TOWN OF JACKSON
PLANNING & BUILDING DEPARTMENT

TRANSMITTAL MEMO

Town of Jackson
- ☒ Public Works/Engineering
- ☒ Building
- ☐ Title Company
- ☒ Town Attorney
- ☐ Police

Joint Town/County
- ☐ Parks and Recreation
- ☐ Pathways
- ☐ Joint Housing Dept

Teton County
- ☐ Planning Division
- ☐ Engineer
- ☐ Surveyor- *Nelson*
- ☐ Assessor
- ☐ Clerk and Recorder
- ☐ Road and Levee

State of Wyoming
- ☐ Teton Conservation
- ☐ WYDOT
- ☐ TC School District #1
- ☐ Game and Fish
- ☐ DEQ

Federal Agencies
- ☐ Army Corp of Engineers

Utility Providers
- ☐ Qwest
- ☐ Lower Valley Energy
- ☐ Bresnan Communications

Special Districts
- ☐ START
- ☒ Jackson Hole Fire/EMS
- ☐ Irrigation Company

Date: July 1, 2025

Item #: P25-115

Planner: Andrew Bowen

Phone: 307-733-0440 ext. 1306

Email: abowen@jacksonwy.gov

Owner
AT&T
575 Morosgo Drive
Atlanta, GA 30324

Applicant:
Desiree Blick
Smart Link Group/AT&T Mobility
10 Church Cir.
Annapolis, MD 21404

REQUESTS:

The applicant is submitting a request for a Basic Use Permit to modify existing wireless communication facility located at 1855 High School Road, legally known PT. S1/2NE1/4 SEC. 6, TWP. 40, RNG. 116

PIDN: 22-40-16-06-2-00-103

For questions, please call Andrew Bowen at 307-733-0440, x1306 or email to the address shown below. Thank you.

Please respond by: July 22, 2025 (with Comments)

RESPONSE: For Departments not using SmartGov, please send responses via email to planning@jacksonwy.gov

PLANNING PERMIT APPLICATION
Planning & Building Department

150 E Pearl Ave.
P.O. Box 1687
Jackson, WY 83001

ph: (307) 733-0440
www.townofjackson.com

For Office Use Only

Fees Paid_____ Date & Time Received _____

Application #s _____ _____ _____

Please note: *Applications received after 3 PM will be processed the next business day.*

PROJECT.

Name/Description: WY3 Summit - Verizon Wireless Antenna Modification

Physical Address: 1855 High School Rd, Jackson, WY

Lot, Subdivision: _____ PIDN: _____

PROPERTY OWNER.

Name: AT&T - Allison Skipper Phone: 470-413-6770

Mailing Address: 575 Morosgo Drive, Atlanta, Georgia ZIP: 30324

E-mail: as317b@att.com

APPLICANT/AGENT.

Name: Desiree Blick Phone: 443-784-8459

Mailing Address: 10 Church Circle, Annapolis, MD ZIP: 21401

E-mail: Desiree.Blick@Smartlinkgroup.com

DESIGNATED PRIMARY CONTACT.

_____Property Owner X_____Applicant/Agent

TYPE OF APPLICATION. *Please check all that apply; review the type of application at www.townofjackson/200/Planning*

Use Permit

X Basic Use

_____Conditional Use

_____Special Use

Relief from the LDRs

_____Administrative Adjustment

_____Variance

_____Beneficial Use Determination

_____Appeal of an Admin. Decision

Physical Development

_____Sketch Plan

_____Development Plan

_____Design Review

Subdivision/Development Option

_____ Subdivision Plat

_____Boundary Adjustment (replat)

_____Boundary Adjustment (no plat)

_____Development Option Plan

Interpretations

_____Formal Interpretation

_____Zoning Compliance Verification

Amendments to the LDRs

_____LDR Text Amendment

_____Map Amendment

Miscellaneous

_____**Other:** _____

_____ Environmental Analysis

PRE-SUBMITTAL STEPS. *To see if pre-submittal steps apply to you, go to www.townofjackson.com/200/Planning and select the relevant application type for requirements. Please submit all required pre-submittal steps with application.*

Pre-application Conference #: N/A

Environmental Analysis #: N/A

Original Permit #: N/A

Date of Neighborhood Meeting:

SUBMITTAL REQUIREMENTS. *Please ensure all submittal requirements are included. The Planning Department will not hold or process incomplete applications. Partial or incomplete applications will be returned to the applicant. Go to www.townofjackson.com/200/Planning and select the relevant application type for submittal requirements.*

Have you attached the following?

_____ **Application Fee.** Fees are cumulative. Go to www.townofjackson.com/200/Planning and select the relevant application type for the fees.

X **Notarized Letter of Authorization.** A notarized letter of consent from the landowner is required if the applicant is not the owner, or if an agent is applying on behalf of the landowner. Please see the Letter of Authorization template at http://www.townofjackson.com/DocumentCenter/View/845/LetterOfAuthorization-PDF.

X **Response to Submittal Requirements**. The submittal requirements can be found on the TOJ website for the specific application. If a pre-application conference is required, the submittal requirements will be provided to applicant at the conference. The submittal requirements are at www.townofjackson.com/200/Planning under the relevant application type.

Note: Information provided by the applicant or other review agencies during the planning process may identify other requirements that were not evident at the time of application submittal or a Pre-Application Conference, if held. Staff may request additional materials during review as needed to determine compliance with the LDRs.

Under penalty of perjury, I hereby certify that I have read this application and associated checklists and state that, to the best of my knowledge, all information submitted in this request is true and correct. I agree to comply with all county and state laws relating to the subject matter of this application, and hereby authorize representatives of Teton County to enter upon the above-mentioned property during normal business hours, after making a reasonable effort to contact the owner/applicant prior to entering.

Desiree Blick

Signature of Property Owner or Authorized Applicant/Agent

6/18/2025

Date

Desiree Blick

Name Printed

Real Estate Specialist 1

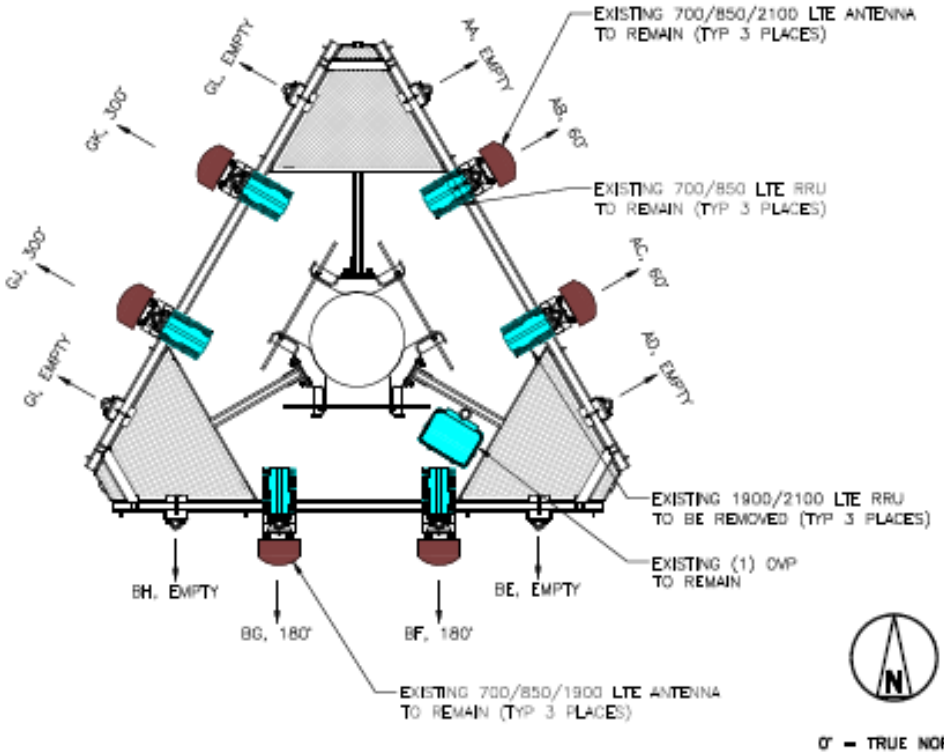
Title

Project Narrative

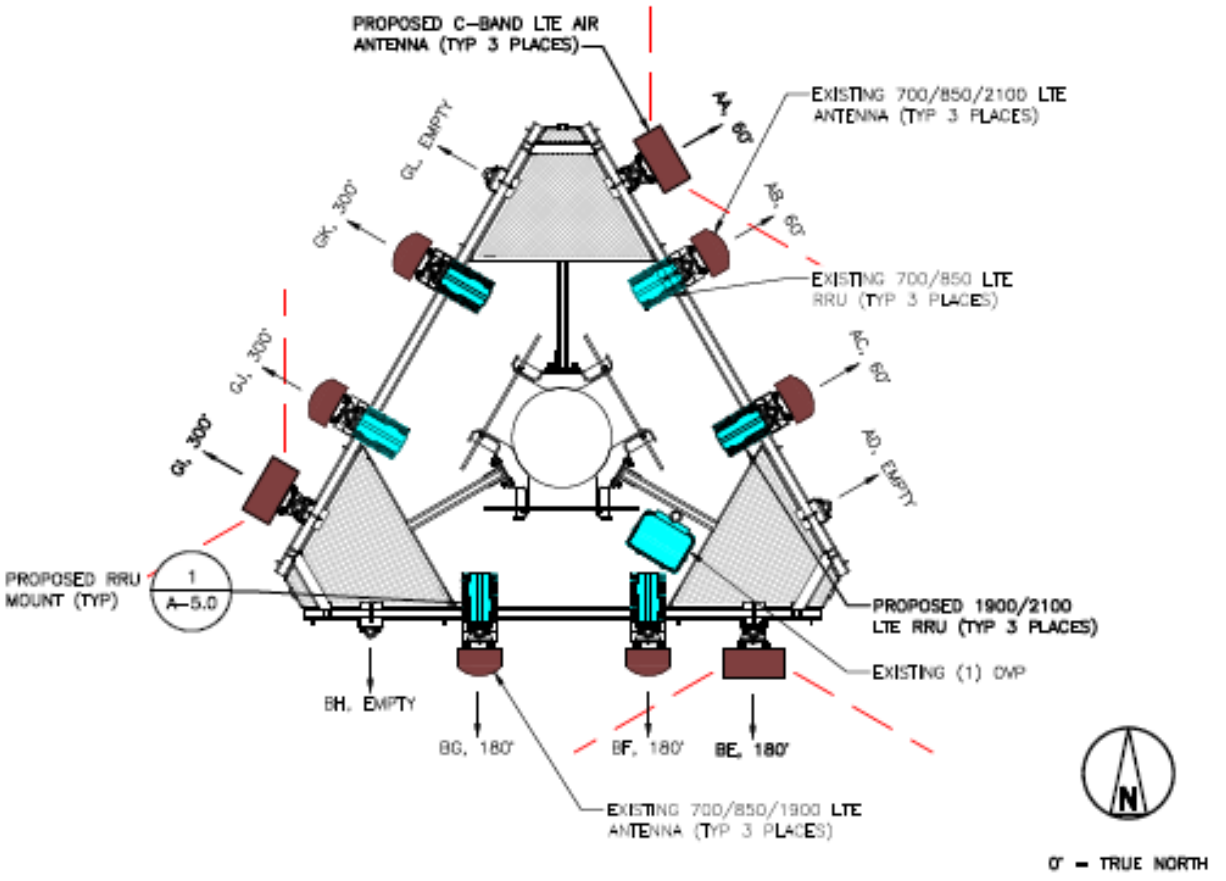
Address: 1855 High School Road, Jackson, WY 83001

Verizon's Modification is proposing to add (3) antennas to the existing cell tower. Retain all other equipment on existing 85' monopole tower within the 20' 5" x 62' 10" compound. Footprints are not changing, and the height of the tower will remain the same. Proposed antennas will not be publicly broadcasting and will have no interference with existing broadcasting equipment.

- Proposed work does not alter the basic intent of the site plan approval.
- Not a residential use.
- The existing Cell tower height will remain the same.
- No parking spaces will be reduced.
- No solar panels will be on site.
- The site is an unmanned facility.



EXISTING ANTENNA LAYOUT | 3



PROPOSED ANTENNA LAYOUT

Lessor Site ID: Teton High School aka SU562 / 10130014
Lessee Site ID: WY3 Summit / 416679

SUPPLEMENT

This Supplement ("Supplement") made this 5 day of JUNE, 2018, between New Cingular Wireless PCS, LLC, a Delaware limited liability company with an office located at 575 Morosgo Drive, Atlanta, Georgia 30324, hereinafter designated LESSOR and CommNet Cellular Inc., d/b/a Verizon Wireless, a Colorado Corporation, with an office located at One Verizon Way, Mailstop 4AW100, Basking Ridge, New Jersey 07920, hereinafter designated LESSEE.

1. This Supplement is a Supplement as referenced in that certain Master Lease Agreement between New Cingular Wireless PCS, LLC as successor to BellSouth Mobility LLC and SBC Wireless, LLC, hereinafter referred to as "Cingular" with its principal mailing address c/o Cingular Wireless, 5565 Glenridge Connector, Atlanta, Georgia 30342, and Cellco Partnership, a Delaware general partnership, d/b/a Verizon Wireless dated September 5, 2002, as amended by the First Amendment to Master Lease Agreement dated December 13, 2006, the Second Amendment to Master Lease Agreement dated September 18, 2009, and the Third Amendment to Master Lease Agreement dated March 1, 2010 (collectively, the "Agreement"). All of the terms and conditions of the Agreement are incorporated hereby by reference and made a part hereof without the necessity of repeating or attaching the Agreement. In the event of a contradiction, modification or inconsistency between the terms of the Agreement and this Supplement, the terms of this Supplement shall govern. Capitalized terms used in this Supplement shall have the same meaning described for them in the Agreement unless otherwise indicated herein.

2. The Property, leased by LESSOR and owned by State of Wyoming Board of Land Commissioners, is described as follows: 1855 High School Road, Jackson, Teton County, Wyoming. See Legal Description in the Prime Lease, attached hereto.

3. The Premises leased by the LESSOR to the LESSEE hereunder is described as follows: The centerline of 85' AGL RAD Center of LESSOR's tower for LESSEE's antennas. See Exhibit 1, attached hereto.

4. In the event an Exhibit 1 is attached hereto describing the Premises, the LESSEE shall have the right to survey the Property and/or Premises and said survey shall then become Exhibit 2 which shall be attached hereto and made a part hereof and shall control in the event of any discrepancies between it and Exhibit 1. The cost for such work shall be borne by the LESSEE.

5. The term and Commencement Date of this Supplement shall be as set forth in Paragraphs 5 and 6 of the Agreement and the date certain envisioned in Paragraph 5 of the Agreement is the earlier of (i) the first day of the month following the issuance of LESSOR'S Notice to Proceed or (ii) Agreement is March 1, 2018, except: N/A.

6. The rental for the initial term pursuant to this Supplement shall be due at an annual rental of [redacted] to be paid in equal monthly installments on the first day of the month, in advance, to LESSOR at AT&T Mobility, Attn: Collocation A/R, P.O. Box 5086, Carol Stream, IL 60197-5086 or to such other person, firm or place as the LESSOR may, from time to time, designate in writing at least thirty (30) days in advance of any rental payment date.

7. If the Property is subject to a Prime Lease affecting LESSOR's interest at the Property, a copy of such agreement is attached hereto as Exhibit 3.

8. Special Provisions: **Tower Extension.** Lessee hereby acknowledges that tower extension expenses ("Tower Extension Costs") and tower extension design expenses are required and will be paid to Lessor by Lessee. Lessor will provide Lessee with a firm quote for the Tower Extension Costs. Lessee shall have sixty (60) days from issuance of the quote to pay the Tower Extension Costs via a Purchase Order ("PO") or check made payable to Lessor. Alternatively, Lessee shall have the right to terminate this Supplement within sixty (60) days of issuance of the Tower Extension Costs quote. If Lessee does not provide a PO or check for payment of the Tower Extension Costs and does not elect to terminate the Supplement within sixty (60) days of issuance of the quote, Lessor shall have the right to terminate this Supplement. Lessor is under no obligation to begin any tower extension until receipt of a PO or check from Lessee. If after the issuance of a PO to Lessor for payment of the Tower Extension Costs, Lessee elects to terminate this Supplement under any other termination provision contained herein, Lessee shall remain obligated to pay the Tower Extension Costs to Lessor within ninety (90) days of such termination.

Lessee agrees that the installation of Lessee's proposed equipment as more particularly described in Exhibit 1 of this Supplement, shall not occur without the issuance of a Notice to Proceed by Lessor. Lessee further acknowledges that, although Lessor's vendor shall perform the actual extension to the tower, Lessor and Lessee may share responsibility for obtaining the approvals necessary for the extension to the tower, including but not limited to FAA, FCC, zoning and environmental approval. At the sole discretion of Lessor, Lessor and Lessee will enter into an additional Supplement ("Tower Extension Supplement") that will document and assign those responsibilities and other applicable matters.

Lessee agrees to reasonably cooperate at Lessee's sole cost and expense with Lessor to effectuate the intent of this paragraph.

Remainder of page intentionally blank
Signature page follows

Lessor Site ID: Teton High School aka SU562 / 10130014
Lessee Site ID: WY3 Summit / 416679

IN WITNESS WHEREOF, the parties hereto have set their hands and affixed their respective seals the day and year first written above.

LESSOR:
New Cingular Wireless PCS, LLC, a Delaware limited liability company
BY: AT&T Mobility Corporation
ITS: Manager

By: _____
Print Name: Neil Boyer
Title: Director – Network
Date: 6-5-18

WITNESS Brett H. Peterman
Area Manager, AT&T

LESSEE:
CommNet Cellular Inc.
d/b/a Verizon Wireless

By: _____
Print Name: Steve LeVar
Title: Director Network Field Engineering
Date: 5/12/2018

WITNESS

Lessor Site ID: Teton High School aka SU562 / 10130014
Lessee Site ID: WY3 Summit / 416679

LESSOR ACKNOWLEDGEMENT

CORPORATE ACKNOWLEDGEMENT

STATE OF GEORGIA)
) ss:
COUNTY OF GWINNETT)

BE IT REMEMBERED, that on this 5 day of JUNE, 2018 before me, the subscriber, a person authorized to take oaths in the State of Georgia, personally appeared Neil Boyer who, being duly sworn on their oath, deposed and made proof to my satisfaction that they are the person named in the within instrument; and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the entities upon behalf of which he acted, executed the instrument.

Notary Public:
My Commission Expires:

KATIE LYTLE
NOTARY PUBLIC
GWINNETT CO., GEORGIA
MY COMMISSION EXPIRES
JAN. 16 2019

LESSEE ACKNOWLEDGEMENT

CORPORATE ACKNOWLEDGEMENT

STATE OF UTAH)
) ss:
COUNTY OF SALT LAKE)

BE IT REMEMBERED, that on this 12th day of March, 2018, before me, the subscriber, a person authorized to take oaths in the State of UTAH, personally appeared Steve Lehr who, being duly sworn on oath, deposed and made proof to my satisfaction that they are the person named in the within instrument; and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the entities upon behalf of which he acted, executed the instrument.

Notary Public:
My Commission Expires:

JAMES D. HARWELL
Notary Public, State of Utah
Commission # 698362
My Commission Expires On
January 08, 2022

Lessor Site ID: Teton High School aka SU562 / 10130014
Lessee Site ID: WY3 Summit / 416679

EXHIBIT 1

Proposed Equipment is defined below and Plans and specifications are attached hereto.

Number of Antennas:	Six (6)
Antenna Manufacturer and Type-Number:	Andrew JAHH-65B-R3B
Weight and Dimension of Antenna(s) (L x W x D):	63.3 lb. / 72" x 13.8" x 8.2"
MW Dish diameter and approved RAD Center:	N/A
Number of Transmission Lines:	Two (2)
Diameter of Transmission Line:	1.5"
Location of Antenna(s) on Tower (Approved RAD Center):	85'
Direction of Radiation (Azimuth):	60 / 180 / 300
Dimensions of LESSEE Ground Space:	Separate Ground Lease
Frequencies/Max. Power Output:	Tx: 1940-1950, 2120-2130, 746-756 MHz
	Rx: 1860-1870, 1720-1730, 767-777 MHz
	260 watts

Quantity and Dimensions of Other Equipment to be placed on Antenna Support Structure:

Three (3) RRH Alcatel Lucent B66A RRH 4x45 / 25.8" x 12" x 7.3" / 67 lb.

Three (3) RRH Alcatel Lucent RB13 RRH 4x30-4R / 21.6" x 12" x 4" / 57.2 lb.

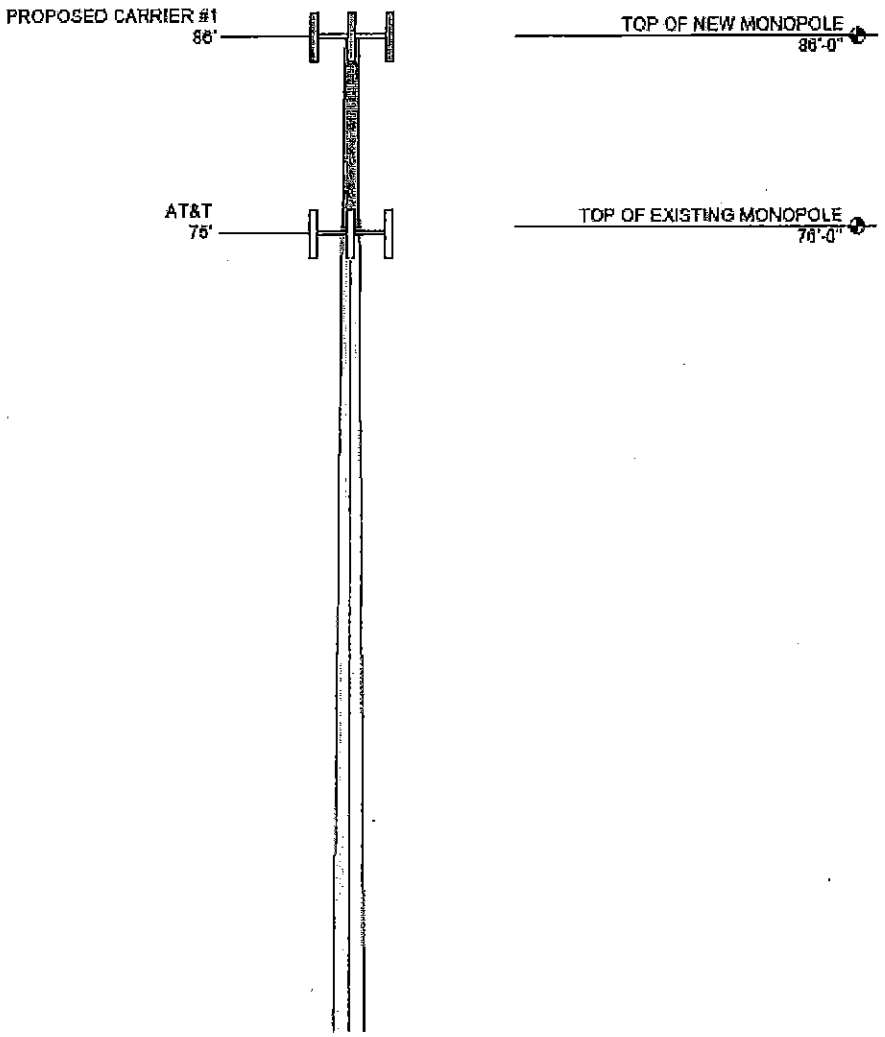
Three (3) RRH Alcatel Lucent B25 RRH 4x30 / 21.6" x 12" x 4" / 57.2 lb.

Two (2) OVP Raycap TRxxDC-1064-PF-48 / 15.95" x10.15" x 8.15" / 14 lb.

Lessor Site ID: Teton High School aka SU562 / 10130014
Lessee Site ID: WY3 Summit / 416679

EXHIBIT 1 – continued

Tower Elevation



*Proposed Carrier #1 = LESSEE

Lessor Site ID: Teton High School aka SU562 / 10130014
Lessee Site ID: WY3 Summit / 416679

EXHIBIT 2

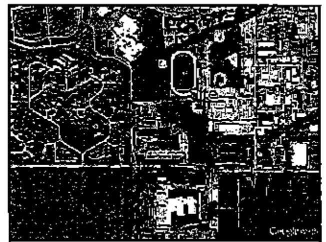
Survey of Premises

(To be added at LESSEE's option.)

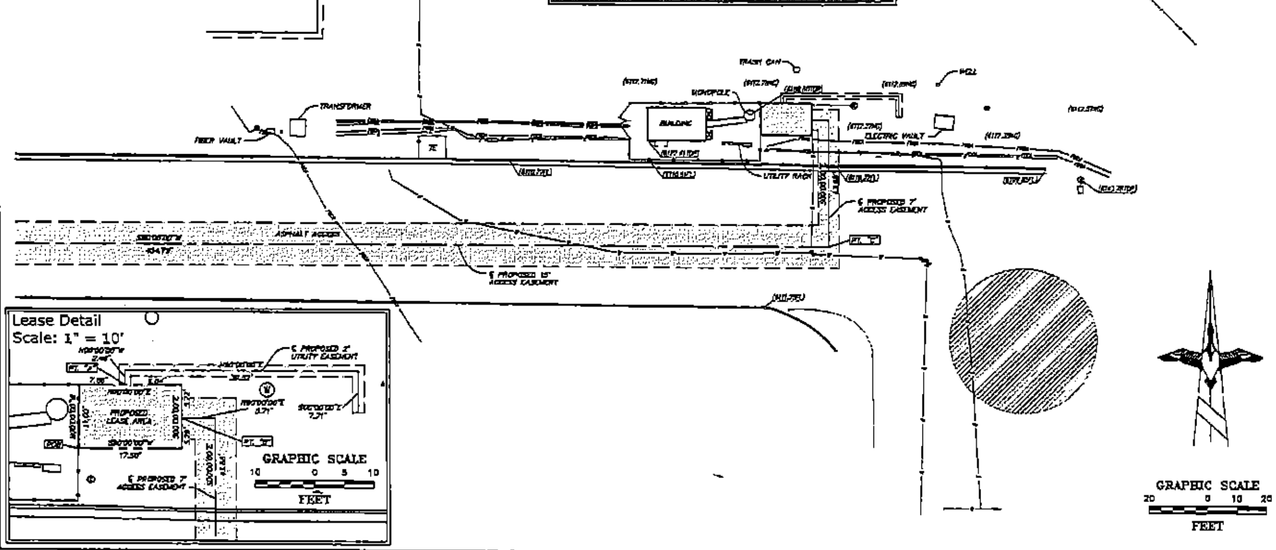
Last Saved On: 1-09-18 At: 09:12am As: N:\Projects\2016 Projects\16156-WY3 SUMMIT\dwg\16156-R1-WY3 SUMMIT By: justin

LINE LEGEND

- SUBJECT PARCEL BOUNDARY LINES
- SECTION LINES
- ADJOINING PARCEL BOUNDARY LINES
- EASEMENT LINES
- RIGHT OF WAY LINES
- FLOOD PLANE LINES
- BARBED WIRE FENCE
- CHAINLINK FENCE
- UNDERGROUND ELECTRIC LINES
- UNDERGROUND GAS LINES
- OVERHEAD ELECTRIC LINES
- UNDERGROUND SANITARY SEWER LINES
- UNDERGROUND TELEPHONE LINES
- UNDERGROUND WATER LINES



Vicinity Map - N.T.S.



Title Report

PREPARED BY: FIRST AMERICAN TITLE INSURANCE COMPANY
ORDER NO.: 4556-2865740
EFFECTIVE DATE: SEPTEMBER 14, 2017

Legal Description

A PARCEL OF LAND IN THE NE1/4 OF SECTION 6, T40N, R116W, 6TH P.M., TETON COUNTY, WYOMING, DESCRIBED AS FOLLOWS, TO-WIT:

BEGINNING AT THE CENTER 1/4 CORNER OF THE SAID SECTION 6, THE POINT BEING MARKED BY A STEEL PIN SET IN THE APPROXIMATE CENTER OF THE LEEK DITCH BY GUY BUSH AND WITNESSED BY NOBLE GREGORY; THENCE ALONG THE LEEK DITCH N1°56'30"E, 747.35 FEET TO A POINT ON THE EAST BANK OF THE SAID DITCH; THENCE ALONG THE SOUTHEASTERLY BANK OF THE LEEK DITCH N27°21'0"E, 382.83 FEET TO A POINT; THENCE CONTINUING ALONG THE SOUTHEASTERLY BANK OF THE LEEK DITCH N31°14'0"E, 238.88 FEET TO A POINT; THENCE CONTINUING ALONG THE SOUTHEASTERLY BANK OF THE LEEK DITCH N53°48'0"E, 422.43 FEET TO A POINT; THENCE CONTINUING ALONG THE SOUTHEASTERLY BANK OF THE LEEK DITCH N67°15'30"E, 237.50 FEET TO A POINT; THENCE CONTINUING ALONG THE SOUTHEASTERLY BANK OF THE LEEK DITCH N57°27'0"E, 282.59 FEET TO A POINT; THENCE CONTINUING ALONG THE SOUTHEASTERLY BANK OF THE LEEK DITCH N72°49'30"E, 280.20 FEET TO A POINT; THENCE S0°4'0"E, 1200.20 FEET ALONG THE WESTERLY [illegible] OF PROPERTIES NOW OR FORMERLY OWNED BY KENNETH GRIGGS, JOHN NIX, NOBLE GREGORY AND VAN GAS; THENCE S89°56'0"W, 392.43 FEET ALONG THE NORTHERLY LINE OF A PROPERTY NOW OR FORMERLY OWNED BY JERRY WILSON; THENCE S0°4'30"W, 500.00 FEET ALONG THE WESTERLY LINE OF PROPERTIES NOW OR FORMERLY OWNED BY JERRY WILSON AND THE TOWN OF JACKSON; THENCE S89°37'0"W, 993.22 FEET ALONG THE SOUTHERLY LINE OF THE NE 1/4 OF SECTION 6 TO THE POINT OF BEGINNING.

Assessor's Parcel No.

22-40-16-06-2-00-103

Easements

SEE SHEET LS2

Lease Area/Access & Utility Easements

SEE SHEET LS2

Date of Survey

JUNE 7, 2016

Basis of Bearings

THE WYOMING STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD83).

