

GENERAL NOTES:

- ALL REFERENCES TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED DUKE ENERGY OR ITS DESIGNATED REPRESENTATIVE.
- 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 KNOWLEDGABLE 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.
- STRUCTURE IS DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-H STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES, ANTENNAS, AND SMALL WIND TURBINE SUPPORT STRUCTURES AND THE 2018 NORTH CAROLINA STATE BUILDING CODE.
- WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE 2018 NC BUILDING CODE (2015 IBC W/ AMENDMENTS).
- 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.
- ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE, TO INSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
- 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 VERIFICATIONS. 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.
- 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.
- 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.
- ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
- BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR. CONTRACTOR SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
- 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.
- 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
- 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 SOFTER MATERIAL SHALL BE REWORKED OR REPLACED.
- 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.
- ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.
- ALL BUILDING DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED. 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.

STRUCTURAL STEEL NOTES:

- THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS AND MANUAL OF STEEL CONSTRUCTION, LOAD AND RESISTANCE FACTOR DESIGN, 13TH EDITION.
- UNLESS OTHERWISE NOTED, ALL STRUCTURAL ELEMENTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - STRUCTURAL STEEL, ASTM DESIGNATION A36 OR A992.
 - ALL BOLTS, ASTM A325 TYPE I GALVANIZED HIGH STRENGTH BOLTS.
 - ALL NUTS, ASTM A563 CARBON AND ALLOY STEEL NUTS.
 - ALL WASHERS, ASTM F436 HARDENED STEEL WASHERS.
- ALL CONNECTIONS NOT FULLY DETAILED ON THESE PLANS SHALL BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH AISC SPECIFICATIONS AND MANUAL OF STEEL CONSTRUCTION, LOAD AND, RESISTANCE FACTOR DESIGN, 13TH EDITION.
- HOLES SHALL NOT BE FLAME CUT THRU STEEL UNLESS APPROVED BY THE ENGINEER.
- HOT-DIP GALVANIZE ALL ITEMS UNLESS OTHERWISE NOTED, AFTER FABRICATION WHERE PRACTICABLE. GALVANIZING: ASTM A123, ASTM, A153/A153M OR ASTM A653/A653M, G90, AS APPLICABLE.
- REPAIR DAMAGED SURFACES WITH GALVANIZING REPAIR METHOD AND PAINT CONFORMING TO ASTM A780 OR BY APPLICATION OF STICK OR THICK PASTED MATERIAL SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING. CLEAN AREAS TO BE REPAIRED AND REMOVE SLAG FROM WELDS. HEAT SURFACES TO WHICH STICK OR PASTE MATERIAL IS APPLIED, WITH A TORCH TO A TEMPERATURE SUFFICIENT TO MELT THE METALLICS IN STICK OR PASTE; SPREAD MOLTEN MATERIAL UNIFORMLY OVER SURFACES TO BE COATED AND WIPE OFF ANY EXCESS.
- A NUT LOCKING DEVICE SHALL BE INSTALLED ON ALL PROPOSED AND/OR REPLACED BOLTS.
- ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH TO EXCLUDE THE THREADS FROM THE SHEAR PLANE.
- ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT BE AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
- ALL ASSEMBLY AND ANCHOR BOLTS ARE TO BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED IN SECTION 8.1 OF THE AISC, "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", DATED JUNE 30, 2004.
- FLAT WASHERS ARE TO BE INSTALLED WITH BOLTS OVER SLOTTED HOLES.
- DO NOT OVER TORQUE ASSEMBLY BOLTS. GALVANIZING ON BOLTS, NUTS, AND STEEL PARTS MAY ACT AS A LUBRICANT, THUS OVER TIGHTENING MAY OCCUR AND MAY CAUSE BOLTS TO CRACK AND SNAP OFF.
- PAL NUTS ARE TO BE INSTALLED AFTER NUTS ARE TIGHT AND WITH EDGE LIP OUT. PAL NUTS ARE NOT REQUIRED WHEN SELF-LOCKING NUTS ARE PROVIDED.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.1-2010 STRUCTURAL WELDING CODE - STEEL.

FIBER NOTES:

FOR VERTICAL RUNS: ON TOWERS OR POLES, ALWAYS UNREEL THE SPOOL FROM THE TOP DOWN. ENSURE NO STRAIN IS PLACED ON THE FIRST 3 FEET OF THE CABLE, AND THAT THE CABLE IS SUPPORTED EVERY THREE FEET VERTICALLY. NEVER ALLOW THE CABLE TO EXPERIENCE THE STRAIN OF THE CABLE SPOOL WEIGHT. ANY BENDS SHALL BE SUPPORTED DIRECTLY ABOVE AND BELOW THE BEND. THE BOTTOM BEND SHALL HAVE A DRIP LOOP WITH A MINIMUM ONE FOOT BEND RADIUS AT 120°. IT IS RECOMMENDED THE FIBER BE TESTED BEFORE AND AFTER INSTALLATION FOR NO GREATER THAN .02 DB LOSS.

PLANS PREPARED FOR:

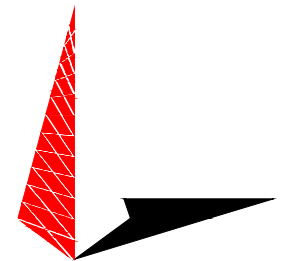


401 SOUTH WILMINGTON STREET
RALEIGH, NC 27601
OFFICE: (800) 452-2777

PROJECT INFORMATION:

**BUIES CREEK
230 SUB
T5504 (NCBCU011)**
1716 NC-27
LILLINGTON, NC 27546
(HARNETT COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net

N.C. LICENSE #C-1794

SEAL:



REV	DATE	ISSUED FOR:
2	10-28-22	CONSTRUCTION
1	08-29-22	PRELIMINARY CONSTRUCTION
0	07-07-22	PRELIMINARY CONSTRUCTION

DRAWN BY: GAH CHECKED BY: JBG

SHEET TITLE:

PROJECT NOTES

SHEET NUMBER:

N-1

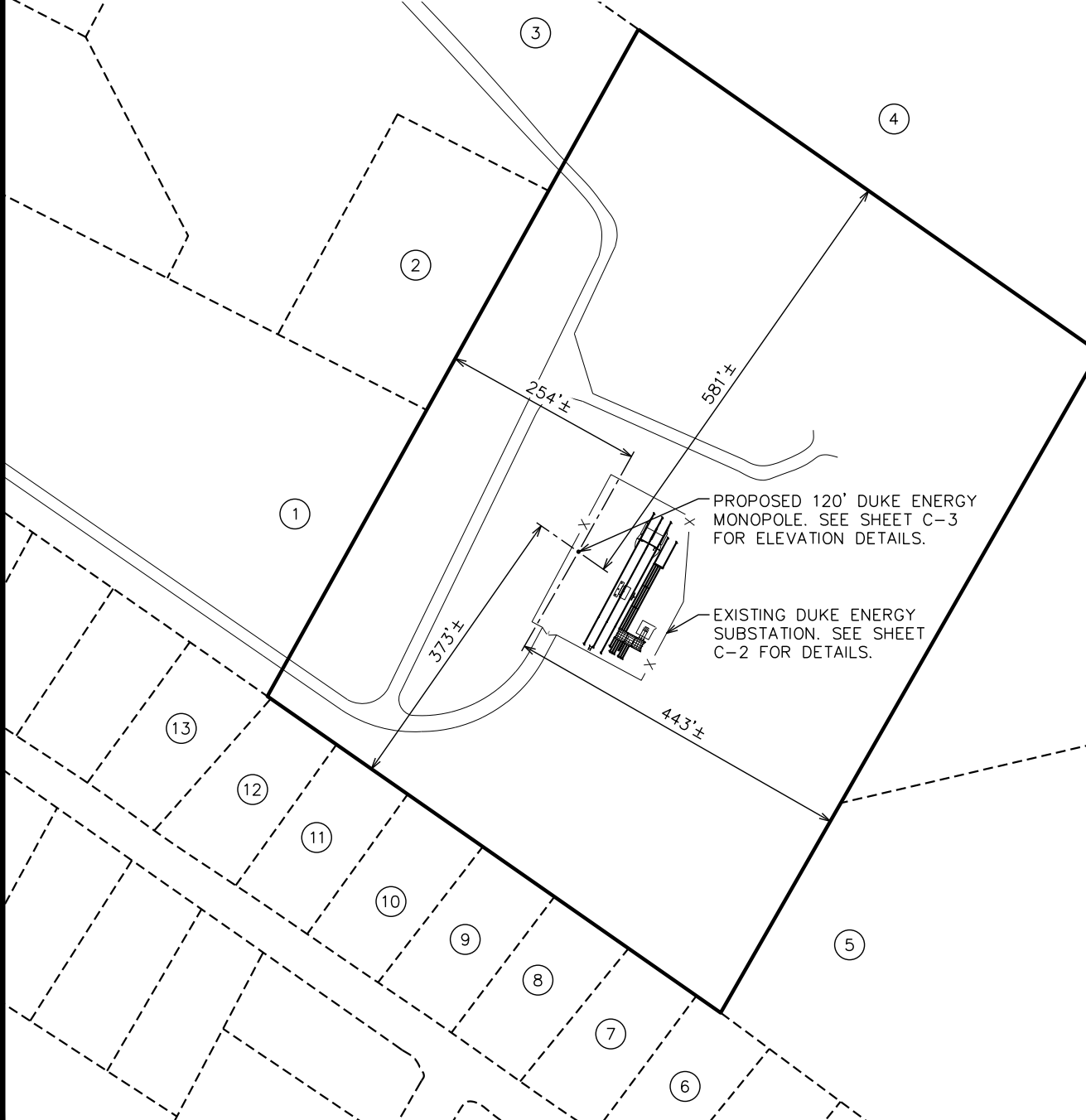
REVISION:

2

TEP#:310886.677088

NOTES

1. SITE PLAN SHOWN ON THIS PLAN IS TAKEN FROM HARNETT COUNTY GIS IMAGERY AND INFORMATION. ALL INFORMATION SHOWN ON THIS PLAN IS FOR REFERENCE ONLY. CONTRACTOR TO VERIFY THAT ALL EXISTING INFORMATION IS AS INDICATED ON SITE PLAN. CONTRACTOR TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.
2. TEP DID NOT SURVEY AND 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. THE POLE IS LOCATED IN SHADED ZONE "X," AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #3720068000J, EFFECTIVE OCTOBER 3, 2006.



