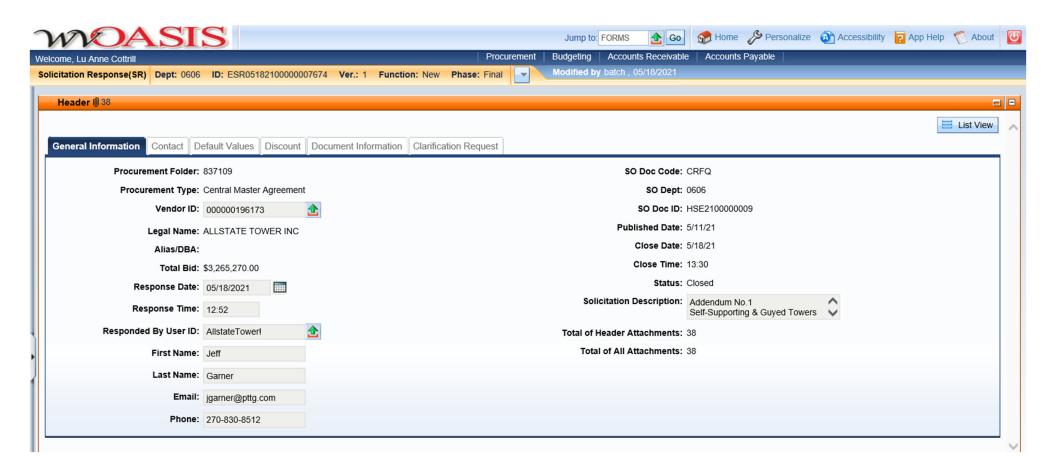


2019 Washington Street, East Charleston, WV 25305 Telephone: 304-558-2306 General Fax: 304-558-6026

Bid Fax: 304-558-3970

The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at *wvOASIS.gov*. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at *WVPurchasing.gov* with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.





Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

State of West Virginia Solicitation Response

Proc Folder: 837109

Solicitation Description: Addendum No.1

Proc Type: Salf-Supporting & Cuyed Towers
Central Master Agreement

 Solicitation Closes
 Solicitation Response
 Version

 2021-05-18 13:30
 SR 0606 ESR05182100000007674
 1

VENDOR

000000196173

ALLSTATE TOWER INC

Solicitation Number: CRFQ 0606 HSE2100000009

Total Bid: 3265270 **Response Date:** 2021-05-18 **Response Time:** 12:52:40

Comments:

FOR INFORMATION CONTACT THE BUYER

David H Pauline 304-558-0067 david.h.pauline@wv.gov

david.n.padiine@wv.gov

Vendor Signature X FEIN#

All offers subject to all terms and conditions contained in this solicitation

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DATE

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	100 Foot Self-Supporting Tower	1.00000	EA	35846.000000	35846.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

100 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	120 Foot Self-Supporting Tower	1.00000	EA	43098.000000	43098.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

120 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	140 Foot Self-Supporting Tower	1.00000	EA	58968.000000	58968.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

140 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	160 Foot Self-Supporting Tower	1.00000	EA	70354.000000	70354.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

160 Foot Self-Supporting Tower

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	180 Foot Self-Supporting Tower	1.00000	EA	83665.000000	83665.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

180 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
6	200 Foot Self-Supporting Tower	1.00000	EA	94224.000000	94224.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

200 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
7	220 Foot Self-Supporting Tower	1.00000	EA	111165.000000	111165.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

220 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
8	240 Foot Self-Supporting Tower	1.00000	EA	128949.000000	128949.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

240 Foot Self-Supporting Tower

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
9	260 Foot Self-Supporting Tower	1.00000	EA	142475.000000	142475.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

260 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
10	280 Foot Self-Supporting Tower	1.00000	EA	162148.000000	162148.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

280 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
11	300 Foot Self-Supporting Tower	1.00000	EA	178065.000000	178065.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

300 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
12	320 Foot Self-Supporting Tower	1.00000	EA	196875.000000	196875.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

320 Foot Self-Supporting Tower

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
13	340 Foot Self-Supporting Tower	1.00000	EA	222155.000000	222155.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

340 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
14	360 Foot Self-Supporting Tower	1.00000	EA	230182.000000	230182.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

360 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
15	380 Foot Self-Supporting Tower	1.00000	EA	262011.000000	262011.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

380 Foot Self-Supporting Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
16	400 Foot Self-Supporting Tower	1.00000	EA	298075.000000	298075.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

400 Foot Self-Supporting Tower

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
17	100 Foot Guyed Tower	1.00000	EA	30268.000000	30268.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

100 Foot Guyed Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
18	120 Foot Guyed Tower	1.00000	EA	33844.000000	33844.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

120 Foot Guyed Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
19	140 Foot Guyed Tower	1.00000	EA	44876.000000	44876.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

140 Foot Guyed Tower

Line Con	mm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
20 160	Foot Guyed Tower	1.00000	EA	48360.000000	48360.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

160 Foot Guyed Tower

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
21	200 Foot Guyed Tower	1.00000	EA	54816.000000	54816.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

200 Foot Guyed Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
22	240 Foot Guyed Tower	1.00000	EA	66084.000000	66084.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

240 Foot Guyed Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
23	280 Foot Guyed Tower	1.00000	EA	79126.000000	79126.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

280 Foot Guyed Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
24	320 Foot Guyed Tower	1.00000	EA	98394.000000	98394.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

320 Foot Guyed Tower

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
25	360 Foot Guyed Tower	1.00000	EA	102564.000000	102564.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

360 Foot Guyed Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
26	400 Foot Guyed Tower	1.00000	EA	120075.000000	120075.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

400 Foot Guyed Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
27	440 Foot Guyed Tower	1.00000	EA	128510.000000	128510.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

440 Foot Guyed Tower

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
28	480 Foot Guyed Tower	1.00000	EA	139563.000000	139563.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

480 Foot Guyed Tower

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
29	Six Foot Standard Arms	1.00000	EA	535.000000	535.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

Six Foot Standard Arms

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
30	Six Foot Tapered Side Arms	0.00000	EA	610.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

Six Foot Tapered Side Arms

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
31	Safety Climb Device (acceptable increments of 100 foot)	0.00000	EA	422.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

Safety Climb Device (acceptable increments of 100 foot)

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
32	Medium white light, and red LED beacon combinations	0.00000	EA	8960.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

Medium white light, and red LED beacon combinations

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
33	Red side lights, must be LED fixtures	0.00000	EA	710.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

Red side lights, must be LED fixtures

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
34	Four-inch microwave dish mounts with all hardware.	0.00000	EA	525.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

Four-inch microwave dish mounts with all hardware.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
35	Ice shields for six (6) foot dishes	0.00000	EA	824.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

Ice shields for six (6) foot dishes

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
36	Ice shields for eight (8) foot dishes	0.00000	EA	988.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

Ice shields for eight (8) foot dishes

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
37	Twenty (20) foot vertical waveguide ladder	0.00000	EA	115.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

Twenty (20) foot vertical waveguide ladder

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
38	Ten (10) foot horizontal waveguide	0.00000	EA	795.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

Ten (10) foot horizontal waveguide

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
39	Three (3) foot standard side arms	0.00000	EA	565.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

Three (3) foot standard side arms

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
40	Three (3) foot tapered side arms	0.00000	EA	590.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

Three (3) foot tapered side arms

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
41	Twelve-foot sector booms	0.00000	EA	5295.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Extended Description:

Twelve-foot sector booms

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
42	Tower light controller kit for tower lights	0.00000	EA	13301.000000	0.00

Comm Code	Manufacturer	Specification	Model #	
43190000				

Commodity Line Comments:

Extended Description:

Tower light controller kit for tower lights

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CRFQ HSE21*09 - EXHIBIT	A
Pricing Page - WV EMD	

Camtua at	Pricing Page -			
Contract Item #	Description	Estimated Annual	Harit Daise	Estanded Dries
3.1.1	Description Tower	Quantity	Unit Price	Extended Price
	100' Self Supporting Tower 120' Self Supporting Tower	1	35846	35846
3.1.2	1. 0	l	43098	43098
3.1.3	140' Self Supporting Tower	1	58968	58968
3.1.4	160' Self Supporting Tower	1	70354	70354
3.1.5	180' Self Supporting Tower	2	83665	167330
3.1.6	200' Self Supporting Tower	1	94224	94224
3.1.7	220' Self Supporting Tower	1	111165	111165
3.1.8	240' Self Supporting Tower	2	128949	257898
3.1.9	260' Self Supporting Tower	1	142475	142475
3.1.10	280' Self Supporting Tower	1	162148	162148
3.1.11	300' Self Supporting Tower	2	178065	356130
3.1.12	320' Self Supporting Tower	2	196875	393750
3.1.13	340' Self Supporting Tower	2	222155	444310
3.1.14	360' Self Supporting Tower	2	230182	460364
3.1.15	380' Self Supporting Tower	2	262011	524022
3.1.16	400' Self Supporting Tower	1	298075	298075
3.1.17	100' Guyed Tower	1	30268	30268
3.1.18	120' Guyed Tower	1	33844	33844
3.1.19	140' Guyed Tower	1	44876	44876
3.1.20	160' Guyed Tower	1	48360	48360
3.1.21	200' Guyed Tower	1	54816	54816
3.1.22	240' Guyed Towers	<u> </u>	66084	66084
3.1.23	280' Guyed Tower	1	79126	79126
3.1.24	320' Guyed Tower	1	98394	98394
3.1.25	360' Guyed Tower	1	102564	102564
3.1.26	400' Guyed Tower	1	120075	120075
3.1.27	440' Guyed Tower	1	128510	128510
3.1.28	480' Guyed Tower	1	139563	139563
3.1.29	Six (6) foot standard arms	10	535	5350
3.1.30	Six (6) foot tapered side arms	10	610	6100
	Safety climb device (acceptable increments of 100			
3.1.31	foot)	10	422	4220
	FAA approved white light and red LED beacon			
3.1.32	combinations	10	8960	89600
3.1.33	Red side lights, shall be LED fixtures	10	710	7100
	Four (4) inch microwave dish pipe mounts with all			
	hardware. Must have capability of attaching to			
3.1.34	straight sections of tapered section	60	525	31500
3.1.35	Ice shields for six (6) foot dishes	16	824	13184
3.1.36	Ice shields for eight (8) foot dishes	16	988	15808
	Twenty (20) foot vertical waveguide ladder			
3.1.37	(minimum width of 24 inches)	100	115	11500
	Ten (10) foot horizontal waveguide bridge			
3.1.38	(minimum width of 24 inches)	12	795	9540
3.1.39	Three (3) foot standard side arms	24	565	13560
3.1.40	Three (3) foot tapered side arms	24	590	14160

	CRFQ HSE21*09 Pricing Page -			
3.1.41	Twelve (12) foot sector booms capable of supporting four (4) antennas on each sector. Assume one (1) foot solid panel that is six (6) feet in length and six (6) inches thick.	6	5295	31770
3.1.42	Tower light controller kit for tower lights. Tower lights must be capable of providing telemetry.	3	1330	3990
			GRAND TOTAL	4824019

Estimated Annual Quantities are for bid evaluation purposes only. Actual quantities ordered may be more or less.

Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost.

VENDOR SECTION:

V 1 V
Vendor Name:
Allstate Tower Inc.
Physical Address.
232 Heilman Aug Henderson, Ky 42420
Remit to Address:
Da Bax 25
Henderson Ky 42419
Telephone:
270-830-8512
Fax:
270-830-8475
Email:
mbarnhill@pttq.com
Vendor Representative (print name):
Matt Barnhill
Signature: Martin Barrell
(100)

ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO.: CRFQ ADJ2100000039

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

(Check th	e bo	x next to each addendum recei	ived)	
[>	K]	Addendum No. 1]]	Addendum No. 6
[_]	Addendum No. 2]]	Addendum No. 7
]]	Addendum No. 3]]	Addendum No. 8
]]	Addendum No. 4]	Addendum No. 9

Addendum Numbers Received:

Addendum No. 5

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

[] Addendum No. 10

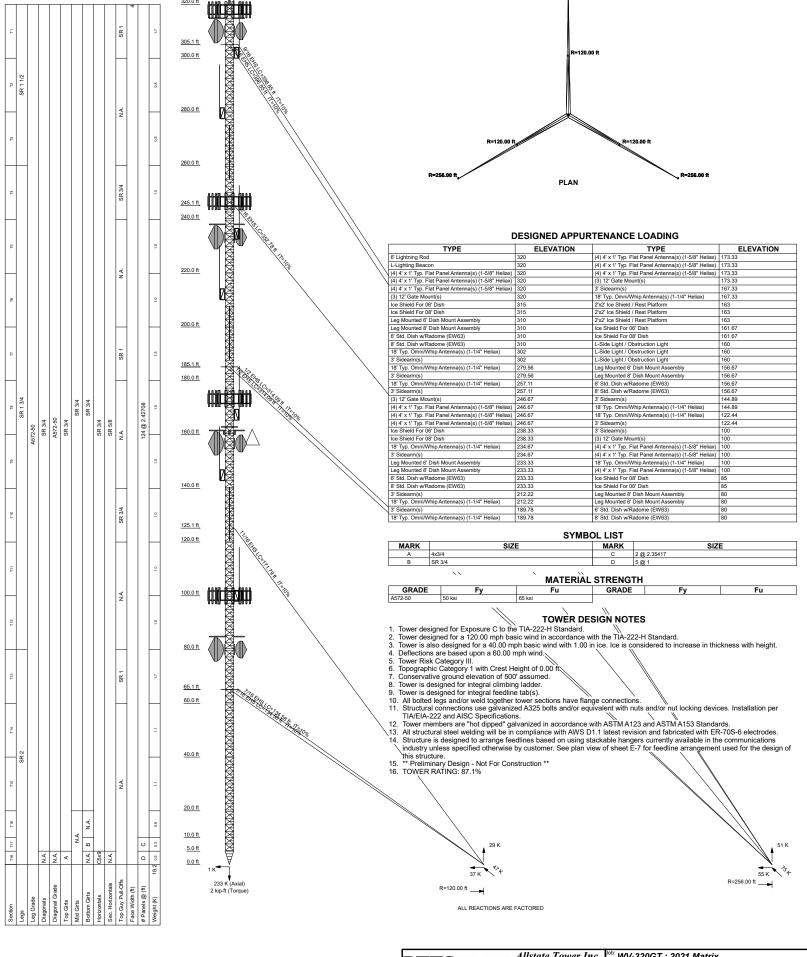
Company

Matt Bull

Authorized Signature

5. (8.) Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.





_	2/8													320.0 ft	
2	SR1		_	o	_	_						9611	6:0		TYPE 6' Lightning Rod
77	SR 2 1/4		SR 7/8	A572-50	SR 7/8	SR 7/8					4	12 @ 3.2361	1.3	300.0 ft	L-Lighting Beacon (4) 4" x " Typ. Flat Panel Antenna (4) 4" x " Typ. Flat Panel Antenna (4) 4" x " Typ. Flat Panel Antenna (3) 12" Gate Mount(s) Ico Shield For 06" Dish Ico Shield For 06" Dish
_			91								4			280.0 ft	Leg Mounted 6' Dish Mount Assel Leg Mounted 8' Dish Mount Asse
172	SR 2 3/4		3/4x1 3/4x3/16 L1 1/2x1 1/2x3/	-							5.75	8 @ 4.84375	2.1 1.7	<u>260.0 ft</u>	6 Std. Dish wRadome (EW63) 8 Std. Dish wRadome (EW63) 18 Typ. OmniWhip Antenna(s) (' 3 Sidearm(s) 18 Typ. OmniWhip Antenna(s) (' 3 Sidearm(s) 18 Typ. OmniWhip Antenna(s) (' 3 Sidearm(s) (3) Typ. OmniWhip Antenna(s) (' 3 Sidearm(s) (3) 12 Cate Mount(s) (4) 4" x Typ. Flat Panel Antenna
	3		L1 3/4x											240.0 ft_	(4) 4" x 1" Typ. Flat Panel Antenna (4) 4" x 1" Typ. Flat Panel Antenna
13	SR		L2x2x3/16								7.5	2	22	<u>240.0 it</u>	los Shield For 06' Dish los Shield For 08' Dish 18' Typ. OmniWhip Antenna(s) (' 3' Sidearm(s) Leg Mounted 6' Dish Mount Asse Leg Mounted 6' Dish Mount Asse
											9.25	@ 4.82292		220.0 ft	6° Std. Dish w/Radome (EW63) 8° Std. Dish w/Radome (EW63) 3° Sidearm(s)
T4	SR 3 1/4		91									8	2.8		18" Typ, OmmiwNhip Antenna(s) (: 3" Sidearm(s) 118 Typ, OmmiwNhip Antenna(s) (:
			L2 1/2x2 1/2x3/16								Ξ			200.0 ft	GRADE
75	SR 3 3/4		112				N.A.	N.A.	N.A.	N.A.		8.	3.3		A572-50 50 ksi
											12.75	@ 6.40278		<u>180.0 ft</u>	1. Tower designed for Ex. 2. Tower designed for a 1 3. Tower is also designed
10	SR 4	20	L3x3x3/16										3.9		4. Deflections are based 5. Tower Risk Category II 6. Topographic Category 7. Conservative ground e
4	SR 4 1/4	A572-50	L3x3x1/4								14.5		4.7	<u>160.0 ft</u>	8. Tower designed for ste 9. Tower designed for ste 10. All botted legs and/or 11. Structural connection TIA/EIA-222 and AIS 12. Tower meaning and
	-		_	A529-50	Ą.	Ą.					16.25	6 @ 6.375		140.0 ft	12. Tower members are " 13. All structural steel we 14. Structure is designed
22			×1/4	A							16.	9	9.6		industry unless specifith in structure. 15. TOWER RATING: 97
	SR 4 1/2		L3 1/2x3 1/2x1/4								\$			120.0 ft	
Ф			F7										5.7		
											19.75			100.0 ft	
T10	SR 4 3/4		L4x4x1/4									@ 6.36117	6.7		
											21.5	6		80.0 ft	ALL REACTIONS ARE FACTORED
TH.			L4x4x5/16										8.0		MAX. CORNER REACTIONS AT BASE: DOWN: 750 K SHEAR: 70 K
											23.25			60.0 ft	UPLIFT: -629 K SHEAR: 60 K
T12			12				6x1/2	6x1/2	6x1/2				7.3		AXIAL 250 K
	SR 5		2L3x3x3/16x1				2L2 1/2x2 1/2x3/16x1/2	2L1 3/4x1 3/4x3/16x1/2	2L1 3/4x1 3/4x3/16x	x1/2	52			40.0 ft	SHEAR MOMENT
T13			21.3.				21.2 1/2.	2L1 3/4;	2L1 3/4;	1/2x2 1/2x3/16x1/2		6 @ 9.6875	7.5		19 K 3259 kip-ft TORQUE 9 kip-ft 40 mph WIND - 1.0000 in ICE
			1/2				1/2	1/2	1/2	212	26.75			20.0 ft	AXIAL 129 K
T14			2L3x3x1/4x1/2				2L3x3x3/16x1/2	2L2x2x3/16x1/2	2L2x2x3/16x1/2				8.7	<u>0.0 ft</u>	SHEAR MOMENT 111 K 17447 kip-ft
				ade		_		ntals	als	9	(ft) 28.5	£	72.3	<u>3.5 n.</u>	TORQUE 55 kip-ft REACTIONS - 120 mph WIND
Section	Fegs	Leg Grade	Diagonals	Diagonal Grade	Top Girts	Bottom Girts	Horizontals	Red. Horizontals	Red. Diagonals	Inner Bracing	Face Width (ft)	# Panels @ (ft)	Weight (K)		

