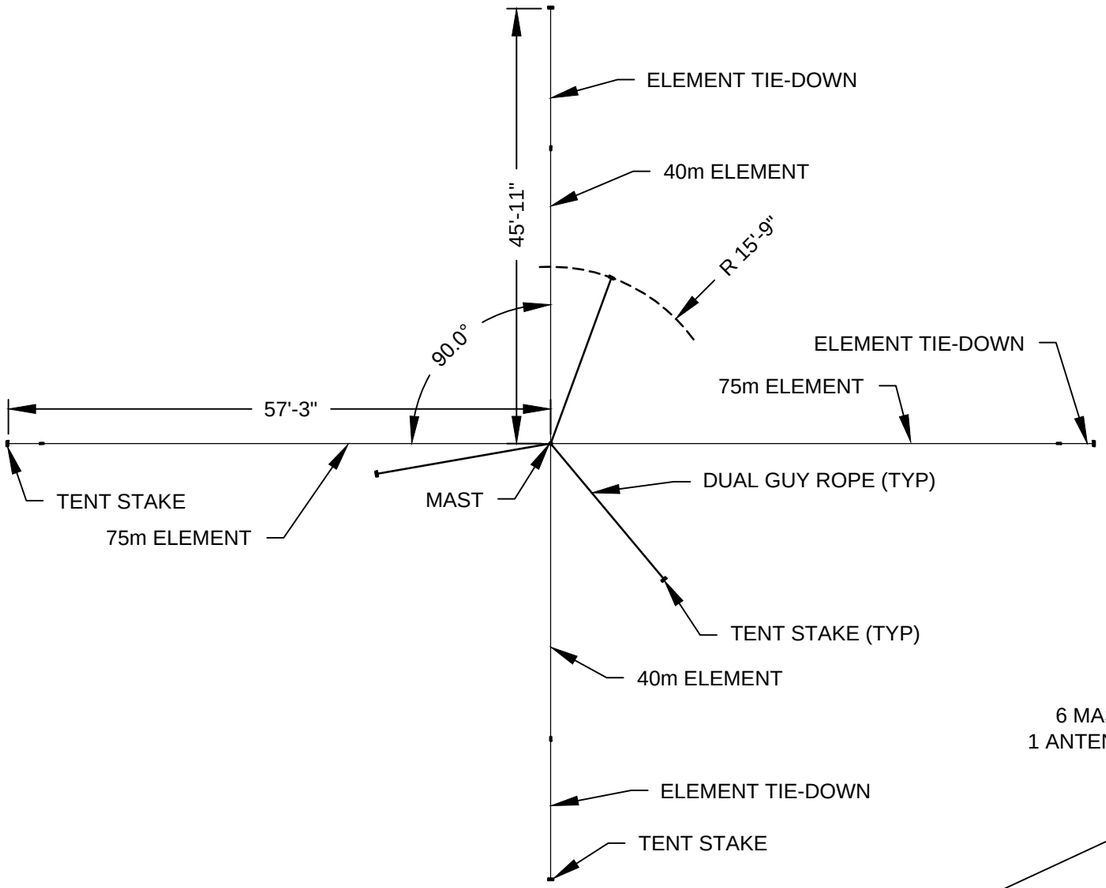
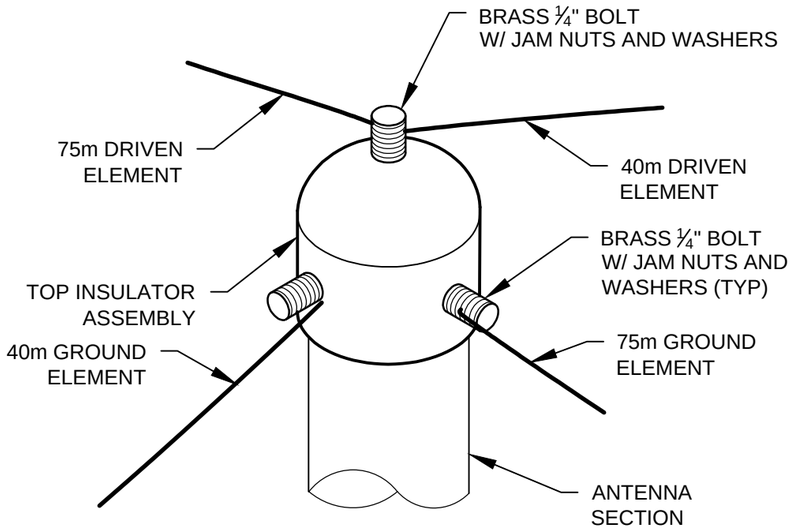
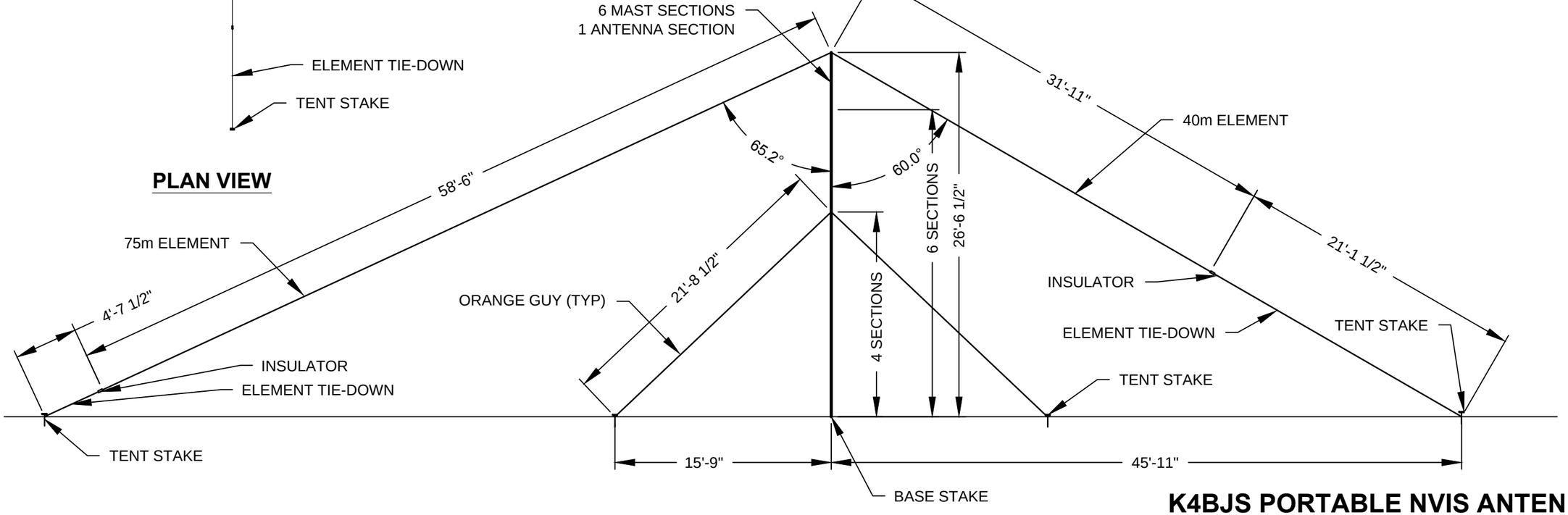


