PROJECT NOTES:

1. All referenced materials and drawings must be considered confidential and are to be returned to the owner or designate agent at the completion of the project.

2. All work performed on these drawings must be completed by the contractor and all material delivered to the site. The contractor must have sufficient experience and ability to perform the work and must be capable of timely completion. The contractor must have sufficient experience and ability to perform the work and must be capable of timely completion.

3. The contractor shall be designed in accordance with ANSI A119.8-2005 and conform to the requirements of the North Carolina Building Code, 2012 Edition.


5. Any work not performed by the contractor, shall be submitted for the materials listed herein, and to the procedures to be used on this project.

6. All materials and equipment furnished shall be ordered and purchased in accordance with the North Carolina Building Code, 2012 Edition.

7. The contractor shall be responsible for any costs incurred in excess of the contract price.

8. The contractor shall be responsible for all work performed under this contract.

9. The contractor shall be responsible for all work performed under this contract.

10. The contractor shall be responsible for all work performed under this contract.

11. The contractor shall be responsible for all work performed under this contract.

12. The contractor shall be responsible for all work performed under this contract.

13. The contractor shall be responsible for all work performed under this contract.

14. The contractor shall be responsible for all work performed under this contract.

15. The contractor shall be responsible for all work performed under this contract.

16. The contractor shall be responsible for all work performed under this contract.

17. The contractor shall be responsible for all work performed under this contract.

18. Any work performed on these drawings must be completed by the contractor and all material delivered to the site. The contractor must have sufficient experience and ability to perform the work and must be capable of timely completion.
COMMUNICATIONS TOWER GROUP LLC
15720 BRUSHMILL HILL AVE, STE 300
CARY, NC  27518-4277

MOHICAN TRAIL/ARAB SHINNE CLU
CTG SITE ID: NC 0010041
SPRINT SITE ID: TBD

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC  27603-3530
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www.tepgroup.net
N.C. LICENSE # C-1794

November 26, 2018

TOWER CONSTRUCTION NOTES

SECTION 010 - Scope of Work

11-01-18
PRELIMINARY
11-21-18
PRELIMINARY
11-26-18
CONSTRUCTION

PLANS PREPARED BY:
TOWER ENGINEERING PROFESSIONALS
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raleigh, NC 27603-3530
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N.C. LICENSE # C-1794

November 26, 2018

SECTION 100 - Cell Site Construction

NOTICE TO PROCEED:

No work shall commence prior to the Company's written notice to proceed and the issuance of work order.

SITE CLEANUP:

Contractor shall keep the Site free from accumulating waste and debris at the completion of the work. Contractor shall remove the Site of all remaining Rubbish, Implements, tools, equipment, spare parts and surplus materials.

SECTION 400 - Submittals and Tests

ALTERNATIVES:

At the Contractor's request, any Alternatives to the Materials or Methods specified shall be submitted to SPRINT for review and approval. Only those Requests made in writing, no verbal approvals will be considered.

TESTS AND INVESTIGATIONS:

All tests and investigations shall be performed by Contractor, with SPRINT's approval.

B. The Contractor shall be responsible for all Construction Tests and inspections and Project documentation.

Conduit shall accomplish testing including but not limited to:

1. COAX SLEEVING and FIBER TESTS PER TS-200 REV B ANTENNA LINE ACCENTIONS STANDARDS.
2. ALL AIRMATE AND CONDUIT: PROVIDE AN AUTOMATIC REPORT UPDATES TO SPRINT USING A COMMERCIAL MADE-FOR-ENGINEERING ELECTRONIC ANTENNA ALIGNMENT TOOLS (SAT-IM) INSTALLED IN AIRMATE, WHERE ALL AUTOMATE AND CONTROL MAST CONDUCION BY CONSTRUCTION DATA.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK RECORDED AS INCORRECTABLE IN SITE REPORTS ACTIVITIES AND ARE REQUIRED TO MAINTAIN A COMPLETE SET OF DATA FOR ALL ANTENNA ON RELEVANT BUILDING SURFACES AND AS ACCEPTABLE TO THE RELEVANT BUILDING AUTHORITY.
4. ALL TESTS REQUIRED BY APPLICABLE INSTALLATION MOPS.
5. All required documentation includes, but is not limited to:
   a. AIRMATE, DMT, ALL FROM SUNDAY INSTRUMENTS, ANTENNA ALIGNMENT TOOL (CAT).
   b. SPREAD AND FIBER TESTS.
   c. PREFERRED PEC PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE EQUIPMENT.
   d. ALL ACCESSIBLE, UNPOLISHED, OR ACCURATE AND CALIBRATED INSTRUMENTS.
   e. A TEST SCAN OF APPROVED WORKS STORED FOR USE IN FURTHER CONSTRUCTION.

LID SHAPES:

c. DESIGNER APPLICATION.

2. REQUIRED CONSTRUCTION PHOTO:

a. REQUIRED CONSTRUCTION PHOTOS.

3. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE.