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	320	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	173.33
L-Lighting Beacon	320	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	173.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	320	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	173.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	320	(3) 12' Gate Mount(s)	173.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	320	167.33	
(3) 12' Gate Mount(s)	320	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	167.33
Ice Shield For 06' Dish	315	2'x2' Ice Shield / Rest Platform	163
Ice Shield For 08' Dish	315	2'x2' Ice Shield / Rest Platform	163
Leg Mounted 6' Dish Mount Assembly	310	2'x2' Ice Shield / Rest Platform	163
Leg Mounted 8' Dish Mount Assembly	310	Ice Shield For 06' Dish	161.67
6' Std. Dish w/Radome (EW63)	310	Ice Shield For 08' Dish	161.67
8' Std. Dish w/Radome (EW63)	310	L-Side Light / Obstruction Light	160
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	302	L-Side Light / Obstruction Light	160
3' Sidearm(s)	302	L-Side Light / Obstruction Light	160
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	279.56	Leg Mounted 6' Dish Mount Assembly	156.67
3' Sidearm(s)	279.56	Leg Mounted 8' Dish Mount Assembly	156.67
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	257.11	6' Std. Dish w/Radome (EW63)	156.67
3' Sidearm(s)	257.11	156.67	
(3) 12' Gate Mount(s)	246.67	144.89	
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	246.67	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	144.89
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	246.67	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	122.44
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	246.67	3' Sidearm(s)	122.44
Ice Shield For 06' Dish	238.33	3' Sidearm(s)	100
Ice Shield For 08' Dish	238.33	(3) 12' Gate Mount(s)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	234.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
3' Sidearm(s)	234.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
Leg Mounted 6' Dish Mount Assembly	233.33	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
Leg Mounted 8' Dish Mount Assembly	233.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
6' Std. Dish w/Radome (EW63)	233.33	Ice Shield For 08' Dish	85
8' Std. Dish w/Radome (EW63)	233.33	Ice Shield For 06' Dish	85
3' Sidearm(s)	212.22	Leg Mounted 8' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	212.22	Leg Mounted 6' Dish Mount Assembly	80
3' Sidearm(s)	189.78	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	189.78	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

- TOWER DESIGN NOTES
 Exposure C to the TIA-222-H Standard.

 1120 mph basic wind in accordance with the TIA-222-H Standard.

 ald for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.

 d upon a 60 mph wind.

 III.

- y 1 with Crest Height of 0.00 ft elevation of 500' assumed.

- tep bolts up all three legs.
 sedlines to be supported with waveguide ladder(s).

- sedlines to be supported with waveguide ladder(s), or weld together tower sections have flange connections. one use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per SC Specifications. "Not dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards. velding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes, and to arrange feedlines based on using stackable hangers currently available in the communications cified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of



lob: WV-320SS : 2	021 Matrix	
Project: As Req'd		
Client: State of WV.	Drawn by: Allstate Tower Inc.	App'd:
Code: TIA-222-H	Date: 05/14/21	Scale: NTS
Path:		Dwg No. ⊏ 4

Section Sect	Section Legs	Leg Grade	Diagonals	Diagonal Grade	Top Girts	Bottom Girts	Horizontals	Red. Horizontals	Red. Diagonals	Inner Bracing	Face Width (ft) 30.25	# Panels @ (ft)	Weight (K) 81.6		TORQUE 59 kip-ft REACTIONS - 120 mph WIND
100 100			2L3x3>				2L3x3x	2L2x2x	2L2x2x		28			<u>0.0 ft</u>	142 K SHEAR 119 K MOMENT 19706 kip-ft
Section Sect			x1/4x1/2				(3/16x1/2	(3/16x1/2	:3/16x1/2	21.2 1/2	ro.		9.1	20.0 ft	40 mph WIND - 1.0000 in ICE
## 14 10 10 10 10 10 10 10	TT3						21.2	2L1	2L1	3x2 1/2x3/16x1/2	26.75	3@ 9.6875	7.5	<u>40.0 ft</u>	272 K SHEAR MOMENT
## 1	$+ \mid$		2L3x3x3/16x1/				2 1/2x2 1/2x3/1.	3/4x1 3/4x3/1.	3/4x1 3/4x3/1s		25			<u>60.0 ft</u>	SHEAR: 63 K
Section Sect	SR 5		1/2				6x1/2	6x1/2	6x1/2		23.25		7.3	20.0 11	DOWN: 799 K
Section Sect	Ē		L4x4x5/16										970	80.0 ft	ALL REACTIONS
Second Column C	T10 SR 4 3/4		L4x4x1/4								40	9	6.7	100.0 ft	
Second S											19.75	-	100	120.0 ft	
Section Sect	1/2		L3 1/2x3 1/2x1.	,							81			140.0 ft	this structur
Substitution Subs	SR		/4	A529-50	N.A.	N.A.					16.25	6@6.3	6.2	160.0 ft	TIA/EIA-22 12. Tower mem 13. All structure is
Section Sect		1 1	L3x3x1/4								14.5	75	4.7		6. Topographic 7. Conservativ 8. Tower desig 9. Tower desig 10. All botted le
S	SR 4		L3x3x3/16									9	3.9	180.0 ft	2. Tower designs 3. Towers allows 4. Deflections a 5. Tower Risk C
Section Sect	SR 3 3						A.N.	N.A.	N.A.	A.N.		@ 6.40278	33	200.0 ft	A572-50
Section Sect			L2 1/2x2 1/2x3/16											220.0 ft	18' Typ. Omni/Whip. 3' Sidearm(s) 18' Typ. Omni/Whip.
Section Sect	3 1/4		ב								9.25	8 @ 4.82292	9	240.0 ft	Leg Mounted 6' Dist Leg Mounted 8' Dist 6' Std. Dish wiRado 8' Std. Dish wiRado
Section Sect	SR 3										7.5		22	260.0 ft	(4) 4" x 1" Typ. Flat I los Shield For 06" D los Shield For 08" D 18" Typ. OmniWhip
S	SS		1 3/4x1 3/4x3/16								5.75	8 @ 4	18		3' Sidearm(s) 18'' Typ. CmniWhip 3' Sidearm(s) (3) 12' Gate Mount((4) 4' x'' Typ. Flat F
S S S S S S S S S S			L1 1/2x1 1/2x3/16									.84375	1.7	280.0 ft	Leg Mounted 8 Disk 6' Std. Dish wiRado 8' Std. Dish wiRado 18' Typ. Omni/Wisp 3' Sideam/Wisp
S	SR 2 1/4										4	=	1.3	300.0 ft	(4) 4" x 1" Typ. Flat F (3) 12" Gate Mount(inclined Shield For 06" D loe Shield For 06" D
5 + 	SR13		SR 7/8	A572-50	SR 7/8	SR 7/8					4	@ 3.23611	77	320.0 ft	L-Lighting Beacon

TYPE	ELEVATION	TYPE	ELEVATION		
6' Lightning Rod	340	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	180		
L-Lighting Beacon	340	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	180		
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	340	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	180		
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	340	(3) 12' Gate Mount(s)	180		
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	340				
(3) 12' Gate Mount(s)	340	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	174		
Ice Shield For 06' Dish	335	2'x2' Ice Shield / Rest Platform	173		
Ice Shield For 08' Dish	335	2'x2' Ice Shield / Rest Platform	173		
Leg Mounted 6' Dish Mount Assembly	330	2'x2' Ice Shield / Rest Platform	173		
Leg Mounted 8' Dish Mount Assembly	330	L-Side Light / Obstruction Light	170		
6' Std. Dish w/Radome (EW63)	330	L-Side Light / Obstruction Light	170		
8' Std. Dish w/Radome (EW63)	330	L-Side Light / Obstruction Light	170		
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	322	Ice Shield For 08' Dish	168.33		
3' Sidearm(s)	322	Ice Shield For 06' Dish	168.33		
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	297.33	Leg Mounted 6' Dish Mount Assembly	163.33		
3' Sidearm(s)	297.33	Leg Mounted 8' Dish Mount Assembly	163.33		
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	272.67	6' Std. Dish w/Radome (EW63)	163.33		
3' Sidearm(s)	272.67	8' Std. Dish w/Radome (EW63)	163.33		
(3) 12' Gate Mount(s)	260	149.33			
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	260	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	149.33		
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	260	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	124.67		
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	260	3' Sidearm(s)	124.67		
Ice Shield For 06' Dish	251.67	3' Sidearm(s)	100		
Ice Shield For 08' Dish	251.67	(3) 12' Gate Mount(s)	100		
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	248	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100		
3' Sidearm(s)	248	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100		
Leg Mounted 6' Dish Mount Assembly	246.67	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100		
Leg Mounted 8' Dish Mount Assembly	246.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100		
6' Std. Dish w/Radome (EW63)	246.67	Ice Shield For 08' Dish	85		
8' Std. Dish w/Radome (EW63)	246.67	Ice Shield For 06' Dish	85		
3' Sidearm(s)	223.33	Leg Mounted 8' Dish Mount Assembly	80		
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	223.33	Leg Mounted 6' Dish Mount Assembly	80		
3' Sidearm(s)	198.67	6' Std. Dish w/Radome (EW63)	80		
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	198.67	8' Std. Dish w/Radome (EW63)	80		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu	
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi	

TOWER DESIGN NOTES

- TOWER DESIGN NOTES

 Tower designed for Exposure C to the TIA-222-H Standard.

 Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.

 Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.

 Deflections are based upon a 60 mph wind.

 Tower Risk Category III.

 Topographic Category 1 with Crest Height of 0.00 ft

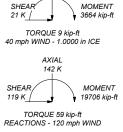
 Conservative ground elevation of 500' assumed.

 Tower designed for step bolts up all three legs.

 Tower designed for feedlines to be supported with waveguide ladder(s).

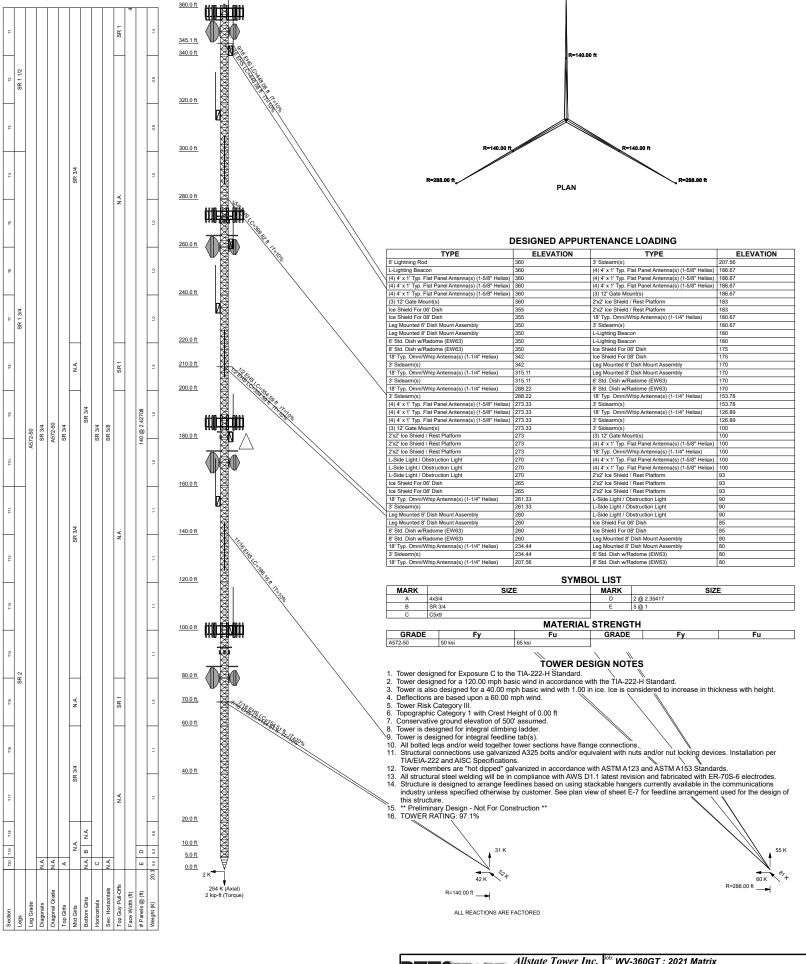
 All bolted leas and/or weld together tower sections have flance connections.

- Tower designed for feedlines to be supported with waveguide ladder(s).
 All bolted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure. this structure.
 5. TOWER RATING: 97.9%



PTTG Since 1919 ALLSTATE TOWER

^{b:} WV-340SS : 2	021 Matrix	
roject: As Req'd		
lient: State of WV.	Drawn by: Allstate Tower Inc.	App'd:
ode: TIA-222-H	Date: 05/14/21	Scale: NTS
ath:	•	Dwg No. ⊏_1





T3 T2 T1	SR3 SR23/4	2.13.50.63/16/12 L4AA65/16 L4AA65/16 L4AA65/16 L4AA414 L3.12A14 L3.63A14 L3.63A14 L3.63A16 L2.172.2.122.316 L1.3AA1.3AA3/16 L1.12A1.172 L3.23A16 L3.24A14 L3.63A174 L3.63A174 L3.24A174 L3	L2x2x3/16 L1 3/4x1 3/4x3/16 L1 1/2x1 1/2x3/16								5 7.5	8 @ 4.82292 8 @ 4.84375	1.8 1.7	300.0 ft 280.0 ft	
14	/4 SR 3 1/4									11 9.25	8@4	2.8	<u>240.0 ft</u>		
T6 T5	SR 3 3/4						A.S.	A.A.	A.A.	A.A.	12.75	6 @ 6.40278	3.9	220.0 ft	
17	SR 4									14.5	3.375	4.4	200.0 ft 180.0 ft		
20	SR 4 1/4		A572-	4529-50	N.A.	N.A.					16.25	6 @ 6.375	5.2	160.0 ft	
D 10	3/4 SR 4 1/2										19.75	3111	5.7	<u>140.0 ft</u>	
T11 T10	SR 4 3/4										21.5	9 @ 6.36111	80 6.7	<u>120.0 ft</u>	
T12	SR 5						/16x1/2	/16x1/2	/16x1/2		23.25		7.3	100.0 ft	
T13				2L3x3x3/16x				2L2 1/2x2 1/2x3/16x1/2	2L1 3/4x1 3/4x3/16x1/2	2L1 3/4x1 3/4x3/16x1/2	2x3/16x1/2	25		7.5	80.0 ft 60.0 ft
T14							2L3x3x3/16x1/2			2L2 1/2x2 1/2x3/16x1/2	.5 26.75	10 @ 9.6875	9.1	40.0 ft	
T15	SR 5 1/4		2L3x3x1/4x1/2					2L2x2x3/16x1/2	2L2x2x3/16x1/2	1/2	30.25 28.5		93	<u>20.0 ft</u>	
T16							2L3x3x1/4x1/2			2L3x3x3/16x1/2	32 3		1.1	<u>0.0 ft</u>	
Section	Legs	Leg Grade	Diagonals	Diagonal Grade	Top Girts	Bottom Girts	Horizontals	Red. Horizontals	Red. Diagonals	Inner Bracing	Face Width (ft) 3	# Panels @ (ft)	Weight (K) 91.		

