


DRAWING NOTES:

- ① GROUND ROD 5/8"x10' LONG (TYP)
- ② GROUND ROD WITH INSPECTION WELL (TYP)
- ③ CADWELD (TYP)
- ④ TOWER GROUND RING
- ⑤ #2 AWG BARE SOLID BARE TINNED COPPER WIRE GROUND RING (SHELTER)
- ⑥ #2 AWG BARE SOLID BARE TINNED COPPER BONDS BETWEEN TOWER GROUND RING AND SHELTER GROUND RING
- ⑦ EXISTING TOWER BUS BAR
- ⑧ PROPOSED ICE BRIDGE BUS BAR
- ⑨ #2 AWG BARE SOLID TINNED COPPER WIRE BETWEEN BUS BARS
- ⑩ PROPOSED ICE BRIDGE
- ⑪ PROPOSED ICE BRIDGE POST (TYP)
- ⑫ #2 AWG ICE BRIDGE BOND BURIED 30" BFG (TYP)
- ⑬ HVAC GROUND. MECHANICAL CONNECTIONS AT HVAC UNITS ABOVE GRADE AS ALLOWED BY CODE.
- ⑭ PROPOSED AT&T WIC EQUIPMENT SHELTER
- ⑮ #2 AWG BOND BETWEEN GENERATOR AND GROUND RING
- ⑯ #2 AWG BOND BONDING PROPOSED METER TO PROPOSED GROUND RING
- ⑰ #2 AWG BOND BETWEEN H-FRAME POST TO GROUND (TYP)

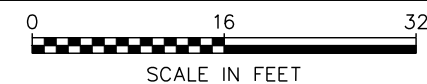
GROUNDING NOTES

1. GROUNDING ELECTRODES SHALL BE CONNECTED IN A RING USING #2 AWG BARE TINNED COPPER WIRE. THE TOP OF THE GROUND RODS AND THE RING CONDUCTOR SHALL BE 2 FEET BELOW FINISHED GRADE. GROUNDING ELECTRODES SHALL BE DRIVEN ON 10'-0" CENTERS. (MIN. 15'-0" MAX)
2. BONDING OF THE GROUNDED CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS/ BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE 250.30.
3. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.



TOWER GROUNDING PLAN

SCALE: 3/32" = 1'-0"



PLANS PREPARED FOR:



2002 PISGAH CHURCH ROAD, SUITE 300
GREENSBORO, NC 27455

PLANS PREPARED FOR:




AMERICAN TOWER
3500 REGENCY PKWY #100
CARY, NC 27518

PROJECT INFORMATION:

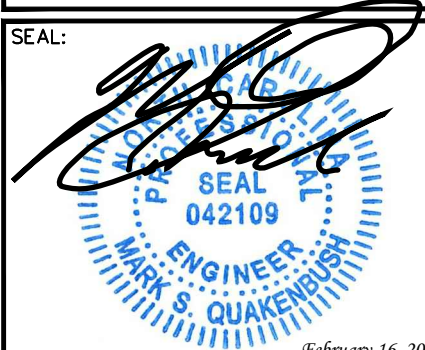
AT&T SITE NAME: 368-754
AT&T FA CODE: 12682186
AT&T PACE#:
MRCAR033546
ATC #: 372926
ANGIER
 2135 JOHNSTON COUNTY RD
 ANGIER, NC 27501
 (HARNETT COUNTY)
 EXISTING 287' GUYED TOWER

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
 326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
 www.tepgroup.net
 N.C. LICENSE # P-1403

SEAL:



February 16, 2021

| | | |
|-----|----------|-------------------|
| 0 | 02-16-21 | 100% CONSTRUCTION |
| A | 12-28-20 | PRELIMINARY |
| REV | DATE | ISSUED FOR: |

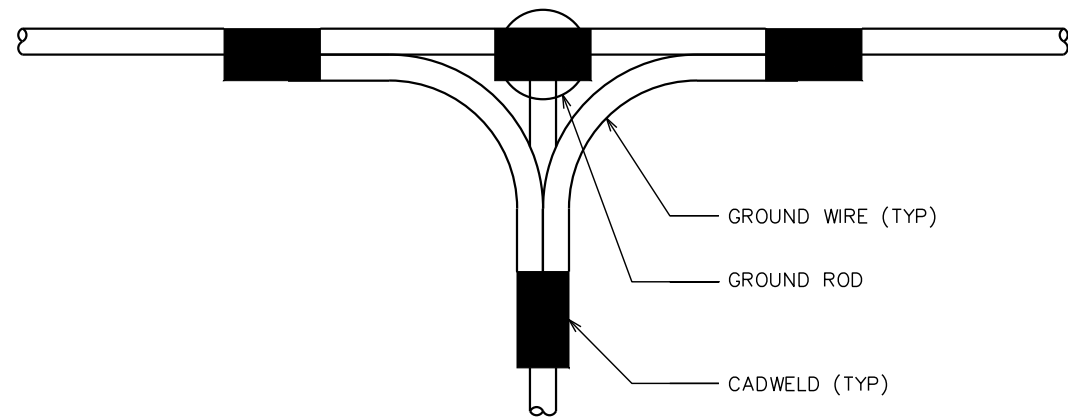
DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

GROUNDING PLAN

SHEET NUMBER: **E-4** REVISION: **0**

TEP#: 55699.245455



TOP VIEW

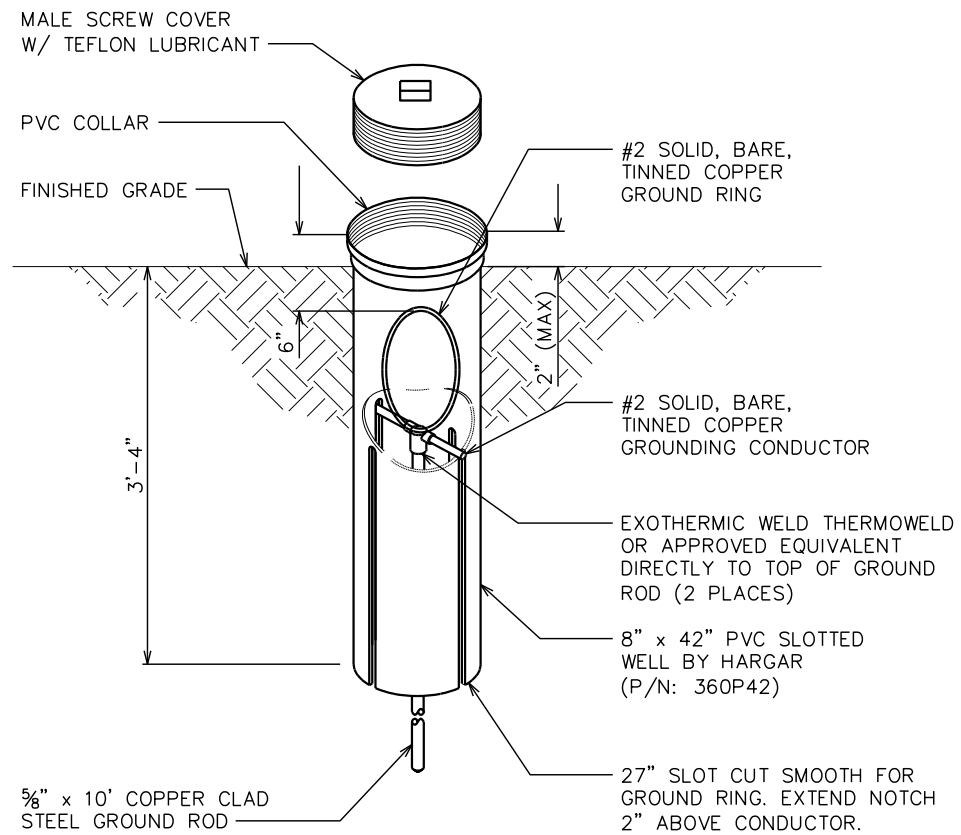
SIDE VIEW

NOTE:

MINIMUM SPACING OF 12" BETWEEN ALL CADWELDS

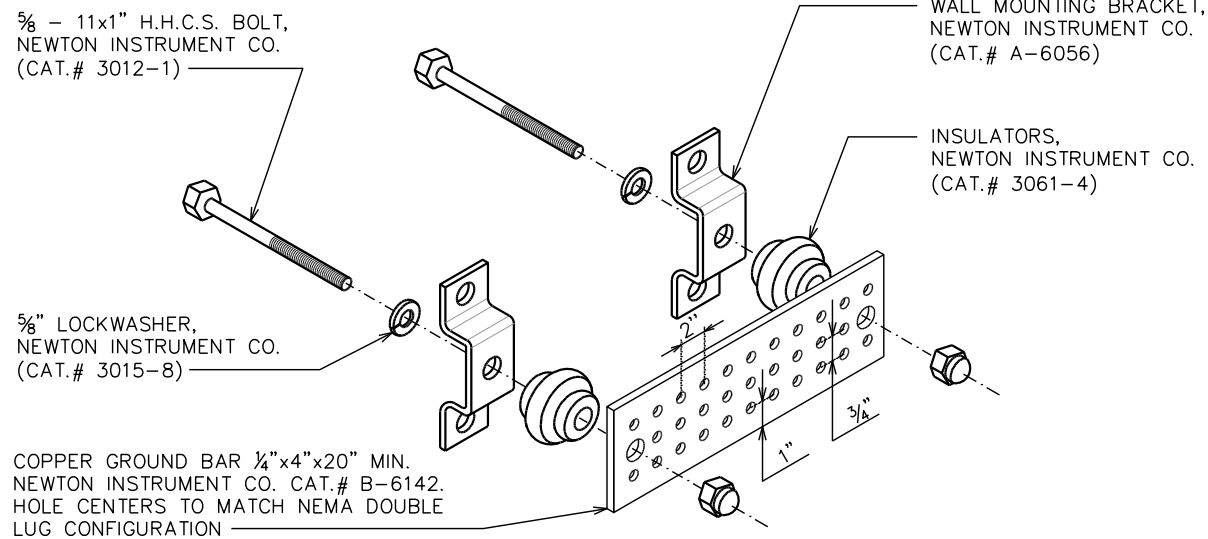
CADWELD GROUNDING DETAIL

SCALE: N.T.S.



GROUND ROD WITH INSPECTION WELL DETAIL

SCALE: N.T.S.

