ERI INVISI-SHIELD®

Electrically Transparent Ice Shield

Features

- Protection from falling ice
- No perceptible pattern distortion
- Can be mounted directly over each element
- Reduces potential accumulation of radial ice
- Convenient work platform

Radial icing occurs when water droplets are large enough to fall from the atmosphere and freeze on objects near the ground. The frozen deposits form a clear ice shell on antenna and tower components. Radial ice conditions are typically very short in duration. The proceeding thaw releases segments of ice which fall or sail causing significant damage to antenna elements.

The antenna elements are particularly susceptible to falling ice. Radial ice has a unit weight of 56 pound per cubic foot and can cause significant damage to unprotected tower appurtenances. Steel ice shields can offer some degree of protection. But due to pattern distortion inherent to their construction the steel shields are placed at distances which diminish their ability to adequately protect the antenna.

Some applications of a steel ice shield are prohibited due to the detracting effects it could have on neighboring antennas. The ERI INVISI-SHIELD® is an electrically transparent ice shield. Utilizing custom fabricated materials and careful placement of connection components has resulted in a structure which has no perceptible effect on the antenna's pattern. The INVISI-SHIELD® can be mounted directly over an antenna element. This close proximity allows the INVISI-SHIELD® to be significantly smaller while increasing protection when compared to a steel shield. The smaller size also results in less load to the tower. The electrical transparency of the INVISI-SHIELD® will permit installation between antenna bays in extreme icing conditions. The top edge of the INVISI-SHIELD® is permeated with a silicone grit. This material helps trap potential freezing rain on the shield reducing the potential of radial ice accumulation and detuning of the antenna element.

Specifications

Load Rating:		300 PSF (1465 kg/m^2) uniform distribution 7,200 lbs. (3265.8 kg) total capacity, High Impact Resistance	
Size:			
Length		6-ft.	1.8-m
Width		4-ft.	1.2-m
Weight:	No Ice	225-lbm	102.1-kg
	½-inch (13 mm) ice	500-lbm	226.8-kg
Effective Projected Area			
Normal	No Ice	8.8-ft^2	0.82-m^2
	½-inch (13 mm) ice	10.0-ft^2	0.93-m^2
Transverse	No Ice	8.4-ft^2	0.78-m^2
	½-inch (13 mm) ice	9.7-ft^2	0.90-m^2

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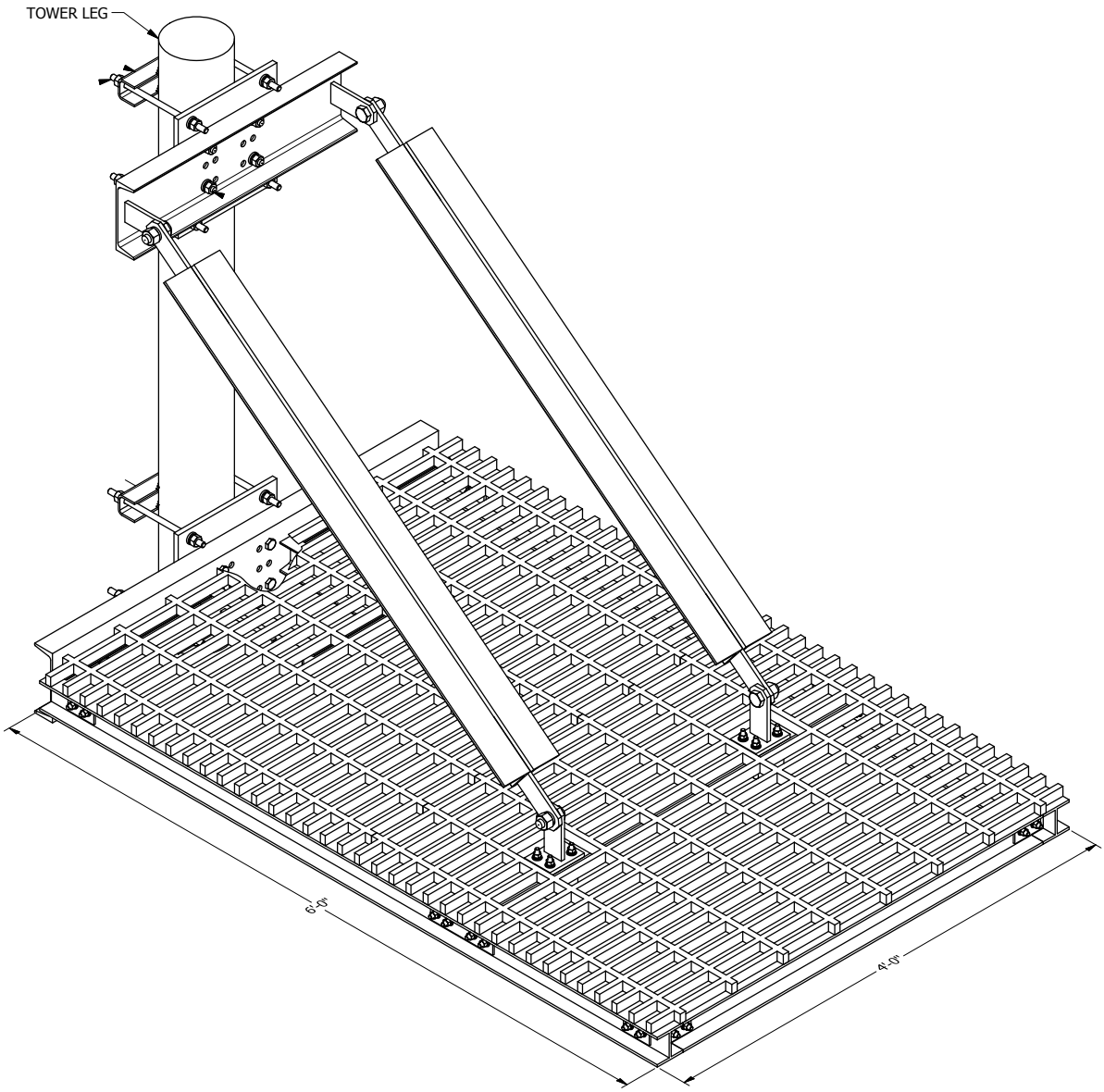

ERI Model ISA06-04F INVISI-SHIELD® shown with optional hardware for up to 7.75-inch O.D tower leg or pole

Part Number	Description
ISA04-06F	INVISI-SHIELD®, fiberglass (electrically transparent) ice shield, 4.00-feet (1219-mm) wide by 6.00-feet (1829-mm) deep (out from tower), includes hardware for leg mounting on 1.125-inches (29-mm) to up to 5.00-inches (127-mm) in diameter leg. Contact ERI for face mounted configurations or other mounting requirements.
ISA04-06FHDW	Additional cost for hardware kit to mount ISA04-06F on legs from 4.75-inches (121-mm) to 7.75-inches (197-mm) in diameter.
ISA04-06F-2	INVISI-SHIELD®, fiberglass (electrically transparent) ice shield, 4.00-feet (1219-mm) wide by 6.00-feet (1829-mm) deep (out from tower), includes hardware for leg mounting on 4.75-inches (121-mm) to 7.75-inches (197-mm) in diameter leg. Contact ERI for face mounted configurations or other mounting requirements.