



## **Non Penetrating Roof Mount User's Manual**

**MNT-NPRM238, MNT-NPRM300**

MAN\_MNT-NPRM\_REV002

Specifications are subject to change without notice

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## APPENDIX A

## Warranty

Seller warrants the items ordered hereunder at the time of shipment to be free from defects in material, workmanship, and to conform to the contract specification. Seller's liability under this Warranty shall terminate one (1) year after date of shipment of order. Some individual products include extended warranties as stated in brochure(s) and extended warranties may be purchased as requested and quoted. Written notice of any defects shall be given Seller upon discovery and Seller shall promptly correct such defects by repair or replacement, at its option, without charge, either FCA Seller's plant or service in the field. After the warranty period stated herein has expired, some manufacturer's and/or licensor's warranties may still be in effect, and the Purchaser shall look solely to such manufacturer and/or licensor for warranty repair.

**IN NO EVENT SHALL SELLER'S LIABILITY UNDER THIS WARRANTY EXCEED THE COST OF REPAIR OR REPLACEMENT OF SUCH DEFECTIVE ITEM AND UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES.**

Specifically excluded from this Warranty are:

- a. Defects or nonconformance caused by and resulting from improper operation, maintenance, or storage of the equipment.
- b. Items of characteristically indeterminate life, such as bulbs, fuses, etc.

THIS WARRANTY CONSTITUTES SELLER'S SOLE AND EXCLUSIVE LIABILITY HERUNDER AND PURCHASER'S SOLE AND EXCLUSIVE REMEDY FOR DEFECTIVE OR NONCONFORMING ITEMS AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS IMPLIED OR STATUTORY (INCLUDING THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE).

***CAUTION: Installation of this product should only be performed by a professional installer and is not recommended for consumer D.I.Y. (Do It Yourself) installations.***

Installation of this product near power lines is dangerous. For your own safety, follow these important safety rules.

1. Perform as many functions as possible on the ground.
2. Be aware of overhead power lines. Check the distance to the power lines before beginning installation. Viking Satcom recommends that you stay a minimum of 6 meters (20 feet) away from all power lines.
3. Do not use metal ladders.
4. Do not install antenna or mast assembly on a windy day.
5. If you start to drop the antenna or mast assembly, get away from it and let it fall.
6. If any part of the antenna or mast assembly comes in contact with a power line, call your local power company. DO NOT ATTEMPT TO REMOVE IT. The power company will ensure that it is removed safely.
7. Ensure that the mast assembly is properly grounded.
8. Prior to installing, investigate and verify that the roof material of the installation site and supporting structure are capable of withstanding all loads imposed by the chosen antenna system. Confirm that the supporting surfaces, anchors, and safety cables (if required) are able to adequately resist the reactions of the antenna system and that the installation will be in accordance with all applicable local, state, and federal requirements.

### **WARNING**

Assembling dish antennas on windy days can be dangerous. Because of the antenna surface, even slight winds are capable of creating strong forces. For example, a 1.0 m antenna facing a wind of 32 km/h (20 mph) can undergo forces of 269 N (60 lbs.). Be prepared to safely handle these forces at any time during installation. Do not attempt to assemble, move, or mount the dish on windy days or serious, even fatal accidents can occur. Viking Satcom is not responsible or liable for damage or injury resulting from antenna installations. See APPENDIX A for a map of special wind regions.

Antennas improperly installed or installed to an inadequate structure are very susceptible to wind damage. This damage can be very serious or even life threatening. The owner and installer assume full responsibility that the installation is structurally sound to support all loads (wind, weight, and ice) and properly sealed against leaks. Viking Satcom will not accept liability for any damage caused by a satellite system due to the many unknown variable applications.

## 1. INTRODUCTION

Thank you for purchasing your Viking Satcom Non Penetrating Mount. We trust that you will find this to be a well-designed product that will offer you many years of reliable service. Please read this manual thoroughly before beginning assembly. For best results in the assembly process, perform each step in the same sequence as listed in this manual.

### 1.1 Unpacking and Inspection of Components

Shipping cartons should be unpacked and the contents checked for damaged or missing parts. Should there be any parts that are damaged or missing, please contact Viking Satcom immediately.

