ATC TOWER INSPECTION FORM

AMERICAN TOWER® CORPORATION

ANSI-TIA-222 Compliant

SECTION A - SITE INFORMATION

ATC Site Number	: 36075	**ATC Site Name, State**	: LEE S SUMMIT #1B
Site Address	: 2200 LOWENSTEIN	**Number of Compounds**	:
City/State	: Lees Summit, MO 64081	**Date of Inspection**	: 1/27/20
Contractor Name	: TOWER ENGINEERING PROFESSIONAL	**Tower Elevation Photo**	: Lee S Summit (36075)_478.JPG
Inspection Completed By	: Ricardo Martinez, Tyler Hazen	**SC Tagged Out?**	: No

SECTION B - TOWER INFORMATION

Structure Type	: Guyed	**# of Tower Legs**	: 3		
Tower Height	: 480'	**Safety Climb Installed?**	: Yes	**Location:**	BC Face
Overall Structure Height	: 497'	**Safety Climb Manuf.**	: Tuf-Tug	**Climbing Facil.**	Face
Tower Manufacturer	: CNR	**AM Detuning ?**	: No		

SECTION C - SITE INFORMATION CATEGORIES

SECTION A - Site Information
SECTION B - Tower Information
SECTION C - Tower Information Summary Comments
SECTION D - Summary of Deficiencies
SECTION E - Tower Foundation Comments
SECTION F - Tower Structure Comments
SECTION G - Safety Comments
SECTION H - Grounding Comments
SECTION I - Guy Anchors & Wires Comments
SECTION J - AM Detuning Comments
SECTION K - Compliance

SECTION D- SUMMARY OF OBSERVATIONS

Instructions: List Comments in Sections E through J as applicable. Section D Summary will automatically populate.

1.	Photos:	Lee S Summit (36075)_076.JPG, Lee
2.	Photos:	Lee S Summit (36075)_299.JPG,
3.	Photos:	Lee S Summit (36075)_331.JPG,
4.	Photos:	Lee S Summit (36075)_428.JPG
5.	Photos:	Lee S Summit (36075)_460.JPG
6.	Photos:	
7.	Photos:	
8.	Photos:	
9.	Photos:	
10.	Photos:	
11.	Photos:	
12.	Photos:	
13.	Photos:	
14.	Photos:	
15.	Photos:	
16.	Photos:	
17.	Photos:	
18.	Photos:	
19.	Photos:	
20.	Photos:	

SECTION E - TOWER FOUNDATION

Instructions

Tower base should be visually inspected for spalling and cracking of the concrete. The soil surrounding the tower base foundation should be inspected for evidence of settlement. Any such settlement or movement should be noted.

Base drains (if present) should be clear of any obstructions. Penetrate drain with object to ensure drains functioning.

Base insulators (if present) - The porcelain surface should be wiped clean with a soft cloth to remove any salt deposits or other foreign substance. A check should be made for any evidence of deterioration or cracks in the porcelain surface.

All discrepancies must be marked with masking tape and magic marker.

All discrepancies must be noted and photographed and numbered.

Is tower center pin in place?
Is tower center pin free of corrosion?
Are all base plate bolts, nuts, and washers present?
Is the tower foundation in good condition? (No cracking, spalling, or settling)
Is the concrete tower base free from standing water?
Are base drains clear and free flowing? (Drains required only under tubular legs.)
Is porcelain surface of base insulators in good condition? (No deterioration or cracking)
Is the soil around the foundation in good condition? (No settling or movement)

If any comments exceed one row please expand the row height so that all of the text is visible. To expand rows automatically, click the Select All button, then click AutoFit Row Height in the Cells/Format box.

Comments:

1.	Photos:	
2.	Photos:	
3.	Photos:	
4.	Photos:	
5.	Photos:	
6.	Photos:	
7.	Photos:	
8.	Photos:	

9.	Photos:
10.	Photos:

SECTION F - TOWER STRUCTURE

Instructions

Corrosion - If corrosion is observed, the source should be determined and noted.
Damaged or faulty members - A visual inspection must be made of the entire tower structure to determine if any of the members have been deformed or damaged. Any bowed, bent or damaged member/bolt should be noted as to part number, size, location on tower, nature and magnitude of deformation or damage.
Do not remove any tower member for replacement unless authorized by ATC Engineering Dept - Signed/Sealed Construction Drawings are required if a
All discrepancies must be marked with masking tape and magic marker. All discrepancies must be noted and photographed before and after repair.

