

ART AND ARCHITECTURAL REVIEW BOARD (AARB)

Project Data Sheet

Revised February 6, 2025

(Due by 3:00 p.m. on the Friday two weeks before the meeting to AARB@dgs.virginia.gov)

Date Submitted: 4/16/26

Agency Name: DEB (Division of Engineering and Building)

Project Name, Number, and Location [* must include the project number]

(Include project name, number/code, and location, i.e., city, county, etc.)

DEB Project , Brumley MTN New Tower , TEL-B6TEL-002 , 8070 Skycraft Rd, Abington, VA 24210, Washington County

Representatives for the Agency and the Architect/Engineer

(Include names, titles, phone numbers, email addresses, and physical addresses—including contact information for the day of the meeting)

Project Contact: Fred Low - Chaille Tower Consultants obo Motorola and Washington County, email: fredlow@chailletowerconsultants.com, (m) 317-538-9856

DEB Contact: Jeffrey L. Barra, AIA, VCCO, State Review Architect, Division of Engineering and Buildings, Department of General Services, email: Jeffrey.Barra@dgs.virginia.gov Office: 804.786.4134

Current Project Status/Phase and Schedule [* must select one of the following]

- Preliminary Design Submission: ☐
- Final Design Submission: ☒

(Status/Phase = Schematic, etc. Schedule - next milestone date)

Request for Consent Agenda: Yes: ☒ No: ☐

* Please refer to the *AARB Agency Project Submission and Presentation Guidelines* – Project Submission Section for additional information and guidance on the Consent Agenda versus Regular Agenda.

PLEASE NOTE: If you did not check the box for Consent Agenda, your project will be posted on the Regular Agenda and the agency will be required to attend the meeting to make a presentation to the board on the day of the meeting. ***Presentations are not to exceed 15 minutes.***

Project Description

(Area, number of stories, building and roof forms, exterior materials, etc.)

Washington County, VA has an existing tower site with an existing 150' self support (Lattice Type) tower within an existing Unmanned Communication Facility compound. The parcel containing the facility is owned by Commonwealth of Virginia.

Washington County, VA is working with Motorola (Project Manager) and Mission 1 (engineer) to upgrade the facility. A NEW tower (115' Self Support Tower) installation is proposed within the existing fenced compound. The new tower will be constructed of hot-dip galvanized material and will therefore be grey in color. Communications Equipment to be mounted on the tower will be of similar color.

The EXISTING tower (150' Self Support Tower) WILL remain on site after new tower installation. New ice bridge will be installed from the existing equipment shelter to the new tower.

The FAA has indicated there is not lighting requirement for the NEW tower.

Architectural Aesthetic:

(What does it look like and why?)

The proposed new tower is a 115' tall self-support (Lattice Type) Tower. This tower type was selected as it matches the type of tower existing on site. This type of tower has also been found to be versatile in equipment it is able to accommodate.

Relationship to Approved Master Plan [** this section must contain information for Board review, do not leave blank*]

(Include the date of the master plan and how this project relates to a larger program effort, if applicable)

The proposed project did not require Approved Master Plan.

Existing Architectural Context

(The surrounding community, historic significance, adjacent site, the identity of the agency or institution, etc.)

The new tower will be constructed within an existing fenced tower compound. There is an existing 150' self support (lattice type) tower within the compound. The two similar towers will remain on the site. The area surrounding the existing tower compound is woodlands. There are no nearby residential structures to the existing tower site.

AARB History (for return presentations on the same project): [** this section must contain information for Board review, do not leave blank / if this section does not apply to your project, please indicate with N/A*]

- State when previous presentation(s) were made to the Board on the project.
- Restate previous Board comments.
- Show actions taken to address Board comments; use visuals to compare previous renderings with updates.

BRUMLEY MTN

8070 SKYCRAFT RD
ABINGTON, VA 24210
WASHINGTON COUNTY

SCOPE OF WORK

- 115' SELF-SUPPORT TOWER SCOPE OF WORK
- INSTALL (1) SITE PRO 1 PSA6 STAND-OFF MOUNT
 - INSTALL (1) SITE PRO 1 HS6-K STAND-OFF MOUNT
 - INSTALL (1) CC450-06-P RX ANTENNA
 - INSTALL (1) CSA20-97P TX ANTENNA
 - INSTALL (8) HX6-6W MW
 - INSTALL (8) ISMD6 MW ICE SHIELD
 - INSTALL (2) EC5-50A 7/8" COAX
 - INSTALL (8) EW63 2" COAX

GROUND SCOPE OF WORK

- INSTALL APPROX. 18.5 LF GALV. ICE BRIDGE
- INSTALL (1) 3' X 12' CONCRETE PAD FOR LP TANK RELOCATION
- INSTALL (1) 50kw GENERATOR

NEW ELECTRIC SERVICE TO SITE AND EQUIPMENT SHELTER. NO WATER SUPPLY OR SEWAGE TO/FROM SITE

SITE NAME: BRUMLEY MTN
SITE ADDRESS: 8070 SKYCRAFT RD
ABINGTON, VA 24210

SITE COORDINATES AND ELEVATION (1A)

LATITUDE - N 36° 49' 14.91"
LONGITUDE - W 82° 04' 40.22"
GRD ELEV. - ± 4112.6' AMSL

SITE INFORMATION

LANDLORD
COMMONWEALTH OF VIRGINIA,
COMMISSION OF GAME & INLAND
FISHERIES

POLICE DEPARTMENT
ABINGDON POLICE DEPT
425 W MAIN ST,
ABINGDON, VA 24210
PH: (276) 628-3111

COUNTY REPRESENTATIVE

THERESA KINGSLEY
EMERGENCY MANAGEMENT COORD.
1 GOVERNMENT PLACE, SUITE A
ABINGDON, VA 24210
PH: (276) 525-1330

FIRE DEPARTMENT

ABINGDON FIRE DEPT
316 PARK ST SE,
ABINGDON, VA 24210
PH: (276) 628-5563

PROJECT MANAGER

MOTOROLA SOLUTIONS, INC
CHAD SWEIGART
PH: (717) 710-6014
EMAIL: CHAD.SWEIGART@MOTOROLASOLUTIONS.COM

ENGINEERING PROJECT MANAGER

T3S POSTSALE ENGINEERING
FEDERICO HUMAN
PH: (948) 888-3648
EMAIL: FEDERICO.HUMAN@MOTOROLASOLUTIONS.COM

CONSTRUCTION PROJECT MANAGER

CARL PAYNE
SENIOR PROJECT MANAGER
PH: (304) 812-3031

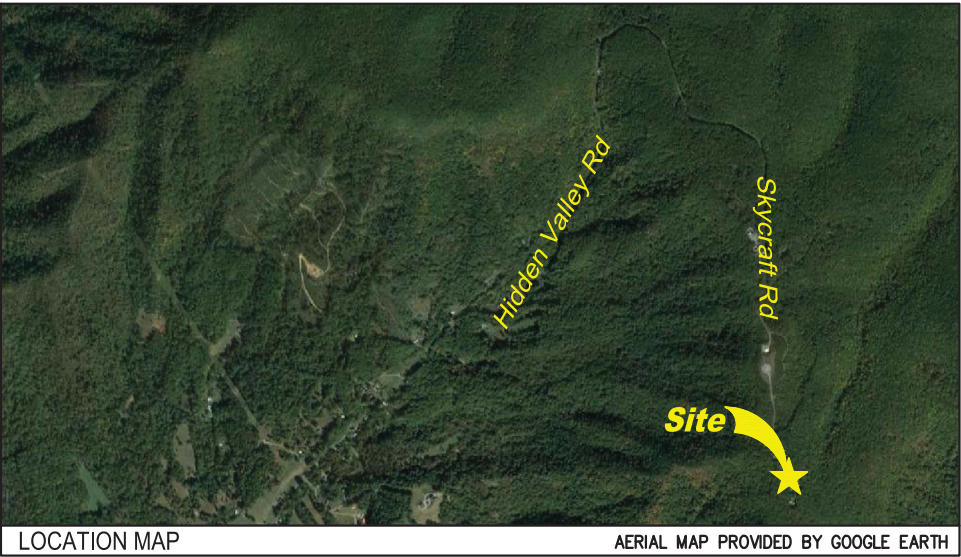
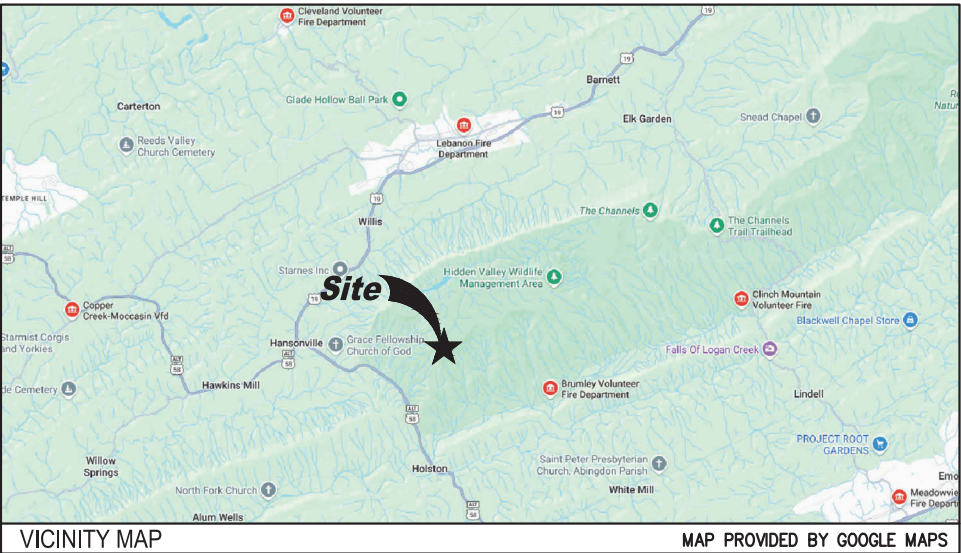
ARCHITECTURAL AND ENGINEERING

MISSION 1 COMMUNICATIONS
MARK ALLEN
6202 CONSTITUTION DRIVE, SUITE C
FORT WAYNE, IN 46804
PH: (260) 436-3922
EMAIL: M.ALLEN@M1COMM.COM

CONSULTANT TEAM

PROJECT REPRESENTATIVE :	RECEIVED :
	ACCEPTED :
COUNTY REPRESENTATIVE :	RECEIVED :
	ACCEPTED :
PROPERTY OWNER:	RECEIVED :
	ACCEPTED :
RECEIVED AND ACCEPTED	

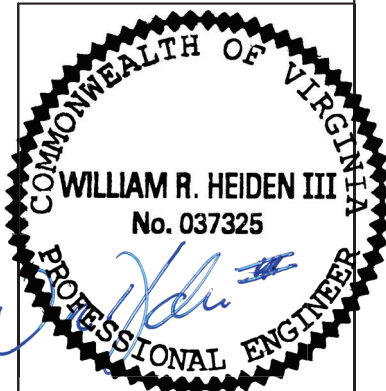
DIRECTIONS TO SITE	DIRECTIONS TO HOSPITAL



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February 9, 2026

4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



PROJECT INFORMATION, LOCATION MAPS, AND DRAWING INDEX

BRUMLEY MTN
8070 SKYCRAFT RD
ABINGTON, VA 24210

T-1

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THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PRESERVING ALL ESTABLISHED SURVEY CONTROL POINTS. IF THE CONTRACTOR OR ANY OF HIS SUB-CONTRACTORS MOVE OR DESTROY ANY SURVEY CONTROL POINTS, THE COST INCURRED BY THE LAND OWNER OR MOTOROLA TO RE-ESTABLISH THEM WILL BE BORNE BY THE CONTRACTOR.

1.10. PERMITS

THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. THE CONTRACTOR SHALL MEET ALL OF THE REGULATORY REQUIREMENTS OF THE JURISDICTION GOVERNING CONSTRUCTION.

1.11. SITE INSPECTION

THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR ARRANGING WITH MOTOROLA FOR AN INSPECTION PRIOR TO COVERING UP ALL WORK THAT WILL BE COVERED IN FINISHED CONDITION. IT IS THE SITE GENERAL CONTRACTOR'S RESPONSIBILITY TO MANAGE THE SEQUENCE OF WORK AND REQUEST THE INSPECTIONS IN A TIMELY MANNER. THE SITE GENERAL CONTRACTOR SHALL NOT REQUEST AN INSPECTION UNLESS ALL OF THE RELATED WORK HAS BEEN COMPLETED. WORK SHALL NOT PROCEED TO THE NEXT STEP UNTIL THE PREVIOUS STEP HAS BEEN INSPECTED AND APPROVED BY THE LOCAL INSPECTORS AND THE MOTOROLA REPRESENTATIVE. THE PRESENCE OF THE OWNER OR MOTOROLA REPRESENTATIVE ON THE JOB SITE IN NO WAY RELIEVES THE SITE GENERAL CONTRACTOR OF THE ASSOCIATED RESPONSIBILITIES OF THE JOB. ANY WORK WHICH DOES NOT MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS WILL BE CORRECTED OR REMOVED SOLELY AT THE SITE GENERAL CONTRACTOR'S EXPENSE.

THE FOLLOWING INFORMATION IS INCLUDED AS A GUIDE TO THE CONTRACTOR TO ASSIST IN DETERMINING THE TYPE AND FREQUENCY OF INSPECTIONS. THE LISTED INSPECTIONS REPRESENT THOSE REQUIRED FOR SMALL OR SIMPLE PROJECTS. LARGE OR COMPLEX PROJECTS MAY REQUIRE ADDITIONAL INSPECTIONS DEPENDING ON THE SEQUENCE OF WORK.

•FOUNDATION EXCAVATIONS AND REBAR: TO BE MADE AFTER TRENCHES ARE EXCAVATED AND FORMS ERECTED, REINFORCEMENT PLACED, COMPACTION TESTED, SOIL TREATED, VAPOR BARRIER PLACED, AND ESSENTIALLY READY FOR CONCRETE PLACEMENT.

•GROUNDING: TO BE MADE AFTER THE BELOW GROUND CADWELD CONNECTIONS HAVE BEEN COMPLETED, PRIOR TO COVERING UP THE TRENCHES.

•ELECTRICAL WORK WITHIN WALLS: TO BE MADE AFTER THE ROOF, FRAMING, FIRE BLOCKING AND BRACING IS IN PLACE PRIOR TO THE INSTALLATION OF INSULATION OR WALL/CEILING MEMBRANES.

AS A GENERAL RULE. THE CONTRACTOR SHALL PROVIDE ADVANCE NOTICE TO MOTOROLA FOR INSPECTION OF ALL WORK PRIOR TO CONCEALMENT. THE CONTRACTOR HAS RESPONSIBILITIES RELATIVE TO ALL TYPES OF INSPECTIONS AND IS RESPONSIBLE FOR CONTACTING ALL OF THE INSPECTING ENTITIES TO DETERMINE HIS RESPONSIBILITIES. ALL OF THESE INSPECTING ENTITIES HAVE UNIQUE AND SEPARATE RESPONSIBILITIES. ONE INSPECTION FROM AN ENTITY WILL NOT SUBSTITUTE FOR AN INSPECTION FROM ANOTHER ENTITY.

1.12. SAFETY

THE CONTRACTOR, HIS EMPLOYEES, ANY SUB-CONTRACTORS, VENDORS, THEIR RESPECTIVE EMPLOYEES AND CONTRACTOR'S VISITORS SHALL COMPLY WITH ALL SAFETY STANDARDS, ACCIDENT PREVENTION REGULATIONS AND ENVIRONMENTAL REGULATIONS PROMULGATED BY FEDERAL, STATE, OR LOCAL AUTHORITIES HAVING JURISDICTION AND SHALL AT ALL TIMES CONDUCT ALL OPERATIONS UNDER THE CONTRACT IN A MANNER TO AVOID THE RISK OF BODILY HARM TO ANY PERSONS AND THE RISK OF DAMAGE TO ANY PROPERTY, EQUIPMENT OR MATERIAL SUCH PARTIES SHALL ALSO COMPLY WITH ANY SAFETY PROGRAMS AND/OR RULES PROMULGATED BY OWNER AND/OR MOTOROLA.

1.13. ELECTRO MAGNETIC EMISSIONS

THE CONTRACTOR SHALL ACKNOWLEDGE ALL OR PORTIONS OF THE WORK MAY INVOLVE POSSIBLE EXPOSURE OF CONTRACTOR, SUB-CONTRACTORS, AND THEIR RESPECTIVE EMPLOYEES, AGENTS, INVITEES, LICENSEES AND OTHER VISITORS TO THE JOBSITE AND/OR MOTOROLA PREMISES TO ELECTRO-MAGNETIC ENERGY ("EME") WHILE PERFORMING WORK UNDER THIS CONTRACT, ESPECIALLY IF WORK IS PERFORMED ON EXISTING ANTENNA TOWERS WHERE ANTENNAS ARE LOCATED. THE CONTRACTOR REPRESENTS THAT CONTRACTOR, SUBCONTRACTORS, AND ALL OF THEIR RESPECTIVE EMPLOYEES, AGENTS, INVITEES, LICENSEES, AND OTHER AUTHORIZED REPRESENTATIVES WHO ARE PERFORMING SERVICES UNDER THIS AGREEMENT WILL COMPLY WITH ALL ANSI AND ANY OTHER APPLICABLE EME STANDARDS, RULES OR REGULATIONS, INCLUDING, BUT NOT LIMITED TO THOSE RULES OR REGULATIONS IMPOSED OR SUGGESTED BY MOTOROLA, IF ANY.

THE CONTRACTOR SHALL ADHERE TO ALL OSHA RULES, REGULATIONS AND ADOPTED POLICIES. ALL CONTRACTOR PERSONNEL SHALL HAVE UNDERGONE ELECTROMAGNETIC ENERGY (EME) TRAINING FOR PERSONNEL WORKING IN THE VICINITY OF ACTIVE ANTENNAS. AS SUCH IT IS RECOMMENDED THAT RF MONITORS BE USED BY THE TOWER PERSONNEL TO MONITOR EXPOSURE LEVELS. IF EME LEVELS AT THE SITE EXCEED THE MAXIMUM PERMISSIBLE EXPOSURE LIMITS, THE CONTRACTOR SHALL COORDINATE WITH THE INDIVIDUALS RESPONSIBLE FOR USE OF THE TRANSMITTER TO MAKE SURE THAT THE EQUIPMENT IS DEACTIVATED BEFORE WORK CAN BE RESUMED, WITHOUT CAUSING A SERIOUS DISRUPTION OF THE SERVICE.

1.14. SITE CLEANUP

THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE AT ALL TIMES DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, VEGETATION, AND RUBBISH, AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. WHENEVER THE WORK-SITE IS LEFT UNATTENDED, THE CONTRACTOR SHALL BLOCK THE OPENING WITH WARNING TAPE TO DISCOURAGE TRESPASSING. THE PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE AT THE CONCLUSION OF SITE WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LANDSCAPE GRADING AND SEEDING OF THE DISTURBED SOIL THE CONTRACTOR SHALL USE LOCAL GRASS SEED TO STABILIZE SOIL AND SHALL COVER DISTURBED AREAS WITH HAY MULCH TO REDUCE RUNOFF OF SEDIMENT TO DOWNSTREAM AREAS. THE CONTRACTOR SHALL RESTORE THE SITE TO ITS ORIGINAL CONDITION. ALL SLOPES AND DISTURBED AREAS NOT RECEIVING AGGREGATE SURFACING ARE TO BE PREPARED AND BROADCAST SEEDED AND FERTILIZED FOR EROSION PROTECTION. SEEDING FOR AREAS DISTURBED SHALL BE ESTABLISHED SEASONALLY AS REQUIRED BY LOCAL CODES.

THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE OR INTERRUPTION OF EXISTING UNDERGROUND OR OVERHEAD ELECTRIC SERVICES, UNDERGROUND GROUNDING AND FUEL LINES, EQUIPMENT AND BUILDINGS ON THE SITE, PLUS OFF SITE SERVICES, BURIED OR OVERHEAD, SURROUNDING THE EXISTING OR EXPANDED COMPOUND. ANY PROPERTY DAMAGE CAUSED BY THE CONTRACTOR OR HIS OPERATIONS SHALL BE CORRECTED AND/OR RESTORED TO THE SATISFACTION OF THE PROPERTY OWNER(S) AND MOTOROLA AT NO ADDITIONAL COST TO THE PROPERTY OWNER OR MOTOROLA. BURNING WILL NOT BE PERMITTED.

1.15. FACILITY STARTUP & COMMISSIONING

THE CONTRACTOR AND/OR SUB-CONTRACTORS SHALL DEMONSTRATE TO MOTOROLA THAT ALL SYSTEMS AND SUB-SYSTEMS INSTALLED UNDER THIS CONTRACT, OPERATE PROPERLY PRIOR TO THE FINAL ACCEPTANCE INSPECTION AND PROVIDE THE OPERATIONS AND MAINTENANCE MANUALS AT THIS TIME.

1.16. SHOP DRAWINGS/AS-BUILT DRAWINGS

THE MODIFICATIONS TO THE DRAWINGS AFTER CONSTRUCTION START SHALL RECEIVE ENGINEERING AND MOTOROLA APPROVAL PRIOR TO ANY CHANGES BEING MADE. THE ENGINEER OF RECORD SHALL MAKE THE REQUIRED CHANGE AND WILL SUBMIT CHANGES TO MOTOROLA AND ANY JURISDICTION HAVING AUTHORITY.

THE CONTRACTOR SHALL KEEP UP-TO-DATE MARKED-UP PRINTS OF THE PROJECT DRAWINGS. UPON COMPLETION OF WORK AT THE SITE, THE CONTRACTOR SHALL REVIEW THE COMPLETED AS-BUILT DRAWINGS, AND ASCERTAIN THAT ALL DATA FURNISHED ON THE DRAWINGS IS ACCURATE AND TRULY REPRESENTS THE WORK IS ACTUALLY INSTALLED. MARKINGS INDICATING CHANGES TO THE DRAWINGS SHALL BE RED OR GREEN AND CLEARLY VISIBLE. TWO (2) SETS OF "AS-BUILT" DRAWINGS SHALL BE FURNISHED TO THE MOTOROLA REPRESENTATIVE WITHIN 5 DAYS OF THE COMPLETION OF THE PROJECT. THESE DRAWINGS SHALL ALSO SHOW THE FOLLOWING:

•MODIFICATIONS TO SITE LAYOUT.

•GROUNDING SYSTEM LAYOUT.

•UNDERGROUND FUEL LINE RUN.

•UNDERGROUND TELCO CABLE RUN.

•UNDERGROUND ELECTRICAL RUN.

WHERE THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE SITE EQUIPMENT ROOM, ISOLATION TRANSFORMER, GENERATOR, ETC. THAT REQUIRES PERIODIC MAINTENANCE, THE CONTRACTOR SHALL INCLUDE ALL OPERATION AND MAINTENANCE MANUALS AND ALL AS-BUILT DRAWINGS WHICH FULLY DESCRIBE THE ACTUAL INSTALLED EQUIPMENT.