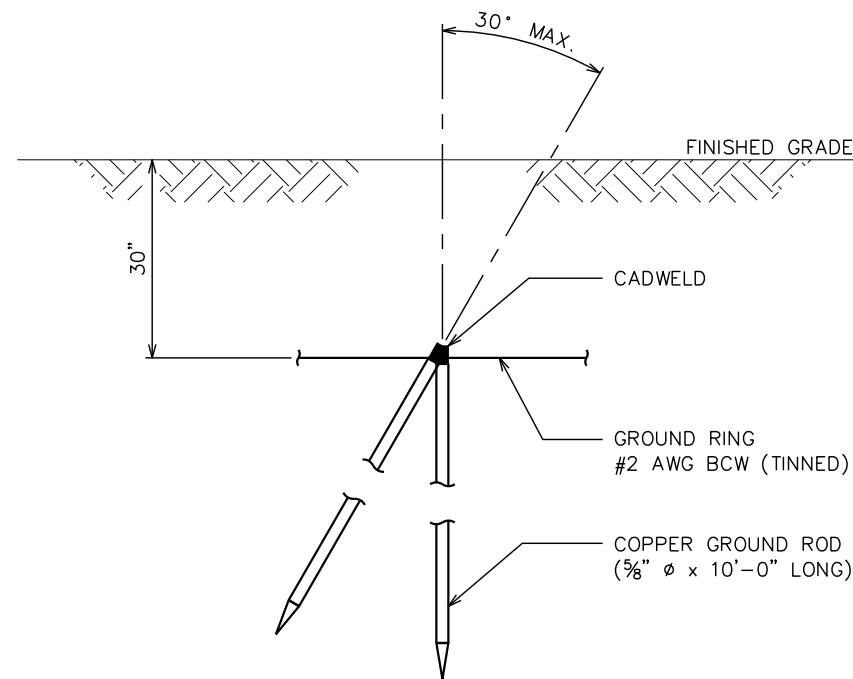


NOTE:

GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED AS WELL AS PROVIDE 50% SPARE CAPACITY

STANDARD GROUND BAR DETAIL

SCALE: N.T.S.



COPPER-CLAD STEEL GROUND ROD DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:



2002 PISGAH CHURCH ROAD, SUITE 300
GREENSBORO, NC 27455

PLANS PREPARED FOR:



3500 REGENCY PKWY #100
CARY, NC 27518

PROJECT INFORMATION:

AT&T SITE NAME: 368-754
AT&T FA CODE: 12682186
AT&T PACE#:
MRCAR033546
ATC #: 372926
ANGIER

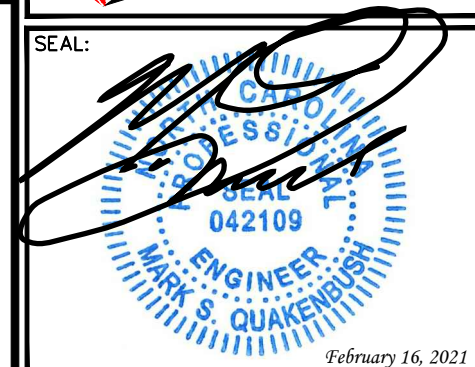
2135 JOHNSTON COUNTY RD
ANGIER, NC 27501
(HARNETT COUNTY)
EXISTING 287' GUYED TOWER

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



| | | |
|-----|----------|-------------------|
| 0 | 02-16-21 | 100% CONSTRUCTION |
| A | 12-28-20 | PRELIMINARY |
| REV | DATE | ISSUED FOR: |

DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

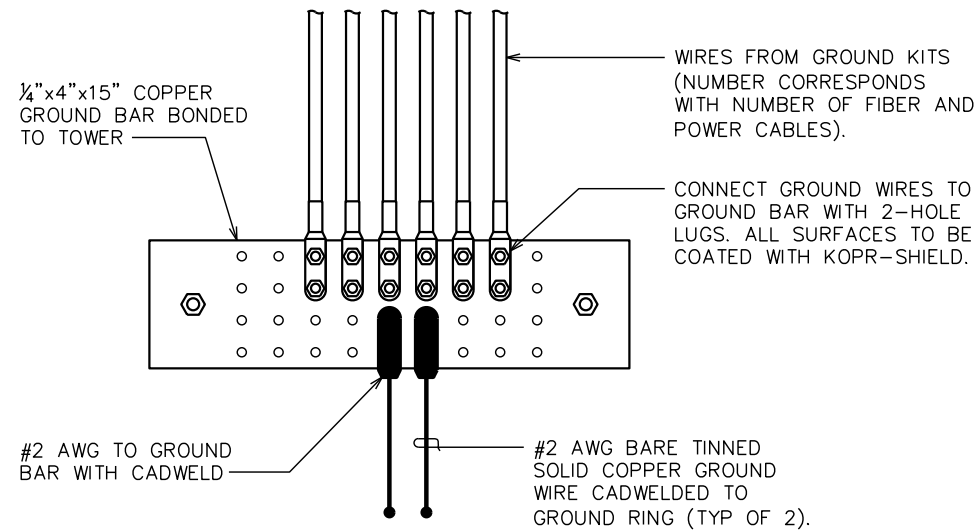
**GROUNDING
DETAILS I**

SHEET NUMBER: REVISION:

E-5

0

TEP#: 55699.245455



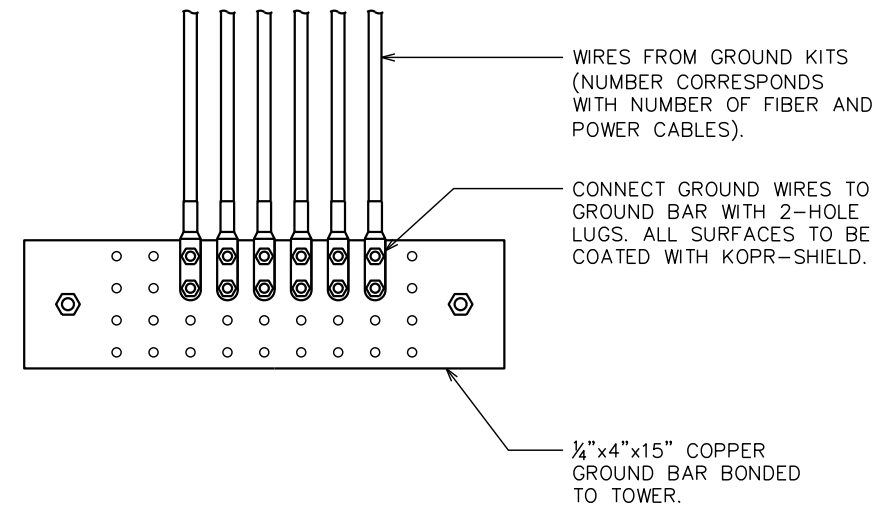
END VIEW

LOWER GROUND BAR

SCALE: N.T.S.

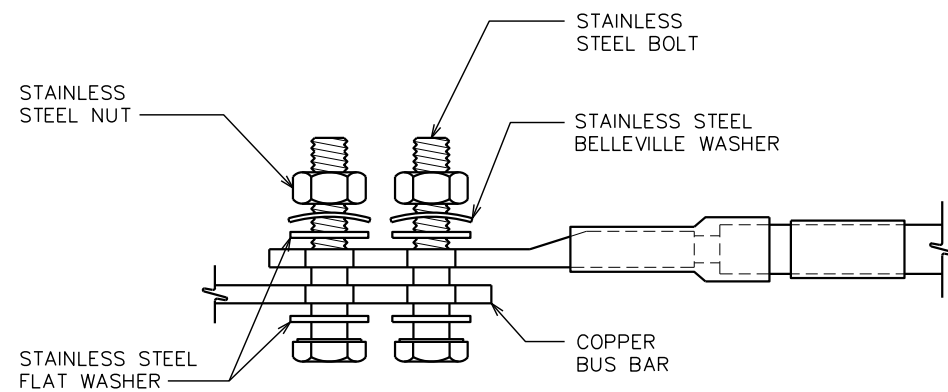
NOTE:

THE CONTRACTOR SHALL UTILIZE AN INTERMEDIATE GROUND BAR FOR ANTENNA RAD CENTERS OVER 200'.



UPPER / INTERMEDIATE GROUND BAR

SCALE: N.T.S.

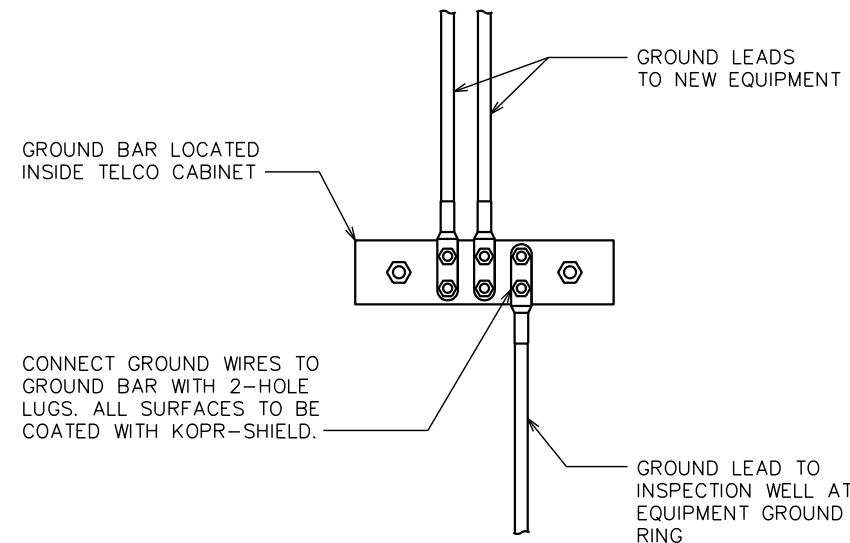


NOTES:

1. ALL HARDWARE SHALL BE 18-8 STAINLESS STEEL, INCLUDING THE BELLEVILLE WASHERS. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
2. FOR GROUND BOND TO STEEL ONLY; INSERT A DRAGON TOOTH WASHER BETWEEN THE LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

LUG DETAIL

SCALE: N.T.S.



GROUND BAR IN TELCO CABINET

SCALE: N.T.S.