Is the tower free of rust? (If "No", be specific in the comments below.)
Are all structural members straight and not damaged, bent, and/or missing?
Is the tower finish in good condition? (No obvious signs of cracking)

Comments:

1.	Photos:	
2.	Photos:	
3.	Photos:	
4.	Photos:	
5.	Photos:	
6.	Photos:	
7.	Photos:	
8.	Photos:	
9.	Photos:	
10.	Photos:	
11.	Photos:	
12.	Photos:	
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19.	Photos:	
20.	Photos:	
21.	Photos:	
22.	Photos:	
23.	Photos:	
24.	Photos:	
25.	Photos:	

SECTION G - SAFETY

Instructions
Safety is paramount- Report anything that makes it unsafe to operate or maintain this tower to ATC immediately.
All discrepancies must be marked with masking tape and magic marker. All discrepancies must be noted and photographed before and after repair.

Is there a safety climb system?
Are all components of the safety climb system free of rust?
Is the cable free from kinks, fraying, broken wires or strands or other damage?
Is the climbing path free from obstructions allowing a clear path for the cable?
Is the cable secured by properly spaced cable guides?
Is the total system properly installed including the top connection? If No, correct and note.
Is the FCC and ATC signage apparent and placed properly.

Comments:

1. Climbing obstruction observed at 139', 350', 380', on BC Face due to Carrier Mount. Climber does not have to	Photos:	Lee S Summit (36075)_076.JPG,
2. The Tuf-Tug safety climb system installed to 80'', on BC Face is recommended for replacement due to the following	Photos:	Lee S Summit (36075)_299.JPG,
3.	Photos:	
4.	Photos:	
5.	Photos:	
6.	Photos:	
7.	Photos:	
8.	Photos:	
9.	Photos:	
10.	Photos:	

SECTION H - GROUNDING

Instructions
Connections - The connections above grade should be visually checked for loose fittings, ensure wires are snug in mechanical connections or well bonded with exothermic connections at the base of the tower.
Ground Wires - The ground wires at the base should be cad welded to each leg.
Take a photo of the grounding at the base and at each anchor.
All discrepancies must be marked with masking tape and magic marker. All discrepancies must be noted and photographed before and after repair.

Is the tower base properly grounded?
Are the guy cables and/or guy anchor heads properly grounded?
Are ground wires and connections in satisfactory condition?

Is the lightning rod mounted such that it is secured to the structure and not at risk of falling?

Comments:

1. Tower base grounding was observed to be inadequate, there are currently (0) installed properly.	Photos:	Lee S Summit (36075)_331.JPG,
2.	Photos:	
3.	Photos:	
4.	Photos:	
5.	Photos:	
6.	Photos:	
7.	Photos:	
8.	Photos:	
9.	Photos:	
10.	Photos:	

SECTION I - GUY ANCHORS & WIRES

Instructions

All discrepancies must be marked with masking tape and magic marker and must be noted and photographed.

Are the guy cables & paths clear of brush, vegetation, fencing or any other obstruction?
Are the anchor heads and rods free from any bends and/or fractures?
Are the anchor heads and turnbuckle hardware free from soil build-up?
Are exposed guy anchor foundations free from cracking, weathering?
Do the turnbuckles have room for adjusting tensions? (Not fully extended or contracted?)
Are the anchor heads free of corrosion?
Is guy anchor rod laterally aligned?
Are guy wires free of broken strands or insulators?
Are the guy dampers secured and in good condition?
Are all shackles, clevises, thimbles, cotter pins, and Crosby clamps properly installed?
Are the dead-end grips in good condition?
Are the dead-end grip end-sleeves (ice-clips) installed?
Are guy wires and guy hardware free of corrosion?
Is each turnbuckle safety wire properly installed and secure? If not, make corrections.
Are guy wire connections in satisfactory condition?
Are guy attachment points to tower in good condition?

Note - If anchor shafts show signs of heavy corrosion at any point, stop digging immediately and complete the remainder of the inspection.