1.17. TEST PROCEDURES AND RESULTS

CONTRACTOR WILL CONTRACT WITH A THIRD PARTY "INDEPENDENT" TESTING FIRM TO PERFORM & SUBMIT THE RESULTS OF ALL TESTS REQUIRED BY THE PROJECT SPECIFICATIONS AND DRAWNGS THAT FALL WITHIN THE SCOPE OF WORK. THESE RESULTS SHALL BE SUBMITTED TO THE DESIGNATED MOTOROLA REPRESENTATIVE. IN GENERAL, THE "INDEPENDENT" TESTING FIRM SHALL SUBMIT THE FOLLOWING TEST RESULTS:

• MIX DESIGN/CONCRETE COMPRESSION TEST FOR ALL CONCRETE WORK.

• FREQUENCY DOMAIN REFLECTOMETER (FDR) WITH PRECISION LOAD / SWEEP TEST FOR ANTENNA AND TRANSMISSION LINE INSTALLATION WORK. ALL SWEEP AND TEST MUST BE WITHIN THE GUIDELINES OUTLINED IN MOTOROLA MOP.

• FUEL LINE LEAKAGE TEST FOR FUEL TANK AND PIPING INSTALLATION WORK.

• SLUMP TEST FOR CONCRETE WORK.

• GROUNDING RESISTANCE TEST FOR GROUNDING WORK.

• STRUCTURAL STEEL FABRICATION DRAWINGS.

• STRUCTURAL (TOWER) STEEL MATERIALS, FINISH, ASSEMBLY, AND PROPER ASSEMBLY AND INSTALLATION OF ANTENNAS AND TRANSMISSION LINES. ("THIRD PARTY CLIMB" AND REPORT INCLUDING PHOTO DOCUMENTATION)

• ANY OTHER TEST THAT MAY BE REQUIRED.

1.18. CONTRACT CLOSEOUT – IN ACCORDANCE WITH MOTOROLA’S SUBCONTRACT AGREEMENT TERMS AND CONDITIONS

THE MOTOROLA REPRESENTATIVE WILL PROVIDE A CERTIFICATE OF COMPLETION AND APPROVE FINAL PAYMENT WHEN ALL PUNCH-LIST ITEMS HAVE BEEN CORRECTED, RECORD DRAWINGS SUBMITTED, AND ALL SYSTEMS ARE ACCEPTABLE. THE CONTRACTOR MUST ALSO RECEIVE A CERTIFICATE OF COMPLETION FROM THE MUNICIPALITY. AFTER FINAL PAYMENT, CONTRACTOR WILL SIGN A RELEASE OF LIEN.

1.19. WARRANTY

ALL WORK PERFORMED BY THE CONTRACTOR IN COMPLETING THE SCOPE IDENTIFIED ON THE DRAWINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF EIGHTEEN MONTHS FROM THE DATE OF FINAL COMPLETION OF THE PROJECT. THIS GUARANTEE SHALL COVER ALL MATERIALS, EQUIPMENT OR WORKMANSHIP WHICH IN THE OPINION OF MOTOROLA IS RENDERED DEFECTIVE OR INFERIOR OR NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT DURING THE GUARANTEE PERIOD. IF, WITHIN THE GUARANTEE PERIOD, REPAIRS OR CHANGES ARE REQUIRED TO CORRECT THE GUARANTEE WORK. THEN UPON RECEIPT OF NOTICE, THE CONTRACTOR SHALL PROMPTLY AND WITHOUT EXPENSE TO MOTOROLA OR THE OWNER, PROCEED TO:

• PLACE IN SATISFACTORY CONDITION ALL OF SUCH GUARANTEED WORK AND CORRECT ALL DEFECTS THEREIN.

• MAKE GOOD ALL DAMAGES TO THE STRUCTURE OR SITE OR EQUIPMENT OR CONTENTS THEREOF, WHICH, IN THE OPINION OF THE MOTOROLA REPRESENTATIVE, IS THE RESULT OF THE USE OF MATERIALS, EQUIPMENT, OR WORKMANSHIP WHICH ARE INFERIOR, DEFECTIVE, OR NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT.

• MAKE GOOD ANY WORK, MATERIALS OR EQUIPMENT AND ADJACENT STRUCTURES DISTURBED IN FULFILLING THE GUARANTEE.

1.20. RELATED DOCUMENTS

CONTRACTOR SHALL BECOME FAMILIAR WITH THE INFORMATION AND REQUIREMENTS CONTAINED IN THE FOLLOWING DOCUMENTS RELATED TO THE PROJECT:

A. TOWER AND TOWER FOUNDATION DRAWINGS BY THE MANUFACTURER.

B. R-56 STANDARDS AND GUIDELINES FOR COMMUNICATIONS SITES BY MOTOROLA.

C. ALL OTHER PERTINENT DOCUMENTS.

4

02-04-26

PERMIT CDs

JJT

MJA

3

12-23-25

PRELIM CDs

JJT

MJA

2

11-25-25

ZONING CDs

MHC

MJA

1

10-17-25

ZONING CDs

MHC

MJA

0

05-21-25

ZONING CDs

JJT

MJA

NO.

DATE

REVISIONS

BY

CHK

APP'D



MISSION 1
COMMUNICATIONS

6202 Constitution Drive, Suite C
Fort Wayne, IN 46804





GENERAL NOTES

BRUMLEY MTN
8070 SKYCRAFT RD
ABINGTON, VA 24210

GN-2

COMMONWEALTH OF VIRGINIA

WILLIAM R. HEIDEN III

No. 037325

PROFESSIONAL ENGINEER



February 9, 2026

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Abbreviations and Symbols

A/C	AIR CONDITIONING	N	NORTH
ADJ	ADJUSTABLE	N/A	NOT APPLICABLE
AFF	ABOVE FINISH FLOOR	NIC	NOT IN CONTRACT
APPROX	APPROXIMATELY	NTS	NOT TO SCALE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS		
AWG	AMERICAN WIRE GAUGE	O/C,O.C.	ON CENTER
		OD	OUTSIDE DIAMETER
		OPG	OPENING
		OPP	OPPOSITE
BLDG	BUILDING		
BLK	BLOCK		
BMR	BASE MOBILE RADIO	PLYWD	PLYWOOD
B/S	BUILDING STANDARD	PR	PAIR
		PROJ	PROJECT
		PROP	PROPERTY
		PT	PRESSURE TREATED
CLG	CEILING		
CLR	CLEAR		
CND,C	CONDUIT		
CONC	CONCRETE		
CONST	CONSTRUCTION	R	RADIUS
CONT	CONTINUOUS	REQ'D	REQUIRED
		RM	ROOM
		RO	ROUGH OPENING
DBL	DOUBLE		
DIA,Ø	DIAMETER	S	SOUTH
DIAG	DIAGONAL	SHT	SHEET
DIM	DIMENSION	SIM	SIMILAR
DN	DOWN	SPEC	SPECIFICATION
DTL,DETL	DETAIL	SQ	SQUARE
DWG	DRAWING	SS	STAINLESS STEEL
		STL	STEEL
E	EAST	STRUCT	STRUCTURAL
EA	EACH	SUSP	SUSPENDED
EL,ELEV	ELEVATION	SV	SHEET VINYL
ELECT	ELECTRICAL		
EQ	EQUAL		
EQUIP	EQUIPMENT	THRU	THROUGH
EW	EACH WAY	TNND	TINNED
EXIST	EXISTING	TOC	TOP OF CONCRETE
EXT	EXTERIOR	TOM	TOP OF MASONRY
		TYP	TYPICAL
FIN	FINISH	UBC	UNIFORM BUILDING
FLUOR	FLUORESCENT		CODE
FLR	FLOOR	UNO	UNLESS NOTED
FT	FOOT		OTHERWISE
GA	GAUGE	VERT	VERTICAL
GALV	GALVANIZE(D)	VIF	VERIFY IN FIELD
GC	GENERAL CONTRACTOR	VT	VINYL TILE
GRND	GROUND		
GWB	GYP SUM WALL BOARD	W	WEST
GYP BD	GYP SUM BOARD	W/	WITH
		WIN	WINDOW
		W/O	WITHOUT
		WP	WATERPROOF
HARD'WD	HARDWOOD		
HORIZ	HORIZONTAL		
HR	HOUR		
HT	HEIGHT		
HVAC	HEATING, VENTING & AIR CONDITIONING		
ID	INSIDE DIA.	∠	ANGLE
IN	INCH	&	AND
INFO	INFORMATION	CL	CENTER LINE
INSUL	INSULATION	PL	PROPERTY LINE
INT	INTERIOR	@	AT
		#	NUMBER
LB(S)	POUND(S)		
MAX	MAXIMUM		
MECH	MECHANICAL		
MET,MTL	METAL		
MFR	MANUFACTURER		
MGR	MANAGER		
MIN	MINIMUM		
MISC	MISCELLANEOUS		

Symbols

	REVISION		DETAIL REFERENCE
	KEY NOTE		ELEVATION REFERENCE
	ROOM NUMBER		SECTION REFERENCE
	KEYED NOTE		

Grounding Abbreviations

ACG	AIR CONDITIONER GROUND
DCG	DOOR CANOPY GROUND
EGB	EXTERIOR GROUND BAR
ESG	ELECTRICAL SERVICE GROUND
FG	FENCE GROUND
GEC	GENERATOR EXHAUST GROUND
GG	GATE GROUND
GR	GROUND ROD
IBCG	ICE BRIDGE CHANNEL GROUND.
IBSG	ICE BRIDGE SUPPORT GROUND.
IEHG	INTERIOR/EXTERIOR HOOD GROUND
MGB	MASTER GROUND BAR
SPG	SHELTER PLATE GROUND
TGB	TOWER GROUND BAR.
TCG	TOWER COAX GROUND
TG	TOWER GROUND
TLG	TOWER LEG GROUND.

Scope of Work
Color Legend

	NEW ITEMS
	ITEMS TO BE REMOVED/RELOCATED
	EXISTING
	EXISTING ON C-1
	FUTURE LOADING ON C-3

Contour Legend

+XXX.X	SPOT ELEVATION – SUBGRADE (FINISH GRADE OF SITE = 0.67' ABOVE SUBGRADE)
EXIST. CONTOUR – MINOR	— — — — —
EXIST. CONTOUR – MAJOR	— — — — —
NEW CONTOUR	— — — — —
NEW SILT FENCE	—○—○—○—○—○—

Equipment Room
Color Legend

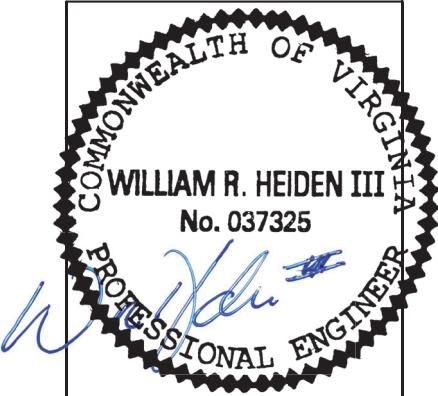
	EXISTING EQUIPMENT
	EXISTING CABLE LADDER
	NEW ELECTRICAL EQUIPMENT
	NEW RF EQUIPMENT
	NEW CABLE LADDER
	TEMPORARY EQUIPMENT
	EQUIPMENT TO BE REMOVED

Grounding Legend

	#2 SOLID BARE COPPER GROUND 30" BELOW GRADE
	CADWELD TO FENCE POST
	BOND GATE LEAF TO GATE POST WITH A FLEXIBLE GATE JUMPER
	GROUND ROD
	GROUND SYSTEM TEST WELL (HAND HOLE)
	CADWELD CONNECTION
	MECHANICAL CONNECTION
	FENCE LINE

Utility Color Legend

	ELECTRIC
	GAS, OIL, STEAM
	COMMUNICATIONS / ALARMS
	POTABLE WATER
	RECLAIMED WATER
	SEWER/ DRAINAGE
	SURVEY MARKS



4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



ABBREVIATIONS, SYMBOLS, AND LEGENDS		GN-3
BRUMLEY MTN 8070 SKYCRAFT RD ABINGTON, VA 24210		

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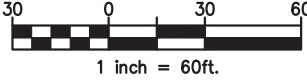
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Scope of Work
Color Legend

- NEW ITEMS
- ITEMS TO BE REMOVED/RELOCATED
- EXISTING

Site Location Plan

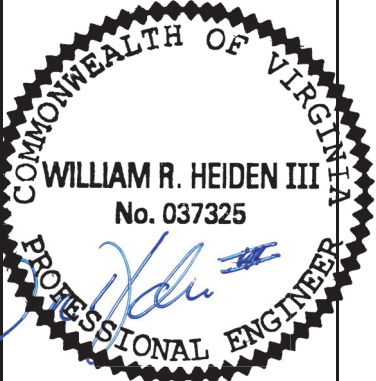


- GENERAL NOTES:**
1. PROPERTY OFFSETS ARE APPROXIMATE. FINAL LOCATION OF COMPOUND TO BE DEVELOPED FROM TOWER ϕ
 2. THE LOCATION, SIZE & TYPE OF MATERIAL OF EXISTING UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING THE SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS & SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION & ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES & THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS & SERVICES SHALL BE RESTORED TO SERVICE AT ONCE & PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
 3. ALL PROPOSED CONSTRUCTION ACTIVITIES & MODIFICATIONS SHALL COMPLY WITH MOTOROLA R-56 STANDARDS, REV 2017.
 4. ANY DISCREPANCIES BETWEEN THIS DRAWING PACKAGE AND EXISTING FIELD CONDITIONS MUST BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

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1-800-552-7001
CALL TOLL FREE



February 9, 2026

4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



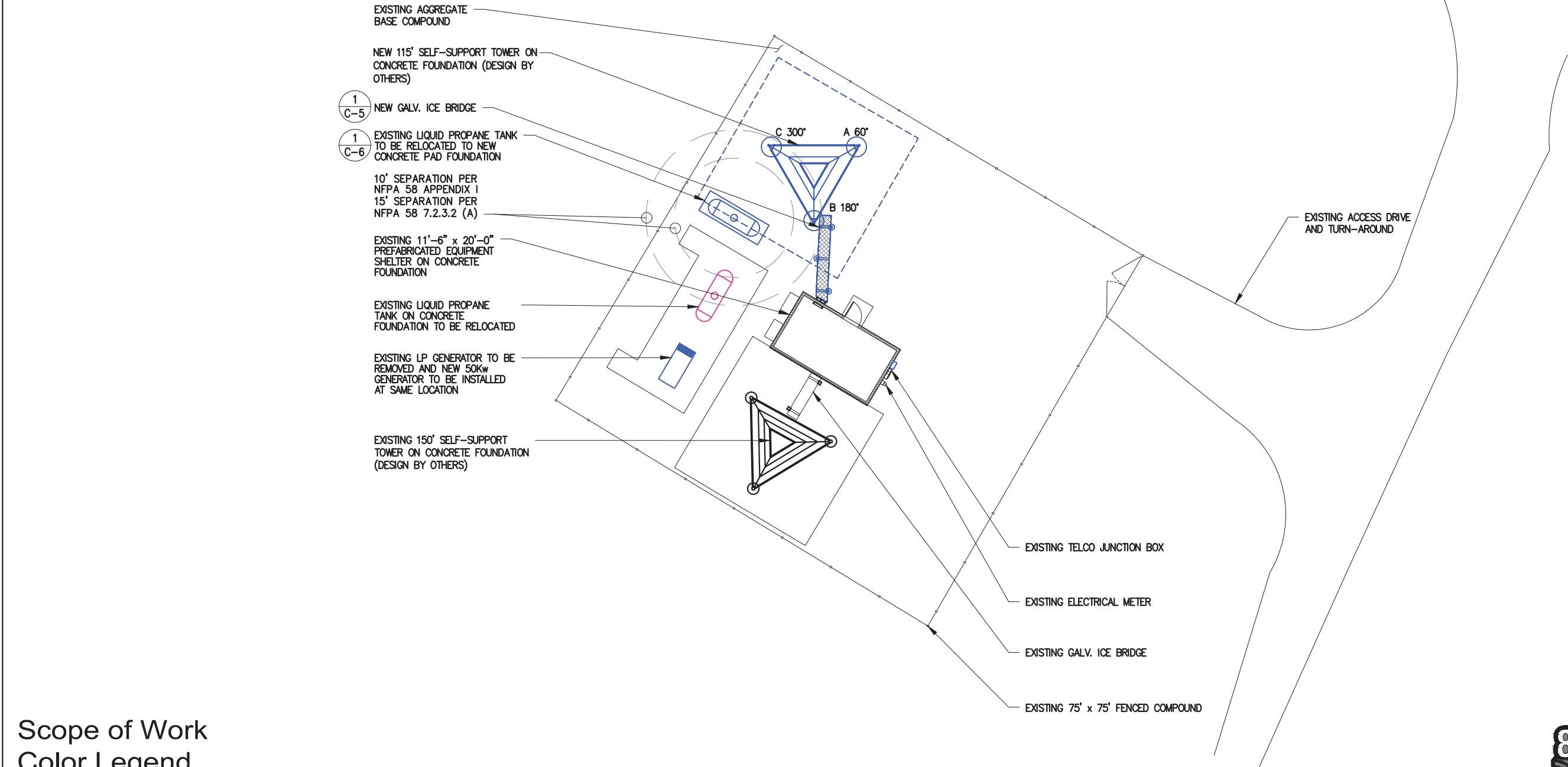
SITE LOCATION PLAN

BRUMLEY MTN
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C-1

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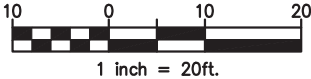
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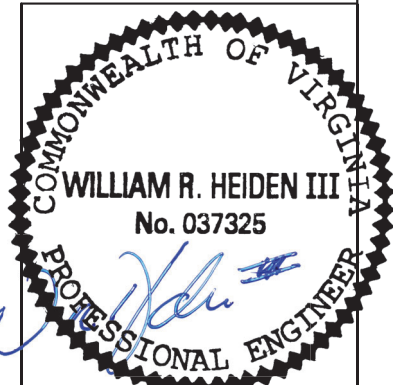
Scope of Work
Color Legend

- NEW ITEMS
- ITEMS TO BE REMOVED/RELOCATED
- EXISTING

Enlarged Site Plan



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February 9, 2026

4	02-04-26	PERMIT CDs	JJT	MJA	
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0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



ENLARGED SITE PLAN

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ABINGTON, VA 24210

C-2

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Scope of Work
Color Legend

- NEW ITEMS
ITEMS TO BE REMOVED/RELOCATED
EXISTING

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0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D


MISSION 1
COMMUNICATIONS
6202 Constitution Drive, Suite C
Fort Wayne, IN 46804


MOTOROLA
SOLUTIONS



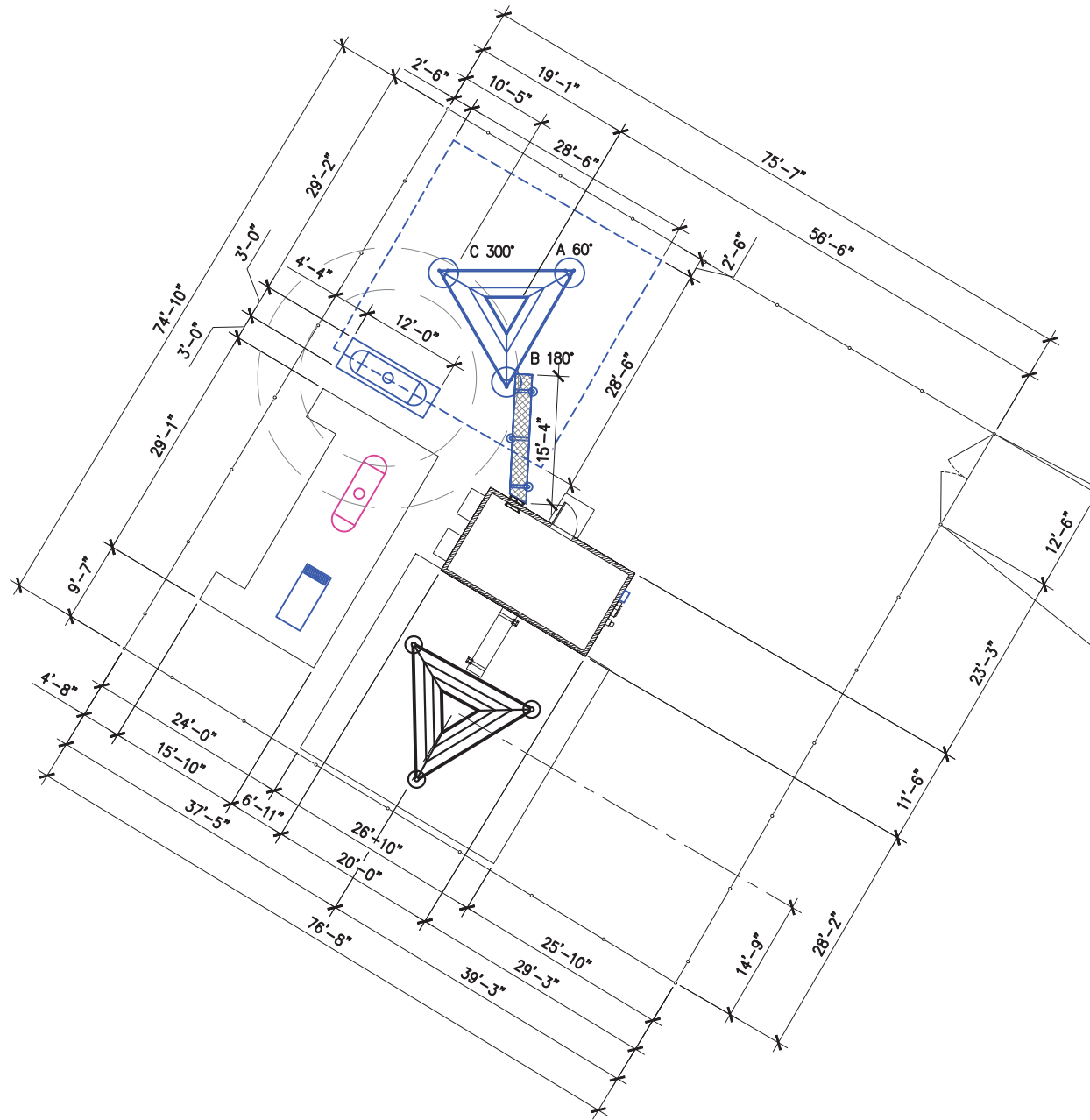
DIMENSIONED SITE PLAN

BRUMLEY MTN
8070 SKYCRAFT RD
ABINGTON, VA 24210

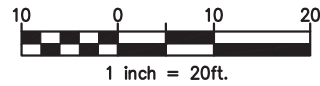
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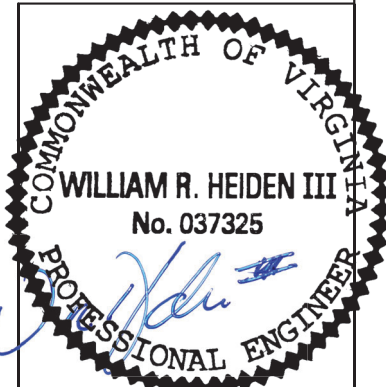
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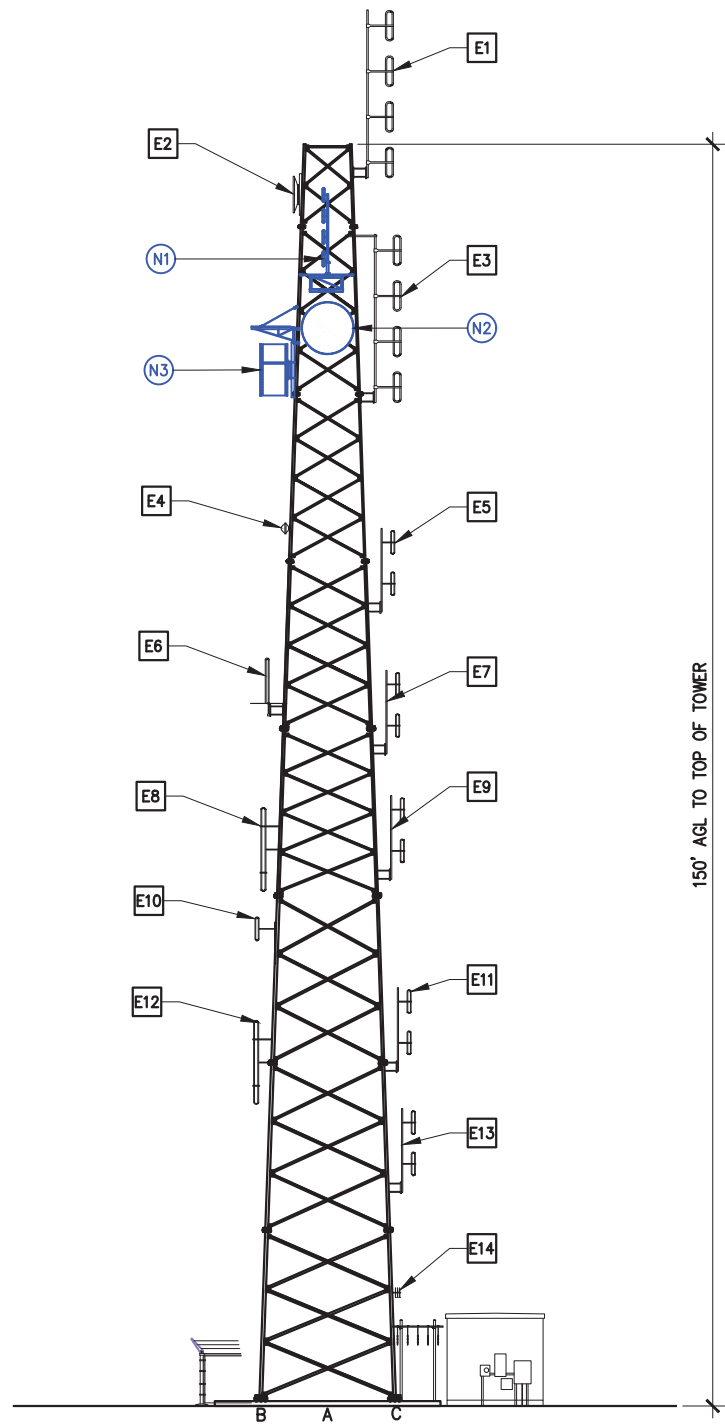
Dimensioned Site Plan