## 2. ASSEMBLY

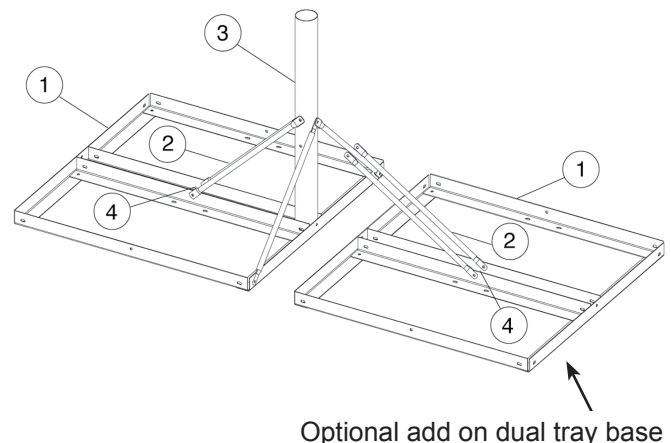
### 2.1 Parts List

Item Number	Description	Quantity
1	Base Angle	6
2	Strut Tubes	4
3	Mast Pipe	1
4*	60 mm/75 mm Bushing	1
5	Hardware Kit	1

\*The 60 mm and 75 mm are included in the hardware kit for the 2 3/8 and 3 in. mounts

#### 2.1.1 Optional Add On Dual Tray Parts List

Item Number	Description	Quantity
1	Base Angle	6
2	Strut Tubes	2
4	60 mm Bushing	1
5	Hardware Kit	1



#### 2.1.2 Tools Required

13 mm Combination Wrench  
13 mm Socket Wrench

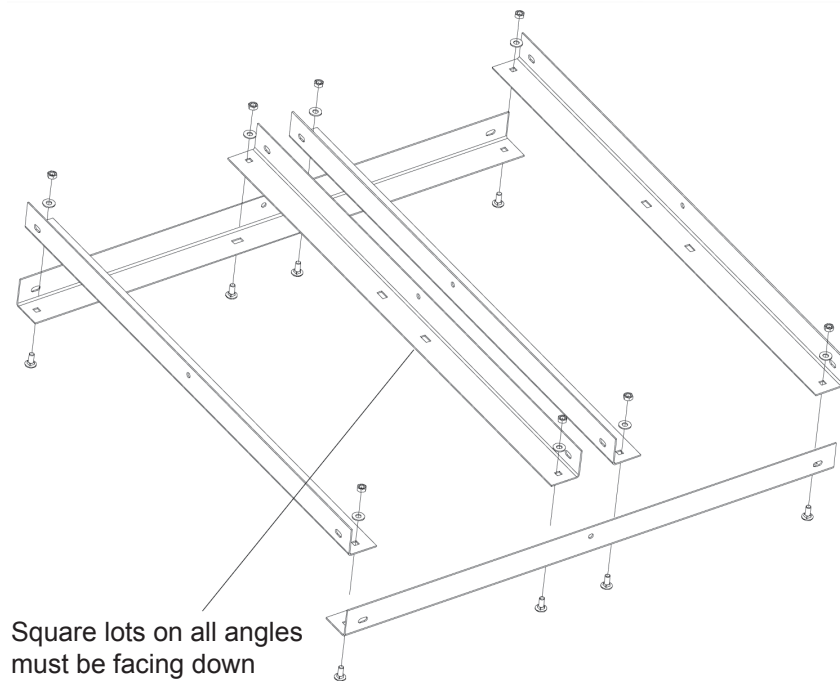
#### 2.1.3 Additional Part Information

- Rubber pad is available as an option
- Solid concrete cap blocks: 3.6 x 7.6 x 15.6 in.
- Tethering cable: 1/8 diameter minimum (1200 lbs. minimum breaking strength)
- Grounding rod clamp, grounding block wire: as required by national and local codes