Comments:

1.	Replacement of (1) Turnbuckle(s) at Guy Level 4' on Outer Anchor B is recommended due to following reason(s): At or	Photos: Lee S Summit (36075)_428.JPG
2.	Replacement of (2) Turnbuckle(s) at Guy Level 4' on Outer Anchor A is recommended due to following reason(s): At or	Photos: Lee S Summit (36075)_460.JPG
3.		Photos:
4.		Photos:
5.		Photos:
6.		Photos:
7.		Photos:
8.		Photos:
9.		Photos:
10.		Photos:
11.		Photos:
12.		Photos:
13.		Photos:
14.		Photos:
15.		Photos:

SECTION J- AM DETUNING

Instructions

All discrepancies must be marked with masking tape and magic marker and must be noted and photographed.
Note: If the tower has a base insulator (decommissioned AM hot tower) the box next to the tower with a single wire feed is NOT an AM detuning device.

Is there an AM Detuning system on the tower?
Are the AM Detuning skirt wires securely attached to the tower?
Are the AM Detuning wires in good condition? (Broken, sharp bends, etc)
Is the AM Detuning box securely attached to the tower or other mounting system?
Is the AM Detuning box in good condition? (Sealed, loose or missing hardware, etc)
Is the exterior of the AM Detuning box free of rust and corrosion?
Is the AM Detuning system properly grounded?

Comments:

1.		Photos:
2.		Photos:
3.		Photos:
4.		Photos:
5.		Photos:

SECTION K - COMPLIANCE

By signing this report:

- I understand that this information and form are the sole property of American Tower Corporation (ATC) and may not be copied or shared without written permission from ATC.

- I certify that any conditions or items omitted in this report were observed to be in acceptable condition per the criteria specifed in the ATC Standard of Care and my own professional experience and judgement.

- I certify this report to be accurate and complete to the best of my knowledge and belief.

Name : Matthew Weber **Date :** 2/4/20

Company : Tower Engineering Professionals

Site #	: 36075
Site Name	: LEE S SUMMIT #1B
Contractor Name	: TOWER ENGINEERING PROFESSIONAL
Completed By	: Ricardo Martinez, Tyler Hazen
Date	: 1/27/20

Rev 7.0.2 Release (06/26/2018)

AMERICAN TOWER® CORPORATION

PRE-TENSIONING: GUY TENSION MEASUREMENTS

Note - Cable sizes must be measured with Guy Cable Measuring Tool. Photos of size and tension measurements are required. If all cable sizes at one elevation are the same for all legs, photos of size measurements of only one leg are required.

Wind Speed (MPH)	8
Wind Direction	Northwest

(Northernmost (A) Anchor)

Guy Level	Elev. (Ft.)	Dist. To Anchor (Ft.)	Guy Attachment Type	Cable Const.	Cable Size measurement - *See Note above		Paint Color on Dead-End Grip (If visible)	Temp. (°F)	Measured Tension (Lbs) - Use "GP/Left" column for Guy Pull-Off - *See Note above				Design Initial Tension (% of B.S.)	Tension (6%-16%)	
					Size	Photo#			GP / Left	Photo#	Right	Photo#		GP / Left	Right
1	70.0	146	Guy Pull-Off	7 Strand	1/2	mit (360	Blue	41	3420	mit (36075)_14.JPG			N/A	11.1%	
2	138.0	146	Stabilizer	7 Strand	9/16	mit (360	Yellow	41	4520	mit (360	3640	mit (360	N/A	11.8%	9.5%
3	220.0	146	Stabilizer	7 Strand	9/16	mit (360	Yellow	41	3820	mit (360	4180	mit (360	N/A	10.4%	11.3%
4	300.0	293.5	Stabilizer	7 Strand	5/8	mit (360	Black	41	4340	mit (360	4500	mit (360	N/A	9.4%	9.8%
5	380.0	293.5	Stabilizer	19 Strand	3/4	mit (360	Orange	41	6400	mit (360	6520	mit (360	N/A	10.3%	10.5%
6	460.0	293.5	Stabilizer	19 Strand	3/4	mit (360	Orange	41	6040	mit (360	6120	mit (360	N/A	9.8%	10.0%
7															
8															
9															
10															
11															
12															

Comments	

(B Anchor)