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CALL TOLL FREE



February 9, 2026



1 Existing Tower Elevation
NOT TO SCALE

BRUMLEY MTN - EXISTING 150' SELF-SUPPORT TOWER

LAT: 36° 49' 14.42"
LON: -82° 04' 40.29"
WASHINGTON VA-SITE MATRIX V6 5/15/2025

Antenna/Appurtenance Location Chart

E = EXISTING
N = NEW
F = FUTURE

PROPOSED ANTENNA INFORMATION												FEEDLINE INFORMATION					COLOR CODE			
ANTENNA ID	MANUFACTURER	MODEL	TYPE	LENGTH	BOTTOM ELEV	RAD CENTER	TOP ELEV.	AZIMUTH	LEG	MOUNT	QTY.	TYPE	MANUFACTURER	MODEL	SIZE	QTY.	BAND 1	BAND 2	BAND 3	BAND 4
N1	RFI	CC450-06-P	RX	10.0'	135.0'	140.0'	145.0'	0°	A	HSK-6	1	COAX	EUPEN	EC5-50A	7/8"	1	GREEN			
	VALMONT	ISMd6	ICE SHIELD	-	-	134.0'	-	-	A	R-5	1	COAX	COMMSCOPE	EW63	2"	1	BLUE			
N2	VALUELINE	HX6-6W	MW	6.0'	126.0'	129.0'	132.0'	79.78°	A	R-5	1									
	VALMONT	ISMd6	ICE SHIELD	-	-	125.0'	-	-	B	R-5	1	COAX	COMMSCOPE	EW63	2"	1	BLUE	BLUE		
N3	VALUELINE	HX6-6W	MW	6.0'	117.0'	120.0'	123.0'	165.01°	B	R-5	1									
	EXISTING ANTENNA INFORMATION												FEEDLINE INFORMATION							
E1	-	4 ELEMENT DIPOLE	-	20.0'	147.0'	157.0'	167.0'	90°	B	-	1	COAX	-	-	7/8"	1				
E2	-	DISH	-	4.0'	143.0'	145.0'	147.0'	-	C	-	1	COAX	-	-	7/8"	1				
E3	-	4 ELEMENT DIPOLE	-	20.0'	120.0'	130.0'	140.0'	210°	C	-	1	COAX	-	-	7/8"	1				
E4	-	DISH	-	1.0'	104.5'	105.0'	105.5'	0°	A	-	1	COAX	-	-	1/4"	1				
E5	-	2 ELEMENT DIPOLE	-	10.0'	95.5'	105.5'	110.5'	210°	C	-	1	COAX	-	-	7/8"	1				
E6	-	GROUND PLANE OMNI	-	5.5'	82.5'	85.3'	88.0'	330°	A	-	1	COAX	-	-	3/8"	1				
E7	-	2 ELEMENT DIPOLE	-	10.0'	78.0'	83.0'	88.0'	-	C	-	1	COAX	-	-	5/8"	1				
E8	-	SINGLE ELEMENT DIPOLE	-	13.0'	60.0'	66.5'	73.0'	-	A	-	1	COAX	-	-	3/8"	1				
E9	-	2 ELEMENT DIPOLE	-	10.0'	63.0'	68.0'	73.0'	210°	C	-	1	COAX	-	-	7/8"	1				
E10	-	SINGLE ELEMENT DIPOLE	-	3.0'	56.5'	58.0'	59.5'	210°	C	-	1	COAX	-	-	5/8"	1				
E11	-	SINGLE ELEMENT DIPOLE	-	10.0'	36.0'	41.0'	46.0'	50°	A	-	1	COAX	-	-	3/8"	1				
E12	-	2 ELEMENT DIPOLE	-	10.0'	40.0'	45.0'	50.0'	210°	C	-	1	COAX	-	-	7/8"	1				
E13	-	2 ELEMENT DIPOLE	-	10.0'	25.5'	30.5'	35.5'	210°	C	-	1	COAX	-	-	5/8"	1				
E14	-	YAGI	-	1.0'	13.0'	13.5'	14.0'	140°	A-B	-	1	COAX	-	-	3/8"	1				
REFER TO TOWER MANUFACTURER DRAWINGS FOR BEACON AND OBSTRUCTION LIGHTING HEIGHTS																				

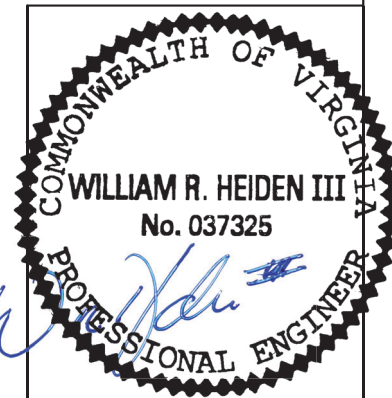
REFER TO TOWER MANUFACTURER DRAWINGS FOR BEACON AND OBSTRUCTION LIGHTING HEIGHTS

ANTENNA AND FEEDLINE NOTES:

- 1 PROPOSED FEEDLINES TO BE ROUTED ON PROPOSED WAVEGUIDE LADDER

GENERAL NOTES:

- MISSION 1 COMMUNICATIONS HAS NOT COMPLETED A STRUCTURAL ANALYSIS FOR THE EXISTING OR PROPOSED LOADING OF ANY STRUCTURES AT THIS TIME. FINAL STRUCTURAL ANALYSIS TO BE COMPLETED BY OTHERS PRIOR TO CONSTRUCTION ACTIVITIES COMMENCE.
- ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR THE TOP & BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION & NEAR ENTRY PORT ON THE SHELTER). ADDITIONAL TRANSMISSION LINE GROUND KITS SHALL BE INSTALLED AS NEEDED TO LIMIT THE DISTANCE BETWEEN GROUND KITS TO 75 FEET.
- THE CONTRACTOR SHALL CONDUCT A SWEEP TEST FOLLOWING MOTOROLA'S ANTENNA COMMISSIONING MOP ON ALL THE NEWLY INSTALLED TRANSMISSION LINES TO DETERMINE THE CABLE CONDUCTOR RESISTANCE, CABLE INSERTION LOSS, REFLECTION & STIMULUS RESPONSE MEASUREMENTS. RESULTS TO BE SUBMITTED TO MOTOROLA.
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- COLOR TAPE BANDS ARE ONLY TEMPORARY. PERMANENT BRASS TAGS SHALL BE INSTALLED PER R-56 4"-6" FROM FOLLOWING LOCATIONS: NEAR THE ANTENNA, JUST BEFORE ENTERING THE SHELTER AS WELL AS INSIDE SHELTER, BEFORE CONNECTING TO THE SURGE SUPPRESSORS.



February 9, 2026

4	02-04-26	PERMIT CDs	JJT	MJA	
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NO.	DATE	REVISIONS	BY	CHK	APP'D



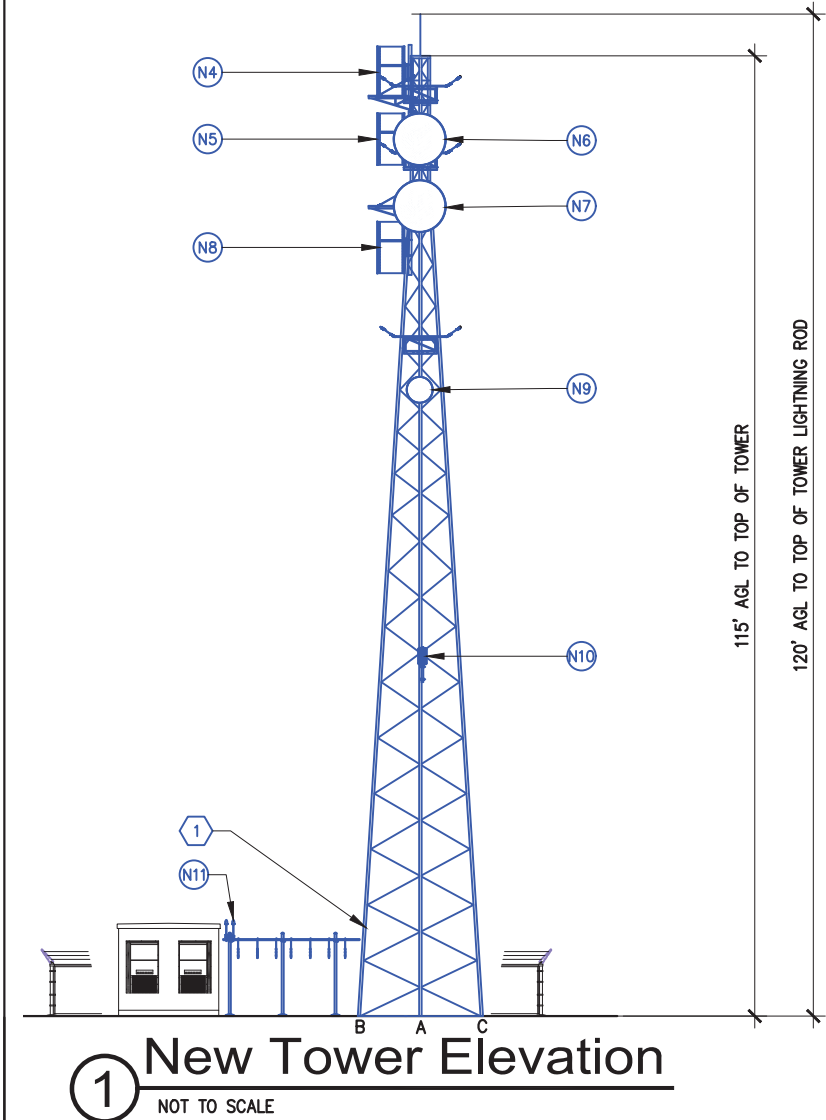
EXISTING TOWER ELEVATION AND ANTENNA INFORMATION

BRUMLEY MTN
8070 SKYCRAFT RD
ABINGTON, VA 24210

C-3

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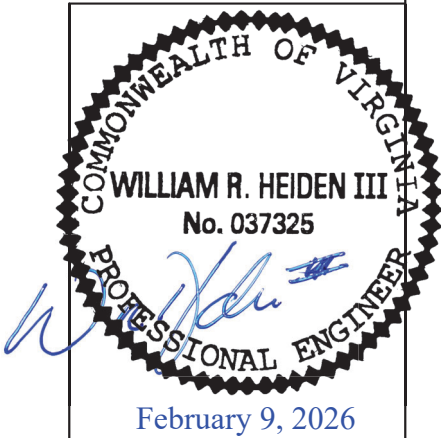
BRUMLEY MTN - NEW 115' SELF-SUPPORT TOWER LAT: 36° 49' 14.91" LON: -82° 04' 40.22" WASHINGTON VA-SITE MATRIX V6 5/15/2025												Antenna/Appurtenance Location Chart												E = EXISTING N = NEW F = FUTURE			
PROPOSED ANTENNA INFORMATION												FEEDLINE INFORMATION					COLOR CODE										
ANTENNA ID	MANUFACTURER	MODEL	TYPE	LENGTH	BOTTOM ELEV	RAD CENTER	TOP ELEV.	AZIMUTH	LEG	MOUNT	QTY.	TYPE	MANUFACTURER	MODEL	SIZE	QTY.	BAND 1	BAND 2	BAND 3	BAND 4							
N4	VALUELINE	HX6-6W	MW	6.0'	110.0'	113.0'	116.0'	197.86°	B	R-5	1	COAX	COMMSCOPE	EW63	2"	1	BLUE	BLUE	BLUE								
N5	VALMONT	ISMD6	ICE SHIELD	-	-	110.0'	-	-	B	R-5	1	COAX	COMMSCOPE	EW63	2"	1	WHITE										
	VALUELINE	HX6-6W	MW	6.0'	102.0'	105.0'	108.0'	150.09°	B	R-5	1																
N6	VALMONT	ISMD6	ICE SHIELD	-	-	110.0'	-	-	A	R-5	1	COAX	COMMSCOPE	EW63	2"	1	WHITE	WHITE									
	VALUELINE	HX6-6W	MW	6.0'	102.0'	105.0'	108.0'	123.57°	A	R-5	1																
N7	VALMONT	ISMD6	ICE SHIELD	-	-	102.0'	-	-	A	R-5	1	COAX	COMMSCOPE	EW63	2"	1	BLUE	WHITE									
	VALUELINE	HX6-6W	MW	6.0'	94.0'	97.0'	100.0'	130.78°	A	R-5	1																
N8	VALMONT	ISMD6	ICE SHIELD	-	-	97.0'	-	-	B	R-5	1	COAX	COMMSCOPE	EW63	2"	1	WHITE	WHITE	WHITE								
	VALUELINE	HX6-6W	MW	6.0'	89.0'	92.0'	95.0'	219.77°	B	R-5	1																
N9	VALMONT	ISMD6	ICE SHIELD	-	-	80.0'	-	-	A	R-5	1	COAX	COMMSCOPE	EW63	2"	1	BLUE	WHITE	WHITE								
	SENTINEL	SHP3-6W	MW	3.0'	73.5'	75.0'	76.5'	123.57°	A	R-5	1																
N10	RFI	CSA20-67P	TX	4.0'	40.0'	42.0'	44.0'	100°	A	PSA6	1	COAX	EUPEN	EC5-50A	7/8"	1	RED										
N11	TFS	4702337.0'	GPS	-	-	-	-	-	-	-	2	COAX	EUPEN	EC4-50	1/2"	2	ORANGE										
REFER TO TOWER MANUFACTURER DRAWINGS FOR BEACON AND OBSTRUCTION LIGHTING HEIGHTS																											



ANTENNA AND FEEDLINE NOTES:

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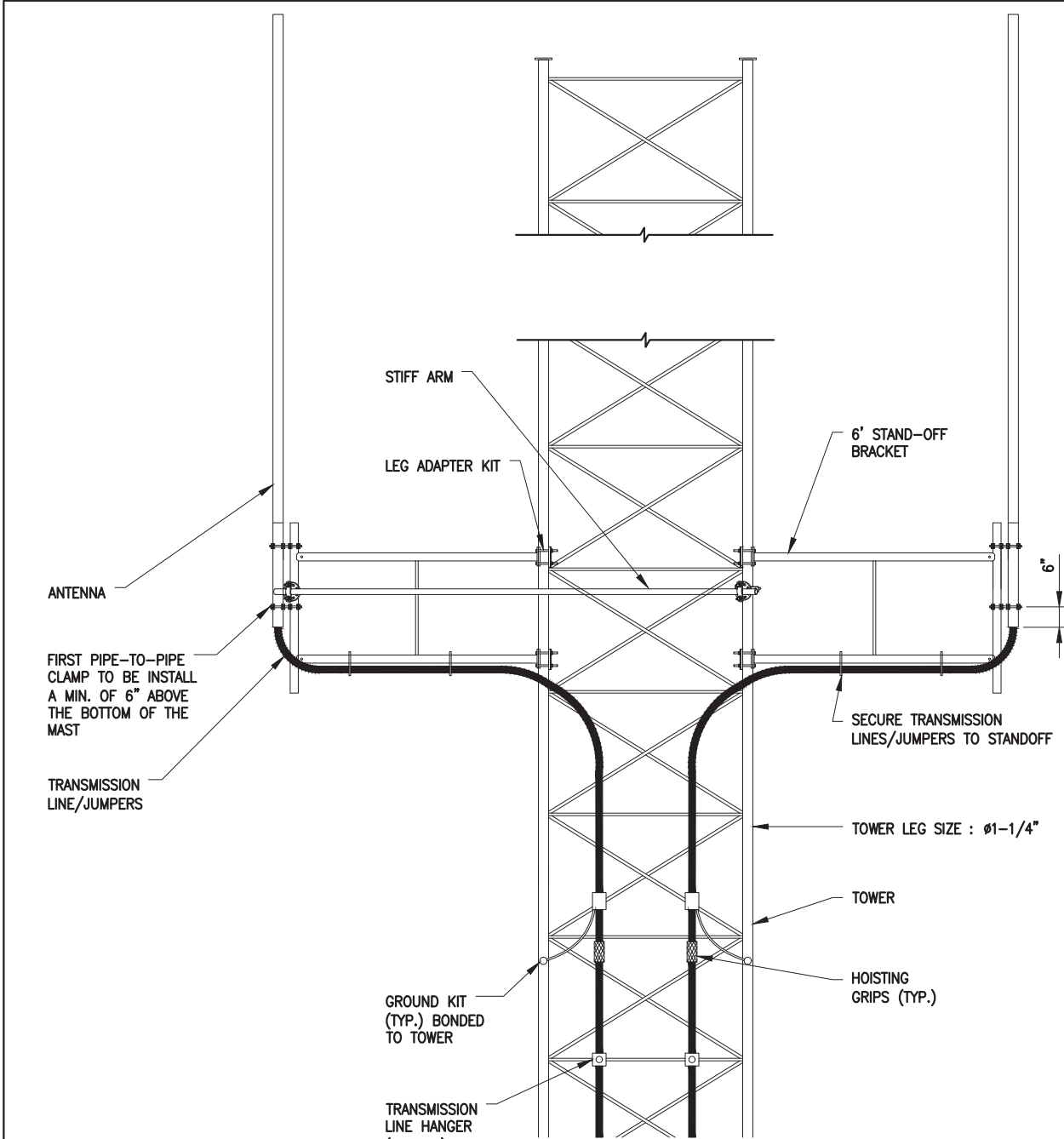
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NO.	DATE	REVISIONS	BY	CHK	APP'D



NEW TOWER ELEVATION AND ANTENNA INFORMATION		C-3.1
BRUMLEY MTN 8070 SKYCRAFT RD ABINGTON, VA 24210		

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NOTES:

1 Antenna Detail - Stand-off Mount

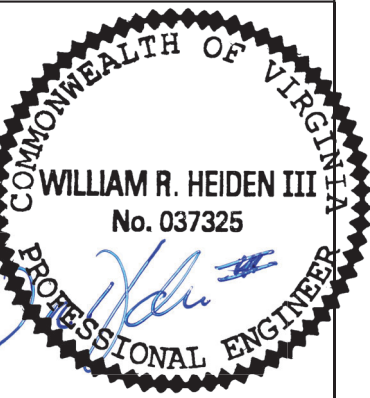
NOT TO SCALE

1. ANTENNAS, CONNECTORS, JUMPERS, TRANSMISSION LINES, TO BE FURNISHED BY MOTOROLA, AND INSTALLED BY CONTRACTOR.
2. CONTRACTOR TO USE STRAIN RELIEF EVERY 200 FEET (MIN.) FOR TRANSMISSION LINES. TO BE INSTALLED BEFORE INSTALLATION OF TRANSMISSION LINES.
3. CONTRACTOR TO WATERPROOF ALL EXTERNAL CONNECTIONS.
4. CONTRACTOR TO INSTALL GALVANIZED OR STAINLESS STEEL MOUNTING HARDWARE.
5. CONTRACTOR TO ATTACH CABLES TO TOWER EVERY 3 FOOT (MAX.)
6. CONTRACTOR SHALL PERFORM A SWEEP TEST ON TRANSMISSION AND TEST LINES PRIOR TO INSTALLATION. IMMEDIATELY NOTIFY MOTOROLA OF ANY LINE DEFICIENCIES.
7. ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS WILL BE GROUNDED NEAR THE TOP & BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION & NEAR ENTRY PORT ON THE SHELTER). TRANSMISSION LINE GROUND KITS WILL BE INSTALLED EVERY 75 FEET.
8. VERIFY IN FIELD OR REVIEW THE TOWER STRUCTURAL ANALYSIS FOR MEMBER SIZE PRIOR TO ORDERING ANTENNA MOUNTS.
9. CONTRACTOR SHALL VERIFY THE RF CONFIGURATION & STRUCTURAL ANALYSIS BEFORE INSTALLATION.

