

JUN 18 2025

Planning & Zoning



FREMONT COUNTY COLLOCATION OF ANTENNA ON AN EXISTING TOWER APPLICATION

1. Name and Number of Existing SRU Permit _____
2. Name: American Tower Address: 10 Presidential Way
 City: Woburn State: MA Zip Code: 01801
 Telephone #: 781-428-7334 office Facsimile # _____
 Name of Contact: Jillian Iannacci Email Address: jillian.iannacci@Americantower.com
3. The Applicant Applying for Collocation is:
 Name: Smartlink on behalf of AT&T Address: 10 Church Circle
 City: Annapolis State: MD Zip Code: 21401
 Telephone #: 574-527-0554 Facsimile # _____
 Name of Contact: Mia Warstler Email Address: mia.warstler@smartlinkgroup.com
4. Property Owner: Roland Melchert Address: 0086 K St
 City: Penrose State: CO Zip Code: 81240
 Telephone #: _____ Facsimile #: _____
 Name of Contact: _____ Email Address: _____
5. Consultant: Smartlink Group Address: 10 Church Circle
 City: Annapolis State: MD Zip Code: 21401
 Telephone #: 574-527-0554 Facsimile # _____
 Name of Contact: Mia Warstler Email Address: mia.warstler@smartlinkgroup.com

Please read prior to completion of this application

An application for Special Review Use Permit, instead of a Collocation Application, will be required for the following:

1. An increase in the height of the existing tower;
2. The relocation of an existing tower;
3. The placement of an additional tower on the existing tower site;
4. An attachment of an antenna on an existing non-commercial tower, which is less than one-hundred (100) feet in height.

Any application which is not complete or does not include all minimum submittal requirements will not be accepted by the Fremont County Department of Planning and Zoning (Department).

The applicant shall provide one (1) original document of the application and all of its attachments (*copies of deeds, contracts, leases etcetera are acceptable*) at the time of application submittal. After submittal, the Department will review the application and all attachments and prepare a Department Submittal Deficiency and Comment Letter (D & C Letter), which will list the deficiencies, comments and questions

about the application, which must be addressed by the applicant. The applicant shall provide one (1) original document of all requirements of the D & C letter to the Department.

Attachments can be made to this application to provide expanded narrative for any application item including supportive documentation or evidence for provided application item answers. Please indicate at the application item that there is an attachment and label it as an exhibit with the application item number, a period and the number of the attachment for that item (*as an example, the first attached document providing evidence in support of the answer given at application item number 22 would be marked - Exhibit 22.1, the fifth attached document supporting the narrative provided for application item 22 would be marked - Exhibit 22.5*). **Please label all exhibits in the lower right-hand corner of the page.**

An additional review fee of two-hundred fifty dollars (\$250.00) will be charged to the applicant, if all deficiencies as per the initial D & C Letter are not adequately addressed or provided. Each subsequent D & C Letter, based on resubmitted items, will result in another two-hundred fifty dollar (\$250.00) review fee. All such fees shall be paid along with the deficiency submittal, prior to any further review of the application.

If the application is approved by the Department, with contingencies and the contingencies are not submitted or addressed within six (6) months after approval, an additional fee of one-hundred fifty dollars (\$150.00) will be charged to the applicant for a request for an extension of time to submit the contingencies. All such fees shall be paid along with a written request, explaining the need for extension.

The Department may require additional information at any time during the application process as may be deemed necessary in determining if the application is in compliance with all applicable regulations and to make an informed decision with regard to recommendations, approval or disapproval of the application.

6. The legal description and/or address of the existing site is: LOT 3A ADOBE CLIFFS FIL #2 EXC ALL MINERALS B1100 P89 RESERVED BK1100-PG89
REF 986-04-165 TOWER # CO-5003 CONTIG TO 987-04-129

7. The type of construction of the existing tower is: Modification to existing collocation

8. The total height of the existing tower (*with antenna*) is 199' feet.

9. What will be the total height of the tower (*with antenna(s)*) after collocation? 199' (no change) feet.

10. The existing tower currently has 9 at 195 RAD CENTER antennas.

11. After the proposed collocation the tower would house 9 at 195 RAD CENTER antennas.

12. Please provide documentation from a Licensed Professional Engineer demonstrating that the tower is capable of accommodating the proposed number of antennas. (*Mark as EXHIBIT 13.1*)

13. The existing site contains 1 accessory structures.

14. Will the proposed collocation require additional accessory structures? ☐ Yes --- ☒ No If yes, please provide how many, the sizes, the heights, the location and the reason such additional structures are necessary (*a new site plan may be required*): _____

15. If a design plan addressing materials, colors, textures, screening and landscaping in the design of the tower or antenna was required with the issuance of the original permit, will it be adequate for the proposed collocation? ☒ Yes --- ☐ No If no, it may be required to comply with the original design plan.
16. The existing site contains 0 off-street parking spaces.
17. Will the proposed collocation require additional off-street parking spaces? ☐ Yes --- ☒ No If yes, please provide how many additional spaces will be necessary: _____ off-street parking spaces.
18. Was surfacing, lighting and or landscaping of driveways and parking areas required with issuance of the original permit? ☐ Yes --- ☒ No If no, was it waived by the Board? ☒ Yes --- ☐ No
19. Will the surfacing, lighting and or landscaping of driveways and parking areas required with issuance of the original permit be adequate for the proposed collocation? ☒ Yes --- ☐ No Please explain: _____

20. Will the existing access to the site be adequate for the proposed collocation? ☒ Yes --- ☐ No If No, what is the proposed access for the proposed collocation? _____

21. Was a stormwater drainage plan required and approved with the issuance of the original permit? ☒ Yes --- ☐ No If yes, will the stormwater drainage plan required and approved with the issuance of the original permit be adequate with the addition of the accessory structures (if any)? ☒ Yes --- ☐ No Please explain: _____

22. Please explain how the existing tower and additional uses meet the minimum requirements of the Federal Aviation Administration. The existing tower does not require additional uses for this SOW

23. If the existing permit holder is not the site property owner, does the agreement, lease, or the like between the site property owner and the existing permit holder allow the collocation? ☒ Yes --- ☐ No Please show (highlight) in the agreement, lease or the like that grants the permission to collocate.
24. Please attach a copy of a lease or agreement between the permit holder and the collocation applicant as to right to use of the tower by the collocation applicant, marked as Exhibit 25.1.
25. A submittal fee of \$250.00 must accompany this application (Check # TBD ☐ cash)

Collocation Applicant's Endorsement:

By signing this Application, the Applicant, or the agent/representative acting with due authorization on behalf of the Applicant, hereby certifies that all information contained in the application and any attachments to the Application, is true and correct to the best of Applicant's knowledge and belief.

Fremont County hereby advises Applicant that if any material information contained herein is determined to be misleading, inaccurate or false, the Board of Commissioners may take any and all reasonable and appropriate steps to declare actions of the Board regarding the Application to be null and void.

Further the applicant understands that if collocation is approved the applicant must comply with the conditions of the original permit, as issued or as may be amended, and applicable regulations of the Fremont County Zoning Resolution.

Signing this Application is a declaration by the Applicant to conform to all plans, drawings, and commitments submitted with or contained within this Application, provided that the same is in conformance with the Fremont County Zoning Resolution.

Mia Warstler on behalf of AT&T

Applicant Printed Name

Mia Warstler

Applicant Signature

Real Estate Specialist, Smartlink Group

Applicant Title & Company Name

6/12/2025

Date

Existing Permit Holder's Endorsement:

By signing this Application, the Permit Holder, or the agent/representative acting with due authorization on behalf of the Permit Holder, hereby certifies that all information contained in the application and any attachments to the Application, is true and correct to the best of Permit Holder's knowledge and belief.

Fremont County hereby advises Permit Holder that if any material information contained herein is determined to be misleading, inaccurate or false, the Board of Commissioners may take any and all reasonable and appropriate steps to declare actions of the Board regarding the Application to be null and void.

Further the existing permit holder understands that if collocation is approved the applicant and existing permit holder must comply with the conditions of the original permit, as issued or as may be amended, and applicable regulations of the Fremont County Zoning Resolution.

Signing this Application is a declaration by the Permit Holder to conform to all plans, drawings, and commitments submitted with or contained within this Application, provided that the same is in conformance with the Fremont County Zoning Resolution.

THIS SIGNATURE ALSO SERVES AS THE EXISTING PERMIT HOLDERS APPROVAL FOR COLLOCATION.

Same as Applicant

Permit Holder Printed Name

Mia Warstler

Permit Holder Signature

Same as Applicant

Permit Holder Title & Company Name

6*/12/2025

Date



June 6, 2025

Fremont County
615 Macon Ave Room 210
Canon City, CO 81212

Re: Zoning and Building Approval Request for Existing Cell Tower
AT&T Site Details: 10093564_WSUTH0038393_AWE - TITAN 3 PENROSE_COL06025
Projects: Nokia Market Modernization

Greetings Fremont County Planning and Building,

I am contacting you on behalf of AT&T Wireless, who is proposing to perform a minor site upgrade to the existing site located in your Jurisdiction.

- **Parcel: 3825280001003**

The modification activity to this site will involve the changes referenced in the Construction Drawings and Passing Structural Analysis attached. Please review and confirm the Zoning and Building review and approval by signing this letter.

Please note that there are:

- No changes to the heights of these structures.
- No changes to the footprint of the site.
- No additional noise.
- No changes to the existing electrical service already provided at these locations.
- No additional shelters/equipment sheds or platforms.
- No expansion of the existing compound.

The Scope of Work includes:

STRUCTURE WORK: • REMOVE (6) ANTENNAS • REMOVE (21) REMOTE RADIO HEADS (RRHS) • REMOVE (9) BACK TO BACK RRU MOUNTS • INSTALL (6) ANTENNAS • INSTALL (9) REMOTE RADIO UNITS (RRUs) • INSTALL (6) BACK TO BACK RRU MOUNTS • INSTALL (3) DCP-18K PIPE-TO-PIPE MOUNTS ALL AIR ANTENNAS • RELOC. (3) ANTENNAS • ROTATE - EXISTING SECTOR FRAME TO MATCH PROPOSED AZIMUTHS	GROUND WORK: • INSTALL (1) GENERIC E\ BBU @ DRM • INSTALL (1) NETSURE 512 RETROFIT CONVERSION KIT • INSTALL (10) -58V CONVERTER • INSTALL (2) -48V RECTIFIERS
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Please call if you need any further information or have any questions or if there is another point of contact I should reach out to for approval.

Thank you,
Mia



Mia Warstler

RE Specialist II

 (574) 527-0554

 Mia.Warstler@SmartlinkGroup.com

 10 Church Circle, Annapolis, MD
21401

 www.smartlinkgroup.com



Canon County has reviewed the requested changes and hereby gives Planning and Building Consent for the replacement of the AT&T equipment as described in the attached letter dated 6/6/2025.

Signed: _____

Printed Name: _____

Title: _____

Date: _____



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 196 ft Self Support Tower
ATC Asset Name : Penrose
ATC Asset Number : 370535
Engineering Number : OAA797712_C3_01
Proposed Carrier : AT&T MOBILITY
Carrier Site Name : TITAN 3
Carrier Site Number : WSUTH0038393
Site Location : 0086 K St
PENROSE, CO 81240-0000
38.4609° N, 104.9978° W
County : Fremont
Date : April 23, 2025
Max Usage : 56%
Analysis Result : Pass

Created By:

Siddharth Yadav
ETS

Reviewed By:

Jeffrey A. Arthur, P.E.
ETS, PLLC Job#: 225135196.STR.0869





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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 196 ft Self Support tower to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower:	Rohn Drawing #A011880, dated August 8, 2001
Foundation:	Rohn Drawing #A011884-1, dated August 9, 2001
Geotechnical:	AMEC Project #1529-000254, dated June 1, 2001

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:	106 mph (3-second gust)
Basic Wind Speed w/ Ice:	56 mph (3-second gust) w/ 0.19" radial ice concurrent
Code(s):	ANSI/TIA-222-I / 2018 IBC
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	$S_{DS} = 0.17$, $S_{D1} = 0.08$
Site Class:	Default

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 reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact Engineering@americantower.com. Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Location	Result
Leg	55.0%	Member X	Section 4	Pass
Diagonal	55.7%	Block Shear	Section 9	Pass
Horizontal	10.5%	Block Shear	Section 10	Pass
Bolt	45.1%	-	Section 5	Pass
Serviceability Usage	8.8%	Rotation	Elevation 180 ft	Pass
Foundation	48.7%	Down	Base	Pass
Foundation	50.1%	Moment	Base	Pass
Foundation	47.4%	Shear	Base	Pass
Foundation	45.9%	Uplift	Base	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Uplift (k)	Shear (k)
Self Support Base (Global)	2,994.5	46.8	-	26.4
Self Support Base (Local)	-	179.3	143.8	17.3

**Reactions shown are maximum overall and not limited by Load Case excluding Overstrength Load Cases*

Foundation usages were calculated by comparing the maximum reactions from this analysis to the reactions from the original design drawings, factored by 1.35 per ANSI/TIA-222-I, Section 15.6.2

AT&T MOBILITY Final Loading

Elev (ft)	Qty	Equipment	Lines
197.8	3	Ericsson AIR 6419 B77D/ C-Band	
	3	Ericsson Radio 4490HP 44B5 44B12A C	
	3	Ericsson Radio 4494 44B14 20B29 M01	(3) 0.39" (10mm) Fiber Trunk
195.0	3	Ericsson Radio 4890HP 48B2/B25 48B66 M01 (67.2 lbs)	(6) 0.78" (19.7mm) 8 AWG 6
	3	Kathrein Scala 80010992K	(1) 0.92" (23.4mm) Cable
	3	Kathrein Scala 80010992V01	(2) 2" conduit
	4	Raycap DC6-48-60-18-8F (20.1" Height)	(1) 3/8" (0.38"- 9.5mm) RET Control Cable
194.0	3	Ericsson AIR 6419 B77G	
190.0	3	Sector Frame	

Install proposed lines in the place of the existing AT&T MOBILITY lines.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines
180.0	3	Empty Sector Frame	
	2	Commscope HELIAX FiberFeed 12 RRU Pendant Connect	
	3	Commscope FFVV-65C-R3-V1	
169.0	3	Nokia AEHC	
	3	Nokia AHFIG	(2) 1.46" (37.1mm) Hybrid
	3	Nokia AirScale Dual RRH 4T4R B12/71 240W AHLOA	(2) 0.59" (15mm) LMR-600
166.0	3	Sector Frame	
163.0	1	Ericsson ANT3 A 0.9 HPX	
	2	Ericsson Mini-Link 6363	
157.1	3	Samsung RRH-B8 w/ Finger Guard	
154.0	-	-	(3) 1 1/4" Hybriflex Cable
	3	Samsung RRH-C2A (w/ External Filter)	
153.9	3	Samsung RRH-P4 (1.9 GHz)	
	3	KMW ET-X-TS-70-15-62-18-iR-RD	
153.5	3	KMW ET-X-WM-18-65-8P	
151.0	3	Sector Frame	
140.7	1	Antel BCD-87010	
132.0	1	Side Arm	
130.0	-	-	(1) 1 5/8" Coax
110.0	4	Stand-Off	

(If table breaks across pages, please see previous page for data in merged cells)



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.

ASSET: Penrose, 370535
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712

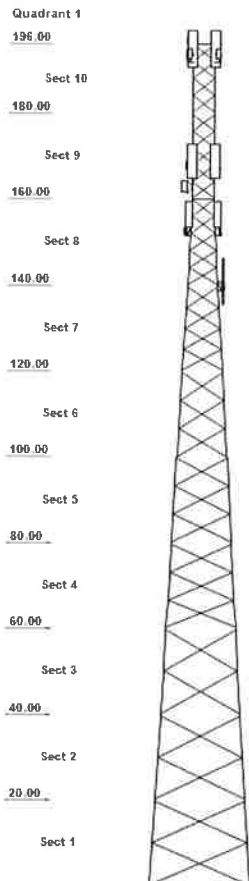
ANALYSIS PARAMETERS

Design Wind: 106 mph Ice Wind: 56 mph w/ 0.19" ice Service Wind: 60 mph
Risk Category: II Exposure: C S_{DS}: 0.170 S_{D1}: 0.083
Topo Factor: Method 1 Topo Feature: Flat
Structure Height: 196 ft Base Elevation: 0 ft Shape: Triangle
Base Width: 21.12 ft Top Width: 4.58 ft

TOWER SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	PSP 50 ksi 8.625" x 0.375"	SAE 50 ksi 3.5x3.5x0.25	
2 - 3	PX 50 ksi 6" DIA PIPE	SAE 50 ksi 3.5x3.5x0.25	
4	PX 50 ksi 5" DIA PIPE	SAE 36 ksi 2.5X2.5X0.25	
5 - 6	PX 50 ksi 5" DIA PIPE	SAE 36 ksi 2.5X2.5X0.1875	
7	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 2X2X0.1875	
8	PX 50 ksi 3" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875	SAE 36 ksi 1.75X1.75X0.125
9	PX 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875	
10	PST 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875	SAE 36 ksi 1.75X1.75X0.125

Tower Elevation View



DISCRETE APPURTENANCE

LINEAR APPURTENANCE

Elev (ft)	Description	Elev (ft)	Description
197.8	(3) Ericsson AIR 6419 B77D/ C-Band	195.0	(2) 2" conduit
195.0	(3) Ericsson Radio 4494 44B14 20B29 M0	195.0	(1) 3/8" (0.38"- 9.5mm) RET Cont
195.0	(4) Raycap DC6-48-60-18-8F (20.1" Heig	195.0	(1) 0.92" (23.4mm) Cable
195.0	(3) Kathrein Scala 80010992V01	195.0	(1) Waveguide
195.0	(3) Ericsson Radio 4890HP 48B2/B25 48	195.0	(6) 0.78" (19.7mm) 8 AWG 6
195.0	(3) Ericsson Radio 4490HP 44B5 44B12A	195.0	(3) 0.39" (10mm) Fiber Trunk
195.0	(3) Kathrein Scala 80010992K	169.0	(2) 1.46" (37.1mm) Hybrid
194.0	(3) Ericsson AIR 6419 B77G	166.0	(1) Waveguide
190.0	(3) Generic Round Sector Frame	163.0	(2) 0.59" (15mm) LMR-600
180.0	(3) Empty Round Sector Frame	154.0	(3) 1 1/4" Hybriflex Cable
169.0	(3) Nokia AirScale Dual RRH 4T4R B12/7	151.0	(1) Waveguide
169.0	(3) Nokia AHFIG	130.0	(1) 1 5/8" Coax
169.0	(2) Commscope HELIAX FiberFeed 12 R	110.0	(1) Waveguide
169.0	(3) Commscope FFVV-65C-R3-V1		
169.0	(3) Nokia AEHC		
166.0	(3) Generic Round Sector Frame		
163.0	(2) Ericsson Mini-Link 6363		
163.0	(1) Ericsson ANT3 A 0.9 HPX		
157.1	(3) Samsung RRH-B8 w/ Finger Guard		
153.9	(3) Samsung RRH-C2A (w/ External Filler		
153.9	(3) Samsung RRH-P4 (1.9 GHz)		
153.5	(3) KMW ET-X-WM-18-65-8P		
153.5	(3) KMW ET-X-TS-70-15-62-18-IR-RD		
151.0	(3) Generic Round Sector Frame		
140.7	(1) Antel BCD-87010		
132.0	(1) Round Side Arm		
110.0	(4) Stand-Off		

GLOBAL BASE REACTIONS

	DL+WL	DL+WL+IL
Moment (k-ft):	2,994.47	1,036.08
Axial (k):	46.84	53.27
Shear (k):	26.40	9.37

INDIVIDUAL BASE REACTIONS

Comp (k):	179.33
Uplift (k):	143.76
Shear (k):	17.29

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

ANALYSIS PARAMETERS

Location:	Fremont County, CO	Height:	196 ft
Type and Shape:	Self Support, Triangle	Base Elevation:	0.00 ft
Manufacturer:	Rohn	Bottom Face Width:	21.12 ft
Kd	0.85	Top Face Width:	4.58 ft
Ke:	0.81	Anchor Bolt Detail Type:	b

ICE & WIND PARAMETERS

Exposure Category:	C	Design Wind Speed Without Ice:	106 mph
		Design Wind Speed with Ice:	56 mph
Risk Category:	II	Operational Windspeed:	60 mph
Topographic Factor Procedure:	Method 1		
Crest Height(H):	0 ft	Design Ice Thickness:	0.19 in
Crest Length(L):	0 ft	HMSL:	5708 ft
Feature:	Flat	Distance from Apex (x):	0
		Upwind/Downwind:	Upwind

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	Default			Period Based on Rayleigh Method (sec):	1.27
T_L (sec):	6	P:	1.3	C_s:	0.030
S_{ds}:	0.170	S_{d1}:	0.083	C_{s, Max}:	0.030
				C_{s, Min}:	0.030

LOAD CASES

1.2D + 1.0W Normal	1.2D + 1.0W Normal - 106 mph Wind with No Ice
1.2D + 1.0W 60°	1.2D + 1.0W 60° - 106 mph Wind with No Ice
1.2D + 1.0W 90°	1.2D + 1.0W 90° - 106 mph Wind with No Ice
1.2D + 1.0W 120°	1.2D + 1.0W 120° - 106 mph Wind with No Ice
1.2D + 1.0W 180°	1.2D + 1.0W 180° - 106 mph Wind with No Ice
1.2D + 1.0W 210°	1.2D + 1.0W 210° - 106 mph Wind with No Ice
1.2D + 1.0W 240°	1.2D + 1.0W 240° - 106 mph Wind with No Ice
1.2D + 1.0W 300°	1.2D + 1.0W 300° - 106 mph Wind with No Ice
1.2D + 1.0W 330°	1.2D + 1.0W 330° - 106 mph Wind with No Ice
0.9D + 1.0W Normal	0.9D + 1.0W Normal - 106 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 60°	0.9D + 1.0W 60° - 106 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 90°	0.9D + 1.0W 90° - 106 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 120°	0.9D + 1.0W 120° - 106 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 180°	0.9D + 1.0W 180° - 106 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 210°	0.9D + 1.0W 210° - 106 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 240°	0.9D + 1.0W 240° - 106 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 300°	0.9D + 1.0W 300° - 106 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 330°	0.9D + 1.0W 330° - 106 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	1.2D + 1.0Di + 1.0Wi Normal - 56 mph Wind with 0.19" Radial Ice
1.2D + 1.0Di + 1.0Wi 60°	1.2D + 1.0Di + 1.0Wi 60° - 56 mph Wind with 0.19" Radial Ice
1.2D + 1.0Di + 1.0Wi 90°	1.2D + 1.0Di + 1.0Wi 90° - 56 mph Wind with 0.19" Radial Ice
1.2D + 1.0Di + 1.0Wi 120°	1.2D + 1.0Di + 1.0Wi 120° - 56 mph Wind with 0.19" Radial Ice
1.2D + 1.0Di + 1.0Wi 180°	1.2D + 1.0Di + 1.0Wi 180° - 56 mph Wind with 0.19" Radial Ice
1.2D + 1.0Di + 1.0Wi 210°	1.2D + 1.0Di + 1.0Wi 210° - 56 mph Wind with 0.19" Radial Ice
1.2D + 1.0Di + 1.0Wi 240°	1.2D + 1.0Di + 1.0Wi 240° - 56 mph Wind with 0.19" Radial Ice
1.2D + 1.0Di + 1.0Wi 300°	1.2D + 1.0Di + 1.0Wi 300° - 56 mph Wind with 0.19" Radial Ice

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

LOAD CASES

1.2D + 1.0Di + 1.0Wi 330°	1.2D + 1.0Di + 1.0Wi 330° - 56 mph Wind with 0.19" Radial Ice
1.2D + 1.0Ev + 1.0Eh Normal	1.2D + 1.0Ev + 1.0Eh Normal - Seismic
1.2D + 1.0Ev + 1.0Eh 60°	1.2D + 1.0Ev + 1.0Eh 60° - Seismic
1.2D + 1.0Ev + 1.0Eh 90°	1.2D + 1.0Ev + 1.0Eh 90° - Seismic
1.2D + 1.0Ev + 1.0Eh 120°	1.2D + 1.0Ev + 1.0Eh 120° - Seismic
1.2D + 1.0Ev + 1.0Eh 180°	1.2D + 1.0Ev + 1.0Eh 180° - Seismic
1.2D + 1.0Ev + 1.0Eh 210°	1.2D + 1.0Ev + 1.0Eh 210° - Seismic
1.2D + 1.0Ev + 1.0Eh 240°	1.2D + 1.0Ev + 1.0Eh 240° - Seismic
1.2D + 1.0Ev + 1.0Eh 300°	1.2D + 1.0Ev + 1.0Eh 300° - Seismic
1.2D + 1.0Ev + 1.0Eh 330°	1.2D + 1.0Ev + 1.0Eh 330° - Seismic
0.9D - 1.0Ev + 1.0Eh Normal	0.9D - 1.0Ev + 1.0Eh Normal - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 60°	0.9D - 1.0Ev + 1.0Eh 60° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 90°	0.9D - 1.0Ev + 1.0Eh 90° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 120°	0.9D - 1.0Ev + 1.0Eh 120° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 180°	0.9D - 1.0Ev + 1.0Eh 180° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 210°	0.9D - 1.0Ev + 1.0Eh 210° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 240°	0.9D - 1.0Ev + 1.0Eh 240° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 300°	0.9D - 1.0Ev + 1.0Eh 300° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 330°	0.9D - 1.0Ev + 1.0Eh 330° - Seismic (Reduced DL)
1.0D + 1.0W Service Normal	1.0D + 1.0W Service Normal - 60 mph Wind with No Ice
1.0D + 1.0W Service 60°	1.0D + 1.0W Service 60° - 60 mph Wind with No Ice
1.0D + 1.0W Service 90°	1.0D + 1.0W Service 90° - 60 mph Wind with No Ice
1.0D + 1.0W Service 120°	1.0D + 1.0W Service 120° - 60 mph Wind with No Ice
1.0D + 1.0W Service 180°	1.0D + 1.0W Service 180° - 60 mph Wind with No Ice
1.0D + 1.0W Service 210°	1.0D + 1.0W Service 210° - 60 mph Wind with No Ice
1.0D + 1.0W Service 240°	1.0D + 1.0W Service 240° - 60 mph Wind with No Ice
1.0D + 1.0W Service 300°	1.0D + 1.0W Service 300° - 60 mph Wind with No Ice
1.0D + 1.0W Service 330°	1.0D + 1.0W Service 330° - 60 mph Wind with No Ice
1.2D + 1.0Ev + 1.5Eh Normal	1.2D + 1.0Ev + 1.5Eh Normal - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 60°	1.2D + 1.0Ev + 1.5Eh 60° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 90°	1.2D + 1.0Ev + 1.5Eh 90° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 120°	1.2D + 1.0Ev + 1.5Eh 120° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 180°	1.2D + 1.0Ev + 1.5Eh 180° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 210°	1.2D + 1.0Ev + 1.5Eh 210° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 240°	1.2D + 1.0Ev + 1.5Eh 240° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 300°	1.2D + 1.0Ev + 1.5Eh 300° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 330°	1.2D + 1.0Ev + 1.5Eh 330° - Seismic Overstrength
0.9D - 1.0Ev + 1.5Eh Normal	0.9D - 1.0Ev + 1.5Eh Normal - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 60°	0.9D - 1.0Ev + 1.5Eh 60° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 90°	0.9D - 1.0Ev + 1.5Eh 90° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 120°	0.9D - 1.0Ev + 1.5Eh 120° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 180°	0.9D - 1.0Ev + 1.5Eh 180° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 210°	0.9D - 1.0Ev + 1.5Eh 210° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 240°	0.9D - 1.0Ev + 1.5Eh 240° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 300°	0.9D - 1.0Ev + 1.5Eh 300° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 330°	0.9D - 1.0Ev + 1.5Eh 330° - Seismic Overstrength (Reduced DL)

