INTRODUCED: March 13, 2023

AN ORDINANCE No. 2023-091

To amend and reordain Ord. No. 97-370-351, adopted Dec. 15, 1997, which authorized the property known as 701 German School Road for the purpose of authorizing an existing radio broadcast studio and office tower and the replacement of an existing telecommunications tower with a new tower of increased height, to remove the limitation on the number of permitted wireless communications providers, upon certain terms and conditions. (9th District)

Patron – Mayor Stoney (By Request)

Approved as to form and legality
by the City Attorney

PUBLIC HEARING: APRIL 10 2023 AT 6 P.M.

I. That Ordinance No. 97-370-351, adopted December 15, 1997, be and is hereby amended and reordained as follows:

§ 1. That the [~~real estate,~~] property known as 701 German School Road, located on the east side of German School Road between Seaman and Deter Roads, identified as Parcel No. C005-00753/036 in the [~~1997~~] 2023 records of the City Assessor, being more completely described as follows: beginning at a point which is the northeast comer of Lot 1, Block A, Westover Woods, and also the southeast corner of Lot 40, Norwood Park, thence along a property line S 89° 33’ 53” W a distance of 657.40 feet to a point; thence along a property line

AYES:	9	NOES:	0	ABSTAIN:	
ADOPTED:	APR 10 2023	REJECTED:		STRICKEN:	

S 44° 59’ 20” W a distance of 250.18 feet to a point; thence along a property line S 76° 25’ 43” W a distance of 101.24 feet to a point; thence along a property line S 44° 52’ 39” W a distance of 251.25 feet to a point on the north line of German School Road; thence along said right of way line N 44° 56’ 37” W a distance of 593.15 feet to a point; thence along a property line N 44° 57’ 10” E a distance of 189.81 feet to a point; thence along a property line N 45° 29’ 48” W a distance of 119.18 feet to a point; thence along a property line N 44° 48’ 51” E a distance of 637.91 feet to a point; thence along a property line S 47° 47’ 05” E a distance of 565.38 feet to a point; thence along a property line S 61° 53 o2” E a distance of 693.26 feet to the point of beginning, is hereby permitted to be used for the purpose of the continued use of the existing radio broadcast studio and office on the premises, and the replacement of the existing telecommunications tower on the premises with a new tower with additional height, substantially as shown on the survey entitled “Survey of 15.8452 Acres with Improvements Thereon & Proposed New Building & New Antenna Tower Location for the Exclusive Use of David Gee and for Obtaining City Approval on the Proposed New Structures on the Property of J. D. Keatley. Richmond, Virginia”, and as shown on the site plan entitled “Site Plan for Special Use Permit”, with such survey and site plan prepared by A. G. Harocopos & Associates P. C. and dated April 2, 1997 and May 7, 1997 respectively, copies of which are attached to and made a part of [~~this ordinance~~] Ordinance No. 97-370-351, adopted December 15, 1997.

§ 2. That adoption of this ordinance shall constitute the granting of a special use permit for the real estate, which shall be transferable from the owner of the real estate to the successor or successors in fee simple title of the owner, whether acquired by operation of law, deed, or otherwise, and shall run with the land.

§ 3. That the Commissioner of Buildings is hereby authorized to issue to the owner of said real estate a building permit and/or certificate of occupancy for such purposes, subject to the following terms and conditions:

(a) That the owner of the property shall be bound by, observe, and shall comply with all other laws, ordinances and rules and regulations adopted pursuant thereto, applicable to the land and building, except as otherwise provided in this ordinance;

(b) That application for a certificate of occupancy (or certificate of zoning compliance, as may be required) for the existing radio broadcast studio and office, and the existing telecommunications tower, shall be made within [~~twelve (12)~~] 12 months of the effective date of [~~this ordinance~~] Ordinance No. 97-370-351, adopted December 15, 1997, the privileges granted by this ordinance shall terminate and the special use permit shall become null and void.

(c) The application for a building permit for the replacement of the existing telecommunications tower shall be made within [~~twenty-four (24)~~] 24 months from the effective date of [~~this ordinance~~] Ordinance No. 97-370-351, adopted December 15, 1997, which building permit shall expire by limitation and become null and void if construction is not commenced within [~~one hundred eighty (180)~~] 180 days from the date of the building permit, or if construction is suspended or abandoned for a period of [~~one hundred eighty days (180)~~] 180 days at any time after work is commenced, as provided in the applicable provisions of the Virginia Uniform Statewide Building Code. Should application for the building permit not be made within [~~twenty-four (24)~~] 24 months from the effective date of the ordinance granting the special use permit, or should the building permit expire and become null and void after the expiration of the [~~twenty-four (24) month~~] 24-month time period for making application for the building permit, the privileges granted

by this ordinance with respect to the replacement of the existing telecommunications tower shall terminate and this special use permit for such replacement shall become null and void.

(d) That the radio broadcast studio and office use of the property shall be limited to the floor area depicted on the [~~attached~~] floor plan attached to Ordinance No. 97-370-351, adopted December 15, 1997, provided that an addition of up to [~~one thousand, four hundred (1,400)~~] 1,400 square feet of floor area, with an exterior matching the exterior materials of the existing building, may be constructed at the rear of the existing building. The existing telecommunications tower serving such radio broadcast studio, with a maximum height of [~~three hundred seventy (370)~~] 370 feet and containing an accessory radio broadcast antenna(s), may remain. Ground-mounted accessory satellite dish antennas of up to [~~twelve (12)~~] 12 feet in diameter shall also be permitted for the radio broadcast studio, with any such antenna located within the enclosure depicted on the attached plans. The enclosure for satellite dish antennas shall consist of a minimum six [~~(6)~~] foot high board fence, with evergreen shrubbery planted on the exterior of the fenced enclosure at six [~~(6)~~] feet on center with a minimum plant height of four and one-half [~~(4 1/2)~~] feet. Any accessory antenna necessary for the operations of the single radio station operated on the premises shall be permitted on the tower. Nonaccessory antennas shall also be permitted, as follows: [~~up to three (3)~~] cellular or pcs antenna arrays, which may include panel antennas or whip antennas, may be installed on the tower, provided that no such array extends more than three [~~(3)~~] feet from the side of the tower; dish antennas less than three and one-half [~~(3 1/2)~~] feet in diameter, extending no more than four [~~(4)~~] feet from the side of the tower, may be installed on the tower; up to eight [~~(8)~~] dish antennas with a diameter greater than three and one-half [~~(3 1/2)~~] feet but with a maximum diameter of eight [~~(8)~~] feet, extending no more than six [~~(6)~~] feet from the side of the tower, may be installed on the tower; and up to

[~~twenty (20)~~] 20 whip antennas may be installed on the tower, provided that no such whip antenna is mounted so as to be more than four [~~(4)~~] feet away from the side of the tower. Of the permitted whip antennas, authorization for three [~~(3)~~] of the [~~twenty (20)~~] shall be reserved for use by the City of Richmond.

(e) That a replacement guyed telecommunications tower for both accessory and nonaccessory antennas, may be constructed on the premises, substantially as depicted on the [~~attached~~] plans attached to Ordinance No. 97-370-351, adopted December 15, 1997. Such replacement tower, together with any antenna mounted thereon, shall not exceed a height of [~~five hundred (500)~~] 500 feet. Permitted antennas for the replacement tower shall be as specified for the existing tower in (d), above, plus one additional antenna serving an FM radio station. The building permit for the replacement tower shall include documentation demonstrating that the tower will be constructed in a manner in which any failure of the tower structure itself or the supporting system of guy wires will not result in the tower structure falling beyond the bounds of the premises. In addition, such documentation shall demonstrate that the tower is designed to safely accommodate a minimum of three [~~(3)~~] cellular and/or pcs antenna arrays, and a minimum of two [~~(2)~~] whip antennas serving City of Richmond wireless communications systems[~~, and a minimum of two [(2)] additional whip antennas, in addition to two [(2)] radio broadcast antennas (one accessory antenna for AM frequencies and one nonaccessory antenna for FM frequencies). The existing tower shall be dismantled and removed from the premises within six [(6)] months of the completion of the construction of the replacement tower~~];

(f) That electrical equipment required for any nonaccessory telecommunications antenna shall be located either within the main building or within the accessory building depicted on the attached plans located at the base of the tower;

(g) That the operator of any telecommunications facility shall adhere to any governmental regulations that state it is the responsibility of the carrier to promptly resolve any electromagnetic interference problems created by the proposed signal source;

(h) That the tower and/or antennas may be painted and/or illuminated as required by any federal and/or state regulation, provided that any light, strobe, or beacon on the tower shall be shielded from view from ground level to the extent permitted by the applicable regulation.

(i) That any antenna located on the telecommunications tower or elsewhere on premises that is not in use for a period of six months or more shall be removed from the premises;

(j) That a reservation for future dedication for public right of way purposes shall extend back from German School Road as depicted on the plans as "30' Proposed New Right of Way Line", and such reservation area, or a portion thereof, shall be dedicated for such purposes upon request of the Director of Public Works;

(k) That a minimum of [~~twenty (20)~~] 20 parking spaces shall be provided substantially as depicted on the [~~attached~~] plans attached to Ordinance No. 97-370-351, adopted December 15, 1997. Such spaces, maneuvering areas, and access aisles shall be paved with an all weather dust free surface, and parking spaces shall be delineated on the pavement surface, and the driveway from German School Road up to a line corresponding to the northern edge of the rear parking area shall be paved with an all weather surface (the driveway from this point to the base of the antenna may be gravel). All driveway entrances shall be in accordance with the requirements of the Director of Public Works;

(l) That in all other respects, the use of the property shall be in accordance with the applicable underlying zoning regulations.

§ 4. [~~That should the owner use the premises for any purpose which is not permitted~~

~~by this ordinance, or fails, refuses or neglects to comply with all applicable terms and conditions, and does not terminate such use or comply with such terms and conditions within sixty (60) days after written notice to do so has been given by the Zoning Administrator, the privileges granted by this ordinance shall terminate and the special use permit shall become null and void, unless an application for a special use amendment is filed with the Director of the Department of Community Development, which shall stay the sixty (60) day period. Failure to comply with the terms and conditions of this ordinance shall constitute a violation of § 32-1080 of the Code of the City of Richmond, 1993, or other applicable provision~~] The privileges granted by this ordinance may be revoked pursuant to the provisions of sections 30-1050.7 through 30-1050.11 of the Code of the City of Richmond (2020), as amended, and all future amendments to such laws. Failure to comply with the terms and conditions of this ordinance shall constitute a violation of section 30-1080 of the Code of the City of Richmond (2020), as amended, and all future amendments to such law, or any other applicable laws or regulations;

§ 5. That when the privileges granted by this ordinance terminate and the special use permit becomes null and void or when the use of the premises is abandoned for a period of [~~twenty-four (24)~~] 24 consecutive months, the use of the [~~real estate~~] property governed thereafter by the zoning regulations prescribed for the district in which the [~~real estate~~] property is then situated.

§ 6. This ordinance shall be in force and effect upon adoption.

II. This amendatory ordinance shall be in force and effect upon adoption.

A TRUE COPY:
TESTE:

City Clerk

RECEIVED
By City Attorney's Office at 10:09 am, Mar 10, 2023
RECEIVED
By CAO Office at 8:25 am, Nov 16, 2022

City of Richmond

900 East Broad Street
2nd Floor of City Hall
Richmond, VA 23219
www.rva.gov

Item Request

File Number: PRE.2022.0451

O & R Request

DATE: November 14, 2022 **EDITION:**1

TO: The Honorable Members of City Council

THROUGH: The Honorable Levar M. Stoney, Mayor (Patron: Mayor, by Request)
(This in no way reflects a recommendation on behalf of the Mayor)

THROUGH: J.E. Lincoln Saunders, Chief Administrative Officer

THROUGH: Sharon L. Ebert, Deputy Chief Administrative Officer for Economic Development and Planning

FROM: Kevin J. Vonck, Director, Department of Planning and Development Review

RE: To amend Ord. 97-370-351 that authorized the property known as 701 German School Road for the purpose of a 500 foot tall telecommunications tower to also allow wireless communications providers, upon certain terms and conditions.

ORD. OR RES. No. ___

PURPOSE: To amend Ord. 97-370-351 that authorized the property known as 701 German School Road for the purpose of a 500 foot tall telecommunications tower to also allow wireless communications providers, upon certain terms and conditions.

REASON: The subject property is located in the R-4 Single-Family Residential District and the existing broadcast tower is a special use authorized by Ordinance 97-370-351. This ordinance limited the number of communications (wireless) antennas to a maximum of three wireless carriers. As there is space and capacity on the tower for more than three wireless carriers, the tower owner wishes to eliminate a maximum number of wireless carriers. Therefore, a Special Use Permit Amendment is requested.

RECOMMENDATION: In accordance with the requirements of the City Charter and the Zoning Ordinance, the City Planning Commission will review this request and make a recommendation to City Council.

BACKGROUND: The 16 acre subject property is located on the east side of German School Road between Seaman and Deter Roads. The property contained a broadcast tower prior to being annexed into the city from Chesterfield County in 1970. It existed as a legally nonconforming use until a special use permit authorizing the replacement of the existing 470 foot tower with a new 500 foot tall tower. The intended use of this tower was for supporting AM and FM radio broadcast antennas. A condition for approval required antenna space for up to three wireless communications providers. The amendment of the special use will not specify a maximum number of wireless carriers. This will allow greater flexibility for the collocation of additional wireless providers and the upgrading of existing wireless carrier antennas.

The Richmond 300 Master Plan recommends Residential uses for the subject property. These neighborhood consist primarily of single-family houses on large- or medium-sized lots more homogeneous in nature.

FISCAL IMPACT / COST: The Department of Planning and Development Review does not anticipate any impact to the City's budget for this or future fiscal years.

FISCAL IMPLICATIONS: The Department of Planning and Development Review does not anticipate any impact to the City's budget for this or future fiscal years.

BUDGET AMENDMENT NECESSARY: None

REVENUE TO CITY: $1,200 application fee

DESIRED EFFECTIVE DATE: Upon Adoption

REQUESTED INTRODUCTION DATE: December 12, 2022

CITY COUNCIL PUBLIC HEARING DATE: January 9, 2023

REQUESTED AGENDA: Consent

RECOMMENDED COUNCIL COMMITTEE: None

CONSIDERATION BY OTHER GOVERNMENTAL ENTITIES: City Planning Commission
January 3, 2023

AFFECTED AGENCIES: Office of Chief Administrative Officer
Law Department (for review of draft ordinance)

RELATIONSHIP TO EXISTING ORD. OR RES.: None

REQUIRED CHANGES TO WORK PROGRAM(S): None

ATTACHMENTS: Draft Ordinance, Application Form, Applicant's Report, Survey, Map

STAFF: David Watson, Senior Planner, Land Use Administration, 804-646-1036

Application for **SPECIAL USE PERMIT**
Department of Planning and Development Review
Land Use Administration Division
900 E. Broad Street, Room 511
Richmond, Virginia 23219
(804) 646-6304
http://www.richmondgov.com/

Application is hereby submitted for: (check one)

- ☐ **special use permit, new**
- ☑ **special use permit, plan amendment**
- ☐ **special use permit, text only amendment**

Project Name/Location

Property Address: 701 German School Road Richmond, VA 23235 Date: 04/07/2022
Tax Map #: C00050753036 Fee:
Total area of affected site in acres: Less than an acre

(See ***page 6*** for fee schedule, please make check payable to the "**City of Richmond**")

Zoning

Current Zoning: R-4

Existing Use: Radio Broadcasting Facility and communication

Proposed Use

(Please include a detailed description of the proposed use in the required applicant's report)
Dish proposes to install panel antennas and radios on existing communication tower without increasing height. Install ground equipment withir
Existing Use: Radio Broadcasting Facility and communications tower

Is this property subject to any previous land use cases?

Yes ☑ No ☐ If Yes, please list the Ordinance Number: 97-370-351
Ordinance only allows for 3 antenna arrays. Dish's installation will total to a 4th antenna array. Request to update SUP lar

Applicant/Contact Person: Justin Nickel
Company: Dewberry on behalf of Dish Wireless
Mailing Address: 2610 Wycliff Road Suite 410
City: Raleigh State: NC Zip Code: 27607
Telephone: (919) 746-9585 Fax: ( )
Email: jnickel@dewberry.com

Property Owner: WXGI Inc
If Business Entity, name and title of authorized signee: David Gee, President

(The person or persons executing or attesting the execution of this Application on behalf of the Company certifies that he or she has or have been duly authorized and empowered to so execute or attest.)

Mailing Address: 1447 Pelican Path
City: The Villages State: FL Zip Code: 32165
Telephone: (804) 683-4758 Fax: ( )
Email: david@davidgee.org

Property Owner Signature:

The names, addresses, telephone numbers and signatures of all owners of the property are required. Please attach additional sheets as needed. If a legal representative signs for a property owner, please attach an executed power of attorney. **Faxed or photocopied signatures will not be accepted.**

NOTE: Please attach the required plans, checklist, and a check for the application fee (see Filing Procedures for special use permits)

The purpose of this additional sheet is to provide the complete language from the application as the PDF version does not allow for complete visibility of applicant's submittal language.

Proposed Use:

(please include a detailed description of the proposed use in the required applicant's report)

Dish proposes to install panel antennas and radios on existing communication tower without increasing height. Install ground equipment within existing leased area.

If Yes, Please list the Ordinance Number: 97-370-351

Ordinance only allows for 3 antenna arrays. Dish's installation will total to a 4th antenna array. Request to update SUP language so as if additional antennas were to be added in the future, approval would be granted via Wireless Plan of Development Approval. In accordance with Title 47 USC1455, this installation will not substantially change the physical dimensions of the existing wireless tower.

Hunter Communications Group, LLC
PO Box 240
Neshanic Station, NJ 08853
Site Manager for WXGI, Inc. Tower 701 German School Road, Richmond, VA

Background and Information on the Tower

The WXGI tower is a 480-foot, heavy duty, guyed radio tower with a 20 foot antenna mast at its top. The overall height above ground level is 500 feet. The tower is used for AM and FM radio broadcasting and wireless communications facilities. It provides important services to the Midlothian Turnpike corridor and surrounding areas of the City.

Since the tower was erected and the Special Use Permit was granted by the City of Richmond, the nature of wireless communications has radically changed. At the time of the construction of the tower there were two dominant wireless carriers in the Richmond market. The number of wireless carriers increased to six and through market consolidation and new entrants the number is now four. Three of the four wireless carriers are on, or are proposed to collocate on, the WXGI tower.

Likewise, major changes have occurred in the broadcasting business. The original broadcaster at the site was WXGI on 950 kHz AM. When the new tower was erected an FM station now owned by Urban One (formerly Radio One) was installed at the top. The FM radio station is WKJS 105.7 “Kiss-FM”.

The AM antenna is a “skirt” antenna consisting of three wires (one on each leg) supported by insulators. The second portion of the AM antenna is buried ground radials extending underground from the base of the tower. By use of a combining device known as a diplexer a second AM station shares skirt antenna. This station is WLES on 590 kHz which broadcasts a religious format.

AM broadcasting lost market share with the proliferation of FM broadcasters. In an effort to maintain viability of AM broadcasters an opportunity was given by the FCC to AM licensees to add FM translators to rebroadcast their signal. Located on the tower are three FM translators:

W219CX 91.7 MHz licensed to CSN International which rebroadcasts KAWZ in a religious format.

W267CB 101.3 MHz licensed to Radio Richmond which rebroadcasts WREJ 990 in a Black Gospel format.

W249CI 97.7 MHz which rebroadcasts WLES religious format.

The FM translators use antennas located on the legs of the tower and do not increase the physical dimensions of the tower. These antennas are barely visible from street level in front of the site.

The current SUP contemplated as many as twenty whip antennas would be installed on the tower for uses such as radio paging, land mobile radio, mobile data and other purposes. The demand for these types of systems has disappeared over the past decade as the advent of the smartphone occurred. There are none of these antennas mounted on the tower.

Flexibility in the use of existing towers to accommodate present and future wireless trends is needed. Services that had not been imagined in the 1990’s are now a part of the global communications infrastructure. Existing and proposed installations on the tower will provide Fifth Generation (5G) wireless broadband services. Wireless carriers periodically replace their antennas on the tower as additional radio frequency spectrum is purchased in FCC auctions. These antennas add capacity to the carrier networks and support the provision of new services. New antennas do not materially increase

the height or width of the tower, in compliance with Public Law 112-96 Feb 12, 2012 (47 USC 1455) the proposed Dish Wireless installation "…does not substantially change the physical dimensions of such tower or base station."

Applicants to collocate on the tower provide to the site manager technical information on the antennas, mounting devices, transmission lines and tower mounted radio equipment. This information is used by a contract structural engineer to perform an analysis on the ability of the tower to support new and existing loads. A copy of the latest analysis performed on July 5,2022 accompanies this information. This analysis includes the proposed Dish Wireless installation as well as modifications to the existing Verizon Wireless installation.

For consistency and maintenance of continuity the same engineering firm, Allpro Consulting Group, Inc. of Dallas, Texas, performs all analyses of new or modified installations on the tower. The July 5, 2022 report indicates that the tower is not overloaded.

THIS IS TO CERTIFY THAT ON 2 APRIL 1997 I MADE AN ACCURATE FIELD SURVEY OF THE PREMISES SHOWN HEREON, THAT ALL IMPROVEMENTS KNOWN OR VISIBLE ARE SHOWN HEREON, THAT THERE ARE NO ENCROACHMENTS BY IMPROVEMENTS EITHER FROM ADJOINING PREMISES OR FROM SUBJECT PREMISES UPON ADJOINING PREMISES. OTHER THAN AS SHOWN HEREON.

A.C. Harocopos, CLS

COMMONWEALTH OF VIRGINIA
A. C. HAROCOPOS
CERTIFICATE NO.
54-17-3M1029
4 2 97
CERTIFIED LAND SURVEYOR

NOTE THIS SURVEY WAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT THEREFORE NECESSARILY INDICATE ALL ENCUMBRANCES ON THE PROPERTY.

NOTE THIS ACREAGE APPEARS TO BE IN FIRM FLOOD ZONE "C" AS SHOWN ON FIRM COMMUNITY PANEL MAP NO. 510129-0015-B.

NOTE THIS PLAT PREPARED FOR THE EXCLUSIVE USE OF

SURVEY OF

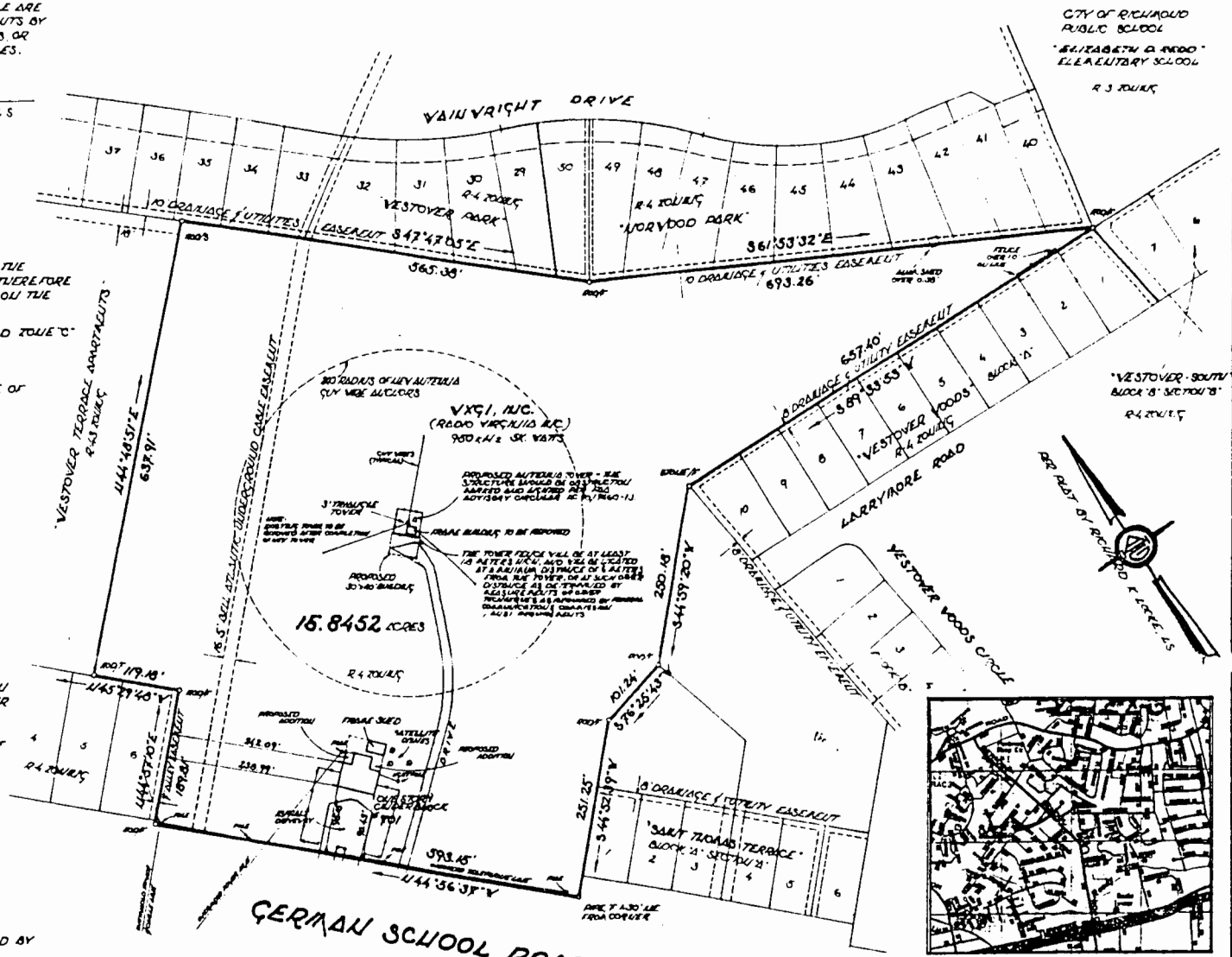
15.8452 ACRES WITH IMPROVEMENTS THEREON & PROPOSED NEW BUILDING & NEW ANTENNA TOWER LOCATION FOR THE EXCLUSIVE USE OF DAVID GEE AND FOR OBTAINING CITY APPROVAL ON THE PROPOSED NEW STRUCTURES ON THE PROPERTY OF J.D. KEATLEY.

RICHMOND, VIRGINIA

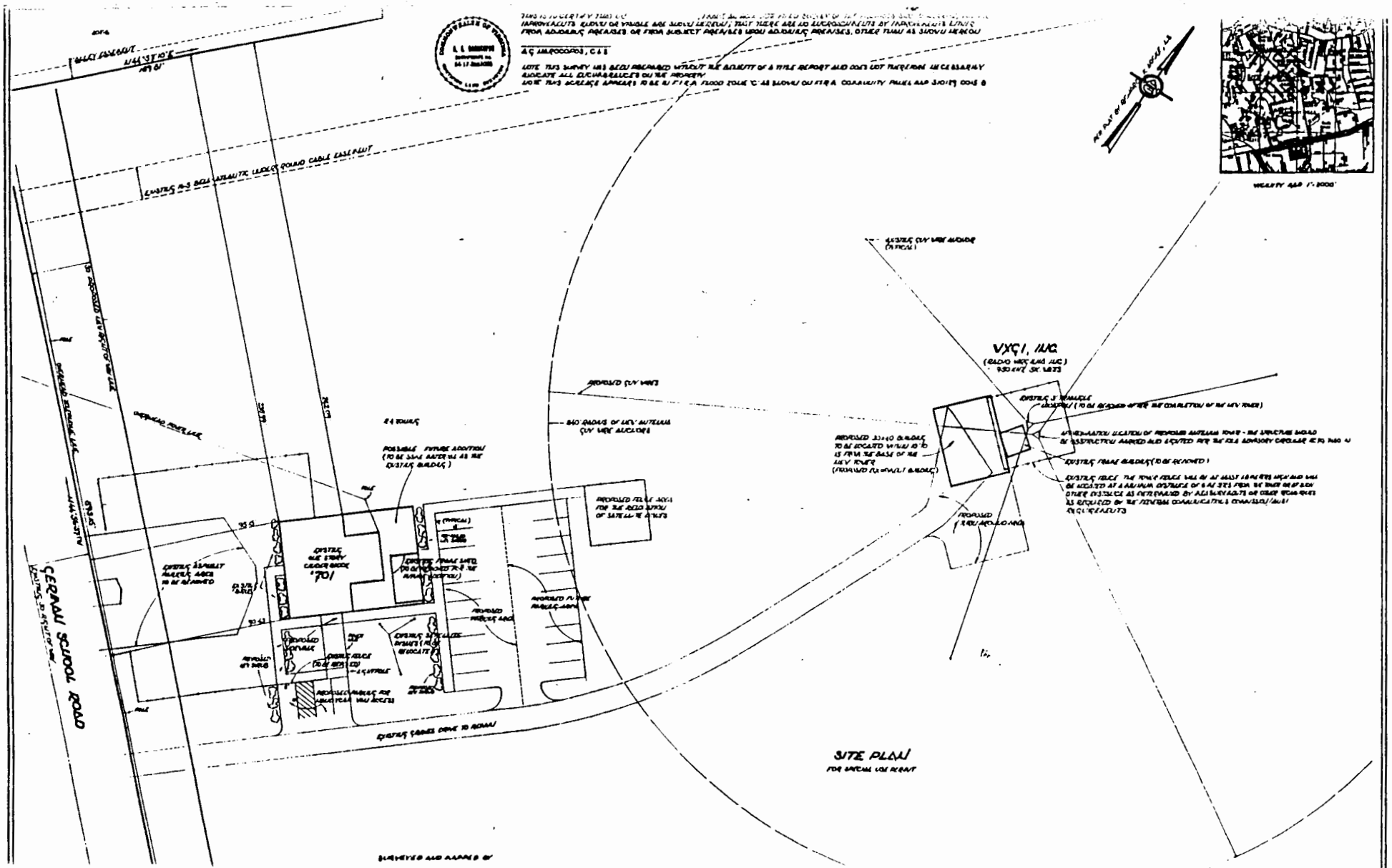
SURVEYED AND MAPPED BY

A.C. HAROCOPOS & ASSOCIATES PC.

RICHMOND, VIRGINIA



VICINITY MAP 1" = 2000'


CERRALL SCHOOL ROAD
SITE PLAN
VXCI, INC.

ALLPRO
CONSULTING GROUP, INC.
9221 Lyndon B. Johnson Freeway, #204, Dallas, TX 75243 ★ PHONE 972-231-8893 ★ FAX 1-866-364-8375
www.allprocgi.com ★ e-mail: info@allprocgi.com

JUL 05, 2022

Mike Hunter
Hunter Communication Group LLC
P O Box 240 Neshanic Station
New Jersey 08853

Ref: *Verizon Site # German School Road*
Site Name: ESPN Radio Tower (WXGI Tower)
Structural Reanalysis of existing 500' guyed tower ***[With proposed Verizon Loading at 130 ']***
701 German School Road, Richmond, VA 23235
ACGI Job # 22-0511
Codes Used: IBC 2018, rev H code, ASCE 7-16
(Ref: Allpro Previous Job #22-0262,dated 01-20-2022)
Wind Speed: 113 mph basic wind speed, 30 mph ice wind speed with 1.5 in. ice cover. Risk Category II, Exposure C.

Dear Mike:
As per your request and authorization we have analyzed the tower located at the above referenced location for the impact of the following loads changes:

Proposed VERIZON LOAD DESCRIPTION					
ELEV (ft.)	***Qty***	***Antenna Description***	***TX. LINE (in)***	***Mount Type***	***Tenant***
134.0±	**3**	**Commscope NHH-65CR2B Antennas**	**(2) 1.55" Hybrid CABLE**	**(3)Andrew SF-SU14-2-126 Sector Mounts**	**VERIZON**
	3	**Commscope NHHSS-65C-R2B Antennas**			
	3	**Samsung MT-6407-77A Antennas**			
127.0±	**3**	**Samsung B13/B5 RFV01U-D2A**			
	3	**Samsung B2/B66 RFV01U-D1A**			
	3	**Samsung CBRS RRH-RT4401-48A**			
	2	Raycap RHSDC-3315-PF-48			

OTHER EXISTING LOAD DESCRIPTION					
ELEV (ft.)	***Qty***	***Antenna Description***	***TX. LINE (in)***	***Mount Type***	***Tenant***
475±-495±	1	LPX-2EHW FM Antenna	(1) 2-1/4" Coax	-	Radio One
430±	1	Shively 6842-2-55 Antenna	(1) 7/8" Coax	-	Delmarva
330±	1	RSI P-9LA72G-U 6' Grid Dish	(1) 7/8" Coax	Pipe Mount	Radio One
293±	1	SWR-FEMC/2-HWS-TA FM Antenna	(1) 7/8" Coax	(1) Stand-off	Radio Richmond
242±	1	BEXT TFC2K FM Antenna	(1) 1/2" Coax	(1) Pipe Mount	Calvary Chapel

ALLPRO
CONSULTING GROUP, INC.
9221 Lyndon B. Johnson Freeway, #204, Dallas, TX 75243 ★ PHONE 972-231-8893 ★ FAX 1-866-364-8375
www.allprocgi.com ★ e-mail: info@allprocgi.com

200'± - 5'±	3	AM Skirt Antenna	-	(2) Side Arms (@ top and @ bottom)	-
215.7±	1	Andrew VHLP1-23 uW Dish	(1) ½" Heliax Coax	Pipe Mount	T-Mobile
204.6±	3	Ericsson AIR 6449 B-41 antenna	(3) 6x12 Hybrid line	(6) perfect vision PV-TF-MB to two legs (6) Schedule 40 pipes vertical (3) 2" Schedule 40 pipe X 80" horizontal	
	3	RFS APXVAALL24_43_U_NA20 antenna			
	3	Radio 4449 B-71 + B-12			
	3	Radio 4415 B-25			
169.29±	3	AIR 32 B66A/B2A	(1) 6x12 Hybrid Cable	(3) Face Mounts	
150±	3	JMA MX08FRO665-21 antennas	(1) 1.75" Hybrid line	Commscope V-Frame (MTC3975083)	Dish Wireless
	3	Fujitsu TAO8025-B605 RRHs			
	3	Fujitsu TAO8025-B604 RRHs			
	1	Raycap RDIDC-9181-PF-48 OVP			

SOURCE OF STRUCTURE DATA/LOADING:

- Existing tower data is as per previous structural report by Allpro Consulting Group, Inc.
  ACGI Job #22-0262, dated 01-20-2022,
  ACGI Job # 21-1601, dated 03/26/2021,
  ACGI Job #19-6300 dated 09/05/2019,
  ACGI Job #19-5389, dated 07/24/2019,
  ACGI Job # 18-6471, dated 10/10/2018,
  ACGI Job # 18-6472, dated 10/10/2018,
  ACGI Job # 07-0344 dated 4/12/07,
  ACGI Job # 09-1091 dated 05/13/09,
  ACGI Job # 10-1557 dated 06/14/2010,
  ACGI Job #10-2726 dated 08/26/2010,
  ACGI Job #12-3873 dated 06/22/12,
  ACGI Job #12-6298, dated 09/04/12,
  ACGI Job #16-2304 dated 7/12/16,
  ACGI Job #16-3670 dated 10/14/2016,
  ACGI Job #16-4558 dated 12/15/2016,
  ACGI Job #17-2138 dated 5/17/2017 and
  ACGI Job#17-4590 dated 08/08/2017.
- Existing loading as per previous structural analysis report by Allpro Consulting Group, Inc.
  ACGI Job # 22-0262, dated 01-20-2022.
- Loading data comments provided by Mike Hunter via email on 01/27/2022.