4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D

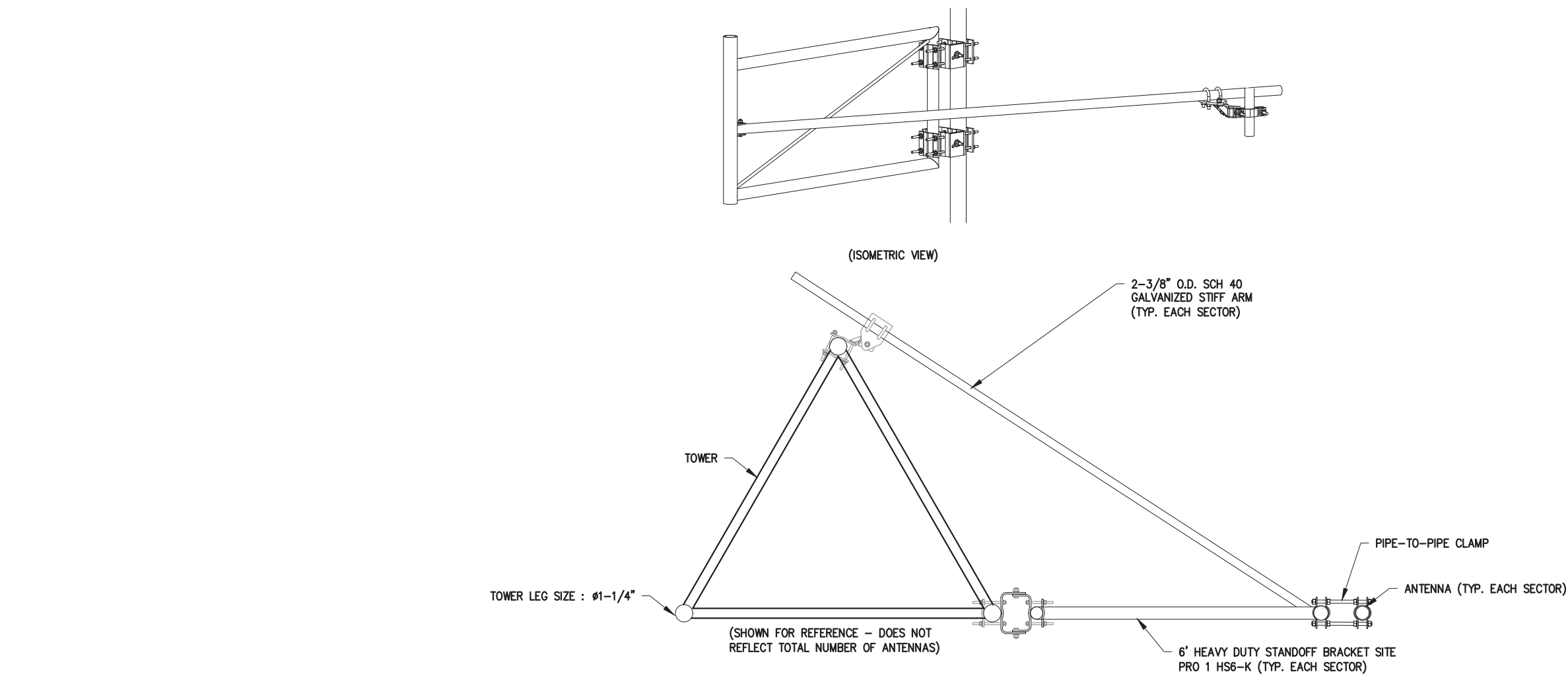


ANTENNA INFORMATION		C-4
BRUMLEY MTN 8070 SKYCRAFT RD ABINGTON, VA 24210		



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1 **Site Pro 1 HS6-K
Antenna Mount**
NOT TO SCALE

COMMONWEALTH OF VIRGINIA
WILLIAM R. HEIDEN III
No. 037325
PROFESSIONAL ENGINEER
February 9, 2026

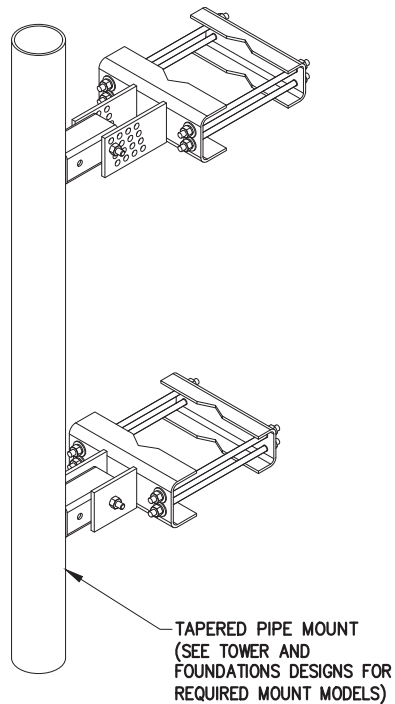
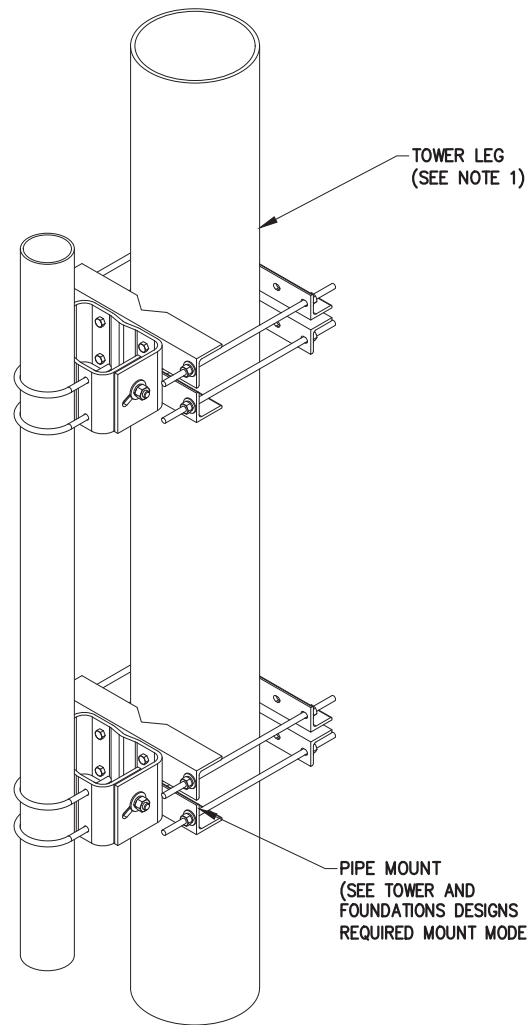
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3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



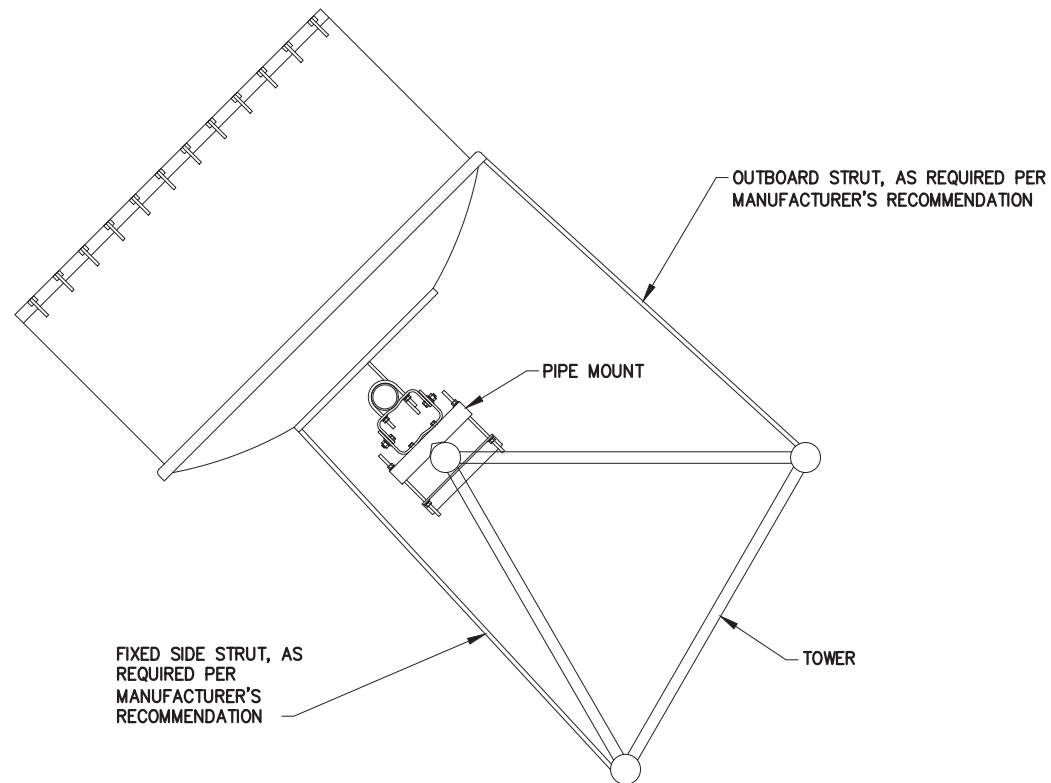
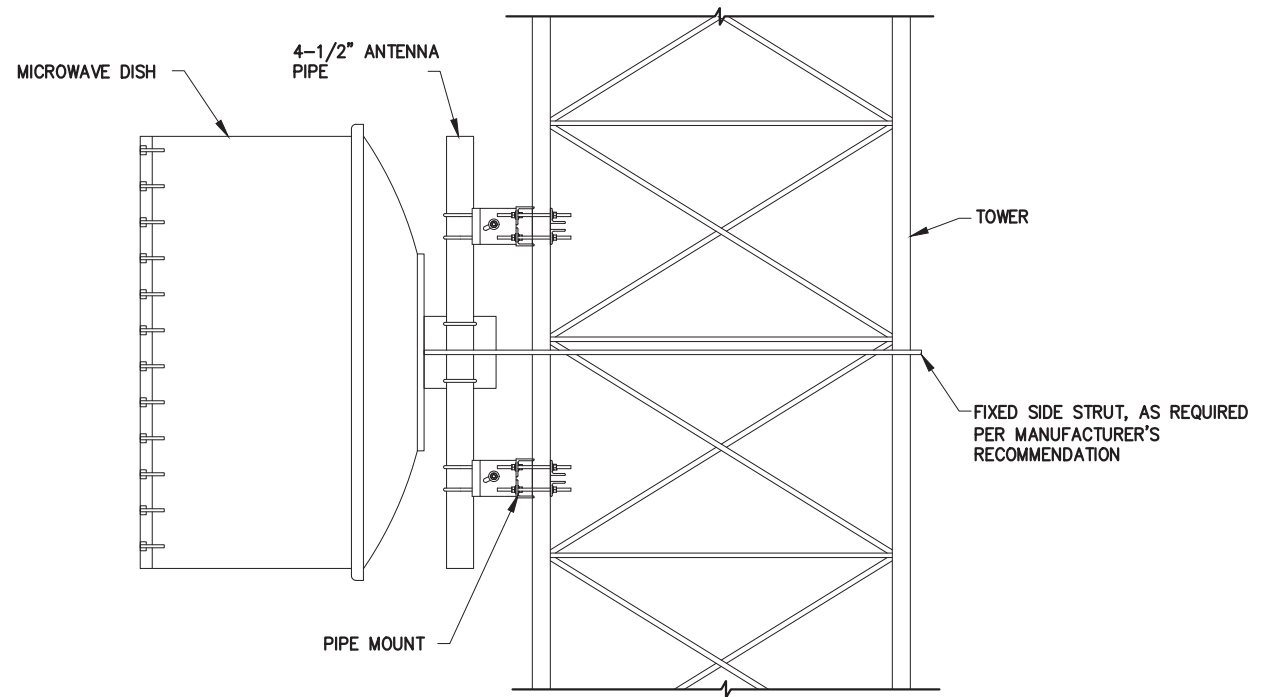
ANTENNA INFORMATION		C-4.1
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- NOTES:**
1. VERIFY IN FIELD OR REVIEW THE TOWER STRUCTURAL ANALYSIS FOR MEMBER SIZE PRIOR TO ORDERING ANTENNA MOUNTS.
 2. CONTRACTOR SHALL VERIFY THE MICROWAVE PATH DATA SHEET CONFIGURATION & STRUCTURAL ANALYSIS BEFORE INSTALLATION.

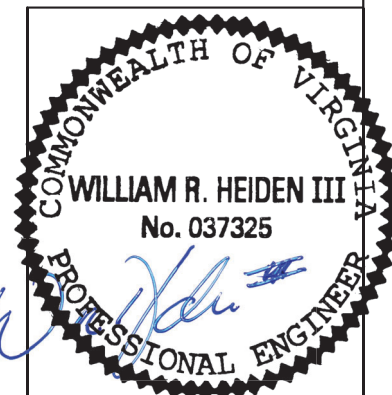


1 Microwave Dish Mounts

NOT TO SCALE

2 Microwave Dish Mounting

NOT TO SCALE



February 9, 2026

4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



MICROWAVE INFORMATION

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C-4.2

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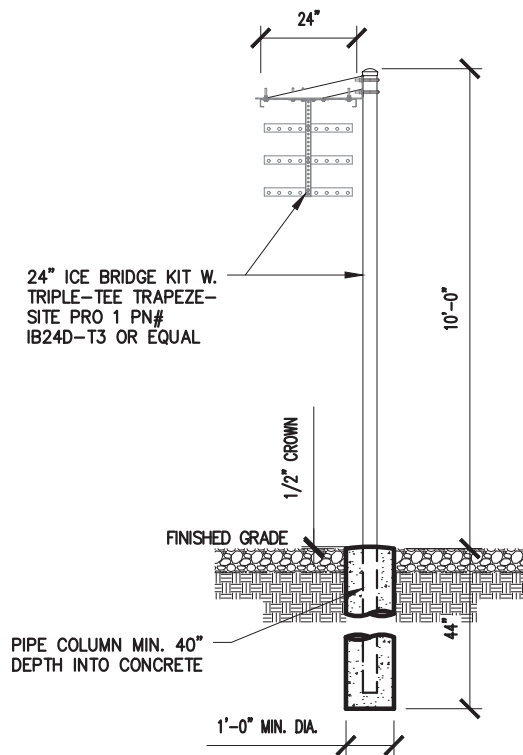
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1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



MICROWAVE ICE SHIELD DETAIL		C-4.3	
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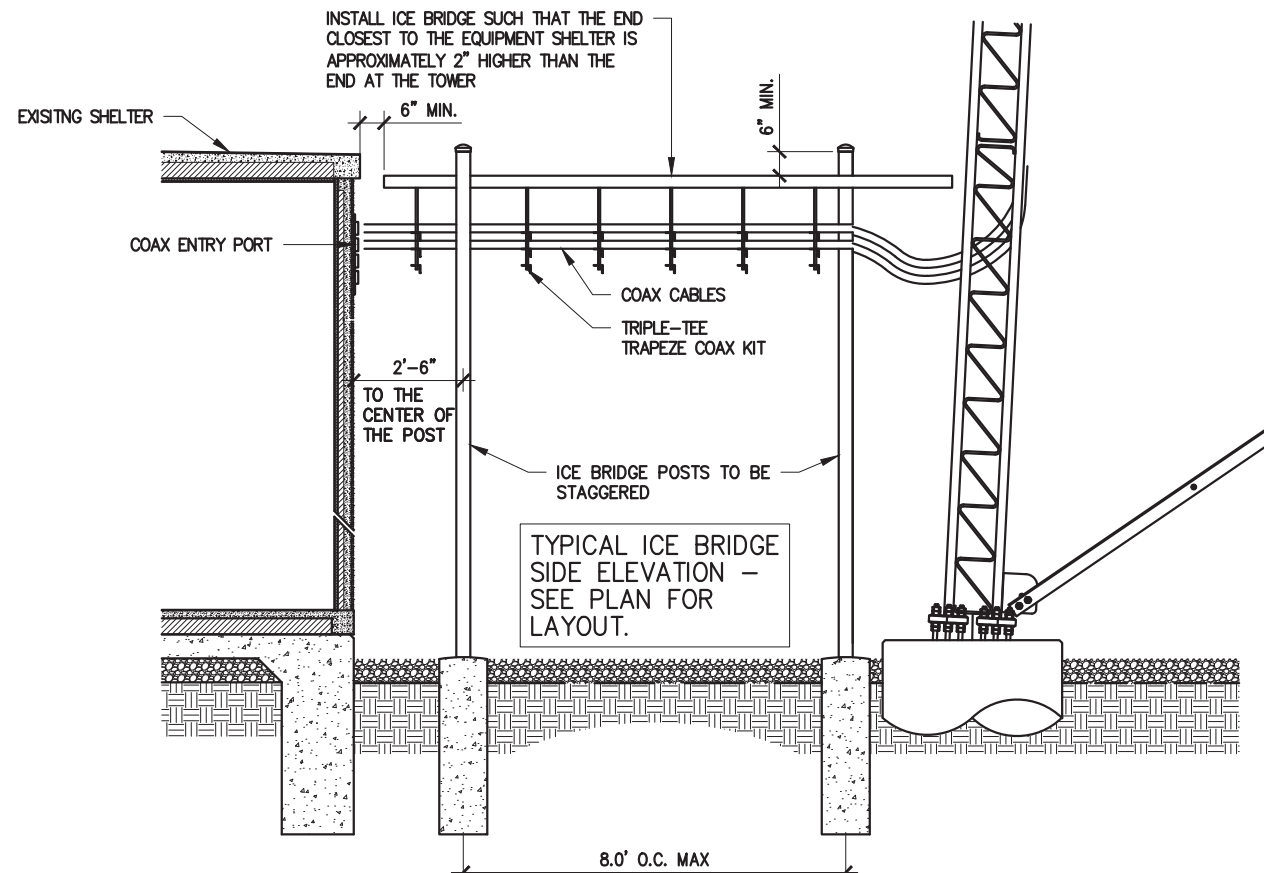
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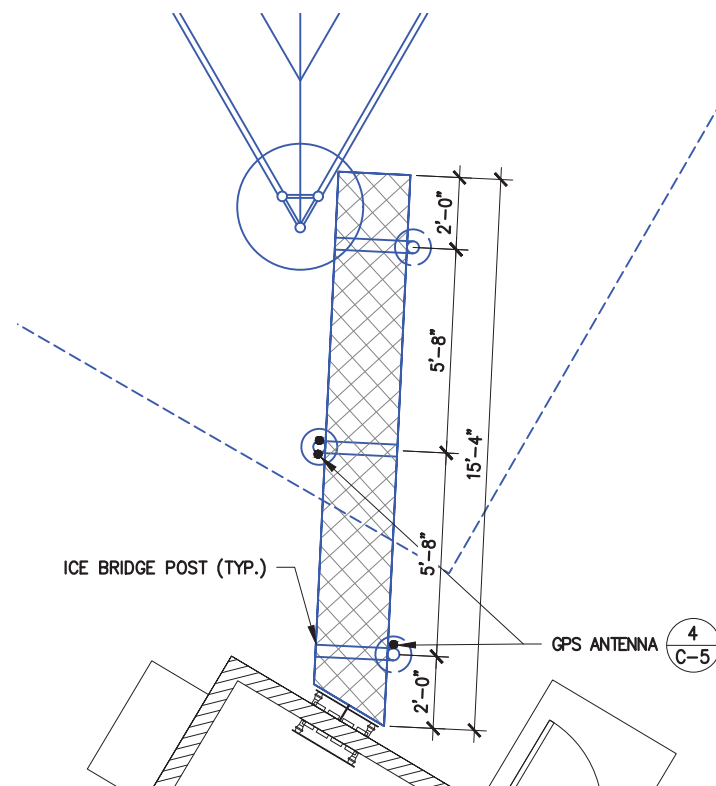
1 Ice Bridge Section
SCALE: 1/4" = 1'-0"

ICE BRIDGE NOTES:

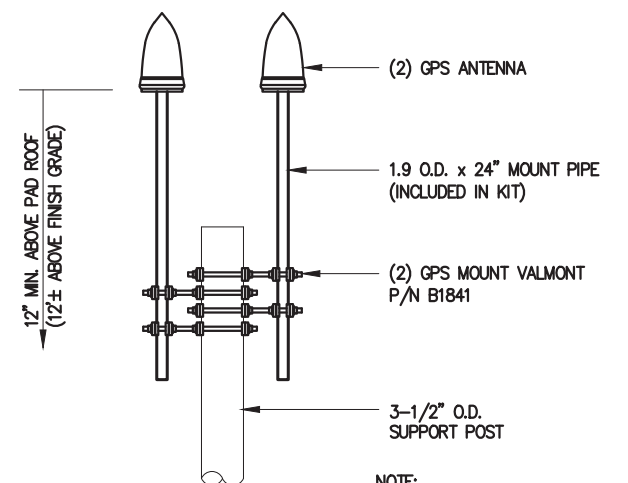
1. MAXIMUM ALLOWABLE DISTANCE BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 8 FEET FOR 10 FEET BRIDGE CHANNEL.
2. WHEN SPlicing BRIDGE CHANNEL SECTIONS, THE SPLICE SHOULD BE PROVIDED AT THE SUPPORT, IF POSSIBLE, OR AT A MAXIMUM OF 2' FROM THE SUPPORT.
3. SUPPORT SHOULD BE PROVIDED AS CLOSE AS POSSIBLE TO THE ENDS OF ICE BRIDGE(S), WITH A MAXIMUM CANTILEVER DISTANCE OF 2' FROM THE SUPPORT TO THE FREE END OF THE ICE BRIDGE.
4. CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES TREATED WITH A MATERIAL TO RESTORE THESE EDGES TO THE ORIGINAL CHANNEL, OR EQUIVALENT, FINISH.
5. ICE BRIDGE(S) MAY BE CONSTRUCTED WITH COMPONENTS FROM OTHER MANUFACTURERS, PROVIDED THE MANUFACTURERS INSTALLATION GUIDELINES ARE FOLLOWED AND THEIR PRODUCT IS CONSIDERED AN EQUAL OR BETTER.
6. DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH THE RESPECTIVE MANUFACTURER'S APPROVAL.
7. DEVIATIONS FROM ICE BRIDGE FOUNDATIONS REQUIRE ENGINEERING APPROVAL. THE DESIGN IS BASED ON ASCE 7-98, SECOND GUST WIND SPEED OF 110 MPH, EXPOSURE C, ELEVATION AT GRADE. THIS DESIGN IS BASED ON A 24" WIDE ICE BRIDGE & (12) 1-1/5" Ø CABLES & MAX. POST SUPPORT SPACING OF 10'-0" O.C.



2 Ice Bridge Side Elevation
SCALE: 1/4" = 1'-0"

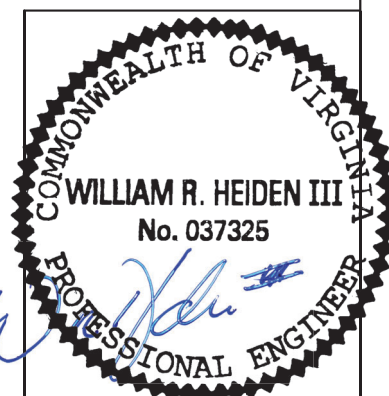


3 Ice Bridge Plan
SCALE: 3/16" = 1'-0"
NORTH



4 GPS Antenna Mounting Detail
SCALE: 3/4" = 1'-0"

NOTE:
CONTRACTOR TO SUPPLY AND
INSTALL GPS MOUNT.
GPS, CABLE, CONNECTORS, ETC.
TO BE PROVIDED BY MOTOROLA
AND INSTALLED BY CONTRACTOR.