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

TOWER LOADING - DISCRETE APPURTENANCE

Discrete Appurtenance Properties for LC: 1.2D + 1.0W

Elev (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)
197.8	Ericsson AIR 6419 B77D/ C-Band	3	64	3.8	2.4	16.1	7.3	0.80	0.64	0.0	0.00	28.65	142	230
195.0	Ericsson Radio 4890HP 48B2/B25	3	67	2.2	1.5	15.1	6.9	0.80	0.67	0.0	0.00	28.57	86	242
195.0	Ericsson Radio 4494 44B14 20B2	3	57	2.2	1.5	15.1	5.6	0.80	0.67	0.0	0.00	28.57	86	206
195.0	Ericsson Radio 4490HP 44B5 44B	3	68	2.2	1.5	15.1	6.8	0.80	0.67	0.0	0.00	28.57	86	246
195.0	Raycap DC6-48-60-18-8F (20.1"	4	16	3.0	1.7	18.2	6.4	0.80	0.60	0.0	0.00	28.57	142	77
195.0	Kathrein Scala 80010992K	3	133	19.3	8.8	20.0	6.9	0.80	0.63	0.0	0.00	28.57	710	480
195.0	Kathrein Scala 80010992V01	3	130	19.3	8.8	20.0	6.9	0.80	0.63	0.0	0.00	28.57	710	468
194.0	Ericsson AIR 6419 B77G	3	66	3.8	2.4	16.1	7.9	0.80	0.65	0.0	0.00	28.54	144	238
190.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	28.42	587	2520
180.0	Empty Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	28.10	519	1080
169.0	Commscope HELIAX FiberFeed 12	2	20	0.9	1.4	6.7	4.7	0.80	0.50	0.0	0.00	27.75	18	48
169.0	Nokia AirScale Dual RRH 4T4R B	3	84	2.2	1.8	12.1	7.4	0.80	0.67	0.0	0.00	27.75	84	302
169.0	Nokia AHFIG	3	79	3.1	2.3	13.4	6.8	0.80	0.66	0.0	0.00	27.75	115	286
169.0	Nokia AEHC	3	104	6.8	3.2	21.5	8.1	0.80	0.62	0.0	0.00	27.75	240	373
169.0	Commscope FFFV-65C-R3-V1	3	125	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.00	27.75	753	449
166.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	27.64	510	2520
163.0	Ericsson Mini-Link 6363	2	6	0.5	0.6	7.0	3.1	0.80	0.50	0.0	0.00	27.54	9	15
163.0	Ericsson ANT3 A 0.9 HPX	1	42	8.6	3.0	35.4	20.0	0.80	1.00	0.0	0.00	27.54	161	50
157.1	Samsung RRH-B8 w/ Finger Guard	3	60	2.6	1.8	15.0	9.5	0.80	0.67	0.0	0.00	27.34	99	214
153.9	Samsung RRH-P4 (1.9 GHz)	3	63	2.7	2.0	13.8	9.0	0.80	0.67	2.9	296.44	27.32	102	226
153.9	Samsung RRH-C2A (w/ External F	3	57	3.1	2.0	15.7	6.7	0.80	0.63	2.9	315.81	27.32	109	206
153.5	KMW ET-X-WM-18-65-8P	3	36	6.7	5.1	12.0	4.3	0.80	0.63	2.5	586.20	27.30	234	131
153.5	KMW ET-X-TS-70-15-62-18-IR-RD	3	42	8.3	6.2	11.8	5.9	0.80	0.67	2.5	770.97	27.30	308	151
151.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	27.12	500	2520
140.7	Antel BCD-87010	1	27	4.8	11.2	2.6	2.6	1.00	1.00	0.0	0.00	26.73	110	32
132.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	26.38	117	180
110.0	Stand-Off	4	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	25.42	301	720
Totals		75	11,842	555.9									6,981	14,210

Discrete Appurtenance Properties for LC: 0.9D + 1.0W

Elev (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)
197.8	Ericsson AIR 6419 B77D/ C-Band	3	64	3.8	2.4	16.1	7.3	0.80	0.64	0.0	0.00	28.65	142	173
195.0	Ericsson Radio 4890HP 48B2/B25	3	67	2.2	1.5	15.1	6.9	0.80	0.67	0.0	0.00	28.57	86	181
195.0	Ericsson Radio 4494 44B14 20B2	3	57	2.2	1.5	15.1	5.6	0.80	0.67	0.0	0.00	28.57	86	155
195.0	Ericsson Radio 4490HP 44B5 44B	3	68	2.2	1.5	15.1	6.8	0.80	0.67	0.0	0.00	28.57	86	184
195.0	Raycap DC6-48-60-18-8F (20.1"	4	16	3.0	1.7	18.2	6.4	0.80	0.60	0.0	0.00	28.57	142	58
195.0	Kathrein Scala 80010992K	3	133	19.3	8.8	20.0	6.9	0.80	0.63	0.0	0.00	28.57	710	360
195.0	Kathrein Scala 80010992V01	3	130	19.3	8.8	20.0	6.9	0.80	0.63	0.0	0.00	28.57	710	351
194.0	Ericsson AIR 6419 B77G	3	66	3.8	2.4	16.1	7.9	0.80	0.65	0.0	0.00	28.54	144	178
190.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	28.42	587	1890
180.0	Empty Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	28.10	519	810
169.0	Commscope HELIAX FiberFeed 12	2	20	0.9	1.4	6.7	4.7	0.80	0.50	0.0	0.00	27.75	18	36
169.0	Nokia AirScale Dual RRH 4T4R B	3	84	2.2	1.8	12.1	7.4	0.80	0.67	0.0	0.00	27.75	84	226
169.0	Nokia AHFIG	3	79	3.1	2.3	13.4	6.8	0.80	0.66	0.0	0.00	27.75	115	214
169.0	Nokia AEHC	3	104	6.8	3.2	21.5	8.1	0.80	0.62	0.0	0.00	27.75	240	280
169.0	Commscope FFFV-65C-R3-V1	3	125	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.00	27.75	753	336
166.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	27.64	510	1890
163.0	Ericsson Mini-Link 6363	2	6	0.5	0.6	7.0	3.1	0.80	0.50	0.0	0.00	27.54	9	11
163.0	Ericsson ANT3 A 0.9 HPX	1	42	8.6	3.0	35.4	20.0	0.80	1.00	0.0	0.00	27.54	161	38
157.1	Samsung RRH-B8 w/ Finger Guard	3	60	2.6	1.8	15.0	9.5	0.80	0.67	0.0	0.00	27.34	99	161
153.9	Samsung RRH-P4 (1.9 GHz)	3	63	2.7	2.0	13.8	9.0	0.80	0.67	2.9	296.44	27.32	102	170
153.9	Samsung RRH-C2A (w/ External F	3	57	3.1	2.0	15.7	6.7	0.80	0.63	2.9	315.81	27.32	109	155
153.5	KMW ET-X-WM-18-65-8P	3	36	6.7	5.1	12.0	4.3	0.80	0.63	2.5	586.20	27.30	234	98
153.5	KMW ET-X-TS-70-15-62-18-IR-RD	3	42	8.3	6.2	11.8	5.9	0.80	0.67	2.5	770.97	27.30	308	113
151.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	27.12	500	1890
140.7	Antel BCD-87010	1	27	4.8	11.2	2.6	2.6	1.00	1.00	0.0	0.00	26.73	110	24
132.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	26.38	117	135
110.0	Stand-Off	4	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	25.42	301	540
Totals		75	11,842	555.9									6,981	10,658

Discrete Appurtenance Properties for LC: 1.2D + 1.0Di + 1.0Wi

Elev (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)
197.8	Ericsson AIR 6419 B77D/ C-Band	3	76	4.0	2.4	16.1	7.3	0.80	0.64	0.0	0.00	8.00	41	267
195.0	Ericsson Radio 4890HP 48B2/B25	3	75	2.3	1.5	15.1	6.9	0.80	0.67	0.0	0.00	7.97	25	265
195.0	Ericsson Radio 4494 44B14 20B2	3	64	2.3	1.5	15.1	5.6	0.80	0.67	0.0	0.00	7.97	25	228
195.0	Ericsson Radio 4490HP 44B5 44B	3	76	2.3	1.5	15.1	6.8	0.80	0.67	0.0	0.00	7.97	25	269
195.0	Raycap DC6-48-60-18-8F (20.1"	4	26	3.2	1.7	18.2	6.4	0.80	0.60	0.0	0.00	7.97	42	115
195.0	Kathrein Scala 80010992K	3	179	19.8	8.8	20.0	6.9	0.80	0.63	0.0	0.00	7.97	203	617
195.0	Kathrein Scala 80010992V01	3	176	19.8	8.8	20.0	6.9	0.80	0.63	0.0	0.00	7.97	203	605
194.0	Ericsson AIR 6419 B77G	3	79	4.0	2.4	16.1	7.9	0.80	0.65	0.0	0.00	7.96	42	276
190.0	Generic Round Sector Frame	3	827	16.5	0.0	0.0	0.0	0.75	0.75	0.0	0.00	7.93	188	2900

ASSET: 370535, Penrose
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
 PROJECT: OAA797712_C3_01

Elev (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)
180.0	Empty Round Sector Frame	3	347	16.5	0.0	0.0	0.0	0.75	0.67	0.0	0.00	7.84	166	1222
169.0	Commscope HELIAX FiberFeed 12	2	24	1.0	1.4	6.7	4.7	0.80	0.50	0.0	0.00	7.74	5	55
169.0	Nokia AirScale Dual RRH 4T4R B	3	92	2.3	1.8	12.1	7.4	0.80	0.67	0.0	0.00	7.74	25	326
169.0	Nokia AHFIG	3	89	3.2	2.3	13.4	6.8	0.80	0.66	0.0	0.00	7.74	34	316
169.0	Nokia AEHC	3	123	7.1	3.2	21.5	8.1	0.80	0.62	0.0	0.00	7.74	69	433
169.0	Commscope FFFV-65C-R3-V1	3	178	21.6	8.0	25.2	9.3	0.80	0.63	0.0	0.00	7.74	215	608
166.0	Generic Round Sector Frame	3	825	16.5	0.0	0.0	0.0	0.75	0.67	0.0	0.00	7.72	163	2896
163.0	Ericsson Mini-Link 6363	2	8	0.5	0.6	7.0	3.1	0.80	0.50	0.0	0.00	7.69	3	18
163.0	Ericsson ANT3 A 0.9 HPX	1	63	8.8	3.0	35.4	20.0	0.80	1.00	0.0	0.00	7.69	46	72
157.1	Samsung RRH-B8 w/ Finger Guard	3	70	2.8	1.8	15.0	9.5	0.80	0.67	0.0	0.00	7.63	29	245
153.9	Samsung RRH-P4 (1.9 GHz)	3	73	2.9	2.0	13.8	9.0	0.80	0.67	2.9	87.04	7.63	30	257
153.9	Samsung RRH-C2A (w/ External F	3	68	3.2	2.0	15.7	6.7	0.80	0.63	2.9	92.37	7.63	32	237
153.5	KMW ET-X-WM-18-65-8P	3	53	7.0	5.1	12.0	4.3	0.80	0.63	2.5	170.92	7.62	68	179
153.5	KMW ET-X-TS-70-15-62-18-IR-RD	3	63	8.6	6.2	11.8	5.9	0.80	0.67	2.5	224.64	7.62	90	214
151.0	Generic Round Sector Frame	3	824	16.5	0.0	0.0	0.0	0.75	0.67	0.0	0.00	7.57	160	2891
140.7	Antel BCD-87010	1	39	5.7	11.2	2.6	2.6	1.00	1.00	0.0	0.00	7.46	36	44
132.0	Round Side Arm	1	159	5.5	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.36	35	189
110.0	Stand-Off	4	159	5.5	0.0	0.0	0.0	1.00	0.67	0.0	0.00	7.09	89	756
Totals		75	14,131	596.4									2091	16,499

Discrete Appurtenance Properties for LC: 1.0D + 1.0W Service

Elev (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)
197.8	Ericsson AIR 6419 B77D/ C-Band	3	64	3.8	2.4	16.1	7.3	0.80	0.64	0.0	0.00	9.18	46	192
195.0	Ericsson Radio 4890HP 48B2/B25	3	67	2.2	1.5	15.1	6.9	0.80	0.67	0.0	0.00	9.15	28	202
195.0	Ericsson Radio 4494 44B14 20B2	3	57	2.2	1.5	15.1	5.6	0.80	0.67	0.0	0.00	9.15	28	172
195.0	Ericsson Radio 4490HP 44B5 44B	3	68	2.2	1.5	15.1	6.8	0.80	0.67	0.0	0.00	9.15	28	205
195.0	Raycap DC6-48-60-18-8F (20.1"	4	16	3.0	1.7	18.2	6.4	0.80	0.60	0.0	0.00	9.15	46	64
195.0	Kathrein Scala 80010992K	3	133	19.3	8.8	20.0	6.9	0.80	0.63	0.0	0.00	9.15	227	400
195.0	Kathrein Scala 80010992V01	3	130	19.3	8.8	20.0	6.9	0.80	0.63	0.0	0.00	9.15	227	390
194.0	Ericsson AIR 6419 B77G	3	66	3.8	2.4	16.1	7.9	0.80	0.65	0.0	0.00	9.14	46	198
190.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	9.10	188	2100
180.0	Empty Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	9.00	166	900
169.0	Commscope HELIAX FiberFeed 12	2	20	0.9	1.4	6.7	4.7	0.80	0.50	0.0	0.00	8.89	6	40
169.0	Nokia AirScale Dual RRH 4T4R B	3	84	2.2	1.8	12.1	7.4	0.80	0.67	0.0	0.00	8.89	27	251
169.0	Nokia AHFIG	3	79	3.1	2.3	13.4	6.8	0.80	0.66	0.0	0.00	8.89	37	238
169.0	Nokia AEHC	3	104	6.8	3.2	21.5	8.1	0.80	0.62	0.0	0.00	8.89	77	311
169.0	Commscope FFFV-65C-R3-V1	3	125	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.00	8.89	241	374
166.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	8.86	163	2100
163.0	Ericsson Mini-Link 6363	2	6	0.5	0.6	7.0	3.1	0.80	0.50	0.0	0.00	8.82	3	12
163.0	Ericsson ANT3 A 0.9 HPX	1	42	8.6	3.0	35.4	20.0	0.80	1.00	0.0	0.00	8.82	52	42
157.1	Samsung RRH-B8 w/ Finger Guard	3	60	2.6	1.8	15.0	9.5	0.80	0.67	0.0	0.00	8.76	32	178
153.9	Samsung RRH-P4 (1.9 GHz)	3	63	2.7	2.0	13.8	9.0	0.80	0.67	2.9	94.98	8.75	33	188
153.9	Samsung RRH-C2A (w/ External F	3	57	3.1	2.0	15.7	6.7	0.80	0.63	2.9	101.18	8.75	35	172
153.5	KMW ET-X-WM-18-65-8P	3	36	6.7	5.1	12.0	4.3	0.80	0.63	2.5	187.82	8.75	75	109
153.5	KMW ET-X-TS-70-15-62-18-IR-RD	3	42	8.3	6.2	11.8	5.9	0.80	0.67	2.5	247.02	8.75	99	126
151.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	8.69	160	2100
140.7	Antel BCD-87010	1	27	4.8	11.2	2.6	2.6	1.00	1.00	0.0	0.00	8.56	35	26
132.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	8.45	37	150
110.0	Stand-Off	4	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.14	96	600
Totals		75	11,842	555.9									2,237	11,842

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

TOWER LOADING - LINEAR APPURTENANCE

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	% In Wind	Spread On Faces	Bundling	Cluster Dia (in)	Out of Zone	Spacing (in)	Orient. Factor	K _a Override
0.0	195.0	2" conduit	2	2.38	3.65	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	195.0	0.92" (23.4mm) Cable	1	0.92	0.89	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	195.0	3/8" (0.38"- 9.5mm) RET Contro	1	0.38	0.23	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	195.0	0.78" (19.7mm) 8 AWG 6	6	0.78	0.59	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	195.0	0.39" (10mm) Fiber Trunk	3	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	195.0	Waveguide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	169.0	1.46" (37.1mm) Hybrid	2	1.46	1.70	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	166.0	Waveguide	1	1.50	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	163.0	0.59" (15mm) LMR-600	2	0.59	0.13	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	154.0	1 1/4" Hybriflex Cable	3	1.54	1.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	151.0	Waveguide	1	1.50	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	130.0	1 5/8" Coax	1	1.98	0.82	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	110.0	Waveguide	1	1.50	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

SECTION FORCES

1.2D + 1.0W Normal

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	1.00	1.00	0.0	11.80	30.81	0.00	1053	0	743	313	1055
9	170	27.78	8.423	9.583	0.00	0.187	2.64	1.00	1.00	0.0	13.91	36.73	0.00	1527	0	867	472	1339
8	150	27.08	10.198	11.687	0.00	0.186	2.64	1.00	1.00	0.0	16.71	44.19	0.00	2083	0	1017	708	1725
7	130	26.30	11.609	15.026	0.00	0.166	2.71	1.00	1.00	0.0	19.30	52.38	0.00	2612	0	1171	781	1952
6	110	25.42	14.054	18.577	0.00	0.160	2.73	1.00	1.00	0.0	22.73	62.17	0.00	3250	0	1343	813	2156
5	90	24.40	16.265	18.576	0.00	0.142	2.80	1.00	1.00	0.0	24.94	69.84	0.00	3439	0	1448	812	2260
4	70	23.18	18.520	18.574	0.00	0.130	2.85	1.00	1.00	0.0	27.27	77.65	0.00	3899	0	1530	771	2301
3	50	21.64	21.096	22.124	0.00	0.132	2.84	1.00	1.00	0.0	30.81	87.52	0.00	4664	0	1610	720	2330
2	30	19.50	23.140	22.119	0.00	0.123	2.87	1.00	1.00	0.0	33.22	95.49	0.00	4810	0	1582	649	2231
1	10	16.90	25.124	28.810	0.00	0.130	2.85	1.00	1.00	0.0	36.90	105.02	0.00	5292	0	1509	562	2071
Totals															32,628	0		19,420

1.2D + 1.0W 60°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	0.80	1.00	0.0	10.32	26.95	0.00	1053	0	649	313	962
9	170	27.78	8.423	9.583	0.00	0.187	2.64	0.80	1.00	0.0	12.22	32.28	0.00	1527	0	762	472	1234
8	150	27.08	10.198	11.687	0.00	0.186	2.64	0.80	1.00	0.0	14.67	38.80	0.00	2083	0	893	708	1601
7	130	26.30	11.609	15.026	0.00	0.166	2.71	0.80	1.00	0.0	16.98	46.08	0.00	2612	0	1030	781	1811
6	110	25.42	14.054	18.577	0.00	0.160	2.73	0.80	1.00	0.0	19.92	54.48	0.00	3250	0	1177	813	1990
5	90	24.40	16.265	18.576	0.00	0.142	2.80	0.80	1.00	0.0	21.68	60.73	0.00	3439	0	1259	812	2071
4	70	23.18	18.520	18.574	0.00	0.130	2.85	0.80	1.00	0.0	23.57	67.11	0.00	3899	0	1322	771	2093
3	50	21.64	21.096	22.124	0.00	0.132	2.84	0.80	1.00	0.0	26.59	75.54	0.00	4664	0	1389	720	2109
2	30	19.50	23.140	22.119	0.00	0.123	2.87	0.80	1.00	0.0	28.59	82.18	0.00	4810	0	1362	649	2011
1	10	16.90	25.124	28.810	0.00	0.130	2.85	0.80	1.00	0.0	31.88	90.72	0.00	5292	0	1303	562	1866
Totals															32,628	0		17,747

1.2D + 1.0W 90°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	0.85	1.00	0.0	10.69	27.91	0.00	1053	0	673	313	985
9	170	27.78	8.423	9.583	0.00	0.187	2.64	0.85	1.00	0.0	12.64	33.39	0.00	1527	0	788	472	1260
8	150	27.08	10.198	11.687	0.00	0.186	2.64	0.85	1.00	0.0	15.18	40.15	0.00	2083	0	924	708	1632
7	130	26.30	11.609	15.026	0.00	0.166	2.71	0.85	1.00	0.0	17.56	47.65	0.00	2612	0	1065	781	1846
6	110	25.42	14.054	18.577	0.00	0.160	2.73	0.85	1.00	0.0	20.63	56.41	0.00	3250	0	1219	813	2032
5	90	24.40	16.265	18.576	0.00	0.142	2.80	0.85	1.00	0.0	22.50	63.01	0.00	3439	0	1307	812	2118
4	70	23.18	18.520	18.574	0.00	0.130	2.85	0.85	1.00	0.0	24.50	69.74	0.00	3899	0	1374	771	2145
3	50	21.64	21.096	22.124	0.00	0.132	2.84	0.85	1.00	0.0	27.65	78.53	0.00	4664	0	1444	720	2164
2	30	19.50	23.140	22.119	0.00	0.123	2.87	0.85	1.00	0.0	29.75	85.51	0.00	4810	0	1417	649	2066
1	10	16.90	25.124	28.810	0.00	0.130	2.85	0.85	1.00	0.0	33.14	94.30	0.00	5292	0	1355	562	1917
Totals															32,628	0		18,165

1.2D + 1.0W 120°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	1.00	1.00	0.0	11.80	30.81	0.00	1053	0	743	313	1055
9	170	27.78	8.423	9.583	0.00	0.187	2.64	1.00	1.00	0.0	13.91	36.73	0.00	1527	0	867	472	1339
8	150	27.08	10.198	11.687	0.00	0.186	2.64	1.00	1.00	0.0	16.71	44.19	0.00	2083	0	1017	708	1725
7	130	26.30	11.609	15.026	0.00	0.166	2.71	1.00	1.00	0.0	19.30	52.38	0.00	2612	0	1171	781	1952
6	110	25.42	14.054	18.577	0.00	0.160	2.73	1.00	1.00	0.0	22.73	62.17	0.00	3250	0	1343	813	2156
5	90	24.40	16.265	18.576	0.00	0.142	2.80	1.00	1.00	0.0	24.94	69.84	0.00	3439	0	1448	812	2260
4	70	23.18	18.520	18.574	0.00	0.130	2.85	1.00	1.00	0.0	27.27	77.65	0.00	3899	0	1530	771	2301
3	50	21.64	21.096	22.124	0.00	0.132	2.84	1.00	1.00	0.0	30.81	87.52	0.00	4664	0	1610	720	2330
2	30	19.50	23.140	22.119	0.00	0.123	2.87	1.00	1.00	0.0	33.22	95.49	0.00	4810	0	1582	649	2231
1	10	16.90	25.124	28.810	0.00	0.130	2.85	1.00	1.00	0.0	36.90	105.02	0.00	5292	0	1509	562	2071
Totals															32,628	0		19,420

1.2D + 1.0W 180°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	0.80	1.00	0.0	10.32	26.95	0.00	1053	0	649	313	962
9	170	27.78	8.423	9.583	0.00	0.187	2.64	0.80	1.00	0.0	12.22	32.28	0.00	1527	0	762	472	1234
8	150	27.08	10.198	11.687	0.00	0.186	2.64	0.80	1.00	0.0	14.67	38.80	0.00	2083	0	893	708	1601
7	130	26.30	11.609	15.026	0.00	0.166	2.71	0.80	1.00	0.0	16.98	46.08	0.00	2612	0	1030	781	1811
6	110	25.42	14.054	18.577	0.00	0.160	2.73	0.80	1.00	0.0	19.92	54.48	0.00	3250	0	1177	813	1990
5	90	24.40	16.265	18.576	0.00	0.142	2.80	0.80	1.00	0.0	21.68	60.73	0.00	3439	0	1259	812	2071
4	70	23.18	18.520	18.574	0.00	0.130	2.85	0.80	1.00	0.0	23.57	67.11	0.00	3899	0	1322	771	2093
3	50	21.64	21.096	22.124	0.00	0.132	2.84	0.80	1.00	0.0	26.59	75.54	0.00	4664	0	1389	720	2109
2	30	19.50	23.140	22.119	0.00	0.123	2.87	0.80	1.00	0.0	28.59	82.18	0.00	4810	0	1362	649	2011

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

SECTION FORCES

1.2D + 1.0W 180°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{lz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
1	10	16.90	25.124	28.810	0.00	0.130	2.85	0.80	1.00	0.0	31.88	90.72	0.00	5292	0	1303	562	1866
Totals															32,628	0		17,747

