

## **BOARD OF APPEALS**

**February 15, 2023**

**County Administration Building, 100 W. Washington St., Meeting Room 2000, Hagerstown, at 6:00 p.m.**

### **AGENDA**

**DOCKET NO. AP2023-005:** An appeal was filed by Arcola Towers LLC for a variance from the required minimum setback distance equaling the total height (142 ft.) of the tower and equipment to 82 ft. from the east side of the property and a variance from the required distance equaling the height of the tower and equipment plus 200 ft. from the nearest part of any existing dwelling, school, church, or institution for human care to 265 ft. from the Longmeadow Volunteer Fire Company. The property is owned by K & S Longmeadow LLC and located at 19224 Longmeadow Road, Hagerstown, Zoned Industrial General.

**DOCKET NO. AP2023-006:** An appeal was filed by Bernard Keauver Jr. and Sondra Riggs for a special exception to establish a gunsmithing/gun repair shop as a resident business in an existing accessory structure on property owned by the appellants and located at 546 Prospect Hill Road, Knoxville, Zoned Environmental Conservation.

**DOCKET NO. AP2023-007:** An appeal was filed by Harmon Builders for a variance from the required 50 ft. rear yard setback to 47.8 ft. for the constructed single-family dwelling foundation on property owned by Sean & Jennifer Barrie and located at 1044 Harpers Ferry Road, Knoxville, Zoned Environmental Conservation.

**DOCKET NO. AP2023-008:** An appeal was filed by Gary Hoffman Jr. for a variance from the required 40 ft. front setback from the future right-of-way for the county road to 28 ft. for the constructed single family dwelling on property owned by the appellant and located at 1521 Hoffmaster Road, Knoxville, Zoned Environmental Conservation.

### **PROPOSED AMENDMENT TO THE BOARD OF APPEALS OF WASHINGTON COUNTY AMENDED RULES OF PROCEDURE**

\*\*\*\*\*

Pursuant to the Maryland Open Meetings Law, notice is hereby given that the deliberations of the Board of Zoning Appeals are open to the public. Furthermore, the Board, at its discretion, may render a decision as to some or all of the cases at the hearing described above or at a subsequent hearing, the date and time of which will be announced prior to the conclusion of the public hearing. Individuals requiring special accommodations are requested to contact Katie Rathvon at 240-313-2464 Voice, 240-313-2130 Voice/TDD no later than February 6, 2023. Any person desiring a stenographic transcript shall be responsible for supplying a competent stenographer.

The Board of Appeals reserves the right to vary the order in which the cases are called. Please take note of the Amended Rules of Procedure (Adopted July 5, 2006), Public Hearing, Section 4(d) which states:

Applicants shall have ten (10) minutes in which to present their request and may, upon request to and permission of the Board, receive an additional twenty (20) minutes for their presentation. Following the Applicant's case in chief, other individuals may receive three (3) minutes to testify, except in the circumstance where an individual is representing a group, in which case said individual shall be given eight (8) minutes to testify.

Those Applicants requesting the additional twenty (20) minutes shall have their case automatically moved to the end of the docket.

For extraordinary cause, the Board may extend any time period set forth herein, or otherwise modify or suspend these Rules, to uphold the spirit of the Ordinance and to do substantial justice.

Jay Miller, Chairman

Board of Zoning Appeals





## WASHINGTON COUNTY BOARD OF ZONING APPEALS

747 Northern Avenue | Hagerstown, MD 21742-2723 | P: 240.313.2430 | F: 240.313.2431 | Hearing Impaired: 7-1-1

MY COMMISSION EXPIRES NOVEMBER 07, 2025

### ZONING APPEAL

**Property Owner:** K & S Longmeadow LLC  
6615 Reisterstown Road  
Suite 203C  
Baltimore MD 21215

**Appellant:** Arcola Towers LLC  
112 West Washington Street #201  
Middleburg VA 20117

**Property Location:** 19224 Longmeadow Road  
Hagerstown, MD 21742

**Description Of Appeal:** Variance from the required minimum setback distance equaling the total height (142 ft.) of the tower and equipment to 82 ft. from the east side of the property and a variance from the required distance equaling the height of the tower and equipment plus 200 ft. from the nearest part of any existing dwelling, school, church, or institution for human care to 265 ft. from the Longmeadow Volunteer Fire Company property.

**Docket No:** AP2023-005  
**Tax ID No:** 27019196

**Zoning:** IG  
**RB Overlay:** No  
**Zoning Overlay:**  
**Filed Date:** 01/23/2023  
**Hearing Date:** 02/15/2023

**Appellant's Legal Interest In Above Property:**

<b>Owner:</b>	No	<b>Contract to Rent/Lease:</b>	Yes
<b>Lessee:</b>	No	<b>Contract to Purchase:</b>	No
<b>Other:</b>			

**Previous Petition/Appeal Docket No(s):**

**Applicable Ordinance Sections:** Washington County Zoning Ordinance Sections: 4.22.1 & 4.22.2

**Reason For Hardship:** Unable to locate a suitable property that could meet both AT&T's objectives and the required setbacks.

**If Appeal of Ruling, Date Of Ruling:**

**Ruling Official/Agency:**

**Existing Use:** Commerical

**Proposed Use:**

Commerical with Commuication Tower Compound

**Previous Use Ceased For At Least 6 Months:**

**Date Ceased:**

**Area Devoted To Non-Conforming Use -**

**Existing:**

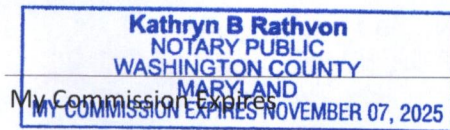
**Proposed:**

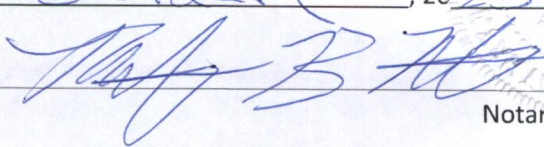
I hereby affirm that all of the statements and information contained in or filed with this appeal are true and correct.

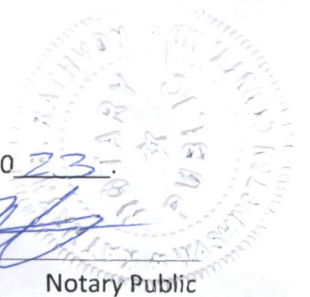
Appellant Signature

State Of Maryland, Washington County to-wit:

Sworn and subscribed before me this 23 day of January, 2023.



  
Notary Public







WASHINGTON COUNTY BOARD OF ZONING APPEALS

747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

## AFFIDAVIT IN COMPLIANCE WITH SECTION 25.51(C)

Docket No: AP2023-005

State of Maryland Washington County, To Wit:

On 1/23/2023, before me the subscriber, a Notary of the public of the State and County aforesaid, personally appeared Hellman Yates Attorneys and Counselors at Law and made oath in due form of law as follows:

Hellman Yates Attorneys and Counselors at Law will post the zoning notice sign(s) given to me by the Zoning Administrator in accordance with Section 25.51(c) of the Washington County Zoning Ordinance for the above captioned Board of Appeals case, scheduled for public hearing on 02/15/2023, and that said sign(s) will be erected on the subject property in accordance with the required distances and positioning as set out in the attached posting instructions.

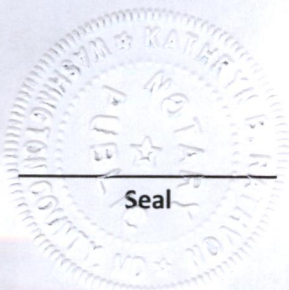
Sign(s) will be posted on 01/31/2023 and will remain until after the above hearing date.

Hellman Yates Attorneys and Counselors at Law

Sworn and subscribed before me the day and year first above written.

Kathryn B Rathvon  
NOTARY PUBLIC  
WASHINGTON COUNTY  
MARYLAND  
MY COMMISSION EXPIRES NOVEMBER 07, 2025

Notary Public



Seal

My Commission Expires



## BOARD OF ZONING APPEALS

80 West Baltimore Street | Hagerstown, MD 21740 | P: 240.313.2460 | F: 240.313.2461 | Hearing Impaired: 7-1-1

WWW.WASHCO-MD.NET

### Appeal for Variance

Appeal is hereby made for a variance from a requirement of the Washington County Zoning Ordinance as follows:

Location 19224 Longmeadow Rd. Hagerstown, MD 21742

Appellant's present legal interest in above property: (Check One)

☐ Owner (Including Joint Ownership) ☒ Lessee ☐ Contract to rent/lease

☐ Contract to Purchase ☐ Other \_\_\_\_\_

Specify the Ordinance section and subsection from which the variance is desired:

Sections 4.22.1 and 4.22.2

Specify the particular requirement(s) from which a variance is desired in that section or subsection:

4.22.1 requires a setback distance of tower height to property lines.

4.22.2 requires a setback of tower height plus 200 feet to properties zoned RS.

Describe the nature and extent of the desired variance from Ordinance requirements: listed above:

We are requesting relief from the height setback to the property line adjacent to the CSX Railroad line to the east. The tower has a certified Fall Zone of 70 feet, thus meeting the intent of the ordinance. In addition, we are requesting to be less than 340 feet to the Longmeadow Volunteer Fire Company property to the south. The Longmeadow Volunteer Fire Company supports this request, and President Robert Flint provided an affidavit in support.

Describe reason(s) why the Ordinance requirement(s) in question would result in peculiar and/or unusual practical difficulties to or would impose exceptional or undue hardship upon the owner of the property if the requested variance were not granted:

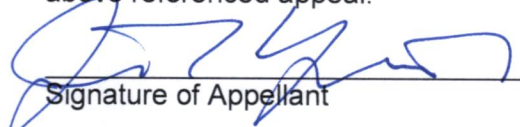
### Provide Detailed Explanation on Separate Sheet

Has any previous petition or appeal involving this property been made to the Board?

☐ Yes ☒ No

If yes, list docket number(s): \_\_\_\_\_

I hereby certify that I have, to the best of my knowledge, accurately supplied the information required for the above referenced appeal.

  
Signature of Appellant

jly@hellmanyates.com

Email of Appellant

105 Broad St., Third Floor, Charleston, SC 29401

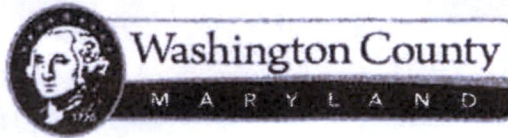
Address and of Appellant

(843) 414-9754

Phone Number of Appellant

This appeal form is to be used to assist the customer in gathering the information necessary to submit an application. However, the application shall be processed in person.

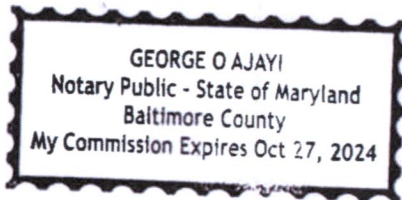




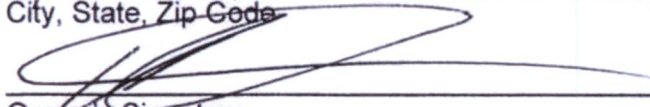
## BOARD OF ZONING APPEALS

### OWNER REPRESENTATIVE AFFIDAVIT

This is to certify that Jonathan L. Yates  
is authorized to file an appeal with the Washington County Board of Appeals for  
Variances \_\_\_\_\_ on property  
located at 19224 Longmeadow Rd. Hagerstown, MD 21742 Map 0025, Grid 0013, Parcel 0297.  
The said work is authorized by K&S Longmeadow LLC  
the property owner in fee.



#### PROPERTY OWNER

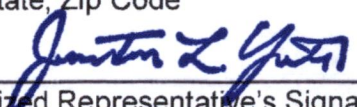
K&S Longmeadow, LLC  
Name  
14074 Reisterstown RD  
Address  
Pikesville, MD 21208  
City, State, Zip Code  
  
Owner's Signature

Sworn and subscribed before me this 30<sup>th</sup> day of August, 2022

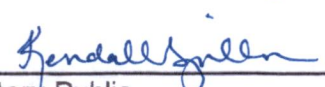
  
Notary Public

My Commission Expires: 10/27/2024

#### AUTHORIZED REPRESENTATIVE

Jonathon Yates  
Name  
105 Broad St., Third Floor  
Address  
Charleston, SC 29401  
City, State, Zip Code  
  
Authorized Representative's Signature

Sworn and subscribed before me this 20<sup>th</sup> day of January, 2023

  
Notary Public

My Commission Expires: 08/09/32



## BOARD OF ZONING APPEALS

80 West Baltimore Street | Hagerstown, MD 21740 | P: 240.313.2460 | F: 240.313.2461 | Hearing Impaired: 7-1-1

WWW.WASHCO-MD.NET

### Appeal for Variance

Appeal is hereby made for a variance from a requirement of the Washington County Zoning Ordinance as follows:

Location 19224 Longmeadow Rd. Hagerstown, MD 21742

Appellant's present legal interest in above property: (Check One)

☐ Owner (Including Joint Ownership) ☒ Lessee ☐ Contract to rent/lease

☐ Contract to Purchase ☐ Other \_\_\_\_\_

Specify the Ordinance section and subsection from which the variance is desired:

Sections 4.22.1 and 4.22.2

Specify the particular requirement(s) from which a variance is desired in that section or subsection:

4.22.1 requires a setback distance of tower height to property lines.

4.22.2 requires a setback of tower height plus 200 feet to properties zoned RS.

Describe the nature and extent of the desired variance from Ordinance requirements: listed above:

We are requesting relief from the height setback to the property line adjacent to the CSX Railroad line to the east. The tower has a certified Fall Zone of 70 feet, thus meeting the intent of the ordinance. In addition, we are requesting to be less than 340 feet to the Longmeadow Volunteer Fire Company property to the south. The Longmeadow Volunteer Fire Company supports this request, and President Robert Flint provided an affidavit in support.