CLASSIFICATION	MINIMUM GEOMETRIC ACCURACY STANDARD
THIRD	5.0 cm + 1: 10,000

Bench Mark

NGS CONTROL POINT "A 136", ELEVATION = 6429.87 FEET (NAVD 88)

Legend

Symbol	Description	Symbol	Description
	CONCRETE PAVEMENT	NG	NATURAL GROUND
	CONIFEROUS TREE		PARKING BOLLARD
	DIAMETER	POB	POINT OF BEGINNING
	DECIDUOUS TREE	POC	POINT OF COMMENCEMENT
	EDGE OF ASPHALT		OVERHEAD ELECTRIC LINE
FF	FINISHED FLOOR		POWER POLE
FS	FINISH SURFACE		PROPERTY LINE
	FIRE HYDRANT	R.O.W.	RIGHT OF WAY
FL	FLOW LINE		SEWER MANHOLE
	FOUND MONUMENT AS NOTED		SIGN POST
	FOUND SECTION MONUMENT		STREET LIGHT STANDARD
	GEOGRAPHIC LOCATION		TELEPHONE PEDESTAL
	GAS METER	TYP	TYPICAL
	IRRIGATION CONTROL VALVE		WATER METER
			WATER VALVE

Certificate of Survey

THIS IS TO CERTIFY THAT THIS TOPOGRAPHIC MAP AND IMPROVEMENTS SHOWN ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Professional Land Surveyor
WILLIAM C. STAMPALIOS
6954
1/9/18

WILLIAM C. STAMPALIOS PLS 6954

THIS DOES NOT REPRESENT A MONUMENTED SURVEY.
REFERENCE IS MADE TO A COMMITMENT FOR TITLE INSURANCE, NUMBER 4556-2865740, ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, AND HAVING AN EFFECTIVE DATE OF SEPTEMBER 14, 2017. THIS SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE. THE LESSOR'S LEGAL DESCRIPTION AND RECORD BOUNDARY ARE SHOWN HEREON FOR REFERENCE ONLY.
THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE LESSOR'S PROPERTY.

verizon✓
3131 SOUTH VAUGHN WAY
AURORA, CO 80014

Technology Associates
SAN DIEGO MARKET OFFICE
5333 MISSION CENTER RD. STE 220
SAN DIEGO, CA 92108

REV	DATE	DESCRIPTION	BY
1	[illegible]	ADDED LEASE AREA	JT
0	[illegible]	90% ZONING DRAWINGS	JT

Engineer/Consultant:
ANTELOPE SURVEYING
2017-000778867 CORP
[illegible]
Englewood, CO, 80110
Phone: (303) 749-[illegible]

ALTURA
[illegible]

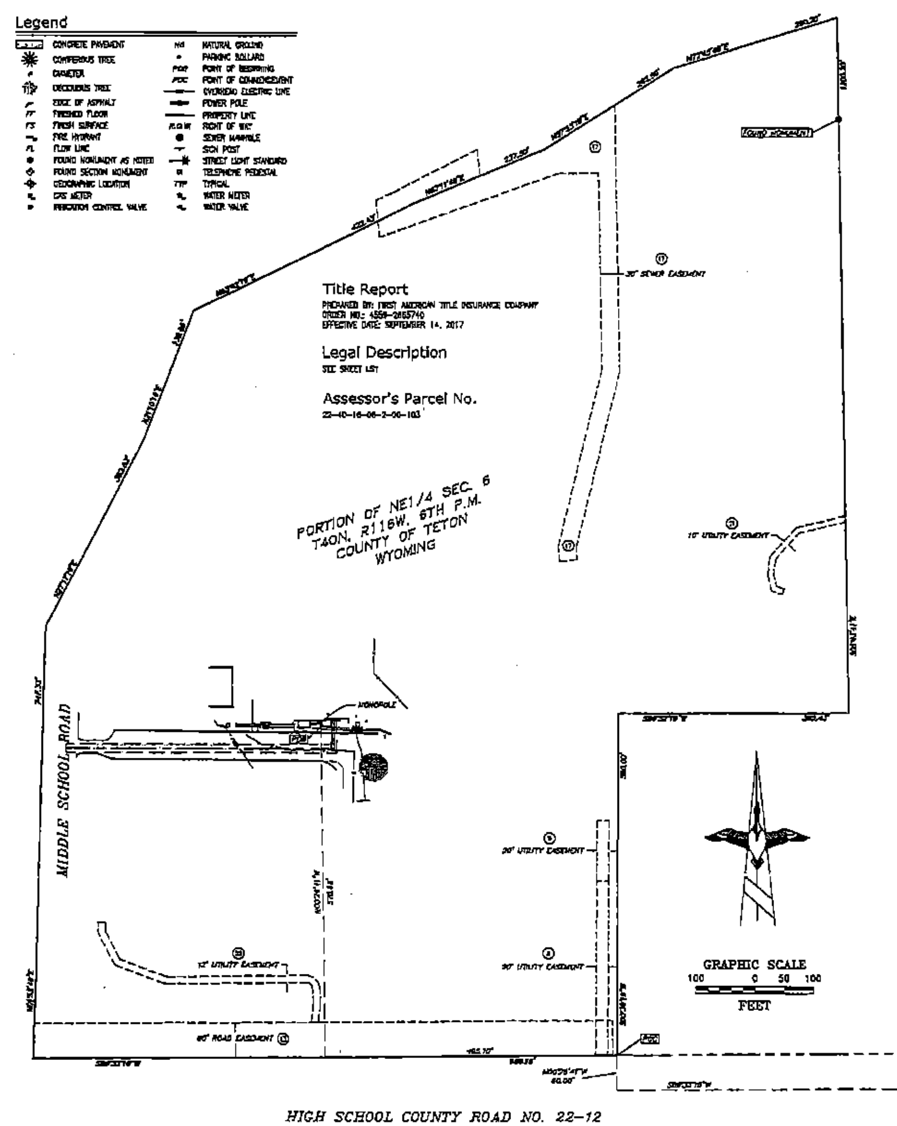
Drawn By: JT
Job No.: 16156

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

WY3 SUMMIT
1855 HIGH SCHOOL RD.
JACKSON, WY, 83001
MONOPOLE

SHEET TITLE
TOPOGRAPHIC SURVEY

SHEET NUMBER
LS1



Title Report

PREPARED BY: FIRST AMERICAN TITLE INSURANCE COMPANY
ORDER NO.: 4559-2655740
EFFECTIVE DATE: SEPTEMBER 14, 2017

Legal Description

SEE SHEET LS1

Assessor's Parcel No.

22-40-16-06-2-00-103

LINE LEGEND
SUBJECT PARCEL BOUNDARY LINES
SECTION LINES
ADJOINING PARCEL BOUNDARY LINES
EASEMENT LINES
RIGHT OF WAY LINES
FLOOD PLANE LINES
BARBED WIRE FENCE
CHAINLINK FENCE
UNDERGROUND ELECTRIC LINES
UNDERGROUND GAS LINES
OVERHEAD ELECTRIC LINES
UNDERGROUND SANITARY SEWER LINES
UNDERGROUND TELEPHONE LINES
UNDERGROUND WATER LINES

Lease Area/Access & Utility Easements

LEASE AREA

BEING A TELECOMMUNICATIONS LEASE PARCEL LYING WITHIN A PORTION OF THE NORTHEAST 1/4 OF SECTION 6, TOWNSHIP 40 NORTH, RANGE 116 WEST, 6TH P.M., TETON COUNTY, WYOMING, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF THAT PARCEL OF LAND DESCRIBED IN DOCUMENT RECORDED DECEMBER 28, 2001, AS RECEPTION NO. 0559177, IN THE OFFICE OF THE CLERK AND RECORDER, SAID COUNTY; THENCE ALONG THE SOUTH LINE OF SAID PARCEL, S89°35'18"W, 495.10 FEET; THENCE N00°26'41"W, 570.66 FEET TO THE POINT OF BEGINNING; THENCE N00°00'00"W, 11.00 FEET; THENCE N90°00'00"E, 7.86 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT "A"; THENCE CONTINUING N90°00'00"E, 9.64 FEET; THENCE S00°00'00"E, 5.72 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT "B"; THENCE S00°00'00"E, 5.28 FEET; THENCE S90°00'00"W, 17.50 FEET TO THE POINT OF BEGINNING.

CONTAINING 193 SQ. FT. OR 0.004 ACRES MORE OR LESS.

UTILITY EASEMENT

BEING A STRIP OF LAND 2.00 FEET IN WIDTH LYING WITHIN A PORTION OF THE NORTHEAST 1/4 OF SECTION 6, TOWNSHIP 40 NORTH, RANGE 116 WEST, 6TH P.M., TETON COUNTY, WYOMING, LYING 1.00 FOOT ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT POINT "A" AS DESCRIBED ABOVE; THENCE N00°00'00"W, 2.46 FEET; THENCE N90°00'00"E, 39.52 FEET; THENCE S00°00'00"E, 7.21 FEET TO THE END OF SAID STRIP OF LAND.

7' ACCESS EASEMENT

BEING A STRIP OF LAND 7.00 FEET IN WIDTH LYING WITHIN A PORTION OF THE NORTHEAST 1/4 OF SECTION 6, TOWNSHIP 40 NORTH, RANGE 116 WEST, 6TH P.M., TETON COUNTY, WYOMING, LYING 3.50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT POINT "B" AS DESCRIBED ABOVE; THENCE N90°00'00"E, 3.71 FEET; THENCE S00°00'00"E, 43.88 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT "C" AND THE END OF SAID STRIP OF LAND.

15' ACCESS EASEMENT

BEING A STRIP OF LAND 15.00 FEET IN WIDTH LYING WITHIN A PORTION OF THE NORTHEAST 1/4 OF SECTION 6, TOWNSHIP 40 NORTH, RANGE 116 WEST, 6TH P.M., TETON COUNTY, WYOMING, LYING 7.50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT POINT "C" AS DESCRIBED ABOVE; THENCE S90°00'00"W, 454.78 FEET TO THE END OF SAID STRIP OF LAND.

EXCEPT ANY PORTION LYING WITHIN THE RIGHT-OF-WAY OF MIDDLE SCHOLL ROAD.

SIDELINES OF SAID STRIPS OF LAND ARE TO BE LENGTHENED AND/OR SHORTENED TO PREVENT GAPS AND/OR OVERLAPS.

Date of Survey

JUNE 7, 2018

Basis of Bearings

THE WYOMING STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD83).
CLASSIFICATION: MINIMUM GEOMETRIC ACCURACY STANDARD
THIRD: 5.0 cm + 1: 10,000

Bench Mark

NGS CONTROL POINT "A 136", ELEVATION = 6429.87 FEET (NAVD 88)

Easements

8. EASEMENT, INCLUDING TERMS AND CONDITIONS CONTAINED THEREIN:
GRANTED TO: LOWER VALLEY POWER AND LIGHT, INC.
FOR: CONSTRUCTION, OPERATION AND MAINTENANCE OF ELECTRIC DISTRIBUTION CIRCUITS
RECORDED: OCTOBER 21, 1969
RECORDING INFORMATION: BOOK 1 OF PHOTO, PAGE 315 (PLOTTED HEREON).

(9) EASEMENT, INCLUDING TERMS AND CONDITIONS CONTAINED THEREIN:
GRANTED TO: LOWER VALLEY POWER AND LIGHT, INC.
FOR: CONSTRUCTION, OPERATION AND MAINTENANCE OF ELECTRIC DISTRIBUTION CIRCUITS
RECORDED: FEBRUARY 26, 1971
RECORDING INFORMATION: BOOK 9 OF PHOTO, PAGE 178 (PLOTTED HEREON).

10. EASEMENT, INCLUDING TERMS AND CONDITIONS CONTAINED THEREIN:
GRANTED TO: LOWER VALLEY POWER AND LIGHT, INC.
FOR: CONSTRUCTION, OPERATION AND MAINTENANCE OF ELECTRIC DISTRIBUTION CIRCUITS
RECORDED: DECEMBER 8, 1976
RECORDING INFORMATION: BOOK 53 OF PHOTO, PAGE 64 (DOES NOT AFFECT SUBJECT PROPERTY).

11. AGREEMENT FOR BOUNDARY LINE INCLUDING THE TERMS AND CONDITIONS THEREOF:
BETWEEN: FOUR LAZY F RANCH
AND: THE ROBERT BRUCE PORTER TRUST
RECORDED: SEPTEMBER 23, 1983
RECORDING INFORMATION: BOOK 145 OF PHOTO, PAGE 172-181 (BLANKET IN NATURE).

12. EASEMENT, INCLUDING TERMS AND CONDITIONS CONTAINED THEREIN:
GRANTED TO: TETON COUNTY, WYOMING
FOR: PUBLIC ROADWAY
RECORDED: NOVEMBER 13, 1984
RECORDING INFORMATION: BOOK 161 OF PHOTO, PAGE 62-64 (DOES NOT AFFECT SITE).

(13) EASEMENT, INCLUDING TERMS AND CONDITIONS CONTAINED THEREIN:
GRANTED TO: TETON COUNTY, WYOMING
FOR: PUBLIC ROADWAY
RECORDED: DECEMBER 10, 1984
RECORDING INFORMATION: BOOK 162 OF PHOTO, PAGE 234-235 (PLOTTED HEREON).

14. AFFIDAVIT REGARDING THE LEEK DITCH RECORDED AUGUST 7, 1989 IN BOOK 214 OF PHOTO, PAGE 69-83. (BLANKET IN NATURE).

15. A CONTRACT FOR PURCHASE OF POWER, INCLUDING THE TERMS AND CONDITIONS CONTAINED THEREIN:
BETWEEN: LOWER VALLEY POWER AND LIGHT, INC.
AND: RECREATION DEPARTMENT
RECORDED: DECEMBER 11, 1989
RECORDING INFORMATION: BOOK 219 OF PHOTO, PAGE 381-382 (NOT A PLOTTABLE ITEM).

16. A CONTRACT FOR PURCHASE OF POWER, INCLUDING THE TERMS AND CONDITIONS CONTAINED THEREIN:
BETWEEN: LOWER VALLEY POWER AND LIGHT, INC.
AND:
RECORDED:
RECORDING INFORMATION:
TETON COUNTY SCHOOL DISTRICT NO. 1
DECEMBER 18, 1998
BOOK 319 OF PHOTO, PAGE 683-684 (NOT A PLOTTABLE ITEM).

(17) EASEMENT, INCLUDING TERMS AND CONDITIONS CONTAINED THEREIN:
GRANTED TO: TOWN OF JACKSON
FOR: SEWER
RECORDED: OCTOBER 16, 1992
RECORDING INFORMATION: BOOK 259 OF PHOTO, PAGE 878-882 (PLOTTED HEREON).

18. LEASE AND THE TERMS AND CONDITIONS THEREOF:
LESSOR: WYOMING BOARD OF LAND COMMISSIONERS
LESSEE: TETON COUNTY SCHOOL DISTRICT NO. 1
RECORDED: DECEMBER 28, 2001
RECORDING INFORMATION: BOOK 445 OF PHOTO, PAGE 915-918 (BLANKET IN NATURE).

19. LEASE AND THE TERMS AND CONDITIONS THEREOF:
LESSOR: TETON COUNTY SCHOOL DISTRICT NO.1
LESSEE: TETON COUNTY/TETON COUNTY SCHOOL DISTRICT NO.1 PUBLIC FACILITIES JOINT POWERS BOARD
RECORDED: DECEMBER 28, 2001
RECORDING INFORMATION: BOOK 445 OF PHOTO, PAGE 919-928 (BLANKET IN NATURE).

20. LEASE AND THE TERMS AND CONDITIONS THEREOF:
LESSOR: TETON COUNTY/TETON COUNTY SCHOOL DISTRICT NO.1 PUBLIC FACILITIES JOINT POWERS BOARD
LESSEE: TETON COUNTY SCHOOL DISTRICT NO. 1
RECORDED: DECEMBER 28, 2001
RECORDING INFORMATION: BOOK 445 OF PHOTO, PAGE 929-967 (BLANKET IN NATURE).

(21) EASEMENT, INCLUDING TERMS AND CONDITIONS CONTAINED THEREIN:
GRANTED TO: LOWER VALLEY ENERGY, INC.
FOR: CONSTRUCTION, OPERATION AND MAINTENANCE OF ELECTRIC DISTRIBUTION CIRCUITS
RECORDED: JULY 14, 2010
RECORDING INFORMATION: BOOK 740 OF PHOTO, PAGE 719-723 (PLOTTED HEREON).

(22) EASEMENT, INCLUDING TERMS AND CONDITIONS CONTAINED THEREIN:
GRANTED TO: LOWER VALLEY ENERGY, INC.
FOR: CONSTRUCTION, OPERATION AND MAINTENANCE OF ELECTRIC DISTRIBUTION CIRCUITS
RECORDED: JUNE 6, 2012
RECORDING INFORMATION: BOOK 810 OF PHOTO, PAGE 786-789 (PLOTTED HEREON).

23. MORTGAGE AND THE TERMS AND CONDITIONS THEREOF.
MORTGAGOR: TETON COUNTY/TETON COUNTY SCHOOL DISTRICT NO.1 PUBLIC FACILITIES JOINT POWERS BOARD
MORTGAGEE: WYOMING BANK & TRUST AS TRUSTEE
AMOUNT: $1,250,000.00
RECORDED: DECEMBER 28, 2001
RECORDING INFORMATION: BOOK 445 OF PHOTO, PAGE 968-1032 (BLANKET IN NATURE).

verizon
3131 SOUTH VAUGHN WAY
AURORA, CO 80014

Technology Associates
SAN DIEGO MARKET OFFICE
5333 MISSION CENTER RD, STE 220
SAN DIEGO, CA 92108

REV	DATE	DESCRIPTION	BY
0	6/7/18	95% ZONING DRAWINGS	JT
1	11/7/18	ADDED LEASE AREA	JT

ANTELOPE SURVEYING
AXTURA

Drawn By: JT
Job No.: 16156

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

WY3 SUMMIT

1855 HIGH SCHOOL RD.
JACKSON, WY. 83001
MONOPOLE

SHEET TITLE
TOPOGRAPHIC SURVEY

SHEET NUMBER
LS2

Lessor Site ID: Teton High School aka SU562 / 10130014
Lessee Site ID: WY3 Summit / 416679

EXHIBIT 3

Prime Lease

Copy of Prime Lease (subject to redaction) attached hereto.

(Bd. Appvd. 9-3-1998)

LEASE AMENDED BY BOARD FEBRUARY 6, 2014
LEASE NO. SU-562

STATE OF WYOMING
BOARD OF LAND COMMISSIONERS

SPECIAL USE LEASE

(1) PARTIES - The parties of this lease are: NEW CINGULAR WIRELESS PCS, LLC

whose address is Attention: Network Real Estate Administration, RE: Cell Site #IDL 04077, Name: Teton High School, FA #10130014, 575 Morosgo Drive NE, Suite 13-F, West Tower, Atlanta, GA 30324 (Lessee), and the Wyoming Board of Land Commissioners, (Lessor), whose address is Office of State Lands and Investments, 122 West 25th Street, 3rd Floor West, Cheyenne, Wyoming 82002-0600.

In the event that the addresses listed above change, the party whose address has changed shall immediately notify the other party to the lease in writing.

(2) PURPOSE OF LEASE - The Lessor hereby leases to Lessee, for the purpose of cellular communication site and fiber-optic line only, the following described lands, subject to all terms, conditions, regulations, and restrictions contained in this lease, the Statutes of the State of Wyoming, and the Rules and Regulations of the Board of Land Commissioners. Any other use by Lessee is a violation of the terms and conditions of the lease.

DESCRIPTION:

SEE ATTACHED SURVEYS

(3) TERM OF LEASE - The term of this lease shall begin at 5:00 P.M. on the 1ST day of FEBRUARY, 2007 and terminate at 5:00 P.M. on the 1ST day of FEBRUARY, 2032.

(4) RENTAL PAYMENT - The lessee shall pay to the Lessor at the Office of State Lands and Investments, Herschler Building, Cheyenne, Wyoming, a rental for the use of the premises in the amount and manner as follows:

[redacted] PER YEAR, ADJUSTED ANNUALLY BY THE CONSUMER PRICE INDEX
SUBJECT TO FIVE YEAR RENTAL REVIEW

Annual rentals are due and payable on or before the anniversary date of this lease. If the annual rental is not paid on or before the anniversary date a 10% late fee will be assessed.

(5) LESSEE'S RESPONSIBILITIES - Lessee Agrees:
(a) Not to take or disturb any fur bearing animals on the premises except where a permit to do so has been secured from the Wyoming Game and Fish Commission and consent thereto has also been obtained from the Office of State Lands and Investments.
(b) To observe state and federal laws and regulations for the protection of fish and wildlife.
(c) Not to cut, destroy or remove, or permit to be cut, destroyed or removed, any timber that may be upon the premises. The Lessee shall promptly report to the Lessor the cutting or removal of timber by other persons.
(d) To maintain all improvements located on the premises in a good state of repair at the Lessee's expense.
(e) Noxious weeds and pests will be controlled by lessee. Lessee may work in conjunction with County Weed and Pest Control Districts to develop projects to be submitted to the Office of State Lands and Investments for reimbursement of certain costs of eradication of weeds and pests on state lands. Cost estimates must be submitted by County Weed and Pest Districts and approved by the Office to be eligible for reimbursement. Subject to funding availability, the total cost of the project will be reimbursed for leafy spurge infestations, for all other noxious weeds and pests, the cost of materials only. Lessee of state lands shall pay the cost of application or other control measures.
(f) To dispose of all waste in a proper manner and not to allow debris, garbage, contaminates or other refuse to accumulate on the leased premises. Any landfill or open dump operated by the Lessee on the leased premises, must be permitted by the Board and must comply with State law and the rules and regulations of the Department of Environmental Quality. Any landfill, open dump, accumulation of debris, garbage, contaminants or refuse of any kind which the Lessee placed, or allowed to be placed, on the leased premises, and which has not been authorized by the Board, must be removed at the Lessee's expense. Lessee further agrees that the Lessor shall have the right to remove debris, garbage, contaminants, or other refuse which the Lessee placed on the premises and collect the cost of such removal from the Lessee. The Lessee further agrees to document and report, as soon as possible, to the Office any unauthorized dumping of debris, garbage, contaminants, or other refuse on the leased premises, by parties other than the Lessee, so that appropriate investigation and corrective measures can be taken by the Lessor.
(g) Lessee shall restore the leased premises to as near its original condition as possible upon termination of this lease or any renewal thereof.
(h) Lessee to maintain a bond [redacted] which is equal to an Engineer's Estimate for reclamation of the site, until such time as it is no longer being used and full reclamation, remediation, or other appropriate actions consistent with the Board's rules is taken.

(6) SPECIAL PROVISIONS:
(a) RESERVATIONS - Lessor Reserves:
(1) The right to order the sale of all or any portion of the premises at any time, subject to this lease.
(2) The right to lease and dispose of all coal, oil, gas, and other minerals, and all deposits of clay, stone, gravel and sand valuable for building, mining, or commercial purposes, and all timber, together with the right to mine and remove such minerals and other deposits and timber with the right of ingress and egress thereto, and to cancel this lease as to any portion of the premises when required for these purposes.
(3) The right to hold, sell, appropriate or otherwise dispose of any fences or other improvements of any character owned by the Lessee upon the premises, to insure the payment of rentals, damages or other expenses accruing to the Lessor by virtue of this lease.
(4) The right to enter in and upon the premises at any time for purposes of inspection or management.
(5) The right at any time to grant easements across the premises for ditches, canals, tunnels, telephone and telegraph lines, pipelines, power lines, or other lawful purposes, with right of ingress and egress thereto.
(6) The right to use or lease the premises or any part thereof at any time for any purpose other than the rights and privileges granted by this lease.

(7) The privilege of any person to use the premises for casual recreational day uses, fishing and hunting pursuant to Chapter 13 of the Rules and Regulations of the Board of Land Commissioners.
(8) All rights not expressly granted to Lessee by this lease are reserved to the Lessor.

(b) **ASSIGNMENTS** - This lease shall not be assigned without the prior approval of the Lessor. Any assignment of this lease shall be recorded in the Office of State Lands and Investments.

(c) **SUBLEASES** - The premises shall not be subleased or made subject to any contract, or other agreement of any kind, without the approval of the Lessor. Such approval may be conditioned upon payment of additional rental to the Lessor.

(d) **IMPROVEMENTS** -

(1) Lessee shall have the right to construct or make improvements upon state lands in the amount o[redacted] section, without first obtaining permission.

(2) Lessee shall request permission to construct or make improvements in excess of [redacted] n value per section by submitting a completed application form furnished by the Office.

(3) Any improvement regardless of value, which will restrict existing public access or alter existing multiple use of the lands must be approved by the Board of Land Commissioners.

(4) Unless permission has been obtained in the manner provided, the owner of the improvements in excess of the [redacted] er section shall not be entitled to compensation as provided by W.S. 36-5-111 and 36-9-105, and upon expiration of the lease the improvements shall forfeit to and become the property of the state; except that within 120 days from the date of the expiration of the lease, the owner may remove such improvements in a manner which minimizes injury to the land.

(e) **ENTRY UPON LEASED PREMISES BY THIRD PARTIES** - Third parties desiring to enter upon the leased premises shall contact the lessee prior to entry, unless it is a member of the Board of Land Commissioners or its representatives or a member of the public when entering for purposes of hunting and fishing and casual recreational use pursuant to provisions of Chapter 13 of the Rules and Regulations of the Board of Land Commissioners. For all entries by third parties, the lessee may negotiate a payment for damage to the surface of the leased premises, pursuant to Chapter 4, Section 13. Payments must be consistent with payments for damages to adjacent lands.

(f) **CANCELLATION** - If it be determined by the Lessor that this lease has been procured by fraud, deceit, or misrepresentation, or if the premises or any part thereof be used for unlawful, unauthorized, or illegal purposes, or if the Lessee fails to perform or violates any of the terms of this lease, the Lessor shall have power and authority to cancel this lease.

(g) **SURRENDER OF PREMISES UPON TERMINATION OF LEASE** - The Lessee shall, upon termination of this lease, surrender and deliver unto the Lessor the peaceful and uninterrupted possession of the premises. The Lessee may remove his improvements in accordance with W.S. 36-5-110.

(h) **TIME AND SPECIFIC PERFORMANCE** are each of the essence of this lease, and all agreements and conditions herein contained shall extend to and be binding alike upon the heirs, administrators, successors and assigns of the parties hereto.

(i) **RELIANCE** - The Lessor has expressly relied on the representations made by the Lessee in the written application to lease the premises.

(j) **EXCHANGE** - The lease is granted upon the express condition that should the Lessor hereafter find it to be in the best interest of the Lessor to exchange the lands embraced in this lease for other lands, as provided by law, then this lease may be terminated upon giving the Lessee one (1) year's notice, unless by mutual consent of the Lessor and the Lessee, an earlier date of termination may be fixed.

(k) **BUY-OUT BY LESSOR** - The Lessor shall have the right to purchase back from the Lessee all the rights and interests granted to the Lessee by this lease for any portion of the premises at any time by paying to the Lessee the fair market value of those rights and interests for the remaining term of the lease.

(7) **GENERAL PROVISIONS.**

(a) **NOTICES** - All notices arising out of, or from, the provisions of this lease shall be in writing and given to the parties at the address provided under this lease, either by regular mail, or delivery in person.

(b) **EFFECT OF CHANGE IN LAW** - The rights and responsibilities of the Lessee under this lease which are granted or imposed by the Statutes of the State of Wyoming or rules and regulations of the Board of Land Commissioners, are subject to change during the term of this lease as a result of the adoption, amendment, or repeal of statutes or rules.

(c) **COMPLIANCE WITH LAWS** - The Lessee shall keep informed of and comply with all applicable federal, state and local laws and regulations in the performance of this lease.

(d) **APPLICABLE LAW/VENUE** - The construction, interpretation and enforcement of this lease shall be governed by the laws of the State of Wyoming. The Courts of the State of Wyoming shall have jurisdiction over this lease and the parties, and the venue shall be the First Judicial District, Laramie County, Wyoming.

(e) **ENTIRETY OF LEASE** - This lease contains the entire contract between the parties and supersedes all prior negotiations, representations, leases or other contracts, either written or oral. This lease cannot be changed except by a written instrument subsequently executed by the parties or included in the body of the lease and signed by the parties.

(f) **INDEMNITY** - The Lessee shall release, indemnify, and hold harmless the State, the Lessor, and their officers, agents, employees, successors and assignees from any cause of action, or claims or demands arising out of this lease.

(g) **SOVEREIGN IMMUNITY** - The State of Wyoming and the Lessor do not waive sovereign immunity by entering into this lease, and specifically retain immunity and all defenses available to them as sovereigns pursuant to W.S. 1-39-104(a) and all other state law.

(h) **WAIVERS** - The failure of Lessor to insist on a strict performance of any of the terms and conditions hereof shall not be deemed a waiver of the rights or remedies that Lessor may have regarding that specific term or condition.

(i) **EXTENUATING CIRCUMSTANCES:** In the event circumstances arise for whatever reason which creates the impossibility of continuing the lease, it may be canceled by either party upon written notice. Neither party shall be liable for failure to perform under this lease if the failure is based upon the extenuating circumstances. Lessor reserves the right to determine whether circumstances create an impossibility. A partial refund of the annual payment may be made on a case-by-case basis.

(8) **SIGNATURES** - IN WITNESS THEREOF, the parties to this lease through their duly authorized representative have executed this lease on the dates set out below, and certify that they have read, understand, and agree to the terms and conditions of this lease.

LESSOR: THE STATE OF WYOMING
BOARD OF LAND COMMISSIONERS

BY: Bridget Hill — Date: JUL 25 2014
Director, Office of State Lands and Investments

LESSEE: Becky Shumway — Date: 7-14-14
New Cingular Wireless PCS, LLC

HARPER-LEAVITT ENGINEERING, INC.
CIVIL AND STRUCTURAL ENGINEERING, MATERIALS TESTING AND LAND SURVEYING
800 W. Judicial Street • Blackfoot, Idaho 83221 • Office Phone: 208.785.2977 • Fax: 208.785.2990
985 N. Capital Avenue • Idaho Falls, Idaho 83405 • Office Phone: 208.524.0212 • Fax: 208.524.0229

FOR: AT&T
JOB NO: 2507
DATE: 01-22-14
BY: SJ

44' X 20' LEASE AREA

Part of the southwest ¼ of the northeast ¼ of section 6, township 40 North, range 116 W. 6th P.M., Teton County, Wyoming, more particularly described:
Commencing at the east ¼ corner of said section 6, from which the witness corner to the center ¼ corner of said section bears N 89°37'38" W 2718.26 feet, the basis of bearings for this description; thence N 89°37'38" W 2198.57 feet along the section line from said east ¼ corner; thence N 00°22'22" E 545.01 feet to the **POINT OF BEGINNING**; thence N 00°32'57" E 20.00 feet; thence N 89°27'03" W 44.00 feet; thence S 00°32'57" W 20.00 feet; thence S 89°27'03" E 44.00 feet to the **POINT OF BEGINNING.**

Parcel contains 880 square feet more or less.

HARPER-LEAVITT ENGINEERING, INC.
CIVIL AND STRUCTURAL ENGINEERING, LAND SURVEYING AND MATERIALS TESTING
985 N. CAPITAL AVE. • IDAHO FALLS, IDAHO • OFFICE PHONE: 208.524.0212 • FAX: 208.524.0229

Client: MYCOM North America Project No: 2570 Date: 11/19/13

PROPOSED 10.00 FEET WIDE UNDERGROUND FIBER OPTIC LINE

A 10.00 feet wide underground fiber optic line being part of the southwest ¼ of the northeast ¼ of section 6, township 40 North, range 116 W. 116th, P.M., Teton County, Wyoming, more particularly described as being 5.00 feet both sides of the following described centerline:

Commencing at the east ¼ corner of said section 6, from which the witness corner to the center ¼ corner of said section bears N 89°37'38" W 2718.26 feet, the basis of bearings for this description; thence N 89°37'38" W 2228.55 feet along the section line from said east ¼ corner; thence N 00°22'22" E 550.89 feet to a point on the west line of an existing lease area, said point being the **POINT OF BEGINNING**; thence S 89°59'07" W 374.34 feet; thence N 00°14'37" W 269.76 feet to an existing underground fiber optic junction box, said point being the **POINT OF TERMINUS**.

AT&T
2180 Lake Blvd, 5th Floor (5B13)
Brookhaven, GA 30319

GPD GROUP
Professional Corporation
Chad Burton
520 South Main Street, Suite 2531
Akron, OH 44311
(614) 859-1623
cburton@gpdgroup.com

GPD# 2025723.01.99730.05
May 14, 2025

COMPREHENSIVE STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	**USID #:**	**99730**
	Site FA #:	**10130014**
	Site Name:	**Teton_High_School**
	Verizon #:	**5000182326**
	Verizon Name:	**Summit**
ANALYSIS CRITERIA:	**Codes:**	**TIA-222-H & 2021 IBC** **105 mph (3-second gust) w/ 0" ice** **S_s = 1.057, S_1 = 0.348**
SITE DATA:		**1855 High School Road, Jackson, WY 83001, Teton County** **Latitude 43° 27' 35.42" N, Longitude 110° 48' 06.11" W** **85' EEI Monopole**

To whom it may concern,

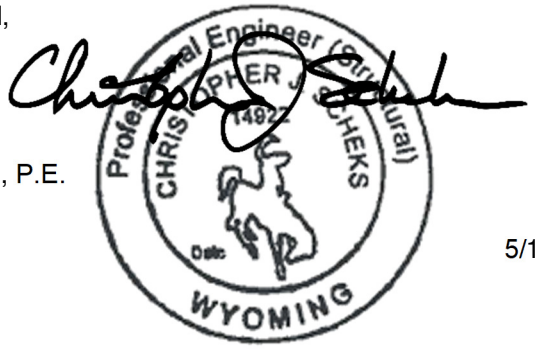
GPD is pleased to submit this Comprehensive Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the existing and proposed loading configuration detailed in the analysis report.

Analysis Results

Tower Stress Level with Proposed Equipment:	73.3%	Pass
Foundation Ratio with Proposed Equipment:	70.9%	Pass

We at GPD appreciate the opportunity of providing our continuing professional services to you and AT&T. If you have any questions or need further assistance on this or any other projects, please do not hesitate to call.

Respectfully submitted,



Christopher J. Scheks, P.E.
Wyoming #: 14922

5/14/2025

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by Verizon and commissioned by AT&T.

This analysis has been performed in accordance with the 2021 International Building Code based upon a 3-second gust wind speed of 105 mph. Applicable Standard references and design criteria are listed in Appendices A & B.

The proposed feedlines shall be installed as shown in Appendices A & B for the analysis results to be valid.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Monopole	73.3%	Pass
Anchor Rods	72.6%	Pass
Base Plate	67.3%	Pass
Foundation	70.9%	Pass

RECOMMENDATIONS

The tower and its foundation(s) have sufficient capacity to carry the proposed loading configuration. No modifications are required at this time.

ANALYSIS METHOD

tnxTower (Version 8.2.4.3), a commercially available software program, was used to create a three-dimensional model of the tower and calculate primary member stresses for various load cases. Selected output from the analysis is included the report appendices. The following table details the information provided to complete this structural analysis. This analysis is based solely on this information.

DOCUMENTS PROVIDED

Document	Remarks	Source
Site Lease Application	Verizon Collocation Application, dated 4/1/2025	AT&T
Tower Design	Ehresmann Engineering Job #: 88300, dated 8/1/2013	AT&T
Foundation Design	Ehresmann Engineering Job #: 88300, dated 8/1/2013	AT&T
Geotechnical Report	Not Provided	N/A
Previous Tower Analysis	GPD Project #: 2024723.02.99730.04, dated 5/17/2024	AT&T
Tower Mapping	Not Provided	N/A
Modification Drawings	GPD Project #: 2018723.01.99730.02, dated 5/4/2018	AT&T
Post Modification Inspection	GPD Project #: 2020707.02, dated 4/9/2020	AT&T

ASSUMPTIONS

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower member sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The appurtenance configuration is as supplied, determined from available photos, and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
4. The soil parameters are as per data supplied or as assumed and stated in the calculations.
5. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
6. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
7. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
8. All prior structural modifications, if applicable, are assumed to be as per data supplied/available and to have been properly installed.
9. Loading interpreted from photos is accurate to ±5' AGL, antenna size accurate to ±3.3 sf, and coax equal to the number of existing antennas without reserve.
10. All existing and proposed loading has been taken from the available site photos as well as documents supplied to GPD at the time of generating this report. All such documents are listed in the Documents Provided Table and are assumed to be accurate. GPD is not responsible for loading scenarios outside those conveyed in the supplied documentation.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD should be allowed to review any new information to determine its effect on the structural integrity of the tower.