1.2D + 1.0W 210°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{lz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	0.85	1.00	0.0	10.69	27.91	0.00	1053	0	673	313	985
9	170	27.78	8.423	9.583	0.00	0.187	2.64	0.85	1.00	0.0	12.64	33.39	0.00	1527	0	788	472	1260
8	150	27.08	10.198	11.687	0.00	0.186	2.64	0.85	1.00	0.0	15.18	40.15	0.00	2083	0	924	708	1632
7	130	26.30	11.609	15.026	0.00	0.166	2.71	0.85	1.00	0.0	17.56	47.65	0.00	2612	0	1065	781	1846
6	110	25.42	14.054	18.577	0.00	0.160	2.73	0.85	1.00	0.0	20.63	56.41	0.00	3250	0	1219	813	2032
5	90	24.40	16.265	18.576	0.00	0.142	2.80	0.85	1.00	0.0	22.50	63.01	0.00	3439	0	1307	812	2118
4	70	23.18	18.520	18.574	0.00	0.130	2.85	0.85	1.00	0.0	24.50	69.74	0.00	3899	0	1374	771	2145
3	50	21.64	21.096	22.124	0.00	0.132	2.84	0.85	1.00	0.0	27.65	78.53	0.00	4664	0	1444	720	2164
2	30	19.50	23.140	22.119	0.00	0.123	2.87	0.85	1.00	0.0	29.75	85.51	0.00	4810	0	1417	649	2066
1	10	16.90	25.124	28.810	0.00	0.130	2.85	0.85	1.00	0.0	33.14	94.30	0.00	5292	0	1355	562	1917
Totals															32,628	0		18,165

1.2D + 1.0W 240°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{lz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	1.00	1.00	0.0	11.80	30.81	0.00	1053	0	743	313	1055
9	170	27.78	8.423	9.583	0.00	0.187	2.64	1.00	1.00	0.0	13.91	36.73	0.00	1527	0	867	472	1339
8	150	27.08	10.198	11.687	0.00	0.186	2.64	1.00	1.00	0.0	16.71	44.19	0.00	2083	0	1017	708	1725
7	130	26.30	11.609	15.026	0.00	0.166	2.71	1.00	1.00	0.0	19.30	52.38	0.00	2612	0	1171	781	1952
6	110	25.42	14.054	18.577	0.00	0.160	2.73	1.00	1.00	0.0	22.73	62.17	0.00	3250	0	1343	813	2156
5	90	24.40	16.265	18.576	0.00	0.142	2.80	1.00	1.00	0.0	24.94	69.84	0.00	3439	0	1448	812	2260
4	70	23.18	18.520	18.574	0.00	0.130	2.85	1.00	1.00	0.0	27.27	77.65	0.00	3899	0	1530	771	2301
3	50	21.64	21.096	22.124	0.00	0.132	2.84	1.00	1.00	0.0	30.81	87.52	0.00	4664	0	1610	720	2330
2	30	19.50	23.140	22.119	0.00	0.123	2.87	1.00	1.00	0.0	33.22	95.49	0.00	4810	0	1582	649	2231
1	10	16.90	25.124	28.810	0.00	0.130	2.85	1.00	1.00	0.0	36.90	105.02	0.00	5292	0	1509	562	2071
Totals															32,628	0		19,420

1.2D + 1.0W 300°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{lz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	0.80	1.00	0.0	10.32	26.95	0.00	1053	0	649	313	962
9	170	27.78	8.423	9.583	0.00	0.187	2.64	0.80	1.00	0.0	12.22	32.28	0.00	1527	0	762	472	1234
8	150	27.08	10.198	11.687	0.00	0.186	2.64	0.80	1.00	0.0	14.67	38.80	0.00	2083	0	893	708	1601
7	130	26.30	11.609	15.026	0.00	0.166	2.71	0.80	1.00	0.0	16.98	46.08	0.00	2612	0	1030	781	1811
6	110	25.42	14.054	18.577	0.00	0.160	2.73	0.80	1.00	0.0	19.92	54.48	0.00	3250	0	1177	813	1990
5	90	24.40	16.265	18.576	0.00	0.142	2.80	0.80	1.00	0.0	21.68	60.73	0.00	3439	0	1259	812	2071
4	70	23.18	18.520	18.574	0.00	0.130	2.85	0.80	1.00	0.0	23.57	67.11	0.00	3899	0	1322	771	2093
3	50	21.64	21.096	22.124	0.00	0.132	2.84	0.80	1.00	0.0	26.59	75.54	0.00	4664	0	1389	720	2109
2	30	19.50	23.140	22.119	0.00	0.123	2.87	0.80	1.00	0.0	28.59	82.18	0.00	4810	0	1362	649	2011
1	10	16.90	25.124	28.810	0.00	0.130	2.85	0.80	1.00	0.0	31.88	90.72	0.00	5292	0	1303	562	1866
Totals															32,628	0		17,747

1.2D + 1.0W 330°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{lz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	0.85	1.00	0.0	10.69	27.91	0.00	1053	0	673	313	985
9	170	27.78	8.423	9.583	0.00	0.187	2.64	0.85	1.00	0.0	12.64	33.39	0.00	1527	0	788	472	1260
8	150	27.08	10.198	11.687	0.00	0.186	2.64	0.85	1.00	0.0	15.18	40.15	0.00	2083	0	924	708	1632
7	130	26.30	11.609	15.026	0.00	0.166	2.71	0.85	1.00	0.0	17.56	47.65	0.00	2612	0	1065	781	1846
6	110	25.42	14.054	18.577	0.00	0.160	2.73	0.85	1.00	0.0	20.63	56.41	0.00	3250	0	1219	813	2032
5	90	24.40	16.265	18.576	0.00	0.142	2.80	0.85	1.00	0.0	22.50	63.01	0.00	3439	0	1307	812	2118
4	70	23.18	18.520	18.574	0.00	0.130	2.85	0.85	1.00	0.0	24.50	69.74	0.00	3899	0	1374	771	2145
3	50	21.64	21.096	22.124	0.00	0.132	2.84	0.85	1.00	0.0	27.65	78.53	0.00	4664	0	1444	720	2164
2	30	19.50	23.140	22.119	0.00	0.123	2.87	0.85	1.00	0.0	29.75	85.51	0.00	4810	0	1417	649	2066
1	10	16.90	25.124	28.810	0.00	0.130	2.85	0.85	1.00	0.0	33.14	94.30	0.00	5292	0	1355	562	1917
Totals															32,628	0		18,165

0.9D + 1.0W Normal

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{lz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{sl} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	1.00	1.00	0.0	11.80	30.81	0.00	789	0	743	313	1055

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

SECTION FORCES

0.9D + 1.0W Normal

Gust Response Factor (G_h): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (I_w): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{iz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{si} (lb)	F _a (lb)	Force (lb)
9	170	27.78	8,423	9,583	0.00	0.187	2.64	1.00	1.00	0.0	13.91	36.73	0.00	1145	0	867	472	1339
8	150	27.08	10,198	11,687	0.00	0.186	2.64	1.00	1.00	0.0	16.71	44.19	0.00	1562	0	1017	708	1725
7	130	26.30	11,609	15,026	0.00	0.166	2.71	1.00	1.00	0.0	19.30	52.38	0.00	1959	0	1171	781	1952
6	110	25.42	14,054	18,577	0.00	0.160	2.73	1.00	1.00	0.0	22.73	62.17	0.00	2438	0	1343	813	2156
5	90	24.40	16,265	18,576	0.00	0.142	2.80	1.00	1.00	0.0	24.94	69.84	0.00	2579	0	1448	812	2260
4	70	23.18	18,520	18,574	0.00	0.130	2.85	1.00	1.00	0.0	27.27	77.65	0.00	2924	0	1530	771	2301
3	50	21.64	21,096	22,124	0.00	0.132	2.84	1.00	1.00	0.0	30.81	87.52	0.00	3498	0	1610	720	2330
2	30	19.50	23,140	22,119	0.00	0.123	2.87	1.00	1.00	0.0	33.22	95.49	0.00	3607	0	1582	649	2231
1	10	16.90	25,124	28,810	0.00	0.130	2.85	1.00	1.00	0.0	36.90	105.02	0.00	3969	0	1509	562	2071
Totals															24,471	0		19,420

0.9D + 1.0W 60°

Gust Response Factor (G_h): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (I_w): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{iz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{si} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7,400	7,667	0.00	0.195	2.61	0.80	1.00	0.0	10.32	26.95	0.00	789	0	649	313	962
9	170	27.78	8,423	9,583	0.00	0.187	2.64	0.80	1.00	0.0	12.22	32.28	0.00	1145	0	762	472	1234
8	150	27.08	10,198	11,687	0.00	0.186	2.64	0.80	1.00	0.0	14.67	38.80	0.00	1562	0	893	708	1601
7	130	26.30	11,609	15,026	0.00	0.166	2.71	0.80	1.00	0.0	16.98	46.08	0.00	1959	0	1030	781	1811
6	110	25.42	14,054	18,577	0.00	0.160	2.73	0.80	1.00	0.0	19.92	54.48	0.00	2438	0	1177	813	1990
5	90	24.40	16,265	18,576	0.00	0.142	2.80	0.80	1.00	0.0	21.68	60.73	0.00	2579	0	1259	812	2071
4	70	23.18	18,520	18,574	0.00	0.130	2.85	0.80	1.00	0.0	23.57	67.11	0.00	2924	0	1322	771	2093
3	50	21.64	21,096	22,124	0.00	0.132	2.84	0.80	1.00	0.0	26.59	75.54	0.00	3498	0	1389	720	2109
2	30	19.50	23,140	22,119	0.00	0.123	2.87	0.80	1.00	0.0	28.59	82.18	0.00	3607	0	1362	649	2011
1	10	16.90	25,124	28,810	0.00	0.130	2.85	0.80	1.00	0.0	31.88	90.72	0.00	3969	0	1303	562	1866
Totals															24,471	0		17,747

0.9D + 1.0W 90°

Gust Response Factor (G_h): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (I_w): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{iz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{si} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7,400	7,667	0.00	0.195	2.61	0.85	1.00	0.0	10.69	27.91	0.00	789	0	673	313	985
9	170	27.78	8,423	9,583	0.00	0.187	2.64	0.85	1.00	0.0	12.64	33.39	0.00	1145	0	788	472	1260
8	150	27.08	10,198	11,687	0.00	0.186	2.64	0.85	1.00	0.0	15.18	40.15	0.00	1562	0	924	708	1632
7	130	26.30	11,609	15,026	0.00	0.166	2.71	0.85	1.00	0.0	17.56	47.65	0.00	1959	0	1065	781	1846
6	110	25.42	14,054	18,577	0.00	0.160	2.73	0.85	1.00	0.0	20.63	56.41	0.00	2438	0	1219	813	2032
5	90	24.40	16,265	18,576	0.00	0.142	2.80	0.85	1.00	0.0	22.50	63.01	0.00	2579	0	1307	812	2118
4	70	23.18	18,520	18,574	0.00	0.130	2.85	0.85	1.00	0.0	24.50	69.74	0.00	2924	0	1374	771	2145
3	50	21.64	21,096	22,124	0.00	0.132	2.84	0.85	1.00	0.0	27.65	78.53	0.00	3498	0	1444	720	2164
2	30	19.50	23,140	22,119	0.00	0.123	2.87	0.85	1.00	0.0	29.75	85.51	0.00	3607	0	1417	649	2066
1	10	16.90	25,124	28,810	0.00	0.130	2.85	0.85	1.00	0.0	33.14	94.30	0.00	3969	0	1355	562	1917
Totals															24,471	0		18,165

0.9D + 1.0W 120°

Gust Response Factor (G_h): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (I_w): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{iz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{si} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7,400	7,667	0.00	0.195	2.61	1.00	1.00	0.0	11.80	30.81	0.00	789	0	743	313	1055
9	170	27.78	8,423	9,583	0.00	0.187	2.64	1.00	1.00	0.0	13.91	36.73	0.00	1145	0	867	472	1339
8	150	27.08	10,198	11,687	0.00	0.186	2.64	1.00	1.00	0.0	16.71	44.19	0.00	1562	0	1017	708	1725
7	130	26.30	11,609	15,026	0.00	0.166	2.71	1.00	1.00	0.0	19.30	52.38	0.00	1959	0	1171	781	1952
6	110	25.42	14,054	18,577	0.00	0.160	2.73	1.00	1.00	0.0	22.73	62.17	0.00	2438	0	1343	813	2156
5	90	24.40	16,265	18,576	0.00	0.142	2.80	1.00	1.00	0.0	24.94	69.84	0.00	2579	0	1448	812	2260
4	70	23.18	18,520	18,574	0.00	0.130	2.85	1.00	1.00	0.0	27.27	77.65	0.00	2924	0	1530	771	2301
3	50	21.64	21,096	22,124	0.00	0.132	2.84	1.00	1.00	0.0	30.81	87.52	0.00	3498	0	1610	720	2330
2	30	19.50	23,140	22,119	0.00	0.123	2.87	1.00	1.00	0.0	33.22	95.49	0.00	3607	0	1582	649	2231
1	10	16.90	25,124	28,810	0.00	0.130	2.85	1.00	1.00	0.0	36.90	105.02	0.00	3969	0	1509	562	2071
Totals															24,471	0		19,420

0.9D + 1.0W 180°

Gust Response Factor (G_h): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (I_w): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{iz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{si} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7,400	7,667	0.00	0.195	2.61	0.80	1.00	0.0	10.32	26.95	0.00	789	0	649	313	962
9	170	27.78	8,423	9,583	0.00	0.187	2.64	0.80	1.00	0.0	12.22	32.28	0.00	1145	0	762	472	1234
8	150	27.08	10,198	11,687	0.00	0.186	2.64	0.80	1.00	0.0	14.67	38.80	0.00	1562	0	893	708	1601
7	130	26.30	11,609	15,026	0.00	0.166	2.71	0.80	1.00	0.0	16.98	46.08	0.00	1959	0	1030	781	1811
6	110	25.42	14,054	18,577	0.00	0.160	2.73	0.80	1.00	0.0	19.92	54.48	0.00	2438	0	1177	813	1990
5	90	24.40	16,265	18,576	0.00	0.142	2.80	0.80	1.00	0.0	21.68	60.73	0.00	2579	0	1259	812	2071
4	70	23.18	18,520	18,574	0.00	0.130	2.85	0.80	1.00	0.0	23.57	67.11	0.00	2924	0	1322	771	2093
3	50	21.64	21,096	22,124	0.00	0.132	2.84	0.80	1.00	0.0	26.59	75.54	0.00	3498	0	1389	720	2109
2	30	19.50	23,140	22,119	0.00	0.123	2.87	0.80	1.00	0.0	28.59	82.18	0.00	3607	0	1362	649	2011
1	10	16.90	25,124	28,810	0.00	0.130	2.85	0.80	1.00	0.0	31.88	90.72	0.00	3969	0	1303	562	1866
Totals															24,471	0		18,165

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

SECTION FORCES

0.9D + 1.0W 180°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
Totals														24,471	0			17,747

0.9D + 1.0W 210°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	0.85	1.00	0.0	10.69	27.91	0.00	789	0	673	313	985
9	170	27.78	8.423	9.583	0.00	0.187	2.64	0.85	1.00	0.0	12.64	33.39	0.00	1145	0	788	472	1260
8	150	27.08	10.198	11.687	0.00	0.186	2.64	0.85	1.00	0.0	15.18	40.15	0.00	1562	0	924	708	1632
7	130	26.30	11.609	15.026	0.00	0.166	2.71	0.85	1.00	0.0	17.56	47.65	0.00	1959	0	1065	781	1846
6	110	25.42	14.054	18.577	0.00	0.160	2.73	0.85	1.00	0.0	20.63	56.41	0.00	2438	0	1219	813	2032
5	90	24.40	16.265	18.576	0.00	0.142	2.80	0.85	1.00	0.0	22.50	63.01	0.00	2579	0	1307	812	2118
4	70	23.18	18.520	18.574	0.00	0.130	2.85	0.85	1.00	0.0	24.50	69.74	0.00	2924	0	1374	771	2145
3	50	21.64	21.096	22.124	0.00	0.132	2.84	0.85	1.00	0.0	27.65	78.53	0.00	3498	0	1444	720	2164
2	30	19.50	23.140	22.119	0.00	0.123	2.87	0.85	1.00	0.0	29.75	85.51	0.00	3607	0	1417	649	2066
1	10	16.90	25.124	28.810	0.00	0.130	2.85	0.85	1.00	0.0	33.14	94.30	0.00	3969	0	1355	562	1917
Totals														24,471	0			18,165

0.9D + 1.0W 240°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	1.00	1.00	0.0	11.80	30.81	0.00	789	0	743	313	1055
9	170	27.78	8.423	9.583	0.00	0.187	2.64	1.00	1.00	0.0	13.91	36.73	0.00	1145	0	867	472	1339
8	150	27.08	10.198	11.687	0.00	0.186	2.64	1.00	1.00	0.0	16.71	44.19	0.00	1562	0	1017	708	1725
7	130	26.30	11.609	15.026	0.00	0.166	2.71	1.00	1.00	0.0	19.30	52.38	0.00	1959	0	1171	781	1952
6	110	25.42	14.054	18.577	0.00	0.160	2.73	1.00	1.00	0.0	22.73	62.17	0.00	2438	0	1343	813	2156
5	90	24.40	16.265	18.576	0.00	0.142	2.80	1.00	1.00	0.0	24.94	69.84	0.00	2579	0	1448	812	2260
4	70	23.18	18.520	18.574	0.00	0.130	2.85	1.00	1.00	0.0	27.27	77.65	0.00	2924	0	1530	771	2301
3	50	21.64	21.096	22.124	0.00	0.132	2.84	1.00	1.00	0.0	30.81	87.52	0.00	3498	0	1610	720	2330
2	30	19.50	23.140	22.119	0.00	0.123	2.87	1.00	1.00	0.0	33.22	95.49	0.00	3607	0	1582	649	2231
1	10	16.90	25.124	28.810	0.00	0.130	2.85	1.00	1.00	0.0	36.90	105.02	0.00	3969	0	1509	562	2071
Totals														24,471	0			19,420

0.9D + 1.0W 300°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	0.80	1.00	0.0	10.32	26.95	0.00	789	0	649	313	962
9	170	27.78	8.423	9.583	0.00	0.187	2.64	0.80	1.00	0.0	12.22	32.28	0.00	1145	0	762	472	1234
8	150	27.08	10.198	11.687	0.00	0.186	2.64	0.80	1.00	0.0	14.67	38.80	0.00	1562	0	893	708	1601
7	130	26.30	11.609	15.026	0.00	0.166	2.71	0.80	1.00	0.0	16.98	46.08	0.00	1959	0	1030	781	1811
6	110	25.42	14.054	18.577	0.00	0.160	2.73	0.80	1.00	0.0	19.92	54.48	0.00	2438	0	1177	813	1990
5	90	24.40	16.265	18.576	0.00	0.142	2.80	0.80	1.00	0.0	21.68	60.73	0.00	2579	0	1259	812	2071
4	70	23.18	18.520	18.574	0.00	0.130	2.85	0.80	1.00	0.0	23.57	67.11	0.00	2924	0	1322	771	2093
3	50	21.64	21.096	22.124	0.00	0.132	2.84	0.80	1.00	0.0	26.59	75.54	0.00	3498	0	1389	720	2109
2	30	19.50	23.140	22.119	0.00	0.123	2.87	0.80	1.00	0.0	28.59	82.18	0.00	3607	0	1362	649	2011
1	10	16.90	25.124	28.810	0.00	0.130	2.85	0.80	1.00	0.0	31.88	90.72	0.00	3969	0	1303	562	1866
Totals														24,471	0			17,747

0.9D + 1.0W 330°

Gust Response Factor (Gh): 0.85

106 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	28.36	7.400	7.667	0.00	0.195	2.61	0.85	1.00	0.0	10.69	27.91	0.00	789	0	673	313	985
9	170	27.78	8.423	9.583	0.00	0.187	2.64	0.85	1.00	0.0	12.64	33.39	0.00	1145	0	788	472	1260
8	150	27.08	10.198	11.687	0.00	0.186	2.64	0.85	1.00	0.0	15.18	40.15	0.00	1562	0	924	708	1632
7	130	26.30	11.609	15.026	0.00	0.166	2.71	0.85	1.00	0.0	17.56	47.65	0.00	1959	0	1065	781	1846
6	110	25.42	14.054	18.577	0.00	0.160	2.73	0.85	1.00	0.0	20.63	56.41	0.00	2438	0	1219	813	2032
5	90	24.40	16.265	18.576	0.00	0.142	2.80	0.85	1.00	0.0	22.50	63.01	0.00	2579	0	1307	812	2118
4	70	23.18	18.520	18.574	0.00	0.130	2.85	0.85	1.00	0.0	24.50	69.74	0.00	2924	0	1374	771	2145
3	50	21.64	21.096	22.124	0.00	0.132	2.84	0.85	1.00	0.0	27.65	78.53	0.00	3498	0	1444	720	2164
2	30	19.50	23.140	22.119	0.00	0.123	2.87	0.85	1.00	0.0	29.75	85.51	0.00	3607	0	1417	649	2066
1	10	16.90	25.124	28.810	0.00	0.130	2.85	0.85	1.00	0.0	33.14	94.30	0.00	3969	0	1355	562	1917
Totals														24,471	0			18,165

1.2D + 1.0Di + 1.0Wi Normal

Gust Response Factor (Gh): 0.85

56 mph Wind with 0.19" Radial Ice

Wind Importance Factor (Iw): 1.00

Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	7.91	7.400	10.866	3.20	0.235	2.48	1.00	1.00	0.2	13.72	34.07	3.20	1266	214	229	157	386
9	170	7.75	8.423	13.320	3.74	0.224	2.52	1.00	1.00	0.2	16.14	40.64	3.74	1798	271	268	236	503

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

SECTION FORCES

1.2D + 1.0Di + 1.0Wi Normal

Gust Response Factor (Gh): 0.85

56 mph Wind with 0.19" Radial Ice

Wind Importance Factor (Iw): 1.00

Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _r	D _r	T _{iz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	150	7.56	10.198	15.858	4.17	0.220	2.53	1.00	1.00	0.2	19.37	49.04	4.17	2434	351	315	341	656
7	130	7.34	11.609	19.120	4.09	0.190	2.63	1.00	1.00	0.2	22.56	59.30	4.09	3009	398	370	381	751
6	110	7.09	14.054	22.518	3.94	0.179	2.67	1.00	1.00	0.2	26.91	71.82	3.94	3698	447	433	394	828
5	90	6.81	16.265	22.809	4.23	0.159	2.74	1.00	1.00	0.2	29.23	80.07	4.23	3909	469	463	395	858
4	70	6.47	18.520	23.072	4.50	0.145	2.79	1.00	1.00	0.2	31.60	88.15	4.50	4382	484	485	377	862
3	50	6.04	21.096	25.907	3.78	0.143	2.80	1.00	1.00	0.2	35.78	100.12	3.78	5174	510	514	350	864
2	30	5.44	23.140	25.933	3.81	0.133	2.84	1.00	1.00	0.2	37.82	107.25	3.81	5315	505	496	314	810
1	10	4.72	25.124	32.438	3.63	0.139	2.81	1.00	1.00	0.2	43.50	122.38	3.63	5787	495	491	264	755
Totals														36,771	4,143			7,274

1.2D + 1.0Di + 1.0Wi 60°

Gust Response Factor (Gh): 0.85

56 mph Wind with 0.19" Radial Ice

Wind Importance Factor (Iw): 1.00

Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _r	D _r	T _{iz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	7.91	7.400	10.866	3.20	0.235	2.48	0.80	1.00	0.2	12.24	30.39	3.20	1266	214	204	157	361
9	170	7.75	8.423	13.320	3.74	0.224	2.52	0.80	1.00	0.2	14.45	36.39	3.74	1798	271	240	236	475
8	150	7.56	10.198	15.858	4.17	0.220	2.53	0.80	1.00	0.2	17.33	43.87	4.17	2434	351	282	341	623
7	130	7.34	11.609	19.120	4.09	0.190	2.63	0.80	1.00	0.2	20.24	53.19	4.09	3009	398	332	381	713
6	110	7.09	14.054	22.518	3.94	0.179	2.67	0.80	1.00	0.2	24.10	64.32	3.94	3698	447	388	394	782
5	90	6.81	16.265	22.809	4.23	0.159	2.74	0.80	1.00	0.2	25.98	71.16	4.23	3909	469	412	395	807
4	70	6.47	18.520	23.072	4.50	0.145	2.79	0.80	1.00	0.2	27.90	77.82	4.50	4382	484	428	377	805
3	50	6.04	21.096	25.907	3.78	0.143	2.80	0.80	1.00	0.2	31.56	88.32	3.78	5174	510	453	350	803
2	30	5.44	23.140	25.933	3.81	0.133	2.84	0.80	1.00	0.2	33.19	94.13	3.81	5315	505	435	314	750
1	10	4.72	25.124	32.438	3.63	0.139	2.81	0.80	1.00	0.2	38.47	108.25	3.63	5787	495	434	264	698
Totals														36,771	4,143			6,819

1.2D + 1.0Di + 1.0Wi 90°

Gust Response Factor (Gh): 0.85

56 mph Wind with 0.19" Radial Ice

Wind Importance Factor (Iw): 1.00

Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _r	D _r	T _{iz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	7.91	7.400	10.866	3.20	0.235	2.48	0.85	1.00	0.2	12.61	31.31	3.20	1266	214	211	157	368
9	170	7.75	8.423	13.320	3.74	0.224	2.52	0.85	1.00	0.2	14.87	37.45	3.74	1798	271	247	236	482
8	150	7.56	10.198	15.858	4.17	0.220	2.53	0.85	1.00	0.2	17.84	45.16	4.17	2434	351	290	341	631
7	130	7.34	11.609	19.120	4.09	0.190	2.63	0.85	1.00	0.2	20.82	54.72	4.09	3009	398	341	381	723
6	110	7.09	14.054	22.518	3.94	0.179	2.67	0.85	1.00	0.2	24.81	66.19	3.94	3698	447	399	394	794
5	90	6.81	16.265	22.809	4.23	0.159	2.74	0.85	1.00	0.2	26.79	73.39	4.23	3909	469	425	395	820
4	70	6.47	18.520	23.072	4.50	0.145	2.79	0.85	1.00	0.2	28.83	80.40	4.50	4382	484	442	377	820
3	50	6.04	21.096	25.907	3.78	0.143	2.80	0.85	1.00	0.2	32.62	91.27	3.78	5174	510	469	350	819
2	30	5.44	23.140	25.933	3.81	0.133	2.84	0.85	1.00	0.2	34.35	97.41	3.81	5315	505	451	314	765
1	10	4.72	25.124	32.438	3.63	0.139	2.81	0.85	1.00	0.2	39.73	111.78	3.63	5787	495	448	264	712
Totals														36,771	4,143			6,932