## 2.2 Non Penetrating Mount Assembly

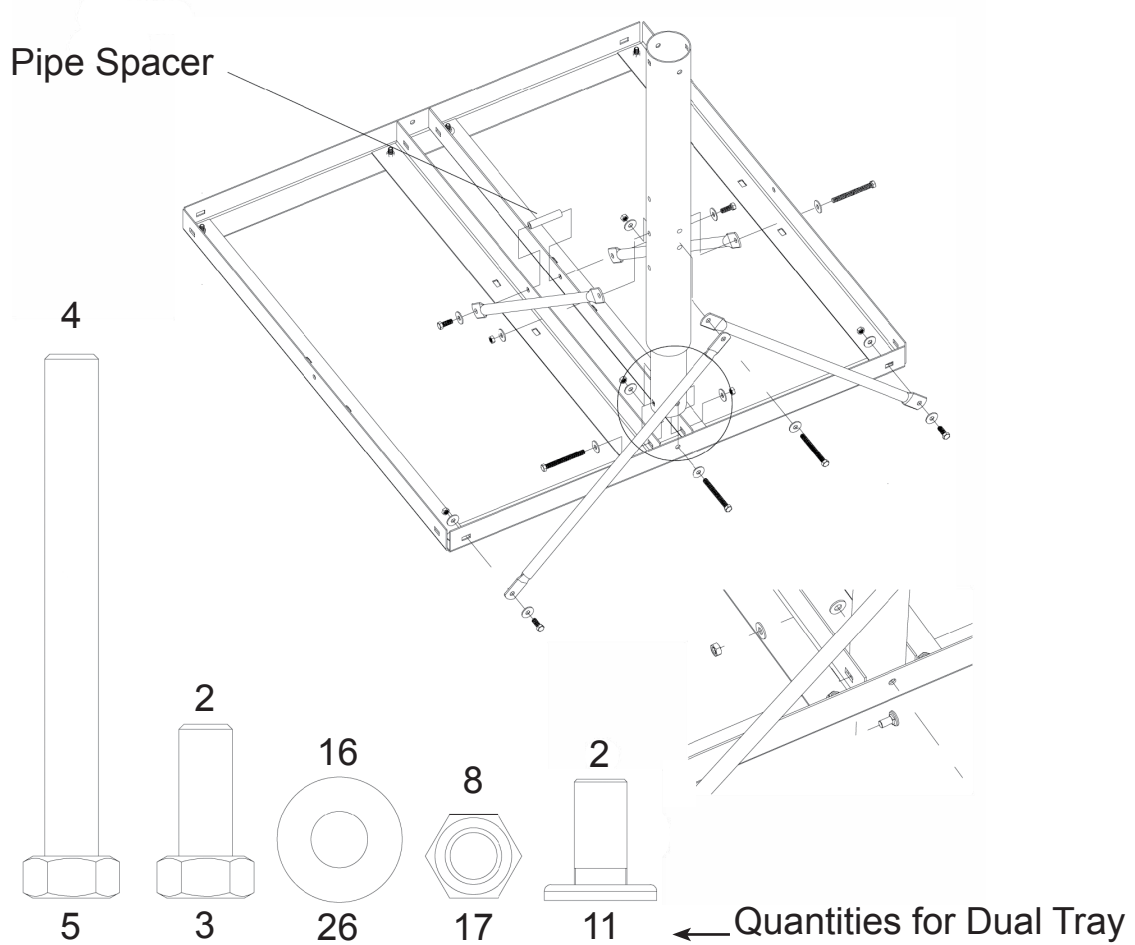
1. Begin frame assembly by laying the (6) base angles as shown and fasten together using M8 hardware. Do not fully tighten at this time.

*NOTE: The bolt heads are on the bottom side against the rubber padding.*



(8) of each

2. Attach mast pipe and strut tubes to the base frame with the hardware illustrated. Do not fully tighten at this time.
3. Visibly "square up" the base frame and tighten all hardware.
4. Assemble and add on any additional ballast trays (optional) necessary for the required ballast.