DISCLAIMER OF WARRANTIES

GPD has not performed a site visit to the tower to verify the member sizes or antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD in connection with this Comprehensive Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

This analysis is limited to the designated maximum wind and seismic conditions per the governing tower standards and code. Wind forces resulting in tower vibrations near the structure's resonant frequencies were not considered in this analysis and are outside the scope of this analysis. Lateral loading from any dynamic response was not evaluated under a time-domain based fatigue analysis.

GPD does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the capability of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the code specified amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

Towers are designed to carry gravity, wind, and ice loads. All members, legs, diagonals, struts, and redundant members provide structural stability to the tower with little redundancy. Absence or removal of a member can trigger catastrophic failure unless a substitute is provided before any removal. Legs carry axial loads and derive their strength from shorter unbraced lengths by the presence of redundant members and their connection to the diagonals with bolts or welds. If the bolts or welds are removed without providing any substitute to the frame, the leg is subjected to a higher unbraced length that immediately reduces its load carrying capacity. If a diagonal is also removed in addition to the connection, the unbraced length of the leg is greatly increased, jeopardizing its load carrying capacity. Failure of one leg can result in a tower collapse because there is no redundancy. Redundant members and diagonals are critical to the stability of the tower.

GPD makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

Tower Analysis Summary Form

Tower Analysis Summary Form

General Info

Site Name	Teton_High_School
Site Number	99730
FA Number	10130014
Date of Analysis	5/14/2025
Company Performing Analysis	GPD

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Tower Info	Description	Date
Tower Type (G, SST, MP)	MP	
Tower Height (top of steel AGL)	85'	
Tower Manufacturer	EEI	
Tower Model	n/a	
Tower Design	Ehresmann Engineering Job #: 88300	8/1/2013
Foundation Design	Ehresmann Engineering Job #: 88300	8/1/2013
Geotechnical Report	n/a	
Previous Tower Analysis	GPD Project #: 2024723.02.99730.04	5/17/2024
Tower Mapping	n/a	
Modification Drawings	GPD Project #: 2018723.01.99730.02	5/4/2018
Post Modification Inspection	GPD Project #: 2020707.02	4/9/2020

Design Parameters	
Design Code Used	TIA-222-H & 2021 IBC
Location of Tower (County, State)	Teton, WY
Wind Speed (mph)	105 (3-second gust)
Ice Thickness (in)	0.25
Risk Category (I, II, III)	II
Exposure Category (B, C, D)	C
Topographic Category (1 to 5)	1

Analysis Results (% Maximum Usage)

Existing/Reserved + Future + Proposed Condition	
Tower (%)	73.3%
Tower Base (%)	72.6%
Foundation (%)	70.9%
Foundation Adequate?	Yes

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Int/Ext
Verizon Wireless	**85**	**85**	**6**	**Panel**	**Andrew**	**JAHH-65B-R3B**	**60/180/300**	**1**	**Unknown**	**12' LP Platform w/ Rails**	**2**	**Hybrid**	**1-1/2"**	**Internal**
Verizon Wireless	**85**	**85**	**3**	**RRU**	**Alcatel Lucent**	**B66A RRH 4x45**				**on the same mount**				
Verizon Wireless	**85**	**85**	**3**	**RRU**	**Alcatel Lucent**	**B13 RRH 4x30-4R**				**on the same mount**				
Verizon Wireless	**85**	**85**	**3**	**RRU**	**Alcatel Lucent**	**B25 RRH 4x30**				**on the same mount**				
Verizon Wireless	**85**	**85**	**2**	**Surge**	**Raycap**	**TRxxDC-1064-PF-48**				**on the same mount**				
AT&T Mobility	70	71	6	Panel	Kathrein	80010992	90/220/330	3	Unknown	11' Modified T-Arm Mounts	1	Fiber	18 PAIR	Internal
AT&T Mobility	70	71	3	Panel	Ericsson	AIR6419 B77D+AIR6419 B77G STACKED	90/210/330			on the same mounts	4	DC Power	#8 AWG	Internal
AT&T Mobility	70	71	3	RRU	Ericsson	4415 B30				on the same mounts	3	Conduit	2"	Internal
AT&T Mobility	70	71	3	RRU	Ericsson	4478 B14				on the same mounts	12	Unknown	7/8"	Internal
AT&T Mobility	70	71	3	RRU	Ericsson	4890 B25/B66				on the same mounts	1	RET	3/8"	Internal
AT&T Mobility	70	71	1	Surge	Raycap	DC9-48-60-24-8C-EV				on the same mounts	1	DC Power	#6 AWG	Internal
AT&T Mobility	70	71	2	Surge	Raycap	DC6-48-60-18-8F				on the same mounts	4	Fiber	24 PAIR	Internal
Unknown	58	58	6	Light	Unknown	2'ø Stadium Light		1	Unknown	T-Arm	6	Lighting Cable	5/16"	Internal
Unknown	55	55	4	Light	Unknown	2'ø Stadium Light		1	Unknown	T-Arm	4	Lighting Cable	5/16"	Internal
Unknown	35	35	1	Light	Unknown	Area Street Light		1	Unknown	Standoff	2	Lighting Cable	5/16"	Internal

***Bolded loading configuration will be replaced with the final proposed loading configuration below.**

Proposed Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Int/Ext
Verizon Wireless	85	85	6	Panel	Commscope	NHH-65B-R2B	60/180/300	1	Unknown	12' LP Platform w/ Rails	2	Hybrid	1-1/2"	Internal
Verizon Wireless	85	85	3	Panel	Ericsson	AIR6419	60/180/300			on the same mount	1	Hybrid	12 x 24 1/2"	Internal
Verizon Wireless	85	85	3	RRU	Ericsson	4449				on the same mount				
Verizon Wireless	85	85	3	RRU	Ericsson	4890				on the same mount				
Verizon Wireless	85	85	1	Surge	Raycap	TRxxDC-1064-PF-48				on the same mount				
Verizon Wireless	85	85	1	Surge	Raycap	RHSDC-6627-PF-48				on the same mount				

Note: The proposed loading shall be in addition to the remaining existing equipment at the same elevation.
Note: All feedlines shall be installed as indicated in this report in order for the analysis results to be valid.

Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Int/Ext
AT&T Mobility	70	71	3	Panel	Kathrein	80010992	90/220/330			on the existing mounts	6	Unknown	1-5/8"	Internal

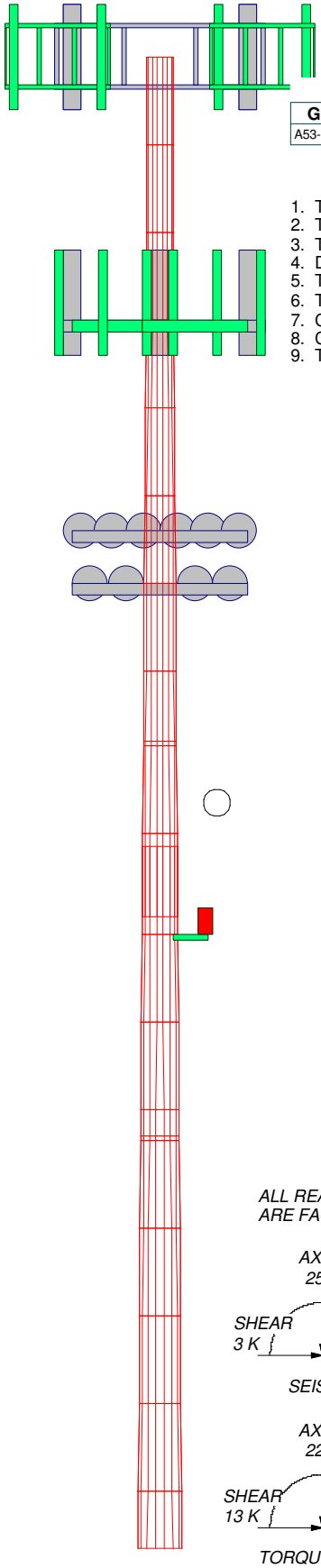
Note: AT&T generic future loading

APPENDIX B

Tower Analysis Output File

Section																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
Length (ft)	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.00	0.25	5.00	5.00		5.00	5.00	0.25		5.00	5.00	5.00	5.00	3.25		
Number of Sides	0	0	12	12	12	12	12	12	12	12	12		12	12	12		12	12	12	12	12		
Thickness (in)	0.3750	0.3750	0.1875	0.1875	0.1875	0.1875	0.1875	0.1875	0.4625	0.4500	0.4500	0.2500	0.2500	0.2500	0.5000	0.5000	0.5000	0.4875	0.4750	0.4750	0.4625		
Socket Length (ft)											4.00												
Top Dia (in)	18.0000	18.0000	18.0000	18.8269	19.6538	20.4808	21.3077	22.1346	22.7962	22.8375	23.6644	24.4135	24.2404	25.0673	25.8942	26.1838	26.1838	27.0106	27.8375	28.6644	29.4913		
Bot Dia (in)	18.0000	18.0000	18.8269	19.6538	20.4808	21.3077	22.1346	22.7962	22.8375	23.6644	24.4500	24.2404	25.0673	25.8942	26.1838	26.1838	27.0106	27.8375	28.6644	29.4913	30.0288		
Grade	A53-B-35										A572-65												
Weight (K)	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.5	0.5	0.3	0.3	0.3	0.1	0.0	0.7	0.7	0.8	0.8	0.5	7.6	

85.0 ft
80.0 ft
75.0 ft
70.0 ft
65.0 ft
60.0 ft
55.0 ft
50.0 ft
46.0 ft
40.8 ft
36.0 ft
35.0 ft
30.0 ft
25.0 ft
23.5 ft
18.2 ft
13.2 ft
8.2 ft
3.2 ft
0.0 ft



MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-35	35 ksi	63 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in Teton County, Wyoming.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 105 mph basic wind in accordance with the TIA-222-H Standard.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. CCISeismic Note: Seismic loads generated by CCISeismic 4.0.2
8. CCISeismic Note: Seismic calculations are in accordance with TIA-222-H-1
9. TOWER RATING: 73.5%

ALL REACTIONS ARE FACTORED

AXIAL 25 K

SHEAR 3 K — *MOMENT 252 kip-ft*

SEISMIC

AXIAL 22 K

SHEAR 13 K — *MOMENT 828 kip-ft*

TORQUE 3 kip-ft

REACTIONS - 105 mph WIND

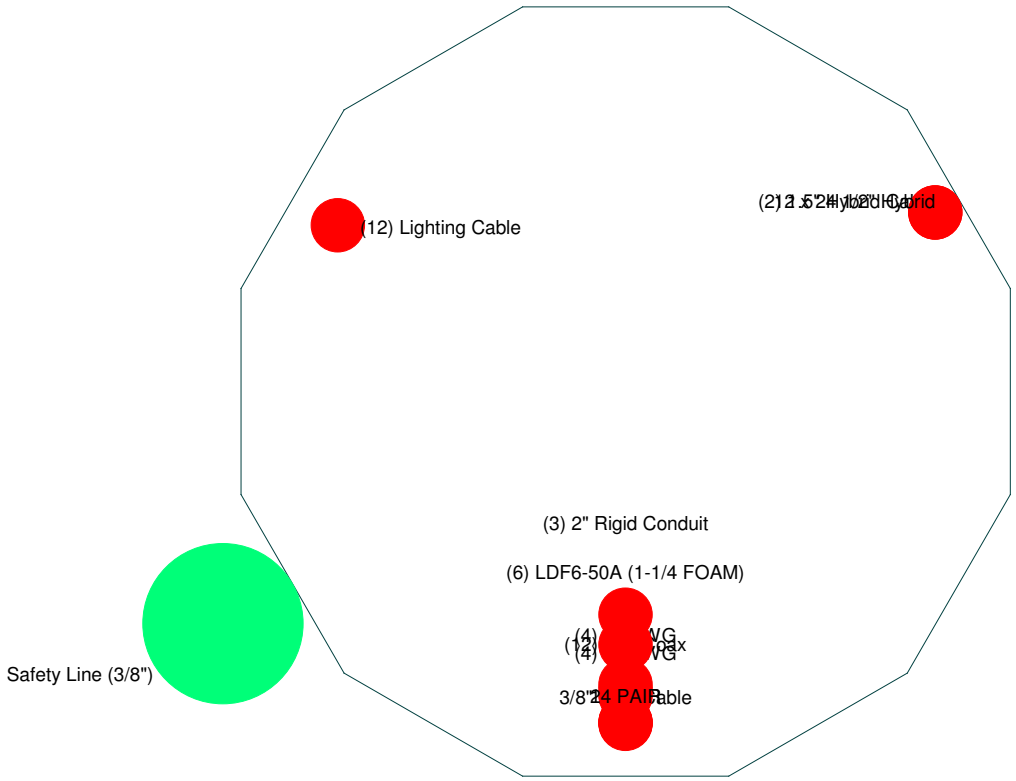
GPD Group
520 South Main Street, Suite 2531
Akron, OH 44311
Phone:
FAX:

Job:	***99730 TETON_HIGH_SCHOOL***		
Project:	***2025723.01.99730.05***		
Client: AT&T Towers	Drawn by: mrisley		App'd:
Code: TIA-222-H	Date: 05/14/25		Scale: NTS
Path:			Dwg No. E-1

Feed Line Plan
8'3"

Round Flat App In Face App Out Face

Section @ 8'3"



GPD Group
520 South Main Street, Suite 2531
Akron, OH 44311
Phone:
FAX:

Job: 99730 TETON_HIGH_SCHOOL			
Project: 2025723.01.99730.05			
Client: AT&T Towers	Drawn by: mrisley	App'd:	
Code: TIA-222-H	Date: 05/14/25	Scale: NTS	
Path:		Dwg No. E-7	

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower is located in Teton County, Wyoming.
Tower base elevation above sea level: 6119.00 ft.
Basic wind speed of 105 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.
Deflections calculated using a wind speed of 60 mph.
CCISeismic Note: Seismic loads generated by CCISeismic 4.0.2.
CCISeismic Note: Seismic calculations are in accordance with TIA-222-H-1.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

Tapered Pole Section Geometry

Section	*Elevation* *ft*	*Section Length* *ft*	*Splice Length* *ft*	*Number of Sides*	*Top Diameter* *in*	*Bottom Diameter* *in*	*Wall Thickness* *in*	*Bend Radius* *in*	*Pole Grade*
L1	85.00-80.00	5.00	0.00	Round	18.0000	18.0000	0.3750		A53-B-35 (35 ksi)
L2	80.00-75.00	5.00	0.00	Round	18.0000	18.0000	0.3750		A53-B-35 (35 ksi)
L3	75.00-70.00	5.00	0.00	12	18.0000	18.8269	0.1875	0.7500	A572-65 (65 ksi)
L4	70.00-65.00	5.00	0.00	12	18.8269	19.6538	0.1875	0.7500	A572-65

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
									(65 ksi)
L5	65.00-60.00	5.00	0.00	12	19.6538	20.4808	0.1875	0.7500	A572-65 (65 ksi)
L6	60.00-55.00	5.00	0.00	12	20.4808	21.3077	0.1875	0.7500	A572-65 (65 ksi)
L7	55.00-50.00	5.00	0.00	12	21.3077	22.1346	0.1875	0.7500	A572-65 (65 ksi)
L8	50.00-46.00	4.00	0.00	12	22.1346	22.7962	0.1875	0.7500	A572-65 (65 ksi)
L9	46.00-45.75	0.25	0.00	12	22.7962	22.8375	0.4625	1.8500	A572-65 (65 ksi)
L10	45.75-40.75	5.00	0.00	12	22.8375	23.6644	0.4500	1.8000	A572-65 (65 ksi)
L11	40.75-36.00	4.75	4.00	12	23.6644	24.4500	0.4500	1.8000	A572-65 (65 ksi)
L12	36.00-35.00	5.00	0.00	12	23.4135	24.2404	0.2500	1.0000	A572-65 (65 ksi)
L13	35.00-30.00	5.00	0.00	12	24.2404	25.0673	0.2500	1.0000	A572-65 (65 ksi)
L14	30.00-25.00	5.00	0.00	12	25.0673	25.8942	0.2500	1.0000	A572-65 (65 ksi)
L15	25.00-23.50	1.50	0.00	12	25.8942	26.1423	0.2500	1.0000	A572-65 (65 ksi)
L16	23.50-23.25	0.25	0.00	12	26.1423	26.1836	0.5000	2.0000	A572-65 (65 ksi)
L17	23.25-18.25	5.00	0.00	12	26.1836	27.0106	0.5000	2.0000	A572-65 (65 ksi)
L18	18.25-13.25	5.00	0.00	12	27.0106	27.8375	0.4875	1.9500	A572-65 (65 ksi)
L19	13.25-8.25	5.00	0.00	12	27.8375	28.6644	0.4750	1.9000	A572-65 (65 ksi)
L20	8.25-3.25	5.00	0.00	12	28.6644	29.4913	0.4750	1.9000	A572-65 (65 ksi)
L21	3.25-0.00	3.25		12	29.4913	30.0288	0.4625	1.8500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	18.0000	20.7640	806.6313	6.2328	9.0000	89.6257	1613.2627	10.3758	0.0000	0
	18.0000	20.7640	806.6313	6.2328	9.0000	89.6257	1613.2627	10.3758	0.0000	0
L2	18.0000	20.7640	806.6313	6.2328	9.0000	89.6257	1613.2627	10.3758	0.0000	0
	18.0000	20.7640	806.6313	6.2328	9.0000	89.6257	1613.2627	10.3758	0.0000	0
L3	18.5688	10.7543	435.5296	6.3769	9.3240	46.7106	882.5011	5.2929	4.3215	23.048
	19.4249	11.2536	499.0459	6.6729	9.7523	51.1719	1011.2023	5.5387	4.5431	24.23
L4	19.4249	11.2536	499.0459	6.6729	9.7523	51.1719	1011.2023	5.5387	4.5431	24.23
	20.2810	11.7528	568.4554	6.9690	10.1807	55.8366	1151.8448	5.7844	4.7647	25.412
L5	20.2810	11.7528	568.4554	6.9690	10.1807	55.8366	1151.8448	5.7844	4.7647	25.412
	21.1371	12.2521	644.0197	7.2650	10.6090	60.7048	1304.9584	6.0301	4.9863	26.594
L6	21.1371	12.2521	644.0197	7.2650	10.6090	60.7048	1304.9584	6.0301	4.9863	26.594
	21.9932	12.7513	726.0001	7.5610	11.0374	65.7765	1471.0730	6.2758	5.2080	27.776
L7	21.9932	12.7513	726.0001	7.5610	11.0374	65.7765	1471.0730	6.2758	5.2080	27.776
	22.8493	13.2506	814.6582	7.8571	11.4657	71.0516	1650.7183	6.5215	5.4296	28.958
L8	22.8493	13.2506	814.6582	7.8571	11.4657	71.0516	1650.7183	6.5215	5.4296	28.958
	23.5342	13.6500	890.5683	8.0939	11.8084	75.4181	1804.5328	6.7181	5.6069	29.903

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L9	23.4372	33.2604	2117.5463	7.9954	11.8084	179.3253	4290.7228	16.3698	4.8699	10.529
	23.4800	33.3220	2129.3286	8.0102	11.8298	179.9966	4314.5971	16.4001	4.8810	10.553
L10	23.4844	32.4395	2075.2534	8.0147	11.8298	175.4255	4205.0260	15.9657	4.9145	10.921
	24.3405	33.6377	2313.8117	8.3108	12.2582	188.7567	4688.4099	16.5555	5.1361	11.413
L11	24.3405	33.6377	2313.8117	8.3108	12.2582	188.7567	4688.4099	16.5555	5.1361	11.413
	25.1538	34.7760	2556.7488	8.5920	12.6651	201.8736	5180.6662	17.1157	5.3466	11.881
L12	24.8361	18.6466	1277.0039	8.2925	12.1282	105.2924	2587.5562	9.1773	5.6048	22.419
	25.0073	19.3123	1418.7085	8.5886	12.5565	112.9858	2874.6880	9.5049	5.8264	23.306
L13	25.0073	19.3123	1418.7085	8.5886	12.5565	112.9858	2874.6880	9.5049	5.8264	23.306
	25.8634	19.9779	1570.5263	8.8846	12.9849	120.9506	3182.3121	9.8325	6.0480	24.192
L14	25.8634	19.9779	1570.5263	8.8846	12.9849	120.9506	3182.3121	9.8325	6.0480	24.192
	26.7195	20.6436	1732.8061	9.1806	13.4132	129.1866	3511.1349	10.1601	6.2696	25.079
L15	26.7195	20.6436	1732.8061	9.1806	13.4132	129.1866	3511.1349	10.1601	6.2696	25.079
	26.9763	20.8433	1783.5824	9.2694	13.5417	131.7103	3614.0214	10.2584	6.3361	25.345
L16	26.8881	41.2841	3464.8321	9.1799	13.5417	255.8638	7020.6893	20.3188	5.6661	11.332
	26.9309	41.3507	3481.6194	9.1947	13.5631	256.6975	7054.7048	20.3515	5.6772	11.354
L17	26.9309	41.3507	3481.6194	9.1947	13.5631	256.6975	7054.7048	20.3515	5.6772	11.354
	27.7870	42.6820	3828.8481	9.4908	13.9915	273.6560	7758.2843	21.0068	5.8988	11.798
L18	27.7914	41.6346	3738.4100	9.4953	13.9915	267.1922	7575.0322	20.4913	5.9323	12.169
	28.6475	42.9326	4099.0853	9.7913	14.4198	284.2677	8305.8582	21.1301	6.1539	12.623
L19	28.6519	41.8509	3999.4593	9.7958	14.4198	277.3587	8103.9888	20.5977	6.1874	13.026
	29.5080	43.1157	4373.1289	10.0918	14.8482	294.5234	8861.1448	21.2202	6.4091	13.493
L20	29.5080	43.1157	4373.1289	10.0918	14.8482	294.5234	8861.1448	21.2202	6.4091	13.493
	30.3641	44.3804	4769.3776	10.3878	15.2765	312.2036	9664.0521	21.8427	6.6307	13.959
L21	30.3685	43.2311	4649.8719	10.3923	15.2765	304.3808	9421.9011	21.2771	6.6642	14.409
	30.9249	44.0316	4912.9743	10.5847	15.5549	315.8470	9955.0180	21.6710	6.8082	14.72

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 85.00-80.00				1	1	1			
L2 80.00-75.00				1	1	1			
L3 75.00-70.00				1	1	1			
L4 70.00-65.00				1	1	1			
L5 65.00-60.00				1	1	1			
L6 60.00-55.00				1	1	1			
L7 55.00-50.00				1	1	1			
L8 50.00-46.00				1	1	1			
L9 46.00-45.75				1	1	0.917537			
L10 45.75-40.75				1	1	0.923767			
L11 40.75-36.00				1	1	0.921072			
L12 36.00-35.00				1	1	1			
L13 35.00-30.00				1	1	1			
L14 30.00-25.00				1	1	1			
L15 25.00-23.50				1	1	1			
L16 23.50-23.25				1	1	1.04977			
L17 23.25-18.25				1	1	1.03262			
L18 18.25-13.25				1	1	1.0421			
L19 13.25-8.25				1	1	1.05312			
L20 8.25-3.25				1	1	1.0381			

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
L21 3.25-0.00				1	1	1.05615			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
5/8" Step Bolts	C	No	Surface Ar (CaAa)	85.00 - 8.00	1	1	0.000 0.000	0.4167		1.00
4-1/2"x1-1/4" Mod Plate	A	No	Surface Af (CaAa)	25.50 - 0.00	1	1	0.500 0.500	4.5000	11.5000	19.14
4-1/2"x1-1/4" Mod Plate	C	No	Surface Af (CaAa)	25.50 - 0.00	1	1	0.000 0.000	4.5000	11.5000	19.14
4-1/2"x1-1/4" Mod Plate	C	No	Surface Af (CaAa)	48.00 - 38.00	1	1	0.000 0.000	4.5000	11.5000	19.14

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft²/ft	Weight plf
Safety Line (3/8")	C	No	No	CaAa (Out Of Face)	85.00 - 8.00	1	No Ice	0.04	0.22
1.5" Hybrid Cable	B	No	No	Inside Pole	85.00 - 8.00	2	No Ice	0.00	0.80
12 x 24 1/2" Hybrid	B	No	No	Inside Pole	85.00 - 8.00	1	No Ice	0.00	0.40
Lighting Cable	A	No	No	Inside Pole	35.00 - 8.00	12	No Ice	0.00	0.15
Lighting Cable	A	No	No	Inside Pole	55.00 - 35.00	10	No Ice	0.00	0.15
Lighting Cable	A	No	No	Inside Pole	58.00 - 55.00	6	No Ice	0.00	0.15
7/8" Coax	C	No	No	Inside Pole	70.00 - 8.00	12	No Ice	0.00	0.33
3/8" RET Cable	C	No	No	Inside Pole	70.00 - 8.00	1	No Ice	0.00	0.10
2" Rigid Conduit	C	No	No	Inside Pole	70.00 - 8.00	3	No Ice	0.00	2.80
18 PAIR	C	No	No	Inside Pole	70.00 - 8.00	1	No Ice	0.00	0.08
#6 AWG	C	No	No	Inside Pole	70.00 - 8.00	4	No Ice	0.00	0.91
#8 AWG	C	No	No	Inside Pole	70.00 - 8.00	4	No Ice	0.00	0.58
24 PAIR	C	No	No	Inside Pole	70.00 - 8.00	1	No Ice	0.00	0.05
LDF6-50A (1-1/4 FOAM)	C	No	No	Inside Pole	70.00 - 8.00	6	No Ice	0.00	0.66

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
L1	85.00-80.00	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.010

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
		C	0.000	0.000	0.208	0.188	0.006
L2	80.00-75.00	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	0.208	0.188	0.006
L3	75.00-70.00	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	0.208	0.188	0.006
L4	70.00-65.00	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	0.208	0.188	0.119
L5	65.00-60.00	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	0.208	0.188	0.119
L6	60.00-55.00	A	0.000	0.000	0.000	0.000	0.003
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	0.208	0.188	0.119
L7	55.00-50.00	A	0.000	0.000	0.000	0.000	0.007
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	0.208	0.188	0.119
L8	50.00-46.00	A	0.000	0.000	0.000	0.000	0.006
		B	0.000	0.000	0.000	0.000	0.008
		C	0.000	0.000	1.667	0.150	0.133
L9	46.00-45.75	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.001
		C	0.000	0.000	0.198	0.009	0.011
L10	45.75-40.75	A	0.000	0.000	0.000	0.000	0.007
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	3.958	0.188	0.214
L11	40.75-36.00	A	0.000	0.000	0.000	0.000	0.007
		B	0.000	0.000	0.000	0.000	0.009
		C	0.000	0.000	2.260	0.178	0.165
L12	36.00-35.00	A	0.000	0.000	0.000	0.000	0.002
		B	0.000	0.000	0.000	0.000	0.002
		C	0.000	0.000	0.042	0.037	0.024
L13	35.00-30.00	A	0.000	0.000	0.000	0.000	0.009
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	0.208	0.188	0.119
L14	30.00-25.00	A	0.000	0.000	0.375	0.000	0.019
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	0.583	0.188	0.128
L15	25.00-23.50	A	0.000	0.000	1.125	0.000	0.031
		B	0.000	0.000	0.000	0.000	0.003
		C	0.000	0.000	1.187	0.056	0.064
L16	23.50-23.25	A	0.000	0.000	0.188	0.000	0.005
		B	0.000	0.000	0.000	0.000	0.001
		C	0.000	0.000	0.198	0.009	0.011
L17	23.25-18.25	A	0.000	0.000	3.750	0.000	0.105
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	3.958	0.188	0.214
L18	18.25-13.25	A	0.000	0.000	3.750	0.000	0.105
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	3.958	0.188	0.214
L19	13.25-8.25	A	0.000	0.000	3.750	0.000	0.105
		B	0.000	0.000	0.000	0.000	0.010
		C	0.000	0.000	3.958	0.188	0.214
L20	8.25-3.25	A	0.000	0.000	3.750	0.000	0.096
		B	0.000	0.000	0.000	0.000	0.001
		C	0.000	0.000	3.760	0.009	0.102
L21	3.25-0.00	A	0.000	0.000	2.438	0.000	0.062
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	2.438	0.000	0.062

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L1	85.00-80.00	-0.2985	0.5642	-0.1555	0.2940
L2	80.00-75.00	-0.2985	0.5642	-0.1555	0.2940
L3	75.00-70.00	-0.1889	0.3568	-0.1511	0.2855
L4	70.00-65.00	-0.1892	0.3573	-0.1513	0.2857
L5	65.00-60.00	-0.1896	0.3578	-0.1516	0.2860
L6	60.00-55.00	-0.1899	0.3582	-0.1518	0.2862
L7	55.00-50.00	-0.1902	0.3586	-0.1519	0.2864
L8	50.00-46.00	-0.1593	2.2553	-0.1315	1.8624
L9	46.00-45.75	-0.1379	3.6195	-0.1167	3.0623
L10	45.75-40.75	-0.1387	3.6363	-0.1172	3.0738
L11	40.75-36.00	-0.1580	2.5051	-0.1307	2.0728
L12	36.00-35.00	-0.1912	0.3598	-0.1526	0.2872
L13	35.00-30.00	-0.1913	0.3600	-0.1526	0.2873
L14	30.00-25.00	0.2405	0.3369	0.1944	0.2723
L15	25.00-23.50	2.5197	0.2145	2.1891	0.1864
L16	23.50-23.25	2.5303	0.2154	2.1981	0.1871
L17	23.25-18.25	2.5479	0.2169	2.2113	0.1882
L18	18.25-13.25	2.5802	0.2195	2.2355	0.1902
L19	13.25-8.25	2.6113	0.2221	2.2587	0.1921
L20	8.25-3.25	2.8088	0.0113	2.4193	0.0097
L21	3.25-0.00	2.8424	0.0000	2.4449	0.0000

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
L1	1	5/8" Step Bolts	80.00 - 85.00	1.0000	1.0000
L2	1	5/8" Step Bolts	75.00 - 80.00	1.0000	1.0000
L3	1	5/8" Step Bolts	70.00 - 75.00	1.0000	1.0000
L4	1	5/8" Step Bolts	65.00 - 70.00	1.0000	1.0000
L5	1	5/8" Step Bolts	60.00 - 65.00	1.0000	1.0000
L6	1	5/8" Step Bolts	55.00 - 60.00	1.0000	1.0000
L7	1	5/8" Step Bolts	50.00 - 55.00	1.0000	1.0000
L8	1	5/8" Step Bolts	46.00 - 50.00	1.0000	1.0000
L8	12	4-1/2"x1-1/4" Mod Plate	46.00 - 48.00	1.0000	1.0000
L9	1	5/8" Step Bolts	45.75 - 46.00	1.0000	1.0000
L9	12	4-1/2"x1-1/4" Mod Plate	45.75 - 46.00	1.0000	1.0000
L10	1	5/8" Step Bolts	40.75 - 45.75	1.0000	1.0000
L10	12	4-1/2"x1-1/4" Mod Plate	40.75 - 45.75	1.0000	1.0000
L11	1	5/8" Step Bolts	36.00 - 40.75	1.0000	1.0000
L11	12	4-1/2"x1-1/4" Mod Plate	38.00 - 40.75	1.0000	1.0000
L12	1	5/8" Step Bolts	35.00 - 36.00	1.0000	1.0000
L13	1	5/8" Step Bolts	30.00 - 35.00	1.0000	1.0000
L14	1	5/8" Step Bolts	25.00 - 30.00	1.0000	1.0000
L14	10	4-1/2"x1-1/4" Mod Plate	25.00 - 25.50	1.0000	1.0000
L14	11	4-1/2"x1-1/4" Mod Plate	25.00 - 25.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L15	1	5/8" Step Bolts	23.50 - 25.00	1.0000	1.0000
L15	10	4-1/2"x1-1/4" Mod Plate	23.50 - 25.00	1.0000	1.0000
L15	11	4-1/2"x1-1/4" Mod Plate	23.50 - 25.00	1.0000	1.0000
L16	1	5/8" Step Bolts	23.25 - 23.50	1.0000	1.0000
L16	10	4-1/2"x1-1/4" Mod Plate	23.25 - 23.50	1.0000	1.0000
L16	11	4-1/2"x1-1/4" Mod Plate	23.25 - 23.50	1.0000	1.0000
L17	1	5/8" Step Bolts	18.25 - 23.25	1.0000	1.0000
L17	10	4-1/2"x1-1/4" Mod Plate	18.25 - 23.25	1.0000	1.0000
L17	11	4-1/2"x1-1/4" Mod Plate	18.25 - 23.25	1.0000	1.0000
L18	1	5/8" Step Bolts	13.25 - 18.25	1.0000	1.0000
L18	10	4-1/2"x1-1/4" Mod Plate	13.25 - 18.25	1.0000	1.0000
L18	11	4-1/2"x1-1/4" Mod Plate	13.25 - 18.25	1.0000	1.0000
L19	1	5/8" Step Bolts	8.25 - 13.25	1.0000	1.0000
L19	10	4-1/2"x1-1/4" Mod Plate	8.25 - 13.25	1.0000	1.0000
L19	11	4-1/2"x1-1/4" Mod Plate	8.25 - 13.25	1.0000	1.0000
L20	1	5/8" Step Bolts	8.00 - 8.25	1.0000	1.0000
L20	10	4-1/2"x1-1/4" Mod Plate	3.25 - 8.25	1.0000	1.0000
L20	11	4-1/2"x1-1/4" Mod Plate	3.25 - 8.25	1.0000	1.0000
L21	10	4-1/2"x1-1/4" Mod Plate	0.00 - 3.25	1.0000	1.0000
L21	11	4-1/2"x1-1/4" Mod Plate	0.00 - 3.25	1.0000	1.0000

