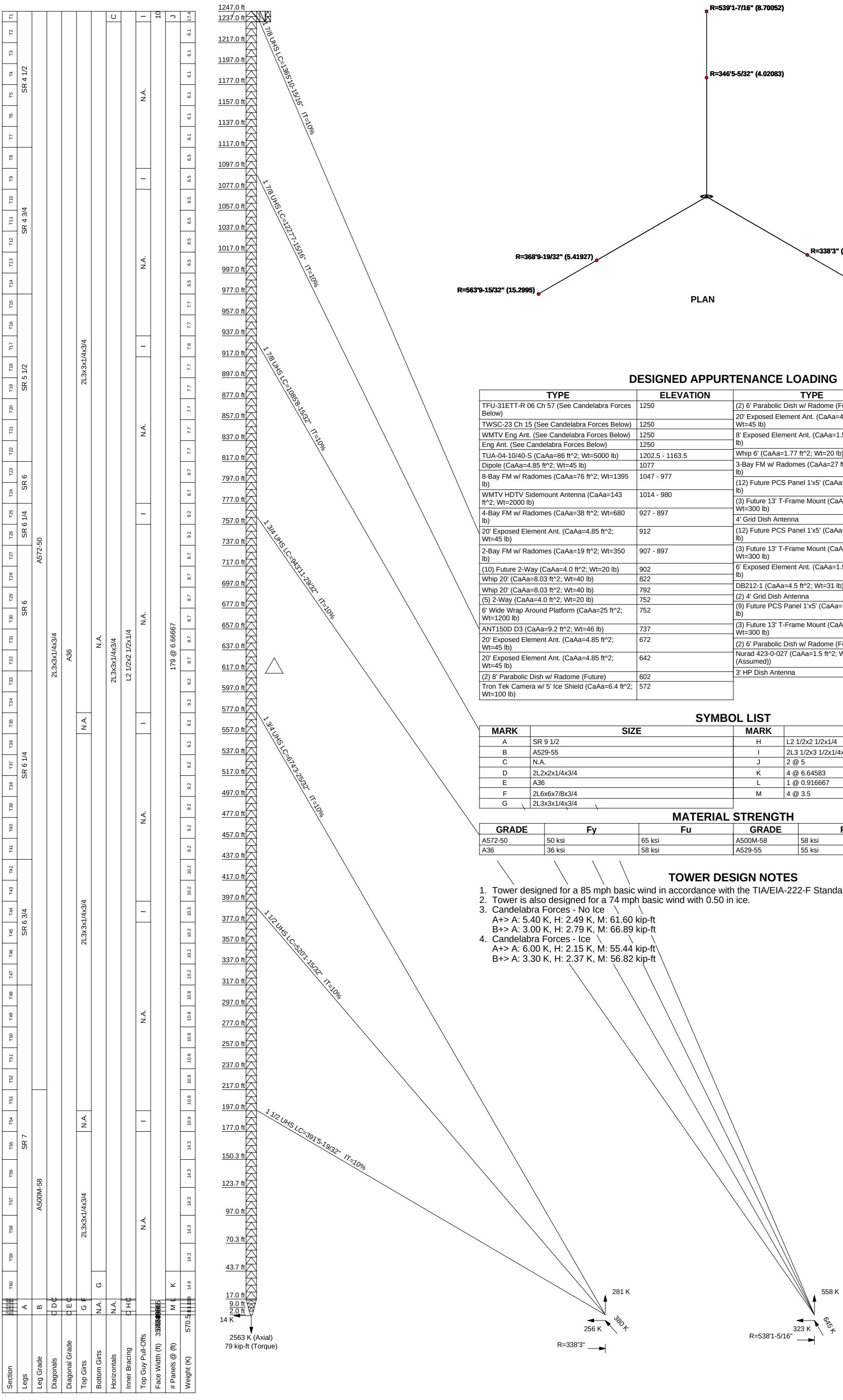

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
TFU-31ETT-R 06 Ch 57 (See Candelabra Forces Below)	1250	(2) 6' Parabolic Dish w/ Radome (Future)	452
TWSC-23 Ch 15 (See Candelabra Forces Below)	1250	20' Exposed Element Ant. (CaAa=4.85 ft^2; Wt=45 lb)	442
WMTV Eng Ant. (See Candelabra Forces Below)	1250	8' Exposed Element Ant. (CaAa=1.5 ft^2; Wt=25 lb)	417
Eng Ant. (See Candelabra Forces Below)	1250	Whip 6' (CaAa=1.77 ft^2; Wt=20 lb)	402
TUA-04-10/40-S (CaAa=86 ft^2; Wt=5000 lb)	1202.5 - 1163.5	3-Bay FM w/ Radomes (CaAa=27 ft^2; Wt=485 lb)	292
Dipole (CaAa=4.85 ft^2; Wt=45 lb)	1077	(12) Future PCS Panel 1'x5' (CaAa=7 ft^2; Wt=30 lb)	202
8-Bay FM w/ Radomes (CaAa=76 ft^2; Wt=1395 lb)	1047 - 977	(3) Future 13' T-Frame Mount (CaAa=12.4 ft^2; Wt=300 lb)	202
WMTV HDTV Sidemount Antenna (CaAa=143 ft^2; Wt=2000 lb)	1014 - 980	4' Grid Dish Antenna	197
4-Bay FM w/ Radomes (CaAa=38 ft^2; Wt=680 lb)	927 - 897	(12) Future PCS Panel 1'x5' (CaAa=7 ft^2; Wt=30 lb)	182
20' Exposed Element Ant. (CaAa=4.85 ft^2; Wt=45 lb)	912	(3) Future 13' T-Frame Mount (CaAa=12.4 ft^2; Wt=300 lb)	182
2-Bay FM w/ Radomes (CaAa=19 ft^2; Wt=350 lb)	907 - 897	6' Exposed Element Ant. (CaAa=1.5 ft^2; Wt=25 lb)	177
(10) Future 2-Way (CaAa=4.0 ft^2; Wt=20 lb)	902	DB212-1 (CaAa=4.5 ft^2; Wt=31 lb)	167
Whip 20' (CaAa=8.03 ft^2; Wt=40 lb)	822	(2) 4' Grid Dish Antenna	162
Whip 20' (CaAa=8.03 ft^2; Wt=40 lb)	792	(9) Future PCS Panel 1'x5' (CaAa=7 ft^2; Wt=30 lb)	152
(5) 2-Way (CaAa=4.0 ft^2; Wt=20 lb)	752	(3) Future 13' T-Frame Mount (CaAa=12.4 ft^2; Wt=300 lb)	152
