



Stephanie Free, PLA
Urban Planner
Current Planning Division
National Capital Planning Commission
401 9th Street, NW | Suite 500 | Washington, DC 20004
stephanie.free@ncpc.gov

Re: Ft Belvoir/Boingo new Small Cell SMC – 3 Britten, NCPC Final Submission

August 7, 2026

AAFES/Boingo was approached by Verizon Wireless in August 2024 and asked to help identify new Macro cell tower sites on Ft Belvoir for the Carrier to provide better coverage to building 6921, as numerous customers have reported issues with poor coverage and connectivity within the building.

Boingo worked closely with AAFES and Ft. Belvoir Master Planning and Cultural Teams to identify potential candidates on Ft. Belvoir. Due to building 6921's proximity to Davison Airfield, a macro tower was ruled out. We worked with the Carrier to find the best candidate for this small cell project, which we determined is our primary candidate (Britten), located approximately 300' northwest of building 6921. The proposed small cell is a 50-foot pole, approximately the same height as the surrounding trees. For this small cell site, the Carrier will deploy a lower power emitter (not a macro tower site). We have also engaged directly with DAAF Airfield Operations points of contact for project review and approval, and filed this proposed small cell with the FAA; it is currently under review (FAA study # 2026-AEA-8147-OE).

The project proposal involves Boingo Wireless installing a new small cellular antenna site to enhance cellular coverage and density on Ft Belvoir, specifically for building 6921 and the surrounding area. The new single-carrier Small Cell antenna site is proposed to have an overall height of 50 feet, designed for Verizon, which has already confirmed colocation on the Small Cell at the time of submission.

This will be a single-tenant 50-foot wood pole with all equipment housed on the pole; no compound will be required, and no tree removal will be needed.

In addition to these NCPC project details, we've included our Photo Simulations of the new Small Cell, construction drawings, and an RF propagation map.

If you have any further questions or concerns, please don't hesitate to contact me for additional information.

Thank you.

**Adam
Fleming**

Digitally signed by
Adam Fleming
Date: 2026.08.07
10:54:19 -05'00'

Adam Fleming
Director, Tower Site Development & Construction
Boingo Wireless, Inc.
469.831.1606 – Mobile
afleming@boingo.com



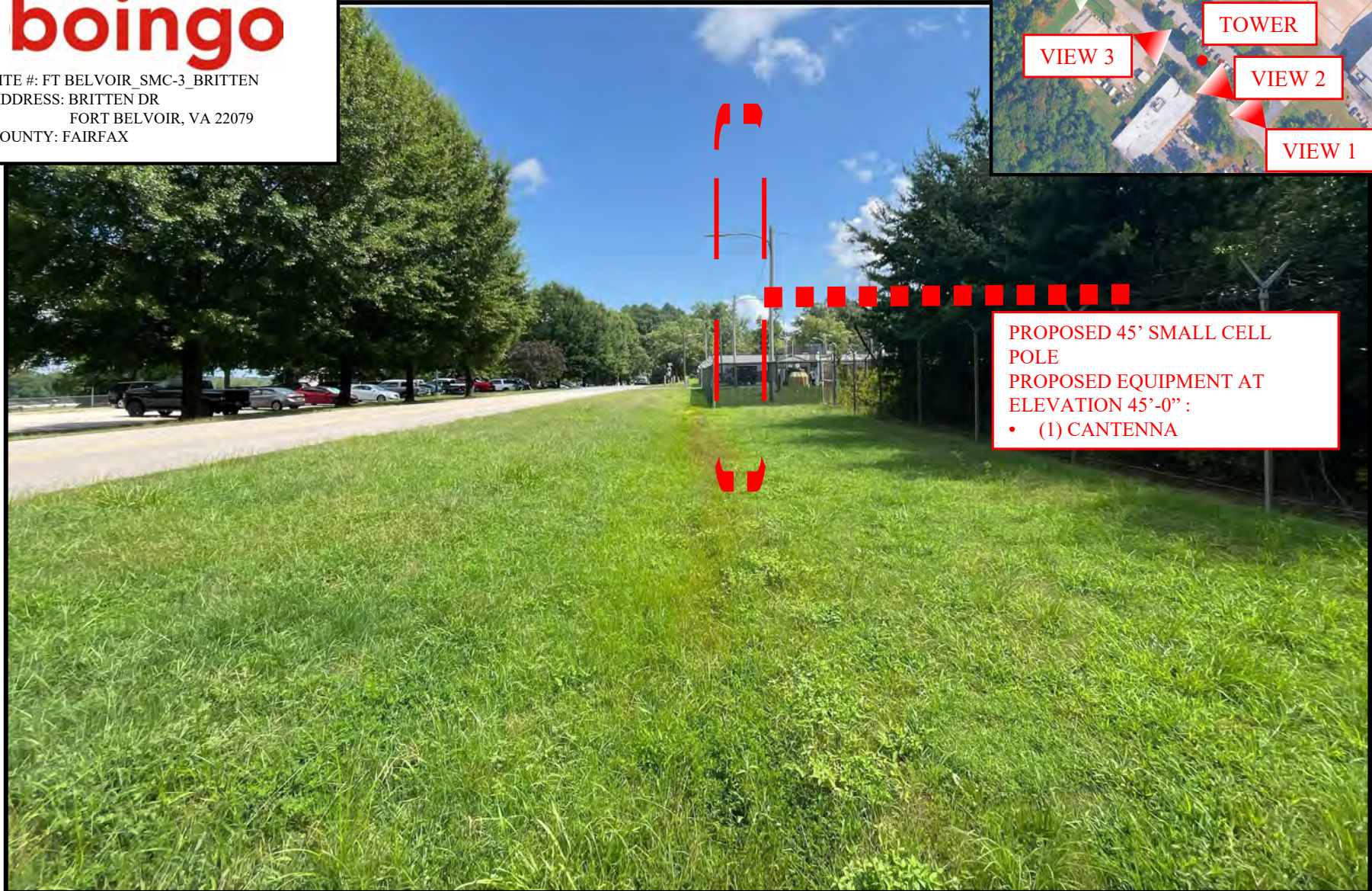
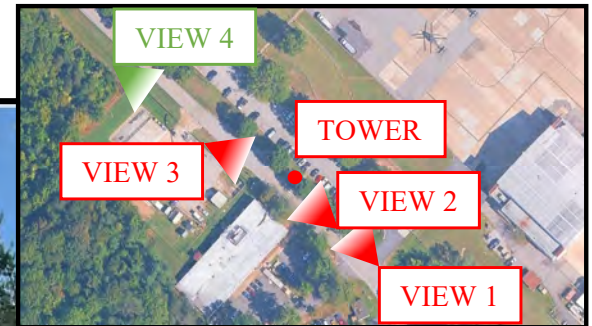
**SITE NAME: FT BELVOIR_SMC-3_BRITTEN
PROPOSED 45'-0" SMALL CELL WOOD POLE**

BRITTEN DR
FORT BELVOIR, VA 22079
(FAIRFAX COUNTY)

PROPOSED VIEW: LOCATION 4



SITE #: FT BELVOIR_SMC-3_BRITTEN
ADDRESS: BRITTEN DR
FORT BELVOIR, VA 22079
COUNTY: FAIRFAX

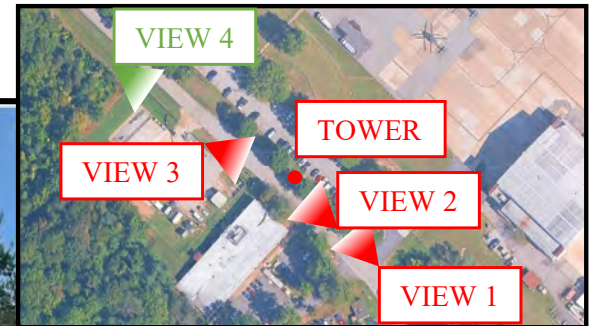


PROPOSED 45' SMALL CELL
POLE
PROPOSED EQUIPMENT AT
ELEVATION 45'-0" :
• (1) CANTENNA

PROPOSED VIEW: LOCATION 4



SITE #: FT BELVOIR_SMC-3_BRITTEN
ADDRESS: BRITTEN DR
FORT BELVOIR, VA 22079
COUNTY: FAIRFAX



PROPOSED 45' SMALL CELL
POLE
PROPOSED EQUIPMENT AT
ELEVATION 45'-0" :
• (1) CANTENNA

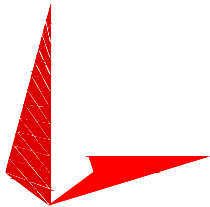
CONTRACTOR NOTES

CONTRACTOR SHALL VERIFY ALL
PLANS, EXISTING DIMENSIONS
AND CONDITIONS ON THE JOB
SITE AND IMMEDIATELY NOTIFY
THE ENGINEER IN WRITING OF
ANY DISCREPANCIES BEFORE
PROCEEDING WITH THE WORK.

SITE ID: FT BELVOIR_SMC-3_BRITTEN
BOINGO SITE ID: FT BELVOIR_SMC-3_BRITTEN
POLE OWNER/TYPE: BOINGO (N) COMPOSITE POLE
ADDRESS : BRITTEN DR, FORT BELVOIR, VA 22060
LAT: 38.711750° , LONG: -77.181956°

SHEET	SHEET TITLE
T-1	TITLE SHEET
T-2	LEGEND
N-1 - N-2	GENERAL NOTES
C-1	AERIAL SITE PLAN
C-1A	SITE PHOTOS
C-2	PROPOSED NODE ELEVATION
EQ-1-EQ-7	EQUIPMENT DETAILS

OWNER/DEVELOPER:

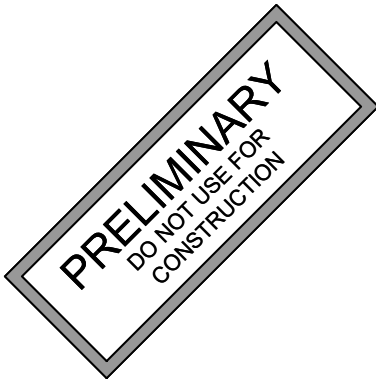


TEP OPCO LLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
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VICINITY DETAIL



AERIAL DETAIL



January 20, 2025

REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

COVER SHEET

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg

SHEET:

T-1

CONFIDENTIAL/PROPRIETARY

SOW
INSTALL NEW SMALL CELL POLE

DIRECTION TO SITE
FROM WASHINGTON DC - TRAVEL SOUTHWEST ON I-95/I-395 FOR APPROXIMATELY 13 MILES - TAKE EXIT FOR ROUTE 286 IN NEWINGTON TO HEAD SOUTH TOWARDS FORT BELVOIR - TURN LEFT ONTO US-1 RICHMOD HIGHWAY - TURN RIGHT ONTO TULLY ROAD TOWARDS THE VISITOR ENTRY POINT. - CHECK-IN AT ENTRY POINT WITH NEED FOR ACCESS. - SUPPLY WORK ORDER SUPPLIED BY BOINGO - THEN PROCEED BACK TO US-1 AND ROUTE 286. - AFTER 0.8 MILES TURN LEFT JOHN KINGMAN ROAD - TURN LEFT ONTO SANTJER ROAD AND CONTINUE AROUND THE FORT BELVOIR AIRFIELD - ROAD WILL TURN INTO BRITTEN DRIVE - NODE WILL BE LOCATED ON LEFT AFTER 1.0 MILE

PROJECT CONTACTS	
CLIENT	ENGINEERING FIRM
Boingo Wireless, INC. 10960 Wilshire Blvd #23 Los Angeles, CA 90024	TEP OpCo, LLC 326 Tryon Road Raleigh, NC 27603
Adam Fleming Director, Site Development Mobile: (469) 831-1606 afleming@boingo.com	NICHOLAS CONSTANTINE,P.E. PROJECT MANAGER OFFICE: (303) 566-9914 nconstatine@tepgroup.net

LEGEND

LINETYPES

	UGT
	UGT
	OHT
	OHT
	STRAND - EXISTING
	STRAND - PROPOSED
	CONDUIT - EXISTING
	CONDUIT - PROPOSED
	INNERDUCT - EXISTING
	INNERDUCT - PROPOSED
	SW
	G
	W
	T
	OHE
	UGE
	OHE
	UGE
	SEW
	SD
	FENCE
	TV
	STM
	OIL
	UNK
	R/W
	EOP
	ESMT

UG FIBER - EXISTING
UG FIBER - PROPOSED
AERIAL FIBER - EXISTING
AERIAL FIBER - PROPOSED
STRAND - EXISTING
STRAND - PROPOSED
CONDUIT - EXISTING
CONDUIT - PROPOSED
INNERDUCT - EXISTING
INNERDUCT - PROPOSED
SIDE WALK
GAS
WATER
TELEPHONE
OH ELECTRIC - EXISTING
UG ELECTRIC - EXISTING
OH ELECTRIC - PROPOSED
UG ELECTRIC - PROPOSED
SANITARY SEWER (SEW)
STORM DRAIN
FENCE
CABLE TV
STEAM
OIL
UNKNOWN UTILITY
RIGHT OF WAY
EDGE OF PAVEMENT
UTILITY EASEMENT

	RISER
	TELEPHONE
	POWER VAULT
	CATCH BASIN/INLET
	FIRE HYDRANT
	GROUND/BOND
	STREET LIGHT
	TREE
	CULVERT
	WING WALL
	BRIDGE
	MISC. UTILITY
	UTILITY POLE - EXISTING
	POLE - PROPOSED
	HANDHOLE - EXISTING
	HANDHOLE - PROPOSED
	MANHOLE - EXISTING
	MANHOLE - PROPOSED
	PULLBOX - EXISTING
	PULBOX - PROPOSED

TELEPHONE
POWER VAULT
CATCH BASIN/INLET
FIRE HYDRANT
GROUND/BOND
STREET LIGHT
TREE
CULVERT
WING WALL
BRIDGE
MISC. UTILITY
UTILITY POLE - EXISTING
POLE - PROPOSED
HANDHOLE - EXISTING
HANDHOLE - PROPOSED
MANHOLE - EXISTING
MANHOLE - PROPOSED
PULLBOX - EXISTING
PULBOX - PROPOSED

VAULT - EXISTING
VAULT - PROPOSED

VAULT - EXISTING
VAULT - PROPOSED

AERIAL STORAGE - EXISTING
AERIAL STORAGE - PROPOSED

VAULT/BUILDING STORAGE - EXISTING
VAULT/BUILDING STORAGE - PROPOSED

POLE ANCHOR/DOWN GUY - EXISTING
POLE ANCHOR/DOWN GUY - PROPOSED
PROPOSED DOWN GUY ON EXISTING ANCHOR

TERMINATION - EXISTING
TERMINATION - PROPOSED

TERMINATION - EXISTING
TERMINATION - PROPOSED

BUILDING CALLOUT - PROPOSED

SPLICE POINT - EXISTING
SPLICE POINT - PROPOSED

SEQUENTIAL CALLOUT

SEQUENTIAL IN TAIL CALLOUT

SEQUENTIAL TAIL OUT CALLOUT

POLE NO	N/A
UTILITY1	0'-0"

POLE NO	N/A
UTILITY1	0'-0"

CABLE FIBERS: FIBERS	CABLE OWNER: OWNER
CABLE LENGTH: LENGTH	NOTES:

CABLE FIBERS: FIBERS	CABLE OWNER: OWNER
CABLE LENGTH: LENGTH	NOTES:

CONDUIT OWNER: OWNER	CONDUIT LENGTH: LENGTH
CONDUIT QTY: CONDUITS	CONDUIT SIZE: SIZE
CONDUIT TYPE: TYPE	INNER DUCT QTY: INNERDUCTS
INNER DUCT SIZE: SIZE	INNER DUCT TYPE: TYPE
NOTES:	

CONDUIT OWNER: OWNER	CONDUIT LENGTH: LENGTH
CONDUIT QTY: CONDUITS	CONDUIT SIZE: SIZE
CONDUIT TYPE: TYPE	INNER DUCT QTY: INNERDUCTS
INNER DUCT SIZE: SIZE	INNER DUCT TYPE: TYPE
NOTES:	

STRAND TYPE: TYPE	STRAND LENGTH: LENGTH
NOTES:	

STRAND TYPE: TYPE	STRAND LENGTH: LENGTH
NOTES:	

HORIZONTAL DIRECTIONAL DRILL

POLE ATTACHMENT CALLOUT - EXISTING
USE DYNAMIC PULL DOWN TO SELECT
FROM 1 TO 6 ATTACHMENTS

POLE ATTACHMENT CALLOUT - PROPOSED
USE DYNAMIC PULL DOWN TO SELECT
FROM 1 TO 6 ATTACHMENTS

CABLE SPAN CALLOUT - EXISTING
FOR USE ON PAPER SPACE (SHOWN AT 50X)

CABLE SPAN CALLOUT - PROPOSED
FOR USE ON PAPER SPACE (SHOWN AT 50X)

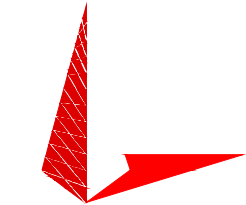
CONDUIT CALLOUT - EXISTING
FOR USE ON PAPER SPACE (SHOWN AT 50X)
WITH OR WITHOUT INNER DUCT INFO

CONDUIT CALLOUT - PROPOSED
FOR USE ON PAPER SPACE (SHOWN AT 50X)
WITH OR WITHOUT INNER DUCT INFO

STRAND CALLOUT - EXISTING
FOR USE ON PAPER SPACE (SHOWN AT 50X)

STRAND CALLOUT - PROPOSED
FOR USE ON PAPER SPACE (SHOWN AT 50X)

OWNER/DEVELOPER:



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January 20, 2025

REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

LEGEND

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg
SHEET:	

T-2

CONFIDENTIAL/PROPRIETARY

GENERAL NOTES

1.