PLANS PREPARED FOR:



2002 PISGAH CHURCH ROAD, SUITE 300
GREENSBORO, NC 27455

PLANS PREPARED FOR:



3500 REGENCY PKWY #100
CARY, NC 27518

PROJECT INFORMATION:

AT&T SITE NAME: 368-754
AT&T FA CODE: 12682186
AT&T PACE#:
MRCAR033546
ATC #: 372926
ANGIER

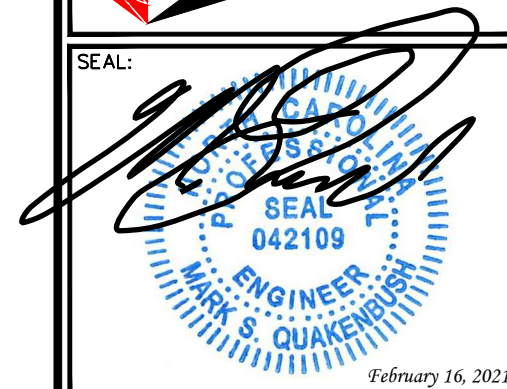
2135 JOHNSTON COUNTY RD
ANGIER, NC 27501
(HARNETT COUNTY)
EXISTING 287' GUYED TOWER

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # P-1403

SEAL:



| | | |
|-----|----------|-------------------|
| 0 | 02-16-21 | 100% CONSTRUCTION |
| A | 12-28-20 | PRELIMINARY |
| REV | DATE | ISSUED FOR: |

DRAWN BY: SRZ CHECKED BY: EGG

SHEET TITLE:

**GROUNDING
DETAILS II**

| | |
|-----------------------------|-----------------------|
| SHEET NUMBER: E-6 | REVISION: 0 |
| TEP#: 55699.245455 | |



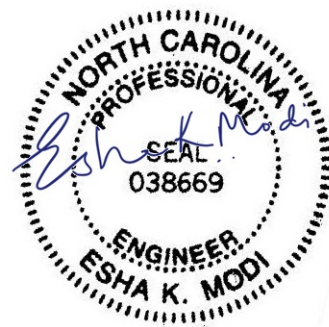
AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 287.5 ft Guyed Self Supported Tower
ATC Site Name : Angier, NC
ATC Asset Number : 372926
Engineering Number : 13250561_C3_03
Proposed Carrier : AT&T MOBILITY
Carrier Site Name : MRCAR033546
Carrier Site Number : 368-754
Site Location : 2135 Johnston County Road
Angier, NC 27501-8209
35.466400,-78.645600
County : Harnett
Date : January 7, 2021
Max Usage : 83%
Result : Pass

Prepared By:
Adam Pittman
Structural Engineer II

Reviewed By:



COA: P-1177



Table of Contents

Introduction 1

Supporting Documents..... 1

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Equipment to be Removed 2

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Structure Usages.....3

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Calculations Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 287.5 ft Self Supported guyed tower to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

| | |
|---------------------------|---|
| Tower Drawings | CSEI Analysis, dated September 17, 2013 |
| Foundation Drawing | CSEI Analysis, dated September 17, 2013 |

Analysis

The tower was analyzed using Power Lines Systems INC., tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

| | |
|---------------------------------|---|
| Basic Wind Speed: | 91 mph (3-Second Gust, Vasd) / 117 mph (3-Second Gust, Vult) |
| Basic Wind Speed w/ Ice: | 30 mph (3-Second Gust) w/ 3/4" radial ice concurrent |
| Code: | ANSI/TIA-222-G / 2015 IBC / 2018 North Carolina Building Code |
| Structure Class: | II |
| Exposure Category: | C |
| Topographic Category: | 1 |
| Crest Height: | 0 ft |

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

| Elev. ¹ (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|-------------------------|-----|-------------------------|--------------|------------------------------|------------------------------|
| 305.0 | 1 | Generic 2' Omni | Pole Mount | (1) 7/8" Coax | CAROLINA 440 UHF LINK SYSTEM |
| | 1 | Generic 6' Dipole | | | |
| 290.0 | 1 | Generic 24" x 24" Panel | Pole Mount | - | |
| 287.0 | - | - | Sector Frame | (1) 0.39" (10mm) Fiber Trunk | AT&T MOBILITY |
| 261.0 | 2 | Generic 3' Grid Dish | Stand-Off | (11) 0.24" (6mm) Cat 5 | CAROLINA 440 UHF LINK SYSTEM |
| 258.0 | 2 | Generic 3' Omni | | | |
| | 3 | Generic 24" x 24" Panel | | | |
| 220.0 | 1 | Generic 24" x 24" Panel | Pole Mount | - | |
| 30.0 | 1 | Generic 3' Yagi | Pole Mount | (1) 0.41" (10.3mm) LMR-400 | |

Equipment to be Removed

| Elev. ¹ (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|-------------------------|-----|--|------------|--|---------------|
| 287.0 | 6 | Ericsson RRUS-11 | - | (4) 0.78" (19.7mm) 8 AWG 6 (2) 3/8" (0.38"-9.5mm) RET Control Cable | AT&T MOBILITY |
| | 3 | CellMax CMA-B/6521/E0-6 | | | |
| | 6 | Andrew SBNHH-1D65C (49.6lb) | | | |
| | 3 | Ericsson RRUS-32 B30 (77 lbs) | | | |
| | 3 | Ericsson RRUS A2 Module (15.1" Height) | | | |
| | 3 | Ericsson RRUS-12 B2 | | | |
| | 2 | Raycap DC6-48-60-18-8F (23.5" Height) | | | |

Proposed Equipment

| Elev. ¹ (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|-------------------------|-----|-------------------------------------|--------------|--|---------------|
| 287.0 | 2 | Raycap DC9-48-60-24-8C-EV | Sector Frame | (1) 0.39" (10mm) Fiber Trunk (6) 1.15" (29.2mm) Cable | AT&T MOBILITY |
| | 6 | Ace Technology XXQLH-654L8H8-iVT-V2 | | | |
| | 3 | Ericsson RRUS 4426 B66 | | | |
| | 3 | Ericsson RRUS 4478 B14 | | | |
| | 3 | Ericsson RRUS 4415 B30 | | | |
| | 3 | Ericsson RRUS 4415 B25 | | | |
| | 3 | Ericsson 4478 B12A | | | |

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.



Structure Usages

| Structural Component | Controlling Usage | Pass/Fail |
|----------------------|-------------------|-----------|
| Legs | 61% | Pass |
| Diagonals | 75% | Pass |
| Trussed Diagonals | 83% | Pass |
| Horizontals | 53% | Pass |
| Trussed Horizontals | 64% | Pass |
| Guys | 27% | Pass |
| Anchor Bolts | 43% | Pass |

Foundations

| Reaction Component | Analysis Reactions | % of Usage |
|--------------------------|--------------------|------------|
| Base Axial (kips) | 262.9 | 49% |
| Base Uplift (kips) | 128.1 | 44% |
| Guy Anchor Uplift (kips) | 40.6 | 30% |
| Guy Anchor Shear (kips) | 27.2 | 36% |

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.



Standard Conditions

All engineering services performed by A.T. Engineering Services, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

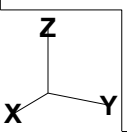
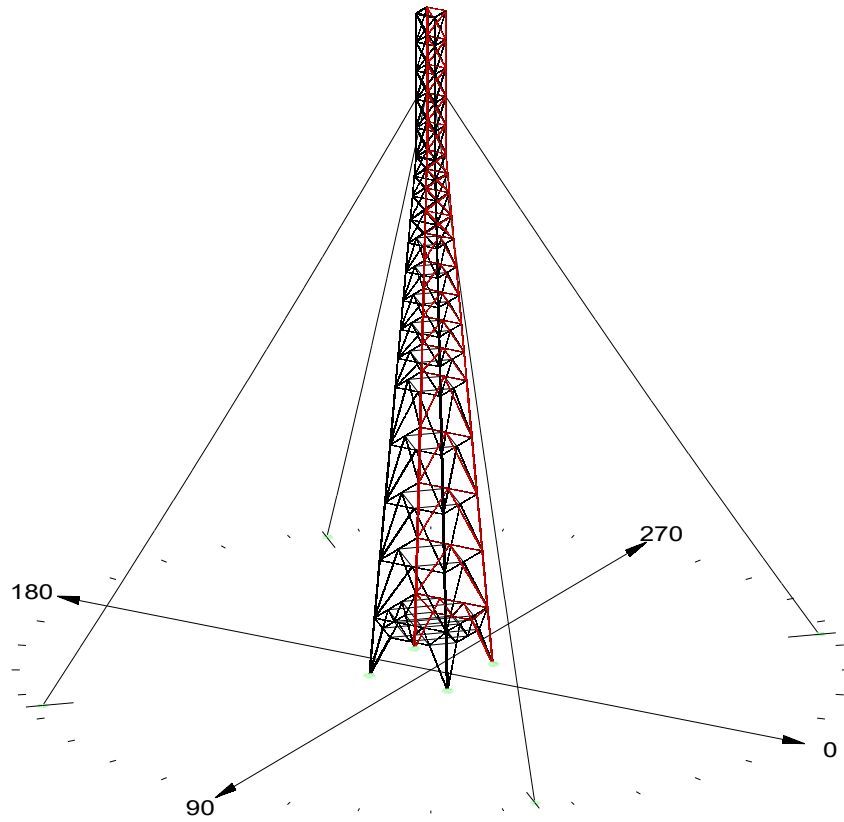
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Services, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Services, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Project Name : 372926
 Project Notes:
 Project File : X:\A-B\Angier, NC (372926)\13250561 AT&T MOBILITY\13250561_03_CUST_STR\372926.TOW
 Date run : 4:10:15 PM Thursday, January 7, 2021
 By : Tower Version 16.01
 Licensed to : American Tower Corp.

Successfully performed nonlinear analysis

Member check option: ANSI/TIA 222-G-1
 Connection rupture check: Not Checked
 Crossing diagonal check: Fixed
 Included angle check: None
 Climbing load check: None
 Redundant members checked with: Actual Force
 Loads from file: N:\L2 - ATC\372926\13250561\13250561.eia

*** Analysis Results:

Maximum element usage is 82.81% for Angle *LD 1X* in load case *W -45*

Foundation Design Forces For All Load Cases:

Note: loads are factored.