February 9, 2026

4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



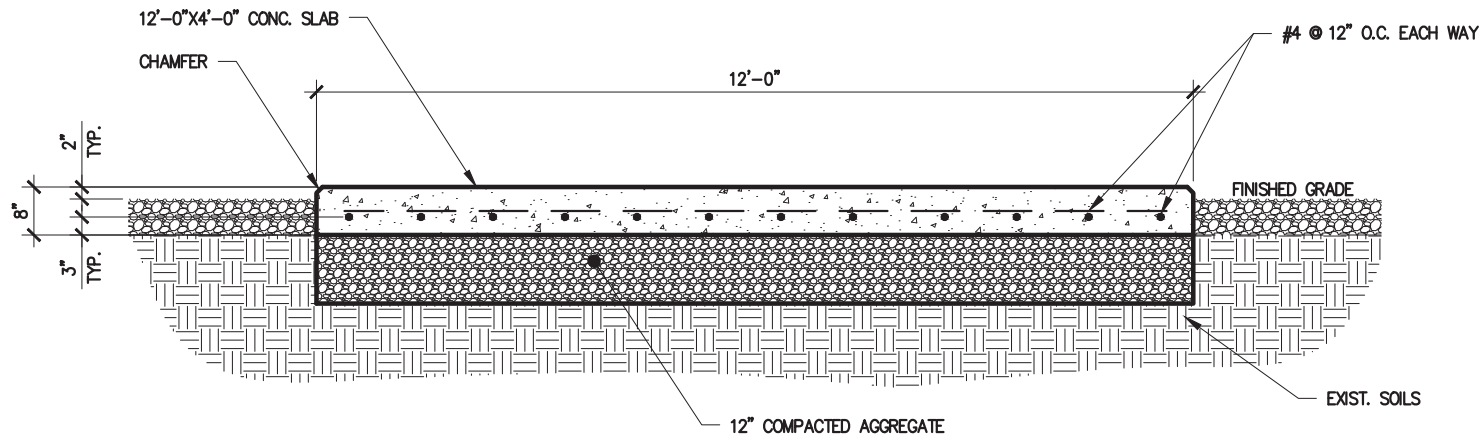
ICE BRIDGE DETAILS

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C-5

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NOTES:
FOUNDATIONS AS DESIGNED ASSUME NORMAL SOILS - GEOTECHNICAL BORING RESULTS NOT PROVIDED AT TIME OF DESIGN, RESULTS OF THIS REPORT COULD ALTER THE FOUNDATION DESIGN - COORDINATE W/SOILS ENGINEER

1 LP Slab Detail
SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
WILLIAM R. HEIDEN III
No. 037325
PROFESSIONAL ENGINEER
February 9, 2026

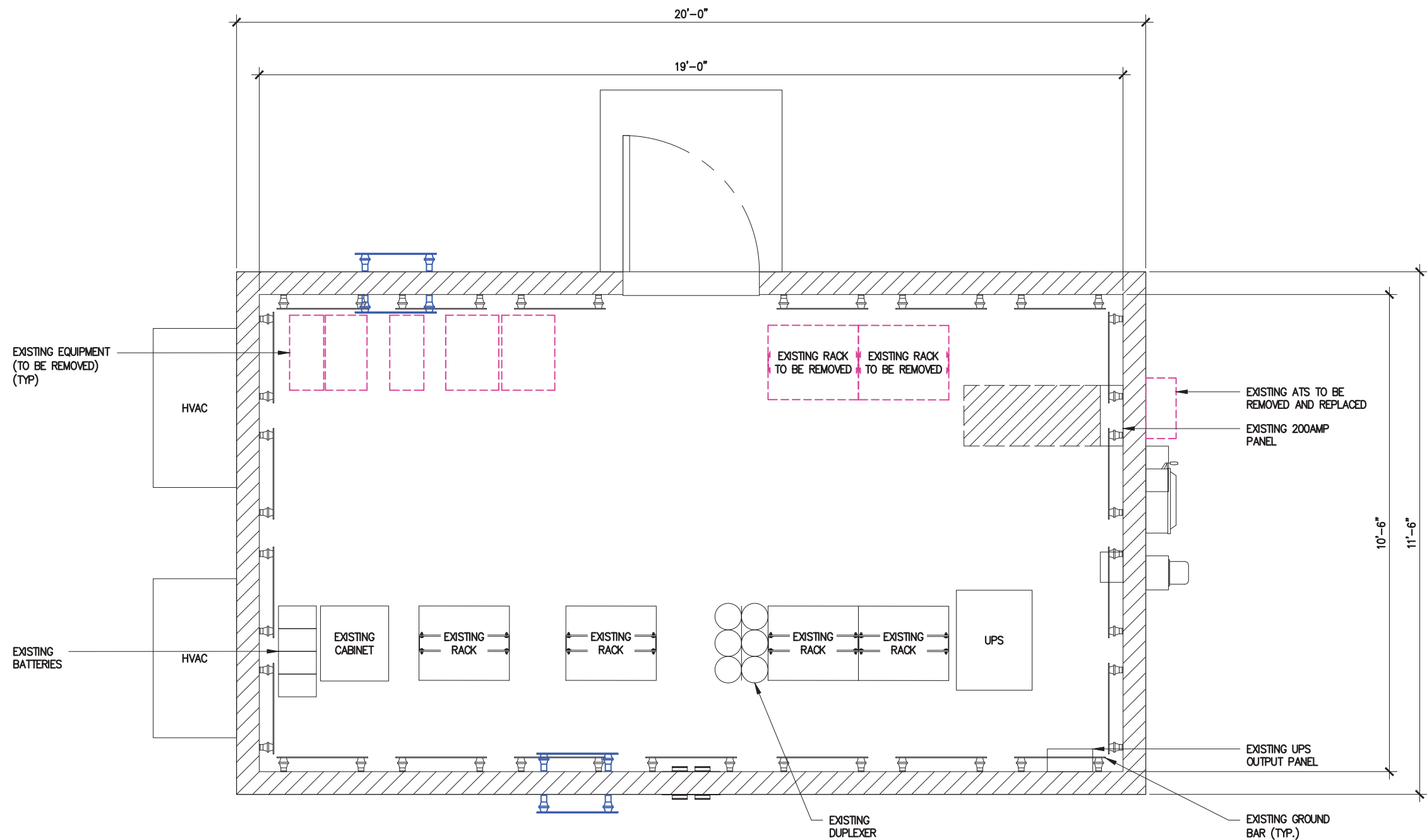
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3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



SITE CIVIL DETAILS	
BRUMLEY MTN 8070 SKYCRAFT RD ABINGTON, VA 24210	

C-6

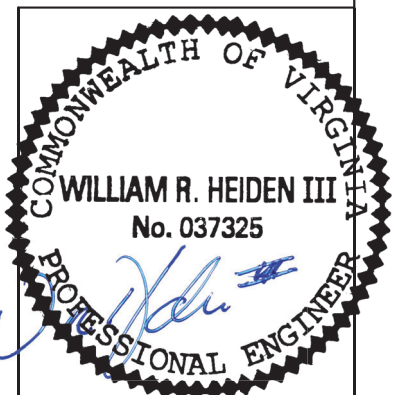
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Color Legend

- EXISTING EQUIPMENT
- EXISTING CABLE LADDER
- NEW ELECTRICAL EQUIPMENT
- NEW RF EQUIPMENT
- NEW CABLE LADDER
- TEMPORARY EQUIPMENT
- EQUIPMENT TO BE REMOVED

1 Existing Equipment Shelter Plan
SCALE: 3/8" = 1'-0"
NORTH



February 9, 2026

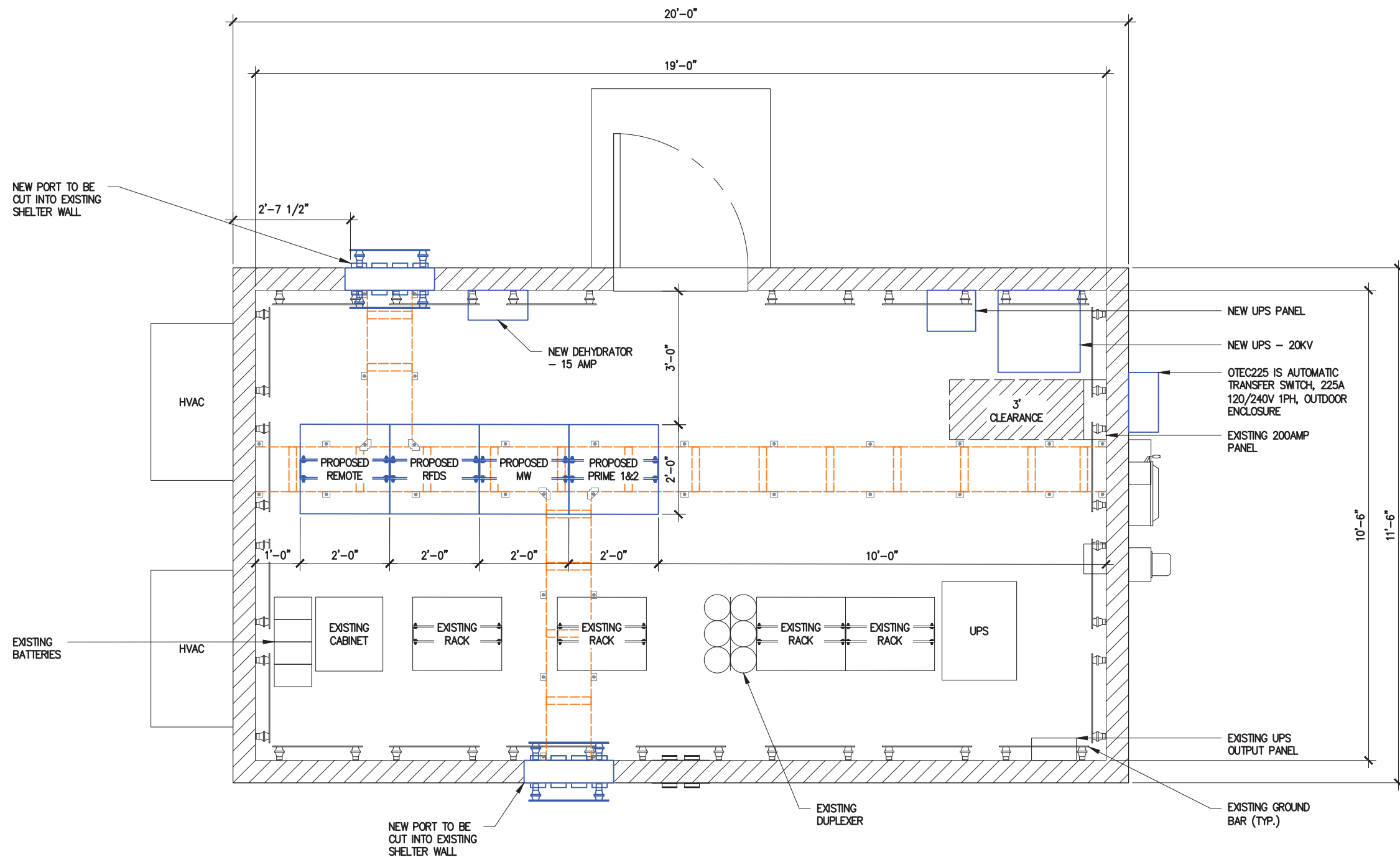
NO.	DATE	REVISIONS	BY	CHK	APP'D
4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	



EXISTING EQUIPMENT SHELTER PLAN
BRUMLEY MTN
8070 SKYCRAFT RD
ABINGTON, VA 24210

A-1

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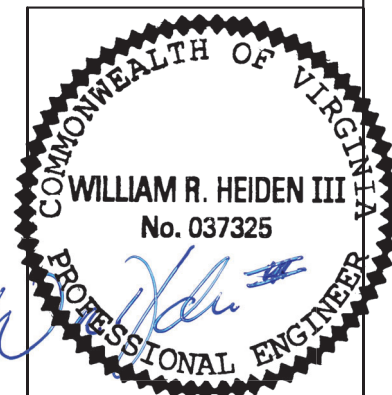


Color Legend

	EXISTING EQUIPMENT
	EXISTING CABLE LADDER
	NEW ELECTRICAL EQUIPMENT
	NEW RF EQUIPMENT
	NEW CABLE LADDER
	TEMPORARY EQUIPMENT
	EQUIPMENT TO BE REMOVED

1 Proposed Equipment Shelter Plan

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



February 9, 2026

NO.	DATE	REVISIONS	BY	CHK	APP'D
4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	



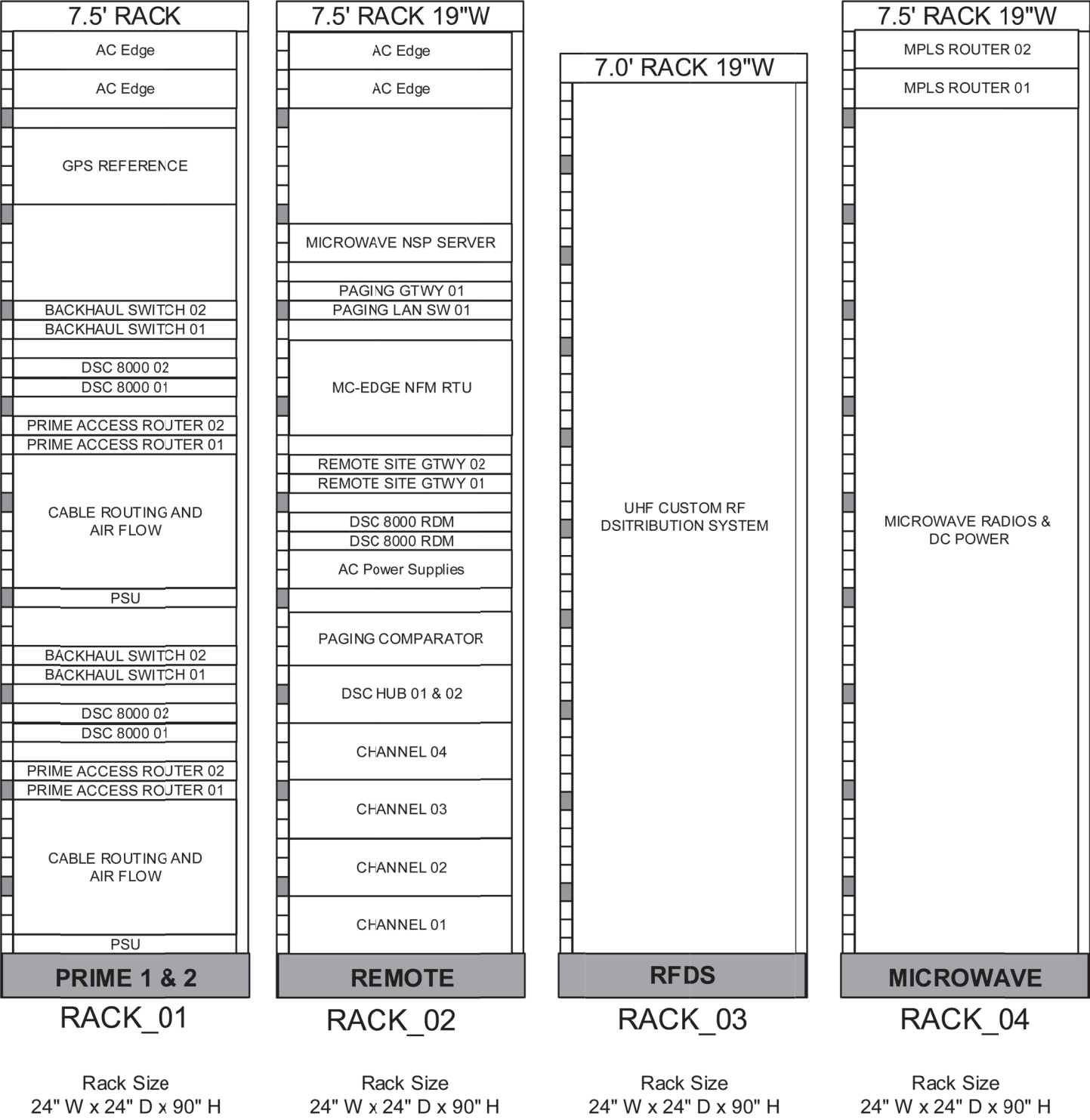
PROPOSED EQUIPMENT SHELTER PLAN

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A-2

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COMMONWEALTH OF VIRGINIA

WILLIAM R. HEIDEN III

No. 037325

PROFESSIONAL ENGINEER

February 9, 2026

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0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



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MOTOROLA
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RACK LAYOUT ELEVATION

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A-3

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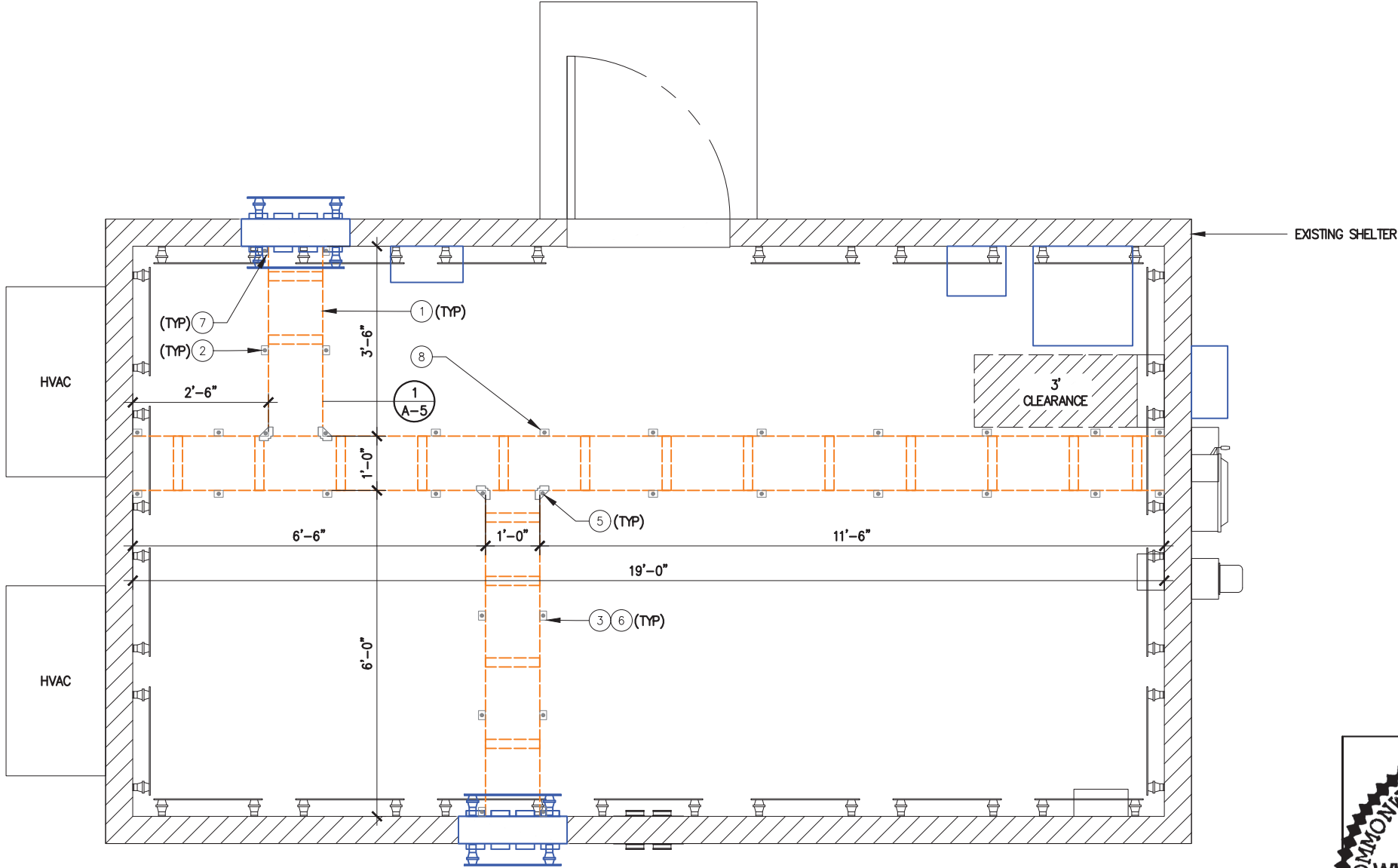
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LADDER RACK NOTES:

NOTE: THESE NOTES ARE FOR REFERENCE ONLY. CONTRACTOR TO MATCH EXISTING MODEL, COLOR, MOUNTING METHOD, ETC.

- 1
- NEW LADDER RACK W/ ZINC PLATED AND GOLD CHROMATE FINISH – NEWTON MODEL#0020033630 (12")
- 2
- NEW 1/2"Ø THREADED ROD ANCHORED TO UNISTRUT ABOVE – ZINC PLATED AND GOLD CHROMATE FINISH – NEWTON MODEL# 0030210310 OR APPROVED EQUAL
- 3
- NEW SLOTTED LADDER RACK HANGER BRACKET – ZINC PLATED AND GOLD CHROMATE FINISH – NEWTON MODEL# 2137610210 OR APPROVED EQUAL
- 4
- NEW SPLICE CLAMP AT LADDER RACK JUNCTIONS TYP. – ZINC PLATED AND GOLD CHROMATE FINISH – NEWTON MODEL# 0020110010 OR APPROVED EQUAL
- 5
- NEW CORNER CLAMP AT "T" JUNCTIONS TYP. – ZINC PLATED AND GOLD CHROMATE FINISH – NEWTON MODEL# 0020140010 OR APPROVED EQUAL
- 6
- CONTRACTOR TO SEAL ROD OPENING IN CEILING PANEL W/CLEAR SILICONE SEALANT
- 7
- CONTRACTOR TO SECURE LADDER RACK TO WALL USING STEEL FRAMING ANGLE AND J-BOLT ASSEMBLY – ZINC PLATED AND GOLD CHROMATE FINISH – NEWTON MODEL# 0020420010 OR APPROVED EQUAL
- 8
- CONTRACTOR TO INSTALL WHITE GROMMET AT EACH OPENING THROUGH HARD CEILING – SEAL ROD/GROMMET WITH CLEAR SILICONE SEALANT
- 9
- ANCHOR LADDER RACK DIRECTLY INTO EXISTING WALL. PROVIDE BLOCKING IN EXISTING WALL AS REQUIRED.

NOTE: ALL LADDER RACKS TO MATCH EXISTING LADDER RACK HEIGHT.