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	360	3' Sidearm(s)	207.56
L-Lighting Beacon	360	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	186.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	360	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	186.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	360	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	186.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	360	(3) 12' Gate Mount(s)	186.67
(3) 12' Gate Mount(s)	360	2'x2' Ice Shield / Rest Platform	183
Ice Shield For 06' Dish	355	2'x2' Ice Shield / Rest Platform	183
Ice Shield For 08' Dish	355	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	180.67
Leg Mounted 6' Dish Mount Assembly	350	3' Sidearm(s)	180.67
Leg Mounted 8' Dish Mount Assembly	350	L-Lighting Beacon	180
6' Std. Dish w/Radome (EW63)	350	L-Lighting Beacon	180
8' Std. Dish w/Radome (EW63)	350	Ice Shield For 06' Dish	175
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	342	Ice Shield For 08' Dish	175
3' Sidearm(s)	342	Leg Mounted 6' Dish Mount Assembly	170
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	315.11	Leg Mounted 8' Dish Mount Assembly	170
3' Sidearm(s)	315.11	6' Std. Dish w/Radome (EW63)	170
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	288.22	8' Std. Dish w/Radome (EW63)	170
3' Sidearm(s)	288.22	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	153.78
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	273.33	3' Sidearm(s)	153.78
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	273.33	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	126.89
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	273.33	3' Sidearm(s)	126.89
(3) 12' Gate Mount(s)	273.33	3' Sidearm(s)	100
2'x2' Ice Shield / Rest Platform	273	(3) 12' Gate Mount(s)	100
2'x2' Ice Shield / Rest Platform	273	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
2'x2' Ice Shield / Rest Platform	273	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
L-Side Light / Obstruction Light	270	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
L-Side Light / Obstruction Light	270	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
L-Side Light / Obstruction Light	270	2'x2' Ice Shield / Rest Platform	93
Ice Shield For 06' Dish	265	2'x2' Ice Shield / Rest Platform	93
Ice Shield For 08' Dish	265	2'x2' Ice Shield / Rest Platform	93
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	261.33	L-Side Light / Obstruction Light	90
3' Sidearm(s)	261.33	L-Side Light / Obstruction Light	90
Leg Mounted 6' Dish Mount Assembly	260	L-Side Light / Obstruction Light	90
Leg Mounted 8' Dish Mount Assembly	260	Ice Shield For 06' Dish	85
6' Std. Dish w/Radome (EW63)	260	Ice Shield For 08' Dish	85
8' Std. Dish w/Radome (EW63)	260	Leg Mounted 8' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	234.44	Leg Mounted 6' Dish Mount Assembly	80
3' Sidearm(s)	234.44	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	207.56	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

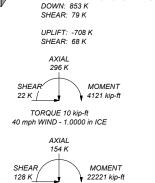
TOWER DESIGN NOTES

- Tower designed for Exposure C to the TIA-222-H Standard.
- Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.

 Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.

 Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.

- Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 Deflections are based upon a 60 mph wind.
 Tower Risk Category III.
 Topographic Category 1 with Crest Height of 0.00 ft
 Conservative ground elevation of 500' assumed.
 Tower designed for step bolts up all three legs.
 Tower designed for feedlines to be supported with waveguide ladder(s).
 All bolted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure.
- this structure.
 15. TOWER RATING: 99%



TORQUE 65 kip-ft REACTIONS - 120 mph WIND

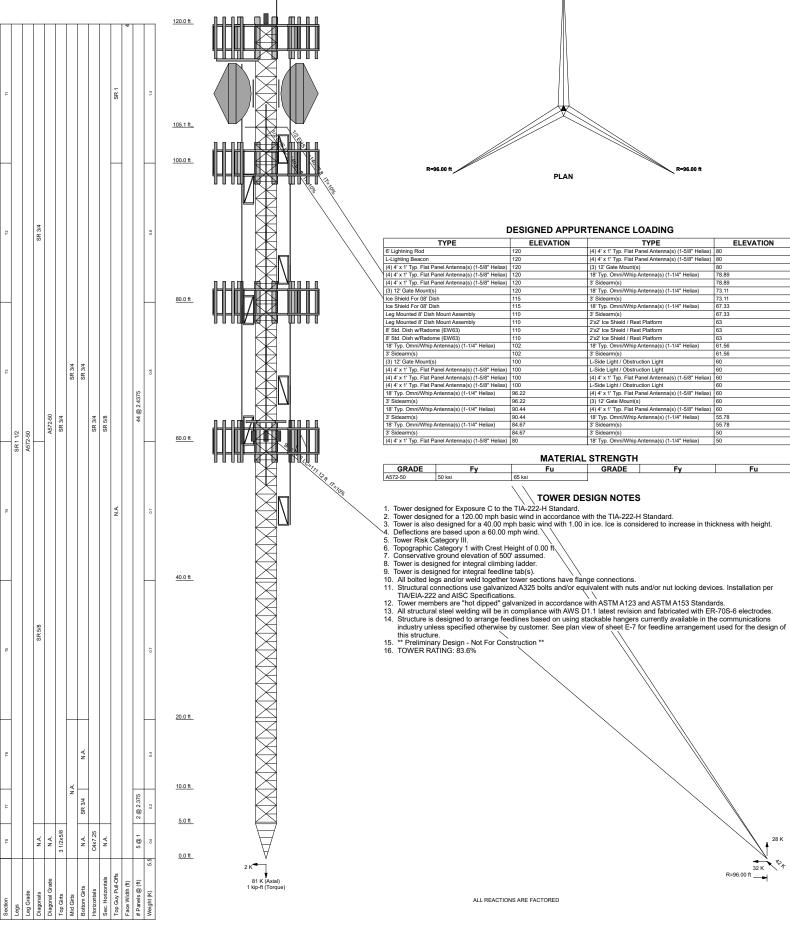
MAX. CORNER REACTIONS AT BASE:

ALL REACTIONS ARE FACTORED

 \triangle

PTTG **ALLSTATE TOWER**

Job: WV-360SS : 2	ob: WV-360SS : 2021 Matrix						
Project: As Req'd							
Client: State of WV.	Drawn by: Allstate Tower Inc.	App'd:					
Code: TIA-222-H	Date: 05/14/21	Scale: NTS					
Path:	•	Dwg No. ⊏_1					



Section	74	£1	Zi.	Ţ	z	ы
regs	SR 3 1/2	ls	SR3	SR 23/4	SR 2 1/4	SR 1 3/4
Leg Grade			A572-50	-50		
Diagonals	L2 1/2x2 1/2x3/16		L2x2x3/16		SR 1	SR 7/8
Diagonal Grade		A52	A529-50		A572-50	5-50
Top Girts		Z	N.A.		SR 1	SR 7/8
Bottom Girts		Z	N.A.		SR 1	SR 7/8
Face Width (ft) 12.5	10.5	8.5	9.9	4.5	4.5	2
# Panels @ (ft)	3 @ 6.40278	8 @ 8	8 @ 4.82292	4 @ 4.84375	12 @ 3.23611	.23611
Weight (K) 11.7	2.9	2.3	22	1.8	1.5	4.0
<u>0.0 ft</u>		20.0 ft	40.0 ft	60.0 ft	80.0 ft	120.0 ft



TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	120	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	80
L-Lighting Beacon	120	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	80
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	120	(3) 12' Gate Mount(s)	80
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	120	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	78.89
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	120	3' Sidearm(s)	78.89
(3) 12' Gate Mount(s)	120	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	73.11
Ice Shield For 08' Dish	115	3' Sidearm(s)	73.11
Ice Shield For 08' Dish	115	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	67.33
Leg Mounted 8' Dish Mount Assembly	110	3' Sidearm(s)	67.33
Leg Mounted 8' Dish Mount Assembly	110	2'x2' Ice Shield / Rest Platform	63
8' Std. Dish w/Radome (EW63)	110	2'x2' Ice Shield / Rest Platform	63
8' Std. Dish w/Radome (EW63)	110	2'x2' Ice Shield / Rest Platform	63
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	102	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	61.56
3' Sidearm(s)	102	3' Sidearm(s)	61.56
(3) 12' Gate Mount(s)	100	L-Side Light / Obstruction Light	60
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100	L-Side Light / Obstruction Light	60
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	60
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100	L-Side Light / Obstruction Light	60
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	96.22	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	60
3' Sidearm(s)	96.22	(3) 12' Gate Mount(s)	60
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	90.44	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	60
3' Sidearm(s)	90.44	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	55.78
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	84.67	3' Sidearm(s)	55.78
3' Sidearm(s)	84.67	3' Sidearm(s)	50
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	80	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	50

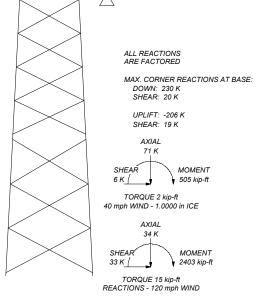
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

TOWER DESIGN NOTES

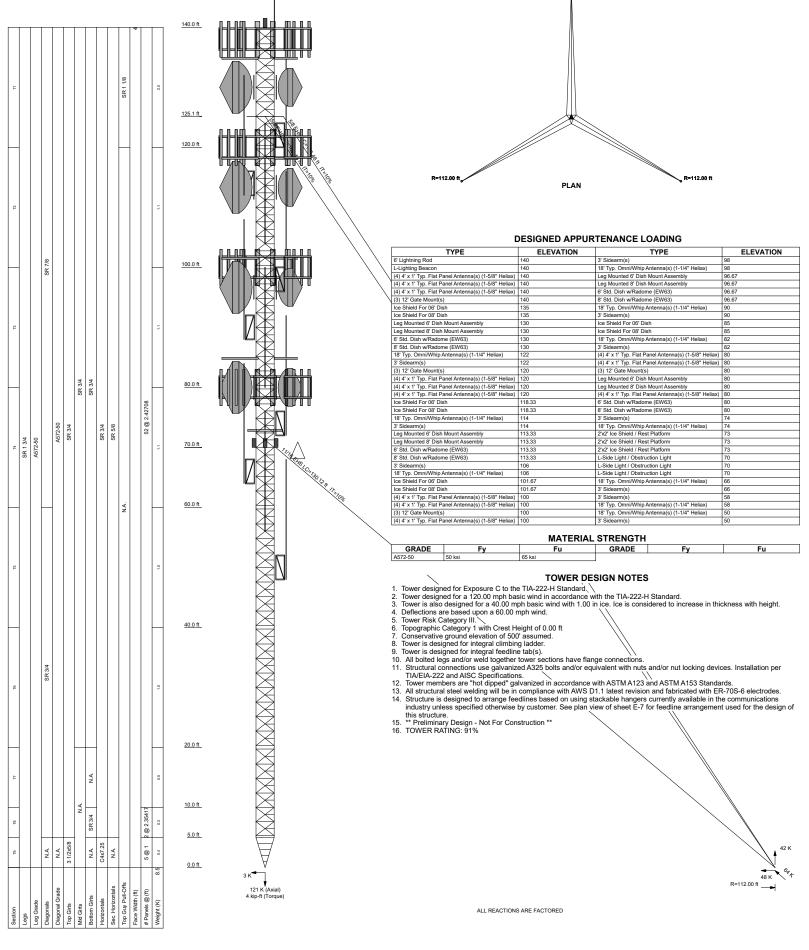
- Tower designed for Exposure C to the TIA-222-H Standard.

- 1. Tower designed for Exposure C to the TIA-222-H Standard.
 2. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
 3. Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 4. Deflections are based upon a 60 mph wind.
 5. Tower Risk Category III.
 6. Topographic Category 1 with Crest Height of 0.00 ft
 7. Conservative ground elevation of 500' assumed.
 8. Tower designed for step bolts up all three legs.
 9. Tower designed for feedlines to be supported with waveguide ladder(s).
 10. All bolted legs and/or weld together tower sections have flange connections.
 11. Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 12. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 13. All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 14. Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure.



PTTG **ALLSTATE TOWER**

lob: WV-120SS : 2	^{bb:} WV-120SS : 2021 Matrix						
Project: As Req'd							
Client: State of WV.	Drawn by: Allstate Tower Inc.	App'd:					
Code: TIA-222-H	Date: 05/14/21	Scale: NTS					
Path:		Dwg No. ⊏ 4					

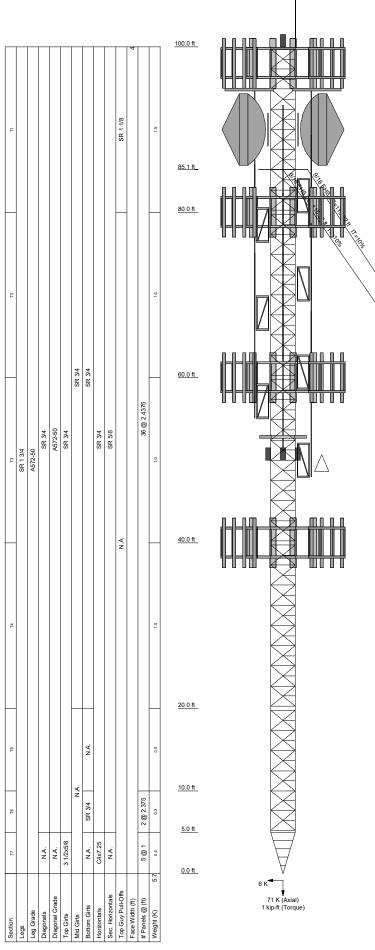


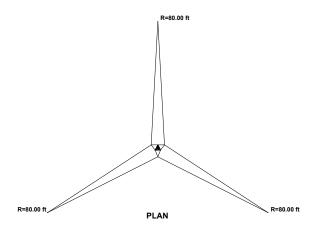
PTTG Since 1919
ALLSTATE TOWER

Allstate Tower Inc. P.O. Box 25 Henderson, KY. 42419 Phone: (270) 830 - 8512 FAX: (270) 228 - 4551

R=112.00 ft

^{оь:} WV-140GT : 2021 Matrix						
Project: As Req'd						
	Alistate Tower IIIc.	App'd:				
Code: TIA-222-H		Scale: NTS				
Path:		Dwg No. E-1				





TYPE	ELEVATION	TYPE	ELEVATION	
6' Lightning Rod	100	3' Sidearm(s)	67.78	
L-Lighting Reacon	100	18' Typ. Omni/Whip Antenna(s) (1-1/4"	64.22	
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8"	100	Heliax)	04.22	
Heliax)	100	3' Sidearm(s)	64.22	
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	60.67	
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8"	100	3' Sidearm(s)	60.67	
Heliax)		(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8"	60	
(3) 12' Gate Mount(s)	100	Heliax)		
Ice Shield For 08' Dish	95	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8"	60	
Ice Shield For 08' Dish	95	Heliax)		
Leg Mounted 8' Dish Mount Assembly	90	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	60	
Leg Mounted 8' Dish Mount Assembly	90			
8' Std. Dish w/Radome (EW63)	90	(3) 12' Gate Mount(s)	60	
8' Std. Dish w/Radome (EW63)	90	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	57.11	
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	82	3' Sidearm(s)	57.11	
3' Sidearm(s)	82	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	53.56	
(3) 12' Gate Mount(s)	80	3' Sidearm(s)	53.56	
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	80	2'x2' Ice Shield / Rest Platform	53	
,		2'x2' Ice Shield / Rest Platform	53	
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	80	2'x2' Ice Shield / Rest Platform	53	
(4) 4' x 1' Tvp. Flat Panel Antenna(s) (1-5/8"	80	L-Side Light / Obstruction Light	50	
Heliax)	-	L-Side Light / Obstruction Light	50	
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	78.44	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	50	
3' Sidearm(s)	78.44	3' Sidearm(s)	50	
18' Typ. Omni/Whip Antenna(s) (1-1/4"	74.89	L-Side Light / Obstruction Light	50	
Heliax)		(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8"	40	
3' Sidearm(s)	74.89	Heliax)		
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	71.33	(3) 12' Gate Mount(s)	40	
3' Sidearm(s)	71.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	40	
3 Sidearm(s) 18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	67.78	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	40	

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi			

TOWER DESIGN NOTES

- Tower designed for Exposure C to the TIA-222-H Standard.
 Tower designed for a 120.00 mph basic wind in accordance with the TIA-222-H Standard.
- Tower is also designed for a 40.00 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness
- with height.

 Deflections are based upon a 60.00 mph wind.
- Tower is designed for integral feedline tab(s).

 Tower is designed for integral feedline tab(s).

 Tower is designed for integral feedline tab(s).

- All bolted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications. Installation per TIA/EIA-222 and AISC Specifications.

 12. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.

 13. All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6
- 14. Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure.