Effective Width of Flat Linear Attachments / Feed Lines

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L8	12	4-1/2"x1-1/4" Mod Plate	46.00 - 48.00	Manual	1.0000
L9	12	4-1/2"x1-1/4" Mod Plate	45.75 - 46.00	Manual	1.0000
L10	12	4-1/2"x1-1/4" Mod Plate	40.75 - 45.75	Manual	1.0000
L11	12	4-1/2"x1-1/4" Mod Plate	38.00 - 40.75	Manual	1.0000
L14	10	4-1/2"x1-1/4" Mod Plate	25.00 - 25.50	Manual	1.0000
L14	11	4-1/2"x1-1/4" Mod Plate	25.00 - 25.50	Manual	1.0000
L15	10	4-1/2"x1-1/4" Mod Plate	23.50 - 25.00	Manual	1.0000
L15	11	4-1/2"x1-1/4" Mod Plate	23.50 - 25.00	Manual	1.0000
L16	10	4-1/2"x1-1/4" Mod Plate	23.25 - 23.50	Manual	1.0000
L16	11	4-1/2"x1-1/4" Mod Plate	23.25 - 23.50	Manual	1.0000
L17	10	4-1/2"x1-1/4" Mod Plate	18.25 - 23.25	Manual	1.0000
L17	11	4-1/2"x1-1/4" Mod Plate	18.25 - 23.25	Manual	1.0000
L18	10	4-1/2"x1-1/4" Mod Plate	13.25 - 18.25	Manual	1.0000
L18	11	4-1/2"x1-1/4" Mod Plate	13.25 - 18.25	Manual	1.0000
L19	10	4-1/2"x1-1/4" Mod Plate	8.25 - 13.25	Manual	1.0000
L19	11	4-1/2"x1-1/4" Mod Plate	8.25 - 13.25	Manual	1.0000
L20	10	4-1/2"x1-1/4" Mod Plate	3.25 - 8.25	Manual	1.0000
L20	11	4-1/2"x1-1/4" Mod Plate	3.25 - 8.25	Manual	1.0000
L21	10	4-1/2"x1-1/4" Mod Plate	0.00 - 3.25	Manual	1.0000
L21	11	4-1/2"x1-1/4" Mod Plate	0.00 - 3.25	Manual	1.0000

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
CCISeismic Tower Section 1 - 1	82.50	0.00	0.0000	0.060	0.000	0.000	0.132
CCISeismic Tower Section 2 - 1	77.50	0.00	0.0000	0.060	0.000	0.000	0.117
CCISeismic Tower Section 3 - 1	72.50	0.00	0.0000	0.032	0.000	0.000	0.054
CCISeismic Tower Section 4 - 1	67.50	0.00	0.0000	0.033	0.000	0.000	0.049
CCISeismic Tower Section 5 - 1	62.50	0.00	0.0000	0.035	0.000	0.000	0.044
CCISeismic Tower Section 6 - 1	57.50	0.00	0.0000	0.036	0.000	0.000	0.039
CCISeismic Tower Section 7 - 1	52.50	0.00	0.0000	0.037	0.000	0.000	0.034
CCISeismic Tower Section 8 - 1	48.00	0.00	0.0000	0.031	0.000	0.000	0.023
CCISeismic Tower Section 9 - 1	45.88	0.00	0.0000	0.004	0.000	0.000	0.003
CCISeismic Tower Section 10 - 1	43.25	0.00	0.0000	0.088	0.000	0.000	0.053
CCISeismic Tower Section 11 - 1	38.38	0.00	0.0000	0.086	0.000	0.000	0.041
CCISeismic Tower Section 12 - 1	37.50	0.00	0.0000	0.054	0.000	0.000	0.025
CCISeismic Tower Section 13 - 1	32.50	0.00	0.0000	0.056	0.000	0.000	0.019
CCISeismic Tower Section 14 - 1	27.50	0.00	0.0000	0.058	0.000	0.000	0.014
CCISeismic Tower Section 15 - 1	24.25	0.00	0.0000	0.018	0.000	0.000	0.003
CCISeismic Tower Section 16 - 1	23.38	0.00	0.0000	0.006	0.000	0.000	0.001
CCISeismic Tower Section 17 - 1	20.75	0.00	0.0000	0.125	0.000	0.000	0.018
CCISeismic Tower Section 18 - 1	15.75	0.00	0.0000	0.127	0.000	0.000	0.010
CCISeismic Tower Section 19 - 1	10.75	0.00	0.0000	0.129	0.000	0.000	0.005
CCISeismic Tower Section 20 - 1	5.75	0.00	0.0000	0.131	0.000	0.000	0.001
CCISeismic Tower Section 21 - 1	1.63	0.00	0.0000	0.086	0.000	0.000	0.000
CCISeismic tower mounts (cci) Platform Mount [LP 301-1]	85.00	0.00	0.0000	0.269	0.000	0.000	0.631
CCISeismic (2) pipes (gpd) Pipe 2 Std x 8'	85.00	0.00	0.0000	0.010	0.000	0.000	0.023
CCISeismic (2) pipes (gpd) Pipe 2 Std x 8'	85.00	0.00	0.0000	0.010	0.000	0.000	0.023
CCISeismic (2) pipes (gpd) Pipe 2 Std x 8'	85.00	0.00	0.0000	0.010	0.000	0.000	0.023
CCISeismic (2) NHH-65B-R2B	85.00	0.00	0.0000	0.026	0.000	0.000	0.061
CCISeismic (2) NHH-65B-R2B	85.00	0.00	0.0000	0.026	0.000	0.000	0.061
CCISeismic (2) NHH-65B-R2B	85.00	0.00	0.0000	0.026	0.000	0.000	0.061
CCISeismic ericsson AIR6419 w/ Mount Pipe	85.00	0.00	0.0000	0.019	0.000	0.000	0.044
CCISeismic ericsson AIR6419 w/ Mount Pipe	85.00	0.00	0.0000	0.019	0.000	0.000	0.044
CCISeismic ericsson AIR6419 w/ Mount Pipe	85.00	0.00	0.0000	0.019	0.000	0.000	0.044
CCISeismic ericsson 4449	85.00	0.00	0.0000	0.012	0.000	0.000	0.028
CCISeismic ericsson 4449	85.00	0.00	0.0000	0.012	0.000	0.000	0.028
CCISeismic ericsson 4449	85.00	0.00	0.0000	0.012	0.000	0.000	0.028
CCISeismic ericsson 4890	85.00	0.00	0.0000	0.012	0.000	0.000	0.028
CCISeismic ericsson 4890	85.00	0.00	0.0000	0.012	0.000	0.000	0.028
CCISeismic ericsson 4890	85.00	0.00	0.0000	0.012	0.000	0.000	0.028
CCISeismic raycap	85.00	0.00	0.0000	0.005	0.000	0.000	0.013

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
RHSDC-6627-PF-48 CCISeismic	85.00	0.00	0.0000	0.002	0.000	0.000	0.006
TRXXDC-1064-PF-48 CCISeismic	70.00	0.00	0.0000	0.056	0.000	0.000	0.090
11' T-Arm - Round (GPD) CCISeismic	70.00	0.00	0.0000	0.056	0.000	0.000	0.090
11' T-Arm - Round (GPD) CCISeismic	70.00	0.00	0.0000	0.056	0.000	0.000	0.090
11' T-Arm - Round (GPD) CCISeismic	70.00	0.00	0.0000	0.010	0.000	0.000	0.016
P2.5 STD x 10' Mount Pipe CCISeismic	70.00	0.00	0.0000	0.010	0.000	0.000	0.016
P2.5 STD x 10' Mount Pipe CCISeismic	70.00	0.00	0.0000	0.010	0.000	0.000	0.016
P2.5 STD x 10' Mount Pipe CCISeismic miscl 2.375" x 5' Mount Pipe	70.00	0.00	0.0000	0.006	0.000	0.000	0.009
CCISeismic miscl 2.375" x 5' Mount Pipe	70.00	0.00	0.0000	0.006	0.000	0.000	0.009
CCISeismic miscl 2.375" x 5' Mount Pipe	70.00	0.00	0.0000	0.006	0.000	0.000	0.009
CCISeismic (3) kathrein 80010992 w/ Mount Pipe	70.00	0.00	0.0000	0.085	0.000	0.000	0.136
CCISeismic (3) kathrein 80010992 w/ Mount Pipe	70.00	0.00	0.0000	0.085	0.000	0.000	0.136
CCISeismic (3) kathrein 80010992 w/ Mount Pipe	70.00	0.00	0.0000	0.085	0.000	0.000	0.136
CCISeismic ericsson AIR6419 B77D+AIR6419 B77G STACKED w/ 10' x 2.875" Mount Pipe	70.00	0.00	0.0000	0.030	0.000	0.000	0.047
CCISeismic ericsson AIR6419 B77D+AIR6419 B77G STACKED w/ 10' x 2.875" Mount Pipe	70.00	0.00	0.0000	0.030	0.000	0.000	0.047
CCISeismic ericsson AIR6419 B77D+AIR6419 B77G STACKED w/ 10' x 2.875" Mount Pipe	70.00	0.00	0.0000	0.030	0.000	0.000	0.047
CCISeismic ericsson 4415 B30	70.00	0.00	0.0000	0.008	0.000	0.000	0.012
CCISeismic ericsson 4415 B30	70.00	0.00	0.0000	0.008	0.000	0.000	0.012
CCISeismic ericsson 4415 B30	70.00	0.00	0.0000	0.008	0.000	0.000	0.012
CCISeismic ericsson 4478 B14	70.00	0.00	0.0000	0.010	0.000	0.000	0.016
CCISeismic ericsson 4478 B14	70.00	0.00	0.0000	0.010	0.000	0.000	0.016
CCISeismic ericsson 4478 B14	70.00	0.00	0.0000	0.010	0.000	0.000	0.016
CCISeismic ericsson 4890 B25/B66A	70.00	0.00	0.0000	0.011	0.000	0.000	0.018
CCISeismic ericsson 4890 B25/B66A	70.00	0.00	0.0000	0.011	0.000	0.000	0.018
CCISeismic ericsson 4890 B25/B66A	70.00	0.00	0.0000	0.011	0.000	0.000	0.018
CCISeismic raycap DC9-48-60-24-8C-EV	70.00	0.00	0.0000	0.004	0.000	0.000	0.007
CCISeismic raycap DC6-48-60-18-8F Surge Suppression Unit	70.00	0.00	0.0000	0.003	0.000	0.000	0.005
CCISeismic raycap DC6-48-60-18-8F Surge Suppression Unit	70.00	0.00	0.0000	0.003	0.000	0.000	0.005
CCISeismic tower mount generic	58.00	0.00	0.0000	0.042	0.000	0.000	0.046

Description	*Elevation* *ft*	*Offset From Centroid* *ft*	*Azimuth Angle* °	E_v *K*	E_{hx} *K*	E_{hz} *K*	E_h *K*
(gpd) 10' T-Arm - Round (GPD)							
CCISeismic tower mount generic (gpd) 10' T-Arm - Round (GPD)	55.00	0.00	0.0000	0.042	0.000	0.000	0.042
CCISeismic tower mount generic (gpd) 2' Standoff - Round (GPD)	35.00	0.00	0.0000	0.006	0.000	0.000	0.003
CCISeismic Area Street Light	35.00	0.00	0.0000	0.009	0.000	0.000	0.003
CCISeismic misc 2' Stadium Light	58.00	0.00	0.0000	0.003	0.000	0.000	0.004
CCISeismic misc 2' Stadium Light	58.00	0.00	0.0000	0.003	0.000	0.000	0.004
CCISeismic misc 2' Stadium Light	58.00	0.00	0.0000	0.003	0.000	0.000	0.004
CCISeismic misc 2' Stadium Light	58.00	0.00	0.0000	0.003	0.000	0.000	0.004
CCISeismic misc 2' Stadium Light	58.00	0.00	0.0000	0.003	0.000	0.000	0.004
CCISeismic misc 2' Stadium Light	58.00	0.00	0.0000	0.003	0.000	0.000	0.004
CCISeismic misc 2' Stadium Light	55.00	0.00	0.0000	0.003	0.000	0.000	0.003
CCISeismic misc 2' Stadium Light	55.00	0.00	0.0000	0.003	0.000	0.000	0.003
CCISeismic misc 2' Stadium Light	55.00	0.00	0.0000	0.003	0.000	0.000	0.003
CCISeismic misc 2' Stadium Light	55.00	0.00	0.0000	0.003	0.000	0.000	0.003
CCISeismic miscl 5/8" Step Bolts From 8 to 85 (75ft to85ft)	80.00	0.00	0.0000	0.002	0.000	0.000	0.004
CCISeismic miscl 5/8" Step Bolts From 8 to 85 (65ft to75ft)	70.00	0.00	0.0000	0.002	0.000	0.000	0.003
CCISeismic miscl 5/8" Step Bolts From 8 to 85 (55ft to65ft)	60.00	0.00	0.0000	0.002	0.000	0.000	0.002
CCISeismic miscl 5/8" Step Bolts From 8 to 85 (45ft to55ft)	50.00	0.00	0.0000	0.002	0.000	0.000	0.001
CCISeismic miscl 5/8" Step Bolts From 8 to 85 (35ft to45ft)	40.00	0.00	0.0000	0.002	0.000	0.000	0.001
CCISeismic miscl 5/8" Step Bolts From 8 to 85 (25ft to35ft)	30.00	0.00	0.0000	0.002	0.000	0.000	0.001
CCISeismic miscl 5/8" Step Bolts From 8 to 85 (15ft to25ft)	20.00	0.00	0.0000	0.002	0.000	0.000	0.000
CCISeismic miscl 5/8" Step Bolts From 8 to 85 (8ft to15ft)	11.50	0.00	0.0000	0.001	0.000	0.000	0.000
CCISeismic miscl Safety Line (3/8") From 8 to 85 (75ft to85ft)	80.00	0.00	0.0000	0.000	0.000	0.000	0.001
CCISeismic miscl Safety Line (3/8") From 8 to 85 (65ft to75ft)	70.00	0.00	0.0000	0.000	0.000	0.000	0.001
CCISeismic miscl Safety Line (3/8") From 8 to 85 (55ft to65ft)	60.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic miscl Safety Line (3/8") From 8 to 85 (45ft to55ft)	50.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic miscl Safety Line (3/8") From 8 to 85 (35ft to45ft)	40.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic miscl Safety Line (3/8") From 8 to 85 (25ft to35ft)	30.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic miscl Safety Line (3/8") From 8 to 85 (15ft to25ft)	20.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic miscl Safety Line (3/8") From 8 to 85 (8ft to15ft)	11.50	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic (2) 1.5" Hybrid Cable From 8 to 85 (75ft to85ft)	80.00	0.00	0.0000	0.003	0.000	0.000	0.006

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
CCISeismic (2) 1.5" Hybrid Cable From 8 to 85 (65ft to75ft)	70.00	0.00	0.0000	0.003	0.000	0.000	0.004
CCISeismic (2) 1.5" Hybrid Cable From 8 to 85 (55ft to65ft)	60.00	0.00	0.0000	0.003	0.000	0.000	0.003
CCISeismic (2) 1.5" Hybrid Cable From 8 to 85 (45ft to55ft)	50.00	0.00	0.0000	0.003	0.000	0.000	0.002
CCISeismic (2) 1.5" Hybrid Cable From 8 to 85 (35ft to45ft)	40.00	0.00	0.0000	0.003	0.000	0.000	0.001
CCISeismic (2) 1.5" Hybrid Cable From 8 to 85 (25ft to35ft)	30.00	0.00	0.0000	0.003	0.000	0.000	0.001
CCISeismic (2) 1.5" Hybrid Cable From 8 to 85 (15ft to25ft)	20.00	0.00	0.0000	0.003	0.000	0.000	0.000
CCISeismic (2) 1.5" Hybrid Cable From 8 to 85 (8ft to15ft)	11.50	0.00	0.0000	0.002	0.000	0.000	0.000
CCISeismic 12 x 24 1/2" Hybrid From 8 to 85 (75ft to85ft)	80.00	0.00	0.0000	0.001	0.000	0.000	0.001
CCISeismic 12 x 24 1/2" Hybrid From 8 to 85 (65ft to75ft)	70.00	0.00	0.0000	0.001	0.000	0.000	0.001
CCISeismic 12 x 24 1/2" Hybrid From 8 to 85 (55ft to65ft)	60.00	0.00	0.0000	0.001	0.000	0.000	0.001
CCISeismic 12 x 24 1/2" Hybrid From 8 to 85 (45ft to55ft)	50.00	0.00	0.0000	0.001	0.000	0.000	0.001
CCISeismic 12 x 24 1/2" Hybrid From 8 to 85 (35ft to45ft)	40.00	0.00	0.0000	0.001	0.000	0.000	0.000
CCISeismic 12 x 24 1/2" Hybrid From 8 to 85 (25ft to35ft)	30.00	0.00	0.0000	0.001	0.000	0.000	0.000
CCISeismic 12 x 24 1/2" Hybrid From 8 to 85 (15ft to25ft)	20.00	0.00	0.0000	0.001	0.000	0.000	0.000
CCISeismic 12 x 24 1/2" Hybrid From 8 to 85 (8ft to15ft)	11.50	0.00	0.0000	0.001	0.000	0.000	0.000
CCISeismic (12) miscl Lighting Cable From 8 to 35 (25ft to35ft)	30.00	0.00	0.0000	0.003	0.000	0.000	0.001
CCISeismic (12) miscl Lighting Cable From 8 to 35 (15ft to25ft)	20.00	0.00	0.0000	0.003	0.000	0.000	0.000
CCISeismic (12) miscl Lighting Cable From 8 to 35 (8ft to15ft)	11.50	0.00	0.0000	0.002	0.000	0.000	0.000
CCISeismic (10) miscl Lighting Cable From 35 to 55 (45ft to55ft)	50.00	0.00	0.0000	0.003	0.000	0.000	0.002
CCISeismic (10) miscl Lighting Cable From 35 to 55 (35ft to45ft)	40.00	0.00	0.0000	0.003	0.000	0.000	0.001
CCISeismic (6) miscl Lighting Cable From 55 to 58 (55ft to58ft)	56.50	0.00	0.0000	0.001	0.000	0.000	0.001
CCISeismic 4-1/2"x1-1/4" Mod Plate From 0 to 25.5 (25ft to25.5ft)	25.25	0.00	0.0000	0.002	0.000	0.000	0.000
CCISeismic 4-1/2"x1-1/4" Mod Plate From 0 to 25.5 (15ft to25ft)	20.00	0.00	0.0000	0.032	0.000	0.000	0.004
CCISeismic 4-1/2"x1-1/4" Mod Plate From 0 to 25.5 (5ft to15ft)	10.00	0.00	0.0000	0.032	0.000	0.000	0.001
CCISeismic 4-1/2"x1-1/4" Mod	2.50	0.00	0.0000	0.016	0.000	0.000	0.000

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
Plate From 0 to 25.5 (0ft to5ft) CCISeismic 4-1/2"x1-1/4" Mod	25.25	0.00	0.0000	0.002	0.000	0.000	0.000
Plate From 0 to 25.5 (25ft to25.5ft) CCISeismic 4-1/2"x1-1/4" Mod	20.00	0.00	0.0000	0.032	0.000	0.000	0.004
Plate From 0 to 25.5 (15ft to25ft) CCISeismic 4-1/2"x1-1/4" Mod	10.00	0.00	0.0000	0.032	0.000	0.000	0.001
Plate From 0 to 25.5 (5ft to15ft) CCISeismic 4-1/2"x1-1/4" Mod	2.50	0.00	0.0000	0.016	0.000	0.000	0.000
Plate From 0 to 25.5 (0ft to5ft) CCISeismic 4-1/2"x1-1/4" Mod	46.50	0.00	0.0000	0.010	0.000	0.000	0.007
Plate From 38 to 48 (45ft to48ft) CCISeismic 4-1/2"x1-1/4" Mod	41.50	0.00	0.0000	0.023	0.000	0.000	0.013
Plate From 38 to 48 (38ft to45ft) CCISeismic (12) miscl 7/8"	67.50	0.00	0.0000	0.003	0.000	0.000	0.005
Coax From 8 to 70 (65ft to70ft) CCISeismic (12) miscl 7/8"	60.00	0.00	0.0000	0.007	0.000	0.000	0.008
Coax From 8 to 70 (55ft to65ft) CCISeismic (12) miscl 7/8"	50.00	0.00	0.0000	0.007	0.000	0.000	0.005
Coax From 8 to 70 (45ft to55ft) CCISeismic (12) miscl 7/8"	40.00	0.00	0.0000	0.007	0.000	0.000	0.004
Coax From 8 to 70 (35ft to45ft) CCISeismic (12) miscl 7/8"	30.00	0.00	0.0000	0.007	0.000	0.000	0.002
Coax From 8 to 70 (25ft to35ft) CCISeismic (12) miscl 7/8"	20.00	0.00	0.0000	0.007	0.000	0.000	0.001
Coax From 8 to 70 (15ft to25ft) CCISeismic (12) miscl 7/8"	11.50	0.00	0.0000	0.005	0.000	0.000	0.000
Coax From 8 to 70 (8ft to15ft) CCISeismic miscl 3/8" RET	67.50	0.00	0.0000	0.000	0.000	0.000	0.000
Cable From 8 to 70 (65ft to70ft) CCISeismic miscl 3/8" RET	60.00	0.00	0.0000	0.000	0.000	0.000	0.000
Cable From 8 to 70 (55ft to65ft) CCISeismic miscl 3/8" RET	50.00	0.00	0.0000	0.000	0.000	0.000	0.000
Cable From 8 to 70 (45ft to55ft) CCISeismic miscl 3/8" RET	40.00	0.00	0.0000	0.000	0.000	0.000	0.000
Cable From 8 to 70 (35ft to45ft) CCISeismic miscl 3/8" RET	30.00	0.00	0.0000	0.000	0.000	0.000	0.000
Cable From 8 to 70 (25ft to35ft) CCISeismic miscl 3/8" RET	20.00	0.00	0.0000	0.000	0.000	0.000	0.000
Cable From 8 to 70 (15ft to25ft) CCISeismic miscl 3/8" RET	11.50	0.00	0.0000	0.000	0.000	0.000	0.000
Cable From 8 to 70 (8ft to15ft) CCISeismic (3) miscl 2" Rigid Conduit From 8 to 70 (65ft to70ft)	67.50	0.00	0.0000	0.007	0.000	0.000	0.011
CCISeismic (3) miscl 2" Rigid Conduit From 8 to 70 (55ft to65ft)	60.00	0.00	0.0000	0.014	0.000	0.000	0.017
CCISeismic (3) miscl 2" Rigid Conduit From 8 to 70 (45ft to55ft)	50.00	0.00	0.0000	0.014	0.000	0.000	0.012
CCISeismic (3) miscl 2" Rigid Conduit From 8 to 70 (35ft to45ft)	40.00	0.00	0.0000	0.014	0.000	0.000	0.007
CCISeismic (3) miscl 2" Rigid Conduit From 8 to 70 (25ft to35ft)	30.00	0.00	0.0000	0.014	0.000	0.000	0.004
CCISeismic (3) miscl 2" Rigid Conduit From 8 to 70 (15ft to25ft)	20.00	0.00	0.0000	0.014	0.000	0.000	0.002

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
CCISeismic (3) miscl 2" Rigid Conduit From 8 to 70 (8ft to15ft)	11.50	0.00	0.0000	0.010	0.000	0.000	0.000
CCISeismic 18 PAIR From 8 to 70 (65ft to70ft)	67.50	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 18 PAIR From 8 to 70 (55ft to65ft)	60.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 18 PAIR From 8 to 70 (45ft to55ft)	50.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 18 PAIR From 8 to 70 (35ft to45ft)	40.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 18 PAIR From 8 to 70 (25ft to35ft)	30.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 18 PAIR From 8 to 70 (15ft to25ft)	20.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 18 PAIR From 8 to 70 (8ft to15ft)	11.50	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic (4) #6 AWG From 8 to 70 (65ft to70ft)	67.50	0.00	0.0000	0.003	0.000	0.000	0.005
CCISeismic (4) #6 AWG From 8 to 70 (55ft to65ft)	60.00	0.00	0.0000	0.006	0.000	0.000	0.007
CCISeismic (4) #6 AWG From 8 to 70 (45ft to55ft)	50.00	0.00	0.0000	0.006	0.000	0.000	0.005
CCISeismic (4) #6 AWG From 8 to 70 (35ft to45ft)	40.00	0.00	0.0000	0.006	0.000	0.000	0.003
CCISeismic (4) #6 AWG From 8 to 70 (25ft to35ft)	30.00	0.00	0.0000	0.006	0.000	0.000	0.002
CCISeismic (4) #6 AWG From 8 to 70 (15ft to25ft)	20.00	0.00	0.0000	0.006	0.000	0.000	0.001
CCISeismic (4) #6 AWG From 8 to 70 (8ft to15ft)	11.50	0.00	0.0000	0.004	0.000	0.000	0.000
CCISeismic (4) #8 AWG From 8 to 70 (65ft to70ft)	67.50	0.00	0.0000	0.002	0.000	0.000	0.003
CCISeismic (4) #8 AWG From 8 to 70 (55ft to65ft)	60.00	0.00	0.0000	0.004	0.000	0.000	0.005
CCISeismic (4) #8 AWG From 8 to 70 (45ft to55ft)	50.00	0.00	0.0000	0.004	0.000	0.000	0.003
CCISeismic (4) #8 AWG From 8 to 70 (35ft to45ft)	40.00	0.00	0.0000	0.004	0.000	0.000	0.002
CCISeismic (4) #8 AWG From 8 to 70 (25ft to35ft)	30.00	0.00	0.0000	0.004	0.000	0.000	0.001
CCISeismic (4) #8 AWG From 8 to 70 (15ft to25ft)	20.00	0.00	0.0000	0.004	0.000	0.000	0.001
CCISeismic (4) #8 AWG From 8 to 70 (8ft to15ft)	11.50	0.00	0.0000	0.003	0.000	0.000	0.000
CCISeismic 24 PAIR From 8 to 70 (65ft to70ft)	67.50	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 24 PAIR From 8 to 70 (55ft to65ft)	60.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 24 PAIR From 8 to 70 (45ft to55ft)	50.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 24 PAIR From 8 to 70 (35ft to45ft)	40.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 24 PAIR From 8 to 70 (25ft to35ft)	30.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 24 PAIR From 8 to 70 (15ft to25ft)	20.00	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic 24 PAIR From 8 to 70 (8ft to15ft)	11.50	0.00	0.0000	0.000	0.000	0.000	0.000
CCISeismic (6) andrew (cci) LDF6-50A (1-1/4 FOAM) From	67.50	0.00	0.0000	0.003	0.000	0.000	0.005

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
8 to 70 (65ft to70ft) CCISeismic (6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70 (55ft to65ft)	60.00	0.00	0.0000	0.007	0.000	0.000	0.008
CCISeismic (6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70 (45ft to55ft)	50.00	0.00	0.0000	0.007	0.000	0.000	0.005
CCISeismic (6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70 (35ft to45ft)	40.00	0.00	0.0000	0.007	0.000	0.000	0.004
CCISeismic (6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70 (25ft to35ft)	30.00	0.00	0.0000	0.007	0.000	0.000	0.002
CCISeismic (6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70 (15ft to25ft)	20.00	0.00	0.0000	0.007	0.000	0.000	0.001
CCISeismic (6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70 (8ft to15ft)	11.50	0.00	0.0000	0.005	0.000	0.000	0.000

Discrete Tower Loads

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
Platform Mount [LP 301-1]	A	None		0.0000	85.00	No Ice	23.81	23.81	1.589
(2) Pipe 2 Std x 8'	A	From Face	1.50 0.00 0.00	0.0000	85.00	No Ice	1.90	1.90	0.029
(2) Pipe 2 Std x 8'	B	From Face	1.50 0.00 0.00	0.0000	85.00	No Ice	1.90	1.90	0.029
(2) Pipe 2 Std x 8'	C	From Face	1.50 0.00 0.00	0.0000	85.00	No Ice	1.90	1.90	0.029
(2) NHH-65B-R2B	A	From Centroid-Leg	4.00 0.00 0.00	0.0000	85.00	No Ice	6.90	2.40	0.077
(2) NHH-65B-R2B	A	From Centroid-Leg	4.00 0.00 0.00	0.0000	85.00	No Ice	6.90	2.40	0.077
(2) NHH-65B-R2B	A	From Centroid-Leg	4.00 0.00 0.00	0.0000	85.00	No Ice	6.90	2.40	0.077
AIR6419 w/ Mount Pipe	A	From Centroid-Leg	4.00 0.00 0.00	0.0000	85.00	No Ice	5.29	3.96	0.112
AIR6419 w/ Mount Pipe	B	From Centroid-Leg	4.00 0.00 0.00	0.0000	85.00	No Ice	5.29	3.96	0.112
AIR6419 w/ Mount Pipe	C	From	4.00	0.0000	85.00	No Ice	5.29	3.96	0.112

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Offsets: ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
		Centroid-Leg	0.00	0.00							
4449	A	From Centroid-Leg	4.00	0.00	0.00	0.0000	85.00	No Ice	1.98	1.41	0.070
4449	B	From Centroid-Leg	4.00	0.00	0.00	0.0000	85.00	No Ice	1.98	1.41	0.070
4449	C	From Centroid-Leg	4.00	0.00	0.00	0.0000	85.00	No Ice	1.98	1.41	0.070
4890	A	From Centroid-Leg	4.00	0.00	0.00	0.0000	85.00	No Ice	2.22	1.02	0.070
4890	B	From Centroid-Leg	4.00	0.00	0.00	0.0000	85.00	No Ice	2.22	1.02	0.070
4890	C	From Centroid-Leg	4.00	0.00	0.00	0.0000	85.00	No Ice	2.22	1.02	0.070
RHSDC-6627-PF-48	B	From Centroid-Leg	4.00	0.00	0.00	0.0000	85.00	No Ice	4.06	3.10	0.032
TRXXDC-1064-PF-48	C	From Centroid-Leg	4.00	0.00	0.00	0.0000	85.00	No Ice	1.35	1.35	0.014
11' T-Arm - Round (GPD)	A	From Leg	1.50	0.00	0.00	0.0000	70.00	No Ice	4.70	2.33	0.333
11' T-Arm - Round (GPD)	B	From Leg	1.50	0.00	0.00	0.0000	70.00	No Ice	4.70	2.33	0.333
11' T-Arm - Round (GPD)	C	From Leg	1.50	0.00	0.00	0.0000	70.00	No Ice	4.70	2.33	0.333
P2.5 STD x 10' Mount Pipe	A	From Leg	3.00	0.00	0.00	0.0000	70.00	No Ice	2.88	2.88	0.059
P2.5 STD x 10' Mount Pipe	B	From Leg	3.00	0.00	0.00	0.0000	70.00	No Ice	2.88	2.88	0.059
P2.5 STD x 10' Mount Pipe	C	From Leg	3.00	0.00	0.00	0.0000	70.00	No Ice	2.88	2.88	0.059
2.375" x 5' Mount Pipe	A	From Leg	3.00	0.00	0.00	0.0000	70.00	No Ice	1.19	1.19	0.034
2.375" x 5' Mount Pipe	B	From Leg	3.00	0.00	0.00	0.0000	70.00	No Ice	1.19	1.19	0.034
2.375" x 5' Mount Pipe	C	From Leg	3.00	0.00	0.00	0.0000	70.00	No Ice	1.19	1.19	0.034
(3) 80010992 w/ Mount Pipe	A	From Leg	3.00	0.00	0.00	0.0000	70.00	No Ice	19.50	10.70	0.168
(3) 80010992 w/ Mount Pipe	B	From Leg	3.00	1.00		0.0000	70.00	No Ice	19.50	10.70	0.168