ALLPRO
CONSULTING GROUP, INC.
9221 Lyndon B. Johnson Freeway, #204, Dallas, TX 75243 ★ PHONE 972-231-8893 ★ FAX 1-866-364-8375
www.allprocgi.com ★ e-mail: info@allprocgi.com

RESULTS:
Based on our structural review the existing tower with the proposed antenna loading is found to be less than 100% making it in code compliance with IBC 2018/ VUSBC 2018 and ANSI/TIA-222-H codes for 113 mph basic wind speed, exposure "C".

TOWER RESULT SUMMARY		
COMPONENT	*% Capacity*	*Pass/Fail*
Top Pole	**56.3 %**	**Pass**
Leg	**76.1 %**	**Pass**
Diagonal	**77.1 %**	**Pass**
Horizontal	**46.4 %**	**Pass**
Girt	**67.3 %**	**Pass**
Guys	**82.8 %**	**Pass**
Torque Arm	**31.8 %**	**Pass**
Bolts	**50.7 %**	**Pass**
FOUNDATION RESULT SUMMARY		
No original tower foundation data was made available to ACGI at the time of this report. It is recommended to locate the original foundation data along with the original soil data to evaluate the actual capacity of the foundation. However, the foundation is estimated to be acceptable based on the tower member loads and stresses.		

RESULT SUMMARY FOR TILT/TWIST FOR MW DISHES (Service Wind)		
Existing RSI P-9LA72G-U 6' Grid Dish @330'	**Tilt (deg.)**	**Twist (deg.)**
	0.1181	**0.4667**
VHLP1-23	**0.0478**	**0.2068**

Note: It is responsibility of the carrier to choose the adequate frequency of the existing dishes being installed on the tower to meet the tilt/twist requirements.

ASSUMPTIONS: This analysis was completed based on the following assumptions:

- Tower has been properly maintained
- Tower erection was in accordance to manufacturer drawings
- Leg flanges have been properly designed by manufacturer to not be a limiting reaction
- Welds have been properly designed and installed by manufacturer to not be a limiting reaction
- Foundation was constructed in accordance to manufacturer drawings
- Foundation does not have structural damage
- Bolts have been properly tightened according to manufacturer specifications
- Appurtenance, mount and transmission line sizes and weights are best estimates using the tnxTower database and manufacturer information

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DISCLAIMER: This analysis assumes that all structural members are in good condition and free of any defects and that the existing structure was designed in accordance to governing code requirements. An analysis of any new mounts is not the scope of work for this report. All antenna installation is to be performed by a contractor who is experienced in similar work. The scope of this analysis does not include the loads induced during installation. All installation loads and procedures are the responsibility of the contractor.

The contractor should verify all field dimensions and fits before fabrication.

Climbers should not latch or tie their support lanyard or gear on to antennas, radios, epoxied or glued mounts etc without proper evaluation. They should only tie to their support lanyards or gear to or attach to Tower structural members that have visible bolting and connection to the larger structure.

Notify Allpro Consulting Group, Inc. of any potential physical & other interference with existing antennas for a redesign.

Please contact us if additional clarifications are needed

Sincerely,

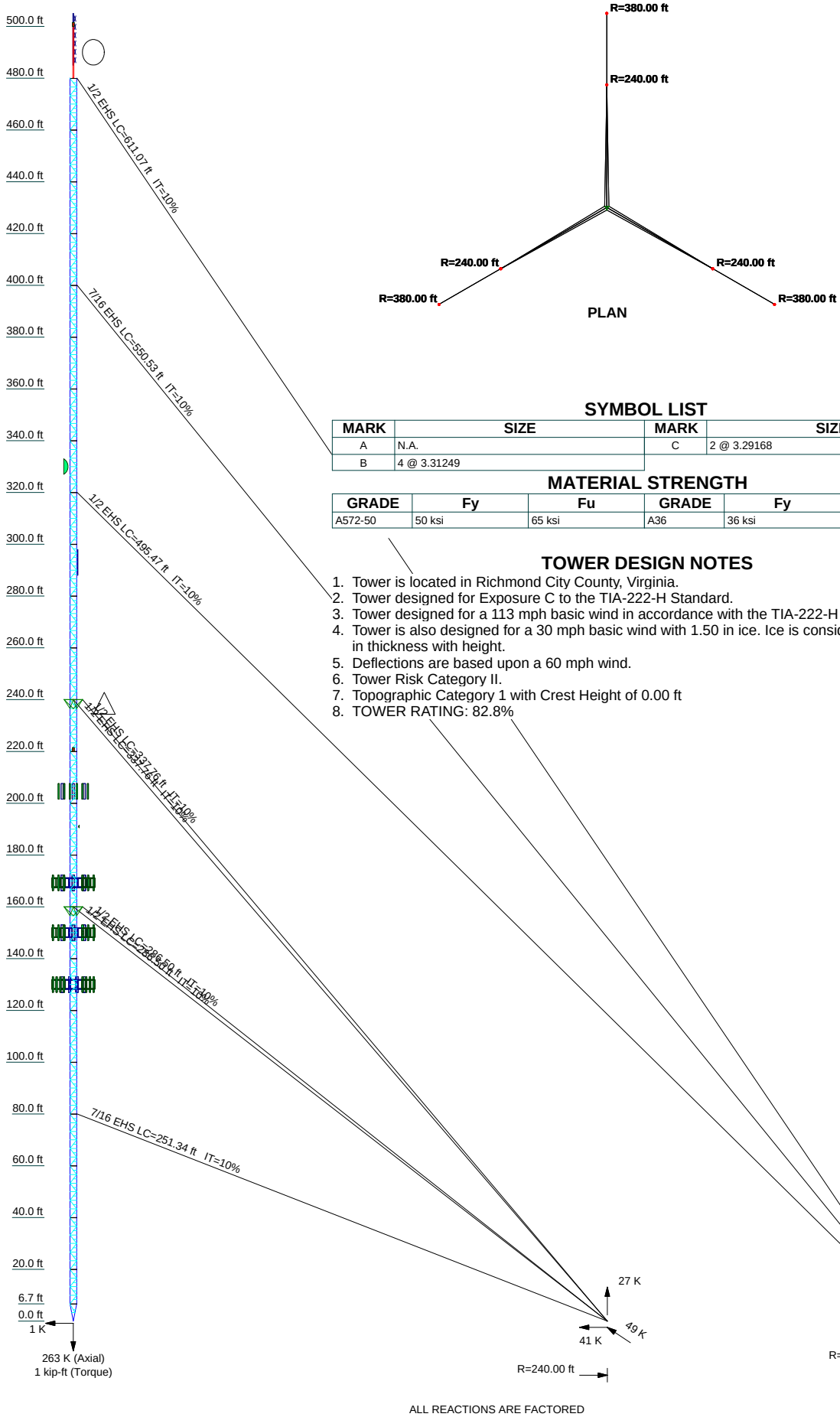
Suraj Perabathula, E.I.T.

Attachment:
1) TNX Tower Printout

Approved by,
Chiyu Zhang, P.E.
VA PE # 060325

PASS: ✓(82.8 %)
FAIL

Section	T25	T24	T23	T22	T21	T20	T19	T18	T17	T16	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1	L1
Legs						SR 2 1/4						SR 2								SR 1 3/4						P6x.28
Leg Grade														A572-50												A36
Diagonals					SR 1						SR 1 1/4									SR 1						N.A.
Diagonal Grade														A36												N.A.
Top Girts														SR 3/4												N.A.
Bottom Girts		A												SR 3/4												N.A.
Horizontals														SR 3/4												N.A.
Sec. Horizontals														SR 5/8												N.A.
Face Width (ft)																									3 @ 0.552083	
# Panels @ (ft)		C	B						72 @ 3.31944											66 @ 3.33333						N.A.
Weight (K)	25.8	0.3	0.8	1.2	1.2	1.2	1.2	1.2	1.6	1.3	1.1	1.1	1.4	1.1	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.4



SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	N.A.	C	2 @ 3.29168
B	4 @ 3.31249		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Richmond City County, Virginia.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 113 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 30 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 82.8%

ALL REACTIONS ARE FACTORED

ALL PRO Consulting Group, INC.
9221 Lyndon B Johnson Freeway, Suite 204
Dallas, TX 75243
Phone: 972-231-8893
FAX: 866-364-8375

Job: **22-0511**			
Project: ***WXGI Tower***			
Client: Hunter Communications Group LLC	Drawn by: sPerabathula	App'd:	
Code: TIA-222-H	Date: 07/05/22	Scale: NTS	
Path:		Dwg No. E-1	

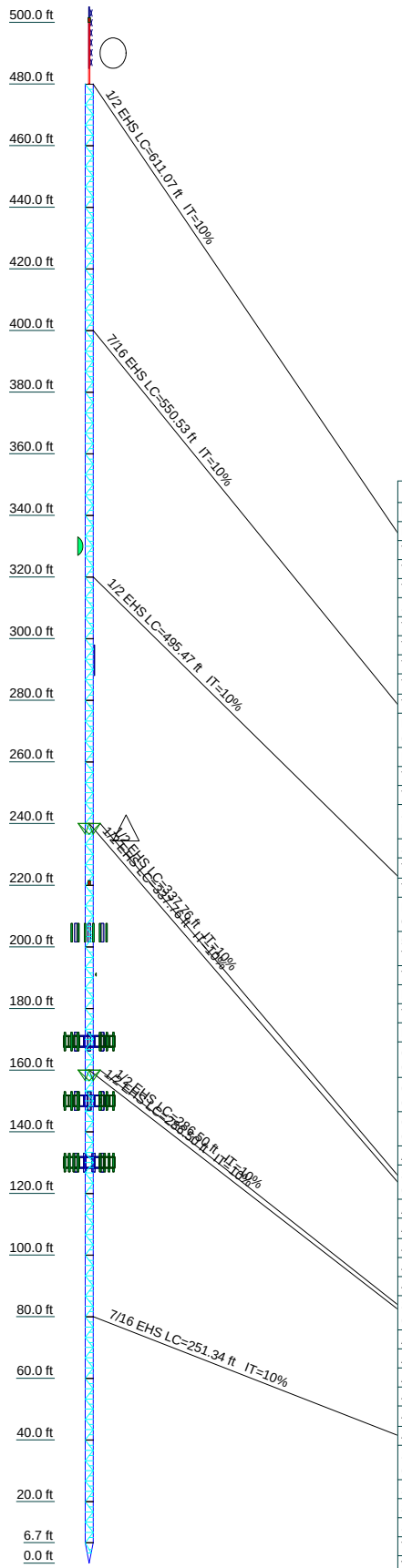
Section																									
Legs																									P6x.28
Leg Grade																									A36
Diagonals																									N.A.
Diagonal Grade																									N.A.
Top Girts																									N.A.
Bottom Girts																								A	N.A.
Horizontals																									N.A.
Sec. Horizontals																									N.A.
Face Width (ft)																									3 0.552083
# Panels @ (ft)																								C	B
Weight (K)	25.8	0.3	0.8	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.1	1.1	1.4	1.1	1.2	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.4
	L1	T24	T23	T22	T21	T20	T19	T18	T17	T16	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1

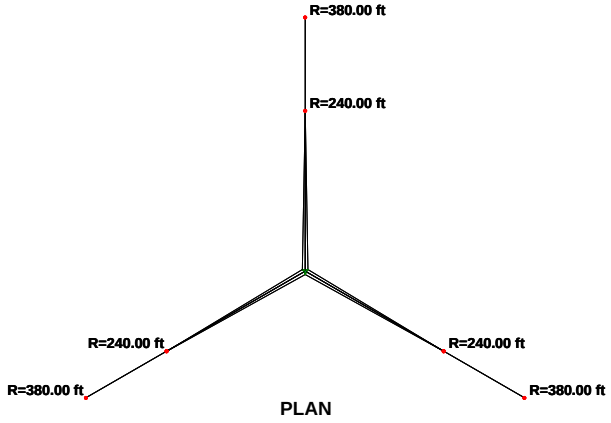
SR 2 1/4 | SR 2 | SR 1 3/4

A572-50 | A36

SR 1 | SR 1 1/4 | SR 3/4 | SR 5/8

72 @ 3.31944 | 66 @ 3.33333





PLAN

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION
Existing Top Beacon	500
LPX-2EHW FM antenna (Radio One)	495
T1	480
T2	460
T3	440
Shively 6842-2-55 Antenna (Delmarva)	430
T4	420
T5	400
T6	380
T7	360
T8	340
RSI P-9LA72G-U 6' Grid Dish (Radio-One)	330
Dish Pipe Mount	330
T9	320
T10	300
SWR-FEMC/2-HWS-TA (Radio Richmond)	293
Standoff (1) (Clearwire)	293
T11	280
T12	260
BEXT TFC2K FM Antenna (Calvary Chapel)	242
5'3"x4" Pipe Mount (Calvary Chapel of Twin Falls, Inc)	242
T13	240
Existing Middle (2) Beacons	220
T14	220
Pipe mount 8'x2.375 (T-mobile)	215.7
(2) Schedule 40 Pipes Vertical (T-Mobile)	204.6
(2) Schedule 40 Pipes Vertical (T-Mobile)	204.6
(2) Schedule 40 Pipes Vertical (T-Mobile)	204.6
AIR6449 B41 (T-Mobile)	204.6
Schedule 40 pipes x 80" Horizontal (T-mobile)	204.6
APXVAARR24_43-U-NA20 (T-Mobile)	204.6
AIR6449 B41 (T-Mobile)	204.6
4449 B71 / B12 (T-Mobile)	204.6
4415 B25 (T-Mobile)	204.6
4415 B25 (T-Mobile)	204.6
Schedule 40 pipes x 80" Horizontal (T-mobile)	204.6
AIR6449 B41 (T-Mobile)	204.6
APXVAARR24_43-U-NA20 (T-Mobile)	204.6
APXVAARR24_43-U-NA20 (T-Mobile)	204.6
4449 B71 / B12 (T-Mobile)	204.6
4449 B71 / B12 (T-Mobile)	204.6
4415 B25 (T-Mobile)	204.6
Schedule 40 pipes x 80" Horizontal (T-mobile)	204.6
Side arms for skirt (AM Stations)	200
Side arms for skirt (AM Stations)	200
Side arms for skirt (AM Stations)	200
T15	200
VHLP1-23 (T-mobile)	191
T16	180
Face mounts (T-Mobile)	169.29
Face mounts (T-Mobile)	169.29
Face mounts (T-Mobile)	169.29
AIR 32 B66A/B2A (T-Mobile)	169.29
AIR 32 B66A/B2A (T-Mobile)	169.29
AIR 32 B66A/B2A (T-Mobile)	169.29

TYPE	ELEVATION
RDIDC-9181-PF-48 (Dish Wireless)	150
Commscope MTC3975083-PK01 Sector Frame (Dish Wireless)	150
Commscope MTC3975083-PK01 Sector Frame (Dish Wireless)	150
(3) mount pipes (Dish Wireless)	150
(3) mount pipes (Dish Wireless)	150
MX08FRO665-21 (Dish Wireless)	150
MX08FRO665-21 (Dish Wireless)	150
MX08FRO665-21 (Dish Wireless)	150
TA08025-B605 (Dish Wireless)	150
TA08025-B605 (Dish Wireless)	150
TA08025-B605 (Dish Wireless)	150
TA08025-B604 (Dish Wireless)	150
TA08025-B604 (Dish Wireless)	150
TA08025-B604 (Dish Wireless)	150
Commscope MTC3975083-PK01 Sector Frame (Dish Wireless)	150
(3) mount pipes (Dish Wireless)	150
T18	140
MT6407-77A (Verizon)	134
MT6407-77A (Verizon)	134
MT6407-77A (Verizon)	134
NHH-65C-R2B (Verizon)	134
NHH-65C-RCB (Verizon)	134
NHH-65C-RCB (Verizon)	134
NHHSS-65C-R2B (Verizon)	134
NHHSS-65C-R2B (Verizon)	134
NHHSS-65C-R2B (Verizon)	134
SF-SU14-2-126 Sector Mount (Verizon)	130
SF-SU14-2-126 Sector Mount (Verizon)	130
SF-SU14-2-126 Sector Mount (Verizon)	130
(4)mount pipes (Verizon)	130
(4)mount pipes (Verizon)	130
(4)mount pipes (Verizon)	130
B5/B13 RRH-BR04C (RFV01U-D2A) (Verizon)	127
B2/B66A RRH-BRO49 (RFV01U-D1A) (Verizon)	127
B2/B66A RRH-BRO49 (RFV01U-D1A) (Verizon)	127
B2/B66A RRH-BRO49 (RFV01U-D1A) (Verizon)	127
CBRS RRH - RT4401-48A (Verizon)	127
CBRS RRH - RT4401-48A (Verizon)	127
CBRS RRH - RT4401-48A (Verizon)	127
B5/B13 RRH-BR04C (RFV01U-D2A) (Verizon)	127
B5/B13 RRH-BR04C (RFV01U-D2A) (Verizon)	127
Raycap RHSDC-3315-PF-48 (Verizon)	127
Raycap RHSDC-3315-PF-48 (Verizon)	127
T19	120
T20	100
T21	80
T22	60
T23	40
T24	20
T25	6.67
Side arms for skirt (AM Stations)	5
Side arms for skirt (AM Stations)	5
Side arms for skirt (AM Stations)	5

ALL PRO Consulting Group, INC.
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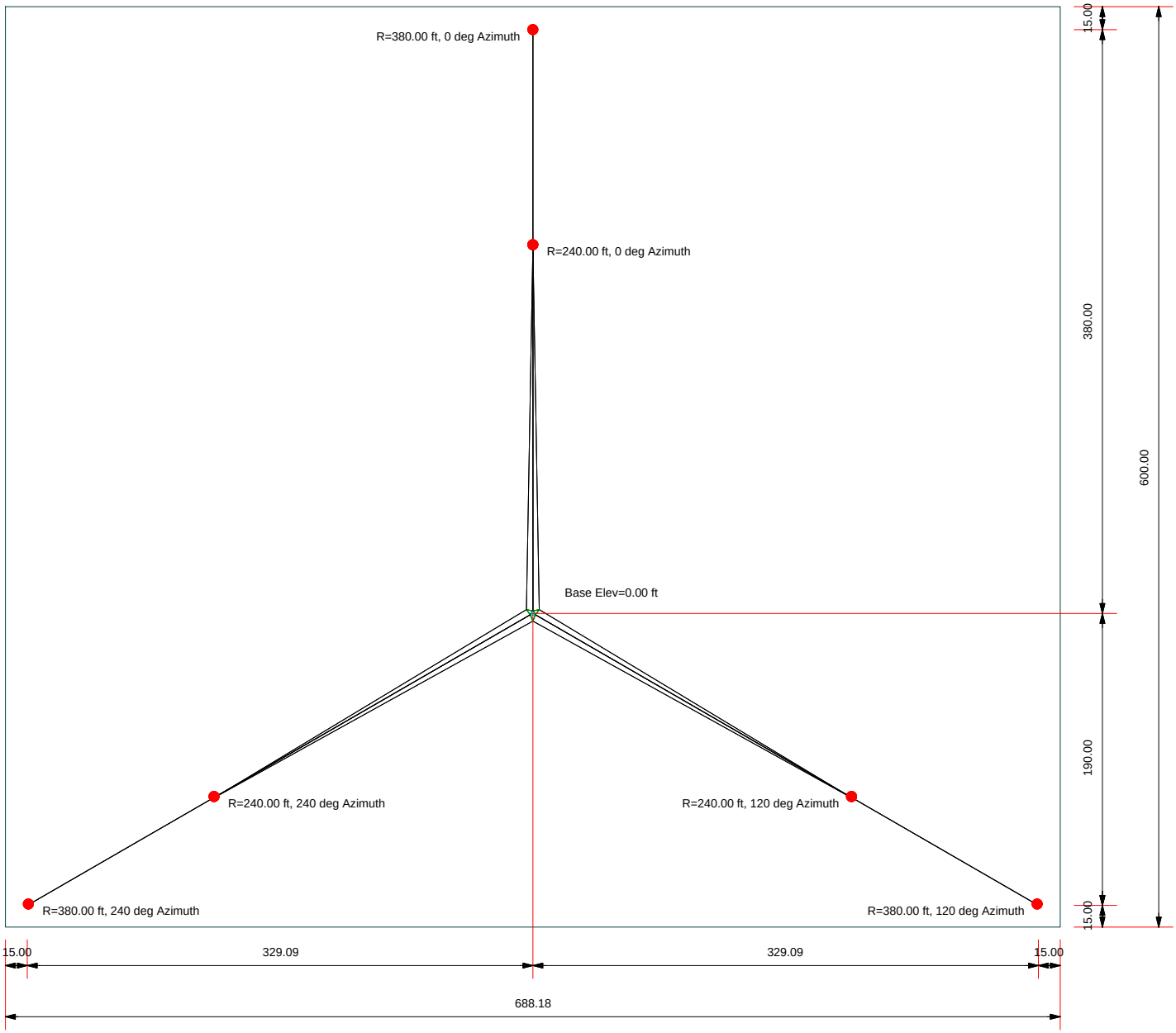
Job: ***22-0511*** **SYMBOL LIST**

Project: ***WXGI Tower***			
Client: Hunter Communications Group LLC	Drawn by: sPerabathula	App'd:	
Code: TIA-222-H	Date: 07/05/22	Scale: NTS	
Path:		Dwg No. E-1	

Plot Plan

Total Area - 9.48 Acres



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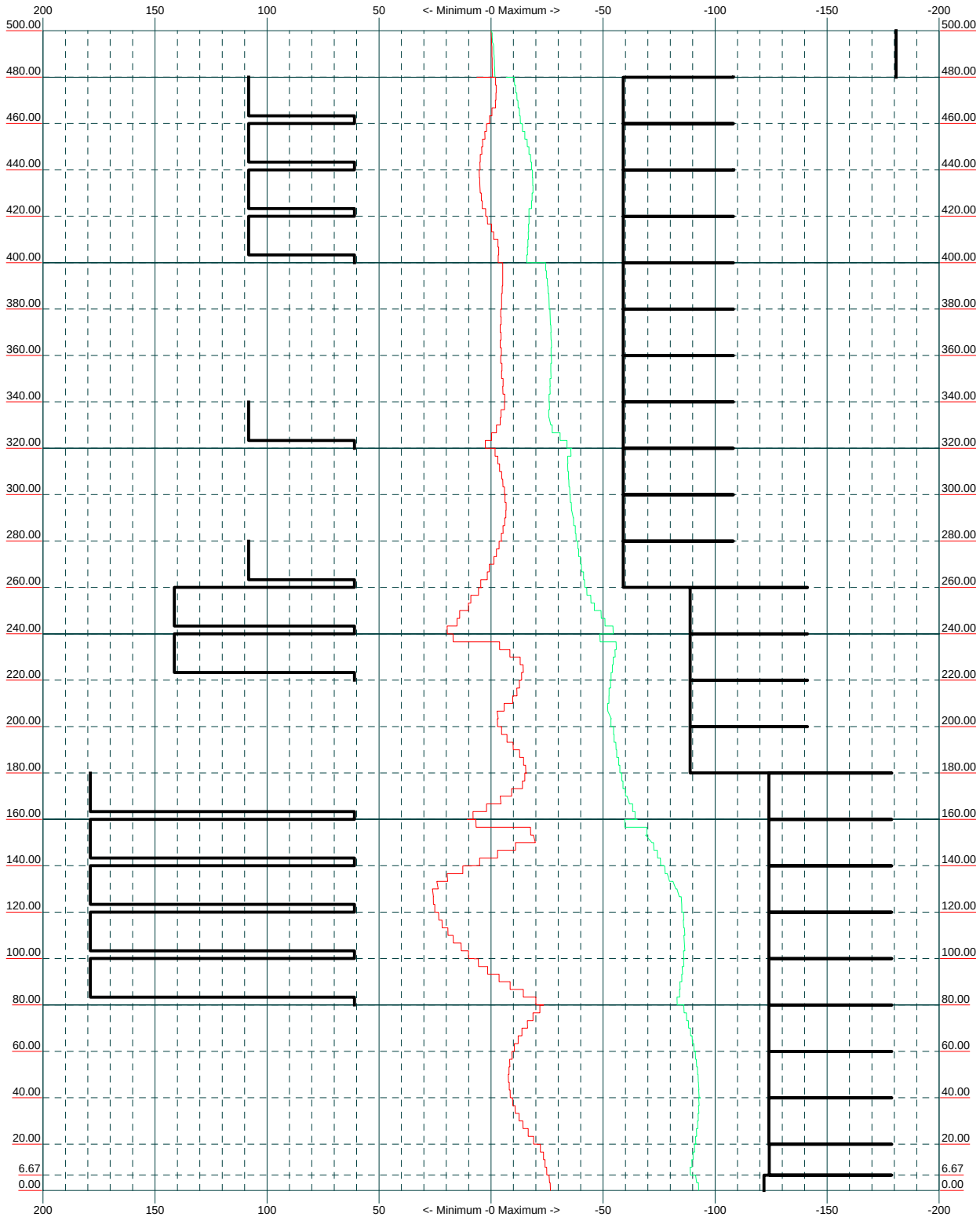
Project: ***WXGI Tower***			
Client: Hunter Communications Group LLC	Drawn by: sPerabathula	App'd:	
Code: TIA-222-H	Date: 07/05/22	Scale: NTS	
Path:		Dwg No. E-2	

TIA-222-H - 113 mph/30 mph 1.5000 in Ice Exposure C

Leg Capacity ——— **Leg Compression (K)**



Elevation (ft)

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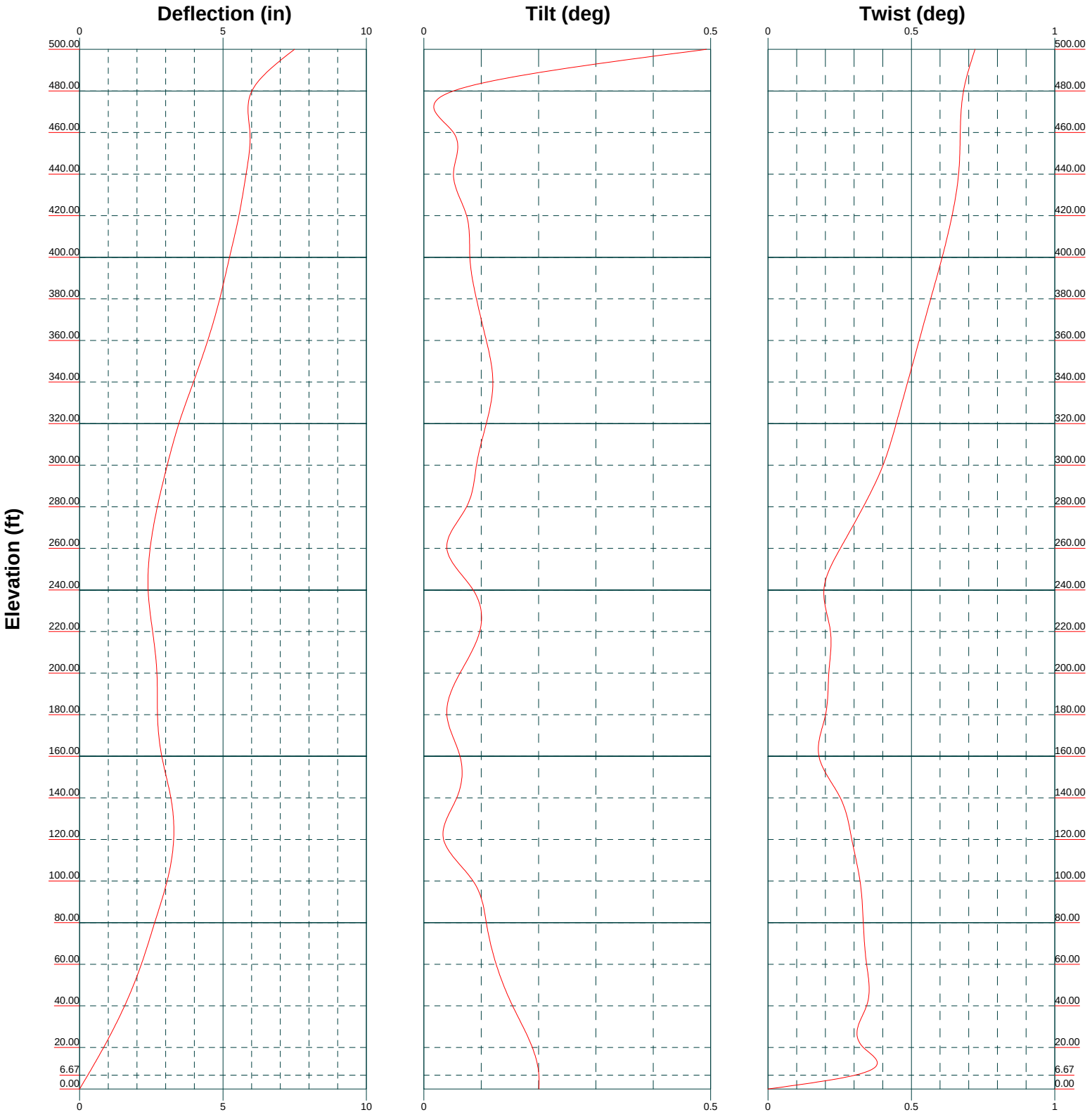
Project: ***WXGI Tower***			
Client: Hunter Communications Group LLC	Drawn by: sPerabathula	App'd:	
Code: TIA-222-H	Date: 07/05/22	Scale: NTS	
Path:		Dwg No. E-3	

TIA-222-H - Service - 60 mph

Maximum Values



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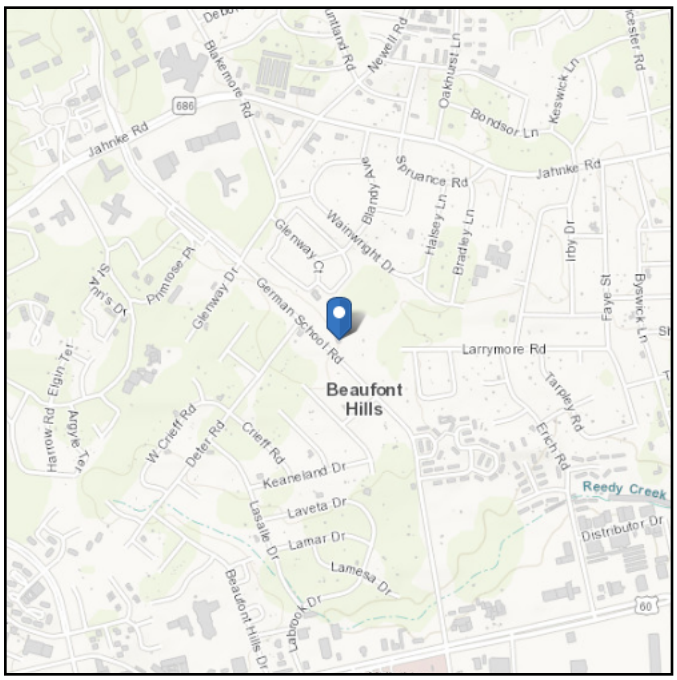
Job: ***22-0511***			
Project: ***WXGI Tower***			
Client: Hunter Communications Group LLC	Drawn by: sPerabathula	App'd:	
Code: TIA-222-H	Date: 07/05/22	Scale: NTS	
Path:		Dwg No. E-5	

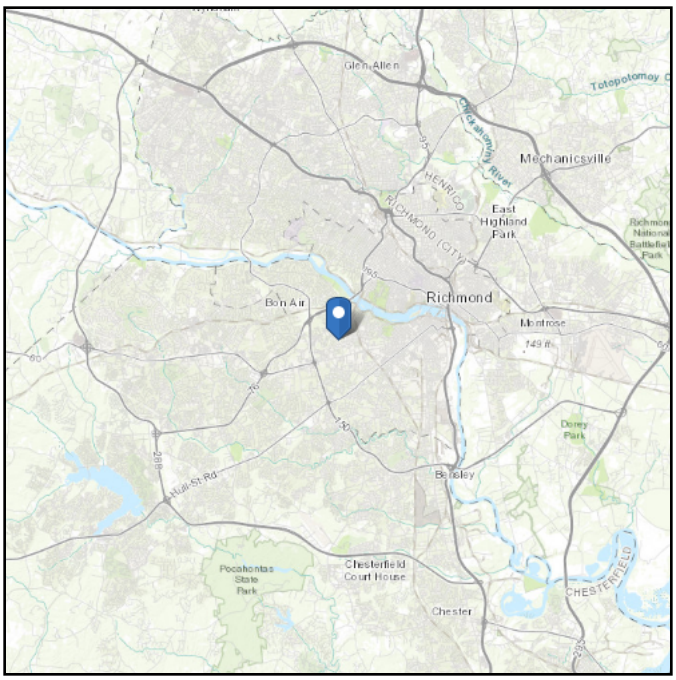
ASCE 7 Hazards Report

Address:
701 German School Rd
Richmond, Virginia
23225

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 239.48 ft (NAVD 88)
Latitude: 37.513803
Longitude: -77.508391