| Load Case | Foundation Description | Axial Force (kips) | Shear Force (kips) | Bending Moment (ft-k) | Foundation Usage % |
|-----------|------------------------|--------------------|--------------------|-----------------------|--------------------|
| W 0 | OP | 196.32 | 29.28 | 2.96 | 0.00 |
| W 0 | OX | 191.92 | 28.67 | 2.68 | 0.00 |
| W 0 | OXY | 61.85 | 12.76 | 3.10 | 0.00 |
| W 0 | OY | -61.86 | 13.34 | 3.34 | 0.00 |
| W 0 | S\$nd1 | -6.49 | 4.19 | 0.00 | 0.00 |
| W 0 | S\$nd2 | -6.61 | 4.27 | 0.00 | 0.00 |
| W 0 | S\$nd3 | -31.98 | 21.50 | 0.00 | 0.00 |
| W 0 | S\$nd4 | -32.29 | 21.70 | 0.00 | 0.00 |
| W 180 | OP | -60.07 | 13.66 | 3.56 | 0.00 |
| W 180 | OX | -60.21 | 12.90 | 3.25 | 0.00 |
| W 180 | OXY | 189.51 | 28.64 | 2.83 | 0.00 |
| W 180 | OY | 193.71 | 29.48 | 3.16 | 0.00 |
| W 180 | S\$nd1 | -30.98 | 20.86 | 0.00 | 0.00 |
| W 180 | S\$nd2 | -31.29 | 21.06 | 0.00 | 0.00 |
| W 180 | S\$nd3 | -6.70 | 4.33 | 0.00 | 0.00 |
| W 180 | S\$nd4 | -6.83 | 4.41 | 0.00 | 0.00 |
| W 45 | OP | 262.91 | 39.10 | 3.03 | 0.00 |
| W 45 | OX | 64.43 | 11.88 | 3.26 | 0.00 |
| W 45 | OXY | -128.11 | 22.21 | 3.56 | 0.00 |
| W 45 | OY | 64.39 | 11.68 | 3.11 | 0.00 |
| W 45 | S\$nd1 | -0.59 | 0.29 | 0.00 | 0.00 |
| W 45 | S\$nd2 | -17.45 | 11.70 | 0.00 | 0.00 |
| W 45 | S\$nd3 | -17.82 | 11.94 | 0.00 | 0.00 |
| W 45 | S\$nd4 | -40.59 | 27.16 | 0.00 | 0.00 |
| W -45 | OP | 67.86 | 12.65 | 3.58 | 0.00 |
| W -45 | OX | 258.94 | 38.82 | 3.11 | 0.00 |
| W -45 | OXY | 63.87 | 11.50 | 2.96 | 0.00 |
| W -45 | OY | -127.56 | 22.39 | 3.65 | 0.00 |
| W -45 | S\$nd1 | -17.14 | 11.51 | 0.00 | 0.00 |
| W -45 | S\$nd2 | -0.61 | 0.30 | 0.00 | 0.00 |
| W -45 | S\$nd3 | -40.19 | 26.91 | 0.00 | 0.00 |
| W -45 | S\$nd4 | -18.01 | 12.06 | 0.00 | 0.00 |
| W 90 | OP | 196.69 | 29.42 | 3.08 | 0.00 |
| W 90 | OX | -62.00 | 13.60 | 3.45 | 0.00 |
| W 90 | OXY | -61.84 | 12.68 | 3.06 | 0.00 |
| W 90 | OY | 191.22 | 28.64 | 2.64 | 0.00 |
| W 90 | S\$nd1 | -6.45 | 4.17 | 0.00 | 0.00 |
| W 90 | S\$nd2 | -31.48 | 21.18 | 0.00 | 0.00 |
| W 90 | S\$nd3 | -6.78 | 4.38 | 0.00 | 0.00 |
| W 90 | S\$nd4 | -32.19 | 21.64 | 0.00 | 0.00 |
| W -90 | OP | 60.08 | 13.75 | 3.60 | 0.00 |
| W -90 | OX | 194.43 | 29.52 | 3.21 | 0.00 |
| W -90 | OXY | 189.15 | 28.51 | 2.72 | 0.00 |
| W -90 | OY | -60.07 | 12.64 | 3.14 | 0.00 |
| W -90 | S\$nd1 | -31.07 | 20.92 | 0.00 | 0.00 |
| W -90 | S\$nd2 | -6.53 | 4.22 | 0.00 | 0.00 |
| W -90 | S\$nd3 | -31.79 | 21.38 | 0.00 | 0.00 |
| W -90 | S\$nd4 | -6.87 | 4.44 | 0.00 | 0.00 |
| W 0 Ice | OP | 88.89 | 10.24 | 1.47 | 0.00 |
| W 0 Ice | OX | 85.81 | 10.24 | 1.32 | 0.00 |
| W 0 Ice | OXY | 63.65 | 7.05 | 1.57 | 0.00 |
| W 0 Ice | OY | 66.16 | 7.23 | 1.62 | 0.00 |
| W 0 Ice | S\$nd1 | -11.20 | 7.98 | 0.00 | 0.00 |
| W 0 Ice | S\$nd2 | -11.47 | 8.15 | 0.00 | 0.00 |
| W 0 Ice | S\$nd3 | -14.39 | 10.19 | 0.00 | 0.00 |
| W 0 Ice | S\$nd4 | -14.69 | 10.37 | 0.00 | 0.00 |
| W 180 Ice | OP | 69.41 | 7.09 | 1.85 | 0.00 |
| W 180 Ice | OX | 66.73 | 7.20 | 1.70 | 0.00 |
| W 180 Ice | OXY | 82.66 | 10.13 | 1.23 | 0.00 |
| W 180 Ice | OY | 85.55 | 10.42 | 1.29 | 0.00 |
| W 180 Ice | S\$nd1 | -13.65 | 9.71 | 0.00 | 0.00 |
| W 180 Ice | S\$nd2 | -13.94 | 9.89 | 0.00 | 0.00 |
| W 180 Ice | S\$nd3 | -11.86 | 8.40 | 0.00 | 0.00 |
| W 180 Ice | S\$nd4 | -12.14 | 8.58 | 0.00 | 0.00 |
| W 45 Ice | OP | 95.13 | 11.21 | 1.36 | 0.00 |
| W 45 Ice | OX | 76.15 | 8.68 | 1.51 | 0.00 |
| W 45 Ice | OXY | 57.57 | 6.09 | 1.67 | 0.00 |
| W 45 Ice | OY | 75.74 | 8.79 | 1.44 | 0.00 |
| W 45 Ice | S\$nd1 | -10.60 | 7.57 | 0.00 | 0.00 |
| W 45 Ice | S\$nd2 | -12.77 | 9.06 | 0.00 | 0.00 |
| W 45 Ice | S\$nd3 | -13.19 | 9.34 | 0.00 | 0.00 |
| W 45 Ice | S\$nd4 | -15.28 | 10.78 | 0.00 | 0.00 |
| W -45 Ice | OP | 79.15 | 8.68 | 1.67 | 0.00 |
| W -45 Ice | OX | 92.10 | 11.24 | 1.22 | 0.00 |
| W -45 Ice | OXY | 73.17 | 8.60 | 1.41 | 0.00 |
| W -45 Ice | OY | 60.12 | 6.29 | 1.72 | 0.00 |
| W -45 Ice | S\$nd1 | -12.49 | 8.89 | 0.00 | 0.00 |
| W -45 Ice | S\$nd2 | -10.85 | 7.73 | 0.00 | 0.00 |
| W -45 Ice | S\$nd3 | -14.97 | 10.58 | 0.00 | 0.00 |
| W -45 Ice | S\$nd4 | -13.48 | 9.52 | 0.00 | 0.00 |
| W 90 Ice | OP | 88.91 | 10.25 | 1.48 | 0.00 |
| W 90 Ice | OX | 66.53 | 7.12 | 1.68 | 0.00 |
| W 90 Ice | OXY | 63.66 | 7.06 | 1.58 | 0.00 |
| W 90 Ice | OY | 85.36 | 10.34 | 1.25 | 0.00 |
| W 90 Ice | S\$nd1 | -11.20 | 7.98 | 0.00 | 0.00 |
| W 90 Ice | S\$nd2 | -13.95 | 9.90 | 0.00 | 0.00 |
| W 90 Ice | S\$nd3 | -11.88 | 8.41 | 0.00 | 0.00 |
| W 90 Ice | S\$nd4 | -14.68 | 10.37 | 0.00 | 0.00 |
| W -90 Ice | OP | 69.39 | 7.07 | 1.84 | 0.00 |
| W -90 Ice | OX | 86.01 | 10.33 | 1.35 | 0.00 |
| W -90 Ice | OXY | 82.65 | 10.12 | 1.22 | 0.00 |
| W -90 Ice | OY | 66.35 | 7.31 | 1.64 | 0.00 |
| W -90 Ice | S\$nd1 | -13.66 | 9.72 | 0.00 | 0.00 |
| W -90 Ice | S\$nd2 | -11.45 | 8.14 | 0.00 | 0.00 |
| W -90 Ice | S\$nd3 | -14.38 | 10.18 | 0.00 | 0.00 |
| W -90 Ice | S\$nd4 | -12.15 | 8.59 | 0.00 | 0.00 |

Summary of Joint Support Reactions For All Load Cases:

| Load Case | Joint Label | Long. Force (kips) | Tran. Force (kips) | Vert. Force (kips) | Shear Force (kips) | Tran. Moment (ft-k) | Long. Moment (ft-k) | Bending Moment (ft-k) | Vert. Moment (ft-k) | Found. Usage % |
|-----------|-------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|-----------------------|---------------------|----------------|
| W 0 | OP | -24.53 | 196.32 | 29.28 | -0.33 | 23.94 | 2.96 | -11.10 | 0.00 | 0.00 |
| W 0 | OX | -23.48 | 16.45 | -191.92 | 28.67 | 0.01 | -2.68 | 2.68 | 1.09 | 0.00 |
| W 0 | OXY | -11.96 | -4.45 | 61.85 | 12.76 | 0.32 | -3.09 | 3.10 | 1.09 | 0.00 |
| W 0 | OY | -12.67 | 4.17 | 61.86 | 13.34 | -0.23 | -3.33 | 3.34 | -1.07 | 0.00 |
| W 0 | S\$nd1 | 2.56 | 3.33 | 6.49 | 4.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 | S\$nd2 | 2.61 | -3.38 | 6.61 | 4.27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 | S\$nd3 | -15.62 | 14.77 | 31.98 | 21.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 | S\$nd4 | -15.76 | 14.91 | 32.29 | 21.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 | OP | 13.03 | 4.09 | 60.07 | 13.66 | -0.25 | 3.55 | 3.56 | 1.10 | 0.00 |
| W 180 | OX | 12.20 | -4.21 | -60.21 | 12.90 | 0.28 | 3.23 | 3.25 | -1.12 | 0.00 |
| W 180 | OXY | 23.65 | 16.15 | -189.51 | 28.64 | 0.04 | 2.83 | 2.83 | -1.11 | 0.00 |
| W 180 | OY | 24.86 | -15.82 | 193.71 | 29.48 | -0.30 | 3.14 | 3.16 | 1.12 | 0.00 |
| W 180 | S\$nd1 | 15.16 | 14.32 | 30.98 | 20.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 | S\$nd2 | 15.30 | -14.46 | 31.29 | 21.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 | S\$nd3 | -2.45 | 3.42 | -62.00 | 13.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 | S\$nd4 | -2.71 | -3.48 | 6.83 | 4.41 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 | OP | -27.46 | -27.83 | -262.91 | 39.10 | 2.21 | -2.07 | 3.03 | 0.00 | 0.00 |
| W 45 | OX | -11.88 | -0.41 | -64.43 | 11.88 | 2.54 | -2.05 | 3.26 | 1.65 | 0.00 |
| W 45 | OXY | -15.80 | -6.81 | -128.11 | 22.21 | 2.48 | -2.55 | 3.56 | -0.01 | 0.00 |
| W 45 | OY | -0.05 | -11.68 | -64.39 | 11.68 | 1.98 | -2.40 | 3.11 | -1.65 | 0.00 |
| W 45 | S\$nd1 | 0.20 | 0.20 | 0.59 | 0.29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 | S\$nd2 | 7.64 | -8.87 | 17.45 | 11.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 | S\$nd3 | -9.04 | 7.80 | 17.82 | 11.94 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 | S\$nd4 | -19.21 | -19.20 | 40.59 | 27.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 | OP | -12.63 | 0.81 | -67.86 | 12.65 | -2.81 | -2.22 | 3.58 | -1.66 | 0.00 |
| W -45 | OX | -26.67 | 28.21 | -258.94 | 38.82 | -2.47 | -1.89 | 3.11 | -0.02 | 0.00 |
| W -45 | OXY | 0.37 | 11.50 | -63.87 | 11.50 | -1.94 | -2.24 | 2.96 | 1.67 | 0.00 |
| W -45 | OY | -16.22 | 15.43 | 127.56 | 22.39 | -2.44 | -2.71 | 3.65 | 0.03 | 0.00 |
| W -45 | S\$nd1 | 7.50 | 8.73 | -17.14 | 11.51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|-----------|--------|--------|--------|---------|-------|-------|-------|------|-------|------|------|------|------|------|------|------|------|------|
| W -45 | \$Gnd2 | 0.21 | -0.21 | 0.61 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 | \$Gnd3 | -1.19 | 19.02 | 40.19 | 26.91 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 | \$Gnd4 | -9.12 | -7.89 | 18.01 | 12.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 | OP | -15.74 | -24.86 | -196.69 | 29.42 | 3.05 | 0.43 | 3.08 | 1.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 | OX | 4.08 | -12.98 | 62.00 | 13.60 | 3.44 | 0.20 | 3.45 | 1.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 | OXY | 5.54 | -11.84 | 61.84 | 12.68 | 3.04 | -0.35 | 3.06 | -1.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 | OY | 16.67 | -23.30 | -191.22 | 28.64 | 2.64 | 0.09 | 2.64 | -1.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 | \$Gnd1 | 3.31 | 2.54 | 6.45 | 4.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 | \$Gnd2 | 14.45 | 15.21 | 31.49 | 21.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 | \$Gnd3 | -3.46 | 2.69 | 6.78 | 4.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 | \$Gnd4 | -14.87 | -15.71 | 32.19 | 21.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 | OP | 4.00 | 13.16 | 60.08 | 13.75 | -3.59 | 0.22 | 3.60 | -1.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 | OX | -15.43 | 29.35 | -194.43 | 29.52 | -3.18 | 0.40 | 3.21 | -1.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 | OXY | 16.40 | 23.32 | -189.15 | 28.51 | -2.72 | 0.06 | 2.72 | 1.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 | OY | -4.30 | 11.89 | 60.07 | 12.64 | -3.12 | -0.32 | 3.14 | 1.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 | \$Gnd1 | 14.07 | 15.21 | 31.47 | 20.92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 | \$Gnd2 | 3.35 | -2.58 | 6.53 | 4.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 | \$Gnd3 | -14.69 | 15.53 | 31.79 | 21.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 | \$Gnd4 | -3.50 | -2.73 | 6.87 | 4.44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 Ice | OP | -7.45 | -6.93 | -88.89 | 10.24 | -1.15 | 0.92 | 1.47 | -0.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 Ice | OX | -7.30 | 7.18 | -85.81 | 10.24 | 0.95 | 0.91 | 1.32 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 Ice | OXY | 4.73 | 5.23 | -63.65 | 7.05 | 1.02 | -1.20 | 1.57 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 Ice | OY | 4.99 | -5.22 | -66.15 | 7.23 | -1.18 | 1.18 | 1.62 | -0.96 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 Ice | \$Gnd1 | 5.58 | 5.70 | 11.20 | 7.98 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 Ice | \$Gnd2 | 5.70 | -5.82 | 11.47 | 8.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 Ice | \$Gnd3 | -7.26 | 7.14 | -14.39 | 10.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 0 Ice | \$Gnd4 | -7.40 | -7.27 | -14.69 | 10.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 Ice | OP | -4.57 | -5.41 | -69.41 | 7.09 | -1.14 | 1.46 | 1.85 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 Ice | OX | -4.51 | 5.61 | -66.73 | 7.20 | 0.97 | 1.39 | 1.70 | -0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 Ice | OXY | 7.52 | 6.79 | -82.63 | 10.13 | -0.99 | -0.72 | 1.39 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 Ice | OY | 7.95 | -6.74 | -85.55 | 10.42 | -1.11 | -0.65 | 1.29 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 Ice | \$Gnd1 | 6.93 | 6.81 | 13.65 | 9.71 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 Ice | \$Gnd2 | 7.58 | -9.94 | 13.43 | 9.89 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 Ice | \$Gnd3 | -5.88 | 6.00 | 11.86 | 8.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 180 Ice | \$Gnd4 | -6.01 | -6.13 | 12.14 | 8.58 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 Ice | OP | -7.85 | -8.00 | -95.13 | 11.21 | -0.93 | 0.99 | 1.36 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 Ice | OX | -6.42 | 8.85 | -76.15 | 8.68 | 1.16 | 0.68 | 1.11 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 Ice | OXY | 4.36 | 4.26 | -57.57 | 6.09 | 1.20 | -1.16 | 1.67 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 Ice | OY | 5.95 | -6.47 | -75.74 | 8.79 | -0.92 | -1.11 | 1.44 | -0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 Ice | \$Gnd1 | 5.35 | 10.63 | 10.63 | 7.57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 Ice | \$Gnd2 | 6.31 | -6.50 | 12.77 | 9.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 Ice | \$Gnd3 | -6.69 | 6.51 | 13.19 | 9.34 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 45 Ice | \$Gnd4 | -7.62 | -7.62 | 15.28 | 10.78 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 Ice | OP | -6.5 | 6.0 | -78.15 | 8.68 | -1.36 | 0.98 | 1.67 | -0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 Ice | OX | -7.64 | 8.24 | -92.10 | 11.24 | 0.74 | 0.97 | 1.22 | -0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 Ice | OXY | 5.66 | 6.48 | -73.17 | 8.60 | 0.83 | -1.13 | 1.41 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 Ice | OY | -6.42 | -6.25 | -80.12 | 8.29 | -1.24 | 1.23 | 1.72 | -0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 Ice | \$Gnd1 | 6.19 | 6.37 | 12.49 | 8.89 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 Ice | \$Gnd2 | 5.46 | -5.47 | 10.85 | 7.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 Ice | \$Gnd3 | -7.48 | 7.48 | -14.97 | 10.58 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -45 Ice | \$Gnd4 | -6.84 | -6.64 | 13.48 | 9.52 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 Ice | OP | -6.80 | -7.68 | -88.91 | 10.25 | -0.87 | 1.20 | 1.48 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 Ice | OX | -5.16 | 4.90 | -66.53 | 7.12 | 1.24 | 1.14 | 1.68 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 Ice | OXY | 5.33 | 6.53 | -60.12 | 8.68 | -1.25 | 0.98 | 1.58 | -0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 Ice | OY | 7.27 | -7.35 | -85.36 | 10.34 | -0.87 | -0.90 | 1.25 | -0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 Ice | \$Gnd1 | 5.70 | 5.58 | 11.20 | 7.98 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 Ice | \$Gnd2 | 6.94 | -7.06 | 13.95 | 9.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 Ice | \$Gnd3 | -6.4 | 8.9 | 11.88 | 8.41 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W 90 Ice | \$Gnd4 | -7.27 | -7.39 | -14.68 | 10.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 Ice | OP | -5.31 | -4.67 | -69.39 | 7.07 | -1.42 | 1.18 | 1.84 | -0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 Ice | OX | -6.9 | 7.90 | -86.01 | 8.33 | 0.69 | 1.16 | 1.61 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 Ice | OXY | 6.93 | 7.38 | -82.65 | 10.12 | 0.77 | -0.94 | 1.22 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 Ice | OY | 5.67 | -4.61 | -66.35 | 7.31 | -1.34 | -0.93 | 1.64 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 Ice | \$Gnd1 | 5.33 | 9.93 | 9.93 | 7.72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 Ice | \$Gnd2 | 5.82 | -5.70 | 11.45 | 8.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 Ice | \$Gnd3 | -7.14 | 7.26 | -14.38 | 10.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| W -90 Ice | \$Gnd4 | -6.13 | -6.01 | 12.15 | 8.59 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

| Load Case | Support Origin | Joint | Joint Member | Leg Force In Residual Shear | Residual Shear Perpendicular To Leg | Residual Shear Horizontal To Leg | Residual Shear Horizontal To Leg - Long. | Residual Shear Horizontal To Leg - Tran. | Total Long. | Total Tran. | Total Vert. |
|-----------|----------------|-------|--------------|-----------------------------|-------------------------------------|----------------------------------|--|--|-------------|-------------|-------------|
| | | | | | | | | | | | |
| W 0 | OP | IP | L IP | 198.078 | 12.270 | 12.270 | 12.270 | 12.270 | 3.715 | -24.53 | -196.32 |
| W 0 | OX | LX | L LX | 193.664 | 12.280 | 12.280 | 11.485</ | | | | |

| | | | |
|-----------|-------|-------|-------|
| W 0 Ice | 32.46 | L 11X | Angle |
| W 180 Ice | 30.82 | L 11X | Angle |
| W 45 Ice | 32.41 | L 11P | Angle |
| W -45 Ice | 33.24 | L 11X | Angle |
| W 90 Ice | 31.63 | L 11P | Angle |
| W -90 Ice | 32.46 | L 11X | Angle |

Summary of Guy Usages by Load Case:

| Load Case | Maximum Usage % | Guy Label |
|-----------|-----------------|-----------|
| W 0 | 21.55 | G4 |
| W 180 | 20.91 | G2 |
| W 45 | 26.83 | G4 |
| W -45 | 26.58 | G3 |
| W 90 | 21.49 | G4 |
| W -90 | 21.23 | G3 |
| W 0 Ice | 10.96 | G4 |
| W 180 Ice | 10.48 | G2 |
| W 45 Ice | 11.34 | G4 |
| W -45 Ice | 11.14 | G3 |
| W 90 Ice | 10.85 | G4 |
| W -90 Ice | 10.76 | G3 |

*** Weight of structure (lbs):
 Weight of Guys: 7611.4
 Weight of Angles*Section DLF: 101896.2
 Total: 109507.6

*** End of Report

Legs

| | |
|------------------|---------------|
| Site No.: | 372926 |
| Engineer: | adam.pittman |
| Date: | 01/07/2021 |
| Carrier: | AT&T Mobility |

When inputting thickness values, include all decimal places.

| Tower Section # | Section Elevations (ft) | Type of Shape ^[1] | Diameter or Length (in) | Thickness ^[2] (in) | F _y (ksi) |
|-----------------|-------------------------|------------------------------|-------------------------|-------------------------------|----------------------|
| 1 | 0.000-25.00 | L | 8 | 1 | 36 |
| 2 | 25.00-50.00 | L | 8 | 0.875 | 36 |
| 3 | 50.00-75.00 | L | 8 | 0.875 | 36 |
| 4 | 75.00-100.0 | L | 8 | 0.75 | 36 |
| 5 | 100.0-125.0 | L | 8 | 0.625 | 36 |
| 6 | 125.0-137.5 | L | 6 | 0.75 | 36 |
| 7 | 137.5-150.0 | L | 6 | 0.75 | 36 |
| 8 | 150.0-162.5 | L | 6 | 0.5625 | 36 |
| 9 | 162.5-175.0 | L | 6 | 0.5625 | 36 |
| 10 | 175.0-187.5 | L | 6 | 0.4375 | 36 |
| 11 | 187.5-197.7 | L | 5 | 0.4375 | 36 |
| 12 | 197.7-207.8 | L | 5 | 0.4375 | 36 |
| 13 | 207.8-216.4 | L | 5 | 0.3125 | 36 |
| 14 | 216.4-225.0 | L | 5 | 0.3125 | 36 |
| 15 | 225.0-237.5 | L | 6 | 0.5 | 36 |
| 16 | 237.5-250.0 | L | 6 | 0.5 | 36 |
| 17 | 250.0-262.5 | L | 6 | 0.375 | 36 |
| 18 | 262.5-275.0 | L | 6 | 0.375 | 36 |
| 19 | 275.0-287.5 | L | 6 | 0.375 | 36 |

Notes:

^[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifferized Angle. **L** = Even Leg

^[2] For Solid Round Leg Shapes Thickness Equals Zero.