1.2D + 1.0Di + 1.0Wi 120°

Gust Response Factor (Gh): 0.85

56 mph Wind with 0.19" Radial Ice

Wind Importance Factor (Iw): 1.00

Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _r	D _r	T _{iz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	7.91	7.400	10.866	3.20	0.235	2.48	1.00	1.00	0.2	13.72	34.07	3.20	1266	214	229	157	386
9	170	7.75	8.423	13.320	3.74	0.224	2.52	1.00	1.00	0.2	16.14	40.64	3.74	1798	271	268	236	503
8	150	7.56	10.198	15.858	4.17	0.220	2.53	1.00	1.00	0.2	19.37	49.04	4.17	2434	351	315	341	656
7	130	7.34	11.609	19.120	4.09	0.190	2.63	1.00	1.00	0.2	22.56	59.30	4.09	3009	398	370	381	751
6	110	7.09	14.054	22.518	3.94	0.179	2.67	1.00	1.00	0.2	26.91	71.82	3.94	3698	447	433	394	828
5	90	6.81	16.265	22.809	4.23	0.159	2.74	1.00	1.00	0.2	29.23	80.07	4.23	3909	469	463	395	858
4	70	6.47	18.520	23.072	4.50	0.145	2.79	1.00	1.00	0.2	31.60	88.15	4.50	4382	484	485	377	862
3	50	6.04	21.096	25.907	3.78	0.143	2.80	1.00	1.00	0.2	35.78	100.12	3.78	5174	510	514	350	864
2	30	5.44	23.140	25.933	3.81	0.133	2.84	1.00	1.00	0.2	37.82	107.25	3.81	5315	505	496	314	810
1	10	4.72	25.124	32.438	3.63	0.139	2.81	1.00	1.00	0.2	43.50	122.38	3.63	5787	495	491	264	755
Totals														36,771	4,143			7,274

1.2D + 1.0Di + 1.0Wi 180°

Gust Response Factor (Gh): 0.85

56 mph Wind with 0.19" Radial Ice

Wind Importance Factor (Iw): 1.00

Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _r	D _r	T _{iz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	7.91	7.400	10.866	3.20	0.235	2.48	0.80	1.00	0.2	12.24	30.39	3.20	1266	214	204	157	361
9	170	7.75	8.423	13.320	3.74	0.224	2.52	0.80	1.00	0.2	14.45	36.39	3.74	1798	271	240	236	475
8	150	7.56	10.198	15.858	4.17	0.220	2.53	0.80	1.00	0.2	17.33	43.87	4.17	2434	351	282	341	623
7	130	7.34	11.609	19.120	4.09	0.190	2.63	0.80	1.00	0.2	20.24	53.19	4.09	3009	398	332	381	713
6	110	7.09	14.054	22.518	3.94	0.179	2.67	0.80	1.00	0.2	24.10	64.32	3.94	3698	447	388	394	782
5	90	6.81	16.265	22.809	4.23	0.159	2.74	0.80	1.00	0.2	25.98	71.16	4.23	3909	469	412	395	807
4	70	6.47	18.520	23.072	4.50	0.145	2.79	0.80	1.00	0.2	27.90	77.82	4.50	4382	484	428	377	805
3	50	6.04	21.096	25.907	3.78	0.143	2.80	0.80	1.00	0.2	31.56	88.32	3.78	5174	510	453	350	803
2	30	5.44	23.140	25.933	3.81	0.133	2.84	0.80	1.00	0.2	33.19	94.13	3.81	5315	505	435	314	750
1	10	4.72	25.124	32.438	3.63	0.139	2.81	0.80	1.00	0.2	38.47	108.25	3.63	5787	495	434	264	698
Totals														36,771	4,143			6,819

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 210°

Gust Response Factor (Gh): 0.85

56 mph Wind with 0.19" Radial Ice

Wind Importance Factor (Iw): 1.00

Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q _z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	7.91	7.400	10.866	3.20	0.235	2.48	0.85	1.00	0.2	12.61	31.31	3.20	1266	214	211	157	368
9	170	7.75	8.423	13.320	3.74	0.224	2.52	0.85	1.00	0.2	14.87	37.45	3.74	1798	271	247	236	482
8	150	7.56	10.198	15.858	4.17	0.220	2.53	0.85	1.00	0.2	17.84	45.16	4.17	2434	351	290	341	631
7	130	7.34	11.609	19.120	4.09	0.190	2.63	0.85	1.00	0.2	20.82	54.72	4.09	3009	398	341	381	723
6	110	7.09	14.054	22.518	3.94	0.179	2.67	0.85	1.00	0.2	24.81	66.19	3.94	3698	447	399	394	794
5	90	6.81	16.265	22.809	4.23	0.159	2.74	0.85	1.00	0.2	26.79	73.39	4.23	3909	469	425	395	820
4	70	6.47	18.520	23.072	4.50	0.145	2.79	0.85	1.00	0.2	28.83	80.40	4.50	4382	484	442	377	820
3	50	6.04	21.096	25.907	3.78	0.143	2.80	0.85	1.00	0.2	32.62	91.27	3.78	5174	510	469	350	819
2	30	5.44	23.140	25.933	3.81	0.133	2.84	0.85	1.00	0.2	34.35	97.41	3.81	5315	505	451	314	765
1	10	4.72	25.124	32.438	3.63	0.139	2.81	0.85	1.00	0.2	39.73	111.78	3.63	5787	495	448	264	712
Totals														36,771	4,143			6,932

1.2D + 1.0Di + 1.0Wi 240°

Gust Response Factor (Gh): 0.85

56 mph Wind with 0.19" Radial Ice

Wind Importance Factor (Iw): 1.00

Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q _z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	7.91	7.400	10.866	3.20	0.235	2.48	1.00	1.00	0.2	13.72	34.07	3.20	1266	214	229	157	386
9	170	7.75	8.423	13.320	3.74	0.224	2.52	1.00	1.00	0.2	16.14	40.64	3.74	1798	271	268	236	503
8	150	7.56	10.198	15.858	4.17	0.220	2.53	1.00	1.00	0.2	19.37	49.04	4.17	2434	351	315	341	656
7	130	7.34	11.609	19.120	4.09	0.190	2.63	1.00	1.00	0.2	22.56	59.30	4.09	3009	398	370	381	751
6	110	7.09	14.054	22.518	3.94	0.179	2.67	1.00	1.00	0.2	26.91	71.82	3.94	3698	447	433	394	828
5	90	6.81	16.265	22.809	4.23	0.159	2.74	1.00	1.00	0.2	29.23	80.07	4.23	3909	469	463	395	858
4	70	6.47	18.520	23.072	4.50	0.145	2.79	1.00	1.00	0.2	31.60	88.15	4.50	4382	484	485	377	862
3	50	6.04	21.096	25.907	3.78	0.143	2.80	1.00	1.00	0.2	35.78	100.12	3.78	5174	510	514	350	864
2	30	5.44	23.140	25.933	3.81	0.133	2.84	1.00	1.00	0.2	37.82	107.25	3.81	5315	505	496	314	810
1	10	4.72	25.124	32.438	3.63	0.139	2.81	1.00	1.00	0.2	43.50	122.38	3.63	5787	495	491	264	755
Totals														36,771	4,143			7,274

1.2D + 1.0Di + 1.0Wi 300°

Gust Response Factor (Gh): 0.85

56 mph Wind with 0.19" Radial Ice

Wind Importance Factor (Iw): 1.00

Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q _z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	7.91	7.400	10.866	3.20	0.235	2.48	0.80	1.00	0.2	12.24	30.39	3.20	1266	214	204	157	361
9	170	7.75	8.423	13.320	3.74	0.224	2.52	0.80	1.00	0.2	14.45	36.39	3.74	1798	271	240	236	475
8	150	7.56	10.198	15.858	4.17	0.220	2.53	0.80	1.00	0.2	17.33	43.87	4.17	2434	351	282	341	623
7	130	7.34	11.609	19.120	4.09	0.190	2.63	0.80	1.00	0.2	20.24	53.19	4.09	3009	398	332	381	713
6	110	7.09	14.054	22.518	3.94	0.179	2.67	0.80	1.00	0.2	24.10	64.32	3.94	3698	447	388	394	782
5	90	6.81	16.265	22.809	4.23	0.159	2.74	0.80	1.00	0.2	25.98	71.16	4.23	3909	469	412	395	807
4	70	6.47	18.520	23.072	4.50	0.145	2.79	0.80	1.00	0.2	27.90	77.82	4.50	4382	484	428	377	805
3	50	6.04	21.096	25.907	3.78	0.143	2.80	0.80	1.00	0.2	31.56	88.32	3.78	5174	510	453	350	803
2	30	5.44	23.140	25.933	3.81	0.133	2.84	0.80	1.00	0.2	33.19	94.13	3.81	5315	505	435	314	750
1	10	4.72	25.124	32.438	3.63	0.139	2.81	0.80	1.00	0.2	38.47	108.25	3.63	5787	495	434	264	698
Totals														36,771	4,143			6,819

1.2D + 1.0Di + 1.0Wi 330°

Gust Response Factor (Gh): 0.85

56 mph Wind with 0.19" Radial Ice

Wind Importance Factor (Iw): 1.00

Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q _z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	7.91	7.400	10.866	3.20	0.235	2.48	0.85	1.00	0.2	12.61	31.31	3.20	1266	214	211	157	368
9	170	7.75	8.423	13.320	3.74	0.224	2.52	0.85	1.00	0.2	14.87	37.45	3.74	1798	271	247	236	482
8	150	7.56	10.198	15.858	4.17	0.220	2.53	0.85	1.00	0.2	17.84	45.16	4.17	2434	351	290	341	631
7	130	7.34	11.609	19.120	4.09	0.190	2.63	0.85	1.00	0.2	20.82	54.72	4.09	3009	398	341	381	723
6	110	7.09	14.054	22.518	3.94	0.179	2.67	0.85	1.00	0.2	24.81	66.19	3.94	3698	447	399	394	794
5	90	6.81	16.265	22.809	4.23	0.159	2.74	0.85	1.00	0.2	26.79	73.39	4.23	3909	469	425	395	820
4	70	6.47	18.520	23.072	4.50	0.145	2.79	0.85	1.00	0.2	28.83	80.40	4.50	4382	484	442	377	820
3	50	6.04	21.096	25.907	3.78	0.143	2.80	0.85	1.00	0.2	32.62	91.27	3.78	5174	510	469	350	819
2	30	5.44	23.140	25.933	3.81	0.133	2.84	0.85	1.00	0.2	34.35	97.41	3.81	5315	505	451	314	765
1	10	4.72	25.124	32.438	3.63	0.139	2.81	0.85	1.00	0.2	39.73	111.78	3.63	5787	495	448	264	712
Totals														36,771	4,143			6,932

1.0D + 1.0W Service Normal

Gust Response Factor (Gh): 0.85

60 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	9.08	7.400	7.667	0.00	0.195	2.61	1.00	1.00	0.0	11.80	30.81	0.00	877	0	238	100	338
9	170	8.90	8.423	9.583	0.00	0.187	2.64	1.00	1.00	0.0	13.91	36.73	0.00	1272	0	278	151	429
8	150	8.68	10.198	11.687	0.00	0.186	2.64	1.00	1.00	0.0	16.88	44.66	0.00	1736	0	329	227	556
7	130	8.43	11.609	15.026	0.00	0.166	2.71	1.00	1.00	0.0	20.16	54.73	0.00	2176	0	392	250	642
6	110	8.14	14.054	18.577	0.00	0.160	2.73	1.00	1.00	0.0	24.62	67.33	0.00	2708	0	466	260	727
5	90	7.82	16.265	18.576	0.00	0.142	2.80	1.00	1.00	0.0	26.79	75.05	0.00	2866	0	499	260	759
4	70	7.43	18.520	18.574	0.00	0.130	2.85	1.00	1.00	0.0	29.03	82.65	0.00	3249	0	522	247	769
3	50	6.93	21.096	22.124	0.00	0.132	2.84	1.00	1.00	0.0	33.53	95.24	0.00	3887	0	561	231	792

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

SECTION FORCES

1.0D + 1.0W Service Normal
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _{se} (sf)	EPA _{sa} (sf)	EPA _{sa} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
2	30	6.25	23.140	22.119	0.00	0.123	2.87	1.00	1.00	0.0	35.64	102.47	0.00	4008	0	544	208	752
1	10	5.42	25.124	28.810	0.00	0.130	2.85	1.00	1.00	0.0	39.06	111.15	0.00	4410	0	512	180	692
Totals															27,190	0		6,455

1.0D + 1.0W Service 60°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _{se} (sf)	EPA _{sa} (sf)	EPA _{sa} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	9.08	7.400	7.667	0.00	0.195	2.61	0.80	1.00	0.0	10.32	26.95	0.00	877	0	208	100	308
9	170	8.90	8.423	9.583	0.00	0.187	2.64	0.80	1.00	0.0	12.22	32.28	0.00	1272	0	244	151	395
8	150	8.68	10.198	11.687	0.00	0.186	2.64	0.80	1.00	0.0	14.84	39.26	0.00	1736	0	290	227	516
7	130	8.43	11.609	15.026	0.00	0.166	2.71	0.80	1.00	0.0	17.84	48.42	0.00	2176	0	347	250	597
6	110	8.14	14.054	18.577	0.00	0.160	2.73	0.80	1.00	0.0	21.81	59.64	0.00	2708	0	413	260	673
5	90	7.82	16.265	18.576	0.00	0.142	2.80	0.80	1.00	0.0	23.54	65.94	0.00	2866	0	438	260	698
4	70	7.43	18.520	18.574	0.00	0.130	2.85	0.80	1.00	0.0	25.33	72.11	0.00	3249	0	455	247	702
3	50	6.93	21.096	22.124	0.00	0.132	2.84	0.80	1.00	0.0	29.31	83.26	0.00	3887	0	491	231	721
2	30	6.25	23.140	22.119	0.00	0.123	2.87	0.80	1.00	0.0	31.02	89.16	0.00	4008	0	473	208	681
1	10	5.42	25.124	28.810	0.00	0.130	2.85	0.80	1.00	0.0	34.03	96.85	0.00	4410	0	446	180	626
Totals															27,190	0		5,919

1.0D + 1.0W Service 90°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _{se} (sf)	EPA _{sa} (sf)	EPA _{sa} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	9.08	7.400	7.667	0.00	0.195	2.61	0.85	1.00	0.0	10.69	27.91	0.00	877	0	216	100	316
9	170	8.90	8.423	9.583	0.00	0.187	2.64	0.85	1.00	0.0	12.64	33.39	0.00	1272	0	253	151	404
8	150	8.68	10.198	11.687	0.00	0.186	2.64	0.85	1.00	0.0	15.35	40.61	0.00	1736	0	299	227	526
7	130	8.43	11.609	15.026	0.00	0.166	2.71	0.85	1.00	0.0	18.42	50.00	0.00	2176	0	358	250	608
6	110	8.14	14.054	18.577	0.00	0.160	2.73	0.85	1.00	0.0	22.51	61.56	0.00	2708	0	426	260	687
5	90	7.82	16.265	18.576	0.00	0.142	2.80	0.85	1.00	0.0	24.35	68.21	0.00	2866	0	453	260	713
4	70	7.43	18.520	18.574	0.00	0.130	2.85	0.85	1.00	0.0	26.25	74.74	0.00	3249	0	472	247	719
3	50	6.93	21.096	22.124	0.00	0.132	2.84	0.85	1.00	0.0	30.37	86.25	0.00	3887	0	508	231	739
2	30	6.25	23.140	22.119	0.00	0.123	2.87	0.85	1.00	0.0	32.17	92.49	0.00	4008	0	491	208	699
1	10	5.42	25.124	28.810	0.00	0.130	2.85	0.85	1.00	0.0	35.29	100.43	0.00	4410	0	462	180	642
Totals															27,190	0		6,053

1.0D + 1.0W Service 120°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _{se} (sf)	EPA _{sa} (sf)	EPA _{sa} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	9.08	7.400	7.667	0.00	0.195	2.61	1.00	1.00	0.0	11.80	30.81	0.00	877	0	238	100	338
9	170	8.90	8.423	9.583	0.00	0.187	2.64	1.00	1.00	0.0	13.91	36.73	0.00	1272	0	278	151	429
8	150	8.68	10.198	11.687	0.00	0.186	2.64	1.00	1.00	0.0	16.88	44.66	0.00	1736	0	329	227	556
7	130	8.43	11.609	15.026	0.00	0.166	2.71	1.00	1.00	0.0	20.16	54.73	0.00	2176	0	392	250	642
6	110	8.14	14.054	18.577	0.00	0.160	2.73	1.00	1.00	0.0	24.62	67.33	0.00	2708	0	466	260	727
5	90	7.82	16.265	18.576	0.00	0.142	2.80	1.00	1.00	0.0	26.79	75.05	0.00	2866	0	499	260	759
4	70	7.43	18.520	18.574	0.00	0.130	2.85	1.00	1.00	0.0	29.03	82.65	0.00	3249	0	522	247	769
3	50	6.93	21.096	22.124	0.00	0.132	2.84	1.00	1.00	0.0	33.53	95.24	0.00	3887	0	561	231	792
2	30	6.25	23.140	22.119	0.00	0.123	2.87	1.00	1.00	0.0	35.64	102.47	0.00	4008	0	544	208	752
1	10	5.42	25.124	28.810	0.00	0.130	2.85	1.00	1.00	0.0	39.06	111.15	0.00	4410	0	512	180	692
Totals															27,190	0		6,455

1.0D + 1.0W Service 180°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _{se} (sf)	EPA _{sa} (sf)	EPA _{sa} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	9.08	7.400	7.667	0.00	0.195	2.61	0.80	1.00	0.0	10.32	26.95	0.00	877	0	208	100	308
9	170	8.90	8.423	9.583	0.00	0.187	2.64	0.80	1.00	0.0	12.22	32.28	0.00	1272	0	244	151	395
8	150	8.68	10.198	11.687	0.00	0.186	2.64	0.80	1.00	0.0	14.84	39.26	0.00	1736	0	290	227	516
7	130	8.43	11.609	15.026	0.00	0.166	2.71	0.80	1.00	0.0	17.84	48.42	0.00	2176	0	347	250	597
6	110	8.14	14.054	18.577	0.00	0.160	2.73	0.80	1.00	0.0	21.81	59.64	0.00	2708	0	413	260	673
5	90	7.82	16.265	18.576	0.00	0.142	2.80	0.80	1.00	0.0	23.54	65.94	0.00	2866	0	438	260	698
4	70	7.43	18.520	18.574	0.00	0.130	2.85	0.80	1.00	0.0	25.33	72.11	0.00	3249	0	455	247	702
3	50	6.93	21.096	22.124	0.00	0.132	2.84	0.80	1.00	0.0	29.31	83.26	0.00	3887	0	491	231	721
2	30	6.25	23.140	22.119	0.00	0.123	2.87	0.80	1.00	0.0	31.02	89.16	0.00	4008	0	473	208	681
1	10	5.42	25.124	28.810	0.00	0.130	2.85	0.80	1.00	0.0	34.03	96.85	0.00	4410	0	446	180	626
Totals															27,190	0		5,919

1.0D + 1.0W Service 210°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _{se} (sf)	EPA _{sa} (sf)	EPA _{sa} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
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ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

SECTION FORCES

1.0D + 1.0W Service 210°

Gust Response Factor (Gh): 0.85

60 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{lz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	9.08	7.400	7.667	0.00	0.195	2.61	0.85	1.00	0.0	10.69	27.91	0.00	877	0	216	100	316
9	170	8.90	8.423	9.583	0.00	0.187	2.64	0.85	1.00	0.0	12.64	33.39	0.00	1272	0	253	151	404
8	150	8.68	10.198	11.687	0.00	0.186	2.64	0.85	1.00	0.0	15.35	40.61	0.00	1736	0	299	227	526
7	130	8.43	11.609	15.026	0.00	0.166	2.71	0.85	1.00	0.0	18.42	50.00	0.00	2176	0	358	250	608
6	110	8.14	14.054	18.577	0.00	0.160	2.73	0.85	1.00	0.0	22.51	61.56	0.00	2708	0	426	260	687
5	90	7.82	16.265	18.576	0.00	0.142	2.80	0.85	1.00	0.0	24.35	68.21	0.00	2866	0	453	260	713
4	70	7.43	18.520	18.574	0.00	0.130	2.85	0.85	1.00	0.0	26.25	74.74	0.00	3249	0	472	247	719
3	50	6.93	21.096	22.124	0.00	0.132	2.84	0.85	1.00	0.0	30.37	86.25	0.00	3887	0	508	231	739
2	30	6.25	23.140	22.119	0.00	0.123	2.87	0.85	1.00	0.0	32.17	92.49	0.00	4008	0	491	208	699
1	10	5.42	25.124	28.810	0.00	0.130	2.85	0.85	1.00	0.0	35.29	100.43	0.00	4410	0	462	180	642
Totals															27,190	0		6,053

1.0D + 1.0W Service 240°

Gust Response Factor (Gh): 0.85

60 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{lz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	9.08	7.400	7.667	0.00	0.195	2.61	1.00	1.00	0.0	11.80	30.81	0.00	877	0	238	100	338
9	170	8.90	8.423	9.583	0.00	0.187	2.64	1.00	1.00	0.0	13.91	36.73	0.00	1272	0	278	151	429
8	150	8.68	10.198	11.687	0.00	0.186	2.64	1.00	1.00	0.0	16.88	44.66	0.00	1736	0	329	227	556
7	130	8.43	11.609	15.026	0.00	0.166	2.71	1.00	1.00	0.0	20.16	54.73	0.00	2176	0	392	250	642
6	110	8.14	14.054	18.577	0.00	0.160	2.73	1.00	1.00	0.0	24.62	67.33	0.00	2708	0	466	260	727
5	90	7.82	16.265	18.576	0.00	0.142	2.80	1.00	1.00	0.0	26.79	75.05	0.00	2866	0	499	260	759
4	70	7.43	18.520	18.574	0.00	0.130	2.85	1.00	1.00	0.0	29.03	82.65	0.00	3249	0	522	247	769
3	50	6.93	21.096	22.124	0.00	0.132	2.84	1.00	1.00	0.0	33.53	95.24	0.00	3887	0	561	231	792
2	30	6.25	23.140	22.119	0.00	0.123	2.87	1.00	1.00	0.0	35.64	102.47	0.00	4008	0	544	208	752
1	10	5.42	25.124	28.810	0.00	0.130	2.85	1.00	1.00	0.0	39.06	111.15	0.00	4410	0	512	180	692
Totals															27,190	0		6,455

1.0D + 1.0W Service 300°

Gust Response Factor (Gh): 0.85

60 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{lz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	9.08	7.400	7.667	0.00	0.195	2.61	0.80	1.00	0.0	10.32	26.95	0.00	877	0	208	100	308
9	170	8.90	8.423	9.583	0.00	0.187	2.64	0.80	1.00	0.0	12.22	32.28	0.00	1272	0	244	151	395
8	150	8.68	10.198	11.687	0.00	0.186	2.64	0.80	1.00	0.0	14.84	39.26	0.00	1736	0	290	227	516
7	130	8.43	11.609	15.026	0.00	0.166	2.71	0.80	1.00	0.0	17.84	48.42	0.00	2176	0	347	250	597
6	110	8.14	14.054	18.577	0.00	0.160	2.73	0.80	1.00	0.0	21.81	59.64	0.00	2708	0	413	260	673
5	90	7.82	16.265	18.576	0.00	0.142	2.80	0.80	1.00	0.0	23.54	65.94	0.00	2866	0	438	260	698
4	70	7.43	18.520	18.574	0.00	0.130	2.85	0.80	1.00	0.0	25.33	72.11	0.00	3249	0	455	247	702
3	50	6.93	21.096	22.124	0.00	0.132	2.84	0.80	1.00	0.0	29.31	83.26	0.00	3887	0	491	231	721
2	30	6.25	23.140	22.119	0.00	0.123	2.87	0.80	1.00	0.0	31.02	89.16	0.00	4008	0	473	208	681
1	10	5.42	25.124	28.810	0.00	0.130	2.85	0.80	1.00	0.0	34.03	96.85	0.00	4410	0	446	180	626
Totals															27,190	0		5,919

1.0D + 1.0W Service 330°

Gust Response Factor (Gh): 0.85

60 mph Wind with No Ice

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{lz} (in)	A _o (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt (lb)	Ice Wt (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
10	188	9.08	7.400	7.667	0.00	0.195	2.61	0.85	1.00	0.0	10.69	27.91	0.00	877	0	216	100	316
9	170	8.90	8.423	9.583	0.00	0.187	2.64	0.85	1.00	0.0	12.64	33.39	0.00	1272	0	253	151	404
8	150	8.68	10.198	11.687	0.00	0.186	2.64	0.85	1.00	0.0	15.35	40.61	0.00	1736	0	299	227	526
7	130	8.43	11.609	15.026	0.00	0.166	2.71	0.85	1.00	0.0	18.42	50.00	0.00	2176	0	358	250	608
6	110	8.14	14.054	18.577	0.00	0.160	2.73	0.85	1.00	0.0	22.51	61.56	0.00	2708	0	426	260	687
5	90	7.82	16.265	18.576	0.00	0.142	2.80	0.85	1.00	0.0	24.35	68.21	0.00	2866	0	453	260	713
4	70	7.43	18.520	18.574	0.00	0.130	2.85	0.85	1.00	0.0	26.25	74.74	0.00	3249	0	472	247	719
3	50	6.93	21.096	22.124	0.00	0.132	2.84	0.85	1.00	0.0	30.37	86.25	0.00	3887	0	508	231	739
2	30	6.25	23.140	22.119	0.00	0.123	2.87	0.85	1.00	0.0	32.17	92.49	0.00	4008	0	491	208	699
1	10	5.42	25.124	28.810	0.00	0.130	2.85	0.85	1.00	0.0	35.29	100.43	0.00	4410	0	462	180	642
Totals															27,190	0		6,053

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

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EQUIVALENT LATERAL FORCE METHOD

Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_e):	1.00
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.17
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):	1.27
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.39
Total Unfactored Dead Load:	39.03 k
Seismic Base Shear (E):	1.52 k