PLAN VIEW



ANTENNA TOP ASSEMBLY



HALF SECTION

NOTES:

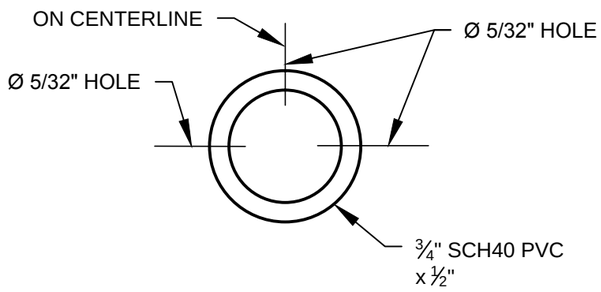
1. ADD 12 INCHES TO THE DIPOLE ELEMENT LENGTH TO ALLOW FOR TUNING THE DIPOLE ANTENNAS.

OPTIONAL 60M ANTENNA:

60m ELEMENT LENGTH IS 44'-3" AND ELEMENT TIE-DOWN LENGTH IS 15'-11", INCLUDED ANGLE IS 111.2 DEG.
EZNEC MODEL IS: SWR 1.13:1, BEAM WIDTH 85.4 DEG., GAIN AT 90 DEG. IS 7.8 dB, GAIN AT 50 DEG. IS 6.2 dB.