Guy Level	Elev. (Ft.)	Dist. To Anchor (Ft.)	Guy Attachment Type	Cable Const.	Cable Size measurement *See Note above		Paint Color on Dead-End Grip (If visible)	Temp. (°F)	Measured Tension (Lbs) - Use "GP/Left" column for Guy Pull-Off *See Note above				Design Initial Tension (% of B.S.)	Tension (6%-16%)	
					Size	Photo#			GP / Left	Photo#	Right	Photo#		GP / Left	Right
1	70.0	148	Guy Pull-Off	7 Strand	1/2	mit (360	Blue	41	3660	mit (36075)_13.JPG			N/A	11.9%	
2	138.0	148	Stabilizer	7 Strand	9/16	mit (360	Yellow	41	3720	mit (360	4620	mit (360	N/A	9.7%	12.1%
3	220.0	148	Stabilizer	7 Strand	9/16	mit (360	Yellow	41	3440	mit (360	3720	mit (360	N/A	9.3%	10.1%
4	300.0	294	Stabilizer	7 Strand	5/8	mit (360	Black	41	4260	mit (360	4380	mit (360	N/A	9.2%	9.5%
5	380.0	294	Stabilizer	19 Strand	3/4	mit (360	Orange	41	6160	mit (360	6020	mit (360	N/A	9.9%	9.7%
6	460.0	294	Stabilizer	19 Strand	3/4	mit (360	Orange	41	5960	mit (360	6000	mit (360	N/A	9.7%	9.8%
7															
8															
9															
10															
11															
12															

Comments	

(C Anchor)

Guy Level	Elev. (Ft.)	Dist. To Anchor (Ft.)	Guy Attachment Type	Cable Const.	Cable Size measurement *See Note above		Paint Color on Dead-End Grip (If visible)	Temp. (°F)	Measured Tension (Lbs) - Use "GP/Left" column for Guy Pull-Off *See Note above				Design Initial Tension (% of B.S.)	Tension (6%-16%)	
					Size	Photo#			GP / Left	Photo#	Right	Photo#		GP / Left	Right
1	70.0	146	Guy Pull-Off	7 Strand	1/2	mit (360	Blue	41	3680	mit (36075)_12.JPG			N/A	11.9%	
2	138.0	146	Stabilizer	7 Strand	9/16	mit (360	Yellow	41	3900	mit (360	4540	mit (360	N/A	10.2%	11.9%
3	220.0	146	Stabilizer	7 Strand	9/16	mit (360	Yellow	41	4500	mit (360	4020	mit (360	N/A	12.2%	10.9%
4	300.0	292	Stabilizer	7 Strand	5/8	mit (360	Black	41	4020	mit (360	3880	mit (360	N/A	8.7%	8.4%
5	380.0	292	Stabilizer	19 Strand	3/4	mit (360	Orange	41	6280	mit (360	6340	mit (360	N/A	10.1%	10.2%
6	460.0	292	Stabilizer	19 Strand	3/4	mit (360	Orange	41	5480	mit (360	5960	mit (360	N/A	8.9%	9.7%
7															
8															
9															
10															
11															
12															

Comments	

(D Anchor)

Guy Level	Elev. (Ft.)	Dist. To Anchor (Ft.)	Guy Attachment Type	Cable Const.	Cable Size measurement *See Note above		Paint Color on Dead-End Grip (If visible)	Temp. (°F)	Measured Tension (Lbs) - Use "GP/Left" column for Guy Pull-Off *See Note above				Design Initial Tension (% of B.S.)	Tension (6%-16%)	
					Size	Photo#			GP / Left	Photo#	Right	Photo#		GP / Left	Right
1															
2															

Site #	: 36075
Site Name	: LEE S SUMMIT #1B
Contractor Name	: TOWER ENGINEERING PROFESSIONAL
Completed By	: Ricardo Martinez, Tyler Hazen
Date	: 1/27/20

AMERICAN TOWER® CORPORATION

PRE-ADJUSTMENT: 3-SIDED TOWER TWIST AND PLUMB

	FW (Ft)	Elev (Ft)
4th Taper Change ***OR*** Top of Tower	0.00	0.00
3rd Taper Change ***OR*** Top of Tower	0.00	0.00
2nd Taper Change ***OR*** Top of Tower	0.00	0.00
1st Taper Change ***OR*** Top of Tower	3.50	480.00
Base of tower (Bottom of steel)*	3.50	0.00

Wind Speed	8
Direction	Northwest

For a GT w/ a tapered base, enter the face width at the top of the taper into Cell G14.