2. APPROPRIATE MOP R/W TASKS INCLUDING DOCUMENT UPLOADS COMPLETE AS PER CTG SITE'S DOCUMENTS REPORT OF RECORD.

12. CONSTRUCTION PHOTOS AND CLOSEDOUT CHECKLIST.

SPRINT WILL PROVIDE SPECIFIC GUIDANCE.

a. ALL PHOTOGRAPHS OF FINAL PROJECT FOR THE FOLLOWING:

(1) BASE MATH CHEMICAL PLACID.
(2) EXACT EACH ANTENNA AND RELATED EQUIPMENT.
(3) MANUFACTURER NAME TAG FOR ALL SEPARATELY EQUIPED EQUIPMENT.
(4) PULL AND DISTRIBUTION BOX INTERMEDIATE BETWEEN R/NGS (DOOR OPEN). (5) ENSURE CONDUIT IS CONNECTED TO SUPPLY MACHINES.
(6) POWER CORDS, DODGER OPEN, BATTERIES INSTALLED.
(7) ELECTRICAL DEVICE COMPLETION.
(8) ASSEMBLY FOR SPRENT OWNED TOWERS.

b. PHOTOGRAPHY FROM EACH SECTOR FROM PROXIMATE RAD CENTER OF ANY NEW ANTENNA AT HORIZON.

6. LOAD PHOTOS TO INTERVIEW PROJECT LIBRARY. IN 15 CREATE NEW CATEGORY.

7. SPREAD, INSTALL, AND TEST OF COMPLIANT.

TABLE APPLICATION:

4. INSPECT SURFACES, FLOAT LINES, LINES, AND BOLTS AND NUTS SHALL BE TOUCHED UP.

5. STAR DAMAGE AND ALL BOLTS NUTS SHALL BE TOUCHED UP.

6. PULL, FIXED INSTALLATION, SHIP TO CONFORM TO THE MANUFACTURER'S WRITINGS.

7. ALL PCS NICE CLEANED WITH CARE TO PREPEND ALL COMPONENTS, THEIR PRESERVATION TO PROTECT THEM.

8. ANY ADDITIONAL DISCUSSIONS OF THE CTG SITE'S DOCUMENTS REPORT RECORD.

SECTION 700 - Antenna Assembly, Stand-Off Units

SUMMARY:

This section specifies installation of antenna, spires, and cable equipment. Testing of coaxial cable and testing of coaxial cable.
N-3
SPRINT CONSTRUCTION NOTES II

November 26, 2018

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0
11-01-18
PRELIMINARY
0
11-21-18
PRELIMINARY
0
11-26-18
CONSTRUCTION

NO FREE CABLE.
EXISTING NO FREE CABLE WILL BE USED AT EACH SITE. CABLE SHALL BE USED PER THE CONSTRUCTION DRAWINGS AND THE APPROPRIATE MANUFACTURER’S REQUIREMENTS.

JUMPERS AND CONNECTORS.
FURNISH AND INSTALL 30’ COAX JUMPER CABLES BETWEEN THE BRUS AND ANTENNAS. JUMPERS SHALL BE TYPE L-4, TCL-12-50, OR TCL-12-50-3. SUPERFLEX CABLES ARE NOT ALLOWED. JUMPERS BETWEEN THE BRUS AND ANTENNAS OR TOWER TOP AMPLIFIERS SHALL CONSIST OF 30’ FOAM DIELECTRIC CABLE OF MINIMUM GAUGE. MAXIMUM LENGTH FOR JUMPER SHALL GO AS TO ALLOW FOR THE PROPER BEND RADIUS PER MANUFACTURER’S SPECIFICATIONS.

FREEDE ELECTRICAL WIRING CABLES.
INSTALLATION.
INSTALL SPLITTERS, COMBINES, FILTERS PER DATA SHEET, FURNISHED BY SUPPLIER.

ANTENNA INSTALLATION.
The contractor shall assemble all antennas onsite in accordance with the instructions supplied by the manufacturer, antenna height, and antenna information shall be as described on the construction drawings.

A. THE CONTRACTOR SHALL INSTALL THE ANTENNAS ON THE TOP OF THE ANTENNA MOUNTING STRUCTURE AND AS DIRECTED BY THE MANUFACTURER’S APPLICATION GUIDE.

B. ANTENNA MOUNTING REQUIREMENTS. PROVIDE ANTENNA MOUNTING HARDWARE AS ILLUSTRATED ON THE CONSTRUCTION DRAWINGS.

FREEDE CABLE INSTALLATION.
FREEDE CABLE INSTALLATION.

A. THE CONTRACTOR SHALL ROUTE, TEST AND INSTALL ALL CABLES AS DIRECTED ON THE CONSTRUCTION DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER’S SPECIFICATIONS.

B. THE INSTALLED RADIUS OF THE CABLE SHALL NOT BE LESS THAN THE MANUFACTURER’S SPECIFICATIONS FOR BENDING RADIUS.

C. FREEDE CABLE INSTALLATION.
FREEDE CABLE INSTALLATION.

1. FASTENING NO FREE CABLES.
FREEDE CABLE INSTALLATION.

A. THE CABLES SHALL BE SECURE AND TIGHT AT EACH POINT WHERE THEY ENTER THE BUILDING AND AT THE ANCHORING POINTS.

B. ALL FREE CABLES SHALL BE SECURELY FASTENED TO THE COAX LADDER AT 4'-0" OC USING NON-MAGNETIC STEEL CLIPS. WORKING GRIPS SHOULD BE USED AT 12" INTERVALS. FREE CABLE RUNS EXCEEDING 200' AS WELL AS TOP SIDE.