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	877	1,238,211	0.046	70	760
9	170.00	1,272	1,562,474	0.058	89	1,102
8	150.00	1,736	1,792,392	0.067	102	1,503
7	130.00	2,176	1,843,215	0.069	105	1,885
6	110.00	2,708	1,820,004	0.068	103	2,345
5	90.00	2,866	1,458,586	0.054	83	2,482
4	70.00	3,249	1,167,416	0.044	66	2,814
3	50.00	3,887	876,339	0.033	50	3,366
2	30.00	4,008	445,435	0.017	25	3,471
1	10.00	4,410	107,011	0.004	6	3,819
Ericsson AIR 6419 B77D/ C-Band	196.00	192	287,148	0.011	16	166
Ericsson Radio 4890HP 48B2/B25 48B66 M01 (67.2 lbs)	195.00	202	299,377	0.011	17	175
Ericsson Radio 4494 44B14 20B29 M01	195.00	172	255,272	0.010	14	149
Ericsson Radio 4490HP 44B5 44B12A C	195.00	205	304,277	0.011	17	177
Raycap DC6-48-60-18-8F (20.1" Height)	195.00	64	95,040	0.004	5	55
Kathrein Scala 80010992K	195.00	400	594,298	0.022	34	347
Kathrein Scala 80010992V01	195.00	390	579,597	0.022	33	338
Ericsson AIR 6419 B77G	194.00	198	292,387	0.011	17	172
Generic Round Sector Frame	190.00	2,100	3,008,309	0.112	171	1,819
Empty Round Sector Frame	180.00	900	1,196,256	0.045	68	779
Commscope HELIAX FiberFeed 12 RRU Pendant Connect	169.00	40	48,721	0.002	3	35
Nokia AirScale Dual RRH 4T4R B12/71 240W AHLOA	169.00	251	306,208	0.011	17	218
Nokia AHFIG	169.00	238	290,131	0.011	16	206
Nokia AEHC	169.00	311	378,558	0.014	21	269
Commscope FFVV-65C-R3-V1	169.00	374	455,293	0.017	26	324
Generic Round Sector Frame	166.00	2,100	2,495,156	0.093	142	1,819
Ericsson Mini-Link 6363	163.00	12	14,366	0.000	1	11
Ericsson ANT3 A 0.9 HPX	163.00	42	48,543	0.002	3	36
Samsung RRH-B8 w/ Finger Guard	157.10	178	196,504	0.007	11	155
Samsung RRH-P4 (1.9 GHz)	153.90	188	201,574	0.008	11	163
Samsung RRH-C2A (w/ External Filter)	153.90	172	183,920	0.007	10	149
KMW ET-X-WM-18-65-8P	153.50	109	116,416	0.004	7	95
KMW ET-X-TS-70-15-62-18-iR-RD	153.50	126	134,006	0.005	8	109
Generic Round Sector Frame	151.00	2,100	2,188,419	0.082	124	1,819
Antel BCD-87010	140.70	26	25,042	0.001	1	23
Round Side Arm	132.00	150	129,752	0.005	7	130
Stand-Off	110.00	600	403,187	0.015	23	520
Totals		39,032	26,838,838	1.000	1,522	33,801

0.9D - 1.0Ev + 1.5Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	877	1,238,211	0.046	105	760
9	170.00	1,272	1,562,474	0.058	133	1,102
8	150.00	1,736	1,792,392	0.067	152	1,503
7	130.00	2,176	1,843,215	0.069	157	1,885
6	110.00	2,708	1,820,004	0.068	155	2,345
5	90.00	2,866	1,458,586	0.054	124	2,482

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4	70.00	3,249	1,167,416	0.044	99	2,814
3	50.00	3,887	876,339	0.033	75	3,366
2	30.00	4,008	445,435	0.017	38	3,471
1	10.00	4,410	107,011	0.004	9	3,819
Ericsson AIR 6419 B77D/ C-Band	196.00	192	287,148	0.011	24	166
Ericsson Radio 4890HP 48B2/B25 48B66 M01 (67.2 lbs)	195.00	202	299,377	0.011	25	175
Ericsson Radio 4494 44B14 20B29 M01	195.00	172	255,272	0.010	22	149
Ericsson Radio 4490HP 44B5 44B12A C	195.00	205	304,277	0.011	26	177
Raycap DC6-48-60-18-8F (20.1" Height)	195.00	64	95,040	0.004	8	55
Kathrein Scala 80010992K	195.00	400	594,298	0.022	51	347
Kathrein Scala 80010992V01	195.00	390	579,597	0.022	49	338
Ericsson AIR 6419 B77G	194.00	198	292,387	0.011	25	172
Generic Round Sector Frame	190.00	2,100	3,008,309	0.112	256	1,819
Empty Round Sector Frame	180.00	900	1,196,256	0.045	102	779
Commscope HELIAX FiberFeed 12 RRU Pendant Connect	169.00	40	48,721	0.002	4	35
Nokia AirScale Dual RRH 4T4R B12/71 240W AHLOA	169.00	251	306,208	0.011	26	218
Nokia AHFIG	169.00	238	290,131	0.011	25	206
Nokia AEHC	169.00	311	378,558	0.014	32	269
Commscope FFV-65C-R3-V1	169.00	374	455,293	0.017	39	324
Generic Round Sector Frame	166.00	2,100	2,495,156	0.093	212	1,819
Ericsson Mini-Link 6363	163.00	12	14,366	0.000	1	11
Ericsson ANT3 A 0.9 HPX	163.00	42	48,543	0.002	4	36
Samsung RRH-B8 w/ Finger Guard	157.10	178	196,504	0.007	17	155
Samsung RRH-P4 (1.9 GHz)	153.90	188	201,574	0.008	17	163
Samsung RRH-C2A (w/ External Filter)	153.90	172	183,920	0.007	16	149
KMW ET-X-WM-18-65-8P	153.50	109	116,416	0.004	10	95
KMW ET-X-TS-70-15-62-18-iR-RD	153.50	126	134,006	0.005	11	109
Generic Round Sector Frame	151.00	2,100	2,188,419	0.082	186	1,819
Antel BCD-87010	140.70	26	25,042	0.001	2	23
Round Side Arm	132.00	150	129,752	0.005	11	130
Stand-Off	110.00	600	403,187	0.015	34	520
Totals		39,032	26,838,838	1.000	2,283	33,801

1.2D + 1.0Ev + 1.0Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W _Z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	877	1,238,211	0.046	70	1,082
9	170.00	1,272	1,562,474	0.058	89	1,570
8	150.00	1,736	1,792,392	0.067	102	2,142
7	130.00	2,176	1,843,215	0.069	105	2,686
6	110.00	2,708	1,820,004	0.068	103	3,342
5	90.00	2,866	1,458,586	0.054	83	3,537
4	70.00	3,249	1,167,416	0.044	66	4,009
3	50.00	3,887	876,339	0.033	50	4,796
2	30.00	4,008	445,435	0.017	25	4,946
1	10.00	4,410	107,011	0.004	6	5,442
Ericsson AIR 6419 B77D/ C-Band	196.00	192	287,148	0.011	16	237
Ericsson Radio 4890HP 48B2/B25 48B66 M01 (67.2 lbs)	195.00	202	299,377	0.011	17	249
Ericsson Radio 4494 44B14 20B29 M01	195.00	172	255,272	0.010	14	212
Ericsson Radio 4490HP 44B5 44B12A C	195.00	205	304,277	0.011	17	253
Raycap DC6-48-60-18-8F (20.1" Height)	195.00	64	95,040	0.004	5	79
Kathrein Scala 80010992K	195.00	400	594,298	0.022	34	494
Kathrein Scala 80010992V01	195.00	390	579,597	0.022	33	482
Ericsson AIR 6419 B77G	194.00	198	292,387	0.011	17	245
Generic Round Sector Frame	190.00	2,100	3,008,309	0.112	171	2,591
Empty Round Sector Frame	180.00	900	1,196,256	0.045	68	1,111
Commscope HELIAX FiberFeed 12 RRU Pendant Connect	169.00	40	48,721	0.002	3	49
Nokia AirScale Dual RRH 4T4R B12/71 240W AHLOA	169.00	251	306,208	0.011	17	310
Nokia AHFIG	169.00	238	290,131	0.011	16	294
Nokia AEHC	169.00	311	378,558	0.014	21	384
Commscope FFV-65C-R3-V1	169.00	374	455,293	0.017	26	461
Generic Round Sector Frame	166.00	2,100	2,495,156	0.093	142	2,591
Ericsson Mini-Link 6363	163.00	12	14,366	0.000	1	15
Ericsson ANT3 A 0.9 HPX	163.00	42	48,543	0.002	3	52
Samsung RRH-B8 w/ Finger Guard	157.10	178	196,504	0.007	11	220
Samsung RRH-P4 (1.9 GHz)	153.90	188	201,574	0.008	11	232
Samsung RRH-C2A (w/ External Filter)	153.90	172	183,920	0.007	10	212
KMW ET-X-WM-18-65-8P	153.50	109	116,416	0.004	7	135
KMW ET-X-TS-70-15-62-18-iR-RD	153.50	126	134,006	0.005	8	155
Generic Round Sector Frame	151.00	2,100	2,188,419	0.082	124	2,591
Antel BCD-87010	140.70	26	25,042	0.001	1	33
Round Side Arm	132.00	150	129,752	0.005	7	185
Stand-Off	110.00	600	403,187	0.015	23	740
Totals		39,032	26,838,838	1.000	1,522	48,165

1.2D + 1.0Ev + 1.5Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W _Z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	877	1,238,211	0.046	105	1,082
9	170.00	1,272	1,562,474	0.058	133	1,570
8	150.00	1,736	1,792,392	0.067	152	2,142

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7	130.00	2,176	1,843,215	0.069	157	2,686
6	110.00	2,708	1,820,004	0.068	155	3,342
5	90.00	2,866	1,458,586	0.054	124	3,537
4	70.00	3,249	1,167,416	0.044	99	4,009
3	50.00	3,887	876,339	0.033	75	4,796
2	30.00	4,008	445,435	0.017	38	4,946
1	10.00	4,410	107,011	0.004	9	5,442
Ericsson AIR 6419 B77D/ C-Band	196.00	192	287,148	0.011	24	237
Ericsson Radio 4890HP 48B2/B25 48B66 M01 (67.2 lbs)	195.00	202	299,377	0.011	25	249
Ericsson Radio 4494 44B14 20B29 M01	195.00	172	255,272	0.010	22	212
Ericsson Radio 4490HP 44B5 44B12A C	195.00	205	304,277	0.011	26	253
Raycap DC6-48-60-18-8F (20.1" Height)	195.00	64	95,040	0.004	8	79
Kathrein Scala 80010992K	195.00	400	594,298	0.022	51	494
Kathrein Scala 80010992V01	195.00	390	579,597	0.022	49	482
Ericsson AIR 6419 B77G	194.00	198	292,387	0.011	25	245
Generic Round Sector Frame	190.00	2,100	3,008,309	0.112	256	2,591
Empty Round Sector Frame	180.00	900	1,196,256	0.045	102	1,111
Commscope HELIAX FiberFeed 12 RRU Pendant Connect	169.00	40	48,721	0.002	4	49
Nokia AirScale Dual RRH 4T4R B12/71 240W AHLOA	169.00	251	306,208	0.011	26	310
Nokia AHFIG	169.00	238	290,131	0.011	25	294
Nokia AEHC	169.00	311	378,558	0.014	32	384
Commscope FFVV-65C-R3-V1	169.00	374	455,293	0.017	39	461
Generic Round Sector Frame	166.00	2,100	2,495,156	0.093	212	2,591
Ericsson Mini-Link 6363	163.00	12	14,366	0.000	1	15
Ericsson ANT3 A 0.9 HPX	163.00	42	48,543	0.002	4	52
Samsung RRH-B8 w/ Finger Guard	157.10	178	196,504	0.007	17	220
Samsung RRH-P4 (1.9 GHz)	153.90	188	201,574	0.008	17	232
Samsung RRH-C2A (w/ External Filter)	153.90	172	183,920	0.007	16	212
KMW ET-X-WM-18-65-8P	153.50	109	116,416	0.004	10	135
KMW ET-X-TS-70-15-62-18-IR-RD	153.50	126	134,006	0.005	11	155
Generic Round Sector Frame	151.00	2,100	2,188,419	0.082	186	2,591
Antel BCD-87010	140.70	26	25,042	0.001	2	33
Round Side Arm	132.00	150	129,752	0.005	11	185
Stand-Off	110.00	600	403,187	0.015	34	740
Totals		39,032	26,838,838	1.000	2,283	48,165

FORCE/STRESS SUMMARY

Section 1 - 0.0' to 20.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls	
	X			Y	Z	KL/R			Φ _{Rnv} (kip)	Φ _{Rn} (kip)					
L PSP - 8.625" x 0.375"	-176.05	1.2D + 1.0W N	9.77	100	100	100	40.16	50.00	388.71	0.00	0.00	0	0	45	Member X
D SAE - 3.5x3.5x0.25	-3.47	1.2D + 1.0W 90°	22.744	50	50	50	198.35	50.00	12.29	19.88	23.40	1	1	28	Member Z
Member Tension	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{Rnv} (kip)	Bear Φ _{Rn} (kip)	Blk Shear	# Bolt	# Hole	Use %	Controls			
	Φ _t P _n (kip)														
L PSP - 8.625" x 0.375"	144.65	0.9D + 1.0W 180°	50.0	65	437.35	0.00	0.00		0	0	33	Member			
D SAE - 3.5x3.5x0.25	3.60	0.9D + 1.0W 90°	50.0	65	54.36	19.88	14.14	17.98	1	1	25	Bolt Bear			
Max Splice Forces	Pu (kip)	Load Case	Φ _{Rnl} (kip)	Use %	Num Bolts	Bolt Type									
Bot Tension	144.66	0.9D + 1.0W 180°	454.31	10	8	1" A354-BC									
Bot Compression	179.72	1.2D + 1.0W N	528.21	0	0										

Section 2 - 20.0' to 40.00'

Member Compression	Pu	Load Case	Len (ft)	Bracing %			F'y (ksi)	Φc Pn (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls	
	(kip)			X	Y	Z			KL/R	ΦRnv (kip)					ΦRn (kip)
L PX - 6" DIA PIPE	-162.30	1.2D + 1.0W N	9.766	100	100	100	53.39	50.00	306.89	0.00	0.00	0	0	53	Member X

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FORCE/STRESS SUMMARY

Section 2 - 20.0' to 40.00'

Member Compression		Pu (kip)	Load Case	Len (ft)	Bracing %			KL/R	Fy (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
D SAE - 3.5x3.5x0.25		-4.16	1.2D + 1.0W 90°	20.806	50	50	50	181.45	50.00	14.69	19.88	23.40	1	1	28	Member Z
Member Tension		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Φc Pn (kip)				Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
L PX - 6" DIA PIPE		135.16	0.9D + 1.0W 180°	50.0	65	378.00				0.00	0.00		0	0	36	Member
D SAE - 3.5x3.5x0.25		4.12	0.9D + 1.0W 90°	50.0	65	54.36				19.88	14.14	17.98	1	1	29	Bolt Bear
Max Splice Forces		Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type									
Bot Tension		134.95	0.9D + 1.0W 180°	436.14	31	8	1 A325									

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FORCE/STRESS SUMMARY

Section 3 - 40.0' to 60.00'

										Shear	Bear	#	#	Use	Controls		
Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	Bolt	Hole	%				
L PX - 6" DIA PIPE	-146.64	1.2D + 1.0W N	9.768	100	100	100	53.40	50.00	306.86	0.00	0.00	0	0	48	Member X		
D SAE - 3.5x3.5x0.25	-3.63	0.9D + 1.0W 90°	19.068	50	50	50	166.29	50.00	17.49	19.88	23.40	1	1	21	Member Z		
										Shear	Bear	Blk Shear		#	#	Use	Controls
Member Tension	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	Φ _t P _n (kip)	Bolt	Hole	%						
L PX - 6" DIA PIPE	123.00	0.9D + 1.0W 180°	50.0	65	378.00	0.00	0.00		0	0	33	Member					
D SAE - 3.5x3.5x0.25	3.57	0.9D + 1.0W 90°	50.0	65	54.36	19.88	14.14	17.98	1	1	25	Bolt Bear					
										Shear	Bear	Blk Shear		#	#	Use	Controls
Max Splice Forces	Pu (kip)	Load Case	ΦR _{nt} (kip)	Use %	Num Bolts	Bolt Type											
Bot Tension	122.69	0.9D + 1.0W 180°	327.10	38	6	1 A325											

Section 4 - 60.0' to 80.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls	
	X			Y	Z	KL/R			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)					
L PX - 5" DIA PIPE	-132.27	1.2D + 1.0W N	6.511	100	100	100	42.46	50.00	240.60	0.00	0.00	0	0	55	Member X
D SAE - 2.5X2.5X0.25	-3.25	1.2D + 1.0W 90°	15.872	48	48	48	186.19	36.00	9.82	13.81	17.40	1	1	33	Member Z
Member Tension	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)	Blk Shear		# Bolt	# Hole	Use %	Controls	
	Shear								Bear						
L PX - 5" DIA PIPE	111.26	0.9D + 1.0W 180°	50.0	65	274.50	0.00	0.00			0	0	41		Member	
D SAE - 2.5X2.5X0.25	3.22	0.9D + 1.0W 90°	36.0	58	33.22	13.81	10.44	11.83		1	1	31		Bolt Bear	
Max Splice Forces		Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type									
Bot Tension															
Pu (kip)															
	110.97	0.9D + 1.0W 180°	327.10	34	6	1 A325									

Section 5 - 80.0' to 100.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls	
	X			Y	Z	KL/R			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)					
L PX - 5" DIA PIPE	-116.22	1.2D + 1.0W N	6.511	100	100	100	42.46	50.00	240.59	0.00	0.00	0	0	48	Member X
D SAE - 2.5X2.5X0.1875	-2.96	1.2D + 1.0W 90°	14.058	50	50	50	170.39	36.00	8.89	13.81	13.05	1	1	33	Member Z
Member Tension	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear	# Bolt	# Hole	Use %	Controls			
	Φ _t P _n (kip)														
L PX - 5" DIA PIPE	98.45	0.9D + 1.0W 180°	50.0	65	274.50	0.00	0.00		0	0	36	Member			
D SAE - 2.5X2.5X0.1875	2.96	1.2D + 1.0W 90°	36.0	58	25.22	13.81	7.83	8.87	1	1	38	Bolt Bear			
Max Splice Forces		Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type									
Bot Tension															
		0.9D + 1.0W 180°	218.07	45	4	1 A325									

Section 6 - 100.0' to 120.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls	
	X			Y	Z	KL/R			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)					
L PX - 5" DIA PIPE	-99.85	1.2D + 1.0W N	6.512	100	100	100	42.47	50.00	240.59	0.00	0.00	0	0	42	Member X
D SAE - 2.5X2.5X0.1875	-2.68	1.2D + 1.0W 90°	12.276	50	50	50	148.80	36.00	11.66	13.81	13.05	1	1	23	Member Z
Member Tension	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear	# Bolt	# Hole	Use %	Controls			
	Φ _t P _n (kip)														
L PX - 5" DIA PIPE	85.03	0.9D + 1.0W 180°	50.0	65	274.50	0.00	0.00		0	0	31	Member			
D SAE - 2.5X2.5X0.1875	2.61	0.9D + 1.0W 90°	36.0	58	25.22	13.81	7.83	8.87	1	1	33	Bolt Bear			
Max Splice Forces		Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type									
Bot Tension															
		0.9D + 1.0W 180°	218.07	39	4	1 A325									

ASSET: 370535, Penrose
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FORCE/STRESS SUMMARY

Section 7 - 120.0' to 140.00'

											Shear	Bear					
Member Compression			P _u (kip)	Load Case	Len (ft)	Bracing %			F' _y (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	# Bolt	# Hole	Use %	Controls	
L PX - 4" DIA PIPE			-83.80	1.2D + 1.0W N	4.884	100	100	100	39.60	50.00	176.96	0.00	0.00	0	0	47	Member X
D SAE - 2X2X0.1875			-2.29	1.2D + 1.0W 90°	9.717	50	50	50	147.98	36.00	9.35	13.81	13.05	1	1	25	Member Z
Member Tension			P _u (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear ΦR _{nv} (kip)	Bear ΦR _n (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls			
L PX - 4" DIA PIPE			71.42	0.9D + 1.0W 180°	50.0	65	198.45	0.00	0.00		0	0	36	Member			
D SAE - 2X2X0.1875			2.48	1.2D + 1.0W 90°	36.0	58	19.12	13.81	7.83	6.83	1	1	36	Blk Shear			
Max Splice Forces			P _u (kip)	Load Case	ΦR _{nt} (kip)	Use %	Num Bolts	Bolt Type									
Bot Tension			71.26	0.9D + 1.0W 180°	218.07	33	4	1 A325									

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FORCE/STRESS SUMMARY

Section 8 - 140.0' to 160.00'

										Shear	Bear					
Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	# Bolt	# Hole	Use %	Controls		
L PX - 3" DIA PIPE	-65.31	1.2D + 1.0W N	3.957	100	100	100	41.65	50.00	119.71	0.00	0.00	0	0	55	Member X	
H SAE - 1.75X1.75X0.125	-0.15	1.2D + 1.0W N	4.58	100	100	100	158.39	36.00	4.79	13.81	8.70	1	1	3	Member Z	
D SAE - 1.75X1.75X0.1875	-2.15	1.2D + 1.0W 330°	7.523	50	50	50	131.60	36.00	10.26	13.81	13.05	1	1	21	Member Z	
										Blk Shear						
Member Tension	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls				
L PX - 3" DIA PIPE	55.28	0.9D + 1.0W 180°	50.0	65	135.90	0.00	0.00		0	0	41	Member				
H SAE - 1.75X1.75X0.125	0.09	0.9D + 1.0W 180°	36.0	58	10.90	13.81	5.22	3.87	1	1	2	Blk Shear				
D SAE - 1.75X1.75X0.1875	2.18	0.9D + 1.0W 330°	36.0	58	16.05	13.81	7.83	5.81	1	1	38	Blk Shear				
Max Splice Forces	Pu (kip)	Load Case	ΦR _{nt} (kip)	Use %	Num Bolts	Bolt Type										
Bot Tension	55.18	0.9D + 1.0W 180°	166.22	33	4	0.875" A325										

Section 9 - 160.0' to 180.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing %			KL/R	F _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls
	X			Y	Z	Φ _{R_{nv}} (kip)				Φ _{R_n} (kip)					
L PX - 2-1/2" DIA PIPE	-40.71	1.2D + 1.0W N	3.9	100	100	100	50.65	50.00	83.93	0.00	0.00	0	0	49	Member X
D SAE - 1.75X1.75X0.1875	-3.41	1.2D + 1.0W 330°	6.016	50	50	50	108.92	36.00	14.02	13.81	13.05	1	1	26	Bolt Bear
Member Tension	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear		# Bolt	# Hole	Use %	Controls		
	Φ _t P _n (kip)														
L PX - 2-1/2" DIA PIPE	36.59	0.9D + 1.0W 180°	50.0	65	101.25	0.00	0.00			0	0	36	Member		
D SAE - 1.75X1.75X0.1875	3.24	1.2D + 1.0W 210°	36.0	58	16.05	13.81	7.83	5.81		1	1	56	Blk Shear		
Max Splice Forces		Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type								
Bot Tension		36.44						0.9D + 1.0W 180°	120.41	30	4	0.75" A325			

Section 10 - 180.0' to 196.00'

										Shear	Bear					
Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	# Bolt	# Hole	Use %	Controls		
L PST - 2-1/2" DIA PIPE	-11.88	1.2D + 1.0W 120°	3.938	X	Y	Z	49.89	50.00	63.92	0.00	0.00	0	0	19	Member X	
H SAE - 1.75X1.75X0.125	-0.37	0.9D + 1.0W 180°	4.58	100	100	100	158.39	36.00	4.79	13.81	8.70	1	1	8	Member Z	
D SAE - 1.75X1.75X0.1875	-1.69	1.2D + 1.0W 330°	6.04	50	50	50	109.24	36.00	13.97	13.81	13.05	1	1	13	Bolt Bear	
										Blk Shear						
Member Tension	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	Φ _t P _n (kip)		# Bolt	# Hole	Use %	Controls			
L PST - 2-1/2" DIA PIPE	10.29	0.9D + 1.0W 180°	50.0	65	76.68	0.00	0.00			0	0	13	Member			
H SAE - 1.75X1.75X0.125	0.41	1.2D + 1.0W N	36.0	58	10.90	13.81	5.22	3.87		1	1	10	Blk Shear			
D SAE - 1.75X1.75X0.1875	1.73	1.2D + 1.0W 210°	36.0	58	16.05	13.81	7.83	5.81		1	1	30	Blk Shear			
Max Splice Forces	Pu (kip)	Load Case	ΦR _{nt} (kip)	Use %	Num Bolts		Bolt Type									
Bot Tension	9.97	0.9D + 1.0W 180°	81.36	12	4		5/8 A325									