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
			0.00 1.00						
(3) 80010992 w/ Mount Pipe	C	From Leg	3.00 0.00 1.00	0.0000	70.00	No Ice	19.50	10.70	0.168
AIR6419 B77D+AIR6419 B77G STACKED w/ 10' x 2.875" Mount Pipe	A	From Leg	3.00 0.00 1.00	0.0000	70.00	No Ice	9.76	7.20	0.176
AIR6419 B77D+AIR6419 B77G STACKED w/ 10' x 2.875" Mount Pipe	B	From Leg	3.00 0.00 1.00	0.0000	70.00	No Ice	9.76	7.20	0.176
AIR6419 B77D+AIR6419 B77G STACKED w/ 10' x 2.875" Mount Pipe	C	From Leg	3.00 0.00 1.00	0.0000	70.00	No Ice	9.76	7.20	0.176
4415 B30	A	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	1.84	0.82	0.046
4415 B30	B	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	1.84	0.82	0.046
4415 B30	C	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	1.84	0.82	0.046
4478 B14	A	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	1.96	1.25	0.059
4478 B14	B	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	1.96	1.25	0.059
4478 B14	C	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	1.96	1.25	0.059
4890 B25/B66A	A	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	2.19	0.86	0.068
4890 B25/B66A	B	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	2.19	0.86	0.068
4890 B25/B66A	C	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	2.19	0.86	0.068
DC9-48-60-24-8C-EV	A	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	2.74	4.78	0.026
DC6-48-60-18-8F Surge Suppression Unit	B	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	0.92	0.92	0.019
DC6-48-60-18-8F Surge Suppression Unit	C	From Leg	1.50 0.00 1.00	0.0000	70.00	No Ice	0.92	0.92	0.019
10' T-Arm - Round (GPD)	A	From Leg	1.00 0.00 0.00	0.0000	58.00	No Ice	3.90	2.33	0.250
10' T-Arm - Round (GPD)	A	From Leg	1.00 0.00 0.00	0.0000	55.00	No Ice	3.90	2.33	0.250
2' Standoff - Round (GPD)	B	From Leg	1.00	0.0000	35.00	No Ice	1.14	1.62	0.037

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
Area Street Light	B	From Leg	0.00 0.00 2.00 0.00 0.00	0.0000	35.00	No Ice	2.00	3.00	0.050

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
2' Stadium Light	A	Paraboloid w/o Radome	From Leg	2.00 -4.50 0.00	0.0000		58.00	2.00	No Ice	3.14	0.020
2' Stadium Light	A	Paraboloid w/o Radome	From Leg	2.00 -2.75 0.00	0.0000		58.00	2.00	No Ice	3.14	0.020
2' Stadium Light	A	Paraboloid w/o Radome	From Leg	2.00 -1.00 0.00	0.0000		58.00	2.00	No Ice	3.14	0.020
2' Stadium Light	A	Paraboloid w/o Radome	From Leg	2.00 1.00 0.00	0.0000		58.00	2.00	No Ice	3.14	0.020
2' Stadium Light	A	Paraboloid w/o Radome	From Leg	2.00 2.75 0.00	0.0000		58.00	2.00	No Ice	3.14	0.020
2' Stadium Light	A	Paraboloid w/o Radome	From Leg	2.00 4.50 0.00	0.0000		58.00	2.00	No Ice	3.14	0.020
2' Stadium Light	A	Paraboloid w/o Radome	From Leg	2.00 -4.00 0.00	0.0000		55.00	2.00	No Ice	3.14	0.020
2' Stadium Light	A	Paraboloid w/o Radome	From Leg	2.00 -2.00 0.00	0.0000		55.00	2.00	No Ice	3.14	0.020
2' Stadium Light	A	Paraboloid w/o Radome	From Leg	2.00 2.00 0.00	0.0000		55.00	2.00	No Ice	3.14	0.020
2' Stadium Light	A	Paraboloid w/o Radome	From Leg	2.00 4.00 0.00	0.0000		55.00	2.00	No Ice	3.14	0.020

Load Combinations

Comb. No.	Description

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	Dead+Wind 0 deg - Service
27	Dead+Wind 30 deg - Service
28	Dead+Wind 60 deg - Service
29	Dead+Wind 90 deg - Service
30	Dead+Wind 120 deg - Service
31	Dead+Wind 150 deg - Service
32	Dead+Wind 180 deg - Service
33	Dead+Wind 210 deg - Service
34	Dead+Wind 240 deg - Service
35	Dead+Wind 270 deg - Service
36	Dead+Wind 300 deg - Service
37	Dead+Wind 330 deg - Service
38	1.2 Dead+1.0 Ev+1.0 Eh 0 deg
39	0.9 Dead-1.0 Ev+1.0 Eh 0 deg
40	1.2 Dead+1.0 Ev+1.0 Eh 30 deg
41	0.9 Dead-1.0 Ev+1.0 Eh 30 deg
42	1.2 Dead+1.0 Ev+1.0 Eh 60 deg
43	0.9 Dead-1.0 Ev+1.0 Eh 60 deg
44	1.2 Dead+1.0 Ev+1.0 Eh 90 deg
45	0.9 Dead-1.0 Ev+1.0 Eh 90 deg
46	1.2 Dead+1.0 Ev+1.0 Eh 120 deg
47	0.9 Dead-1.0 Ev+1.0 Eh 120 deg
48	1.2 Dead+1.0 Ev+1.0 Eh 150 deg
49	0.9 Dead-1.0 Ev+1.0 Eh 150 deg
50	1.2 Dead+1.0 Ev+1.0 Eh 180 deg
51	0.9 Dead-1.0 Ev+1.0 Eh 180 deg
52	1.2 Dead+1.0 Ev+1.0 Eh 210 deg
53	0.9 Dead-1.0 Ev+1.0 Eh 210 deg
54	1.2 Dead+1.0 Ev+1.0 Eh 240 deg
55	0.9 Dead-1.0 Ev+1.0 Eh 240 deg
56	1.2 Dead+1.0 Ev+1.0 Eh 270 deg
57	0.9 Dead-1.0 Ev+1.0 Eh 270 deg
58	1.2 Dead+1.0 Ev+1.0 Eh 300 deg
59	0.9 Dead-1.0 Ev+1.0 Eh 300 deg
60	1.2 Dead+1.0 Ev+1.0 Eh 330 deg
61	0.9 Dead-1.0 Ev+1.0 Eh 330 deg

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	85 - 80	12.297	26	1.2603	0.0161
L2	80 - 75	10.980	26	1.2532	0.0152
L3	75 - 70	9.675	26	1.2379	0.0144
L4	70 - 65	8.400	26	1.1966	0.0130
L5	65 - 60	7.177	26	1.1343	0.0117
L6	60 - 55	6.032	26	1.0500	0.0105
L7	55 - 50	4.984	26	0.9474	0.0090
L8	50 - 46	4.054	26	0.8278	0.0070
L9	46 - 45.75	3.403	26	0.7234	0.0055
L10	45.75 - 40.75	3.366	26	0.7205	0.0055
L11	40.75 - 36	2.642	26	0.6604	0.0047
L12	40 - 35	2.539	26	0.6511	0.0046
L13	35 - 30	1.880	26	0.5947	0.0041
L14	30 - 25	1.320	26	0.4742	0.0030
L15	25 - 23.5	0.888	26	0.3511	0.0021
L16	23.5 - 23.25	0.783	26	0.3143	0.0018
L17	23.25 - 18.25	0.767	26	0.3111	0.0018
L18	18.25 - 13.25	0.475	26	0.2467	0.0013
L19	13.25 - 8.25	0.251	26	0.1805	0.0009
L20	8.25 - 3.25	0.098	32	0.1125	0.0006
L21	3.25 - 0	0.015	32	0.0449	0.0002

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
85.00	Platform Mount [LP 301-1]	26	12.297	1.2603	0.0161	25698
82.50	CCISeismic Tower Section 1 - 1	26	11.638	1.2570	0.0156	25698
80.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (75ft to85ft)	26	10.980	1.2532	0.0152	25698
77.50	CCISeismic Tower Section 2 - 1	26	10.325	1.2479	0.0148	15228
72.50	CCISeismic Tower Section 3 - 1	26	9.032	1.2205	0.0137	7368
70.00	11' T-Arm - Round (GPD)	26	8.400	1.1966	0.0130	5672
67.50	CCISeismic Tower Section 4 - 1	26	7.780	1.1680	0.0123	4593
62.50	CCISeismic Tower Section 5 - 1	26	6.594	1.0950	0.0111	3412
60.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (55ft to65ft)	26	6.032	1.0500	0.0105	3066
58.00	2' Stadium Light	26	5.600	1.0103	0.0099	2842
57.50	CCISeismic Tower Section 6 - 1	26	5.495	1.0000	0.0098	2792
56.50	CCISeismic (6) miscl Lighting Cable From 55 to 58 (55ft to58ft)	26	5.287	0.9791	0.0095	2698
55.00	2' Stadium Light	26	4.984	0.9474	0.0090	2571
52.50	CCISeismic Tower Section 7 - 1	26	4.503	0.8929	0.0080	2399
50.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (45ft to55ft)	26	4.054	0.8278	0.0070	2304
48.00	CCISeismic Tower Section 8 - 1	26	3.718	0.7669	0.0061	2469
46.50	CCISeismic 4-1/2"x1-1/4" Mod Plate From 38 to 48 (45ft to48ft)	26	3.480	0.7309	0.0056	2823
45.88	CCISeismic Tower Section 9 - 1	26	3.385	0.7219	0.0055	3065
43.25	CCISeismic Tower Section 10 - 1	26	2.996	0.6916	0.0051	4401

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
41.50	CCISeismic 4-1/2"x1-1/4" Mod Plate From 38 to 48 (38ft to45ft)	26	2.747	0.6699	0.0048	5253
40.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (35ft to45ft)	26	2.539	0.6511	0.0046	5468
38.38	CCISeismic Tower Section 11 - 1	26	2.319	0.6346	0.0045	4824
37.50	CCISeismic Tower Section 12 - 1	26	2.202	0.6264	0.0044	4282
35.00	2' Standoff - Round (GPD)	26	1.880	0.5947	0.0041	3029
32.50	CCISeismic Tower Section 13 - 1	26	1.585	0.5393	0.0036	2517
30.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (25ft to35ft)	26	1.320	0.4742	0.0030	2351
27.50	CCISeismic Tower Section 14 - 1	26	1.088	0.4147	0.0025	2336
25.25	CCISeismic 4-1/2"x1-1/4" Mod Plate From 0 to 25.5 (25ft to25.5ft)	26	0.906	0.3581	0.0021	2585
24.25	CCISeismic Tower Section 15 - 1	26	0.834	0.3301	0.0019	2817
23.38	CCISeismic Tower Section 16 - 1	26	0.775	0.3127	0.0018	3109
20.75	CCISeismic Tower Section 17 - 1	26	0.613	0.2798	0.0016	4074
20.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (15ft to25ft)	26	0.569	0.2699	0.0015	4258
15.75	CCISeismic Tower Section 18 - 1	26	0.354	0.2137	0.0011	4296
11.50	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (8ft to15ft)	32	0.190	0.1568	0.0008	4300
10.75	CCISeismic Tower Section 19 - 1	32	0.166	0.1466	0.0007	4310
10.00	CCISeismic 4-1/2"x1-1/4" Mod Plate From 0 to 25.5 (5ft to15ft)	32	0.144	0.1364	0.0007	4309
5.75	CCISeismic Tower Section 20 - 1	32	0.047	0.0788	0.0004	4044
2.50	CCISeismic 4-1/2"x1-1/4" Mod Plate From 0 to 25.5 (0ft to5ft)	32	0.010	0.0346	0.0002	4109
1.63	CCISeismic Tower Section 21 - 1	32	0.005	0.0226	0.0001	4109

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	85 - 80	41.685	14	4.2363	0.0555
L2	80 - 75	37.309	14	4.2188	0.0525
L3	75 - 70	32.958	14	4.1728	0.0495
L4	70 - 65	28.688	14	4.0420	0.0444
L5	65 - 60	24.577	14	3.8370	0.0398
L6	60 - 55	20.710	14	3.5549	0.0358
L7	55 - 50	17.161	14	3.2201	0.0308
L8	50 - 46	13.988	14	2.8319	0.0239
L9	46 - 45.75	11.760	14	2.4864	0.0188
L10	45.75 - 40.75	11.630	14	2.4770	0.0187
L11	40.75 - 36	9.141	14	2.2755	0.0163
L12	40 - 35	8.786	14	2.2441	0.0159
L13	35 - 30	6.514	14	2.0524	0.0140
L14	30 - 25	4.579	14	1.6402	0.0104
L15	25 - 23.5	3.083	14	1.2168	0.0071
L16	23.5 - 23.25	2.720	14	1.0900	0.0062
L17	23.25 - 18.25	2.663	14	1.0790	0.0061
L18	18.25 - 13.25	1.650	14	0.8565	0.0046
L19	13.25 - 8.25	0.873	14	0.6270	0.0032
L20	8.25 - 3.25	0.340	14	0.3913	0.0019
L21	3.25 - 0	0.053	14	0.1561	0.0007

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
85.00	Platform Mount [LP 301-1]	14	41.685	4.2363	0.0557	9161
82.50	CCISeismic Tower Section 1 - 1	14	39.496	4.2285	0.0541	9161
80.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (75ft to85ft)	14	37.309	4.2188	0.0527	9161
77.50	CCISeismic Tower Section 2 - 1	14	35.128	4.2035	0.0514	5123
72.50	CCISeismic Tower Section 3 - 1	14	30.809	4.1181	0.0474	2334
70.00	11' T-Arm - Round (GPD)	14	28.688	4.0420	0.0446	1768
67.50	CCISeismic Tower Section 4 - 1	14	26.607	3.9486	0.0419	1410
62.50	CCISeismic Tower Section 5 - 1	14	22.608	3.7057	0.0379	1027
60.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (55ft to65ft)	14	20.710	3.5549	0.0358	920
58.00	2' Stadium Light	14	19.249	3.4242	0.0340	854
57.50	CCISeismic Tower Section 6 - 1	14	18.892	3.3907	0.0335	839
56.50	CCISeismic (6) miscl Lighting Cable From 55 to 58 (55ft to58ft)	14	18.188	3.3228	0.0325	811
55.00	2' Stadium Light	14	17.161	3.2201	0.0308	774
52.50	CCISeismic Tower Section 7 - 1	14	15.524	3.0440	0.0275	721
50.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (45ft to55ft)	14	13.988	2.8319	0.0239	690
48.00	CCISeismic Tower Section 8 - 1	14	12.838	2.6310	0.0208	738
46.50	CCISeismic 4-1/2"x1-1/4" Mod Plate From 38 to 48 (45ft to48ft)	14	12.023	2.5116	0.0192	843
45.88	CCISeismic Tower Section 9 - 1	14	11.695	2.4816	0.0188	914
43.25	CCISeismic Tower Section 10 - 1	14	10.359	2.3804	0.0175	1309
41.50	CCISeismic 4-1/2"x1-1/4" Mod Plate From 38 to 48 (38ft to45ft)	14	9.500	2.3075	0.0166	1559
40.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (35ft to45ft)	14	8.786	2.2441	0.0159	1621
38.38	CCISeismic Tower Section 11 - 1	14	8.025	2.1883	0.0153	1426
37.50	CCISeismic Tower Section 12 - 1	14	7.622	2.1605	0.0150	1263
35.00	2' Standoff - Round (GPD)	14	6.514	2.0524	0.0140	890
32.50	CCISeismic Tower Section 13 - 1	14	5.495	1.8631	0.0123	737
30.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (25ft to35ft)	14	4.579	1.6402	0.0104	686
27.50	CCISeismic Tower Section 14 - 1	14	3.775	1.4356	0.0087	680
25.25	CCISeismic 4-1/2"x1-1/4" Mod Plate From 0 to 25.5 (25ft to25.5ft)	14	3.147	1.2409	0.0073	751
24.25	CCISeismic Tower Section 15 - 1	14	2.897	1.1445	0.0066	818
23.38	CCISeismic Tower Section 16 - 1	14	2.692	1.0842	0.0061	902
20.75	CCISeismic Tower Section 17 - 1	14	2.128	0.9706	0.0054	1180
20.00	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (15ft to25ft)	14	1.978	0.9367	0.0051	1233
15.75	CCISeismic Tower Section 18 - 1	14	1.231	0.7421	0.0039	1241
11.50	CCISeismic miscl 5/8" Step Bolts From 8 to 85 (8ft to15ft)	14	0.659	0.5449	0.0028	1240
10.75	CCISeismic Tower Section 19 - 1	14	0.576	0.5095	0.0026	1242
10.00	CCISeismic 4-1/2"x1-1/4" Mod Plate From 0 to 25.5 (5ft to15ft)	14	0.499	0.4740	0.0024	1242
5.75	CCISeismic Tower Section 20 - 1	14	0.163	0.2740	0.0013	1164
2.50	CCISeismic 4-1/2"x1-1/4" Mod Plate From 0 to 25.5 (0ft to5ft)	14	0.034	0.1203	0.0006	1182
1.63	CCISeismic Tower Section 21 - 1	14	0.019	0.0784	0.0004	1182

Compression Checks

Pole Design Data

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	
L1	85 - 80 (1)	TP18x18x0.375	5.00	0.00	0.0	20.7640	-3.851	654.065	0.006
L2	80 - 75 (2)	TP18x18x0.375	5.00	0.00	0.0	20.7640	-4.285	654.065	0.007
L3	75 - 70 (3)	TP18.8269x18x0.1875	5.00	0.00	0.0	11.2536	-4.521	658.333	0.007
L4	70 - 65 (4)	TP19.6538x18.8269x0.1875	5.00	0.00	0.0	11.7528	-9.274	687.539	0.013
L5	65 - 60 (5)	TP20.4808x19.6538x0.1875	5.00	0.00	0.0	12.2521	-9.700	716.746	0.014
L6	60 - 55 (6)	TP21.3077x20.4808x0.1875	5.00	0.00	0.0	12.7513	-10.559	745.952	0.014
L7	55 - 50 (7)	TP22.1346x21.3077x0.1875	5.00	0.00	0.0	13.2506	-11.415	775.158	0.015
L8	50 - 46 (8)	TP22.7962x22.1346x0.1875	4.00	0.00	0.0	13.6500	-11.866	798.524	0.015
L9	46 - 45.75 (9)	TP22.8375x22.7962x0.4625	0.25	0.00	0.0	33.3220	-11.919	1949.340	0.006
L10	45.75 - 40.75 (10)	TP23.6644x22.8375x0.45	5.00	0.00	0.0	33.6377	-12.845	1967.810	0.007
L11	40.75 - 36 (11)	TP24.45x23.6644x0.45	4.75	0.00	0.0	33.8174	-12.980	1978.320	0.007
L12	36 - 35 (12)	TP24.2404x23.4135x0.25	5.00	0.00	0.0	19.3123	-14.101	1129.770	0.012
L13	35 - 30 (13)	TP25.0673x24.2404x0.25	5.00	0.00	0.0	19.9779	-14.844	1168.710	0.013
L14	30 - 25 (14)	TP25.8942x25.0673x0.25	5.00	0.00	0.0	20.6436	-15.527	1207.650	0.013
L15	25 - 23.5 (15)	TP26.1423x25.8942x0.25	1.50	0.00	0.0	20.8433	-15.793	1219.330	0.013
L16	23.5 - 23.25 (16)	TP26.1836x26.1423x0.5	0.25	0.00	0.0	41.3507	-15.872	2419.010	0.007
L17	23.25 - 18.25 (17)	TP27.0106x26.1836x0.5	5.00	0.00	0.0	42.6820	-17.191	2496.900	0.007
L18	18.25 - 13.25 (18)	TP27.8375x27.0106x0.4875	5.00	0.00	0.0	42.9326	-18.531	2511.560	0.007
L19	13.25 - 8.25 (19)	TP28.6644x27.8375x0.475	5.00	0.00	0.0	43.1157	-19.888	2522.270	0.008
L20	8.25 - 3.25 (20)	TP29.4913x28.6644x0.475	5.00	0.00	0.0	44.3804	-21.104	2596.260	0.008
L21	3.25 - 0 (21)	TP30.0288x29.4913x0.4625	3.25	0.00	0.0	44.0316	-21.898	2575.850	0.009

Pole Bending Design Data

Section No.	Elevation	Size	M_{ux}	ϕM_{nx}	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy}	ϕM_{ny}	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	ft		kip-ft	kip-ft		kip-ft	kip-ft	
L1	85 - 80 (1)	TP18x18x0.375	17.85	305.83	0.058	0.00	305.83	0.000
L2	80 - 75 (2)	TP18x18x0.375	34.41	305.83	0.113	0.00	305.83	0.000
L3	75 - 70 (3)	TP18.8269x18x0.1875	51.92	294.85	0.176	0.00	294.85	0.000
L4	70 - 65 (4)	TP19.6538x18.8269x0.1875	98.61	316.33	0.312	0.00	316.33	0.000
L5	65 - 60 (5)	TP20.4808x19.6538x0.1875	142.35	338.04	0.421	0.00	338.04	0.000
L6	60 - 55 (6)	TP21.3077x20.4808x0.1875	190.04	359.93	0.528	0.00	359.93	0.000
L7	55 - 50 (7)	TP22.1346x21.3077x0.1875	242.22	381.92	0.634	0.00	381.92	0.000
L8	50 - 46 (8)	TP22.7962x22.1346x0.1875	283.89	399.56	0.711	0.00	399.56	0.000
L9	46 - 45.75 (9)	TP22.8375x22.7962x0.4625	286.51	1105.63	0.259	0.00	1105.63	0.000
L10	45.75 - 40.75 (10)	TP23.6644x22.8375x0.45	339.53	1159.44	0.293	0.00	1159.44	0.000
L11	40.75 - 36 (11)	TP24.45x23.6644x0.45	347.59	1171.98	0.297	0.00	1171.98	0.000
L12	36 - 35 (12)	TP24.2404x23.4135x0.25	403.79	659.57	0.612	0.00	659.57	0.000
L13	35 - 30 (13)	TP25.0673x24.2404x0.25	462.05	697.29	0.663	0.00	697.29	0.000
L14	30 - 25 (14)	TP25.8942x25.0673x0.25	520.92	735.41	0.708	0.00	735.41	0.000
L15	25 - 23.5 (15)	TP26.1423x25.8942x0.25	538.71	746.91	0.721	0.00	746.91	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 $\frac{M_{uy}}{\phi M_{ny}}$
L16	23.5 - 23.25 (16)	TP26.1836x26.1423x0.5	541.68	1576.77	0.344	0.00	1576.77	0.000
L17	23.25 - 18.25 (17)	TP27.0106x26.1836x0.5	601.62	1680.93	0.358	0.00	1680.93	0.000
L18	18.25 - 13.25 (18)	TP27.8375x27.0106x0.4875	662.48	1746.12	0.379	0.00	1746.12	0.000
L19	13.25 - 8.25 (19)	TP28.6644x27.8375x0.475	724.19	1809.11	0.400	0.00	1809.11	0.000
L20	8.25 - 3.25 (20)	TP29.4913x28.6644x0.475	786.72	1917.71	0.410	0.00	1917.71	0.000
L21	3.25 - 0 (21)	TP30.0288x29.4913x0.4625	827.78	1940.09	0.427	0.00	1940.09	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	85 - 80 (1)	TP18x18x0.375	3.231	196.219	0.016	0.16	304.05	0.001
L2	80 - 75 (2)	TP18x18x0.375	3.393	196.219	0.017	0.16	304.05	0.001
L3	75 - 70 (3)	TP18.8269x18x0.1875	3.616	197.500	0.018	0.15	323.82	0.000
L4	70 - 65 (4)	TP19.6538x18.8269x0.1875	8.649	206.262	0.042	0.15	353.19	0.000
L5	65 - 60 (5)	TP20.4808x19.6538x0.1875	8.856	215.024	0.041	0.15	383.83	0.000
L6	60 - 55 (6)	TP21.3077x20.4808x0.1875	9.712	223.786	0.043	0.14	415.75	0.000
L7	55 - 50 (7)	TP22.1346x21.3077x0.1875	10.368	232.548	0.045	0.14	448.94	0.000
L8	50 - 46 (8)	TP22.7962x22.1346x0.1875	10.508	239.557	0.044	0.14	476.41	0.000
L9	46 - 45.75 (9)	TP22.8375x22.7962x0.4625	10.512	584.801	0.018	0.13	1150.99	0.000
L10	45.75 - 40.75 (10)	TP23.6644x22.8375x0.45	10.750	590.342	0.018	0.13	1205.48	0.000
L11	40.75 - 36 (11)	TP24.45x23.6644x0.45	10.783	593.496	0.018	0.13	1218.40	0.000
L12	36 - 35 (12)	TP24.2404x23.4135x0.25	11.450	338.930	0.034	0.13	715.23	0.000
L13	35 - 30 (13)	TP25.0673x24.2404x0.25	11.712	348.276	0.034	0.38	765.39	0.001
L14	30 - 25 (14)	TP25.8942x25.0673x0.25	11.857	359.959	0.033	0.38	817.24	0.000
L15	25 - 23.5 (15)	TP26.1423x25.8942x0.25	11.905	362.295	0.033	0.38	833.13	0.000
L16	23.5 - 23.25 (16)	TP26.1836x26.1423x0.5	11.899	724.536	0.016	0.38	1639.52	0.000
L17	23.25 - 18.25 (17)	TP27.0106x26.1836x0.5	12.098	744.396	0.016	0.38	1746.79	0.000
L18	18.25 - 13.25 (18)	TP27.8375x27.0106x0.4875	12.274	748.911	0.016	0.37	1812.68	0.000
L19	13.25 - 8.25 (19)	TP28.6644x27.8375x0.475	12.443	752.241	0.017	0.37	1876.28	0.000
L20	8.25 - 3.25 (20)	TP29.4913x28.6644x0.475	12.603	774.437	0.016	0.37	1987.97	0.000
L21	3.25 - 0 (21)	TP30.0288x29.4913x0.4625	12.705	768.072	0.017	0.37	2009.73	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	85 - 80 (1)	0.006	0.058	0.000	0.016	0.001	0.065	1.000	
L2	80 - 75 (2)	0.007	0.113	0.000	0.017	0.001	0.119	1.000	
L3	75 - 70 (3)	0.007	0.176	0.000	0.018	0.000	0.183	1.000	

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L4	70 - 65 (4)	0.013	0.312	0.000	0.042	0.000	0.327	1.000	
L5	65 - 60 (5)	0.014	0.421	0.000	0.041	0.000	0.436	1.000	
L6	60 - 55 (6)	0.014	0.528	0.000	0.043	0.000	0.544	1.000	
L7	55 - 50 (7)	0.015	0.634	0.000	0.045	0.000	0.651	1.000	
L8	50 - 46 (8)	0.015	0.711	0.000	0.044	0.000	0.727	1.000	
L9	46 - 45.75 (9)	0.006	0.259	0.000	0.018	0.000	0.266	1.000	
L10	45.75 - 40.75 (10)	0.007	0.293	0.000	0.018	0.000	0.300	1.000	
L11	40.75 - 36 (11)	0.007	0.297	0.000	0.018	0.000	0.303	1.000	
L12	36 - 35 (12)	0.012	0.612	0.000	0.034	0.000	0.626	1.000	
L13	35 - 30 (13)	0.013	0.663	0.000	0.034	0.001	0.677	1.000	
L14	30 - 25 (14)	0.013	0.708	0.000	0.033	0.000	0.722	1.000	
L15	25 - 23.5 (15)	0.013	0.721	0.000	0.033	0.000	0.735	1.000	
L16	23.5 - 23.25 (16)	0.007	0.344	0.000	0.016	0.000	0.350	1.000	
L17	23.25 - 18.25 (17)	0.007	0.358	0.000	0.016	0.000	0.365	1.000	
L18	18.25 - 13.25 (18)	0.007	0.379	0.000	0.016	0.000	0.387	1.000	
L19	13.25 - 8.25 (19)	0.008	0.400	0.000	0.017	0.000	0.408	1.000	
L20	8.25 - 3.25 (20)	0.008	0.410	0.000	0.016	0.000	0.419	1.000	
L21	3.25 - 0 (21)	0.009	0.427	0.000	0.017	0.000	0.435	1.000	

CCIpole

per TIA-222- H

Site BU: _____

Work Order: _____

Pole Geometry

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	85	10	0	0	18	18	0.375		A53-B-35
2	75	39	4	12	18.00	24.45	0.1875	Auto	A572-65
3	40	40	0	12	23.41	30.0288	0.25	Auto	A572-65

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12
1	0	23.5	plate	CCI-CFP-045125	4			x		x			x			x	
2	40	46	plate	CCI-CFP-045125	3	x				x				x			
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Type	Bottom Termination Length (in)	Top Termination Type	Top Termination Length (in)	Lu (in)	Net Area (in2)	Bolt Hole Size (in)	Reinforcement Material
1	4.5	1.25	5.625	0.625	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	20.000	4.063	1.1875	A572-65
2	4.5	1.25	5.625	0.625	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	20.000	4.063	1.1875	A572-65

Connection Details for Custom Reinforcements

Reinforcement	End	# Bolts	N or X	Bolt Spacing (in)	Edge Dist (in)	Weld Grade (ksi)	Transverse (Horiz.) Weld Type	Horiz. Weld Length (in)	Horiz. Groove Depth (in)	Horiz. Groove Angle (deg)	Horiz. Fillet Size (in)	Vertical Weld Length (in)	Vertical Fillet Size (in)	Rev H Connection Capacity (kip)
CCI-CFP-045125	Top	8	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	8	N	3	3	-	-	-	-	-	-	-	-	-

TNX Geometry Input

Increment (ft): 5 Export to TNX

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	85 - 80	5		0	18.000	18.000	0.375	A53-B-35	1.000
2	80 - 75	5	0	0	18.000	18.000	0.375	A53-B-35	1.000
3	75 - 70	5		12	18.000	18.827	0.1875	A572-65	1.000
4	70 - 65	5		12	18.827	19.654	0.1875	A572-65	1.000
5	65 - 60	5		12	19.654	20.481	0.1875	A572-65	1.000
6	60 - 55	5		12	20.481	21.308	0.1875	A572-65	1.000
7	55 - 50	5		12	21.308	22.135	0.1875	A572-65	1.000
8	50 - 46	4		12	22.135	22.796	0.1875	A572-65	1.000
9	46 - 45.75	0.25		12	22.796	22.838	0.4625	A572-65	0.918
10	45.75 - 40.75	5		12	22.838	23.664	0.45	A572-65	0.924
11	40.75 - 40	4.75	4	12	23.664	24.450	0.45	A572-65	0.921
12	40 - 35	5		12	23.413	24.240	0.25	A572-65	1.000
13	35 - 30	5		12	24.240	25.067	0.25	A572-65	1.000
14	30 - 25	5		12	25.067	25.894	0.25	A572-65	1.000
15	25 - 23.5	1.5		12	25.894	26.142	0.25	A572-65	1.000
16	23.5 - 23.25	0.25		12	26.142	26.184	0.5	A572-65	1.050
17	23.25 - 18.25	5		12	26.184	27.011	0.5	A572-65	1.033
18	18.25 - 13.25	5		12	27.011	27.837	0.4875	A572-65	1.042
19	13.25 - 8.25	5		12	27.837	28.664	0.475	A572-65	1.053
20	8.25 - 3.25	5		12	28.664	29.491	0.475	A572-65	1.038
21	3.25 - 0	3.25		12	29.491	30.029	0.4625	A572-65	1.056

TNX Section Forces

Increment (ft):	5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	85 - 80	3.85	17.85	3.23
2	80 - 75	4.29	34.41	3.39
3	75 - 70	4.52	51.92	3.62
4	70 - 65	9.27	98.61	8.65
5	65 - 60	9.70	142.35	8.86
6	60 - 55	10.56	190.04	9.71
7	55 - 50	11.42	242.22	10.37
8	50 - 46	11.87	283.89	10.51
9	46 - 45.75	11.92	286.51	10.51
10	45.75 - 40.75	12.84	339.53	10.75
11	40.75 - 40	12.98	347.59	10.78
12	40 - 35	14.10	403.79	11.45
13	35 - 30	14.84	462.05	11.71
14	30 - 25	15.53	520.92	11.86
15	25 - 23.5	15.79	538.71	11.90
16	23.5 - 23.25	15.87	541.68	11.90
17	23.25 - 18.25	17.19	601.62	12.10
18	18.25 - 13.25	18.53	662.48	12.27
19	13.25 - 8.25	19.89	724.19	12.44
20	8.25 - 3.25	21.10	786.72	12.60
21	3.25 - 0	21.90	827.78	12.70

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
85 - 80	Pole	TP18x18x0.375	Pole	6.5%	Pass
80 - 75	Pole	TP18x18x0.375	Pole	11.9%	Pass
75 - 70	Pole	TP18.827x18x0.1875	Pole	18.3%	Pass
70 - 65	Pole	TP19.654x18.827x0.1875	Pole	32.6%	Pass
65 - 60	Pole	TP20.481x19.654x0.1875	Pole	43.5%	Pass
60 - 55	Pole	TP21.308x20.481x0.1875	Pole	54.3%	Pass
55 - 50	Pole	TP22.135x21.308x0.1875	Pole	64.9%	Pass
50 - 46	Pole	TP22.796x22.135x0.1875	Pole	72.5%	Pass
46 - 45.75	Pole + Reinf.	TP22.838x22.796x0.4625	Reinf. 2 Bolt-Shaft Bearing	46.6%	Pass
45.75 - 40.75	Pole + Reinf.	TP23.664x22.838x0.45	Reinf. 2 Tension Rupture	51.3%	Pass
40.75 - 40	Pole + Reinf.	TP24.45x23.664x0.45	Reinf. 2 Bolt-Shaft Bearing	53.3%	Pass
40 - 35	Pole	TP24.24x23.413x0.25	Pole	62.4%	Pass
35 - 30	Pole	TP25.067x24.24x0.25	Pole	67.5%	Pass
30 - 25	Pole	TP25.894x25.067x0.25	Pole	72.0%	Pass
25 - 23.5	Pole	TP26.142x25.894x0.25	Pole	73.3%	Pass
23.5 - 23.25	Pole + Reinf.	TP26.184x26.142x0.5	Reinf. 1 Tension Rupture	56.6%	Pass
23.25 - 18.25	Pole + Reinf.	TP27.011x26.184x0.5	Reinf. 1 Tension Rupture	60.0%	Pass
18.25 - 13.25	Pole + Reinf.	TP27.837x27.011x0.4875	Reinf. 1 Tension Rupture	63.1%	Pass
13.25 - 8.25	Pole + Reinf.	TP28.664x27.837x0.475	Reinf. 1 Tension Rupture	66.0%	Pass
8.25 - 3.25	Pole + Reinf.	TP29.491x28.664x0.475	Reinf. 1 Tension Rupture	68.6%	Pass
3.25 - 0	Pole + Reinf.	TP30.029x29.491x0.4625	Reinf. 1 Tension Rupture	70.2%	Pass
				Summary	
			Pole	73.3%	Pass
			Reinforcement	70.2%	Pass
			Overall	73.3%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity		
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2
85 - 80	807	n/a	807	20.76	n/a	20.76	6.5%		
80 - 75	807	n/a	807	20.76	n/a	20.76	11.9%		
75 - 70	500	n/a	500	11.24	n/a	11.24	18.3%		
70 - 65	569	n/a	569	11.74	n/a	11.74	32.6%		
65 - 60	645	n/a	645	12.23	n/a	12.23	43.5%		
60 - 55	727	n/a	727	12.73	n/a	12.73	54.3%		
55 - 50	816	n/a	816	13.23	n/a	13.23	64.9%		
50 - 46	892	n/a	892	13.63	n/a	13.63	72.5%		
46 - 45.75	897	1239	2136	13.66	16.88	30.53	29.7%		46.6%
45.75 - 40.75	999	1325	2323	14.15	16.88	31.03	34.1%		51.3%
40.75 - 40	1014	1338	2352	14.23	16.88	31.10	34.8%		53.3%
40 - 35	1421	n/a	1421	19.28	n/a	19.28	62.4%		
35 - 30	1573	n/a	1573	19.95	n/a	19.95	67.5%		
30 - 25	1735	n/a	1735	20.61	n/a	20.61	72.0%		
25 - 23.5	1786	n/a	1786	20.81	n/a	20.81	73.3%		
23.5 - 23.25	1798	1725	3523	20.85	22.50	43.35	38.4%	56.6%	
23.25 - 18.25	1975	1830	3805	21.51	22.50	44.01	41.2%	60.0%	
18.25 - 13.25	2164	1937	4101	22.18	22.50	44.68	44.0%	63.1%	
13.25 - 8.25	2364	2047	4412	22.84	22.50	45.34	46.6%	66.0%	
8.25 - 3.25	2576	2161	4737	23.51	22.50	46.01	49.1%	68.6%	
3.25 - 0	2721	2236	4957	23.94	22.50	46.44	50.7%	70.2%	

Note: Section capacity checked using 5 degree increments.