C. ALL FREE CABLES SHALL BE SECURELY FASTENED TO THE COAX LADDER AT 4'-0" OC USING NON-MAGNETIC STEEL CLIPS. WORKING GRIPS SHOULD BE USED AT 12" INTERVALS. FREE CABLE RUNS EXCEEDING 200' AS WELL AS TOP SIDE.

D. ALL FREE CABLES SHALL BE SECURELY FASTENED TO THE COAX LADDER AT 4'-0" OC USING NON-MAGNETIC STEEL CLIPS. WORKING GRIPS SHOULD BE USED AT 12" INTERIORS. FREE CABLE RUNS EXCEEDING 200' AS WELL AS TOP SIDE.

2. FASTENING INDIVIDUAL FREE AND DC CABLES ABOVE BREAKOUT ENCLOSURE (MECH). FREED CABLE INSTALLATION.
FREEDE CABLE INSTALLATION.

A. FASTENING INDIVIDUAL FREE AND DC CABLES ABOVE BREAKOUT ENCLOSURE (MECH). FREED CABLE INSTALLATION.
FREEDE CABLE INSTALLATION.

B. FASTENING INDIVIDUAL FREE AND DC CABLES ABOVE BREAKOUT ENCLOSURE (MECH). FREED CABLE INSTALLATION.
FREEDE CABLE INSTALLATION.

C. FASTENING INDIVIDUAL FREE AND DC CABLES ABOVE BREAKOUT ENCLOSURE (MECH). FREED CABLE INSTALLATION.
FREEDE CABLE INSTALLATION.

D. FASTENING INDIVIDUAL FREE AND DC CABLES ABOVE BREAKOUT ENCLOSURE (MECH). FREED CABLE INSTALLATION.
FREEDE CABLE INSTALLATION.

3. FASTENING OR SECURING JUMPERS SHOULD CONSIST OF STEEL CLIPS, 18" FROM REAR OF CONNECTOR AND 24" THEREAFTER. FASTENING OR SECURING JUMPERS SHOULD CONSIST OF STEEL CLIPS, 18" FROM REAR OF CONNECTOR AND 24" THEREAFTER. FASTENING OR SECURING JUMPERS SHOULD CONSIST OF STEEL CLIPS, 18" FROM REAR OF CONNECTOR AND 24" THEREAFTER. FASTENING OR SECURING JUMPERS SHOULD CONSIST OF STEEL CLIPS, 18" FROM REAR OF CONNECTOR AND 24" THEREAFTER.

4. CABLE INSTALLATION.
FREEDE CABLE INSTALLATION.

A. FASTENING CABLES PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE MANUFACTURER.
FREEDE CABLE INSTALLATION.

B. CABLE ROUTING CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOPE AS ILLUSTRATED ON THE DRAWINGS. AVOID TIGHTING AND CROSSOVERS.
FREEDE CABLE INSTALLATION.

C. FASTENING CABLES PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE MANUFACTURER.
FREEDE CABLE INSTALLATION.

D. CABLE ROUTING CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOPE AS ILLUSTRATED ON THE DRAWINGS. AVOID TIGHTING AND CROSSOVERS.
FREEDE CABLE INSTALLATION.

E. FASTENING CABLES PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE MANUFACTURER.
FREEDE CABLE INSTALLATION.

F. CABLE ROUTING CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOPE AS ILLUSTRATED ON THE DRAWINGS. AVOID TIGHTING AND CROSSOVERS.
FREEDE CABLE INSTALLATION.

G. FASTENING CABLES PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE MANUFACTURER.
FREEDE CABLE INSTALLATION.

H. CABLE ROUTING CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOPE AS ILLUSTRATED ON THE DRAWINGS. AVOID TIGHTING AND CROSSOVERS.
FREEDE CABLE INSTALLATION.

I. FASTENING CABLES PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE MANUFACTURER.
FREEDE CABLE INSTALLATION.

J. CABLE ROUTING CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOPE AS ILLUSTRATED ON THE DRAWINGS. AVOID TIGHTING AND CROSSOVERS.
FREEDE CABLE INSTALLATION.

K. FASTENING CABLES PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE MANUFACTURER.
FREEDE CABLE INSTALLATION.

L. CABLE ROUTING CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOPE AS ILLUSTRATED ON THE DRAWINGS. AVOID TIGHTING AND CROSSOVERS.
FREEDE CABLE INSTALLATION.

M. FASTENING CABLES PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE MANUFACTURER.
FREEDE CABLE INSTALLATION.

N. CABLE ROUTING CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOPE AS ILLUSTRATED ON THE DRAWINGS. AVOID TIGHTING AND CROSSOVERS.
FREEDE CABLE INSTALLATION.

O. FASTENING CABLES PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE MANUFACTURER.
FREEDE CABLE INSTALLATION.

P. CABLE ROUTING CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOPE AS ILLUSTRATED ON THE DRAWINGS. AVOID TIGHTING AND CROSSOVERS.
FREEDE CABLE INSTALLATION.