Wind

Results:

Wind Speed	113 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	95 Vmph

Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed:	Mon Jan 17 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

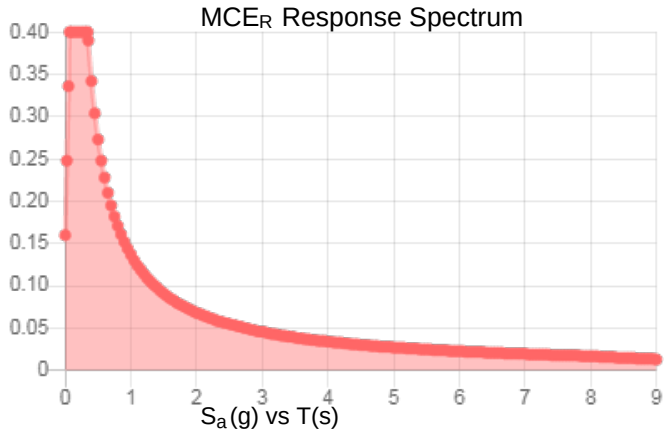
Seismic

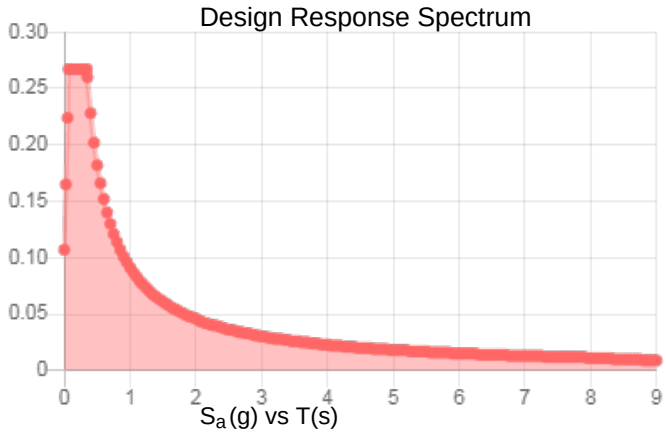
Site Soil Class: D - Stiff Soil

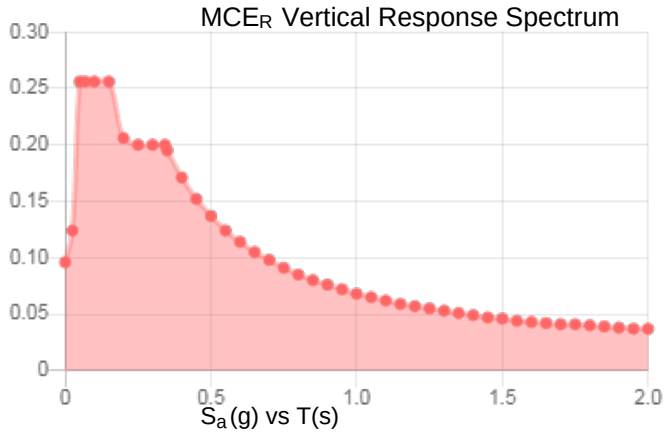
Results:

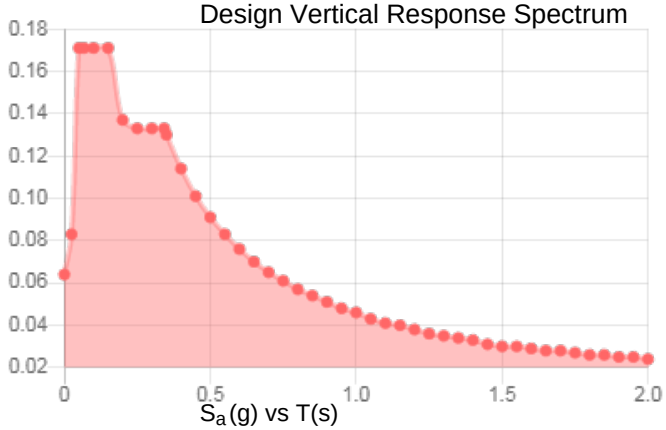
S_S :	0.25	S_{D1} :	0.091
S_1 :	0.057	T_L :	8
F_a :	1.6	PGA :	0.152
F_v :	2.4	PGA_M :	0.227
S_{MS} :	0.4	F_{PGA} :	1.497
S_{M1} :	0.137	I_e :	1
S_{DS} :	0.267	C_v :	0.8

Seismic Design Category B









Data Accessed: **Mon Jan 17 2022**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.50 in.
Concurrent Temperature:	15 F
Gust Speed	30 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Mon Jan 17 2022

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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Tower Input Data

The main tower is a 3x guyed tower with an overall height of 500.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 3.00 ft at the top and tapered at the base.
An index plate is provided at the 3x guyed -tower connection.
There is a pole section.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower is located in Richmond City County, Virginia.
Tower base elevation above sea level: 239.48 ft.
Basic wind speed of 113 mph.
Risk Category II.
Exposure Category C.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.00 ft.
Nominal ice thickness of 1.5000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 30 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Stress ratio used in tower member design is 1.
Safety factor used in guy design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned	√	Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios	√	Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys	√	Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients	√	Include Angle Block Shear Check
	Use Special Wind Profile		Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
√	Include Bolts In Member Capacity	√	Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
√	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)	√	Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
√	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known

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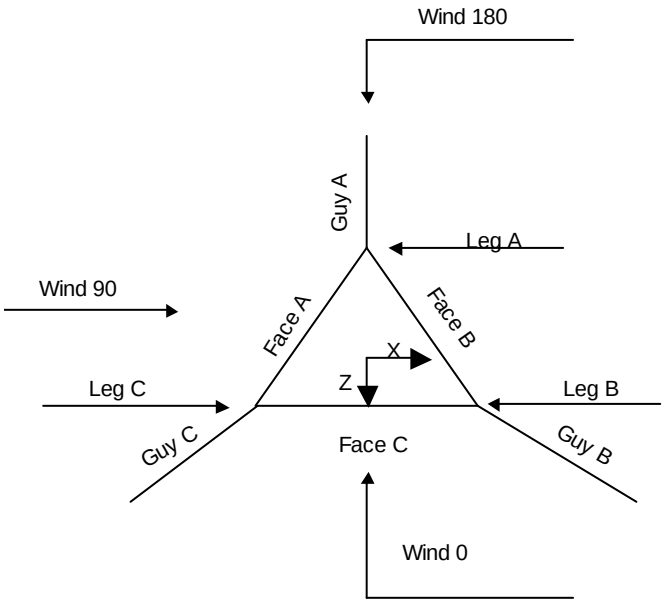

Corner & Starmount Guyed Tower

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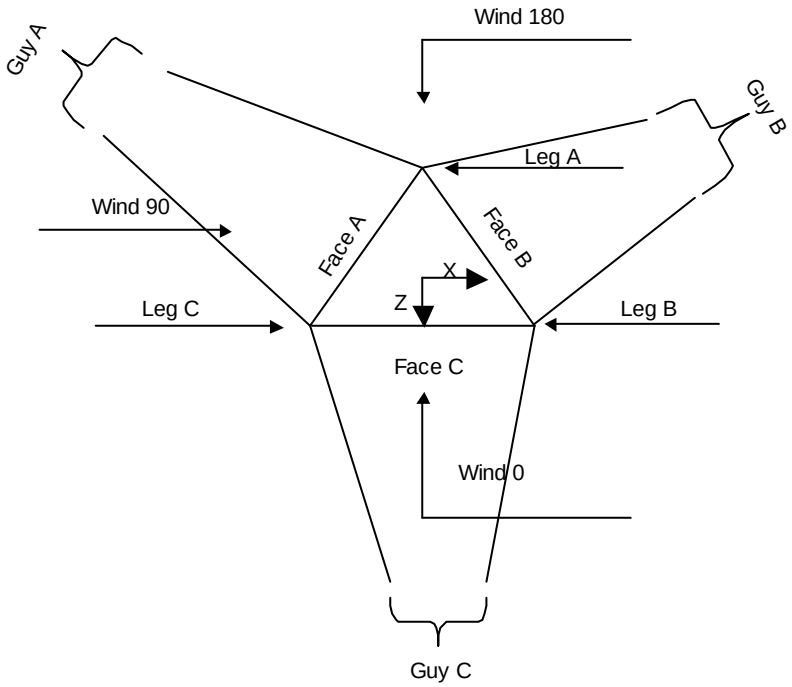

Face Guyed

Pole Section Geometry

Section	*Elevation* *ft*	*Section Length* *ft*	*Pole Size*	*Pole Grade*	*Socket Length* *ft*
L1	500.00-480.00	20.00	P6x.28	A36 (36 ksi)	

Tower Elevation *ft*	*Gusset Area (per face)* ft^2	*Gusset Thickness* *in*	*Gusset Grade*	*Adjust. Factor* A_f	*Adjust. Factor* A_r	*Weight Mult.*	*Double Angle Stitch Bolt Spacing Diagonals* *in*	*Double Angle Stitch Bolt Spacing Horizontals* *in*	*Double Angle Stitch Bolt Spacing Redundants* *in*
L1 500.00-480.00				1	1	1.05			

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Tower Section Geometry

Tower Section	Tower Elevation ft	Assembly Database	Description	Section Width ft	Number of Sections	Section Length ft
T1-T11	480.00-260.00			3.00	11	20.00
T12-T15	260.00-180.00			3.00	4	20.00
T16-T17	180.00-140.00			3.00	2	20.00
T18-T23	140.00-20.00			3.00	6	20.00
T24	20.00-6.67			3.00	1	13.33
T25	6.67-0.00			3.00	1	6.67

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1-T11	480.00-260.00	3.33	K Brace Left	No	Yes+Steps	1.0000	0.0000
T12-T15	260.00-180.00	3.32	K Brace Left	No	Yes+Steps	1.0000	0.0000
T16-T17	180.00-140.00	3.32	K Brace Left	No	Yes+Steps	1.0000	0.0000
T18-T23	140.00-20.00	3.32	K Brace Left	No	Yes+Steps	1.0000	0.0000
T24	20.00-6.67	3.31	K Brace Left	No	Yes+Steps	1.0000	0.0000
T25	6.67-0.00	3.29	K Brace Left	No	Yes+Steps	1.0000	0.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1-T11 480.00-260.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)
T12-T15 260.00-180.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T16-T17 180.00-140.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T18-T23 140.00-20.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)
T24 20.00-6.67	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)
T25 6.67-0.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1-T11 480.00-260.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T12-T15 260.00-180.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T16-T17 180.00-140.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T18-T23 140.00-20.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T24 20.00-6.67	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T25 6.67-0.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1-T11 480.00-260.00	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T12-T15 260.00-180.00	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T16-T17 180.00-140.00	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T18-T23 140.00-20.00	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T24 20.00-6.67	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T25 6.67-0.00	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T1-T11 480.00-260.00	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T12-T15 260.00-180.00	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T16-T17 180.00-140.00	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T18-T23 140.00-20.00	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T24 20.00-6.67	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T25 6.67-0.00	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1-T11 480.00-260.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T12-T15 260.00-180.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T16-T17 180.00-140.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T18-T23 140.00-20.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T24 20.00-6.67	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T25 6.67-0.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X	X Brace Diags Y	K Single Diags X	K Single Diags Y	Girts X	Girts Y	Horiz. X	Horiz. Y	Sec. Horiz. X	Sec. Horiz. Y	Inner Brace X	Inner Brace Y
T1-T11 480.00-260.00	No	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
T12-T15 260.00-180.00	No	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
T16-T17 180.00-140.00	No	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
T18-T23 140.00-20.00	No	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
T24 20.00-6.67	No	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
T25 6.67-0.00	No	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1

[1]*Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.*

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Net Width Deduct in	Leg U	Diagonal Net Width Deduct in	Diagonal U	Top Girt Net Width Deduct in	Top Girt U	Bottom Girt Net Width Deduct in	Bottom Girt U	Mid Girt Net Width Deduct in	Mid Girt U	Long Horizontal Net Width Deduct in	Long Horizontal U	Short Horizontal Net Width Deduct in	Short Horizontal U
T1-T11 480.00-260.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T12-T15 260.00-180.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T16-T17 180.00-140.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T18-T23 140.00-20.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T24 20.00-6.67	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T25 6.67-0.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1-T11 480.00-260.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T12-T15 260.00-180.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T16-T17 180.00-140.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T18-T23 140.00-20.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T24 20.00-6.67	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T25 6.67-0.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1-T11 480.00-260.00	Flange	0.6250 A325N	3	1.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325N	0	0.6250 A325N	0
T12-T15 260.00-180.00	Flange	0.6250 A325N	3	1.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325N	0	0.6250 A325N	0
T16-T17 180.00-140.00	Flange	0.6250 A325N	3	1.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325N	0	0.6250 A325N	0
T18-T23 140.00-20.00	Flange	0.6250 A325N	3	1.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325N	0	0.6250 A325N	0
T24 20.00-6.67	Flange	0.6250 A325N	0	1.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325N	0	0.6250 A325N	0
T25 6.67-0.00	Flange	0.6250 A325N	0	1.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325N	0	0.6250 A325N	0

Guy Data

Guy Elevation ft	Guy Grade		Guy Size	Initial Tension K	%	Guy Modulus ksi	Guy Weight plf	L_u ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %
479.917	EHS	A	1/2	2.69	10%	21000	0.517	610.65	380.00	0.0000	0.00	100%
		B	1/2	2.69	10%	21000	0.517	610.65	380.00	0.0000	0.00	100%
		C	1/2	2.69	10%	21000	0.517	610.65	380.00	0.0000	0.00	100%
400	EHS	A	7/16	2.08	10%	21000	0.399	550.16	380.00	0.0000	0.00	100%
		B	7/16	2.08	10%	21000	0.399	550.16	380.00	0.0000	0.00	100%
		C	7/16	2.08	10%	21000	0.399	550.16	380.00	0.0000	0.00	100%
320	EHS	A	1/2	2.69	10%	21000	0.517	495.13	380.00	0.0000	0.00	100%
		B	1/2	2.69	10%	21000	0.517	495.13	380.00	0.0000	0.00	100%
		C	1/2	2.69	10%	21000	0.517	495.13	380.00	0.0000	0.00	100%
240	EHS	A	1/2	2.69	10%	21000	0.517	337.49	240.00	0.0000	0.00	100%
		B	1/2	2.69	10%	21000	0.517	337.49	240.00	0.0000	0.00	100%
		C	1/2	2.69	10%	21000	0.517	337.49	240.00	0.0000	0.00	100%
160	EHS	A	1/2	2.69	10%	21000	0.517	286.27	240.00	0.0000	0.00	100%
		B	1/2	2.69	10%	21000	0.517	286.27	240.00	0.0000	0.00	100%
		C	1/2	2.69	10%	21000	0.517	286.27	240.00	0.0000	0.00	100%
80	EHS	A	7/16	2.08	10%	21000	0.399	251.14	240.00	0.0000	0.00	100%
		B	7/16	2.08	10%	21000	0.399	251.14	240.00	0.0000	0.00	100%
		C	7/16	2.08	10%	21000	0.399	251.14	240.00	0.0000	0.00	100%

Guy Data *(cont'd)*

Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
479.917	Corner						
400	Corner						
320	Corner						
240	Torque Arm	8.25	40.0000	Bat Ear	A36 (36 ksi)	Equal Angle	L3x3x1/4
160	Torque Arm	8.25	40.0000	Bat Ear	A36 (36 ksi)	Equal Angle	L3x3x1/4
80	Corner						

Guy Data *(cont'd)*

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
479.92	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Solid Round	
400.00	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Solid Round	
320.00	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Solid Round	
240.00	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Solid Round	

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Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
160.00	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Solid Round	
80.00	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Solid Round	

Guy Data *(cont'd)*

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
479.917	0.32	0.32	0.32		34.30 10.1 sec/pulse	34.30 10.1 sec/pulse	34.30 10.1 sec/pulse	
400	0.22	0.22	0.22		28.00 9.1 sec/pulse	28.00 9.1 sec/pulse	28.00 9.1 sec/pulse	
320	0.26	0.26	0.26		22.89 8.3 sec/pulse	22.89 8.3 sec/pulse	22.89 8.3 sec/pulse	
240	0.17	0.17	0.17		10.71 5.7 sec/pulse	10.71 5.7 sec/pulse	10.71 5.7 sec/pulse	
160	0.15	0.15	0.15		7.76 4.8 sec/pulse	7.76 4.8 sec/pulse	7.76 4.8 sec/pulse	
80	0.10	0.10	0.10		6.01 4.2 sec/pulse	6.01 4.2 sec/pulse	6.01 4.2 sec/pulse	

Guy Data *(cont'd)*

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm K_x	Torque Arm K_y	Pull Off K_x	Pull Off K_y	Diagonal K_x	Diagonal K_y
479.917	No	No			1	1	1	1
400	No	No			1	1	1	1
320	No	No			1	1	1	1
240	No	No	0.67	0.67	1	1	1	1
160	No	No	0.67	0.67	1	1	1	1
80	No	No			1	1	1	1

Guy Data *(cont'd)*

Guy Elevation ft	Torque-Arm Bolt Size in	Torque-Arm Number	Torque-Arm Net Width Deduct in	Torque-Arm U	Pull Off Bolt Size in	Pull Off Number	Pull Off Net Width Deduct in	Pull Off U	Diagonal Bolt Size in	Diagonal Number	Diagonal Net Width Deduct in	Diagonal U
479.917	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
400	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
320	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Elevation ft	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
240	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
160	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
80	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q_z ksf	q_z Ice ksf	Ice Thickness in
479.917	A	239.96	0	0	1.8292
	B	239.96	0	0	1.8292
	C	239.96	0	0	1.8292
400	A	200.00	0	0	1.7962
	B	200.00	0	0	1.7962
	C	200.00	0	0	1.7962
320	A	160.00	0	0	1.7565
	B	160.00	0	0	1.7565
	C	160.00	0	0	1.7565
240	A	120.00	0	0	1.7067
	B	120.00	0	0	1.7067
	C	120.00	0	0	1.7067
160	A	80.00	0	0	1.6389
	B	80.00	0	0	1.6389
	C	80.00	0	0	1.6389
80	A	40.00	0	0	1.5291
	B	40.00	0	0	1.5291
	C	40.00	0	0	1.5291

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
2 1/4"	A	No	No	Ar (CaAa)	480.00 - 10.00	0.0000	0	1	1	0.5000	2.3800		1.16
****													
7/8"	A	No	No	Ar (CaAa)	430.00 - 10.00	0.0000	0	1	1	0.5000	1.1100		0.54
****													
7/8"	A	No	No	Ar (CaAa)	416.00 - 10.00	0.0000	0	1	1	0.5000	1.1100		0.54
****													
7/8"	A	No	No	Ar (CaAa)	330.00 - 10.00	0.0000	0	1	1	0.5000	1.1100		0.54
****													
7/8"	A	No	No	Ar (CaAa)	293.00 - 10.00	0.0000	0	1	1	0.5000	1.1100		0.54
****													

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
1/2" (Calvary Chapel of Twin Falls, Inc.) **** ****	A	No	No	Ar (CaAa)	242.00 - 10.00	0.0000	0	1	1	0.5000	0.5800		0.25
1/2" Heliax Coax (T-Mobile)	A	No	No	Ar (CaAa)	215.70 - 7.00	-1.0000	0.4	1	1	0.5000	0.5000		0.00
1-1/4" Hybrid (T-Mobile)	A	No	No	Ar (CaAa)	204.60 - 10.00	0.0000	0	3	3	0.5000	1.5500		1.10
2" Fiber Duct (Sprint)	C	No	No	Ar (CaAa)	192.50 - 7.00	-0.7500	0.2	1	1	0.5000	2.3800		0.00
5/16 Coax (Sprint)	A	No	No	Ar (CaAa)	192.50 - 7.00	-0.7500	0.2	6	3	0.5800 0.5000	0.3125		0.00
1-1/4" Hybrid (T-Mobile)	A	No	No	Ar (CaAa)	169.29 - 10.00	0.0000	0	1	1	0.5000	1.5500		1.10
1.75" (Dish Wireless) **** ***	A	No	No	Ar (CaAa)	150.00 - 0.00	0.0000	0	1	1	0.5000	1.9000		2.50
AM Skirt Antenna (AM Stations)	A	No	No	Ar (CaAa)	200.00 - 5.00	-35.000 0	0	1	1	0.5000	0.5800		0.25
AM Skirt Antenna (AM Stations)	B	No	No	Ar (CaAa)	200.00 - 5.00	-35.000 0	0	1	1	0.5000	0.5800		0.25
AM Skirt Antenna (AM Stations) ***	C	No	No	Ar (CaAa)	200.00 - 5.00	-35.000 0	0	1	1	0.5000	0.5800		0.25
1.55" Hybrid (Verizon)	A	No	No	Ar (CaAa)	130.00 - 0.00	0.0000	0	2	2	0.5000	1.6500		2.00

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	500.00-480.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T1	480.00-460.00	A	0.000	0.000	4.760	0.000	0.02
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T2	460.00-440.00	A	0.000	0.000	4.760	0.000	0.02
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T3	440.00-420.00	A	0.000	0.000	5.870	0.000	0.03
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T4	420.00-400.00	A	0.000	0.000	8.756	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T5	400.00-380.00	A	0.000	0.000	9.200	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T6	380.00-360.00	A	0.000	0.000	9.200	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T7	360.00-340.00	A	0.000	0.000	9.200	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T8	340.00-320.00	A	0.000	0.000	10.310	0.000	0.05
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T9	320.00-300.00	A	0.000	0.000	11.420	0.000	0.06
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T10	300.00-280.00	A	0.000	0.000	12.863	0.000	0.06
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T11	280.00-260.00	A	0.000	0.000	13.640	0.000	0.07
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T12	260.00-240.00	A	0.000	0.000	13.756	0.000	0.07
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T13	240.00-220.00	A	0.000	0.000	14.800	0.000	0.07
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T14	220.00-200.00	A	0.000	0.000	17.724	0.000	0.09
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T15	200.00-180.00	A	0.000	0.000	28.604	0.000	0.14
		B	0.000	0.000	1.160	0.000	0.01
		C	0.000	0.000	4.135	0.000	0.01
T16	180.00-160.00	A	0.000	0.000	31.450	0.000	0.15
		B	0.000	0.000	1.160	0.000	0.01
		C	0.000	0.000	5.920	0.000	0.01
T17	160.00-140.00	A	0.000	0.000	35.010	0.000	0.19
		B	0.000	0.000	1.160	0.000	0.01
		C	0.000	0.000	5.920	0.000	0.01
T18	140.00-120.00	A	0.000	0.000	40.210	0.000	0.25
		B	0.000	0.000	1.160	0.000	0.01
		C	0.000	0.000	5.920	0.000	0.01
T19	120.00-100.00	A	0.000	0.000	43.510	0.000	0.29
		B	0.000	0.000	1.160	0.000	0.01
		C	0.000	0.000	5.920	0.000	0.01
T20	100.00-80.00	A	0.000	0.000	43.510	0.000	0.29
		B	0.000	0.000	1.160	0.000	0.01
		C	0.000	0.000	5.920	0.000	0.01
T21	80.00-60.00	A	0.000	0.000	43.510	0.000	0.29
		B	0.000	0.000	1.160	0.000	0.01
		C	0.000	0.000	5.920	0.000	0.01
T22	60.00-40.00	A	0.000	0.000	43.510	0.000	0.29
		B	0.000	0.000	1.160	0.000	0.01
		C	0.000	0.000	5.920	0.000	0.01
T23	40.00-20.00	A	0.000	0.000	43.510	0.000	0.29
		B	0.000	0.000	1.160	0.000	0.01
		C	0.000	0.000	5.920	0.000	0.01
T24	20.00-6.67	A	0.000	0.000	24.394	0.000	0.17
		B	0.000	0.000	0.773	0.000	0.00
		C	0.000	0.000	3.867	0.000	0.00
T25	6.67-0.00	A	0.000	0.000	3.563	0.000	0.04

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B	0.000	0.000	0.097	0.000	0.00
		C	0.000	0.000	0.097	0.000	0.00

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	500.00-480.00	A	1.965	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T1	480.00-460.00	A	1.956	0.000	0.000	12.585	0.000	0.23
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T2	460.00-440.00	A	1.948	0.000	0.000	12.552	0.000	0.23
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T3	440.00-420.00	A	1.939	0.000	0.000	17.504	0.000	0.31
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T4	420.00-400.00	A	1.930	0.000	0.000	30.370	0.000	0.50
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T5	400.00-380.00	A	1.920	0.000	0.000	32.242	0.000	0.53
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T6	380.00-360.00	A	1.910	0.000	0.000	32.121	0.000	0.53
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T7	360.00-340.00	A	1.900	0.000	0.000	31.994	0.000	0.52
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T8	340.00-320.00	A	1.888	0.000	0.000	36.747	0.000	0.59
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T9	320.00-300.00	A	1.877	0.000	0.000	41.446	0.000	0.66
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T10	300.00-280.00	A	1.864	0.000	0.000	47.536	0.000	0.75
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T11	280.00-260.00	A	1.851	0.000	0.000	50.657	0.000	0.79
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T12	260.00-240.00	A	1.837	0.000	0.000	51.224	0.000	0.80
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T13	240.00-220.00	A	1.821	0.000	0.000	58.514	0.000	0.89
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T14	220.00-200.00	A	1.805	0.000	0.000	70.666	0.000	1.04
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T15	200.00-180.00	A	1.787	0.000	0.000	112.030	0.000	1.53
		B		0.000	0.000	8.308	0.000	0.11
		C		0.000	0.000	15.750	0.000	0.22
T16	180.00-160.00	A	1.767	0.000	0.000	122.752	0.000	1.65
		B		0.000	0.000	8.229	0.000	0.11

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C		0.000	0.000	20.058	0.000	0.29
T17	160.00-140.00	A	1.745	0.000	0.000	132.492	0.000	1.81
		B		0.000	0.000	8.141	0.000	0.10
		C		0.000	0.000	19.882	0.000	0.28
T18	140.00-120.00	A	1.720	0.000	0.000	147.612	0.000	2.02
		B		0.000	0.000	8.042	0.000	0.10
		C		0.000	0.000	19.683	0.000	0.27
T19	120.00-100.00	A	1.692	0.000	0.000	156.944	0.000	2.12
		B		0.000	0.000	7.928	0.000	0.10
		C		0.000	0.000	19.455	0.000	0.27
T20	100.00-80.00	A	1.658	0.000	0.000	154.901	0.000	2.07
		B		0.000	0.000	7.793	0.000	0.10
		C		0.000	0.000	19.186	0.000	0.26
T21	80.00-60.00	A	1.617	0.000	0.000	152.399	0.000	2.00
		B		0.000	0.000	7.629	0.000	0.09
		C		0.000	0.000	18.857	0.000	0.25
T22	60.00-40.00	A	1.564	0.000	0.000	149.148	0.000	1.92
		B		0.000	0.000	7.415	0.000	0.09
		C		0.000	0.000	18.429	0.000	0.24
T23	40.00-20.00	A	1.486	0.000	0.000	144.418	0.000	1.81
		B		0.000	0.000	7.103	0.000	0.08
		C		0.000	0.000	17.806	0.000	0.22
T24	20.00-6.67	A	1.370	0.000	0.000	77.925	0.000	0.93
		B		0.000	0.000	4.427	0.000	0.05
		C		0.000	0.000	11.083	0.000	0.13
T25	6.67-0.00	A	1.193	0.000	0.000	9.506	0.000	0.12
		B		0.000	0.000	0.494	0.000	0.00
		C		0.000	0.000	0.494	0.000	0.00

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	500.00-480.00	0.0000	0.0000	0.0000	0.0000
T1	480.00-460.00	-1.5929	-0.9196	-0.9883	-0.5706
T2	460.00-440.00	-1.5929	-0.9196	-0.9924	-0.5730
T3	440.00-420.00	-1.8745	-1.0823	-1.3198	-0.7620
T4	420.00-400.00	-2.5207	-1.4553	-2.0625	-1.1908
T5	400.00-380.00	-2.6105	-1.5072	-2.1722	-1.2541
T6	380.00-360.00	-2.6105	-1.5072	-2.1804	-1.2588
T7	360.00-340.00	-2.6105	-1.5072	-2.1890	-1.2638
T8	340.00-320.00	-2.8252	-1.6311	-2.4428	-1.4104
T9	320.00-300.00	-3.0268	-1.7475	-2.6823	-1.5486
T10	300.00-280.00	-3.2714	-1.8888	-2.9708	-1.7152
T11	280.00-260.00	-3.3956	-1.9604	-3.1237	-1.8035
T12	260.00-240.00	-3.1801	-1.8360	-3.0306	-1.7497
T13	240.00-220.00	-3.3279	-1.9214	-3.3253	-1.9198
T14	220.00-200.00	-3.4906	-2.3517	-3.3726	-2.5757
T15	200.00-180.00	-4.0354	-2.4593	-3.5021	-2.5826
T16	180.00-160.00	-4.1606	-2.3588	-3.6788	-2.5886
T17	160.00-140.00	-4.4505	-2.5209	-3.9568	-2.7265
T18	140.00-120.00	-4.8576	-2.7696	-4.3066	-2.9227
T19	120.00-100.00	-5.0348	-2.8878	-4.4743	-3.0190
T20	100.00-80.00	-5.0348	-2.8878	-4.5007	-3.0346
T21	80.00-60.00	-5.0348	-2.8878	-4.5325	-3.0532
T22	60.00-40.00	-5.0348	-2.8878	-4.5730	-3.0766

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
T23	40.00-20.00	-5.0348	-2.8878	-4.6300	-3.1090
T24	20.00-6.67	-4.6115	-2.6315	-4.2387	-2.9017
T25	6.67-0.00	-2.7985	-1.7508	-1.9703	-1.2556

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	1	2 1/4"	460.00 - 480.00	0.6000	0.4658
T2	1	2 1/4"	440.00 - 460.00	0.6000	0.4673
T3	1	2 1/4"	420.00 - 440.00	0.6000	0.4689
T3	3	7/8"	420.00 - 430.00	0.6000	0.4689
T4	1	2 1/4"	400.00 - 420.00	0.6000	0.4706
T4	3	7/8"	400.00 - 420.00	0.6000	0.4706
T4	5	7/8"	400.00 - 416.00	0.6000	0.4706
T5	1	2 1/4"	380.00 - 400.00	0.6000	0.4723
T5	3	7/8"	380.00 - 400.00	0.6000	0.4723
T5	5	7/8"	380.00 - 400.00	0.6000	0.4723
T6	1	2 1/4"	360.00 - 380.00	0.6000	0.4741
T6	3	7/8"	360.00 - 380.00	0.6000	0.4741
T6	5	7/8"	360.00 - 380.00	0.6000	0.4741
T7	1	2 1/4"	340.00 - 360.00	0.6000	0.4760
T7	3	7/8"	340.00 - 360.00	0.6000	0.4760
T7	5	7/8"	340.00 - 360.00	0.6000	0.4760
T8	1	2 1/4"	320.00 - 340.00	0.6000	0.4780
T8	3	7/8"	320.00 - 340.00	0.6000	0.4780
T8	5	7/8"	320.00 - 340.00	0.6000	0.4780
T8	7	7/8"	320.00 - 330.00	0.6000	0.4780
T9	1	2 1/4"	300.00 - 320.00	0.6000	0.4802
T9	3	7/8"	300.00 - 320.00	0.6000	0.4802

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T9	5	7/8"	300.00 - 320.00	0.6000	0.4802
T9	7	7/8"	300.00 - 320.00	0.6000	0.4802
T10	1	2 1/4"	280.00 - 300.00	0.6000	0.4824
T10	3	7/8"	280.00 - 300.00	0.6000	0.4824
T10	5	7/8"	280.00 - 300.00	0.6000	0.4824
T10	7	7/8"	280.00 - 300.00	0.6000	0.4824
T10	9	7/8"	280.00 - 293.00	0.6000	0.4824
T11	1	2 1/4"	260.00 - 280.00	0.6000	0.4848
T11	3	7/8"	260.00 - 280.00	0.6000	0.4848
T11	5	7/8"	260.00 - 280.00	0.6000	0.4848
T11	7	7/8"	260.00 - 280.00	0.6000	0.4848
T11	9	7/8"	260.00 - 280.00	0.6000	0.4848
T12	1	2 1/4"	240.00 - 260.00	0.6000	0.4727
T12	3	7/8"	240.00 - 260.00	0.6000	0.4727
T12	5	7/8"	240.00 - 260.00	0.6000	0.4727
T12	7	7/8"	240.00 - 260.00	0.6000	0.4727
T12	9	7/8"	240.00 - 260.00	0.6000	0.4727
T12	11	1/2"	240.00 - 242.00	0.6000	0.4727
T13	1	2 1/4"	220.00 - 240.00	0.6000	0.4754
T13	3	7/8"	220.00 - 240.00	0.6000	0.4754
T13	5	7/8"	220.00 - 240.00	0.6000	0.4754
T13	7	7/8"	220.00 - 240.00	0.6000	0.4754
T13	9	7/8"	220.00 - 240.00	0.6000	0.4754
T13	11	1/2"	220.00 - 240.00	0.6000	0.4754
T14	1	2 1/4"	200.00 - 220.00	0.6000	0.4784
T14	3	7/8"	200.00 - 220.00	0.6000	0.4784
T14	5	7/8"	200.00 - 220.00	0.6000	0.4784
T14	7	7/8"	200.00 - 220.00	0.6000	0.4784
T14	9	7/8"	200.00 - 220.00	0.6000	0.4784
T14	11	1/2"	200.00 - 220.00	0.6000	0.4784
T14	16	1/2" Heliax Coax	200.00 - 215.70	0.6000	0.4784