Color Legend

- EXISTING EQUIPMENT
- EXISTING CABLE LADDER
- NEW ELECTRICAL EQUIPMENT
- NEW RF EQUIPMENT
- NEW CABLE LADDER
- TEMPORARY EQUIPMENT
- EQUIPMENT TO BE REMOVED

1 Cable Ladder Plan
SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
WILLIAM R. HEIDEN III
No. 037325
PROFESSIONAL ENGINEER
February 9, 2026

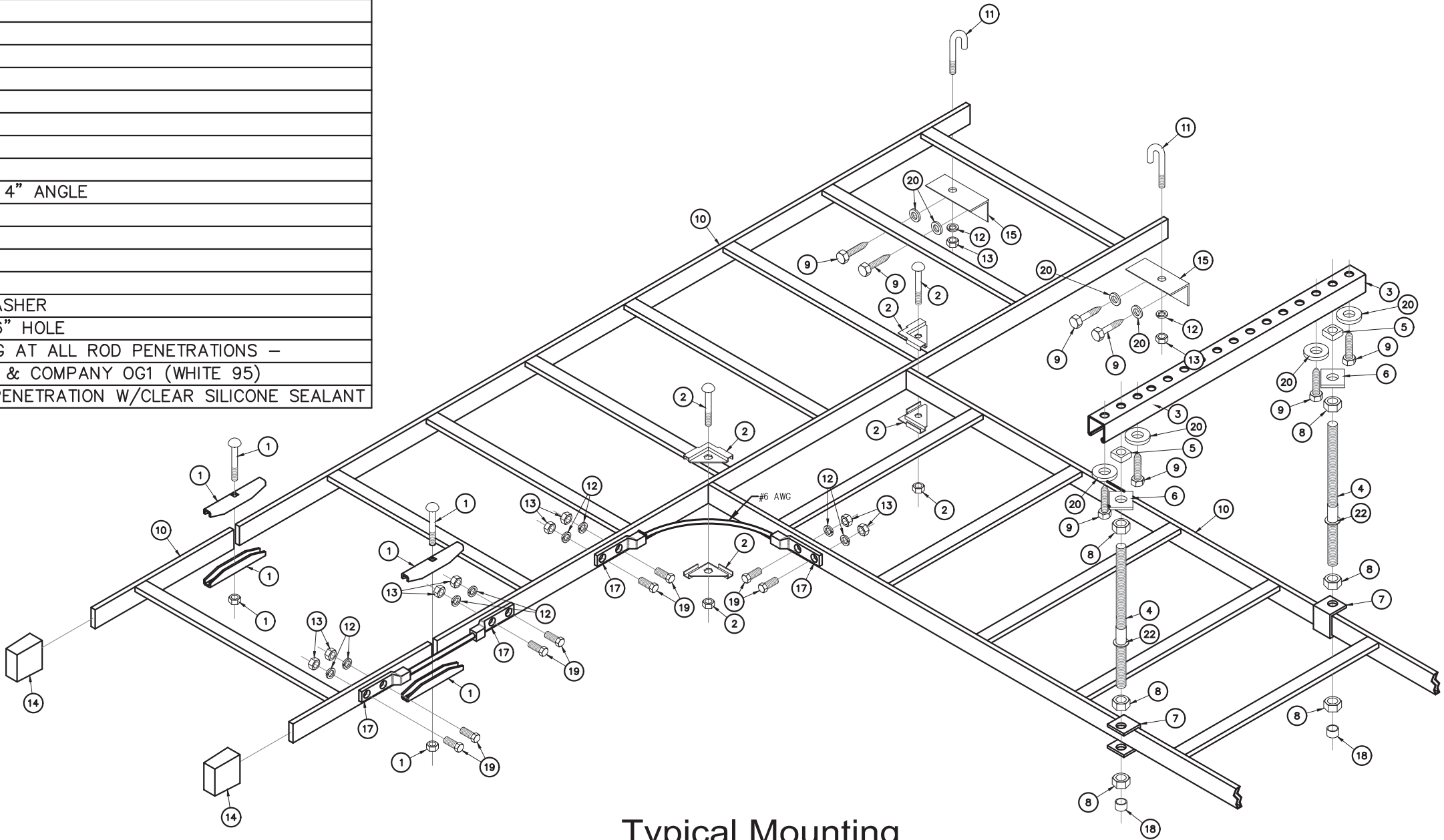
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0	05-21-25	ZONING CDs	JJT	MJA	
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CABLE LADDER PLAN		A-4	
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MATERIAL LIST	
NO	DESCRIPTION
1	SPLICE CLAMP
	BOLT
	NUT
2	CORNER CLAMP
	BOLT
3	KINDORF CHANNEL – FIELD VERIFY LENGTH
4	5/8” – 11 THREADED ROD
5	SQUARE NUT – 5/8”
6	SQUARE WASHER
7	BRACKET
8	NUT
9	TAP CON
10	18” SOLID BAR
11	J-BOLT
12	LOCK WASHER
13	NUT
14	END CAPS
15	1 3/4” x 1 3/4” x 1/8” x 4” ANGLE
16	NOT USED
17	2-HOLE LUG W/ #6 WIRE
18	PLASTIC PROTECTION CAP
19	1/4” X 1” BOLT
20	1/4” X 1” FENDER FLAT WASHER
21	BRACKET, WALL CLIP– 7/16” HOLE
22	WHITE GROMMETS IN CEILING AT ALL ROD PENETRATIONS – SIMILAR TO DOUG MOCKETT & COMPANY OG1 (WHITE 95) (800-523-1269) – SEAL PENETRATION W/CLEAR SILICONE SEALANT



1 Typical Mounting For Ladder Rack
SCALE: N.T.S.

COMMONWEALTH OF VIRGINIA

WILLIAM R. HEIDEN III

No. 037325

PROFESSIONAL ENGINEER

February 9, 2026

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2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D

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SOLUTIONS



TYPICAL MOUNTING FOR
LADDER RACK

BRUMLEY MTN
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ABINGTON, VA 24210

A-5

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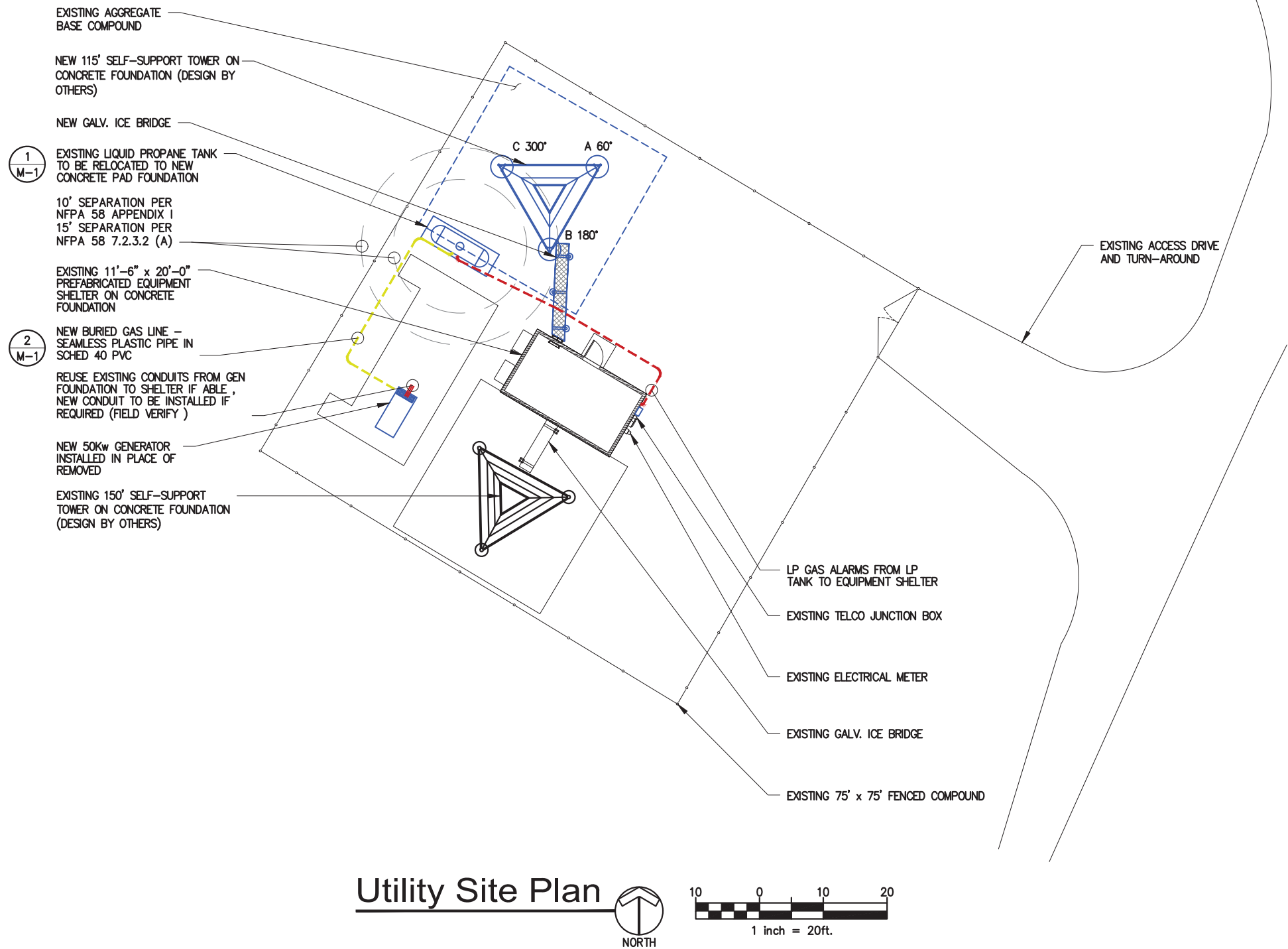
GENERAL NOTES:

1. THE LOCATION, SIZE & TYPE OF MATERIAL OF EXISTING UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING THE SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS & SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION & ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES & THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS & SERVICES SHALL BE RESTORED TO SERVICE AT ONCE & PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

2. NEW GROUNDING NOT SHOWN FOR CLARITY

3. WARNING TAPE SHALL BE INSTALLED DIRECTLY ABOVE CONDUITS AT A DEPTH OF 12 INCHES BELOW FINISHED GRADE UNLESS NOTED OTHERWISE. TAPE COLOR SHALL BE AS SPECIFIED BELOW AND SHALL BEAR DESCRIPTION OF THE UTILITY.

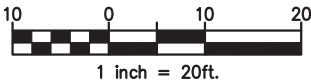
G.C. RESPONSIBLE FOR
PRE-CONSTRUCTION WALK
WITH UTILITY PROVIDERS TO
VERIFY REQUIREMENTS



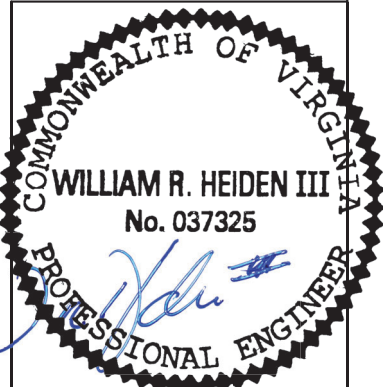
Utility Color Legend

- ELECTRIC
- GAS, OIL, STEAM
- COMMUNICATIONS / ALARMS
- POTABLE WATER
- RECLAIMED WATER
- SEWER/ DRAINAGE
- SURVEY MARKS

Utility Site Plan



1-800-552-7001
CALL TOLL FREE



February 9, 2026

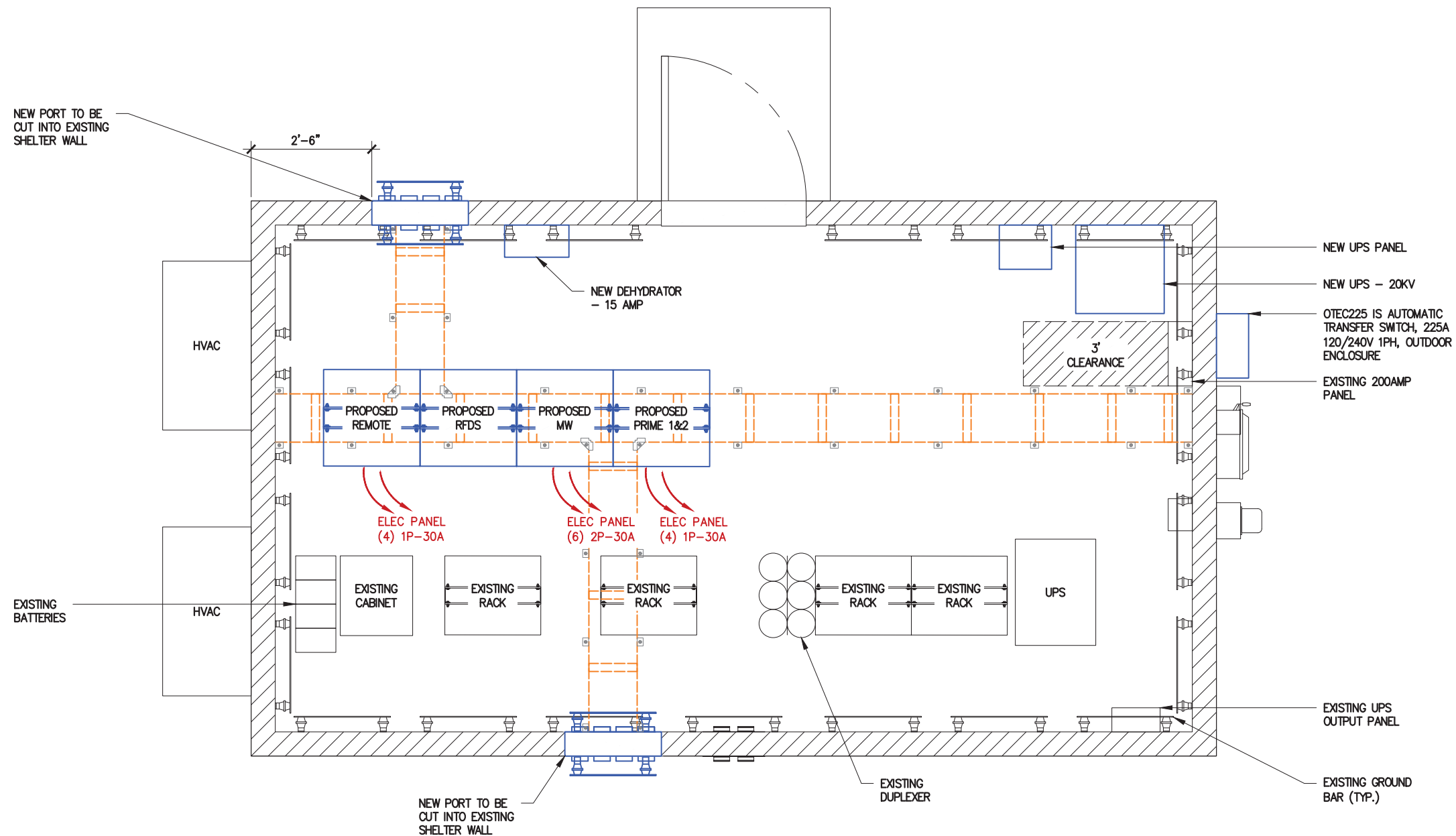
4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



UTILITY SITE PLAN		E-1
BRUMLEY MTN 8070 SKYCRAFT RD ABINGTON, VA 24210		

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Color Legend

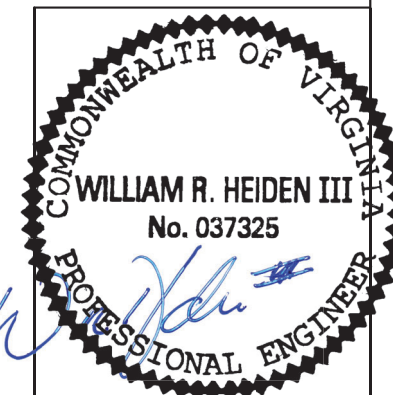
- EXISTING EQUIPMENT
- EXISTING CABLE LADDER
- NEW ELECTRICAL EQUIPMENT
- NEW RF EQUIPMENT
- NEW CABLE LADDER
- TEMPORARY EQUIPMENT
- EQUIPMENT TO BE REMOVED

1 Electrical Equipment Shelter Plan

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



NORTH



February 9, 2026

NO.	DATE	REVISIONS	BY	CHK	APP'D
4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	



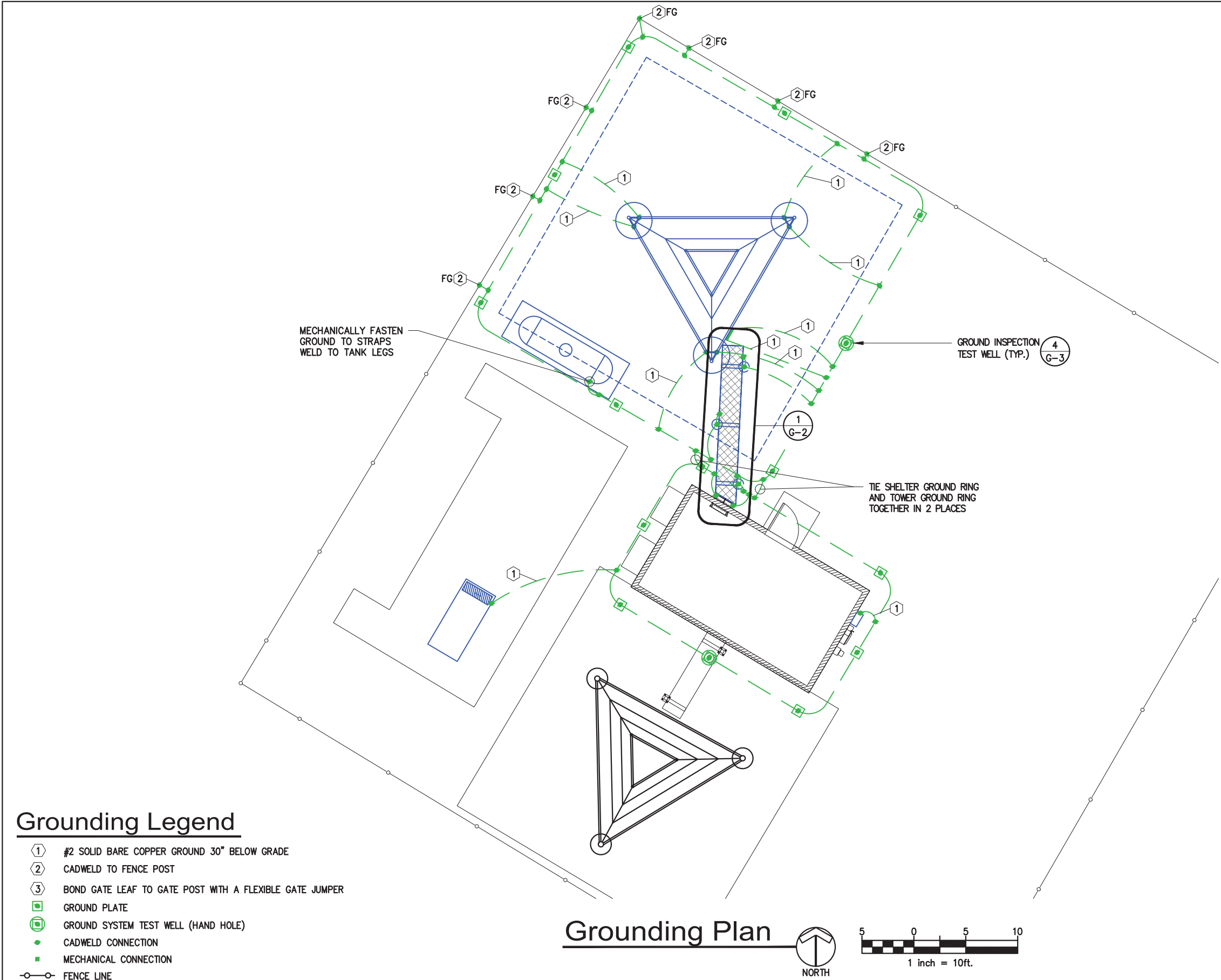
ELECTRICAL EQUIPMENT SHELTER PLAN

BRUMLEY MTN
8070 SKYCRAFT RD
ABINGTON, VA 24210

E-2

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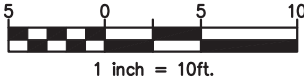


- TYPICAL GROUNDING NOTES**
1. ALL METALLIC ITEMS WITHIN 6' OF THE GROUNDING SYSTEM AND ALL FENCE POSTS WITHIN 20' OF SHELTERS TO BE BONDED TO GROUND RING.
 2. GROUND RING AROUND SHELTER TO BE MINIMUM 3' FROM THE SHELTER.
 3. GROUND RING AROUND TOWER TO BE MINIMUM 2' FROM THE TOWER LEG FOUNDATION.
 4. FENCE FABRIC TO BE BONDED PER R-56 STANDARDS REV 2017.
 5. FENCE FABRIC RUNS LESS THAN 40' SHALL BE BONDED ON ONE END. FENCE FABRIC RUNS GREATER THAN 40' SHALL BE BONDED ON BOTH ENDS.
 6. FENCE TOP RAIL TO BE BONDED TO CORNER POSTS ON BOTH ENDS.
 7. CONTRACTOR TO REPAIR ANY EXISTING GROUNDING LEADS CUT DURING CONSTRUCTIONS

Grounding Legend

- ① #2 SOLID BARE COPPER GROUND 30" BELOW GRADE
- ② CADWELD TO FENCE POST
- ③ BOND GATE LEAF TO GATE POST WITH A FLEXIBLE GATE JUMPER
- GROUND PLATE
- Ⓜ GROUND SYSTEM TEST WELL (HAND HOLE)
- CADWELD CONNECTION
- MECHANICAL CONNECTION
- FENCE LINE

Grounding Plan



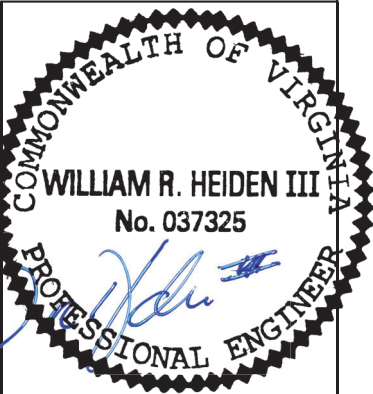
NO.	DATE	REVISIONS	BY	CHK	APP'D
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1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	



GROUNDING PLAN

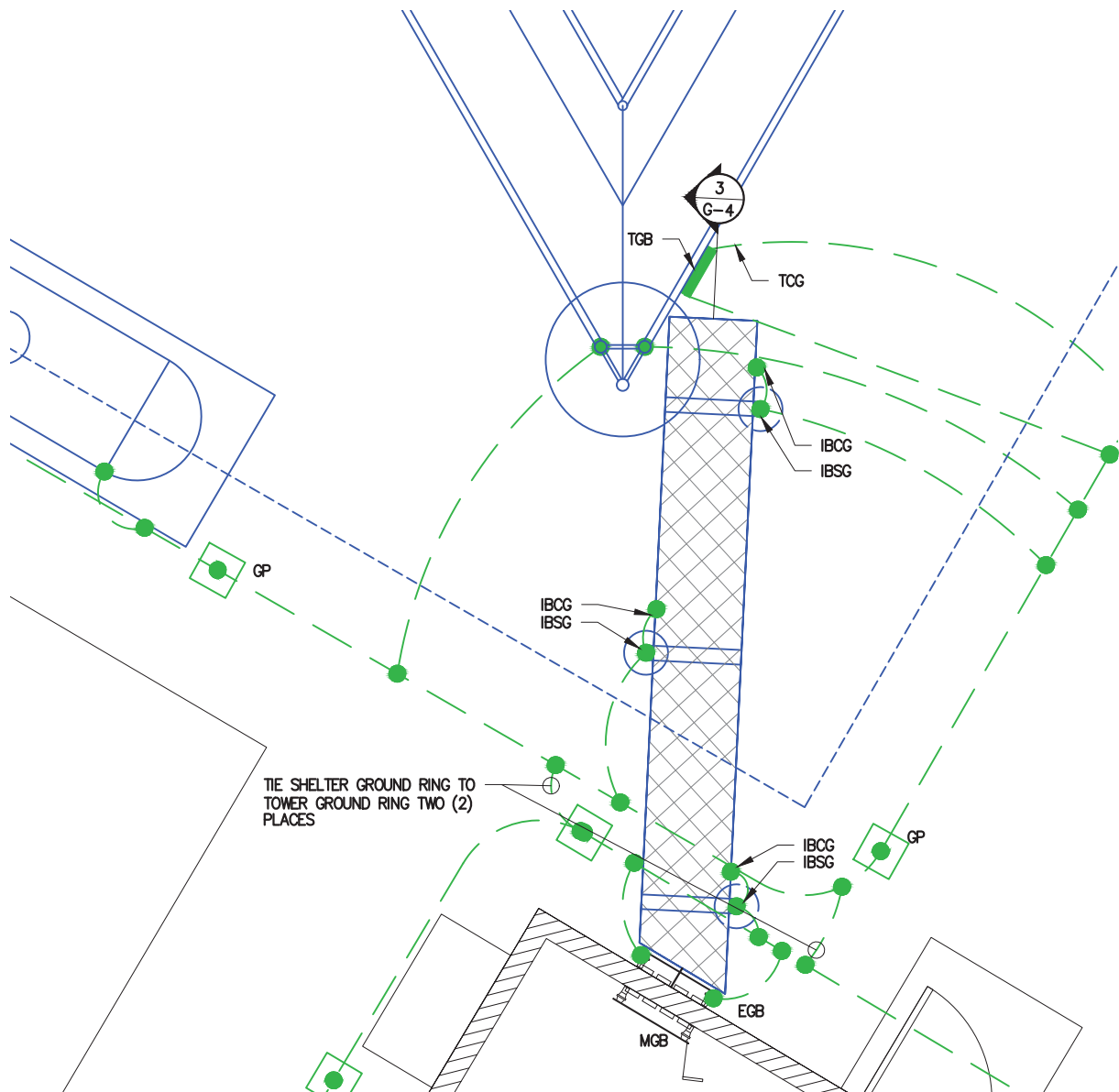
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G-1