### 3. LOCATING THE NON PENETRATING MOUNT

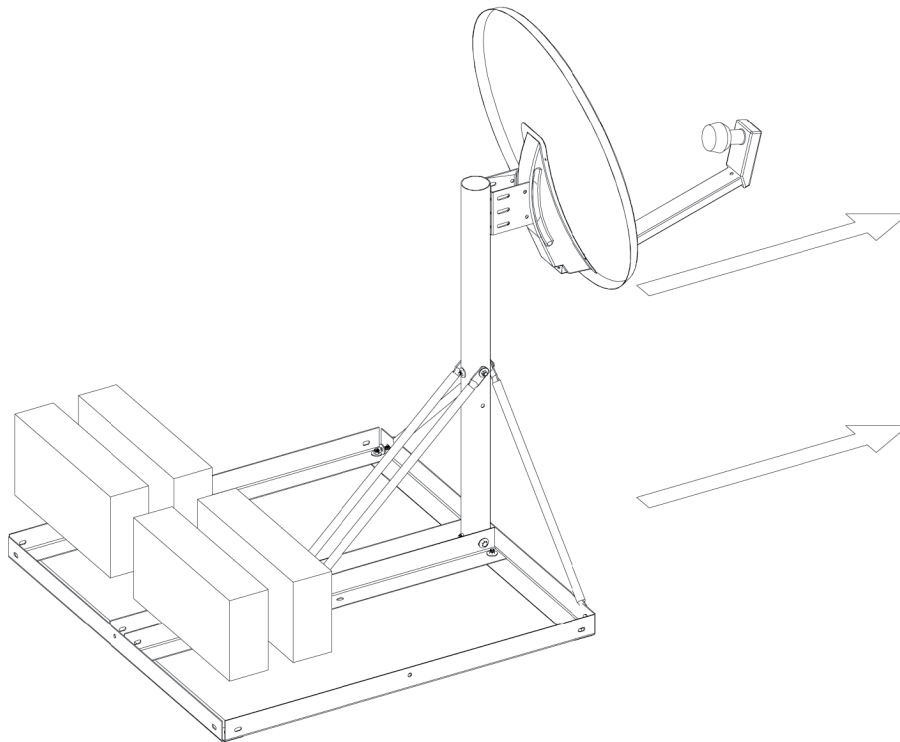
1. Remove all gravel and debris from the area that the non penetrating roof mount will be placed.

*NOTE: It is required that a 3/8 in. rubber pad be attached to the bottom of the base frame with outdoor quality adhesive. The rubber pad will provide the coefficient of friction that the ballast requirement calculations are determined from.*

2. Roughly align the non penetrating frame assembly in the Azimuth direction toward the desired satellite using a compass or realign the frame after Section 2.2, Step 4, and place (2 - 4) cement blocks into the ballast trays to give stability for a rough site-in.

*NOTE: The non penetrating mount should be aligned within 10° of the direction that the antenna is pointed.*

3. Place the assembled antenna onto the mast pipe.
4. Using installation tuning equipment, align the reflector to the desired satellite. Realign the direction of the non penetrating mount if needed.