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T14	17	1-1/4" Hybrid	200.00 - 204.60	0.6000	0.4784
T15	1	2 1/4"	180.00 - 200.00	0.6000	0.4816
T15	3	7/8"	180.00 - 200.00	0.6000	0.4816
T15	5	7/8"	180.00 - 200.00	0.6000	0.4816
T15	7	7/8"	180.00 - 200.00	0.6000	0.4816
T15	9	7/8"	180.00 - 200.00	0.6000	0.4816
T15	11	1/2"	180.00 - 200.00	0.6000	0.4816
T15	16	1/2" Heliax Coax	180.00 - 200.00	0.6000	0.4816
T15	17	1-1/4" Hybrid	180.00 - 200.00	0.6000	0.4816
T15	18	2" Fiber Duct	180.00 - 192.50	0.6000	0.4816
T15	19	5/16 Coax	180.00 - 192.50	0.6000	0.4816
T15	27	AM Skirt Antenna	180.00 - 200.00	0.6000	0.4816
T15	28	AM Skirt Antenna	180.00 - 200.00	0.6000	0.4816
T15	29	AM Skirt Antenna	180.00 - 200.00	0.6000	0.4816
T16	1	2 1/4"	160.00 - 180.00	0.6000	0.4781
T16	3	7/8"	160.00 - 180.00	0.6000	0.4781
T16	5	7/8"	160.00 - 180.00	0.6000	0.4781
T16	7	7/8"	160.00 - 180.00	0.6000	0.4781
T16	9	7/8"	160.00 - 180.00	0.6000	0.4781
T16	11	1/2"	160.00 - 180.00	0.6000	0.4781
T16	16	1/2" Heliax Coax	160.00 - 180.00	0.6000	0.4781
T16	17	1-1/4" Hybrid	160.00 - 180.00	0.6000	0.4781
T16	18	2" Fiber Duct	160.00 - 180.00	0.6000	0.4781
T16	19	5/16 Coax	160.00 - 180.00	0.6000	0.4781
T16	20	1-1/4" Hybrid	160.00 - 169.29	0.6000	0.4781
T16	27	AM Skirt Antenna	160.00 - 180.00	0.6000	0.4781
T16	28	AM Skirt Antenna	160.00 - 180.00	0.6000	0.4781
T16	29	AM Skirt Antenna	160.00 - 180.00	0.6000	0.4781
T17	1	2 1/4"	140.00 - 160.00	0.6000	0.4820
T17	3	7/8"	140.00 - 160.00	0.6000	0.4820
T17	5	7/8"	140.00 - 160.00	0.6000	0.4820

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T17	7	7/8"	140.00 - 160.00	0.6000	0.4820
T17	9	7/8"	140.00 - 160.00	0.6000	0.4820
T17	11	1/2"	140.00 - 160.00	0.6000	0.4820
T17	16	1/2" Heliax Coax	140.00 - 160.00	0.6000	0.4820
T17	17	1-1/4" Hybrid	140.00 - 160.00	0.6000	0.4820
T17	18	2" Fiber Duct	140.00 - 160.00	0.6000	0.4820
T17	19	5/16 Coax	140.00 - 160.00	0.6000	0.4820
T17	20	1-1/4" Hybrid	140.00 - 160.00	0.6000	0.4820
T17	22	1.75"	140.00 - 150.00	0.6000	0.4820
T17	27	AM Skirt Antenna	140.00 - 160.00	0.6000	0.4820
T17	28	AM Skirt Antenna	140.00 - 160.00	0.6000	0.4820
T17	29	AM Skirt Antenna	140.00 - 160.00	0.6000	0.4820
T18	1	2 1/4"	120.00 - 140.00	0.6000	0.4940
T18	3	7/8"	120.00 - 140.00	0.6000	0.4940
T18	5	7/8"	120.00 - 140.00	0.6000	0.4940
T18	7	7/8"	120.00 - 140.00	0.6000	0.4940
T18	9	7/8"	120.00 - 140.00	0.6000	0.4940
T18	11	1/2"	120.00 - 140.00	0.6000	0.4940
T18	16	1/2" Heliax Coax	120.00 - 140.00	0.6000	0.4940
T18	17	1-1/4" Hybrid	120.00 - 140.00	0.6000	0.4940
T18	18	2" Fiber Duct	120.00 - 140.00	0.6000	0.4940
T18	19	5/16 Coax	120.00 - 140.00	0.6000	0.4940
T18	20	1-1/4" Hybrid	120.00 - 140.00	0.6000	0.4940
T18	22	1.75"	120.00 - 140.00	0.6000	0.4940
T18	27	AM Skirt Antenna	120.00 - 140.00	0.6000	0.4940
T18	28	AM Skirt Antenna	120.00 - 140.00	0.6000	0.4940
T18	29	AM Skirt Antenna	120.00 - 140.00	0.6000	0.4940
T18	31	1.55" Hybrid	120.00 - 130.00	0.6000	0.4940
T19	1	2 1/4"	100.00 - 120.00	0.6000	0.4991
T19	3	7/8"	100.00 - 120.00	0.6000	0.4991
T19	5	7/8"	100.00 - 120.00	0.6000	0.4991

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T19	7	7/8"	100.00 - 120.00	0.6000	0.4991
T19	9	7/8"	100.00 - 120.00	0.6000	0.4991
T19	11	1/2"	100.00 - 120.00	0.6000	0.4991
T19	16	1/2" Heliax Coax	100.00 - 120.00	0.6000	0.4991
T19	17	1-1/4" Hybrid	100.00 - 120.00	0.6000	0.4991
T19	18	2" Fiber Duct	100.00 - 120.00	0.6000	0.4991
T19	19	5/16 Coax	100.00 - 120.00	0.6000	0.4991
T19	20	1-1/4" Hybrid	100.00 - 120.00	0.6000	0.4991
T19	22	1.75"	100.00 - 120.00	0.6000	0.4991
T19	27	AM Skirt Antenna	100.00 - 120.00	0.6000	0.4991
T19	28	AM Skirt Antenna	100.00 - 120.00	0.6000	0.4991
T19	29	AM Skirt Antenna	100.00 - 120.00	0.6000	0.4991
T19	31	1.55" Hybrid	100.00 - 120.00	0.6000	0.4991
T20	1	2 1/4"	80.00 - 100.00	0.6000	0.5052
T20	3	7/8"	80.00 - 100.00	0.6000	0.5052
T20	5	7/8"	80.00 - 100.00	0.6000	0.5052
T20	7	7/8"	80.00 - 100.00	0.6000	0.5052
T20	9	7/8"	80.00 - 100.00	0.6000	0.5052
T20	11	1/2"	80.00 - 100.00	0.6000	0.5052
T20	16	1/2" Heliax Coax	80.00 - 100.00	0.6000	0.5052
T20	17	1-1/4" Hybrid	80.00 - 100.00	0.6000	0.5052
T20	18	2" Fiber Duct	80.00 - 100.00	0.6000	0.5052
T20	19	5/16 Coax	80.00 - 100.00	0.6000	0.5052
T20	20	1-1/4" Hybrid	80.00 - 100.00	0.6000	0.5052
T20	22	1.75"	80.00 - 100.00	0.6000	0.5052
T20	27	AM Skirt Antenna	80.00 - 100.00	0.6000	0.5052
T20	28	AM Skirt Antenna	80.00 - 100.00	0.6000	0.5052
T20	29	AM Skirt Antenna	80.00 - 100.00	0.6000	0.5052
T20	31	1.55" Hybrid	80.00 - 100.00	0.6000	0.5052
T21	1	2 1/4"	60.00 - 80.00	0.6000	0.5126
T21	3	7/8"	60.00 - 80.00	0.6000	0.5126
T21	5	7/8"	60.00 - 80.00	0.6000	0.5126
T21	7	7/8"	60.00 - 80.00	0.6000	0.5126
T21	9	7/8"	60.00 - 80.00	0.6000	0.5126
T21	11	1/2"	60.00 - 80.00	0.6000	0.5126
T21	16	1/2" Heliax Coax	60.00 - 80.00	0.6000	0.5126
T21	17	1-1/4" Hybrid	60.00 - 80.00	0.6000	0.5126
T21	18	2" Fiber Duct	60.00 - 80.00	0.6000	0.5126
T21	19	5/16 Coax	60.00 - 80.00	0.6000	0.5126
T21	20	1-1/4" Hybrid	60.00 - 80.00	0.6000	0.5126
T21	22	1.75"	60.00 - 80.00	0.6000	0.5126
T21	27	AM Skirt Antenna	60.00 - 80.00	0.6000	0.5126
T21	28	AM Skirt Antenna	60.00 - 80.00	0.6000	0.5126
T21	29	AM Skirt Antenna	60.00 - 80.00	0.6000	0.5126
T21	31	1.55" Hybrid	60.00 - 80.00	0.6000	0.5126
T22	1	2 1/4"	40.00 - 60.00	0.6000	0.5223
T22	3	7/8"	40.00 - 60.00	0.6000	0.5223
T22	5	7/8"	40.00 - 60.00	0.6000	0.5223
T22	7	7/8"	40.00 - 60.00	0.6000	0.5223

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T22	9	7/8"	40.00 - 60.00	0.6000	0.5223
T22	11	1/2"	40.00 - 60.00	0.6000	0.5223
T22	16	1/2" Heliax Coax	40.00 - 60.00	0.6000	0.5223
T22	17	1-1/4" Hybrid	40.00 - 60.00	0.6000	0.5223
T22	18	2" Fiber Duct	40.00 - 60.00	0.6000	0.5223
T22	19	5/16 Coax	40.00 - 60.00	0.6000	0.5223
T22	20	1-1/4" Hybrid	40.00 - 60.00	0.6000	0.5223
T22	22	1.75"	40.00 - 60.00	0.6000	0.5223
T22	27	AM Skirt Antenna	40.00 - 60.00	0.6000	0.5223
T22	28	AM Skirt Antenna	40.00 - 60.00	0.6000	0.5223
T22	29	AM Skirt Antenna	40.00 - 60.00	0.6000	0.5223
T22	31	1.55" Hybrid	40.00 - 60.00	0.6000	0.5223
T23	1	2 1/4"	20.00 - 40.00	0.6000	0.5365
T23	3	7/8"	20.00 - 40.00	0.6000	0.5365
T23	5	7/8"	20.00 - 40.00	0.6000	0.5365
T23	7	7/8"	20.00 - 40.00	0.6000	0.5365
T23	9	7/8"	20.00 - 40.00	0.6000	0.5365
T23	11	1/2"	20.00 - 40.00	0.6000	0.5365
T23	16	1/2" Heliax Coax	20.00 - 40.00	0.6000	0.5365
T23	17	1-1/4" Hybrid	20.00 - 40.00	0.6000	0.5365
T23	18	2" Fiber Duct	20.00 - 40.00	0.6000	0.5365
T23	19	5/16 Coax	20.00 - 40.00	0.6000	0.5365
T23	20	1-1/4" Hybrid	20.00 - 40.00	0.6000	0.5365
T23	22	1.75"	20.00 - 40.00	0.6000	0.5365
T23	27	AM Skirt Antenna	20.00 - 40.00	0.6000	0.5365
T23	28	AM Skirt Antenna	20.00 - 40.00	0.6000	0.5365
T23	29	AM Skirt Antenna	20.00 - 40.00	0.6000	0.5365
T23	31	1.55" Hybrid	20.00 - 40.00	0.6000	0.5365
T24	1	2 1/4"	10.00 - 20.00	0.6000	0.5520
T24	3	7/8"	10.00 - 20.00	0.6000	0.5520
T24	5	7/8"	10.00 - 20.00	0.6000	0.5520
T24	7	7/8"	10.00 - 20.00	0.6000	0.5520
T24	9	7/8"	10.00 - 20.00	0.6000	0.5520
T24	11	1/2"	10.00 - 20.00	0.6000	0.5520
T24	16	1/2" Heliax Coax	7.00 - 20.00	0.6000	0.5520
T24	17	1-1/4" Hybrid	10.00 - 20.00	0.6000	0.5520
T24	18	2" Fiber Duct	7.00 - 20.00	0.6000	0.5520
T24	19	5/16 Coax	7.00 - 20.00	0.6000	0.5520
T24	20	1-1/4" Hybrid	10.00 - 20.00	0.6000	0.5520
T24	22	1.75"	6.67 - 20.00	0.6000	0.5520
T24	27	AM Skirt Antenna	6.67 - 20.00	0.6000	0.5520
T24	28	AM Skirt Antenna	6.67 - 20.00	0.6000	0.5520
T24	29	AM Skirt Antenna	6.67 - 20.00	0.6000	0.5520
T24	31	1.55" Hybrid	6.67 - 20.00	0.6000	0.5520
T25	22	1.75"	0.00 - 6.67	0.6000	0.4131
T25	27	AM Skirt Antenna	5.00 - 6.67	0.6000	0.4131
T25	28	AM Skirt Antenna	5.00 - 6.67	0.6000	0.4131
T25	29	AM Skirt Antenna	5.00 - 6.67	0.6000	0.4131
T25	31	1.55" Hybrid	0.00 - 6.67	0.6000	0.4131

User Defined Loads - Seismic

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
T1	480.00	0.00	0.0000	0.10	0.00	0.00	0.10
T2	460.00	0.00	0.0000	0.05	0.00	0.00	0.06
T3	440.00	0.00	0.0000	0.05	0.00	0.00	0.07
T4	420.00	0.00	0.0000	0.05	0.00	0.00	0.06
T5	400.00	0.00	0.0000	0.08	0.00	0.00	0.08
T6	380.00	0.00	0.0000	0.05	0.00	0.00	0.05
T7	360.00	0.00	0.0000	0.05	0.00	0.00	0.05
T8	340.00	0.00	0.0000	0.06	0.00	0.00	0.06
T9	320.00	0.00	0.0000	0.09	0.00	0.00	0.07
T10	300.00	0.00	0.0000	0.06	0.00	0.00	0.05
T11	280.00	0.00	0.0000	0.05	0.00	0.00	0.04
T12	260.00	0.00	0.0000	0.07	0.00	0.00	0.06
T13	240.00	0.00	0.0000	0.11	0.00	0.00	0.07
T14	220.00	0.00	0.0000	0.14	0.00	0.00	0.09
T15	200.00	0.00	0.0000	0.09	0.00	0.00	0.06
T16	180.00	0.00	0.0000	0.12	0.00	0.00	0.06
T17	160.00	0.00	0.0000	0.23	0.00	0.00	0.11
T18	140.00	0.00	0.0000	0.24	0.00	0.00	0.10
T19	120.00	0.00	0.0000	0.08	0.00	0.00	0.03
T20	100.00	0.00	0.0000	0.08	0.00	0.00	0.02
T21	80.00	0.00	0.0000	0.10	0.00	0.00	0.02
T22	60.00	0.00	0.0000	0.08	0.00	0.00	0.01
T23	40.00	0.00	0.0000	0.08	0.00	0.00	0.01
T24	20.00	0.00	0.0000	0.05	0.00	0.00	0.00
T25	6.67	0.00	0.0000	0.04	0.00	0.00	0.00

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement		C_AA_A Front	C_AA_A Side	Weight
			ft ft ft	°	ft		ft^2	ft^2	K
Existing Top Beacon	B	None		0.0000	500.00	No Ice	2.50	4.00	0.10
						1/2" Ice	3.00	0.00	0.17
						1" Ice	5.50	0.00	0.25
						2" Ice	8.50	0.00	0.40
Existing Middle (2) Beacons	B	None		0.0000	220.00	No Ice	5.00	4.00	0.10
						1/2" Ice	5.90	0.00	0.00
						1" Ice	6.80	0.00	0.00
						2" Ice	8.60	0.00	0.00
****									
LPX-2EHW FM antenna (Radio One)	A	From Leg	1.50 0.00 0.00	0.0000	495.00	No Ice	7.00	7.00	0.13
						1/2" Ice	10.00	10.00	0.20
						1" Ice	13.00	13.00	0.28
						2" Ice	19.00	19.00	0.45
****									
Shively 6842-2-55 Antenna (Delmarva)	A	From Leg	3.00 0.00 0.00	0.0000	430.00	No Ice	6.50	4.10	0.12
						1/2" Ice	10.30	7.00	0.19
						1" Ice	14.10	9.90	0.25
						2" Ice	21.70	15.70	0.39
****									
****									

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Dish Pipe Mount	C	From Leg	1.00 0.00 0.00	0.0000	330.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.20 2.70 3.20 4.20	1.80 2.40 3.00 4.20	0.07 0.11 0.15 0.23
****									
SWR-FEMC/2-HWS-TA (Radio Richmond)	A	From Leg	3.00 0.00 0.00	0.0000	293.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.50 7.00 8.50 11.50	5.50 7.00 8.50 11.50	0.15 0.25 0.35 0.55
Standoff (1) (Clearwire)	A	From Leg	1.00 0.00 0.00	0.0000	293.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.97 6.12 7.27 9.57	4.97 6.12 7.27 9.57	0.07 0.13 0.19 0.31
***									
BEXT TFC2K FM Antenna (Calvary Chapel)	C	From Leg	2.00 0.00 0.00	0.0000	242.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.30 4.10 4.90 6.50	6.22 7.82 9.42 12.62	0.04 0.05 0.06 0.08
5'3"x4" Pipe Mount (Calvary Chapel of Twin Falls, Inc)	A	From Leg	1.50 0.00 0.00	0.0000	242.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.54 2.21 2.54 3.24	1.54 2.21 2.54 3.24	0.06 0.07 0.09 0.15
*** **** ****									
Pipe mount 8'x2.375 (T-mobile)	A	From Leg	3.00 0.00 0.00	0.0000	215.70	No Ice 1/2" Ice 1" Ice 2" Ice	1.10 1.60 2.10 3.10	1.91 2.70 3.49 5.07	0.02 0.03 0.05 0.09
**** ****									
AIR6449 B41 (T-Mobile)	A	From Leg	3.00 0.00 0.00	0.0000	204.60	No Ice 1/2" Ice 1" Ice 2" Ice	5.65 5.96 6.26 6.90	2.42 2.64 2.87 3.36	0.10 0.14 0.18 0.28
AIR6449 B41 (T-Mobile)	B	From Leg	3.00 0.00 0.00	0.0000	204.60	No Ice 1/2" Ice 1" Ice 2" Ice	5.65 5.96 6.26 6.90	2.42 2.64 2.87 3.36	0.10 0.14 0.18 0.28
AIR6449 B41 (T-Mobile)	C	From Leg	3.00 0.00 0.00	0.0000	204.60	No Ice 1/2" Ice 1" Ice 2" Ice	5.65 5.96 6.26 6.90	2.42 2.64 2.87 3.36	0.10 0.14 0.18 0.28
APXVAARR24_43-U-NA20 (T-Mobile)	A	From Leg	3.00 0.00 0.00	0.0000	204.60	No Ice 1/2" Ice 1" Ice 2" Ice	20.24 20.89 21.54 22.87	8.89 9.49 10.09 11.33	0.13 0.24 0.36 0.63
APXVAARR24_43-U-NA20 (T-Mobile)	B	From Leg	3.00 0.00 0.00	0.0000	204.60	No Ice 1/2" Ice 1" Ice 2" Ice	20.24 20.89 21.54 22.87	8.89 9.49 10.09 11.33	0.13 0.24 0.36 0.63
APXVAARR24_43-U-NA20 (T-Mobile)	C	From Leg	3.00 0.00 0.00	0.0000	204.60	No Ice 1/2" Ice 1" Ice 2" Ice	20.24 20.89 21.54 22.87	8.89 9.49 10.09 11.33	0.13 0.24 0.36 0.63
4449 B71 / B12 (T-Mobile)	A	From Leg	3.00 0.00	0.0000	204.60	No Ice 1/2" Ice	1.98 2.16	1.41 1.57	0.07 0.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00				1" Ice	2.34	1.73	0.11
							2" Ice	2.73	2.08	0.16
4449 B71 / B12	B	From Leg	3.00		0.0000	204.60	No Ice	1.98	1.41	0.07
(T-Mobile)			0.00				1/2" Ice	2.16	1.57	0.09
			0.00				1" Ice	2.34	1.73	0.11
							2" Ice	2.73	2.08	0.16
4449 B71 / B12	C	From Leg	3.00		0.0000	204.60	No Ice	1.98	1.41	0.07
(T-Mobile)			0.00				1/2" Ice	2.16	1.57	0.09
			0.00				1" Ice	2.34	1.73	0.11
							2" Ice	2.73	2.08	0.16
****										
4415 B25	A	From Leg	3.00		0.0000	204.60	No Ice	1.84	0.82	0.05
(T-Mobile)			0.00				1/2" Ice	2.01	0.94	0.06
			0.00				1" Ice	2.19	1.07	0.08
							2" Ice	2.57	1.37	0.12
4415 B25	B	From Leg	3.00		0.0000	204.60	No Ice	1.84	0.82	0.05
(T-Mobile)			0.00				1/2" Ice	2.01	0.94	0.06
			0.00				1" Ice	2.19	1.07	0.08
							2" Ice	2.57	1.37	0.12
4415 B25	C	From Leg	3.00		0.0000	204.60	No Ice	1.84	0.82	0.05
(T-Mobile)			0.00				1/2" Ice	2.01	0.94	0.06
			0.00				1" Ice	2.19	1.07	0.08
							2" Ice	2.57	1.37	0.12
Schedule 40 pipes x 80"	A	From Leg	3.00		0.0000	204.60	No Ice	1.32	0.00	0.02
Horizontal			0.00				1/2" Ice	1.88	0.00	0.05
(T-mobile)			0.00				1" Ice	4.87	0.00	0.08
							2" Ice	7.09	0.00	0.13
Schedule 40 pipes x 80"	B	From Leg	3.00		0.0000	204.60	No Ice	1.32	0.00	0.02
Horizontal			0.00				1/2" Ice	1.88	0.00	0.05
(T-mobile)			0.00				1" Ice	4.87	0.00	0.08
							2" Ice	7.09	0.00	0.13
Schedule 40 pipes x 80"	C	From Leg	3.00		0.0000	204.60	No Ice	1.32	0.00	0.02
Horizontal			0.00				1/2" Ice	1.88	0.00	0.05
(T-mobile)			0.00				1" Ice	4.87	0.00	0.08
							2" Ice	7.09	0.00	0.13
(2) Schedule 40 Pipes	A	From Leg	3.00		0.0000	204.60	No Ice	0.02	3.81	0.03
Vertical			0.00				1/2" Ice	0.05	5.41	0.06
(T-Mobile)			0.00				1" Ice	0.16	7.01	0.09
							2" Ice	0.30	10.21	0.14
(2) Schedule 40 Pipes	B	From Leg	3.00		0.0000	204.60	No Ice	0.02	3.81	0.03
Vertical			0.00				1/2" Ice	0.05	5.41	0.06
(T-Mobile)			0.00				1" Ice	0.16	7.01	0.09
							2" Ice	0.30	10.21	0.14
(2) Schedule 40 Pipes	C	From Leg	3.00		0.0000	204.60	No Ice	0.02	3.81	0.03
Vertical			0.00				1/2" Ice	0.05	5.41	0.06
(T-Mobile)			0.00				1" Ice	0.16	7.01	0.09
							2" Ice	0.30	10.21	0.14
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Face mounts	A	From Leg	1.00		0.0000	169.29	No Ice	2.62	1.99	0.10
(T-Mobile)			0.00				1/2" Ice	3.42	2.65	0.15
			0.00				1" Ice	15.85	11.91	0.50
							2" Ice	22.65	16.75	0.71

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Face mounts	B	From Leg	1.00	0.0000	169.29	No Ice	2.62	1.99	0.10
(T-Mobile)			0.00			1/2" Ice	3.42	2.65	0.15
			0.00			1" Ice	15.85	11.91	0.50
						2" Ice	22.65	16.75	0.71
Face mounts	C	From Leg	1.00	0.0000	169.29	No Ice	2.62	1.99	0.10
(T-Mobile)			0.00			1/2" Ice	3.42	2.65	0.15
			0.00			1" Ice	15.85	11.91	0.50
						2" Ice	22.65	16.75	0.71
****									
AIR 32 B66A/B2A	A	From Leg	3.00	0.0000	169.29	No Ice	6.51	4.71	0.13
(T-Mobile)			0.00			1/2" Ice	6.89	5.07	0.18
			0.00			1" Ice	7.27	5.43	0.23
						2" Ice	8.06	6.18	0.35
AIR 32 B66A/B2A	B	From Leg	3.00	0.0000	169.29	No Ice	6.51	4.71	0.13
(T-Mobile)			0.00			1/2" Ice	6.89	5.07	0.18
			0.00			1" Ice	7.27	5.43	0.23
						2" Ice	8.06	6.18	0.35
AIR 32 B66A/B2A	C	From Leg	3.00	0.0000	169.29	No Ice	6.51	4.71	0.13
(T-Mobile)			0.00			1/2" Ice	6.89	5.07	0.18
			0.00			1" Ice	7.27	5.43	0.23
						2" Ice	8.06	6.18	0.35
***									
MX08FRO665-21	A	From Leg	3.00	0.0000	150.00	No Ice	12.49	5.87	0.06
(Dish Wireless)			0.00			1/2" Ice	12.99	6.32	0.14
			0.00			1" Ice	13.49	6.79	0.22
						2" Ice	14.52	7.74	0.40
MX08FRO665-21	B	From Leg	3.00	0.0000	150.00	No Ice	12.49	5.87	0.06
(Dish Wireless)			0.00			1/2" Ice	12.99	6.32	0.14
			0.00			1" Ice	13.49	6.79	0.22
						2" Ice	14.52	7.74	0.40
MX08FRO665-21	C	From Leg	3.00	0.0000	150.00	No Ice	12.49	5.87	0.06
(Dish Wireless)			0.00			1/2" Ice	12.99	6.32	0.14
			0.00			1" Ice	13.49	6.79	0.22
						2" Ice	14.52	7.74	0.40
TA08025-B605	A	From Leg	3.00	0.0000	150.00	No Ice	1.96	1.19	0.07
(Dish Wireless)			0.00			1/2" Ice	2.14	1.33	0.09
			0.00			1" Ice	2.32	1.48	0.11
						2" Ice	2.71	1.80	0.16
TA08025-B605	B	From Leg	3.00	0.0000	150.00	No Ice	1.96	1.19	0.07
(Dish Wireless)			0.00			1/2" Ice	2.14	1.33	0.09
			0.00			1" Ice	2.32	1.48	0.11
						2" Ice	2.71	1.80	0.16
TA08025-B605	C	From Leg	3.00	0.0000	150.00	No Ice	1.96	1.19	0.07
(Dish Wireless)			0.00			1/2" Ice	2.14	1.33	0.09
			0.00			1" Ice	2.32	1.48	0.11
						2" Ice	2.71	1.80	0.16
TA08025-B604	A	From Leg	3.00	0.0000	150.00	No Ice	1.96	1.03	0.06
(Dish Wireless)			0.00			1/2" Ice	2.14	1.17	0.08
			0.00			1" Ice	2.32	1.31	0.10
						2" Ice	2.71	1.62	0.15
TA08025-B604	B	From Leg	3.00	0.0000	150.00	No Ice	1.96	1.03	0.06
(Dish Wireless)			0.00			1/2" Ice	2.14	1.17	0.08
			0.00			1" Ice	2.32	1.31	0.10
						2" Ice	2.71	1.62	0.15
TA08025-B604	C	From Leg	3.00	0.0000	150.00	No Ice	1.96	1.03	0.06
(Dish Wireless)			0.00			1/2" Ice	2.14	1.17	0.08
			0.00			1" Ice	2.32	1.31	0.10

Description	*Face or Leg*	*Offset Type*	*Offsets: Horz Lateral Vert* *ft ft ft*	*Azimuth Adjustment* *°*	*Placement* *ft*		*C_AA_A Front* *ft^2*	*C_AA_A Side* *ft^2*	*Weight* *K*
						2" Ice	2.71	1.62	0.15
RDIDC-9181-PF-48	A	From Leg	3.00	0.0000	150.00	No Ice	2.24	1.17	0.02
(Dish Wireless)			0.00			1/2" Ice	2.42	1.31	0.04
			0.00			1" Ice	2.62	1.46	0.06
						2" Ice	3.02	1.78	0.12
Commscope	A	From Leg	3.00	0.0000	150.00	No Ice	6.92	4.88	0.35
MTC3975083-PK01 Sector			0.00			1/2" Ice	9.85	8.30	0.46
Frame			0.00			1" Ice	12.78	11.72	0.56
(Dish Wireless)						2" Ice	18.64	18.56	0.78
Commscope	B	From Leg	3.00	0.0000	150.00	No Ice	6.92	4.88	0.35
MTC3975083-PK01 Sector			0.00			1/2" Ice	9.85	8.30	0.46
Frame			0.00			1" Ice	12.78	11.72	0.56
(Dish Wireless)						2" Ice	18.64	18.56	0.78
Commscope	C	From Leg	3.00	0.0000	150.00	No Ice	6.92	4.88	0.35
MTC3975083-PK01 Sector			0.00			1/2" Ice	9.85	8.30	0.46
Frame			0.00			1" Ice	12.78	11.72	0.56
(Dish Wireless)						2" Ice	18.64	18.56	0.78
(3) mount pipes	A	From Leg	3.00	0.0000	150.00	No Ice	5.20	6.91	0.14
(Dish Wireless)			0.00			1/2" Ice	6.98	9.31	0.19
			0.00			1" Ice	8.76	11.71	0.24
						2" Ice	12.32	16.51	0.34
(3) mount pipes	A	From Leg	3.00	0.0000	150.00	No Ice	5.20	6.91	0.14
(Dish Wireless)			0.00			1/2" Ice	6.98	9.31	0.19
			0.00			1" Ice	8.76	11.71	0.24
						2" Ice	12.32	16.51	0.34
(3) mount pipes	A	From Leg	3.00	0.0000	150.00	No Ice	5.20	6.91	0.14
(Dish Wireless)			0.00			1/2" Ice	6.98	9.31	0.19
			0.00			1" Ice	8.76	11.71	0.24
						2" Ice	12.32	16.51	0.34
***									
NHH-65C-R2B	A	From Leg	3.00	0.0000	134.00	No Ice	11.39	7.66	0.05
(Verizon)			0.00			1/2" Ice	12.01	8.25	0.12
			0.00			1" Ice	12.63	8.84	0.19
						2" Ice	13.87	10.06	0.36
NHH-65C-RCB	B	From Leg	3.00	0.0000	134.00	No Ice	11.39	7.66	0.05
(Verizon)			0.00			1/2" Ice	12.01	8.25	0.12
			0.00			1" Ice	12.63	8.84	0.19
						2" Ice	13.87	10.06	0.36
NHH-65C-RCB	C	From Leg	3.00	0.0000	134.00	No Ice	11.39	7.66	0.05
(Verizon)			0.00			1/2" Ice	12.01	8.25	0.12
			0.00			1" Ice	12.63	8.84	0.19
						2" Ice	13.87	10.06	0.36
NHHSS-65C-R2B	A	From Leg	3.00	0.0000	134.00	No Ice	11.39	7.66	0.06
(Verizon)			0.00			1/2" Ice	12.01	8.25	0.12
			0.00			1" Ice	12.63	8.84	0.19
						2" Ice	13.87	10.06	0.37
NHHSS-65C-R2B	B	From Leg	3.00	0.0000	134.00	No Ice	11.39	7.66	0.06
(Verizon)			0.00			1/2" Ice	12.01	8.25	0.12
			0.00			1" Ice	12.63	8.84	0.19
						2" Ice	13.87	10.06	0.37
NHHSS-65C-R2B	C	From Leg	3.00	0.0000	134.00	No Ice	11.39	7.66	0.06
(Verizon)			0.00			1/2" Ice	12.01	8.25	0.12
			0.00			1" Ice	12.63	8.84	0.19
						2" Ice	13.87	10.06	0.37
MT6407-77A	A	From Leg	3.00	0.0000	134.00	No Ice	4.67	1.84	0.08
(Verizon)			0.00			1/2" Ice	4.96	2.06	0.11
			0.00			1" Ice	5.26	2.29	0.14

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	5.87	2.77	0.22
MT6407-77A	B	From Leg	3.00	0.0000	134.00	No Ice	4.67	1.84	0.08
(Verizon)			0.00			1/2" Ice	4.96	2.06	0.11
			0.00			1" Ice	5.26	2.29	0.14
						2" Ice	5.87	2.77	0.22
MT6407-77A	C	From Leg	3.00	0.0000	134.00	No Ice	4.67	1.84	0.08
(Verizon)			0.00			1/2" Ice	4.96	2.06	0.11
			0.00			1" Ice	5.26	2.29	0.14
						2" Ice	5.87	2.77	0.22
B5/B13 RRH-BR04C	A	From Leg	3.00	0.0000	127.00	No Ice	1.87	1.02	0.07
(RFV01U-D2A)			0.00			1/2" Ice	2.03	1.15	0.09
(Verizon)			0.00			1" Ice	2.21	1.29	0.11
						2" Ice	2.59	1.59	0.15
B5/B13 RRH-BR04C	B	From Leg	3.00	0.0000	127.00	No Ice	1.87	1.02	0.07
(RFV01U-D2A)			0.00			1/2" Ice	2.03	1.15	0.09
(Verizon)			0.00			1" Ice	2.21	1.29	0.11
						2" Ice	2.59	1.59	0.15
B5/B13 RRH-BR04C	C	From Leg	3.00	0.0000	127.00	No Ice	1.87	1.02	0.07
(RFV01U-D2A)			0.00			1/2" Ice	2.03	1.15	0.09
(Verizon)			0.00			1" Ice	2.21	1.29	0.11
						2" Ice	2.59	1.59	0.15
B2/B66A RRH-BRO49	A	From Leg	3.00	0.0000	127.00	No Ice	1.87	1.25	0.08
(RFV01U-D1A)			0.00			1/2" Ice	2.04	1.39	0.10
(Verizon)			0.00			1" Ice	2.21	1.54	0.12
						2" Ice	2.59	1.87	0.17
B2/B66A RRH-BRO49	B	From Leg	3.00	0.0000	127.00	No Ice	1.87	1.25	0.08
(RFV01U-D1A)			0.00			1/2" Ice	2.04	1.39	0.10
(Verizon)			0.00			1" Ice	2.21	1.54	0.12
						2" Ice	2.59	1.87	0.17
B2/B66A RRH-BRO49	C	From Leg	3.00	0.0000	127.00	No Ice	1.87	1.25	0.08
(RFV01U-D1A)			0.00			1/2" Ice	2.04	1.39	0.10
(Verizon)			0.00			1" Ice	2.21	1.54	0.12
						2" Ice	2.59	1.87	0.17
CBRS RRH - RT4401-48A	A	From Leg	3.00	0.0000	127.00	No Ice	0.85	0.43	0.02
(Verizon)			0.00			1/2" Ice	0.97	0.52	0.02
			0.00			1" Ice	1.09	0.61	0.03
						2" Ice	1.36	0.84	0.06
CBRS RRH - RT4401-48A	B	From Leg	3.00	0.0000	127.00	No Ice	0.85	0.43	0.02
(Verizon)			0.00			1/2" Ice	0.97	0.52	0.02
			0.00			1" Ice	1.09	0.61	0.03
						2" Ice	1.36	0.84	0.06
CBRS RRH - RT4401-48A	C	From Leg	3.00	0.0000	127.00	No Ice	0.85	0.43	0.02
(Verizon)			0.00			1/2" Ice	0.97	0.52	0.02
			0.00			1" Ice	1.09	0.61	0.03
						2" Ice	1.36	0.84	0.06
(4)mount pipes	A	From Leg	3.00	0.0000	130.00	No Ice	6.18	10.00	0.16
(Verizon)			0.00			1/2" Ice	8.80	14.20	0.20
			0.00			1" Ice	11.42	18.40	0.24
						2" Ice	16.66	26.80	0.32
(4)mount pipes	B	From Leg	3.00	0.0000	130.00	No Ice	6.18	10.00	0.16
(Verizon)			0.00			1/2" Ice	8.80	14.20	0.20
			0.00			1" Ice	11.42	18.40	0.24
						2" Ice	16.66	26.80	0.32
(4)mount pipes	C	From Leg	3.00	0.0000	130.00	No Ice	6.18	10.00	0.16
(Verizon)			0.00			1/2" Ice	8.80	14.20	0.20
			0.00			1" Ice	11.42	18.40	0.24
						2" Ice	16.66	26.80	0.32

