This is an example for using the new 2010 Ground Mount design tables found in the Code Compliant Ground Mount Manual

For the design example we will use a site that requires the following

15 PSF Snow Load - 90 MPH wind zone - 25Degrees of desired tilt.

GROUND SNOW LOAD =11 to 20 PSF

90 MPH DESIGN WIND SPEED – 1-1/2" NOMINAL DIAMETER PIPE – 12" DIAMETER PIERS**

Tilt Angle	Max PS (ft.)				Pier Depth		Required Braces			
	No Brace E & F		Braced (E & F)		Short/Tall Leg (ft.)		A	B	C	D
	Sch. 40	Sch. 80	Sch. 40	Sch. 80	No Brace E&F	Braced (E&F)				
0-15 Deg.	4'-0"	5'-0"	10'	12'	(3) / (4)	(2) / (4)	NO	NO	EVERY 3RD BAY*	NO
16-30 Deg.	N/A	4'-0"	8'	10'	(3) / (4-1/2)	(2) / (4)	YES	NO	EVERY 3RD BAY*	EVERY 3RD BAY*
31-45 Deg.	N/A	N/A	6'	6'	(3) / (5)	(2) / (6)	YES	NO	N/A	N/A

*Brace D is not required when Brace E is used and C is not required when F is used.

**Actual Outer Diameter of Sch. 40/80 1-1/2" Nominal Diameter Pipe is 1.9"

There are several choices that must be made in the design process after gathering site specific information. Below is a list of the relevant information required to use the engineering design charts.

1. Choose the correct SNOW LOAD – this chart is from page 22 of the 2010 Ground Mount manual and covers GROUND SNOW LOADS 11 to 20 PSF. Noted at the top of page 22.
2. Choose the correct TABLE for your sites DESIGN WIND SPEED – This chart is for 90 MPH wind zones and it is noted at the top of the chart. Can be found in the middle of page 22.
3. The desired TILT ANGLE of the array is chosen next. The first column has three choices for tilt angles 0-15 Degrees, 16-30 Degrees and 31-45 Degrees. For this example we are using the 16-30 Degree tilt angle row, because our desired tilt angle is 25 degrees.
4. The next choice is for Pier Spacing (Max PS in feet) East to West.
5. In this example design we have a choice to either use braces "E" and "F" or leave them out. At this point you must decide before moving to the next column of information. As an example if we choose to use the cross bracing "E" and "F" and we choose to use Schedule 40 pipe rather than Schedule 80 pipe the PS span can be a max of 8 feet. From this point forward you simply move to the next relevant column of information for your design.