Q. FASTENING CABLES PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE MANUFACTURER.
FREEDE CABLE INSTALLATION.

R. CABLE ROUTING CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOPE AS ILLUSTRATED ON THE DRAWINGS. AVOID TIGHTING AND CROSSOVERS.
FREEDE CABLE INSTALLATION.
SPRINT CONSTRUCTION NOTES III

N-1

11-01-18

PRELIMINARY

N-2

11-21-18

PRELIMINARY

N-3

11-26-18

CONSTRUCTION

SPRINT CONSTRUCTION NOTES III

N.4-0

0 NO OPEN FLAME ON SITE

G.0 TO ENSURE WIRES ARE SUPPORTED EVERY 5'-0" ON HORIZONTAL AND 4'-0" ON VERTICAL RUNS

SUPPLEMENTAL GROUNDING SYSTEM:

A. PURCHASE AND INSTALL A SUPPLEMENTAL GROUNDING SYSTEM TO THE EXTENT INDICATED ON THE DRAWINGS. SUPPORT SYSTEM WITH NON-MAGNETIC STAINLESS STEEL CLIPS WITH RUBBER GROMMETS (GROUNDING CONNECTORS SHALL BE BRICKED IN CONCRETE. SIMILAR TO INDICATED ON THE DRAWINGS) PROVIDE STRANDED SIAMESE (PAIR OR OXIDIZED) CONDUCTORS EXCEPT AS OTHERWISE NOTED.

B. SUPPLEMENTAL GROUNDING SYSTEM: ALL CONNECTIONS TO BE MADE WITH GAD WIRE, EXCEPT AT EQUIPMENT USE LUGS OR OTHER AVAILABLE GROUNDING MEANS AS REQUIRED BY MANUFACTURER. AT GROUND BARS USE TWO-HOLE SPACERS WITH NO-0X.

C. STOOL GROUND BARS. IN THE EVENT OF STOOL GROUND BARS, CONTACT SPRINT CONSTRUCTION MANAGERS FOR REPLACEMENT INSTRUCTION USING Threaded Rod KIES.

EXISTING STRUCTURE:

A. EXISTING EXPOSED WIRING AND ALL EXPOSED OUTLETS, RECEPTACLES, SWITCHES, DEVICES, BOXES, AND OTHER EQUIPMENT THAT ARE NOT TO BE INSTALLED IN THE COMPLETE PROJECT SHOWN ON THE DRAWINGS IN ADDITION TO ROUTING ARROWS SHALL BE MADE WITH CONCIL OUTLET BOXES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKABLE MANNER, PARALLEL AND PERPENDICULAR TO THE STRUCTURE WALL AND CEILING PLATES. ALL CONDUIT SHALL BE TIGHT TO CLEAR OBSTRUCTIONS. ENDS OF CONDUIT SHALL BE TEMPORARILY COVERED TO PREVENT CONDUIT PLUGS OR DROPS FROM ENTERING. CONDUITS SHALL BE TIGHTLY CLOSED TO BOXES BY GANVED RINGING ON NIQUE AND GANVED MALICEDER IRON LOADING ON OUTSIDE AND NIQUE.

CONDUIT AND CONDUCTOR INSTALLATION:

A. CONDUIT SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFOMED STRAPS AND HANDERS. EXPLOSIVE DEVICES FOR ATTACHING MAPPERS TO STRUCTURE WILL NOT BE PERMITTED. PREPARE THE END OF THE STRUCTURE, MANAGE CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUIT IN FRONT ENVELOPES. CHANGES IN DIRECTION TO ROUTING ARROWS SHALL BE MADE WITH CONCIL CONDUIT BOXES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKABLE MANNER, PARALLEL AND PERPENDICULAR TO THE STRUCTURE WALL AND CEILING PLATES. ALL CONDUIT SHALL BE TIGHT TO CLEAR OBSTRUCTIONS. ENDS OF CONDUIT SHALL BE TEMPORARILY COVERED TO PREVENT CONDUIT PLUGS OR DROPS FROM ENTERING. CONDUITS SHALL BE TIGHTLY CLOSED TO BOXES BY GANVED RINGING ON NIQUE AND GANVED MALICEDER IRON LOADING ON OUTSIDE AND NIQUE.

B. CONDUCTORS SHALL BE INSTALLED IN ACCORDANCE WITH ACCEPTED GOOD PRACTICE.

ADDITIONAL REQUIREMENTS:

G.0 IS RESPONSIBLE FOR HIRING ALL 3RD PARTY SPECIAL INSPECTIONS AS REQUIRED PER MUNICIPALITY

G.0 IS RESPONSIBLE FOR CONVINCING ALL FIELD MEASUREMENTS PRIOR TO STARTING CONSTRUCTION

DO NOT OPEN I/RU PACKAGES IN THE MAIN
PLANS PREPARED FOR:
COMMUNICATIONS TOWER GROUP LLC
15720 BRIAN HILL AVE, STE 300
CHARLOTTE, NC 28277