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Raycap RHSDC-3315-PF-48 (Verizon)	A	From Leg	1.00 0.00 0.00	0.0000	127.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.36 3.72 4.07 4.78	2.19 2.50 2.81 3.42	0.03 0.05 0.07 0.10
Raycap RHSDC-3315-PF-48 (Verizon)	B	From Leg	1.00 0.00 0.00	0.0000	127.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.36 3.72 4.07 4.78	2.19 2.50 2.81 3.42	0.03 0.05 0.07 0.10
SF-SU14-2-126 Sector Mount (Verizon)	A	From Leg	1.50 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice 2" Ice	15.50 17.00 18.50 21.50	11.60 12.75 13.90 16.20	0.50 0.65 0.80 1.10
SF-SU14-2-126 Sector Mount (Verizon)	B	From Leg	1.50 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice 2" Ice	15.50 17.00 18.50 21.50	11.60 12.75 13.90 16.20	0.50 0.65 0.80 1.10
SF-SU14-2-126 Sector Mount (Verizon)	C	From Leg	1.50 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice 2" Ice	15.50 17.00 18.50 21.50	11.60 12.75 13.90 16.20	0.50 0.65 0.80 1.10
Side arms for skirt (AM Stations)	A	From Leg	1.00 0.00 0.00	0.0000	200.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.00 12.00 15.00 21.00	4.50 6.00 7.50 10.50	0.15 0.25 0.35 0.55
Side arms for skirt (AM Stations)	B	From Leg	1.00 0.00 0.00	0.0000	200.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.00 12.00 15.00 21.00	4.50 6.00 7.50 10.50	0.15 0.25 0.35 0.55
Side arms for skirt (AM Stations)	C	From Leg	1.00 0.00 0.00	0.0000	200.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.00 12.00 15.00 21.00	4.50 6.00 7.50 10.50	0.15 0.25 0.35 0.55
Side arms for skirt (AM Stations)	A	From Leg	1.00 0.00 0.00	0.0000	5.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.00 12.00 15.00 21.00	4.50 6.00 7.50 10.50	0.15 0.25 0.35 0.55
Side arms for skirt (AM Stations)	B	From Leg	1.00 0.00 0.00	0.0000	5.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.00 12.00 15.00 21.00	4.50 6.00 7.50 10.50	0.15 0.25 0.35 0.55
Side arms for skirt (AM Stations)	C	From Leg	1.00 0.00 0.00	0.0000	5.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.00 12.00 15.00 21.00	4.50 6.00 7.50 10.50	0.15 0.25 0.35 0.55
*****									

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
RSI P-9LA72G-U 6' Grid Dish (Radio-One)	C	Grid	From Leg	1.00 0.00 0.00	0.0000		330.00	6.00	No Ice 1/2" Ice 1" Ice 2" Ice	28.30 29.05 29.80 31.30	0.12 0.16 0.20 0.28
****											
VHLP1-23 (T-mobile)	B	Paraboloid w/o Radome	From Leg	1.00 0.00 0.00	0.0000		191.00	1.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.79 0.92 1.06 1.33	0.01 0.02 0.02 0.03

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy
3	1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy
4	1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy
5	1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy
6	1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy
7	1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy
8	1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy
9	1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy
10	1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy
11	1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy
12	1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy
13	1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy
14	1.2 Dead+1.0 Ice+1.0 Temp+Guy
15	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy
16	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy
17	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy
18	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy
19	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy
20	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy
21	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy
22	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy
23	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy
24	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy
25	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy
26	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy
27	Dead+Wind 0 deg - Service+Guy
28	Dead+Wind 30 deg - Service+Guy
29	Dead+Wind 60 deg - Service+Guy
30	Dead+Wind 90 deg - Service+Guy
31	Dead+Wind 120 deg - Service+Guy
32	Dead+Wind 150 deg - Service+Guy
33	Dead+Wind 180 deg - Service+Guy
34	Dead+Wind 210 deg - Service+Guy
35	Dead+Wind 240 deg - Service+Guy
36	Dead+Wind 270 deg - Service+Guy
37	Dead+Wind 300 deg - Service+Guy
38	Dead+Wind 330 deg - Service+Guy
39	1.2 Dead+1.0 Ev+1.0 Eh 0 deg+1.0 Guy
40	1.2 Dead+1.0 Ev+1.0 Eh 30 deg+1.0 Guy
41	1.2 Dead+1.0 Ev+1.0 Eh 60 deg+1.0 Guy
42	1.2 Dead+1.0 Ev+1.0 Eh 90 deg+1.0 Guy

Comb. No.	Description
43	1.2 Dead+1.0 Ev+1.0 Eh 120 deg+1.0 Guy
44	1.2 Dead+1.0 Ev+1.0 Eh 150 deg+1.0 Guy
45	1.2 Dead+1.0 Ev+1.0 Eh 180 deg+1.0 Guy
46	1.2 Dead+1.0 Ev+1.0 Eh 210 deg+1.0 Guy
47	1.2 Dead+1.0 Ev+1.0 Eh 240 deg+1.0 Guy
48	1.2 Dead+1.0 Ev+1.0 Eh 270 deg+1.0 Guy
49	1.2 Dead+1.0 Ev+1.0 Eh 300 deg+1.0 Guy
50	1.2 Dead+1.0 Ev+1.0 Eh 330 deg+1.0 Guy

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	500 - 480	Pole	Max Tension	3	0.00	-0.00	0.00
			Max. Compression	23	-1.77	2.67	-0.66
			Max. Mx	11	-0.74	16.70	0.81
			Max. My	2	-0.74	0.32	17.00
			Max. Vy	11	-1.17	16.70	0.81
			Max. Vx	2	-1.17	0.32	17.00
			Max. Torque	11			-0.83
T1	480 - 460	Leg	Max Tension	12	6.25	-0.39	-0.17
			Max. Compression	21	-13.09	0.06	-0.00
			Max. Mx	12	6.25	-0.39	-0.17
			Max. My	8	6.09	0.06	0.41
			Max. Vy	12	-4.97	0.02	0.04
			Max. Vx	8	5.32	0.03	-0.04
		Diagonal	Max Tension	5	1.72	0.00	0.00
			Max. Compression	3	-1.84	0.00	0.00
			Max. Mx	23	0.35	0.02	0.00
			Max. My	10	-0.06	0.00	-0.00
			Max. Vy	23	0.02	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.08	0.00	0.00
			Max. Compression	2	-0.02	0.00	0.00
			Max. Mx	19	0.04	0.01	0.00
			Max. My	10	0.03	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	23	0.00	-0.00	-0.00
			Max. Compression	19	-0.00	-0.00	-0.00
			Max. Mx	18	-0.00	-0.00	-0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	18	0.01	-0.00	-0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	15	4.14	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	4.14	0.01	0.00
			Max. My	10	0.05	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Bottom Girt	Max Tension	8	0.09	0.00	0.00
			Max. Compression	2	-0.06	0.00	0.00
			Max. Mx	24	0.04	0.01	0.00
			Max. My	10	-0.04	0.00	-0.00
			Max. Vy	24	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Guy A	Bottom Tension	21	10.61		

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Section No.	*Elevation ft*	*Component Type*	*Condition*	*Gov. Load Comb.*	*Axial K*	*Major Axis Moment kip-ft*	*Minor Axis Moment kip-ft*
			Top Tension	8	12.10		
			Top Cable Vert	21	10.27		
			Top Cable Norm	21	6.41		
			Top Cable Tan	21	0.00		
			Bot Cable Vert	8	-8.03		
			Bot Cable Norm	8	6.93		
			Bot Cable Tan	8	0.00		
		Guy B	Bottom Tension	25	10.62		
			Top Tension	12	12.16		
			Top Cable Vert	25	10.31		
			Top Cable Norm	25	6.44		
			Top Cable Tan	25	0.00		
			Bot Cable Vert	12	-8.05		
			Bot Cable Norm	12	6.94		
			Bot Cable Tan	12	0.00		
		Guy C	Bottom Tension	17	10.69		
			Top Tension	4	12.17		
			Top Cable Vert	17	10.32		
			Top Cable Norm	17	6.45		
			Top Cable Tan	17	0.00		
			Bot Cable Vert	4	-8.10		
			Bot Cable Norm	4	6.98		
			Bot Cable Tan	4	0.00		
T2	460 - 440	Leg	Max Tension	2	4.95	-0.02	-0.00
			Max. Compression	4	-18.10	-0.03	-0.04
			Max. Mx	22	-14.77	-0.06	-0.00
			Max. My	23	-13.55	-0.03	0.05
			Max. Vy	5	-0.70	-0.04	-0.03
			Max. Vx	3	0.58	0.00	0.02
		Diagonal	Max Tension	5	1.04	0.00	0.00
			Max. Compression	11	-1.10	0.00	0.00
			Max. Mx	23	0.17	0.02	0.00
			Max. My	10	0.02	0.00	-0.00
			Max. Vy	23	-0.02	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.09	0.00	0.00
			Max. Compression	10	-0.03	0.00	0.00
			Max. Mx	24	0.06	0.01	0.00
			Max. My	10	0.04	0.00	-0.00
			Max. Vy	24	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	23	0.00	-0.00	0.00
			Max. Compression	19	-0.00	-0.00	-0.00
			Max. Mx	18	-0.00	-0.00	-0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	18	0.01	-0.00	-0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	11	0.04	0.00	0.00
			Max. Compression	5	-0.01	0.00	0.00
			Max. Mx	24	0.02	0.01	0.00
			Max. My	10	0.03	0.00	-0.00
			Max. Vy	24	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Bottom Girt	Max Tension	8	0.06	0.00	0.00
			Max. Compression	2	-0.03	0.00	0.00
			Max. Mx	25	0.04	0.01	0.00
			Max. My	10	-0.02	0.00	-0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
T3	440 - 420	Leg	Max Tension	2	5.25	0.02	-0.01

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	4	-18.70	-0.02	-0.04
			Max. Mx	19	-14.93	0.07	-0.01
			Max. My	23	-14.17	-0.03	0.06
			Max. Vy	5	0.35	-0.02	0.01
			Max. Vx	4	-0.25	0.03	0.04
		Diagonal	Max Tension	10	1.46	0.00	0.00
			Max. Compression	6	-1.64	0.00	0.00
			Max. Mx	23	0.01	0.02	0.00
			Max. My	10	0.70	0.00	-0.00
			Max. Vy	23	-0.02	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	5	0.42	0.00	0.00
			Max. Compression	11	-0.33	0.00	0.00
			Max. Mx	18	0.08	0.01	0.00
			Max. My	10	0.04	0.00	-0.00
			Max. Vy	18	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	6	0.00	-0.00	-0.00
			Max. Compression	19	-0.00	-0.00	-0.00
			Max. Mx	18	-0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	18	0.01	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	11	0.05	0.00	0.00
			Max. Compression	5	-0.02	0.00	0.00
			Max. Mx	25	0.03	0.01	0.00
			Max. My	10	0.00	0.00	-0.00
			Max. Vy	25	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Bottom Girt	Max Tension	5	0.08	0.00	0.00
			Max. Compression	11	-0.05	0.00	0.00
			Max. Mx	14	0.03	0.01	0.00
			Max. My	10	-0.02	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
T4	420 - 400	Leg	Max Tension	10	1.68	-0.01	-0.02
			Max. Compression	21	-16.99	0.07	-0.00
			Max. Mx	17	-15.36	-0.14	-0.00
			Max. My	23	-14.43	0.06	0.12
			Max. Vy	10	-0.52	0.06	-0.02
			Max. Vx	6	0.86	-0.03	-0.02
		Diagonal	Max Tension	10	2.19	0.00	0.00
			Max. Compression	6	-2.30	0.00	0.00
			Max. Mx	25	0.32	0.02	0.00
			Max. My	10	0.78	0.00	-0.00
			Max. Vy	25	-0.02	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	18	0.12	0.00	0.00
			Max. Compression	2	-0.03	0.00	0.00
			Max. Mx	14	0.06	0.01	0.00
			Max. My	10	0.05	0.00	-0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	6	0.00	-0.00	-0.00
			Max. Compression	11	-0.00	-0.00	-0.00
			Max. Mx	18	0.00	-0.00	0.00
			Max. My	2	-0.00	-0.00	0.00
			Max. Vy	18	0.01	-0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Top Girt	Max Tension	11	0.14	0.00	0.00
			Max. Compression	5	-0.10	0.00	0.00
			Max. Mx	14	0.03	0.01	0.00
			Max. My	10	0.01	0.00	-0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Bottom Girt	Max Tension	18	2.20	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1.90	0.01	0.00
			Max. My	10	1.06	0.00	-0.00
			Max. Vy	21	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
T5	400 - 380	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	21	-26.00	0.11	0.00
			Max. Mx	17	-23.67	-0.14	-0.00
			Max. My	23	-22.34	0.06	0.12
			Max. Vy	4	-2.36	-0.13	0.04
			Max. Vx	21	-2.51	0.07	-0.11
		Diagonal	Max Tension	5	1.79	0.00	0.00
			Max. Compression	11	-1.89	0.00	0.00
			Max. Mx	25	-0.11	0.02	0.00
			Max. My	10	0.50	0.00	-0.00
			Max. Vy	25	-0.02	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.12	0.00	0.00
			Max. Compression	6	-0.02	0.00	0.00
			Max. Mx	18	0.10	0.01	0.00
			Max. My	10	0.06	0.00	-0.00
			Max. Vy	18	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
			Max. Compression	25	-0.00	-0.00	-0.00
			Max. Mx	17	0.00	-0.00	-0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	17	0.01	-0.00	-0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	18	1.54	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1.32	0.01	0.00
			Max. My	10	0.87	0.00	-0.00
			Max. Vy	21	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Bottom Girt	Max Tension	5	0.12	0.00	0.00
			Max. Compression	11	-0.05	0.00	0.00
			Max. Mx	26	0.04	0.01	0.00
			Max. My	10	-0.05	0.00	-0.00
			Max. Vy	26	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Guy A	Bottom Tension	21	8.37		
			Top Tension	8	10.27		
			Top Cable Vert	21	8.22		
			Top Cable Norm	21	6.15		
			Top Cable Tan	21	0.00		
			Bot Cable Vert	8	-5.86		
			Bot Cable Norm	8	5.98		
			Bot Cable Tan	8	0.00		
		Guy B	Bottom Tension	25	8.37		
			Top Tension	12	10.28		
			Top Cable Vert	25	8.23		
			Top Cable Norm	25	6.16		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Top Cable Tan	25	0.00		
			Bot Cable Vert	12	-5.86		
			Bot Cable Norm	12	5.97		
			Bot Cable Tan	12	0.00		
		Guy C	Bottom Tension	17	8.51		
			Top Tension	4	10.33		
			Top Cable Vert	17	8.26		
			Top Cable Norm	17	6.19		
			Top Cable Tan	17	0.00		
			Bot Cable Vert	4	-5.96		
			Bot Cable Norm	4	6.08		
			Bot Cable Tan	4	0.00		
T6	380 - 360	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	17	-26.99	0.06	0.10
			Max. Mx	20	-26.03	0.12	-0.00
			Max. My	23	-24.85	-0.06	0.10
			Max. Vy	5	-0.65	-0.06	-0.06
			Max. Vx	5	0.47	-0.04	0.01
		Diagonal	Max Tension	10	1.24	0.00	0.00
			Max. Compression	6	-1.44	0.00	0.00
			Max. Mx	21	-0.02	0.02	0.00
			Max. My	10	0.61	0.00	-0.00
			Max. Vy	21	-0.02	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.14	0.00	0.00
			Max. Compression	10	-0.02	0.00	0.00
			Max. Mx	14	0.11	0.01	0.00
			Max. My	10	0.07	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	17	0.00	-0.00	-0.00
			Max. Compression	25	-0.00	-0.00	-0.00
			Max. Mx	17	0.00	-0.00	-0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	17	0.01	-0.00	-0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	11	0.10	0.00	0.00
			Max. Compression	5	-0.05	0.00	0.00
			Max. Mx	26	0.05	0.01	0.00
			Max. My	10	0.05	0.00	-0.00
			Max. Vy	26	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Bottom Girt	Max Tension	5	0.09	0.00	0.00
			Max. Compression	11	-0.04	0.00	0.00
			Max. Mx	23	0.05	0.01	0.00
			Max. My	3	0.05	0.00	0.00
			Max. Vy	23	-0.01	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
T7	360 - 340	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	17	-27.01	-0.06	-0.10
			Max. Mx	23	-25.43	-0.12	-0.00
			Max. My	20	-22.54	-0.05	0.11
			Max. Vy	10	-0.46	0.08	-0.03
			Max. Vx	6	0.74	-0.05	0.01
		Diagonal	Max Tension	10	2.01	0.00	0.00
			Max. Compression	6	-2.13	0.00	0.00
			Max. Mx	21	0.19	0.02	0.00
			Max. My	4	-0.82	0.00	0.00
			Max. Vy	21	-0.02	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Horizontal	Max Tension	4	0.14	0.00	0.00
			Max. Compression	10	-0.02	0.00	0.00
			Max. Mx	23	0.12	0.01	0.00
			Max. My	4	0.03	0.00	0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	17	0.00	-0.00	-0.00
			Max. Compression	25	-0.00	-0.00	-0.00
			Max. Mx	17	0.00	-0.00	-0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	17	0.01	-0.00	-0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	11	0.14	0.00	0.00
			Max. Compression	5	-0.08	0.00	0.00
			Max. Mx	23	0.06	0.01	0.00
			Max. My	3	-0.04	0.00	0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
		Bottom Girt	Max Tension	5	0.13	0.00	0.00
			Max. Compression	11	-0.06	0.00	0.00
			Max. Mx	17	0.07	0.01	0.00
			Max. My	4	0.09	0.00	0.00
			Max. Vy	17	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
T8	340 - 320	Leg	Max Tension	7	2.58	-0.04	0.00
			Max. Compression	6	-33.93	-0.06	0.08
			Max. Mx	18	-24.19	-0.18	-0.03
			Max. My	23	-24.32	0.05	0.18
			Max. Vy	10	-0.72	0.09	-0.06
			Max. Vx	6	1.10	-0.07	0.00
		Diagonal	Max Tension	9	3.77	0.00	0.00
			Max. Compression	3	-4.06	0.00	0.00
			Max. Mx	17	0.61	0.02	0.00
			Max. My	4	-0.93	0.00	0.00
			Max. Vy	17	-0.02	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Horizontal	Max Tension	12	0.55	0.00	0.00
			Max. Compression	6	-0.42	0.00	0.00
			Max. Mx	17	0.10	0.01	0.00
			Max. My	4	0.02	0.00	0.00
			Max. Vy	17	-0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	17	0.00	-0.00	-0.00
			Max. Compression	25	-0.00	-0.00	-0.00
			Max. Mx	17	0.00	-0.00	-0.00
			Max. My	8	-0.00	-0.00	0.00
			Max. Vy	17	0.01	-0.00	-0.00
			Max. Vx	8	-0.00	-0.00	0.00
		Top Girt	Max Tension	11	0.17	0.00	0.00
			Max. Compression	5	-0.12	0.00	0.00
			Max. Mx	17	0.03	0.01	0.00
			Max. My	4	-0.07	0.00	0.00
			Max. Vy	17	-0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Bottom Girt	Max Tension	18	2.69	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	2.41	0.01	0.00
			Max. My	4	2.45	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00