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Enlarged Shelter and Tower Grounding Plan

1

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



GROUNDING LEGEND	
SYMBOL	DESCRIPTION
	12"x12"x0.062" COPPER GROUND PLATE
	GROUND PLATE WITH INSPECTION WELL
	EXOTHERMIC WELD (CADWELD)
	#2 SOLID TINNED COPPER WIRE UNLESS OTHERWISE NOTED
	MECHANICAL CONNECTION
ESG	ELECTRICAL SERVICE GROUND
TSG	TELCO SERVICE GROUND

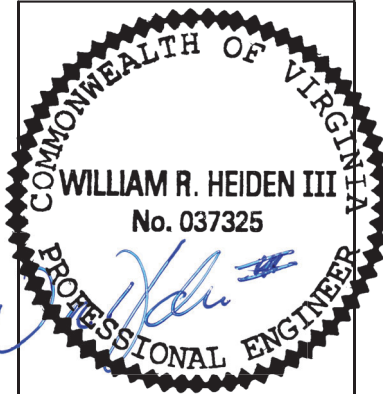
Legend

- ACG AIR CONDITIONER GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNNND COPPER GROUND WIRE FROM AIR CONDITIONER CABINET TO GROUND RING. CONNECTION AT AIR CONDITIONER CABINET TO BE MECHANICAL, CONNECTION AT GROUND RING TO BE CADWELD (TYPICAL OF 2).
- DCG DOOR CANOPY GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNNND COPPER GROUND WIRE FROM DOOR CANOPY TO SHELTER GROUND RING. CONNECTION AT DOOR CANOPY TO BE MECHANICAL, CONNECTION AT GROUND RING TO BE CADWELD.
- EGB EXTERIOR GROUND BAR: SHELTER MANUFACTURER FURNISHED AND INSTALLED 24"x4"x1/4" TNNND COPPER GROUND BAR ON EXTERIOR SIDEWALL OF SHELTER BELOW COAX BUILDING ENTRY.
- ESG ELECTRICAL SERVICE GROUND: E.C. SHALL FURNISH AND INSTALL #2 AWG BARE SOLID TNNND COPPER GROUND WIRE FROM SERVICE LB BOX TO A GROUND ROD. BOTH CONNECTIONS TO BE CADWELD.
- FG FENCE GROUND: E.C. TO FURNISH AND INSTALL #2 AWG BARE SOLID TNNND COPPER GROUND WIRE AT FENCE POST. GROUND WIRE TO BE ROUTED ALONG FENCE POST AND CADWELDED FOUR (4) PLACES, TOP RAIL, TOP AND BOTTOM OF CORNER POST, AND GROUND RING.
- GEC GENERATOR EXHAUST GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNNND COPPER GROUND WIRE FROM GENERATOR EXHAUST TO GROUND RING. CONNECTION AT GENERATOR EXHAUST TO BE MECHANICAL, CONNECTION AT GROUND RING TO BE CADWELD (TYPICAL OF 1).
- GG GATE GROUND: SIMILAR TO FENCE GROUND (FG), E.C. SHALL ALSO FURNISH AND INSTALL #2 BRAIDED GATE JUMPER WIRE BETWEEN THE GATE FRAME AND THE GATE POST. CONNECTIONS AT GATE FRAME AND GATE POST TO BE CADWELD.
- GP 12"x12"x0.062" COPPER GROUND PLATE W/ FACTORY EXOTHERMICALLY APPLIED #2 AWG TIN PLATED COPPER PIG TAIL (HARGER GP06212122T) SPACING OF GROUND PLATES 12.5' MIN. ALL CONNECTIONS TO BE CADWELD.
- IBCG ICE BRIDGE CHANNEL GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNNND COPPER GROUND JUMPER WIRE FROM ICE BRIDGE CHANNEL TO ICE BRIDGE SUPPORT POST. ALL CONNECTIONS TO BE CADWELD.
- IBSG ICE BRIDGE SUPPORT GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNNND COPPER GROUND WIRE FROM ICE BRIDGE SUPPORT POST TO GROUND RING. ALL CONNECTIONS TO BE CADWELD.
- IEHG INTERIOR/EXTERIOR HOOD GROUND: E.C. TO FURNISH AND INSTALL TWO (2) #2 AWG BARE SOLID TNNND COPPER GROUND WIRES FROM THE INTERIOR / EXTERIOR GENERATOR HOOD TO GROUND RING. ALL CONNECTIONS TO BE CADWELD.
- MGB MASTER GROUND BAR: SHELTER MANUFACTURER FURNISHED AND INSTALLED 24"x4"x1/4" TNNND COPPER GROUND BAR ON INTERIOR SIDEWALL OF SHELTER BELOW COAX BUILDING ENTRY.
- SPG SHELTER PLATE GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNNND COPPER GROUND WIRE FROM SHELTER PLATE TO SHELTER GROUND RING. TYPICAL OF 2 AT SHELTER AND ON DIAGONAL CORNERS. CONNECTION AT GROUND RING TO BE CADWELD.
- TGB TOWER GROUND BAR: E.C. TO FURNISH AND INSTALL 20"x4"x1/4" TNNND COPPER GROUND BARS ON THE TOWER AS REQUIRED. ONE TO BE LOCATED AT ANTENNA MOUNT ELEVATION (ATTACHED TO TOWER STEEL), THE OTHER AT THE BASE OF THE TOWER ADJACENT TO THE ICE BRIDGE (ISOLATED FROM TOWER STEEL).ADDITIONAL TRANSMISSION LINE GROUND KITS SHALL BE INSTALLED AS NEEDED TO LIMIT THE DISTANCE BETWEEN GROUND KITS TO 50 FEET MINIMUM AND 75 FEET MAXIMUM. DO NOT INSTALL ON WAVEGUIDE LADDER.
- TCG TOWER COAX GROUND: E.C. TO FURNISH AND INSTALL TWO (2) #2 AWG BARE SOLID TNNND COPPER GROUND WIRES FROM TOWER GROUND BAR (TGB) TO GROUND RING. ALL CONNECTIONS TO BE CADWELD.
- TG TOWER GROUND: E.C. TO FURNISH AND INSTALL #2 AWG BARE SOLID TNNND COPPER GROUND WIRE FROM BASE OF TOWER TO TOWER GROUND RING. ALL CONNECTIONS TO BE CADWELD.
- TLG TOWER LEG GROUND: E.C. TO FURNISH AND INSTALL #2 AWG BARE SOLID TNNND COPPER GROUND WIRE FROM TOWER LEG TO TOWER GROUND RING. ALL CONNECTIONS TO BE CADWELD. PROVIDE A MINIMUM OF 90 DEGREE SEPARATION BETWEEN THE TLG AND TG.

NOTE: ALL GROUND LEADS AT TOWER, ICE BRIDGE SUPPORT POSTS, FENCE POSTS, ETC. TO BE ROUTED IN 1/2" NON-METALLIC PVC FLEX CONDUIT. GROUND LEADS AT SHELTER FROM EXTERNAL GROUND BARS, COAX ENTRY, LOUVERS, PIPES, ETC. TO BE ROUTED IN 1/2" NON-METALLIC PVC RIGID CONDUIT SECURED TO SHELTER WALL WITH AT LEAST ONE (1) NON-METALLIC CONDUIT CLAMP 36" MAX. SPACING. CONDUIT TO BE 4" MAX. FROM APPLIANCE CONNECTION AND EXTEND 18" MIN. BELOW GRADE.

TYPICAL GROUNDING NOTES

- ALL GROUND CABLE IN CONCRETE OR THROUGH WALL SHALL BE IN 3/4" PVC CONDUIT. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTOR SLEEVES.
- GROUND ALL EXPOSED METALLIC OBJECTS USING A TWO-HOLE NEMA DRILLED CONNECTOR SUCH AS THOMAS & BETTS #32207 OR APPROVED EQUAL
- THE CONTRACTOR SHALL NOTIFY THE PYRAMID NETWORK SERVICES, LLC REPRESENTATIVE WHEN THE GROUND RING IS INSTALLED SO THAT THE REPRESENTATIVE CAN INSPECT GROUND RING BEFORE IT IS CONCEALED.
- ALL EXTERIOR GROUND CONDUCTORS INCLUDING GROUND RING SHALL BE #2 AWG SOLID BARE TINNED COPPER. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. THE RADIUS OF ANY BEND SHALL NOT BE LESS THAN 8" AND THE INCLUSIVE ANGLE OF ANY BEND SHALL NOT EXCEED 90'. GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARD TOWARD THE BURIED GROUND RING.
- ALL BELOW GROUND EXTERNAL CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. ALL EXOTHERMIC WELDS TO BURIED GROUND RING SHALL BE THE PARALLEL-TYPE. EXCEPT FOR THE GROUND RODS WHICH ARE TEE-TYPE EXOTHERMIC WELDS. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY EXOTHERMIC WELDING. USE SPRAY GALVANIZED SUCH AS HOLUB LECTROSOL #15-501.
- WHERE MECHANICAL CONNECTORS (TWO-HOLE OR CLAMP) ARE USED, APPLY A LIBERAL PROTECTIVE COATING OF A CONDUCTIVE ANTI-OXIDE COMPOUND ON ALL CONNECTORS. PROVIDE LOCK WASHERS ON ALL MECHANICAL CONNECTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT. THOROUGHLY REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND CONNECTORS, REPAINT TO MATCH EXISTING AFTER CONNECTION IS MADE TO MAINTAIN CORROSION RESISTANCE. ALL GROUND CONNECTIONS SHALL BE APPROVED FOR THE TYPES OF METALS BEING ATTACHED TO.
- A RESISTANCE TO GROUND OF (10) OHMS OR LESS IS REQUIRED FOR ALL MOTOROLA SITES. THE CONTRACTOR SHOULD RETAIN HIS OWN TESTER AT HIS OWN EXPENSE. IN ADDITION, A THIRD PARTY SHOULD BE HIRED TO OBTAIN MEGGER AND SWEEP RESULTS ON ALL SITES INCLUSIVE OF WHAT RESULTS THE CONTRACTOR SUBMITS, TO INSURE PROPER QUALITY CONTROL ON ALL SITES. SCHEDULE FINAL MEGGER TEST SUCH THAT THE PYRAMID NETWORK SERVICES, LLC REPRESENTATIVE CAN BE PRESENT FOR FIELD VERIFICATION. REFER TO THE MOTOROLA MASTER SPECIFICATION FOR MEGGER TESTING PROCEDURES. IF THE FINAL GROUNDING RESISTANCE MEASUREMENT EXCEEDS 10 (TEN) OHMS, THE CONTRACTOR SHALL NOTIFY THE PYRAMID NETWORK SERVICES, LLC REPRESENTATIVE.
- ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL
- THE GROUND CONDUCTORS SHALL BE RUN STRAIGHT FOR MINIMUM INDUCTANCE AND VOLTAGE DROP. SINCE CABLE BENDS INCREASE INDUCTANCE, THE MINIMUM REQUIRED BENDING RADIUS IS 8 INCHES WHEN BENDS ARE UNAVOIDABLE. ALL METAL WORK WITHIN 10 FEET OF THE GROUND RING SHALL BE DIRECTLY BONDED TO THIS GROUND SYSTEM, WITHOUT USING SERIES OR DAISY CHAIN CONNECTION ARRANGEMENTS.
- PAINT, ENAMEL, LACQUER AND OTHER ELECTRICALLY NON-CONDUCTIVE COATINGS SHALL BE REMOVED FROM THREADS AND SURFACE AREAS WHERE CONNECTIONS ARE MADE TO ENSURE GOOD ELECTRICAL CONTINUITY.
- CONNECTIONS BETWEEN DISSIMILAR METALS SHALL NOT BE MADE UNLESS THE CONDUCTORS ARE SEPARATED BY A SUITABLE MATERIAL. THAT IS A PART OF THE ATTACHMENT DEVICE LISTED AND APPROVED FOR USE WITH THE SPECIFIC DISSIMILAR METALS MAY BE USED FOR THE PURPOSE.
- ALL BELOW GRADE GROUND SYSTEM CONDUCTORS SHALL BE A MINIMUM DEPTH OF 30".



February 9, 2026

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NO.	DATE	REVISIONS	BY	CHK	APP'D



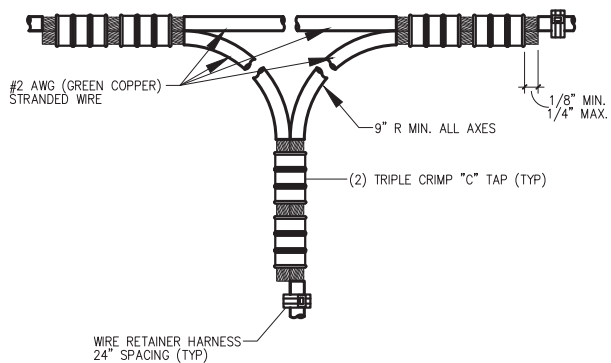
ENLARGED GROUNDING
PLAN AND NOTES

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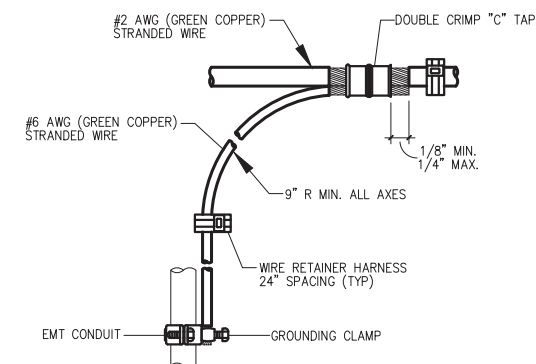
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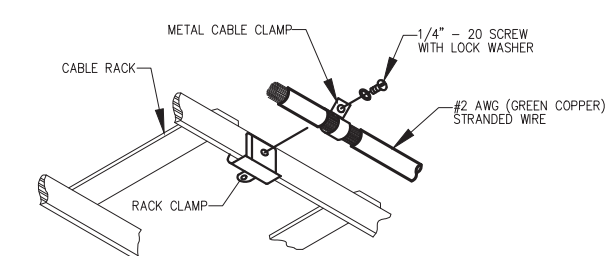
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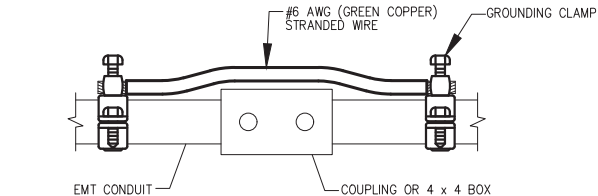
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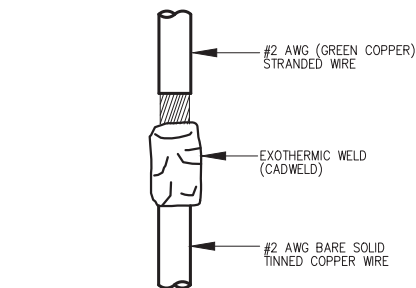
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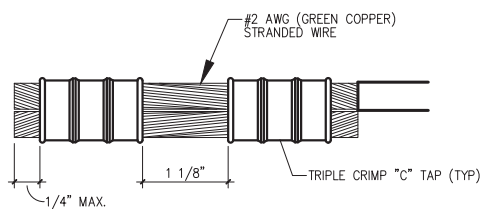
5 Grounding Detail
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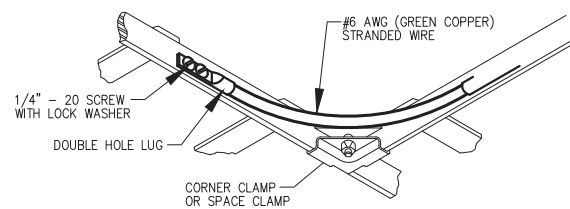
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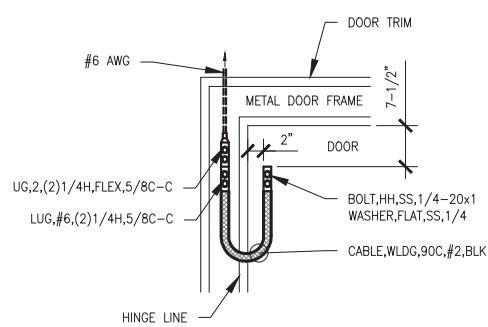
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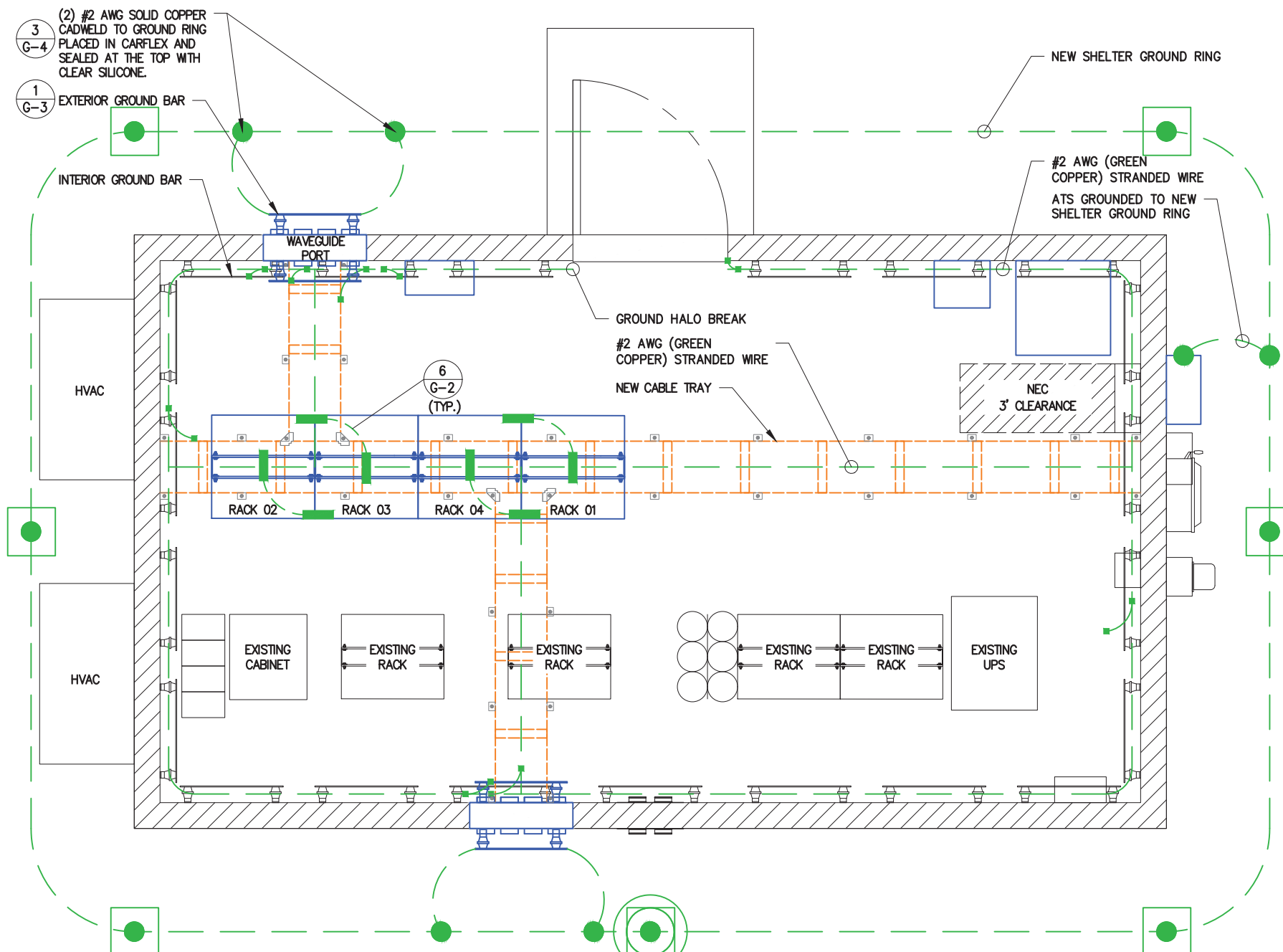
4 Grounding Detail
NO SCALE



6 Grounding Detail
NO SCALE

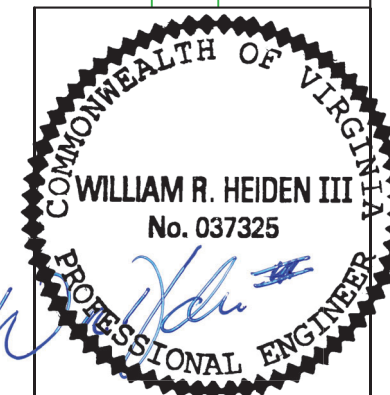


8 Grounding Detail
NO SCALE



Interior Grounding Plan

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



February 9, 2026

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0	05-21-25	ZONING CDs	JJT	MJA	
NO.	DATE	REVISIONS	BY	CHK	APP'D