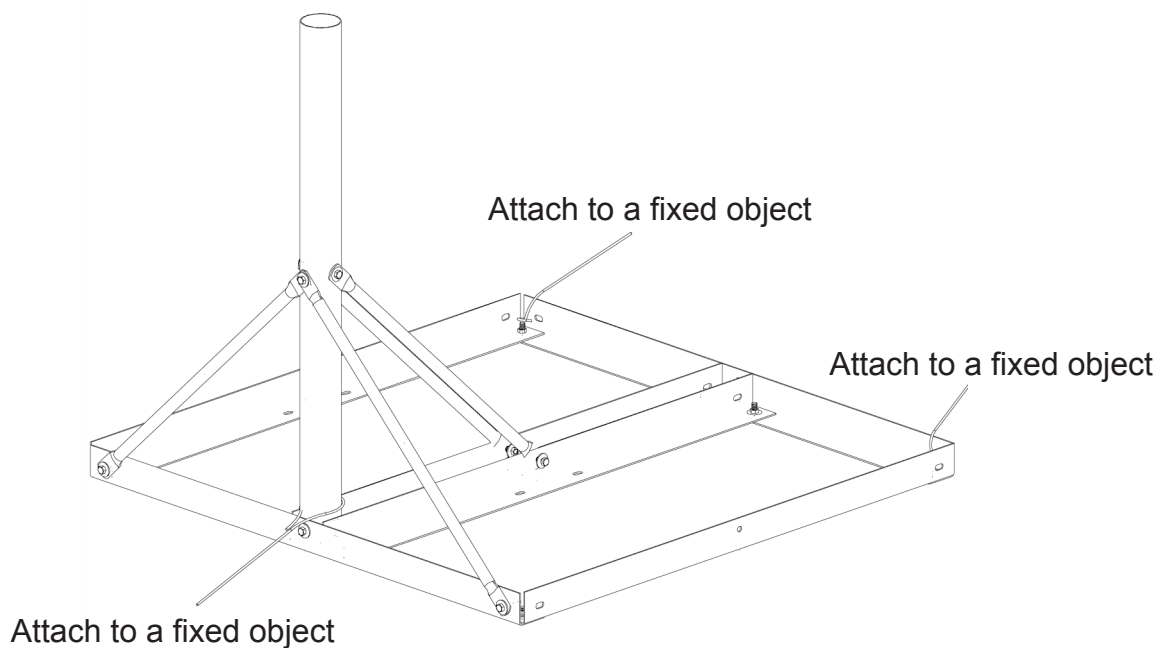




## 4. TYPICAL TETHERING FOR NON PENETRATING MOUNT FRAME

For additional safety, attach three cables as shown to fixed objects capable of supporting 150 lbs. Cable must be 1/8 in. diameter minimum stainless steel or galvanized steel, 7 x 7 or 7 x 19, 1200 lbs. minimum breaking strength.

*NOTE: Installations for wind speeds exceeding 100 mph are recommended to be tethered.*



## 5. BALLAST REQUIREMENTS

1. Determine the Elevation angle and wind speed requirements. See Page 4.
2. Look up the required ballast for the antenna size being installed.

**NOTE:** Always use the larger ballast weight when referencing wind speed and Elevation angle.

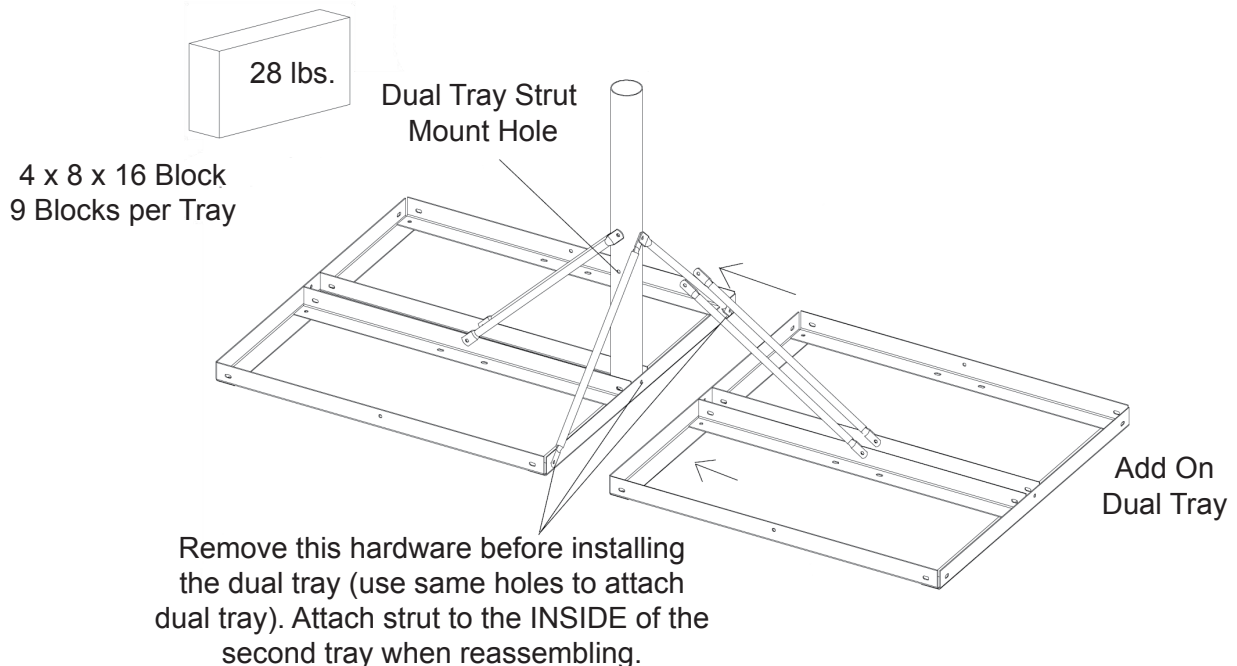
**CAUTION:** Installations with required wind speeds in excess of 100 mph are to be tethered. Due to the many variables involved, Viking Satcom does not accept responsibility for verifying the applicability of the NPRM for a specific installation.

