



AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by



**TOWER
ENGINEERING
PROFESSIONALS**

Structural Analysis Report

Structure : 245 ft Guyed Tower
ATC Site Name : Lacrosse FL 6, FL
ATC Asset Number : 303048
Engineering Number : 13677441_C3_02
Proposed Carrier : ALLTEL COMMUNICATIONS, LLC
Carrier Site Name : ATC LACROSSE
Carrier Site Number : 131311
Site Location : 2156 SE CR18
Lake City, FL 32024-0001
29.951500,-82.570700
County : Columbia
Date : May 24, 2021
Max Usage : 57%
Result : Pass

Prepared By:
Warren B. Atkinson
TEP

Reviewed By:



8/25/2021

COA: 9053

63



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	2
Proposed Equipment	2
Structure Usages	3
Foundations	3
Deflection, Twist, and Sway.....	3
Standard Conditions	4
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 245 ft guyed tower to reflect the change in loading by ALLTEL COMMUNICATIONS, LLC.

Supporting Documents

Tower Drawings	FWT/PJF Job #1956296-R, dated June 27, 1996
Foundation Drawing	FWT/PJF Job #1956296, dated July 8, 1996
Geotechnical Report	United Consulting Group Job #940648-01-05, dated June 8, 1994
Modifications	MEI Job #01-0140M, dated March 28, 2001 ATC Job #25968632, dated March 20, 2006

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	120 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	30 mph (3-Second Gust) w/ 1/4" radial ice concurrent
Code:	ANSI/TIA-222-H / 2018 IBC / 7th Ed. (2020) Florida Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	$S_s = 0.08$, $S_1 = 0.05$
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
204.0	-	-	Sector Frame	(10) 1 5/8" Coax (1) 1 5/8" Hybriflex	ALLTEL COMMUNICATIONS, LLC
194.4	1	Raycap RTMDC-5634-PF-48	Sector Frame	(1) 1 5/8" Coax (2) 1.99" (50.7mm) Hybrid	T-MOBILE
194.0	3	Ericsson 4424 B25			
	1	CSA Wireless A-24A24-t			
	3	Ericsson RRUS 4415 B25			
	3	Ericsson Radio 4449 B12,B71 (75 lbs)			
	3	Commscope FFV4-65C-R3-V1			
171.0	-	-	(2) 0.405" (10.3mm) Coax		
170.0	1	Andrew Microwaves HPX6-59-P3A/K		Stand-Off	
	2	Ceragon FibeAir RFU-C			
150.0	1	Ceragon FibeAir RFU-C	Stand-Off	(1) 0.405" (10.3mm) Coax	
	1	Andrew Microwaves UHX6-59-P3A/L			

Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
204.0	6	JMA Wireless DBC-67-C-1SF	-	(1) 1 5/8" Coax	ALLTEL COMMUNICATIONS, LLC
	3	Ericsson Radio 2212 B13/B5			
	6	CSS X7CAP-865			
	3	Ericsson RRUS-32 (55.1 lbs)			
	6	Commscope NHH-65C-R2B			
	1	Raycap RRFDC-3315-PF-48 (32lbs)			

Proposed Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
204.0	3	Ericsson Radio 4449 - B13&B5	Sector Frame	(1) 1 5/8" Hybriflex	ALLTEL COMMUNICATIONS, LLC
	3	Ericsson 8843 Rev 2			
	3	Commscope TD-850B-LTE78-43			
	3	Ericsson AIR 6449 B77D/ C-Band			
	2	Raycap RCMDC-6627-PF-48			
	6	Commscope NHH-85C-R2B			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines alongside existing ALLTEL COMMUNICATIONS, LLC lines.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	55%	Pass
Diagonals	51%	Pass
Horizontals	24%	Pass
Guys	57%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Base Axial (kips)	124.0	167.4	92.3	55%
A1 Uplift (kips)	54.0	72.9	35.6	49%
A1 Shear (kips)	65.0	87.8	45.3	52%

* The design reactions are factored by 1.35 per ANSI/TIA-222-H, Sec 15.6.2

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
204.0	Ericsson Radio 4449 - B13&B5	ALLTEL COMMUNICATION	0.118	0.034	0.058
	Ericsson 8843 Rev 2				
	Commscope TD-850B-LTE78-43				
	Ericsson AIR 6449 B77D/ C-Band				
	Raycap RCMDC-6627-PF-48				
	Commscope NHH-85C-R2B				
194.0	CSA Wireless A-24A24-t	T-MOBILE	0.122	0.033	0.042
170.0	Andrew Microwaves HPX6-59-P3A/K		0.123	0.032	0.021
150.0	Andrew Microwaves UHX6-59-P3A/L		0.118	0.031	0.032

*Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H



Standard Conditions

All engineering services performed by ATC Tower Services LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of ATC Tower Services LLC

It is the responsibility of the client to ensure that the information provided to ATC Tower Services LLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and ATC Tower Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Quadrant 1

245.00
240.00

Sect 16

224.10
220.00

Sect 14

200.00
195.90

Sect 12

180.00

Sect 11

160.00

Sect 10

140.00

Sect 9

120.00

Sect 8

100.00

Sect 7

80.00

Sect 6

60.00

Sect 5

40.00

Sect 4

20.00

Sect 3

8.03

Sect 1

7/8 EHS @ 24
IT = 10%

3/4 EHS @ 180.0
IT = 10%

5/8 EHS @ 120.0
IT = 10%

1/2 EHS @ 60.0
IT = 10%

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Loads: 120 mph no ice
30 mph w/ 1/4" radial ice
Site Class: D Ss: 0.08 S1: 0.05
60 mph Serviceability

Job Information

Client : ALLTEL COMMUNICATIONS, LLC
Tower : 303048
Code : ANSI/TIA-222-H
Risk Cat : II
Location : Lacrosse FL 6, FL
Topo Method: Method 1
Topo: 1
Exposure : C
Base Width : 4.00 ft
Tower Ht : 245.00 ft
Shape : Triangle

Sections Properties

Section	Leg Members	Diagonal Members	Horizontal Members
1	SOL 50 ksi 2" SOLID	PL 36 ksi PL 2 x 0.25"	SAE 36 ksi 2.5X2.5X0.25
2 - 13	SOL 50 ksi 2" SOLID	SOL 36 ksi 5/8" SOLID	SAU 36 ksi 2X1.5X0.1875
14 - 17	SOL 50 ksi 2" SOLID	SOL 36 ksi 3/4" SOLID	SAU 36 ksi 2X1.5X0.1875

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
245.00	Platform	1	Flat Platform w/ Handrails
204.00	Panel	6	Commscope NHH-85C-R2B
204.00	Panel	2	Raycap RCMD-6627-PF-48
204.00	Panel	3	Ericsson AIR 6449 B77D/C-Band
204.00	Panel	3	Commscope TD-850B-LTE78-43
204.00	Panel	3	Ericsson 8843 Rev 2
204.00	Panel	3	Ericsson Radio 4449 - B13&B5
204.00	Mounting Frame	3	Generic Flat Light Sector Fram
194.40	Mounting Frame	1	Raycap RTMDC-5634-PF-48
194.00	Panel	3	Commscope FFV4-66C-R3-V1
194.00	Dish	1	CSA Wireless A-24A24-t
194.00	Dish	3	Ericsson 4424 B25
194.00	Dish	3	Ericsson RRUS 4415 B25
194.00	Mounting Frame	3	Ericsson Radio 4449 B12,B71 (7
170.00	Dish	1	Round Sector Frames
170.00	Dish	1	Andrew Microwaves HPX6-59-P3A/
170.00	Straight Arm	2	Ceragon FibeAir RFU-C
150.00	Dish	1	Generic Flat Stand-Off
150.00	Dish	1	Andrew Microwaves UHX6-59-P3A/
150.00	Straight Arm	1	Ceragon FibeAir RFU-C
150.00	Straight Arm	1	Generic Flat Stand-Off

Linear Appurtenance

Elev (ft)	From	To	Qty	Description
5.00	245.00	1	1	Climbing Ladder
5.00	204.00	1	1	5/8" Hybriflex
5.00	204.00	1	1	5/8" Hybriflex
5.00	204.00	10	1	5/8" Coax
5.00	194.00	1	1	5/8" Coax
0.00	194.00	2	1	1.99" (50.7mm) Hybri
5.00	171.00	1	1	0.405" (10.3mm) Coax
5.00	170.00	1	1	0.405" (10.3mm) Coax
5.00	150.00	1	1	0.405" (10.3mm) Coax

R: 200.00

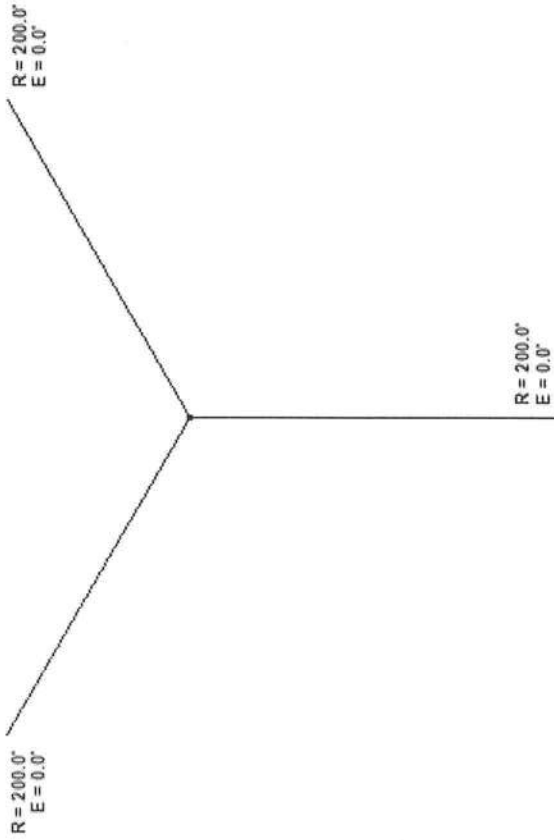
Job Information

Client : ALLTEL COMMUNICATIONS, LLC
 Tower : 303048
 Code : ANSI/TIA-222-H
 Risk Cat : II
 Location : Lacrosse FL 6, FL
 Base Width : 4.00 ft
 Topo Method: Method 1
 Tower Ht : 245.00 ft
 Shape : Triangle
 Topo: 1
 Exposure : C

