3/8" Security Chain Link Mesh Variables   11-1/2 ga to 9 ga

3/8" Mesh Wind & Weight Values				
Gauge	Dia (in)	ε	C_{fw}	D_m (psf)
5	0.207	-	-	-
6	0.192	-	-	-
8	0.162	-	-	-
9	0.148	0.53	1.5	4.3
10	0.135	0.49	1.5	3.3
11	0.120	0.45	1.5	2.4
11-½	0.113	0.43	1.5	1.9

ε = solidity ratio for chain link

ε' = solidity ratio for iced chain link

C_{fw} = wind force coefficient

C_{fi} = wind on ice force coefficient

D_m = estimated weight of chain link mesh - verify with supplier

D_i = estimated weight of ice (includes 0.7 ASD factor)

The values below are only valid for Risk Category I and K_{zt} = 1.0

For heights not shown, round up to the nearest 5', or interpolate

For ice thickness not shown, round up to nearest value

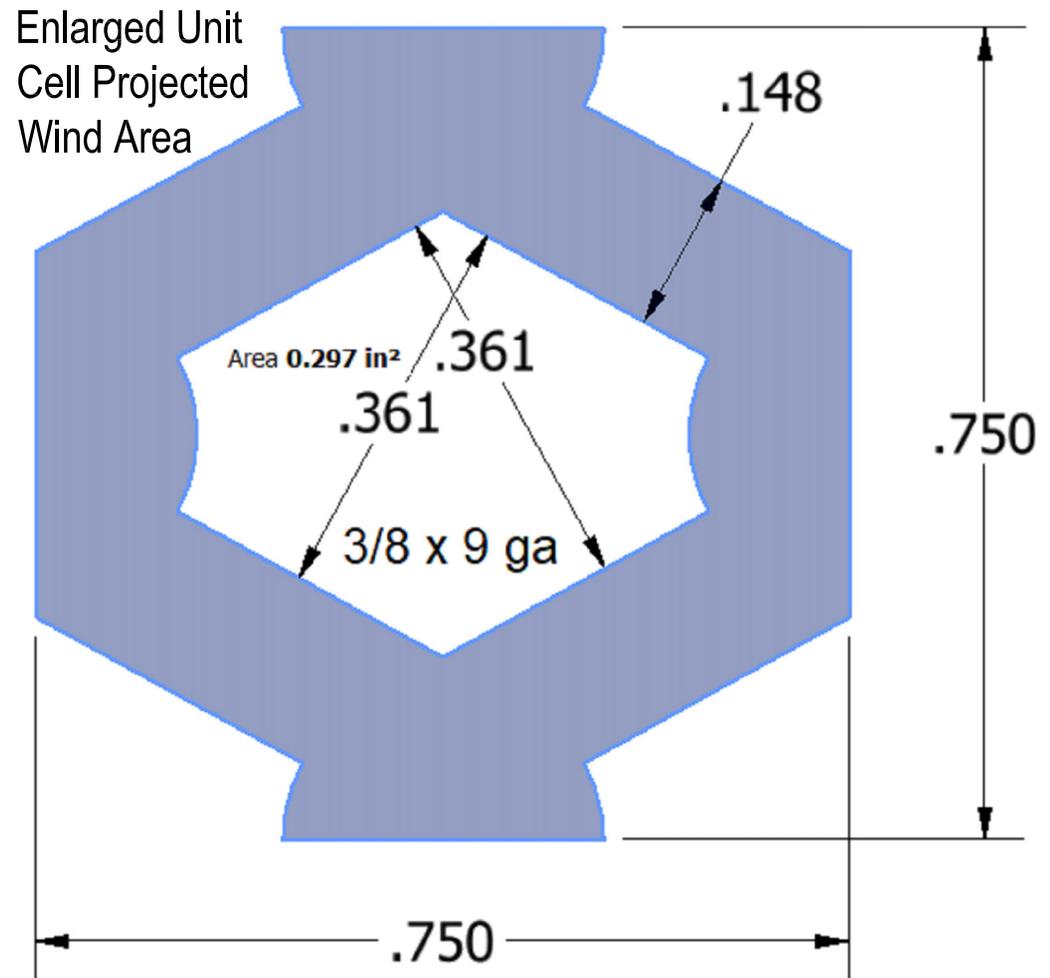| 3/8" Security Mesh (all gauges)			Estimated Ice Loading			Risk Category I			K_{zt} = 1.0		
ASCE 7-10	Fence Height, h										
Nominal Ice	5'			10'			15'			20'		
Thickness, t (in)	ε'	C_{fi}	D_i (psf)	ε'	C_{fi}	D_i (psf)	ε'	C_{fi}	D_i (psf)	ε'	C_{fi}	D_i (psf)
0.25	1.00	See solid wall Case A or Case C tables	2.7	1.00	See solid wall Case A or Case C tables	2.9	1.00	See solid wall Case A or Case C tables	3.0	1.00	See solid wall Case A or Case C tables	3.1
0.50	1.00		5.6	1.00		6.0	1.00		6.2	1.00		6.4
0.75	1.00		8.3	1.00		8.9	1.00		9.3	1.00		9.6
1.00	1.00		11.1	1.00		11.9	1.00		12.3	1.00		12.7
1.25	1.00		13.8	1.00		14.8	1.00		15.4	1.00		15.8
1.50	1.00		16.5	1.00		17.7	1.00		18.5	1.00		19.0
ASCE 7-16	Fence Height, h										
Nominal Ice	5'			10'			15'			20'		