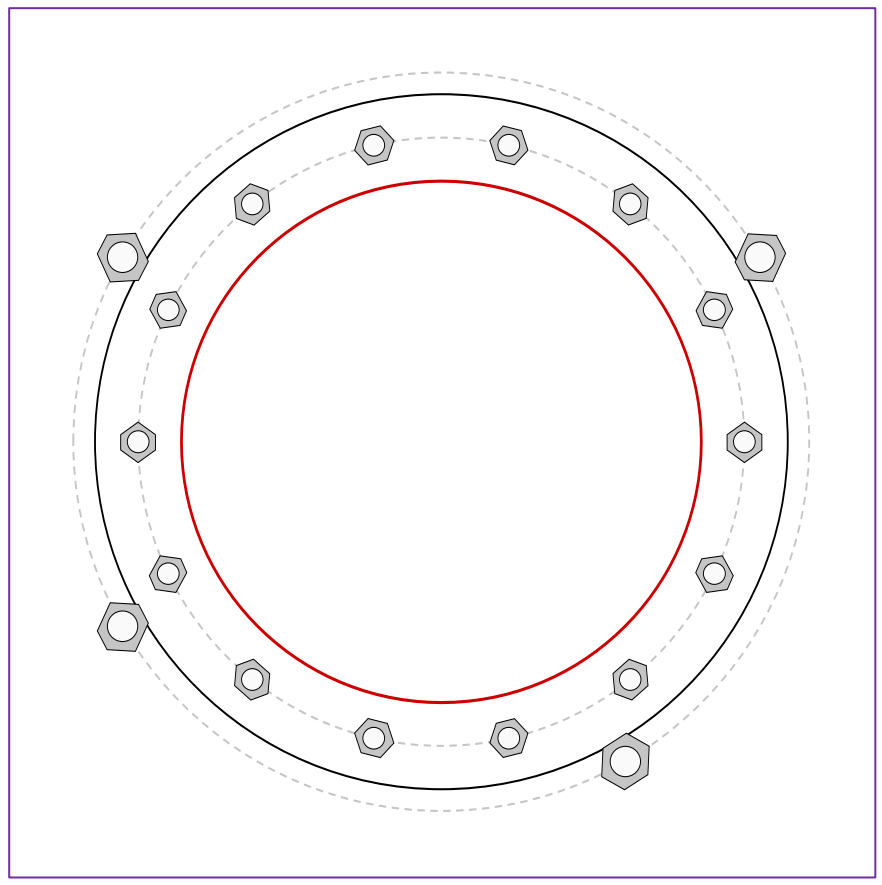
APPENDIX C

Additional Calculations

Monopole Base Plate Connection

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	See Custom Sheet
l_{ar} (in)	See Custom Sheet

Applied Loads	
Moment (kip-ft)	827.78
Axial Force (kips)	21.90
Shear Force (kips)	12.70



Connection Properties

Anchor Rod Data

GROUP 1: (14) 1-1/4" ø bolts (F1554-105 N; Fy=105 ksi, Fu=125 ksi) on 35" BC

GROUP 2: (4) 1-3/4" ø bolts (A193 Gr. B7 N; Fy=105 ksi, Fu=125 ksi) on 42.5" BC

pos. (deg): 30, 150, 210, 300

Base Plate Data

40" OD x 1.25" Plate (A572-50; Fy=50 ksi, Fu=65 ksi)

Stiffener Data

N/A

Pole Data

30.0288" x 0.4625" 12-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

GROUP 1:		
Pu_t = 51.1	ϕPn_t = 90.84	**Stress Rating**
Vu = 0.91	ϕVn = 57.52	**56.2%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_t = 109.81	ϕPn_t = 178.13	**Stress Rating**
Vu = 0	ϕVn = 112.75	**61.7%**
Mu = 0	ϕMn = 84.41	**Pass**

Base Plate Summary

Max Stress (ksi):	30.27	(Flexural)
Allowable Stress (ksi):	45	
Stress Rating:	**67.3%**	**Pass**

CCIplate

Elevation (ft)	0	*(Base)*

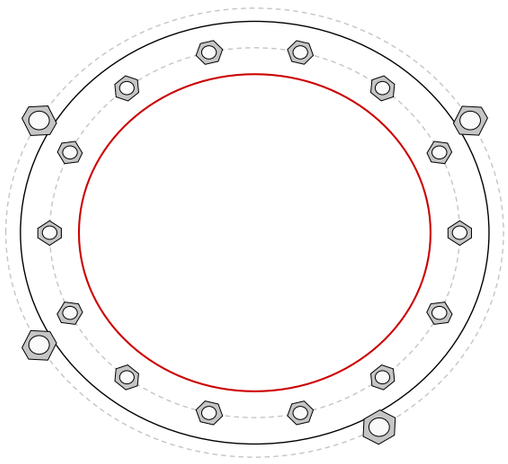
note: Bending interaction not considered when Grout Considered = "Yes"

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending	Grout Considered	Apply at BARB Elevation	BARB CL Elevation (ft)
1	Yes	Yes	Yes	No	No	
2	Yes	No	No	No	No	

Custom Bolt Connection

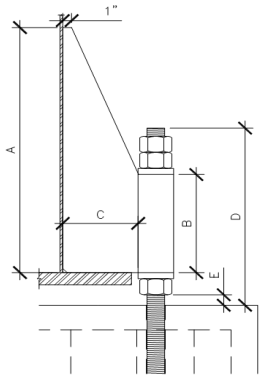
Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, η:	l_{ar} (in):	Thread Type	Area Override, in^2	Tension Only
1	1	0	1.25	F1554-105	35	0.5	1.25	N-Included		No
2	1	25.714286	1.25	F1554-105	35	0.5	1.25	N-Included		No
3	1	51.428571	1.25	F1554-105	35	0.5	1.25	N-Included		No
4	1	77.142857	1.25	F1554-105	35	0.5	1.25	N-Included		No
5	1	102.85714	1.25	F1554-105	35	0.5	1.25	N-Included		No
6	1	128.57143	1.25	F1554-105	35	0.5	1.25	N-Included		No
7	1	154.28571	1.25	F1554-105	35	0.5	1.25	N-Included		No
8	1	180	1.25	F1554-105	35	0.5	1.25	N-Included		No
9	1	205.71429	1.25	F1554-105	35	0.5	1.25	N-Included		No
10	1	231.42857	1.25	F1554-105	35	0.5	1.25	N-Included		No
11	1	257.14286	1.25	F1554-105	35	0.5	1.25	N-Included		No
12	1	282.85714	1.25	F1554-105	35	0.5	1.25	N-Included		No
13	1	308.57143	1.25	F1554-105	35	0.5	1.25	N-Included		No
14	1	334.28571	1.25	F1554-105	35	0.5	1.25	N-Included		No
15	2	30	1.75	A193 Gr. B7	42.5	0.5	5.25	N-Included		No
16	2	150	1.75	A193 Gr. B7	42.5	0.5	5.25	N-Included		No
17	2	210	1.75	A193 Gr. B7	42.5	0.5	5.25	N-Included		No
18	2	300	1.75	A193 Gr. B7	42.5	0.5	5.25	N-Included		No

Plot Graphic



ANCHOR ROD BRACKET CALCULATIONS - TIA-222-H

Site Name:	TETON HIGH SCHOOL (IDL04077)
GPD Project No:	2025723.01.99730.05
Sheet Application:	Analysis
Max Capacity:	105%
Apply TIA-222-H Section 15.5?	No



Anchor Rod Properties		
F_u =	125	ksi
F_y =	105	ksi
Diameter =	1.75	in
Rod Tension Force =	109.8	kips
Rod Compression Force =	109.8	kips

Bracket Plate Properties		
A =	24	in
B =	14	in
C =	3.5	in
Unbraced Length of Anchor Rod, E =	5.25	in
Bracket Thickness =	1	in
F_y =	65	ksi
Fu =	80	ksi
ARB connected to flat plate?	Yes	
Flat Plate Width =	4.5	in
Flat Plate Thickness =	1.25	in
Flat Plate Weld Length =	24	in

Anchor Rod Buckling			
Buckling K Factor =	1.2		
Nominal Diameter, d =	1.75	in	
Gross Area, Ag =	2.405	in^2	
Moment of Inertia, I =	0.460	in^4	
Radius of Gyration, r =	0.438	in	
KL/r =	14.40		
F_e =	1380.3	ksi	
F_{cr} =	101.7	ksi	
$\phi_{buckling}$ =	0.9		
Capacity =	lar <= 4d		OK

Pipe Yielding			
Pipe Size =	P 3 XX-STR		
Outer Diameter =	3.5	in	
Inner Diameter =	2.3	in	
Area =	5.47	in^2	
Yield Stress, F_y =	42	ksi	
Ultimate Stress, F_u =	58	ksi	
ϕ =	0.97		
ϕP_n =	206.63	kips	
Capacity =	53.1%		OK

Flexure and Combined Flexure & Shear (Pipe-to-Bracket)			
Plastic Modulus, Z =	49.00	in^3	
Elastic Modulus, S =	32.67	in^3	
ϕM =	0.9		
ϕV =	1.0		
$\phi M_{n,\ yield,\ LTB}$ =	2847.2	kip-in	
ϕV_n =	546.0	kips	
M_u =	192.2	kip-in	
V_u =	109.8	kips	
Capacity =	6.7%		OK

Shear Strength (Pipe-to-Bracket)			
A_w =	14	in^2	
F_y =	65	ksi	
Fu =	80	ksi	
ϕ_{yield} =	1.0		
$\phi_{rupture}$ =	0.75		
$\phi V_{n,\ yield}$ =	546.0	kips	
$\phi V_{n,\ rupture}$ =	504.0	kips	
V_u =	109.8	kips	
Capacity =	21.8%		OK

Rupture Strength at Welds (Flat Plate-to-Tower)		
Pole Thickness =	0.25	in
Pole Fy =	65	ksi
Pole Fu =	80	ksi
Applied Force =	3.52	k/in
Rupture Strength of Pole =	12	k/in
Capacity =	29.3%	OK

Pipe Punching Shear		
Eccentricity, e =	1.75	in
Induced Moment, M =	192.17	k-in
ϕ =	0.75	
$\phi M_{n,\ punching}$ =	1023.1	k-in
Capacity =	18.8%	OK

Flexure and Combined Flexure & Shear (Bracket-to-Flat Plate)			
Plastic Modulus, Z =	144.00	in^3	
Elastic Modulus, S =	96.00	in^3	
ϕM =	0.9		
ϕV =	1.0		
$\phi M_{n,\ yield,\ LTB}$ =	8246.6	kip-in	
ϕV_n =	936	kips	
M_u =	576.5	kip-in	
V_u =	109.8	kips	
Capacity =	7.0%		OK

Shear Strength (Bracket-to-Flat Plate)			
A_w =	24	in^2	
F_y =	65	ksi	
Fu =	80	ksi	
ϕ_{yield} =	1.0		
$\phi_{rupture}$ =	0.75		
$\phi V_{n,\ yield}$ =	936.0	kips	
$\phi V_{n,\ rupture}$ =	864.0	kips	
V_u =	109.8	kips	
Capacity =	12.7%		OK

Weld Check (Pipe-to-Bracket)					
Weld Length =	14	in	D =	3.7856	
Fillet Weld Size =	0.2366	in	C1 =	1.03	
Weld Strength =	80	ksi	C =	3.70	
e =	1.75	in	ϕ =	0.75	
a =	0.125		ϕR_n =	151.28	kips
			Capacity =	72.6%	OK

Weld Check (Bracket-to-Flat Plate)					
Weld Length =	24	in	D =	4	
Fillet Weld Size =	0.25	in	C1 =	1.03	
Weld Strength =	80	ksi	C =	3.44	
e =	5.25	in	ϕ =	0.75	
a =	0.219		ϕR_n =	254.74	kips
			Capacity =	43.1%	OK

Weld Check (Flat Plate-to-Tower)					
Weld Length =	24	in	D =	4	
Fillet Weld Size =	0.25	in	C1 =	1	
Weld Strength =	70	ksi	C =	3.22	
e =	6.5	in	ϕ =	0.75	
a =	0.271		ϕR_n =	231.72	kips
			Capacity =	47.4%	OK

Drilled Pier Foundation

Report File:

TIA-222 Revison: H
Tower Type: Monopole

Check Limitation	
Apply TIA-222-H Section 15.5:	☐
N/A	☐

Design Options	
Input Effective Depths (else Actual):	☐
Consider non-tapered moment capacity:	☐
Check Shear along Depth of Pier:	☑
Utilize Shear-Friction Methodology:	☐
Override Critical Depth:	☐

Go to Soil Calculations

Applied Loads	Comp.	Uplift
Moment (kip-ft)	827.78	
Axial Force (kips)	21.9	
Shear Force (kips)	12.7	

Material Properties		
Concrete Strength, f'c:	4	ksi
Rebar Strength, Fy:	60	ksi
Tie Yield Strength, Fyt:	40	ksi

Pier Design Data		
Depth	22	ft
Ext. Above Grade	0.5	ft
Pier Section 1		
From 0.5' above grade to 22' below grade		
Pier Diameter	4.5	ft
Rebar Quantity	20	
Rebar Size	7	
Clear Cover to Ties	3	in
Tie Size	4	
Tie Spacing	12	in

Rebar & Pier Options

Embedded Pole Inputs

Belled Pier Inputs

Analysis Results

Soil Lateral Check	Compression	Uplift
$D_{v=0}$ (ft from TOC)	5.75	-
Soil Safety Factor	3.67	-
Max Moment (kip-ft)	897.75	-
Rating	*36.2%*	-

Soil Vertical Check	Compression	Uplift
Skin Friction (kips)	174.77	-
End Bearing (kips)	0.00	-
Weight of Concrete (kips)	45.35	-
Total Capacity (kips)	174.77	-
Axial (kips)	67.25	-
Rating	*38.5%*	-

Reinforced Concrete Flexure	Compression	Uplift
Critical Depth (ft from TOC)	5.83	-
Critical Moment (kip-ft)	897.73	-
Critical Moment Capacity	1265.50	-
Rating	*70.9%*	-

Reinforced Concrete Shear	Compression	Uplift
Critical Depth (ft from TOC)	15.66	-
Critical Shear (kip)	111.58	-
Critical Shear Capacity	243.82	-
Rating	*45.8%*	-

Structural Foundation Rating	**70.9%**
Soil Interaction Rating	**38.5%**

Soil Profile

Groundwater Depth	6	# of Layers	4

Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γ_{soil} (pcf)	$\gamma_{concrete}$ (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	2.833	2.833	100	150			0.000	0.000					Cohesionless
2	2.833	6	3.167	100	150		34	0.000	0.000	0.65	0.43			Cohesionless
3	6	15	9	40	87.6		37	0.000	0.000	0.83	0.55			Cohesionless
4	15	22	7	40	87.6		37	0.000	0.000	1.00	0.65	0		Cohesionless

APPENDIX D

Seismic Calculations

Structure: A

Rev:

Location

	Decimal Degrees		Deg	Min	Sec
Lat:	43.459861	+	43	27	35.50
Long:	-110.801750	-	110	48	6.30

Code and Site Parameters

Seismic Design Code:	TIA-222-H-1	
Site Soil:	D (Default)	Default
Risk Category:	II	

USGS Seismic Reference			
	S_S:	1.0570	g
	S_1:	0.3480	g
	T_L:	8	s

Seismic Design Category Determination

Importance Factor, I_e:	1	
Acceleration-based site coefficient, F_a:	1.2000	
Velocity-based site coefficient, F_v:	1.9520	
Design spectral response acceleration short period, S_{DS}:	0.8456	g
Design spectral response acceleration 1 s period, S_{D1}:	0.4529	g
T_s:	0.5356	
Seismic Design Category Based on S_{DS}:	D	
Seismic Design Category Based on S_{D1}:	D	
Seismic Design Category Based on S_1:	N/A	
Controlling Seismic Design Category:	D	

Structure: A

Rev:

Tower Details

Tower Type:	Tapered Monopole		
Height, h:	85	ft	
Effective Seismic Weight, W:	18.24	kips	
Amplification Factor, A_s:	1.0		2.7.8.1

Seismic Base Shear

Response Modification Factor, R:	1.5		
Discrete Appurtenance Weight in Top 1/3 of Structure, W_u:	7.2999	kips	
W_L:	10.94344031	kips	
E:	29000.0	ksi	
g:	386.088	in/s^2	
Average Moment of Inertia, I_{avg}:	1947.135145	in^4	
F_a:	0.397453337	hz	
Approximate Fundamental Period Monopole, T_a:	2.5160	s	2.7.7.1.3.3
Seismic Response Coefficient, C_s	0.1800		Table 2-12 Note 3
Seismic Response Coefficient Max 1, C_{smax}	N/A		
Seismic Response Coefficient Max 2, C_{smax}	N/A		
Seismic Response Coefficient Min 1, C_{smin}	0.0372		2.7.7.1.1
Seismic Response Coefficient Min 2, C_{smin}	N/A		2.7.7.1.1
Controlling Seismic Response Coefficient, C_{sc}	0.1800		
Seismic Base Shear, V	3.284	kips	2.7.7.1.1

Vertical Distribution Factors

Period Related Exponent, k:	2.000
Sum of $w_i h_i^k$	59691.19

Tower Section Loads								
Section Number	Length	Top Height	Mid Height, h_x	Section Weight, w_x	$w_x h_x^k$	C_{vx}	F_{xh}	F_{xv}
1 - 1	5.00	85.00	82.50	0.3533	2404.48	0.0403	0.1323	0.0597
2 - 1	5.00	80.00	77.50	0.3533	2121.86	0.0355	0.1167	0.0597
3 - 1	5.00	75.00	72.50	0.1870	982.66	0.0165	0.0541	0.0316
4 - 1	5.00	70.00	67.50	0.1954	890.44	0.0149	0.0490	0.0331
5 - 1	5.00	65.00	62.50	0.2039	796.55	0.0133	0.0438	0.0345
6 - 1	5.00	60.00	57.50	0.2124	702.24	0.0118	0.0386	0.0359
7 - 1	5.00	55.00	52.50	0.2209	608.80	0.0102	0.0335	0.0374
8 - 1	4.00	50.00	48.00	0.1828	421.20	0.0071	0.0232	0.0309
9 - 1	0.25	46.00	45.88	0.0259	54.61	0.0009	0.0030	0.0044
10 - 1	5.00	45.75	43.25	0.5185	969.92	0.0162	0.0534	0.0877
11 - 1	4.75	40.75	38.38	0.5085	748.87	0.0125	0.0412	0.0860
12 - 1	5.00	40.00	37.50	0.3225	453.45	0.0076	0.0249	0.0545
13 - 1	5.00	35.00	32.50	0.3338	352.53	0.0059	0.0194	0.0564
14 - 1	5.00	30.00	27.50	0.3451	260.96	0.0044	0.0144	0.0584
15 - 1	1.50	25.00	24.25	0.1057	62.17	0.0010	0.0034	0.0179
16 - 1	0.25	23.50	23.38	0.0368	20.13	0.0003	0.0011	0.0062
17 - 1	5.00	23.25	20.75	0.7371	317.38	0.0053	0.0175	0.1247
18 - 1	5.00	18.25	15.75	0.7486	185.71	0.0031	0.0102	0.1266
19 - 1	5.00	13.25	10.75	0.7601	87.84	0.0015	0.0048	0.1285
20 - 1	5.00	8.25	5.75	0.7716	25.51	0.0004	0.0014	0.1305
21 - 1	3.25	3.25	1.63	0.5089	1.34	0.0000	0.0001	0.0861
			Sum	7.6321	12468.67			

Discrete Loads						
Name	h_x	w_x	$w_xh_x^k$	C_{vx}	F_{xh}	F_{xv}
tower mounts (cci) Platform Mount [LP 301-1]	85.00	1.5885	11476.91	0.1923	0.6314	0.2686
(2) pipes (gpd) Pipe 2 Std x 8'	85.00	0.0580	419.05	0.0070	0.0231	0.0098
(2) pipes (gpd) Pipe 2 Std x 8'	85.00	0.0580	419.05	0.0070	0.0231	0.0098
(2) pipes (gpd) Pipe 2 Std x 8'	85.00	0.0580	419.05	0.0070	0.0231	0.0098
(2) NHH-65B-R2B	85.00	0.1548	1118.43	0.0187	0.0615	0.0262
(2) NHH-65B-R2B	85.00	0.1548	1118.43	0.0187	0.0615	0.0262
(2) NHH-65B-R2B	85.00	0.1548	1118.43	0.0187	0.0615	0.0262
ericsson AIR6419 w/ Mount Pipe	85.00	0.1120	809.20	0.0136	0.0445	0.0189
ericsson AIR6419 w/ Mount Pipe	85.00	0.1120	809.20	0.0136	0.0445	0.0189
ericsson AIR6419 w/ Mount Pipe	85.00	0.1120	809.20	0.0136	0.0445	0.0189
ericsson 4449	85.00	0.0700	505.75	0.0085	0.0278	0.0118
ericsson 4449	85.00	0.0700	505.75	0.0085	0.0278	0.0118
ericsson 4449	85.00	0.0700	505.75	0.0085	0.0278	0.0118
ericsson 4890	85.00	0.0700	505.75	0.0085	0.0278	0.0118
ericsson 4890	85.00	0.0700	505.75	0.0085	0.0278	0.0118
ericsson 4890	85.00	0.0700	505.75	0.0085	0.0278	0.0118
raycap RHSDC-6627-PF-48	85.00	0.0320	231.20	0.0039	0.0127	0.0054
TRXXDC-1064-PF-48	85.00	0.0140	101.15	0.0017	0.0056	0.0024
11' T-Arm - Round (GPD)	70.00	0.3330	1631.70	0.0273	0.0898	0.0563
11' T-Arm - Round (GPD)	70.00	0.3330	1631.70	0.0273	0.0898	0.0563
11' T-Arm - Round (GPD)	70.00	0.3330	1631.70	0.0273	0.0898	0.0563
P2.5 STD x 10' Mount Pipe	70.00	0.0590	289.10	0.0048	0.0159	0.0100
P2.5 STD x 10' Mount Pipe	70.00	0.0590	289.10	0.0048	0.0159	0.0100
P2.5 STD x 10' Mount Pipe	70.00	0.0590	289.10	0.0048	0.0159	0.0100
miscl 2.375" x 5' Mount Pipe	70.00	0.0340	166.60	0.0028	0.0092	0.0058
miscl 2.375" x 5' Mount Pipe	70.00	0.0340	166.60	0.0028	0.0092	0.0058
miscl 2.375" x 5' Mount Pipe	70.00	0.0340	166.60	0.0028	0.0092	0.0058
(3) kathrein 80010992 w/ Mount Pipe	70.00	0.5040	2469.60	0.0414	0.1359	0.0852
(3) kathrein 80010992 w/ Mount Pipe	70.00	0.5040	2469.60	0.0414	0.1359	0.0852
(3) kathrein 80010992 w/ Mount Pipe	70.00	0.5040	2469.60	0.0414	0.1359	0.0852
ericsson AIR6419 B77D+AIR6419 B77G STACKED w/ 10' x 2.875" Mount Pip	70.00	0.1760	862.40	0.0144	0.0474	0.0298
ericsson AIR6419 B77D+AIR6419 B77G STACKED w/ 10' x 2.875" Mount Pip	70.00	0.1760	862.40	0.0144	0.0474	0.0298
ericsson AIR6419 B77D+AIR6419 B77G STACKED w/ 10' x 2.875" Mount Pip	70.00	0.1760	862.40	0.0144	0.0474	0.0298
ericsson 4415 B30	70.00	0.0460	225.40	0.0038	0.0124	0.0078
ericsson 4415 B30	70.00	0.0460	225.40	0.0038	0.0124	0.0078
ericsson 4415 B30	70.00	0.0460	225.40	0.0038	0.0124	0.0078
ericsson 4478 B14	70.00	0.0590	289.10	0.0048	0.0159	0.0100
ericsson 4478 B14	70.00	0.0590	289.10	0.0048	0.0159	0.0100
ericsson 4478 B14	70.00	0.0590	289.10	0.0048	0.0159	0.0100
ericsson 4890 B25/B66A	70.00	0.0680	333.20	0.0056	0.0183	0.0115
ericsson 4890 B25/B66A	70.00	0.0680	333.20	0.0056	0.0183	0.0115
ericsson 4890 B25/B66A	70.00	0.0680	333.20	0.0056	0.0183	0.0115
raycap DC9-48-60-24-8C-EV	70.00	0.0260	127.40	0.0021	0.0070	0.0044
raycap DC6-48-60-18-8F Surge Suppression Unit	70.00	0.0190	93.10	0.0016	0.0051	0.0032
raycap DC6-48-60-18-8F Surge Suppression Unit	70.00	0.0190	93.10	0.0016	0.0051	0.0032
tower mount generic (gpd) 10' T-Arm - Round (GPD)	58.00	0.2500	841.00	0.0141	0.0463	0.0423
tower mount generic (gpd) 10' T-Arm - Round (GPD)	55.00	0.2500	756.25	0.0127	0.0416	0.0423
tower mount generic (gpd) 2' Standoff - Round (GPD)	35.00	0.0374	45.82	0.0008	0.0025	0.0063
Area Street Light	35.00	0.0500	61.25	0.0010	0.0034	0.0085
misc 2' Stadium Light	58.00	0.0200	67.28	0.0011	0.0037	0.0034
misc 2' Stadium Light	58.00	0.0200	67.28	0.0011	0.0037	0.0034
misc 2' Stadium Light	58.00	0.0200	67.28	0.0011	0.0037	0.0034
misc 2' Stadium Light	58.00	0.0200	67.28	0.0011	0.0037	0.0034
misc 2' Stadium Light	58.00	0.0200	67.28	0.0011	0.0037	0.0034
misc 2' Stadium Light	58.00	0.0200	67.28	0.0011	0.0037	0.0034
misc 2' Stadium Light	55.00	0.0200	60.50	0.0010	0.0033	0.0034
misc 2' Stadium Light	55.00	0.0200	60.50	0.0010	0.0033	0.0034
misc 2' Stadium Light	55.00	0.0200	60.50	0.0010	0.0033	0.0034
misc 2' Stadium Light	55.00	0.0200	60.50	0.0010	0.0033	0.0034
	Sum	7.7173	43348.70			