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Guy Anchor Design Loads				
Radius (ft)	Drop (ft)	Azimuth (°)	Uplift (kip)	Shear (kip)
200.00	0.00	0	35.63	45.30
200.00	0.00	240	35.63	45.30
200.00	0.00	120	35.63	45.30

Global Base Foundation Design Loads	
Vertical (kip)	Horizontal (kip)
92.29	1.30



Site Number: 303048
Site Name: Lacrosse FL 6, FL
Customer: ALLTEL COMMUNICATIONS, LLC

Code: ANSI/TIA-222-H
Engineering Number: 13677441_C3_02

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Analysis Parameters

Location:	Columbia County, FL	Height (ft):	245
Code:	ANSI/TIA-222-H	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	4.00
Tower Manufacturer:	FWT Inc	Top Face Width (ft):	4.00
Tower Type:	Guyed		
Kd:	0.85		
Ke:	0.99		

Ice & Wind Parameters

Exposure Category:	C	Design Windspeed Without Ice:	120 mph
Risk Category:	II	Design Windspeed With Ice:	30 mph
Topographic Factor Procedure:	Method 1	Operational Windspeed:	60 mph
Topographic Category:	1	Design Ice Thickness:	0.25 in
Crest Height:	0 ft	HMSL:	153.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	0.74		
T_L (sec):	8	p:	1.3
S_S :	0.081	S_1 :	0.048
F_a :	1.600	F_v :	2.400
S_{ds} :	0.086	S_{d1} :	0.077
		C_s :	0.030
		C_s , Max:	0.034
		C_s , Min:	0.030

Load Cases

1.2D + 1.0W Normal	120 mph Normal with No Ice
1.2D + 1.0W 60 deg	120 mph 60 degree with No Ice
1.2D + 1.0W 90 deg	120 mph 90 degree with No Ice
1.2D + 1.0W 120 deg	120 mph 120 degree with No Ice
1.2D + 1.0W 180 deg	120 mph 180 degree with No Ice
1.2D + 1.0W 210 deg	120 mph 210 degree with No Ice
1.2D + 1.0W 240 deg	120 mph 240 degree with No Ice
1.2D + 1.0W 300 deg	120 mph 300 degree with No Ice
1.2D + 1.0W 330 deg	120 mph 330 degree with No Ice
1.2D + 1.0Di + 1.0Wi Normal	30 mph Normal with 0.25 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	30 mph 60 deg with 0.25 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	30 mph 90 deg with 0.25 in Radial Ice
1.2D + 1.0Di + 1.0Wi 120 deg	30 mph 120 deg with 0.25 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	30 mph 180 deg with 0.25 in Radial Ice
1.2D + 1.0Di + 1.0Wi 210 deg	30 mph 210 deg with 0.25 in Radial Ice
1.2D + 1.0Di + 1.0Wi 240 deg	30 mph 240 deg with 0.25 in Radial Ice
1.2D + 1.0Di + 1.0Wi 300 deg	30 mph 300 deg with 0.25 in Radial Ice
1.2D + 1.0Di + 1.0Wi 330 deg	30 mph 330 deg with 0.25 in Radial Ice

Site Number: 303048

Code:

ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

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Customer: ALLTEL COMMUNICATIONS, LLC

Analysis Parameters

1.2D + 1.0Ev + 1.0Eh Normal	Seismic Normal
1.2D + 1.0Ev + 1.0Eh 60 deg	Seismic 60 deg
1.2D + 1.0Ev + 1.0Eh 90 deg	Seismic 90 deg
1.2D + 1.0Ev + 1.0Eh 120 deg	Seismic 120 deg
1.2D + 1.0Ev + 1.0Eh 180 deg	Seismic 180 deg
1.2D + 1.0Ev + 1.0Eh 210 deg	Seismic 210 deg
1.2D + 1.0Ev + 1.0Eh 240 deg	Seismic 240 deg
1.2D + 1.0Ev + 1.0Eh 300 deg	Seismic 300 deg
1.2D + 1.0Ev + 1.0Eh 330 deg	Seismic 330 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 120 deg	Serviceability - 60 mph Wind 120 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 210 deg	Serviceability - 60 mph Wind 210 deg
1.0D + 1.0W Service 240 deg	Serviceability - 60 mph Wind 240 deg
1.0D + 1.0W Service 300 deg	Serviceability - 60 mph Wind 300 deg
1.0D + 1.0W Service 330 deg	Serviceability - 60 mph Wind 330 deg

Site Number: 303048

Code:

ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

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Customer: ALLTEL COMMUNICATIONS, LLC

Tower Loading**Discrete Appurtenance Properties 1.2D + 1.0W**

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
245.0	Flat Platform w/	1	2000	42.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	47.63	1716	2400
204.0	Ericsson Radio 4449	3	70	1.6	1.3	13.2	9.3	0.80	0.50	0.0	0.0	45.83	77	252
204.0	Ericsson 8843 Rev 2	3	75	1.6	1.3	13.2	11.1	0.80	0.50	0.0	0.0	45.83	77	270
204.0	Commscope TD-	3	53	2.0	1.3	15.3	6.4	0.80	0.50	0.0	0.0	45.83	92	191
204.0	Ericsson AIR 6449	3	82	4.0	2.5	15.9	10.6	0.80	0.67	0.0	0.0	45.83	252	294
204.0	Raycap RCMD- C	2	32	4.1	2.5	16.5	12.6	0.80	0.79	0.0	0.0	45.83	200	77
204.0	Commscope NHH-	6	51	11.4	8.0	11.9	7.1	0.80	0.67	0.0	0.0	45.83	1427	366
204.0	Generic Flat Light	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	45.83	1177	1440
194.4	Raycap RTMDC-	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.0	45.36	58	26
194.0	Ericsson Radio 4449	3	75	1.6	1.3	13.2	10.4	0.80	0.50	0.0	0.0	45.34	76	270
194.0	Ericsson RRUS 4415	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.0	45.34	85	166
194.0	Ericsson 4424 B25	3	86	2.1	1.4	14.4	11.3	0.80	0.67	0.0	0.0	45.34	127	310
194.0	CSA Wireless A-	1	15	6.1	2.2	26.0	1.8	1.00	1.00	3.0	711.8	45.49	237	18
194.0	Commscope FFV4-	3	132	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.0	45.34	1230	474
191.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	45.19	933	1080
170.0	Ceragon FibeAir RFU-	2	9	0.5	0.7	7.9	3.4	1.00	0.50	0.0	0.0	44.10	19	22
170.0	Generic Flat Stand-	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	44.10	236	225
170.0	Andrew Microwaves	1	320	41.3	6.5	77.5	53.3	1.00	1.00	-0.4	619.4	44.08	1548	384
150.0	Ceragon FibeAir RFU-	1	9	0.5	0.7	7.9	3.4	1.00	0.50	0.0	0.0	42.95	9	11
150.0	Generic Flat Stand-	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	42.95	230	225
150.0	Andrew Microwaves	1	320	41.3	6.5	77.5	53.3	1.00	1.00	0.0	0.0	42.95	1509	384
Totals		48	7404	428.4									11318	8884

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
245.0	Flat Platform w/	1	2249	46.1	0.0	0.0	0.0	1.00	1.00	0.0	0.0	2.98	117	2649
204.0	Ericsson Radio 4449	3	80	1.8	1.3	13.2	9.3	0.80	0.50	0.0	0.0	2.86	5	281
204.0	Ericsson 8843 Rev 2	3	86	1.8	1.3	13.2	11.1	0.80	0.50	0.0	0.0	2.86	5	302
204.0	Commscope TD-	3	62	2.1	1.3	15.3	6.4	0.80	0.50	0.0	0.0	2.86	6	218
204.0	Ericsson AIR 6449	3	102	4.3	2.5	15.9	10.6	0.80	0.67	0.0	0.0	2.86	17	354
204.0	Raycap RCMD- C	2	54	4.3	2.5	16.5	12.6	0.80	0.79	0.0	0.0	2.86	13	121
204.0	Commscope NHH-	6	90	11.9	8.0	11.9	7.1	0.80	0.67	0.0	0.0	2.86	94	603
204.0	Generic Flat Light	3	452	20.5	0.0	0.0	0.0	0.75	0.75	0.0	0.0	2.86	84	1596
194.4	Raycap RTMDC-	1	32	2.0	1.3	14.0	8.0	0.80	1.00	0.0	0.0	2.84	4	36
194.0	Ericsson Radio 4449	3	85	1.8	1.3	13.2	10.4	0.80	0.50	0.0	0.0	2.83	5	301
194.0	Ericsson RRUS 4415	3	54	2.0	1.4	13.4	5.9	0.80	0.50	0.0	0.0	2.83	6	191
194.0	Ericsson 4424 B25	3	98	2.2	1.4	14.4	11.3	0.80	0.67	0.0	0.0	2.83	9	347
194.0	CSA Wireless A-	1	31	6.4	2.2	26.0	1.8	1.00	1.00	3.0	46.6	2.84	16	34
194.0	Commscope FFV4-	3	203	21.7	8.0	25.2	9.3	0.80	0.63	0.0	0.0	2.83	79	687
191.0	Round Sector	3	363	17.2	0.0	0.0	0.0	0.75	0.75	0.0	0.0	2.82	70	1268
170.0	Ceragon FibeAir RFU-	2	12	0.6	0.7	7.9	3.4	1.00	0.50	0.0	0.0	2.76	1	27
170.0	Generic Flat Stand-	1	210	6.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	2.76	16	248
170.0	Andrew Microwaves	1	459	42.0	6.5	77.5	53.3	1.00	1.00	-0.4	39.3	2.75	98	523
150.0	Ceragon FibeAir RFU-	1	12	0.6	0.7	7.9	3.4	1.00	0.50	0.0	0.0	2.68	1	13
150.0	Generic Flat Stand-	1	210	6.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	2.68	16	247
150.0	Andrew Microwaves	1	457	42.0	6.5	77.5	53.3	1.00	1.00	0.0	0.0	2.68	96	521
Totals		48	9086	460.6									757	10567

Site Number: 303048

Code:

ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

5/24/2021 10:03:39 AM

Customer: ALLTEL COMMUNICATIONS, LLC

Tower Loading**Discrete Appurtenance Properties** 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
245.0	Flat Platform w/	1	2000	42.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	11.91	429	2000
204.0	Ericsson Radio 4449	3	70	1.6	1.3	13.2	9.3	0.80	0.50	0.0	0.0	11.46	19	210
204.0	Ericsson 8843 Rev 2	3	75	1.6	1.3	13.2	11.1	0.80	0.50	0.0	0.0	11.46	19	225
204.0	Commscope TD-	3	53	2.0	1.3	15.3	6.4	0.80	0.50	0.0	0.0	11.46	23	159
204.0	Ericsson AIR 6449	3	82	4.0	2.5	15.9	10.6	0.80	0.67	0.0	0.0	11.46	63	245
204.0	Raycap RCMD-	2	32	4.1	2.5	16.5	12.6	0.80	0.79	0.0	0.0	11.46	50	64
204.0	Commscope NHH-	6	51	11.4	8.0	11.9	7.1	0.80	0.67	0.0	0.0	11.46	357	305
204.0	Generic Flat Light	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	11.46	294	1200
194.4	Raycap RTMDC-	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.0	11.34	14	22
194.0	Ericsson Radio 4449	3	75	1.6	1.3	13.2	10.4	0.80	0.50	0.0	0.0	11.34	19	225
194.0	Ericsson RRUS 4415	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.0	11.34	21	138
194.0	Ericsson 4424 B25	3	86	2.1	1.4	14.4	11.3	0.80	0.67	0.0	0.0	11.34	32	258
194.0	CSA Wireless A-	1	15	6.1	2.2	26.0	1.8	1.00	1.00	3.0	177.9	11.37	59	15
194.0	Commscope FFV4-	3	132	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.0	11.34	308	395
191.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	11.30	233	900
170.0	Ceragon FibeAir RFU-	2	9	0.5	0.7	7.9	3.4	1.00	0.50	0.0	0.0	11.02	5	18
170.0	Generic Flat Stand-	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	11.02	59	188
170.0	Andrew Microwaves	1	320	41.3	6.5	77.5	53.3	1.00	1.00	-0.4	154.8	11.02	387	320
150.0	Ceragon FibeAir RFU-	1	9	0.5	0.7	7.9	3.4	1.00	0.50	0.0	0.0	10.74	2	9
150.0	Generic Flat Stand-	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.74	58	188
150.0	Andrew Microwaves	1	320	41.3	6.5	77.5	53.3	1.00	1.00	0.0	0.0	10.74	377	320
Totals		48	7404	428.4									2829	7404

Site Number: 303048

Code: ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

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Customer: ALLTEL COMMUNICATIONS, LLC

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
5.00	245.0	Climbing Ladder	1	1.50	6.90	100	2	Individual	0.00	N	1.00	1.00	0.00
5.00	204.0	1 5/8" Coax	10	1.98	0.82	33	3	Block	0.00	N	1.00	1.00	0.00
5.00	204.0	1 5/8" Hybriflex	1	1.98	1.30	100	1	Individual	0.00	N	1.00	1.00	0.00
5.00	204.0	1 5/8" Hybriflex	1	1.98	1.30	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	194.0	1.99" (50.7mm)	2	1.99	1.90	100	2	Individual	0.00	N	1.00	1.00	0.00
5.00	194.0	1 5/8" Coax	1	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
5.00	171.0	0.405" (10.3mm)	1	0.41	0.11	100	2	Individual	0.00	N	1.00	1.00	0.00
5.00	170.0	0.405" (10.3mm)	1	0.41	0.11	100	2	Individual	0.00	N	1.00	1.00	0.00
5.00	150.0	0.405" (10.3mm)	1	0.41	0.11	100	2	Individual	0.00	N	1.00	1.00	0.00

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Site Name: Lacrosse FL 6, FL

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5/24/2021 10:03:39 AM

Customer: ALLTEL COMMUNICATIONS, LLC

Equivalent Lateral Force Method

Spectral Response Acceleration for Short Period (S_g):	0.08
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05
Long-Period Transition Period (T_L - Seconds):	8
Importance Factor (I_e):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.09
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.08
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s :	0.03
Lower Limit C_s :	0.03
Period based on Rayleigh Method (sec):	0.74
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.12
Total Unfactored Dead Load:	24.84 k
Seismic Base Shear (E):	0.97 k

LoadCase 1.2D + 1.0Ev + 1.0Eh**Seismic**

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
17	242.50	300	141,629	0.021	20	365
16	232.05	982	441,613	0.065	63	1,195
15	222.05	311	132,999	0.020	19	378
14	210.00	1,477	594,101	0.087	84	1,798
13	197.95	314	118,273	0.017	17	383
12	187.95	1,123	398,869	0.059	57	1,367
11	170.00	1,476	468,403	0.069	67	1,797
10	150.00	1,421	391,726	0.057	56	1,729
9	130.00	1,422	333,903	0.049	47	1,731
8	110.00	1,481	288,306	0.042	41	1,802
7	90.00	1,422	221,063	0.032	31	1,731
6	70.00	1,422	166,767	0.024	24	1,731
5	50.00	1,481	119,077	0.017	17	1,802
4	30.00	1,422	64,480	0.009	9	1,731
3	14.02	836	16,151	0.002	2	1,018
2	7.02	189	1,685	0.000	0	231
1	3.00	360	1,234	0.000	0	438
Flat Platform w/ Handrails	245.00	2,000	956,026	0.140	136	2,435
Ericsson Radio 4449 - B13&B5	204.00	210	81,745	0.012	12	256
Ericsson 8843 Rev 2	204.00	225	87,584	0.013	12	274
Commscope TD-850B-LTE78-43	204.00	159	61,892	0.009	9	194
Ericsson AIR 6449 B77D/ C-Band	204.00	245	95,291	0.014	14	298
Raycap RCMD-6627-PF-48	204.00	64	24,913	0.004	4	78
Commscope NHH-85C-R2B	204.00	305	118,880	0.017	17	372

Site Number: 303048

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

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Customer: ALLTEL COMMUNICATIONS, LLC

Equivalent Lateral Force Method

Generic Flat Light Sector Frame	204.00	1,200	467,113	0.069	66	1,461
Raycap RTMDC-5634-PF-48	194.40	22	8,076	0.001	1	27
Ericsson Radio 4449 B12,B71 (75 lbs)	194.00	225	82,783	0.012	12	274
Ericsson RRUS 4415 B25	194.00	138	50,774	0.007	7	168
Ericsson 4424 B25	194.00	258	94,925	0.014	13	314
CSA Wireless A-24A24-t	194.00	15	5,519	0.001	1	18
Commscope FFV4-65C-R3-V1	194.00	395	145,478	0.021	21	481
Round Sector Frames	191.00	900	325,396	0.048	46	1,096
Ceragon FibeAir RFU-C	170.00	18	5,711	0.001	1	22
Generic Flat Stand-Off	170.00	188	59,490	0.009	8	228
Andrew Microwaves HPX6-59-P3A/K	170.00	320	101,529	0.015	14	390
Ceragon FibeAir RFU-C	150.00	9	2,482	0.000	0	11
Generic Flat Stand-Off	150.00	188	51,699	0.008	7	228
Andrew Microwaves UHX6-59-P3A/L	150.00	320	88,232	0.013	13	390
		24,842	6,815,817	1.000	969	30,240

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Engineering Number: 13677441_C3_02

5/24/2021 10:03:40 AM

Customer: ALLTEL COMMUNICATIONS, LLC

Force/Stress Summary

Section: 1		Section 1		Bot Elev (ft): 0.00				Height (ft): 6.000									
		Pu		Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	(kip)	(kip)	% Controls
LEG	SOL - 2" SOLID	-35.28	1.2D + 1.0W 90 deg	3.07	100	100	100	73.6	50.0	95.10	0	0	0.00	0.00		37	Member X
HORIZ	SAE - 2.5X2.5X0.25	-0.07	1.2D + 1.0W Normal	1.909	100	100	100	30.3	36.0	41.60	0	0	0.00	0.00		0	Member Z
DIAG	PL - PL 2 x 0.25"	-0.08	1.0D + 1.0W	4.087	50	50	50	305.6	36.0	1.53	0	0	0.00	0.00			Member Y
		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Blk	Shear		Use		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		phiRnv	phiRn	phiRn	phit	Pn	%	Controls	
LEG		0.00		0	0	0.00	0	0		0.00	0.00				0		
HORIZ SAE - 2.5X2.5X0.25		3.91	1.2D + 1.0W Normal	36	58	38.56	0	0		0.00	0.00		0.00		10	Member	
DIAG PL - PL 2 x 0.25"		0.00	1.2D + 1.0W Normal	36	58	16.20	0	0		0.00	0.00		0.00		0	Member	

Section: 2		Section 2		Bot Elev (ft): 6.00				Height (ft): 2.033									
		Pu		Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	(kip)	(kip)	% Controls
LEG	SOL - 2" SOLID	-32.68	1.2D + 1.0W Normal	1.76	100	100	100	42.2	50.0	124.08	0	0	0.00	0.00		26	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00		0	
DIAG	SOL - 5/8" SOLID	-0.29	1.2D + 1.0W Normal	4.370	50	50	50	151.3	36.0	3.03	0	0	0.00	0.00			Member X
		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Blk	Shear		Use		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		phiRnv	phiRn	phiRn	phit	Pn	%	Controls	
LEG		0.00		0	0	0.00	0	0		0.00	0.00				0		
HORIZ SAU - 2X1.5X0.1875		3.05	1.2D + 1.0W Normal	36	58	20.09	0	0		0.00	0.00		0.00		15	Member	
DIAG SOL - 5/8" SOLID		0.80	1.2D + 1.0W Normal	36	58	9.94	0	0		0.00	0.00		0.00		8	Member	

Section: 3		Section 3		Bot Elev (ft): 8.03				Height (ft): 11.967									
		Pu		Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	(kip)	(kip)	% Controls
LEG	SOL - 2" SOLID	-34.88	1.2D + 1.0W 60 deg	3.90	100	100	100	93.6	50.0	74.55	0	0	0.00	0.00		46	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00		0	
DIAG	SOL - 5/8" SOLID	-1.68	1.2D + 1.0W Normal	5.585	50	50	50	193.3	36.0	1.85	0	0	0.00	0.00			Member X
		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Blk	Shear		Use		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		phiRnv	phiRn	phiRn	phit	Pn	%	Controls	
LEG		0.00		0	0	0.00	0	0		0.00	0.00				0		
HORIZ SAU - 2X1.5X0.1875		1.70	1.2D + 1.0W Normal	36	58	20.09	0	0		0.00	0.00		0.00		8	Member	
DIAG		0.00		0	0	0.00	0	0		0.00	0.00		0.00		0		