ADJACENT PROPERTIES	
ITEM	OWNER INFORMATION
①	N/F WHITE WHERRY LEIGH PIN: 0680-54-3929.000 PO BOX 1388 LILLINGTON, NC 27546-0000 DB: 1438/PG: 0842
②	N/F MADRIGAL RANDALL FERNANDO & MADRIGAL VICTORIA ALEJANDRA PIN: 0680-55-7201.000 PO BOX 73 ANGIER, NC 27501 DB: 3499/PG: 0024
③	N/F MADRIGAL RANDALL FERNANDO & MADRIGAL VICTORIA ALEJANDRA PIN: 0680-55-5471.000 PO BOX 73 ANGIER, NC 27501 DB: 3499/PG: 0024
④	N/F PENNY EDWIN KENT PIN: 0680-65-5636.000 2140 NC 27 E COATS, NC 27521-0000 DB: 1181/PG: 0468
⑤	N/F TURLINGTON CHAD CHRISTOPHER & TURLINGTON JAMIE CARROLL PIN: 0680-64-7238.000 384 MCLAMB ROAD COATS, NC 27521-0000 DB: 3410/PG: 0396
⑥	N/F POTTER DOROTHY T PIN: 0680-64-0147.000 265 ROCKY RUN LANE LILLINGTON, NC 27546-6157 DB: 2456/PG: 0504
⑦	N/F CARAWAN DELLA POTTER PIN: 0680-54-9253.000 245 ROCK RUN LN LILLINGTON, NC 27546-6157 DB: 3402/PG: 0161
⑧	N/F BLALOCK RICKY WAYNE & BLALOCK MELANIE C PIN: 0680-54-8360.000 215 ROCKY RUN LN LILLINGTON, NC 27546-0000 DB: 1702/PG: 0946
⑨	N/F CHAVIS ANTONIO PIN: 0680-54-7376.000 195 ROCKY RUN LN LILLINGTON, NC 27546 DB: 3193/PG: 0004

⑩	N/F BOOK NOEL C & BOOK LISA A PIN: 0680-54-6482.000 175 ROCKY RUN LN LILLINGTON, NC 27546-6145 DB: 2675/PG: 0570
⑪	N/F FERRELL PHILLIP & FERRELL KAY C PIN: 0680-54-5488.000 155 ROCKY RUN LN LILLINGTON, NC 27546 DB: 3261/PG: 0842
⑫	N/F STONEROCK WILLIAM & STONEROCK BECKY PIN: 0680-54-4594.000 135 ROCKY RUN LN LILLINGTON, NC 27546 DB: 1667/PG: 0671
⑬	N/F GUY RICHARD B PIN: 0680-54-4601.000 111 ROCKY RUN LN LILLINGTON, NC 27546 DB: 1658/PG: 0589

LEGEND	
	EXIST. PROPERTY LINE
	EXIST. UTILITY POLE
	EXIST. LIGHT POLE
	EXIST. HYDRANT
	EXIST. TELCO PEDESTAL
	PROPERTY CORNER
	EXIST. CONTOUR LINE
	EDGE OF PAVEMENT
	OVERHEAD WIRE
	RIGHT-OF-WAY
	CHAIN LINK FENCE
	EXISTING TREE LINE

PLANS PREPARED FOR:

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

SEAL:

REV	DATE	ISSUED FOR:
4	02-23-24	JURISDICTION COMMENTS
3	05-30-23	ADD POLE CONNECTION
2	10-28-22	CONSTRUCTION
1	08-29-22	PRELIMINARY CONSTRUCTION

DRAWN BY: GAH | CHECKED BY: JBG

SHEET TITLE:

SITE PLAN

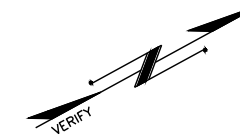
SHEET NUMBER: **C-1** | REVISION: **4**
TEP#: 310886.677088


SITE PLAN
SCALE: 1" = 200'



NOTES

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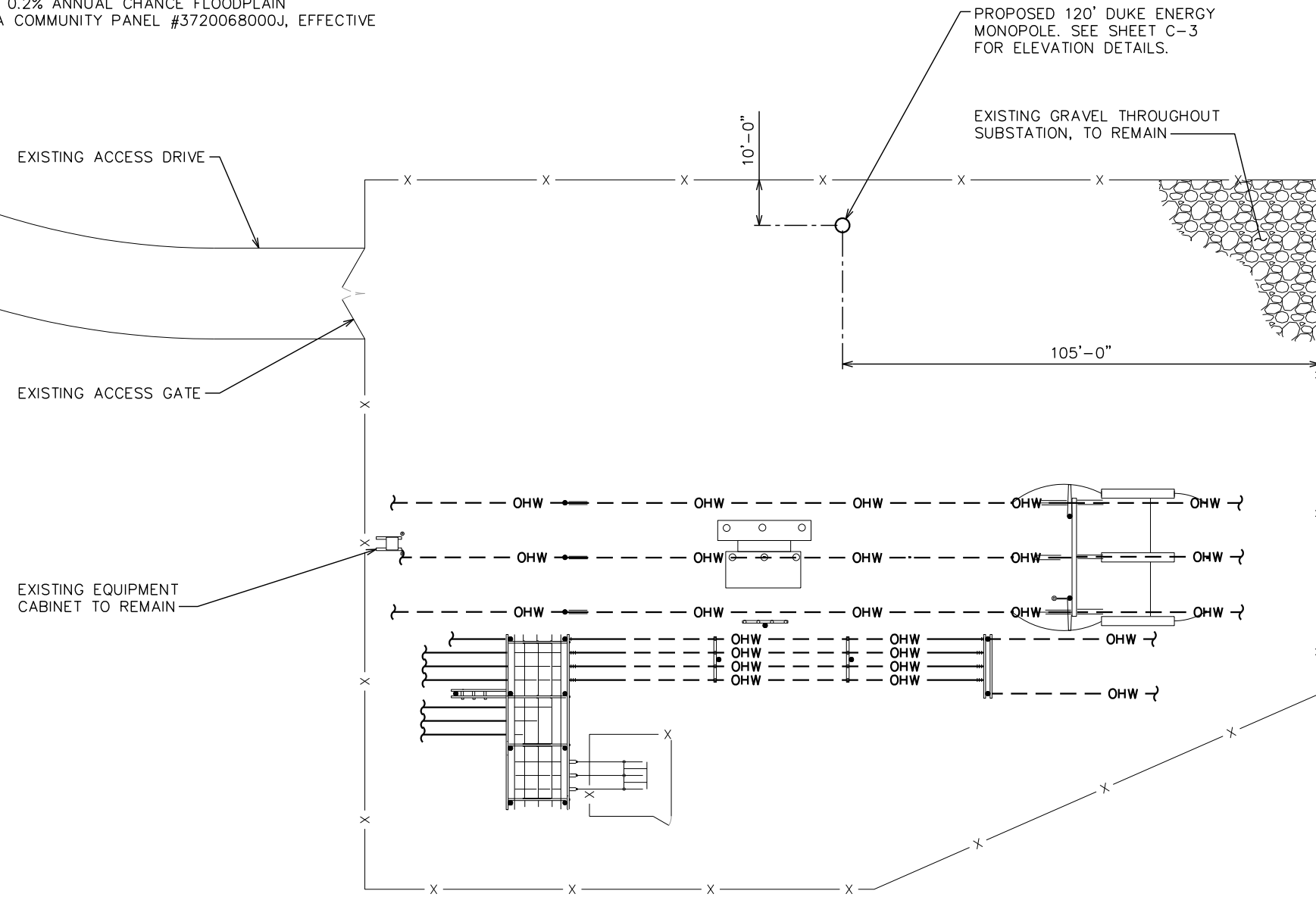
SEAL:

 October 28, 2022

REV	DATE	ISSUED FOR:
2	10-28-22	CONSTRUCTION
1	08-29-22	PRELIMINARY CONSTRUCTION
0	07-07-22	PRELIMINARY CONSTRUCTION

DRAWN BY: GAH CHECKED BY: JBG

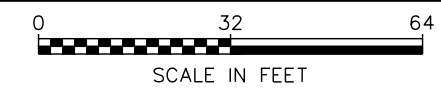
SHEET TITLE:
COMPOUND DETAIL

SHEET NUMBER: **C-2** REVISION: **2**
 TEP#: 310886.677088



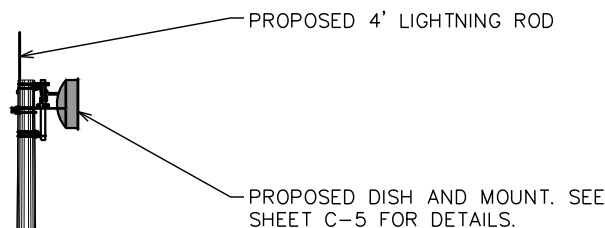
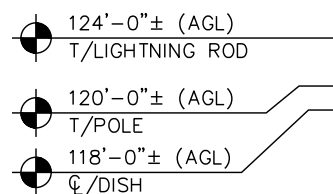
COMPOUND DETAIL

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



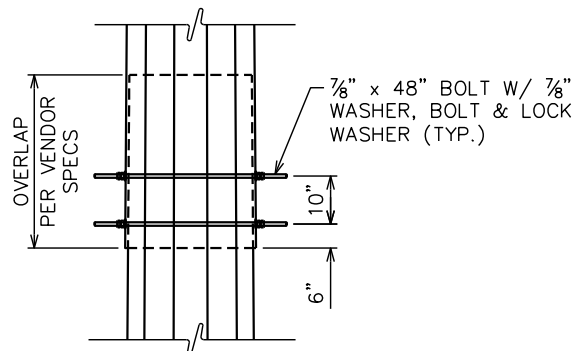
NOTE:

- POLE TO REMAIN A GALVANIZED COLOR.
- POLE SHALL BE LIT ONLY IF REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION.



DETAIL NOTE:

IF POLE SECTIONS ARE JACKED TOGETHER PRIOR TO LIFTING AND SETTING THE POLE IN THE HOLE, THE POLE SECTIONS SHALL BE BOLTED AT THE SLIP JOINTS.



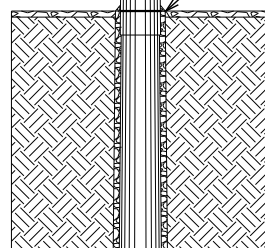
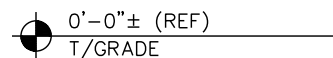
POLE SLIP JOIN DETAIL

SCALE: N.T.S.

PROPOSED DISH AND MOUNT. SEE SHEET C-5 FOR DETAILS.

PROPOSED 140', CLASS H10 POLE BY VALMONT. REFER TO MANUFACTURER DESIGN DRAWINGS FOR DETAILS.

PROPOSED POLE FOUNDATION. SEE SHEET C-4, FOR DETAILS.



PLANS PREPARED FOR:

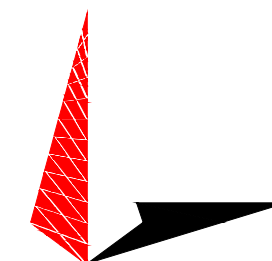


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SEAL:



3	05-30-23	ADD POLE CONNECTION
2	10-28-22	CONSTRUCTION
1	08-29-22	PRELIMINARY CONSTRUCTION
0	07-07-22	PRELIMINARY CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GAH | CHECKED BY: JBG

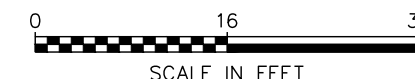
SHEET TITLE:

POLE ELEVATION

SHEET NUMBER: C-3	REVISION: 3 TEP#: 310886.677088
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POLE ELEVATION

SCALE: 1/6" = 1'-0"



REFERENCED DOCUMENTS

DOCUMENT	REMARKS	DATE
GEOTECHNICAL REPORT	TEP PROJECT NO.: 310886.677089	07-29-22
POLE DESIGN DRAWINGS	VALMONT INDUSTRIES	06-22-22
STRUCTURAL ANALYSIS	TEP PROJECT NO.: 310886.677091	08-25-22

CONTRACTOR SHALL FIELD VERIFY ALL: DIMENSIONS, QUANTITIES, PART NUMBERS AND COAX/ANTENNA PLACEMENTS PRIOR TO: BIDDING ORDERING MATERIALS, AND CONSTRUCTION.