THE INTENTION OF THIS DOCUMENT IS TO SHOW THE COMPLETE INSTALLATION AND TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY, WHETHER OR NOT SPECIFICALLY INDICATED, FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN THE CONTRACT. THE INTENT OF THIS DOCUMENT IS NOT TO DESIGNATE THE MEANS AND METHODS OF PROCEDURE OF THE WORK. THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING HIS PROFESSIONAL KNOWLEDGE AND SKILLS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, SEQUENCING, AND COORDINATING ALL PORTION OF THE WORK UNDER THE CONTRACT.
2.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING CODES, STANDARDS, AND SUPPLEMENTS:
 - ALL GOVERNING STATE, COUNTY, AND LOCAL CODES AND ORDINANCES
 - AISC - AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATIONS
 - ANSI/TIA - TELECOMMUNICATIONS INDUSTRY ASSOCIATION - 222-G STANDARD
 - IEEE - INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
 - IMC - INTERNATIONAL MECHANICAL CODE
 - NEC - NATIONAL ELECTRICAL CODE
 - NESC - NATIONAL ELECTRICAL SAFETY CODE
 - NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
 - NFPA - NATIONAL FIRE PROTECTION ASSOCIATION
 - NSPC - NATIONAL STANDARD PLUMBING CODE
 - OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
 - UL - UNDERWRITERS LABORATORIESTHE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES IN THE CODE REQUIREMENTS.
3.

THE ENGINEERING DRAWINGS SHOW PRINCIPAL AREAS WHERE WORK MUST BE ACCOMPLISHED UNDER THIS CONTRACT. INCIDENTAL WORK MAY ALSO BE NECESSARY IN AREAS NOT SHOWN ON THE ENGINEERING DRAWINGS DUE TO CHANGES AFFECTING EXISTING ELECTRICAL OR OTHER SYSTEMS. SUCH INCIDENTAL WORK IS ALSO A PART OF THIS CONTRACT. INSPECT THOSE AREAS AND ASCERTAIN WHAT IS NEEDED TO DO THAT WORK IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
4.

DO NOT SCALE DRAWINGS. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE.
5.

MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK. HOWEVER, NO CHANGE THAT ALTERS THE ORIGINAL INTENT OF THE DESIGN WILL BE MADE OR PERMITTED BY THE OWNER WITHOUT A CHANGE ORDER.
6.

GENERAL CIVIL, STRUCTURAL, ELECTRICAL AND ANTENNA DRAWINGS ARE INTERRELATED. IN PERFORMANCE OF THE WORK, EACH CONTRACTOR MUST REFER TO ALL DRAWINGS. ALL COORDINATION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
7.

THE GENERAL NOTES CONTAINED HEREIN ARE PART OF THE PLANS AND SPECIFICATIONS, AND ARE TO BE COMPLIED WITH IN ALL RESPECTS. THE MOST RESTRICTIVE NOTES SPECIFIED ARE TO TAKE PRECEDENCE. CERTAIN SECTIONS OF THE GENERAL NOTES MAY NOT APPLY TO EVERY SITE. THE CONTRACTOR IS TO COMPLY WITH ALL APPLICABLE GENERAL NOTES IN ALL RESPECTS.
8.

ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENT TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
9.

REPRESENTATION OF TRUE NORTH OTHER THAN THOSE FOUND ON THE PLOT OF THE SURVEY DRAWING SHALL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF THE SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE CIVIL SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ENGINEER.
10.

THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS, AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
11.

THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD THE DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
12.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS SUCH AS OSHA COMPLIANCE DURING THE PROGRESS OF THE WORK. THE ENGINEER WILL NOT ADVISE NOR PROVIDE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.
13.

THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY OF THE SECURITY OF THE SITE UNTIL COMPLETION OF THE CONSTRUCTION.
14.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS TO ENSURE THAT WORK PROGRESSION IS NOT INTERRUPTED.
15.

THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT TO AVOID DELAYS IN THE CONTRACT SCHEDULE OR OTHER WORK PERFORMED IN THE VICINITY OF THE CONSTRUCTION AREA.
16.

THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE TO THE PROPERTY OWNER WELL IN ADVANCE OF THE STARTING DATE OF THE WORK. THE OWNER SHALL ALSO BE NOTIFIED OF A CHANGE IN THE CONSTRUCTION SCHEDULE.
17.

THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
18.

EACH CONTRACTOR IS RESPONSIBLE FOR FOR PULING THE BUILDING PERMIT AT THE LOCAL

- JURISDICTION AS THE CONTRACTOR OF RECORD, AND SHALL PROVIDE THE JURISDICTION WITH ALL PROOF REQUIRED TO OPERATE AS THE CONTRACTOR IN THIS JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATIONS, ETC. PRIOR TO BEGIN THE WORK.
19.

EACH CONTRACTOR IS RESPONSIBLE FOR APPLICATION AND PAYMENT OF CONTRACTOR LICENSES, BONDS, AND INSURANCES. DOCUMENTATION SHALL BE PROVIDED TO THE OWNER PRIOR TO WORK.
20.

THE CONTRACTOR IS TO PROVIDE THE OWNER WITH A FULL SET OF RECORD DRAWINGS WITH ACTUAL DIMENSIONS, ROUTING AND CIRCUITS UPON COMPLETION OF CONSTRUCTION.
21.

THE CONTRACTOR IS TO CONTACT BOTH LOCAL POWER AND TELEPHONE UTILITY COMPANIES BEFORE CONSTRUCTION BEGINS TO ORDER SERVICE, OBTAIN AND PAY ALL FEES ASSOCIATED WITH CONSTRUCTION, SCHEDULE INSTALLATION OF SERVICE, COORDINATE CONDUIT RUN/TERMINATION POINT AND OBTAIN ANY FIELD MATERIALS THAT MAY BE SUPPLIED BY THE UTILITY COMPANIES AND INSTALLED BY THE CONTRACTORS.
22.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK AND THE PROTECTION OF ALL WORK DURING CONSTRUCTION TO AVOID DAMAGE, COLLAPSE, DISTORTION & MISALIGNMENT.
23.

THE CONTRACTOR SHALL MONITOR ALL EXISTING STRUCTURES DURING CONSTRUCTION.
24.

ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN SAFE CONDITIONS PRIOR TO INSTALLATIONS, AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT.
25.

ALL MATERIALS MUST BE STORED IN A LEVEL AND DRY LOCATION AND IN A MANNER THAT WILL NOT OBSTRUCT THE FLOW OF OTHER WORK RELATED OR NOT TO THIS CONTRACT. ANY EQUIPMENT OR MATERIAL STORAGE MUST MEET ALL RECOMMENDATIONS OF THE MANUFACTURER. THE CONTRACTOR SHALL INSPECT THOROUGHLY ALL MATERIALS AND EQUIPMENT PRIOR TO FINAL INSTALLATION. DAMAGED EQUIPMENT OR MATERIALS SHALL NOT BE INSTALLED PERMANENTLY.
26.

ALL MATERIALS SHALL BE INSTALLED PER THE MANUFACTURERS' INSTRUCTIONS.
27.

ALL EQUIPMENT SHALL BE INSTALLED LEVEL AND PLUMB.
- EXISTING CONDITIONS

1.

BEFORE BEGINNING WORK THE CONTRACTOR SHALL INSPECT THE EXISTING SITE AND DETERMINE THE EXTENT OF MAINTENANCE IN ORDER TO PERFORM THE WORK UNDER THIS CONTRACT. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS BEFORE STARTING WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCES BETWEEN THE ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.

2.

BY SUBMITTING A BID FOR THIS WORK, THE CONTRACTOR ACKNOWLEDGES THAT HE HAS THOROUGHLY REVIEWED AND UNDERSTOOD THE CONSTRUCTION DOCUMENTS, VISITED THE SITE AND IS FAMILIAR WITH THE CONDITIONS ENCOUNTERED AT THE SITE.

3.

THE CONTRACTOR, IF AWARDED THE CONTRACT, WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING WHICH THE CONTRACTOR MIGHT NOT HAVE FULLY INFORMED HIMSELF OF PRIOR TO BIDDING.

4.

NO PLEA OF IGNORANCE OF CONDITIONS THAT EXIST, OR OF DIFFICULTIES THAT MAY BE ENCOUNTERED OR OF ANY OTHER RELEVANT MATTER CONCERNING THE WORK TO BE PERFORMED WILL BE ACCEPTED AS A REASON FOR ANY FAILURE OR OMISSION OF THE PART OF THE CONTRACTOR TO FULFILL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

5.

IT IS UNDERSTOOD BY THE OWNER THAT THE CONTRACTOR IN SUBMITTING HIS BID, WARRANTS THAT HE HAS CAREFULLY EXAMINED THE SITE OF THE PROJECT TO ACQUAINT HIMSELF WITH THE SURROUNDING PROPERTIES, THE MEANS OF APPROACH TO THE SITE, THE CONDITIONS OF THE ACTUAL JOB SITE, THE FACILITIES FOR DELIVERING, STORING, PLACING, HANDLING AND THE REMOVAL OF MATERIALS AND EQUIPMENT AND ANY AND ALL DIFFICULTIES THAT MAY BE ENCOUNTERED DURING THE EXECUTION OF THE WORK IN ACCORD WITH THE CONTRACT DOCUMENTS.

6.

THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN VERIFIED BY THE OWNER OF ITS REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL UNDERGROUND UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND ACCEPTS FULL RESPONSIBILITY FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO LOCATE ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK.

7.

SHOULD ANY ERROR OR INCONSISTENCY APPEAR IN THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR, BEFORE PROCEEDING WITH THE WORK, MUST BRING THE MATTER TO THE ATTENTION OF THE ENGINEER FOR PROPER ADJUSTMENT. IN NO CASE SHALL THE CONTRACTOR PROCEED WITH THE WORK IN UNCERTAINTY OR WITH INSUFFICIENT DRAWINGS.

8.

THE CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY IN DIMENSIONS WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE ENGINEER AND THE OWNER REPRESENTATIVE FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE OWNER OR ITS REPRESENTATIVE.

9.

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGES WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGES TO NEW OR EXISTING SURFACES, STRUCTURES OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER. THE CONTRACTOR SHALL BEAR THE COST OF REPAIRING OR REPLACING ANY DAMAGED AREAS.

10.

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES AND EFFORTS TO PROTECT THE STRUCTURAL INTEGRITY OF EXISTING STRUCTURES. WHEN WORK IS PERFORMED IN THE VICINITY OF EXISTING STRUCTURES, THE STRUCTURAL INTEGRITY AND STABILITY SHALL BE MONITORED AT ALL TIMES DURING EVERY PHASE OF CONSTRUCTION.

11.

THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MARKINGS. ANY MARKINGS DISTURBED OR DESTROYED, AS JUDGED BY THE OWNER OR OWNER'S REPRESENTATIVE, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR.

12.

NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL, AND PAINT COLOR, EXCEPT AS NOTED IN THE DRAWINGS.

13.

WHERE INDICATED ON THE PLANS, THE CONTRACTOR SHALL PAINT ALL NEW ANTENNA SHROUDS AND RELATED MOUNTING HARDWARE TO MATCH THE EXISTING ADJACENT SURFACES. THE CONTRACTOR SHALL NOT USE A METAL BASED PAINT FOR ANTENNAS. ALL SURFACE CONTAMINATION SHALL BE REMOVED PRIOR TO PAINTING NEW SURFACES.

14.

ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK SHALL BE PROTECTED AT ALL TIMES, WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. THE CONTRACTOR SHALL PROVIDE SAFETY TRAINING

- FOR THE WORK CREW.
15.

IF AN INACTIVE ELECTRICAL , TELEPHONE, SEWER, WATER OR ANY OTHER UTILITY ARE ENCOUNTERED AND INTERFERE WITH THE EXECUTION OF THE WORK, THE CONTRACTOR IS TO REMOVE THE UTILITY AND CAP, PLUG OR OTHERWISE TERMINATE THE UTILITY AT A POINT WHERE IT NO LONGER IS IN CONFLICT WITH THE WORK. THE UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE UTILITY COMPANIES RECOMMENDATIONS AND PER LOCAL AUTHORITY HAVING JURISDICTION.
16.

ALL UTILITY WORK INVOLVING CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY OWNER BEFORE EACH AND EVERY CONNECTION TO EXISTING SYSTEMS IS MADE.
17.

MAINTAIN FLOW FOR ALL EXISTING UTILITIES.
18.

THE CONTRACTOR SHALL RESTORE ALL PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD OF CONDITION AS BEFORE DISTURBED AS DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE.
19.

IN THE EVENT OF DAMAGE TO AN EXISTING STRUCTURE, THE CONTRACTOR SHALL NOTIFY THE OWNER OR ITS REPRESENTATIVE IMMEDIATELY, AND THEN PROMPTLY MAKE ALL REPLACEMENTS AND REPAIRS TO THE SATISFACTION OF THE OWNER. THE OWNER MAY ELECT TO USE A THIRD PARTY CONTRACTOR TO PERFORM THE REPAIRS. ALL EXPENSES ASSOCIATED WITH THE REPAIRS AND REPLACEMENTS SHALL BE PAID BY THE GENERAL CONTRACTOR SELECTED FOR THIS CONTRACT.

ACCESS

1.