Site Number: 303048

Code: ANSI/TIA-222-H

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Engineering Number: 13677441_C3_02

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Customer: ALLTEL COMMUNICATIONS, LLC

Force/Stress Summary

Section: 4		Section 4		Bot Elev (ft): 20.00				Height (ft): 20.000									
		Pu		Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls	
LEG	SOL - 2" SOLID	-35.88	1.2D + 1.0W 60 deg	3.89	100	100	100	93.4	50.0	74.73	0	0	0.00	0.00	48	Member X	
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0		
DIAG	SOL - 5/8" SOLID	-1.21	1.2D + 1.0W Normal	5.580	50	50	50	193.1	36.0	1.86	0	0	0.00	0.00		Member X	
		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear		Bear	Blk	Shear	Use		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		phiRnv		phiRn	phiRn	phiRn	%	Controls	
LEG		0.00		0	0	0.00	0	0		0.00		0.00			0		
HORIZ	SAU - 2X1.5X0.1875	1.76	1.2D + 1.0W Normal	36	58	20.09	0	0		0.00		0.00		0.00	8	Member	
DIAG		0.00		0	0	0.00	0	0		0.00		0.00		0.00	0		

Section: 5		Section 5		Bot Elev (ft): 40.00				Height (ft): 20.000									
		Pu		Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls	
LEG	SOL - 2" SOLID	-33.73	1.2D + 1.0W 60 deg	3.89	100	100	100	93.4	50.0	74.73	0	0	0.00	0.00	45	Member X	
HORIZ	SAU - 2X1.5X0.1875	-1.40	1.2D + 1.0W 90 deg	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	8	Member Z	
DIAG	SOL - 5/8" SOLID	-0.49	1.2D + 1.0W Normal	5.580	50	50	50	193.1	36.0	1.86	0	0	0.00	0.00		Member X	
		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear		Bear	Blk	Shear	Use		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		phiRnv		phiRn	phiRn	phiRn	%	Controls	
LEG		0.00		0	0	0.00	0	0		0.00		0.00			0		
HORIZ	SAU - 2X1.5X0.1875	1.65	1.2D + 1.0W Normal	36	58	20.09	0	0		0.00		0.00		0.00	8	Member	
DIAG	SOL - 5/8" SOLID	2.02	1.2D + 1.0W 90 deg	36	58	9.94	0	0		0.00		0.00		0.00	20	Member	

Section: 6		Section 6		Bot Elev (ft): 60.00				Height (ft): 20.000									
		Pu		Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls	
LEG	SOL - 2" SOLID	-29.91	1.2D + 1.0W Normal	3.89	100	100	100	93.4	50.0	74.73	0	0	0.00	0.00	40	Member X	
HORIZ	SAU - 2X1.5X0.1875	-1.29	1.2D + 1.0W Normal	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	8	Member Z	
DIAG	SOL - 5/8" SOLID	-0.98	1.2D + 1.0W Normal	5.580	50	50	50	193.1	36.0	1.86	0	0	0.00	0.00		Member X	
		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear		Bear	Blk	Shear	Use		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		phiRnv		phiRn	phiRn	phiRn	%	Controls	
LEG		0.00		0	0	0.00	0	0		0.00		0.00			0		
HORIZ	SAU - 2X1.5X0.1875	1.43	1.2D + 1.0W Normal	36	58	20.09	0	0		0.00		0.00		0.00	7	Member	
DIAG	SOL - 5/8" SOLID	1.94	1.2D + 1.0W 90 deg	36	58	9.94	0	0		0.00		0.00		0.00	19	Member	

Site Number: 303048

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ANSI/TIA-222-H

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Engineering Number: 13677441_C3_02

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Customer: ALLTEL COMMUNICATIONS, LLC

Force/Stress Summary

Section: 7		Section 7		Bot Elev (ft): 80.00				Height (ft): 20.000							
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Num	Shear	Bear		
		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	Use
Max Compression Member															Controls
LEG	SOL - 2" SOLID	-30.07	1.2D + 1.0W Normal	3.89	100	100	100	93.4	50.0	74.73	0	0	0.00	0.00	40 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SOL - 5/8" SOLID	-1.10	1.2D + 1.0W Normal	5.580	50	50	50	193.1	36.0	1.86	0	0	0.00	0.00	Member X
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear			Use	Controls
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phiRn			%	
LEG		0.00		0	0	0.00	0	0	0.00	0.00				0	
HORIZ	SAU - 2X1.5X0.1875	1.61	1.2D + 1.0W Normal	36	58	20.09	0	0	0.00	0.00	0.00			7 Member	
DIAG		0.00		0	0	0.00	0	0	0.00	0.00	0.00			0	

Section: 8		Section 8		Bot Elev (ft): 100.0				Height (ft): 20.000							
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Num	Shear	Bear		
		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	Use
Max Compression Member															Controls
LEG	SOL - 2" SOLID	-31.31	1.2D + 1.0W Normal	3.89	100	100	100	93.4	50.0	74.73	0	0	0.00	0.00	41 Member X
HORIZ	SAU - 2X1.5X0.1875	-1.63	1.2D + 1.0W 60 deg	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	10 Member Z
DIAG	SOL - 5/8" SOLID	-0.23	1.2D + 1.0W Normal	5.580	50	50	50	193.1	36.0	1.86	0	0	0.00	0.00	Member X
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear			Use	Controls
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phiRn			%	
LEG		0.00		0	0	0.00	0	0	0.00	0.00				0	
HORIZ	SAU - 2X1.5X0.1875	1.46	1.2D + 1.0W Normal	36	58	20.09	0	0	0.00	0.00	0.00			7 Member	
DIAG	SOL - 5/8" SOLID	2.43	1.2D + 1.0W 90 deg	36	58	9.94	0	0	0.00	0.00	0.00			24 Member	

Section: 9		Section 9		Bot Elev (ft): 120.0				Height (ft): 20.000							
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Num	Shear	Bear		
		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	Use
Max Compression Member															Controls
LEG	SOL - 2" SOLID	-32.92	1.2D + 1.0W 90 deg	3.89	100	100	100	93.4	50.0	74.73	0	0	0.00	0.00	44 Member X
HORIZ	SAU - 2X1.5X0.1875	-3.60	1.2D + 1.0W 90 deg	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	22 Member Z
DIAG	SOL - 5/8" SOLID	-0.68	1.2D + 1.0W Normal	5.580	50	50	50	193.1	36.0	1.86	0	0	0.00	0.00	Member X
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear			Use	Controls
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phiRn			%	
LEG		0.00		0	0	0.00	0	0	0.00	0.00				0	
HORIZ	SAU - 2X1.5X0.1875	1.41	1.2D + 1.0W Normal	36	58	20.09	0	0	0.00	0.00	0.00			7 Member	
DIAG	SOL - 5/8" SOLID	5.12	1.2D + 1.0W 90 deg	36	58	9.94	0	0	0.00	0.00	0.00			51 Member	

Site Number: 303048

Code: ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

5/24/2021 10:03:40 AM

Customer: ALLTEL COMMUNICATIONS, LLC

Force/Stress Summary

Section: 10		Section 10		Bot Elev (ft): 140.0				Height (ft): 20.000								
		Pu		Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use	
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
LEG	SOL - 2" SOLID	-41.78	1.2D + 1.0W 60 deg	3.89	100	100	100	93.4	50.0	74.73	0	0	0.00	0.00	55	Member X
HORIZ	SAU - 2X1.5X0.1875	-2.27	1.2D + 1.0W 90 deg	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	14	Member Z
DIAG	SOL - 5/8" SOLID	-1.26	1.2D + 1.0W Normal	5.580	50	50	50	193.1	36.0	1.86	0	0	0.00	0.00		Member X
		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Blk	Shear	Use		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		phiRnv	phiRn	phiRn	phiRn	%	Controls	
LEG	SOL - 2" SOLID	12.92	1.2D + 1.0W Normal	50	65	141.37	0	0		0.00	0.00			9	Member	
HORIZ	SAU - 2X1.5X0.1875	2.11	1.2D + 1.0W Normal	36	58	20.09	0	0		0.00	0.00		0.00	10	Member	
DIAG	SOL - 5/8" SOLID	3.48	1.2D + 1.0W 90 deg	36	58	9.94	0	0		0.00	0.00		0.00	35	Member	

Section: 11		Section 11		Bot Elev (ft): 160.0				Height (ft): 20.000								
		Pu		Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use	
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
LEG	SOL - 2" SOLID	-40.36	1.2D + 1.0W 180 deg	3.89	100	100	100	93.4	50.0	74.73	0	0	0.00	0.00	54	Member X
HORIZ	SAU - 2X1.5X0.1875	-2.37	1.2D + 1.0W 210 deg	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	15	Member Z
DIAG	SOL - 5/8" SOLID	-0.23	1.2D + 1.0W Normal	5.580	50	50	50	193.1	36.0	1.86	0	0	0.00	0.00		Member X
		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Blk	Shear	Use		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		phiRnv	phiRn	phiRn	phiRn	%	Controls	
LEG	SOL - 2" SOLID	12.73	1.2D + 1.0W Normal	50	65	141.37	0	0		0.00	0.00			9	Member	
HORIZ	SAU - 2X1.5X0.1875	2.08	1.2D + 1.0W Normal	36	58	20.09	0	0		0.00	0.00		0.00	10	Member	
DIAG	SOL - 5/8" SOLID	3.38	1.2D + 1.0W 90 deg	36	58	9.94	0	0		0.00	0.00		0.00	34	Member	

Section: 12		Section 12		Bot Elev (ft): 180.0				Height (ft): 15.900								
		Pu		Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use	
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
LEG	SOL - 2" SOLID	-40.50	1.2D + 1.0W 60 deg	3.91	100	100	100	93.8	50.0	74.34	0	0	0.00	0.00	54	Member X
HORIZ	SAU - 2X1.5X0.1875	-3.86	1.2D + 1.0W 90 deg	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	24	Member Z
DIAG	SOL - 5/8" SOLID	-0.78	1.2D + 1.0W Normal	5.591	50	50	50	193.5	36.0	1.85	0	0	0.00	0.00		Member X
		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Blk	Shear	Use		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		phiRnv	phiRn	phiRn	phiRn	%	Controls	
LEG	SOL - 2" SOLID	24.49	1.2D + 1.0W Normal	50	65	141.37	0	0		0.00	0.00			17	Member	
HORIZ	SAU - 2X1.5X0.1875	1.84	1.2D + 1.0W Normal	36	58	20.09	0	0		0.00	0.00		0.00	9	Member	
DIAG	SOL - 5/8" SOLID	5.51	1.2D + 1.0W 90 deg	36	58	19.88	0	0		0.00	0.00		0.00	27	User Input	

