

SEE PAGE 2 FOR APPURTENANCES

BUILDING_CODE(S): 2009 International Building Code

Design Standard: TIA-222-G

TOWER DESIGN CRITERIA
 Basic Wind Speed: 98 mph (no ice)
 40 mph (1.00" ice)
 60 mph (deflection only)

Structure Class: III
 Exposure: C
 Topographic Category: 1
 Crest Height: 0 ft.

MATERIAL STRENGTHS
 Solid Rod A36 (rod dia. <3/4")
 A572 Gr.50 (3/4" thru 1" dia.)
 A572 Gr.58 (>1" dia. T10 - T12)
 Pipe A500 Gr.B (antenna pipes)
 A572 Gr.B/C (tower legs min. Fy 50 ksi)

Angle A36 Gr.36

Plate A572 Gr.50

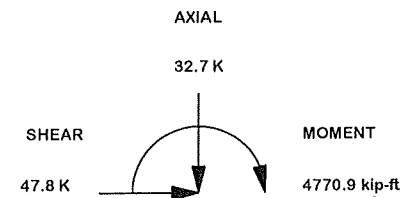
Bolts A-325/A-449 (leg & angle)

Anchor Bolts: F1554 grade 105 or A687

Finish: Tower & Hardware are hotdip galvanized

TOWER COLUMN										
SECTION	ELEVATION	FACE WIDTH	PANELS	LEG SIZE	LEG STYLE	LEG BOLT QTY & DIA	DIAGONAL BRACING SIZE	HORIZONTAL BRACING SIZE	BRACING BOLT QTY & DIA	SECTION WEIGHT
T1	160' - 180'	5.0'	4	2.50"	V	4 x 3/4"	1/8" x 2" x 2"	3/16" x 2" x 2"	1 x 3/4"	932.41
T2	140' - 160'	5.0'	3	4.00"	V	6 x 3/4"	3/16" x 2" x 2"		1 x 3/4"	1280.43
T3	120' - 140'	7.0'	3	5.00"	V	8 x 3/4"	3/16" x 2" x 2"		1 x 3/4"	1602.68
T4	100' - 120'	9.0'	3	5.00"	V	8 x 3/4"	3/16" x 2" x 2"		1 x 3/4"	1729.74
T5	80' - 100'	11.0'	3	6.00"	V	8 x 3/4"	3/16" x 2-1/2" x 2-1/2"		1 x 3/4"	2177.67
T6	60' - 80'	13.0'	3	6.00"	V	6 x 1"	3/16" x 2-1/2" x 2-1/2"		1 x 3/4"	2476.95
T7	40' - 60'	15.0'	2	1.50"	12BDFH	6 x 1"	3/16" x 3" x 3"		1 x 1"	2611.71
T8	20' - 40'	17.0'	2	1.75"	12BDFH	6 x 1 1/4"	5/16" x 3" x 3"		1 x 1"	3650.25
T9	0' - 20'	19.0'	2	1.75"	12BDFH	6 x 1 1/4"	5/16" x 3" x 3"		1 x 1"	3759.21

Reactions - No Ice

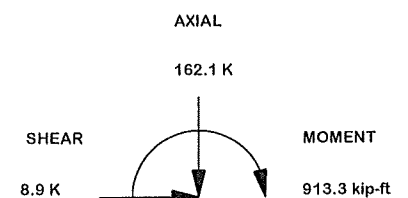


MAX. CORNER REACTIONS AT BASE:

DOWN: 296.6 K
 UPLIFT: -266.1 K
 SHEAR: 30.8 K

TORQUE 10.4 kip-ft
 REACTIONS 98.0 mph WIND (no ice)

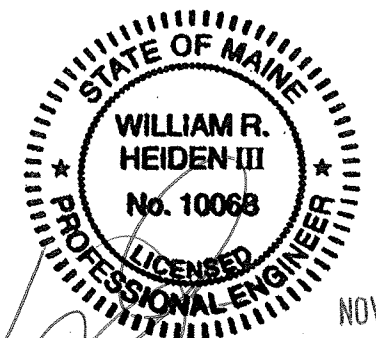
Reactions - Ice



MAX. CORNER REACTIONS AT BASE:

DOWN: 296.6 K
 UPLIFT: -266.1 K
 SHEAR: 30.8 K

TORQUE 0.9 kip-ft
 REACTIONS 40.0 mph WIND (1.00" ice)



NOV 15 2016

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@A <ACBATCH> REV DESCRIPTION OF REVISIONS CPD BY DATE REVISION HISTORY		SITE CITY OF PORTLAND FD, ME MOTOROLA SOLUTIONS U 19 X 180' COPYRIGHT 2013		DESCRIPTION Tower View Page 1		 1-877-467-4763 Plymouth, IN 1-800-547-2151 Salem, OR ENG. FILE NO. 324370		PAGE 1 OF 11
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