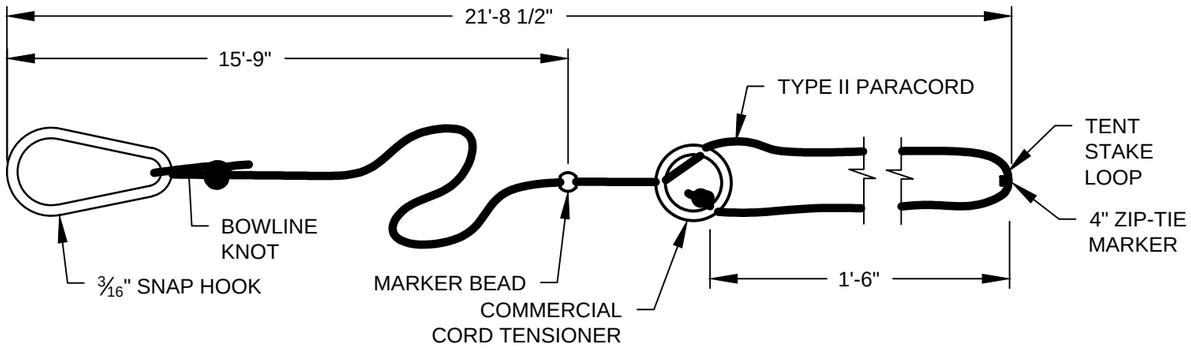
K4BJS PORTABLE NVIS ANTENNA

MULTI-STAGE IMPROVEMENT
DUAL BAND INVERTED "V"



ROPE TENSIONER

4 REQUIRED



GUY ROPE ASSEMBLY

3 REQUIRED

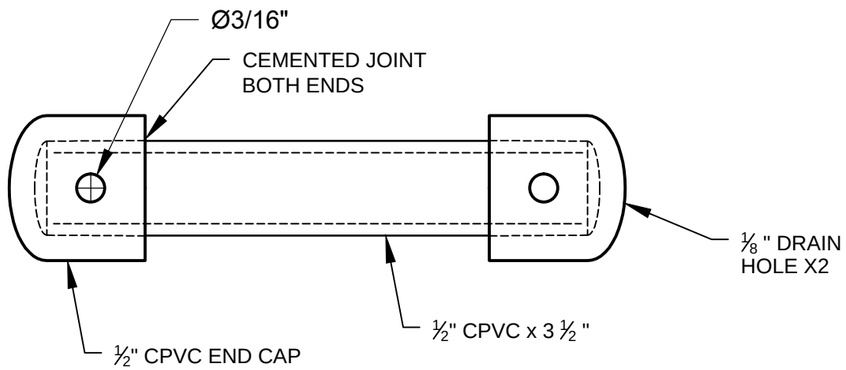
NOTES:

1. ELEMENT TIE DOWN ASSEMBLY MARKER BEAD MEASUREMENT:
   75m: 57'-3"
   40m: 45'-11"

   MEASURED FROM END OF ANTENNA WIRE TO MARKER BEAD.

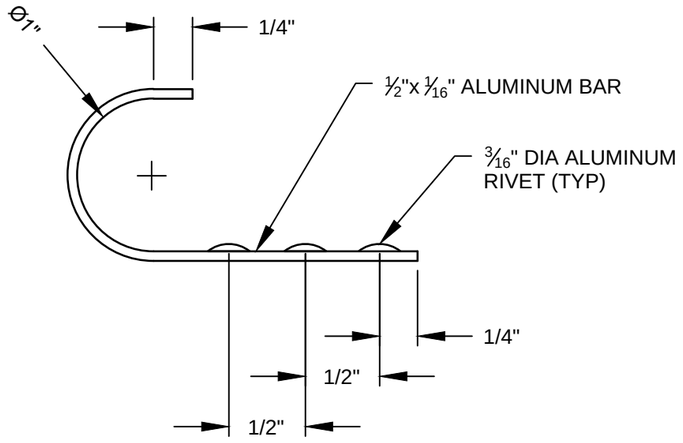
2. TYPE I PARACORD, 95 LBS WORKING LIMIT.