PROJECT INFORMATION:
MOHICAN TRAIL/ARAB SHRINE CLUB
CTG SITE ID:NC 0010041
SPRINT SITE ID: TBD

CTG SITE ID:NC 0010041
SPRINT SITE ID: TBD

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

EXISTING BLDG
PROPOSED 125'-WIDE LEASE AREA
PROPOSED 25'-WIDE LANDSCAPING BUFFER SEE SHEET L-1 & L-5 FOR DETAILS
PROPOSED 12'-WIDE ICE BRIDGE, SEE SHEET C-6 FOR DETAILS
PROPOSED 10'-WIDE SPRING CONCRETE EQUIPMENT PAD & 12'-X-20' LEASE AREA, SEE SHEET C-2A FOR DETAILS
PROPOSED 6'-0" M-FRAME WITH 4 GANG METER RACK, SEE SHEET E-4 FOR DETAILS
EXISTING OPEN-SIDED CARGO TO BE RELOCATED (TYP OF 2)
EXISTING CONCRETE PAD TO BE REMOVED (TYP OF 2)
PROPOSED 13'-WIDE GATE, SEE SHEET C-7 FOR DETAILS
PROPOSED UNPAIRED TOWER, SEE SHEET C-3 FOR DETAILS
PROPOSED VINYL FENCE SEE SHEET C-7 FOR DETAILS
EXISTING ASPHALT DRIVEWAY TO REMAIN

FUTURE 12'-X-20' LEASE AREA
FUTURE 12'-X-20' LEASE AREA
FUTURE 12'-X-20' LEASE AREA

ROAD
PROPOSED 6'-0" OF 45' STONE ON GEOSYNTHETIC FABRIC TO EXTEND 12'-OUTSIDE OF FENCE

ANG
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N.C. LICENSE # C-1794

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N.C. LICENSE # C-1794

NORTH CAROLINA ENGINEERS COMMISSION NO. 043120
ENGINEER H. BEST
November 23, 2018
DRAWN BY: ALI
CHECKED BY: JAG

REVISION: 2
SHEET NUMBER: C-2
SHEET TITLE: COMPOUND DETAIL
SCALE IN FEET
SHEET SIZE: 22" X 34"
SHEET TITLE: COMPOUND DETAIL
SHEET NUMBER: C-2
REVISION: 2
SHEET SIZE: 22" X 34"
SHEET TITLE: COMPOUND DETAIL
SHEET NUMBER: C-2
REVISION: 2
SHEET SIZE: 22" X 34"
NOTES:

1. PROPOSED COAX TO BE RUN INSIDE TOWER USING Hosing CUPS (AS DIRECTED BY TOWER MANUFACTURER(s)).

2. TOWER SHALL BE CONSTRUCTED OF GALVANIZED STEEL OR PAINTED PER APPLICABLE STANDARDS OF THE FAA OR OTHER APPLICABLE FEDERAL OR STATE AGENCY.

3. TOWER ELEVATION SHOWN FOR REFERENCE ONLY, VERIFY ACTUAL TOWER DESIGN & LOADING WITH TOWER DRAWINGS FROM MANUFACTURER AND/OR PASSING STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION.

4. CONTRACTOR TO VERIFY PROPOSED LOADING WHEN PASSING STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION. CONTACT CTG IN THE EVENT OF ANY DISCREPANCIES.

5. AS PER FCC REGULATIONS, TOWER IS NOT REQUIRED TO BE LIT.
NOTES:
1. FILTER FABRIC SHALL CONFORM TO THE REQUIREMENTS LISTED IN ASTM D 5841.
2. ENDS OF INDIVIDUAL FILTER FABRIC SHALL BE SECURELY FASTENED AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
3. PLACE 12 INCHES OF FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
4. INSPECT SEGMENT FENCE(S) AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL.
5. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE.
6. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE AND PROPERLY STABILIZE THE SITE.

SILT FENCE DETAIL

SCALE: N.T.S.
**SIDE VIEW**

**DRAWING NOTES:**
1. 1-6" FAUX WOOD att. to 2x4's with hot dipped galvanized steel screws.
2. 2x4 treated wood att. to galvanized fence post with support bracket and 1 1/2" x 1" lag bolt (TP)
3. Galvanized fence post
4. Wood fence to be appropriately staked or furred.

**FENCE NOTE:**
Fence to be maintained by CTG. Only faux wood and hot dipped galvanized steel screws are to be used.

**TYPICAL FENCE ELEVATION**

**GATE DETENT DETAIL**

**GATE STOP / KEEPER DETAIL**

**FENCE DETAIL (SIDE VIEW)**

**CONSTRUCTION**

November 26, 2018

TOWER ENGINEERING PROFESSIONALS
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RALEIGH, NC  27603-3530

OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # C-1794

Mohican Trail/Arab Shrine Club
CTG Site ID: NC 0010041
 Sprint Site ID: TBD

PROPOSED SITING LOCATION:

2' - 0" for all posts in rock min 3' - 0" for all posts in soil, or 6" below frost line whichever is greater.

**PLANS PREPARED BY:**

**PLANS ISSUED FOR:**

**DRAWN BY:**

**CHECKED BY:**

**REVISION:**

**SHEET NUMBER:**

C-7

10' = 1'-0"
STANDARD ROAD SECTION (GOOD SUBGRADE) WITH ASPHALT

2" OF SP3.5 A ASPHALT
ADDITIONAL 2" #4 GRAVEL ROLLED OR 2" OF CRUSHER RUN ROLLED CONSIDER WITH CTG CONSTRUCTION MANAGER.
MINIMUM 3" CRUSHER RUN ROLLED
MINIMUM 3" #4 CRUSHER RUN ROLLED
MINIMUM 3" #3 GRAVEL ROLLED/COMPACTED
COMPACTED SUBGRADE
PROPOSED DRAINAGE DITCH TO RUN ALONG ROADSIDE AS NECESSARY.