OBSERVED LEG DISPLACEMENTS										CALCULATED TWIST			CALCULATED OUT-OF-PLUMB		
Data Point	Mast Elev. * See Note (Ft)	A - Face Width (In)	Leg Width (In)	D1**	i1	D2	i2	D3	i3	d (In)	e	α (Deg)	x (In)	y (In)	r (In)
1	70.00	42.00	3.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	138.00	42.00	3.05	0.00	0.00	-0.13	-0.13	0.25	0.25	0.13	0.01	0.30	-0.66	-0.13	0.67
3	220.00	42.00	3.05	-0.25	-0.25	-0.25	-0.25	0.50	0.50	0.00	0.00	0.00	-1.32	-0.76	1.53
4	300.00	42.00	2.80	-0.38	-0.38	-0.25	-0.25	0.50	0.50	-0.12	-0.01	-0.29	-1.21	-0.94	1.54
5	380.00	42.00	2.55	-0.50	-0.50	-0.38	-0.38	0.75	0.75	-0.11	0.00	-0.26	-1.66	-1.16	2.03
6	460.00	42.00	2.30	-0.63	-0.63	-0.50	-0.50	1.00	1.00	-0.10	0.00	-0.24	-1.99	-1.35	2.41
7	480.00	42.00	2.30	-0.63	-0.63	-0.50	-0.50	1.00	1.00	-0.10	0.00	-0.24	-1.99	-1.35	2.41
8															
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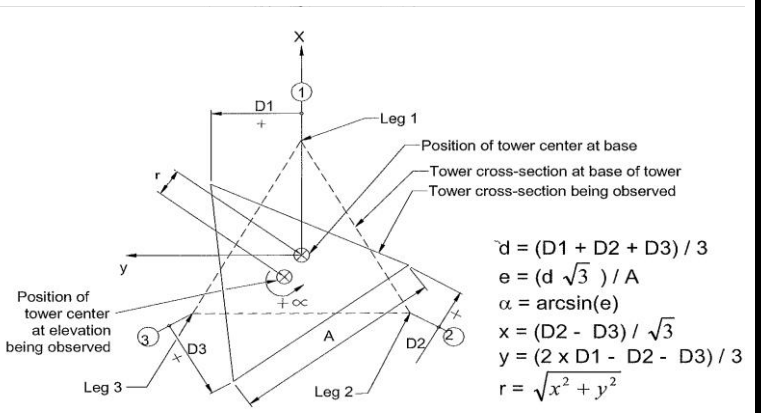
20															

Comments	

Tower Plumb and Twist Measurements

The transit is to be set up on each leg azimuth at the base of the tower. The corresponding tower leg at the base of the tower is used to set the vertical baseline.



**** Mast Elevation Note***

For guyed towers, record data at each guy elevation ***and*** at all taper change elevations. For self-supporting towers, record data at each 20' section ***and*** at all taper change elevations.

***** Displacement Note***

"D" refers to direct
"i" refers to inverse
Unitless; values are fraction of leg displaced

Site #	: 36075
Site Name	: LEE S SUMMIT #1B
Contractor Name	: TOWER ENGINEERING PROFESSIONAL
Completed By	: Ricardo Martinez, Tyler Hazen
Date	: 1/27/20

Rev 7.0.2 Release (06/26/2018)

AMERICAN TOWER® CORPORATION

Tower Height Verification Form

TOTAL TOWER HEIGHT = GROUND TO HIGHEST APPURTENANCE (F+S+A) = 497 (feet)

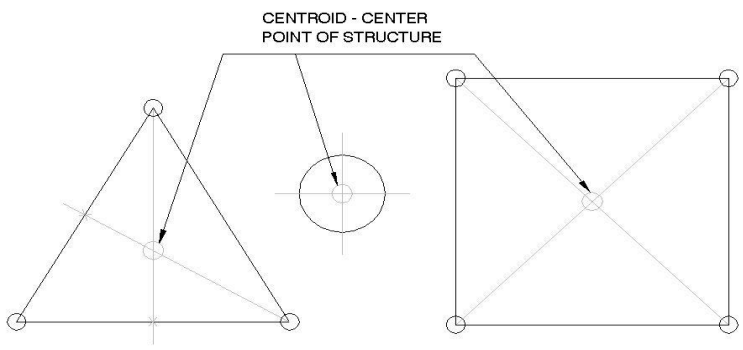
HEIGHT of FOUNDATION (F) = 2 **(feet)**
(Measure from ground at center of tower to top of baseplate)