Linear Loads								
Name	Start Height	End Height	h_x	w_x	$w_x h_x^k$	C_{vx}	F_{xh}	F_{xv}
miscl 5/8" Step Bolts From 8 to 85	75.00	85.00	80.00	0.0100	64.00	0.0011	0.0035	0.0017
miscl 5/8" Step Bolts From 8 to 85	65.00	75.00	70.00	0.0100	49.00	0.0008	0.0027	0.0017
miscl 5/8" Step Bolts From 8 to 85	55.00	65.00	60.00	0.0100	36.00	0.0006	0.0020	0.0017
miscl 5/8" Step Bolts From 8 to 85	45.00	55.00	50.00	0.0100	25.00	0.0004	0.0014	0.0017
miscl 5/8" Step Bolts From 8 to 85	35.00	45.00	40.00	0.0100	16.00	0.0003	0.0009	0.0017
miscl 5/8" Step Bolts From 8 to 85	25.00	35.00	30.00	0.0100	9.00	0.0002	0.0005	0.0017
miscl 5/8" Step Bolts From 8 to 85	15.00	25.00	20.00	0.0100	4.00	0.0001	0.0002	0.0017
miscl 5/8" Step Bolts From 8 to 85	8.00	15.00	11.50	0.0070	0.93	0.0000	0.0001	0.0012
miscl Safety Line (3/8") From 8 to 85	75.00	85.00	80.00	0.0022	14.08	0.0002	0.0008	0.0004
miscl Safety Line (3/8") From 8 to 85	65.00	75.00	70.00	0.0022	10.78	0.0002	0.0006	0.0004
miscl Safety Line (3/8") From 8 to 85	55.00	65.00	60.00	0.0022	7.92	0.0001	0.0004	0.0004
miscl Safety Line (3/8") From 8 to 85	45.00	55.00	50.00	0.0022	5.50	0.0001	0.0003	0.0004
miscl Safety Line (3/8") From 8 to 85	35.00	45.00	40.00	0.0022	3.52	0.0001	0.0002	0.0004
miscl Safety Line (3/8") From 8 to 85	25.00	35.00	30.00	0.0022	1.98	0.0000	0.0001	0.0004
miscl Safety Line (3/8") From 8 to 85	15.00	25.00	20.00	0.0022	0.88	0.0000	0.0000	0.0004
miscl Safety Line (3/8") From 8 to 85	8.00	15.00	11.50	0.0015	0.20	0.0000	0.0000	0.0003
(2) 1.5" Hybrid Cable From 8 to 85	75.00	85.00	80.00	0.0160	102.40	0.0017	0.0056	0.0027
(2) 1.5" Hybrid Cable From 8 to 85	65.00	75.00	70.00	0.0160	78.40	0.0013	0.0043	0.0027
(2) 1.5" Hybrid Cable From 8 to 85	55.00	65.00	60.00	0.0160	57.60	0.0010	0.0032	0.0027
(2) 1.5" Hybrid Cable From 8 to 85	45.00	55.00	50.00	0.0160	40.00	0.0007	0.0022	0.0027
(2) 1.5" Hybrid Cable From 8 to 85	35.00	45.00	40.00	0.0160	25.60	0.0004	0.0014	0.0027
(2) 1.5" Hybrid Cable From 8 to 85	25.00	35.00	30.00	0.0160	14.40	0.0002	0.0008	0.0027
(2) 1.5" Hybrid Cable From 8 to 85	15.00	25.00	20.00	0.0160	6.40	0.0001	0.0004	0.0027
(2) 1.5" Hybrid Cable From 8 to 85	8.00	15.00	11.50	0.0112	1.48	0.0000	0.0001	0.0019
12 x 24 1/2" Hybrid From 8 to 85	75.00	85.00	80.00	0.0040	25.60	0.0004	0.0014	0.0007
12 x 24 1/2" Hybrid From 8 to 85	65.00	75.00	70.00	0.0040	19.60	0.0003	0.0011	0.0007
12 x 24 1/2" Hybrid From 8 to 85	55.00	65.00	60.00	0.0040	14.40	0.0002	0.0008	0.0007
12 x 24 1/2" Hybrid From 8 to 85	45.00	55.00	50.00	0.0040	10.00	0.0002	0.0006	0.0007
12 x 24 1/2" Hybrid From 8 to 85	35.00	45.00	40.00	0.0040	6.40	0.0001	0.0004	0.0007
12 x 24 1/2" Hybrid From 8 to 85	25.00	35.00	30.00	0.0040	3.60	0.0001	0.0002	0.0007
12 x 24 1/2" Hybrid From 8 to 85	15.00	25.00	20.00	0.0040	1.60	0.0000	0.0001	0.0007
12 x 24 1/2" Hybrid From 8 to 85	8.00	15.00	11.50	0.0028	0.37	0.0000	0.0000	0.0005
(12) miscl Lighting Cable From 8 to 35	25.00	35.00	30.00	0.0180	16.20	0.0003	0.0009	0.0030
(12) miscl Lighting Cable From 8 to 35	15.00	25.00	20.00	0.0180	7.20	0.0001	0.0004	0.0030
(12) miscl Lighting Cable From 8 to 35	8.00	15.00	11.50	0.0126	1.67	0.0000	0.0001	0.0021
(10) miscl Lighting Cable From 35 to 55	45.00	55.00	50.00	0.0150	37.50	0.0006	0.0021	0.0025
(10) miscl Lighting Cable From 35 to 55	35.00	45.00	40.00	0.0150	24.00	0.0004	0.0013	0.0025
(6) miscl Lighting Cable From 55 to 58	55.00	58.00	56.50	0.0027	8.62	0.0001	0.0005	0.0005
4-1/2"x1-1/4" Mod Plate From 0 to 25.5	25.00	25.50	25.25	0.0096	6.10	0.0001	0.0003	0.0016
4-1/2"x1-1/4" Mod Plate From 0 to 25.5	15.00	25.00	20.00	0.1914	76.56	0.0013	0.0042	0.0324
4-1/2"x1-1/4" Mod Plate From 0 to 25.5	5.00	15.00	10.00	0.1914	19.14	0.0003	0.0011	0.0324
4-1/2"x1-1/4" Mod Plate From 0 to 25.5	0.00	5.00	2.50	0.0957	0.60	0.0000	0.0000	0.0162
4-1/2"x1-1/4" Mod Plate From 0 to 25.5	25.00	25.50	25.25	0.0096	6.10	0.0001	0.0003	0.0016
4-1/2"x1-1/4" Mod Plate From 0 to 25.5	15.00	25.00	20.00	0.1914	76.56	0.0013	0.0042	0.0324
4-1/2"x1-1/4" Mod Plate From 0 to 25.5	5.00	15.00	10.00	0.1914	19.14	0.0003	0.0011	0.0324
4-1/2"x1-1/4" Mod Plate From 0 to 25.5	0.00	5.00	2.50	0.0957	0.60	0.0000	0.0000	0.0162
4-1/2"x1-1/4" Mod Plate From 38 to 48	45.00	48.00	46.50	0.0574	124.16	0.0021	0.0068	0.0097
4-1/2"x1-1/4" Mod Plate From 38 to 48	38.00	45.00	41.50	0.1340	230.75	0.0039	0.0127	0.0227
(12) miscl 7/8" Coax From 8 to 70	65.00	70.00	67.50	0.0198	90.21	0.0015	0.0050	0.0033
(12) miscl 7/8" Coax From 8 to 70	55.00	65.00	60.00	0.0396	142.56	0.0024	0.0078	0.0067
(12) miscl 7/8" Coax From 8 to 70	45.00	55.00	50.00	0.0396	99.00	0.0017	0.0054	0.0067
(12) miscl 7/8" Coax From 8 to 70	35.00	45.00	40.00	0.0396	63.36	0.0011	0.0035	0.0067
(12) miscl 7/8" Coax From 8 to 70	25.00	35.00	30.00	0.0396	35.64	0.0006	0.0020	0.0067
(12) miscl 7/8" Coax From 8 to 70	15.00	25.00	20.00	0.0396	15.84	0.0003	0.0009	0.0067
(12) miscl 7/8" Coax From 8 to 70	8.00	15.00	11.50	0.0277	3.67	0.0001	0.0002	0.0047
miscl 3/8" RET Cable From 8 to 70	65.00	70.00	67.50	0.0005	2.28	0.0000	0.0001	0.0001
miscl 3/8" RET Cable From 8 to 70	55.00	65.00	60.00	0.0010	3.60	0.0001	0.0002	0.0002
miscl 3/8" RET Cable From 8 to 70	45.00	55.00	50.00	0.0010	2.50	0.0000	0.0001	0.0002
miscl 3/8" RET Cable From 8 to 70	35.00	45.00	40.00	0.0010	1.60	0.0000	0.0001	0.0002
miscl 3/8" RET Cable From 8 to 70	25.00	35.00	30.00	0.0010	0.90	0.0000	0.0000	0.0002
miscl 3/8" RET Cable From 8 to 70	15.00	25.00	20.00	0.0010	0.40	0.0000	0.0000	0.0002
miscl 3/8" RET Cable From 8 to 70	8.00	15.00	11.50	0.0007	0.09	0.0000	0.0000	0.0001
(3) miscl 2" Rigid Conduit From 8 to 70	65.00	70.00	67.50	0.0420	191.36	0.0032	0.0105	0.0071
(3) miscl 2" Rigid Conduit From 8 to 70	55.00	65.00	60.00	0.0840	302.40	0.0051	0.0166	0.0142
(3) miscl 2" Rigid Conduit From 8 to 70	45.00	55.00	50.00	0.0840	210.00	0.0035	0.0116	0.0142
(3) miscl 2" Rigid Conduit From 8 to 70	35.00	45.00	40.00	0.0840	134.40	0.0023	0.0074	0.0142
(3) miscl 2" Rigid Conduit From 8 to 70	25.00	35.00	30.00	0.0840	75.60	0.0013	0.0042	0.0142
(3) miscl 2" Rigid Conduit From 8 to 70	15.00	25.00	20.00	0.0840	33.60	0.0006	0.0018	0.0142
(3) miscl 2" Rigid Conduit From 8 to 70	8.00	15.00	11.50	0.0588	7.78	0.0001	0.0004	0.0099
18 PAIR From 8 to 70	65.00	70.00	67.50	0.0004	1.82	0.0000	0.0001	0.0001
18 PAIR From 8 to 70	55.00	65.00	60.00	0.0008	2.88	0.0000	0.0002	0.0001
18 PAIR From 8 to 70	45.00	55.00	50.00	0.0008	2.00	0.0000	0.0001	0.0001
18 PAIR From 8 to 70	35.00	45.00	40.00	0.0008	1.28	0.0000	0.0001	0.0001
18 PAIR From 8 to 70	25.00	35.00	30.00	0.0008	0.72	0.0000	0.0000	0.0001
18 PAIR From 8 to 70	15.00	25.00	20.00	0.0008	0.32	0.0000	0.0000	0.0001
18 PAIR From 8 to 70	8.00	15.00	11.50	0.0006	0.07	0.0000	0.0000	0.0001
(4) #6 AWG From 8 to 70	65.00	70.00	67.50	0.0182	83.11	0.0014	0.0046	0.0031
(4) #6 AWG From 8 to 70	55.00	65.00	60.00	0.0365	131.33	0.0022	0.0072	0.0062
(4) #6 AWG From 8 to 70	45.00	55.00	50.00	0.0365	91.20	0.0015	0.0050	0.0062
(4) #6 AWG From 8 to 70	35.00	45.00	40.00	0.0365	58.37	0.0010	0.0032	0.0062
(4) #6 AWG From 8 to 70	25.00	35.00	30.00	0.0365	32.83	0.0006	0.0018	0.0062

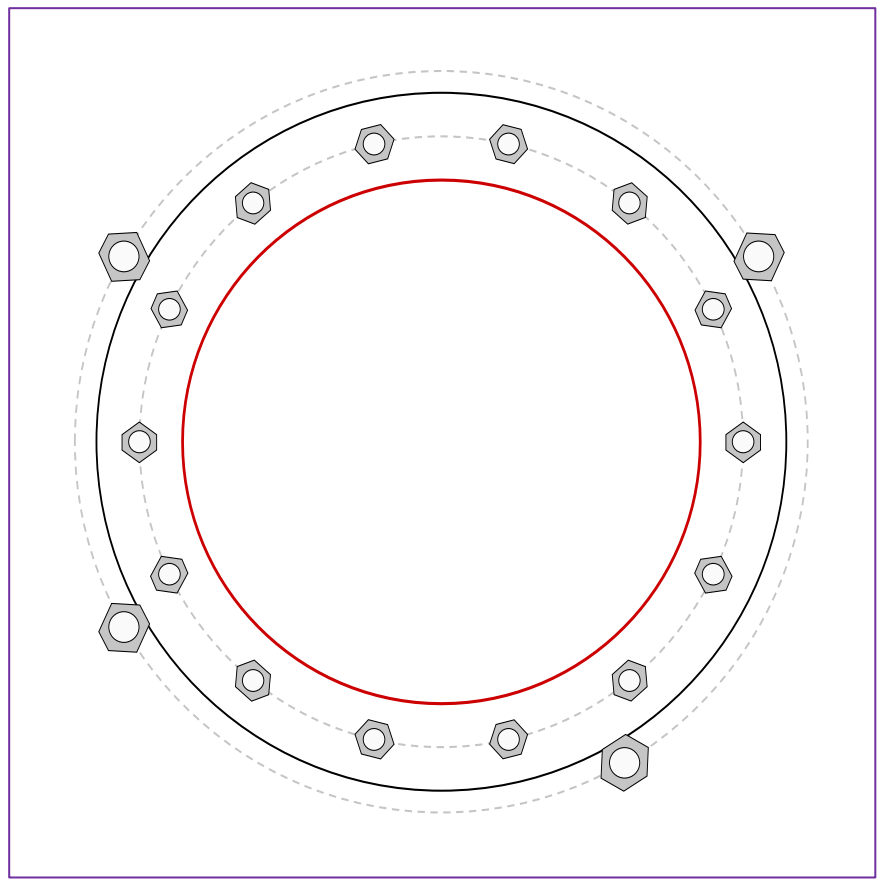
(4) #6 AWG From 8 to 70	15.00	25.00	20.00	0.0365	14.59	0.0002	0.0008	0.0062
(4) #6 AWG From 8 to 70	8.00	15.00	11.50	0.0255	3.38	0.0001	0.0002	0.0043
(4) #8 AWG From 8 to 70	65.00	70.00	67.50	0.0117	53.22	0.0009	0.0029	0.0020
(4) #8 AWG From 8 to 70	55.00	65.00	60.00	0.0234	84.10	0.0014	0.0046	0.0040
(4) #8 AWG From 8 to 70	45.00	55.00	50.00	0.0234	58.40	0.0010	0.0032	0.0040
(4) #8 AWG From 8 to 70	35.00	45.00	40.00	0.0234	37.38	0.0006	0.0021	0.0040
(4) #8 AWG From 8 to 70	25.00	35.00	30.00	0.0234	21.02	0.0004	0.0012	0.0040
(4) #8 AWG From 8 to 70	15.00	25.00	20.00	0.0234	9.34	0.0002	0.0005	0.0040
(4) #8 AWG From 8 to 70	8.00	15.00	11.50	0.0164	2.16	0.0000	0.0001	0.0028
24 PAIR From 8 to 70	65.00	70.00	67.50	0.0003	1.14	0.0000	0.0001	0.0000
24 PAIR From 8 to 70	55.00	65.00	60.00	0.0005	1.80	0.0000	0.0001	0.0001
24 PAIR From 8 to 70	45.00	55.00	50.00	0.0005	1.25	0.0000	0.0001	0.0001
24 PAIR From 8 to 70	35.00	45.00	40.00	0.0005	0.80	0.0000	0.0000	0.0001
24 PAIR From 8 to 70	25.00	35.00	30.00	0.0005	0.45	0.0000	0.0000	0.0001
24 PAIR From 8 to 70	15.00	25.00	20.00	0.0005	0.20	0.0000	0.0000	0.0001
24 PAIR From 8 to 70	8.00	15.00	11.50	0.0004	0.05	0.0000	0.0000	0.0001
(6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70	65.00	70.00	67.50	0.0198	90.21	0.0015	0.0050	0.0033
(6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70	55.00	65.00	60.00	0.0396	142.56	0.0024	0.0078	0.0067
(6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70	45.00	55.00	50.00	0.0396	99.00	0.0017	0.0054	0.0067
(6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70	35.00	45.00	40.00	0.0396	63.36	0.0011	0.0035	0.0067
(6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70	25.00	35.00	30.00	0.0396	35.64	0.0006	0.0020	0.0067
(6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70	15.00	25.00	20.00	0.0396	15.84	0.0003	0.0009	0.0067
(6) andrew (cci) LDF6-50A (1-1/4 FOAM) From 8 to 70	8.00	15.00	11.50	0.0277	3.67	0.0001	0.0002	0.0047
			Sum	2.8939	3873.82			

Monopole Base Plate Connection - Seismic

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	See Custom Sheet
l_{ar} (in)	See Custom Sheet

Applied Loads	
Moment (kip-ft)	252.00
Axial Force (kips)	25.00
Shear Force (kips)	3.28

**1.5 Overstrength Factor Applied*



Connection Properties

Anchor Rod Data

GROUP 1: (14) 1-1/4" ø bolts (F1554-105 N; Fy=105 ksi, Fu=125 ksi) on 35" BC

GROUP 2: (4) 1-3/4" ø bolts (A193 Gr. B7 N; Fy=105 ksi, Fu=125 ksi) on 42.5" BC

pos. (deg): 30, 150, 210, 300

Base Plate Data

40" OD x 1.25" Plate (A572-50; Fy=50 ksi, Fu=65 ksi)

Stiffener Data

N/A

Pole Data

30.0288" x 0.4625" 12-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

GROUP 1:		
Pu_t = 22.65	ϕPn_t = 90.84	**Stress Rating**
Vu = 0.35	ϕVn = 57.52	**24.9%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_t = 48.8	ϕPn_t = 178.13	**Stress Rating**
Vu = 0	ϕVn = 112.75	**27.4%**
Mu = 0	ϕMn = 84.41	**Pass**

Base Plate Summary

Max Stress (ksi):	9.7	(Flexural)
Allowable Stress (ksi):	45	
Stress Rating:	**21.6%**	**Pass**

verizon

APPLICANT SITE NAME:
WY3 SUMMIT

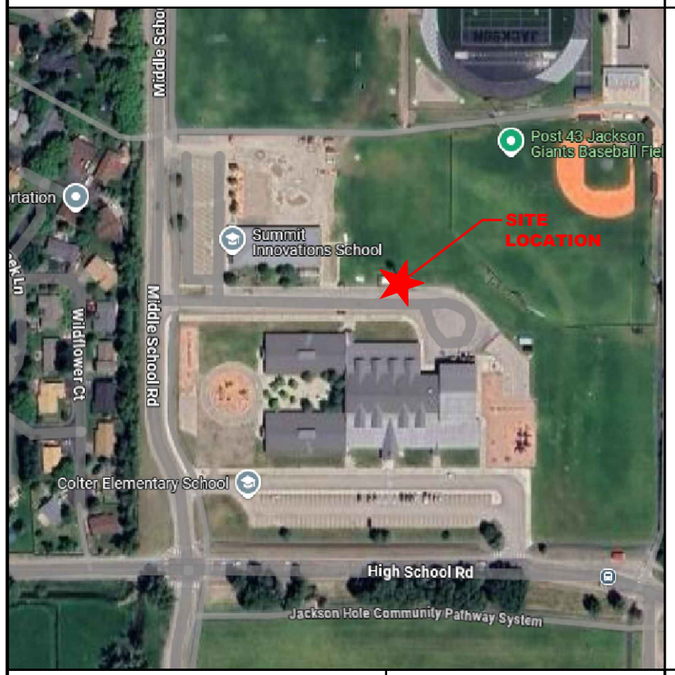
MDG LOCATION ID:
5000182326

APPLICANT PROJECT #:
17120426

PROJECT:
5G ANTENNA MOD

DRAWING DESCRIPTION:
FINAL CD

AERIAL MAP



SITE INFORMATION

PROJECT: 5G ANTENNA MOD

CELL SITE NAME: WY3 SUMMIT

CELL SITE ADDRESS: 1855 HIGH SCHOOL RD
JACKSON, WY
83001

LESSOR: STATE OF WYOMING
1855 HIGH SCHOOL RD
JACKSON, WY
83001

CONTACT: CONTACT
PHONE: (000) 000-0000

TOWER INFORMATION:

LATITUDE:	43° 27' 35.32" N (NAD 83)
LONGITUDE:	110° 48' 6.540" W (NAD 83)
GROUND ELEV:	6132.0' AMSL
OVERALL STRUCTURE HT:	90'-0" AGL
TOWER HEIGHT:	85'-0" AGL
TOWER TYPE:	MONOPOLE
APPLICANT CL:	84'-0" AGL

CONTACT: NETWORK REAL ESTATE MANAGER
PHONE: (913) 344-2896 (VERIZON WIRELESS)

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT: HTTPS://PMI.VZWSMART.COM

SMART TOOL VENDOR PROJECT NUMBER: 10258453

VZW LOCATION CODE: 5000182326

*** PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT

MOUNT REPLACEMENT REQUIRED: NO

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VZW SMART KIT APPROVED VENDORS

CONTRACTOR – SHALL REVIEW SPECIFIC SITE PMI REQUIREMENTS UPON AWARD.

CONTRACTOR – NOTIFY COLLIER ENGINEERING & DESIGN UPON COMPLETION OF PMI BY SENDING AN EMAIL TO THE FOLLOWING EMAIL ADDRESS: PMISUPPORT@COLLIERSENG.COM

DRAWING INDEX

SHEET NO.	SHEET DESCRIPTION	DISC.
T-1.0	TITLE SHEET	C
A-1.0	SITE PLAN	C
A-2.0	TOWER ELEVATIONS	C
A-3.0	EXISTING ANTENNA SCHEDULE	C
A-3.1	PROPOSED ANTENNA SCHEDULE	C
A-4.0	RF DIAGRAM	C
A-5.0	EQUIPMENT DETAILS	C
GN-1.0	GENERAL NOTES	C

SITE LOCATION QR CODE

CONSULTING TEAM

ENGINEERING:
SSC, INC.
7171 WEST 95TH STREET, SUITE 600
OVERLAND PARK, KANSAS 66212
PHONE: (913) 438-7700
FAX: (913) 438-7777
SSC SITE ID: SSC-23397
PROJECT ID: P-036731

CLIENT MANAGER:
JEFF KONKEL

A&E PROJECT MANAGER:
TYSEN WEISHAAR

LEAD ENGINEER:
KEVIN VANMAELE

LEAD ELECTRICAL:
SHELTON KEISLING

JURISDICTION COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE
2. INTERNATIONAL MECHANICAL CODE
3. ANSI/TIA-222 STRUCTURAL STANDARD
4. NFPA 780 – LIGHTNING PROTECTION CODE
5. NATIONAL ELECTRICAL CODE

811 Know what's below. Call before you dig. www.call811.com

THE UTILITIES AS SHOWN ON THIS SET OF DRAWINGS WERE DEVELOPED FROM THE INFORMATION AVAILABLE. THE INFORMATION PROVIDED IS NOT IMPLIED NOR INTENDED TO BE THE COMPLETE INVENTORY OF UTILITIES IN THIS AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES (WHETHER SHOWN OR NOT) AND PROTECT SAID UTILITIES FROM ANY DAMAGE CAUSED BY CONTRACTOR'S ACTIVITIES.

PROJECT INFORMATION:
INSTALL COMMUNICATIONS EQUIPMENT & MODIFY ANTENNA CONFIGURATION ON TOWER.

STAMP:
Professional Engineer
KEVIN M. VANMAELE
5217
Date 6/16/2025
WYOMING
DocuSigned by:
01D4823916EA469...

ENGINEERING LICENSE:
STATE OF WYOMING
CERTIFICATE OF AUTHORIZATION # E-2756

ENGINEER:		PE#:	DISCIPLINE:	
KMV	KEVIN M. VANMAELE	PE 5217	CIVIL	C
SDK	SHELTON D. KEISLING	PE 19515	ELECTRICAL	E
DJW	DAVID J. WALDRON	PE 21170	ELECTRICAL	E
TMS	TERRANCE M. SUPER	PE 10603	ELECTRICAL	E

PLANS PREPARED FOR: verizon

PLANS PREPARED BY: SSC

DRAWING NOTICE:

SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	06/02/25	DSL	A
ISSUED FOR CONSTRUCTION	06/16/25	DSL	0

APPLICANT SITE NAME: WY3 SUMMIT

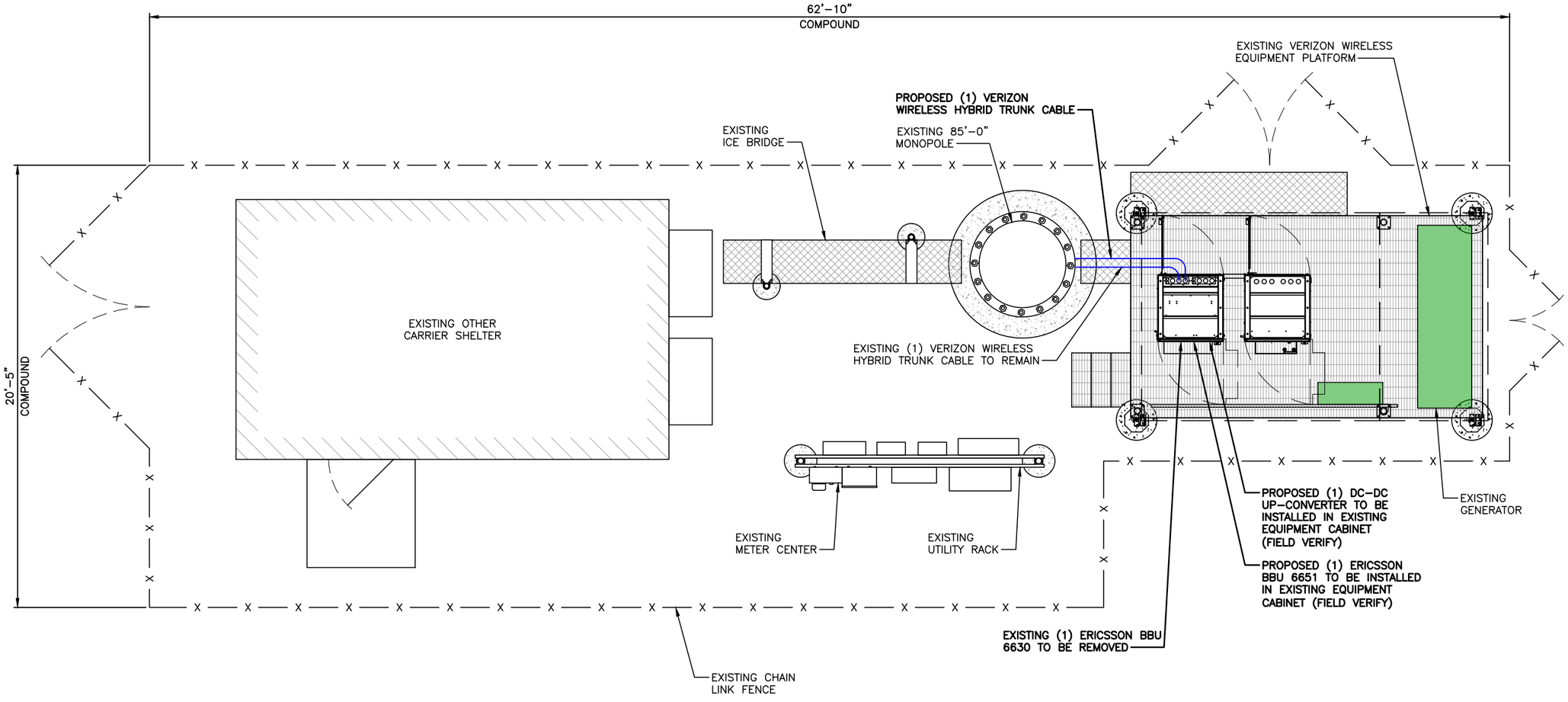
APPLICANT LOCATION CODE: 5000182326

SITE ADDRESS: 1855 HIGH SCHOOL RD
JACKSON, WY 83001

SHEET DESCRIPTION: TITLE SHEET

SHEET #: T-1.0

NEW VZW UTILITY EASEMENT
ACCESS/UTILITY EASEMENT
VZW LANDSPACE
PENETRATIONS
RRH/BBU
ANTENNAS
FIBER
POWER/ GROUNDING
HYBRID & COAX CABLES



SITE PLAN

1

STAMP:

Professional Engineer
KEVIN M. VANMAELE
5217
WYOMING
Date 6/16/2025
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01D4823916EA469...

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PLANS PREPARED FOR:

verizon

PLANS PREPARED BY:

SSC

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WY3 SUMMIT

APPLICANT LOCATION CODE:

5000182326

SITE ADDRESS:

1855 HIGH SCHOOL RD
JACKSON, WY 83001

SHEET DESCRIPTION:

SITE PLAN

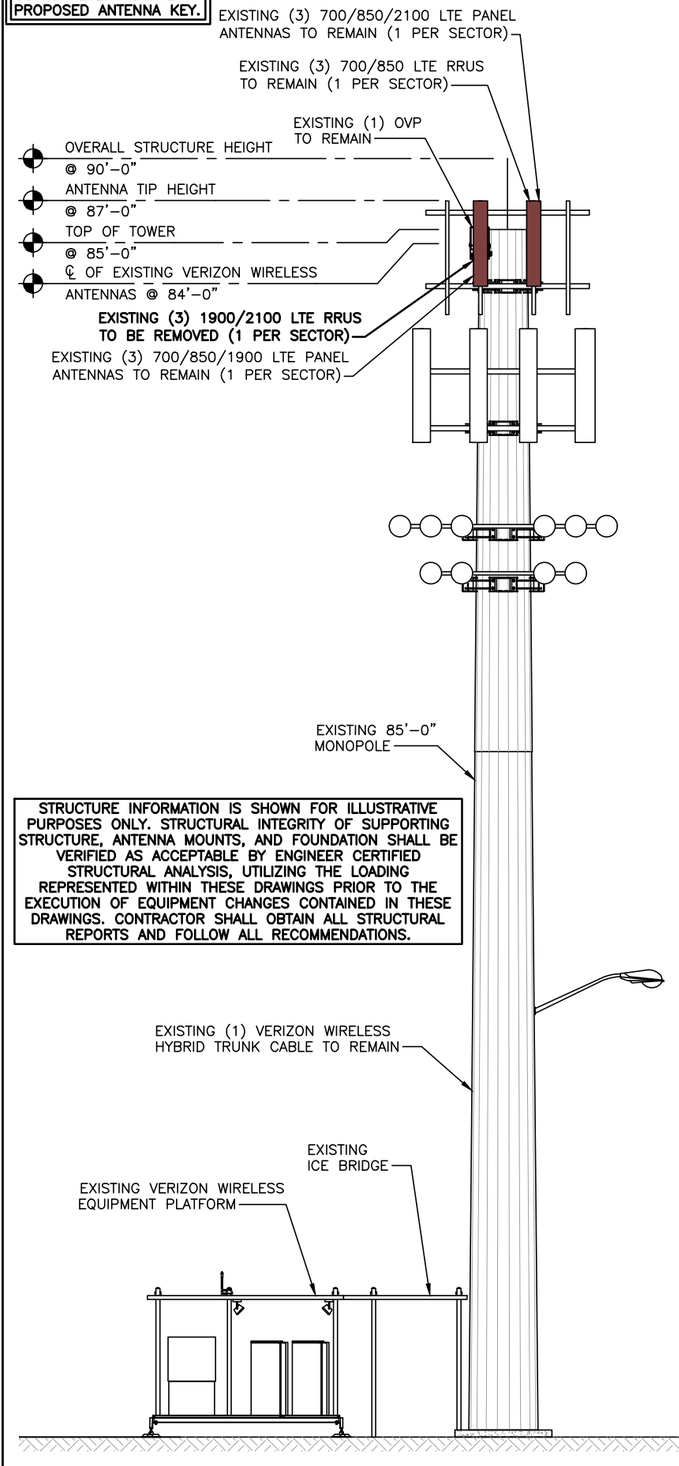
SHEET #:

A-1.0

PHOTO OF EXISTING TOWER | 3

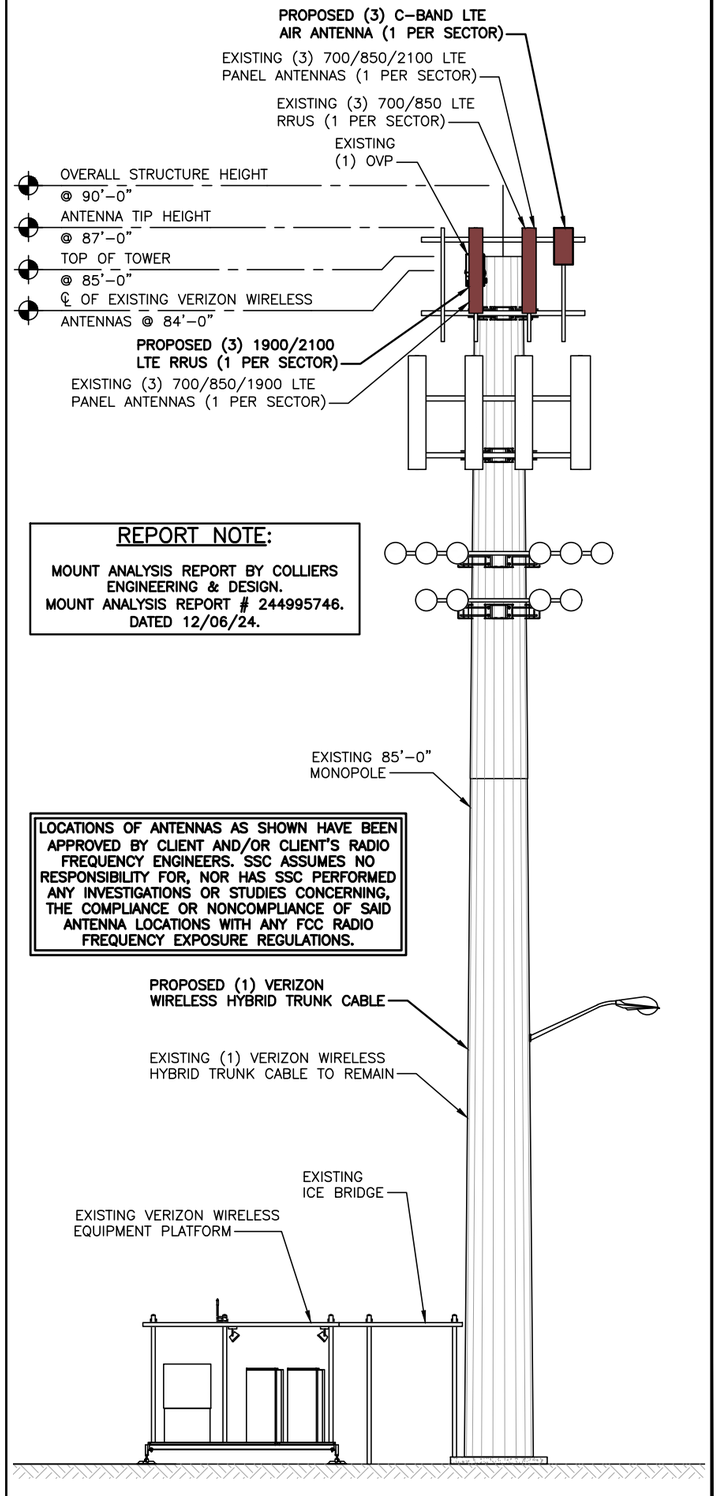
NOTE:

GC TO REFER TO THE PROPOSED ANTENNA KEY.



STRUCTURE INFORMATION IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. STRUCTURAL INTEGRITY OF SUPPORTING STRUCTURE, ANTENNA MOUNTS, AND FOUNDATION SHALL BE VERIFIED AS ACCEPTABLE BY ENGINEER CERTIFIED STRUCTURAL ANALYSIS, UTILIZING THE LOADING REPRESENTED WITHIN THESE DRAWINGS PRIOR TO THE EXECUTION OF EQUIPMENT CHANGES CONTAINED IN THESE DRAWINGS. CONTRACTOR SHALL OBTAIN ALL STRUCTURAL REPORTS AND FOLLOW ALL RECOMMENDATIONS.

EXISTING TOWER ELEVATION | 2



REPORT NOTE:

MOUNT ANALYSIS REPORT BY COLLIERS ENGINEERING & DESIGN.
MOUNT ANALYSIS REPORT # 244995746.
DATED 12/06/24.

LOCATIONS OF ANTENNAS AS SHOWN HAVE BEEN APPROVED BY CLIENT AND/OR CLIENT'S RADIO FREQUENCY ENGINEERS. SSC ASSUMES NO RESPONSIBILITY FOR, NOR HAS SSC PERFORMED ANY INVESTIGATIONS OR STUDIES CONCERNING, THE COMPLIANCE OR NONCOMPLIANCE OF SAID ANTENNA LOCATIONS WITH ANY FCC RADIO FREQUENCY EXPOSURE REGULATIONS.