FLOW
FLOW
FLOW

1 2

DOCK WIDTH VARIES

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ACCESS ROAD DETAILS

C-8

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RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # C-1794
ICE BRIDGE DETAIL

PROPOSED ICE BRIDGE BY
SPRINT (CONNECT-IT
WIRELESS P/N: WMP3010
OR APPROVED EQUIVALENT)

C-9

ICE BRIDGE &
EQUIPMENT DETAILS

1. LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.

2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.
FOUNDATION NOTES:
1. FOUNDATION DESIGN BASED ON 2,000 PSF SOIL BIRING CAPACITY.
2. CONCRETE SHALL BE 4,000 PSF @ 28 DAYS.
3. REINFORCING STEEL P2 = 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 3/4".
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 318-11.

SECTION CUT A

PLAN

FOUNDATION DETAILS

- 8" THICK CONCRETE PAD WITH LIGHT BROOM FINISH
- PROVIDE 2 LAYERS OF 6"x6" WAXON OR 1 LAYER OF 6"x6" WAXON & 3" IN SHEET FORM ONLY. ROLLED FABRIC NOT PERMITTED. OPTION: 1 LAYER OF #6 @ 12" E.W.
- #27 STONE COMPACTED TO 95% STD. PROCTOR DENSITY- CONFOGURATED/UNCONFURATED SUBGRADE
- LAYER OF GEOTEXTILE FABRIC (WPI 500 OR EQUIVALENT) BETWEEN #27 STONE & SUBGRADE

PRELIMINARY

MOHICAN TRAIL ARAB SHRINE CLUB
CTG SITE ID: NC 0010041
SPRINT SITE ID: TBD

11-01-18
11-21-18
11-26-18

CONSTRUCTION
PRELIMINARY
PRELIMINARY

DRAWN BY: CHECKED BY:

SEAL:

SEAL:

SHEET TITLE: FOUNDATION DETAILS

SHEET NUMBER: C-11

REVISION: 2

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

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY.</th>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>HEIGHT @ PLANTING</th>
<th>HEIGHT @ MATURITY</th>
<th>CALIPER/SPREAD</th>
<th>SPACING</th>
<th>REMARKS</th>
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<tr>
<td></td>
<td></td>
<td>JUNIPERUS SILICICOLA</td>
<td>SOUTHERN RED CEDAR</td>
<td>-</td>
<td>40'-0&quot; (MIN)</td>
<td>1½'</td>
<td>25'-0&quot;</td>
<td>SHOWN AS</td>
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</table>

| ITEM | QTY. | LEX VOLOMORIA | VAUPON NOLLY | 24" | 5'-0" (MIN) | (3) GALLON | 5'-0" | SHOWN AS |

MULCH

1. - - - - - - - APPLY 3'-4" DEEP FROM THE TRUNKLINE TO THE ORIGIN FOR GROUND COVERAGE APPLY 1'-0" DEEP

NOTE:

LANDSCAPING IS NOT INSTALLED ON THE NORTH SIDE OF THE PROPOSED FENCE COMPOUND BECAUSE THE EXISTING BUILDINGS ARE SCREENING THE COMPOUND. CTG WILL INSTALL LANDSCAPING ALONG THE NORTH SIDE OF THE PROPOSED FENCE COMPOUND FOR NEW HANOVER COUNTY ZONING ORDOANCE SECTION 633.5 (C) IN THE EVENT THAT THE EXISTING BUILDINGS TO THE NORTH OF THE COMPOUND ARE REMOVED.

LANDSCAPING PLAN

SCALE: 1" = 1'-0"
LANDSCAPE NOTES:

1. Topsoil to be provided by the site contractor in rough grade to within 1" of finish grade.
2. Each plant to be in good condition after spreading and pruning.
3. Each plant to be free from disease, insect infestation, and mechanical injuries, and in all respects be suitable for field planting.
4. All plants to be fully guaranteed (labor and materials) for a period of not less than (1) year from date of installation.
5. All plants shall conform to the American Standard for Nursery Stock ANSI 250.1-1973 in regard to sizing, growing, and bale specifications.
6. The contractor shall protect all existing trees and shrubs within the construction area identified as "to remain" from damage by equipment and construction activities.

SHRUB PLANTING DETAIL

TREE PLANTING DETAIL

LANDSCAPING DETAILS

SCALE: N.T.S.
SCOPE:
1. PROVIDE LABOR, MATERIALS, INSPECTION, AND TESTING TO PROVIDE CODE COMPLIANCE FOR TELEPHONE, TELEVISION, AND GROUNDING/LIGHTNING SYSTEMS.

CODES:
1. THE INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND CODES. THESE INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
   A. NATIONAL ELECTRICAL CODE
   B. NATIONAL ELECTRICAL CODE - NFPA-70
   C. INTERNATIONAL ELECTRICAL CODE - NEC
   D. LOCAL CODES
   E. INTERNATIONAL ELECTRICAL CODE - NECA

   PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR.

2. AFTER COMPLETION AND FINAL INSPECTION OF THE WORK, THE CONTRACTOR SHALL FURNISH 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 SHALL ALSO BE GUARANTEED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER AND WITHOUT CHARGE 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 MAKE ITSELF FAMILIAR WITH THE CONDITIONS AFFECTING THE PROJECT.