COORDINATE THE CONSTRUCTION SCHEDULE AND SITE ACCESS WITH THE SITE OWNER. ENSURE THAT THE OWNER OF PARENT PARCEL IS NOTIFIED IN WRITING OF CONSTRUCTION ACTIVITIES.
2.

A LIST OF WORKERS INVOLVED IN THIS PROJECT SHALL BE PROVIDED TO THE PROPERTY OWNER OR ITS REPRESENTATIVE.
3.

THE CONTRACTOR SHALL COORDINATE ALL SPECIAL CONSIDERATIONS OF CONSTRUCTION SUCH AS NOISY OPERATION, INTERRUPTION OF ANY MECHANICAL AND/OR ELECTRICAL SERVICES, MATERIAL DELIVERABLES AND STORAGE, STAGING AREA, CRANE LIFTS WITH THE OWNER PRIOR TO THE START OF WORK.
4.

CONTRACTOR SHALL COORDINATE WITH AN OWNER REPRESENTATIVE ABOUT ANY INSTANCES OF TEMPORARY FENCE REMOVAL, LANDSCAPING, OR ANY EXPECTED DAMAGES TO ACCESS ROAD OR REPAIR OF ADJACENT PROPERTY PRIOR TO COMMENCING WORK.
5.

THE CONTRACTOR SHALL COORDINATE WORK HOURS WITH THE OWNER.

TRAFFIC CONTROL

1.

THIS PROJECT WILL INVOLVE WORKING ALONG A MAJOR ARTERIAL ROAD AND HEAVY TRAFFIC VOLUME SHOULD BE ANTICIPATED.
2.

UNIFORM TRAFFIC FLOW SHALL BE MAINTAINED AT ALL TIMES. ONLY EQUIPMENT AND MATERIALS NECESSARY FOR IMMEDIATELY SCHEDULED OR IN PROGRESS WORK WILL BE MAINTAINED IN THE WORK AREA. ALL OTHER EQUIPMENT AND MATERIALS WILL BE "STORED OR STOCKPILED" IN SUCH A MANNER AS TO ELIMINATE HAZARDOUS CONDITIONS FOR TRAFFIC OR PEDESTRIANS DURING NON-WORKING OR SHUT DOWN PERIODS.
3.

TRAFFIC WARNING DEVICES AND SIGNS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (U.S. GOVERNMENT PRINTING OFFICE) AND TO THE OREGON STATE HIGHWAY DIVISION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. HIGH LEVEL WARNING TYPE DEVICES ARE TO BE USED AT ALL TIMES AND SPECIAL WARNING DEVICES MAY BE STIPULATED BY THE JURISDICTIONAL PERMIT AGENCY AT ANY TIME THE USE WILL ADD TO THE SAFETY AND PROTECTION OF TRAFFIC OR PEDESTRIANS IN THE CONSTRUCTION AREA.
4.

ALL CONDUIT TRENCHING IN PAVED AREAS SHALL BE BACKFILLED WITH CRUSHED GRAVEL OR COMPLETELY COVERED AT THE COMPLETION OF EACH WORKING DAY. ANY BACKFILLED TRENCH SHALL BE CAPPED WITH A MINIMUM LAYER OF ASPHALTIC CONCRETE COLD PATCH AT THE END OF EACH WORKING DAY.
5.

THE CONTRACTOR SHALL MARK THE CONDUIT TRENCH AND DEFINE HIS CONSTRUCTION AREA CLEARLY WITH BARRICADES, CONES, AND/OR OTHER VISIBLE METHODS THAT ALERT THE PUBLIC OF THE CONSTRUCTION ACTIVITY.
6.

A TRAFFIC CONTROL PLAN SHALL BE PREPARED BY THE CONTRACTOR AS REQUIRED AND SUBMITTED TO EACH PERMITTING AGENCY REQUESTING SUCH PLAN FOR REVIEW AND APPROVAL OR REVISION PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY FOR THIS PROJECT. THE APPROVED PLAN SHALL BE SUBMITTED TO THE AGENCY AND A COPY OF THE PLAN SHALL BE KEPT AT THE CONSTRUCTION SITE AND MUST BE READILY AVAILABLE REVIEW BY THE AGENCY REPRESENTATIVES.

SITE MAINTENANCE

1.

REMOVE STAINING OR REACTIVE MATERIALS FROM NEW AND EXISTING SURFACES IMMEDIATELY. REMOVE HAZARDOUS ACCUMULATIONS OF DEBRIS PROMPTLY, AT LEAST DAILY. CONFINE DUST PRODUCING OPERATIONS DURING CUTTING, DRILLING, PAINTING AND FINISHING.
2.

THERE SHALL NOT BE ANY CREATION OF NOISE OUTSIDE OF THE NORMAL BUSINESS HOURS OF 7 AM TO 6 PM, UNLESS OTHERWISE AGREED UPON WITH THE OWNER. NOISE SHOULD BE KEPT TO A MINIMUM THROUGHOUT CONSTRUCTION.
3.

THE CONTRACTOR IS TO PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OR 2 ABC WITHIN 75 FT OF TRAVEL TO ALL PORTIONS OF THE CONSTRUCTION AREA.
4.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A NEAT AND ORDERLY SITE, YARD AND GROUNDS. HE IS TO REMOVE AND DISPOSE LEGALLY OFF SITE OF ALL RUBBISH, WASTE MATERIALS, LITTER, AND ALL FOREIGN SUBSTANCES. REMOVE PETROCHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS TO A SMOOTH EVEN-TEXTURED SURFACE.
5.

AT PROJECT COMPLETION, REMOVE TEMPORARY SERVICES, CONSTRUCTION EQUIPMENT, TOOLS AND FACILITIES, MOCKUPS, TEMPORARY STRUCTURES, SURPLUS MATERIALS, DEBRIS, AND RUBBISH FROM THE CONSTRUCTION SITE. PUT SITE IN NEAT AND ORDERLY CONDITION, READY FOR USE.
6.

THE CONTRACTOR SHALL TAKE ALL MEASURE NECESSARY TO MAINTAIN POLLUTION CONTROL,

COMPLY WITH ALL GOVERNING REGULATION PERTAINING TO ENVIRONMENTAL PROTECTION, AND PROMPTLY REMOVE ALL DEBRIS AND ACCUMULATION OF MATERIALS RESULTING FROM THE WORK.

DEMOLITION SPECIFICS

1.

GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SHORING, BRACING, PROVIDING LATERAL SUPPORT, AND FOR MAINTAINING THE INTEGRITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.
2.

THE CONTRACTOR IS TO DEMOLISH AND REMOVE FROM SITE (AND DISPOSE OF APPROPRIATELY) ALL ITEMS NOTED FRO DEMOLITION IN THE ARCHITECTURAL, CIVIL, ELECTRICAL AND/OR STRUCTURAL DRAWINGS, INCLUDING BELOW GRADE FOUNDATION AND STRUCTURES. CONTRACTOR SHALL COORDINATE WITH THE OWNER REPRESENTATIVE THE DISPOSAL OF EQUIPMENT AND MATERIALS.

GRADING

1.

THE CONTRACTOR SHALL SEED THE GRADED AREAS PER DOT STANDARDS. THE SI GEOSOLUTIONS LAND LOCK CS2 EROSION CONTROL BLANKET SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS.
2.

THE CONTRACTOR SHALL PROVIDE ADEQUATE WATERING TO ENSURE FAVORABLE GROWTH OF VEGETATION FOR A PERIOD OF 6 MONTHS.
3.

ALL GROUNDING, UTILITIES AND UNDERGROUND EQUIPMENT EXPOSED BY GRADING SHALL BE REPLACED AND PROPERLY CONNECTED TO THE EXISTING PORTION OF THE ORIGINAL SYSTEM PER APPROVED CODES AND JURISDICTION REQUIREMENTS.

CLEARING AND GRUBBING

1.

CLEARING OF TREES AND VEGETATION ON THE SITE SHOULD BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR THE CONSTRUCTION OF THE FACILITY SHALL BE REMOVED. ANY DAMAGES TO PROPERTY OUTSIDE THE CONSTRUCTION LIMIT SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
2.

THE CONTRACTOR SHALL: PROTECT EXISTING TREES, VEGETATION, LANDSCAPING AND SITE IMPROVEMENTS NO SCHEDULED FOR CLEARING OR REMOVAL WHICH MIGHT BE DAMAGED BY CONSTRUCTION ACTIVITIES.
3.

TRIM EXISTING TREES AND VEGETATION AS RECOMMENDED BY THE ARBORIST FOR PROTECTION DURING CONSTRUCTION.
4.

CLEAR AND GRUB STUMPS, VEGETATION, DEBRIS, RUBBISH, DESIGNATED TREES AND SITE IMPROVEMENT.
5.

STRIP AND STOCKPILE TOPSOIL.
6.

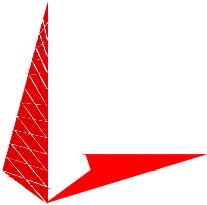
PROTECT TEMPORARY ADJACENT PROPERTY, STRUCTURES, BENCHMARKS AND MONUMENTS.
7.

MARK DESIGNATED TREES AND VEGETATION DURING CONSTRUCTION ACTIVITIES.
8.

PROVIDE TEMPORARY EROSION CONTROL, SILTATION CONTROL AND DUST CONTROL.
9.

REMOVE AND LEGALLY DISPOSE OF CLEARED MATERIALS.

OWNER/DEVELOPER:



TEP OPCO LLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net



January 20, 2025

REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

GENERAL NOTES

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg

SHEET:

N-1

CONFIDENTIAL/PROPRIETARY

FOUNDATION NOTES

1. FOUNDATION INSTALLATION SHALL BE SUPERVISED BY PERSONNEL KNOWLEDGEABLE AND EXPERIENCED WITH THE PROPOSED FOUNDATION TYPE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH GENERALLY ACCEPTED PRACTICES AND IN A GOOD WORKMANLIKE MANNER.
2. THE FOUNDATION DESIGN IS IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRINCIPLES AND PRACTICES WITHIN THE LIMITS OF THE SUBSURFACE DATA PROVIDED.
3. THE FOUNDATION DESIGN ASSUMES FIELD INSPECTIONS WILL BE PERFORMED TO VERIFY THAT CONSTRUCTION MATERIALS, INSTALLATION METHODS, AND ASSUMED DESIGN PARAMETERS ARE ACCEPTABLE BASED ON THE CONDITIONS AT THE SITE.
4. THE FOUNDATION DESIGN ASSUMES NO CONSTRUCTION JOINTS.

EXCAVATION/EARTHWORK NOTES

1. WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND SAFETY REGULATIONS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION, AND UTILITIES SHALL BE ESTABLISHED PRIOR TO BEGINNING WORK.
2. THE SIDES OF THE EXCAVATION SHALL BE ROUGH AND FREE OF LOOSE CUTTINGS.
3. LOOSE MATERIAL TO BE REMOVED FROM THE BOTTOM OF EXCAVATION PRIOR TO CONCRETE PLACEMENT.
4. BACKFILL TO BE CLEAN AND CLEAR OF DELETERIOUS MATERIALS.
5. BACKFILL TO CONSIST OF #57 STONE.
6. BACKFILL TO BE COMPACTED IN 12" MAXIMUM LIFTS TO APPROXIMATELY 8% SETTLEMENT, OR APPROXIMATELY ONE INCH PER 12" LIFT.

STEEL NOTES

1. ALL CONNECTIONS OF STRUCTURAL STEEL MEMBERS SHALL BE MADE USING SPECIFIED WELDS WITH WELDING ELECTRODES E-70XX OR SPECIFIED HIGH STRENGTH BOLTS TO BE ASTM A325N, THREAD INCLUDED WITH SHEAR PLANE (UNLESS OTHERWISE NOTED).
2. ALL BOLTED CONNECTIONS TO BE INSTALLED TO A SNUG-TIGHTENED CONDITION IN ACCORDANCE WITH AISC 13 PART 16.2, "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", SECTION 8.1, UNLESS OTHERWISE SPECIFIED. WHEN "X" TYPE BOLTS ARE USED, CONTRACTOR MAY BE REQUIRED TO STACK ADDITIONAL WASHERS TO OBTAIN PROPER SNUG TIGHT INSTALLATION. ALL NUTS SHALL BE HEAVY HEX UNLESS OTHERWISE NOTED.
3. ALL STEEL, AFTER FABRICATION, SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. ALL DAMAGED SURFACES, WELDED AREAS AND AUTHORIZED NON-GALVANIZED MEMBERS OR PARTS (EXISTING OR NEW) SHALL BE PAINTED WITH MULTIPLE COATS OF ZRC COLD GALVANIZING COMPOUND ACHIEVING A MINIMUM OF 4 MILS DRY FILM PER ASTM A 780.
4. ALL SHOP AND FIELD WELDING SHALL BE DONE BY WELDERS QUALIFIED AS DESCRIBED IN THE "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" TO PERFORM THE TYPE OF WORK REQUIRED. CONTRACTOR IS REQUIRED TO PROVIDE TEP OPCO, LLC WITH A PASSING CERTIFIED WELDING INSPECTION FOR ALL WELDS.
5. STRUCTURAL STEEL MAY NOT BE TORCH CUT FOR FABRICATION. ALL STEEL FABRICATION MUST FOLLOW AISC STANDARDS.

ELECTRICAL

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, TRANSPORTATION, CONSTRUCTION TOOLS, ETC. FOR THE INSTALLATION OF COMPLETE AND PROPERLY OPERATING SYSTEMS.
2. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS AND ORDINANCES OF ALL AUTHORITIES HAVING JURISDICTION AND WITH ALL ASSOCIATED UTILITY COMPANY REGULATIONS AND APPLICABLE REQUIREMENTS. INSTALLATION WILL ALSO COMPLY WITH THE LATEST EDITIONS OF ALL CODES AND STANDARDS OF THE ENTITIES LISTED ON SHEET N-1, NOTE 2. THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.
3. THE CONTRACTOR SHALL SECURE ALL NECESSARY ELECTRICAL PERMITS AND PAY ALL REQUIRED FEES.
4. RECORD DRAWINGS: MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS BETWEEN WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DOCUMENTS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT.
5. ALL BROCHURES, OPERATION MANUALS, CATALOGS, SHOP DRAWINGS, SPECIFICATIONS, ETC. SHALL BE TURNED OVER TO THE CARRIER AT THE COMPLETION OF THE PROJECT.
6. GUARENTEE/WARRANTY: GUARANTEE INSTALLATION TO BE FREE OF DEFECTS, SHORTS, GROUND, ETC. FOR A PERIOD OF ONE YEAR. FURNISH WARRANTY SO THE DEFECTIVE MATERIAL AND/OR WORKMANSHIP WILL BE REPAIRED/REPLACED IMMEDIATELY UPON NOTIFICATION AT NO COST TO THE OWNER FOR PERIOD WARRANTY. IF, AFTER THIRTY (30) DAYS THE CORRECTIONS ARE NOT COMPLETE, THE OWNER RESERVES THE OPTION OF ARRANGING FOR THE NECESSARY REPAIRS AND BACKCHARGING THE CONTRACTOR FOR THE WORK.
7. DO NOT INTERRUPT EXISTING SERVICES WITHOUT THE WRITTEN PERMISSION OF THE OWNER OF THAT SERVICE AND WRITTEN PERMISSION OF THIS INSTALLATION'S CARRIER.
8. CHANGES: NO ADDITIONAL COST FOR LABOR OR MATERIALS WILL BE ALLOWED FOR CHANGES OR MODIFICATIONS MADE UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER OR OWNER IN THE FORM OF A CHANGE ORDER.
9. DRAWING: ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT TO BE SCALED.