 15. ** Preliminary Design Not For Construction **

 16. TOWER RATING: 89.7%

R=80.00 ft _

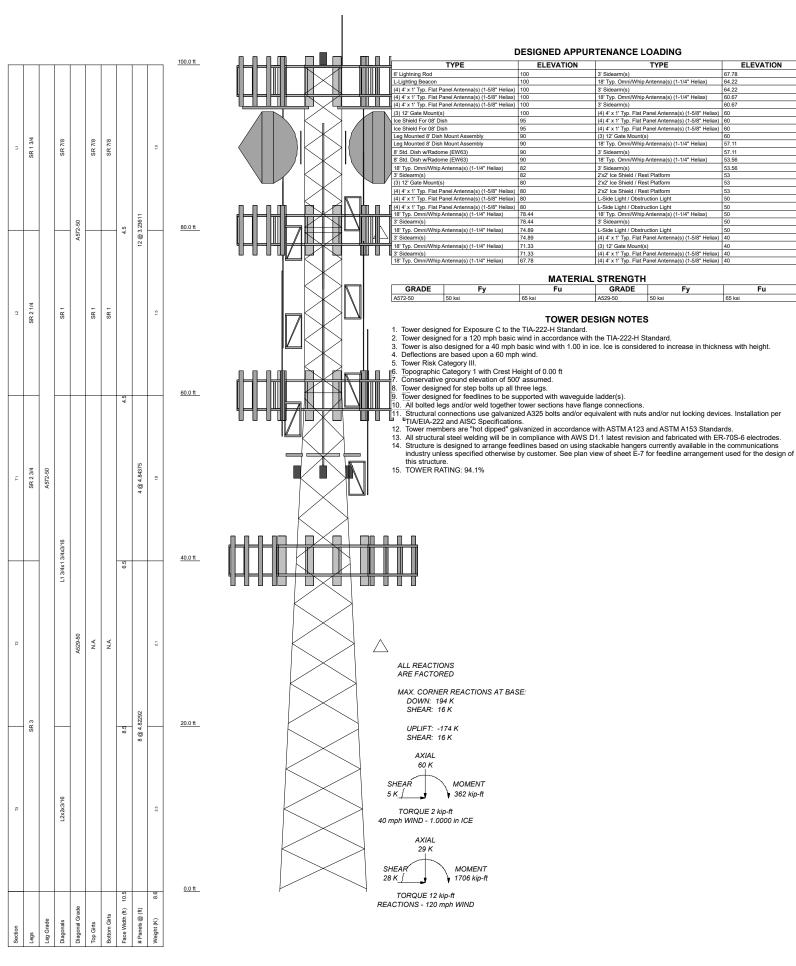
ALL REACTIONS ARE FACTORED



Allstate Tower Inc. P.O. Box 25 Henderson, KY. 42419 Phone: (270) 830 - 8512

FAX: (270) 228 - 4551

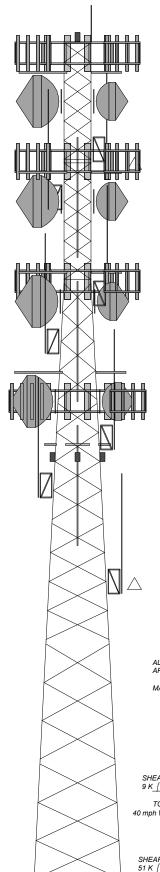
^{Job:} WV-100GT : 2	021 Matrix	
Project: As Req'd		
Client: State of WV	Drawn by: Allstate Tower Inc.	App'd:
Code: TIA-222-H	Date: 05/13/21	Scale: NTS
Path:		Dwg No. F_1



PTTG Since 1913
ALLSTATE TOWER

ob: WV-100SS : 202	21 Matrix	
Project: As Req'd		
	Alistate Tower IIIc.	App'd:
Code: TIA-222-H		Scale: NTS
Path:		Dwg No. E-

Section	15	14	£	잗	ц	71	5
Legs	żs	SR 4	SR 3 1/2	SR 3 1/4	SR3	SR21/4	SR 1 3/4
Leg Grade				A572-50			
Diagonals	L3x3x3/16	L2 1/2x2	L2 1/2x2 1/2x3/16		L2x2x3/16	SR1	SR 7/8
Diagonal Grade			A529-50			A57	A572-50
Top Girts			A,A,			SR1	SR 7/8
Bottom Girts			A, A.			SR1	SR 7/8
Face Width (ft) 14.5	12.5	10.5		8.5	4.5		4.5
# Panels @ (ft)	9@9	6 @ 6.40278	8	8 @ 4.82292	4 @ 4.84375	12 @ 3	12 @ 3.23611
Weight (K) 17.5	3.9	90	3.0	2.4	2.1	1.6	4.0
	0.0 ft	20.0 ft	<u>40.0 ft</u>	60.0 ft	80.0 ft	100.0 ft	<u>120.0 ft</u>



TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	140	3' Sidearm(s)	98
L-Lighting Beacon	140	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	98
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	140	Leg Mounted 6' Dish Mount Assembly	96.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	140	Leg Mounted 8' Dish Mount Assembly	96.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	140	6' Std. Dish w/Radome (EW63)	96.67
(3) 12' Gate Mount(s)	140	8' Std. Dish w/Radome (EW63)	96.67
Ice Shield For 06' Dish	135	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	90
Ice Shield For 08' Dish	135	3' Sidearm(s)	90
Leg Mounted 6' Dish Mount Assembly	130	Ice Shield For 06' Dish	85
Leg Mounted 8' Dish Mount Assembly	130	Ice Shield For 08' Dish	85
6' Std. Dish w/Radome (EW63)	130	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	82
8' Std. Dish w/Radome (EW63)	130	3' Sidearm(s)	82
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	122	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	80
3' Sidearm(s)	122	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	80
(3) 12' Gate Mount(s)	120	(3) 12' Gate Mount(s)	80
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	120	Leg Mounted 6' Dish Mount Assembly	80
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	120	Leg Mounted 8' Dish Mount Assembly	80
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	120	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	80
Ice Shield For 06' Dish	118.33	6' Std. Dish w/Radome (EW63)	80
Ice Shield For 08' Dish	118.33	8' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	114	3' Sidearm(s)	74
3' Sidearm(s)	114	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	74
Leg Mounted 6' Dish Mount Assembly	113.33	2'x2' Ice Shield / Rest Platform	73
Leg Mounted 8' Dish Mount Assembly	113.33	2'x2' Ice Shield / Rest Platform	73
6' Std. Dish w/Radome (EW63)	113.33	2'x2' Ice Shield / Rest Platform	73
8' Std. Dish w/Radome (EW63)	113.33	L-Side Light / Obstruction Light	70
3' Sidearm(s)	106	L-Side Light / Obstruction Light	70
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	106	L-Side Light / Obstruction Light	70
Ice Shield For 06' Dish	101.67	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	66
Ice Shield For 08' Dish	101.67	3' Sidearm(s)	66
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100	3' Sidearm(s)	58
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	58
(3) 12' Gate Mount(s)	100	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	50
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100	3' Sidearm(s)	50

MATERIAL STRENGTH

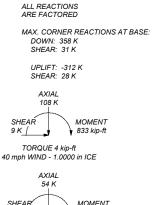
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

TOWER DESIGN NOTES

- Tower designed for Exposure C to the TIA-222-H Standard.
 Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
 Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 Deflections are based upon a 60 mph wind.

- Detlections are based upon a 60 mpn wind.
 Tower Risk Category III.
 Topographic Category 1 with Crest Height of 0.00 ft
 Conservative ground elevation of 500° assumed.
 Tower designed for step bolts up all three legs.
 Tower designed for feedlines to be supported with waveguide ladder(s).

- Tower designed for feedlines to be supported with waveguide ladder(s).
 All botted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure. this structure.
 15. TOWER RATING: 97.4%

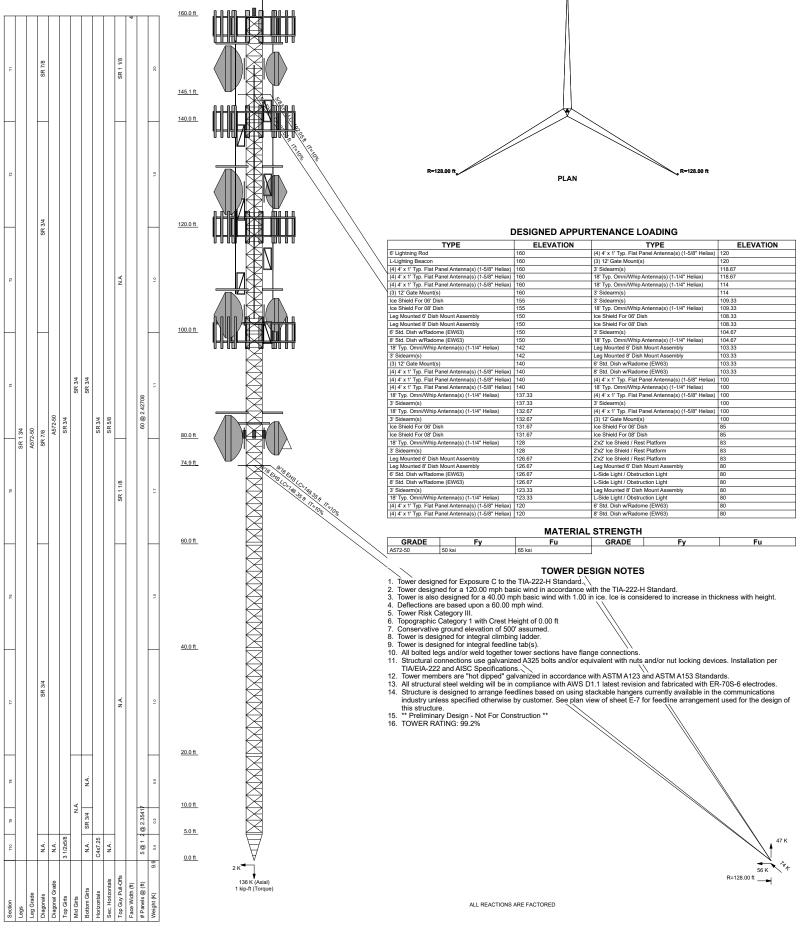


TORQUE 27 kip-ft REACTIONS - 120 mph WIND

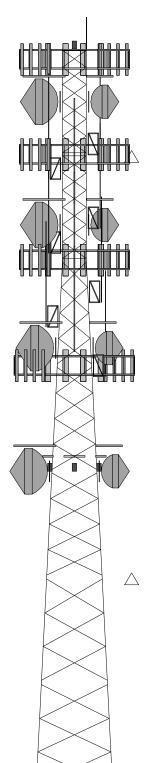
PTTG **ALLSTATE TOWER**

4345 kip-ft

^{ob:} WV-140SS : 2	021 Matrix	
Project: As Req'd		
Client: State of WV.	Drawn by: Allstate Tower Inc.	App'd:
Code: TIA-222-H	Date: 05/14/21	Scale: NTS
Path:	•	Dwg No. F_



Section	16	15	41	£T.	22.	£	71	5
Legs	SR 4 1/4	SR 4	4	SR 3 1/2	SR 3 1/4	SR 3	SR2 1/4	SR 1 3/4
Leg Grade				A57	A572-50			
Diagonals	L3x3x1/4	L3x3x3/16	3/16	L2 1/2X2	L2 1/2x2 1/2x3/16	L2x2x3/16	SR1	SR 7/8
Diagonal Grade			A5:	A529-50			A57.	A572-50
Top Girts			2	Z.A.			SR1	SR 7/8
Bottom Girts			2	Z.A.			SR1	SR 7/8
Face Width (ft) 16.5	14.5	12.5	10.5	8.5	6.5	4.5		4.5
# Panels @ (ft)	3 @ 6.375	6 @ 6.40278	40278	7@8	8 @ 4.82292	4 @ 4.84375	12 @ 3	12 @ 3.23611
Weight (K) 22.5	4.7	68	3.7	3.0	2.6	2.1	1.5	01
<u>0.0 ft</u>		20.0 ft	40.0 ft	60.0 ft	80.0 ft	100.0 ft	<u>120.0 ft</u>	140.0 ft_



TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	160	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	120
L-Lighting Beacon	160	(3) 12' Gate Mount(s)	120
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	160	3' Sidearm(s)	118.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	160	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	118.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	160	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	114
(3) 12' Gate Mount(s)	160	3' Sidearm(s)	114
Ice Shield For 06' Dish	155	3' Sidearm(s)	109.33
Ice Shield For 08' Dish	155	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	109.33
Leg Mounted 6' Dish Mount Assembly	150	Ice Shield For 06' Dish	108.33
Leg Mounted 8' Dish Mount Assembly	150	Ice Shield For 08' Dish	108.33
6' Std. Dish w/Radome (EW63)	150	3' Sidearm(s)	104.67
8' Std. Dish w/Radome (EW63)	150	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	104.67
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	142	Leg Mounted 6' Dish Mount Assembly	103.33
3' Sidearm(s)	142	Leg Mounted 8' Dish Mount Assembly	103.33
(3) 12' Gate Mount(s)	140	6' Std. Dish w/Radome (EW63)	103.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	140	8' Std. Dish w/Radome (EW63)	103.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	140	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	140	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	137.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
3' Sidearm(s)	137.33	3' Sidearm(s)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	132.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
3' Sidearm(s)	132.67	(3) 12' Gate Mount(s)	100
Ice Shield For 06' Dish	131.67	Ice Shield For 06' Dish	85
Ice Shield For 08' Dish	131.67	Ice Shield For 08' Dish	85
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	128	2'x2' Ice Shield / Rest Platform	83
3' Sidearm(s)	128	2'x2' Ice Shield / Rest Platform	83
Leg Mounted 6' Dish Mount Assembly	126.67	2'x2' Ice Shield / Rest Platform	83
Leg Mounted 8' Dish Mount Assembly	126.67	Leg Mounted 6' Dish Mount Assembly	80
6' Std. Dish w/Radome (EW63)	126.67	L-Side Light / Obstruction Light	80
8' Std. Dish w/Radome (EW63)	126.67	L-Side Light / Obstruction Light	80
3' Sidearm(s)	123.33	Leg Mounted 8' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	123.33	L-Side Light / Obstruction Light	80
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	120	6' Std. Dish w/Radome (EW63)	80
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	120	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

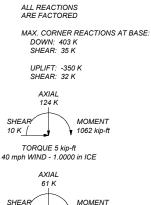
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

TOWER DESIGN NOTES

- Tower designed for Exposure C to the TIA-222-H Standard.
 Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
 Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 Deflections are based upon a 60 mph wind.

- Detlections are based upon a 60 mpn wind.
 Tower Risk Category III.
 Topographic Category 1 with Crest Height of 0.00 ft
 Conservative ground elevation of 500° assumed.
 Tower designed for step bolts up all three legs.
 Tower designed for feedlines to be supported with waveguide ladder(s).

- Tower designed for feedlines to be supported with waveguide ladder(s).
 All bolted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure. this structure.
 15. TOWER RATING: 97.6%



5573 kip-ft

TORQUE 28 kip-ft REACTIONS - 120 mph WIND

59 K

PTTG **ALLSTATE TOWER**

^{ob:} WV-160SS : 2	021 Matrix	
Project: As Req'd		
Client: State of WV.	Drawn by: Allstate Tower Inc.	App'd:
Code: TIA-222-H	Date: 05/14/21	Scale: NTS
Path:	•	Dwg No. ⊏_

Section	11	16	T6	14	T3	12	F	77	5
regs	SR 4 1/2	SR 4 1/4	s	SR 4	SRS	SR 3 1/4	SR 2 3/4	SR 2 1/4	SR 1 3/4
Leg Grade					A572-50				
Diagonals	L3 1/2x3 1/2x1/4	L3x3x1/4	L3X;	L3x3x3/16	L2 1/2x2 1/2x3/16	15/2	L2x2x3/16	SR 1	SR 7/8
Diagonal Grade				A529-50				A57	A572-50
Top Girts				N.A.				SR 1	SR 7/8
Bottom Girts				N.A.				SR 1	SR 7/8
Face Width (ft) 18	16		4	10	8		4	4	
# Panels @ (ft)	9	6 @ 6.375	9@9	3.40278	8 @ 4.82292	82292	4 @ 4.84375	12 @ 3.23611	.23611
Weight (K) 27.1	979	4.7	3.8	3.7	2.7	2.4	1.8	1.4	1,0
_	<u>0.0 ft</u>	<u>20.0 ft</u>	<u>40.0 ft</u>	<u>60.0 ft</u>	80.0 ft	100.0 ft	120.0 ft	140.0 ft	180.0 ft

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	180	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	126.67
L-Lighting Beacon	180	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	126.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	180	(3) 12' Gate Mount(s)	126.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	180	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	126.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	180	3' Sidearm(s)	120.67
(3) 12' Gate Mount(s)	180	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	120.67
Ice Shield For 06' Dish	175	Ice Shield For 06' Dish	115
Ice Shield For 08' Dish	175	Ice Shield For 08' Dish	115
Leg Mounted 6' Dish Mount Assembly	170	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	113.78
Leg Mounted 8' Dish Mount Assembly	170	3' Sidearm(s)	113.78
6' Std. Dish w/Radome (EW63)	170	Leg Mounted 6' Dish Mount Assembly	110
8' Std. Dish w/Radome (EW63)	170	Leg Mounted 8' Dish Mount Assembly	110
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	162	6' Std. Dish w/Radome (EW63)	110
3' Sidearm(s)	162	8' Std. Dish w/Radome (EW63)	110
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	155.11	3' Sidearm(s)	106.89
3' Sidearm(s)	155.11	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	106.89
(3) 12' Gate Mount(s)	153.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	153.33	3' Sidearm(s)	100
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	153.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	153.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	148.22	(3) 12' Gate Mount(s)	100
3' Sidearm(s)	148.22	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
Ice Shield For 06' Dish	145	2'x2' Ice Shield / Rest Platform	93
Ice Shield For 08' Dish	145	2'x2' Ice Shield / Rest Platform	93
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	141.33	2'x2' Ice Shield / Rest Platform	93
3' Sidearm(s)	141.33	L-Side Light / Obstruction Light	90
Leg Mounted 6' Dish Mount Assembly	140	L-Side Light / Obstruction Light	90
Leg Mounted 8' Dish Mount Assembly	140	L-Side Light / Obstruction Light	90
6' Std. Dish w/Radome (EW63)	140	Ice Shield For 08' Dish	85
8' Std. Dish w/Radome (EW63)	140	Ice Shield For 06' Dish	85
3' Sidearm(s)	134.44	Leg Mounted 8' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	134.44	Leg Mounted 6' Dish Mount Assembly	80
3' Sidearm(s)	127.56	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	127.56	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

TOWER DESIGN NOTES

- TOWER DESIGN NOTES

 Tower designed for Exposure C to the TIA-222-H Standard.

 Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.

 Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.

 Deflections are based upon a 60 mph wind.

 Tower Risk Category III.

 Topographic Category 1 with Crest Height of 0.00 ft.

 Conservative ground elevation of 500' assumed.

 Tower designed for step bolts up all three legs.

 Tower designed for feedlines to be supported with waveguide ladder(s).

 O. All bolted leas and/or weld together tower sections have flance connections.

- Tower designed for feedlines to be supported with waveguide ladder(s).
 All botted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure. this structure.
 15. TOWER RATING: 98.3%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE: DOWN: 435 K SHEAR: 39 K

UPLIFT: -376 K SHEAR: 35 K

AXIAL 136 K MOMENT 1240 kip-ft

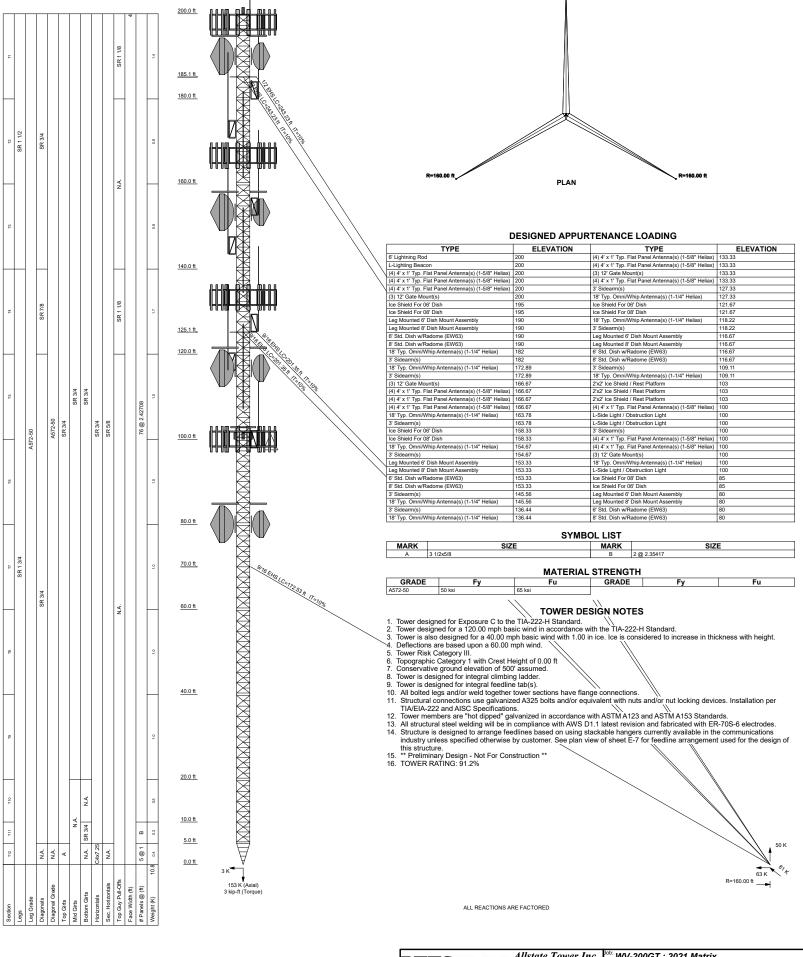
TORQUE 5 kip-ft 40 mph WIND - 1.0000 in ICE

AXIAL 68 K SHEAR MOMENT 64 K / 6523 kip-ft

TORQUE 28 kip-ft REACTIONS - 120 mph WIND

> PTTG **ALLSTATE TOWER**

^{b:} WV-180SS : 20	21 Matrix	
roject: As Req'd		
lient: State of WV.	Drawn by: Allstate Tower Inc.	App'd:
ode: TIA-222-H	Date: 05/14/21	Scale: NTS
ath:		Dwg No. E-1



Allstate Tower Inc. WV-200GT : 2021 Matrix PTTG P.O. Box 25 ject: As Req'd Client: State of WV Drawn by: Allstate Tower Inc. **ALLSTATE TOWER** App'd Henderson, KY, 42419 Scale: NTS ode: TIA-222-H Date: 05/13/21 Phone: (270) 830 - 8512 Dwg No. E-1 FAX: (270) 228 - 4551

										240.0 ft	<u> </u>			
17	SR 1 1/2		8/2	5-50	8/2	8/2		@ 3.23611	80	220.0 ft_	TYPI 6 Lightning Rod L-Lighting Beacon (4) 4' x 1' Typ. Flat Panel And (4) 4' x 1' Typ. Flat Panel And (4) 4' x 1' Typ. Flat Panel And			
ה	SR 2 1/4		SR 7/8	A572-50	SR 7/8	SR 7/8	4	12 @ 3.	13		(3) 12 Gate Mount(s) Los Shield For 06 Dish Los Shield For 08 Dish Los Shield For 08 Dish Log Mounted 6' Dish Mount. Leg Mounted 6' Dish Mount. For Stid. Dish WRadome (EW) For Stid. Dish WRadome (EW)			
T1	SR 23/4		L1 3/4x1 3/4x3/16						4		1.7	200.0 ft	16" Typ. Omni/Whip Antenna 3" Sidearm(s) 16" Typ. Omni/Whip Antenna 3" Sidearm(s) 18" Typ. Omni/Whip Antenna 3" Sidearm(s) 18" Typ. Omni/Whip Antenna 3" Sidearm(s) (3) 12" Gallet Mount(s) (4) 4" x" Typ. Flat Panel Ant (4) 4" x" Typ. Flat Panel Ant (4) 4" x" Typ. Flat Panel Ant	
72	SR 3										5.75	8 @ 4.84375	21	<u>180.0 ft</u>
13	SR 3 1/4		L2x2x3/16				7.5		25	<u>160.0 ft</u>	3 Sidearm(s) 18 Typ. Omni/Whip Antenna 3 Sidearm(s) 18 Typ. Omni/Whip Antenna GRADE			
	3 1/2		1/2x3/16						9.25	8 @ 4.82292		<u>140.0 ft</u>	1. Tower designed for 2. Tower designed for 3. Tower is also designed for 4. Deflections are bas	
14	SR 3	A572-50	L2 1/2x2 1/2x3/16						-		3.1	<u>120.0 ft</u>	5. Tower Risk Catego 6. Topographic Catego 7. Conservative grour 8. Tower designed for 9. Tower designed for 10. All bolted legs and 11. Structural connec	
16	SR 4		L3x3x3/16	A529-50	N.A.	Ä.Ä.	12.75	6 @ 6.40278	38	<u>100.0 ft</u>	TIA/EIA-222 and J 12. Tower members a 13. All structural steel 14. Structure is desig industry unless sy this structure. 15. TOWER RATING			
T6	SR 4 1/4		L3x3x1/4									4.6	80.0 ft	
177	SR		L3 1/2x3 1/2x1/4							16.25	.375	375	09	
TS	SR 4 1/2						16.25	16.25	16.25			6@ 6.37	60.0 ft	ALL REACTIONS ARE FACTORED MAX. CORNER REACTIONS AT BAS DOWN: 577 K SHEAR: 49 K UPLIFT: -495 K
Т9	SR 4 3/4						18		6.1	<u>40.0 ft</u>	SHEAR: 45 K AXIAL 178 K SHEAR MOMENT			
	5		1/4				19.75	6 @ 6.36111		<u>20.0 ft</u>	14 K 1939 kip-ft TORQUE 6 kip-ft 40 mph WIND - 1.0000 in ICE AXIAL 91 K			
110	SR		L4x4x1/4				21.5		43.7	0.0 ft	SHEAR MOMENT 82 K 10182 kip-ft TORQUE 38 kip-ft REACTIONS - 120 mph WIND			
Section	Legs	Leg Grade	Diagonals	Diagonal Grade	Top Girts	Bottom Girts	Face Width (ft)	# Panels @ (ft)	Weight (K)		NENOTIONS - 120 mpii vinu			

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	240	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	146.67
L-Lighting Beacon	240	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	146.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	240	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	146.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	240	(3) 12' Gate Mount(s)	146.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	240	3' Sidearm(s)	140.67
(3) 12' Gate Mount(s)	240	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	140.67
Ice Shield For 06' Dish	235	Ice Shield For 06' Dish	135
Ice Shield For 08' Dish	235	Ice Shield For 08' Dish	135
Leg Mounted 6' Dish Mount Assembly	230	Leg Mounted 6' Dish Mount Assembly	130
Leg Mounted 8' Dish Mount Assembly	230	Leg Mounted 8' Dish Mount Assembly	130
6' Std. Dish w/Radome (EW63)	230	6' Std. Dish w/Radome (EW63)	130
8' Std. Dish w/Radome (EW63)	230	8' Std. Dish w/Radome (EW63)	130
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	222	3' Sidearm(s)	127.11
3' Sidearm(s)	222	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	127.11
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	208.44	2'x2' Ice Shield / Rest Platform	123
3' Sidearm(s)	208.44	2'x2' Ice Shield / Rest Platform	123
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	194.89	2'x2' Ice Shield / Rest Platform	123
3' Sidearm(s)	194.89	L-Side Light / Obstruction Light	120
(3) 12' Gate Mount(s)	193.33	L-Side Light / Obstruction Light	120
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	193.33	L-Side Light / Obstruction Light	120
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	193.33	3' Sidearm(s)	113.56
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	193.33	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	113.56
Ice Shield For 06' Dish	185	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
Ice Shield For 08' Dish	185	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	181.33	(3) 12' Gate Mount(s)	100
3' Sidearm(s)	181.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
Leg Mounted 6' Dish Mount Assembly	180	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
Leg Mounted 8' Dish Mount Assembly	180	3' Sidearm(s)	100
6' Std. Dish w/Radome (EW63)	180	Ice Shield For 08' Dish	85
8' Std. Dish w/Radome (EW63)	180	Ice Shield For 06' Dish	85
3' Sidearm(s)	167.78	Leg Mounted 6' Dish Mount Assembly	80
18" Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	167.78	Leg Mounted 8' Dish Mount Assembly	80
3' Sidearm(s)	154.22	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	154.22	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

TOWER DESIGN NOTES

- TOWER DESIGN NOTES

 or Exposure C to the TIA-222-H Standard.

 or a 120 mph basic wind in accordance with the TIA-222-H Standard.

 gned for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height. sed upon a 60 mph wind.

 soy III.

 gory 1 with Crest Height of 0.00 ft ind elevation of 500' assumed.

 or step bolts up all three legs.

 r feedlines to be supported with waveguide ladder(s).

 adjor weld together lower sections have flance connections.

- r feedlines to be supported with waveguide ladder(s).
 (d/or weld together tower sections have flange connections.
 tions use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per
 AISC Specifications.
 are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 It welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Interest page feedlines based on using stackable hangers currently available in the communications
 pecified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of
- 98.5%

PTTG Since 1919
ALLSTATE TOWER

b: WV-240SS : 2021 Matrix								
Project: As Req'd								
Client: State of WV.	Alistate Tower IIIc.	App'd:						
Code: TIA-222-H		Scale: NTS						
Path:	number of St. Continue States Continue & Environmentally Designs, 2011. PT-000795845 Supporting States (W-2005).	Dwg No. E-1						

										260.0 ft	0.000 0.00 00.00																															
5	SR 1 3/4		8	09	8	8		3611	0.1		TYPE 6 Lightning Red Lightning Beacon (4) 4' x' x' Typ. Flat Panel Anteru																															
71	SR 2 1/4		SR 7/8	A572-50	SR 7/8	SR 7/8	4	12 @ 3.23611	1.3	<u>240.0 ft</u>	(4) 4' x 1" Typ. Fial Panel Antenr (4) 4' x 1" Typ. Fial Panel Antenr (3) 12' Gate Mount(e) (5) Ice Shield For 06' Dish Ice Shield For 06' Dish Leg Mounted 6' Dish Mount Ass Leg Mounted 6' Dish Mount Ass (6' Std. Dish WRadome (EW63)																															
			91				4			<u>220.0 ft</u>	o Stat. Dish Whadome (EW63) 8 Stat. Dish WRadome (EW63) 18 Typ. Omni/Whip Antenna(s) 3 Sidearm(s) 18 Typ. Omni/Whip Antenna(s)																															
1	SR 2 3/4		L1 1/2x1 1/2x3/16				2	@ 4.84375	-21	<u>200.0 ft</u>	3 Sidearm(s) 18" Typ. CmniWhip Antenna(s) 3 Sidearm(s) (3) 12" Gate Mount(s) (4) 4" x" Typ. Flat Panel Antern (4) 4" x" Typ. Flat Panel Antern																															
12	SR 3		L1 3/4x1 3/4x3/16				5.75	8	2.1		(4) 4' x 1" Typ. Filal Panel Antent los Shield For 08 Dish los Shield For 08 Dish 18" Typ. OmniWhip Antenna(s) 3" Sidearm(s) Leg Mounted & Dish Mount Ass Leg Mounted & Dish Mount Ass																															
							7.5			<u>180.0 ft</u>	6 Std. Dish wiRadome (EW63) 8 Std. Dish wiRadome (EW63) 3 Sidearm(s) 18 Typ. OmniWhip Antenna(s)																															
ħ			L2x2x3/16						2.5		3 Sidearm(s) 18' Typ. Omni/Whip Antenna(s)																															
	SR 3 1/4		9				9.25	8 @ 4.82292		<u>160.0 ft</u>	GRADE																															
72			L2 1/2x2 1/2x3/16							28	140.0 ft	1. Tower designed for E: 2. Tower designed for a: 3. Tower is also designe 4. Deflections are based																														
		20					=			<u> 140.0 K</u>	5. Tower Risk Category 6. Topographic Category 7. Conservative ground 8. Tower designed for st																															
7E		A572-50	/16					0278	3.8	400.0	9. Tower designed for fe 10. All bolted legs and/o 11. Structural connection TIA/EIA-222 and AIS																															
16	SR 4		L3x3x3/16	A529-50	N.A.	N.A.	12.75	6 @ 6.40278	3.9	<u>120.0 ft</u>	12. Tower members are 13. All structural steel w 14. Structure is designe industry unless spec this structure. 15. TOWER RAITING: 9:																															
							14.5			<u>100.0 ft</u>																																
4	SR 4 1/4		L3x3x1/4																																					4.7		
								16.25	6 @ 6.375		80.0 ft																															
æ	SR 4 1/2						16.		9.6																																	
			L3 1/2x3 1/2x1/4				18			<u>60.0 ft</u>	ALL REACTIONS ARE FACTORED MAX. CORNER REACTIONS AT BASE:																															
ρ			L3 1/						6.1		DOWN: 615 K SHEAR: 53 K																															
	SR 4 3/4						2			<u>40.0 ft</u>	UPLIFT: -525 K SHEAR: 48 K AXIAL																															
T10	SR		L4x4x1/4					19.75	@ 6.36111	6.7		195 K SHEAR MOMENT																														
÷			L4x4					9 @ 6	9	20.0 ft	16 K 2224 kip-ft TORQUE 7 kip-ft 40 mph WIND - 1.0000 in ICE																															
	5		416				21.5			25.011	AXIAL 100 K																															
11	SR 5		L4x4x5/16						8.0		SHEAR MOMENT 11724 kip-ft																															
							23.25		50.0	<u>0.0 ft</u>	TORQUE 42 kip-ft REACTIONS - 120 mph WIND																															
Section	Fegs	Leg Grade	Diagonals	Diagonal Grade	Top Girts	Bottom Girts	Face Width (ft)	# Panels @ (ft)	Weight (K)																																	

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	260	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	153.33
L-Lighting Beacon	260	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	153.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	260	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	153.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	260	(3) 12' Gate Mount(s)	153.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	260	3' Sidearm(s)	147.33
(3) 12' Gate Mount(s)	260	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	147.33
Ice Shield For 06' Dish	255	Ice Shield For 06' Dish	141.67
Ice Shield For 08' Dish	255	Ice Shield For 08' Dish	141.67
Leg Mounted 6' Dish Mount Assembly	250	Leg Mounted 6' Dish Mount Assembly	136.67
Leg Mounted 8' Dish Mount Assembly	250	Leg Mounted 8' Dish Mount Assembly	136.67
6' Std. Dish w/Radome (EW63)	250	6' Std. Dish w/Radome (EW63)	136.67
8' Std. Dish w/Radome (EW63)	250	8' Std. Dish w/Radome (EW63)	136.67
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	242	2'x2' Ice Shield / Rest Platform	133
3' Sidearm(s)	242	2'x2' Ice Shield / Rest Platform	133
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	226.22	2'x2' Ice Shield / Rest Platform	133
3' Sidearm(s)	226.22	3' Sidearm(s)	131.56
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	210.44	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	131.56
3' Sidearm(s)	210.44	L-Side Light / Obstruction Light	130
(3) 12' Gate Mount(s)	206.67	L-Side Light / Obstruction Light	130
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	206.67	L-Side Light / Obstruction Light	130
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	206.67	3' Sidearm(s)	115.78
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	206.67	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	115.78
Ice Shield For 06' Dish	198.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
Ice Shield For 08' Dish	198.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	194.67	(3) 12' Gate Mount(s)	100
3' Sidearm(s)	194.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
Leg Mounted 6' Dish Mount Assembly	193.33	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
Leg Mounted 8' Dish Mount Assembly	193.33	3' Sidearm(s)	100
6' Std. Dish w/Radome (EW63)	193.33	Ice Shield For 08' Dish	85
8' Std. Dish w/Radome (EW63)	193.33	Ice Shield For 06' Dish	85
3' Sidearm(s)	178.89	Leg Mounted 6' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	178.89	Leg Mounted 8' Dish Mount Assembly	80
3' Sidearm(s)	163.11	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	163.11	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

- TOWER DESIGN NOTES

 Exposure C to the TIA-222-H Standard.
 a 120 mph basic wind in accordance with the TIA-222-H Standard.
 ned for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 ed upon a 60 mph wind.
 y III.