APPLIED LOADS

AXIAL	11898 LBS
MOMENT	848418 LB-FT
SHEAR	12785 LBS

DESIGN REACTIONS TAKEN FROM THE STRUCTURAL ANALYSIS LISTED IN THE REFERENCED DOCUMENTS CHART ABOVE.

DESIGN NOTE:

REFER TO VALMONT INDUSTRIES DRAWINGS FOR FINAL POLE AND FOUNDATION CONSTRUCTION, AND ASSEMBLY DETAILS. ANY INFORMATION SHOWN IN THIS DRAWING SHALL BE SUPERSEDED BY MANUFACTURER DESIGN DOCUMENTS.

FOUNDATION CONSTRUCTION:

THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT REFERENCED ABOVE. CONTRACTOR SHALL CONSULT THE GEOTECHNICAL REPORT PRIOR TO BIDDING AND CONSTRUCTION.

FOUNDATION DESIGN

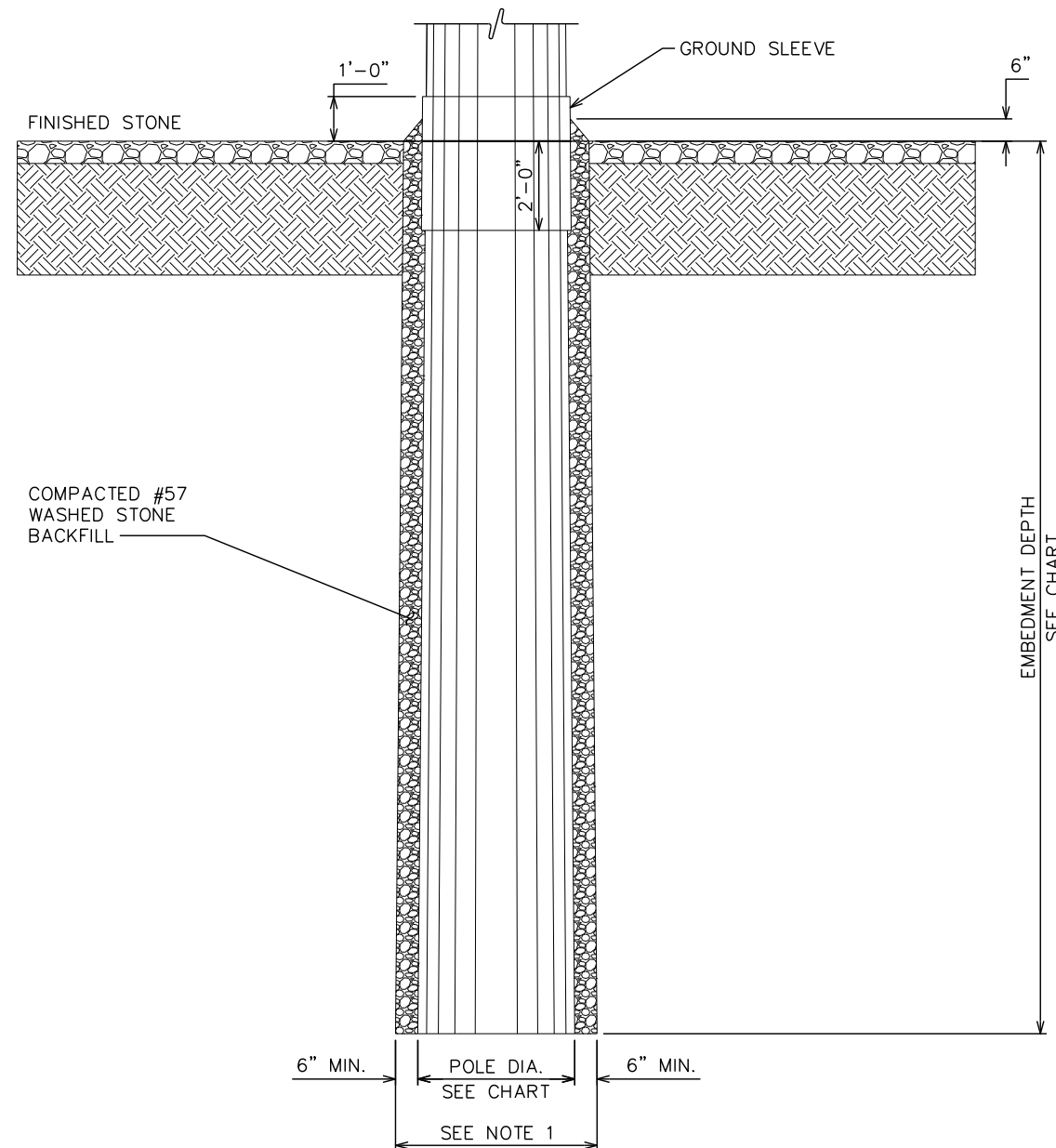
TOP OD	BASE OD	EMBEDMENT DEPTH	OVERALL POLE LENGTH
37.27"	41.00"	20'	140.00'

NOTE:

BEARING PLATE DETAILS ARE SPECIFIED IN THE POLE MFG'S DRAWINGS. VERIFY PRIOR TO CONSTRUCTION.

BACKFILL NOTES:

- HOLE SHALL BE EXCAVATED BY AN AUGER OF SUFFICIENT SIZE TO ALLOW A MINIMUM OF 6" BETWEEN THE SIDES OF THE HOLE AND THE POLE SO THAT PROPER TAMPING/RODDING OF THE GRAVEL BACKFILL CAN BE PERFORMED FROM THE BOTTOM OF THE HOLE TO THE GROUND SURFACE.
- IF THE HOLE IS DRILLED DEEPER THAN REQUIRED. THE EXTRA DEPTH IS TO BE BACKFILLED WITH #57 STONE AND TAMPED BEFORE THE POLE IS SET. IF THE BOTTOM OF THE HOLE IS SOFT OR IF WATER IS IN THE HOLE, #57 STONE SHALL BE USED TO FILL THE OVER-EXCAVATION.
- THE #57 STONE BACKFILL SHALL BE PLACED IN EVEN LIFTS WITH A MAXIMUM DEPTH OF 6" PER LIFT. THE STONE BACKFILL SHALL BE COMPACTED BY MECHANICALLY OR MANUALLY RODDING EACH LIFT AFTER PLACEMENT IN THE HOLE. THE MAXIMUM UNIFORM DENSITY FROM THE BOTTOM OF THE HOLE TO THE NATURAL GROUND SURFACE SHALL BE ATTAINED.
- AFTER COMPLETION OF BACKFILLING, THE BACKFILL SHALL BE BANKED AROUND THE POLE TO AN ELEVATION OF 6" ABOVE THE EXISTING GRADE.



PLANS PREPARED FOR:

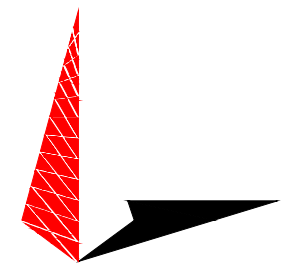


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October 28, 2022

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REV	DATE	ISSUED FOR:

DRAWN BY: GAH CHECKED BY: JBG

SHEET TITLE:

**POLE FOUNDATION
DETAIL & NOTES**

SHEET NUMBER:

C-4

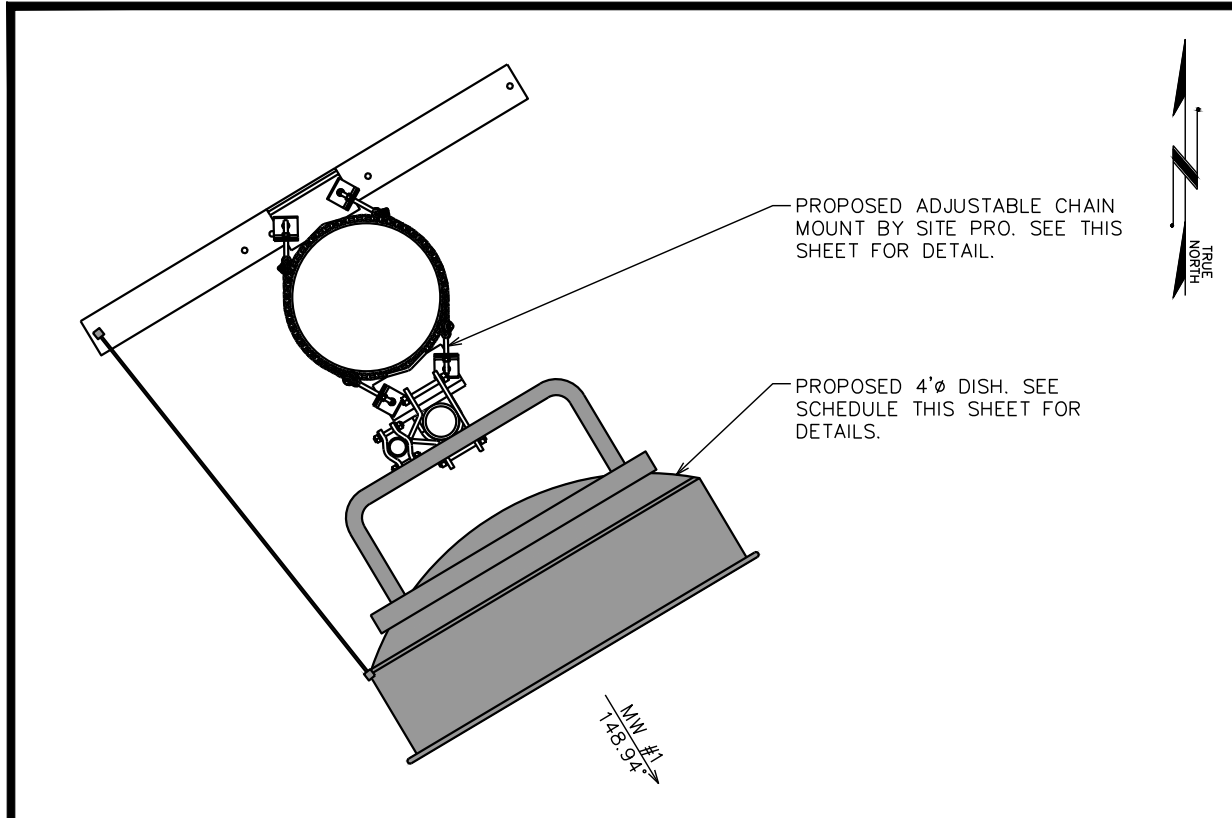
REVISION:

2

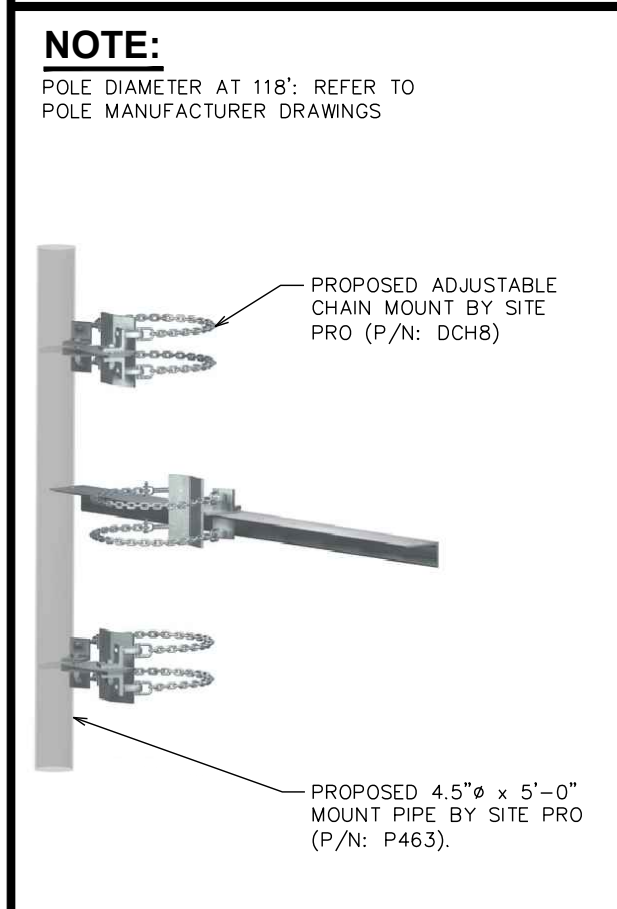
TEP#:310886.677088

POLE FOUNDATION DETAIL

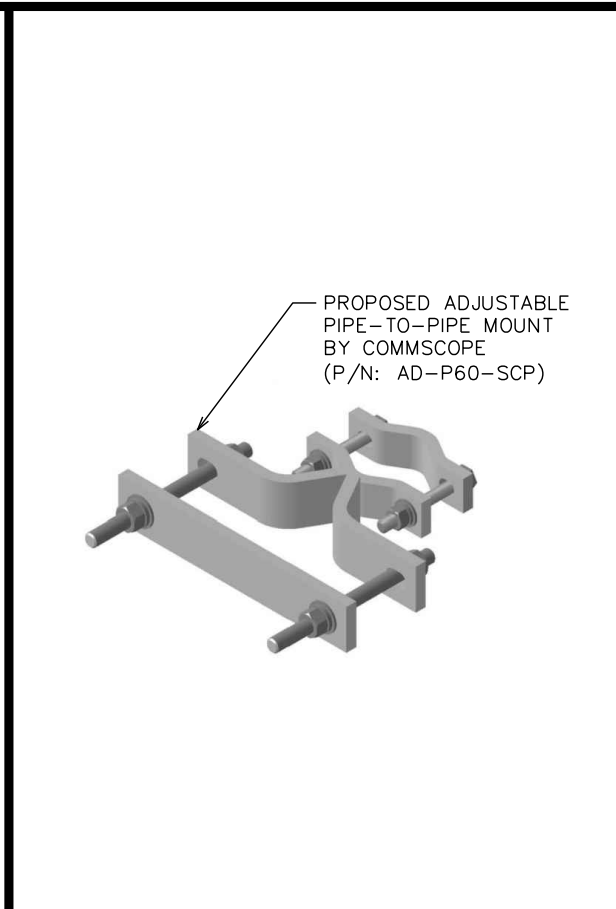
SCALE: N.T.S.



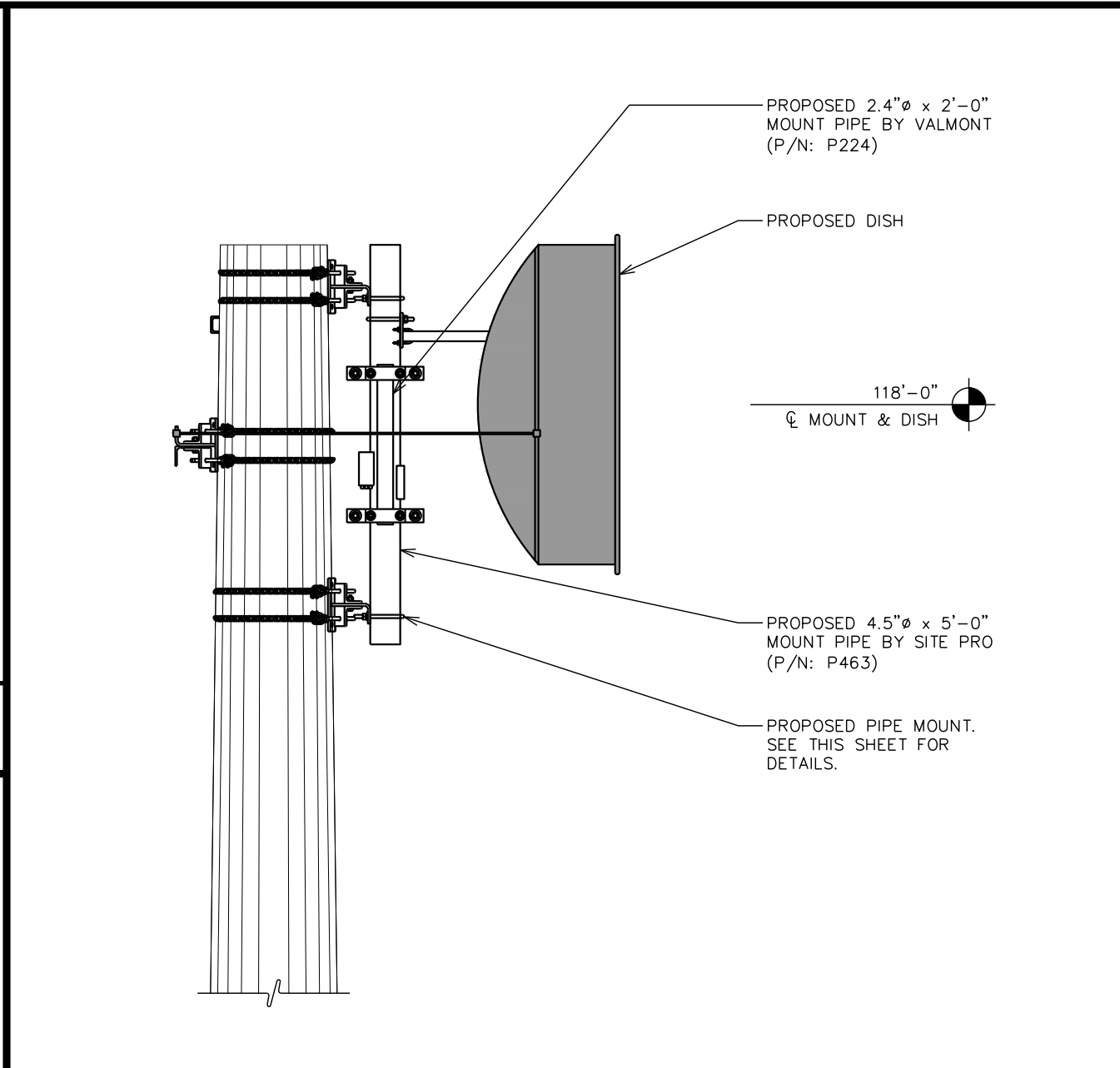
PROPOSED DISH @ 118'-0"
 SCALE: 1/2" = 1'-0"
 SCALE IN FEET



PROPOSED PIPE MOUNT
 SCALE: N.T.S.



PROP. PIPE-TO-PIPE MOUNT
 SCALE: N.T.S.



PROPOSED PIPE MOUNT PROFILE
 SCALE: N.T.S.

PROPOSED ANTENNA/CABLE SCHEDULE

TECHNOLOGY	MANUFACTURER (MODEL #)	MOUNTING HEIGHT	AZIMUTH	CABLE SIZE	CABLE LENGTH
DISH	RADIOWAVES (HPD4-5.2)	Ø @ 118'-0"	148.94°	(1) CAT5e	*270'±
-	CAMBIUM (PMP450i NON-INTEGRATED)				

*CONTRACTOR SHALL FIELD VERIFY COAX LENGTH PRIOR TO CONSTRUCTION.

PROPOSED ANTENNA/COAX SCHEDULE
 SCALE: N.T.S.

PLANS PREPARED FOR:

401 SOUTH WILMINGTON STREET
 RALEIGH, NC 27601
 OFFICE: (800) 452-2777

PROJECT INFORMATION:

**BUIES CREEK
 230 SUB
 T5504 (NCBCU011)**

1716 NC-27
 LILLINGTON, NC 27546
 (HARNETT COUNTY)

PLANS PREPARED BY:

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

SEAL:

October 28, 2022

REV	DATE	ISSUED FOR:
2	10-28-22	CONSTRUCTION
1	08-29-22	PRELIMINARY CONSTRUCTION
0	07-07-22	PRELIMINARY CONSTRUCTION

DRAWN BY: GAH CHECKED BY: JBG

SHEET TITLE:

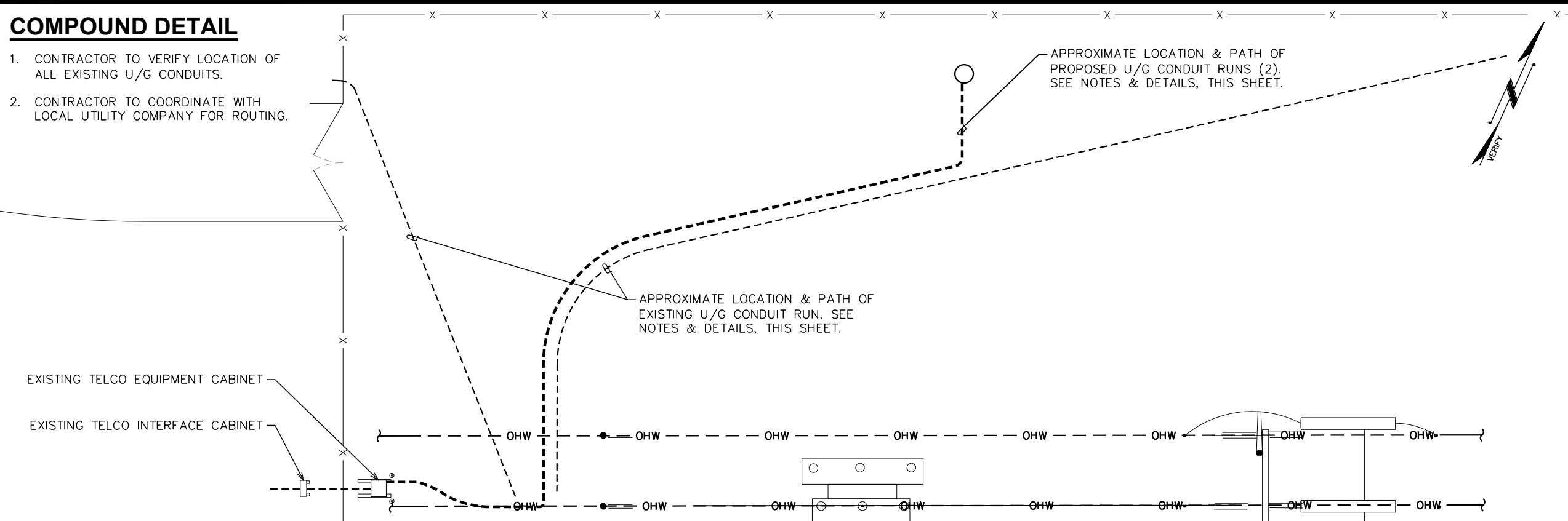
**ANTENNA MOUNTING
 DETAILS**

SHEET NUMBER: **C-5** REVISION: **2**

TEP#: 310886.677088

COMPOUND DETAIL

1. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING U/G CONDUITS.
2. CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANY FOR ROUTING.