10. DISCREPANCIES: DISCREPANCIES ON THESE PLANS, SPECIFICATIONS, ETC. MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
11. SURVEY AND CONDITIONS: VISIT THE JOB SITE PRIOR TO SUBMITTING BID, AND MAKE A SURVEY OF EXISTING CONDITIONS WHICH MAY AFFECT THE WORK TO BE PERFORMED. NO OTHER ALLOWANCES WILL BE GIVEN FOR THE SITE CONDITION.
12. CO-OPERATION: COOPERATE WITH OTHER CONTRACTORS AND SUBCONTRACTORS ON SITE. ARRANGE AND EXECUTE WORK IN SUCH A MANNER AS REQUIRED FOR THE SATISFACTORY AND EFFICIENT CONSTRUCTION OF THIS PROJECT BY ALL TRADES CONCERNED.
13. INSTALLATION SHALL COMPLY SPECIFICALLY WITH THE ENGINEERING STANDARDS MANUAL. ANY DEVIATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER PRIOR TO COMMENCEMENT OF WORK.
14. PROCUREMENT VERIFICATION: PROVIDE AN ITEMIZED CERTIFICATION TO THE PROJECT MANAGER THAT THE EQUIPMENT AND RELATED HARDWARE HAVE BEEN ORDERED WITHIN 24 HOURS OF NOTICE TO PROCEED.
15. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

INSPECTIONS

1. GENERAL: DURING AND UPON COMPLETION OF WORK, ARRANGE AND PAY ALL ASSOCIATED INSPECTIONS OF ALL ELECTRICAL WORK INSTALLED UNDER THIS CONTRACT IN ACCORDANCE WITH THE CONDITIONS OF THE CONTRACT.
2. INSPECTIONS REQUIRED: AS PER THE LAWS AND REGULATIONS OF THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
3. INSPECTION AGENCY: APPROVED BY THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
4. CERTIFICATES: SUBMIT ALL REQUIRED INSPECTION CERTIFICATES TO THE CARRIER AND UTILITY.

HANGARS AND SUPPORTS

1. MATERIALS: ALL HANGERS, SUPPORTS, FASTENERS AND HARDWARE SHALL BE ZINC COATED OR OF EQUIVALENT CORROSION RESISTANCE BY TREATMENT OR INHERENT PROPERTY AND SHALL BE MANUFACTURED PRODUCTS DESIGNED FOR THE APPLICATION. PRODUCTS FOR OUTDOOR USE SHALL BE HOT DIP GALVANIZED.
2. TYPES: HANGERS, STRAPS, RISER SUPPORTS, CLAMPS, U-CHANNEL, THREADED RODS, ETC. AS INDICATED OR REQUIRED.
3. INSTALLATION: RIGIDLY SUPPORT AND SECURE ALL MATERIAL, RACEWAY AND EQUIPMENT TO BUILDING STRUCTURE USING HANGERS, SUPPORTS AND FASTENERS SUITABLE FOR THE USE ON MATERIALS AND LOADS ENCOUNTERED. PROVIDE ALL NECESSARY HARDWARE.

ELECTRICAL SERVICE

1. GENERAL: COMPLY WITH AND CO-ORDINATE ALL REQUIREMENTS OF THE UTILITY COMPANY.
2. SHORT CIRCUIT RATINGS: PROVIDE EQUIPMENT WITH HIGHER FAULT CURRENT RATINGS AS NEEDED TO MATCH UTILITY COMPANY AVAILABLE FAULT CURRENT.
3. CONTRACTOR TO VERIFY UTILITY CO. FAULT CURRENT AND ENSURE THAT ALL EQUIPMENT MEETS FAULT CURRENT (AT A MINIMUM ALL EQUIPMENT TO BE 10,000 AIC).
4. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS WITH THE ELECTRIC UTILITY RELATIVE TO A TIMELY INSTALLATION OF THE NEW SERVICE AND PAYING ALL ASSOCIATED FEES.
5. IDENTIFICATION: IDENTIFY SERVICE DISCONNECTION MEANS WITH PERMANENT NAMEPLATE.
6. THE LOCATION SHOWN FOR A UTILITY POLE OR CONNECTION TO NEW UTILITIES IS FOR CONCEPTUAL USE ONLY. THE CONTRACTOR SHALL COORDINATE THE ACTUAL LOCATION WITH THE ELECTRIC UTILITY.
7. LOCATION AND ARRANGEMENTS: DRAWINGS INDICATE DIAGRAMMATICALLY THE DESIRED LOCATION OF EQUIPMENT, FIXTURES, OUTLETS, ETC. AND ARE NOT TO BE SCALED. PROPER JUDGEMENT MUST BE EXERCISED IN THE EXECUTION TO ENSURE THE BEST POSSIBLE INSTALLATION.
8. PANEL AND DISTRIBUTION BOARD IDENTIFICATION: SWITCHBOARDS, PANELBOARDS, TRANSFORMERS AND DISTRIBUTION SECTIONS SHALL BE IDENTIFIED WITH ENGRAVED, WHITE ON BLACK, LAMINATED, RIGID PHENOLIC NAMEPLATES WITH 1/4 INCH CHARACTERS, SECURELY AFFIXED TO FACE OF CABINET.

CHECKOUT, TESTING AND ADJUSTING

1. CORRECTION/REPLACEMENT: AFTER TESTING BY CONTRACTOR, OWNER OR ENGINEER, CORRECT ANY DEFICIENCIES AND REPLACE MATERIALS AND EQUIPMENT SHOWN TO BE DEFECTIVE OR UNABLE TO PERFORM AT DESIGN OR RATED CAPACITY.
2. POWER CONDUCTORS: CONTRACTOR SHALL CONDUCT A CONTINUITY AND INSULATION TEST ON CONDUCTORS BETWEEN SERVICE DISCONNECT SWITCH AND LOAD CENTER.
3. WHEN POWER IS DERIVED FROM A 3-PHASE SOURCE, LOAD READINGS WILL BE TAKEN AND RECORDED TO MAINTAIN A BALANCED LOAD AT THE PRIMARY SOURCE. RECORDS SHALL BE RETURNED TO THE OWNER'S REPRESENTATIVE.

RACEWAY SYSTEMS / CONDUIT

1. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT. UNDERGROUND PVC CONDUIT SHALL TRANSITION TO RIGID GALVANIZED STEEL CONDUIT OR SCHEDULE 80 PVC CONDUIT BEFORE RISING ABOVE GRADE OR CONCRETE SLAB. EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL (RGS) CONDUIT OR SCHEDULE 80 PVC CONDUIT.
2. GRS CONDUITS, WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT.

3. ELECTRICAL METALLIC TUBING (EMT) OR RIGID, NONMETALLIC CONDUIT (RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
4. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (RIGID PVC SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
5. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATIONS OCCUR OR FLEXIBILTY IS NEEDED.
6. PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LB. TEST POLYETHYLENE CORD.
7. ALL CONDUIT BENDS SHALL BE MINIMUM OF 24 INCH RADIUS.
8. ALL METALLIC RACEWAYS SHALL BE GROUNDED PER NEC.

9. THE CONTRACTOR SHALL FIELD VERIFY THE BEST AND LEAST DISRUPTIVE ROUTING OF CONDUITS, CABLE TRAYS AND DUCTS. CONDUIT ROUTING IS SHOWN AS A GUIDE ONLY, ACTUAL CONDUIT PLACEMENT IS TO BE DONE IN A PROFESSIONAL MANNER.

EQUIPMENT

1. THE MAIN CIRCUIT BREAKER SHALL BE RATED FOR STANDARD A.I.C. RATING HIGHER THAN INCOMING EQUIPMENT A.I.C.
2. ALL EQUIPMENT SHALL BE BRACED FOR STANDARD A.I.C RATING HIGHER THAN INCOMING FROM UTILITY CO.
3. THE CONTRACTOR SHALL PROVIDE AN ITEMIZED CERTIFICATION TO THE CARRIER OF ALL EQUIPMENT AND RELATED HARDWARE, SPECIFIED TO BE PURCHASED AND INSTALLED BY THE CONTRACTOR, WHERE ORDERED WITHIN 24 HRS OF NOTICE TO PROCEED.
4. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH ITS VOLTAGE RATING, PHASE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
5. METAL RECEPTACLE SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OT EXCEED UL 514A AND NEMA OS 1; AND BE RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER -PROTECTED (WP OR BETTER) OUTDOORS.
6. NONMETALLIC RECEPTACLE SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2, AND BE RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER-PROTECTED (WP OR BETTER) OUTDOORS.

TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS)

1. TVSS DEVICES FOR AC POWER SHALL BE INSTALLED IN ALL EXISTING FACILITIES THAT ARE MISSING TVSS DEVICES OR HAVE UNSUITABLE TVSS DEVICES.
2. THE AC POWER COMMON MODE SURGE SUPPRESSOR SHALL BE CONNECTED TO THE COMMERCIAL POWER INPUT SIDE OF THE MANUAL TRANSFER SWITCH.
3. IN MARKETS WITH LIGHTNING ZONE GREATER THAN OR EQUAL TO 4, RF TVSS DEVICE SHALL BE INSTALLED AT THE ENTRANCE TO THE SHELTER OR AS CLOSE AS POSSIBLE TO THE BTS CABINET FOR OUTDOOR SITES, TO PROTECT AGAINST LIGHTNING AND TRANSIENT VOLTAGES.
4. A T1 TRANSPORT TVSS DEVICE SHALL BE INSTALLED AT ALL SITES BETWEEN THE NIU AND THE BTS.

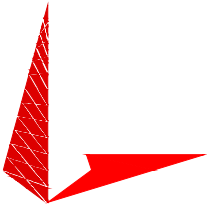
GROUNDING

1. THE SUBCONTRACTOR SHALL VERIFY THAT THE SYSTEM IS EFFECTIVELY GROUNDED, MEETS NEC ARTICLE 250 REQUIREMENTS, IS ACCEPTABLE TO THE LOCAL UTILITY AND THE LOCAL AUTHORITY HAVING JURISDICTION, AND MEETS THE CARRIER'S ELECTRICAL AND GROUNDING SPECIFICATIONS. FOLLOWING COMPLETION OF WORK, CONDUCT GROUND TEST. OWNER'S REPRESENTATIVE WILL INSPECT CADWELDS AND REVIEW GROUND TEST PRIOR TO BURIAL. USE CLEAN SAND AND CLAY BACKFILL FOR BURIED GROUND CONDUCTORS.
2. ALL DETAILS SHOWN ARE DIAGRAMMATICAL. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
3. NOTIFY CONSTRUCTION MANAGER IF THERE ARE ANY DIFFICULTIES INSTALLING THE GROUND SYSTEM DUE TO SITE/SOIL CONDITIONS.
4. GROUND CONNECTIONS: WHERE GROUND CONNECTIONS ARE MADE, THE CONTACT POINTS SHALL BE THOROUGHLY CLEANED AND MADE FREE OF FOREIGN MATERIAL SUCH AS PAINT, GALVANIZATION, AND CORROSION, TO ENSURE ADEQUATE BOND. REFER TO EXOTHERMIC WELD, LUGS, AND ANTI-OXIDIZATION COMPOUND NOTES FOR FURTHER DETAILS.
5. GROUND WIRE: OUTSIDE/UNDERGROUND: MINIMUM NO. 2 AMERICAN WIRE GAUGE (AWG) BARE, SOLID, ANNEALED, THINNED COPPER WIRE (BTCW) BUT SIZED IN ACCORDANCE WITH NEC TABLE 250.66. UNDER NO CIRCUMSTANCES IS STRANDED WIRE ACCEPTABLE. ALL BURIED WIRE SHALL BE INSTALLED TO MEET MINIMUM BEND RADIUS. SHARP BENDS AND KINKS ARE NEVER ACCEPTABLE. WHEN ANY GROUNDING OR BONDING WIRE RUNS THROUGH CONCRETE, IT SHALL BE SLEEVED IN PVC. GROUND WIRES SHALL NOT BE INSTALLED OR ROUTED THROUGH HOLES IN ANY METAL OBJECTS OR SUPPORTS.
6. GROUND WIRE - INSIDE: WIRE SHALL BE NO. 2 AWG THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° WC (WET AND DRY) OPERATION, GREEN INSULATED (A HIGH-STRAND COUNT WIRE IS PREFERRED).
7. BURIED GROUND RING: THE EQUIPMENT/SHELTER PAD OR PLATFORM SHALL HAVE A BURIED GROUND RING (BGR) THAT CONSISTS OF A RING OF NO. 2 AWG BARE, SOLID, ANNEALED, TINNED COPPER WIRE AND EXOTHERMICALLY WELDED GROUND RODS. THE BGR DESIGN SHOULD RESULT IN 10 OHMS OR LESS WITH SOIL RESISTIVITIES OF UP TO 50,000 OHM-CM. SOIL RESISTIVITIES HIGHER THAN THIS WILL REQUIRE FURTHER AUGMENTATION. ALL UNDERGROUND (BELOW GRADE) GROUNDING CONNECTIONS, INCLUDING COPPER GROUND RODS, CHEMICAL GROUND ROD ATTACHMENTS, AND GROUND LEADS FROM EQUIPMENT, TOWER, AND COAX SHALL BE MADE BY AN EXOTHERMIC WELD. THE GROUND RING SHALL BE

BETWEEN A MINIMUM OF TWO FEET FROM THE SHELTER FOUNDATION, BTS PAD, OR PLATFORM PERIMETER AT A MINIMUM DEPTH OF 2 FEET, SIX INCHES, AND WITH NO BEND HAVING A RADIUS OF LESS THAN TWO FEET. THE TRENCH SHALL BE DUG 6 INCHES BELOW THE REQUIRED WIRE DEPTH. GROUND RODS TO BE INSTALLED, AT A MINIMUM, AT EACH CORNER OF THE BGR, OF PER NFPA 70, ARTICLE 250-56. EVERY EFFORT SHALL BE MADE TO ENSURE THAT ALL GROUND PATHS TO ENSURE THAT ALL GROUND PATHS TO THE BGR ARE INSTALLED SO THAT ANY POTENTIAL DISCHARGE OF ELECTRICITY WILL BE DOWNWARD, OR IF NECESSARY, FLAT. AT NO POINT SHOULD ANY GROUND PATH GO UPWARD.