Site Number: 303048

Code: ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

5/24/2021 10:03:40 AM

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Force/Stress Summary

Section: 13		Section 13		Bot Elev (ft): 195.9				Height (ft): 4.100								
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	SOL - 2" SOLID	-40.15	1.2D + 1.0W 60 deg	3.83	50	50	50	45.9	50.0	121.17	0	0	0.00	0.00	33	Member X
HORIZ	SAU - 2X1.5X0.1875	-0.38	1.2D + 1.0W 60 deg	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	2	Member Z
DIAG	SOL - 5/8" SOLID	-0.76	1.2D + 1.0W Normal	5.536	50	50	50	191.6	36.0	1.89	0	0	0.00	0.00		Member X
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use				
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls			
LEG	SOL - 2" SOLID	28.80	1.2D + 1.0W Normal	50	65	141.37	0	0	0.00	0.00		20	Member			
HORIZ	SAU - 2X1.5X0.1875	1.03	1.2D + 1.0W Normal	36	58	20.09	0	0	0.00	0.00	0.00	5	Member			
DIAG	SOL - 5/8" SOLID	0.64	1.2D + 1.0W Normal	36	58	19.88	0	0	0.00	0.00	0.00	3	User Input			

Section: 14		Section 14		Bot Elev (ft): 200.0				Height (ft): 20.000								
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	SOL - 2" SOLID	-42.12	1.2D + 1.0W 60 deg	3.89	50	50	50	46.7	50.0	120.54	0	0	0.00	0.00	34	Member X
HORIZ	SAU - 2X1.5X0.1875	-0.94	1.2D + 1.0W 60 deg	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	5	Member Z
DIAG	SOL - 3/4" SOLID	-0.47	1.2D + 1.0W Normal	5.580	50	50	50	160.7	36.0	3.87	0	0	0.00	0.00		Member X
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use				
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls			
LEG	SOL - 2" SOLID	29.71	1.2D + 1.0W Normal	50	65	141.37	0	0	0.00	0.00		21	Member			
HORIZ	SAU - 2X1.5X0.1875	2.58	1.2D + 1.0W Normal	36	58	20.09	0	0	0.00	0.00	0.00	12	Member			
DIAG	SOL - 3/4" SOLID	1.34	1.2D + 1.0W Normal	36	58	14.31	0	0	0.00	0.00	0.00	9	Member			

Section: 15		Section 15		Bot Elev (ft): 220.0				Height (ft): 4.100								
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	SOL - 2" SOLID	-29.82	1.2D + 1.0W 60 deg	3.83	50	50	50	45.9	50.0	121.17	0	0	0.00	0.00	24	Member X
HORIZ	SAU - 2X1.5X0.1875	-0.45	1.2D + 1.0W 60 deg	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	2	Member Z
DIAG	SOL - 3/4" SOLID	-0.98	1.2D + 1.0W Normal	5.536	50	50	50	159.4	36.0	3.93	0	0	0.00	0.00		Member X
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use				
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls			
LEG	SOL - 2" SOLID	18.14	1.2D + 1.0W Normal	50	65	141.37	0	0	0.00	0.00		12	Member			
HORIZ	SAU - 2X1.5X0.1875	1.25	1.2D + 1.0W Normal	36	58	20.09	0	0	0.00	0.00	0.00	6	Member			
DIAG	SOL - 3/4" SOLID	1.47	1.2D + 1.0W Normal	36	58	14.31	0	0	0.00	0.00	0.00	10	Member			

Site Number: 303048

Code:

ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

5/24/2021 10:03:40 AM

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Force/Stress Summary

Section: 16		Section 16		Bot Elev (ft): 224.1				Height (ft): 15.900							
		Pu		Len	Bracing %			F'y	Phic Pn	Num		Shear	Bear		
		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	Use
Max Compression Member															Controls
LEG	SOL - 2" SOLID	-26.25	1.2D + 1.0W 60 deg	3.91	100	100	100	93.8	50.0	74.34	0	0	0.00	0.00	35 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SOL - 3/4" SOLID	-0.87	1.2D + 1.0W Normal	5.591	50	50	50	161.0	36.0	3.85	0	0	0.00	0.00	Member X
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear			Use	Controls
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phiRn			%	
LEG	SOL - 2" SOLID	11.75	1.2D + 1.0W Normal	50	65	141.37	0	0	0.00	0.00				8	Member
HORIZ	SAU - 2X1.5X0.1875	1.22	1.2D + 1.0W Normal	36	58	20.09	0	0	0.00	0.00	0.00			6	Member
DIAG	SOL - 3/4" SOLID	1.58	1.2D + 1.0W Normal	36	58	14.31	0	0	0.00	0.00	0.00			11	Member

Section: 17		Section 17		Bot Elev (ft): 240.0				Height (ft): 5.000							
		Pu		Len	Bracing %			F'y	Phic Pn	Num		Shear	Bear		
		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	Use
Max Compression Member															Controls
LEG	SOL - 2" SOLID	-2.12	1.2D + 1.0W Normal	4.45	100	100	100	106.9	50.0	61.31	0	0	0.00	0.00	3 Member X
HORIZ	SAU - 2X1.5X0.1875	-0.32	1.2D + 1.0W 60 deg	4.000	100	100	100	96.9	36.0	15.73	0	0	0.00	0.00	2 Member Z
DIAG	SOL - 3/4" SOLID	-0.90	1.2D + 1.0W Normal	5.986	50	50	50	172.4	36.0	3.36	0	0	0.00	0.00	Member X
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear			Use	Controls
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phiRn			%	
LEG	SOL - 2" SOLID	1.65	1.2D + 1.0W 60 deg	50	65	141.37	0	0	0.00	0.00				1	Member
HORIZ	SAU - 2X1.5X0.1875	0.89	1.2D + 1.0W Normal	36	58	20.09	0	0	0.00	0.00	0.00			4	Member
DIAG	SOL - 3/4" SOLID	1.01	1.2D + 1.0W 90 deg	36	58	14.31	0	0	0.00	0.00	0.00			7	Member

Site Number: 303048

Code: ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

5/24/2021 10:03:40 AM

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Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.0W Normal	0.00	00.00		1	0.00	92.28	-1.22	
	200.00	00.00	0	A1	0.00	-2.07	1.91	
	200.00	00.00	240	A1a	-31.10	-28.43	-19.24	
	200.00	00.00	120	A1b	31.10	-28.43	-19.24	
1.2D + 1.0W 60 deg	0.00	00.00		1	-1.13	88.25	-0.65	
	200.00	00.00	0	A1	-1.03	-9.94	11.56	
	200.00	00.00	240	A1a	-39.23	-35.63	-22.65	
	200.00	00.00	120	A1b	9.50	-9.94	-6.67	
1.2D + 1.0W 90 deg	0.00	00.00		1	-1.19	90.78	-0.15	
	200.00	00.00	0	A1	-1.32	-19.25	24.12	
	200.00	00.00	240	A1a	-38.12	-34.17	-21.38	
	200.00	00.00	120	A1b	3.57	-4.31	-2.60	
1.2D + 1.0W 120 deg	0.00	00.00		1	-1.06	92.29	0.61	
	200.00	00.00	0	A1	-1.11	-28.43	36.56	
	200.00	00.00	240	A1a	-32.22	-28.43	-17.32	
	200.00	00.00	120	A1b	1.66	-2.07	-0.96	
1.2D + 1.0W 180 deg	0.00	00.00		1	0.00	88.25	1.30	
	200.00	00.00	0	A1	0.00	-35.63	45.30	
	200.00	00.00	240	A1a	-10.52	-9.94	-4.89	
	200.00	00.00	120	A1b	10.52	-9.94	-4.89	
1.2D + 1.0W 210 deg	0.00	00.00		1	0.47	90.78	1.10	
	200.00	00.00	0	A1	0.55	-34.17	43.70	
	200.00	00.00	240	A1a	-4.04	-4.31	-1.79	
	200.00	00.00	120	A1b	21.55	-19.25	-10.91	
1.2D + 1.0W 240 deg	0.00	00.00		1	1.06	92.29	0.61	
	200.00	00.00	0	A1	1.11	-28.43	36.56	
	200.00	00.00	240	A1a	-1.66	-2.07	-0.96	
	200.00	00.00	120	A1b	32.22	-28.43	-17.32	
1.2D + 1.0W 300 deg	0.00	00.00		1	1.13	88.25	-0.65	
	200.00	00.00	0	A1	1.03	-9.94	11.56	
	200.00	00.00	240	A1a	-9.50	-9.94	-6.67	
	200.00	00.00	120	A1b	39.23	-35.63	-22.65	
1.2D + 1.0W 330 deg	0.00	00.00		1	0.72	90.77	-0.96	
	200.00	00.00	0	A1	0.47	-4.31	4.39	
	200.00	00.00	240	A1a	-20.23	-19.25	-13.20	
	200.00	00.00	120	A1b	37.57	-34.17	-22.33	
1.2D + 1.0Di + 1.0Wi Normal	0.00	00.00		1	0.00	79.86	-0.12	
	200.00	00.00	0	A1	0.00	-11.91	15.40	
	200.00	00.00	240	A1a	-15.51	-13.82	-9.08	
	200.00	00.00	120	A1b	15.51	-13.82	-9.08	
1.2D + 1.0Di + 1.0Wi 60 deg	0.00	00.00		1	-0.10	79.62	-0.06	
	200.00	00.00	0	A1	-0.11	-12.51	16.19	
	200.00	00.00	240	A1a	-16.20	-14.38	-9.35	
	200.00	00.00	120	A1b	13.96	-12.51	-8.19	
1.2D + 1.0Di + 1.0Wi 90 deg	0.00	00.00		1	-0.12	79.74	0.00	
	200.00	00.00	0	A1	-0.14	-13.16	17.07	
	200.00	00.00	240	A1a	-16.08	-14.24	-9.22	
	200.00	00.00	120	A1b	13.49	-12.07	-7.85	

Site Number: 303048

Code:

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Engineering Number: 13677441_C3_02