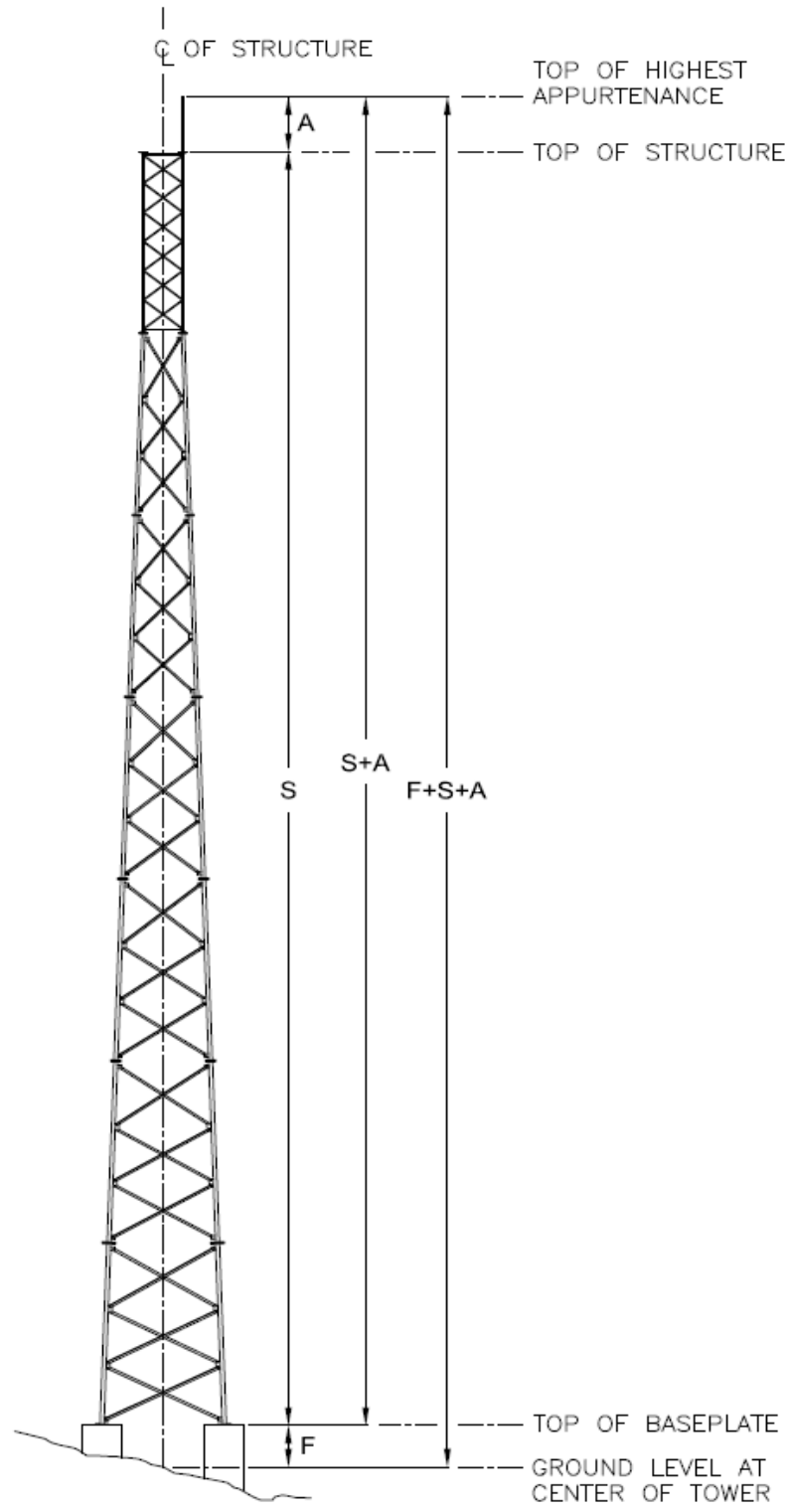
HEIGHT of STRUCTURE (S) = 480 **(feet)**
(Measure from top of baseplate to top of structure)

HEIGHT of APPURTENANCE (A) = 15 **(feet)**

HEIGHT with APPURTENANCE (F+S+A) = 497 **(feet)**

Distance From Centroid At Base Of Structure To Laser Tripod = **(feet)**





METHOD OF MEASUREMENT	(●) Tape Drop ( ) Range Finder

(Accuracy to be within +/- 1’ for structures Up to 100 feet. The accuracy is no better than +/- 1’ for structures greater than 100 feet.) This method is generally used to validate existing distances only.

Range Finder Make and Model #	
Calibration Date	
Training Date	

MEASUREMENT CERTIFICATION:

Company:	Tower Engineering Professionals
Print Name:	Ricardo Martinez
Date:	01/27/2020