8. EXOTHERMIC WELDING: EXOTHERMIC WELDS SHALL BE CADWELD, A REGISTERED TRADEMARK OF ERICO PRODUCTS, INC. OF CLEVELAND, OHIO, OR THERMOWELD, A DIVISION OF CONTINENTAL INDUSTRIES, INC. OF TULSA, OKLAHOMA OR EQUIVALENT.
9. GROUND ROD: 5/8" X 8 FEET (MINIMUM LENGTH) STEEL WITH PURE COPPER JACKET NOT LESS THAN 0.0012 INCHES THICK. GROUND RODS SHALL BE SPACED NO GREATER THAN 15 FT. O.C. AND NO LESS THAN 6 FT. O.C.
10. GROUND ROD COUPLING: 5/8" GROUND ROD COUPLING MADE OF THE SAME MATERIAL AS THE GROUND ROD TO PREVENT DISSIMILAR METAL HIGH OXIDIZATION POINTS.
11. CHEMICAL GROUND ROD: COMPRISED OF A HOLLOW COPPER GROUND ROD, A GROUND TEST WELL, A 4'-0" EXOTHERMICALLY WELDED PIGTAIL, AND CONDUCTIVE BACKFILL MATERIAL. THE CHEMICAL GROUND ELECTRODE SHALL BE MADE OF A MINIMUM 2 INCH I.D. TYPE K COPPER TUBE WITH A MINIMUM WALL THICKNESS OF 0.083 INCHES AND SHALL BE A MINIMUM OF 8 FEET IN LENGTH. THE CHEMICAL GROUND ROD SHALL BE UL LISTED. IN SITUATIONS WHERE DRILLING VERTICALLY IS TOO DIFFICULT OR COSTLY, HORIZONTAL L-SHAPE CHEMICAL GROUND RODS ARE ACCEPTABLE.
12. GROUND BARS: GROUND BARS SHALL BE MANUFACTURED EXACTLY AS SPECIFIED. NO DEVIATIONS ARE ALLOWED. DIMENSIONS SHALL BE 1/4 INCH THICK SOLID ELECTRICAL GRADE COPPER MANUFACTURED BY HARGER OR APPROVED EQUAL. GROUND BARS SHALL NOT BE FABRICATED OR MODIFIED IN THE FIELD. COAXIAL CABLE GROUND BARS SHOULD BE MECHANICALLY CONNECTED TO THE TOWER STRUCTURAL STEEL. HOWEVER, DO NOT DRILL HOLES OR USE EXOTHERMIC WELDS TO CONNECT GROUND LEADS TO A STEEL TOWER EXCEPT ON STEEL TABS OR FLANGES SPECIFICALLY DESIGNED FOR THAT PURPOSE. HOLES AND/OR EXOTHERMIC WELDING CAN NEGATIVELY IMPACT THE STRUCTURAL INTEGRITY OF THE TOWER AND INCREASE CHANCES OF CORROSION.
13. INSULATORS: POLYESTER FIBERGLASS, 15 KV MINIMUM DIELECTRIC STRENGTH, FLAME RESISTANT PER UL 94 VO CLASSIFICATION.
14. CLIPS: WHEN SECURING ANY GROUND WIRES, SOLID OR STRANDED, INSULATED OR UNINSULATED, NEVER USE ANY CLIPS OR OTHER DEVICES THAT ARE CONDUCTIVE AND FORM A CLOSED LOOP. METALLIC CLIPS ARE ACCEPTABLE IF THEY DO NOT FORM A CLOSE LOOP.
15. GROUND CLAMP: BURNDY GAR STYLE UL CLAMP WITH TWO-HOLE PROVISIONS FOR LONG BARREL MULTIPLE CRIMP TWO-HOLE LUGS.
16. COAX GROUNDING KIT: COAX GROUND KITS SHALL BE FROM THE SAME MANUFACTURER AS THE COAX. GROUND KITS SHALL BE SOLID STRAP TYPE WITH NO. 6 AWG WIRE AND 2-HOLE COMPRESSION CRIMPED LUGS (INSTALLED USING THE PROPER UL TOOL AND CIRCUMFERENTIAL HEXAGON DIE). BRAID OR HOSE CLAMP TYPE SHALL NOT BE USED. SOLID COPPER STRAP TYPE WITH SINGLE HOLE LUGS SHALL NOT BE USED. ALL COAX CABLES ARE TO BE GROUNDED AT THEIR SECTOR CGB, THE COLLECTOR CGB, MIDPOINT CGB (IF REQUIRED), BOTTOM CGB, WAVEGUIDE BRIDGE CGB (IF REQUIRED), AND AT THE SHELTER WALL. A MIDPOINT CGB IS ONLY REQUIRED IF THE COAX LENGTH EXCEEDS 200'. A WAVEGUIDE BRIDGE CGB IS ONLY REQUIRED WHEN THE LENGTH (FROM TOWER TO EQUIPMENT) IS GREATER THAN 15 FEET.
17. WEATHERPROOFING: ALL COAX GROUND KITS SHALL BE WEATHERPROOFED. ONLY GROUND KITS APPROVED BY THE COAX MANUFACTURER SHALL BE USED.
18. METALLIC CONDUIT: ANY GROUND WIRES, SOLID OR STRANDED, THAT PASS THROUGH CONDUIT, METALLIC SLEEVE, OR CABLE COVER, SHALL BE BONDED AT BOTH ENDS.
19. SERVICE DISCONNECT GROUNDING: IF THERE IS A SERVICE DISCONNECT SEPARATE FROM THE PPC MAIN CIRCUIT BREAKERS, THE NEUTRAL TO GROUND BOND SHALL BE MADE AT THE SERVICE DISCONNECT SWITCH LOCATED SEPARATELY AND ON THE SUPPLY SIDE OF THE PPC CABINET AND NO NEUTRAL TO GROUND CONNECTION SHOULD BE IN THE PPC. IT IS CRITICAL THAT ONLY ONE NEUTRAL TO GROUND BOND BE MADE AT THE SERVICE ENTRANCE EQUIPMENT AS DEFINED BY THE NATIONAL ELECTRIC CODE.

OWNER/DEVELOPER:



TEP OPCO LLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net



January 20, 2025

REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

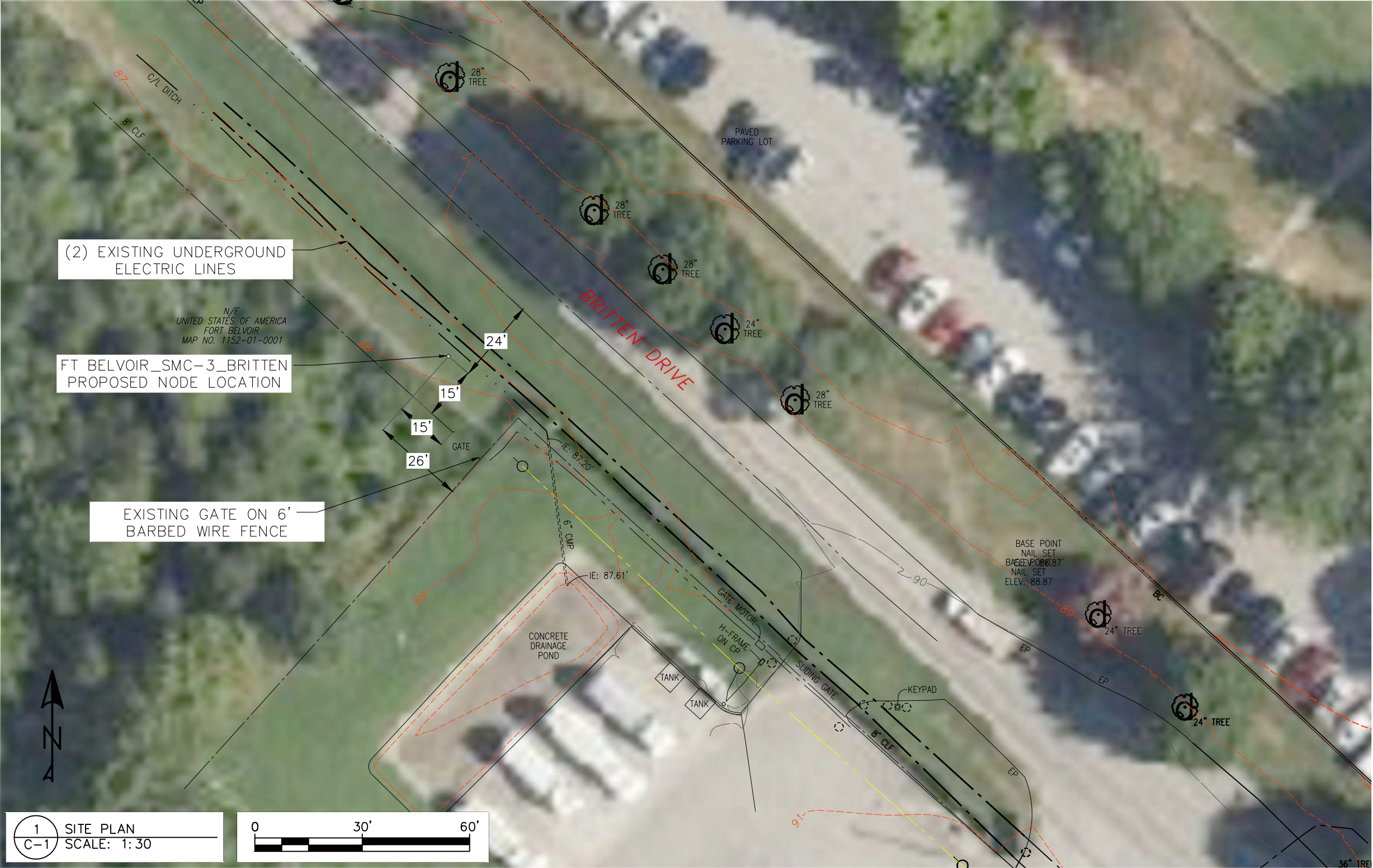
GENERAL NOTES

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg

SHEET:

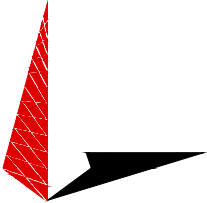
N-2

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OWNER/DEVELOPER:





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PRELIMINARY
DO NOT USE FOR
CONSTRUCTION

January 20, 2025

REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

AERIAL SITE PLAN

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg
SHEET:	C-1

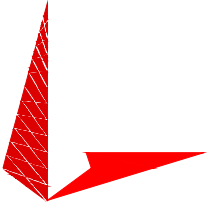
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NODE LOCATION PHOTOS



OWNER/DEVELOPER:





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January 20, 2025

REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

SITE PHOTOS

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg
SHEET:	C-1A

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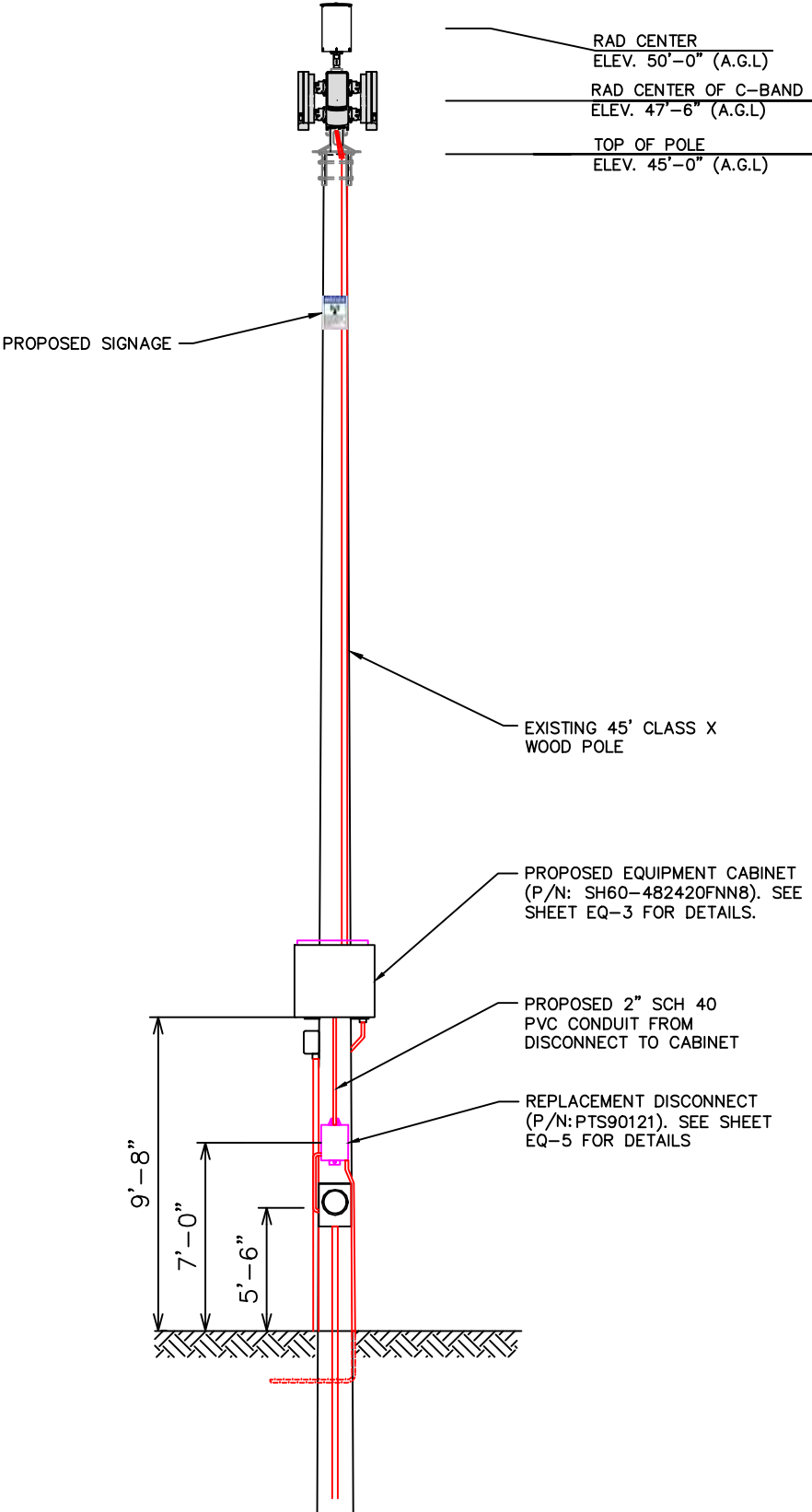
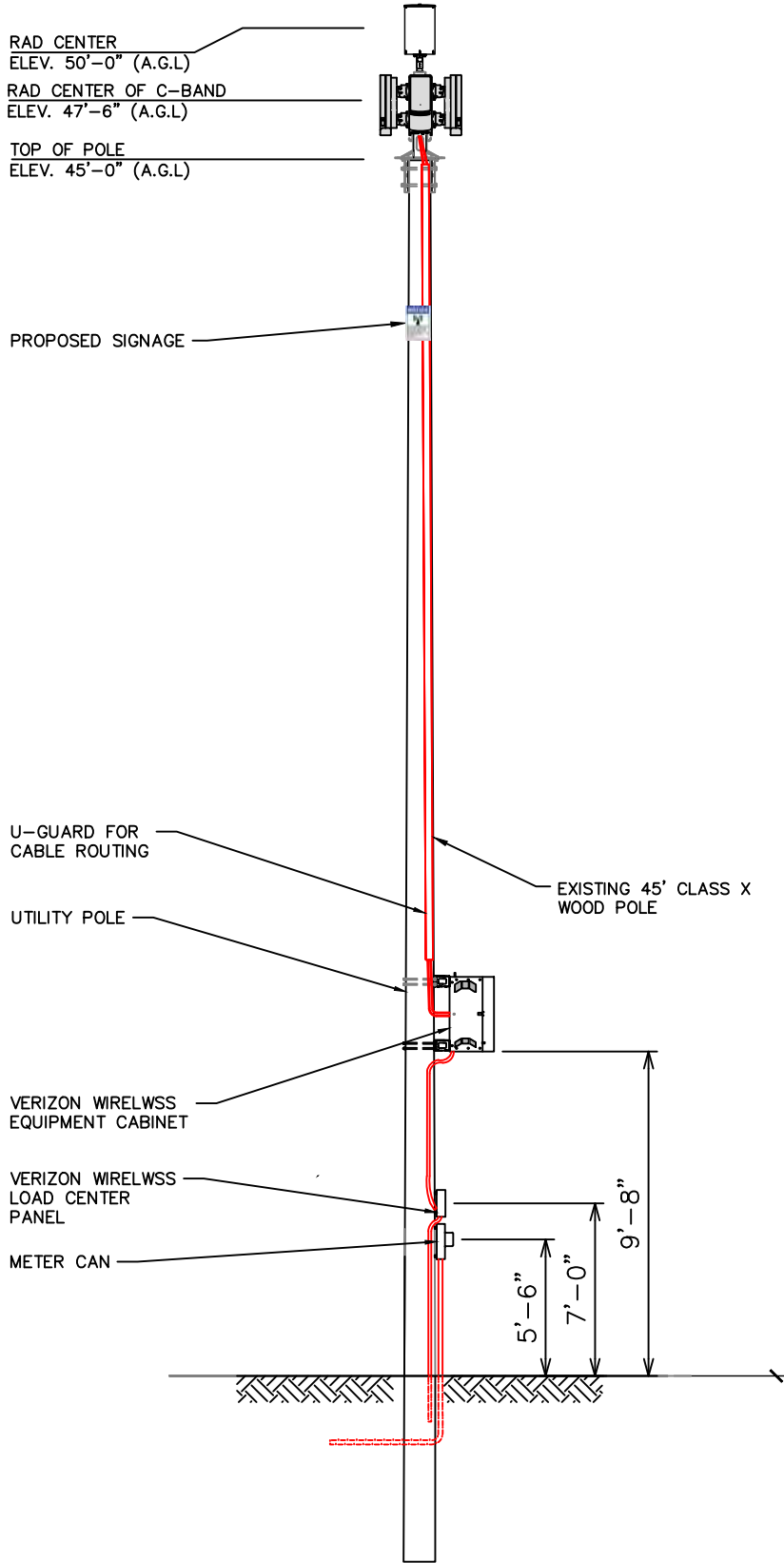
EXCAVATION/EARTHWORK NOTES

1. WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND SAFETY REGULATIONS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION, AND UTILITIES SHALL BE ESTABLISHED PRIOR TO BEGINNING WORK.
2. THE SIDES OF THE EXCAVATION SHALL BE ROUGH AND FREE OF LOOSE CUTTINGS.
3. LOOSE MATERIAL TO BE REMOVED FROM THE BOTTOM OF EXCAVATION PRIOR TO BACKFILL PLACEMENT.
4. BACKFILL TO BE CLEAN AND CLEAR OF DELETERIOUS MATERIALS.