3. TYPE II PARACORD, 275 LBS WORKING LIMIT.



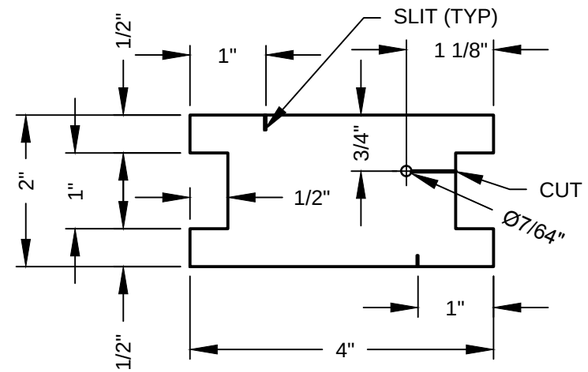
ANTENNA END INSULATOR

4 REQUIRED



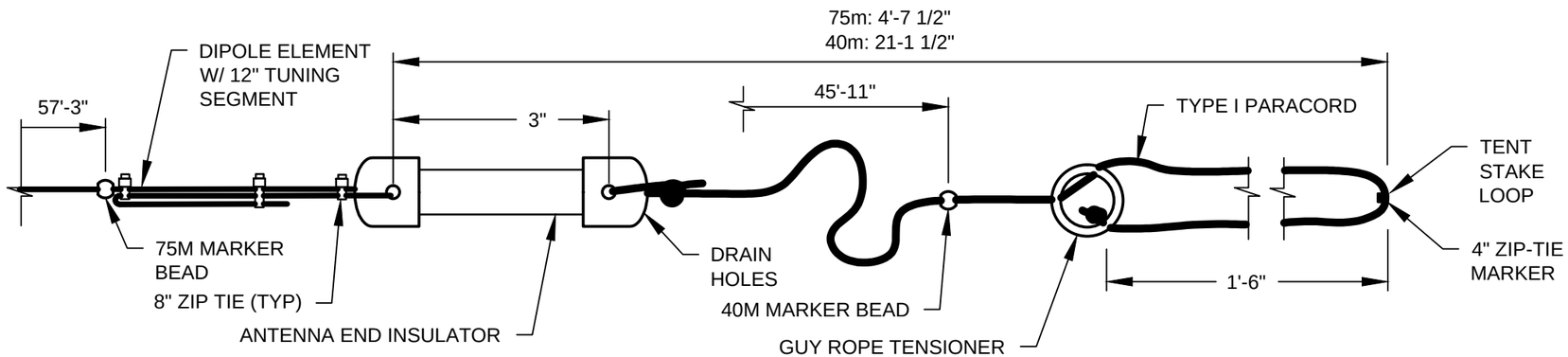
J-HOOK

8 REQUIRED



GUY ROPE WINDER

3 REQUIRED
MATL: 1/16" THICK WOOD OR PLASTIC

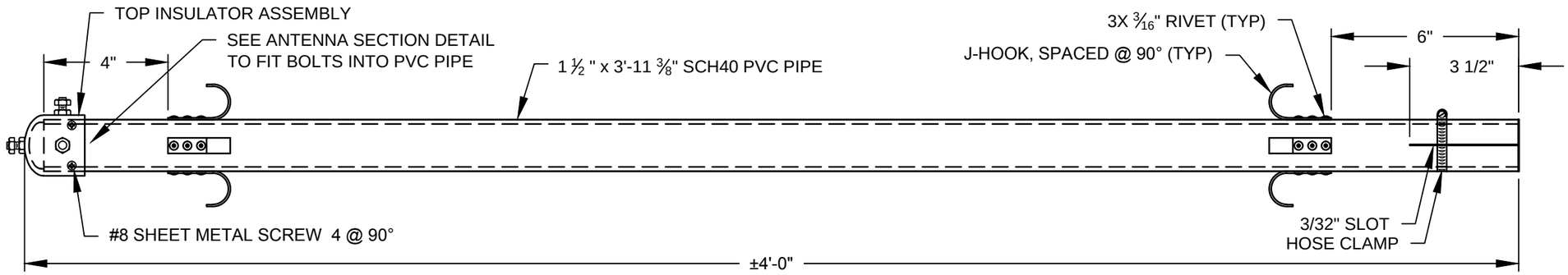


ELEMENT TIE-DOWN ASSEMBLY

2 OF EACH BAND REQUIRED

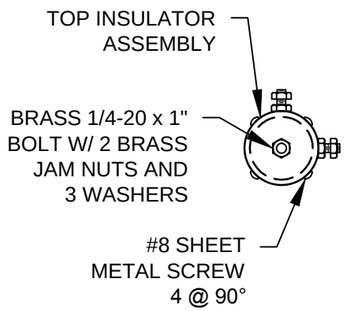
K4BJS PORTABLE NVIS ANTENNA

MULTI-STAGE IMPROVEMENT
DUAL BAND INVERTED "V"