^[3] Adjust for Bent Plate Leg Shapes.

Diagonals

| | |
|-----------|---------------|
| Site No.: | 372926 |
| Engineer: | adam.pittman |
| Date: | 01/07/2021 |
| Carrier: | AT&T Mobility |

When inputting thickness values, include all decimal places.

| Tower Section # | Section Elevations (ft) | Type of Shape ^[1] | Diameter ^[2] (in) | Web Length ^[3] (in) | Flange Length ^[3] (in) | Thickness (in) | F _y (ksi) | Is Diag. Tension Only? (Y/N) |
|-----------------|-------------------------|------------------------------|------------------------------|--------------------------------|-----------------------------------|----------------|----------------------|------------------------------|
| 1 | 0.000-25.00 | 2L | | 3 | 4 | 0.3125 | 36 | |
| 2 | 25.00-50.00 | 2L | | 2.5 | 3 | 0.25 | 36 | |
| 3 | 50.00-75.00 | 2L | | 2.5 | 3 | 0.25 | 36 | |
| 4 | 75.00-100.0 | 2L | | 2.5 | 3 | 0.25 | 36 | |
| 5 | 100.0-125.0 | 2L | | 2.5 | 3 | 0.25 | 36 | |
| 6 | 125.0-137.5 | 2L | | 2.5 | 2.5 | 0.25 | 36 | |
| 7 | 137.5-150.0 | 2L | | 2.5 | 2.5 | 0.25 | 36 | |
| 8 | 150.0-162.5 | 2L | | 2.5 | 2 | 0.25 | 36 | |
| 9 | 162.5-175.0 | 2L | | 2.5 | 2 | 0.25 | 36 | |
| 10 | 175.0-187.5 | 2L | | 2.5 | 2 | 0.25 | 36 | |
| 11 | 187.5-197.7 | L | | 3.5 | 3.5 | 0.25 | 36 | |
| 12 | 197.7-207.8 | L | | 3.5 | 3.5 | 0.25 | 36 | |
| 13 | 207.8-216.4 | L | | 3 | 3 | 0.25 | 36 | |
| 14 | 216.4-225.0 | L | | 3 | 3 | 0.25 | 36 | |
| 15 | 225.0-237.5 | 2L | | 3 | 3 | 0.3125 | 36 | |
| 16 | 237.5-250.0 | 2L | | 3 | 3 | 0.25 | 36 | |
| 17 | 250.0-262.5 | 2L | | 3 | 3 | 0.25 | 36 | |
| 18 | 262.5-275.0 | L | | 3 | 3 | 0.25 | 36 | |
| 19 | 275.0-287.5 | L | | 3 | 3 | 0.25 | 36 | |

Notes:

- ^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.
- ^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.
- ^[3] Applies to Single-Angle and Double-Angle Shapes only.
- ^[4] Applies to Double-Angle Shapes only.
- ^[5] Applies to Single-Angle Shapes only.

Horizontals

| | |
|-----------|---------------|
| Site No.: | 372926 |
| Engineer: | adam.pittman |
| Date: | 01/07/2021 |
| Carrier: | AT&T Mobility |

When inputting thickness values, include all decimal places.

| Tower Section # | Section Elevations (ft) | Type of Shape ^[1] | Diameter ^[2] (in) | Web Length ^[3] (in) | Flange Length ^[3] (in) | Thickness (in) | F _y (ksi) |
|-----------------|-------------------------|------------------------------|------------------------------|--------------------------------|-----------------------------------|----------------|----------------------|
| 1 | 0.000-25.00 | 2L | | 3 | 2.5 | 0.25 | 36 |
| 2 | 25.00-50.00 | 2L | | 3 | 2.5 | 0.25 | 36 |
| 3 | 50.00-75.00 | 2L | | 3 | 2.5 | 0.25 | 36 |
| 4 | 75.00-100.0 | 2L | | 2.5 | 2.5 | 0.25 | 36 |
| 5 | 100.0-125.0 | 2L | | 2.5 | 2.5 | 0.25 | 36 |
| 6 | 125.0-137.5 | 2L | | 2.5 | 2.5 | 0.25 | 36 |
| 7 | 137.5-150.0 | 2L | | 2.5 | 2.5 | 0.25 | 36 |
| 8 | 150.0-162.5 | 2L | | 2.5 | 2.5 | 0.25 | 36 |
| 9 | 162.5-175.0 | 2L | | 2.5 | 2.5 | 0.25 | 36 |
| 10 | 175.0-187.5 | 2L | | 2.5 | 2.5 | 0.25 | 36 |
| 11 | 187.5-197.7 | L | | 3 | 2.5 | 0.25 | 36 |
| 12 | 197.7-207.8 | 2L | | 3 | 2.5 | 0.25 | 36 |
| 13 | 207.8-216.4 | 2L | | 3 | 2.5 | 0.25 | 36 |
| 14 | 216.4-225.0 | C | | 8 | 11.5 | | 36 |
| 15 | 225.0-237.5 | L | | 3 | 3 | 0.25 | 36 |
| 16 | 237.5-250.0 | 2L | | 3 | 3 | 0.25 | 36 |
| 17 | 250.0-262.5 | L | | 3 | 3 | 0.25 | 36 |
| 18 | 262.5-275.0 | 2L | | 3 | 3 | 0.25 | 36 |
| 19 | 275.0-287.5 | C | | 8 | 11.5 | | 36 |

Notes:

^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle, **2L** = Double-Angle, **C** = Channel, **W** = W Shape

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

| | |
|-----------|---------------|
| Site No.: | 372926 |
| Engineer: | adam.pittman |
| Date: | 01/07/2021 |
| Carrier: | AT&T Mobility |

When inputting thickness values, include all decimal places.

Input diags. from left to center & from base section upward.

| Tower Built-up Diag. # | Section Elevations (ft) | Type of Shape ^[1] | Diameter ^[2] (in) | Web Length ^[3] (in) | Flange Length ^[3] (in) | Thickness (in) | F _y (ksi) |
|------------------------|-------------------------|------------------------------|------------------------------|--------------------------------|-----------------------------------|----------------|----------------------|
| 1 | 0.000-25.00 | 2L | | 2.5 | 2 | 0.25 | 36 |
| 2 | 0.000-25.00 | 2L | | 2.5 | 2 | 0.25 | 36 |
| 3 | 0.000-25.00 | 2L | | 3 | 2 | 0.25 | 36 |

Notes:

^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Horizontals

| | |
|-----------|---------------|
| Site No.: | 372926 |
| Engineer: | adam.pittman |
| Date: | 01/07/2021 |
| Carrier: | AT&T Mobility |

When inputting thickness values, include all decimal places.

| Tower Section # | Section Elevations (ft) | Type of Shape ^[1] | Diameter ^[2] (in) | Web Length ^[3] (in) | Flange Length ^[3] (in) | Thickness (in) | F _y (ksi) | Is Horiz. Tension Only? (Y/N) |
|-----------------|-------------------------|------------------------------|------------------------------|--------------------------------|-----------------------------------|----------------|----------------------|-------------------------------|
| 1 | 0.000-25.00 | 2L | | 2.5 | 3 | 0.25 | 36 | |

Notes:

- ^[1] Type of Horizontal Shape: R = Round, L = Single-Angle or 2L = Double-Angle.
- ^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.
- ^[3] Applies to Single-Angle and Double-Angle Shapes only.
- ^[4] Applies to Double-Angle Shapes only.
- ^[5] Applies to Single-Angle Shapes only.

| | |
|----------|---------------|
| Site No. | 372626 |
| Engineer | adam pittman |
| Date | 06/07/11 |
| Carrier | AT&T Mobility |

| Description | From (ft) | To (ft) | Quantity | Shape | Width or Diameter (in) | Perimeter (in) | Unit Weight (lb/ft) | Part of Face Solidity Ratio (Yes/No) | Include in Wind Load (Yes/No) |
|-----------------|-----------|---------|----------|-------|------------------------|----------------|---------------------|--------------------------------------|-------------------------------|
| 1 Ladder | 0 | 287.5 | 1 | Flat | 2 | 8.0 | 6 | Yes | Yes |
| 2 Coax Cage | 8.3333 | 13.3333 | 2 | Round | 12 | 37.7 | 25 | Yes | Yes |
| 3 Coax Cage | 8.3333 | 13.3333 | 2 | Round | 12 | 37.7 | 25 | Yes | Yes |
| 4 WG | 8.3333 | 50 | 1 | Flat | 2 | 8.0 | 6 | Yes | Yes |
| 5 WG | 8.3333 | 50 | 1 | Flat | 2 | 8.0 | 6 | Yes | Yes |
| 6 WG | 8.3333 | 50 | 1 | Flat | 2 | 8.0 | 6 | Yes | Yes |
| 7 Carolina 440 | 8.3333 | 287 | 1 | Round | 1.09 | 3.4 | 0.33 | Yes | Yes |
| 8 AT&T | 8.3333 | 287 | 6 | Round | 1.15 | 3.6 | 0.46 | Yes | Yes |
| 9 AT&T | 8.3333 | 287 | 1 | Round | 0.39 | 1.2 | 0.17 | Yes | Yes |
| 10 Carolina 440 | 8.3333 | 361 | 11 | Round | 0.24 | 0.8 | 0.04 | Yes | Yes |
| 11 Carolina 440 | 8.3333 | 30 | 1 | Round | 0.41 | 1.3 | 0.09 | Yes | Yes |

| | | | | |
|-----------|-----------|----------|-------------------------|------|
| Exposure | C | α | 9.5 $k_{z, \text{min}}$ | 2.01 |
| Topo Cat: | 1 | k_z | 900 $k_{z, \text{min}}$ | 0.85 |
| Tia Code: | 11a-222-g | k_z | 1 k_z | |