COMPOUND DETAIL

SCALE: 1" = 20'

PLANS PREPARED FOR:

401 SOUTH WILMINGTON STREET
RALEIGH, NC 27601
OFFICE: (800) 452-2777

PROJECT INFORMATION:

**BUIES CREEK
230 SUB
T5504 (NCBCU011)**

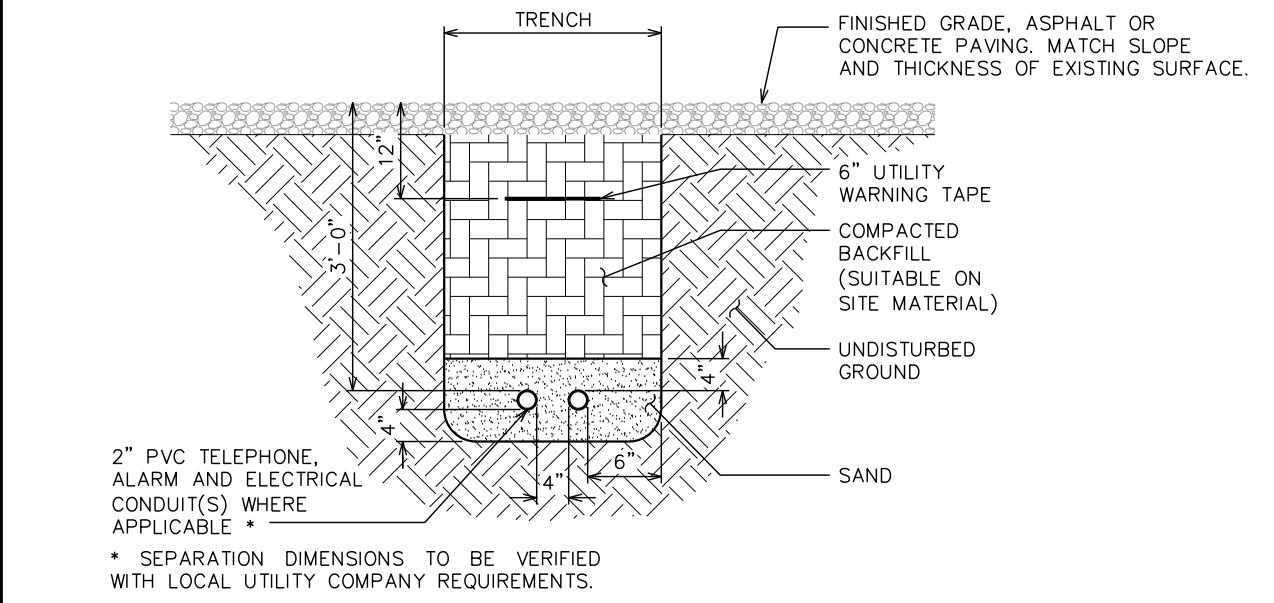
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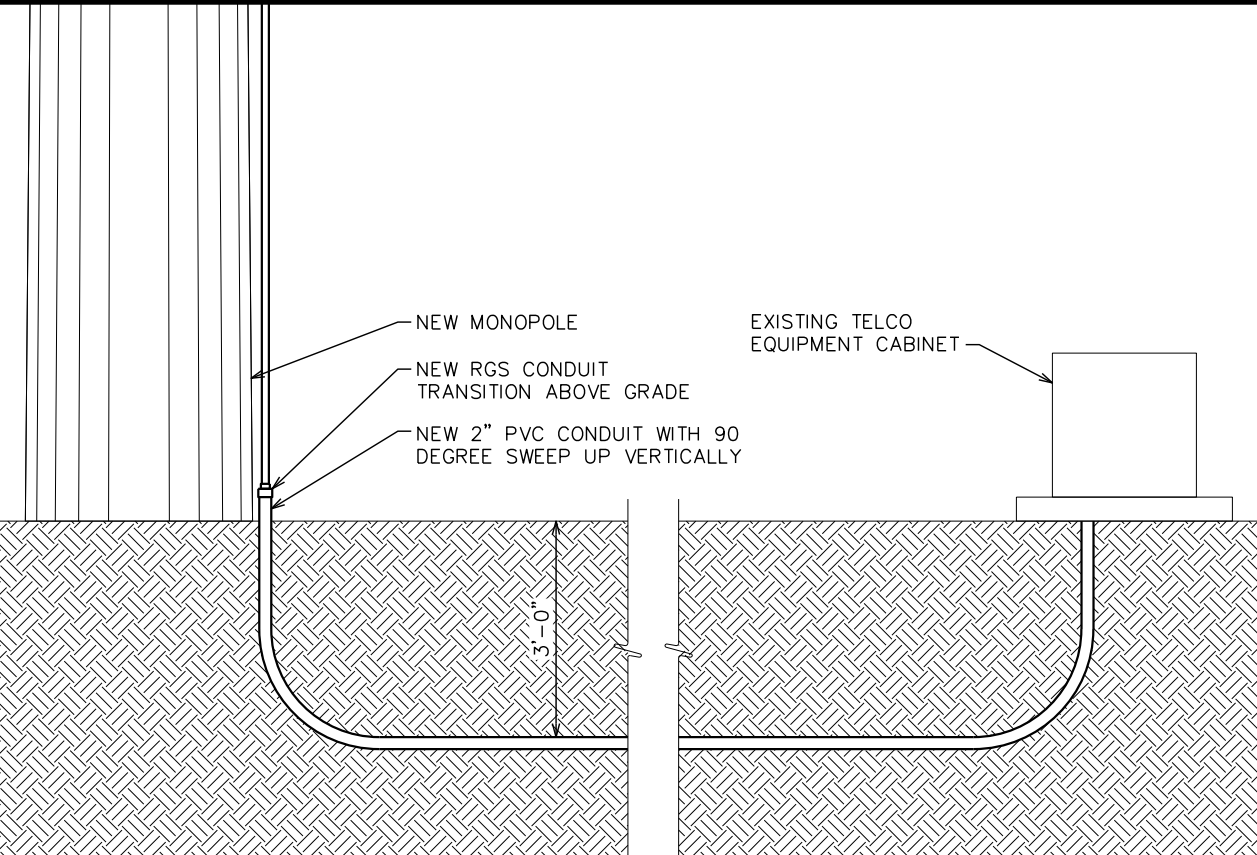
NOTES:

1. ACTUAL SEPARATION OF CONDUITS TO BE DETERMINED BY SITE SPECIFIC REQUIREMENTS.
2. PROVIDE PVC CONDUIT BELOW GRADE.
3. PROVIDE RGS CONDUIT AND ELBOWS AT STUB UP LOCATIONS (I.E. SERVICE POLES, EQUIPMENT, ETC.)
4. PROVIDE RGS CONDUIT FOR INSTALLATIONS BELOW PARKING LOTS AND ROADWAYS.



UNDERGROUND CONDUIT(S) TRENCH DETAIL

SCALE: N.T.S.



CONDUIT ROUTING DETAIL

SCALE: N.T.S.

SEAL:

May 30, 2023

3	05-30-23	ADD POLE CONNECTION
2	10-28-22	CONSTRUCTION
1	08-29-22	PRELIMINARY CONSTRUCTION
0	07-07-22	PRELIMINARY CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GAH CHECKED BY: JBG

SHEET TITLE:

UNDERGROUND CONDUIT DETAILS

SHEET NUMBER: **C-6** REVISION: **3**

TEP#: 310886.677088

SCOPE:

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

CODES:

1. THE INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND CODES. THESE INCLUDE BUT ARE NOT LIMITED TO THE LATEST ADOPTED EDITIONS OF:
 - A. THE NATIONAL ELECTRICAL SAFETY CODE
 - B. THE NATIONAL ELECTRIC CODE – NFPA-70
 - C. REGULATIONS OF THE SERVING UTILITY COMPANY
 - D. LOCAL AND STATE AMENDMENTS
 - E. THE INTERNATIONAL ELECTRIC CODE – IEC (WHERE APPLICABLE)
2. PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR.
3. AFTER COMPLETION AND FINAL INSPECTION OF THE WORK, THE OWNER SHALL BE FURNISHED A CERTIFICATE OF COMPLETION AND APPROVAL.

TESTING:

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

GUARANTEE:

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

UTILITY CO-ORDINATION:

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

EXAMINATION OF SITE:

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

CUTTING, PATCHING AND EXCAVATION:

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

RACEWAYS / CONDUITS GENERAL:

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

EXTERIOR CONDUIT:

1. EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.
2. WHERE INSTALLED ON EXTERIOR STRUCTURES OR EXPOSED TO DAMAGE, THE CONDUIT SHALL BE RIGID STEEL.
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.
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.


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
	●		EXOTHERMIC WELD
	⊗		GROUND ROD WITH INSPECTION WELL

PLANS PREPARED FOR:

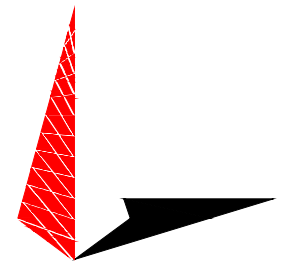


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PROJECT INFORMATION:

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PLANS PREPARED BY:



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DRAWN BY: GAH | CHECKED BY: JBG

SHEET TITLE:

ELECTRICAL
NOTES

SHEET NUMBER: | REVISION:

E-1

2

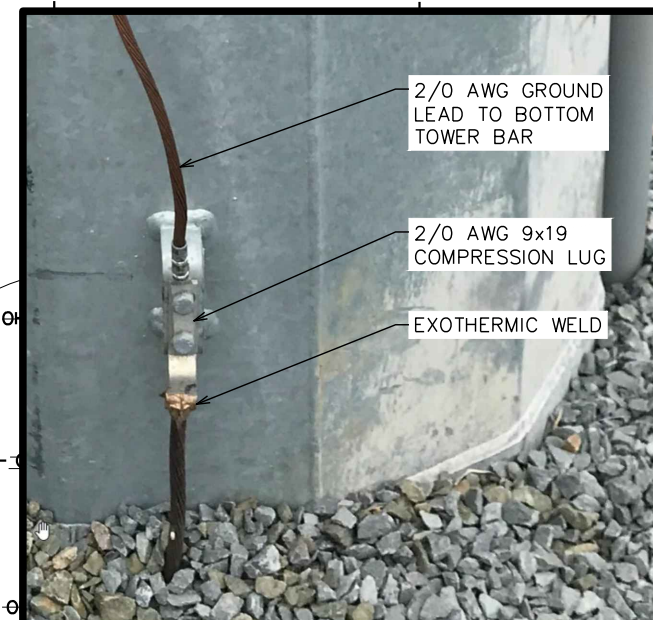
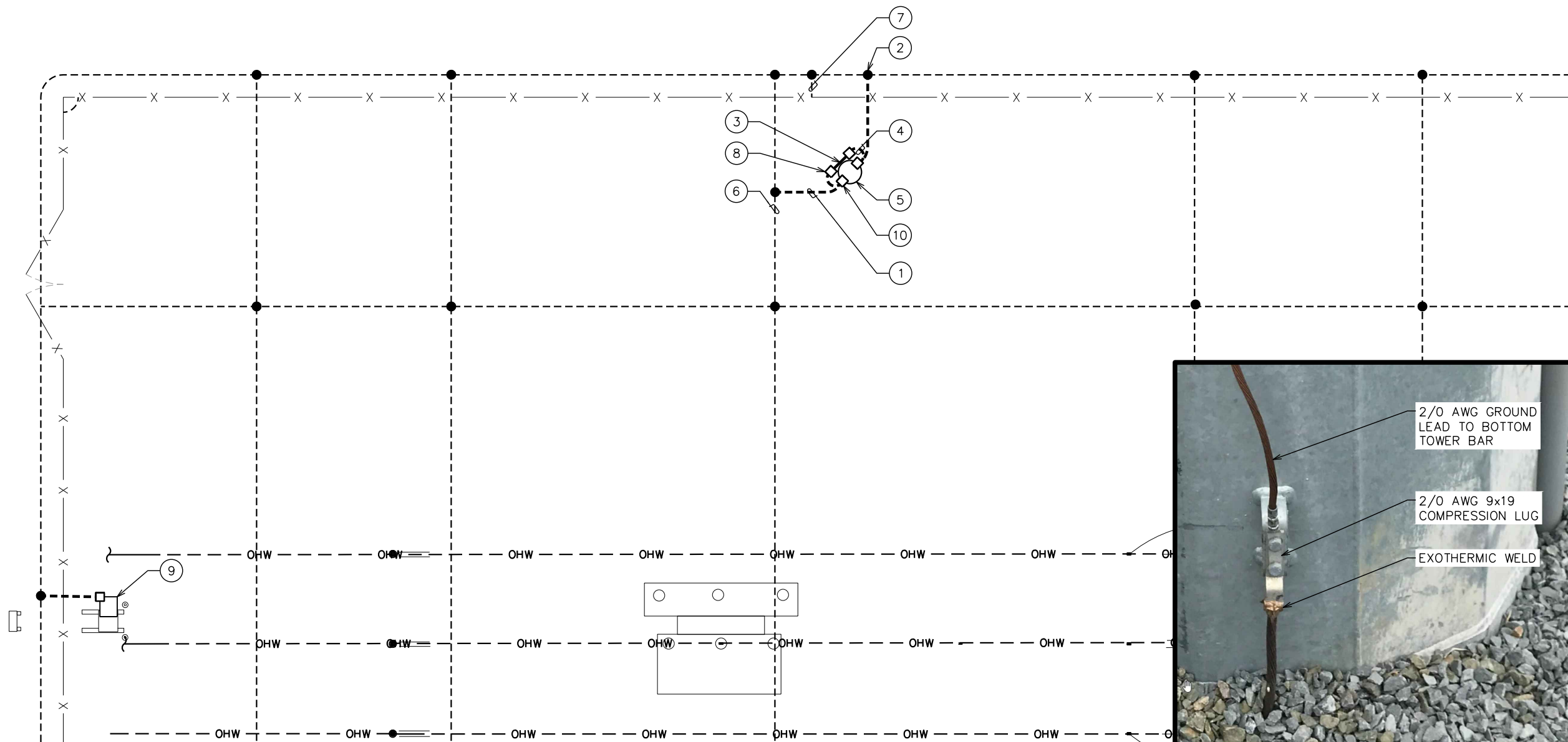
TEP#: 310886.677088

DRAWING NOTES:

- ① EXOTHERMIC WELD FROM EXISTING GROUND SYSTEM (CONTRACTOR TO VERIFY LOCATION) TO GROUND BRACKET (TYP OF 2) ON POLE. SEE THIS SHEET FOR DETAILS.
- ② EXOTHERMIC WELD (TYP)
- ③ POLE BOTTOM BUSS BAR
- ④ POLE BUSS BAR BONDING CONDUCTOR (TYP OF 2) TO EXISTING POLE GROUNDING BRACKETS
- ⑤ PROPOSED POLE
- ⑥ EXISTING SUBSTATION GROUND SYSTEM
- ⑦ EXISTING FENCE GROUND CONNECTION
- ⑧ MECHANICAL GROUND LUG (TYP)
- ⑨ LPU (LIGHTNING PROTECTION UNIT)
- ⑩ GROUNDING BRACKET AT BOTTOM OF POLE (TYP OF 2). SEE DETAIL THIS SHEET.

GROUNDING NOTES

- 1. CONTRACTOR SHALL VERIFY THAT GROUNDING ELECTRODES SHALL BE CONNECTED IN A RING USING 2/0 AWG OR 4/0 AWG (CONTRACTOR TO VERIFY EXISTING GROUND MAT SIZING) BARE TINNED COPPER WIRE, THE TOP OF THE GROUND RODS AND THE RING CONDUCTOR SHALL BE 30" BELOW FINISHED GRADE. GROUNDING ELECTRODES SHALL BE DRIVEN ON 10'-0" CENTERS. (MINIMUM; 15'-0" MAX, PROVIDE AND INSTALL AS REQUIRED PER PLAN BELOW).
- 2. GROUND RING CONNECTION CONDUCTORS SHALL BE OF EQUAL LENGTH, MATERIAL, AND BONDING TECHNIQUE.
- 3. PROVIDE AND INSTALL GROUNDING CONNECTIONS SHOWN BELOW AS NEEDED PER EXISTING SITE GROUNDING SYSTEM. CONTRACTOR SHALL VERIFY ALL EXISTING SITE GROUNDING CONDITIONS BEFORE STARTING WORK OR PURCHASING EQUIPMENT.
- 4. BOND POLE GROUND BAR TO EXTERNAL GROUND RING WITH 2 RUNS OF 2/0 OR 4/0 AWG (CONTRACTOR TO VERIFY EXISTING GROUND MAT SIZING) BARE, TINNED, SOLID COPPER CONDUCTOR IN PVC. CONNECT BAR END WITH 2 HOLE LUG, AND EXOTHERMICALLY WELD THE OTHER END TO THE EXTERNAL GROUND ROD.
- 5. BONDING CONDUCTORS SHALL BE ROUTED THROUGH A 3/4" PVC CONDUIT SLEEVE RUN UNDER THE FOUNDATION. REFER TO THE GROUNDING PLAN BELOW.
- 6. ALL CONDUIT, GROUND GRID CONDUCTOR AND UNDERGROUND FEEDER CIRCUIT LOCATIONS ARE APPROXIMATE. HAND DIG TO A MINIMUM OF 36" PRIOR TO MACHINERY EXCAVATIONS WHERE THERE IS A POTENTIAL FOR IMPACTING EXISTING UNDERGROUND COMPONENTS.



GROUND BRACKET DETAIL

SCALE: N.T.S.

POLE GROUNDING PLAN

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



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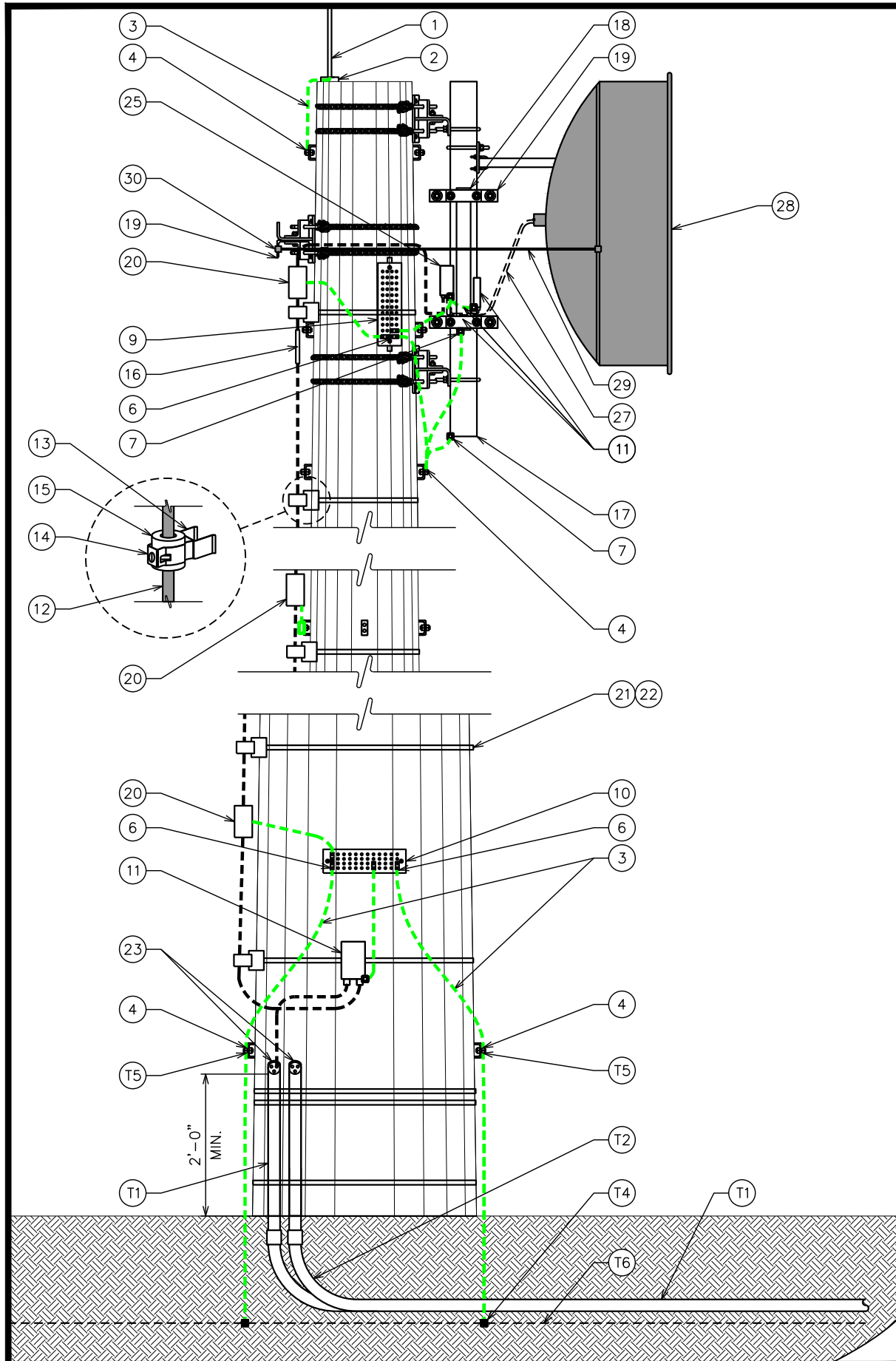
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DRAWN BY: GAH | CHECKED BY: JBG

SHEET TITLE:
POLE GROUNDING AND ROUTING PLAN

SHEET NUMBER: **E-2** | REVISION: **2**
TEP#: 310886.677088



MONOPOLE ELEVATION (FRONT VIEW)


SCALE: N.T.S.