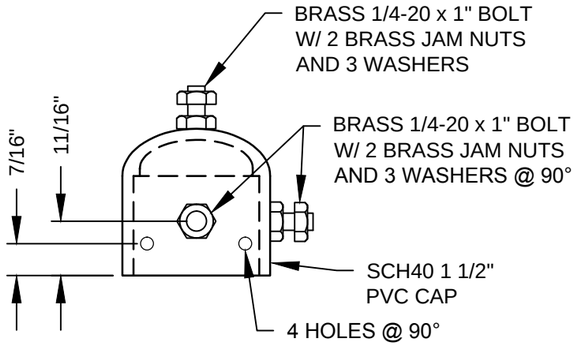


ANTENNA SECTION

1 REQUIRED



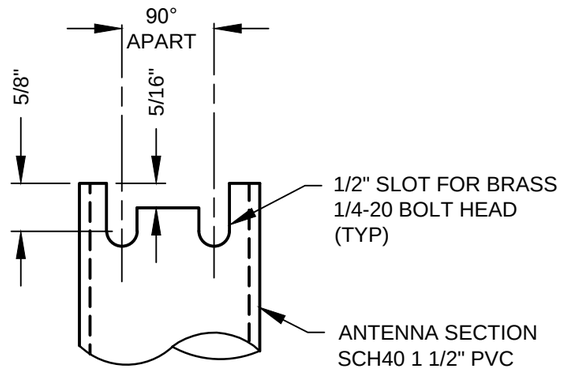
ANTENNA SECTION TOP VIEW



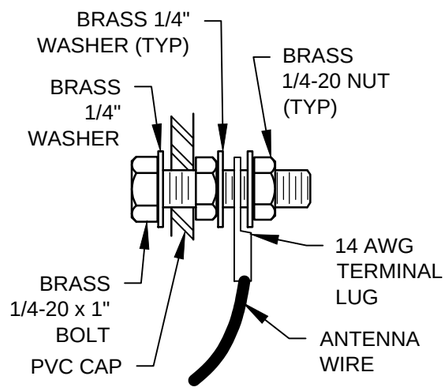
PVC CAP NEEDS TO BE A LOOSE FIT ON PIPE, SAND PAPER INSIDE TO REMOVE SOME MATERIAL