6' Wide Wrap Around Platform (CaAa=25 ft^2; Wt=1200 lb)	752	(2) 6' Parabolic Dish w/ Radome (Future)	132
ANT150D D3 (CaAa=9.2 ft^2; Wt=46 lb)	737	Nurad 423-0-027 (CaAa=1.5 ft^2; Wt=25 lb (Assumed))	102
20' Exposed Element Ant. (CaAa=4.85 ft^2; Wt=45 lb)	672	3' HP Dish Antenna	102
20' Exposed Element Ant. (CaAa=4.85 ft^2; Wt=45 lb)	642		
(2) 8' Parabolic Dish w/ Radome (Future)	602		
Tron Tek Camera w/ 5' Ice Shield (CaAa=6.4 ft^2; Wt=100 lb)	572		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	SR 9 1/2	H	L2 1/2x2 1/2x1/4
B	A529-55	I	2L3 1/2x3 1/2x1/4x3/4
C	N.A.	J	2 @ 5
D	2L2x2x1/4x3/4	K	4 @ 6.64583
E	A36	L	1 @ 0.916667
F	2L6x6x7/8x3/4	M	4 @ 3.5
G	2L3x3x1/4x3/4		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A500M-58	58 ksi	70 ksi
A36	36 ksi	58 ksi	A529-55	55 ksi	70 ksi

TOWER DESIGN NOTES

1. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
2. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
3. Candelabra Forces - No Ice
   A+> A: 5.40 K, H: 2.49 K, M: 61.60 kip-ft
   B+> A: 3.00 K, H: 2.79 K, M: 66.89 kip-ft
4. Candelabra Forces - Ice
   A+> A: 6.00 K, H: 2.15 K, M: 55.44 kip-ft
   B+> A: 3.30 K, H: 2.37 K, M: 56.82 kip-ft

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Job: G2047 - 16426 : B-20939r5			
Project: Madison, Dane County, WI			
Client:	Drawn by: T.I. Engineering Dept.	App'd:	
Code: TIA/EIA-222-F	Date: 12/19/06	Scale: NTS	
Path: C:\0 - Current Design Runs\PDF\07 - Tall Bolted Guyed Tower - 30ft Sep T Bar TV - G2047 - 14626 - B-20939r5.eri		Dwg No. E-1	