- y III. ory 1 with Crest Height of 0.00 ft d elevation of 500' assumed.

- d elevation of 500' assumed.
 step bolts up all three legs.
 feedlines to be supported with waveguide ladder(s).
 feedlines to be supported with waveguide ladder(s).
 for weld together tower sections have flange connections.
 ions use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per
 NSC Specifications.
 re "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 ned to arrange feedlines based on using stackable hangers currently available in the communications
 ecified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of

PTTG Street 1919
ALLSTATE TOWER

^{ob:} WV-260SS : 2021 Matrix									
Project: As Req'd									
Client: State of WV.	Drawn by: Allstate Tower Inc.	App'd:							
Code: TIA-222-H	Date: 05/14/21	Scale: NTS							
Path:		Dwg No. ⊏ 1							

SR 2 3/4				SR A57	SR 7/2 SR	2
SR3 SR234	L2x2x3/16	7525316	5.78 S.78		5.76 8 @ 4.84375	21 P 0 0 0 1 P 1 P 1 P 1 P 1 P 1 P 1 P 1
SR 3 1/2 SR 3 1/4	L2 1/2x2 1/2x3/16 -50				5	8 @ 4 82292 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
SR 4 114 SR 4	LXXXXII 0 A52B-50 A A52B-50 A A52B-50			01/2628CI	98	6 @ 6.40278
SR 4 1/2 SR 4 1/2		-	8. 41 8. 41		1.6.6.0	40.0 ft
SR 4 3/4 L3 1/2x3 1/2x1/4			16.28			

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	200	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	133.33
L-Lighting Beacon	200	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	133.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	200	(3) 12' Gate Mount(s)	133.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	200	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	133.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	200	3' Sidearm(s)	127.33
(3) 12' Gate Mount(s)	200	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	127.33
Ice Shield For 06' Dish	195	Ice Shield For 06' Dish	121.67
Ice Shield For 08' Dish	195	Ice Shield For 08' Dish	121.67
Leg Mounted 6' Dish Mount Assembly	190	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	118.22
Leg Mounted 8' Dish Mount Assembly	190	3' Sidearm(s)	118.22
6' Std. Dish w/Radome (EW63)	190	Leg Mounted 6' Dish Mount Assembly	116.67
8' Std. Dish w/Radome (EW63)	190	Leg Mounted 8' Dish Mount Assembly	116.67
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	182	6' Std. Dish w/Radome (EW63)	116.67
3' Sidearm(s)	182	8' Std. Dish w/Radome (EW63)	116.67
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	172.89	3' Sidearm(s)	109.11
3' Sidearm(s)	172.89	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	109.11
(3) 12' Gate Mount(s)	166.67	2'x2' Ice Shield / Rest Platform	103
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	166.67	2'x2' Ice Shield / Rest Platform	103
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	166.67	2'x2' Ice Shield / Rest Platform	103
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	166.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	163.78	L-Side Light / Obstruction Light	100
3' Sidearm(s)	163.78	L-Side Light / Obstruction Light	100
Ice Shield For 06' Dish	158.33	3' Sidearm(s)	100
Ice Shield For 08' Dish	158.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	154.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
3' Sidearm(s)	154.67	(3) 12' Gate Mount(s)	100
Leg Mounted 6' Dish Mount Assembly	153.33	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
Leg Mounted 8' Dish Mount Assembly	153.33	L-Side Light / Obstruction Light	100
6' Std. Dish w/Radome (EW63)	153.33	Ice Shield For 08' Dish	85
8' Std. Dish w/Radome (EW63)	153.33	Ice Shield For 06' Dish	85
3' Sidearm(s)	145.56	Leg Mounted 6' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	145.56	Leg Mounted 8' Dish Mount Assembly	80
3' Sidearm(s)	136.44	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	136.44	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

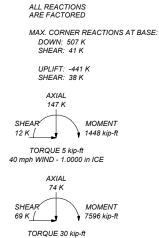
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

TOWER DESIGN NOTES

- TOWER DESIGN NOTES

 1. Tower designed for Exposure C to the TIA-222-H Standard.
 2. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
 3. Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 4. Deflections are based upon a 60 mph wind.
 5. Tower Risk Category III.
 6. Topographic Category 1 with Crest Height of 0.00 ft
 7. Conservative ground elevation of 500' assumed.
 8. Tower designed for step bolts up all three legs.
 9. Tower designed for feedlines to be supported with waveguide ladder(s).
 10. All bolted leas and/or weld together tower sections have flance connections.

- Tower designed for feedlines to be supported with waveguide ladder(s).
 All botted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure. this structure.
 15. TOWER RATING: 98.1%



REACTIONS - 120 mph WIND

PTTG **ALLSTATE TOWER**

Job: WV-200SS : 2	2021 Matrix	
Project: As Req'd		
Client: State of WV.	Drawn by: Allstate Tower Inc.	App'd:
Code: TIA-222-H	Date: 05/14/21	Scale: NTS
Path:	•	Dwg No = 4

Section	gT.	ř	-	£	£	7.3	Ē	4	F	21	Ξ
Leds	SR 43/4		SR 4 1/2	SR 4 1/4	SR 4	SR 3 1/2	SR 3 1/4	SR3	SR 2 3/4	SR 2 1/4	SR 13/4
Leg Grade						A572-50					
Diagonals	L3 1/2x3	L3 1/2x3 1/2x1/4	F7	L3x3x1/4	L3x3x3/16	L2 1/2x2	L2 1/2x2 1/2x3/16	12%	L2x2x3/16	ς,	SR 7/8
Diagonal Grade					A529-50					A57	A572-50
Top Girts					N.A.					s,	SR 7/8
Bottom Girts					N.A.					, s	SR 7/8
Face Width (ft) 19.75	18	16.25		14.5	11	9.25	7.5	5.75			4
# Panels @ (ft)	3 @ 6.36111	8	6@6.375	9@9	6 @ 6.40278	8 @ 4.	8 @ 4.82292	8 @ 4.	8 @ 4.84375	12 @	12 @ 3.23611
Weight (K) 37.1	6.1	99	20	4.6	98	3.1	2.6	27	65	133	6.
	<u>0.0 ft</u>	<u>20.0 ft</u>	40.0 ft	60.0 ft_	80.0 ft	100.0 ft	120.0 ft	<u>140.0 ft</u>	<u>160.0 ft</u>	<u>180.0 ft</u>	<u>200.0 ft</u>

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	220	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	140
L-Lighting Beacon	220	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	140
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	220	(3) 12' Gate Mount(s)	140
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	220	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	140
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	220	3' Sidearm(s)	134
(3) 12' Gate Mount(s)	220	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	134
Ice Shield For 06' Dish	215	Ice Shield For 06' Dish	128.33
Ice Shield For 08' Dish	215	Ice Shield For 08' Dish	128.33
Leg Mounted 6' Dish Mount Assembly	210	Leg Mounted 6' Dish Mount Assembly	123.33
Leg Mounted 8' Dish Mount Assembly	210	Leg Mounted 8' Dish Mount Assembly	123.33
6' Std. Dish w/Radome (EW63)	210	6' Std. Dish w/Radome (EW63)	123.33
8' Std. Dish w/Radome (EW63)	210	8' Std. Dish w/Radome (EW63)	123.33
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	202	3' Sidearm(s)	122.67
3' Sidearm(s)	202	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	122.67
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	190.67	2'x2' Ice Shield / Rest Platform	113
3' Sidearm(s)	190.67	2'x2' Ice Shield / Rest Platform	113
(3) 12' Gate Mount(s)	180	2'x2' Ice Shield / Rest Platform	113
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	180	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	111.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	180	3' Sidearm(s)	111.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	180	L-Side Light / Obstruction Light	110
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	179.33	L-Side Light / Obstruction Light	110
3' Sidearm(s)	179.33	L-Side Light / Obstruction Light	110
Ice Shield For 06' Dish	171.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
Ice Shield For 08' Dish	171.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	168	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
3' Sidearm(s)	168	(3) 12' Gate Mount(s)	100
Leg Mounted 6' Dish Mount Assembly	166.67	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
Leg Mounted 8' Dish Mount Assembly	166.67	3' Sidearm(s)	100
6' Std. Dish w/Radome (EW63)	166.67	Ice Shield For 08' Dish	85
8' Std. Dish w/Radome (EW63)	166.67	Ice Shield For 06' Dish	85
3' Sidearm(s)	156.67	Leg Mounted 8' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	156.67	Leg Mounted 6' Dish Mount Assembly	80
3' Sidearm(s)	145.33	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	145.33	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

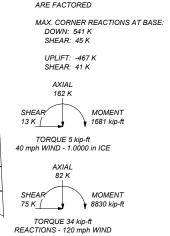
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

TOWER DESIGN NOTES

- Tower designed for Exposure C to the TIA-222-H Standard.
 Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
 Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 Deflections are based upon a 60 mph wind.

- Detlections are based upon a 60 mpn wind.
 Tower Risk Category III.
 Topographic Category 1 with Crest Height of 0.00 ft
 Conservative ground elevation of 500° assumed.
 Tower designed for step bolts up all three legs.
 Tower designed for feedlines to be supported with waveguide ladder(s).

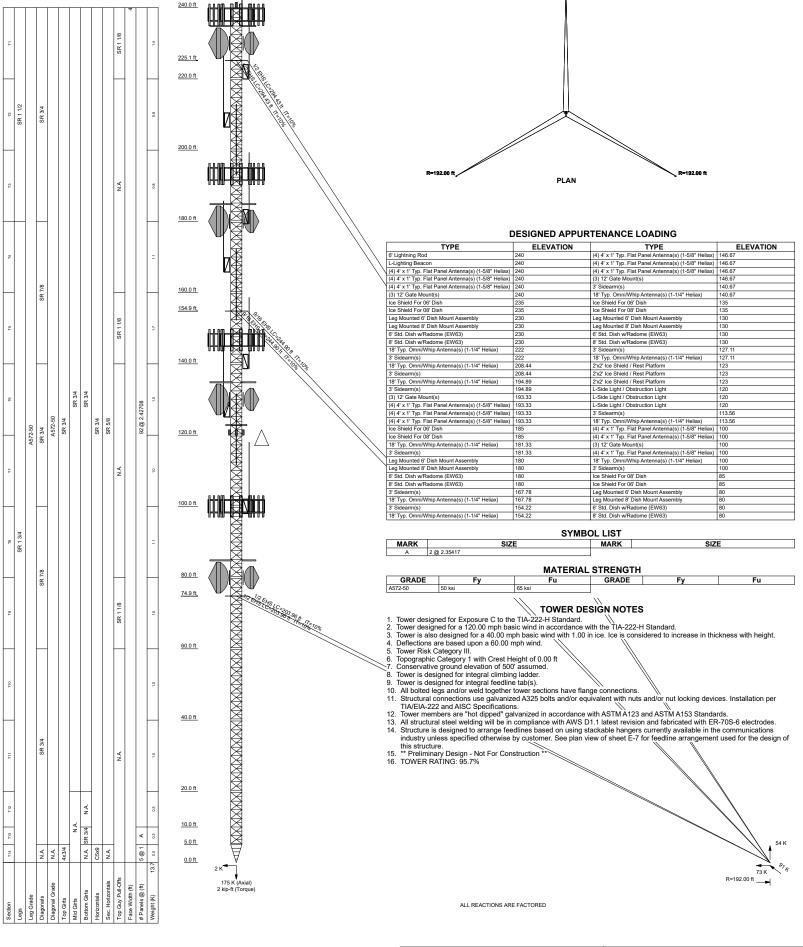
- Tower designed for feedlines to be supported with waveguide ladder(s).
 All botted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure. this structure.
 15. TOWER RATING: 96.4%



ALL REACTIONS

PTTG **ALLSTATE TOWER**

^{Job:} WV-220SS : 20	21 Matrix	
Project: As Req'd		
	Drawn by: Allstate Tower Inc.	App'd:
Code: TIA-222-H	Date: 05/14/21	Scale: NTS
Path:		Dwg No. E-1



Allstate Tower Inc. WV-240GT : 2021 Matrix PTTG P.O. Box 25 ject: As Req'd Client: State of WV Drawn by: Allstate Tower Inc. **ALLSTATE TOWER** App'd Henderson, KY. 42419 Scale: NTS ode: TIA-222-H Date: 05/13/21 Phone: (270) 830 - 8512 Dwg No. E-1 FAX: (270) 228 - 4551

Section	T17	T16	T16	T14	T13	T12	111	T10	et.	8T	1	91	2T	T4	T3	T2	F	7	5
Legs	as I	SR 5 1/2	SR51/4	1/4		SR5		SR 4 3/4	SR 4 1/2	SR 4 1/4	SR 4	**	SR 3 3/4	SR 3 1/4	SR3	SR 2 3/4	3/4	SR 2 1/4	SR 1 3/4
Leg Grade										A572-50									
Diagonals	2L3-1/2x3	2L3-1/2x3-1/2x1/4x1/2	2L3x3x1/4x1/2	/4x1/2	2L3x3x3/16x1/2	16x1/2	L4x4x5/16	L4x4x1/4	L3 1/2x3 1/2x1/4	1/2x1/4	L3x3x3/16	V16	L2 1/2x2 1/2x3/16		L1 3/4x1 3/4x3/16	L1 1/2x1 1/2x3/16	1/2x3/16	SR 7/8	8/2
Diagonal Grade									A529-50									A572-50	1-50
Top Girts									A.N									SR 7/8	8/2
Bottom Girts									A.N									SR 7/8	8/2
Horizontals	2L3x3	2L3x3x1/4x1/2	2L3x3x3/16x1/2	16x1/2	2L2 1/2x2 1/2x3/16x1/2	2x3/16x1/2							N.A.						
Red. Horizontals		2L2x2x	2L2x2x3/16x1/2		2L1 3/4x1 3/4x3/16x1/2	4x3/16x1/2							N.A.						
Red. Diagonals		2L2x2x	2L2x2x3/16x1/2		2L1 3/4x1 3/4x3/16x1/2	4x3/16x1/2							N.A.						
Inner Bracing	2L3x3;	2L3x3x3/16x1/2		2L2 1/2x2 1/2x3/16x1/2	2x3/16x1/2								N.A.						
Face Width (ft) 33.75		32 30.25	5 28.5	26.75	25	23.25	21.5	19.75	18	16.25	14.5	12.75	11	9.25	7.5	5.75	4	4	
# Panels @ (ft)			12 @ 9.6875	6875				9 @ 6.36111		6 @ 6.375	375	6 @ 6.40278	40278	8 @ 4.82292	82292	8 @ 4.84375	34375	12 @ 3.2361	23611
Weight (K) 102.4	11.0	10.7	6.3	9.1	7.5	7.3	970	6.7	5.7	52	4.0	3.9	3.3	2.8	2.1	1.7	1.7	1.3	1.0