CONDUCTORS:
1. EXAMINATION OF THE EQUIPMENT SHALL BE MADE TO MEET THE REQUIREMENTS OF NFC, NFPA, AND THE LOCAL CODES.

GROUNDING:
1. IN ADDITION TO THE GROUNDING OF THE EQUIPMENT, EACH PIECE OF EQUIPMENT SHALL ALSO BE GROUNDED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK.

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## 200A M.C.B, 240/120 VAC, 1Ø, 3W PPC PANEL SCHEDULE

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<th>PHASE</th>
<th>OT #</th>
<th>CHT #</th>
<th>VOLT AMPERES (WATTS)</th>
<th>PHASE</th>
<th>OT #</th>
<th>CHT #</th>
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<td>L1 AMPS</td>
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<td>128.8</td>
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</table>

**NOTE:**

**ANGJKW**

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**PPC PANEL SCHEDULE**

**SCALE:** N.T.S.
CTG SERVICE RACK

1. WATT-HOUR SOCKETS/SERVICE DISCONNECT MEANS, UTILITY COMPANY TO PROVIDE METERS.

2. ALL NEW STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A 123.

3. FIELD ASSEMBLY SHALL BE TOUCHED UP PAINTED WITH ZINC RICH (GALVANIZING) REPAIR IN ACCORDANCE WITH ASTM A 760.

4. ALL EXPOSED ENDS OF CONDUIT SHALL HAVE WEATHERPROOF CAPS.

5. PROVIDE 200A SERVICE DISCONNECT IN EACH TELEPHONE AND POWER CONDUIT. STUB CONDUITS INTO ENCLOSURE AND LABEL.


7. CONTRACTOR TO VERIFY RACK DIMENSIONS AND STRUT SPACING RELATIVE TO METER BASE MODEL NUMBER.

8. GROUNDING ELECTRODE CONDUCTOR IS SIZED FOR SINGLE 200A SERVICE ONLY. IF METER BASE SHARED, COMMON NEUTRAL/GROUND POINT, CONTRACTOR WILL INSTALL (1) 3/0 COPPER GEC INSTEAD.

NOTES:

SHEET TITLE:
CTG SERVICE RACK DETAILS

SHEET NUMBER:
E-4

REV.: E-4

SPECS:

CTG SITE ID: NC 0010041
SPRINT SITE ID: TBD
NOTES:
1. ALL EQUIPMENT SHALL BE GROUNDED
2. ALL ELECTRICAL ENCLOSURES TO BE NEMA 3R RATED
3. SEE SITE PLAN FOR GENERAL ROUTING OF ALL DUCTS. DETERMINE EXACT ROUTINGS IN FIELD.
4. ELECTRICAL EQUIPMENT SHALL BE A MIN, 3'-0" FROM ANY STRUCTURE
5. ALL COVER PLATES TO BE WEATHERPROOF
6. INSTALL CAPS ON ALL OPEN POSTS
7. INSTALL UNISTRUT BEHIND SUPPORT POST AS SHOWN
8. ALL LUG MUST BE MADE METALIC
9. IF GENERATOR PLUG IS ON THE LEFT SIDE OF THE PPC, REVERSE H-FRAME LAYOUT

PROPOSED 150W HALOGEN FLOODLIGHT
W/ 100' DOUBLE LOCK DOWN LENS,
LED DETECTION INDICATOR, BRONZE FINISH (RAD MODELS #5150
OR APPROVED EQUIVALENT). 4MM FLOODLIGHT AT EQUIPMENT

PROPOSED SHEAR STOP
PL3 x 3 x 1/2" (TYP)

HIGH STEEL CHANNEL UNDISRUPTED STAND OFF APPROVED EQUAL (TYP)

PLASTIC END CAP (TYP)

W 0Meg3.25" (TYP OF 2)

1/2" CROWN (TYP)

FINISHED GRADE

CONCRETE PIER (TYP)

CONDUIT FOR POWER FROM PPC TO CABINET

CONDUIT FOR INCOMING AAY FROM MEET-NE-HD-POINT

CONDUIT FROM AAY TO CABINET

CONDUIT FOR HHG TO CABINET

EQUIPMENT CABINET MOUNTING DETAILS

SCALE: N.T.S.

TYPICAL UTILITY H-FRAME MOUNTING DETAILS

SCALE: N.T.S.
GENERAL NOTE:
CONTRACTOR TO INSTALL FULL BOX EVERY THIRD 90° TURN (MAX.)

DRAWING NOTES:

1. PPC CABINET
2. PURCELL TELCO CABINET
3. PURCELL EQUIPMENT CABINET
4. PROPOSED 3" PVC FROM PROPOSED METER TO PROPOSED PPC CABINET
5. PROPOSED 3" PVC FOR Riser FROM CTG TELCO CABINET TO SPRINT TELCO CABINET
6. PROPOSED 2" PVC FOR POWER FROM PPC TO PURCELL & EQUIPMENT CABINET
7. PROPOSED 2" PVC FOR POWER FROM PPC TO PURCELL & EQUIPMENT CABINET
8. CONTRACTOR TO COORDINATE SERVICE WITH LOCAL UTILITY COMPANIES
9. PROPOSED UTILITY METER

POWER/TELCO ROUTING PLAN
SCALE: 1" = 1'-0"
GROUNDING NOTES:

1. CONTRACTOR SHALL VERIFY THAT 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 30 INCHES BELOW FINISHED GRADE. GROUNDING ELECTRODES SHALL BE DRIVEN ON 15'-0" CENTERS (PROVIDE AND INSTALL AS REQUIRED, REQUIRED PER PLAN BELOW).