5/24/2021 10:03:40 AM

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1.2D + 1.0Di + 1.0Wi 120 deg	0.00	00.00		1	-0.11	79.86	0.06
	200.00	00.00	0	A1	-0.11	-13.82	17.97
	200.00	00.00	240	A1a	-15.62	-13.82	-8.89
	200.00	00.00	120	A1b	13.34	-11.91	-7.70
1.2D + 1.0Di + 1.0Wi 180 deg	0.00	00.00		1	0.00	79.62	0.12
	200.00	00.00	0	A1	0.00	-14.38	18.71
	200.00	00.00	240	A1a	-14.07	-12.51	-8.00
	200.00	00.00	120	A1b	14.07	-12.51	-8.00
1.2D + 1.0Di + 1.0Wi 210 deg	0.00	00.00		1	0.06	79.74	0.10
	200.00	00.00	0	A1	0.05	-14.24	18.53
	200.00	00.00	240	A1a	-13.54	-12.07	-7.76
	200.00	00.00	120	A1b	14.86	-13.16	-8.42
1.2D + 1.0Di + 1.0Wi 240 deg	0.00	00.00		1	0.11	79.86	0.06
	200.00	00.00	0	A1	0.11	-13.82	17.97
	200.00	00.00	240	A1a	-13.34	-11.91	-7.70
	200.00	00.00	120	A1b	15.62	-13.82	-8.89
1.2D + 1.0Di + 1.0Wi 300 deg	0.00	00.00		1	0.10	79.62	-0.06
	200.00	00.00	0	A1	0.11	-12.51	16.19
	200.00	00.00	240	A1a	-13.96	-12.51	-8.19
	200.00	00.00	120	A1b	16.20	-14.38	-9.35
1.2D + 1.0Di + 1.0Wi 330 deg	0.00	00.00		1	0.06	79.74	-0.10
	200.00	00.00	0	A1	0.05	-12.07	15.60
	200.00	00.00	240	A1a	-14.72	-13.16	-8.66
	200.00	00.00	120	A1b	16.02	-14.24	-9.31
1.2D + 1.0Ev + 1.0Eh Normal M1	0.00	00.00		1	0.00	64.68	0.01
	200.00	00.00	0	A1	0.00	-10.80	13.76
	200.00	00.00	240	A1a	-12.52	-11.42	-7.23
	200.00	00.00	120	A1b	12.52	-11.42	-7.23
1.2D + 1.0Ev + 1.0Eh 60 deg M1	0.00	00.00		1	0.01	64.67	0.00
	200.00	00.00	0	A1	0.00	-11.00	13.99
	200.00	00.00	240	A1a	-12.73	-11.63	-7.35
	200.00	00.00	120	A1b	12.12	-11.00	-7.00
1.2D + 1.0Ev + 1.0Eh 90 deg M1	0.00	00.00		1	0.01	64.68	0.00
	200.00	00.00	0	A1	0.00	-11.21	14.22
	200.00	00.00	240	A1a	-12.67	-11.57	-7.32
	200.00	00.00	120	A1b	11.97	-10.85	-6.91
1.2D + 1.0Ev + 1.0Eh 120 deg M1	0.00	00.00		1	0.01	64.68	0.00
	200.00	00.00	0	A1	0.00	-11.42	14.46
	200.00	00.00	240	A1a	-12.52	-11.42	-7.23
	200.00	00.00	120	A1b	11.91	-10.80	-6.88
1.2D + 1.0Ev + 1.0Eh 180 deg M1	0.00	00.00		1	0.00	64.67	-0.01
	200.00	00.00	0	A1	0.00	-11.63	14.70
	200.00	00.00	240	A1a	-12.12	-11.00	-6.99
	200.00	00.00	120	A1b	12.12	-11.00	-6.99
1.2D + 1.0Ev + 1.0Eh 210 deg M1	0.00	00.00		1	0.00	64.68	-0.01
	200.00	00.00	0	A1	0.00	-11.57	14.63
	200.00	00.00	240	A1a	-11.97	-10.85	-6.91
	200.00	00.00	120	A1b	12.32	-11.21	-7.11
1.2D + 1.0Ev + 1.0Eh 240 deg M1	0.00	00.00		1	-0.01	64.68	0.00
	200.00	00.00	0	A1	0.00	-11.42	14.46
	200.00	00.00	240	A1a	-11.91	-10.80	-6.88
	200.00	00.00	120	A1b	12.52	-11.42	-7.23

Site Number: 303048

Code:

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

5/24/2021 10:03:40 AM

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1.2D + 1.0Ev + 1.0Eh 300 deg M1	0.00	00.00		1	-0.01	64.67	0.00
	200.00	00.00	0	A1	0.00	-11.00	13.99
	200.00	00.00	240	A1a	-12.12	-11.00	-7.00
	200.00	00.00	120	A1b	12.73	-11.63	-7.35
1.2D + 1.0Ev + 1.0Eh 330 deg M1	0.00	00.00		1	0.00	64.68	0.01
	200.00	00.00	0	A1	0.00	-10.85	13.82
	200.00	00.00	240	A1a	-12.32	-11.21	-7.11
	200.00	00.00	120	A1b	12.67	-11.57	-7.32
1.0D + 1.0W Service Normal	0.00	00.00		1	0.00	62.92	-0.39
	200.00	00.00	0	A1	0.00	-7.26	9.05
	200.00	00.00	240	A1a	-15.06	-13.75	-8.99
	200.00	00.00	120	A1b	15.06	-13.75	-8.99
1.0D + 1.0W Service 60 deg	0.00	00.00		1	-0.32	62.83	-0.18
	200.00	00.00	0	A1	-0.25	-9.51	11.92
	200.00	00.00	240	A1a	-17.44	-15.80	-10.07
	200.00	00.00	120	A1b	10.19	-9.51	-6.18
1.0D + 1.0W Service 90 deg	0.00	00.00		1	-0.37	62.84	0.00
	200.00	00.00	0	A1	-0.32	-11.58	14.66
	200.00	00.00	240	A1a	-16.94	-15.27	-9.64
	200.00	00.00	120	A1b	8.47	-7.91	-5.03
1.0D + 1.0W Service 120 deg	0.00	00.00		1	-0.34	62.92	0.19
	200.00	00.00	0	A1	-0.26	-13.75	17.54
	200.00	00.00	240	A1a	-15.32	-13.75	-8.55
	200.00	00.00	120	A1b	7.84	-7.26	-4.53
1.0D + 1.0W Service 180 deg	0.00	00.00		1	0.00	62.84	0.37
	200.00	00.00	0	A1	0.00	-15.84	20.20
	200.00	00.00	240	A1a	-10.43	-9.50	-5.73
	200.00	00.00	120	A1b	10.43	-9.50	-5.73
1.0D + 1.0W Service 210 deg	0.00	00.00		1	0.18	62.84	0.32
	200.00	00.00	0	A1	0.12	-15.27	19.49
	200.00	00.00	240	A1a	-8.59	-7.90	-4.82
	200.00	00.00	120	A1b	12.85	-11.58	-7.05
1.0D + 1.0W Service 240 deg	0.00	00.00		1	0.34	62.92	0.19
	200.00	00.00	0	A1	0.26	-13.75	17.54
	200.00	00.00	240	A1a	-7.84	-7.26	-4.53
	200.00	00.00	120	A1b	15.32	-13.75	-8.55
1.0D + 1.0W Service 300 deg	0.00	00.00		1	0.32	62.83	-0.18
	200.00	00.00	0	A1	0.25	-9.51	11.92
	200.00	00.00	240	A1a	-10.19	-9.51	-6.18
	200.00	00.00	120	A1b	17.44	-15.80	-10.07
1.0D + 1.0W Service 330 deg	0.00	00.00		1	0.19	62.84	-0.32
	200.00	00.00	0	A1	0.12	-7.90	9.85
	200.00	00.00	240	A1a	-12.54	-11.58	-7.61
	200.00	00.00	120	A1b	16.82	-15.27	-9.85

Site Number: 303048

Code: ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

5/24/2021 10:03:40 AM

Customer: ALLTEL COMMUNICATIONS, LLC

Guy Anchor Design Loads

Radius (ft)	Drop (ft)	Azimuth (°)	Uplift (kip)	Shear (kip)
200.00	0.00	0	35.63	45.30
200.00	0.00	240	35.63	45.30
200.00	0.00	120	35.63	45.30

Maximum Cable Forces Summary

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use %
1.2D + 1.0W 60 deg	59.99	1/2 EHS	A1a	24b	16.14	7.18	44
1.2D + 1.0W 60 deg	119.99	5/8 EHS	A1a	45b	25.44	13.85	54
1.2D + 1.0W 60 deg	179.99	3/4 EHS	A1a	66b	34.98	19.96	57
1.2D + 1.0W 60 deg	239.99	7/8 EHS	A1a	87b	47.82	18.34	38

Maximum Torque Arm Stress Summary

Load Case	Elevation (ft)	Member	Type	Compression %	Tension %
1.2D + 1.0W Normal	60.00	3X3X0.25	Horiz		6
1.2D + 1.0W Normal	120.00	3X3X0.25	Horiz		9
1.2D + 1.0W Normal	180.00	3X3X0.25	Horiz		11
1.2D + 1.0W Normal	240.00	3X3X0.25	Horiz		8

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ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