380.0 ft

360.0 ft

340.0 ft

320.0 ft

300.0 ft

280.0 ft

260.0 ft

240.0 ft

220.0 ft

200.0 ft

180.0 ft

160.0 ft

140.0 ft

120.0 ft

100.0 ft 飿

80.0 ft

60.0 ft

40.0 ft

20.0 ft

0.0 ft

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TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	380	3' Sidearm(s)	216.44
L-Lighting Beacon	380	(3) 12' Gate Mount(s)	193.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	380	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	193.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	380	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	193.33
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	380	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	193.33
(3) 12' Gate Mount(s)	380	2'x2' Ice Shield / Rest Platform	193
Ice Shield For 06' Dish	375	2'x2' Ice Shield / Rest Platform	193
Ice Shield For 08' Dish	375	L-Lighting Beacon	190
Leg Mounted 6' Dish Mount Assembly	370	L-Lighting Beacon	190
Leg Mounted 8' Dish Mount Assembly	370	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	187.33
6' Std. Dish w/Radome (EW63)	370	3' Sidearm(s)	187.33
8' Std. Dish w/Radome (EW63)	370	Ice Shield For 06' Dish	181.67
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	362	Ice Shield For 08' Dish	181.67
3' Sidearm(s)	362	Leg Mounted 6' Dish Mount Assembly	176.67
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	332.89	Leg Mounted 8' Dish Mount Assembly	176.67
3' Sidearm(s)	332.89	6' Std. Dish w/Radome (EW63)	176.67
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	303.78	8' Std. Dish w/Radome (EW63)	176.67
3' Sidearm(s)	303.78	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	158.22
2'x2' Ice Shield / Rest Platform	288	3' Sidearm(s)	158.22
2'x2' Ice Shield / Rest Platform	288	3' Sidearm(s)	129.11
2'x2' Ice Shield / Rest Platform	288	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	129.11
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	286.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	286.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	286.67	(3) 12' Gate Mount(s)	100
(3) 12' Gate Mount(s)	286.67	3' Sidearm(s)	100
L-Side Light / Obstruction Light	285	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
L-Side Light / Obstruction Light	285	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
L-Side Light / Obstruction Light	285	2'x2' Ice Shield / Rest Platform	98
Ice Shield For 06' Dish	278.33	2'x2' Ice Shield / Rest Platform	98
Ice Shield For 08' Dish	278.33	2'x2' Ice Shield / Rest Platform	98
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	274.67	L-Side Light / Obstruction Light	95
3' Sidearm(s)	274.67	L-Side Light / Obstruction Light	95
Leg Mounted 6' Dish Mount Assembly	273.33	L-Side Light / Obstruction Light	95
Leg Mounted 8' Dish Mount Assembly	273.33	Ice Shield For 06' Dish	85
6' Std. Dish w/Radome (EW63)	273.33	Ice Shield For 08' Dish	85
8' Std. Dish w/Radome (EW63)	273.33	Leg Mounted 8' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	245.56	Leg Mounted 6' Dish Mount Assembly	80
3' Sidearm(s)	245.56	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	216.44	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

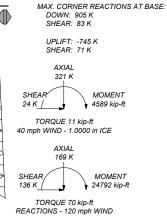
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

TOWER DESIGN NOTES

- Tower designed for Exposure C to the TIA-222-H Standard.
- Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.

 Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.

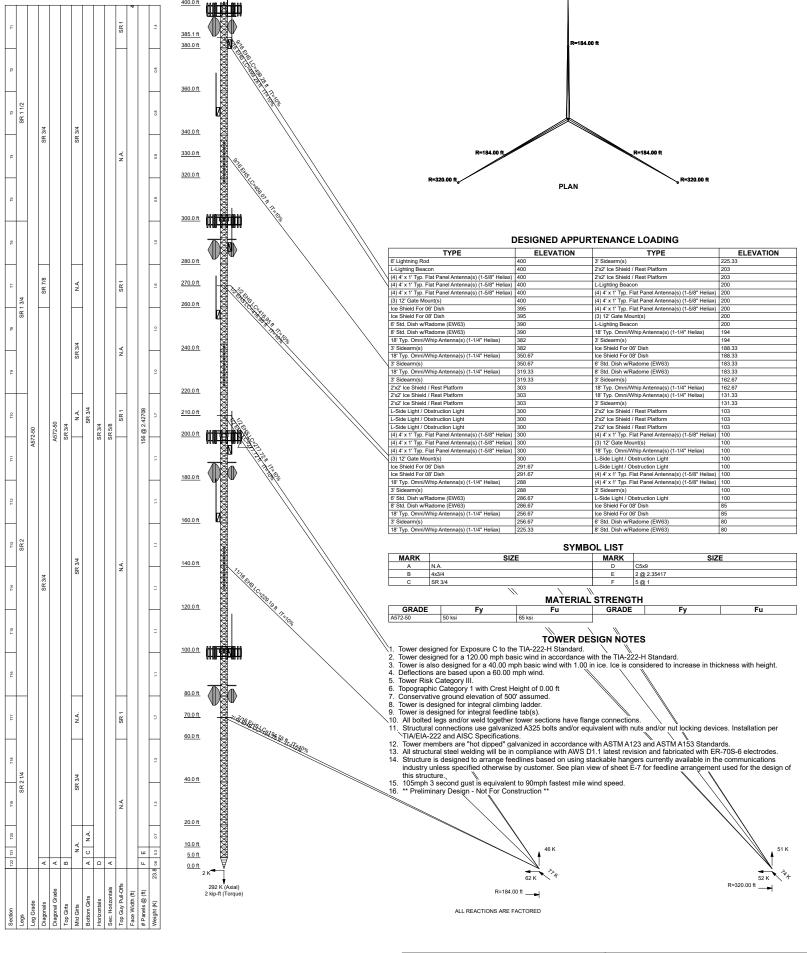
- Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 Deflections are based upon a 60 mph wind.
 Tower Risk Category III.
 Topographic Category 1 with Crest Height of 0.00 ft
 Conservative ground elevation of 500' assumed.
 Tower designed for step bolts up all three legs.
 Tower designed for feedlines to be supported with waveguide ladder(s).
 All bolted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 Tower members are "not dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure.
- 15. TOWER RATING: 96.7%



ALL REACTIONS ARE FACTORED

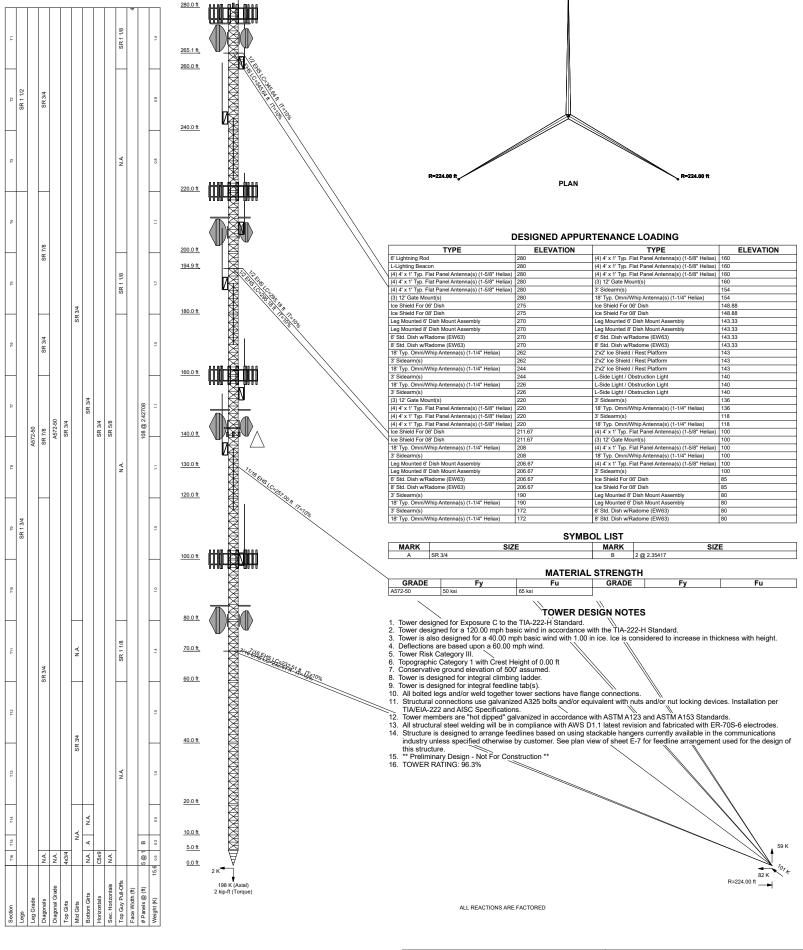
PTTG **ALLSTATE TOWER**

lop: 148 (accord	004144	
^{Job:} WV-380SS : 2	021 Matrix	
Project: As Req'd		
Client: State of WV.	Drawn by: Allstate Tower Inc.	App'd:
Code: TIA-222-H	Date: 05/13/21	Scale: NTS
Path:	Communication St., Continuer Streets Continues & Experimental NV Designs, 2021 J. P. LINCYSCO. Assessing Designs (NV.)	Dwg No. E-1





Scale: NTS



Allstate Tower Inc. WV-280GT: 2021 Matrix PTTG P.O. Box 25 ject: As Req'd Client: State of WV **ALLSTATE TOWER** Drawn by: Allstate Tower Inc. App'd Henderson, KY, 42419 Scale: NTS ode: TIA-222-H Date: 05/13/21 Phone: (270) 830 - 8512 Dwg No. E-1 FAX: (270) 228 - 4551

T12 T11	T11		T10	8L	82	Ľ.	T6	2T	T4	T3	172	17	77	ы
SR5			SR 4 3/4	1 3/4	SR 4 1/2	SR 4 1/4	SR 4	SR 3 3/4	SR	SR 3 1/4	SR 3	SR 2 3/4	SR 2 1/4	SR 1 3/4
		1					ď	A572-50						
2L3x3x3/16x1/2 L4x4x5/16	L4x4x5/16	\vdash	L4x4x1/4	x1/4	L3 1/2x3 1/2x1/4	L3x3x1/4	ยา	L3x3x3/16	L2 1/2x2 1/2x3/16	L2x2x3/16	L1 3/4x1 3/4x3/16	L1 1/2x1 1/2x3/16	S	SR 7/8
		ł				¥	A529-50						A5	A572-50
							N.A.						S	SR 7/8
							N.A.						S	SR 7/8
2L2 1/2x2 1/2x3/16x1/2								N.A.						
2L1 3/4x1 3/4x3/16x1/2								N.A.						
2L1 3/4x1 3/4x3/16x1/2								N.A.						
2L2 1/2x2 1/2x3/16x1/2								N.A.						
23.25		21.5	19.75		16.25		14.5	12.75	11 9.25		7.5 5.75	10	4	4
2 @ 9.6875			9 @ 6.36111		9	6 @ 6.375	9	6 @ 6.40278	8@4	8 @ 4.82292	8@4	8 @ 4.84375	12 @	12 @ 3.23611
7.3 8.0	8.0		6.7	99	979	4.7	3.9	3.4	2.8	2.5	2.1	1.7	1.3	1.0
<u>20.0 ft</u>		40.0 ft	40.0 ft	60.0 ft	<u>80.0 ft</u>	<u>100.0 ft</u>	<u>120.0 ft</u>	<u>140.0 ft</u>	<u>160.0 ft</u>	<u>180.0 ft</u>	<u>200.0 ft</u>	<u>220.0 ft</u>	<u>240.0 ft</u>	<u>260.0 ft</u>

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	280	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	160
L-Lighting Beacon	280	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	160
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	280	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	160
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	280	(3) 12' Gate Mount(s)	160
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	280	3' Sidearm(s)	154
(3) 12' Gate Mount(s)	280	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	154
Ice Shield For 06' Dish	275	Ice Shield For 06' Dish	148.33
Ice Shield For 08' Dish	275	Ice Shield For 08' Dish	148.33
Leg Mounted 6' Dish Mount Assembly	270	Leg Mounted 6' Dish Mount Assembly	143.33
Leg Mounted 8' Dish Mount Assembly	270	Leg Mounted 8' Dish Mount Assembly	143.33
6' Std. Dish w/Radome (EW63)	270	6' Std. Dish w/Radome (EW63)	143.33
8' Std. Dish w/Radome (EW63)	270	8' Std. Dish w/Radome (EW63)	143.33
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	262	2'x2' Ice Shield / Rest Platform	143
3' Sidearm(s)	262	2'x2' Ice Shield / Rest Platform	143
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	244	2'x2' Ice Shield / Rest Platform	143
3' Sidearm(s)	244	L-Side Light / Obstruction Light	140
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	226	L-Side Light / Obstruction Light	140
3' Sidearm(s)	226	L-Side Light / Obstruction Light	140
(3) 12' Gate Mount(s)	220	3' Sidearm(s)	136
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	220	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	136
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	220	3' Sidearm(s)	118
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	220	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	118
Ice Shield For 06' Dish	211.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
Ice Shield For 08' Dish	211.67	(3) 12' Gate Mount(s)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	208	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
3' Sidearm(s)	208	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
Leg Mounted 6' Dish Mount Assembly	206.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
Leg Mounted 8' Dish Mount Assembly	206.67	3' Sidearm(s)	100
6' Std. Dish w/Radome (EW63)	206.67	Ice Shield For 06' Dish	85
8' Std. Dish w/Radome (EW63)	206.67	Ice Shield For 08' Dish	85
3' Sidearm(s)	190	Leg Mounted 8' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	190	Leg Mounted 6' Dish Mount Assembly	80
3' Sidearm(s)	172	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	172	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

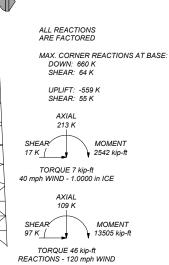
TOWER DESIGN NOTES

- Tower designed for Exposure C to the TIA-222-H Standard.
 Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
 Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 Deflections are based upon a 60 mph wind.

Ш

- Detlections are based upon a 60 mpn wind.
 Tower Risk Category III.
 Topographic Category 1 with Crest Height of 0.00 ft
 Conservative ground elevation of 500° assumed.
 Tower designed for step bolts up all three legs.
 Tower designed for feedlines to be supported with waveguide ladder(s).

- lower designed for feedlines to be supported with waveguide ladder(s).
 All botted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 botts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC. Specifications.
 Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure. this structure.
 15. TOWER RATING: 95.8%



PTTG **ALLSTATE TOWER**

lob: WV-280SS : 202	21 Matrix	
Project: As Req'd		
Client: State of WV.	Alistate Tower IIIc.	App'd:
Code: TIA-222-H		Scale: NTS
Path:	Institute Co., Continuer Barriello Desires & Essantinariology Desires 2021 FT-2027/93/ded Assessories Desires/WV-2025 2	Dwg No. E-

						_				_	_			300.0 ft	0100 8.9 moon
ы	SR 1 3/4		8	20	8	8						3611	1.0		F Light
77	SR 2 1/4		SR 7/8	A572-50	SR 7/8	SR 7/8					4	12 @ 3.2361	1.3	280.0 ft	(4) 4° x (4) 4° x (4) 4° x (3) 12' loe Shi
			9								4			<u>260.0 ft</u>	Leg Mc Leg Mc 6' Std.
11	SR 2 3/4		L1 1/2x1 1/2x3/16										1.7		8 Std. 18 Typ 3 Stde 18 Typ
			_								5.75	8 @ 4.84375		240.0 ft	3° Side 18° Typ 3° Side (3) 12° (4) 4°×
T2			L1 3/4x1 3/4x3/16										2.1		(4) 4' x (4) 4' x Ice Shi
	SR3										7.5			220.0 ft	ice Shi 18 Typ 3 Side Leg M
T3			L2x2x3/16									92	22		Leg Mr 6 Std. 8 Std. 3 Std.
											9.25	8 @ 4.82292		<u>200.0 ft</u>	18 Typ 3' Side 18' Typ
T4	SR 3 1/4		x3/16										2.8		G A572-6
	14		L2 1/2x2 1/2x3/16								=			<u>180.0 ft</u>	
T6	SR 33/4						Z.A.	N.A.	N.A.	A.A.		0278	33	400.0	1. To 2. To 3. To 4. De
	4	-20	3/16								12.75	6 @ 6.40278		<u>160.0 ft</u>	5. To 6. To 7. Co 8. To
T6	SR 4	A572-50	L3x3x3/16										3.9	140.0 ft	9. To 10. A 11. S
17	1/4		L3x3x1/4	A529-50	ď	ď					14.5		4.7	<u> 146.0 K</u>	12. T 13. A 14. S
-	SR4		F73X3	A528	Z.A.	Z.A.					10	6 @ 6.375	4	<u>120.0 ft</u>	in the state of th
T8											16.25	9	979		
	SR 4 1/2		/2x3 1/2x1/4								18			<u>100.0 ft</u>	
13	S		L3 1/2										5.7		1111
											19.75	-		<u>80.0 ft</u>	ALL REACTIONS
110	SR 4 3/4		L4x4x1/4								19	9 @ 6.36111	6.7		ARE FACTORED MAX. CORNER REACT
											21.5	6		<u>60.0 ft</u>	DOWN: 702 K SHEAR: 63 K UPLIFT: -592 K
111			L4x4x5/16										08		SHEAR: 55 K
											23.25			40.0 ft	230 K SHEAR MOMI
T12	SR 5		1/2				16x1/2	16x1/2	16x1/2	16x1/2			7.3		18 K 2882 H TORQUE 8 kip-ft 40 mph WIND - 1.0000 in ICE
			2L3x3x3/16x1/2				2L2 1/2x2 1/2x3/16x1/2	2L1 3/4x1 3/4x3/16x1/2	2L1 3/4x1 3/4x3/16x1/2	2L2 1/2x2 1/2x3/16x1/2	52	4 @ 9.6875		20.0 ft	40 mph WiND - 1.0000 in ICE AXIAL 118 K
T13			."				21.2	21.1	21.1	21.2			7.5		SHEAR 104 K 15357
								şı	.0		26.75	_	63.7	0.0 ft	TORQUE 50 kip-ft REACTIONS - 120 mph WIND
Section	Fegs	Leg Grade	Diagonals	Diagonal Grade	Top Girts	Bottom Girts	Horizontals	Red. Horizontals	Red. Diagonals	Inner Bracing	Face Width (ft)	# Panels @ (ft)	Weight (K)		
Š	Le	Le	ă	ă	۱º	<u>%</u>	Ĭ	ď	å	르	E.	#	Ś	l	