3. GROUND RING CONNECTION CONDUCTORS SHALL BE OF EQUAL LENGTH, MATERIAL, AND BONDING TECHNIQUE.

4. CONTRACTOR SHALL ENSURE GROUND RING IS WITHIN 12 TO 36 INCHES OF THE EQUIPMENT PAD. PROVIDE AND INSTALL GROUNDING CONNECTIONS SHOWN BELOW AS NEEDED PER EXISTING SITE GROUNDING SYSTEM. CONTRACTOR SHALL VERIFY EXISTING SITE GROUNDING CONDITIONS BEFORE STARTING WORK OR PURCHASING EQUIPMENT.

5. BOND GROUND BAR TO EXTERNAL GROUND RING WITH 1 RUN OF #2 BARE, TINNED, SOLID COPPER CONDUCTOR IN PVC. CONNECT BAR END WITH 2 HOLES LUG, AND "CAGEDWELD" THE OTHER END TO THE EXTERNAL GROUND ROD.

6. ALL DOWN CONDUCTORS MUST BE DOWN.

7. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.

DRAWING NOTES:

1. GROUND ROD 8" x 10' LONG (TYP)
2. GROUND ROD WITH INSPECTION WELL (TYP)
3. CAGEDWELD (TYP)
4. 2-HOLE LUG MECHANICAL CONNECTION (TYP)
5. PROPOSED TOWER GROUND RING
6. GROUND LEAD FROM TOWER TO TOWER GROUND RING (TYP)
7. PROPOSED EQUIPMENT CABINET
8. #2 TINNED SOLID COPPER EQUIPMENT GROUND RING
9. #2 TINNED SOLID COPPER GROUND WIRE FROM TOWER GROUND RING TO GROUND ROD IN EQUIPMENT GROUND RING. IF DISTANCE IS GREATER THAN 25' BUT LESS THAN 35', INSTALL A GROUND RD AT THE CENTER.
10. ICE BRIDGE GROUND ROD (TYP)
11. #2 TINNED SOLID COPPER GROUND WIRE FROM METER TO PROPOSED SERVICE ENTRANCE GROUND ROD
12. #2 TINNED COPPER GROUND WIRE FROM PROPOSED GROUND RING TO FENCE POST (TYP)
13. ISOLATED BOTTOM TOWER GROUND RING
NOTE:
[1] Ground leads from master ground bar to equipment ground ring.

TYPICAL ICE BRIDGE/GROUND BAR ELEVATION

SCALE: N.T.S.

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # C-1794

MOHICAN TRAIL/ARAB SHRINE CLUB
CTG SITE ID: NC 0010041
SPRINT SITE ID: TBD

4-6" C/C (MAX)

5-6" C/C (MAX)

CABLE GROUNDING KIT

LOWER TOWER 3/8" BAR
W/ CHERRY INSULATORS

PROPOSED TOWER

#2 AND SOLID COPPER IN 3/4" PVC FLEX (BOTH ENDS TO BE SEALED) (TYP)

10 EQUIPMENT GROUND RING (TYPICAL)

CABLE SUPPORT (TYP)

BONDING STRAP (TYP)

CABLES
NOTE:
(1) SECTOR OF ANTENNAS SHOWN

NOTE:
CADWELD "TYPES" SHOWN ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC TYPES OF CADWELDS TO BE USED FOR THIS PROJECT.

TYPICAL ANTENNA CABLE & GROUNDING SCHEMATIC

CADWELD DETAILS

SCALE: N.T.S.

SCALE: N.T.S.
TOP VIEW

NOTE:
MINIMUM SPACING OF 12" BETWEEN ALL CADDWELDS

SIDE VIEW

NOTE:
GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY

STANDARD GROUND BAR DETAIL

SCALE: N.T.S.

COPPER-CLAD STEEL GROUND ROD DETAIL

SCALE: N.T.S.

GROUNDED ROD WITH INSPECTION WELL DETAIL

SCALE: N.T.S.

WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. (CAT. # 4-6098)

INSULATORS, NEWTON INSTRUMENT CO. (CAT. # 3281-4)

COPPER GROUND BAR 3/8"x4"x20" MS, NEWTON INSTRUMENT CO. CAT. # 4-6142

NOTE:
HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION

CADWELD GROUNDING DETAIL

SCALE: N.T.S.

1/4" LOCKWASHER, NEWTON INSTRUMENT CO. (CAT. # 3015-8)

1/4" HEX BOLT, NEWTON INSTRUMENT CO. (CAT. # 3012-1)

COMMUNICATIONS TOWER GROUP LLC
15720 BRIARHILL HILL AVE., STE 300
CHARLOTTE, NC 28277

PROJECT INFORMATION:
MOHICAN TRAIL/ARAB SHRINE CLUB
CTG SITE ID: NC 0010041
SPRINT SITE ID: TBD
4510 S COLLEGE ROAD
WINSTON-SALEM, NC 27106

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