TOP INSULATOR DETAIL

1 REQUIRED

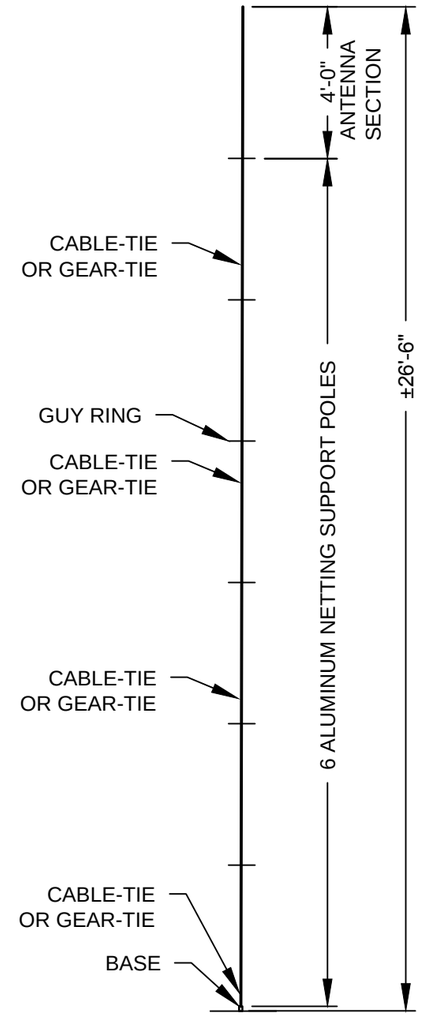


ANTENNA SECTION DETAIL

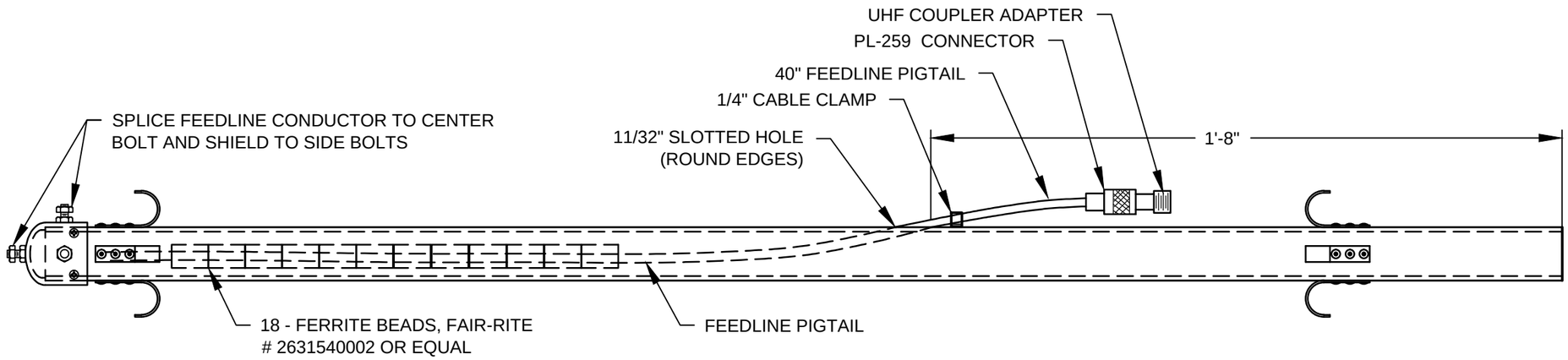


FEED POINT DETAIL

3 REQUIRED



MAST ASSEMBLY



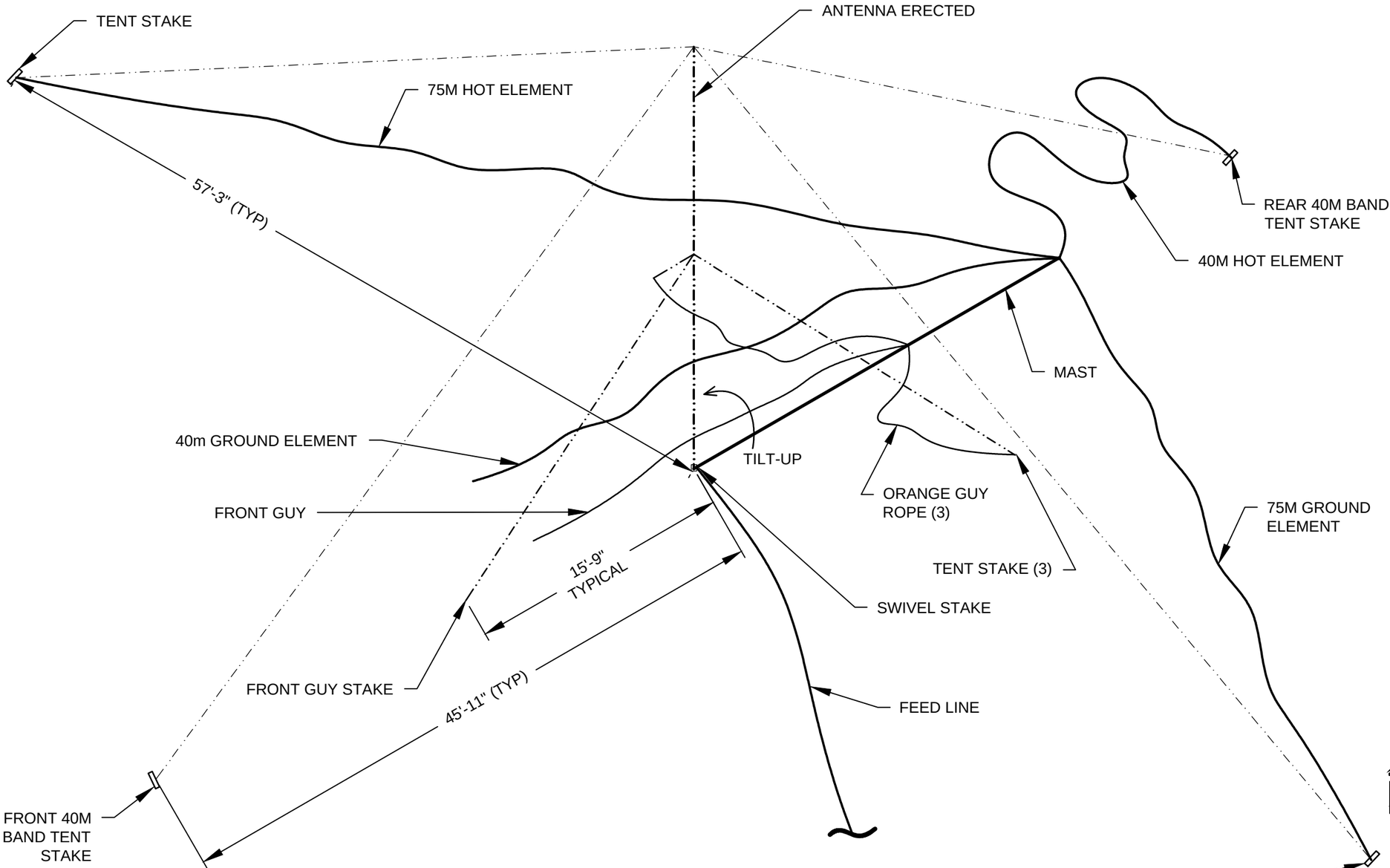
NOTE: ASSEMBLE FEEDLINE AND TOP INSULATOR WITHOUT PL-259 CONNECTOR, THEN INSERT IT INSIDE PVC PIPE AND INSTALL PL-259 CONNECTOR