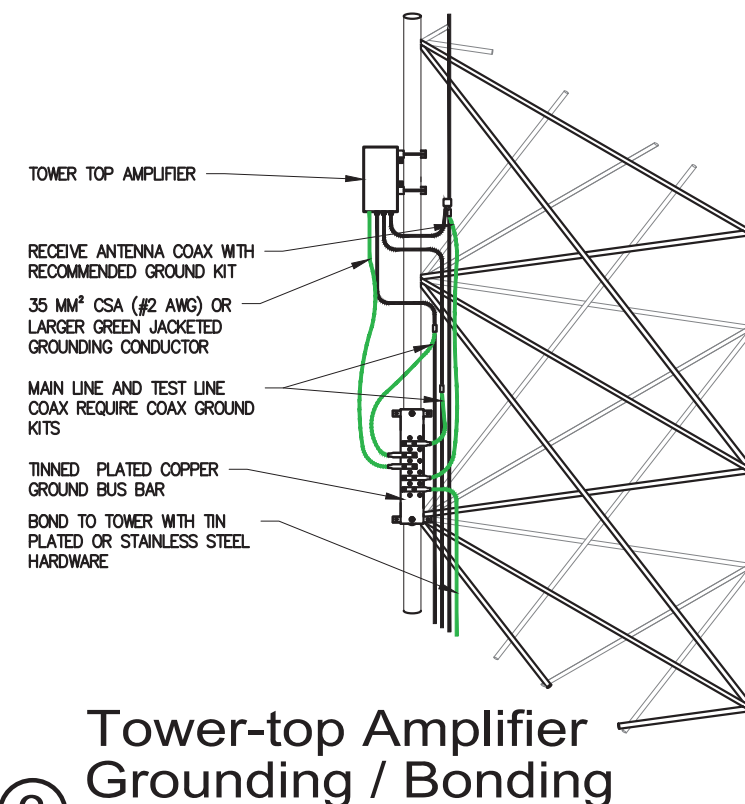
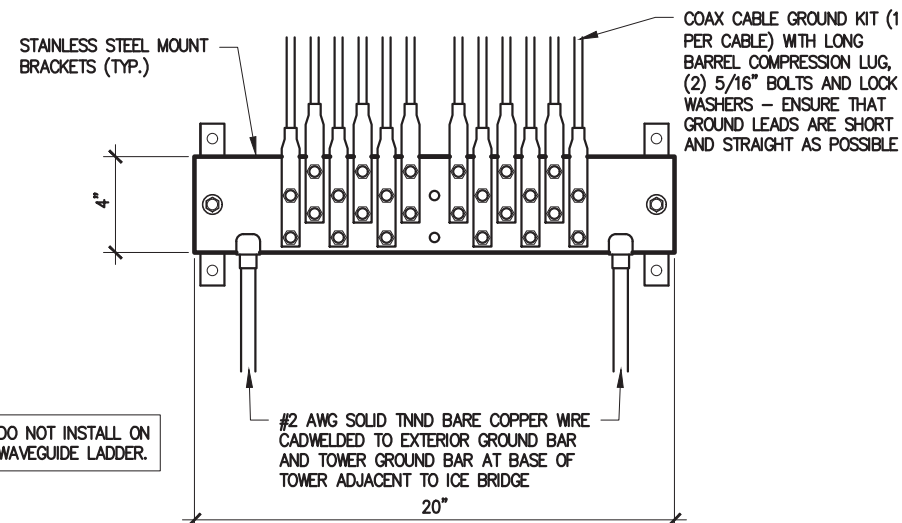
INTERIOR GROUNDING PLAN		G-2
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- BOLTING THE BUS BAR DIRECTLY TO THE TOWER STRUCTURE USING APPROPRIATE STAINLESS STEEL HARDWARE. THIS SHALL PROVIDE A DIRECT ELECTRICAL BOND.
- SECURING THE BUS BAR TO THE TOWER USING APPROPRIATE MECHANICAL HARDWARE AND ELECTRICALLY BONDING THE BUS BAR TO THE TOWER USING A GROUNDING CONDUCTOR. THE GROUNDING CONDUCTOR SHALL CONNECT TO THE NEAREST TOWER LEG OR DIAGONAL STRUCTURAL SUPPORT AT A POINT BELOW THE TGB. THE GROUNDING CONDUCTOR SHALL BOND TO THE TOWER USING APPROPRIATE HARDWARE, SUCH AS STAINLESS STEEL BEAM CLAMPS OR STAINLESS STEEL BAND/STRAP TYPE CLAMPS



① External Ground Bar (EGB)

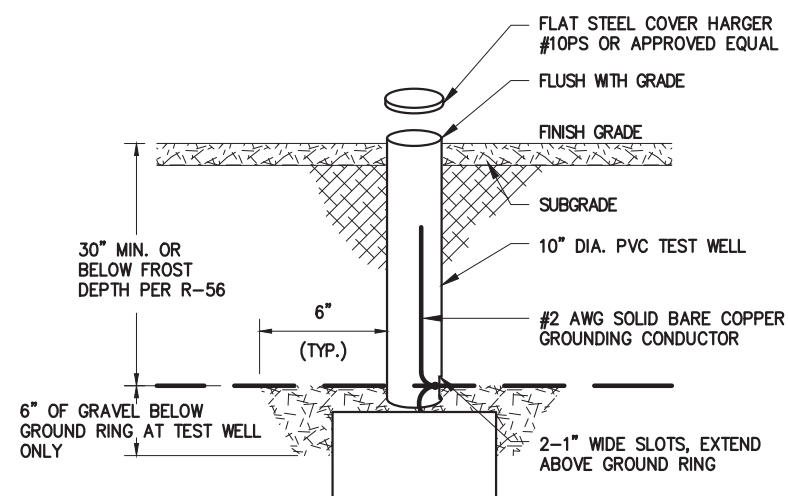
SCALE: 3" = 1'-0"

② Tower Ground Bar (TGB)

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

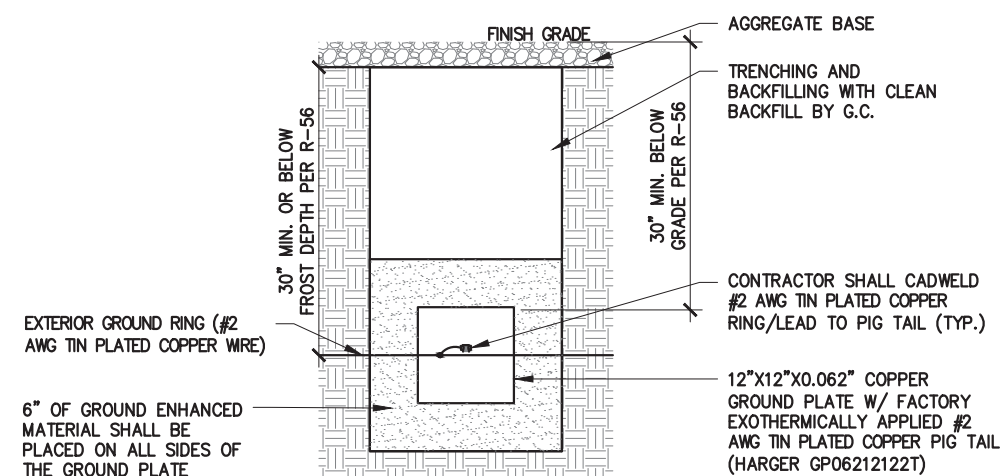
3 Grounding / Bonding

NOT TO SCALE



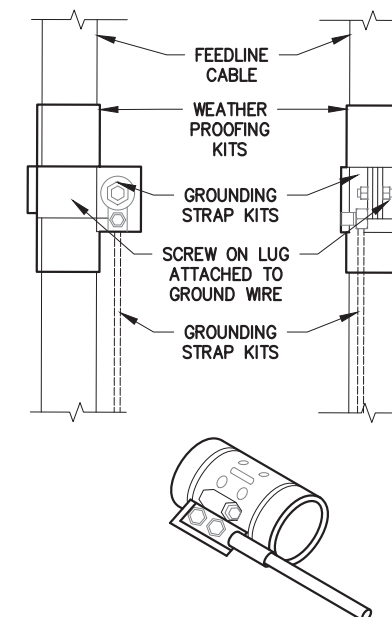
④ Grounding Inspection Test Well

NOT TO SCALE



⑤ Grounding Plate Detail

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



- NOTES:**

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR
2. THIS DETAIL IS TYPICAL FOR EACH COAX / HYBRID CABLE WHERE IT IS SPECIFIED TO BE GROUNDED
3. CABLE TO BE GROUNDED AT ANTENNA LEVEL AND PRIOR TO ENTERING SHELTER ENTRY PANEL
4. CABLE ALSO TO BE GROUNDED TO GROUND BAR AT TOWER BASE IF APPLICABLE

Coax Cable Ground Kit Detail

SCALE: N.T.S.

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NO.	DATE	REVISIONS		BY	CHK APP'D



6202 Constitution Drive, Suite C
Fort Wayne, IN 46804



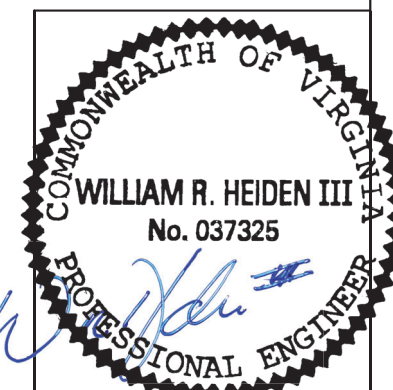
GROUNDING DETAILS

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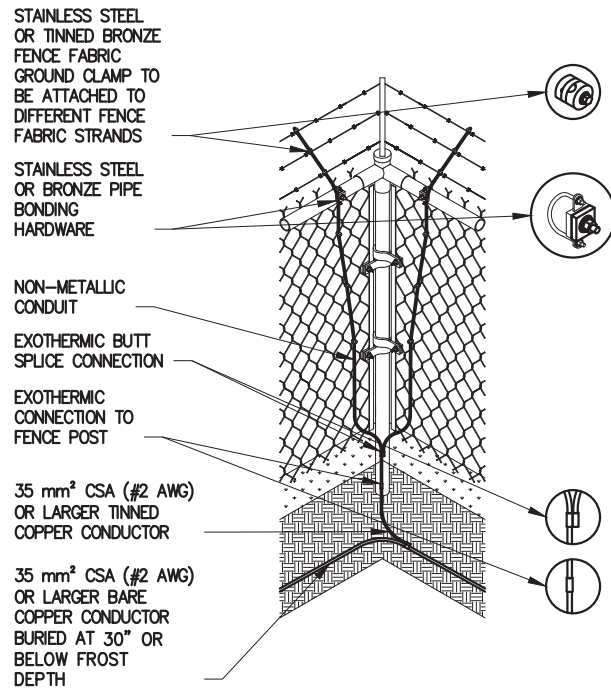
G-3

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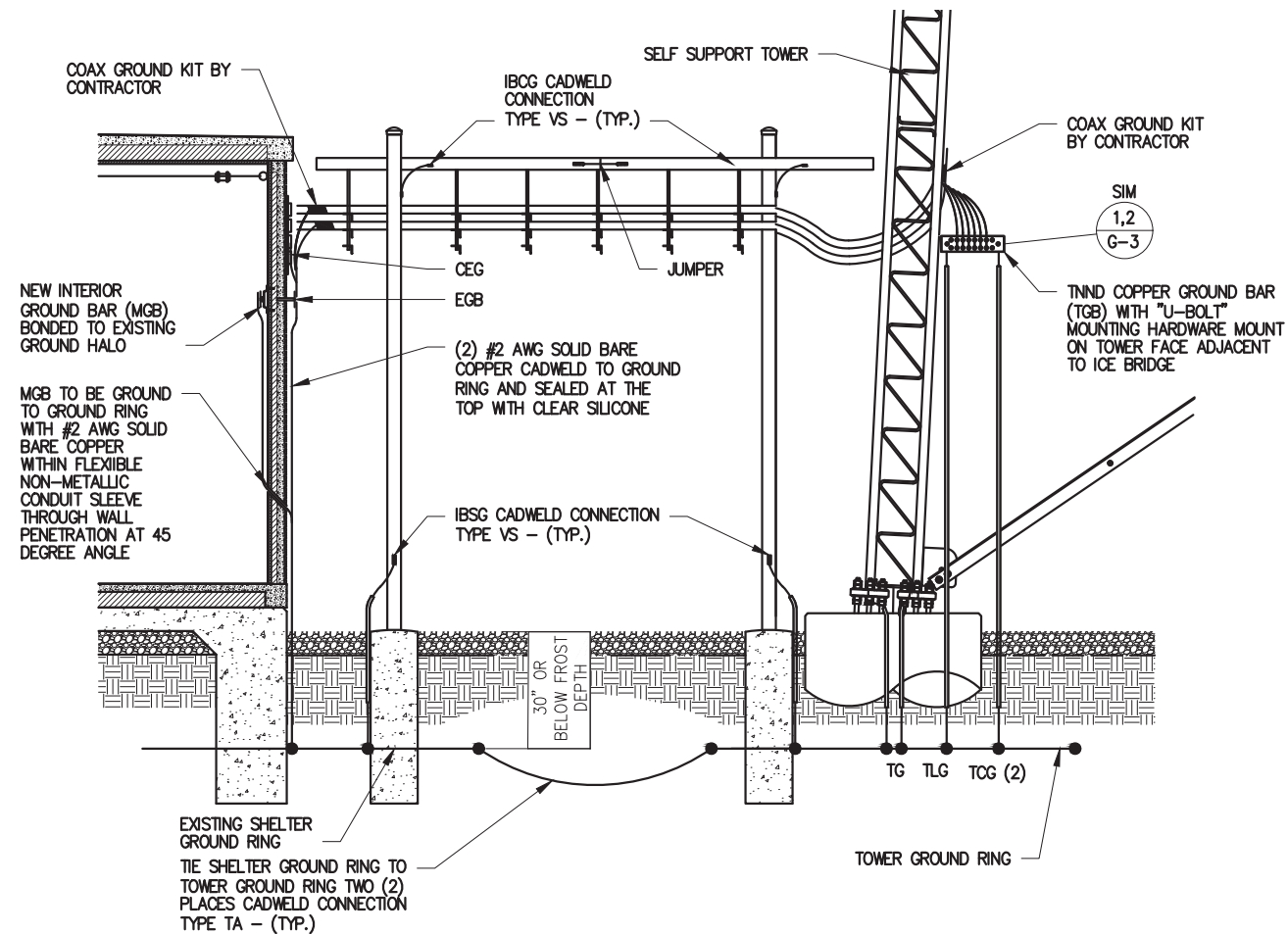


February 9, 2026



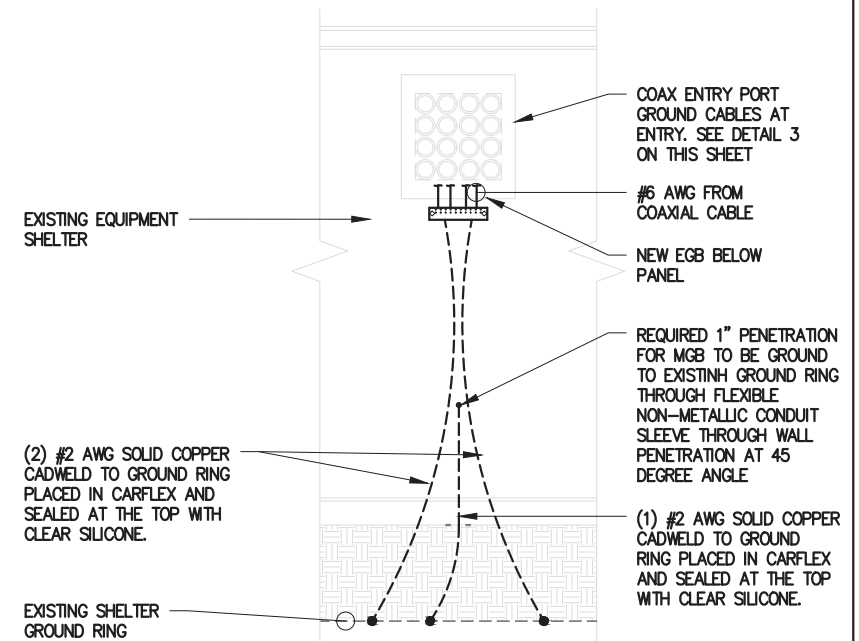
Fence Fabric and Deterrent Wiring Bonding

1 NO SCALE



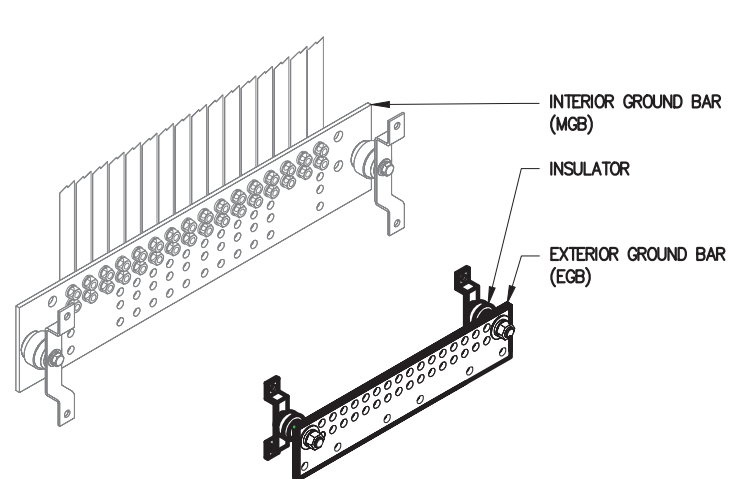
Shelter and Tower Grounding Elevation Schematic

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



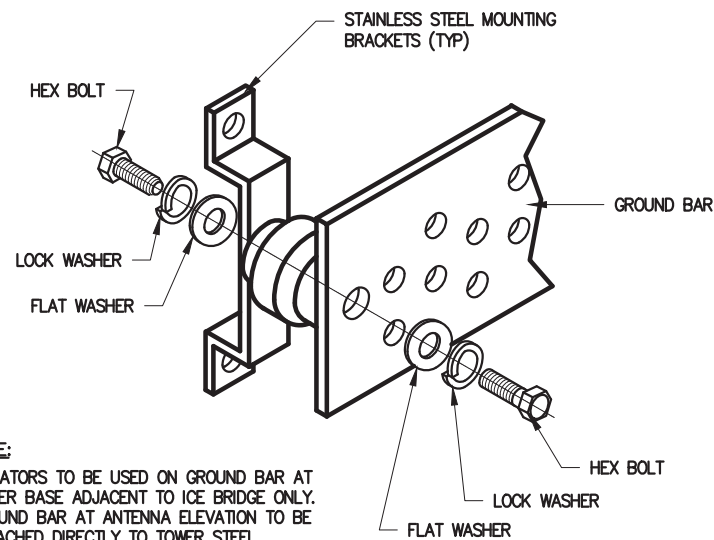
Shelter Grounding Detail

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

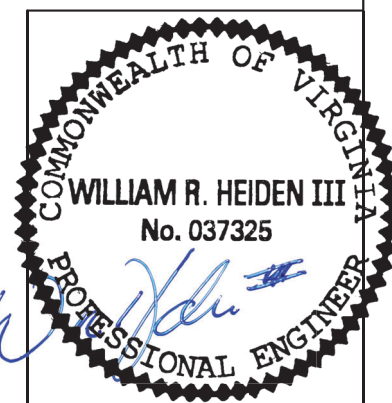


(EGB/PBB) Shelter Ground Bar Installation Kit

4 NOT TO SCALE



NOTE:
ISOLATORS TO BE USED ON GROUND BAR AT TOWER BASE ADJACENT TO ICE BRIDGE ONLY. GROUND BAR AT ANTENNA ELEVATION TO BE ATTACHED DIRECTLY TO TOWER STEEL.



February 9, 2026

NO.	DATE	REVISIONS	BY	CHK	APP'D
4	02-04-26	PERMIT CDs	JJT	MJA	
3	12-23-25	PRELIM CDs	JJT	MJA	
2	11-25-25	ZONING CDs	MHC	MJA	
1	10-17-25	ZONING CDs	MHC	MJA	
0	05-21-25	ZONING CDs	JJT	MJA	

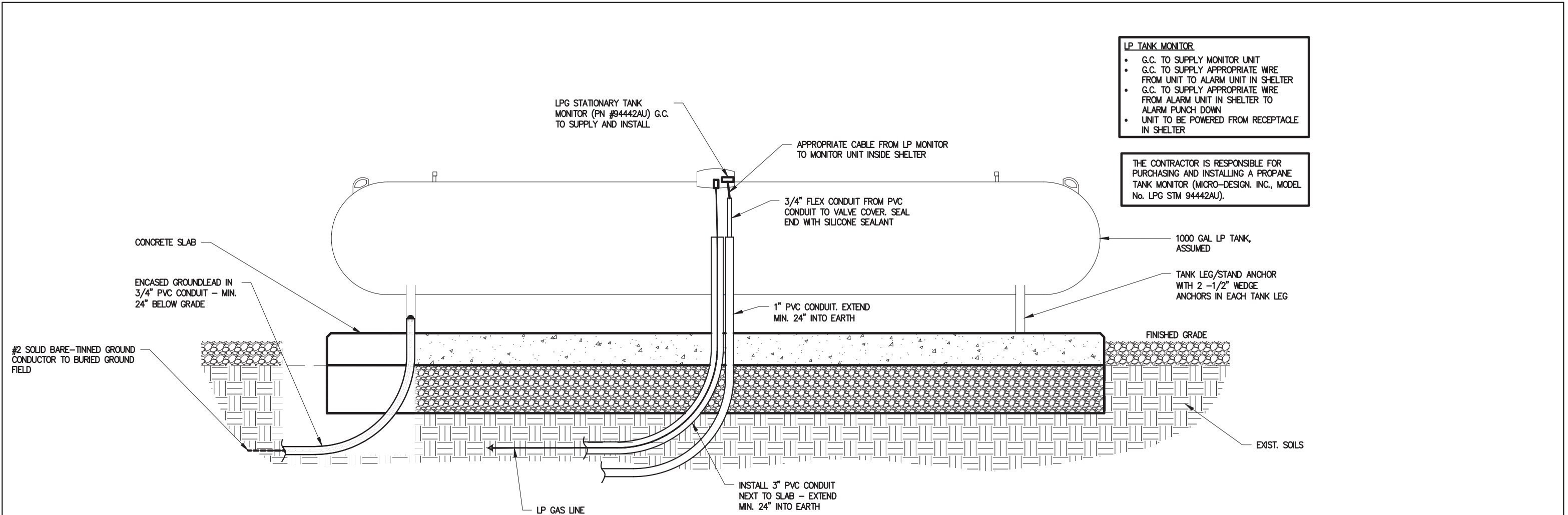


GROUNDING DETAILS

BRUMLEY MTN
8070 SKYCRAFT RD
ABINGTON, VA 24210

G-4

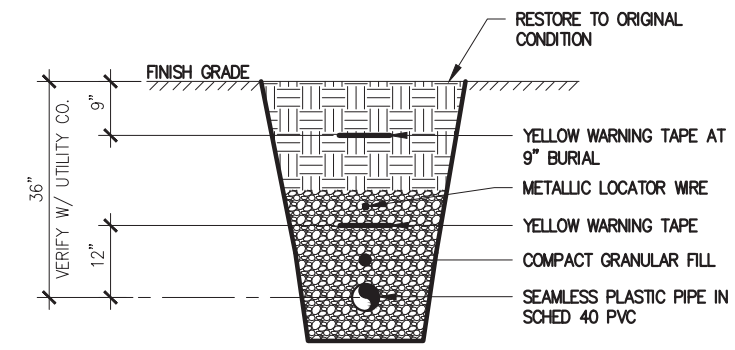
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- LP TANK MONITOR**
- G.C. TO SUPPLY MONITOR UNIT
 - G.C. TO SUPPLY APPROPRIATE WIRE FROM UNIT TO ALARM UNIT IN SHELTER
 - G.C. TO SUPPLY APPROPRIATE WIRE FROM ALARM UNIT IN SHELTER TO ALARM PUNCH DOWN
 - UNIT TO BE POWERED FROM RECEPTACLE IN SHELTER

THE CONTRACTOR IS RESPONSIBLE FOR PURCHASING AND INSTALLING A PROPANE TANK MONITOR (MICRO-DESIGN, INC., MODEL No. LPG STM 94442AU).

1 LP Tank Detail
SCALE: 1/2" = 1'-0"



2 LP Gas Service from LP tank to Generator
SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
WILLIAM R. HEIDEN III
No. 037325
[Signature]
PROFESSIONAL ENGINEER
February 9, 2026

4	02-04-26	PERMIT CDs	JJT	MJA	
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NO.	DATE	REVISIONS	BY	CHK	APP'D


6202 Constitution Drive, Suite C
Fort Wayne, IN 46804





PROPANE DETAILS

BRUMLEY MTN
8070 SKYCRAFT RD
ABINGTON, VA 24210

M-1

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