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5/24/2021 10:03:40 AM

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Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
120 mph Normal with No Ice	151.95	0.856	0.0031	0.1547	0.1547
120 mph Normal with No Ice	171.95	0.877	0.0049	0.0935	0.0935
120 mph Normal with No Ice	191.99	0.854	0.0054	0.1228	0.1229
120 mph Normal with No Ice	195.90	0.843	0.0035	0.1506	0.1506
120 mph Normal with No Ice	204.16	0.810	0.0039	0.2962	0.2962
120 mph Normal with No Ice	245.00	0.485	0.0002	0.4276	0.4276
120 mph 60 degree with No Ice	151.95	0.610	-0.0004	0.1797	0.1797
120 mph 60 degree with No Ice	171.95	0.642	-0.0009	0.0478	0.0478
120 mph 60 degree with No Ice	191.99	0.654	-0.0045	0.0589	0.0591
120 mph 60 degree with No Ice	195.90	0.655	0.0007	0.0861	0.0861
120 mph 60 degree with No Ice	204.16	0.642	0.0035	0.1574	0.1574
120 mph 60 degree with No Ice	245.00	0.444	0.0015	0.2535	0.2535
120 mph 90 degree with No Ice	151.95	0.769	0.3183	0.1806	0.3651
120 mph 90 degree with No Ice	171.95	0.797	0.3116	0.0295	0.3125
120 mph 90 degree with No Ice	191.99	0.786	0.2878	0.0893	0.3013
120 mph 90 degree with No Ice	195.90	0.781	0.2813	0.1826	0.3324
120 mph 90 degree with No Ice	204.16	0.757	0.2835	0.2457	0.3738
120 mph 90 degree with No Ice	245.00	0.485	0.2797	0.3589	0.4545
120 mph 120 degree with No Ice	151.95	0.856	0.0033	0.1550	0.1550
120 mph 120 degree with No Ice	171.95	0.877	0.0051	0.0505	0.0505
120 mph 120 degree with No Ice	191.99	0.855	0.0052	0.1072	0.1073
120 mph 120 degree with No Ice	195.90	0.844	0.0031	0.2266	0.2266
120 mph 120 degree with No Ice	204.16	0.811	0.0036	0.3003	0.3003
120 mph 120 degree with No Ice	245.00	0.485	-0.0001	0.4287	0.4287
120 mph 180 degree with No Ice	151.95	0.610	0.0004	0.1795	0.1795
120 mph 180 degree with No Ice	171.95	0.642	0.0009	0.0377	0.0377
120 mph 180 degree with No Ice	191.99	0.654	0.0042	0.0412	0.0414
120 mph 180 degree with No Ice	195.90	0.655	0.0007	0.0070	0.0070
120 mph 180 degree with No Ice	204.16	0.642	0.0035	0.1536	0.1536
120 mph 180 degree with No Ice	245.00	0.444	0.0014	0.2529	0.2529
120 mph 210 degree with No Ice	151.95	0.769	0.3169	0.1804	0.3637
120 mph 210 degree with No Ice	171.95	0.796	0.3102	0.0482	0.3140
120 mph 210 degree with No Ice	191.99	0.786	0.2862	0.0839	0.2983
120 mph 210 degree with No Ice	195.90	0.781	0.2797	0.1481	0.3156
120 mph 210 degree with No Ice	204.16	0.757	0.2818	0.2427	0.3703
120 mph 210 degree with No Ice	245.00	0.485	0.2781	0.3583	0.4531
120 mph 240 degree with No Ice	151.95	0.856	-0.0033	0.1550	0.1550
120 mph 240 degree with No Ice	171.95	0.877	-0.0051	0.0505	0.0505
120 mph 240 degree with No Ice	191.99	0.855	0.0057	0.1072	0.1073
120 mph 240 degree with No Ice	195.90	0.844	0.0038	0.2266	0.2266
120 mph 240 degree with No Ice	204.16	0.811	0.0042	0.3003	0.3003
120 mph 240 degree with No Ice	245.00	0.485	0.0005	0.4287	0.4287
120 mph 300 degree with No Ice	151.95	0.610	0.0004	0.1797	0.1797
120 mph 300 degree with No Ice	171.95	0.642	0.0009	0.0478	0.0478
120 mph 300 degree with No Ice	191.99	0.654	0.0045	0.0589	0.0591
120 mph 300 degree with No Ice	195.90	0.655	0.0006	0.0861	0.0861
120 mph 300 degree with No Ice	204.16	0.642	-0.0035	0.1574	0.1574
120 mph 300 degree with No Ice	245.00	0.444	-0.0015	0.2535	0.2535
120 mph 330 degree with No Ice	151.95	0.769	0.3182	0.1803	0.3649
120 mph 330 degree with No Ice	171.95	0.796	0.3116	0.0635	0.3176
120 mph 330 degree with No Ice	191.99	0.786	0.2883	0.1012	0.3055
120 mph 330 degree with No Ice	195.90	0.781	0.2810	0.1016	0.2978
120 mph 330 degree with No Ice	204.16	0.757	0.2831	0.2408	0.3704
120 mph 330 degree with No Ice	245.00	0.485	0.2793	0.3579	0.4535
30 mph Normal with 0.25 in Radial Ice	151.95	0.032	0.0001	0.0053	0.0053

Site Number: 303048

Code:

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5/24/2021 10:03:40 AM

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30 mph Normal with 0.25 in Radial Ice	171.95	0.032	0.0001	0.0072	0.0072
30 mph Normal with 0.25 in Radial Ice	191.99	0.030	0.0001	0.0073	0.0073
30 mph Normal with 0.25 in Radial Ice	195.90	0.029	0.0002	0.0083	0.0083
30 mph Normal with 0.25 in Radial Ice	204.16	0.028	0.0002	0.0165	0.0165
30 mph Normal with 0.25 in Radial Ice	245.00	0.010	0.0001	0.0250	0.0250
30 mph 60 deg with 0.25 in Radial Ice	151.95	0.033	0.0001	0.0062	0.0062
30 mph 60 deg with 0.25 in Radial Ice	171.95	0.033	0.0001	0.0034	0.0034
30 mph 60 deg with 0.25 in Radial Ice	191.99	0.032	0.0001	0.0054	0.0054
30 mph 60 deg with 0.25 in Radial Ice	195.90	0.031	0.0002	0.0115	0.0115
30 mph 60 deg with 0.25 in Radial Ice	204.16	0.030	0.0002	0.0155	0.0155
30 mph 60 deg with 0.25 in Radial Ice	245.00	0.013	0.0001	0.0261	0.0261
30 mph 90 deg with 0.25 in Radial Ice	151.95	0.032	0.0087	0.0058	0.0104
30 mph 90 deg with 0.25 in Radial Ice	171.95	0.032	0.0091	0.0017	0.0092
30 mph 90 deg with 0.25 in Radial Ice	191.99	0.031	0.0093	0.0055	0.0106
30 mph 90 deg with 0.25 in Radial Ice	195.90	0.030	0.0093	0.0134	0.0162
30 mph 90 deg with 0.25 in Radial Ice	204.16	0.029	0.0095	0.0161	0.0185
30 mph 90 deg with 0.25 in Radial Ice	245.00	0.011	0.0096	0.0260	0.0277
30 mph 120 deg with 0.25 in Radial Ice	151.95	0.032	0.0001	0.0053	0.0053
30 mph 120 deg with 0.25 in Radial Ice	171.95	0.032	0.0001	0.0041	0.0041
30 mph 120 deg with 0.25 in Radial Ice	191.99	0.030	0.0001	0.0063	0.0063
30 mph 120 deg with 0.25 in Radial Ice	195.90	0.029	0.0002	0.0130	0.0130
30 mph 120 deg with 0.25 in Radial Ice	204.16	0.028	0.0002	0.0168	0.0168
30 mph 120 deg with 0.25 in Radial Ice	245.00	0.010	0.0001	0.0250	0.0250
30 mph 180 deg with 0.25 in Radial Ice	151.95	0.033	0.0001	0.0061	0.0061
30 mph 180 deg with 0.25 in Radial Ice	171.95	0.033	0.0001	0.0061	0.0061
30 mph 180 deg with 0.25 in Radial Ice	191.99	0.032	0.0001	0.0063	0.0063
30 mph 180 deg with 0.25 in Radial Ice	195.90	0.031	0.0002	0.0065	0.0065
30 mph 180 deg with 0.25 in Radial Ice	204.16	0.030	0.0002	0.0152	0.0152
30 mph 180 deg with 0.25 in Radial Ice	245.00	0.013	0.0001	0.0261	0.0261
30 mph 210 deg with 0.25 in Radial Ice	151.95	0.032	0.0087	0.0058	0.0104
30 mph 210 deg with 0.25 in Radial Ice	171.95	0.032	0.0091	0.0056	0.0105
30 mph 210 deg with 0.25 in Radial Ice	191.99	0.031	0.0093	0.0064	0.0112
30 mph 210 deg with 0.25 in Radial Ice	195.90	0.030	0.0093	0.0096	0.0132
30 mph 210 deg with 0.25 in Radial Ice	204.16	0.029	0.0095	0.0159	0.0183
30 mph 210 deg with 0.25 in Radial Ice	245.00	0.011	0.0096	0.0260	0.0277
30 mph 240 deg with 0.25 in Radial Ice	151.95	0.032	-0.0001	0.0053	0.0053
30 mph 240 deg with 0.25 in Radial Ice	171.95	0.032	-0.0001	0.0041	0.0041
30 mph 240 deg with 0.25 in Radial Ice	191.99	0.030	-0.0001	0.0063	0.0063
30 mph 240 deg with 0.25 in Radial Ice	195.90	0.029	0.0002	0.0130	0.0130
30 mph 240 deg with 0.25 in Radial Ice	204.16	0.028	-0.0002	0.0168	0.0168
30 mph 240 deg with 0.25 in Radial Ice	245.00	0.010	-0.0001	0.0250	0.0250
30 mph 300 deg with 0.25 in Radial Ice	151.95	0.033	0.0001	0.0062	0.0062
30 mph 300 deg with 0.25 in Radial Ice	171.95	0.033	-0.0001	0.0034	0.0034
30 mph 300 deg with 0.25 in Radial Ice	191.99	0.032	-0.0001	0.0054	0.0054
30 mph 300 deg with 0.25 in Radial Ice	195.90	0.031	0.0002	0.0115	0.0115
30 mph 300 deg with 0.25 in Radial Ice	204.16	0.030	0.0002	0.0155	0.0155
30 mph 300 deg with 0.25 in Radial Ice	245.00	0.013	0.0001	0.0261	0.0261
30 mph 330 deg with 0.25 in Radial Ice	151.95	0.032	0.0087	0.0058	0.0104
30 mph 330 deg with 0.25 in Radial Ice	171.95	0.032	0.0091	0.0061	0.0109
30 mph 330 deg with 0.25 in Radial Ice	191.99	0.031	0.0093	0.0066	0.0112
30 mph 330 deg with 0.25 in Radial Ice	195.90	0.030	0.0093	0.0092	0.0129
30 mph 330 deg with 0.25 in Radial Ice	204.16	0.029	0.0095	0.0159	0.0183
30 mph 330 deg with 0.25 in Radial Ice	245.00	0.011	0.0096	0.0260	0.0277
Seismic Normal M1	151.95	0.011	0.0000	0.0073	0.0073
Seismic Normal M1	171.95	0.013	0.0000	0.0050	0.0050
Seismic Normal M1	191.99	0.015	0.0001	0.0033	0.0033
Seismic Normal M1	195.90	0.015	0.0001	0.0016	0.0016
Seismic Normal M1	204.16	0.015	0.0001	0.0015	0.0015
Seismic Normal M1	245.00	0.010	0.0000	0.0101	0.0101
Seismic 60 deg M1	151.95	0.011	0.0000	0.0071	0.0071
Seismic 60 deg M1	171.95	0.013	0.0000	0.0048	0.0048
Seismic 60 deg M1	191.99	0.015	0.0001	0.0033	0.0033