Describe reason(s) why the Ordinance requirement(s) in question would result in peculiar and/or unusual practical difficulties to or would impose exceptional or undue hardship upon the owner of the property if the requested variance were not granted:


Provide Detailed Explanation on Separate Sheet

Has any previous petition or appeal involving this property been made to the Board?

☐ Yes ☒ No

If yes, list docket number(s): \_\_\_\_\_

I hereby certify that I have, to the best of my knowledge, accurately supplied the information required for the above referenced appeal.

  
Signature of Appellant

jly@hellmanyates.com

Email of Appellant

105 Broad St., Third Floor, Charleston, SC 29401

Address and of Appellant

(843) 414-9754

Phone Number of Appellant

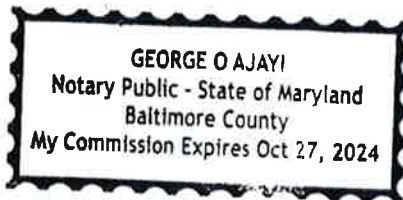
This appeal form is to be used to assist the customer in gathering the information necessary to submit an application. However, the application shall be processed in person.



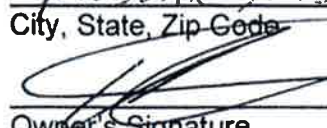
## BOARD OF ZONING APPEALS

### OWNER REPRESENTATIVE AFFIDAVIT

This is to certify that Jonathan L. Yates  
is authorized to file an appeal with the Washington County Board of Appeals for  
Variances \_\_\_\_\_ on property  
located at 19224 Longmeadow Rd. Hagerstown, MD 21742 Map 0025, Grid 0013, Parcel 0297.  
The said work is authorized by K&S Longmeadow LLC  
the property owner in fee.



#### PROPERTY OWNER

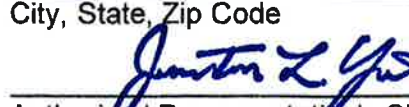
K&S Longmeadow, LLC  
Name  
1407 H Reisterstown RD  
Address  
Pikesville, MD 21208  
City, State, Zip Code  
  
Owner's Signature

Sworn and subscribed before me this 30<sup>th</sup> day of August, 2022

  
Notary Public

My Commission Expires: 10/27/2024

#### AUTHORIZED REPRESENTATIVE

Jonathan Yates  
Name  
105 Broad St., Third Floor  
Address  
Charleston, SC 29401  
City, State, Zip Code  
  
Authorized Representative's Signature

Sworn and subscribed before me this 20<sup>th</sup> day of January, 2023

  
Notary Public

My Commission Expires: 08/09/32

80 West Baltimore Street | Hagerstown, MD 21740 | P: 240.313.2460 | F: 240.313.2461 | Hearing Impaired: 7-1-1

# HELLMAN YATES

ATTORNEYS AND COUNSELORS AT LAW

JONATHAN L. YATES  
DIRECT VOICE 843 414-9754  
JLY@HELLMANYATES.COM

HELLMAN & YATES, PA  
105 BROAD STREET, THIRD FLOOR  
CHARLESTON, SOUTH CAROLINA 29401  
V 843 266-9099  
F 843 266-9188

January 20, 2023

## **VIA HAND DELIVERY**

Katie Rathvon  
Zoning Coordinator, Division of Planning & Zoning  
80 West Baltimore Street  
Hagerstown, MD 21740

Re: Proposed 140 foot Monopole Style Communications Facility to be located at 19224 Longmeadow Rd., Hagerstown, MD 21742 by Arcola Towers for AT&T.

Dear Ms. Rathvon,

Enclosed, please find the application of Arcola Towers for a proposed 140 foot monopole style communications facility, to be located at 19224 Longmeadow Rd., Hagerstown, MD 21742 on the property of K and S Longmeadow, LLC by Arcola Towers for AT&T. In support of this application, we have taken the liberty of recasting the relevant sections of Washington County Zoning Ordinance, with our answer to the relevant section in bold beneath. As will be evident from a review of the attached, Arcola Towers has not only met, but also has exceeded, all of the necessary requirements for approval under the Washington County Zoning Ordinance except for setbacks, for which we are requesting variances.

Without the granting of the variances, exceptional and undue hardship would be imposed as the tower height will have to be dramatically reduced and AT&T will not be as able to achieve their coverage objectives in this area for voice, advanced broadband, and First Net services. After a very extensive search of the surrounding area over a fourteen month period, we were unable to locate a suitable property that could meet both AT&T's objectives and the required setbacks.

### **Section 4.22 Commercial Communication Towers**

The purpose of this section is to regulate the placement, construction, and modification of commercial communications towers as defined in Article 28A (hereinafter "towers") and commercial communications equipment as defined in Article 28A (hereinafter "equipment"). It is the intent of these regulations to minimize the visual impact of towers and equipment, to minimize the number of towers through shared use and co-location, to encourage utilization of technological designs that will either eliminate or reduce the need for new towers to support equipment and to ensure that all towers and equipment are compatible with surrounding land uses while assuring wireless communications service to the citizens of Washington County.

Equipment proposed to be located on an existing tower or antenna support structure as defined in Article 28A shall be allowed in any district provided that the height from grade of the equipment shall not exceed the height from grade of the antenna support structure by more than twenty (20) feet.



**The Applicant accepts and acknowledges this provision. This is an application for a new tower. Please see the Site Drawings by Maryland Professional Engineer Marc Anthony Marzullo attached hereto as Exhibit "1" and incorporated herein by reference.**

No permit to construct a tower may be issued unless the applicant demonstrates to the Planning Commission, or where applicable, to the Board of Zoning Appeals, need for the tower and that the applicant has exhausted all alternatives to constructing a tower. Applicants are required to prove need by:

a. demonstrating via statement or other evidence that, in terms of location and construction, there are no existing towers, buildings, elevated tanks or other structures able to provide the antenna platform required.

**The Applicant accepts and acknowledges this provision. Arcola Towers was able to confirm that there are no existing towers, buildings, elevated tanks, or other structures able to provide the antenna platform required. Please see the Alternative Candidate Analysis by Madison Johnson of Arcola Towers attached as Exhibit "2" and incorporated herein by reference.**

b. providing evidence, including coverage diagrams and technical reports, demonstrating that co-location on existing sites is not technically possible in order to serve the desired need.

**Please see Exhibit "2".**

A. Design requirements

In addition to the applicable requirements for a site plan as specified in Section 4.11, the applicant shall provide the following information as part of the site plan submittal. These provisions shall apply to towers in all districts where permitted as a principal permitted or special exception use:

1. Subject to a minimum setback of a distance equaling the total height of the tower and equipment. The setback shall be measured from the base of the tower to the boundary line of the property owned, leased, or controlled by easement by the applicant.

**The proposed monopole style communications facility will meet the minimum setback requirements on the north, south, and western property lines, but not on the east side, for which we are respectfully requesting variance relief. The proposed setbacks are: 201 feet to the south front yard, 1,821 feet to the rear north yard, 82 feet to the east side, and 331 feet to the west side. Please see Sheet Z-1 of Exhibit "1". The facility has been designed by Maryland Professional Engineer Marc Anthony Marzullo with a Certified Fall Zone of 70 feet as shown in Exhibit "7" attached hereto and incorporated herein by reference. Consequently, the intent of this section is met as the Fall Zone is fully contained on the K and S Longmeadow property.**

2. Subject to a minimum distance requirement of a distance equaling the height of the tower and equipment plus 200 feet from the RT, RS, RU, RM and RV districts or the nearest part of any existing dwelling, school, church, or institution for human care, in any other district.

**As shown on Sheet Z-2 of Exhibit "1", we will meet this requirement except as to the property of the Longmeadow Volunteer Fire Company Inc. at 19307 Longmeadow Rd., for which we are respectfully requesting variance relief. The Longmeadow Volunteer Fire Company Inc. supports this request for variance relief from their property. Please see the Affidavit of Consent and Support of the Telecommunications Tower Application by Robert Flint, President of Longmeadow Volunteer Fire Company, Inc., attached hereto as Exhibit "10" and incorporated herein by reference.**

3. Subject to a minimum setback from all overhead transmission lines of a distance equaling two times the height of the tower and equipment.

**The Applicant accepts and acknowledges this provision.**

4. Subject to a height not to exceed 200 feet. Measurement of tower height shall include the tower structure itself, the base pad, and any other equipment attached thereto which extends more than twenty (20) feet over the top of the tower structure itself. The tower height shall be measured from grade.

**The proposed monopole style communications facility will not exceed 200 feet. Please see Sheet Z-5 of Exhibit "1" for the proposed monopole elevation of 140 feet with a two foot lightning rod for a total height of 142 feet.**

5. Proposed towers shall meet the following separation requirements from existing towers or towers which have been issued a permit but are not yet constructed.

a. Monopole towers shall be separated from all other towers, whether monopole, self-supporting lattice, or guyed, by a minimum of seven hundred and fifty (750) feet.

**Please see Exhibit "2". According to the Alternative Candidate Analysis, there are no existing structures within a 1 mile radius of the proposed search ring center. The closest tower is 1.2 miles to the southwest of the search ring and will not cover the intended area for AT&T.**

b. Self-supporting lattice or guyed towers shall be separated from all other self-supporting or guyed towers by a minimum of fifteen hundred (1,500) feet.

**The provision does not apply to this application as this is for a monopole style communications facility.**

c. Self-supporting lattice or guyed towers shall be separated from all monopole towers by a minimum of seven hundred and fifty (750) feet.

**The provision does not apply to this application as this is for a monopole style communications facility.**

6. All towers shall be designed for co-location, which shall mean the ability of the structure to allow for the placement of comparable equipment for other carriers. An application for a tower shall be accompanied by an affidavit from the applicant stating that one ten (10) foot space on the proposed tower will be specifically reserved for use by

the County, and that other spaces will be made available to other future users, when possible.

**Please see the Affidavit from Christian Winkler of Arcola Towers attached hereto as Exhibit "3" and incorporated herein by reference. One ten (10) foot space on the proposed tower will be specifically reserved for use by Washington County, and other spaces will be made available to other future users, when possible. The proposed monopole style facility has been designed for AT&T and colocation by at least three additional broadband carriers as shown on Sheet Z-5 of Exhibit "1".**

7. Fencing shall be provided around the base of the tower and any associated equipment buildings.

**Please see Sheets Z-4 and Z-6 of Exhibit "1" for the fencing plan. The fifty foot by fifty foot compound will be secured by an 8 foot chain link fence.**

8. All sites shall be identified by means of a sign no longer than two square feet affixed to the fence identifying the entity using the site and shall provide the telephone number of a contact person in the event of an emergency.

**The Applicant accepts and acknowledges this provision. Please see Sheet Z-11 in Exhibit "1".**

9. Towers not requiring FAA painting or marking shall have an exterior finish which enhances compatibility with adjacent land uses, as approved by the Planning Commission or Board of Zoning Appeals. Towers shall not be lighted unless specifically required by the FAA.

**The Applicant accepts and acknowledges this provision. Due to its de minimis height, the FAA will not require illumination.**

10. In order to protect the natural skyline, towers should be sited within areas of mature vegetation and should be located down slope from ridge lines, and toward the interior of the parcel whenever possible. Placement should only be considered elsewhere on the property when valid technical data supplied by the applicant indicates that there is no other suitable location.

**The Applicant accepts and acknowledges this provision. Please see the Photo Simulations attached hereto as Exhibit "4" and incorporated herein by reference. In addition, please also see Sheet Z-10 of Exhibit "1". The proposed monopole style communications facility will have twenty-two Eastern Arborvitae spread around the compound to provide effective vegetative cover and protect the natural skyline.**

11. Towers proposed to be located within the Appalachian Trail corridor special planning area as identified in the adopted Comprehensive Plan for the County, any "AO" Antietam Overlay zoning district or "HP" Historic Preservation zoning district shall utilize stealth technology as defined in Article 28A to minimize visual impact.

**The Applicant accepts and acknowledges this provision. Please see Note 2 on Sheet Z-2 in Exhibit "1".**

- 12 (a) A Commercial Communication Tower that is out of service for a continuous six (6) month period will be deemed to have been abandoned. The Zoning Administrator may issue a Notice of Abandonment to the Owner of the Tower that is deemed to be abandoned. The Owner shall have the right to respond in writing to the Notice of Abandonment setting forth the reasons for operation difficulty and providing a reasonable timeframe for correction action, within thirty (30) days from the date of the Notice. The Administrator shall withdraw the Notice of Abandonment and notify the Owner that the Notice has been withdrawn if the Owner provides information that demonstrates the Tower has not been abandoned.

**The Applicant accepts and acknowledges this provision. Please see the Tower Removal Letter by Operations Manager Madison Johnson of Arcola Towers attached hereto as Exhibit "5" and incorporated herein by reference.**

(b) If the Tower is determined to be abandoned, the Owner of the Tower shall remove the Tower, and all related equipment at the Owner's sole expensed within three (3) months of the Date of Notice of Abandonment. If the Owner fails to remove the Tower and related equipment, the Administrator may pursue legal action to have the Tower removed at the Owner's expense.

**The Applicant accepts and acknowledges this provision. Please see Exhibit "5".**

In addition, please find the following: AT&T RF Memorandum Propagation Studies and Existing Locations in Washington County attached hereto as Exhibit "6" and incorporated herein by reference; the Deed attached hereto as Exhibit "8" and incorporated herein by reference; and the Design Drawings by Maryland Professional Engineer Nathan A. Ross attached hereto as Exhibit "9" and incorporated herein by reference.

We would respectfully request to be placed on the agenda of the Washington County Board of Appeals February 15, 2023 scheduled meeting.