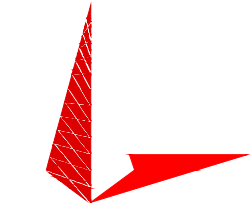
ALL CONDUITS
CALLED OUT ARE
INSIDE POLE.

ALL ATTACHMENTS TO
BE PAINTED TO
MATCH COLOR OF
POLE

STRUCTURAL TO BE
PERFORMED BY
MANUFACTURER. CONTRACTOR
TO CONFIRM PASSING SA
BEFORE CONSTRUCTION.



OWNER/DEVELOPER:



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January 20, 2025

REV	DESCRIPTION	DATE
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B	REVISED PRELIMINARY	04/23/26
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PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

PROPOSED
ELEVATION

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg

SHEET:

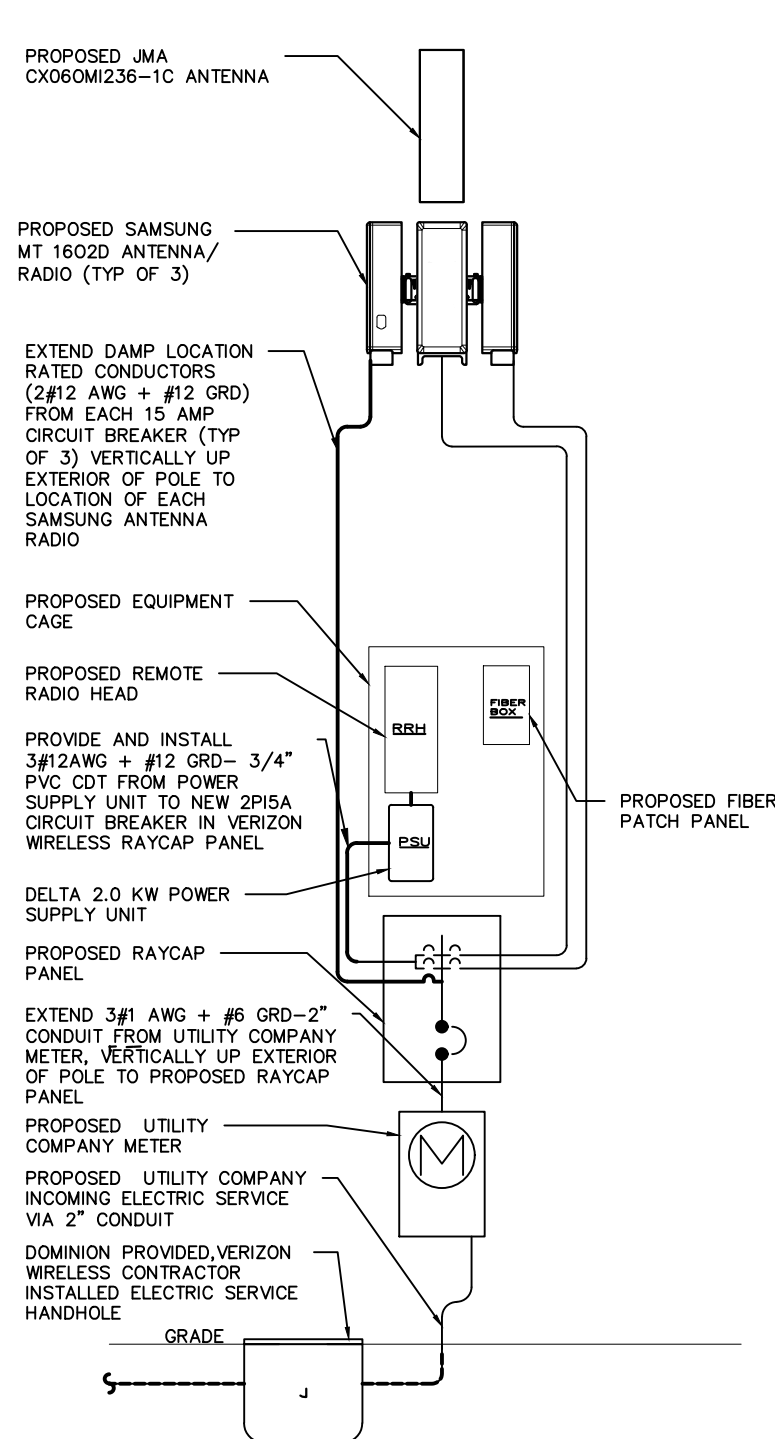
C-2

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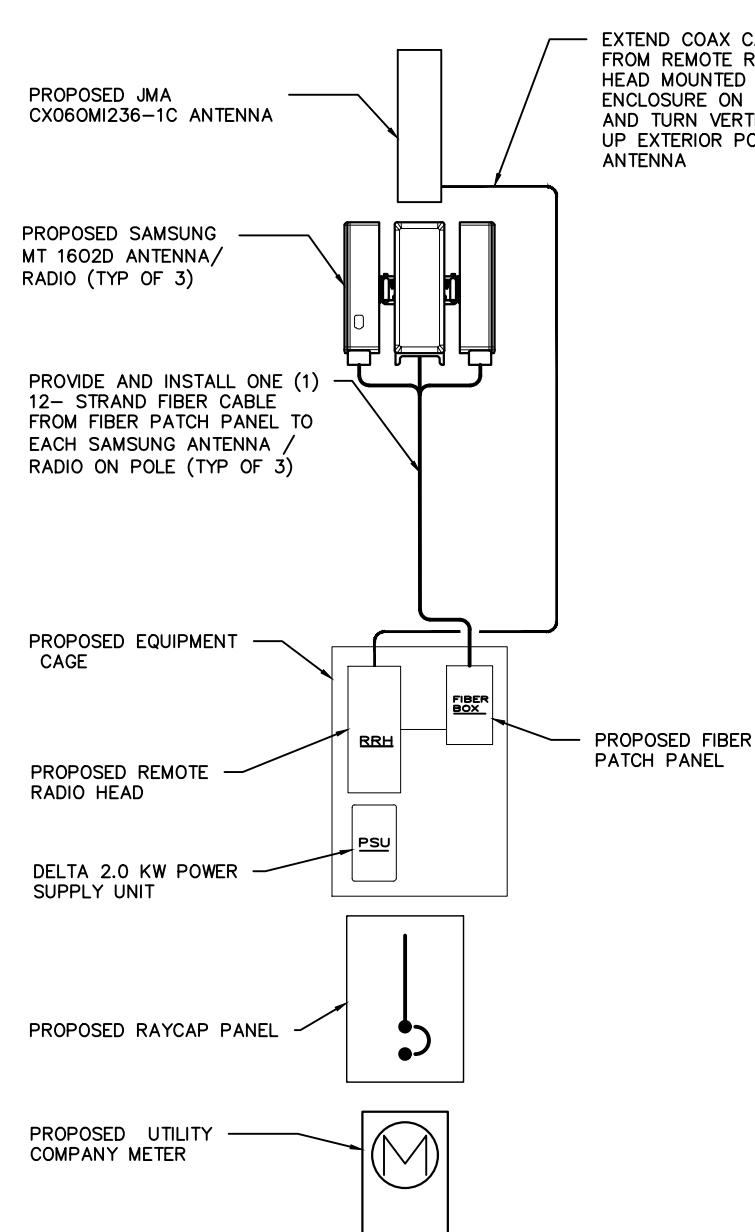
1
C-2
NODE ELEVATION SCALE:
NTS

2
C-2
NODE ELEVATION (FROM ROAD)
SCALE: NTS

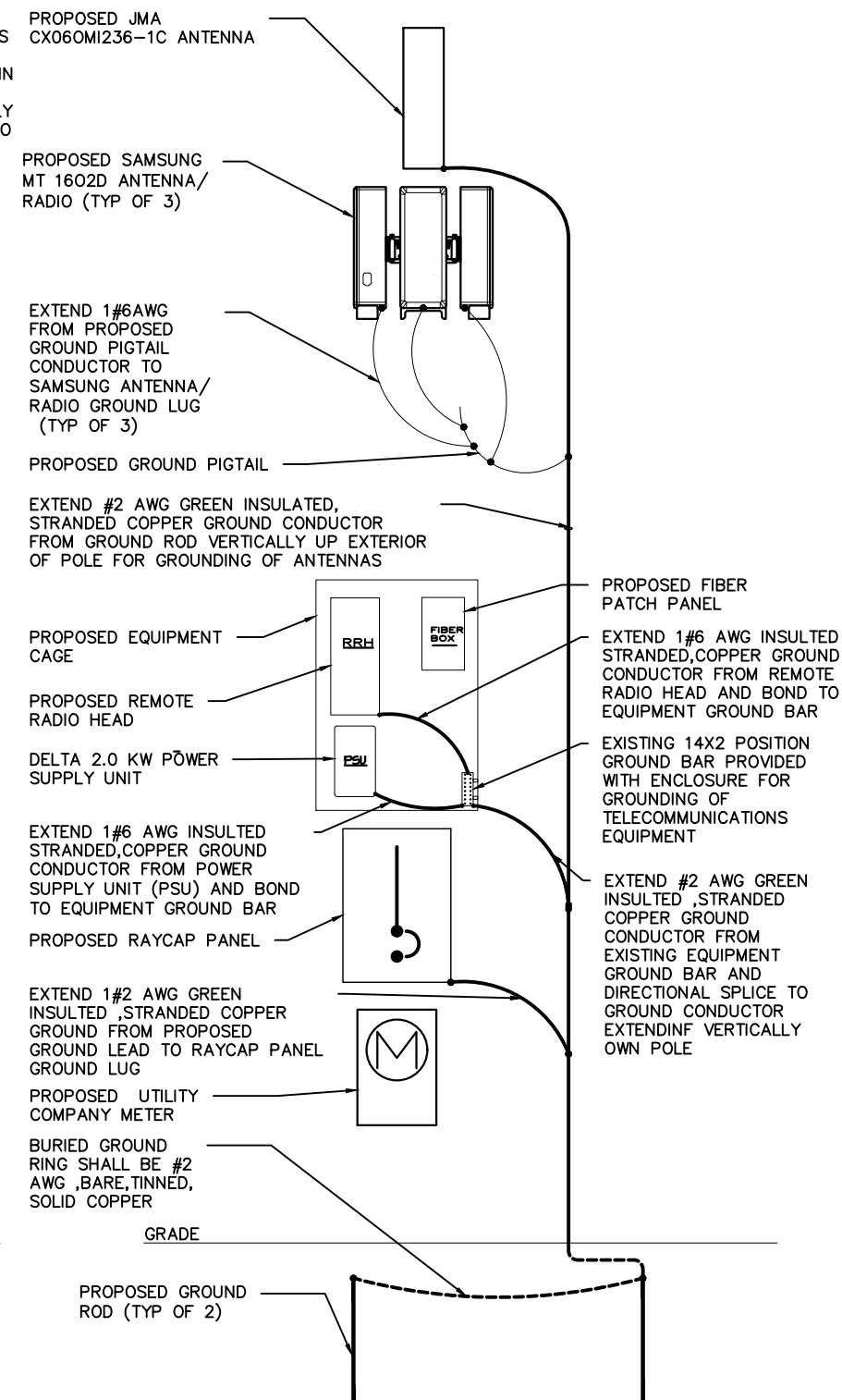
NOTE: CONTRACTOR SHALL REFER TO LATEST EDITION OF VZW
FIBER DESIGN STANDARDS FOR FIBER QUANTITIES ETC.
STANDARD DETAILS MAY NOT REPRESENT EXACT PULLBOX
LOCATIONS. PLAN SHEETS DICTATE PULLBOX LOCATIONS



1 POWER ONE LINE DIAGRAM
EQ-1 SCALE : NTS

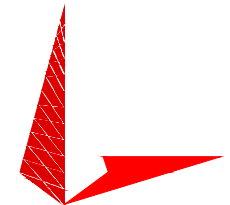


2 FIBER ONE LINE DIAGRAM
EQ-1 SCALE : NTS



3 GROUNDING ONE LINE DIAGRAM
EQ-1 SCALE : NTS

OWNER/DEVELOPER:



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DESIGNED BY OTHERS

REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:	
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FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