Thickness, t (in)	ε'	C_{fi}	D_i (psf)	ε'	C_{fi}	D_i (psf)	ε'	C_{fi}	D_i (psf)	ε'	C_{fi}	D_i (psf)
0.25	0.99	See solid wall Case A or Case C tables	1.2	1.00	See solid wall Case A or Case C tables	1.3	1.00	See solid wall Case A or Case C tables	1.3	1.00	See solid wall Case A or Case C tables	1.4
0.50	1.00		2.7	1.00		2.9	1.00		3.0	1.00		3.1
0.75	1.00		4.2	1.00		4.5	1.00		4.7	1.00		4.8
1.00	1.00		5.6	1.00		6.0	1.00		6.2	1.00		6.4
1.25	1.00		7.0	1.00		7.4	1.00		7.8	1.00		8.0
1.50	1.00		8.3	1.00		8.9	1.00		9.3	1.00		9.6
1.75	1.00		9.7	1.00		10.4	1.00		10.8	1.00		11.1
2.00	1.00		11.1	1.00		11.9	1.00		12.3	1.00		12.7
2.25	1.00		12.4	1.00		13.3	1.00		13.9	1.00		14.3
2.50	1.00		13.8	1.00		14.8	1.00		15.4	1.00		15.8
ASCE 7-22	Fence Height, h										
Nominal Ice	5'			10'			15'			20'		
Thickness, t (in)	ε'	C_{fi}	D_i (psf)	ε'	C_{fi}	D_i (psf)	ε'	C_{fi}	D_i (psf)	ε'	C_{fi}	D_i (psf)
0.25	1.00	See solid wall Case A or Case C tables	1.5	1.00	See solid wall Case A or Case C tables	1.7	1.00	See solid wall Case A or Case C tables	1.7	1.00	See solid wall Case A or Case C tables	1.8
0.50	1.00		3.5	1.00		3.7	1.00		3.9	1.00		4.0
0.75	1.00		5.2	1.00		5.6	1.00		5.8	1.00		6.0
1.00	1.00		7.0	1.00		7.4	1.00		7.8	1.00		8.0
1.25	1.00		8.7	1.00		9.3	1.00		9.7	1.00		9.9
1.50	1.00		10.4	1.00		11.1	1.00		11.6	1.00		11.9
1.75	1.00		12.1	1.00		13.0	1.00		13.5	1.00		13.9
2.00	1.00		13.8	1.00		14.8	1.00		15.4	1.00		15.8
2.25	1.00		15.5	1.00		16.6	1.00		17.3	1.00		17.8
2.50	1.00		17.2	1.00		18.5	1.00		19.2	1.00		19.8