If you have any questions or concerns, please do not hesitate to contact me at 843-414-9754, or via email at [jly@hellmanyates.com](mailto:jly@hellmanyates.com).

Thank you for all your help with this.

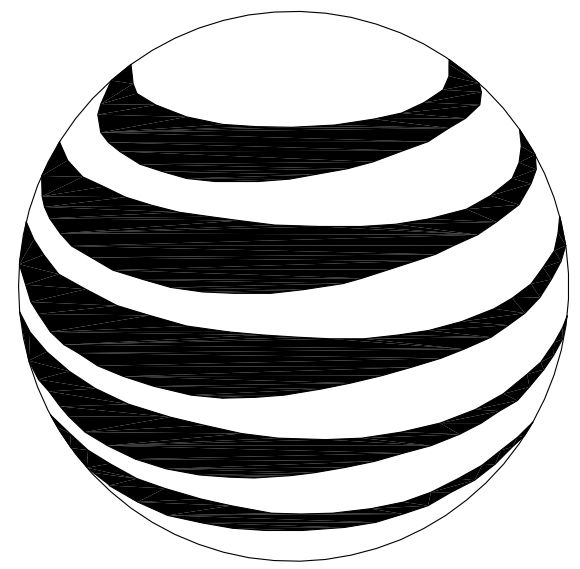
With warmest regards, I am

Yours very truly,

  
Jonathan L. Yates

# **Exhibit 1**





at&t

# ARCOLA TOWERS

## MD-003 PARAMOUNT

### 19224 LONGMEADOW ROAD

### HAGERSTOWN, MD 21742

## 140' MONOPOLE

**entrex**  
communication services, inc.  
6100 Executive Blvd., Suite 430  
Rockville, MD 20852  
PHONE: (202)408-0960

#### SUBMITTALS

DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	AROLA COMMENTS	
09-23-22	ZONING	

SEAL:



#### GENERAL NOTES

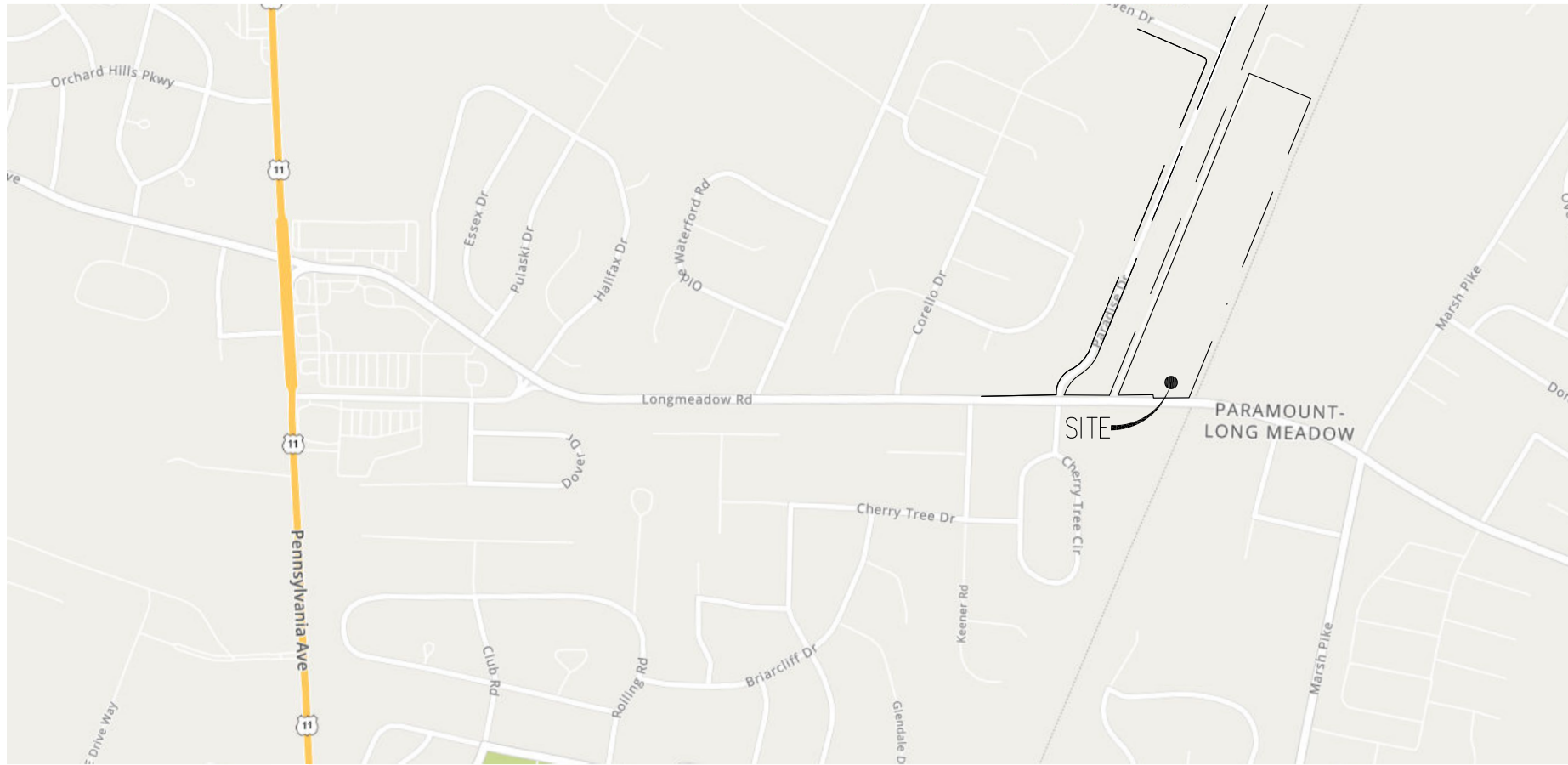
- THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES.
- THE ARCHITECT/ENGINEER HAS MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
- THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE CONSTRUCTION MANAGER OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
- THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
- THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWING/CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATION UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDA OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
- THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
- THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
- THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL THE CONFLICT IS RESOLVED BY THE CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE PROJECT.

#### BUILDING CODE

2018 INTERNATIONAL BUILDING CODE

REFERENCING:  
2017 NATIONAL ELECTRIC CODE WITH LOCAL AMENDMENTS  
2018 INTERNATIONAL MECHANICAL CODE  
TIA-222-H (2016) STRUCTURAL STANDARDS FOR ANTENNA  
SUPPORTING STRUCTURES AND ANTENNAS

#### VICINITY MAP



#### SYMBOLS AND ABBREVIATIONS

ADJ	ADJUSTABLE	MECH	MECHANICAL	SPOT ELEVATION
APPROX	APPROXIMATE	MFR	MANUFACTURER	
CAB	CABINET	MGB	MAIN GROUND BAR	
CLG	CEILING	MIN	MINIMUM	
CONC	CONCRETE	MTL	METAL	
CONT	CONTINUOUS	NIC	NOT IN CONTRACT	
CJ	CONSTRUCTION JOINT	NTS	NOT TO SCALE	
DIA	DIAMETER	OC	ON CENTER	
DWG	DRAWING	OPP	OPPOSITE	
EGB	EQUIPMENT GROUND BAR	SF	SQUARE FOOT	
EA	EACH	SHT	SHEET	
ELEC	ELECTRICAL	SIM	SIMILAR	
EL	ELEVATION	SS	STAINLESS STEEL	
EQ	EQUAL	STL	STEEL	
EQUIP	EQUIPMENT	TOC	TOP OF CONCRETE	
EXT	EXTERIOR	TOM	TOP OF MASONRY	
FF	FINISHED FLOOR	TOS	TOP OF STEEL	
GA	GAGE	TYP	TYPICAL	
GALV	GALVANIZED	VIF	VERIFY IN FIELD	
GB	GROUND BAR	UON	UNLESS OTHERWISE NOTED	
GC	GENERAL CONTRACTOR	WWF	WELDED WIRE FABRIC	
GRND	GROUND	W/	WITH	
LG	LONG	&	AND	
LLH	LONG LEG HORIZONTAL	@	AT	
MAX	MAXIMUM			



#### SHEET INDEX

- T-1 TITLE SHEET
- Z-1 SITE PLAN
- Z-1A ADJOINERS LIST
- Z-2 PARTIAL SITE PLAN
- Z-3 EROSION AND SEDIMENT CONTROL PLAN AND DETAILS
- Z-4 COMPOUND PLAN
- Z-5 MONOPOLE ELEVATION
- Z-6 SITE DETAILS
- Z-7 AT&T ANTENNA LAYOUT, SECTION, DETAILS AND SCHEDULE
- Z-8 AT&T EQUIPMENT SHELTER DETAILS
- Z-9 AT&T GENERATOR DETAILS
- Z-10 LANDSCAPE PLAN
- Z-11 SIGNAGE

#### PROJECT DESCRIPTION

- SCOPE OF WORK:
- INSTALL EROSION AND SEDIMENT CONTROLS.
  - CLEAR AND GRADE SITE TO FINAL SUBGRADE ELEVATION.
  - INSTALL MONOPOLE FOUNDATION AND 150' HIGH MONOPOLE.
  - INSTALL EQUIPMENT FRAME AND EQUIPMENT
  - INSTALL GROUNDING, MESA CABINET BASE, UTILITY WIREWAY.
  - INSTALL ELECTRICAL AND TELEPHONE CONDUIT AND HAND HOLES.
  - INSTALL FENCE AND SITE IMPROVEMENTS.

#### PROJECT INFORMATION

PROPERTY OWNER: KS LONGMEADOW LLC  
6615 REISTERSTOWN RD STE 203C  
BALTIMORE MD 21215

APPLICANT: ARCOLA TOWERS  
116 W WASHINGTON ST. #203  
MIDDLEBURG, VA 20117  
(571) 895 3990

LATITUDE: 39° 41' 05.023" N  
LONGITUDE: 77° 42' 00.703" W  
GROUND ELEVATION: 594.30' AMSL  
JURISDICTION: WASHINGTON COUNTY  
PROPERTY INFO: DEED REF: 02648/00171  
ACCOUNT ID.: 27-019196  
MAP/GRID: 0025/ 0013  
CURRENT ZONING: IG  
USE: COMMERCIAL  
PROPOSED USE: COMMERCIAL/TELECOM

PROJECT NO: 1164.010

DESIGNER: M.A.

ENGINEER: M.M.

SCALE:

SCALE AS NOTED

**ARCOLA TOWERS**  
**MD-003 PARAMOUNT**  
**19224 LONGMEADOW RD.**  
**HAGERSTOWN, MD 21742**

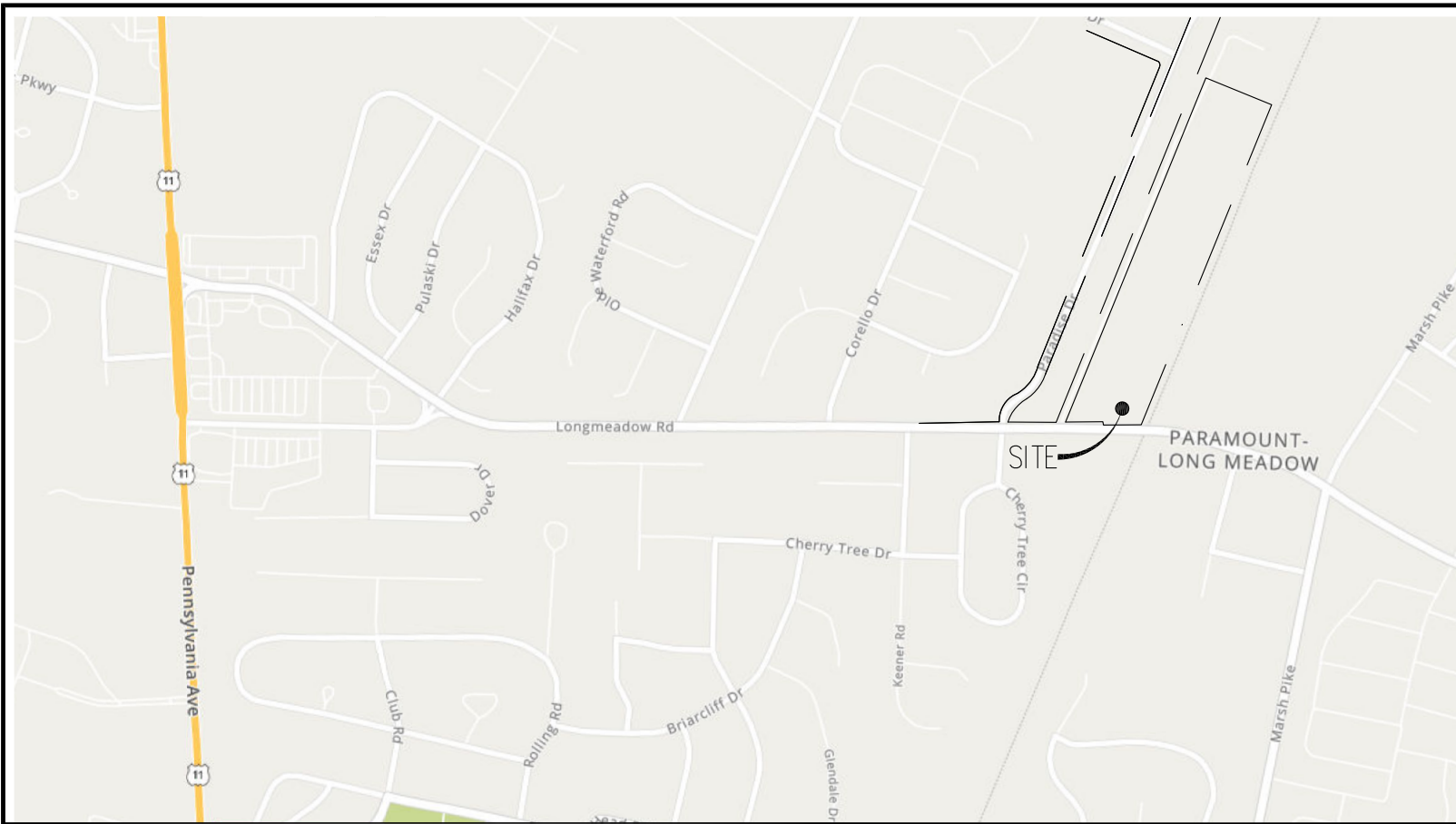
TITLE:

**TITLE SHEET**

SHEET NUMBER:

**T-1**





VICINITY MAP  
SCALE: 1" = 1,000'



### SITE PLAN NOTES

- 1.) SITE NAME: ARCOLA TOWERS SITE – PARAMOUNT
- 2.) THIS IS NOT A BOUNDARY SURVEY AND IS NOT TO BE USED FOR THE TRANSFER OF PROPERTY. THE SITE PROPERTY WAS SURVEYED. THE ADJACENT PROPERTY LINES AND LOCATION OF OFFSITE HOUSES WERE DETERMINED FROM THE WASHINGTON COUNTY GIS PARCEL AND ZONING LOCATOR.
- 3.) THE SUBJECT PARCEL INFORMATION;  
OWNER: KS LONGMEADOW LLC  
PREMISES ADDRESS: 19224 LONGMEADOW RD, HAGERSTOWN, MD 21742  
MAILING ADDRESS: 6615 REISTERTOWN RD, STE 203C, BALTIMORE, MD 21215  
ACCOUNT ID.: 27-019196  
MAP: 0025 GRID: 0013 PARCEL: 0297  
DEED REF: DEED REF: 05876/0280  
COUNTY: WASHINGTON COUNTY
- 4.) THE DATUM'S ARE NAD 83 AND NAVD 88, AND THE BEARING BASE IS STATE GRID.
- 5.) NO UNDERGROUND UTILITIES HAVE BEEN LOCATED. THE PRESENCE OF ANY SUCH UTILITIES MUST BE CONFIRMED BY THE CONTRACTOR BEFORE CONSTRUCTION.
- 6.) NO WETLANDS HAVE BEEN DEFINED AND ANY AREAS SHOWN AS MARSH, PONDS OR DITCHES ARE DONE SO FROM VISIBLE SURFACE FEATURES AND IN NO WAY CONSTITUTE A DEFINED WETLAND.
- 7.) THE FLOOD ZONE OF THE PROPOSED MONOPOLE IS AS FOLLOWS; FLOOD ZONE X, AREA OF MINIMUM FLOODING. SOURCE, FEMA FLOOD MAP FOR WASHINGTON COUNTY, MD. COMMUNITY PANEL NUMBER 24043C 0137D. REVISED, AUGUST 15, 2017.
- 8.) A TITLE REPORT WAS REVIEWED FOR THIS SURVEY.
- 9.) THE DATA COLLECTED AND SHOWN ON THIS DRAWING ARE FOR THE PURPOSES OF CONSTRUCTION OF A CELLULAR ANTENNAS ON A PROPOSED MONOPOLE. ANY NECESSARY ANCILLARY EQUIPMENT AND ALL APPROPRIATE EASEMENTS.
- 10.) NO UNRECORDED EASEMENTS ARE SHOWN ON THIS SURVEY AND IT IS POSSIBLE THAT SUCH EASEMENTS IMPACT THE SITE.
- 11.) THIS PROPERTY IS SUBJECT TO ALL MATTERS OF PUBLIC RECORD.
- 12.) THE LOCATION OF THE PROPOSED MONOPOLE IS AS FOLLOWS; THE VALUES LISTED BELOW ARE WITHIN ±50' HORIZONTAL AND ±20' VERTICAL.  
LATITUDE: N 39° 41' 05.023"  
LONGITUDE: W 77° 42' 00.703"  
ELEVATION: 594.30' AT MONOPOLE BASE

PROPOSED MONOPOLE SETBACKS	
	PROPOSED
FRONT YARD (SOUTH)	±201'
REAR YARD (NORTH)	±1,821'
SIDE YARD (EAST)	±82'
SIDE YARD (WEST)	±331'
CLOSEST RESIDENCE	±465'
CLOSEST PUBLIC ROAD	±212'

### LINE TYPES

PROPERTY LINE
RIGHT OF WAY BOUNDARY
EDGE OF ASPHALT
EDGE OF CONCRETE
FENCE LINE – CHAIN
1' CONTOUR LINE
5' CONTOUR LINE

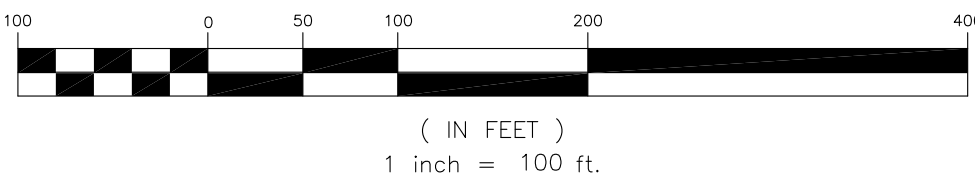
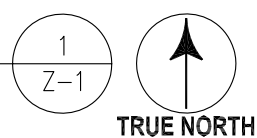


### LEGEND

- TREE OR VEGETATION LINE
- FOUND PROPERTY CORNER
  - △ BENCH MARKS
  - UTILITY POLE
  - SIGN
  - ☆ LIGHT POLE
  - TP TELEPHONE PEDESTAL
  - INDIVIDUAL TREE – DECIDUOUS

MD STATE GRID = NAD83

SITE PLAN  
SCALE: 1" = 100'

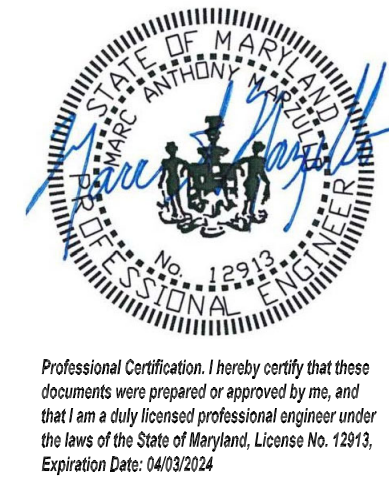


**entrex**  
communication services, inc.  
6100 Executive Blvd., Suite 430  
Rockville, MD 20852  
PHONE: (202)408-0960

### SUBMITTALS

DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING	
09-15-22	ARCOLA COMMENTS	

SEAL:



PROJECT NO: 1164.010  
DESIGNER: R.S.  
ENGINEER: M.M.

SCALE:  
SCALE AS NOTED

**ARCOLA TOWER SITE -  
PARAMOUNT  
19224 LONGMEADOW RD  
HAGERSTOWN, MD 21742**

TITLE:

**SITE PLAN**

SHEET NUMBER:

**Z-1**



PARENT  
ACCOUNT ID: 27- 019196N/F  
K & S LONGMEADOW LLC  
PARCEL ADDRESS: 19212 LONGMEADOW RD  
HAGERSTOWN MD 21742-0000  
MAILING ADDRESS: 6615 REISTERSTOWN RD STE 203C  
BALTIMORE MD 21215-  
DEED BOOK /05876/ 00280  
ZONING: IG  
AREA: 19.69 A.C.

1,  
ACCOUNT ID: 27- 003141  
N/F  
SWANSON BRIAN JACOB  
PARCEL ADDRESS: 19212 LONGMEADOW RD  
HAGERSTOWN MD 21742-0000  
MAILING ADDRESS: 19212 LONGMEADOW RD  
HAGERSTOWN MD 21742-0000  
DEED BOOK /05841/ 00475  
ZONING: RPC  
AREA: 15,246 SF

2,  
ACCOUNT ID: 27- 018254  
N/F  
HERSON MICHELLE E

PARCEL ADDRESS: 13513 PARADISE DR  
HAGERSTOWN MD 21742-2421  
MAILING ADDRESS: 13513 PARADISE DR  
HAGERSTOWN MD 21742-2421  
DEED BOOK /03045/ 00150  
ZONING: RPC  
AREA: 18,295 SF

3,  
ACCOUNT ID: 27- 007228  
N/F  
DEGUZMAN BERNADETTE L  
PARCEL ADDRESS: 12750 VALLEYWOOD DRIVE  
WOODBIDGE, VA 22192  
MAILING ADDRESS: 13517 PARADISE DR  
HAGERSTOWN MD 21742-0000  
DEED BOOK /05469/ 00273  
ZONING: R2C  
AREA:17,424 SF

4,  
ACCOUNT ID: 27- 007465  
N/F  
THOMAS JOHN R & SHERREE D  
PARCEL ADDRESS: 13521 PARADISE DR  
HAGERSTOWN MD 21742-2421  
MAILING ADDRESS: 13521 PARADISE DR  
HAGERSTOWN MD 21742-2421  
DEED BOOK: /01656/ 00294  
ZONING: R2C  
AREA:17,424 SF

5,  
ACCOUNT ID: 27- 009654  
N/F  
KLINE JUNIOR L & ELIZABETH H L/E  
PARCEL ADDRESS: 13525 PARADISE DR  
HAGERSTOWN MD 21742-2421  
MAILING ADDRESS: SAME  
DEED BOOK: /02202/ 00505  
ZONING: R2C  
AREA:17,424 SF

6,  
ACCOUNT ID: 27- 005624  
N/F  
KELLER ARTHUR DANIEL  
PARCEL ADDRESS: 13529 PARADISE DR  
HAGERSTOWN MD 21742-2421  
MAILING ADDRESS: SAME  
DEED BOOK: /06779/ 00109  
ZONING: R2C  
AREA: AREA:17,424 SF

7,  
ACCOUNT ID: 27- 001491  
N/F  
BORDER MICHAEL W  
PARCEL ADDRESS: 13533 PARADISE DR  
HAGERSTOWN MD 21742-2421  
MAILING ADDRESS: SAME  
DEED BOOK: /00637/ 00465  
A: R2C  
AREA: AREA:17,424 SF

8,  
ACCOUNT ID: 27011985  
N/F  
TOPPER DAVID E  
WORDEN VICTORIA N  
PARCEL ADDRESS: 12838 VALLEYWOOD DRIVE  
WOODBIDGE, VA 22192  
MAILING ADDRESS: SAME  
DEED BOOK /05841/ 00475  
ZONING: R2C  
AREA:17,424 SF

9,  
ACCOUNT ID: 27- 014364  
N/F  
EYLER JILL D  
PARCEL ADDRESS: 13541 PARADISE DR  
HAGERSTOWN MD 21742-2421  
MAILING ADDRESS: SAME  
DEED BOOK /04077/ 00430  
ZONING: R2C  
AREA:17,424 SF

10,  
ACCOUNT ID: 27- 018289  
N/F  
GERBER RONALD F  
PARCEL ADDRESS: 13545 PARADISE DR  
HAGERSTOWN MD 21742-2421  
MAILING ADDRESS: SAME  
DEED BOOK /00739/ 00171  
ZONING: R2  
AREA:17,424 SF

11,  
ACCOUNT ID: 27- 010512  
N/F  
FURR MICHAEL  
PARCEL ADDRESS:13549 PARADISE DR  
HAGERSTOWN MD 21742-0000  
MAILING ADDRESS: SAME  
DEED BOOK /05803/ 00440  
ZONING: R2  
AREA:17,424 SF

12,  
ACCOUNT ID: 27-011233  
N/F  
MARTIN ERNEST W JR  
PARCEL ADDRESS: 13553 PARADISE DR  
HAGERSTOWN MD 21742-2421  
MAILING ADDRESS: SAME  
DEED BOOK /00447/ 00709  
ZONING: R2  
AREA:17,424 SF

13,  
ACCOUNT ID: 27- 013376  
N/F  
MARTIN CLIFTON R  
MARTIN LISA L  
PARCEL ADDRESS:13603 PARADISE DR  
HAGERSTOWN 21742-0000

MAILING ADDRESS: 14040 PARADISE CHURCH RD  
HAGERSTOWN MD 21742-0000  
DEED BOOK /05122/ 00125  
ZONING: R2  
AREA: 0.4 AC

14,  
ACCOUNT ID: 27- 016138  
N/F  
DOMINGUEZ PABLO  
REYES SONIA  
PARCEL ADDRESS: 13607 PARADISE DR  
HAGERSTOWN MD 21742-2490  
MAILING ADDRESS: SAME  
DEED BOOK 02071/ 00620  
ZONING: R2  
AREA: 0.4 AC

15,  
ACCOUNT ID: 27- 008607  
N/F  
GIBSON MARCUS B  
GIBSON AMY M  
PARCEL ADDRESS: 13611 PARADISE DR  
HAGERSTOWN MD 21742-  
MAILING ADDRESS: SAME  
DEED BOOK/06915/ 00234  
ZONING: R2  
AREA: 17,424 SF

16,  
ACCOUNT ID: 27- 003168  
N/FN/F  
HOTT DONALD C JR  
HOTT VICKI L  
PARCEL ADDRESS: 13615 PARADISE DR  
HAGERSTOWN MD 21742-  
MAILING ADDRESS: SAME  
DEED BOOK /06923/ 00174  
ZONING: R2  
AREA: 17,424 SF

17,  
ACCOUNT ID: 27-014216  
N/FN/F  
SNIDER BRYAN C  
PARCEL ADDRESS: 13619 PARADISE DR  
HAGERSTOWN MD 21742-2490  
MAILING ADDRESS: 12350 OAKWOOD DRIVE  
WOODBIDGE, VA 22192  
DEED BOOK/01413/ 01069  
ZONING: R2  
AREA: 17,424 SF