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DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	106.75	0.1124	-0.0139	0.1301	0.1306
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	130.00	0.1735	-0.0211	0.1750	0.1763
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	140.25	0.2067	-0.0259	0.2070	0.2086
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	152.10	0.2513	-0.0397	0.2405	0.2437
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	156.05	0.2679	-0.0403	0.2455	0.246
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	164.15	0.3049	-0.0397	0.2752	0.2764
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	168.05	0.3241	-0.0397	0.2908	0.2921
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	180.00	0.387	-0.0395	0.3395	0.3417
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	188.13	0.4319	-0.0394	0.3211	0.3235
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	192.06	0.4538	-0.0394	0.3200	0.3224
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	196.00	0.4759	-0.0394	0.3229	0.3239
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	106.75	0.111	0.0158	0.1281	0.1286
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	130.00	0.1714	0.0224	0.1726	0.1738
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	140.25	0.2043	0.0267	0.2056	0.2071
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	152.10	0.2484	-0.0366	0.2278	0.2308
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	156.05	0.2647	-0.0369	0.2422	0.2433
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	164.15	0.3013	-0.0365	0.2723	0.2746
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	168.05	0.3204	-0.0364	0.2865	0.2887
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	180.00	0.3826	-0.0362	0.3406	0.3425
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	188.13	0.427	-0.0361	0.3182	0.3202
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	192.06	0.4488	-0.0361	0.3168	0.3188
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	196.00	0.4706	-0.0361	0.3189	0.3208
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	106.75	0.1161	0.0177	0.1333	0.1338
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	130.00	0.1789	0.0252	0.1788	0.1797
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	140.25	0.2129	0.0301	0.2125	0.2136
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	152.10	0.2585	0.0407	0.2362	0.2384
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	156.05	0.2756	0.0409	0.2514	0.2527
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	164.15	0.3134	0.0406	0.2812	0.2841
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	168.05	0.3328	0.0405	0.2968	0.2995
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	180.00	0.3971	0.0402	0.3505	0.3519
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	188.13	0.4429	0.0402	0.3274	0.3297
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	192.06	0.4653	0.0401	0.3267	0.3291
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	196.00	0.4879	0.0401	0.3293	0.3317
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	106.75	0.1124	-0.0120	0.1302	0.1303
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	130.00	0.1735	-0.0183	0.1746	0.1756
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	140.25	0.2067	-0.0225	0.2065	0.2077
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	152.10	0.2513	-0.0347	0.2406	0.2431
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	156.05	0.2679	-0.0352	0.2458	0.2464
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	164.15	0.3049	-0.0346	0.2752	0.2759
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	168.05	0.3241	-0.0345	0.2908	0.2913
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	180.00	0.387	-0.0342	0.3395	0.3406
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	188.13	0.4318	-0.0342	0.3211	0.3223
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	192.06	0.4538	-0.0342	0.3200	0.3215
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	196.00	0.4759	-0.0342	0.3229	0.3234
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	106.75	0.1111	0.0093	0.1291	0.1294
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	130.00	0.1717	0.0147	0.1732	0.1738
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	140.25	0.2047	0.0183	0.2060	0.206
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	152.10	0.249	0.0301	0.2429	0.2447
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	156.05	0.2654	0.0306	0.2419	0.2438
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	164.15	0.3021	0.0300	0.2727	0.2743
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	168.05	0.3213	0.0299	0.2877	0.2892
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	180.00	0.3837	0.0296	0.3416	0.3416
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	188.13	0.4283	0.0296	0.3193	0.3195
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	192.06	0.4502	0.0296	0.3179	0.3191
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	196.00	0.4721	0.0296	0.3199	0.3213
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	106.75	0.1161	-0.0177	0.1333	0.1338
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	130.00	0.1789	-0.0252	0.1788	0.1797
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	140.25	0.2129	-0.0301	0.2125	0.2136
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	152.10	0.2585	-0.0407	0.2362	0.2384

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

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DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	156.05	0.2756	-0.0409	0.2514	0.2527
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	164.15	0.3134	-0.0406	0.2812	0.2841
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	168.05	0.3328	-0.0405	0.2968	0.2995
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	180.00	0.3971	-0.0402	0.3505	0.3519
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	188.13	0.4429	-0.0402	0.3274	0.3297
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	192.06	0.4653	-0.0401	0.3267	0.3291
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	196.00	0.4879	-0.0401	0.3293	0.3317
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	106.75	0.1122	-0.0194	0.1289	0.13
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	130.00	0.1732	-0.0275	0.1735	0.174
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	140.25	0.2063	-0.0329	0.2053	0.206
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	152.10	0.2507	-0.0442	0.2238	0.2249
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	156.05	0.2672	-0.0444	0.2443	0.2483
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	164.15	0.3041	-0.0442	0.2748	0.2783
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	168.05	0.3232	-0.0441	0.2896	0.293
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	180.00	0.3858	-0.0440	0.3384	0.3391
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	188.13	0.4305	-0.0439	0.3200	0.3221
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	192.06	0.4524	-0.0439	0.3189	0.3219
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	196.00	0.4744	-0.0439	0.3219	0.3248
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	106.75	0.111	-0.0158	0.1281	0.1286
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	130.00	0.1714	-0.0224	0.1726	0.1738
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	140.25	0.2043	-0.0267	0.2056	0.2071
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	152.10	0.2484	0.0366	0.2278	0.2308
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	156.05	0.2647	0.0369	0.2422	0.2433
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	164.15	0.3013	0.0365	0.2723	0.2746
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	168.05	0.3204	0.0364	0.2865	0.2887
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	180.00	0.3826	0.0362	0.3406	0.3425
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	188.13	0.427	0.0361	0.3182	0.3202
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	192.06	0.4488	0.0361	0.3168	0.3188
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	196.00	0.4706	0.0361	0.3189	0.3208
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	106.75	0.1162	0.0092	0.1343	0.1346
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	130.00	0.1792	0.0146	0.1798	0.1804
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	140.25	0.2133	0.0182	0.2129	0.2129
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	152.10	0.2591	0.0300	0.2506	0.2524
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	156.05	0.2763	0.0305	0.2508	0.2527
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	164.15	0.3143	0.0299	0.2816	0.2831
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	168.05	0.3338	0.0298	0.2980	0.2995
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	180.00	0.3983	0.0297	0.3516	0.3516
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	188.13	0.4442	0.0296	0.3285	0.3297
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	192.06	0.4667	0.0295	0.3277	0.3291
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	196.00	0.4893	0.0295	0.3303	0.3316
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	106.75	0.0285	-0.0010	0.0349	0.035
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	130.00	0.0452	-0.0012	0.0483	0.0483
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	140.25	0.0544	-0.0014	0.0582	0.0582
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	152.10	0.067	-0.0009	0.0671	0.0671
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	156.05	0.0718	-0.0008	0.0705	0.0705
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	164.15	0.0824	-0.0008	0.0787	0.0788
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	168.05	0.0878	-0.0008	0.0839	0.0839
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	180.00	0.1059	-0.0008	0.0979	0.0979
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	188.13	0.1186	-0.0008	0.0903	0.0903
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	192.06	0.1248	-0.0008	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	196.00	0.1309	-0.0008	0.0900	0.09
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	106.75	0.0284	0.0009	0.0349	0.0349
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	130.00	0.0451	0.0011	0.0484	0.0484
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	140.25	0.0544	0.0012	0.0587	0.0587
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	152.10	0.0669	0.0008	0.0666	0.0666
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	156.05	0.0717	0.0007	0.0696	0.0696
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	164.15	0.0823	0.0007	0.0788	0.0788
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	168.05	0.0878	0.0007	0.0835	0.0835
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	180.00	0.1059	0.0007	0.0993	0.0993

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	188.13	0.1186	0.0007	0.0904	0.0904
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	192.06	0.1248	0.0007	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	196.00	0.1309	0.0007	0.0900	0.09
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	106.75	0.0285	0.0009	0.0349	0.0349
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	130.00	0.0452	0.0011	0.0482	0.0482
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	140.25	0.0545	0.0012	0.0581	0.0581
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	152.10	0.067	0.0008	0.0673	0.0673
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	156.05	0.0718	0.0007	0.0704	0.0704
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	164.15	0.0825	0.0007	0.0786	0.0786
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	168.05	0.0879	0.0007	0.0840	0.084
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	180.00	0.1059	0.0007	0.0987	0.0987
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	188.13	0.1186	0.0007	0.0903	0.0903
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	192.06	0.1248	0.0007	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	196.00	0.1309	0.0007	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	106.75	0.0285	-0.0010	0.0349	0.035
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	130.00	0.0452	-0.0012	0.0483	0.0483
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	140.25	0.0544	-0.0014	0.0582	0.0582
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	152.10	0.067	-0.0009	0.0671	0.0671
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	156.05	0.0718	-0.0008	0.0705	0.0705
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	164.15	0.0824	-0.0008	0.0787	0.0788
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	168.05	0.0878	-0.0008	0.0839	0.0839
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	180.00	0.1059	-0.0008	0.0979	0.0979
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	188.13	0.1186	-0.0008	0.0903	0.0903
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	192.06	0.1248	-0.0008	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	196.00	0.1309	-0.0008	0.0900	0.09
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	106.75	0.0284	0.0009	0.0349	0.0349
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	130.00	0.0451	0.0011	0.0484	0.0484
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	140.25	0.0544	0.0012	0.0587	0.0587
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	152.10	0.0669	0.0008	0.0666	0.0666
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	156.05	0.0717	0.0007	0.0696	0.0696
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	164.15	0.0823	0.0007	0.0788	0.0788
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	168.05	0.0878	0.0007	0.0835	0.0835
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	180.00	0.1059	0.0007	0.0993	0.0993
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	188.13	0.1186	0.0007	0.0904	0.0904
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	192.06	0.1248	0.0007	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	196.00	0.1309	0.0007	0.0900	0.09
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	106.75	0.0285	0.0009	0.0349	0.0349
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	130.00	0.0452	0.0011	0.0482	0.0482
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	140.25	0.0545	0.0012	0.0581	0.0581
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	152.10	0.067	0.0008	0.0673	0.0673
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	156.05	0.0718	0.0007	0.0704	0.0704
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	164.15	0.0825	0.0007	0.0786	0.0786
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	168.05	0.0879	0.0007	0.0840	0.084
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	180.00	0.1059	0.0007	0.0987	0.0987
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	188.13	0.1186	0.0007	0.0903	0.0903
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	192.06	0.1248	0.0007	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	196.00	0.1309	0.0007	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	106.75	0.0285	-0.0010	0.0349	0.035
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	130.00	0.0452	-0.0013	0.0483	0.0483
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	140.25	0.0544	-0.0014	0.0582	0.0582
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	152.10	0.067	-0.0009	0.0671	0.0671
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	156.05	0.0718	-0.0008	0.0705	0.0705
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	164.15	0.0824	-0.0008	0.0787	0.0788
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	168.05	0.0878	-0.0008	0.0839	0.0839
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	180.00	0.1059	-0.0008	0.0979	0.0979
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	188.13	0.1186	-0.0008	0.0903	0.0903
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	192.06	0.1248	-0.0008	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	196.00	0.1309	-0.0008	0.0900	0.09
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	106.75	0.0284	0.0009	0.0349	0.0349

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	130.00	0.0451	0.0011	0.0484	0.0484
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	140.25	0.0544	0.0012	0.0587	0.0587
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	152.10	0.0669	0.0008	0.0666	0.0666
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	156.05	0.0717	0.0007	0.0696	0.0696
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	164.15	0.0823	0.0007	0.0788	0.0788
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	168.05	0.0878	0.0007	0.0835	0.0835
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	180.00	0.1059	0.0007	0.0993	0.0993
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	188.13	0.1186	0.0007	0.0904	0.0904
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	192.06	0.1248	0.0007	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	196.00	0.1309	0.0007	0.0900	0.09
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	106.75	0.0285	0.0009	0.0349	0.0349
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	130.00	0.0452	0.0011	0.0482	0.0482
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	140.25	0.0545	0.0012	0.0581	0.0581
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	152.10	0.067	0.0008	0.0673	0.0673
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	156.05	0.0718	0.0007	0.0704	0.0704
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	164.15	0.0825	0.0007	0.0786	0.0786
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	168.05	0.0879	0.0007	0.0840	0.084
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	180.00	0.1059	0.0007	0.0987	0.0987
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	188.13	0.1186	0.0007	0.0903	0.0903
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	192.06	0.1248	0.0007	0.0898	0.0898
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	196.00	0.1309	0.0007	0.0898	0.0898
1.2D + 1.0Ev + 1.0Eh 330° Seismic	106.75	0.0286	-0.0010	0.0351	0.0351
1.2D + 1.0Ev + 1.0Eh 330° Seismic	130.00	0.0453	-0.0013	0.0486	0.0486
1.2D + 1.0Ev + 1.0Eh 330° Seismic	140.25	0.0546	-0.0014	0.0586	0.0586
1.2D + 1.0Ev + 1.0Eh 330° Seismic	152.10	0.0673	-0.0009	0.0676	0.0676
1.2D + 1.0Ev + 1.0Eh 330° Seismic	156.05	0.0721	-0.0008	0.0708	0.0708
1.2D + 1.0Ev + 1.0Eh 330° Seismic	164.15	0.0828	-0.0008	0.0792	0.0792
1.2D + 1.0Ev + 1.0Eh 330° Seismic	168.05	0.0882	-0.0008	0.0843	0.0843
1.2D + 1.0Ev + 1.0Eh 330° Seismic	180.00	0.1064	-0.0008	0.0985	0.0985
1.2D + 1.0Ev + 1.0Eh 330° Seismic	188.13	0.1191	-0.0008	0.0908	0.0908
1.2D + 1.0Ev + 1.0Eh 330° Seismic	192.06	0.1253	-0.0008	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh 330° Seismic	196.00	0.1315	-0.0008	0.0905	0.0905
1.2D + 1.0Ev + 1.0Eh 300° Seismic	106.75	0.0285	0.0009	0.0350	0.0351
1.2D + 1.0Ev + 1.0Eh 300° Seismic	130.00	0.0453	0.0011	0.0486	0.0486
1.2D + 1.0Ev + 1.0Eh 300° Seismic	140.25	0.0546	0.0012	0.0591	0.0591
1.2D + 1.0Ev + 1.0Eh 300° Seismic	152.10	0.0672	0.0008	0.0670	0.067
1.2D + 1.0Ev + 1.0Eh 300° Seismic	156.05	0.072	0.0007	0.0701	0.0701
1.2D + 1.0Ev + 1.0Eh 300° Seismic	164.15	0.0826	0.0007	0.0793	0.0793
1.2D + 1.0Ev + 1.0Eh 300° Seismic	168.05	0.0882	0.0007	0.0842	0.0842
1.2D + 1.0Ev + 1.0Eh 300° Seismic	180.00	0.1064	0.0007	0.0999	0.0999
1.2D + 1.0Ev + 1.0Eh 300° Seismic	188.13	0.1191	0.0007	0.0909	0.0909
1.2D + 1.0Ev + 1.0Eh 300° Seismic	192.06	0.1253	0.0007	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh 300° Seismic	196.00	0.1315	0.0007	0.0906	0.0906
1.2D + 1.0Ev + 1.0Eh 240° Seismic	106.75	0.0286	0.0009	0.0350	0.035
1.2D + 1.0Ev + 1.0Eh 240° Seismic	130.00	0.0454	0.0011	0.0484	0.0484
1.2D + 1.0Ev + 1.0Eh 240° Seismic	140.25	0.0547	0.0012	0.0582	0.0582
1.2D + 1.0Ev + 1.0Eh 240° Seismic	152.10	0.0673	0.0008	0.0678	0.0678
1.2D + 1.0Ev + 1.0Eh 240° Seismic	156.05	0.0721	0.0007	0.0709	0.0709
1.2D + 1.0Ev + 1.0Eh 240° Seismic	164.15	0.0828	0.0007	0.0791	0.0791
1.2D + 1.0Ev + 1.0Eh 240° Seismic	168.05	0.0882	0.0007	0.0845	0.0845
1.2D + 1.0Ev + 1.0Eh 240° Seismic	180.00	0.1064	0.0007	0.0991	0.0991
1.2D + 1.0Ev + 1.0Eh 240° Seismic	188.13	0.1191	0.0007	0.0908	0.0908
1.2D + 1.0Ev + 1.0Eh 240° Seismic	192.06	0.1253	0.0007	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh 240° Seismic	196.00	0.1315	0.0007	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh 210° Seismic	106.75	0.0286	-0.0010	0.0351	0.0351
1.2D + 1.0Ev + 1.0Eh 210° Seismic	130.00	0.0453	-0.0013	0.0486	0.0486
1.2D + 1.0Ev + 1.0Eh 210° Seismic	140.25	0.0546	-0.0014	0.0586	0.0586
1.2D + 1.0Ev + 1.0Eh 210° Seismic	152.10	0.0673	-0.0009	0.0676	0.0676
1.2D + 1.0Ev + 1.0Eh 210° Seismic	156.05	0.0721	-0.0008	0.0708	0.0708

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 210° Seismic	164.15	0.0828	-0.0008	0.0792	0.0792
1.2D + 1.0Ev + 1.0Eh 210° Seismic	168.05	0.0882	-0.0008	0.0843	0.0843
1.2D + 1.0Ev + 1.0Eh 210° Seismic	180.00	0.1064	-0.0008	0.0985	0.0985
1.2D + 1.0Ev + 1.0Eh 210° Seismic	188.13	0.1191	-0.0008	0.0908	0.0908
1.2D + 1.0Ev + 1.0Eh 210° Seismic	192.06	0.1253	-0.0008	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh 210° Seismic	196.00	0.1315	-0.0008	0.0905	0.0905
1.2D + 1.0Ev + 1.0Eh 180° Seismic	106.75	0.0285	0.0009	0.0350	0.0351
1.2D + 1.0Ev + 1.0Eh 180° Seismic	130.00	0.0453	0.0011	0.0486	0.0486
1.2D + 1.0Ev + 1.0Eh 180° Seismic	140.25	0.0546	0.0012	0.0591	0.0591
1.2D + 1.0Ev + 1.0Eh 180° Seismic	152.10	0.0672	0.0008	0.0670	0.067
1.2D + 1.0Ev + 1.0Eh 180° Seismic	156.05	0.072	0.0007	0.0701	0.0701
1.2D + 1.0Ev + 1.0Eh 180° Seismic	164.15	0.0826	0.0007	0.0793	0.0793
1.2D + 1.0Ev + 1.0Eh 180° Seismic	168.05	0.0882	0.0007	0.0842	0.0842
1.2D + 1.0Ev + 1.0Eh 180° Seismic	180.00	0.1064	0.0007	0.0999	0.0999
1.2D + 1.0Ev + 1.0Eh 180° Seismic	188.13	0.1191	0.0007	0.0909	0.0909
1.2D + 1.0Ev + 1.0Eh 180° Seismic	192.06	0.1253	0.0007	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh 180° Seismic	196.00	0.1315	0.0007	0.0906	0.0906
1.2D + 1.0Ev + 1.0Eh 120° Seismic	106.75	0.0286	0.0009	0.0350	0.035
1.2D + 1.0Ev + 1.0Eh 120° Seismic	130.00	0.0454	0.0011	0.0484	0.0484
1.2D + 1.0Ev + 1.0Eh 120° Seismic	140.25	0.0547	0.0012	0.0582	0.0582
1.2D + 1.0Ev + 1.0Eh 120° Seismic	152.10	0.0673	0.0008	0.0678	0.0678
1.2D + 1.0Ev + 1.0Eh 120° Seismic	156.05	0.0721	0.0007	0.0709	0.0709
1.2D + 1.0Ev + 1.0Eh 120° Seismic	164.15	0.0828	0.0007	0.0791	0.0791
1.2D + 1.0Ev + 1.0Eh 120° Seismic	168.05	0.0882	0.0007	0.0845	0.0845
1.2D + 1.0Ev + 1.0Eh 120° Seismic	180.00	0.1064	0.0007	0.0991	0.0991
1.2D + 1.0Ev + 1.0Eh 120° Seismic	188.13	0.1191	0.0007	0.0908	0.0908
1.2D + 1.0Ev + 1.0Eh 120° Seismic	192.06	0.1253	0.0007	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh 120° Seismic	196.00	0.1315	0.0007	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh 90° Seismic	106.75	0.0286	-0.0010	0.0351	0.0351
1.2D + 1.0Ev + 1.0Eh 90° Seismic	130.00	0.0453	-0.0013	0.0486	0.0486
1.2D + 1.0Ev + 1.0Eh 90° Seismic	140.25	0.0546	-0.0014	0.0586	0.0586
1.2D + 1.0Ev + 1.0Eh 90° Seismic	152.10	0.0673	-0.0009	0.0676	0.0676
1.2D + 1.0Ev + 1.0Eh 90° Seismic	156.05	0.0721	-0.0008	0.0708	0.0708
1.2D + 1.0Ev + 1.0Eh 90° Seismic	164.15	0.0828	-0.0008	0.0792	0.0792
1.2D + 1.0Ev + 1.0Eh 90° Seismic	168.05	0.0882	-0.0008	0.0843	0.0843
1.2D + 1.0Ev + 1.0Eh 90° Seismic	180.00	0.1064	-0.0008	0.0985	0.0985
1.2D + 1.0Ev + 1.0Eh 90° Seismic	188.13	0.1191	-0.0008	0.0908	0.0908
1.2D + 1.0Ev + 1.0Eh 90° Seismic	192.06	0.1253	-0.0008	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh 90° Seismic	196.00	0.1315	-0.0008	0.0905	0.0905
1.2D + 1.0Ev + 1.0Eh 60° Seismic	106.75	0.0285	0.0009	0.0350	0.0351
1.2D + 1.0Ev + 1.0Eh 60° Seismic	130.00	0.0453	0.0011	0.0486	0.0486
1.2D + 1.0Ev + 1.0Eh 60° Seismic	140.25	0.0546	0.0012	0.0591	0.0591
1.2D + 1.0Ev + 1.0Eh 60° Seismic	152.10	0.0672	0.0008	0.0670	0.067
1.2D + 1.0Ev + 1.0Eh 60° Seismic	156.05	0.072	0.0007	0.0701	0.0701
1.2D + 1.0Ev + 1.0Eh 60° Seismic	164.15	0.0826	0.0007	0.0793	0.0793
1.2D + 1.0Ev + 1.0Eh 60° Seismic	168.05	0.0882	0.0007	0.0842	0.0842
1.2D + 1.0Ev + 1.0Eh 60° Seismic	180.00	0.1064	0.0007	0.0999	0.0999
1.2D + 1.0Ev + 1.0Eh 60° Seismic	188.13	0.1191	0.0007	0.0909	0.0909
1.2D + 1.0Ev + 1.0Eh 60° Seismic	192.06	0.1253	0.0007	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh 60° Seismic	196.00	0.1315	0.0007	0.0906	0.0906
1.2D + 1.0Ev + 1.0Eh Normal Seismic	106.75	0.0286	0.0009	0.0350	0.035
1.2D + 1.0Ev + 1.0Eh Normal Seismic	130.00	0.0454	0.0011	0.0484	0.0484
1.2D + 1.0Ev + 1.0Eh Normal Seismic	140.25	0.0547	0.0012	0.0582	0.0582
1.2D + 1.0Ev + 1.0Eh Normal Seismic	152.10	0.0673	0.0008	0.0678	0.0678
1.2D + 1.0Ev + 1.0Eh Normal Seismic	156.05	0.0721	0.0007	0.0709	0.0709
1.2D + 1.0Ev + 1.0Eh Normal Seismic	164.15	0.0828	0.0007	0.0791	0.0791
1.2D + 1.0Ev + 1.0Eh Normal Seismic	168.05	0.0882	0.0007	0.0845	0.0845
1.2D + 1.0Ev + 1.0Eh Normal Seismic	180.00	0.1064	0.0007	0.0991	0.0991
1.2D + 1.0Ev + 1.0Eh Normal Seismic	188.13	0.1191	0.0007	0.0908	0.0908

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh Normal Seismic	192.06	0.1253	0.0007	0.0904	0.0904
1.2D + 1.0Ev + 1.0Eh Normal Seismic	196.00	0.1315	0.0007	0.0904	0.0904
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	106.75	0.1205	-0.0123	0.1374	0.1377
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	130.00	0.1846	-0.0188	0.1836	0.1846
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	140.25	0.2193	-0.0231	0.2166	0.2178
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	152.10	0.2657	-0.0357	0.2490	0.2516
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	156.05	0.2828	-0.0363	0.2548	0.255
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	164.15	0.321	-0.0357	0.2843	0.2849
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	168.05	0.3411	-0.0356	0.3001	0.3011
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	180.00	0.4058	-0.0354	0.3485	0.3503
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	188.13	0.4519	-0.0353	0.3296	0.3314
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	192.06	0.4744	-0.0353	0.3282	0.3301
1.2D + 1.0Di + 1.0Wi 330° 56 mph Wind with 0.19" Radial Ice	196.00	0.4971	-0.0353	0.3310	0.3318
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	106.75	0.1195	0.0149	0.1356	0.136
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	130.00	0.1831	0.0211	0.1816	0.1826
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	140.25	0.2174	0.0250	0.2157	0.2169
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	152.10	0.2634	-0.0334	0.2377	0.24
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	156.05	0.2803	-0.0338	0.2517	0.2524
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	164.15	0.3181	-0.0334	0.2818	0.2838
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	168.05	0.338	-0.0333	0.2960	0.2978
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	180.00	0.4021	-0.0331	0.3501	0.3517
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	188.13	0.4478	-0.0330	0.3271	0.3288
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	192.06	0.4702	-0.0330	0.3255	0.3272
1.2D + 1.0Di + 1.0Wi 300° 56 mph Wind with 0.19" Radial Ice	196.00	0.4926	-0.0330	0.3273	0.3289
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	106.75	0.123	0.0168	0.1401	0.1404
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	130.00	0.1887	0.0237	0.1866	0.1873
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	140.25	0.2241	0.0282	0.2212	0.2221
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	152.10	0.2715	0.0377	0.2450	0.2467
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	156.05	0.2887	0.0378	0.2598	0.2606
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	164.15	0.3276	0.0376	0.2892	0.2917
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	168.05	0.3482	0.0375	0.3052	0.3075
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	180.00	0.4141	0.0372	0.3580	0.3592
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	188.13	0.461	0.0372	0.3346	0.3366
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	192.06	0.4839	0.0372	0.3337	0.3358
1.2D + 1.0Di + 1.0Wi 240° 56 mph Wind with 0.19" Radial Ice	196.00	0.5069	0.0372	0.3364	0.3384
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	106.75	0.1205	-0.0106	0.1375	0.1375
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	130.00	0.1846	-0.0162	0.1832	0.1839
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	140.25	0.2193	-0.0200	0.2158	0.2168
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	152.10	0.2657	-0.0312	0.2494	0.2513
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	156.05	0.2828	-0.0317	0.2551	0.2556
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	164.15	0.321	-0.0311	0.2843	0.2847
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	168.05	0.3411	-0.0311	0.3001	0.3005
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	180.00	0.4058	-0.0308	0.3485	0.3493
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	188.13	0.4519	-0.0308	0.3296	0.3303
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	192.06	0.4744	-0.0308	0.3282	0.3293
1.2D + 1.0Di + 1.0Wi 210° 56 mph Wind with 0.19" Radial Ice	196.00	0.4971	-0.0308	0.3310	0.3313
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	106.75	0.1197	0.0079	0.1365	0.1367
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	130.00	0.1834	0.0127	0.1820	0.1823
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	140.25	0.2178	0.0160	0.2160	0.216
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	152.10	0.2639	0.0268	0.2514	0.2528
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	156.05	0.2809	0.0273	0.2513	0.2528
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	164.15	0.3189	0.0268	0.2822	0.2835
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	168.05	0.3388	0.0267	0.2971	0.2983
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	180.00	0.4032	0.0265	0.3511	0.3511
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	188.13	0.449	0.0264	0.3281	0.3281
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	192.06	0.4715	0.0264	0.3265	0.3273
1.2D + 1.0Di + 1.0Wi 180° 56 mph Wind with 0.19" Radial Ice	196.00	0.494	0.0264	0.3283	0.3293
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	106.75	0.123	-0.0168	0.1401	0.1404
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	130.00	0.1887	-0.0237	0.1866	0.1873