BILL OF MATERIALS - TELECOMMUNICATIONS

ITEM	QTY	UNIT	MAXIMO PART NUMBER	DESCRIPTION
1	1	EA	1505632	AIR TERMINAL, COPPER CLAD AIR BASE, 1/2" DIA. X 48"
2	1	EA	1479387	TERMINAL, BRONZE AIR BASE, 1/2" DIA. INTERNALLY THREADED HUB
3	1	RO	1502506	WIRE/CABLE, 2/0 AWG, CU, SOFT DRAWN, 19 STR, BARE CU, CLASS B, PACKAGED IN 25' HAND COILS
4	6	EA	1503888	TERMINAL, LUG, 2/0 AWG CONDUCTOR, (2) 1/2" HOLE BLACK, 1-3/4" CTR
5	1	EA	1612775	TERMINAL, LUG, 2/0 AWG CONDUCTOR, (2) 1/2" HOLE, 1" CTR , BLACK, LONG
6	3	EA	1504572	TERMINAL, LUG, 2/0 AWG, COMP , CU , (2) 3/8" HOLE, 1" CTR
7	2	EA	1505554	TERMINAL, LUG, 2/0 AWG CONDUCTOR, SGL HOLE 3/8" POST F/
8	3	EA	LOOSE	TERMINAL, LUG, # 6 AWG , (2) 1/2" HOLE, 1 3/4" SPACE BLUE, LONG
9	1	EA	1525371	BAR, GROUND, 2" WD X 12" LG X 1/4" THK, W/ INSULATORS & BRACKETS, (18) PRE-DRILLED 7/16" HOLE
10	1	EA	1505048	BAR, GROUND, BUSS, 4" WD X 14" LG X 1/4" THK, TINNED, W/ HARWARE
11	1	KT	1539777	LPU KIT, GROUNDING, LIGHTNING PROTECTION UNIT, ETHERNET CABLE, PREFITTED CABLE GLAND,
12	1	SP	1539773	WIRE/CABLE,ELECTRICAL, CAT5, 4 PAIR, 24 AWG, CU, SHIELDED INSULATION
13	4	PK	1473338	BRACKET, UNIVERSAL STANDOFF MOUNTING, NO ADAPTER
14	4	PK	1505037	HANGER, CABLE, SNAP-IN STACKABLE, F/ 1-5/8" CABLE
15	4	PK	1564840	CUSHION, BARREL, 1-5/8", UNIVERSAL, 14-36MM, SNAP-IN, 10 PER BOX
16	1	EA	1554484	GRIP,CABLE, HOISTING, 3/8" CABLE, SS, PRE-LACED
17	1	EA	1503531	PIPE, 5' LG, ALUM, 4-1/2" OD, F/ ANTENNA MOUNT
18	1	EA	1479381	PIPE, 2-3/8", 2' LG, PLAIN ENDS, STL, F/ ANTENNA MOUNT
19	1	EA	1501289	BRACKET, MOUNTING, HOT DIP GALV STL, BOOM GATE CLAMP SET, 4-1/2" TO 12", 60 DEG ANGLE LEGS
20	3	EA	1539778	KIT, SHIELD GROUNDING, GROUND STRIPS, MASTIC TAPE, ELECTRICAL TAPE, GROUND BOLT & NUT, RETAINING ZIP TIES, F/
21	4	RO	1490605	BAND,STRAPPING, 3/4" WD, 100' LG, 0.03" THK, 316 SS, 1800 LB
22	100	EA	1490606	BUCKLE, BANDING, 3/4" WD, SS
23	2	EA	904105	HEAD,SERVICE ENTRANCE,RIGID,2",SLIP-ON,PVC,WEATHER HD,STD PKG/5
24	1	EA	1545989	BRACKET, MOUNTING, CAMBIUM TILT BRACKET ASSY
25	1	EA	1539782	MODULE, RADIO FREQUENCY, CAMBIUM 5X GHZ PUMP 450I CONNECTORIZED SUBSCRIBER MODULE
26	1	EA	1588737	CHAIN MOUNT, FLUSH ANTENNA, CHAIN MOUNT, TIE BACK ARMS, U-BOLTS, F/ DISH ANTENNA W/ SIDE SUPPORT BRACKETS, F/ 4-1/2" DIA -
27	2	EA	1603548	JUMPER, COAX, 5' LG, N MALE TO N MALE, LMR-400, W/ WEATHER BOOTS
28	1	EA	1564958	ANTENNA, PARABOLIC DISH, 5.25-5.85GHZ, N-FEMALE CONNECTOR, 4' HPDP, 34.1 DBI GAIN
29	1	EA	1501100	BRACKET, MOUNTING, STABILIZER BARS-STIFF ARM, F/ 4' & 6' DISH ANTENNA SERIES SP
30	1	EA	NONE	STIFF ARM SUPPORT BRACKET FOR 2-3/8 IN OD PIPE

BILL OF MATERIALS - TRANSMISSION

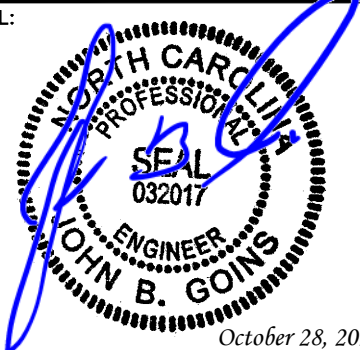
ITEM	QTY	UNIT	MAXIMO PART NUMBER	DESCRIPTION
T1	32	EA	61354	CONDUIT, RIGID, HEAVY WALL, 2", 10' LG, SCH 40, PVC, LG BELLED ONE END, RATED F/ 90 DEG C
T2	2	EA	79433	ELBOW,CONDUIT, RIGID, 2", GRAY PVC, 90 DEG, 9-1/2" RADIUS, PLAIN END, F/ 2" CONDUIT; PACKAGING: 15 PER PACK
T3	16	FT	4177461	WIRE/CABLE, ELECTRICAL, BARE, GROUND, 19 STR SOL SD, 9 AWG, DEAD SOFT ANNEALED COPPERCLAD
T4	1	BX	50130218	POWDER, WELDING, EXO., #300PLUS20, LIGHT GREEN
T5	2	EA	67295	TERMINAL, TIN PLTD CU CONDUCTOR, WELDED CONDUCTOR CONNECTION, (2) 1/2" HOLE 1-3/4" CTR
T6	T5		N/A	EXISTING SUBSTATION GROUND MAT

PLANS PREPARED FOR:

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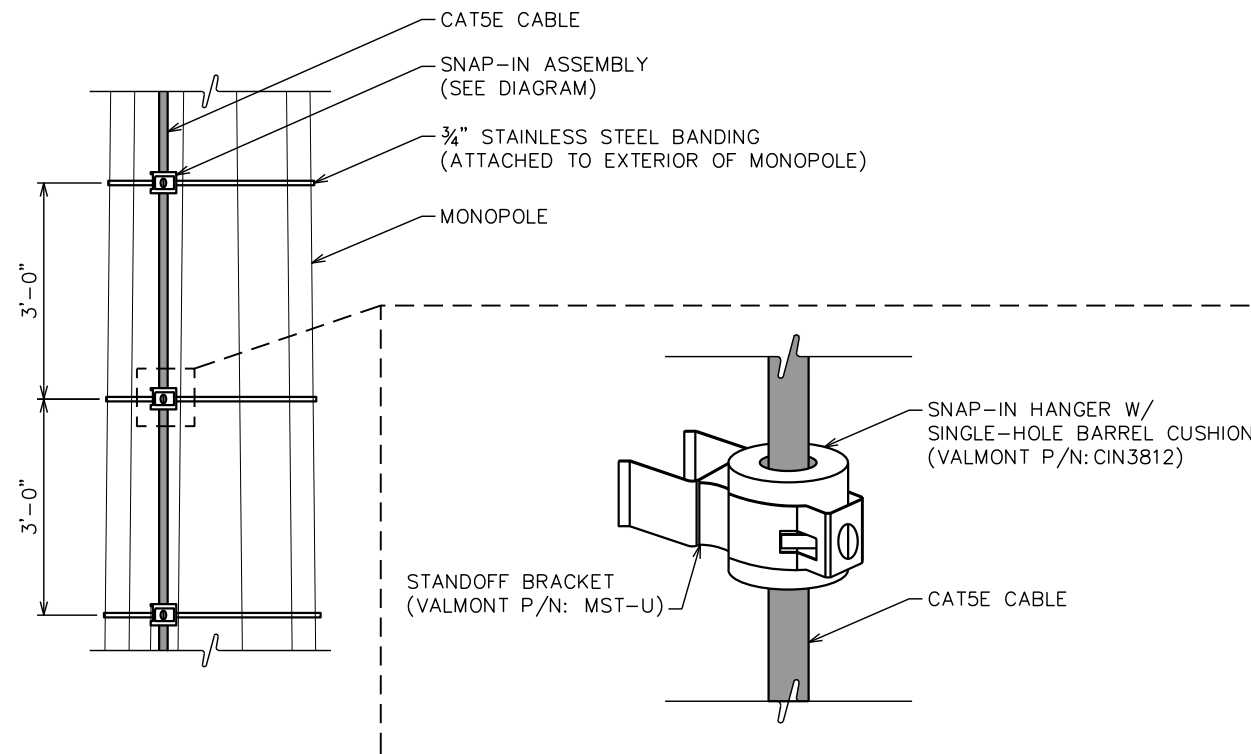
SEAL:

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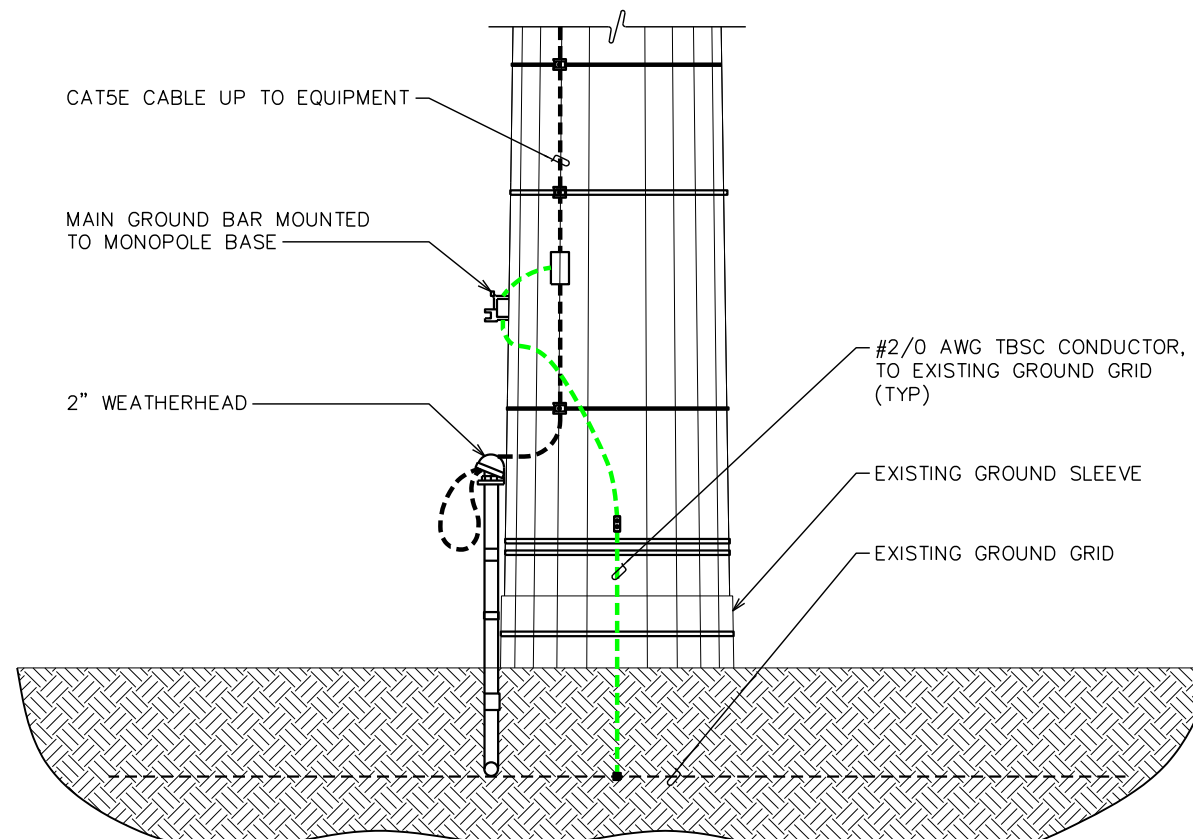
SHEET TITLE:
BILL OF MATERIALS

SHEET NUMBER: **E-3** REVISION: **2**
 TEP#:310886.677088



MONOPOLE GROUNDING

SCALE: N.T.S.