18,  
ACCOUNT ID: 27-004407  
N/FN/F  
DOUCETTE LARRY M & CHRISTINA J  
PARCEL ADDRESS: 13623 PARADISE DR  
HAGERSTOWN MD 21742-2490  
MAILING ADDRESS: SAME  
DEED BOOK /00952/ 00988  
ZONING: R2  
AREA: 30,056 SF

19,  
ACCOUNT ID: 27- 014178  
N/FN/F  
PLANK KENNETH J  
PARCEL ADDRESS: 12858 VALLEYWOOD DRIVE  
WOODBIDGE, VA 22192  
MAILING ADDRESS: 13629 PARADISE DR  
HAGERSTOWN MD 21742-2490  
DEED BOOK/00482/ 00458  
ZONING: R2  
AREA: 20,908 SF

20,  
ACCOUNT ID: 27- 006477  
N/FN/F  
WEBB RONALD L  
WEBB LORNA J  
PARCEL ADDRESS: 12898 VALLEYWOOD DRIVE  
WOODBIDGE, VA 22192  
MAILING ADDRESS: 13633 PARADISE DR  
HAGERSTOWN MD 21742-2490  
DEED BOOK /06061/ 00027  
ZONING: R2  
AREA: 17,424 SF

21,  
ACCOUNT ID: 27- 007414  
N/FN/F  
STROBL RICHARD G & SUSAN L  
PARCEL ADDRESS: 13637 PARADISE DR  
HAGERSTOWN MD 21742-2490  
MAILING ADDRESS: SAME  
DEED BOOK /00768/ 00804  
ZONING: R2  
23,958 SF

22,  
ACCOUNT ID: 27- 015484  
N/FN/F  
ISP MINERALS LLC  
PARCEL ADDRESS: LONGMEADOW RD  
HAGERSTOWN 21740-0000  
MAILING ADDRESS: C/O THOMSON PROERPTY TAX SERV  
400 W 15TH ST STE 700  
AUSTIN TX 78701-1647  
DEED BOOK/01674/ 00673  
ZONING: R2  
AREA: 2.0 AC

23,  
ACCOUNT ID: 27- 011462  
N/FN/F  
DILLER ARLIN E  
PARCEL ADDRESS: 13618 MARSH PIKE  
HAGERSTOWN 21742-0000  
MAILING ADDRESS: 22019 GROVE RD  
HAGERSTOWN MD 21742-0000  
DEED BOOK /05988/ 00215  
ZONING: RPC  
AREA: 78.3 AC

24,  
ACCOUNT ID: 27- 013686  
N/FN/F  
PARAMOUNT FEED & SUPPLY INC  
PARCEL ADDRESS: 19310 LONGMEADOW ROAD  
HAGERSTOWN MD 21742  
MAILING ADDRESS: SAME  
DEED BOOK 00418/ 0000  
ZONING: RPC  
AREA: 2.29 AC

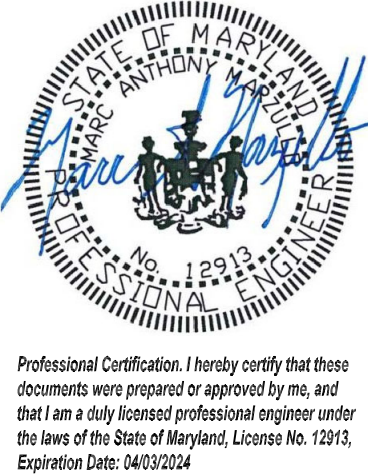
25,  
ACCOUNT ID: 27- 018726  
N/FN/F  
GOSSERT TODD E &  
GIFFT TROY IVAN  
PARCEL ADDRESS: 19231 LONGMEADOW RD  
HAGERSTOWN MD 21742-2858  
MAILING ADDRESS: SAME  
DEED BOOK01618/ 00001  
ZONING: RPC  
AREA: 1.16 AC

26,  
ACCOUNT ID: 27- 018807  
N/FN/F  
VALENTINE DOUGLAS A  
PARCEL ADDRESS:19217 LONGMEADOW RD  
HAGERSTOWN MD 21742-2858  
MAILING ADDRESS: SAME  
DEED BOOK /00610/ 00372  
ZONING: RPC  
AREA: 20,908 SF



SUBMITTALS		
DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	AROLA COMMENTS	
09-23-22	ZONING	

SEAL:



PROJECT NO:	1164.010
DESIGNER:	M.A.
ENGINEER:	M.M.

SCALE:  
  
SCALE AS NOTED

**ARCOLA TOWERS  
MD-003 PARAMOUNT  
19224 LONGMEADOW RD.  
HAGERSTOWN, MD 21742**

TITLE:

**ADJOINERS**

SHEET NUMBER:

**Z-1A**



- 1.) 1. LANDSCAPING NOT SHOWN FOR CLARITY, SEE SHEET Z-10.
- 2.) FACILITY NOT LOCATED WITH THE APPALACHIAN TRAIL CORRIDOR SPECIAL PLANNING AREA, ANTETAM OVERLAY ZONING DISTRICT, OR HISTORIC PRESERVATION ZONING DISTRICT
- 3.) THE MONOPOLE LOCATION IS IN EXCESS OF 388' FROM AN EXISTING DWELLING, SCHOOL, CHURCH OR INSTITUTION FOR HUMAN CARE.
- 4.) THE SITE PROPERTY WAS SURVEYED. THE ADJACENT PROPERTY LINES AND THE LOCATION OF OFF SITE HOUSES WERE DETERMINED FROM THE WASHINGTON COUNTY GIS PARCEL AND ZONING LOCATOR.

1.66 MILES  
.10 EAST OF US ROUTE 81 - US CELLULAR  
AGL: 149.93 FT  
.10 MI EAST OF US ROUTE 81  
HAGERSTOWN, MD 21742

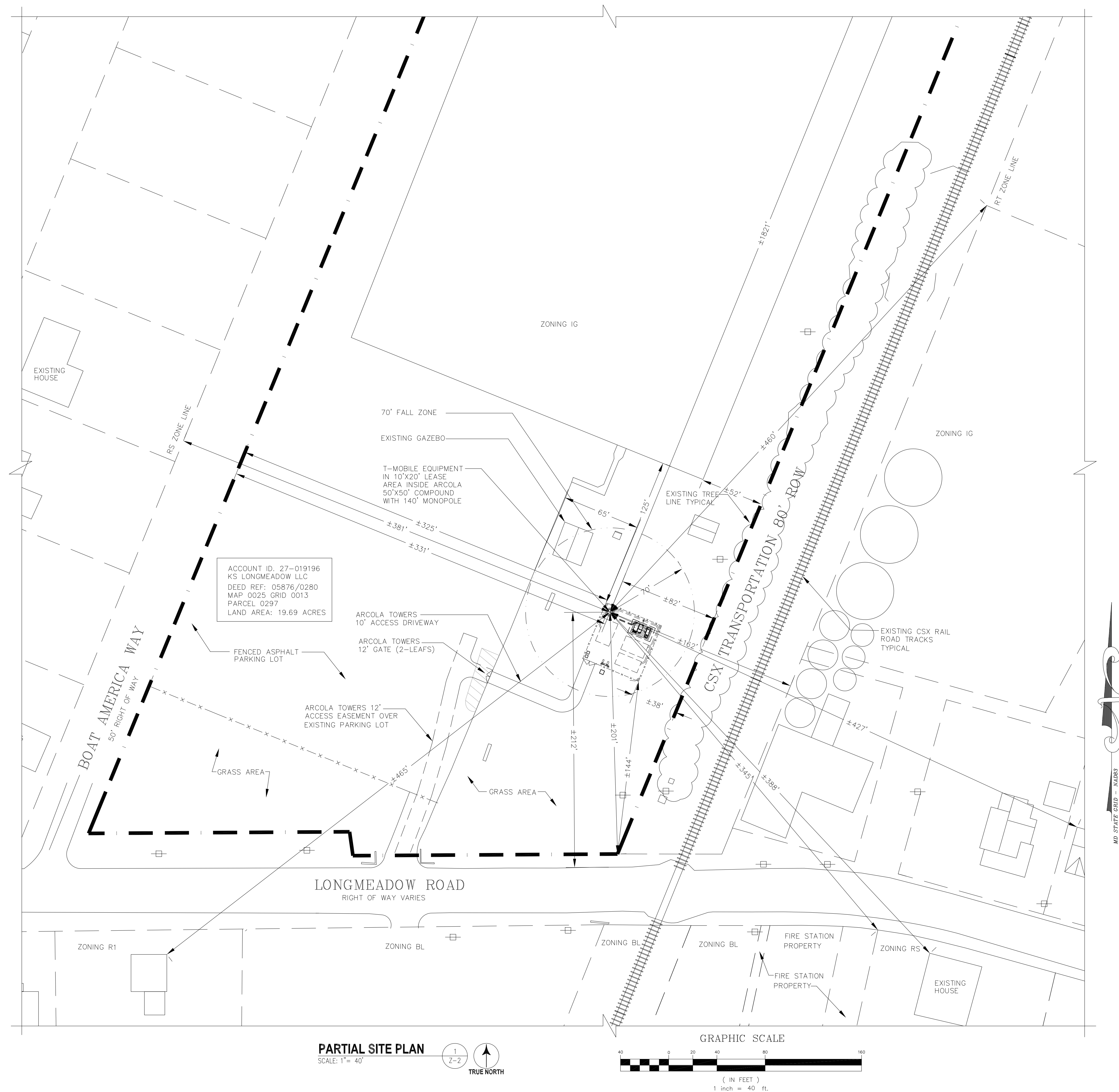
1.89 MILES  
NORTH HAGERSTOWN HIGH SCHOOL - MILESTONE TOWER  
AGL: 89.89 FT  
1200 PENNSYLVANIA AVE  
HAGERSTOWN, MD 21742

2.25 MILES  
1402 MARSHALL STREET - SHENTEL  
AGL: 255.25 FT  
1402 MARSHALL STREET  
MAUGANSVILLE, MD 21740

2.2 MILES  
OLD FORGE ROAD - US CELLULAR  
AGL: 199.14 FT  
OLD FORGE ROAD  
HAGERSTOWN, MD 21742

PROPOSED MONOPOLE SETBACKS	
	PROPOSED
FRONT YARD (SOUTH)	±201'
REAR YARD (NORTH)	±1,821'
SIDE YARD (EAST)	±82'
SIDE YARD (WEST)	±331'
CLOSEST RESIDENCE	±465'
CLOSEST PUBLIC ROAD	±212'

PROPOSED COMPOUND SETBACKS	
	PROPOSED
FRONT YARD (SOUTH)	±144'
REAR YARD (NORTH)	±1,815'
SIDE YARD (EAST)	±38'
SIDE YARD (WEST)	±325'





AREA TABULATION

SITE AREA:	19.69 AC
EXISTING IMPERVIOUS AREA:	412,274 SF (9.464 AC) (48.07%)
ADDED IMPERVIOUS AREA:	3,602 SF (0.083 AC) (0.42%)
TOTAL	415,876 SF (9.547 AC) (48.49%)

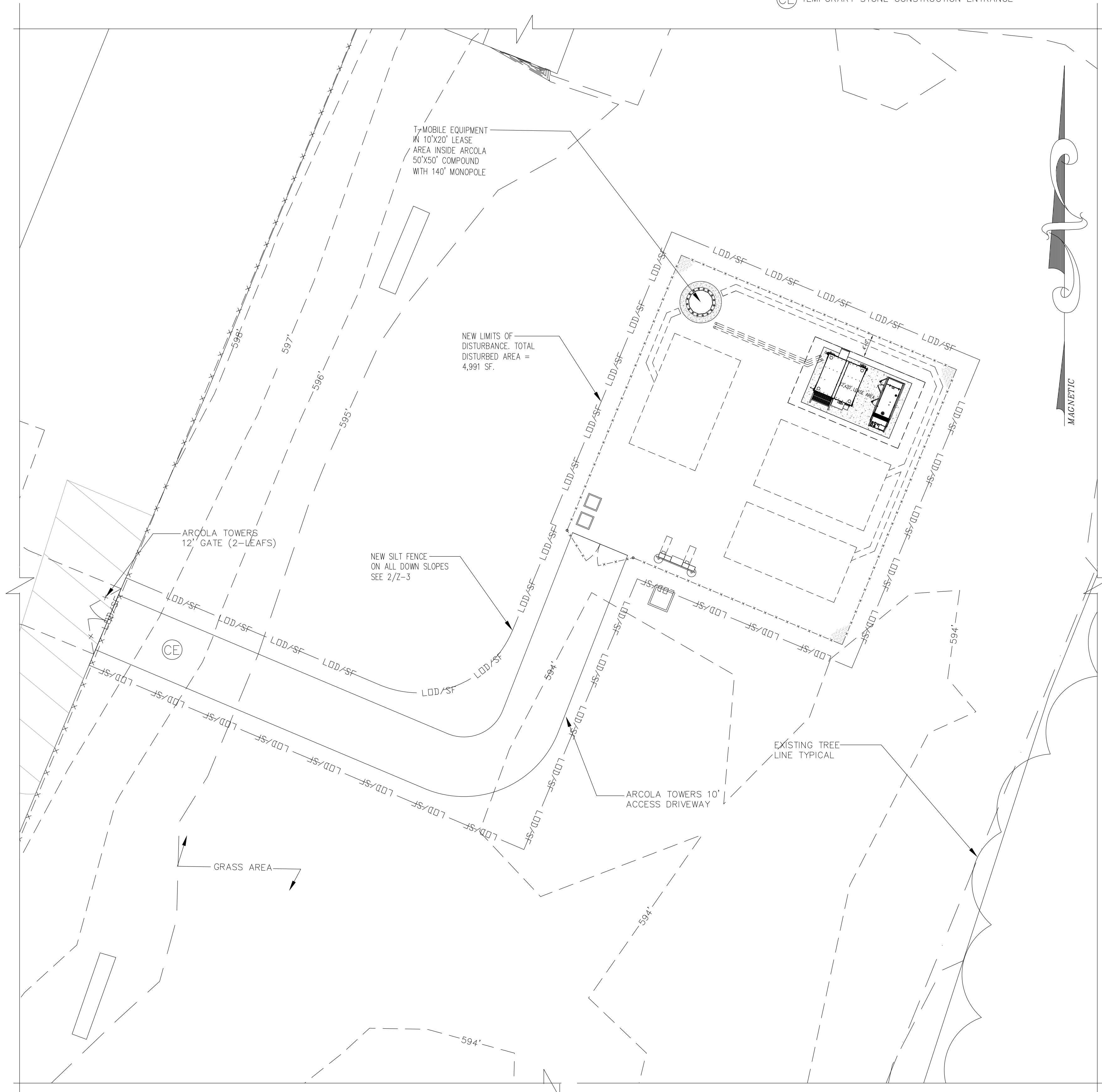
DISTURBED AREA: 4,991 SF

NOTES:

- LANDSCAPING NOT SHOWN FOR CLARITY, SEE SHEET Z-10.
- THE FLOOD ZONE OF THE PROPOSED MONOPOLE IS AS FOLLOWS:  
FLOOD ZONE X, AREA OF MINIMUM FLOODING. SOURCE: FEMA FLOOD MAP FOR WASHINGTON COUNTY, MD. COMMUNITY PANEL NUMBER 24043C 0137D. REVISED AUGUST 15, 2017.