FEED LINE DETAIL

K4BJS PORTABLE NVIS ANTENNA

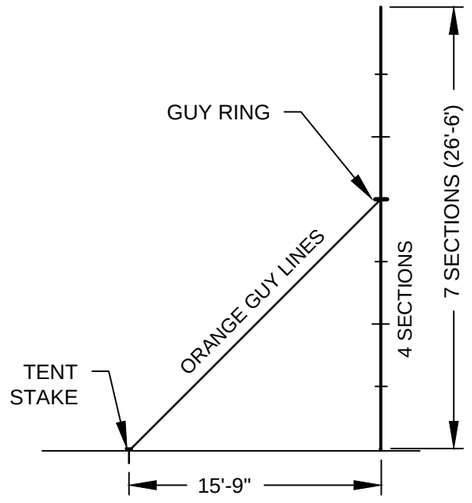
MULTI-STAGE IMPROVEMENT
DUAL BAND INVERTED "V"

TOOLS:
1. HAMMER
2. SURVEYOR FLAGGING

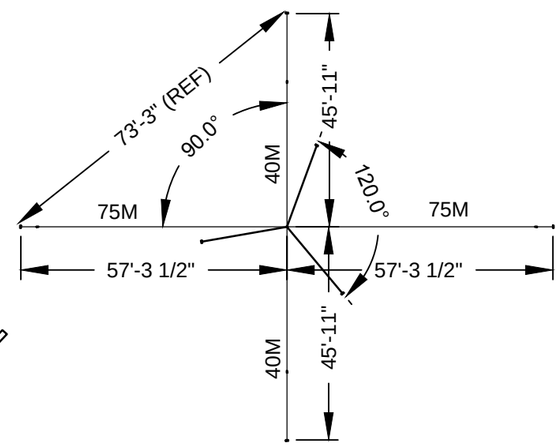


DANGER
WATCH FOR OVERHEAD WIRES. NEVER ERECT ANTENNA DIRECTLY UNDER POWERLINES

FIGURE 1



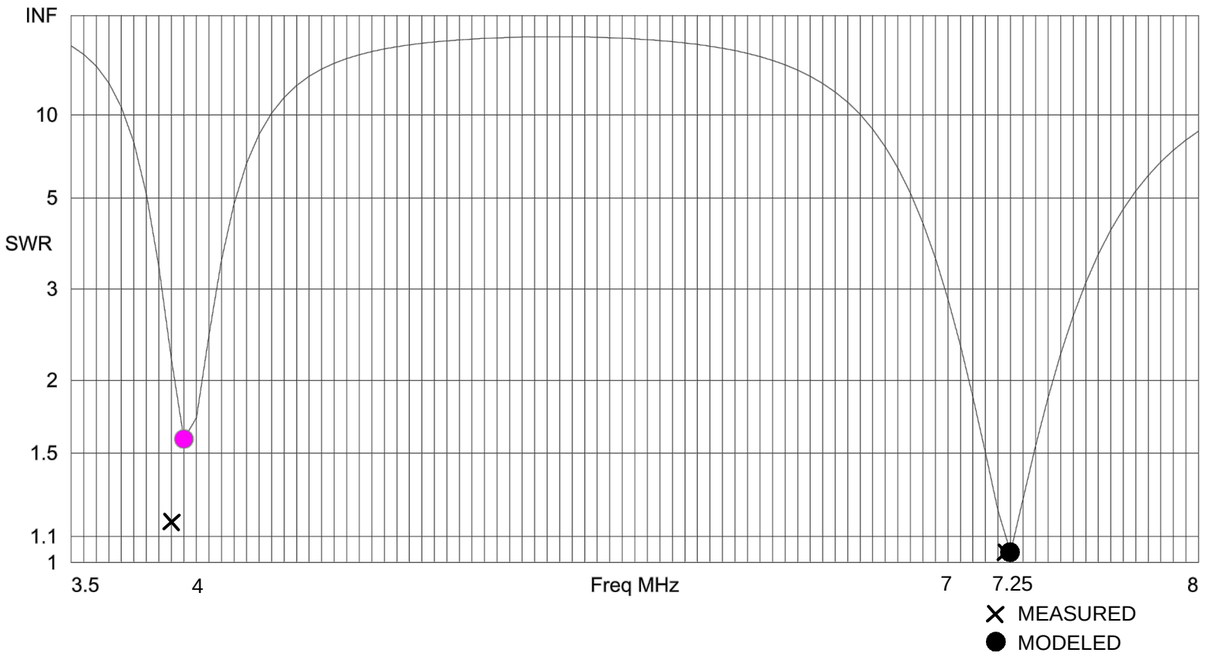
ANTENNA MAST CONFIGURATION



SITE LAYOUT

K4BJS PORTABLE NVIS ANTENNA

MULTI-STAGE IMPROVEMENT
DUAL BAND INVERTED "V"

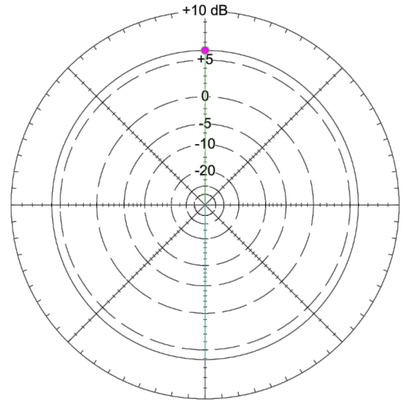


SWR PLOT

HALFWAVE MEASURED FREQUENCY CONSTANTS:
40m ..... 462 (462/7.24 = 63'-10")
75m ..... 456.9 (456.9/3.905 = 117'-0")

WAVE LENGTH HEIGHT
40m..... 0.20
60m..... 0.15
75m..... 0.11

MEASURED SWR:
7.243 .....1.08:1
3.905 .....1.18:1
3.795 ..... 2:1