60 - 75 cm Ballast Chart			
Elevation	Ballast Required		
	Wind Speed (mph)		
	80 lbs.	100 lbs.	125 lbs.
22°	120	250	452
40°	94	195	353
60°	54	112	203

90 - 100 cm Ballast Chart			
Elevation	Ballast Required		
	Wind Speed (mph)		
	80 lbs.	100 lbs.	125 lbs.
22°	259	480	825 (605*)
40°	202	374	644 (475*)
60°	116	216	372

120 cm Ballast Chart			
Elevation	Ballast Required		
	Wind Speed (mph)		
	80 lbs.	100 lbs.	125 lbs.
22°	411	733	1250 (920*)
40°	321	572	964
60°	185	330	556

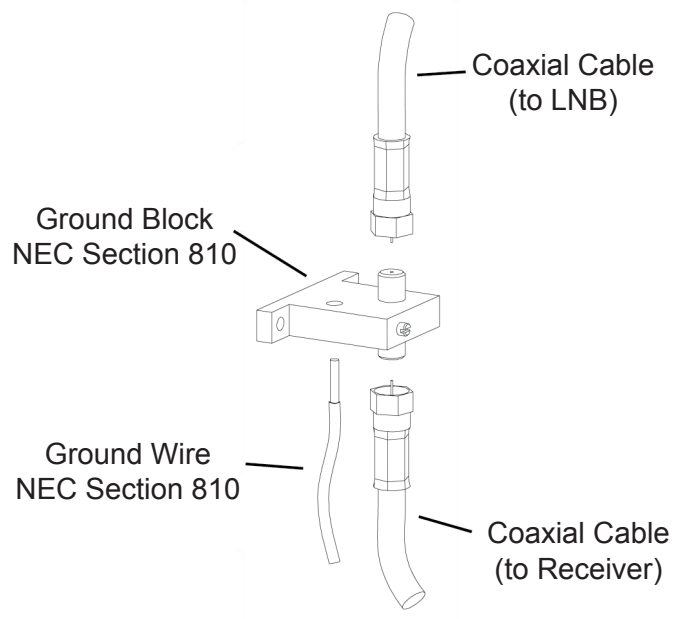
\*Lesser ballast amounts can only be used if the mount is properly tethered.



## 6. GROUNDING

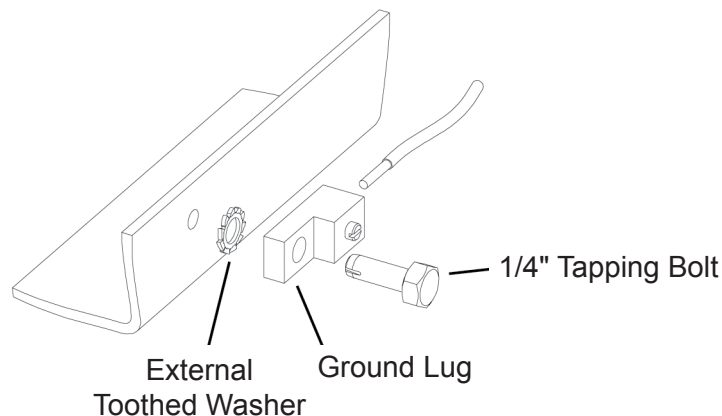
### 6.1 Grounding the Antenna Feed Cables

1. Ground the antenna feed cables in accordance with current National Electric Code (NEC) and local electric codes. The illustration shows a typical grounding method. Clamps that provide a solid connection between ground wire and a ground source should be used.