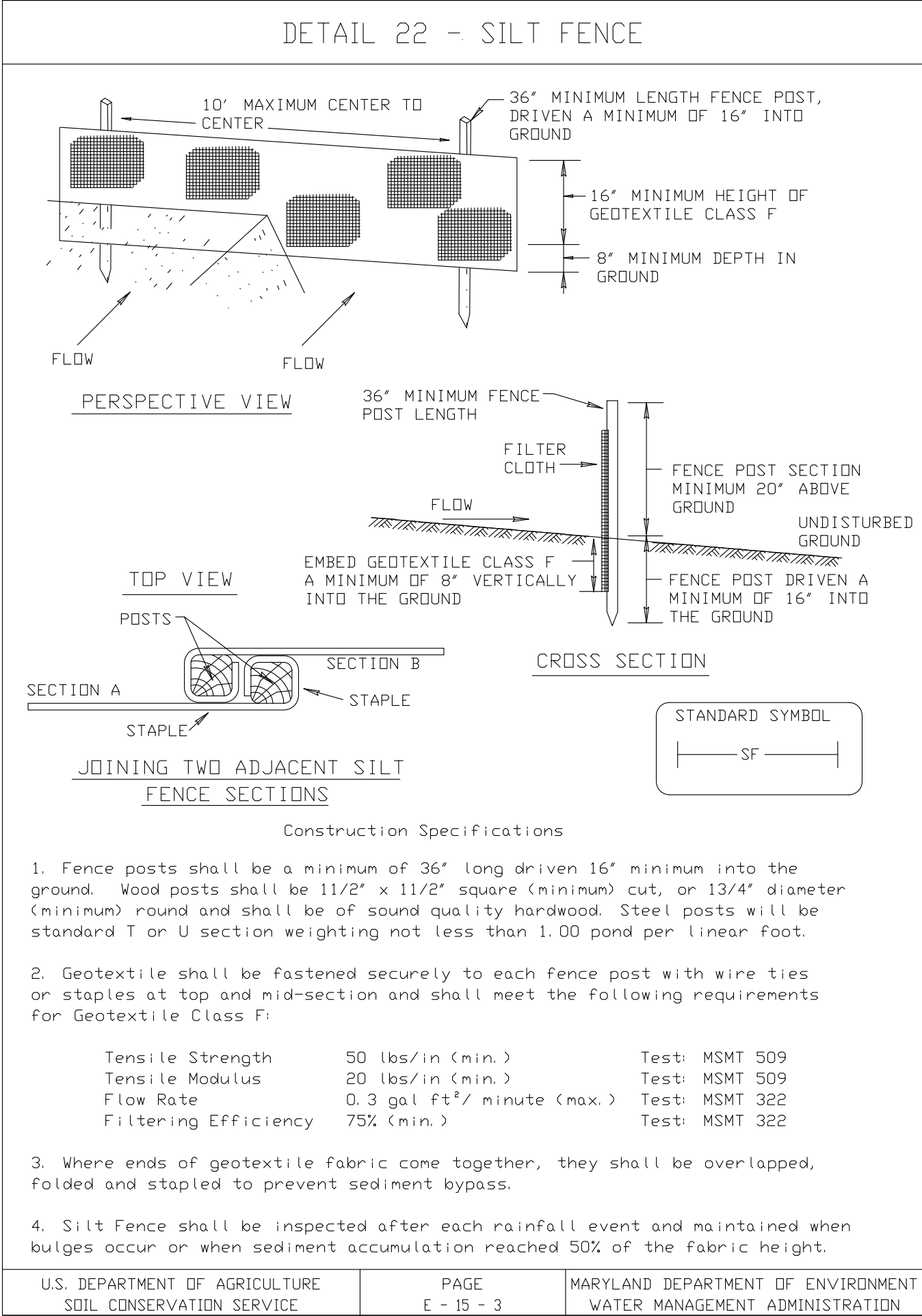
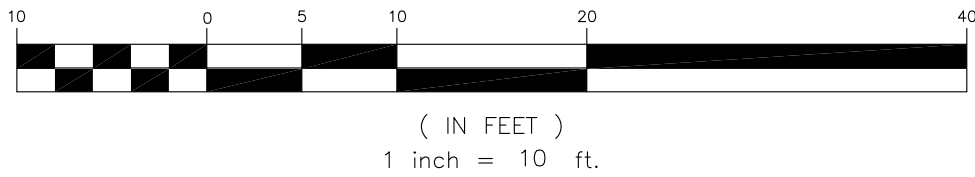
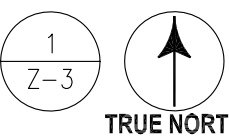
LEGEND

- FOUND PROPERTY CORNER
- △ BENCH MARKS
- UTILITY POLE
- SIGN
- ☆ LIGHT POLE
- TP TELEPHONE PEDESTAL
- INDIVIDUAL TREE - DECIDUOUS
- CE TEMPORARY STONE CONSTRUCTION ENTRANCE



EROSION AND SEDIMENT CONTROL PLAN

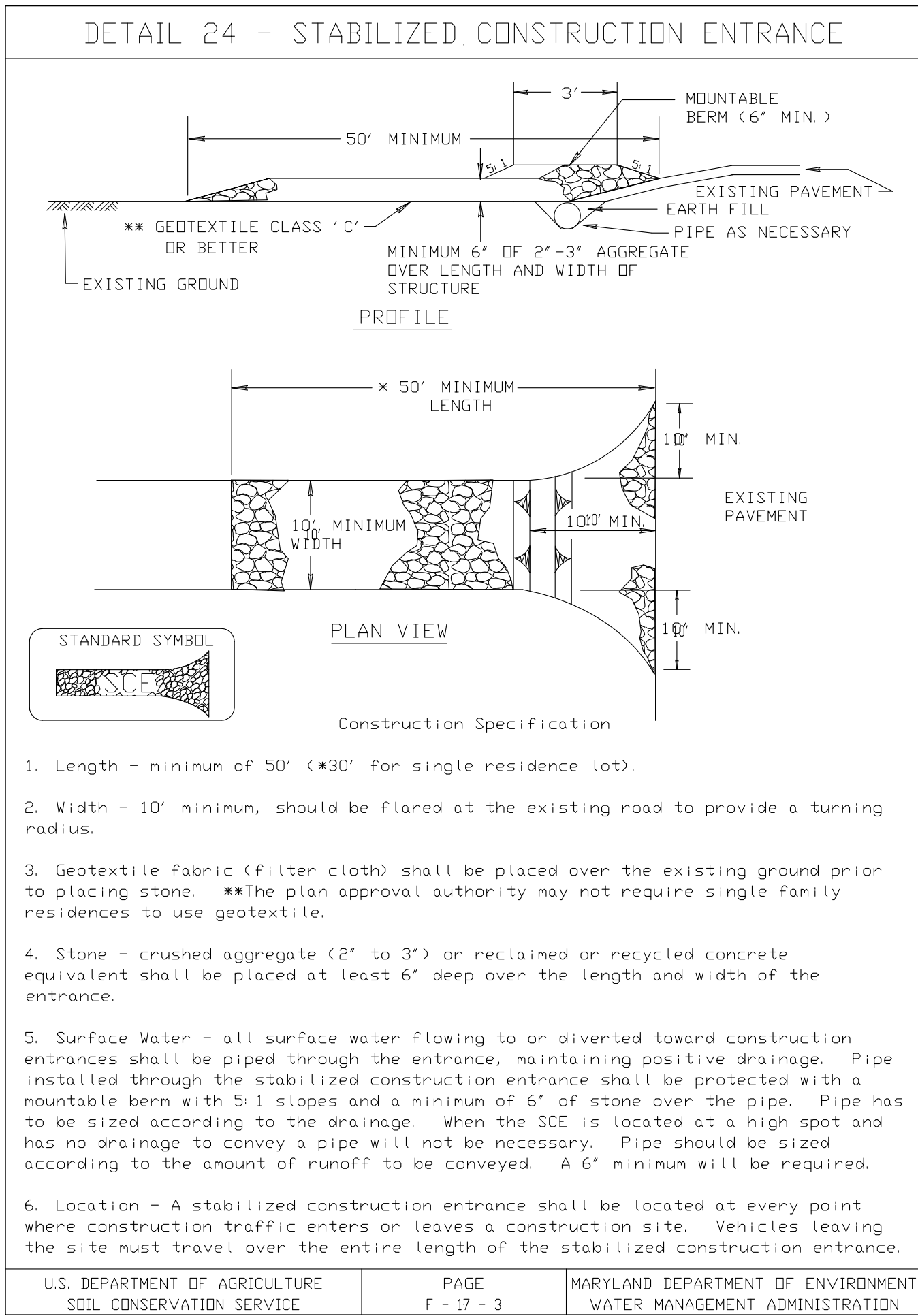
SCALE: 1"= 10'



SILT FENCE

SCALE: N.T.S.

2  
Z-2



STABILIZED CONSTRUCTION ENTRANCE

SCALE: N.T.S.

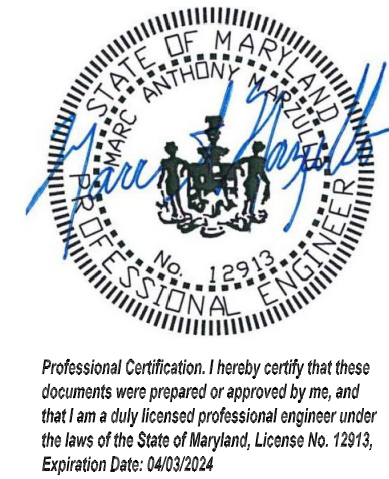
3  
Z-2

**entrex**  
communication services, inc.  
6100 Executive Blvd., Suite 430  
Rockville, MD 20852  
PHONE: (202)408-0960

SUBMITTALS

DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	ARCOLA COMMENTS	
09-23-22	ZONING	

SEAL:



PROJECT NO: 1164.010

DESIGNER: R.S.

ENGINEER: M.M.

SCALE:

SCALE AS NOTED

**ARCOLA TOWERS**  
**MD-003 PARAMOUNT**  
**19224 LONGMEADOW RD.**  
**HAGERSTOWN, MD 21742**

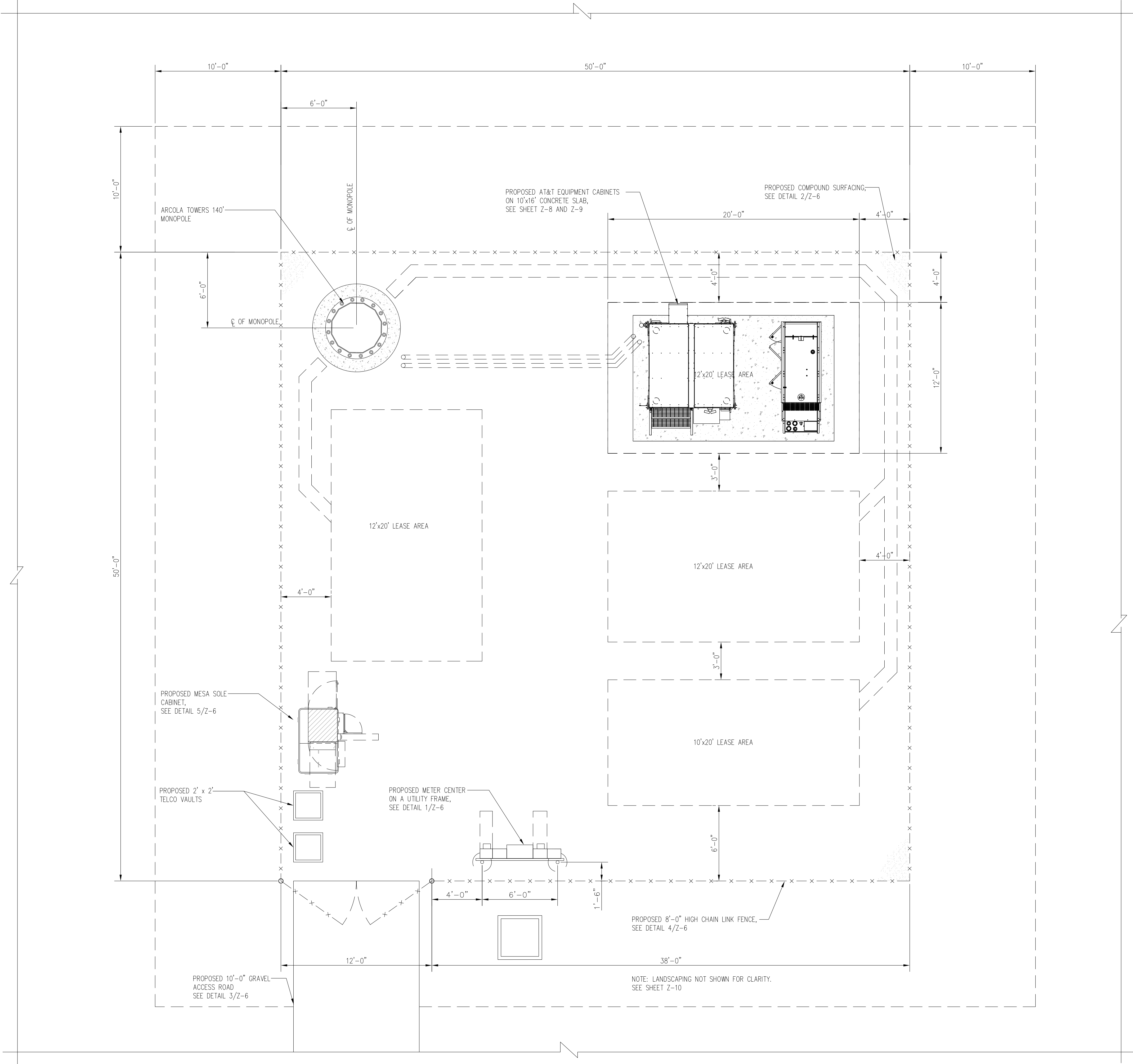
TITLE:

**EROSION AND  
SEDIMENT  
CONTROL PLAN**

SHEET NUMBER:

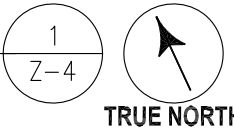
**Z-3**





COMPOUND PLAN

SCALE: 1/4" = 1'-0"



6100 Executive Blvd., Suite 430  
Rockville, MD 20852  
PHONE: (202)408-0960

SUBMITTALS

DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	ARCOLA COMMENTS	
09-23-22	ZONING	

SEAL:



Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 12913, Expiration Date: 04/03/2024.



PROJECT NO: 1164.010

DESIGNER: R.S.

ENGINEER: M.M.

SCALE:

SCALE AS NOTED

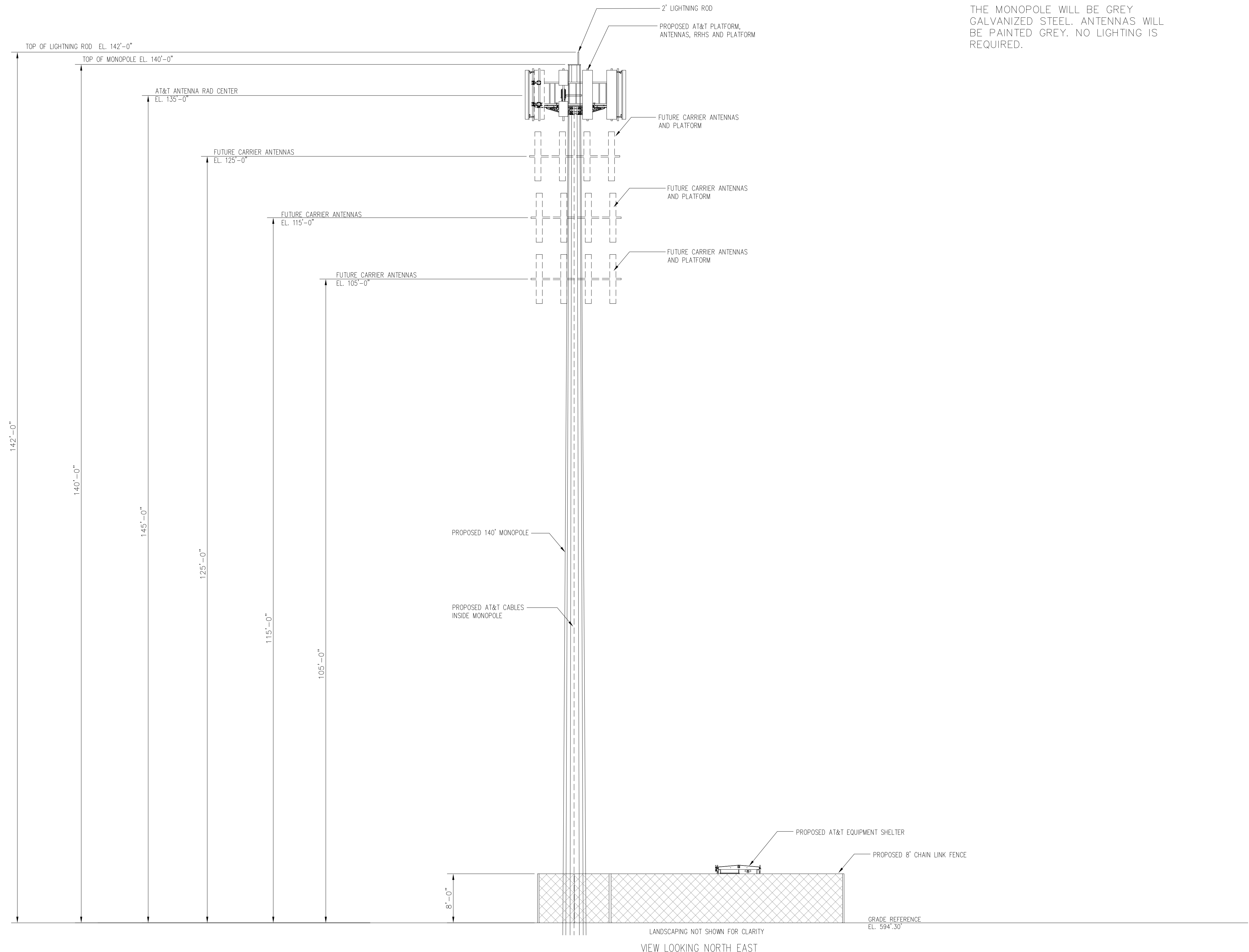
ARCOLA TOWERS  
MD-003 PARAMOUNT  
19224 LONGMEADOW RD.  
HAGERSTOWN, MD 21742

TITLE:

COMPOUND PLAN

SHEET NUMBER:

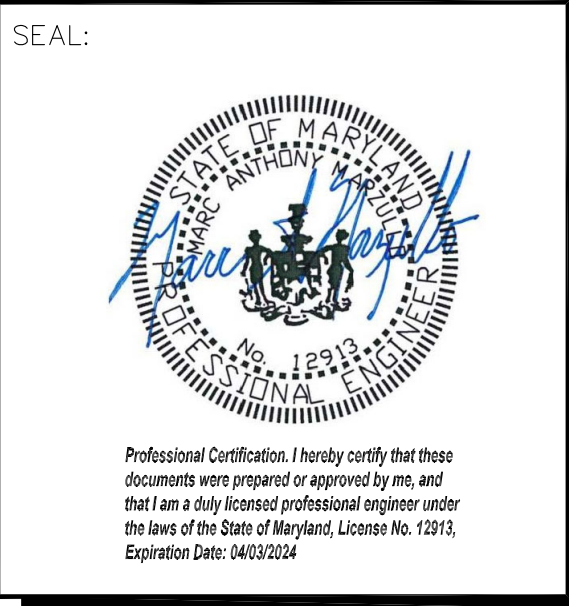
Z-4



NOTE:  
THE MONOPOLE WILL BE GREY GALVANIZED STEEL. ANTENNAS WILL BE PAINTED GREY. NO LIGHTING IS REQUIRED.

MONOPOLE ELEVATION 1 Z-5  
SCALE: 1/8" = 1'-0"

SUBMITTALS		
DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	ARCOLA COMMENTS	
09-23-22	ZONING	



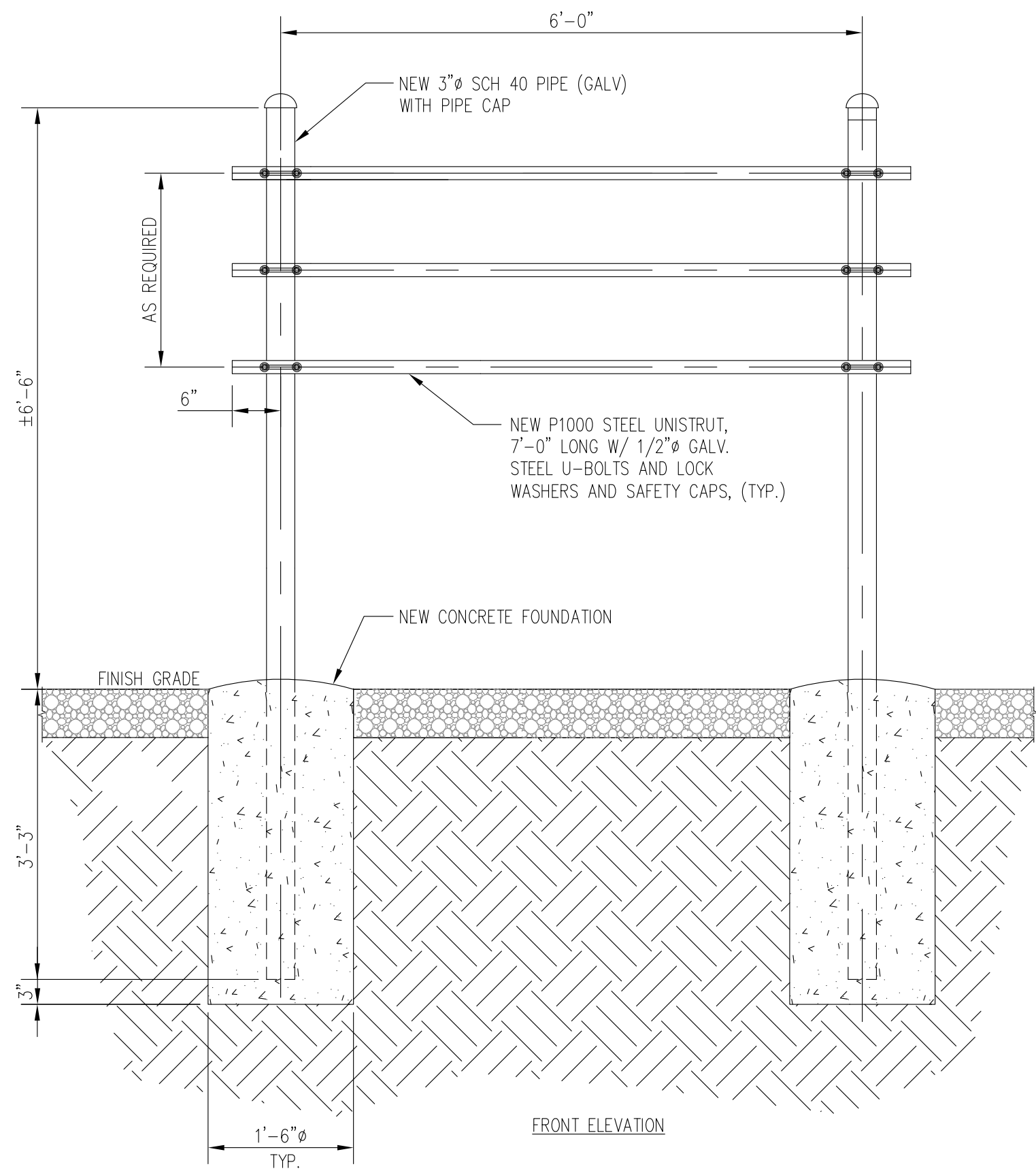
PROJECT NO:	1164.010
DESIGNER:	R.S.
ENGINEER:	M.M.