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	140.25	0.2241	-0.0282	0.2212	0.2221
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	152.10	0.2715	-0.0377	0.2450	0.2467
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	156.05	0.2887	-0.0378	0.2598	0.2606
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	164.15	0.3276	-0.0376	0.2892	0.2917
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	168.05	0.3482	-0.0375	0.3052	0.3075
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	180.00	0.4141	-0.0372	0.3580	0.3592
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	188.13	0.461	-0.0372	0.3346	0.3366
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	192.06	0.4839	-0.0372	0.3337	0.3358
1.2D + 1.0Di + 1.0Wi 120° 56 mph Wind with 0.19" Radial Ice	196.00	0.5069	-0.0372	0.3364	0.3384
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	106.75	0.1203	-0.0183	0.1363	0.1372
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	130.00	0.1843	-0.0258	0.1822	0.1827
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	140.25	0.2189	-0.0307	0.2151	0.2156
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	152.10	0.2652	-0.0408	0.2340	0.2349
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	156.05	0.2821	-0.0409	0.2537	0.257
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	164.15	0.3202	-0.0406	0.2840	0.2869
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	168.05	0.3402	-0.0406	0.2990	0.3018
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	180.00	0.4047	-0.0404	0.3475	0.3481
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	188.13	0.4507	-0.0403	0.3286	0.33
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	192.06	0.4732	-0.0403	0.3272	0.3295
1.2D + 1.0Di + 1.0Wi 90° 56 mph Wind with 0.19" Radial Ice	196.00	0.4957	-0.0402	0.3300	0.3325
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	106.75	0.1195	-0.0149	0.1356	0.136
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	130.00	0.1831	-0.0211	0.1816	0.1826
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	140.25	0.2174	-0.0250	0.2157	0.2169
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	152.10	0.2634	0.0334	0.2377	0.24
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	156.05	0.2803	0.0338	0.2517	0.2524
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	164.15	0.3181	0.0334	0.2818	0.2838
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	168.05	0.338	0.0333	0.2960	0.2978
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	180.00	0.4021	0.0331	0.3501	0.3517
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	188.13	0.4478	0.0330	0.3271	0.3288
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	192.06	0.4702	0.0330	0.3255	0.3272
1.2D + 1.0Di + 1.0Wi 60° 56 mph Wind with 0.19" Radial Ice	196.00	0.4926	0.0330	0.3273	0.3289
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	106.75	0.1231	0.0078	0.1409	0.1411
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	130.00	0.1889	0.0126	0.1875	0.1879
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	140.25	0.2245	0.0159	0.2215	0.2215
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	152.10	0.272	0.0267	0.2581	0.2592
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	156.05	0.2894	0.0273	0.2592	0.2607
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	164.15	0.3284	0.0267	0.2896	0.2908
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	168.05	0.349	0.0267	0.3063	0.3074
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	180.00	0.4151	0.0265	0.3590	0.359
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	188.13	0.4622	0.0264	0.3356	0.3366
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	192.06	0.4851	0.0264	0.3347	0.3357
1.2D + 1.0Di + 1.0Wi Normal 56 mph Wind with 0.19" Radial Ice	196.00	0.5082	0.0264	0.3373	0.3384
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	106.75	0.3456	-0.0504	0.4016	0.4045
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	130.00	0.5347	-0.0761	0.5415	0.5468
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	140.25	0.6375	-0.0931	0.6407	0.6474
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	152.10	0.7758	-0.1416	0.7465	0.7598
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	156.05	0.827	-0.1437	0.7603	0.7652
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	164.15	0.9418	-0.1425	0.8538	0.8605
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	168.05	1.0016	-0.1424	0.9022	0.9072
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	180.00	1.1968	-0.1428	1.0530	1.0621
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	188.13	1.3361	-0.1425	0.9958	1.006
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	192.06	1.4043	-0.1424	0.9930	1.0029
0.9D + 1.0W 330° 106 mph Wind with No Ice (Reduced DL)	196.00	1.4726	-0.1424	1.0022	1.0069
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	106.75	0.3417	-0.0505	0.3953	0.398
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	130.00	0.5287	-0.0746	0.5338	0.539
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	140.25	0.6303	-0.0904	0.6359	0.6423
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	152.10	0.767	-0.1319	0.7068	0.719
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	156.05	0.8177	-0.1336	0.7510	0.754
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	164.15	0.9313	-0.1327	0.8445	0.8501

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	168.05	0.9903	-0.1326	0.8901	0.8954
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	180.00	1.1834	-0.1326	1.0559	1.0642
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	188.13	1.3213	-0.1326	0.9869	0.9957
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	192.06	1.3889	-0.1326	0.9832	0.992
0.9D + 1.0W 300° 106 mph Wind with No Ice (Reduced DL)	196.00	1.4565	-0.1326	0.9905	0.9952
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	106.75	0.357	0.0621	0.4122	0.4138
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	130.00	0.5511	0.0888	0.5535	0.5556
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	140.25	0.6565	0.1061	0.6593	0.6618
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	152.10	0.7977	0.1447	0.7315	0.7364
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	156.05	0.8504	0.1458	0.7796	0.7848
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	164.15	0.9677	0.1452	0.8723	0.8843
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	168.05	1.0285	0.1452	0.9196	0.9308
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	180.00	1.2279	0.1447	1.0892	1.0925
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	188.13	1.3702	0.1450	1.0167	1.0254
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	192.06	1.4397	0.1451	1.0135	1.0238
0.9D + 1.0W 240° 106 mph Wind with No Ice (Reduced DL)	196.00	1.5097	0.1451	1.0211	1.0313
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	106.75	0.3456	0.0392	0.4027	0.4031
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	130.00	0.5347	0.0563	0.5405	0.5427
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	140.25	0.6375	0.0674	0.6400	0.6429
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	152.10	0.7758	-0.0940	0.7451	0.751
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	156.05	0.827	-0.0956	0.7631	0.7665
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	164.15	0.9418	-0.0940	0.8534	0.8563
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	168.05	1.0016	-0.0940	0.9023	0.9051
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	180.00	1.1968	-0.0935	1.0530	1.0571
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	188.13	1.3361	-0.0939	0.9958	1.0002
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	192.06	1.4043	-0.0939	0.9930	0.9971
0.9D + 1.0W 210° 106 mph Wind with No Ice (Reduced DL)	196.00	1.4726	-0.0939	1.0023	1.0048
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	106.75	0.3422	0.0299	0.3988	0.3999
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	130.00	0.5296	0.0471	0.5361	0.5382
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	140.25	0.6316	0.0584	0.6370	0.637
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	152.10	0.7689	0.0954	0.7531	0.7591
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	156.05	0.8199	0.0973	0.7507	0.757
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	164.15	0.934	0.0956	0.8458	0.8512
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	168.05	0.9932	0.0956	0.8938	0.8989
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	180.00	1.187	0.0950	1.0592	1.0592
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	188.13	1.3254	0.0954	0.9902	0.9925
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	192.06	1.3932	0.0954	0.9865	0.9911
0.9D + 1.0W 180° 106 mph Wind with No Ice (Reduced DL)	196.00	1.4611	0.0955	0.9938	0.9984
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	106.75	0.357	-0.0621	0.4122	0.4138
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	130.00	0.5511	-0.0888	0.5535	0.5556
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	140.25	0.6565	-0.1061	0.6593	0.6618
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	152.10	0.7977	-0.1447	0.7315	0.7364
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	156.05	0.8504	-0.1458	0.7796	0.7848
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	164.15	0.9677	-0.1452	0.8723	0.8843
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	168.05	1.0285	-0.1452	0.9196	0.9308
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	180.00	1.2279	-0.1447	1.0892	1.0925
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	188.13	1.3702	-0.1450	1.0167	1.0254
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	192.06	1.4397	-0.1451	1.0135	1.0238
0.9D + 1.0W 120° 106 mph Wind with No Ice (Reduced DL)	196.00	1.5097	-0.1451	1.0211	1.0313
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	106.75	0.3451	-0.0607	0.3980	0.4016
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	130.00	0.5337	-0.0865	0.5364	0.5382
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	140.25	0.6362	-0.1032	0.6353	0.6374
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	152.10	0.7739	-0.1391	0.6930	0.6965
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	156.05	0.8248	-0.1398	0.7573	0.7701
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	164.15	0.9391	-0.1393	0.8524	0.8637
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	168.05	0.9987	-0.1393	0.8985	0.9093
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	180.00	1.1932	-0.1393	1.0496	1.052
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	188.13	1.332	-0.1393	0.9925	1
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	192.06	1.3999	-0.1393	0.9897	0.9994

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D + 1.0W 90° 106 mph Wind with No Ice (Reduced DL)	196.00	1.4681	-0.1393	0.9989	1.0086
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	106.75	0.3417	0.0505	0.3953	0.398
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	130.00	0.5287	0.0746	0.5338	0.539
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	140.25	0.6303	0.0904	0.6359	0.6423
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	152.10	0.767	0.1319	0.7068	0.719
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	156.05	0.8177	0.1336	0.7510	0.754
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	164.15	0.9313	0.1327	0.8445	0.8501
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	168.05	0.9903	0.1326	0.8901	0.8954
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	180.00	1.1834	0.1326	1.0559	1.0642
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	188.13	1.3213	0.1326	0.9869	0.9957
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	192.06	1.3889	0.1326	0.9832	0.992
0.9D + 1.0W 60° 106 mph Wind with No Ice (Reduced DL)	196.00	1.4565	0.1326	0.9905	0.9952
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	106.75	0.3575	0.0297	0.4148	0.4158
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	130.00	0.552	0.0469	0.5561	0.5581
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	140.25	0.6578	0.0585	0.6604	0.6604
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	152.10	0.7996	0.0957	0.7774	0.7833
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	156.05	0.8526	0.0975	0.7770	0.7831
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	164.15	0.9704	0.0962	0.8733	0.8786
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	168.05	1.0314	0.0962	0.9232	0.9282
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	180.00	1.2315	0.0967	1.0926	1.0926
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	188.13	1.3742	0.0963	1.0201	1.023
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	192.06	1.444	0.0962	1.0168	1.0214
0.9D + 1.0W Normal 106 mph Wind with No Ice (Reduced DL)	196.00	1.5142	0.0962	1.0244	1.0289
1.2D + 1.0W 330° 106 mph Wind with No Ice	106.75	0.3465	-0.0504	0.4029	0.4058
1.2D + 1.0W 330° 106 mph Wind with No Ice	130.00	0.5363	-0.0761	0.5435	0.5489
1.2D + 1.0W 330° 106 mph Wind with No Ice	140.25	0.6395	-0.0931	0.6433	0.65
1.2D + 1.0W 330° 106 mph Wind with No Ice	152.10	0.7784	-0.1417	0.7496	0.7629
1.2D + 1.0W 330° 106 mph Wind with No Ice	156.05	0.8298	-0.1438	0.7637	0.7686
1.2D + 1.0W 330° 106 mph Wind with No Ice	164.15	0.9451	-0.1425	0.8577	0.8644
1.2D + 1.0W 330° 106 mph Wind with No Ice	168.05	1.0052	-0.1425	0.9064	0.9116
1.2D + 1.0W 330° 106 mph Wind with No Ice	180.00	1.2013	-0.1429	1.0582	1.0674
1.2D + 1.0W 330° 106 mph Wind with No Ice	188.13	1.3413	-0.1425	1.0007	1.0108
1.2D + 1.0W 330° 106 mph Wind with No Ice	192.06	1.4098	-0.1425	0.9977	1.0077
1.2D + 1.0W 330° 106 mph Wind with No Ice	196.00	1.4785	-0.1425	1.0071	1.0118
1.2D + 1.0W 300° 106 mph Wind with No Ice	106.75	0.3426	-0.0506	0.3966	0.3993
1.2D + 1.0W 300° 106 mph Wind with No Ice	130.00	0.5302	-0.0747	0.5358	0.541
1.2D + 1.0W 300° 106 mph Wind with No Ice	140.25	0.6323	-0.0904	0.6386	0.645
1.2D + 1.0W 300° 106 mph Wind with No Ice	152.10	0.7695	-0.1320	0.7099	0.7221
1.2D + 1.0W 300° 106 mph Wind with No Ice	156.05	0.8205	-0.1337	0.7542	0.7572
1.2D + 1.0W 300° 106 mph Wind with No Ice	164.15	0.9346	-0.1328	0.8484	0.854
1.2D + 1.0W 300° 106 mph Wind with No Ice	168.05	0.9938	-0.1327	0.8941	0.8994
1.2D + 1.0W 300° 106 mph Wind with No Ice	180.00	1.1879	-0.1327	1.0613	1.0696
1.2D + 1.0W 300° 106 mph Wind with No Ice	188.13	1.3265	-0.1327	0.9917	1.0006
1.2D + 1.0W 300° 106 mph Wind with No Ice	192.06	1.3944	-0.1327	0.9879	0.9967
1.2D + 1.0W 300° 106 mph Wind with No Ice	196.00	1.4624	-0.1327	0.9952	0.9999
1.2D + 1.0W 240° 106 mph Wind with No Ice	106.75	0.358	0.0622	0.4136	0.4151
1.2D + 1.0W 240° 106 mph Wind with No Ice	130.00	0.5528	0.0889	0.5556	0.5576
1.2D + 1.0W 240° 106 mph Wind with No Ice	140.25	0.6586	0.1062	0.6618	0.6643
1.2D + 1.0W 240° 106 mph Wind with No Ice	152.10	0.8004	0.1448	0.7349	0.7396
1.2D + 1.0W 240° 106 mph Wind with No Ice	156.05	0.8533	0.1460	0.7831	0.7883
1.2D + 1.0W 240° 106 mph Wind with No Ice	164.15	0.9712	0.1453	0.8763	0.8883
1.2D + 1.0W 240° 106 mph Wind with No Ice	168.05	1.0322	0.1453	0.9240	0.9352
1.2D + 1.0W 240° 106 mph Wind with No Ice	180.00	1.2326	0.1448	1.0946	1.0978
1.2D + 1.0W 240° 106 mph Wind with No Ice	188.13	1.3755	0.1452	1.0215	1.0303
1.2D + 1.0W 240° 106 mph Wind with No Ice	192.06	1.4454	0.1452	1.0184	1.0287
1.2D + 1.0W 240° 106 mph Wind with No Ice	196.00	1.5157	0.1452	1.0261	1.0363
1.2D + 1.0W 210° 106 mph Wind with No Ice	106.75	0.3465	0.0393	0.4040	0.4045
1.2D + 1.0W 210° 106 mph Wind with No Ice	130.00	0.5363	0.0564	0.5425	0.5447
1.2D + 1.0W 210° 106 mph Wind with No Ice	140.25	0.6395	0.0675	0.6425	0.6453

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 210° 106 mph Wind with No Ice	152.10	0.7784	-0.0939	0.7483	0.7542
1.2D + 1.0W 210° 106 mph Wind with No Ice	156.05	0.8298	-0.0954	0.7664	0.7699
1.2D + 1.0W 210° 106 mph Wind with No Ice	164.15	0.9451	-0.0939	0.8573	0.8603
1.2D + 1.0W 210° 106 mph Wind with No Ice	168.05	1.0052	-0.0939	0.9066	0.9094
1.2D + 1.0W 210° 106 mph Wind with No Ice	180.00	1.2013	-0.0934	1.0582	1.0623
1.2D + 1.0W 210° 106 mph Wind with No Ice	188.13	1.3413	-0.0937	1.0007	1.0051
1.2D + 1.0W 210° 106 mph Wind with No Ice	192.06	1.4098	-0.0938	0.9977	1.0019
1.2D + 1.0W 210° 106 mph Wind with No Ice	196.00	1.4785	-0.0938	1.0071	1.0096
1.2D + 1.0W 180° 106 mph Wind with No Ice	106.75	0.3432	0.0298	0.4001	0.4013
1.2D + 1.0W 180° 106 mph Wind with No Ice	130.00	0.5312	0.0470	0.5381	0.5402
1.2D + 1.0W 180° 106 mph Wind with No Ice	140.25	0.6336	0.0584	0.6397	0.6397
1.2D + 1.0W 180° 106 mph Wind with No Ice	152.10	0.7714	0.0953	0.7562	0.7622
1.2D + 1.0W 180° 106 mph Wind with No Ice	156.05	0.8227	0.0973	0.7539	0.7602
1.2D + 1.0W 180° 106 mph Wind with No Ice	164.15	0.9373	0.0955	0.8498	0.8551
1.2D + 1.0W 180° 106 mph Wind with No Ice	168.05	0.9968	0.0955	0.8978	0.9029
1.2D + 1.0W 180° 106 mph Wind with No Ice	180.00	1.1915	0.0950	1.0647	1.0647
1.2D + 1.0W 180° 106 mph Wind with No Ice	188.13	1.3306	0.0954	0.9951	0.9972
1.2D + 1.0W 180° 106 mph Wind with No Ice	192.06	1.3987	0.0954	0.9912	0.9958
1.2D + 1.0W 180° 106 mph Wind with No Ice	196.00	1.4669	0.0954	0.9985	1.0031
1.2D + 1.0W 120° 106 mph Wind with No Ice	106.75	0.358	-0.0622	0.4136	0.4151
1.2D + 1.0W 120° 106 mph Wind with No Ice	130.00	0.5528	-0.0889	0.5556	0.5576
1.2D + 1.0W 120° 106 mph Wind with No Ice	140.25	0.6586	-0.1062	0.6618	0.6643
1.2D + 1.0W 120° 106 mph Wind with No Ice	152.10	0.8004	-0.1448	0.7349	0.7396
1.2D + 1.0W 120° 106 mph Wind with No Ice	156.05	0.8533	-0.1460	0.7831	0.7883
1.2D + 1.0W 120° 106 mph Wind with No Ice	164.15	0.9712	-0.1453	0.8763	0.8883
1.2D + 1.0W 120° 106 mph Wind with No Ice	168.05	1.0322	-0.1453	0.9240	0.9352
1.2D + 1.0W 120° 106 mph Wind with No Ice	180.00	1.2326	-0.1448	1.0946	1.0978
1.2D + 1.0W 120° 106 mph Wind with No Ice	188.13	1.3755	-0.1452	1.0215	1.0303
1.2D + 1.0W 120° 106 mph Wind with No Ice	192.06	1.4454	-0.1452	1.0184	1.0287
1.2D + 1.0W 120° 106 mph Wind with No Ice	196.00	1.5157	-0.1452	1.0261	1.0363
1.2D + 1.0W 90° 106 mph Wind with No Ice	106.75	0.346	-0.0607	0.3994	0.4029
1.2D + 1.0W 90° 106 mph Wind with No Ice	130.00	0.5353	-0.0865	0.5385	0.5402
1.2D + 1.0W 90° 106 mph Wind with No Ice	140.25	0.6382	-0.1032	0.6378	0.6399
1.2D + 1.0W 90° 106 mph Wind with No Ice	152.10	0.7765	-0.1391	0.6962	0.6997
1.2D + 1.0W 90° 106 mph Wind with No Ice	156.05	0.8276	-0.1398	0.7607	0.7734
1.2D + 1.0W 90° 106 mph Wind with No Ice	164.15	0.9424	-0.1394	0.8563	0.8676
1.2D + 1.0W 90° 106 mph Wind with No Ice	168.05	1.0023	-0.1393	0.9028	0.9135
1.2D + 1.0W 90° 106 mph Wind with No Ice	180.00	1.1977	-0.1393	1.0548	1.0571
1.2D + 1.0W 90° 106 mph Wind with No Ice	188.13	1.3372	-0.1393	0.9974	1.0048
1.2D + 1.0W 90° 106 mph Wind with No Ice	192.06	1.4055	-0.1393	0.9944	1.0041
1.2D + 1.0W 90° 106 mph Wind with No Ice	196.00	1.474	-0.1393	1.0038	1.0134
1.2D + 1.0W 60° 106 mph Wind with No Ice	106.75	0.3426	0.0506	0.3966	0.3993
1.2D + 1.0W 60° 106 mph Wind with No Ice	130.00	0.5302	0.0747	0.5358	0.541
1.2D + 1.0W 60° 106 mph Wind with No Ice	140.25	0.6323	0.0904	0.6386	0.645
1.2D + 1.0W 60° 106 mph Wind with No Ice	152.10	0.7695	0.1320	0.7099	0.7221
1.2D + 1.0W 60° 106 mph Wind with No Ice	156.05	0.8205	0.1337	0.7542	0.7572
1.2D + 1.0W 60° 106 mph Wind with No Ice	164.15	0.9346	0.1328	0.8484	0.854
1.2D + 1.0W 60° 106 mph Wind with No Ice	168.05	0.9938	0.1327	0.8941	0.8994
1.2D + 1.0W 60° 106 mph Wind with No Ice	180.00	1.1879	0.1327	1.0613	1.0696
1.2D + 1.0W 60° 106 mph Wind with No Ice	188.13	1.3265	0.1327	0.9917	1.0006
1.2D + 1.0W 60° 106 mph Wind with No Ice	192.06	1.3944	0.1327	0.9879	0.9967
1.2D + 1.0W 60° 106 mph Wind with No Ice	196.00	1.4624	0.1327	0.9952	0.9999
1.2D + 1.0W Normal 106 mph Wind with No Ice	106.75	0.3585	0.0296	0.4162	0.4172
1.2D + 1.0W Normal 106 mph Wind with No Ice	130.00	0.5537	0.0469	0.5582	0.5602
1.2D + 1.0W Normal 106 mph Wind with No Ice	140.25	0.6599	0.0584	0.6629	0.6629
1.2D + 1.0W Normal 106 mph Wind with No Ice	152.10	0.8023	0.0956	0.7806	0.7864
1.2D + 1.0W Normal 106 mph Wind with No Ice	156.05	0.8555	0.0975	0.7805	0.7866
1.2D + 1.0W Normal 106 mph Wind with No Ice	164.15	0.9739	0.0962	0.8774	0.8826
1.2D + 1.0W Normal 106 mph Wind with No Ice	168.05	1.0351	0.0962	0.9277	0.9326

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W Normal 106 mph Wind with No Ice	180.00	1.2362	0.0966	1.0980	1.098
1.2D + 1.0W Normal 106 mph Wind with No Ice	188.13	1.3796	0.0962	1.0249	1.0279
1.2D + 1.0W Normal 106 mph Wind with No Ice	192.06	1.4497	0.0962	1.0217	1.0263
1.2D + 1.0W Normal 106 mph Wind with No Ice	196.00	1.5202	0.0962	1.0295	1.034

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					FX* (kip)	FY* (kip)	FZ* (kip)
1.2D + 1.0W Normal	12.19	0.00	0	1	0.00	179.33	-17.29
	12.19	0.00	120	1a	5.56	-66.25	-4.56
	12.19	0.00	240	1b	-5.56	-66.25	-4.56
1.2D + 1.0W 60°	12.19	0.00	0	1	-1.04	93.51	-8.68
	12.19	0.00	120	1a	-8.03	93.35	3.44
	12.19	0.00	240	1b	-12.34	-140.02	-7.12
1.2D + 1.0W 90°	12.19	0.00	0	1	-1.24	15.61	-1.04
	12.19	0.00	120	1a	-12.85	152.06	6.70
	12.19	0.00	240	1b	-11.06	-120.84	-5.67
1.2D + 1.0W 120°	12.19	0.00	0	1	-1.17	-66.25	7.09
	12.19	0.00	120	1a	-14.97	179.17	8.64
	12.19	0.00	240	1b	-6.72	-66.08	-2.53
1.2D + 1.0W 180°	12.19	0.00	0	1	0.00	-140.19	14.25
	12.19	0.00	120	1a	-7.00	93.51	5.24
	12.19	0.00	240	1b	7.00	93.51	5.24
1.2D + 1.0W 210°	12.19	0.00	0	1	0.62	-121.03	12.41
	12.19	0.00	120	1a	-0.28	15.71	1.59
	12.19	0.00	240	1b	12.23	152.16	7.77
1.2D + 1.0W 240°	12.19	0.00	0	1	1.17	-66.25	7.09
	12.19	0.00	120	1a	6.72	-66.08	-2.53
	12.19	0.00	240	1b	14.97	179.17	8.64
1.2D + 1.0W 300°	12.19	0.00	0	1	1.04	93.51	-8.68
	12.19	0.00	120	1a	12.34	-140.02	-7.12
	12.19	0.00	240	1b	8.03	93.35	3.44
1.2D + 1.0W 330°	12.19	0.00	0	1	0.62	152.25	-14.48
	12.19	0.00	120	1a	10.44	-120.93	-6.74
	12.19	0.00	240	1b	1.52	15.52	-0.55
0.9D + 1.0W Normal	12.19	0.00	0	1	0.00	175.08	-17.02
	12.19	0.00	120	1a	5.79	-69.98	-4.69
	12.19	0.00	240	1b	-5.79	-69.98	-4.69
0.9D + 1.0W 60°	12.19	0.00	0	1	-1.05	89.44	-8.41
	12.19	0.00	120	1a	-7.80	89.28	3.30
	12.19	0.00	240	1b	-12.57	-143.60	-7.25
0.9D + 1.0W 90°	12.19	0.00	0	1	-1.25	11.71	-0.77
	12.19	0.00	120	1a	-12.61	147.87	6.57
	12.19	0.00	240	1b	-11.29	-124.45	-5.79
0.9D + 1.0W 120°	12.19	0.00	0	1	-1.18	-69.98	7.36
	12.19	0.00	120	1a	-14.73	174.92	8.50
	12.19	0.00	240	1b	-6.95	-69.81	-2.66
0.9D + 1.0W 180°	12.19	0.00	0	1	0.00	-143.76	14.51
	12.19	0.00	120	1a	-6.76	89.45	5.11
	12.19	0.00	240	1b	6.76	89.45	5.11
0.9D + 1.0W 210°	12.19	0.00	0	1	0.63	-124.64	12.68
	12.19	0.00	120	1a	-0.05	11.81	1.46
	12.19	0.00	240	1b	12.00	147.97	7.64
0.9D + 1.0W 240°	12.19	0.00	0	1	1.18	-69.98	7.36
	12.19	0.00	120	1a	6.95	-69.81	-2.66
	12.19	0.00	240	1b	14.73	174.92	8.50
0.9D + 1.0W 300°	12.19	0.00	0	1	1.05	89.44	-8.41
	12.19	0.00	120	1a	12.57	-143.60	-7.25
	12.19	0.00	240	1b	7.80	89.28	3.30
0.9D + 1.0W 330°	12.19	0.00	0	1	0.62	148.06	-14.21
	12.19	0.00	120	1a	10.66	-124.55	-6.87
	12.19	0.00	240	1b	1.29	11.62	-0.69
1.2D + 1.0Di + 1.0Wi Normal	12.19	0.00	0	1	0.00	74.40	-4.39
	12.19	0.00	120	1a	3.44	-10.57	-2.49
	12.19	0.00	240	1b	-3.44	-10.57	-2.49
1.2D + 1.0Di + 1.0Wi 60°	12.19	0.00	0	1	-0.40	45.01	-1.39
	12.19	0.00	120	1a	-1.40	44.96	0.35