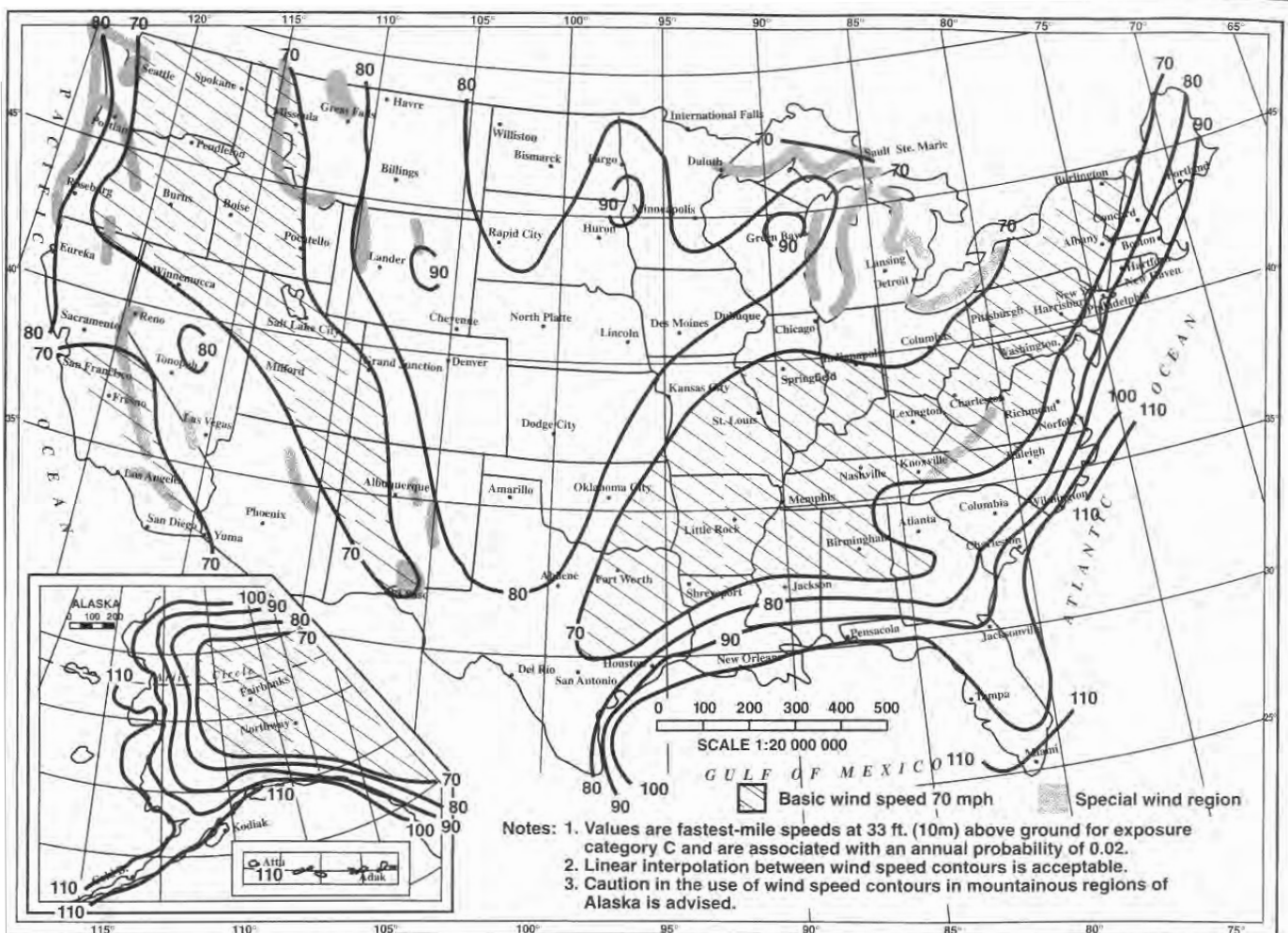


### 6.2 Grounding Non Penetrating Mount Frame

1. Ground the non penetrating mount frame. The illustration shows a typical grounding method. Refer to the NEC Section 810 and local electric codes for specific instructions on grounding the remaining end of the ground wire.



## APPENDIX A



### \*SPECIAL WIND REGIONS:

Records and experience indicates that the wind speeds are higher in mountainous terrain, gorges, and ocean promontories and shall be examined for unusual wind conditions. Contact your local meteorological authority and local civil or professional engineer if your installation is in one of these areas.