Chain Link Mesh

3/8" x 9 ga
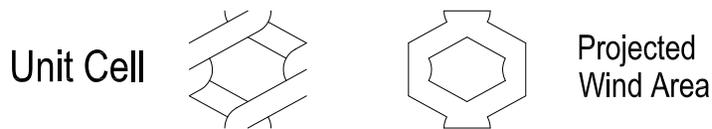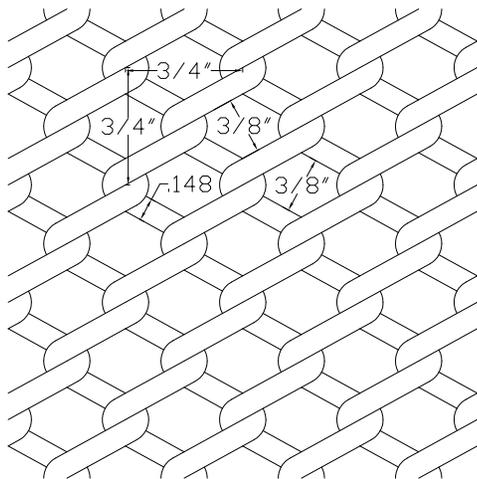
Wind Area, A = 76.0 in^2 / ft^2

ε = 0.528 C_{fw} = 1.5 D_m = 4.3 psf *
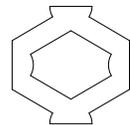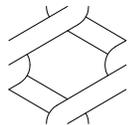
*estimated weight - check with manufacturer

3/4"
3/4"   3/8"
.148   3/8"

Unit Cell   Projected Wind Area

Enlarged Unit Cell Projected Wind Area

.148

Area **0.297** in²   .361

.361

3/8 x 9 ga

.750

.750

Holding the 3/4" outside dimensions per ASTM A392, Fig. 1, 0.361" appears to the closest you can get to 3/8" with 9 ga wire.