DETAILS

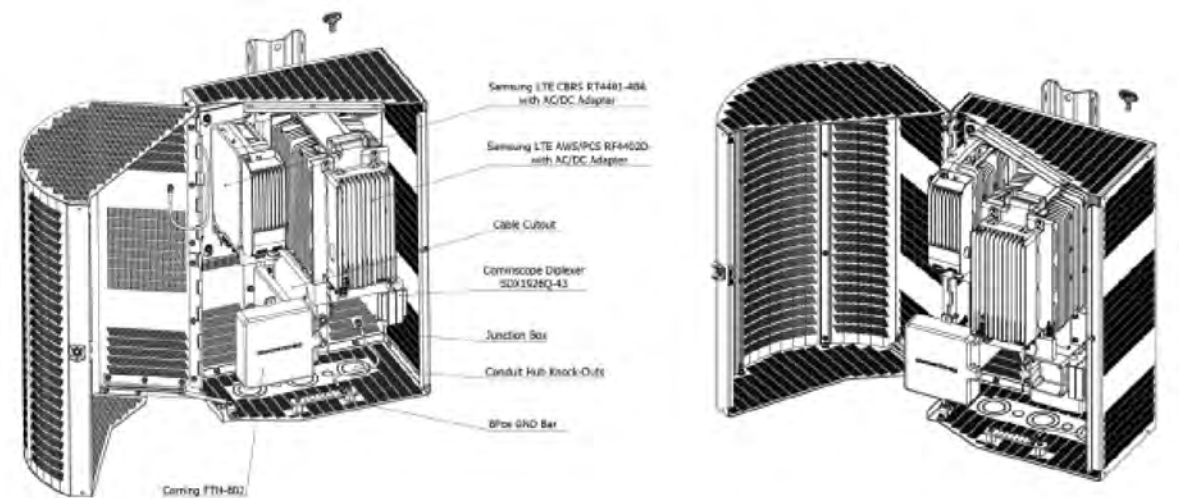
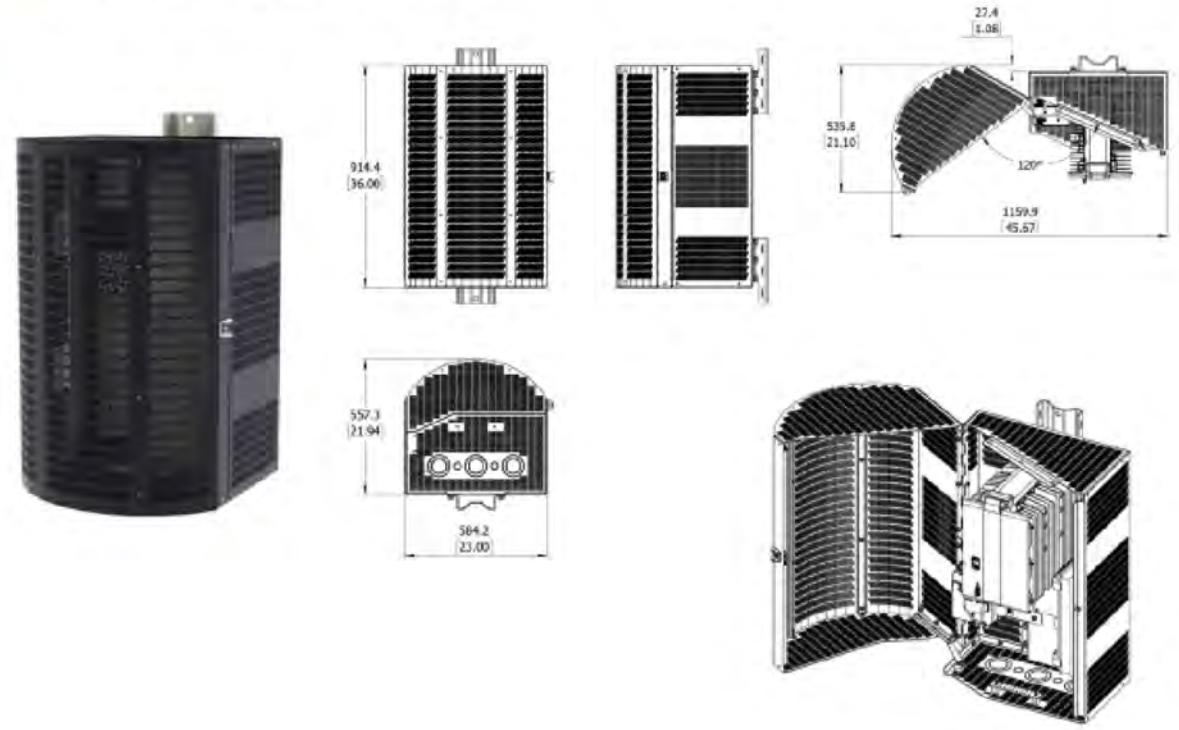
PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg
SHEET:	

SHEET:

EQ-1

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RSCAC-1029-1Y4 / 2Y4 / 3YZ / Shroud
2ND GENERATION



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REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

RADIO SHROUD

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg
SHEET:	EQ-2

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METALLIC PLAQUE TO BE MOUNTED TO
SMALL CELL POLE AT 5'-0" AGL.
WOOD POLE APPLICATIONS WILL REQUIRE
THIS PLACED ON METER HOUSING AS WELL.

BOINGO
IN EMERGENCY CALL 24 HR
555-555-5555
SITE ID

2 BOINGO PLAQUE DETAIL
EQ-3 SCALE: NTS

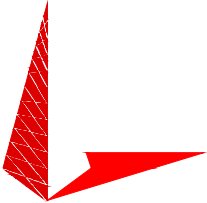
RF SIGN TO
BE INSTALLED
2'-0" BELOW
ANTENNA



3 RF SIGN
EQ-3 SCALE: NTS

OWNER/DEVELOPER:





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REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

EQUIPMENT DETAILS

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg
SHEET:	EQ-3

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3/24/2021

CX06OMI236-1C

CX06OMI236-1C
NWAV™ X-Pol OMNI Antenna

Download this
datasheet

Hex-port 2 ft 360° antenna with RET-controlled HB:
2 ports 698-960 MHz and 4 ports 1695-2700 MHz

- X-Pol, Small Cell, hex-port antenna
- Suitable for pole or building mount
- 2x2 MIMO low-band and 4x4 MIMO high-band
- Internal beam combining
- Dependent RET control for HB ports
- Suitable for LTE/UMTS/CDMA/GSM technologies
- Cost-effective solution for neutral host locations



Omni clover



NWAV

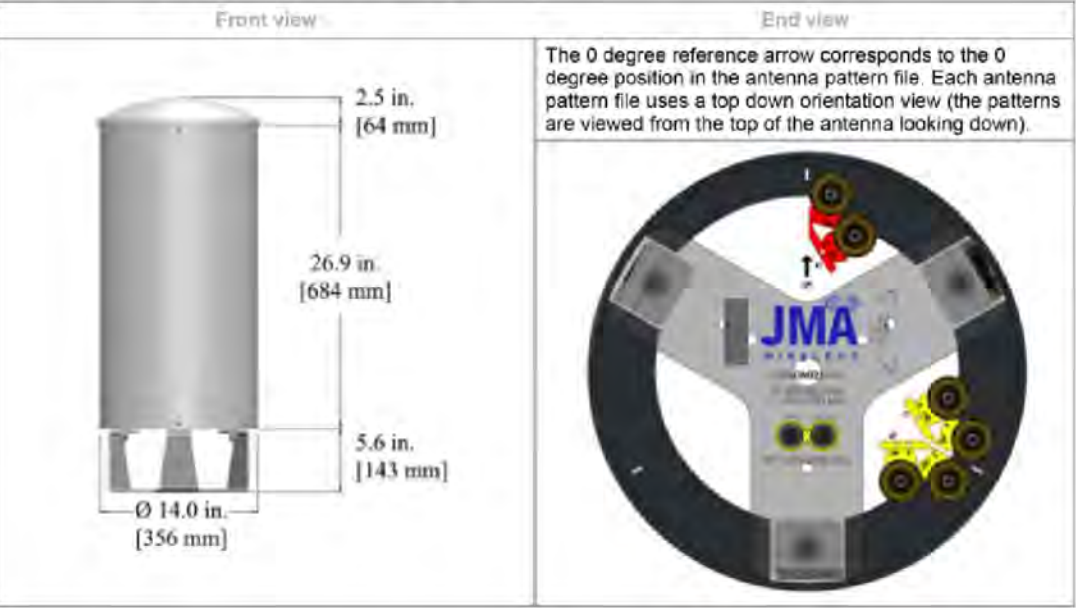
Electrical specification (minimum/maximum)	Ports 1, 2			Ports 3, 4, 5, 6				
Frequency bands, MHz	698-798	824-894	880-960	1695-1880	1850-1990	1920-2180	2300-2500	2500-2690
Polarization	± 45°			± 45°				
Average gain over all tilts, dBi	5.7	5.7	5.1	9.4	9.7	9.9	10.1	10.2
Horizontal beamwidth (HBW), degrees	360°			360°				
Vertical beamwidth (VBW), degrees ¹	40°	35°	32°	15.7°	14.6°	13.7°	12.6°	11.7°
Electrical downtilt (EDT) range, degrees	2° (FET)			2-8° (RET)				
Cross-polar isolation, port-to-port, dB ¹	25	25	25	25	25	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0			1.5:1 / -14.0				
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153			-153				
Maximum input power per port, watts	250			150				
Maximum total input power, watts	900							

¹ Typical value over frequency and tilt

3/24/2021

CX06OMI236-1C

Ordering information	
Antenna model	Description
CX06OMI236-1C	2F X-Pol HEX OMNI 360° LB 2° FET, 1695-2700 MHz 2-8° RET, 4.3-10
Optional accessories	
AISG cables	M/F cables for AISG connections
PCU-1000 RET controller	Stand-alone controller for RET control and configurations
Mechanical specifications	
Dimensions height/diameter, inches (mm)	29.4/ 14 (746.8/ 355)
Antenna volume (cubic feet)	2.44
No. of RF input ports, connector type, and location	6 x 4.3-10 female, bottom
RF connector torque	96 lbf-in (10.85 N-m or 8 lbf-ft)
Net antenna weight, lb (kg)	38.6 (17.5)
Rated wind survival speed, mph (km/h)	150 (241)
Frontal wind loading @ 160 km/h, lbf (N)	47.6 (211.5)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	0.96



C-Band/CBRS 16T16R Dual Band MMU (MT1602D-48A/B)

SAMSUNG

Specifications



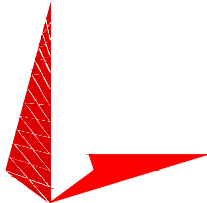
Note 1: CBRS-only is not supported.
Note 2: For CBRS+C-Band operation, 1024 QAM for CBRS may not be possible although power back-off is applied.

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Item		Specification	
Air Technology/ Band / Duplex	NR	NR	NR
	n48 / TDD	n77 / TDD	n77 / TDD
CRS	3550~3700 MHz	3700~3980 MHz	3700~3980 MHz
IBW	80 MHz	350 MHz	200 MHz
OBW	NR 10/20/30/40/60/80 MHz	40/60/80/100 MHz	40/60/80/100 MHz
Carrier configuration	Cri. BW	4 CC	2 CC
	# of carriers per band # of carriers (per Unit)	6 CC (CBRS-C-band dual mode) ^{*)}	Not Support
NB-IoT	Not Support	Not Support	Not Support
TRX path configuration	1T16R (CBRS/C-band Common)	1T16R (CBRS/C-band Common)	1T16R (CBRS/C-band Common)
Antenna configuration	2V8H 48 AE (3 x 1 sub-array, CBRS/C-band Common)	2V8H 48 AE (3 x 1 sub-array, CBRS/C-band Common)	2V8H 48 AE (3 x 1 sub-array, CBRS/C-band Common)
Conductive power	75W	82.5W	82.5W
	Max. 47 dBm/10 MHz (User Beam: 19.8 dBi)	69.4 dBm (49.2 dBm + 20.2 dBi)	69.7 dBm (49.5 dBm + 20.2 dBi) for C only
Modulation	DC: 256 QAM (1024 QAM with 1 ~ 20dB power back-off ^{*)})	DC: 256 QAM (1024 QAM with 1 ~ 20dB power back-off ^{*)})	DC: 256 QAM (1024 QAM with 1 ~ 20dB power back-off ^{*)})
Ref. sensitivity	Typical -97.8 dBm @ 18K (SCS: 30KHz, 61RBz)	Typical -97.8 dBm @ 18K (SCS: 30KHz, 61RBz)	Typical -97.8 dBm @ 18K (SCS: 30KHz, 61RBz)
Unwanted emission	3GPP	3GPP 38.104	3GPP 38.104
	Local regulation	FCC 47 CFR 95.41 (e)	FCC 47 CFR 27.53
Operator's request	* For ES: -13 dBm / MHz @ 3,980~4,000 MHz	* For ES: -13 dBm / MHz @ 3,980~4,000 MHz	* For ES: -13 dBm / MHz @ 3,980~4,000 MHz
	-40 dBm / MHz @ 4,000~4,080 MHz, -60 dBm / MHz @ > 4,080 MHz	-40 dBm / MHz @ 4,000~4,080 MHz, -60 dBm / MHz @ > 4,080 MHz	-40 dBm / MHz @ 4,000~4,080 MHz, -60 dBm / MHz @ > 4,080 MHz
MIMO Capacity	DC, 8L, UL 8Rx (4C)	DC, 8L, UL 8Rx (4C)	DC, 8L, UL 8Rx (4C)
Function Split	Opt. 7-2x Cat. 8 (eCPRI)	Opt. 7-2x Cat. 8 (eCPRI)	Opt. 7-2x Cat. 8 (eCPRI)
Optic interface	16 km, 25 Gbps x 3 Ports, single mode, Bi-di (Option Duplex)	16 km, 25 Gbps x 3 Ports, single mode, Bi-di (Option Duplex)	16 km, 25 Gbps x 3 Ports, single mode, Bi-di (Option Duplex)
Input voltage	-48 VDC (-36 VDC to -58 VDC), 110 VAC (100 VAC to 240 VAC)	-48 VDC (-36 VDC to -58 VDC), 110 VAC (100 VAC to 240 VAC)	-48 VDC (-36 VDC to -58 VDC), 110 VAC (100 VAC to 240 VAC)
Power consumption	DC type: 355.7 W @ 50 % room temp, 452.7 W @ 100 % room temp, 477.7 W @ 100 % all temp	DC type: 355.7 W @ 50 % room temp, 452.7 W @ 100 % room temp, 477.7 W @ 100 % all temp	DC type: 355.7 W @ 50 % room temp, 452.7 W @ 100 % room temp, 477.7 W @ 100 % all temp
	AC type: 371.7 W @ 50 % room temp, 473.7 W @ 100 % room temp, 500.7 W @ 100 % all temp	AC type: 371.7 W @ 50 % room temp, 473.7 W @ 100 % room temp, 500.7 W @ 100 % all temp	AC type: 371.7 W @ 50 % room temp, 473.7 W @ 100 % room temp, 500.7 W @ 100 % all temp
Volume / Dimension	20.5 L / 220 x 583 x 150 mm (8.66 x 22.95 x 6.30 inch)	20.5 L / 220 x 583 x 150 mm (8.66 x 22.95 x 6.30 inch)	20.5 L / 220 x 583 x 150 mm (8.66 x 22.95 x 6.30 inch)
Weight	DC type: 14.02 kg (30.9 lb), AC type: 14.52 kg (32.0 lb)	DC type: 14.02 kg (30.9 lb), AC type: 14.52 kg (32.0 lb)	DC type: 14.02 kg (30.9 lb), AC type: 14.52 kg (32.0 lb)
Operating temperature	-40 °C (-40 °F) to +55 °C (131 °F) (w/o solar load)	-40 °C (-40 °F) to +55 °C (131 °F) (w/o solar load)	-40 °C (-40 °F) to +55 °C (131 °F) (w/o solar load)
Cooling scheme	Natural convection	Natural convection	Natural convection
Installation	Pole, Wall	Pole, Wall	Pole, Wall
UDA	4 Rx	4 Rx	4 Rx
Misc. features	Spectrum analyzer (Tx / Rx)	Spectrum analyzer (Tx / Rx)	Spectrum analyzer (Tx / Rx)

6

OWNER/DEVELOPER:



TEP OPCO LLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

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1 ANTENNA DETAILS
EQ-5 SCALE: N.T.S.