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			Max. Vx	4	-0.00	0.00	0.00
T9	320 - 300	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-36.09	-0.08	0.05
			Max. Mx	18	-31.88	-0.18	-0.03
			Max. My	23	-32.02	0.05	0.18
			Max. Vy	3	-2.70	-0.14	0.06
			Max. Vx	19	-2.97	0.12	-0.14
		Diagonal	Max Tension	2	1.79	0.00	0.00
			Max. Compression	2	-1.90	0.00	0.00
			Max. Mx	17	-0.11	0.02	0.00
			Max. My	4	-0.83	0.00	0.00
			Max. Vy	17	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Horizontal	Max Tension	17	0.15	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.13	0.01	0.00
			Max. My	4	0.08	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	17	0.00	-0.00	-0.00
			Max. Compression	25	-0.00	-0.00	-0.00
			Max. Mx	17	0.00	-0.00	-0.00
			Max. My	8	-0.00	-0.00	0.00
			Max. Vy	17	0.01	-0.00	-0.00
			Max. Vx	8	-0.00	-0.00	0.00
		Top Girt	Max Tension	18	1.88	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1.62	0.01	0.00
			Max. My	4	1.78	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Bottom Girt	Max Tension	3	0.12	0.00	0.00
			Max. Compression	10	-0.05	0.00	0.00
			Max. Mx	14	0.06	0.01	0.00
			Max. My	4	0.06	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Guy A	Bottom Tension	21	9.15		
			Top Tension	21	10.86		
			Top Cable Vert	21	7.84		
			Top Cable Norm	21	7.51		
			Top Cable Tan	21	0.00		
			Bot Cable Vert	21	-5.04		
			Bot Cable Norm	21	7.64		
			Bot Cable Tan	21	0.00		
		Guy B	Bottom Tension	25	9.17		
			Top Tension	25	10.88		
			Top Cable Vert	25	7.85		
			Top Cable Norm	25	7.53		
			Top Cable Tan	25	0.00		
			Bot Cable Vert	25	-5.05		
			Bot Cable Norm	25	7.65		
			Bot Cable Tan	25	0.00		
		Guy C	Bottom Tension	17	9.33		
			Top Tension	4	10.96		
			Top Cable Vert	17	7.91		
			Top Cable Norm	17	7.60		
			Top Cable Tan	17	0.00		
			Bot Cable Vert	4	-5.80		
			Bot Cable Norm	4	7.30		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Bot Cable Tan	4	0.00		
T10	300 - 280	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	15	-37.96	0.18	-0.01
			Max. Mx	16	-37.25	-0.18	0.00
			Max. My	18	-36.50	-0.08	0.16
			Max. Vy	10	0.70	-0.00	-0.09
			Max. Vx	2	0.76	-0.00	0.11
		Diagonal	Max Tension	9	2.24	0.00	0.00
			Max. Compression	4	-2.54	0.00	0.00
			Max. Mx	17	0.04	0.02	0.00
			Max. My	4	-0.91	0.00	0.00
			Max. Vy	17	-0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Horizontal	Max Tension	11	0.52	0.00	0.00
			Max. Compression	5	-0.36	0.00	0.00
			Max. Mx	25	0.13	0.01	0.00
			Max. My	4	-0.27	0.00	0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	17	0.00	-0.00	-0.00
			Max. Compression	25	-0.00	-0.00	-0.00
			Max. Mx	17	0.00	-0.00	-0.00
			Max. My	8	-0.00	-0.00	0.00
			Max. Vy	17	0.01	-0.00	-0.00
			Max. Vx	8	-0.00	-0.00	0.00
		Top Girt	Max Tension	9	0.12	0.00	0.00
			Max. Compression	3	-0.04	0.00	0.00
			Max. Mx	14	0.06	0.01	0.00
			Max. My	4	-0.02	0.00	0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Bottom Girt	Max Tension	4	0.16	0.00	0.00
			Max. Compression	10	-0.08	0.00	0.00
			Max. Mx	14	0.07	0.01	0.00
			Max. My	4	0.14	0.00	0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
T11	280 - 260	Leg	Max Tension	4	4.64	0.02	0.06
			Max. Compression	15	-41.76	0.21	-0.00
			Max. Mx	15	-41.76	0.21	-0.00
			Max. My	18	-40.21	-0.09	0.19
			Max. Vy	4	0.84	0.04	0.07
			Max. Vx	3	-1.23	0.05	0.07
		Diagonal	Max Tension	9	3.07	0.00	0.00
			Max. Compression	3	-3.40	0.00	0.00
			Max. Mx	17	0.37	0.02	0.00
			Max. My	4	-1.80	0.00	0.00
			Max. Vy	17	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Horizontal	Max Tension	18	0.15	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	17	0.14	0.01	0.00
			Max. My	4	0.10	0.00	0.00
			Max. Vy	17	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	17	0.00	-0.00	-0.00
			Max. Compression	25	-0.00	-0.00	-0.00
			Max. Mx	17	0.00	-0.00	-0.00
			Max. My	8	-0.00	-0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	17	0.01	-0.00	-0.00
			Max. Vx	8	-0.00	-0.00	0.00
		Top Girt	Max Tension	9	0.19	0.00	0.00
			Max. Compression	3	-0.11	0.00	0.00
			Max. Mx	14	0.07	0.01	0.00
			Max. My	4	-0.10	0.00	0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Bottom Girt	Max Tension	4	0.16	0.00	0.00
			Max. Compression	10	-0.06	0.00	0.00
			Max. Mx	17	0.11	0.01	0.00
			Max. My	4	0.13	0.00	0.00
			Max. Vy	17	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
T12	260 - 240	Leg	Max Tension	4	19.62	0.02	0.05
			Max. Compression	10	-54.51	0.16	-0.18
			Max. Mx	11	-17.66	0.42	-0.05
			Max. My	8	-36.53	-0.14	-0.39
			Max. Vy	3	1.11	0.04	0.13
			Max. Vx	3	-1.75	0.04	0.13
		Diagonal	Max Tension	9	3.99	0.00	0.00
			Max. Compression	3	-4.25	0.00	0.00
			Max. Mx	17	0.42	0.02	0.00
			Max. My	4	-1.99	0.00	0.00
			Max. Vy	17	-0.02	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Horizontal	Max Tension	3	0.24	0.00	0.00
			Max. Compression	7	-0.09	0.00	0.00
			Max. Mx	18	0.19	0.01	0.00
			Max. My	4	0.09	0.00	0.00
			Max. Vy	18	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	17	0.00	-0.00	0.00
			Max. Compression	25	-0.00	-0.00	-0.00
			Max. Mx	18	0.00	-0.00	0.00
			Max. My	7	-0.00	-0.00	-0.00
			Max. Vy	18	0.01	-0.00	0.00
			Max. Vx	7	0.00	0.00	0.00
		Top Girt	Max Tension	9	0.19	0.00	0.00
			Max. Compression	3	-0.11	0.00	0.00
			Max. Mx	17	0.06	0.01	0.00
			Max. My	4	-0.10	0.00	0.00
			Max. Vy	17	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Bottom Girt	Max Tension	5	4.43	0.00	0.00
			Max. Compression	11	-2.46	0.00	0.00
			Max. Mx	21	1.56	0.01	0.00
			Max. My	10	3.01	0.00	0.00
			Max. Vy	21	0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
T13	240 - 220	Leg	Max Tension	4	19.42	-0.23	0.12
			Max. Compression	15	-55.92	0.30	0.01
			Max. Mx	11	-16.06	0.42	-0.05
			Max. My	8	-35.58	-0.14	-0.39
			Max. Vy	5	-4.25	-0.33	0.00
			Max. Vx	8	-4.11	-0.02	-0.26
		Diagonal	Max Tension	13	4.39	0.00	0.00
			Max. Compression	11	-8.52	0.00	0.00
			Max. Mx	19	-0.10	0.02	0.00
			Max. My	10	0.06	0.00	-0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	19	-0.02	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	2	1.25	0.00	0.00
			Max. Compression	4	-1.29	0.00	0.00
			Max. Mx	20	0.22	0.01	0.00
			Max. My	10	0.13	0.00	0.00
			Max. Vy	20	0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	23	0.00	-0.00	0.00
			Max. Compression	19	-0.00	-0.00	-0.00
			Max. Mx	18	0.00	-0.00	0.00
			Max. My	2	-0.00	-0.00	0.00
			Max. Vy	18	0.01	-0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
		Top Girt	Max Tension	5	4.23	0.00	0.00
			Max. Compression	11	-2.33	0.00	0.00
			Max. Mx	21	1.61	0.01	0.00
			Max. My	10	3.07	0.00	0.00
			Max. Vy	21	0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Bottom Girt	Max Tension	12	0.24	0.00	0.00
			Max. Compression	6	-0.09	0.00	0.00
			Max. Mx	14	0.14	0.01	0.00
			Max. My	10	-0.07	0.00	0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Guy A	Bottom Tension	8	8.91		
			Top Tension	8	9.04		
			Top Cable Vert	8	6.54		
			Top Cable Norm	8	6.23		
			Top Cable Tan	8	0.00		
			Bot Cable Vert	8	-6.18		
			Bot Cable Norm	8	6.42		
			Bot Cable Tan	8	0.00		
		Guy B	Bottom Tension	12	8.77		
			Top Tension	12	8.89		
			Top Cable Vert	12	6.44		
			Top Cable Norm	12	6.13		
			Top Cable Tan	12	0.00		
			Bot Cable Vert	12	-6.08		
			Bot Cable Norm	12	6.32		
			Bot Cable Tan	12	0.00		
		Guy C	Bottom Tension	4	9.10		
			Top Tension	4	9.22		
			Top Cable Vert	4	6.67		
			Top Cable Norm	4	6.37		
			Top Cable Tan	4	0.00		
			Bot Cable Vert	4	-6.32		
			Bot Cable Norm	4	6.55		
			Bot Cable Tan	4	0.00		
		Torque Arm Top	Max Tension	17	10.94	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	26	9.76	-0.04	0.00
			Max. My	10	8.81	0.00	-0.00
			Max. Vy	26	-0.04	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Torque Arm Bottom	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-10.92	0.00	0.00
			Max. Mx	19	-8.70	-0.06	0.00
			Max. My	10	-1.68	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	19	0.04	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
T14	220 - 200	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	19	-53.73	-0.16	0.28
			Max. Mx	11	-40.44	-0.64	-0.16
			Max. My	2	-36.42	-0.10	-0.69
			Max. Vy	5	-2.38	-0.18	-0.13
			Max. Vx	13	2.32	-0.02	0.22
		Diagonal	Max Tension	13	3.77	0.00	0.00
			Max. Compression	7	-4.06	0.00	0.00
			Max. Mx	19	-0.64	0.02	0.00
			Max. My	10	0.01	0.00	-0.00
			Max. Vy	19	-0.02	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Horizontal	Max Tension	4	1.17	0.00	0.00
			Max. Compression	10	-0.86	0.00	0.00
			Max. Mx	14	0.28	0.01	0.00
			Max. My	10	0.18	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	23	0.00	-0.00	0.00
			Max. Compression	19	-0.00	-0.00	-0.00
			Max. Mx	18	-0.00	-0.00	0.00
			Max. My	2	-0.00	-0.00	0.00
			Max. Vy	18	0.01	-0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
		Top Girt	Max Tension	16	0.14	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.13	0.01	0.00
			Max. My	10	0.10	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Bottom Girt	Max Tension	12	0.21	0.00	0.00
			Max. Compression	6	-0.03	0.00	0.00
			Max. Mx	23	0.16	0.01	0.00
			Max. My	10	0.01	0.00	0.00
			Max. Vy	23	-0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
T15	200 - 180	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	19	-57.41	0.18	-0.32
			Max. Mx	15	-55.91	0.38	-0.01
			Max. My	19	-57.41	-0.19	0.34
			Max. Vy	12	-1.17	-0.11	-0.16
			Max. Vx	8	1.06	0.21	0.04
		Diagonal	Max Tension	9	3.12	0.00	0.00
			Max. Compression	3	-3.75	0.00	0.00
			Max. Mx	19	-0.97	0.02	0.00
			Max. My	10	-0.45	0.00	-0.00
			Max. Vy	19	-0.02	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Horizontal	Max Tension	17	0.32	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	23	0.29	0.01	0.00
			Max. My	10	0.18	0.00	0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	23	0.00	-0.00	0.00
			Max. Compression	19	-0.00	-0.00	-0.00
			Max. Mx	18	-0.00	-0.00	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	2	-0.00	-0.00	0.00
			Max. Vy	18	0.01	-0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
		Top Girt	Max Tension	8	0.28	0.00	0.00
			Max. Compression	2	-0.13	0.00	0.00
			Max. Mx	23	0.14	0.01	0.00
			Max. My	10	-0.10	0.00	0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Bottom Girt	Max Tension	18	0.18	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.17	0.01	0.00
			Max. My	5	0.12	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
T16	180 - 160	Leg	Max Tension	12	7.90	0.05	-0.13
			Max. Compression	19	-64.20	-0.14	0.17
			Max. Mx	11	-35.51	0.65	0.01
			Max. My	7	-36.60	-0.31	-0.58
			Max. Vy	12	-2.07	0.03	-0.15
			Max. Vx	3	-1.99	0.10	0.11
		Diagonal	Max Tension	3	5.28	0.00	0.00
			Max. Compression	9	-5.68	0.00	0.00
			Max. Mx	19	-1.14	0.02	0.00
			Max. My	4	-0.73	0.00	0.00
			Max. Vy	19	-0.02	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Horizontal	Max Tension	4	0.54	0.00	0.00
			Max. Compression	10	-0.12	0.00	0.00
			Max. Mx	15	0.40	0.01	0.00
			Max. My	10	0.35	0.00	-0.00
			Max. Vy	15	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	23	0.00	-0.00	0.00
			Max. Compression	19	-0.00	-0.00	-0.00
			Max. Mx	19	-0.00	-0.00	0.00
			Max. My	2	-0.00	-0.00	0.00
			Max. Vy	19	0.01	-0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
		Top Girt	Max Tension	8	0.22	0.00	0.00
			Max. Compression	2	-0.03	0.00	0.00
			Max. Mx	14	0.17	0.01	0.00
			Max. My	5	-0.01	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
		Bottom Girt	Max Tension	5	6.64	0.00	0.00
			Max. Compression	11	-4.17	0.00	0.00
			Max. Mx	15	1.07	0.01	0.00
			Max. My	10	5.11	0.00	0.00
			Max. Vy	15	-0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
T17	160 - 140	Leg	Max Tension	12	10.55	0.19	0.23
			Max. Compression	20	-75.79	0.55	-0.02
			Max. Mx	11	-33.88	0.65	0.01
			Max. My	7	-34.78	-0.31	-0.58
			Max. Vy	5	-6.73	-0.43	-0.05
			Max. Vx	8	-5.79	0.07	-0.37
		Diagonal	Max Tension	3	10.79	0.00	0.00
			Max. Compression	3	-12.04	0.00	0.00
			Max. Mx	19	1.15	0.02	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	4	-1.32	0.00	0.00
			Max. Vy	19	-0.02	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Horizontal	Max Tension	11	3.25	0.00	0.00
			Max. Compression	6	-2.88	0.00	0.00
			Max. Mx	15	0.41	0.01	0.00
			Max. My	5	0.26	0.00	0.00
			Max. Vy	15	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	24	0.00	-0.00	-0.00
			Max. Compression	19	-0.00	-0.00	-0.00
			Max. Mx	19	-0.00	-0.00	0.00
			Max. My	2	-0.00	-0.00	0.00
			Max. Vy	19	0.01	-0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
		Top Girt	Max Tension	5	6.48	0.00	0.00
			Max. Compression	11	-4.06	0.00	0.00
			Max. Mx	15	1.14	0.01	0.00
			Max. My	10	5.06	0.00	0.00
			Max. Vy	15	-0.01	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Bottom Girt	Max Tension	11	0.31	0.00	0.00
			Max. Compression	2	-0.06	0.00	0.00
			Max. Mx	14	0.24	0.01	0.00
			Max. My	18	0.26	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	18	-0.00	0.00	0.00
		Guy A	Bottom Tension	7	11.69		
			Top Tension	7	11.78		
			Top Cable Vert	7	6.66		
			Top Cable Norm	7	9.71		
			Top Cable Tan	7	0.03		
			Bot Cable Vert	7	-6.40		
			Bot Cable Norm	7	9.79		
			Bot Cable Tan	7	0.11		
		Guy B	Bottom Tension	11	11.71		
			Top Tension	11	11.80		
			Top Cable Vert	11	6.67		
			Top Cable Norm	11	9.73		
			Top Cable Tan	11	0.03		
			Bot Cable Vert	11	-6.41		
			Bot Cable Norm	11	9.80		
			Bot Cable Tan	11	0.11		
		Guy C	Bottom Tension	4	11.82		
			Top Tension	4	11.90		
			Top Cable Vert	4	6.73		
			Top Cable Norm	4	9.81		
			Top Cable Tan	4	0.00		
			Bot Cable Vert	4	-6.47		
			Bot Cable Norm	4	9.89		
			Bot Cable Tan	4	0.00		
		Torque Arm Top	Max Tension	5	13.10	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	10.04	-0.04	0.00
			Max. My	10	10.61	0.00	-0.00
			Max. Vy	19	-0.04	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Torque Arm Bottom	Max Tension	10	3.23	0.00	0.00
			Max. Compression	9	-13.84	0.00	0.00
			Max. Mx	19	-6.53	-0.05	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	4	-12.06	0.00	-0.00
			Max. Vy	19	0.04	0.00	0.00
			Max. Vx	4	0.00	0.00	0.00
T18	140 - 120	Leg	Max Tension	6	25.91	0.17	-0.06
			Max. Compression	21	-85.16	0.58	0.01
			Max. Mx	23	-81.30	-0.59	-0.01
			Max. My	19	-79.96	0.28	0.52
			Max. Vy	6	-3.45	-0.19	-0.28
			Max. Vx	9	-3.69	0.39	-0.08
		Diagonal	Max Tension	9	6.10	0.00	0.00
			Max. Compression	3	-6.88	0.00	0.00
			Max. Mx	19	0.12	0.02	0.00
			Max. My	4	0.44	0.00	0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Horizontal	Max Tension	4	1.17	0.00	0.00
			Max. Compression	10	-0.71	0.00	0.00
			Max. Mx	24	0.49	0.01	0.00
			Max. My	4	0.40	0.00	0.00
			Max. Vy	24	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	24	0.00	-0.00	-0.00
			Max. Compression	19	-0.00	-0.00	-0.00
			Max. Mx	19	-0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	19	0.01	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	15	0.25	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.23	0.01	0.00
			Max. My	18	0.23	0.00	0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	18	0.00	0.00	0.00
		Bottom Girt	Max Tension	21	0.27	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	24	0.27	0.01	0.00
			Max. My	3	0.05	0.00	0.00
			Max. Vy	24	0.01	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
T19	120 - 100	Leg	Max Tension	6	23.66	0.01	0.19
			Max. Compression	21	-86.41	-0.59	0.01
			Max. Mx	19	-83.21	0.61	-0.02
			Max. My	19	-82.11	0.29	0.53
			Max. Vy	4	1.20	-0.18	-0.32
			Max. Vx	8	1.19	-0.08	0.22
		Diagonal	Max Tension	13	3.13	0.00	0.00
			Max. Compression	7	-3.98	0.00	0.00
			Max. Mx	19	-0.56	0.02	0.00
			Max. My	4	0.10	0.00	0.00
			Max. Vy	19	0.01	0.00	0.00
			Max. Vx	4	-0.00	0.00	0.00
		Horizontal	Max Tension	21	0.55	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	18	0.51	0.01	0.00
			Max. My	10	0.29	0.00	-0.00
			Max. Vy	18	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
			Max. Compression	19	-0.00	-0.00	-0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	17	0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	17	0.01	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	17	0.26	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	24	0.26	0.01	0.00
			Max. My	3	0.06	0.00	0.00
			Max. Vy	24	0.01	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
		Bottom Girt	Max Tension	21	0.26	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.26	0.01	0.00
			Max. My	3	0.10	0.00	0.00
			Max. Vy	19	0.01	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
T20	100 - 80	Leg	Max Tension	6	7.31	-0.00	0.25
			Max. Compression	21	-86.52	0.59	0.01
			Max. Mx	19	-83.24	0.61	-0.01
			Max. My	24	-82.18	-0.14	0.57
			Max. Vy	5	2.17	-0.16	-0.30
			Max. Vx	7	2.07	-0.10	0.13
		Diagonal	Max Tension	7	4.43	0.00	0.00
			Max. Compression	7	-5.26	0.00	0.00
			Max. Mx	26	-0.01	0.01	0.00
			Max. My	10	-0.59	0.00	-0.00
			Max. Vy	26	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	22	0.55	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.53	0.01	0.00
			Max. My	10	0.29	0.00	-0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
			Max. Compression	11	-0.00	-0.00	-0.00
			Max. Mx	15	0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	15	0.01	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	21	0.27	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.26	0.01	0.00
			Max. My	3	0.04	0.00	0.00
			Max. Vy	19	0.01	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
		Bottom Girt	Max Tension	5	2.99	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1.91	0.01	0.00
			Max. My	3	2.67	0.00	0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
T21	80 - 60	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	21	-90.56	0.63	0.00
			Max. Mx	19	-87.78	0.65	-0.01
			Max. My	19	-87.53	0.32	0.57
			Max. Vy	11	3.58	0.15	0.34
			Max. Vx	7	-4.25	0.22	-0.31
		Diagonal	Max Tension	9	2.34	0.00	0.00
			Max. Compression	3	-3.16	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	18	-1.01	0.01	0.00
			Max. My	10	-0.65	0.00	-0.00
			Max. Vy	18	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	21	0.57	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	23	0.48	0.01	0.00
			Max. My	10	0.30	0.00	-0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	18	0.00	-0.00	-0.00
			Max. Compression	24	-0.00	-0.00	-0.00
			Max. Mx	15	0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	15	0.01	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	5	2.69	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1.65	0.01	0.00
			Max. My	3	2.46	0.00	0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
		Bottom Girt	Max Tension	25	0.28	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	23	0.27	0.01	0.00
			Max. My	10	0.09	0.00	-0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Guy A	Bottom Tension	7	9.61		
			Top Tension	7	9.64		
			Top Cable Vert	7	3.12		
			Top Cable Norm	7	9.12		
			Top Cable Tan	7	0.01		
			Bot Cable Vert	7	-2.98		
			Bot Cable Norm	7	9.13		
			Bot Cable Tan	7	0.07		
		Guy B	Bottom Tension	13	9.58		
			Top Tension	13	9.61		
			Top Cable Vert	13	3.11		
			Top Cable Norm	13	9.09		
			Top Cable Tan	13	0.01		
			Bot Cable Vert	13	-2.97		
			Bot Cable Norm	13	9.10		
			Bot Cable Tan	13	0.07		
		Guy C	Bottom Tension	5	9.62		
			Top Tension	5	9.65		
			Top Cable Vert	5	3.13		
			Top Cable Norm	5	9.13		
			Top Cable Tan	5	0.01		
			Bot Cable Vert	5	-2.99		
			Bot Cable Norm	5	9.14		
			Bot Cable Tan	5	0.07		
T22	60 - 40	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	21	-92.83	0.64	0.01
			Max. Mx	19	-90.07	0.66	-0.02
			Max. My	19	-89.52	0.32	0.58
			Max. Vy	12	0.93	-0.13	-0.23
			Max. Vx	8	-0.79	0.33	-0.02
		Diagonal	Max Tension	8	0.83	0.00	0.00
			Max. Compression	12	-1.78	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	18	-0.52	0.01	0.00
			Max. My	10	-0.35	0.00	-0.00
			Max. Vy	18	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	17	0.58	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	23	0.54	0.01	0.00
			Max. My	10	0.31	0.00	-0.00
			Max. Vy	21	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	18	0.00	-0.00	-0.00
			Max. Compression	24	-0.00	-0.00	-0.00
			Max. Mx	15	0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	15	0.01	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	21	0.27	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	23	0.26	0.01	0.00
			Max. My	10	0.11	0.00	-0.00
			Max. Vy	23	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Bottom Girt	Max Tension	25	0.28	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.26	0.01	0.00
			Max. My	10	0.10	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
T23	40 - 20	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	21	-93.38	0.64	0.00
			Max. Mx	19	-90.04	0.67	-0.01
			Max. My	19	-89.63	0.33	0.58
			Max. Vy	22	-0.40	0.66	0.01
			Max. Vx	5	0.39	-0.12	0.19
		Diagonal	Max Tension	10	1.59	0.00	0.00
			Max. Compression	2	-2.37	0.00	0.00
			Max. Mx	18	-0.07	0.01	0.00
			Max. My	10	-0.05	0.00	-0.00
			Max. Vy	18	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	17	0.58	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	15	0.55	0.01	0.00
			Max. My	10	0.33	0.00	-0.00
			Max. Vy	15	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	18	0.00	-0.00	-0.00
			Max. Compression	24	-0.00	-0.00	-0.00
			Max. Mx	15	0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	15	0.00	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	21	0.29	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.26	0.01	0.00
			Max. My	10	0.10	0.00	-0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Bottom Girt	Max Tension	18	0.27	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	15	0.27	0.01	0.00
			Max. My	3	0.15	0.00	0.00
			Max. Vy	15	0.01	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
T24	20 - 6.6667	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	21	-91.65	0.65	-0.01
			Max. Mx	17	-88.60	-0.74	-0.20
			Max. My	15	-87.85	0.16	0.73
			Max. Vy	6	1.16	-0.16	-0.29
			Max. Vx	10	1.19	0.33	-0.01
		Diagonal	Max Tension	10	2.66	0.00	0.00
			Max. Compression	2	-3.26	0.00	0.00
			Max. Mx	18	0.12	0.01	0.00
			Max. My	10	0.55	0.00	-0.00
			Max. Vy	18	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Horizontal	Max Tension	17	0.65	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	21	0.42	0.01	0.00
			Max. My	10	0.17	0.00	-0.00
			Max. Vy	21	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	18	0.00	-0.00	-0.00
			Max. Compression	24	-0.00	-0.00	-0.00
			Max. Mx	15	0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	15	0.00	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	21	0.29	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	15	0.26	0.01	0.00
			Max. My	3	0.08	0.00	0.00
			Max. Vy	15	-0.01	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
		Bottom Girt	Max Tension	18	7.31	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	15	7.28	0.01	0.00
			Max. My	10	3.64	0.00	-0.00
			Max. Vy	15	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
T25	6.6667 - 0	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	20	-92.64	-0.08	0.59
			Max. Mx	19	-88.79	0.54	0.46
			Max. My	10	-35.50	-0.03	1.19
			Max. Vy	15	10.42	-0.35	0.50
			Max. Vx	2	0.48	-0.25	0.45
		Diagonal	Max Tension	4	0.49	0.00	0.00
			Max. Compression	10	-1.61	0.00	0.00
			Max. Mx	19	-0.91	0.01	0.00
			Max. My	2	-0.03	0.00	0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	2	0.00	0.00	0.00
		Horizontal	Max Tension	8	0.57	0.00	0.00
			Max. Compression	4	-0.18	0.00	0.00
			Max. Mx	21	0.34	0.00	0.00
			Max. My	10	0.54	0.00	-0.00
			Max. Vy	21	-0.00	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Secondary	Max Tension	6	0.00	-0.00	-0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Horizontal					
			Max. Compression	11	-0.00	-0.00	-0.00
			Max. Mx	15	-0.00	-0.00	0.00
			Max. My	2	-0.00	-0.00	0.00
			Max. Vy	15	0.00	-0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
		Top Girt	Max Tension	18	6.49	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	15	6.41	0.01	0.00
			Max. My	10	3.24	0.00	-0.00
			Max. Vy	15	-0.01	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Mast	Max. Vert	15	262.99	-0.07	-0.25
	Max. H_x	12	124.11	0.96	0.55
	Max. H_z	2	129.11	-0.01	0.73
	Max. M_x	1	0.00	-0.01	-0.01
	Max. M_z	1	0.00	-0.01	-0.01
	Max. Torsion	4	1.11	-0.93	0.52
	Min. Vert	1	79.99	-0.01	-0.01
	Min. H_x	4	124.26	-0.93	0.52
	Min. H_z	8	123.88	-0.01	-1.05
	Min. M_x	1	0.00	-0.01	-0.01
	Min. M_z	1	0.00	-0.01	-0.01
	Min. Torsion	10	-0.99	0.62	-0.37
Guy C @ 380 ft Elev 0 ft Azimuth 240 deg	Max. Vert	10	-2.87	-1.71	0.99
	Max. H_x	10	-2.87	-1.71	0.99
	Max. H_z	16	-16.60	-17.70	10.59
	Min. Vert	4	-19.86	-17.63	10.18
	Min. H_x	17	-16.84	-18.08	10.44
	Min. H_z	10	-2.87	-1.71	0.99
Guy B @ 380 ft Elev 0 ft Azimuth 120 deg	Max. Vert	6	-2.90	1.74	1.00
	Max. H_x	25	-16.75	17.99	10.39
	Max. H_z	26	-16.51	17.61	10.54
	Min. Vert	12	-19.55	17.35	10.02
	Min. H_x	6	-2.90	1.74	1.00
	Min. H_z	6	-2.90	1.74	1.00
Guy A @ 380 ft Elev 0 ft Azimuth 0 deg	Max. Vert	2	-2.85	-0.00	-1.96
	Max. H_x	11	-11.30	1.41	-11.08
	Max. H_z	2	-2.85	-0.00	-1.96
	Min. Vert	8	-19.55	0.00	-20.03
	Min. H_x	5	-11.31	-1.41	-11.09
	Min. H_z	21	-16.68	0.00	-20.71
Guy C @ 240 ft Elev 0 ft Azimuth 240 deg	Max. Vert	10	-0.97	-0.80	0.46

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Max. H_x	10	-0.97	-0.80	0.46
	Max. H_z	3	-26.56	-33.74	20.11
	Min. Vert	4	-27.28	-34.66	20.04
	Min. H_x	5	-27.27	-35.43	19.85
	Min. H_z	10	-0.97	-0.80	0.46
Guy B @ 240 ft Elev 0 ft Azimuth 120 deg	Max. Vert	6	-0.97	0.80	0.46
	Max. H_x	11	-27.12	35.24	19.75
	Max. H_z	13	-27.04	34.67	20.63
	Min. Vert	12	-27.39	34.96	20.19
	Min. H_x	6	-0.97	0.80	0.46
	Min. H_z	6	-0.97	0.80	0.46
Guy A @ 240 ft Elev 0 ft Azimuth 0 deg	Max. Vert	2	-0.96	-0.00	-0.92
	Max. H_x	11	-14.78	1.19	-21.52
	Max. H_z	2	-0.96	-0.00	-0.92
	Min. Vert	8	-27.08	0.02	-39.81
	Min. H_x	5	-14.84	-1.20	-21.62
	Min. H_z	7	-27.01	-0.53	-40.32

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	79.99	0.01	0.01	0.00	0.00	0.01
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	129.11	0.01	-0.73	0.00	0.00	-0.80
1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy	127.82	0.54	-0.57	0.00	0.00	-0.90
1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy	124.26	0.93	-0.52	0.00	0.00	-1.11
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	128.77	0.92	-0.17	0.00	0.00	-0.77
1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy	129.03	0.40	0.40	0.00	0.00	-0.16
1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy	128.00	0.31	0.87	0.00	0.00	0.48
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	123.88	0.01	1.05	0.00	0.00	0.91
1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy	127.39	-0.23	0.74	0.00	0.00	0.92
1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy	128.85	-0.62	0.37	0.00	0.00	0.99
1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy	128.39	-0.89	-0.17	0.00	0.00	0.80
1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy	124.11	-0.96	-0.55	0.00	0.00	0.23
1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy	128.04	-0.59	-0.68	0.00	0.00	-0.46
1.2 Dead+1.0 Ice+1.0 Temp+Guy	261.13	0.06	0.02	0.00	0.00	0.03
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	262.99	0.07	0.25	0.00	0.00	-0.12
1.2 Dead+1.0 Wind 30 deg+1.0	262.10	-0.01	0.19	0.00	0.00	-0.14

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 60 deg+1.0	261.25	-0.08	0.10	0.00	0.00	-0.17
Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 90 deg+1.0	262.12	-0.13	-0.01	0.00	0.00	-0.14
Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy	262.98	-0.13	-0.10	0.00	0.00	-0.02
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy	262.09	-0.05	-0.14	0.00	0.00	0.13
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy	261.22	0.07	-0.15	0.00	0.00	0.19
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy	262.08	0.18	-0.13	0.00	0.00	0.21
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy	262.98	0.26	-0.09	0.00	0.00	0.23
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy	262.10	0.26	0.00	0.00	0.00	0.20
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy	261.24	0.21	0.11	0.00	0.00	0.07
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy	262.09	0.14	0.20	0.00	0.00	-0.07
Dead+Wind 0 deg - Service+Guy	82.84	0.01	-0.45	0.00	0.00	-0.23
Dead+Wind 30 deg - Service+Guy	83.16	0.21	-0.35	0.00	0.00	-0.25
Dead+Wind 60 deg - Service+Guy	83.65	0.38	-0.21	0.00	0.00	-0.28
Dead+Wind 90 deg - Service+Guy	83.23	0.48	0.02	0.00	0.00	-0.22
Dead+Wind 120 deg - Service+Guy	82.89	0.42	0.24	0.00	0.00	-0.05
Dead+Wind 150 deg - Service+Guy	83.21	0.25	0.40	0.00	0.00	0.14
Dead+Wind 180 deg - Service+Guy	83.62	0.01	0.43	0.00	0.00	0.24
Dead+Wind 210 deg - Service+Guy	83.15	-0.20	0.35	0.00	0.00	0.26
Dead+Wind 240 deg - Service+Guy	82.84	-0.38	0.23	0.00	0.00	0.29
Dead+Wind 270 deg - Service+Guy	83.22	-0.45	0.02	0.00	0.00	0.23
Dead+Wind 300 deg - Service+Guy	83.64	-0.38	-0.22	0.00	0.00	0.06
Dead+Wind 330 deg - Service+Guy	83.21	-0.21	-0.40	0.00	0.00	-0.13
1.2 Dead+1.0 Ev+1.0 Eh 0 deg+1.0 Guy	89.56	0.01	0.01	0.00	0.00	0.01
1.2 Dead+1.0 Ev+1.0 Eh 30 deg+1.0 Guy	89.56	0.01	0.01	0.00	0.00	0.01
1.2 Dead+1.0 Ev+1.0 Eh 60 deg+1.0 Guy	89.56	0.01	0.01	0.00	0.00	0.01
1.2 Dead+1.0 Ev+1.0 Eh 90 deg+1.0 Guy	89.56	0.01	0.01	0.00	0.00	0.01
1.2 Dead+1.0 Ev+1.0 Eh 120 deg+1.0 Guy	89.56	0.01	0.00	0.00	0.00	0.01
1.2 Dead+1.0 Ev+1.0 Eh 150 deg+1.0 Guy	89.56	0.01	0.00	0.00	0.00	0.01
1.2 Dead+1.0 Ev+1.0 Eh 180 deg+1.0 Guy	89.56	0.01	0.00	0.00	0.00	0.01
1.2 Dead+1.0 Ev+1.0 Eh 210 deg+1.0 Guy	89.56	0.01	0.00	0.00	0.00	0.01

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Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
1.2 Dead+1.0 Ev+1.0 Eh 240 deg+1.0 Guy	89.56	0.02	0.00	0.00	0.00	0.01
1.2 Dead+1.0 Ev+1.0 Eh 270 deg+1.0 Guy	89.56	0.02	0.01	0.00	0.00	0.01
1.2 Dead+1.0 Ev+1.0 Eh 300 deg+1.0 Guy	89.56	0.02	0.01	0.00	0.00	0.01
1.2 Dead+1.0 Ev+1.0 Eh 330 deg+1.0 Guy	89.56	0.01	0.01	0.00	0.00	0.01

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.00	-42.72	0.00	-0.00	42.72	0.00	0.001%
2	0.03	-50.92	-50.06	-0.03	50.92	50.06	0.009%
3	24.79	-50.34	-42.87	-24.79	50.34	42.86	0.009%
4	43.51	-49.76	-25.12	-43.52	49.76	25.12	0.010%
5	50.86	-50.34	-0.03	-50.85	50.34	0.04	0.008%
6	43.56	-50.92	25.07	-43.55	50.92	-25.07	0.010%
7	25.01	-50.34	43.42	-25.00	50.34	-43.42	0.009%
8	-0.09	-49.76	49.60	0.09	49.76	-49.61	0.010%
9	-24.59	-50.34	42.45	24.58	50.34	-42.45	0.008%
10	-43.19	-50.92	24.90	43.19	50.92	-24.89	0.009%
11	-50.41	-50.34	0.05	50.41	50.34	-0.04	0.008%
12	-43.60	-49.76	-25.06	43.60	49.76	25.06	0.010%
13	-25.12	-50.34	-43.36	25.13	50.34	43.36	0.009%
14	0.00	-172.96	0.00	-0.00	172.96	0.00	0.002%
15	0.11	-173.29	-12.70	-0.11	173.29	12.69	0.004%
16	6.39	-172.96	-10.94	-6.39	172.96	10.93	0.004%
17	11.04	-172.63	-6.37	-11.03	172.63	6.37	0.001%
18	12.79	-172.96	-0.07	-12.79	172.96	0.07	0.004%
19	10.93	-173.29	6.19	-10.92	173.29	-6.18	0.005%
20	6.22	-172.96	10.78	-6.22	172.96	-10.78	0.004%
21	-0.01	-172.63	12.41	0.01	172.63	-12.40	0.001%
22	-6.19	-172.96	10.71	6.19	172.96	-10.71	0.004%
23	-10.78	-173.29	6.22	10.77	173.29	-6.21	0.004%
24	-12.50	-172.96	0.00	12.49	172.96	-0.00	0.004%
25	-10.86	-172.63	-6.25	10.85	172.63	6.25	0.004%
26	-6.23	-172.96	-10.78	6.22	172.96	10.78	0.004%
27	0.01	-42.88	-14.21	-0.01	42.88	14.21	0.004%
28	7.04	-42.72	-12.17	-7.04	42.72	12.17	0.002%
29	12.35	-42.55	-7.13	-12.35	42.55	7.13	0.003%
30	14.44	-42.72	-0.01	-14.44	42.72	0.01	0.003%
31	12.37	-42.88	7.12	-12.37	42.88	-7.12	0.001%
32	7.10	-42.72	12.33	-7.10	42.72	-12.33	0.003%
33	-0.03	-42.55	14.08	0.03	42.55	-14.08	0.003%
34	-6.98	-42.72	12.05	6.98	42.72	-12.05	0.002%
35	-12.26	-42.88	7.07	12.26	42.88	-7.07	0.003%
36	-14.31	-42.72	0.01	14.31	42.72	-0.01	0.003%
37	-12.38	-42.55	-7.11	12.38	42.55	7.11	0.003%
38	-7.13	-42.72	-12.31	7.13	42.72	12.31	0.003%
39	0.00	-52.53	-1.35	0.00	52.53	1.35	0.002%
40	0.67	-52.53	-1.17	-0.67	52.53	1.17	0.002%
41	1.17	-52.53	-0.67	-1.17	52.53	0.67	0.002%
42	1.35	-52.53	0.00	-1.35	52.53	0.00	0.002%
43	1.17	-52.53	0.67	-1.17	52.53	-0.67	0.002%
44	0.67	-52.53	1.17	-0.67	52.53	-1.17	0.002%

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
45	0.00	-52.53	1.35	-0.00	52.53	-1.35	0.002%
46	-0.67	-52.53	1.17	0.67	52.53	-1.17	0.002%
47	-1.17	-52.53	0.67	1.17	52.53	-0.67	0.002%
48	-1.35	-52.53	0.00	1.35	52.53	0.00	0.002%
49	-1.17	-52.53	-0.67	1.17	52.53	0.67	0.002%
50	-0.67	-52.53	-1.17	0.67	52.53	1.17	0.002%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	8	0.00000001	0.00004589
2	Yes	47	0.00013358	0.00004277
3	Yes	46	0.00013622	0.00004616
4	Yes	27	0.00013291	0.00008919
5	Yes	46	0.00013096	0.00005218
6	Yes	46	0.00014698	0.00005882
7	Yes	45	0.00013974	0.00004972
8	Yes	27	0.00014220	0.00008668
9	Yes	46	0.00013053	0.00004350
10	Yes	47	0.00013260	0.00004520
11	Yes	46	0.00012941	0.00003843
12	Yes	27	0.00013432	0.00007843
13	Yes	45	0.00014255	0.00003690
14	Yes	13	0.00015000	0.00013282
15	Yes	27	0.00015000	0.00005484
16	Yes	26	0.00015000	0.00005328
17	Yes	34	0.00013707	0.00000882
18	Yes	26	0.00015000	0.00007145
19	Yes	25	0.00015000	0.00011512
20	Yes	26	0.00015000	0.00006386
21	Yes	34	0.00013427	0.00000801
22	Yes	26	0.00015000	0.00005314
23	Yes	26	0.00015000	0.00007145
24	Yes	26	0.00015000	0.00006150
25	Yes	26	0.00015000	0.00004915
26	Yes	26	0.00015000	0.00005609
27	Yes	16	0.00000001	0.00010363
28	Yes	20	0.00011982	0.00001721
29	Yes	17	0.00011732	0.00002135
30	Yes	19	0.00014418	0.00002396
31	Yes	17	0.00000001	0.00007118
32	Yes	19	0.00014681	0.00002078
33	Yes	17	0.00013969	0.00002563
34	Yes	20	0.00012207	0.00001711
35	Yes	17	0.00000001	0.00005275
36	Yes	19	0.00013644	0.00002345
37	Yes	16	0.00013906	0.00003319
38	Yes	19	0.00013127	0.00002066
39	Yes	22	0.00000001	0.00001375
40	Yes	21	0.00000001	0.00001437
41	Yes	19	0.00000001	0.00001753
42	Yes	21	0.00000001	0.00001650
43	Yes	22	0.00000001	0.00001548
44	Yes	21	0.00000001	0.00001655
45	Yes	19	0.00000001	0.00001794

46	Yes	21	0.00000001	0.00001446
47	Yes	22	0.00000001	0.00001378
48	Yes	21	0.00000001	0.00001541
49	Yes	19	0.00000001	0.00002086
50	Yes	21	0.00000001	0.00001673

Maximum Tower Deflections - Service Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
L1	500 - 480	7.492	29	0.4935	0.7196
T1	480 - 460	6.009	29	0.0531	0.6801
T2	460 - 440	5.940	29	0.0506	0.6729
T3	440 - 420	5.805	29	0.0509	0.6636
T4	420 - 400	5.557	29	0.0750	0.6403
T5	400 - 380	5.228	29	0.0820	0.6064
T6	380 - 360	4.886	29	0.0922	0.5688
T7	360 - 340	4.467	29	0.1114	0.5299
T8	340 - 320	3.969	29	0.1224	0.4871
T9	320 - 300	3.460	29	0.1088	0.4462
T10	300 - 280	3.056	29	0.0890	0.3984
T11	280 - 260	2.711	29	0.0728	0.3315
T12	260 - 240	2.462	29	0.0396	0.2498
T13	240 - 220	2.392	29	0.0836	0.1957
T14	220 - 200	2.550	29	0.0998	0.2163
T15	200 - 180	2.701	37	0.0645	0.2104
T16	180 - 160	2.720	37	0.0404	0.1982
T17	160 - 140	2.869	31	0.0646	0.1770
T18	140 - 120	3.184	31	0.0544	0.2548
T19	120 - 100	3.276	31	0.0351	0.2939
T20	100 - 80	3.045	31	0.0857	0.3203
T21	80 - 60	2.611	31	0.1070	0.3304
T22	60 - 40	2.148	31	0.1241	0.3433
T23	40 - 20	1.565	31	0.1567	0.3421
T24	20 - 6.6667	0.836	31	0.1878	0.3316
T25	6.6667 - 0	0.285	31	0.2000	0.3019

Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
500.00	Existing Top Beacon	29	7.492	0.4935	0.7196	8143
495.00	LPX-2EHW FM antenna	29	7.032	0.3475	0.7077	8143
480.00	T1	29	6.009	0.0531	0.6801	2250
479.92	Guy	29	6.006	0.0524	0.6800	2252
460.00	T2	29	5.940	0.0506	0.6729	9082
440.00	T3	29	5.805	0.0509	0.6636	244599
430.00	Shively 6842-2-55 Antenna	29	5.688	0.0620	0.6536	82165
420.00	T4	29	5.557	0.0750	0.6403	37160
400.00	Guy	29	5.228	0.0820	0.6064	72366
380.00	T6	29	4.886	0.0922	0.5688	48496
360.00	T7	29	4.467	0.1114	0.5299	58447
340.00	T8	29	3.969	0.1224	0.4871	101670
330.00	RSI P-9LA72G-U 6' Grid Dish	29	3.707	0.1181	0.4667	63750

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Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
320.00	Guy	29	3.460	0.1088	0.4462	29746
300.00	T10	29	3.056	0.0890	0.3984	94005
293.00	SWR-FEMC/2-HWS-TA	29	2.929	0.0840	0.3777	82892
280.00	T11	29	2.711	0.0728	0.3315	49061
260.00	T12	29	2.462	0.0396	0.2498	28057
242.00	BEXT TFC2K FM Antenna	29	2.387	0.0796	0.1998	16167
240.00	Guy	29	2.392	0.0836	0.1957	16312
220.00	Existing Middle (2) Beacons	29	2.550	0.0998	0.2163	48482
215.70	Pipe mount 8'x2.375	29	2.589	0.0954	0.2196	35575
204.60	AIR6449 B41	37	2.678	0.0746	0.2140	24247
200.00	Side arms for skirt	37	2.701	0.0645	0.2104	22651
191.00	VHLP1-23	37	2.722	0.0478	0.2068	33402
180.00	T16	37	2.720	0.0404	0.1982	120851
169.29	Face mounts	31	2.768	0.0518	0.1788	28398
160.00	Guy	31	2.869	0.0646	0.1770	17339
150.00	MX08FRO665-21	31	3.029	0.0675	0.2107	293707
140.00	T18	31	3.184	0.0544	0.2548	16151
134.00	NHH-65C-R2B	31	3.247	0.0392	0.2724	14583
130.00	(4)mount pipes	31	3.272	0.0290	0.2803	14364
127.00	B5/B13 RRH-BR04C (RFV01U-D2A)	31	3.282	0.0264	0.2849	14204
120.00	T19	31	3.276	0.0351	0.2939	14087
100.00	T20	31	3.045	0.0857	0.3203	21587
80.00	Guy	31	2.611	0.1070	0.3304	63461
60.00	T22	31	2.148	0.1241	0.3433	33463
40.00	T23	31	1.565	0.1567	0.3421	31611
20.00	T24	31	0.836	0.1878	0.3316	41804
6.67	T25	31	0.285	0.2000	0.3020	101865
5.00	Side arms for skirt	31	0.214	0.2003	0.2432	132774