PROPOSED TOWER ELEVATION | 1

STAMP:

ENGINEERING LICENSE:

STATE OF WYOMING

CERTIFICATE OF AUTHORIZATION # E-2756

ENGINEER:		PE#:	DISCIPLINE:	
KMV	KEVIN M. VANMAELE	PE 5217	CIVIL	C
SDK	SHELTON D. KEISLING	PE 19515	ELECTRICAL	E
DJW	DAVID J. WALDRON	PE 21170	ELECTRICAL	E
TMS	TERRANCE M. SUPER	PE 10603	ELECTRICAL	E

PLANS PREPARED FOR:

verizon

PLANS PREPARED BY:

SSC

DRAWING NOTICE:

SUBMITTALS:

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ISSUED FOR CONSTRUCTION	06/16/25	DSL	0

APPLICANT SITE NAME:

WY3 SUMMIT

APPLICANT LOCATION CODE:

5000182326

SITE ADDRESS:

1855 HIGH SCHOOL RD
JACKSON, WY 83001

SHEET DESCRIPTION:

TOWER ELEVATIONS

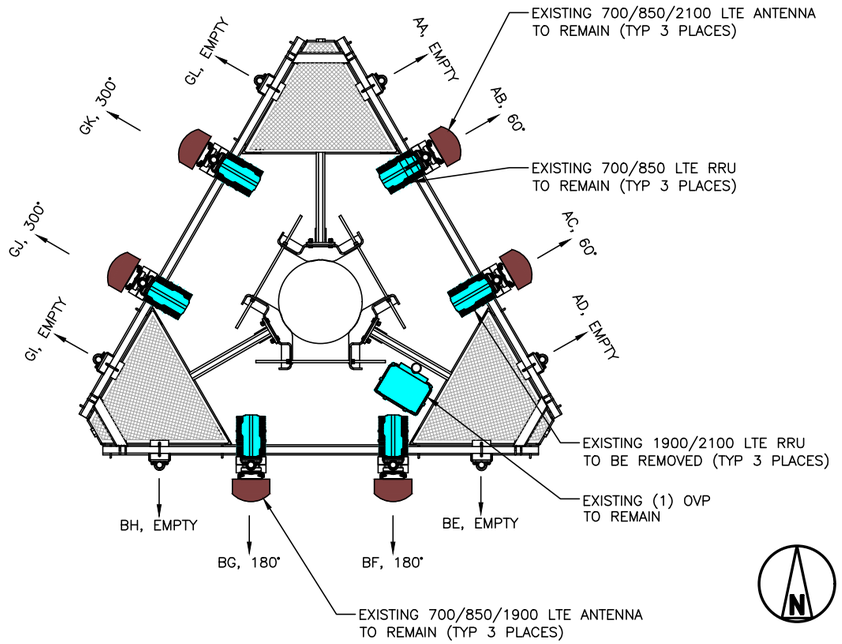
SHEET #:

A-2.0

EXISTING ANTENNA KEY

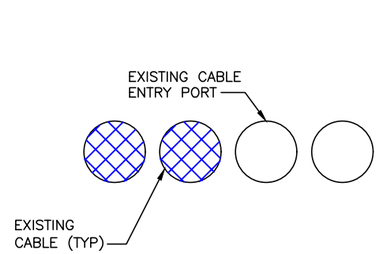
	Position	Status	Antenna Centerline (ft AGL)	Antenna Make / Model	Antenna Count	Height (in)	Width (in)	Depth (in)	Weight (lbs)	Azimuth	Mech Downtilt	Electrical Downtilt	Coax Make/Model	Coax Count	Coax Size	Coax Length	RRU Make/Model	RRU Count	OVP Box Make/Model	OVP Count	Hybrid Cable Make/Model	Hybrid Cable Count	Hybrid Cable Size	Hybrid Cable Length	Hybrid Jumper Count	RF Jumper Count
Mainline Cable & OVP																			RAYCAP/RHSDC-6627-PF-48	1	6x12	1				
Alpha Sector	A	empty																								
	B	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	60	0	3					ERICSSON/4449	1							1	6
	C	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	60	0	3					ERICSSON/8843	1							1	6
	D	empty																								
Beta Sector	E	empty																								
	F	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	180	0	6					ERICSSON/4449	1							1	6
	G	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	180	0	6					ERICSSON/8843	1							1	6
	H	empty																								
Gamma Sector	I	empty																								
	J	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	300	0	4					ERICSSON/4449	1							1	6
	K	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	300	0	4					ERICSSON/8843	1							1	6
	L	empty																								
				Antenna Total	**6**								**Coax Total**	**0**			**RRU Total**	**6**	**OVP Box Total**	**1**	**Hybrid Cable Total**	**1**	**Jumper Totals**		**6**	**36**

EXISTING ANTENNA SCHEDULE | 1



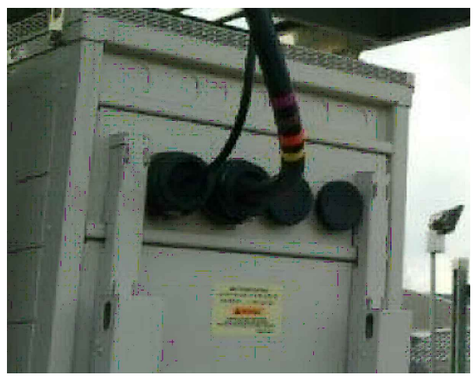
0° = TRUE NORTH

EXISTING ANTENNA LAYOUT | 3



PORT IN USE

PORT AVAILABLE



EXISTING CABLE ENTRY PORT | 2

STAMP:

ENGINEERING LICENSE:

STATE OF WYOMING

CERTIFICATE OF AUTHORIZATION # E-2756

ENGINEER:	PE#:	DISCIPLINE:	
KMV KEVIN M. VANMAELE	PE 5217	CIVIL	C
SDK SHELTON D. KEISLING	PE 19515	ELECTRICAL	E
DJW DAVID J. WALDRON	PE 21170	ELECTRICAL	E
TMS TERRANCE M. SUPER	PE 10603	ELECTRICAL	E

PLANS PREPARED FOR: verizon

PLANS PREPARED BY: SSC

DRAWING NOTICE:

SUBMITTALS:

DESCRIPTION	DATE	BY	REV
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ISSUED FOR CONSTRUCTION	06/16/25	DSL	0

APPLICANT SITE NAME:

WY3 SUMMIT

APPLICANT LOCATION CODE:

5000182326

SITE ADDRESS:

1855 HIGH SCHOOL RD
JACKSON, WY 83001

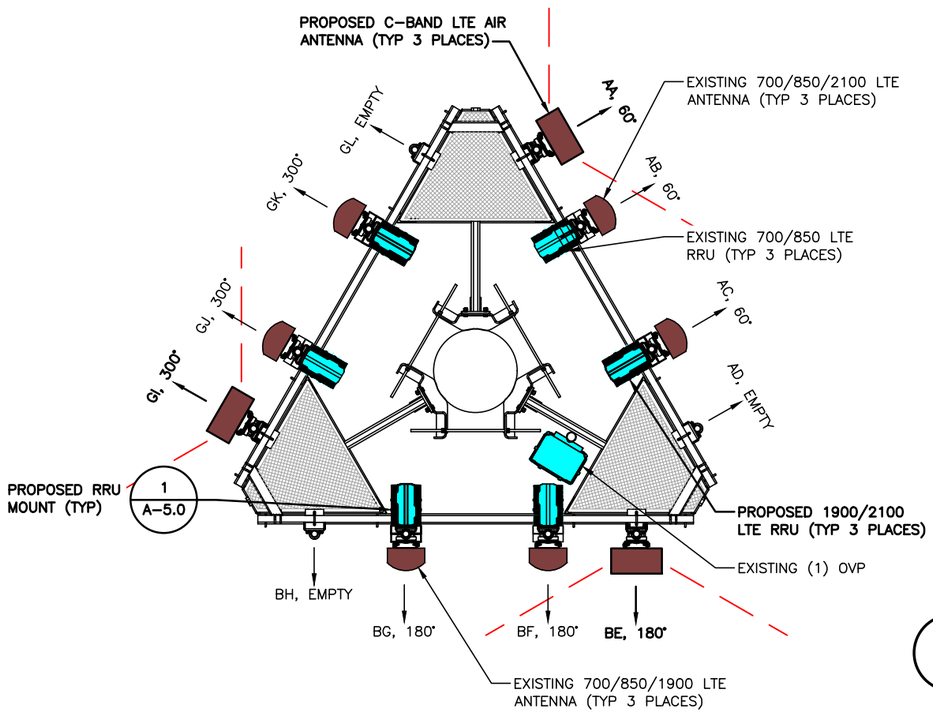
SHEET DESCRIPTION: EXISTING ANTENNA SCHEDULE

SHEET #: A-3.0

PROPOSED ANTENNA KEY

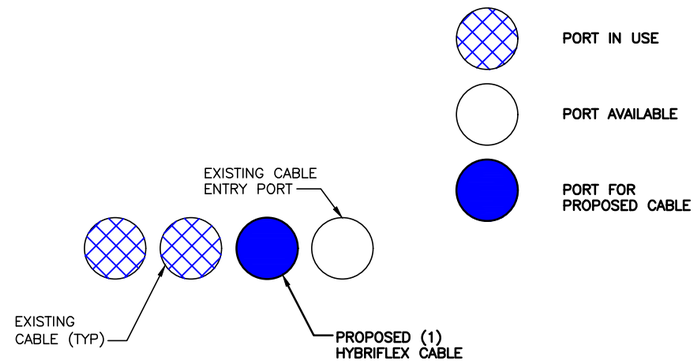
	Position	Status	Antenna Centerline (ft AGL)	Antenna Make / Model	Antenna Count	Height (in)	Width (in)	Depth (in)	Weight (lbs)	Azimuth	Mech Downtilt	Electrical Downtilt	Coax Make/Model	Coax Count	Coax Size	Coax Length	RRU Make/Model	RRU Count	OVP Box Make/Model	OVP Count	Hybrid Cable Make/Model	Hybrid Cable Count	Hybrid Cable Size	Hybrid Cable Length	Hybrid Jumper Count	RF Jumper Count
Mainline Cable & OVP																			RAYCAP/RHSDC-6627-PF-48	1	6x12	2				
Alpha Sector	A	proposed	85.8	ERICSSON/AIR6419	1	28.3	16.1	8	71	60	0	3													1	
	B	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	60	0	3					ERICSSON/4449	1							1	6
	C	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	60	0	3					ERICSSON/4890	1							1	6
	D	empty																								
Beta Sector	E	proposed	85.8	ERICSSON/AIR6419	1	28.3	16.1	8	71	180	0	3													1	
	F	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	180	0	6					ERICSSON/4449	1							1	6
	G	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	180	0	6					ERICSSON/4890	1							1	6
	H	empty																								
Gamma Sector	I	proposed	85.8	ERICSSON/AIR6419	1	28.3	16.1	8	71	300	0	3													1	
	J	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	300	0	4					ERICSSON/4449	1							1	6
	K	existing	84	COMMSCOPE/NHH-65B-R2B	1	71.969	11.85	7.087	43.651	300	0	4					ERICSSON/4890	1							1	6
	L	empty																								
				Antenna Total	**9**								**Coax Total**	**0**			**RRU Total**	**6**	**OVP Box Total**	**1**	**Hybrid Cable Total**	**2**	**Jumper Totals**		**9**	**36**

PROPOSED ANTENNA SCHEDULE 1



0° = TRUE NORTH

PROPOSED ANTENNA LAYOUT 3



NOTE:
GC TO REFER TO THE PROPOSED ANTENNA KEY.

PROPOSED CABLE ENTRY PORT 2

STAMP:
Professional Engineer
KEVIN M. VANMAELE
5217
WYOMING
Date 6/16/2025
DocuSigned by:
01D4823916EA469...

ENGINEERING LICENSE:
STATE OF WYOMING
CERTIFICATE OF AUTHORIZATION # E-2756

ENGINEER:	PE#:	DISCIPLINE:	
KMV KEVIN M. VANMAELE	PE 5217	CIVIL	C
SDK SHELTON D. KEISLING	PE 19515	ELECTRICAL	E
DJW DAVID J. WALDRON	PE 21170	ELECTRICAL	E
TMS TERRANCE M. SUPER	PE 10603	ELECTRICAL	E

PLANS PREPARED FOR:
verizon

PLANS PREPARED BY:
SSC

DRAWING NOTICE:

SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	06/02/25	DSL	A
ISSUED FOR CONSTRUCTION	06/16/25	DSL	0

APPLICANT SITE NAME:
WY3 SUMMIT

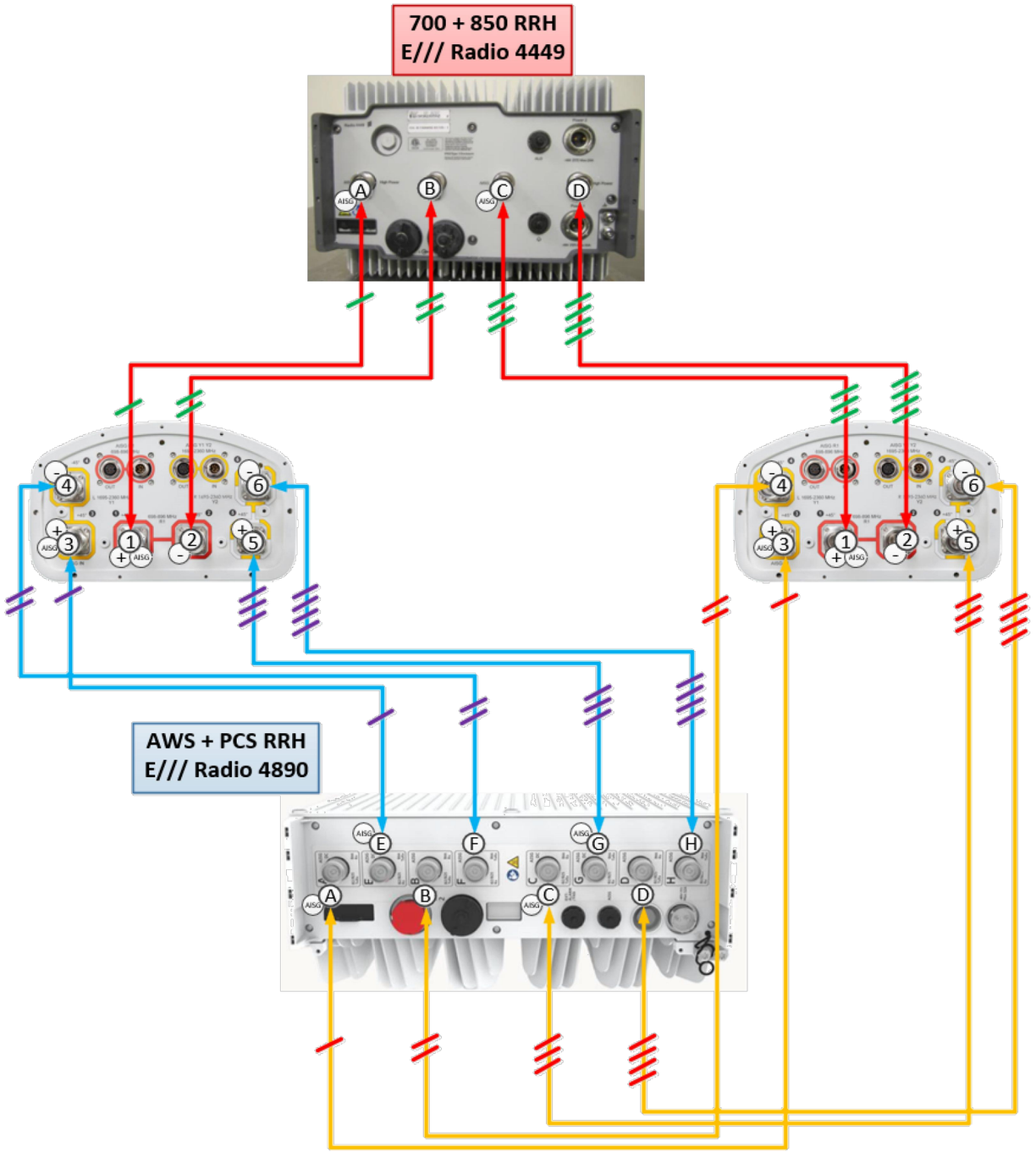
APPLICANT LOCATION CODE:
5000182326

SITE ADDRESS:
1855 HIGH SCHOOL RD
JACKSON, WY 83001

SHEET DESCRIPTION:
PROPOSED ANTENNA SCHEDULE

SHEET #:
A-3.1

Andrew NHH-65A/B/C-R2B
2x 6-Port Antennas + 1 4449 + 1 4890



NOTE:
DETAIL PROVIDED BY APPLICANT & REPRODUCED ON THIS SHEET AS REQUESTED BY APPLICANT.

RF DIAGRAM | 1

STAMP:
Professional Engineer
KEVIN M. VANMAELE
5217
WYOMING
Date 6/16/2025
DocuSigned by:
01D4B2316EA469...

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STATE OF WYOMING
CERTIFICATE OF AUTHORIZATION # E-2756

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TMS	TERRANCE M. SUPER	PE 10603	ELECTRICAL	E

PLANS PREPARED FOR:
verizon

PLANS PREPARED BY:
SSC

DRAWING NOTICE:
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APPLICANT SITE NAME:
WY3 SUMMIT

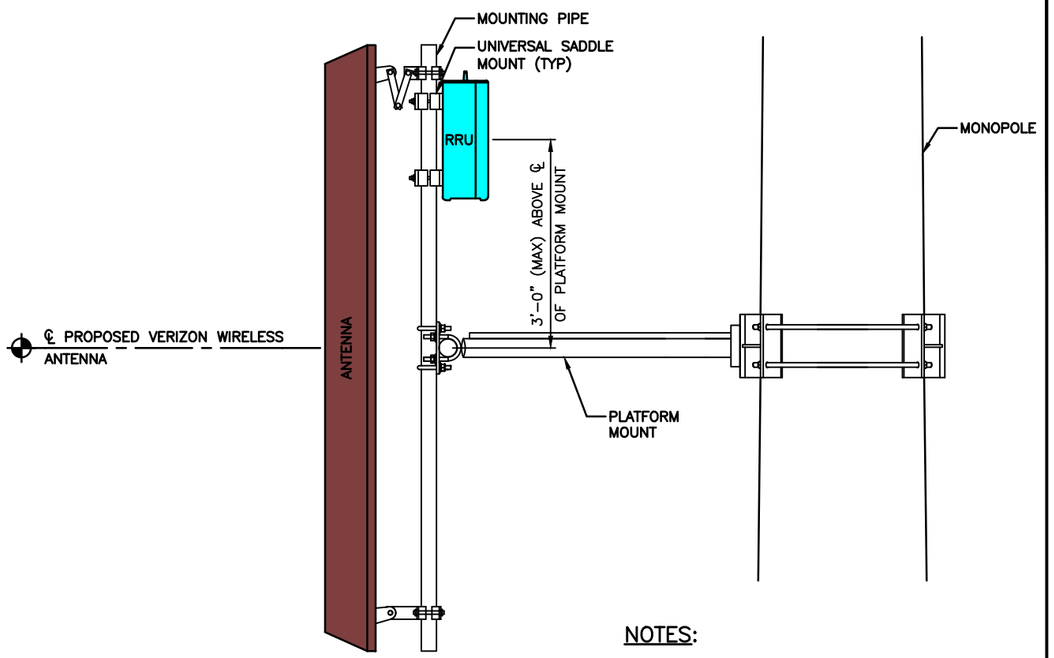
APPLICANT LOCATION CODE:
5000182326

SITE ADDRESS:
1855 HIGH SCHOOL RD
JACKSON, WY 83001

SHEET DESCRIPTION:
RF DIAGRAM

SHEET #:
A-4.0

DETAIL NOT USED | 3

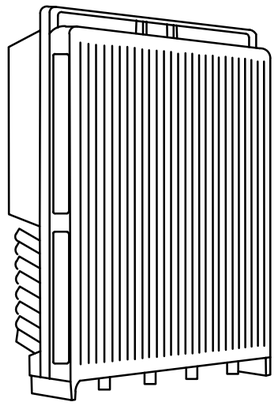


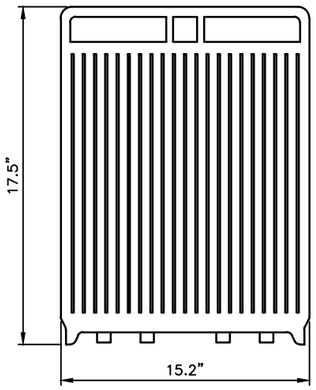
NOTES:

1. UPPER RAIL OMITTED FOR CLARITY.
2. SEE A-3.1 DETAIL 3 FOR UNIT LOCATIONS.

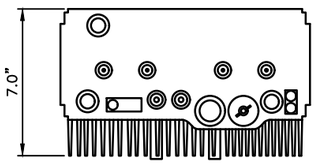
RRU MOUNTING DETAIL | 1

DETAIL NOT USED | 4





FRONT



BOTTOM

NOTE:

CONTRACTOR SHALL INSTALL RRU WITH MOUNTING INSTRUCTIONS PER MANUFACTURER'S SPECIFICATION.

SPECIFICATIONS:

VENDOR:	ERICSSON
MODEL#:	4890
DIMENSIONS (HxWxD):	17.5" x 15.2" x 7.0"
WEIGHT:	69.5 LBS

ERICSSON 4890 RRU DETAIL | 2

STAMP:

Professional Engineer
KEVIN M. VANMAELE
5217
WYOMING
Date 6/16/2025
DocuSigned by:
01D48229916EA469...

ENGINEERING LICENSE:

STATE OF WYOMING

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PLANS PREPARED FOR:

verizon

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SSC

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APPLICANT SITE NAME:

WY3 SUMMIT

APPLICANT LOCATION CODE:

5000182326

SITE ADDRESS:

1855 HIGH SCHOOL RD
JACKSON, WY 83001

SHEET DESCRIPTION:

EQUIPMENT DETAILS

SHEET #:

A-5.0

SYMBOLS

SCHEMATIC SYMBOLS

- GROUND
- TRANSFORMER
- BREAKER (SIZED AS NOTED)
- METER (M)
- FUSED DISCONNECT SWITCH (SIZED AS NOTED)
- NON-FUSED DISCONNECT SWITCH (SIZED AS NOTED)
- AUTOMATIC TRANSFER SWITCH
- DUPLEX RECEPTACLE (120V)
- GENERATOR RECEPTACLE (240V, 1ϕ)
- CAM LOCK
- ENCLOSURE

COLOR LEGEND

HYBRID & COAX CABLES	
POWER/GROUNDING	
FIBER	
ANTENNAS	
RRH/BBU	
PENETRATIONS	
VZW LANDSPACE	
ACESS/UTILITY EASEMENT	
NEW VZW UTILITY EASEMENT	

ABBREVIATIONS

AGL	ABOVE GRADE LINE	GND	GROUND
AMP	AMPERE	HT	HEIGHT
ARCH	ARCHITECT	LF	LINEAL FOOT
BLDG	BUILDING	MIN/MAX	MINIMUM/MAXIMUM
℄	CENTERLINE	MISC	MISCELLANEOUS
CONC	CONCRETE	NTS	NOT TO SCALE
CONST	CONSTRUCTION	O.C.	ON CENTER
CONTR	CONTRACTOR	PL	PLATE
DET	DETAIL	REQ'D	REQUIRED
DIA (ø)	DIAMETER	SF	SQUARE FOOT
DIAG	DIAGONAL	SHT	SHEET
DIM	DIMENSION	SIM	SIMILAR
DN	DOWN	SPECS	SPECIFICATIONS
DWG	DRAWING	SSC, INC.	SELECTIVE SITE CONSULTANTS, INC.
EA	EACH	STD	STANDARD
ELEC	ELECTRICAL	STL	STEEL
ELEV	ELEVATOR, ELEVATION	STRUCT	STRUCTURAL
EQ	EQUAL	SW	SWITCH
EQUIP	EQUIPMENT	T.O.C.	TOP OF CONCRETE
EXIST	EXISTING	T.C.	TOP OF CURB
FND	FOUNDATION	T.O.P.	TOP OF PAVING
FTG	FOOTING	T.O.S.	TOP OF STEEL
GA	GAUGE	TYP	TYPICAL
GALV	GALVANIZED	UNO	UNLESS NOTED OTHERWISE

DETAIL CALLOUT

1 / – DETAIL NUMBER / SHEET REFERENCE*

SECTION CALLOUT

1 / – DETAIL NUMBER / SHEET REFERENCE*

* (–) INDICATES REFERENCED FROM SAME SHEET

PLAN SYMBOLS

- CONDUIT RUN ABOVE GRADE
- CONDUIT RUN BELOW GRADE
- CONDUIT CAP
- NEUTRAL CONDUCTOR
- HASH MARKS INDICATE NUMBER OF WIRES IN CONDUIT
- GROUND CONDUCTOR
- DISCONNECT SWITCH
- $3 LIGHT SWITCH (3) INDICATES 3-WAY SWITCH
- LIGHT FIXTURE (TYPE IN DRAWING)
- LIGHT FIXTURE (TYPE IN DRAWING)
- RECEPTACLE
  GFCI – GROUND FAULT CIRCUIT INTERRUPTER
  WP – WEATHERPROOF COVER

GROUNDING PLAN SYMBOLS

- GROUNDING CONDUCTOR ABOVE GROUND
- GROUNDING CONDUCTOR UNDER GROUND
- GROUND BAR
- GROUND BAR WITH COMPRESSION CONNECTION
- GROUND CONDUCTOR
- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- GROUND ROD
- INSPECTION/TEST WELL

EQUIPMENT FURNISHED AND/OR INSTALLED BY:

DESCRIPTION	FURNISHED	INSTALLED
ANCHOR BOLTS FOR TOWER	TOWER VENDOR	CONTRACTOR
ANTENNA MOUNTS	TOWER VENDOR	CONTRACTOR
ANTENNAS	VERIZON WIRELESS	CONTRACTOR
CABLE LADDER	TOWER VENDOR	CONTRACTOR
FEEDLINE CABLES	VERIZON WIRELESS	CONTRACTOR
CONNECTORS	CONTRACTOR	CONTRACTOR
ENTRY PORT BOOTS	CONTRACTOR	CONTRACTOR
GPS ANTENNA	VERIZON WIRELESS	CONTRACTOR
GROUND KITS	CONTRACTOR	CONTRACTOR
HANGAR KITS	CONTRACTOR	CONTRACTOR
ICE BRIDGE MATERIAL	CONTRACTOR	CONTRACTOR
RF JUMPRS (TOP)	CONTRACTOR	CONTRACTOR
EQUIPMENT	VERIZON WIRELESS	CONTRACTOR
EQUIPMENT PLATFORM/ CANOPY	VERIZON WIRELESS	CONTRACTOR
TOWER	VERIZON WIRELESS	CONTRACTOR
TOWER BUS BARS	TOWER VENDOR	CONTRACTOR
OVP'S	VERIZON WIRELESS	CONTRACTOR
RRU'S	VERIZON WIRELESS	CONTRACTOR

GENERAL NOTES

1. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK USING THEIR BEST SKILL AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
2. THE CONTRACTOR SHALL VISIT THE JOB SITE TO REVIEW THE SCOPE OF WORK AND EXISTING CONDITIONS INCLUDING, BUT NOT LIMITED TO, ELECTRICAL SERVICE AND OVERALL COORDINATION.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING THEIR BID. ANY DISCREPANCIES, CONFLICTS OR OMISSIONS, ETC. SHALL BE REPORTED TO VERIZON WIRELESS BEFORE PROCEEDING WITH THE WORK.
4. THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING CONSTRUCTION, STRUCTURE, OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF VERIZON WIRELESS, AT THE EXPENSE OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL SAFEGUARD THE OWNER'S PROPERTY DURING CONSTRUCTION AND SHALL REPLACE ANY DAMAGED PROPERTY OF THE OWNER TO ORIGINAL CONDITION.
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE JOB IS IN PROGRESS AND UNTIL THE JOB IS COMPLETE.
8. ALL CONSTRUCTION WORK SHALL CONFORM TO THE CODES LISTED IN THE CODE SUMMARY AND ALL APPLICABLE LOCAL REGULATIONS, ORDINANCES, STATUTES & CODES.
9. VERIZON WIRELESS SHALL OBTAIN THE CONSTRUCTION PERMIT. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, LICENSES AND INSPECTIONS NECESSARY FOR PERFORMANCE OF THE WORK AND INCLUDE THOSE IN THE COST OF THE WORK TO THE OWNER.
10. CITY APPROVED PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKERS. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF JOB SUPERINTENDENT.
11. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A:10-B:C WITHIN 75'-0" OF TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILD OUT AREA DURING CONSTRUCTION.
12. ANY CONNECTION FEES FOR ELECTRICAL SERVICE SHALL BE PAID BY THE CONTRACTOR.
13. CABLING NOTE: FOLLOW HYBRIFLEX MANUFACTURER'S RECOMMENDATIONS FOR HOISTING CABLE. VERIZON WIRELESS HAS REPORTED THAT HOIST GRIPS MUST BE USED EVERY 200'-0" OF CABLE.

DESCRIPTION OF PROPOSED SITE USE:

THE CONSTRUCTION OF THIS COMMUNICATION TOWER SITE IS FOR THE TRANSMISSION AND RECEPTION OF CALLS FOR A NEW WIRELESS TELEPHONE SYSTEM. NO FLAMMABLE PRODUCTS OR CHEMICALS WILL BE USED OR STORED INSIDE THE SHELTER.

GENERAL NOTES:

1. ANTENNAS SHALL BE DESIGNATED FROM RIGHT TO LEFT, FACING THE ASSEMBLY FROM THE GROUND. LEFT TO RIGHT FACING THE BACK OF THE ANTENNA.
2. THE OUTER MOST ANTENNAS ON EACH FACE SHALL BE DESIGNATED AS THE RECEIVER ANTENNAS. THE INNER ANTENNAS SHALL BE DESIGNATED AS THE TRANSMIT ANTENNAS.
3. EACH TRANSMISSION LINE SHALL BE LABELED WITH BRASS "TOE TAGS" (GRAINGER PART# 1F035-8) STAMPED WITH 1/4" LETTERS/NUMBERS STAMPS (GRAINGER PART# 3W639). THE LABELS SHALL BE ATTACHED WITH A SEMIPERMANENT METHOD (I.E. BLACK UV RESISTANT CABLE TIES). THE TAGS SHALL BE PLACED SO AS NOT TO COME IN CONTACT WITH THE CONNECTOR ON THE LINE AND THE METAL OF THE TOWER. LINES SHALL BE LABELED AT THE TOP, BOTTOM AT ENTRY PORT.
4. EACH LINE SHALL ALSO BE LABELED AT THE LIGHTING/SURGE PROTECTOR MOUNTING PLATE WITH A PRINTABLE LABEL MAKER TO INDICATE LINE NUMBER AND FUNCTION, THE SAME AS THE TOE TAG.
5. THE TAG LABELING SHALL BE DESIGNATED IN THE ANTENNA KEY. FOR LUCENT USE A-ALPHA, B-BETA, AND G-GAMMA. FOR MOTOROLA USE X-ALPHA, Y-BETA, AND Z-GAMMA.
6. IN TWO-ANTENNA CONFIGURATION WHERE ONE ANTENNA WILL BE DUPLEXED, THE DUPLEXED ANTENNA SHALL BE LABELED AS RECEIVE.
7. CONTRACTOR SHALL FIELD VERIFY THE EXACT TMA'S (IF THEY ARE REQUIRED) PER THE OPERATIONS MANAGER.
8. FEEDLINE LENGTHS INDICATED ARE APPROXIMATE. CONTRACTOR TO VERIFY ACTUAL LENGTH BEFORE ORDERING.
9. CONTRACTOR SHALL INSTALL PLATFORM OR MOUNTING BRACKETS AND HARDWARE FOR ALL ANTENNAS AND SHALL BE PER THE TOWER MANUFACTURERS STANDARD DETAILS OR APPROVED EQUAL.
10. ALL ANTENNAS AND CABLES TO BE TAGGED WITH CARRIER ID.

STAMP:

Professional Engineer
KEVIN M. VANMAELE
5217
WYOMING
Date 6/16/2025
DocuSigned by:
01D48229I6EA469...

ENGINEERING LICENSE:
STATE OF WYOMING
CERTIFICATE OF AUTHORIZATION # E-2756

ENGINEER:		PE#:	DISCIPLINE:	
KMV	KEVIN M. VANMAELE	PE 5217	CIVIL	C
SDK	SHELTON D. KEISLING	PE 19515	ELECTRICAL	E
DJW	DAVID J. WALDRON	PE 21170	ELECTRICAL	E
TMS	TERRANCE M. SUPER	PE 10603	ELECTRICAL	E

PLANS PREPARED FOR: verizon

PLANS PREPARED BY: SSC

SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	06/02/25	DSL	A
ISSUED FOR CONSTRUCTION	06/16/25	DSL	0

APPLICANT SITE NAME: WY3 SUMMIT

APPLICANT LOCATION CODE: 5000182326

SITE ADDRESS: 1855 HIGH SCHOOL RD JACKSON, WY 83001

SHEET DESCRIPTION: GENERAL NOTES

SHEET #: GN-1.0