| | |
|----------|---------------|
| Site No. | 372626 |
| Engineer | adam pittman |
| Date | 06/07/11 |
| Carrier | AT&T Mobility |

| Description | From (ft) | To (ft) | Quantity | Face # (1-4, A, D) | Coax Width (in) | Coax Shape (Block / Flat / Ind) | % Exposed | Spacing (in) | Shape (Round/Flat) | Block Width (ft coax) | Block Depth (ft coax) | Perimeter (in) | Unit Weight (lb/ft) | In Face Zone (Yes/No) | Include in Wind Load (Yes/No) |
|--------------|-----------|---------|----------|--------------------|-----------------|---------------------------------|-----------|--------------|--------------------|-----------------------|-----------------------|----------------|---------------------|-----------------------|-------------------------------|
| Ladder | 0 | 287.5 | 1 | | 2.00 | Flat | 100 | | Flat | 1 | 1 | 8.0 | 6 | Yes | Yes |
| Coax Cage | 8.3333 | 13.3333 | 2 | | 12.00 | Ind | 100 | | Round | 2 | 1 | 37.7 | 25 | Yes | Yes |
| WG | 8.3333 | 50 | 1 | | 2.00 | Flat | 100 | | Flat | 1 | 1 | 8.0 | 6 | Yes | Yes |
| WG | 8.3333 | 50 | 1 | | 2.00 | Flat | 100 | | Flat | 1 | 1 | 8.0 | 6 | Yes | Yes |
| WG | 8.3333 | 50 | 1 | | 2.00 | Flat | 100 | | Flat | 1 | 1 | 8.0 | 6 | Yes | Yes |
| Carolina 440 | 8.3333 | 287 | 1 | | 1.09 | Ind | 100 | | Round | 1 | 1 | 3.4 | 0.33 | Yes | Yes |
| AT&T | 8.3333 | 287 | 6 | | 1.15 | Ind | 100 | | Round | 2 | 1 | 3.6 | 0.46 | Yes | Yes |
| AT&T | 8.3333 | 287 | 1 | | 0.39 | Ind | 100 | | Round | 1 | 1 | 1.2 | 0.17 | Yes | Yes |
| Carolina 440 | 8.3333 | 361 | 11 | | 0.24 | Ind | 100 | | Round | 1 | 1 | 0.8 | 0.04 | Yes | Yes |
| Carolina 440 | 8.3333 | 30 | 1 | | 0.41 | Ind | 100 | | Round | 1 | 1 | 1.3 | 0.09 | Yes | Yes |

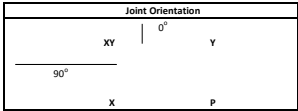
Dishes

| | |
|-----------|---------------|
| Site No.: | 372926 |
| Engineer: | adam.pittman |
| Date: | 01/07/21 |
| Carrier: | AT&T Mobility |

| Dish Types | |
|------------|--------------------|
| S | Standard |
| R | Standard w/ Radome |
| H | High Performance |
| G | Grid |

| Dish Number | Dish Elevation (ft) | Dish Dia. (ft) | Dish Angle (deg) | Dish Type | Joint Orientation | Equipment Status |
|-------------|---------------------|----------------|------------------|-----------|-------------------|------------------|
| 1 | 261 | 3 | 315 | G | Y | |
| 2 | 261 | 3 | 90 | G | X | |
| 3 | | | | | | |
| 4 | | | | | | |
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| 50 | | | | | | |

| Equipment Label | Attach Label | Equipment Property Set | EIA Antenna Orientation Angle (deg) |
|------------------|--------------|------------------------|-------------------------------------|
| 3' GRID 1 @ 261' | 17Y | 3 ft GRID Dish | 315 |
| 3' GRID 2 @ 261' | 17X | 3 ft GRID Dish | 90 |



Foundation

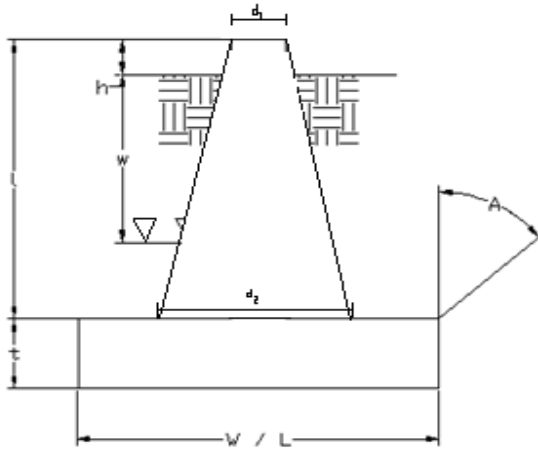
Design Loads (Factored)

| | | |
|------------------|--------|---|
| Compression/Leg: | 262.91 | k |
| Uplift/Leg: | 128.11 | k |
| Shear/Leg: | 39.10 | k |

| | | |
|--|-------|-----|
| Face Width @ Top of Pier (d_1): | 3.50 | ft |
| Face Width @ Bottom of Pier (d_2): | 7.25 | ft |
| Total Length of Pier (l): | 7.50 | ft |
| Height of Pedestal Above Ground (h): | 0.50 | ft |
| Width of Pad (W): | 17.00 | ft |
| Length of Pad (L): | 17.00 | ft |
| Thickness of Pad (t): | 2.50 | ft |
| Water Table Depth (w): | 30.00 | ft |
| Unit Weight of Concrete: | 150.0 | pcf |
| Unit Weight of Soil (Above Water Table): | 100.0 | pcf |
| Unit Weight of Soil (Below Water Table): | 37.6 | pcf |
| Friction Angle of Uplift (A): | 20 | ° |
| Ultimate Compressive Bearing Pressure: | 2500 | psf |
| Ultimate Skin Friction: | | psf |

| | | |
|------------------------|---------|-----------------|
| Volume Pier (Total): | 225.47 | ft ³ |
| Volume Pad (Total): | 722.50 | ft ³ |
| Volume Soil (Total): | 2458.06 | ft ³ |
| Volume Pier (Buoyant): | 0.00 | ft ³ |
| Volume Pad (Buoyant): | 0.00 | ft ³ |
| Volume Soil (Buoyant): | 0.00 | ft ³ |
| Weight Pier: | 33.82 | k |
| Weight Pad: | 108.38 | k |
| Weight Soil: | 245.81 | k |
| Uplift Skin Friction: | 0.00 | k |

| | |
|-----------|---------------|
| Site No.: | 372926 |
| Engineer: | adam.pittman |
| Date: | 01/07/21 |
| Carrier: | AT&T Mobility |



Uplift Check

| ϕ_s Uplift Resistance (k) | Ratio | Result |
|--------------------------------|-------|-----------|
| 291.00 | 0.44 | OK |

Axial Check

| ϕ_s Axial Resistance (k) | Ratio | Result |
|-------------------------------|-------|-----------|
| 541.88 | 0.49 | OK |

Anchor Bolt Check

| | |
|--------------------|-----|
| Bolt Diameter (in) | 2 |
| # of Bolts | 4 |
| Steel Grade | A36 |
| Steel Fy | 36 |
| Steel Fu | 58 |
| Detail Type | C |

| Usage Ratio | Result |
|-------------|-----------|
| 0.43 | OK |

Site Name: Angier, NC

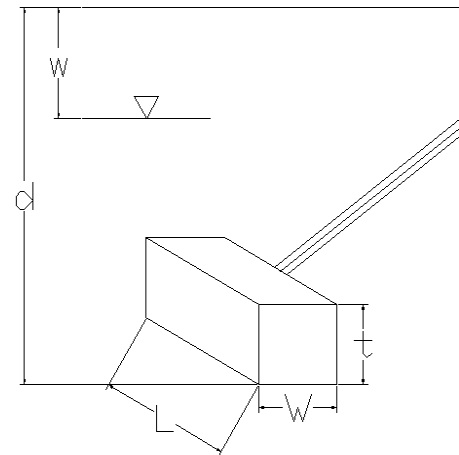
Site Number: 372926

Design Standard per TIA-222-G

Guy Anchor Block Analysis

Anchor Block Analysis Parameters

| | | |
|---|-------|-----|
| Anchor Radius: | 116.7 | ft |
| Uplift (Factored - P_u): | 40.6 | k |
| Shear (Factored - V_u): | 27.2 | k |
| Berm Present: | N | |
| Design Anchor Rod: | N | |
| Mapped Foundation: | Y | |
| Anchor Base Depth (d): | 11.0 | ft |
| Width of Anchor (W): | 9.3 | ft |
| Length of Anchor (L): | 9.3 | ft |
| Thickness of Anchor (t): | 4.5 | ft |
| Depth Below Ground Surface to Water Table (w): | 99 | ft |
| Soil Uplift at Base / Top of Anchor (B/T): | T | |
| Unit Weight of Concrete: | 150 | pcf |
| Unit Weight of Soil Above Water Table: | 100 | pcf |
| Unit Weight of Water: | 62.4 | pcf |
| Submerged Soil Unit Weight: | 37.6 | pcf |
| Internal Angle of Friction: | 20 | ° |
| Cohesion: | 0 | psf |
| Ultimate Skin Friction of Pad Sides to Soil: | 0 | psf |
| Coefficient of Shear Friction: | 0.3 | |
| Maximum Top Conical Failure Angle: | 30 | ° |
| Maximum Base Conical Failure Angle: | 30 | ° |
| Allowable Capacity Increase (Transient Loads): | 1 | |
| Uplift Strength Reduction Factor (ϕ_u): | 0.75 | |
| Shear Strength Reduction Factor (ϕ_v): | 0.75 | |
| Concrete Uplift Strength Reduction Factor (ϕ_u): | 0.9 | |