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	500 - 480	37.523	2	1.6931	2.1721
T1	480 - 460	32.122	2	0.2944	2.0454
T2	460 - 440	30.948	2	0.3161	2.0471
T3	440 - 420	29.502	2	0.4011	2.0412
T4	420 - 400	27.921	3	0.4939	1.9857
T5	400 - 380	26.089	3	0.5258	1.8677
T6	380 - 360	24.227	4	0.5536	1.7957
T7	360 - 340	22.126	4	0.5877	1.7044
T8	340 - 320	19.699	4	0.5937	1.5994
T9	320 - 300	17.229	4	0.5395	1.4692
T10	300 - 280	15.475	3	0.4526	1.3834
T11	280 - 260	14.160	3	0.3745	1.2089
T12	260 - 240	13.692	10	0.2279	0.9808
T13	240 - 220	14.283	2	0.3120	0.8106
T14	220 - 200	15.807	2	0.4105	0.8872
T15	200 - 180	17.331	6	0.2982	0.8877
T16	180 - 160	18.294	6	0.1980	0.8673
T17	160 - 140	19.118	6	0.2536	0.8212
T18	140 - 120	20.249	6	0.1657	1.0113
T19	120 - 100	20.318	6	0.1986	1.1248
T20	100 - 80	18.877	6	0.4832	1.1962

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T21	80 - 60	16.334	6	0.6620	1.2184
T22	60 - 40	13.333	6	0.8038	1.2477
T23	40 - 20	9.583	6	0.9903	1.2336
T24	20 - 6.6667	5.052	6	1.1496	1.1860
T25	6.6667 - 0	1.714	6	1.2084	1.1061

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
500.00	Existing Top Beacon	2	37.523	1.6931	2.1839	2796
495.00	LPX-2EHW FM antenna	2	35.904	1.2516	2.1405	2796
480.00	T1	2	32.122	0.2944	2.0454	773
479.92	Guy	2	32.109	0.2918	2.0451	774
460.00	T2	2	30.948	0.3161	2.0471	2874
440.00	T3	2	29.502	0.4011	2.0412	30518
430.00	Shively 6842-2-55 Antenna	3	28.698	0.4454	2.0225	15340
420.00	T4	3	27.921	0.4939	1.9857	9071
400.00	Guy	3	26.089	0.5258	1.8677	46973
380.00	T6	4	24.227	0.5536	1.7957	11240
360.00	T7	4	22.126	0.5877	1.7044	14220
340.00	T8	4	19.699	0.5937	1.5994	19389
330.00	RSI P-9LA72G-U 6' Grid Dish	4	18.433	0.5768	1.5311	7825
320.00	Guy	4	17.229	0.5395	1.4692	5071
300.00	T10	3	15.475	0.4526	1.3834	9220
293.00	SWR-FEMC/2-HWS-TA	3	14.966	0.4262	1.3340	8767
280.00	T11	3	14.160	0.3745	1.2089	7406
260.00	T12	10	13.692	0.2279	0.9808	5760
242.00	BEXT TFC2K FM Antenna	2	14.172	0.2902	0.8154	3958
240.00	Guy	2	14.283	0.3120	0.8106	4016
220.00	Existing Middle (2) Beacons	2	15.807	0.4105	0.8872	21353
215.70	Pipe mount 8'x2.375	2	16.153	0.3996	0.8970	12774
204.60	AIR6449 B41	6	17.021	0.3334	0.8926	7220
200.00	Side arms for skirt	6	17.331	0.2982	0.8877	6488
191.00	VHLP1-23	6	17.828	0.2340	0.8841	8966
180.00	T16	6	18.294	0.1980	0.8673	23102
169.29	Face mounts	6	18.693	0.2290	0.8240	7767
160.00	Guy	6	19.118	0.2536	0.8212	4797
150.00	MX08FRO665-21	6	19.717	0.2240	0.9024	17832
140.00	T18	6	20.249	0.1657	1.0113	3626
134.00	NHH-65C-R2B	6	20.427	0.1380	1.0585	3265
130.00	(4)mount pipes	6	20.472	0.1296	1.0817	3179
127.00	B5/B13 RRH-BR04C (RFV01U-D2A)	6	20.467	0.1341	1.0961	3117
120.00	T19	6	20.318	0.1986	1.1248	3029
100.00	T20	6	18.877	0.4832	1.1962	4061
80.00	Guy	6	16.334	0.6620	1.2184	20110
60.00	T22	6	13.333	0.8038	1.2477	5674
40.00	T23	6	9.583	0.9903	1.2336	5979
20.00	T24	6	5.052	1.1496	1.1860	8609
6.67	T25	6	1.715	1.2087	1.1065	23083
5.00	Side arms for skirt	6	1.287	1.0172	0.8922	30426

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Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	480	Leg	A325N	0.6250	3	1.45	20.34	0.071 ✔	1	Bolt Tension
T2	460	Leg	A325N	0.6250	3	2.01	20.34	0.099 ✔	1	Bolt Tension
T3	440	Leg	A325N	0.6250	3	1.88	20.34	0.093 ✔	1	Bolt Tension
T4	420	Leg	A325N	0.6250	3	1.78	20.34	0.087 ✔	1	Bolt Tension
T5	400	Leg	A325N	0.6250	3	2.89	20.34	0.142 ✔	1	Bolt Tension
T6	380	Leg	A325N	0.6250	3	2.98	20.34	0.147 ✔	1	Bolt Tension
T7	360	Leg	A325N	0.6250	3	2.88	20.34	0.142 ✔	1	Bolt Tension
T8	340	Leg	A325N	0.6250	3	3.77	20.34	0.185 ✔	1	Bolt Tension
T9	320	Leg	A325N	0.6250	3	3.91	20.34	0.192 ✔	1	Bolt Tension
T10	300	Leg	A325N	0.6250	3	4.22	20.34	0.207 ✔	1	Bolt Tension
T11	280	Leg	A325N	0.6250	3	4.64	20.34	0.228 ✔	1	Bolt Tension
T12	260	Leg	A325N	0.6250	3	6.54	20.34	0.322 ✔	1	Bolt Tension
T13	240	Leg	A325N	0.6250	3	5.95	20.34	0.293 ✔	1	Bolt Tension
T14	220	Leg	A325N	0.6250	3	5.94	20.34	0.292 ✔	1	Bolt Tension
T15	200	Leg	A325N	0.6250	3	6.38	20.34	0.314 ✔	1	Bolt Tension
T16	180	Leg	A325N	0.6250	3	7.13	20.34	0.351 ✔	1	Bolt Tension
T17	160	Leg	A325N	0.6250	3	8.42	20.34	0.414 ✔	1	Bolt Tension
T18	140	Leg	A325N	0.6250	3	9.46	20.34	0.465 ✔	1	Bolt Tension
T19	120	Leg	A325N	0.6250	3	9.56	20.34	0.470 ✔	1	Bolt Tension
T20	100	Leg	A325N	0.6250	3	9.23	20.34	0.454 ✔	1	Bolt Tension
T21	80	Leg	A325N	0.6250	3	10.06	20.34	0.495 ✔	1	Bolt Tension
T22	60	Leg	A325N	0.6250	3	10.31	20.34	0.507 ✔	1	Bolt Tension
T23	40	Leg	A325N	0.6250	3	10.16	20.34	0.499 ✔	1	Bolt Tension

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
T1	479.92 (A) (1155)	1/2 EHS	2.69	26.90	12.10	16.14	1.000	1.333 ✔
	479.92 (B) (1154)	1/2 EHS	2.69	26.90	12.16	16.14	1.000	1.327 ✔
	479.92 (C) (1153)	1/2 EHS	2.69	26.90	12.17	16.14	1.000	1.326 ✔
T5	400.00 (A) (1158)	7/16 EHS	2.08	20.80	10.27	12.48	1.000	1.215 ✔
	400.00 (B) (1157)	7/16 EHS	2.08	20.80	10.28	12.48	1.000	1.214 ✔

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
	400.00 (C) (1156)	7/16 EHS	2.08	20.80	10.33	12.48	1.000	1.208 ✔
T9	320.00 (A) (1161)	1/2 EHS	2.69	26.90	10.86	16.14	1.000	1.487 ✔
	320.00 (B) (1160)	1/2 EHS	2.69	26.90	10.88	16.14	1.000	1.484 ✔
	320.00 (C) (1159)	1/2 EHS	2.69	26.90	10.96	16.14	1.000	1.472 ✔
T13	240.00 (A) (1174)	1/2 EHS	2.69	26.90	8.48	16.14	1.000	1.903 ✔
	240.00 (A) (1175)	1/2 EHS	2.69	26.90	9.04	16.14	1.000	1.786 ✔
	240.00 (B) (1168)	1/2 EHS	2.69	26.90	8.68	16.14	1.000	1.860 ✔
	240.00 (B) (1169)	1/2 EHS	2.69	26.90	8.89	16.14	1.000	1.815 ✔
	240.00 (C) (1162)	1/2 EHS	2.69	26.90	9.22	16.14	1.000	1.750 ✔
	240.00 (C) (1163)	1/2 EHS	2.69	26.90	8.50	16.14	1.000	1.899 ✔
T17	160.00 (A) (1192)	1/2 EHS	2.69	26.90	11.78	16.14	1.000	1.371 ✔
	160.00 (A) (1193)	1/2 EHS	2.69	26.90	11.76	16.14	1.000	1.373 ✔
	160.00 (B) (1186)	1/2 EHS	2.69	26.90	11.55	16.14	1.000	1.398 ✔
	160.00 (B) (1187)	1/2 EHS	2.69	26.90	11.80	16.14	1.000	1.368 ✔
	160.00 (C) (1180)	1/2 EHS	2.69	26.90	11.90	16.14	1.000	1.357 ✔
	160.00 (C) (1181)	1/2 EHS	2.69	26.90	11.53	16.14	1.000	1.400 ✔
T21	80.00 (A) (1200)	7/16 EHS	2.08	20.80	9.64	12.48	1.000	1.295 ✔
	80.00 (B) (1199)	7/16 EHS	2.08	20.80	9.61	12.48	1.000	1.299 ✔
	80.00 (C) (1198)	7/16 EHS	2.08	20.80	9.65	12.48	1.000	1.293 ✔

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	500 - 480 (1)	P6x.28	20.00	0.00	0.0	5.5813	-0.74	180.84	0.004

Pole Bending Design Data

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Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	500 - 480 (1)	P6x.28	17.00	30.46	0.558	0.00	30.46	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	500 - 480 (1)	P6x.28	1.17	54.25	0.021	0.01	30.26	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	500 - 480 (1)	0.004	0.558	0.000	0.021	0.000	0.563 ✔	1.000	4.8.2 ✔

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-13.09	59.04	0.222 [1]
T2	460 - 440	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-18.10	59.04	0.306 [1]
T3	440 - 420	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-18.70	59.04	0.317 [1]
T4	420 - 400	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-16.96	59.04	0.287 [1]
T5	400 - 380	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-26.00	59.04	0.440 [1]
T6	380 - 360	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-26.99	59.04	0.457 [1]
T7	360 - 340	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-27.01	59.04	0.457 [1]
T8	340 - 320	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-33.93	59.04	0.575 [1]
T9	320 - 300	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-35.70	59.04	0.605 [1]
T10	300 - 280	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-37.96	59.04	0.643 [1]

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Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T11	280 - 260	1 3/4	20.00	3.32	91.0 K=1.00	2.4053	-41.76	59.04	0.707 [1]
T12	260 - 240	2	20.00	3.32	79.7 K=1.00	3.1416	-54.51	88.88	0.613 [1]
T13	240 - 220	2	20.00	3.32	79.7 K=1.00	3.1416	-55.92	88.88	0.629 [1]
T14	220 - 200	2	20.00	3.32	79.7 K=1.00	3.1416	-53.62	88.88	0.603 [1]
T15	200 - 180	2	20.00	3.32	79.7 K=1.00	3.1416	-57.41	88.88	0.646 [1]
T16	180 - 160	2 1/4	20.00	3.32	70.8 K=1.00	3.9761	-64.20	124.00	0.518 [1]
T17	160 - 140	2 1/4	20.00	3.32	70.8 K=1.00	3.9761	-75.79	124.00	0.611 [1]
T18	140 - 120	2 1/4	20.00	3.32	70.8 K=1.00	3.9761	-85.16	124.00	0.687 [1]
T19	120 - 100	2 1/4	20.00	3.32	70.8 K=1.00	3.9761	-86.41	124.00	0.697 [1]
T20	100 - 80	2 1/4	20.00	3.32	70.8 K=1.00	3.9761	-86.01	124.00	0.694 [1]
T21	80 - 60	2 1/4	20.00	3.32	70.8 K=1.00	3.9761	-90.56	124.00	0.730 [1]
T22	60 - 40	2 1/4	20.00	3.32	70.8 K=1.00	3.9761	-92.83	124.00	0.749 [1]
T23	40 - 20	2 1/4	20.00	3.32	70.8 K=1.00	3.9761	-92.84	124.00	0.749 [1]
T24	20 - 6.6667	2 1/4	13.33	3.31	70.7 K=1.00	3.9761	-90.89	124.19	0.732 [1]
T25	6.6667 - 0	2 1/4	6.89	3.40	72.6 K=1.00	3.9761	-92.64	121.76	0.761 [1]

[1] P_u / ϕP_n controls

Leg Bending Design Data (Compression)

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
T1	480 - 460	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T2	460 - 440	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T3	440 - 420	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T4	420 - 400	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T5	400 - 380	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T6	380 - 360	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T7	360 - 340	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T8	340 - 320	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T9	320 - 300	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T10	300 - 280	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T11	280 - 260	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T12	260 - 240	2	0.00	5.00	0.000	0.00	5.00	0.000
T13	240 - 220	2	0.00	5.00	0.000	0.00	5.00	0.000
T14	220 - 200	2	0.00	5.00	0.000	0.00	5.00	0.000
T15	200 - 180	2	0.00	5.00	0.000	0.00	5.00	0.000
T16	180 - 160	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T17	160 - 140	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T18	140 - 120	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
T19	120 - 100	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T20	100 - 80	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T21	80 - 60	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T22	60 - 40	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T23	40 - 20	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T24	20 - 6.6667	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T25	6.6667 - 0	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000

Leg Interaction Design Data (Compression)

Section No.	Elevation ft	Size	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	480 - 460	1 3/4	0.222	0.000	0.000	0.222 [1]	1.000	4.8.1
T2	460 - 440	1 3/4	0.306	0.000	0.000	0.306 [1]	1.000	4.8.1
T3	440 - 420	1 3/4	0.317	0.000	0.000	0.317 [1]	1.000	4.8.1
T4	420 - 400	1 3/4	0.287	0.000	0.000	0.287 [1]	1.000	4.8.1
T5	400 - 380	1 3/4	0.440	0.000	0.000	0.440 [1]	1.000	4.8.1
T6	380 - 360	1 3/4	0.457	0.000	0.000	0.457 [1]	1.000	4.8.1
T7	360 - 340	1 3/4	0.457	0.000	0.000	0.457 [1]	1.000	4.8.1
T8	340 - 320	1 3/4	0.575	0.000	0.000	0.575 [1]	1.000	4.8.1
T9	320 - 300	1 3/4	0.605	0.000	0.000	0.605 [1]	1.000	4.8.1
T10	300 - 280	1 3/4	0.643	0.000	0.000	0.643 [1]	1.000	4.8.1
T11	280 - 260	1 3/4	0.707	0.000	0.000	0.707 [1]	1.000	4.8.1
T12	260 - 240	2	0.613	0.000	0.000	0.613 [1]	1.000	4.8.1
T13	240 - 220	2	0.629	0.000	0.000	0.629 [1]	1.000	4.8.1
T14	220 - 200	2	0.603	0.000	0.000	0.603 [1]	1.000	4.8.1
T15	200 - 180	2	0.646	0.000	0.000	0.646 [1]	1.000	4.8.1
T16	180 - 160	2 1/4	0.518	0.000	0.000	0.518 [1]	1.000	4.8.1
T17	160 - 140	2 1/4	0.611	0.000	0.000	0.611 [1]	1.000	4.8.1
T18	140 - 120	2 1/4	0.687	0.000	0.000	0.687 [1]	1.000	4.8.1
T19	120 - 100	2 1/4	0.697	0.000	0.000	0.697 [1]	1.000	4.8.1

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Section No.	Elevation ft	Size	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T20	100 - 80	2 1/4	0.694	0.000	0.000	0.694 [1]	1.000	4.8.1
T21	80 - 60	2 1/4	0.730	0.000	0.000	0.730 [1]	1.000	4.8.1
T22	60 - 40	2 1/4	0.749	0.000	0.000	0.749 [1]	1.000	4.8.1
T23	40 - 20	2 1/4	0.749	0.000	0.000	0.749 [1]	1.000	4.8.1
T24	20 - 6.6667	2 1/4	0.732	0.000	0.000	0.732 [1]	1.000	4.8.1
T25	6.6667 - 0	2 1/4	0.761	0.000	0.000	0.761 [1]	1.000	4.8.1

[1] P_u / ϕP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	1	4.47	4.26	143.0 K=0.70	0.7854	-1.84	8.67	0.212 [1]
T2	460 - 440	1	4.47	4.26	143.0 K=0.70	0.7854	-1.10	8.67	0.127 [1]
T3	440 - 420	1	4.47	4.26	143.0 K=0.70	0.7854	-1.64	8.67	0.189 [1]
T4	420 - 400	1	4.47	4.26	143.0 K=0.70	0.7854	-2.30	8.67	0.266 [1]
T5	400 - 380	1	4.47	4.26	143.0 K=0.70	0.7854	-1.89	8.67	0.218 [1]
T6	380 - 360	1	4.47	4.26	143.0 K=0.70	0.7854	-1.44	8.67	0.167 [1]
T7	360 - 340	1	4.47	4.26	143.0 K=0.70	0.7854	-2.13	8.67	0.246 [1]
T8	340 - 320	1	4.47	4.26	143.0 K=0.70	0.7854	-4.06	8.67	0.468 [1]
T9	320 - 300	1	4.47	4.26	143.0 K=0.70	0.7854	-1.90	8.67	0.219 [1]
T10	300 - 280	1	4.47	4.26	143.0 K=0.70	0.7854	-2.54	8.67	0.293 [1]
T11	280 - 260	1	4.47	4.26	143.0 K=0.70	0.7854	-3.40	8.67	0.392 [1]
T12	260 - 240	1 1/4	4.47	4.23	113.6 K=0.70	1.2272	-4.25	20.16	0.211 [1]
T13	240 - 220	1 1/4	4.47	4.23	113.6 K=0.70	1.2272	-8.52	20.16	0.423 [1]
T14	220 - 200	1 1/4	4.47	4.23	113.6 K=0.70	1.2272	-4.06	20.16	0.201 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T15	200 - 180	1 1/4	4.47	4.23	113.6 K=0.70	1.2272	-3.75	20.16	0.186 [1] ✔
T16	180 - 160	1 1/4	4.47	4.19	112.8 K=0.70	1.2272	-5.68	20.36	0.279 [1] ✔
T17	160 - 140	1 1/4	4.47	4.19	112.8 K=0.70	1.2272	-12.04	20.36	0.591 [1] ✔
T18	140 - 120	1	4.47	4.19	140.9 K=0.70	0.7854	-6.88	8.93	0.771 [1] ✔
T19	120 - 100	1	4.47	4.19	140.9 K=0.70	0.7854	-3.98	8.93	0.446 [1] ✔
T20	100 - 80	1	4.47	4.19	140.9 K=0.70	0.7854	-5.26	8.93	0.589 [1] ✔
T21	80 - 60	1	4.47	4.19	140.9 K=0.70	0.7854	-3.16	8.93	0.354 [1] ✔
T22	60 - 40	1	4.47	4.19	140.9 K=0.70	0.7854	-1.78	8.93	0.199 [1] ✔
T23	40 - 20	1	4.47	4.19	140.9 K=0.70	0.7854	-2.37	8.93	0.265 [1] ✔
T24	20 - 6.6667	1	4.47	4.19	140.8 K=0.70	0.7854	-3.26	8.95	0.364 [1] ✔
T25	6.6667 - 0	1	3.99	3.66	123.1 K=0.70	0.7854	-1.61	11.46	0.141 [1] ✔

[1] P_u / ϕP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.31	6.05	0.051 [1] ✔
T2	460 - 440	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.42	6.05	0.070 [1] ✔
T3	440 - 420	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.44	6.05	0.072 [1] ✔
T4	420 - 400	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.40	6.05	0.066 [1] ✔
T5	400 - 380	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.61	6.05	0.100 [1] ✔
T6	380 - 360	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.63	6.05	0.104 [1] ✔
T7	360 - 340	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.63	6.05	0.104 [1] ✔
T8	340 - 320	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.79	6.05	0.131 [1] ✔
T9	320 - 300	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.84	6.05	0.139 [1] ✔
T10	300 - 280	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.89	6.05	0.147 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T11	280 - 260	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.98	6.05	0.161 [1]
T12	260 - 240	3/4	3.00	2.83	126.9 K=0.70	0.4418	-1.15	6.13	0.188 [1]
T13	240 - 220	3/4	3.00	2.83	126.9 K=0.70	0.4418	-1.29	6.13	0.210 [1]
T14	220 - 200	3/4	3.00	2.83	126.9 K=0.70	0.4418	-1.13	6.13	0.185 [1]
T15	200 - 180	3/4	3.00	2.83	126.9 K=0.70	0.4418	-1.21	6.13	0.198 [1]
T16	180 - 160	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.25	6.21	0.201 [1]
T17	160 - 140	3/4	3.00	2.81	126.0 K=0.70	0.4418	-2.88	6.21	0.464 [1]
T18	140 - 120	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.65	6.21	0.266 [1]
T19	120 - 100	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.68	6.21	0.270 [1]
T20	100 - 80	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.68	6.21	0.271 [1]
T21	80 - 60	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.76	6.21	0.283 [1]
T22	60 - 40	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.80	6.21	0.290 [1]
T23	40 - 20	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.81	6.21	0.292 [1]
T24	20 - 6.6667	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.78	6.21	0.286 [1]
T25	6.6667 - 0	3/4	1.48	1.29	81.1 K=0.98	0.4418	-1.87	10.13	0.185 [1]

[1] $P_u / \phi P_n$ controls

Secondary Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1]
T2	460 - 440	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1]
T3	440 - 420	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1]
T4	420 - 400	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1]
T5	400 - 380	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1]

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Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T6	380 - 360	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1] ✔
T7	360 - 340	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1] ✔
T8	340 - 320	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1] ✔
T9	320 - 300	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1] ✔
T10	300 - 280	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1] ✔
T11	280 - 260	5/8	1.50	1.43	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1] ✔
T12	260 - 240	5/8	1.50	1.42	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1] ✔
T13	240 - 220	5/8	1.50	1.42	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1] ✔
T14	220 - 200	5/8	1.50	1.42	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1] ✔
T15	200 - 180	5/8	1.50	1.42	85.3 K=0.78	0.3068	-0.00	6.78	0.000 [1] ✔
T16	180 - 160	5/8	1.50	1.41	85.3 K=0.79	0.3068	-0.00	6.78	0.000 [1] ✔
T17	160 - 140	5/8	1.50	1.41	85.3 K=0.79	0.3068	-0.00	6.78	0.000 [1] ✔
T18	140 - 120	5/8	1.50	1.41	85.3 K=0.79	0.3068	-0.00	6.78	0.000 [1] ✔
T19	120 - 100	5/8	1.50	1.41	85.3 K=0.79	0.3068	-0.00	6.78	0.000 [1] ✔
T20	100 - 80	5/8	1.50	1.41	85.3 K=0.79	0.3068	-0.00	6.78	0.000 [1] ✔
T21	80 - 60	5/8	1.50	1.41	85.3 K=0.79	0.3068	-0.00	6.78	0.000 [1] ✔
T22	60 - 40	5/8	1.50	1.41	85.3 K=0.79	0.3068	-0.00	6.78	0.000 [1] ✔
T23	40 - 20	5/8	1.50	1.41	85.3 K=0.79	0.3068	-0.00	6.78	0.000 [1] ✔
T24	20 - 6.6667	5/8	1.50	1.41	85.3 K=0.79	0.3068	-0.00	6.78	0.000 [1] ✔
T25	6.6667 - 0	5/8	0.99	0.89	68.7 K=1.00	0.3068	-0.00	7.76	0.000 [1] ✔

[1] P_u / ϕP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.31	6.05	0.051 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T2	460 - 440	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.42	6.05	0.070 [1]
T3	440 - 420	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.44	6.05	0.072 [1]
T4	420 - 400	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.40	6.05	0.066 [1]
T5	400 - 380	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.61	6.05	0.100 [1]
T6	380 - 360	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.63	6.05	0.104 [1]
T7	360 - 340	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.63	6.05	0.104 [1]
T8	340 - 320	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.79	6.05	0.131 [1]
T9	320 - 300	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.84	6.05	0.139 [1]
T10	300 - 280	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.89	6.05	0.147 [1]
T11	280 - 260	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.98	6.05	0.161 [1]
T12	260 - 240	3/4	3.00	2.83	126.9 K=0.70	0.4418	-1.15	6.13	0.188 [1]
T13	240 - 220	3/4	3.00	2.83	126.9 K=0.70	0.4418	-2.33	6.13	0.380 [1]
T14	220 - 200	3/4	3.00	2.83	126.9 K=0.70	0.4418	-1.13	6.13	0.185 [1]
T15	200 - 180	3/4	3.00	2.83	126.9 K=0.70	0.4418	-1.21	6.13	0.198 [1]
T16	180 - 160	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.25	6.21	0.201 [1]
T17	160 - 140	3/4	3.00	2.81	126.0 K=0.70	0.4418	-4.06	6.21	0.654 [1]
T18	140 - 120	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.65	6.21	0.266 [1]
T19	120 - 100	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.68	6.21	0.270 [1]
T20	100 - 80	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.68	6.21	0.271 [1]
T21	80 - 60	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.76	6.21	0.283 [1]
T22	60 - 40	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.80	6.21	0.290 [1]
T23	40 - 20	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.81	6.21	0.292 [1]
T24	20 - 6.6667	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.78	6.21	0.286 [1]
T25	6.6667 - 0	3/4	2.96	2.77	124.3 K=0.70	0.4418	-1.87	6.34	0.295 [1]

[1] P_u / ϕP_n controls

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Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.42	6.05	0.070 [1] ✔
T2	460 - 440	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.44	6.05	0.072 [1] ✔
T3	440 - 420	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.40	6.05	0.066 [1] ✔
T4	420 - 400	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.61	6.05	0.100 [1] ✔
T5	400 - 380	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.63	6.05	0.104 [1] ✔
T6	380 - 360	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.63	6.05	0.104 [1] ✔
T7	360 - 340	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.79	6.05	0.131 [1] ✔
T8	340 - 320	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.84	6.05	0.139 [1] ✔
T9	320 - 300	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.89	6.05	0.147 [1] ✔
T10	300 - 280	3/4	3.00	2.85	127.9 K=0.70	0.4418	-0.98	6.05	0.161 [1] ✔
T11	280 - 260	3/4	3.00	2.85	127.9 K=0.70	0.4418	-1.15	6.05	0.190 [1] ✔
T12	260 - 240	3/4	3.00	2.83	126.9 K=0.70	0.4418	-2.46	6.13	0.402 [1] ✔
T13	240 - 220	3/4	3.00	2.83	126.9 K=0.70	0.4418	-1.13	6.13	0.185 [1] ✔
T14	220 - 200	3/4	3.00	2.83	126.9 K=0.70	0.4418	-1.21	6.13	0.198 [1] ✔
T15	200 - 180	3/4	3.00	2.83	126.9 K=0.70	0.4418	-1.25	6.13	0.203 [1] ✔
T16	180 - 160	3/4	3.00	2.81	126.0 K=0.70	0.4418	-4.17	6.21	0.673 [1] ✔
T17	160 - 140	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.65	6.21	0.266 [1] ✔
T18	140 - 120	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.68	6.21	0.270 [1] ✔
T19	120 - 100	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.68	6.21	0.271 [1] ✔
T20	100 - 80	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.76	6.21	0.283 [1] ✔
T21	80 - 60	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.80	6.21	0.290 [1] ✔
T22	60 - 40	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.81	6.21	0.292 [1] ✔
T23	40 - 20	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.78	6.21	0.286 [1] ✔
T24	20 - 6.6667	3/4	3.00	2.81	126.0 K=0.70	0.4418	-1.87	6.21	0.302 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$

[1] P_u / ϕP_n controls

Torque-Arm Bottom Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T13	240 - 220 (1166)	L3x3x1/4	5.39	5.28	71.7 K=0.67	1.4400	-10.87	43.46	0.250 [1] ✔
T13	240 - 220 (1167)	L3x3x1/4	5.39	5.28	71.7 K=0.67	1.4400	-10.01	43.46	0.230 [1] ✔
T13	240 - 220 (1172)	L3x3x1/4	5.39	5.28	71.7 K=0.67	1.4400	-9.61	43.46	0.221 [1] ✔
T13	240 - 220 (1173)	L3x3x1/4	5.39	5.28	71.7 K=0.67	1.4400	-10.88	43.46	0.250 [1] ✔
T13	240 - 220 (1178)	L3x3x1/4	5.39	5.28	71.7 K=0.67	1.4400	-10.92	43.46	0.251 [1] ✔
T13	240 - 220 (1179)	L3x3x1/4	5.39	5.28	71.7 K=0.67	1.4400	-9.65	43.46	0.222 [1] ✔
T17	160 - 140 (1184)	L3x3x1/4	5.39	5.27	71.5 K=0.67	1.4400	-13.84	43.50	0.318 [1] ✔
T17	160 - 140 (1185)	L3x3x1/4	5.39	5.27	71.5 K=0.67	1.4400	-12.93	43.50	0.297 [1] ✔
T17	160 - 140 (1190)	L3x3x1/4	5.39	5.27	71.5 K=0.67	1.4400	-12.12	43.50	0.279 [1] ✔
T17	160 - 140 (1191)	L3x3x1/4	5.39	5.27	71.5 K=0.67	1.4400	-13.14	43.50	0.302 [1] ✔
T17	160 - 140 (1196)	L3x3x1/4	5.39	5.27	71.5 K=0.67	1.4400	-13.71	43.50	0.315 [1] ✔
T17	160 - 140 (1197)	L3x3x1/4	5.39	5.27	71.5 K=0.67	1.4400	-12.73	43.50	0.293 [1] ✔

[1] P_u / ϕP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	1 3/4	20.00	0.08	2.3	2.4053	6.25	108.24	0.058 [1]
T2	460 - 440	1 3/4	20.00	3.32	91.0	2.4053	4.95	108.24	0.046 [1]
T3	440 - 420	1 3/4	20.00	3.32	91.0	2.4053	5.25	108.24	0.049 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T4	420 - 400	1 3/4	20.00	0.08	2.3	2.4053	1.68	108.24	0.016 [1]
T8	340 - 320	1 3/4	20.00	3.32	91.0	2.4053	2.58	108.24	0.024 [1]
T11	280 - 260	1 3/4	20.00	3.32	91.0	2.4053	4.64	108.24	0.043 [1]
T12	260 - 240	2	20.00	3.32	79.7	3.1416	19.62	141.37	0.139 [1]
T13	240 - 220	2	20.00	0.08	2.0	3.1416	19.42	141.37	0.137 [1]
T16	180 - 160	2 1/4	20.00	3.32	70.8	3.9761	7.90	178.92	0.044 [1]
T17	160 - 140	2 1/4	20.00	0.08	1.8	3.9761	10.55	178.92	0.059 [1]
T18	140 - 120	2 1/4	20.00	3.32	70.8	3.9761	25.91	178.92	0.145 [1]
T19	120 - 100	2 1/4	20.00	0.08	1.8	3.9761	23.66	178.92	0.132 [1]
T20	100 - 80	2 1/4	20.00	0.08	1.8	3.9761	7.31	178.92	0.041 [1]

[1] P_u / ϕP_n controls

Leg Bending Design Data (Tension)

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
T1	480 - 460	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T2	460 - 440	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T3	440 - 420	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T4	420 - 400	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T8	340 - 320	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T11	280 - 260	1 3/4	0.00	3.35	0.000	0.00	3.35	0.000
T12	260 - 240	2	0.00	5.00	0.000	0.00	5.00	0.000
T13	240 - 220	2	0.00	5.00	0.000	0.00	5.00	0.000
T16	180 - 160	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T17	160 - 140	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T18	140 - 120	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T19	120 - 100	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T20	100 - 80	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000

Leg Interaction Design Data (Tension)

Section No.	Elevation ft	Size	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	480 - 460	1 3/4	0.058	0.000	0.000	0.058 [1] ✔	1.000	4.8.1 ✔
T2	460 - 440	1 3/4	0.046	0.000	0.000	0.046 [1] ✔	1.000	4.8.1 ✔
T3	440 - 420	1 3/4	0.049	0.000	0.000	0.049 [1] ✔	1.000	4.8.1 ✔
T4	420 - 400	1 3/4	0.016	0.000	0.000	0.016 [1] ✔	1.000	4.8.1 ✔
T8	340 - 320	1 3/4	0.024	0.000	0.000	0.024 [1] ✔	1.000	4.8.1 ✔
T11	280 - 260	1 3/4	0.043	0.000	0.000	0.043 [1] ✔	1.000	4.8.1 ✔

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Section No.	Elevation ft	Size	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T12	260 - 240	2	0.139	0.000	0.000	0.139 [1] ✔	1.000	4.8.1 ✔
T13	240 - 220	2	0.137	0.000	0.000	0.137 [1] ✔	1.000	4.8.1 ✔
T16	180 - 160	2 1/4	0.044	0.000	0.000	0.044 [1] ✔	1.000	4.8.1 ✔
T17	160 - 140	2 1/4	0.059	0.000	0.000	0.059 [1] ✔	1.000	4.8.1 ✔
T18	140 - 120	2 1/4	0.145	0.000	0.000	0.145 [1] ✔	1.000	4.8.1 ✔
T19	120 - 100	2 1/4	0.132	0.000	0.000	0.132 [1] ✔	1.000	4.8.1 ✔
T20	100 - 80	2 1/4	0.041	0.000	0.000	0.041 [1] ✔	1.000	4.8.1 ✔