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ANSI/TIA-222-H

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5/24/2021 10:03:40 AM

Customer: ALLTEL COMMUNICATIONS, LLC

Seismic 60 deg M1	195.90	0.015	0.0001	0.0017	0.0017
Seismic 60 deg M1	204.16	0.015	0.0001	0.0016	0.0016
Seismic 60 deg M1	245.00	0.010	0.0000	0.0116	0.0116
Seismic 90 deg M1	151.95	0.011	0.0000	0.0072	0.0072
Seismic 90 deg M1	171.95	0.013	0.0000	0.0049	0.0049
Seismic 90 deg M1	191.99	0.015	0.0001	0.0033	0.0033
Seismic 90 deg M1	195.90	0.015	0.0001	0.0017	0.0017
Seismic 90 deg M1	204.16	0.015	0.0001	0.0016	0.0016
Seismic 90 deg M1	245.00	0.010	0.0000	0.0112	0.0112
Seismic 120 deg M1	151.95	0.011	0.0000	0.0072	0.0072
Seismic 120 deg M1	171.95	0.013	0.0000	0.0050	0.0050
Seismic 120 deg M1	191.99	0.015	0.0001	0.0033	0.0033
Seismic 120 deg M1	195.90	0.015	0.0001	0.0016	0.0016
Seismic 120 deg M1	204.16	0.015	0.0001	0.0015	0.0015
Seismic 120 deg M1	245.00	0.010	0.0000	0.0101	0.0101
Seismic 180 deg M1	151.95	0.011	0.0000	0.0071	0.0071
Seismic 180 deg M1	171.95	0.013	0.0000	0.0048	0.0048
Seismic 180 deg M1	191.99	0.015	0.0001	0.0033	0.0033
Seismic 180 deg M1	195.90	0.015	0.0001	0.0017	0.0017
Seismic 180 deg M1	204.16	0.015	0.0001	0.0016	0.0016
Seismic 180 deg M1	245.00	0.010	0.0000	0.0116	0.0116
Seismic 210 deg M1	151.95	0.011	0.0000	0.0072	0.0072
Seismic 210 deg M1	171.95	0.013	0.0000	0.0049	0.0049
Seismic 210 deg M1	191.99	0.015	0.0001	0.0033	0.0033
Seismic 210 deg M1	195.90	0.015	0.0001	0.0017	0.0017
Seismic 210 deg M1	204.16	0.015	0.0001	0.0016	0.0016
Seismic 210 deg M1	245.00	0.010	0.0000	0.0112	0.0112
Seismic 240 deg M1	151.95	0.011	0.0000	0.0072	0.0072
Seismic 240 deg M1	171.95	0.013	0.0000	0.0050	0.0050
Seismic 240 deg M1	191.99	0.015	0.0001	0.0033	0.0033
Seismic 240 deg M1	195.90	0.015	0.0001	0.0016	0.0016
Seismic 240 deg M1	204.16	0.015	0.0001	0.0015	0.0015
Seismic 240 deg M1	245.00	0.010	0.0000	0.0101	0.0101
Seismic 300 deg M1	151.95	0.011	0.0000	0.0071	0.0071
Seismic 300 deg M1	171.95	0.013	0.0000	0.0048	0.0048
Seismic 300 deg M1	191.99	0.015	0.0001	0.0033	0.0033
Seismic 300 deg M1	195.90	0.015	0.0001	0.0017	0.0017
Seismic 300 deg M1	204.16	0.015	0.0001	0.0016	0.0016
Seismic 300 deg M1	245.00	0.010	0.0000	0.0116	0.0116
Seismic 330 deg M1	151.95	0.011	0.0000	0.0072	0.0072
Seismic 330 deg M1	171.95	0.013	0.0000	0.0049	0.0049
Seismic 330 deg M1	191.99	0.015	0.0001	0.0033	0.0033
Seismic 330 deg M1	195.90	0.015	0.0001	0.0017	0.0017
Seismic 330 deg M1	204.16	0.015	0.0001	0.0016	0.0016
Seismic 330 deg M1	245.00	0.010	0.0000	0.0112	0.0112
Serviceability - 60 mph Wind Normal	151.95	0.115	0.0005	0.0237	0.0237
Serviceability - 60 mph Wind Normal	171.95	0.117	0.0005	0.0213	0.0213
Serviceability - 60 mph Wind Normal	191.99	0.112	0.0005	0.0227	0.0227
Serviceability - 60 mph Wind Normal	195.90	0.111	0.0006	0.0241	0.0241
Serviceability - 60 mph Wind Normal	204.16	0.105	0.0009	0.0566	0.0566
Serviceability - 60 mph Wind Normal	245.00	0.042	0.0002	0.0800	0.0800
Serviceability - 60 mph Wind 60 deg	151.95	0.117	0.0005	0.0318	0.0318
Serviceability - 60 mph Wind 60 deg	171.95	0.122	0.0004	0.0101	0.0101
Serviceability - 60 mph Wind 60 deg	191.99	0.121	0.0005	0.0067	0.0067
Serviceability - 60 mph Wind 60 deg	195.90	0.121	0.0006	0.0291	0.0291
Serviceability - 60 mph Wind 60 deg	204.16	0.117	0.0008	0.0431	0.0431
Serviceability - 60 mph Wind 60 deg	245.00	0.065	0.0003	0.0684	0.0684
Serviceability - 60 mph Wind 90 deg	151.95	0.116	0.0311	0.0284	0.0421
Serviceability - 60 mph Wind 90 deg	171.95	0.120	0.0322	0.0074	0.0330
Serviceability - 60 mph Wind 90 deg	191.99	0.117	0.0328	0.0120	0.0347
Serviceability - 60 mph Wind 90 deg	195.90	0.116	0.0329	0.0396	0.0514
Serviceability - 60 mph Wind 90 deg	204.16	0.111	0.0333	0.0502	0.0598

Site Number: 303048

Code:

ANSI/TIA-222-H

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Site Name: Lacrosse FL 6, FL

Engineering Number: 13677441_C3_02

5/24/2021 10:03:40 AM

Customer: ALLTEL COMMUNICATIONS, LLC

Serviceability - 60 mph Wind 90 deg	245.00	0.056	0.0336	0.0745	0.0815
Serviceability - 60 mph Wind 120 deg	151.95	0.115	0.0005	0.0238	0.0238
Serviceability - 60 mph Wind 120 deg	171.95	0.117	0.0005	0.0108	0.0108
Serviceability - 60 mph Wind 120 deg	191.99	0.112	0.0005	0.0191	0.0191
Serviceability - 60 mph Wind 120 deg	195.90	0.111	0.0006	0.0422	0.0422
Serviceability - 60 mph Wind 120 deg	204.16	0.105	0.0009	0.0575	0.0575
Serviceability - 60 mph Wind 120 deg	245.00	0.042	0.0002	0.0801	0.0801
Serviceability - 60 mph Wind 180 deg	151.95	0.118	0.0005	0.0318	0.0318
Serviceability - 60 mph Wind 180 deg	171.95	0.123	0.0004	0.0102	0.0102
Serviceability - 60 mph Wind 180 deg	191.99	0.123	0.0005	0.0101	0.0101
Serviceability - 60 mph Wind 180 deg	195.90	0.122	0.0006	0.0098	0.0098
Serviceability - 60 mph Wind 180 deg	204.16	0.118	0.0009	0.0426	0.0426
Serviceability - 60 mph Wind 180 deg	245.00	0.066	0.0003	0.0690	0.0690
Serviceability - 60 mph Wind 210 deg	151.95	0.116	0.0311	0.0283	0.0421
Serviceability - 60 mph Wind 210 deg	171.95	0.120	0.0321	0.0111	0.0339
Serviceability - 60 mph Wind 210 deg	191.99	0.117	0.0327	0.0147	0.0358
Serviceability - 60 mph Wind 210 deg	195.90	0.116	0.0329	0.0273	0.0420
Serviceability - 60 mph Wind 210 deg	204.16	0.111	0.0333	0.0493	0.0590
Serviceability - 60 mph Wind 210 deg	245.00	0.056	0.0335	0.0743	0.0814
Serviceability - 60 mph Wind 240 deg	151.95	0.115	-0.0005	0.0238	0.0238
Serviceability - 60 mph Wind 240 deg	171.95	0.117	-0.0005	0.0108	0.0108
Serviceability - 60 mph Wind 240 deg	191.99	0.112	-0.0005	0.0191	0.0191
Serviceability - 60 mph Wind 240 deg	195.90	0.111	-0.0006	0.0422	0.0422
Serviceability - 60 mph Wind 240 deg	204.16	0.105	-0.0009	0.0575	0.0575
Serviceability - 60 mph Wind 240 deg	245.00	0.042	-0.0002	0.0801	0.0801
Serviceability - 60 mph Wind 300 deg	151.95	0.117	0.0005	0.0318	0.0318
Serviceability - 60 mph Wind 300 deg	171.95	0.122	0.0005	0.0101	0.0101
Serviceability - 60 mph Wind 300 deg	191.99	0.121	0.0005	0.0067	0.0067
Serviceability - 60 mph Wind 300 deg	195.90	0.121	0.0006	0.0291	0.0291
Serviceability - 60 mph Wind 300 deg	204.16	0.117	0.0009	0.0431	0.0431
Serviceability - 60 mph Wind 300 deg	245.00	0.065	0.0003	0.0684	0.0684
Serviceability - 60 mph Wind 330 deg	151.95	0.116	0.0313	0.0283	0.0422
Serviceability - 60 mph Wind 330 deg	171.95	0.120	0.0323	0.0173	0.0364
Serviceability - 60 mph Wind 330 deg	191.99	0.117	0.0329	0.0166	0.0366
Serviceability - 60 mph Wind 330 deg	195.90	0.116	0.0330	0.0227	0.0394
Serviceability - 60 mph Wind 330 deg	204.16	0.111	0.0335	0.0491	0.0590
Serviceability - 60 mph Wind 330 deg	245.00	0.056	0.0337	0.0743	0.0814

Maximum Reactions Summary

Anchor Group	UpLift	Shear
Base	92.29	1.30
A1	35.63	45.30