MONOPOLE BASE DETAIL (SIDE VIEW)

SCALE: N.T.S.


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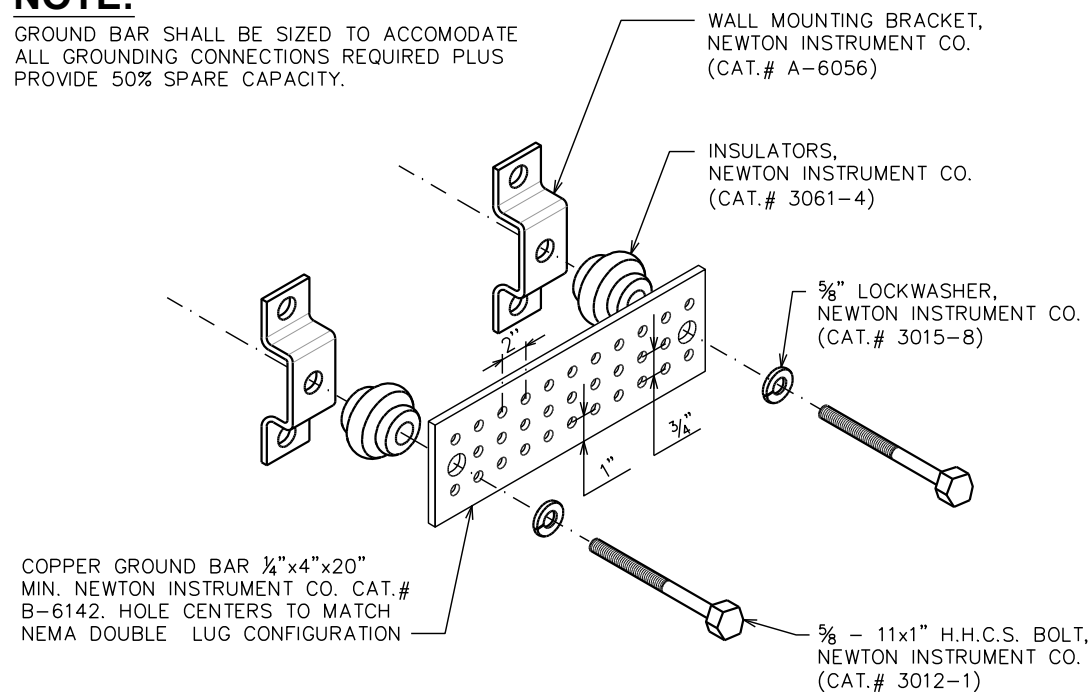
DRAWN BY: GAH | CHECKED BY: JBG

SHEET TITLE:
GROUNDING DETAILS I

SHEET NUMBER: **E-4** | REVISION: **2**
 TEP#: 310886.677088

NOTE:

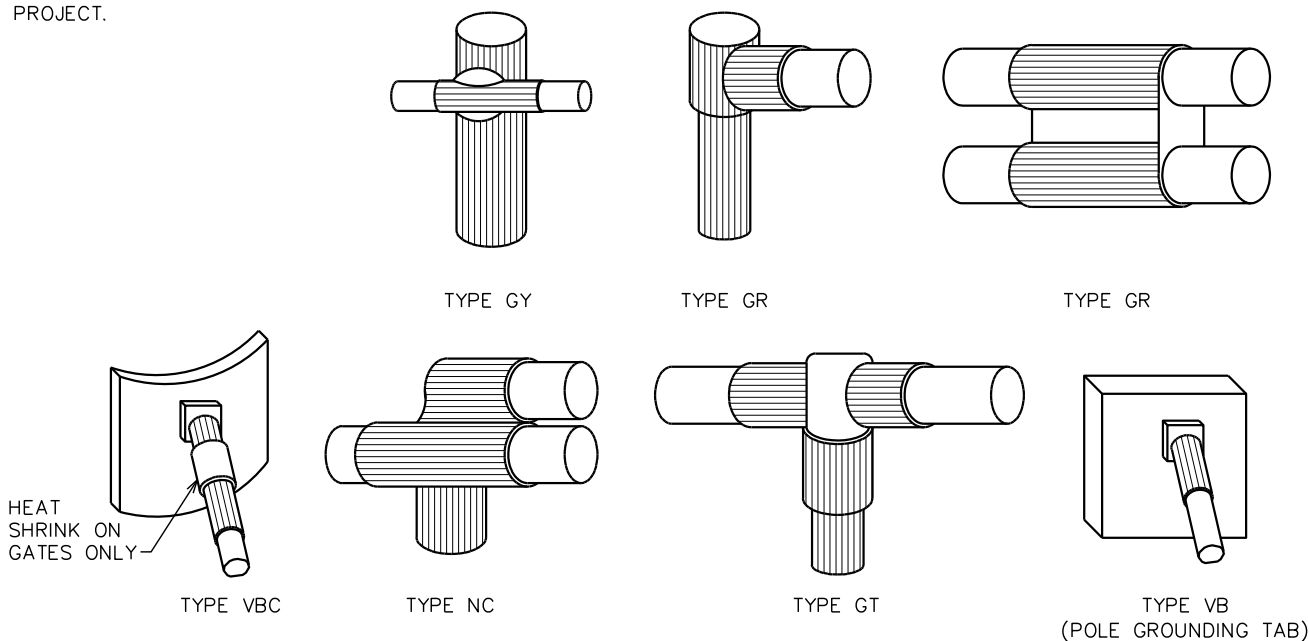
GROUND BAR SHALL BE SIZED TO ACCOMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY.



COPPER GROUND BAR 1/4"x4"x20" MIN. NEWTON INSTRUMENT CO. CAT.# B-6142. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION

NOTE:

EXOTHERMIC WELD "TYPES" SHOWN ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC TYPES OF EXOTHERMIC WELDS TO BE USED FOR THIS PROJECT.



STANDARD GROUND BAR DETAIL

SCALE: N.T.S.

EXOTHERMIC WELD DETAILS

SCALE: N.T.S.

PLANS PREPARED FOR:

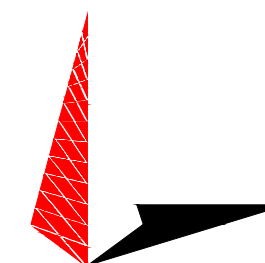


401 SOUTH WILMINGTON STREET
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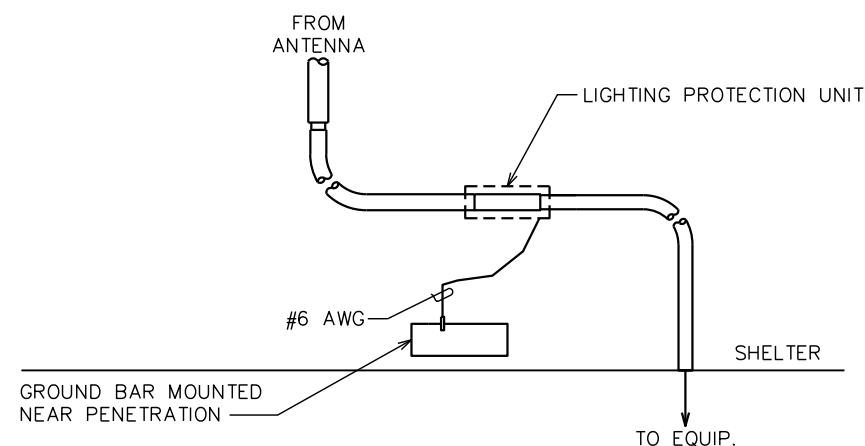
PROJECT INFORMATION:

**BUIES CREEK
230 SUB
T5504 (NCBCU011)**
1716 NC-27
LILLINGTON, NC 27546
(HARNETT COUNTY)

PLANS PREPARED BY:

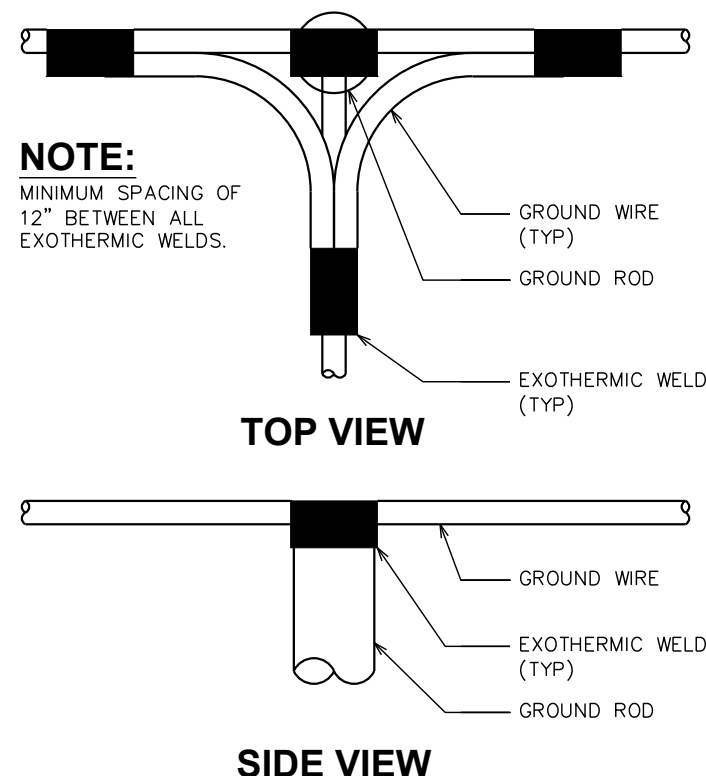


TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #C-1794



POE CABLE GROUNDING DETAIL

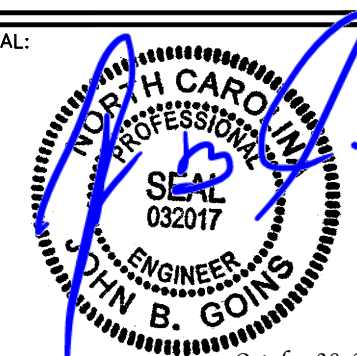
SCALE: N.T.S.



EXOTHERMIC WELD GROUNDING DETAIL

SCALE: N.T.S.

SEAL:



REV	DATE	ISSUED FOR:
2	10-28-22	CONSTRUCTION
1	08-29-22	PRELIMINARY CONSTRUCTION
0	07-07-22	PRELIMINARY CONSTRUCTION

DRAWN BY: GAH CHECKED BY: JBG

SHEET TITLE:

**GROUNDING
DETAILS II**

SHEET NUMBER: REVISION:

E-5

2

TEP#:310886.677088