[1] P_u / ϕP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	1	4.47	4.26	204.3	0.7854	1.72	25.45	0.068 [1] ✔
T2	460 - 440	1	4.47	4.26	204.3	0.7854	1.04	25.45	0.041 [1] ✔
T3	440 - 420	1	4.47	4.26	204.3	0.7854	1.46	25.45	0.057 [1] ✔
T4	420 - 400	1	4.47	4.26	204.3	0.7854	2.19	25.45	0.086 [1] ✔
T5	400 - 380	1	4.47	4.26	204.3	0.7854	1.79	25.45	0.070 [1] ✔
T6	380 - 360	1	4.47	4.26	204.3	0.7854	1.24	25.45	0.049 [1] ✔
T7	360 - 340	1	4.47	4.26	204.3	0.7854	2.01	25.45	0.079 [1] ✔
T8	340 - 320	1	4.47	4.26	204.3	0.7854	3.77	25.45	0.148 [1] ✔
T9	320 - 300	1	4.47	4.26	204.3	0.7854	1.79	25.45	0.070 [1] ✔
T10	300 - 280	1	4.47	4.26	204.3	0.7854	2.24	25.45	0.088 [1] ✔
T11	280 - 260	1	4.47	4.26	204.3	0.7854	3.07	25.45	0.121 [1] ✔
T12	260 - 240	1 1/4	4.47	4.23	162.3	1.2272	3.99	39.76	0.100 [1] ✔
T13	240 - 220	1 1/4	4.47	4.23	162.3	1.2272	4.39	39.76	0.110 [1] ✔
T14	220 - 200	1 1/4	4.47	4.23	162.3	1.2272	3.77	39.76	0.095 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T15	200 - 180	1 1/4	4.47	4.23	162.3	1.2272	3.12	39.76	0.078 [1]
T16	180 - 160	1 1/4	4.47	4.19	161.1	1.2272	5.28	39.76	0.133 [1]
T17	160 - 140	1 1/4	4.47	4.19	161.1	1.2272	10.79	39.76	0.271 [1]
T18	140 - 120	1	4.47	4.19	201.3	0.7854	6.10	25.45	0.240 [1]
T19	120 - 100	1	4.47	4.19	201.3	0.7854	3.13	25.45	0.123 [1]
T20	100 - 80	1	4.47	4.19	201.3	0.7854	4.43	25.45	0.174 [1]
T21	80 - 60	1	4.47	4.19	201.3	0.7854	2.34	25.45	0.092 [1]
T22	60 - 40	1	4.47	4.19	201.3	0.7854	0.83	25.45	0.032 [1]
T23	40 - 20	1	4.47	4.19	201.3	0.7854	1.59	25.45	0.062 [1]
T24	20 - 6.6667	1	4.47	4.19	201.1	0.7854	2.66	25.45	0.104 [1]
T25	6.6667 - 0	1	3.99	3.66	175.8	0.7854	0.49	25.45	0.019 [1]

[1] P_u / ϕP_n controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	3/4	3.00	2.85	182.7	0.4418	0.31	14.31	0.021 [1]
T2	460 - 440	3/4	3.00	2.85	182.7	0.4418	0.42	14.31	0.030 [1]
T3	440 - 420	3/4	3.00	2.85	182.7	0.4418	0.44	14.31	0.031 [1]
T4	420 - 400	3/4	3.00	2.85	182.7	0.4418	0.40	14.31	0.028 [1]
T5	400 - 380	3/4	3.00	2.85	182.7	0.4418	0.61	14.31	0.042 [1]
T6	380 - 360	3/4	3.00	2.85	182.7	0.4418	0.63	14.31	0.044 [1]
T7	360 - 340	3/4	3.00	2.85	182.7	0.4418	0.63	14.31	0.044 [1]
T8	340 - 320	3/4	3.00	2.85	182.7	0.4418	0.79	14.31	0.055 [1]
T9	320 - 300	3/4	3.00	2.85	182.7	0.4418	0.84	14.31	0.059 [1]

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Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T10	300 - 280	3/4	3.00	2.85	182.7	0.4418	0.89	14.31	0.062 [1] ✔
T11	280 - 260	3/4	3.00	2.85	182.7	0.4418	0.98	14.31	0.068 [1] ✔
T12	260 - 240	3/4	3.00	2.83	181.3	0.4418	1.15	14.31	0.080 [1] ✔
T13	240 - 220	3/4	3.00	2.83	181.3	0.4418	1.25	14.31	0.088 [1] ✔
T14	220 - 200	3/4	3.00	2.83	181.3	0.4418	1.17	14.31	0.082 [1] ✔
T15	200 - 180	3/4	3.00	2.83	181.3	0.4418	1.21	14.31	0.085 [1] ✔
T16	180 - 160	3/4	3.00	2.81	180.0	0.4418	1.25	14.31	0.087 [1] ✔
T17	160 - 140	3/4	3.00	2.81	180.0	0.4418	3.25	14.31	0.227 [1] ✔
T18	140 - 120	3/4	3.00	2.81	180.0	0.4418	1.65	14.31	0.115 [1] ✔
T19	120 - 100	3/4	3.00	2.81	180.0	0.4418	1.68	14.31	0.117 [1] ✔
T20	100 - 80	3/4	3.00	2.81	180.0	0.4418	1.68	14.31	0.117 [1] ✔
T21	80 - 60	3/4	3.00	2.81	180.0	0.4418	1.76	14.31	0.123 [1] ✔
T22	60 - 40	3/4	3.00	2.81	180.0	0.4418	1.80	14.31	0.126 [1] ✔
T23	40 - 20	3/4	3.00	2.81	180.0	0.4418	1.81	14.31	0.127 [1] ✔
T24	20 - 6.6667	3/4	3.00	2.81	180.0	0.4418	1.78	14.31	0.124 [1] ✔
T25	6.6667 - 0	3/4	1.48	1.29	82.8	0.4418	1.87	14.31	0.131 [1] ✔

[1] P_u / ϕP_n controls

Secondary Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1] ✔
T2	460 - 440	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1] ✔
T3	440 - 420	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1] ✔
T4	420 - 400	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1] ✔
T5	400 - 380	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T6	380 - 360	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1]
T7	360 - 340	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1]
T8	340 - 320	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1]
T9	320 - 300	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1]
T10	300 - 280	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1]
T11	280 - 260	5/8	1.50	1.43	109.6	0.3068	0.00	9.94	0.000 [1]
T12	260 - 240	5/8	1.50	1.42	108.8	0.3068	0.00	9.94	0.000 [1]
T13	240 - 220	5/8	1.50	1.42	108.8	0.3068	0.00	9.94	0.000 [1]
T14	220 - 200	5/8	1.50	1.42	108.8	0.3068	0.00	9.94	0.000 [1]
T15	200 - 180	5/8	1.50	1.42	108.8	0.3068	0.00	9.94	0.000 [1]
T16	180 - 160	5/8	1.50	1.41	108.0	0.3068	0.00	9.94	0.000 [1]
T17	160 - 140	5/8	1.50	1.41	108.0	0.3068	0.00	9.94	0.000 [1]
T18	140 - 120	5/8	1.50	1.41	108.0	0.3068	0.00	9.94	0.000 [1]
T19	120 - 100	5/8	1.50	1.41	108.0	0.3068	0.00	9.94	0.000 [1]
T20	100 - 80	5/8	1.50	1.41	108.0	0.3068	0.00	9.94	0.000 [1]
T21	80 - 60	5/8	1.50	1.41	108.0	0.3068	0.00	9.94	0.000 [1]
T22	60 - 40	5/8	1.50	1.41	108.0	0.3068	0.00	9.94	0.000 [1]
T23	40 - 20	5/8	1.50	1.41	108.0	0.3068	0.00	9.94	0.000 [1]
T24	20 - 6.6667	5/8	1.50	1.41	108.0	0.3068	0.00	9.94	0.000 [1]
T25	6.6667 - 0	5/8	0.99	0.89	68.7	0.3068	0.00	9.94	0.000 [1]

[1] $P_u / \phi P_n$ controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	480 - 460	3/4	3.00	2.85	182.7	0.4418	4.14	14.31	0.290 [1] ✔
T2	460 - 440	3/4	3.00	2.85	182.7	0.4418	0.42	14.31	0.030 [1] ✔
T3	440 - 420	3/4	3.00	2.85	182.7	0.4418	0.44	14.31	0.031 [1] ✔
T4	420 - 400	3/4	3.00	2.85	182.7	0.4418	0.40	14.31	0.028 [1] ✔
T5	400 - 380	3/4	3.00	2.85	182.7	0.4418	1.54	14.31	0.108 [1] ✔
T6	380 - 360	3/4	3.00	2.85	182.7	0.4418	0.63	14.31	0.044 [1] ✔
T7	360 - 340	3/4	3.00	2.85	182.7	0.4418	0.63	14.31	0.044 [1] ✔
T8	340 - 320	3/4	3.00	2.85	182.7	0.4418	0.79	14.31	0.055 [1] ✔
T9	320 - 300	3/4	3.00	2.85	182.7	0.4418	1.88	14.31	0.131 [1] ✔
T10	300 - 280	3/4	3.00	2.85	182.7	0.4418	0.89	14.31	0.062 [1] ✔
T11	280 - 260	3/4	3.00	2.85	182.7	0.4418	0.98	14.31	0.068 [1] ✔
T12	260 - 240	3/4	3.00	2.83	181.3	0.4418	1.15	14.31	0.080 [1] ✔
T13	240 - 220	3/4	3.00	2.83	181.3	0.4418	4.23	14.31	0.296 [1] ✔
T14	220 - 200	3/4	3.00	2.83	181.3	0.4418	1.13	14.31	0.079 [1] ✔
T15	200 - 180	3/4	3.00	2.83	181.3	0.4418	1.21	14.31	0.085 [1] ✔
T16	180 - 160	3/4	3.00	2.81	180.0	0.4418	1.25	14.31	0.087 [1] ✔
T17	160 - 140	3/4	3.00	2.81	180.0	0.4418	6.48	14.31	0.453 [1] ✔
T18	140 - 120	3/4	3.00	2.81	180.0	0.4418	1.65	14.31	0.115 [1] ✔
T19	120 - 100	3/4	3.00	2.81	180.0	0.4418	1.68	14.31	0.117 [1] ✔
T20	100 - 80	3/4	3.00	2.81	180.0	0.4418	1.68	14.31	0.117 [1] ✔
T21	80 - 60	3/4	3.00	2.81	180.0	0.4418	2.69	14.31	0.188 [1] ✔
T22	60 - 40	3/4	3.00	2.81	180.0	0.4418	1.80	14.31	0.126 [1] ✔
T23	40 - 20	3/4	3.00	2.81	180.0	0.4418	1.81	14.31	0.127 [1] ✔
T24	20 - 6.6667	3/4	3.00	2.81	180.0	0.4418	1.78	14.31	0.124 [1] ✔
T25	6.6667 - 0	3/4	2.96	2.77	177.6	0.4418	6.49	14.31	0.453 [1] ✔

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[1] P_u / ϕP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T1	480 - 460	3/4	3.00	2.85	182.7	0.4418	0.42	14.31	0.030 [1] ✔
T2	460 - 440	3/4	3.00	2.85	182.7	0.4418	0.44	14.31	0.031 [1] ✔
T3	440 - 420	3/4	3.00	2.85	182.7	0.4418	0.40	14.31	0.028 [1] ✔
T4	420 - 400	3/4	3.00	2.85	182.7	0.4418	2.20	14.31	0.154 [1] ✔
T5	400 - 380	3/4	3.00	2.85	182.7	0.4418	0.63	14.31	0.044 [1] ✔
T6	380 - 360	3/4	3.00	2.85	182.7	0.4418	0.63	14.31	0.044 [1] ✔
T7	360 - 340	3/4	3.00	2.85	182.7	0.4418	0.79	14.31	0.055 [1] ✔
T8	340 - 320	3/4	3.00	2.85	182.7	0.4418	2.69	14.31	0.188 [1] ✔
T9	320 - 300	3/4	3.00	2.85	182.7	0.4418	0.89	14.31	0.062 [1] ✔
T10	300 - 280	3/4	3.00	2.85	182.7	0.4418	0.98	14.31	0.068 [1] ✔
T11	280 - 260	3/4	3.00	2.85	182.7	0.4418	1.15	14.31	0.080 [1] ✔
T12	260 - 240	3/4	3.00	2.83	181.3	0.4418	4.43	14.31	0.309 [1] ✔
T13	240 - 220	3/4	3.00	2.83	181.3	0.4418	1.13	14.31	0.079 [1] ✔
T14	220 - 200	3/4	3.00	2.83	181.3	0.4418	1.21	14.31	0.085 [1] ✔
T15	200 - 180	3/4	3.00	2.83	181.3	0.4418	1.25	14.31	0.087 [1] ✔
T16	180 - 160	3/4	3.00	2.81	180.0	0.4418	6.64	14.31	0.464 [1] ✔
T17	160 - 140	3/4	3.00	2.81	180.0	0.4418	1.65	14.31	0.115 [1] ✔
T18	140 - 120	3/4	3.00	2.81	180.0	0.4418	1.68	14.31	0.117 [1] ✔
T19	120 - 100	3/4	3.00	2.81	180.0	0.4418	1.68	14.31	0.117 [1] ✔
T20	100 - 80	3/4	3.00	2.81	180.0	0.4418	2.99	14.31	0.209 [1] ✔
T21	80 - 60	3/4	3.00	2.81	180.0	0.4418	1.80	14.31	0.126 [1] ✔
T22	60 - 40	3/4	3.00	2.81	180.0	0.4418	1.81	14.31	0.127 [1] ✔
T23	40 - 20	3/4	3.00	2.81	180.0	0.4418	1.78	14.31	0.124 [1] ✔
T24	20 - 6.6667	3/4	3.00	2.81	180.0	0.4418	7.31	14.31	0.511 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
									✔

[1] P_u / ϕP_n controls

Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T13	240 - 220 (1164)	L3x3x1/4	4.18	4.09	52.8	1.4400	9.57	46.66	0.205 [1] ✔
T13	240 - 220 (1165)	L3x3x1/4	4.18	4.09	52.8	1.4400	10.94	46.66	0.234 [1] ✔
T13	240 - 220 (1170)	L3x3x1/4	4.18	4.09	52.8	1.4400	10.85	46.66	0.233 [1] ✔
T13	240 - 220 (1171)	L3x3x1/4	4.18	4.09	52.8	1.4400	9.43	46.66	0.202 [1] ✔
T13	240 - 220 (1176)	L3x3x1/4	4.18	4.09	52.8	1.4400	10.78	46.66	0.231 [1] ✔
T13	240 - 220 (1177)	L3x3x1/4	4.18	4.09	52.8	1.4400	9.71	46.66	0.208 [1] ✔
T17	160 - 140 (1182)	L3x3x1/4	4.18	4.08	52.7	1.4400	12.23	46.66	0.262 [1] ✔
T17	160 - 140 (1183)	L3x3x1/4	4.18	4.08	52.7	1.4400	13.10	46.66	0.281 [1] ✔
T17	160 - 140 (1188)	L3x3x1/4	4.18	4.08	52.7	1.4400	12.83	46.66	0.275 [1] ✔
T17	160 - 140 (1189)	L3x3x1/4	4.18	4.08	52.7	1.4400	11.77	46.66	0.252 [1] ✔
T17	160 - 140 (1194)	L3x3x1/4	4.18	4.08	52.7	1.4400	12.58	46.66	0.270 [1] ✔
T17	160 - 140 (1195)	L3x3x1/4	4.18	4.08	52.7	1.4400	12.48	46.66	0.267 [1] ✔

[1] P_u / ϕP_n controls

Torque-Arm Bottom Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T17	160 - 140 (1184)	L3x3x1/4	5.39	5.27	67.9	1.4400	1.82	46.66	0.039 [1] ✔
T17	160 - 140 (1185)	L3x3x1/4	5.39	5.27	67.9	1.4400	3.23	46.66	0.069 [1] ✔
T17	160 - 140 (1190)	L3x3x1/4	5.39	5.27	67.9	1.4400	2.70	46.66	0.058 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T17	160 - 140 (1191)	L3x3x1/4	5.39	5.27	67.9	1.4400	1.30	46.66	0.028 [1]
T17	160 - 140 (1196)	L3x3x1/4	5.39	5.27	67.9	1.4400	1.74	46.66	0.037 [1]
T17	160 - 140 (1197)	L3x3x1/4	5.39	5.27	67.9	1.4400	2.71	46.66	0.058 [1]

[1] P_u / ϕP_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	500 - 480	Pole	P6x.28	1	-0.74	180.84	56.3	Pass
T1	480 - 460	Leg	1 3/4	4	-13.09	59.04	22.2	Pass
T2	460 - 440	Leg	1 3/4	50	-18.10	59.04	30.6	Pass
T3	440 - 420	Leg	1 3/4	98	-18.70	59.04	31.7	Pass
T4	420 - 400	Leg	1 3/4	148	-16.96	59.04	28.7	Pass
T5	400 - 380	Leg	1 3/4	196	-26.00	59.04	44.0	Pass
T6	380 - 360	Leg	1 3/4	242	-26.99	59.04	45.7	Pass
T7	360 - 340	Leg	1 3/4	290	-27.01	59.04	45.7	Pass
T8	340 - 320	Leg	1 3/4	339	-33.93	59.04	57.5	Pass
T9	320 - 300	Leg	1 3/4	388	-35.70	59.04	60.5	Pass
T10	300 - 280	Leg	1 3/4	436	-37.96	59.04	64.3	Pass
T11	280 - 260	Leg	1 3/4	484	-41.76	59.04	70.7	Pass
T12	260 - 240	Leg	2	530	-54.51	88.88	61.3	Pass
T13	240 - 220	Leg	2	580	-55.92	88.88	62.9	Pass
T14	220 - 200	Leg	2	627	-53.62	88.88	60.3	Pass
T15	200 - 180	Leg	2	675	-57.41	88.88	64.6	Pass
T16	180 - 160	Leg	2 1/4	723	-64.20	124.00	51.8	Pass
T17	160 - 140	Leg	2 1/4	772	-75.79	124.00	61.1	Pass
T18	140 - 120	Leg	2 1/4	820	-85.16	124.00	68.7	Pass
T19	120 - 100	Leg	2 1/4	868	-86.41	124.00	69.7	Pass
T20	100 - 80	Leg	2 1/4	916	-86.01	124.00	69.4	Pass
T21	80 - 60	Leg	2 1/4	964	-90.56	124.00	73.0	Pass
T22	60 - 40	Leg	2 1/4	1012	-92.83	124.00	74.9	Pass
T23	40 - 20	Leg	2 1/4	1060	-92.84	124.00	74.9	Pass
T24	20 - 6.6667	Leg	2 1/4	1108	-90.89	124.19	73.2	Pass
T25	6.6667 - 0	Leg	2 1/4	1142	-92.64	121.76	76.1	Pass
T1	480 - 460	Diagonal	1	48	-1.84	8.67	21.2	Pass
T2	460 - 440	Diagonal	1	94	-1.10	8.67	12.7	Pass
T3	440 - 420	Diagonal	1	108	-1.64	8.67	18.9	Pass
T4	420 - 400	Diagonal	1	156	-2.30	8.67	26.6	Pass
T5	400 - 380	Diagonal	1	238	-1.89	8.67	21.8	Pass
T6	380 - 360	Diagonal	1	252	-1.44	8.67	16.7	Pass
T7	360 - 340	Diagonal	1	300	-2.13	8.67	24.6	Pass
T8	340 - 320	Diagonal	1	349	-4.06	8.67	46.8	Pass
T9	320 - 300	Diagonal	1	424	-1.90	8.67	21.9	Pass
T10	300 - 280	Diagonal	1	445	-2.54	8.67	29.3	Pass
T11	280 - 260	Diagonal	1	493	-3.40	8.67	39.2	Pass
T12	260 - 240	Diagonal	1 1/4	541	-4.25	20.16	21.1	Pass
T13	240 - 220	Diagonal	1 1/4	622	-8.52	20.16	42.3	Pass
T14	220 - 200	Diagonal	1 1/4	671	-4.06	20.16	20.1	Pass
T15	200 - 180	Diagonal	1 1/4	685	-3.75	20.16	18.6	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T16	180 - 160	Diagonal	1 1/4	740	-5.68	20.36	27.9	Pass
T17	160 - 140	Diagonal	1 1/4	816	-12.04	20.36	59.1	Pass
T18	140 - 120	Diagonal	1	864	-6.88	8.93	77.1	Pass
T19	120 - 100	Diagonal	1	876	-3.98	8.93	44.6	Pass
T20	100 - 80	Diagonal	1	924	-5.26	8.93	58.9	Pass
T21	80 - 60	Diagonal	1	1008	-3.16	8.93	35.4	Pass
T22	60 - 40	Diagonal	1	1054	-1.78	8.93	19.9	Pass
T23	40 - 20	Diagonal	1	1069	-2.37	8.93	26.5	Pass
T24	20 - 6.6667	Diagonal	1	1117	-3.26	8.95	36.4	Pass
T25	6.6667 - 0	Diagonal	1	1149	-1.61	11.46	14.1	Pass
T1	480 - 460	Horizontal	3/4	16	-0.31	6.05	5.1	Pass
T2	460 - 440	Horizontal	3/4	65	-0.42	6.05	7.0	Pass
T3	440 - 420	Horizontal	3/4	120	-0.44	6.05	7.2	Pass
T4	420 - 400	Horizontal	3/4	160	-0.40	6.05	6.6	Pass
T5	400 - 380	Horizontal	3/4	215	-0.61	6.05	10.0	Pass
T6	380 - 360	Horizontal	3/4	257	-0.63	6.05	10.4	Pass
T7	360 - 340	Horizontal	3/4	305	-0.63	6.05	10.4	Pass
T8	340 - 320	Horizontal	3/4	365	-0.79	6.05	13.1	Pass
T9	320 - 300	Horizontal	3/4	406	-0.84	6.05	13.9	Pass
T10	300 - 280	Horizontal	3/4	462	-0.89	6.05	14.7	Pass
T11	280 - 260	Horizontal	3/4	496	-0.98	6.05	16.1	Pass
T12	260 - 240	Horizontal	3/4	552	-1.15	6.13	18.8	Pass
T13	240 - 220	Horizontal	3/4	619	-1.29	6.13	21.0	Pass
T14	220 - 200	Horizontal	3/4	639	-1.13	6.13	18.5	Pass
T15	200 - 180	Horizontal	3/4	687	-1.21	6.13	19.8	Pass
T16	180 - 160	Horizontal	3/4	735	-1.25	6.21	20.1	Pass
T17	160 - 140	Horizontal	3/4	813	-2.88	6.21	46.4	Pass
T18	140 - 120	Horizontal	3/4	832	-1.65	6.21	26.6	Pass
T19	120 - 100	Horizontal	3/4	880	-1.68	6.21	27.0	Pass
T20	100 - 80	Horizontal	3/4	942	-1.68	6.21	27.1	Pass
T21	80 - 60	Horizontal	3/4	976	-1.76	6.21	28.3	Pass
T22	60 - 40	Horizontal	3/4	1024	-1.80	6.21	29.0	Pass
T23	40 - 20	Horizontal	3/4	1079	-1.81	6.21	29.2	Pass
T24	20 - 6.6667	Horizontal	3/4	1120	-1.78	6.21	28.6	Pass
T25	6.6667 - 0	Horizontal	3/4	1147	-1.87	10.13	18.5	Pass
T1	480 - 460	Secondary Horizontal	5/8	21	-0.00	6.78	0.1	Pass
T2	460 - 440	Secondary Horizontal	5/8	97	-0.00	6.78	0.1	Pass
T3	440 - 420	Secondary Horizontal	5/8	110	-0.00	6.78	0.1	Pass
T4	420 - 400	Secondary Horizontal	5/8	158	-0.00	6.78	0.1	Pass
T5	400 - 380	Secondary Horizontal	5/8	206	-0.00	6.78	0.1	Pass
T6	380 - 360	Secondary Horizontal	5/8	254	-0.00	6.78	0.1	Pass
T7	360 - 340	Secondary Horizontal	5/8	302	0.00	9.94	0.1	Pass
T8	340 - 320	Secondary Horizontal	5/8	350	-0.00	6.78	0.1	Pass
T9	320 - 300	Secondary Horizontal	5/8	398	0.00	9.94	0.1	Pass
T10	300 - 280	Secondary Horizontal	5/8	446	0.00	9.94	0.1	Pass
T11	280 - 260	Secondary Horizontal	5/8	494	0.00	9.94	0.1	Pass
T12	260 - 240	Secondary Horizontal	5/8	556	0.00	9.94	0.1	Pass
T13	240 - 220	Secondary Horizontal	5/8	590	0.00	9.94	0.1	Pass
T14	220 - 200	Secondary Horizontal	5/8	638	0.00	9.94	0.1	Pass
T15	200 - 180	Secondary Horizontal	5/8	686	0.00	9.94	0.1	Pass
T16	180 - 160	Secondary Horizontal	5/8	748	0.00	9.94	0.1	Pass
T17	160 - 140	Secondary Horizontal	5/8	782	0.00	9.94	0.1	Pass
T18	140 - 120	Secondary Horizontal	5/8	830	0.00	9.94	0.1	Pass
T19	120 - 100	Secondary Horizontal	5/8	878	-0.00	6.78	0.1	Pass
T20	100 - 80	Secondary Horizontal	5/8	940	-0.00	6.78	0.1	Pass
T21	80 - 60	Secondary Horizontal	5/8	974	-0.00	6.78	0.1	Pass
T22	60 - 40	Secondary Horizontal	5/8	1022	-0.00	6.78	0.1	Pass
T23	40 - 20	Secondary Horizontal	5/8	1070	-0.00	6.78	0.1	Pass
T24	20 - 6.6667	Secondary Horizontal	5/8	1132	-0.00	6.78	0.1	Pass
T25	6.6667 - 0	Secondary Horizontal	5/8	1152	-0.00	7.76	0.0	Pass
T1	480 - 460	Top Girt	3/4	5	4.14	14.31	29.0	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T2	460 - 440	Top Girt	3/4	55	-0.42	6.05	7.0	Pass
T3	440 - 420	Top Girt	3/4	103	-0.44	6.05	7.2	Pass
T4	420 - 400	Top Girt	3/4	150	-0.40	6.05	6.6	Pass
T5	400 - 380	Top Girt	3/4	199	1.54	14.31	10.8	Pass
T6	380 - 360	Top Girt	3/4	247	-0.63	6.05	10.4	Pass
T7	360 - 340	Top Girt	3/4	295	-0.63	6.05	10.4	Pass
T8	340 - 320	Top Girt	3/4	341	-0.79	6.05	13.1	Pass
T9	320 - 300	Top Girt	3/4	389	-0.84	6.05	13.9	Pass
T10	300 - 280	Top Girt	3/4	438	-0.89	6.05	14.7	Pass
T11	280 - 260	Top Girt	3/4	486	-0.98	6.05	16.1	Pass
T12	260 - 240	Top Girt	3/4	535	-1.15	6.13	18.8	Pass
T13	240 - 220	Top Girt	3/4	582	-2.33	6.13	38.0	Pass
T14	220 - 200	Top Girt	3/4	629	-1.13	6.13	18.5	Pass
T15	200 - 180	Top Girt	3/4	677	-1.21	6.13	19.8	Pass
T16	180 - 160	Top Girt	3/4	725	-1.25	6.21	20.1	Pass
T17	160 - 140	Top Girt	3/4	774	-4.06	6.21	65.4	Pass
T18	140 - 120	Top Girt	3/4	822	-1.65	6.21	26.6	Pass
T19	120 - 100	Top Girt	3/4	870	-1.68	6.21	27.0	Pass
T20	100 - 80	Top Girt	3/4	918	-1.68	6.21	27.1	Pass
T21	80 - 60	Top Girt	3/4	966	-1.76	6.21	28.3	Pass
T22	60 - 40	Top Girt	3/4	1014	-1.80	6.21	29.0	Pass
T23	40 - 20	Top Girt	3/4	1062	-1.81	6.21	29.2	Pass
T24	20 - 6.6667	Top Girt	3/4	1110	-1.78	6.21	28.6	Pass
T25	6.6667 - 0	Top Girt	3/4	1145	6.49	14.31	45.3	Pass
T1	480 - 460	Bottom Girt	3/4	10	-0.42	6.05	7.0	Pass
T2	460 - 440	Bottom Girt	3/4	58	-0.44	6.05	7.2	Pass
T3	440 - 420	Bottom Girt	3/4	105	-0.40	6.05	6.6	Pass
T4	420 - 400	Bottom Girt	3/4	154	2.20	14.31	15.4	Pass
T5	400 - 380	Bottom Girt	3/4	202	-0.63	6.05	10.4	Pass
T6	380 - 360	Bottom Girt	3/4	250	-0.63	6.05	10.4	Pass
T7	360 - 340	Bottom Girt	3/4	296	-0.79	6.05	13.1	Pass
T8	340 - 320	Bottom Girt	3/4	346	2.69	14.31	18.8	Pass
T9	320 - 300	Bottom Girt	3/4	393	-0.89	6.05	14.7	Pass
T10	300 - 280	Bottom Girt	3/4	441	-0.98	6.05	16.1	Pass
T11	280 - 260	Bottom Girt	3/4	490	-1.15	6.05	19.0	Pass
T12	260 - 240	Bottom Girt	3/4	537	-2.46	6.13	40.2	Pass
T13	240 - 220	Bottom Girt	3/4	584	-1.13	6.13	18.5	Pass
T14	220 - 200	Bottom Girt	3/4	632	-1.21	6.13	19.8	Pass
T15	200 - 180	Bottom Girt	3/4	680	-1.25	6.13	20.3	Pass
T16	180 - 160	Bottom Girt	3/4	729	-4.17	6.21	67.3	Pass
T17	160 - 140	Bottom Girt	3/4	777	-1.65	6.21	26.6	Pass
T18	140 - 120	Bottom Girt	3/4	825	-1.68	6.21	27.0	Pass
T19	120 - 100	Bottom Girt	3/4	873	-1.68	6.21	27.1	Pass
T20	100 - 80	Bottom Girt	3/4	921	-1.76	6.21	28.3	Pass
T21	80 - 60	Bottom Girt	3/4	969	-1.80	6.21	29.0	Pass
T22	60 - 40	Bottom Girt	3/4	1017	-1.81	6.21	29.2	Pass
T23	40 - 20	Bottom Girt	3/4	1065	-1.78	6.21	28.6	Pass
T24	20 - 6.6667	Bottom Girt	3/4	1114	7.31	14.31	51.1	Pass
T1	480 - 460	Guy A@479.917	1/2	1155	12.10	16.14	75.0	Pass
T5	400 - 380	Guy A@400	7/16	1158	10.27	12.48	82.3	Pass
T9	320 - 300	Guy A@320	1/2	1161	10.86	16.14	67.3	Pass
T13	240 - 220	Guy A@240	1/2	1175	9.04	16.14	56.0	Pass
T17	160 - 140	Guy A@160	1/2	1192	11.78	16.14	73.0	Pass
T21	80 - 60	Guy A@80	7/16	1200	9.64	12.48	77.2	Pass
T1	480 - 460	Guy B@479.917	1/2	1154	12.16	16.14	75.3	Pass
T5	400 - 380	Guy B@400	7/16	1157	10.28	12.48	82.4	Pass
T9	320 - 300	Guy B@320	1/2	1160	10.88	16.14	67.4	Pass
T13	240 - 220	Guy B@240	1/2	1169	8.89	16.14	55.1	Pass
T17	160 - 140	Guy B@160	1/2	1187	11.80	16.14	73.1	Pass
T21	80 - 60	Guy B@80	7/16	1199	9.61	12.48	77.0	Pass
T1	480 - 460	Guy C@479.917	1/2	1153	12.17	16.14	75.4	Pass

ALL PRO Consulting Group, INC.
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Dallas, TX 75243
Phone: 972-231-8893
FAX: 866-364-8375

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	øP$_{allow}$ K	% Capacity	Pass Fail
T5	400 - 380	Guy C@400	7/16	1156	10.33	12.48	82.8	Pass
T9	320 - 300	Guy C@320	1/2	1159	10.96	16.14	67.9	Pass
T13	240 - 220	Guy C@240	1/2	1162	9.22	16.14	57.2	Pass
T17	160 - 140	Guy C@160	1/2	1180	11.90	16.14	73.7	Pass
T21	80 - 60	Guy C@80	7/16	1198	9.65	12.48	77.3	Pass
T13	240 - 220	Torque Arm Top@240	L3x3x1/4	1165	10.94	46.66	23.4	Pass
T17	160 - 140	Torque Arm Top@160	L3x3x1/4	1183	13.10	46.66	28.1	Pass
T13	240 - 220	Torque Arm Bottom@240	L3x3x1/4	1178	-10.92	43.46	25.1	Pass
T17	160 - 140	Torque Arm Bottom@160	L3x3x1/4	1184	-13.84	43.50	31.8	Pass
							Summary	
						Pole (L1)	56.3	Pass
						Leg (T25)	76.1	Pass
						Diagonal (T18)	77.1	Pass
						Horizontal (T17)	46.4	Pass
						Secondary Horizontal (T1)	0.1	Pass
						Top Girt (T17)	65.4	Pass
						Bottom Girt (T16)	67.3	Pass
						Guy A (T5)	82.3	Pass
						Guy B (T5)	82.4	Pass
						Guy C (T5)	82.8	Pass
						Torque Arm Top (T17)	28.1	Pass
						Torque Arm Bottom (T17)	31.8	Pass
						Bolt Checks	50.7	Pass
						RATING =	**82.8**	**Pass**

	City of Richmond Department of Planning & Development Review	Special Use Permit

LOCATION: 701 German School Road

APPLICANT: WXGI, Inc and Dish Wireless

COUNCIL DISTRICT: 9

PROPOSAL: To amend Ord. 97-370-351 that authorized the property known as 701 German School Road for the purpose of a 500 foot tall telecommunications tower to also allow wireless communications providers, upon certain terms and conditions.

For questions, please contact David Watson at 804-646-1036 or David.Watson@rva.gov