Chain Link Mesh
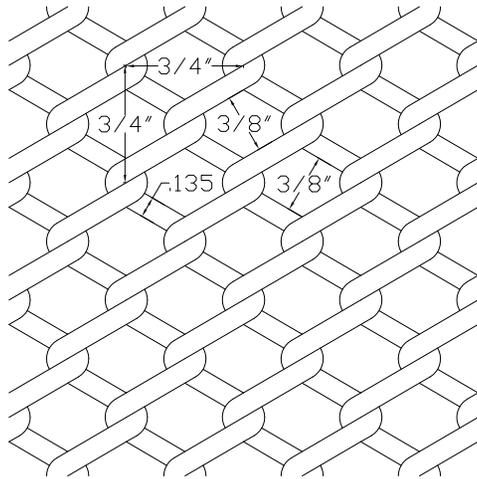
3/8" x 10 ga

Wind Area, A = 69.9 in^2 / ft^2

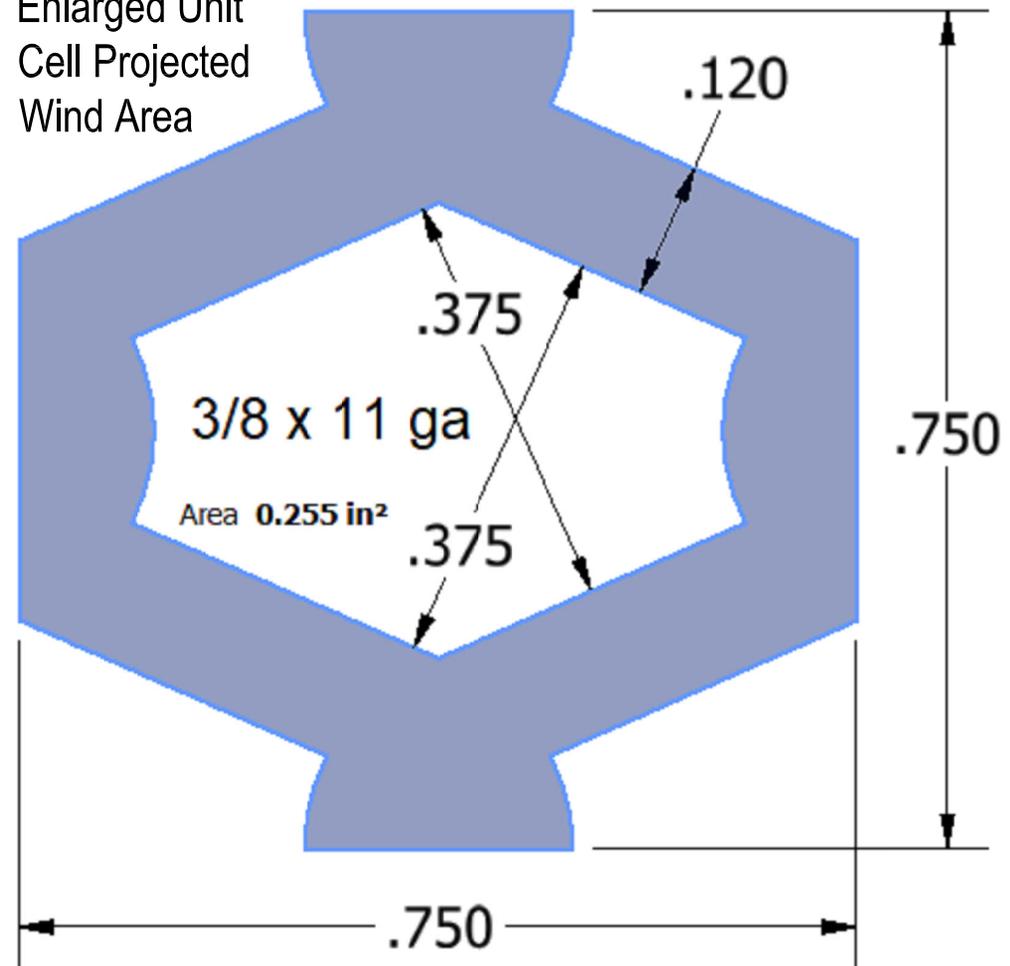ε = 0.485 C_{fw} = 1.5 D_m = 3.3 psf *

*estimated weight - check with manufacturer

Enlarged Unit
Cell Projected
Wind Area

.135

.378

.378

.750

.750

3/8 x 10 ga

Area 0.273 in²

Unit Cell

Projected
Wind Area
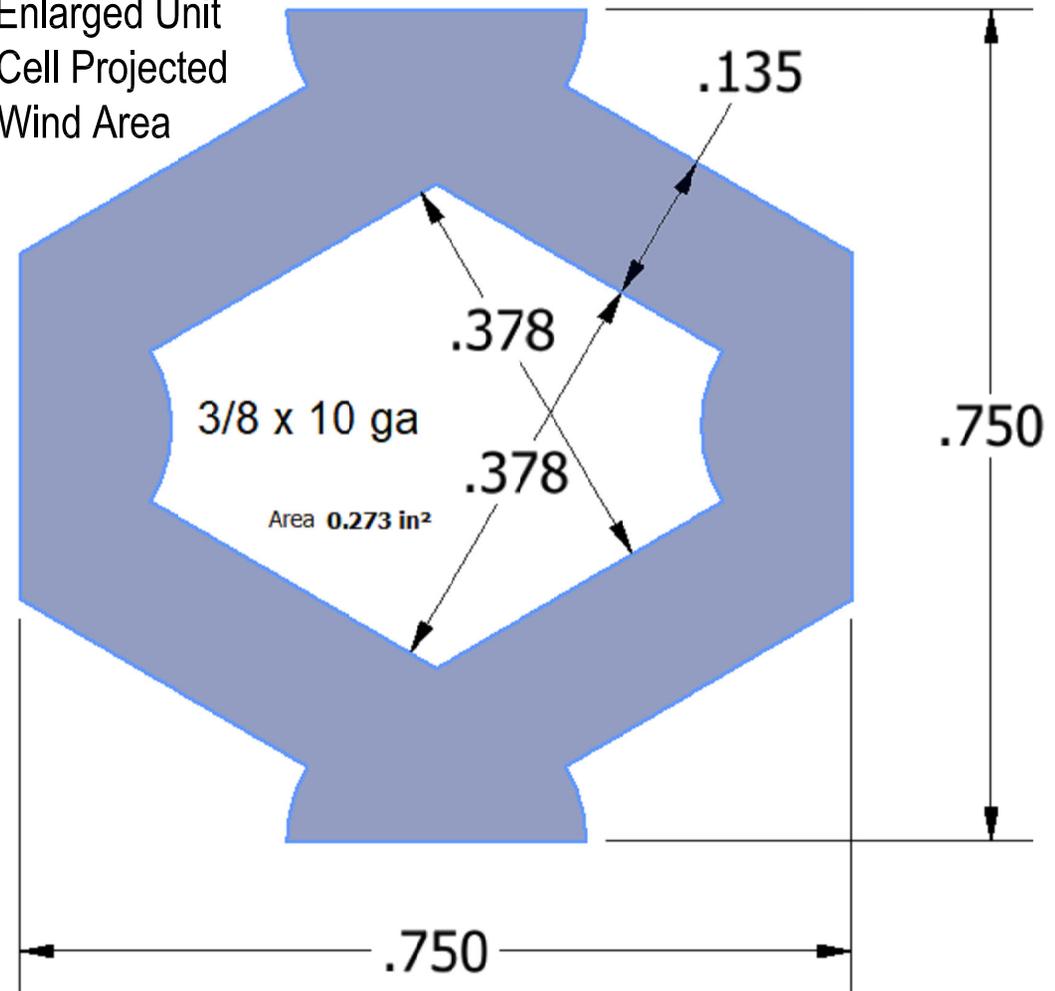
Chain Link Mesh

3/8" x 11 ga
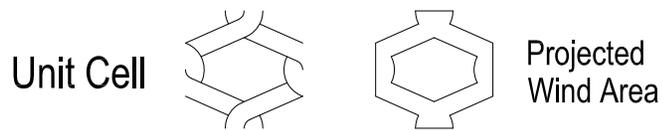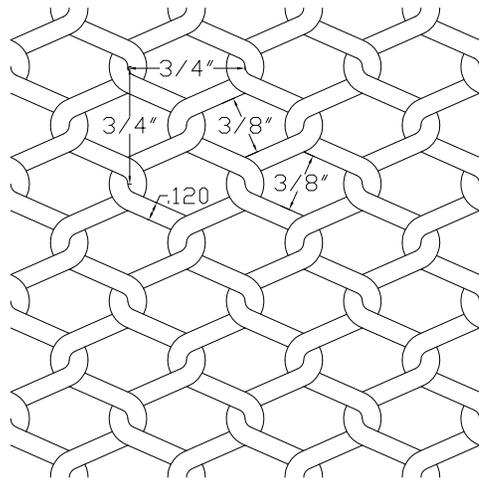
Wind Area, $A = 65.3$ in^2 / ft^2

$\varepsilon = 0.453$ $\qquad$ $C_{fw} = 1.5$ $\qquad$ $D_m = 2.4$ psf *