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					FX* (kip)	FY* (kip)	FZ* (kip)
1.2D + 1.0Di + 1.0Wi 90°	12.19	0.00	240	1b	-5.92	-36.70	-3.41
	12.19	0.00	0	1	-0.47	17.76	1.35
	12.19	0.00	120	1a	-3.11	65.37	1.52
	12.19	0.00	240	1b	-5.45	-29.85	-2.87
1.2D + 1.0Di + 1.0Wi 120°	12.19	0.00	0	1	-0.43	-10.57	4.22
	12.19	0.00	120	1a	-3.80	74.35	2.20
	12.19	0.00	240	1b	-3.87	-10.52	-1.74
	12.19	0.00	0	1	0.00	-36.75	6.83
1.2D + 1.0Di + 1.0Wi 180°	12.19	0.00	120	1a	-1.00	45.01	1.04
	12.19	0.00	240	1b	1.00	45.01	1.04
	12.19	0.00	0	1	0.24	-29.91	6.16
	12.19	0.00	120	1a	1.40	17.78	-0.27
1.2D + 1.0Di + 1.0Wi 210°	12.19	0.00	240	1b	2.87	65.39	1.93
	12.19	0.00	0	1	0.43	-10.57	4.22
	12.19	0.00	120	1a	3.87	-10.52	-1.74
	12.19	0.00	240	1b	3.80	74.35	2.20
1.2D + 1.0Di + 1.0Wi 240°	12.19	0.00	0	1	0.40	45.01	-1.39
	12.19	0.00	120	1a	5.92	-36.70	-3.41
	12.19	0.00	240	1b	1.40	44.96	0.35
	12.19	0.00	0	1	0.23	65.42	-3.45
1.2D + 1.0Di + 1.0Wi 300°	12.19	0.00	120	1a	5.21	-29.88	-3.28
	12.19	0.00	240	1b	-0.94	17.73	-1.08
	12.19	0.00	0	1	0.00	27.82	-2.08
	12.19	0.00	120	1a	-0.53	9.63	0.30
1.2D + 1.0Ev + 1.0Eh Normal	12.19	0.00	240	1b	0.53	9.63	0.30
	12.19	0.00	0	1	0.00	21.76	-1.59
	12.19	0.00	120	1a	-1.38	21.76	0.79
	12.19	0.00	240	1b	0.10	3.56	0.06
1.2D + 1.0Ev + 1.0Eh 60°	12.19	0.00	0	1	0.00	15.69	-1.10
	12.19	0.00	120	1a	-1.69	26.20	0.97
	12.19	0.00	240	1b	0.21	5.19	0.12
	12.19	0.00	0	1	0.00	9.63	-0.60
1.2D + 1.0Ev + 1.0Eh 90°	12.19	0.00	120	1a	-1.80	27.82	1.04
	12.19	0.00	240	1b	0.52	9.63	0.31
	12.19	0.00	0	1	0.00	3.56	-0.11
	12.19	0.00	120	1a	-1.37	21.76	0.80
1.2D + 1.0Ev + 1.0Eh 180°	12.19	0.00	240	1b	1.37	21.76	0.80
	12.19	0.00	0	1	0.00	5.19	-0.24
	12.19	0.00	120	1a	-0.95	15.69	0.55
	12.19	0.00	240	1b	1.68	26.20	0.98
1.2D + 1.0Ev + 1.0Eh 210°	12.19	0.00	0	1	0.00	9.63	-0.60
	12.19	0.00	120	1a	-0.52	9.63	0.31
	12.19	0.00	240	1b	1.80	27.82	1.04
	12.19	0.00	0	1	0.00	21.76	-1.59
1.2D + 1.0Ev + 1.0Eh 240°	12.19	0.00	120	1a	-0.10	3.56	0.06
	12.19	0.00	240	1b	1.38	21.76	0.79
	12.19	0.00	0	1	0.00	26.20	-1.95
	12.19	0.00	120	1a	-0.21	5.19	0.12
1.2D + 1.0Ev + 1.0Eh 300°	12.19	0.00	240	1b	0.95	15.69	0.54
	12.19	0.00	0	1	0.00	23.11	-1.75
	12.19	0.00	120	1a	-0.24	4.96	0.13
	12.19	0.00	240	1b	0.24	4.96	0.13
0.9D - 1.0Ev + 1.0Eh Normal	12.19	0.00	0	1	0.00	17.06	-1.26
	12.19	0.00	120	1a	-1.09	17.06	0.63
	12.19	0.00	240	1b	-0.18	-1.09	-0.11
	12.19	0.00	0	1	-0.01	11.01	-0.77
0.9D - 1.0Ev + 1.0Eh 60°	12.19	0.00	120	1a	-1.40	21.49	0.81
	12.19	0.00	240	1b	-0.07	0.53	-0.04
	12.19	0.00	0	1	0.00	4.96	-0.28
	12.19	0.00	120	1a	0.00	4.96	-0.28

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					FX* (kip)	FY* (kip)	FZ* (kip)
0.9D - 1.0Ev + 1.0Eh 180°	12.19	0.00	120	1a	-1.52	23.11	0.88
	12.19	0.00	240	1b	0.24	4.96	0.14
	12.19	0.00	0	1	0.00	-1.09	0.21
	12.19	0.00	120	1a	-1.09	17.06	0.63
	12.19	0.00	240	1b	1.09	17.06	0.63
0.9D - 1.0Ev + 1.0Eh 210°	12.19	0.00	0	1	0.00	0.53	0.08
	12.19	0.00	120	1a	-0.66	11.01	0.39
	12.19	0.00	240	1b	1.40	21.49	0.81
0.9D - 1.0Ev + 1.0Eh 240°	12.19	0.00	0	1	0.00	4.96	-0.28
	12.19	0.00	120	1a	-0.24	4.96	0.14
	12.19	0.00	240	1b	1.52	23.11	0.88
0.9D - 1.0Ev + 1.0Eh 300°	12.19	0.00	0	1	0.00	17.06	-1.26
	12.19	0.00	120	1a	0.18	-1.09	-0.11
	12.19	0.00	240	1b	1.09	17.06	0.63
0.9D - 1.0Ev + 1.0Eh 330°	12.19	0.00	0	1	0.00	21.49	-1.62
	12.19	0.00	120	1a	0.07	0.53	-0.04
	12.19	0.00	240	1b	0.67	11.01	0.38
1.0D + 1.0W Service Normal	12.19	0.00	0	1	0.00	66.27	-6.22
	12.19	0.00	120	1a	1.35	-13.62	-1.23
	12.19	0.00	240	1b	-1.35	-13.62	-1.23
1.0D + 1.0W Service 60°	12.19	0.00	0	1	-0.36	38.37	-3.40
	12.19	0.00	120	1a	-3.12	38.32	1.39
	12.19	0.00	240	1b	-3.59	-37.66	-2.07
1.0D + 1.0W Service 90°	12.19	0.00	0	1	-0.42	13.01	-0.89
	12.19	0.00	120	1a	-4.70	57.43	2.47
	12.19	0.00	240	1b	-3.17	-31.41	-1.58
1.0D + 1.0W Service 120°	12.19	0.00	0	1	-0.40	-13.62	1.78
	12.19	0.00	120	1a	-5.39	66.22	3.11
	12.19	0.00	240	1b	-1.74	-13.57	-0.55
1.0D + 1.0W Service 180°	12.19	0.00	0	1	0.00	-37.71	4.14
	12.19	0.00	120	1a	-2.77	38.37	2.01
	12.19	0.00	240	1b	2.77	38.37	2.01
1.0D + 1.0W Service 210°	12.19	0.00	0	1	0.21	-31.47	3.54
	12.19	0.00	120	1a	-0.56	13.04	0.81
	12.19	0.00	240	1b	4.49	57.46	2.83
1.0D + 1.0W Service 240°	12.19	0.00	0	1	0.40	-13.62	1.78
	12.19	0.00	120	1a	1.74	-13.57	-0.55
	12.19	0.00	240	1b	5.39	66.22	3.11
1.0D + 1.0W Service 300°	12.19	0.00	0	1	0.36	38.37	-3.40
	12.19	0.00	120	1a	3.59	-37.66	-2.07
	12.19	0.00	240	1b	3.12	38.32	1.39
1.0D + 1.0W Service 330°	12.19	0.00	0	1	0.21	57.49	-5.31
	12.19	0.00	120	1a	2.96	-31.44	-1.95
	12.19	0.00	240	1b	0.98	12.98	0.08
1.2D + 1.0Ev + 1.5Eh Normal	12.19	0.00	0	1	0.00	34.10	-2.59
	12.19	0.00	120	1a	-0.31	6.49	0.17
	12.19	0.00	240	1b	0.31	6.49	0.17
1.2D + 1.0Ev + 1.5Eh 60°	12.19	0.00	0	1	-0.01	24.90	-1.84
	12.19	0.00	120	1a	-1.60	24.90	0.91
	12.19	0.00	240	1b	-0.34	-2.71	-0.20
1.2D + 1.0Ev + 1.5Eh 90°	12.19	0.00	0	1	-0.01	15.69	-1.10
	12.19	0.00	120	1a	-2.07	31.63	1.19
	12.19	0.00	240	1b	-0.17	-0.25	-0.09
1.2D + 1.0Ev + 1.5Eh 120°	12.19	0.00	0	1	-0.01	6.49	-0.35
	12.19	0.00	120	1a	-2.24	34.10	1.29
	12.19	0.00	240	1b	0.30	6.49	0.18
1.2D + 1.0Ev + 1.5Eh 180°	12.19	0.00	0	1	0.00	-2.71	0.40
	12.19	0.00	120	1a	-1.59	24.90	0.93
	12.19	0.00	240	1b	1.59	24.90	0.93

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					FX* (kip)	FY* (kip)	FZ* (kip)
1.2D + 1.0Ev + 1.5Eh 210°	12.19	0.00	0	1	0.00	-0.25	0.20
	12.19	0.00	120	1a	-0.95	15.69	0.55
	12.19	0.00	240	1b	2.06	31.63	1.20
1.2D + 1.0Ev + 1.5Eh 240°	12.19	0.00	0	1	0.01	6.49	-0.35
	12.19	0.00	120	1a	-0.30	6.49	0.18
	12.19	0.00	240	1b	2.24	34.10	1.29
1.2D + 1.0Ev + 1.5Eh 300°	12.19	0.00	0	1	0.01	24.90	-1.84
	12.19	0.00	120	1a	0.34	-2.71	-0.20
	12.19	0.00	240	1b	1.60	24.90	0.91
1.2D + 1.0Ev + 1.5Eh 330°	12.19	0.00	0	1	0.00	31.63	-2.39
	12.19	0.00	120	1a	0.17	-0.25	-0.10
	12.19	0.00	240	1b	0.95	15.69	0.54
0.9D - 1.0Ev + 1.5Eh Normal	12.19	0.00	0	1	0.00	29.37	-2.26
	12.19	0.00	120	1a	-0.02	1.83	0.01
	12.19	0.00	240	1b	0.02	1.83	0.01
0.9D - 1.0Ev + 1.5Eh 60°	12.19	0.00	0	1	-0.01	20.19	-1.51
	12.19	0.00	120	1a	-1.31	20.19	0.75
	12.19	0.00	240	1b	-0.62	-7.35	-0.36
0.9D - 1.0Ev + 1.5Eh 90°	12.19	0.00	0	1	-0.01	11.01	-0.77
	12.19	0.00	120	1a	-1.79	26.91	1.03
	12.19	0.00	240	1b	-0.45	-4.89	-0.26
0.9D - 1.0Ev + 1.5Eh 120°	12.19	0.00	0	1	-0.01	1.83	-0.02
	12.19	0.00	120	1a	-1.96	29.37	1.13
	12.19	0.00	240	1b	0.02	1.83	0.02
0.9D - 1.0Ev + 1.5Eh 180°	12.19	0.00	0	1	0.00	-7.35	0.72
	12.19	0.00	120	1a	-1.31	20.19	0.76
	12.19	0.00	240	1b	1.31	20.19	0.76
0.9D - 1.0Ev + 1.5Eh 210°	12.19	0.00	0	1	0.00	-4.89	0.52
	12.19	0.00	120	1a	-0.66	11.01	0.39
	12.19	0.00	240	1b	1.78	26.91	1.03
0.9D - 1.0Ev + 1.5Eh 240°	12.19	0.00	0	1	0.01	1.83	-0.02
	12.19	0.00	120	1a	-0.02	1.83	0.02
	12.19	0.00	240	1b	1.96	29.37	1.13
0.9D - 1.0Ev + 1.5Eh 300°	12.19	0.00	0	1	0.01	20.19	-1.51
	12.19	0.00	120	1a	0.62	-7.35	-0.36
	12.19	0.00	240	1b	1.31	20.19	0.75
0.9D - 1.0Ev + 1.5Eh 330°	12.19	0.00	0	1	0.00	26.91	-2.06
	12.19	0.00	120	1a	0.45	-4.89	-0.26
	12.19	0.00	240	1b	0.67	11.01	0.38

ASSET: 370535, Penrose
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA797712_C3_01

MAXIMUM REACTIONS SUMMARY

	<u>Individual</u>	<u>Individual w/ Overstrength</u>	<u>Global (DL+WL+IL)</u>	<u>Global (DL+WL)</u>
Max Uplift:	143.76	143.76	Moment Ice: 1036.08 (kip-ft)	Moment: 2994.47 (kip-ft)
Max Down:	179.33	179.33	Total Down Ice: 53.27 (kip)	Total Down: 46.84 (kip)
Max Shear:	17.29	17.29	Total Shear Ice: 9.37 (kip)	Total Shear: 26.4 (kip)
	1.2D + 1.0W Normal			

SIXTH AMENDMENT TO AGREEMENT

This Sixth Amendment (the “***Sixth Amendment***”) to that certain Sublease Agreement dated June 14, 2002, by and between Titan Towers, L.P. and AT&T Wireless PCS, LLC (as amended, the “***Agreement***”), is made and entered into as of the latter signature date hereof, by and between GTP Acquisition Partners II, LLC, a Delaware limited liability company, as successor-in-interest to the Agreement (“***American Tower***”) and New Cingular Wireless PCS, LLC, a Delaware limited liability company, as successor-in-interest to the Agreement (“***AT&T***”).

RECITALS

WHEREAS, pursuant to Section 3(A)(ii) of that certain Site License Modification Agreement dated August 29, 2019 (the “***2019 SLMA***”), AT&T’s Real Estate Rights applicable to this Agreement were modified effective January 1, 2024;

WHEREAS, American Tower and AT&T desire to affirm AT&T’s Real Estate Rights effective January 1, 2024 applicable to this Agreement; and

WHEREAS, AT&T desires to modify its equipment and/or ground space at the Tower Facility described below.

NOW, THEREFORE, for and in consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree to reaffirm AT&T’s Tower Facilities Real Estate Rights as follows:

1. **Tower Facility**. The Agreement being amended by this Sixth Amendment is for the Tower Facility identified below:

American Tower Site Name / Number: Penrose / 370535
AT&T Site Name / Number: TITAN 3 / WSUTH0038393

2. **Real Estate Rights Effective January 1, 2024**. Notwithstanding anything to the contrary in the Agreement and in accordance with Section 3(A)(ii) of the 2019 SLMA, American Tower and AT&T hereby agree that AT&T’s Real Estate Rights effective January 1, 2024 for Wind Load Surface Area, Cabling, and ground space applicable to this Agreement are as follows:

Real Estate Rights Summary:	Total(s):
Wind Load Surface Area (sq. in.):	26,764.69
Cables (sq. in.):	14.49
Ground Space (sq. ft.):	336.00

3. **Modification to Equipment**. Notwithstanding anything to the contrary in the Agreement, AT&T’s current licensed equipment configuration and ground space under the Agreement is hereby modified to be as set forth on Exhibit 2-F attached hereto. The respective amount of Wind Load Surface Area, Cabling, and ground space applicable to the permitted equipment described in Exhibit 2-F of this Sixth Amendment are as follows:

Sixth Amendment Application Equipment Summary:	Total(s):
Wind Load Surface Area (sq. in.):	19,199.31
Cables (sq. in.):	11.70
Ground Space (sq. ft.):	336.00

American Tower Contract No.: GTP1600
AT&T Fixed Asset No.: 10093564

4. License Fee Increase. There shall be no increase to the License Fee associated with this Sixth Amendment.

5. Full Force and Effect. All terms and conditions set forth in the Agreement shall continue in full force and effect unless specifically modified herein.

6. Capitalized Terms. Capitalized terms contained herein, unless otherwise defined, are intended to have the same meaning and effect as set forth in the Agreement.

[SIGNATURES ON FOLLOWING PAGE]

American Tower Contract No.: GTP1600
AT&T Fixed Asset No.: 10093564

IN WITNESS WHEREOF, American Tower and AT&T have caused this Sixth Amendment to be executed by their duly authorized representatives as of the day and year written below.

AMERICAN TOWER:

GTP Acquisition Partners II, LLC,
a Delaware limited liability company

DocuSigned by:
By: Leah Barton
7463239C997C421...
Name: Leah Barton
Title: Senior Counsel, US Tower
Date: June 4, 2025

AT&T:

New Cingular Wireless PCS, LLC,
a Delaware limited liability company

By: AT&T Mobility Corporation
Its: Manager

Signed by:
By: Ashwani Goel
03357F7315E0426...
Name: Ashwani Goel
Title: Director of Engineering
Date: June 4, 2025

Initial
UB

American Tower Contract No.: GTP1600
AT&T Fixed Asset No.: 10093564

EXHIBIT 2-F

Exhibit 2-F**Customer Name:**
AT&T MOBILITY**ATC Asset Name:**
Penrose**ATC Asset #:**
370535**Customer Site Name:**
TITAN 3**Customer Site #:**
WSUTH0038393**GROUND SPACE REQUIREMENTS**

Total Lease Area Sq.Ft: 336.00	Primary Contiguous Lease Area	L: 12.00'	W: 28.00'	H:	Sq.Ft: 336.00
	Concrete Pad	7.00'	12.00'	N/A	84.00
	Concrete Pad	4.00'	7.00'	N/A	28.00
	Outside Primary Lease Area	N/A	N/A	N/A	Sq.Ft: N/A

BACKUP POWER REQUIREMENTS

Generator: N/A **Fuel Tank Size (gal):** N/A **Fuel Type:** N/A **Fuel Tank Setback (radius):** N/A

UTILITY REQUIREMENTS**Power Provided By:** Utility Company Direct**Telco/Interconnect:** N/A**TRANSMITTER & RECEIVER SPECIFICATIONS**

Type: N/A **Quantity:** N/A **TX Power (watts):** N/A **ERP Power (watts):** N/A

EQUIPMENT SPECIFICATIONS

Type	PANEL	PANEL	PANEL	BOB/SSB	BOB/SSB	RRU/RRH
Manufacturer	Ericsson	Kathrein Scala	Kathrein Scala	Raycap	Raycap	Ericsson
Model #	AIR 6419 B77D/ C-Band	80010992V01	80010992K	DC6-48-60-18-8F (20.1" Height)	DC6-48-60-18-8F (20.1" Height)	Radio 4490HP 44B5 44B12A C
Dimensions HxWxD	28.3" x 16.1" x 7.3"	105.2" x 20" x 6.9"	105.2" x 20" x 6.9"	20.1" x 18.2" x 6.4"	20.1" x 18.2" x 6.4"	17.5" x 15.1" x 6.8"
Weight (lbs.)	64.0	130.1	133.4	16.0	16.0	68.3
Location	Tower	Tower	Tower	Tower	Tower	Tower
RAD Center AGL	197.8'	195.0'	195.0'	195.0'	195.0'	195.0'
Tip Height	199.0'	199.4'	199.4'	195.8'	195.8'	195.7'
Base Height	196.6'	190.6'	190.6'	194.2'	194.2'	194.3'
Mount Type	T-Arm	T-Arm	T-Arm	T-Arm	T-Arm	T-Arm
Quantity	3	3	3	2	2	3
Azimuths/Dir. of Radiation	40/140/240	40/140/240	40/140/240	240	40/140	40/140/240
Quant. Per Azimuth/Sector	1/1/1	1/1/1	1/1/1	2	1/1	1/1/1
TX/RX Frequency Units	GHz	MHz	MHz	N/A	N/A	MHz
TX Frequency	3860-3880,3880-3900,3900-3920,3920-3940,3470-3480,3480-3490,3490-3500,3500-3510	704-710,734-740,710-716,740-746,758-768,788-798,1850-1865,1930-1945,1865-1870,1945-1950	704-710,734-740,710-716,740-746,758-768,788-798,1850-1865,1930-1945,1865-1870,1945-1950	N/A	N/A	704-710,734-740,710-716,740-746,758-768,788-798,1850-1865,1930-1945,1865-1870,1945-1950
RX Frequency	3860-3880,3880-3900,3900-3920,3920-3940,3470-3480,3480-3490,3490-3500,3500-3510	704-710,734-740,710-716,740-746,758-768,788-798,1850-1865,1930-1945,1865-1870,1945-1950	704-710,734-740,710-716,740-746,758-768,788-798,1850-1865,1930-1945,1865-1870,1945-1950	N/A	N/A	704-710,734-740,710-716,740-746,758-768,788-798,1850-1865,1930-1945,1865-1870,1945-1950
Using Unlicensed Frequencies?	No	No	No	No	No	No
Antenna Gain	N/A	16.5 / 17.5	N/A	N/A	N/A	N/A
Total # of Lines	N/A	N/A	N/A	1	2	4

Individual Line Configuration	N/A	N/A	N/A	N/A	Qty: 1 Type: Control Cable Diameter: 0.92" (23.4 mm) Cable Azimuth/Sector: 0/1 Qty: 1 Type: Fiber/Hybrid Diameter: 0.39" (10mm) Fiber Trunk Azimuth/Sector: 1/0	Qty: 4 Type: Control Cable Diameter: 0.78" (19.7 mm) 8 AWG 6 Azimuth/Sector: 2/2/0
Conduit Configuration	N/A	N/A	N/A	Qty: 1 Type: 2" conduit containing: 2-Control Cable; 0.78" (19.7mm) 8 AWG 6 1-Fiber/Hybrid; 0.39" (10mm) Fiber Trunk Azimuth/Sector: 1	N/A	N/A

EQUIPMENT SPECIFICATIONS						
Type	RRU/RRH	RRU/RRH	PANEL	N/A	N/A	N/A
Manufacturer	Ericsson	Ericsson	Ericsson	N/A	N/A	N/A
Model #	Radio 4494 44B14 20B29 M01	Radio 4890HP 48B2/B25 48B66 M01 (67.2 lbs)	AIR 6419 B77G	N/A	N/A	N/A
Dimensions HxWxD	17.5" x 15.1" x 5.6"	17.5" x 15.1" x 6.9"	28.3" x 16.1" x 7.9"	N/A	N/A	N/A
Weight (lbs.)	57.3	67.2	66.1	N/A	N/A	N/A
Location	Tower	Tower	Tower	N/A	N/A	N/A
RAD Center AGL	195.0'	195.0'	194.0'	N/A	N/A	N/A
Tip Height	195.7'	195.7'	195.2'	N/A	N/A	N/A
Base Height	194.3'	194.3'	192.8'	N/A	N/A	N/A
Mount Type	T-Arm	T-Arm	T-Arm	N/A	N/A	N/A
Quantity	3	3	3	N/A	N/A	N/A
Azimuths/Dir. of Radiation	40/140/240	40/140/240	40/140/240	N/A	N/A	N/A
Quant. Per Azimuth/Sector	1/1/1	1/1/1	1/1/1	N/A	N/A	N/A
TX/RX Frequency Units	MHz	N/A	GHz	N/A	N/A	N/A
TX Frequency	704-710,734- 740,710-716,740- 746,758-768,788- 798,1850- 1865,1930- 1945,1865- 1870,1945-1950	704-710,734- 740,710-716,740- 746,758-768,788- 798,1850- 1865,1930- 1945,1865- 1870,1945-1950	3860-3880,3880- 3900,3900- 3920,3920- 3940,3470- 3480,3480- 3490,3490- 3500,3500-3510	N/A	N/A	N/A
RX Frequency	704-710,734- 740,710-716,740- 746,758-768,788- 798,1850- 1865,1930- 1945,1865- 1870,1945-1950	704-710,734- 740,710-716,740- 746,758-768,788- 798,1850- 1865,1930- 1945,1865- 1870,1945-1950	3860-3880,3880- 3900,3900- 3920,3920- 3940,3470- 3480,3480- 3490,3490- 3500,3500-3510	N/A	N/A	N/A
Using Unlicensed Frequencies?	No	No	No	N/A	N/A	N/A
Antenna Gain	N/A	N/A	N/A	N/A	N/A	N/A
Total # of Lines	1	1	N/A	N/A	N/A	N/A
Individual Line Configuration	N/A	Qty: 1 Type: Control Cable Diameter: 3/8" (0.38" - 9.5mm) RET Control Cable Azimuth/Sector: 1/0/0	N/A	N/A	N/A	N/A
Conduit Configuration	Qty: 1 Type: 2" conduit containing: 1-Fiber/Hybrid; 0.39" (10mm) Fiber Trunk Azimuth/Sector: 1/0/0	N/A	N/A	N/A	N/A	N/A