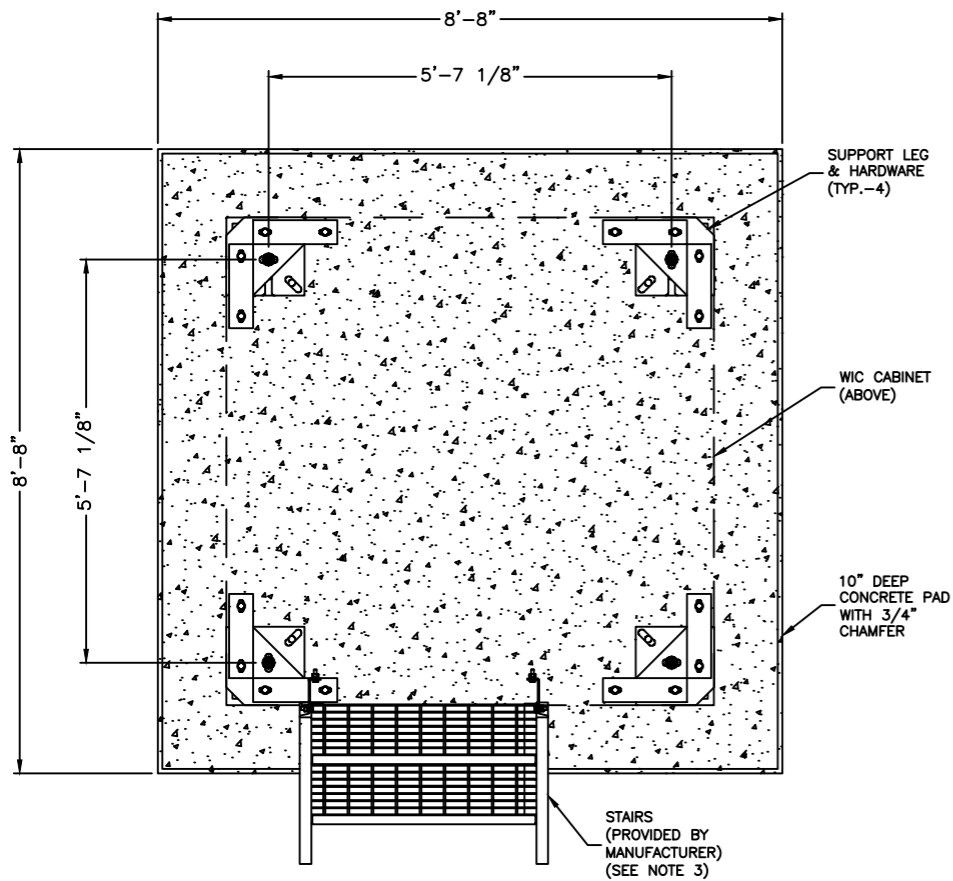
Design Anchor Shaft? N

Soil Uplift Capacity

| | | |
|--|-------|------|
| Ultimate Uplift Resistance from Skin Friction: | 0.0 | k |
| Nominal Factored Uplift Resistance ($\phi_u P_n$): | 135.9 | k |
| $P_u / \phi_u P_n$: | 30% | Pass |

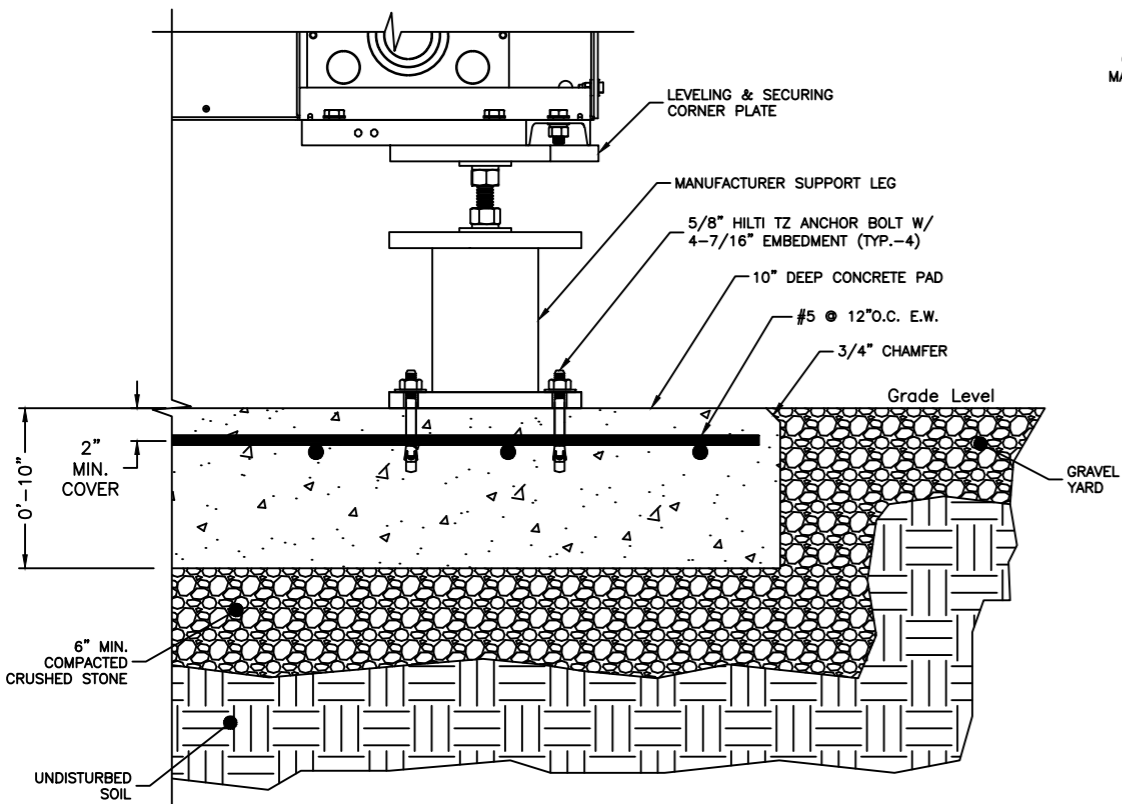
Soil Shear Capacity

| | | |
|---|-------|------|
| Ultimate Shear Friction Resistance Due to Normal Force: | 25.2 | k |
| Passive Pressure: | 1,785 | psf |
| Ultimate Passive Pressure Resistance: | 74.7 | k |
| Nominal Shear Resistance ($\phi_v V_n$): | 74.9 | k |
| $V_u / \phi_v V_n$: | 36% | Pass |



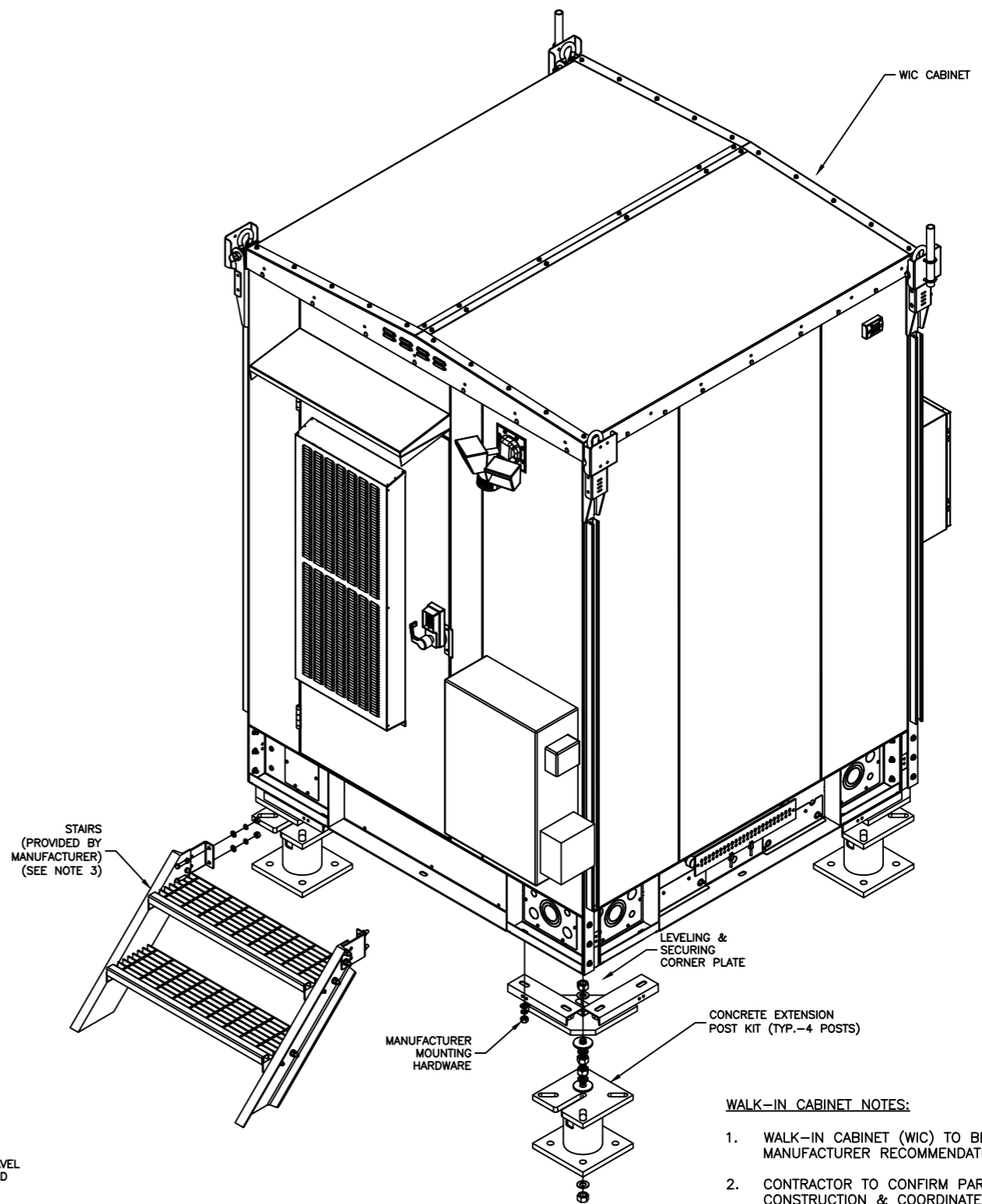
WIC FOUNDATION DETAIL

11"x17" SCALE: 3/8" = 1'-0"



WIC BASE SECTION

11"x17" SCALE: 1" = 1'-0"



WIC ISOMETRIC

11"x17" SCALE: N.T.S.

WALK-IN CABINET NOTES:

1. WALK-IN CABINET (WIC) TO BE INSTALLED ACCORDING TO MANUFACTURER RECOMMENDATIONS & SPECIFICATIONS.
2. CONTRACTOR TO CONFIRM PARTS & HARDWARE PRIOR TO CONSTRUCTION & COORDINATE WITH AT&T CM.
3. FOUNDATION TO BE FLUSH WITH EXISTING GRADE. CONTRACTOR SHALL MAINTAIN A MAXIMUM 18" CLEARANCE FROM GRADE TO BOTTOM OF WIC TO ACCOMMODATE STAIRS. VERIFY IN FIELD PRIOR TO POST INSTALLATION.
4. COORDINATE POWER & TELCO CONDUIT STUBUP PLACEMENT WITH ELECTRICAL TRADES. SEE E-1 FOR ADDITIONAL INFORMATION.
5. PROVIDE WORKING HVAC AND ELECTRICAL WORKING SPACE CLEARANCES PER MANUFACTURER RECOMMENDATIONS & CODE REQUIREMENTS.
6. WIC DIMENSIONS: 6'-8"W X 6'-8"L X 9'-6" TALL (NO BASE)
WIC WEIGHT: 5500 LBS (EMPTY) 7500 LBS (FULLY INTEGRATED)
7. CONTRACTOR TO PROVIDE AND INSTALL SPECIFIED CONCRETE ANCHORS.