SAMSUNG B2/B66A RRH ORAN (RF4439D-25A)

WEIGHT : 74.7 LBS
SIZE (HXWXD) :- 14.96X14.96X10.04

2 RADIO DETAILS
EQ-5 SCALE: N.T.S.

REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

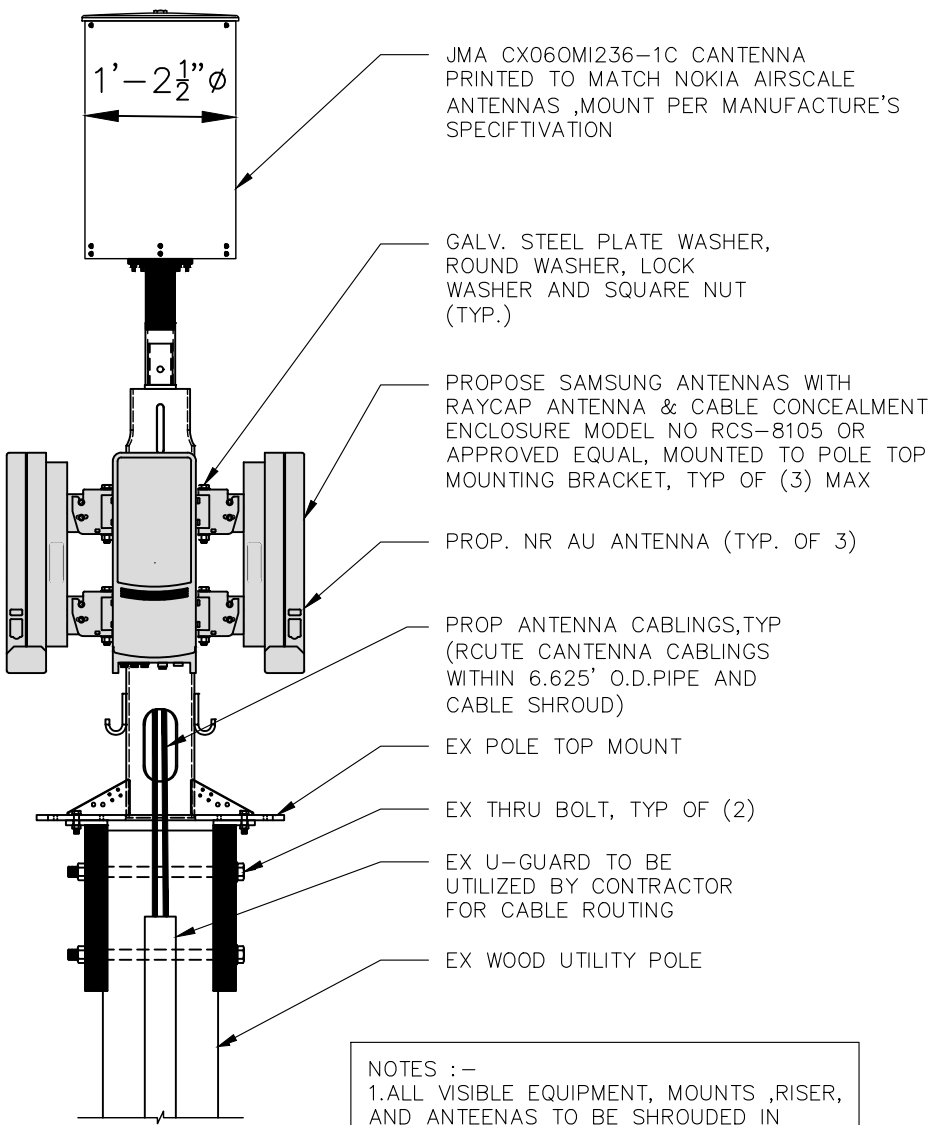
SHEET TITLE:

ANTENNA & RADIO
DETAILS

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg
SHEET:	

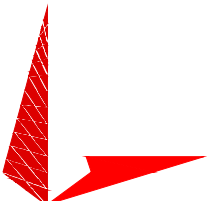
EQ-5

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OWNER/DEVELOPER:





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RALEIGH, NC 27603-3530
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PRELIMINARY
DO NOT USE FOR
CONSTRUCTION

January 20, 2025

REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

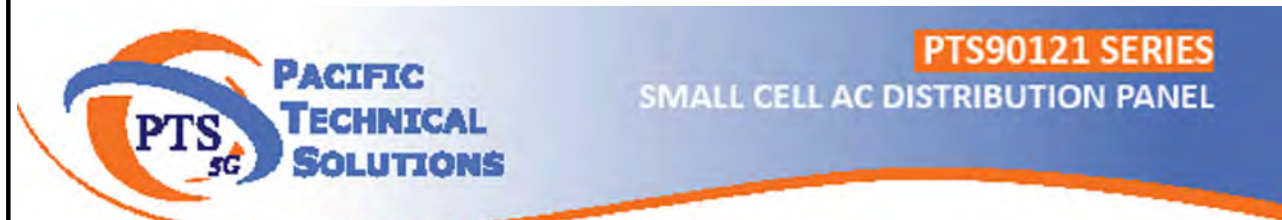
FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

MOUNT DETAILS

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg
SHEET:	EQ-6

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120/208 VAC 5 Position Power Distribution Panel with Surge Protection

- Compact Small Cell AC Load Center
- Suitable for Use as Service Equipment - SUSE Rated
- Factory loaded with 60 AMP / 1 Pole Main Breaker
- 5 Load Breaker Capability
- L1 / N SPD
- Pole Mounting Bracket Included



PTS90121 Load Examples

Base P/N	SPD	LA	Site	Description	REQ. No.
PTS90121 - 6	-	-	-	PICO 120VAC 60A/1Pole 10 kAIC AC Power Distribution Panel	REQ.53469
PTS90121 - 6	-	-	-	MICRO 120VAC 60A/1Pole 10 kAIC AC Power Distribution Panel	REQ.53466
PTS90121 - 6	-	22	-	120VAC 60A/1Pole 22 kAIC AC Power Distribution Panel	
PTS90121 - 6	-	22	-	120VAC 60A/1Pole 22 kAIC AC Power Distribution Panel	
PTS90121 - 7	-	-	-	120VAC 70A/1Pole 10 kAIC AC Power Distribution Panel	

P = (L1-PE), PN = Dual (L1/N-PE)

Position Key

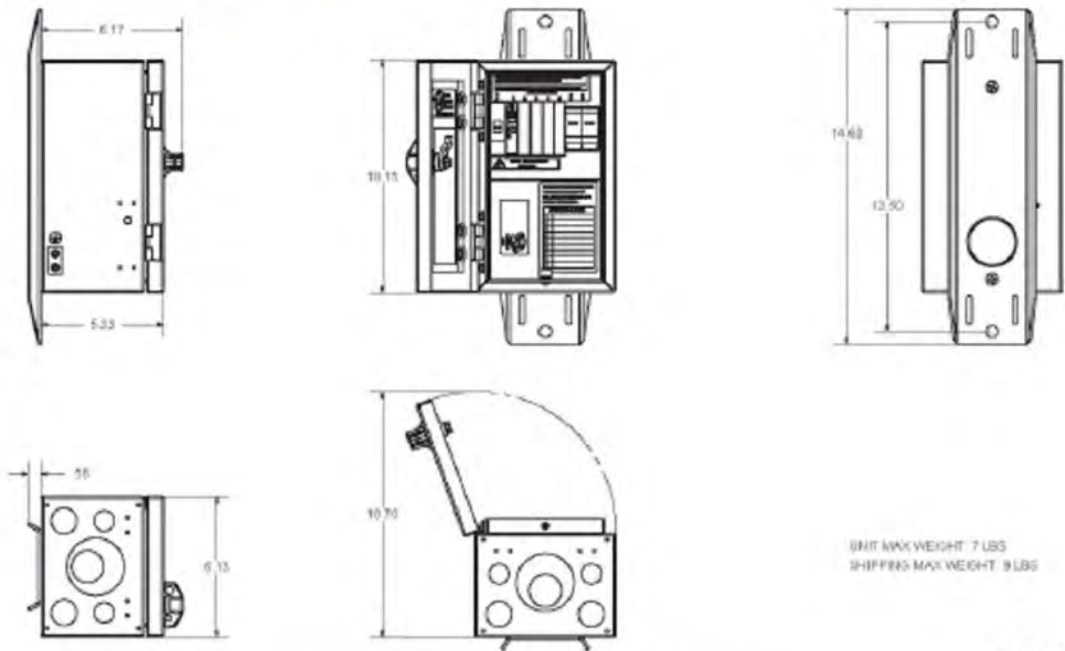
1 Pole	1	2	3	4	5	6	7	8	9	A	C	F	G	K	S	Open
AMP	1	2	3	4	5	6	7	8	9	10	12	15	16	20	25	

= Amperage Code (6=60A/1P, 7=70A/1P(10k)) 40A to 50A Optional, 60A/1P/22kAIC Optional

PTS P/N	Description	PTS P/N	Description	PTS P/N	Description
PT-KM1N-01A	1 AMP	PT-KM1N-10A	10 AMP	PT-KM1N-16A	16 AMP
PT-KM1N-05A	5 AMP	PT-KM1N-12A	12 AMP	PT-KM1N-20A	20 AMP
PT-KM1N-07A	7 AMP	PT-KM1N-15A	15 AMP	PT-KM1N-25A	25 AMP

Additional/Spare Breakers: UL489A DIN Rail Breaker # AMP

PTS90121 Outline Drawings



Electrical Specifications

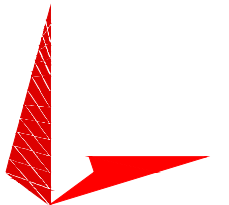
Operating Voltage	120/208 VAC
Main Breaker Rated	60 AMP / 1 Pole (70A optional)
Conditional Short	10kAIC (22kAIC 60A optional)
Switch Rating	N/A
Distribution Breakers - Maximum Positions	5 Positions / UL489
Distribution Breakers - Equipped	5x10A/1P 5x20A/1P
Power Input Wire Size	#14 - #4 awg Cu - Al
Power Output Wire Size	#14 - #4 awg Cu - Al
Neutral & Ground Contacts	#14 - #4 awg Cu - Al
SPD Type	L1/N
SPD Ratings	20 kA 8/20 μ s Nominal, 50kA max - Type 1
External Ground Connection	2-hole 1/4-20 w/ 5/8" spacing
UL Certification	UL67 Panel Boards

Mechanical Specifications

Housing Material	Powder coated aluminum
Breaker Access	Padlockable Wing Knob
Housing Dimensions (H x W x D)	10.15 x 6.13 x 5.33
Unit Weight / Shipping Weight	7 lbs / 9 lbs
Operating Temp	-40 C to 60 C
Humidity	95% Non-Condensing



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REV	DESCRIPTION	DATE
A	PRELIMINARY	10/14/25
B	REVISED PRELIMINARY	04/23/26
C	REVISED PRELIMINARY	04/27/26

PROJECT NAME:

FT BELVOIR_SMC-3_BRITTEN

BOINGO SITE ID:

FT BELVOIR_SMC-3_BRITTEN

SHEET TITLE:

DISCONNECT
DETAILS

PROJECT MANAGER:	NICHOLAS CONSTANTINE ,P.E.
PROJECT ENGINEER:	ASHA PIGGOTT
PROJECT NUMBER:	P-485055
DESCRIPTION:	BOINGO (N) COMPOSITE POLE
DRAWING NAME:	Ft Belvoir_SMC-3_Britten.dwg
SHEET:	

EQ-7

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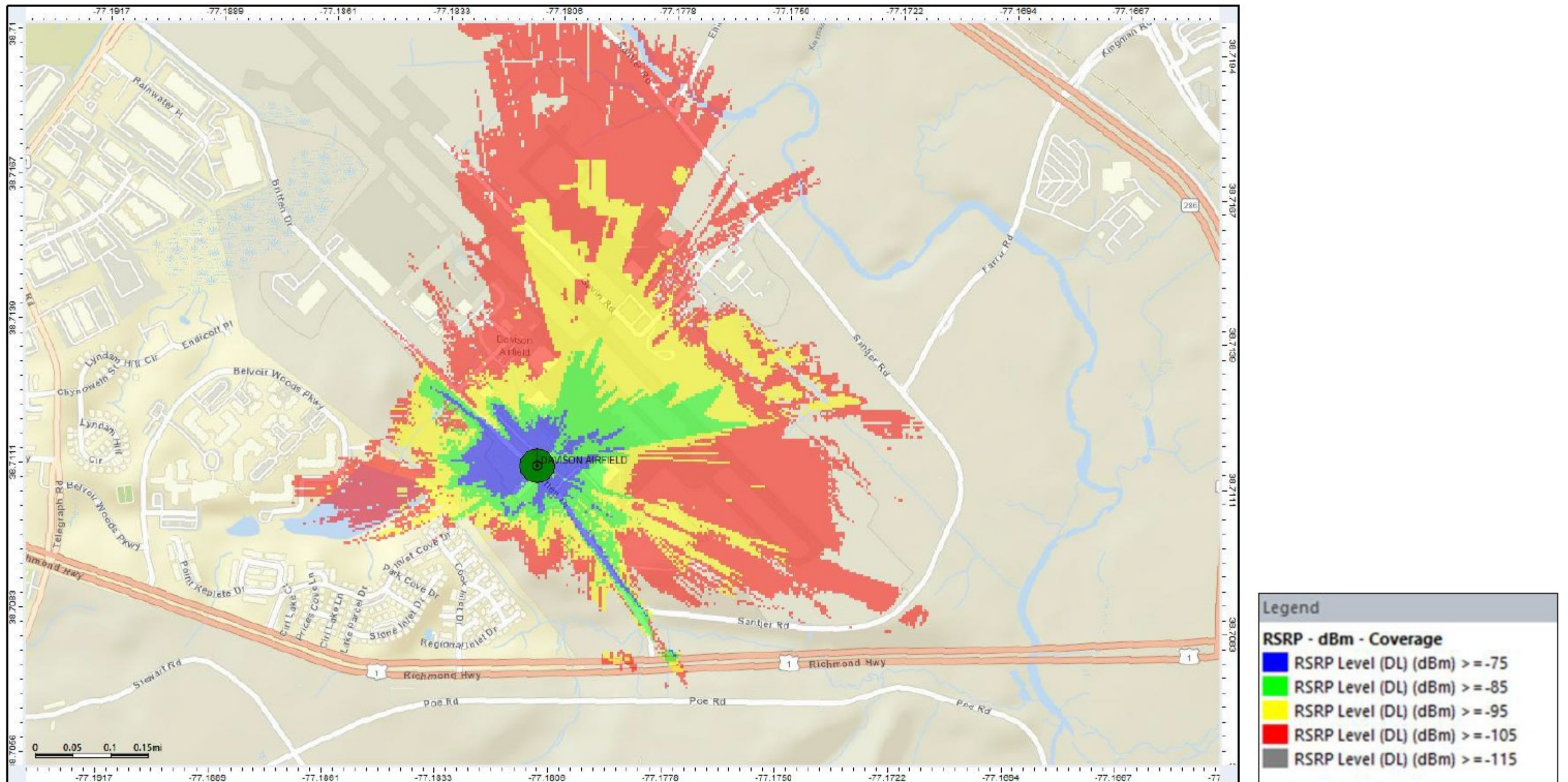
Tel: 888-820-3508

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Ft Belvoir SMC 3 Britten (Davison Airfield) - RF coverage



Signal Strength Legend

Legend

RSRP - dBm - Coverage

	RSRP Level (DL) (dBm) ≥ -75	 Excellent
	RSRP Level (DL) (dBm) ≥ -85	 Good
	RSRP Level (DL) (dBm) ≥ -95	 Fair
	RSRP Level (DL) (dBm) ≥ -105	 Marginal
	RSRP Level (DL) (dBm) ≥ -115	 Poor Coverage