*estimated weight - check with manufacturer

3/4"

3/4" 3/8"

.120 3/8"

3/8"

Unit Cell $\qquad$ Projected Wind Area

Enlarged Unit Cell Projected Wind Area

.120

.375

.375

.375

.750

.750

3/8 x 11 ga

Area **0.255 in²**

Chain Link Mesh

3/8" x 11-½ ga
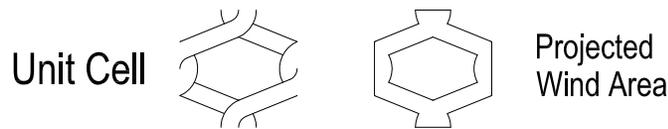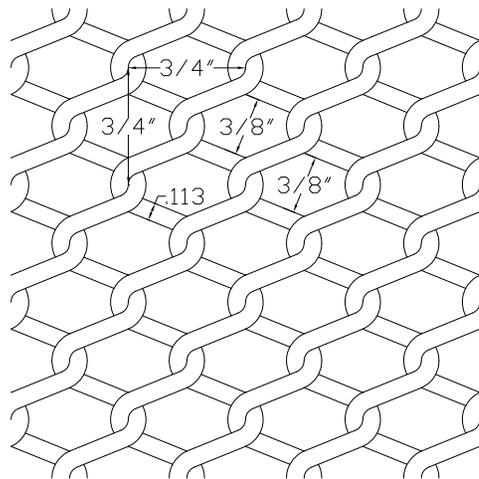
Wind Area, A = 62.5 in^2 / ft^2

ε = 0.434 C_{fw} = 1.5 D_m = 1.9 psf *

*estimated weight - check with manufacturer

Unit Cell

Projected Wind Area

Enlarged Unit Cell Projected Wind Area

.113

.375

.113

3/8 x 11-/12 ga

Area 0.244 in²

.375

.750

.750