3.950 .....1.42:1
4.000 .....1.9:1

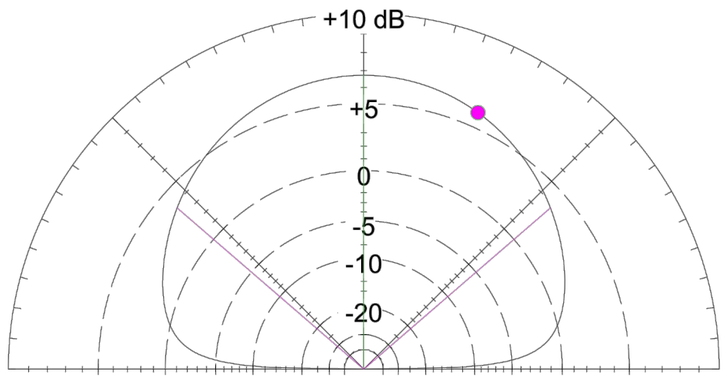


INVERTED m V 3.95 MHz

Azimuth Plot	
Elevation Angle	66.0 deg.
Outer Ring	10.0 dBref
Slice Max Gain	6.11 dBref @ Az Angle = 90.0 deg.
Front/Side	0.16 dB
Beamwidth	?
Sidelobe Gain	6.11 dBref @ Az Angle = 270.0 deg.
Front/Sidelobe	0.0 dB

Cursor Az	90.0 deg.
Gain	6.11 dBref
	0.0 dBmax

AZIMUTH PLOT



INVERTED m V 3.95 MHz

Elevation Plot	
Azimuth Angle	0.0 deg.
Outer Ring	10.0 dBref
Slice Max Gain	6.73 dBref @ Elev Angle = 90.0 deg.
Beamwidth	98.4 deg.; -3dB @ 40.8, 139.2 deg.
Sidelobe Gain	< -100 dBi
Front/Sidelobe	> 100 dB

Cursor Elev	66.0 deg.
Gain	5.95 dBref
	-0.78 dBmax

ELEVATION PLOT

K4BJS PORTABLE NVIS ANTENNA

MULTI-STAGE IMPROVEMENT
DUAL BAND INVERTED "V"