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	300	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	166.67
L-Lighting Beacon	300	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	166.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	300	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	166.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	300	(3) 12' Gate Mount(s)	166.67
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	300	3' Sidearm(s)	160.67
(3) 12' Gate Mount(s)	300	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	160.67
Ice Shield For 06' Dish	295	Ice Shield For 06' Dish	155
Ice Shield For 08' Dish	295	Ice Shield For 08' Dish	155
Leg Mounted 6' Dish Mount Assembly	290	2'x2' Ice Shield / Rest Platform	153
Leg Mounted 8' Dish Mount Assembly	290	2'x2' Ice Shield / Rest Platform	153
6' Std. Dish w/Radome (EW63)	290	2'x2' Ice Shield / Rest Platform	153
8' Std. Dish w/Radome (EW63)	290	L-Side Light / Obstruction Light	150
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	282	L-Side Light / Obstruction Light	150
3' Sidearm(s)	282	L-Side Light / Obstruction Light	150
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	261.78	Leg Mounted 6' Dish Mount Assembly	150
3' Sidearm(s)	261.78	Leg Mounted 8' Dish Mount Assembly	150
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	241.56	6' Std. Dish w/Radome (EW63)	150
3' Sidearm(s)	241.56	8' Std. Dish w/Radome (EW63)	150
(3) 12' Gate Mount(s)	233.33	3' Sidearm(s)	140.44
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	233.33	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	140.44
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	233.33	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	120.22
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	233.33	3' Sidearm(s)	120.22
Ice Shield For 06' Dish	225	3' Sidearm(s)	100
Ice Shield For 08' Dish	225	(3) 12' Gate Mount(s)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	221.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
3' Sidearm(s)	221.33	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
Leg Mounted 6' Dish Mount Assembly	220	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
Leg Mounted 8' Dish Mount Assembly	220	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
6' Std. Dish w/Radome (EW63)	220	Ice Shield For 08' Dish	85
8' Std. Dish w/Radome (EW63)	220	Ice Shield For 06' Dish	85
3' Sidearm(s)	201.11	Leg Mounted 8' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	201.11	Leg Mounted 6' Dish Mount Assembly	80
3' Sidearm(s)	180.89	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	180.89	8' Std. Dish w/Radome (EW63)	80

MATERIAL STRENGTH

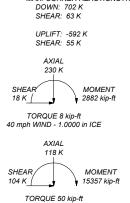
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

TOWER DESIGN NOTES

- Tower designed for Exposure C to the TIA-222-H Standard.
 Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
 Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 Deflections are based upon a 60 mph wind.

- 4. Deflections are based upon a bu mpn wind.
 5. Tower Risk Category III.
 6. Topographic Category 1 with Crest Height of 0.00 ft
 7. Conservative ground elevation of 500' assumed.
 8. Tower designed for step bolts up all three legs.
 9. Tower designed for feedlines to be supported with waveguide ladder(s).

- Tower designed for feedlines to be supported with waveguide ladder(s).
 All botted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure. this structure.
 15. TOWER RATING: 98%



MAX. CORNER REACTIONS AT BASE:

PTTG **ALLSTATE TOWER**

^{Job:} WV-300SS : 2	2021 Matrix	
Project: As Req'd		
Client: State of WV.	Drawn by: Allstate Tower Inc.	App'd:
Code: TIA-222-H	Date: 05/14/21	Scale: NTS
Path:	•	Dwg No. ⊏_1

Section	118	717	T16	T15	114	T13	T12	111	T10	£	20	11	9L	15	14	£	12	F	77	5
Legs	SR	SR 5 3/4	SR 5 1/2	SR 5 1/4	1/4		SR 5		SR 4 3/4	SR 4 1/2	SR 4 1/4	SR 4	4	SR 33/4	SR 3 1/4	SR 3	3	SR 2 3/4	SR 2 1/4	SR 1 3/4
Leg Grade								ł		A572-50	-20									
Diagonals		2L3-1/2x3-1/2x1/4x1/2	1/2	2L3x3x1/4x1/2	4x1/2	2L3x3x3/16x1/2	I6x1/2	L4x4x5/16	L4x4x1/4	L4x4x1/4 L3 1/2x3 1/2x1/4	L3x3x1/4	L3x3x3/16	3/16	L2 1/2x2 1/2x3/16	1/2x3/16	A	L1 1/2x1 1/2x3/16	1/2x3/16	SR	SR 7/8
Diagonal Grade									A528	A529-50									A57	A572-50
Top Girts									N.A.	Ą.									SR	SR 7/8
Bottom Girts									N.A.	Ą.									SR	SR 7/8
Horizontals		2L3x3x1/4x1/2		2L3x3x3/16x1/2	16x1/2	2L2 1/2x2 1/2x3/16x1/2	x3/16x1/2							N.A.						
Red. Horizontals	В		2L2x2x;	2L2x2x3/16x1/2		2L1 3/4x1 3/4x3/16x1/2	x3/16x1/2							N.A.						
Red. Diagonals	В		2L2x2x;	2L2x2x3/16x1/2		2L1 3/4x1 3/4x3/16x1/2	x3/16x1/2							N.A.						
Inner Bracing		2L3x3x3/16x1/2			2L2 1/2x2 1/2x3/16x1/2	2x3/16x1/2								N.A.						
Face Width (ft) 35.5	.5 33.75	5 32	30.25	5 28.5	26.75	25	23.25	21.5	19.75	18	16.25	14.5	12.75	11	9.25	7.5	5.75	4		4
# Panels @ (ft)				14 @ 9.6875					9@6.36111		6 @ 6.375	1.375	6 @ 6.40278	40278	8 @ 4.82292	2292	8 @ 4.84375	34375	12 @ 3	12 @ 3.23611
Weight (K) 114.9	.9 12.0	11.5	10.7	8.8	9.1	7.5	7.3	9.0	6.7	2.9	4.9	4.0	3.9	3.3	2.8	2.1	2.0	1.7	1.3	0,1

400.0 ft

380.0 ft

360.0 ft

340.0 ft

320.0 ft

300.0 ft

280.0 ft

260.0 ft

240.0 ft

220.0 ft

200.0 ft

180.0 ft

160.0 ft

140.0 ft

120.0 ft

100.0 ft

80.0 ft

60.0 ft

40.0 ft

20.0 ft

0.0 ft

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	400	3' Sidearm(s)	225.33
L-Lighting Beacon	400	2'x2' Ice Shield / Rest Platform	203
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	400	2'x2' Ice Shield / Rest Platform	203
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	400	L-Lighting Beacon	200
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	400	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	200
(3) 12' Gate Mount(s)	400	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	200
Ice Shield For 06' Dish	395	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	200
Ice Shield For 08' Dish	395	(3) 12' Gate Mount(s)	200
Leg Mounted 6' Dish Mount Assembly	390	L-Lighting Beacon	200
Leg Mounted 8' Dish Mount Assembly	390	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	194
6' Std. Dish w/Radome (EW63)	390	3' Sidearm(s)	194
8' Std. Dish w/Radome (EW63)	390	Ice Shield For 06' Dish	188.33
18' Tvp. Omni/Whip Antenna(s) (1-1/4" Heliax)	382	Ice Shield For 08' Dish	188.33
3' Sidearm(s)	382	Leg Mounted 6' Dish Mount Assembly	183.33
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	350.67	Leg Mounted 8' Dish Mount Assembly	183.33
3' Sidearm(s)	350.67	6' Std. Dish w/Radome (EW63)	183.33
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	319.33	8' Std. Dish w/Radome (EW63)	183.33
3' Sidearm(s)	319.33	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	162.67
2'x2' Ice Shield / Rest Platform	303	3' Sidearm(s)	162.67
2'x2' Ice Shield / Rest Platform	303	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	131.33
2'x2' Ice Shield / Rest Platform	303	3' Sidearm(s)	131.33
L-Side Light / Obstruction Light	300	2'x2' Ice Shield / Rest Platform	103
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	300	2'x2' Ice Shield / Rest Platform	103
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	300	2'x2' Ice Shield / Rest Platform	103
(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	300	L-Side Light / Obstruction Light	100
(3) 12' Gate Mount(s)	300	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
L-Side Light / Obstruction Light	300	(3) 12' Gate Mount(s)	100
L-Side Light / Obstruction Light	300	3' Sidearm(s)	100
Ice Shield For 06' Dish	291.67	L-Side Light / Obstruction Light	100
Ice Shield For 08' Dish	291.67	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	288	(4) 4' x 1' Typ. Flat Panel Antenna(s) (1-5/8" Heliax)	100
3' Sidearm(s)	288	L-Side Light / Obstruction Light	100
Leg Mounted 6' Dish Mount Assembly	286.67	18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	100
Leg Mounted 8' Dish Mount Assembly	286.67	Ice Shield For 06' Dish	85
6' Std. Dish w/Radome (EW63)	286.67	Ice Shield For 08' Dish	85
8' Std. Dish w/Radome (EW63)	286.67	Leg Mounted 6' Dish Mount Assembly	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	256.67	Leg Mounted 8' Dish Mount Assembly	80
3' Sidearm(s)	256.67	6' Std. Dish w/Radome (EW63)	80
18' Typ. Omni/Whip Antenna(s) (1-1/4" Heliax)	225.33	8' Std. Dish w/Radome (EW63)	80

SYMBOL LIST

MARK	SIZE	MARK	SIZE
Α	L1 3/4x1 3/4x3/16	В	2L2 1/2x2 1/2x3/16x1/2

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A529-50	50 ksi	65 ksi

TOWER DESIGN NOTES

- Tower designed for Exposure C to the TIA-222-H Standard.

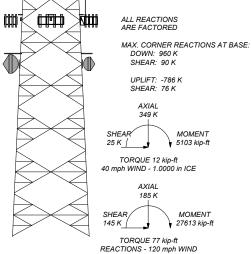
 Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.

 Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height. Deflections are based upon a 60 mph wind.

 Tower Risk Category III.

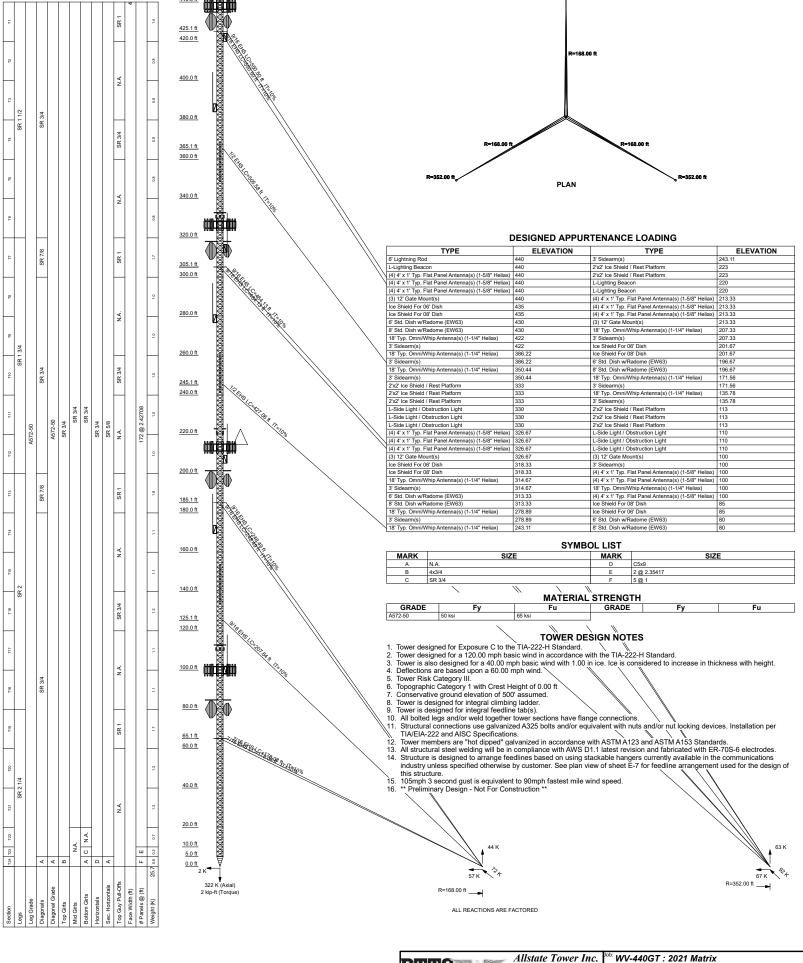
- Topographic Category 1 with Crest Height of 0.00 ft Conservative ground elevation of 500' assumed.

- Conservative ground elevation of 500' assumed.
 Tower designed for step bolts up all three legs.
 Tower designed for step bolts up all three legs.
 All bolted legs and/or weld together tower sections have flange connections.
 Structural connections use galvanized A325 bolts and/or equivalent with nuts and/or nut locking devices. Installation per TIA/EIA-222 and AISC Specifications.
 Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
 All structural steel welding will be in compliance with AWS D1.1 latest revision and fabricated with ER-70S-6 electrodes.
 Structure is designed to arrange feedlines based on using stackable hangers currently available in the communications industry unless specified otherwise by customer. See plan view of sheet E-7 for feedline arrangement used for the design of this structure.
- this structure. 15. TOWER RATING: 96.7%



PTTG **ALLSTATE TOWER**

lob: WV-400SS : 2	021 Matrix	
Project: As Req'd		
Client: State of WV.	Drawn by: Allstate Tower Inc.	App'd:
Code: TIA-222-H	Date: 05/13/21	Scale: NTS
Path:	•	Dwg No. ⊏_





P.O. Box 25

Phone: (270) 830 - 8512 FAX: (270) 228 - 4551

lob: WV-440GT : 20	021 Matrix	
Project: As Req'd		
	Alistate Tower Inc.	App'd:
Code: TIA-222-H		Scale: NTS
Path:	monological M. Codemic Sensity Springs & Equations (CV) Springs 2001 - FT 0000 (Strings (CV) Assign (C	Dwg No. E-

STATE OF WEST VIRGINIA Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Allstate Tower Inc.
Authorized Signature: Mutt Burling Date: 5.187
State of
County of Henderson, to-wit:
Taken, subscribed, and sworn to before me this \(\frac{\lambda}{k} \) day of \(\frac{\mathrea \lambda}{\lambda} \), 20\(\frac{\lambda}{\lambda} \).
My Corphitission rexpires 10-2-22 , 20
AFFIX SEACHERE NOTARY PUBLIC WALL
10 2
Purchasing Affidavit (Revised 01/19/2018)
The LARGE MAN

STATE OF WEST VIRGINIA Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Allstate Tower Inc.
Authorized Signature: Mutt Burling Date: 5.187
State of
County of Henderson, to-wit:
Taken, subscribed, and sworn to before me this \(\frac{\lambda}{k} \) day of \(\frac{\mathrea \lambda}{\lambda} \), 20\(\frac{\lambda}{\lambda} \).
My Corphitission rexpires 10-2-22 , 20
AFFIX SEACHERE NOTARY PUBLIC WALL
10 2
Purchasing Affidavit (Revised 01/19/2018)
The LARGE MAN

	CRFQ HSE21*09 - E Pricing Page - W			
3.1.42	Tower light controller kit for tower lights. Tower lights must be capable of providing telemetry.	3		
		(GRAND TOTAL	

Estimated Annual Quantities are for bid evaluation purposes only. Actual quantities ordered may be more or less.

Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost.

VENDOR SECTION:

Vendor Name: All State Tower Inc.
Physical Address.
232 Heilman Aug Henderson KY 42420
Remit to Address:
Po Box 25 Henderson Ky N2419 Telephone: 20 5:3- 5:3-
Telephone: 270-8:30-85/2
Fax: 270-830-8475
Email:
Vendor Representative (print name):
Signature: Man Dan do V

In the event of significant delay or price increase of material, equipment, or energy occurring during the performance of the contract through no fault of the contractor, the contract sum, time of completion, type of material used, or contract requirements shall be equitably adjusted by change order in accordance with the procedures of the contract documents. A change in price of an item or material, equipment, or energy will be considered significant when the price of an item fluctuates 10 percent between the date of this contract and the date of completion.