SCALE:
SCALE AS NOTED

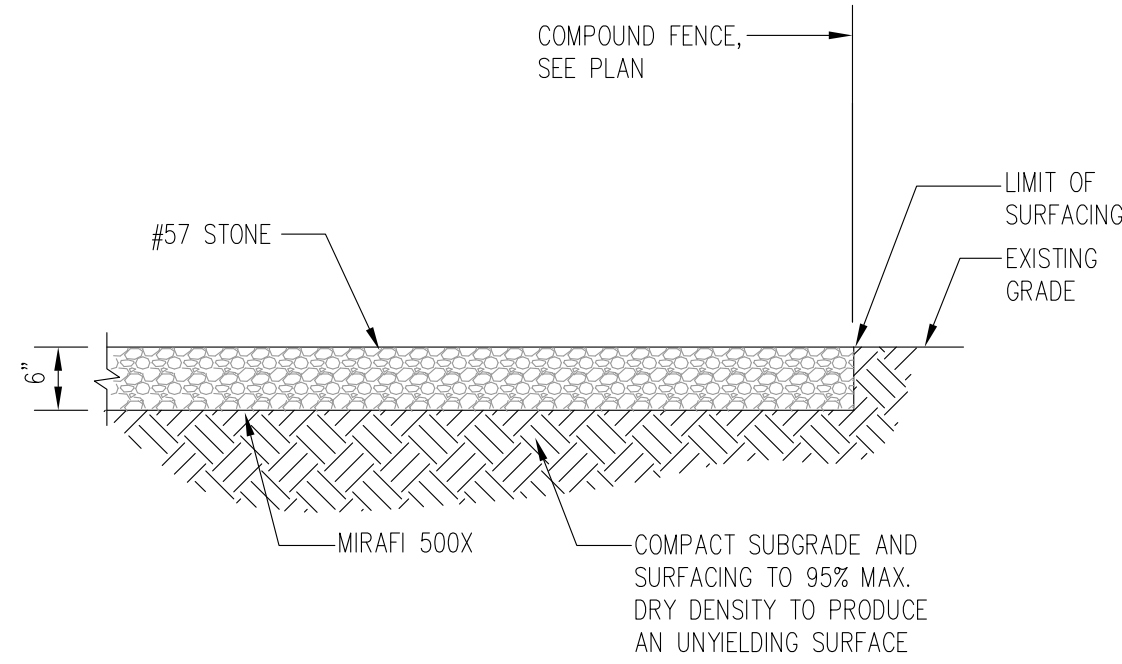
ARCOLA TOWERS  
MD-003 PARAMOUNT  
19224 LONGMEADOW RD.  
HAGERSTOWN, MD 21742

TITLE:
MONOPOLE ELEVATION
SHEET NUMBER:
Z-5



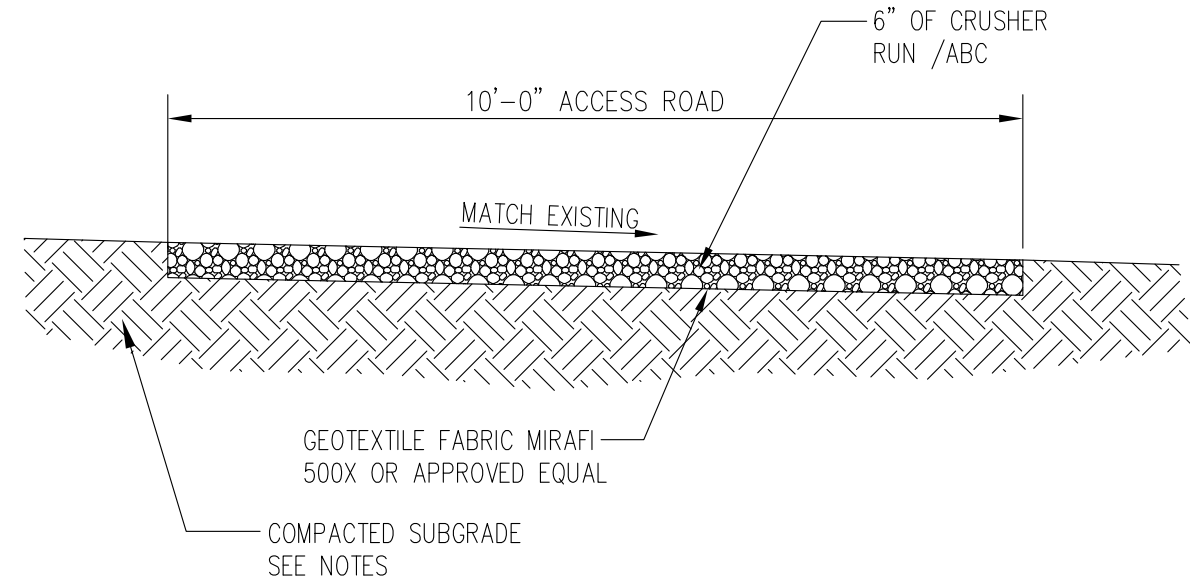


ELECTRIC SERVICE FRAME  
SCALE: 3/4"=1'-0"



NOTE: COMPOUND AREA SHALL BE CLEARED AND GRUBBED. REMOVE UNSUITABLE LOOSE OR SOFT SOIL, ORGANIC MATERIAL OR RUBBLE TO FIRM GRADE. FILL UNDERCUT AND COMPACT UP TO 6" BELOW FINISH GRADE. PLACE A MIRAFIX 500X SOIL STABILIZATION FABRIC ON SUBGRADE. FILL WITH 6" OF AASHTO 57 STONE TO FINISH GRADE.

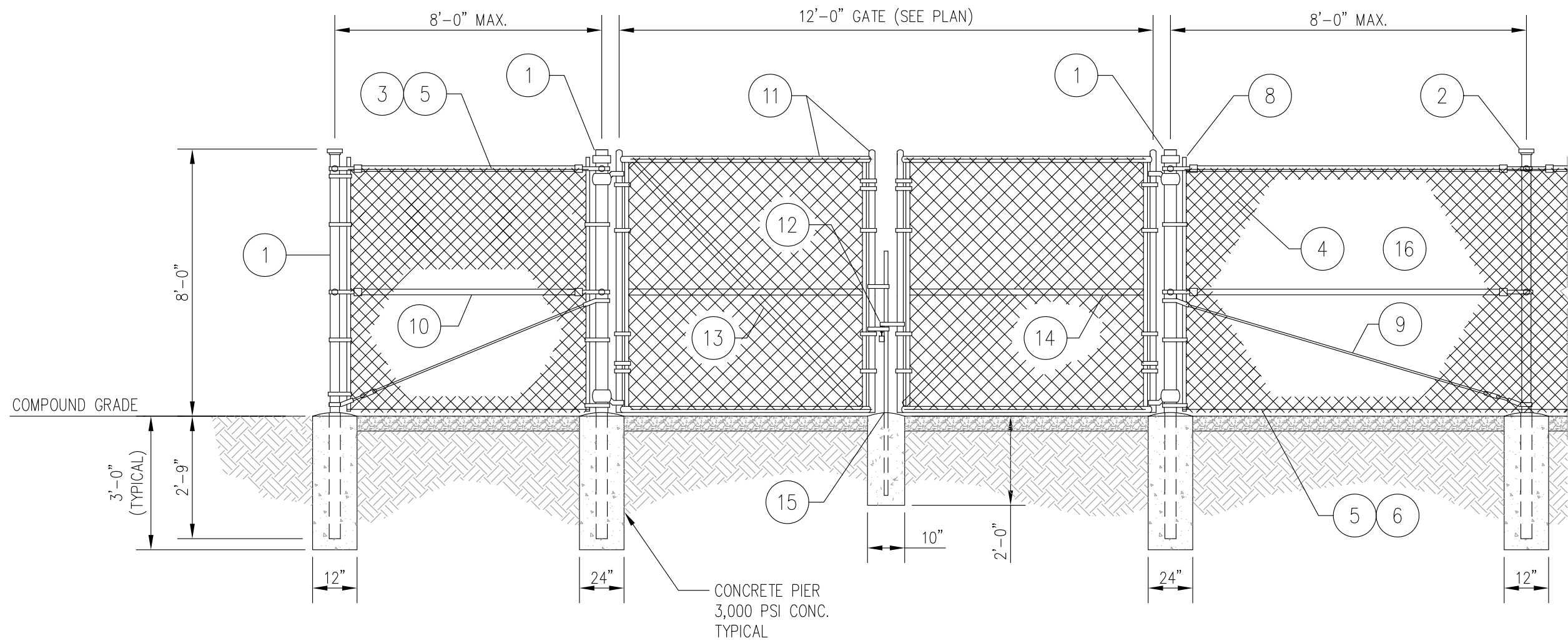
COMPOUND SURFACING DETAIL  
SCALE: 1"=1'-0"



ACCESS ROAD:  
FILL, UNDERCUT AND COMPACT TEMPORARY ACCESS ROAD UP TO 6" BELOW FINISH GRADE. PLACE MIRAFIX 500X STABILIZATION FABRIC ON SUBGRADE. PULL TIGHT AND STAKE IN PLACE. PLACE AND COMPACT 6" DEPTH OF CRUSHER RUN/ABC TO FINISH GRADE.

COMPACTION NOTES:  
1. SURFACE COURSE AND BASE COURSE SHALL BE COMPACTED TO 98% MAX. DRY DENSITY STANDARD PROCTOR.  
2. SUBGRADE SOIL SHALL BE COMPACTED TO 95% MAX. DRY DENSITY STANDARD PROCTOR.

GRAVEL ACCESS ROAD DETAIL  
SCALE: N.T.S.



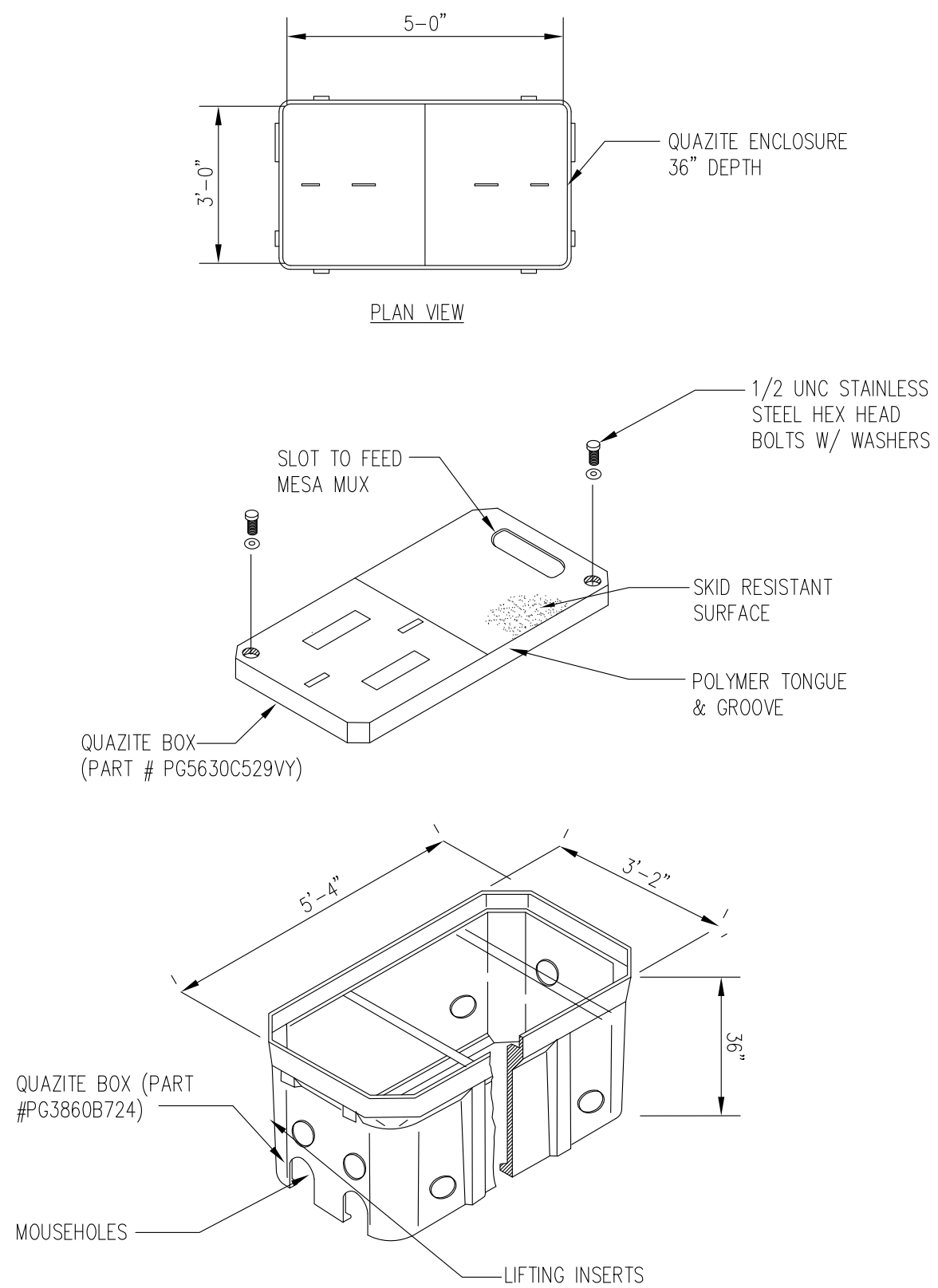
REFERENCE NOTES:

- CORNER, END OR PULL POST: 3" NOMINAL SCHEDULE 40 PIPE. GATE POST: 4" NOMINAL SCHEDULE 40 PIPE.
- LINE POST: 2" SCHEDULE 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 8'-0" O.C.
- TOP RAIL & BRACE RAIL: 1 1/2" PIPE, PER ASTM-F1083.
- FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
- TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX. 24" INTERVALS.
- TENSION WIRE: 9 GA. GALVANIZED STEEL.
- PRIVACY SLATS (IF SPECIFIED)
- STRETCHER BAR.
- 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
- FENCE CORNER POST BRACE: 1 5/8" DIA. EACH CORNER EACH WAY.
- GATE FRAME: 1 1/2" PIPE, PER ASTM-F1083.
- STIMIE MULTI-LOCKING DEVICE W/KNOX LOCK
- GATE DIAGONAL GALVANIZED STEEL 1 1/2" PIPE.
- GATE FRAME BRACE: 1 5/8" DIAMETER.
- CENTER GATE STOP
- PRIVACY SLATS

GENERAL NOTES:

- INSTALL FENCING PER ASTM F-567
- INSTALL SWING GATES PER ASTM F-900
- FENCE PIPE AND COMPONENTS SHALL BE GALVANIZED.
- GATE FRAMES SHALL BE WELDED. WELDING SHALL BE COATED WITH (3) COATS OF COLD GALV. (OR EQUAL).
- POSTS SHALL HAVE END-CAPS.
- GATES SHALL HAVE LOCKING HARDWARE.
- PROVIDE GATE STOPS TO SECURE GATES IN OPEN POSITION.
- INSERT PRIVACY SLATS

FENCE AND GATE ELEVATION  
SCALE: N.T.S.



MESA QUAZITE BASE DETAIL  
SCALE: 3/8"=1'-0"

SUBMITTALS

DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	ARCOLA COMMENTS	
09-23-22	ZONING	

SEAL:



PROJECT NO: 1164.010  
DESIGNER: M.A.  
ENGINEER: M.M.

SCALE:

SCALE AS NOTED

**ARCOLA TOWERS**  
**MD-003 PARAMOUNT**  
**19224 LONGMEADOW RD.**  
**HAGERSTOWN, MD 21742**

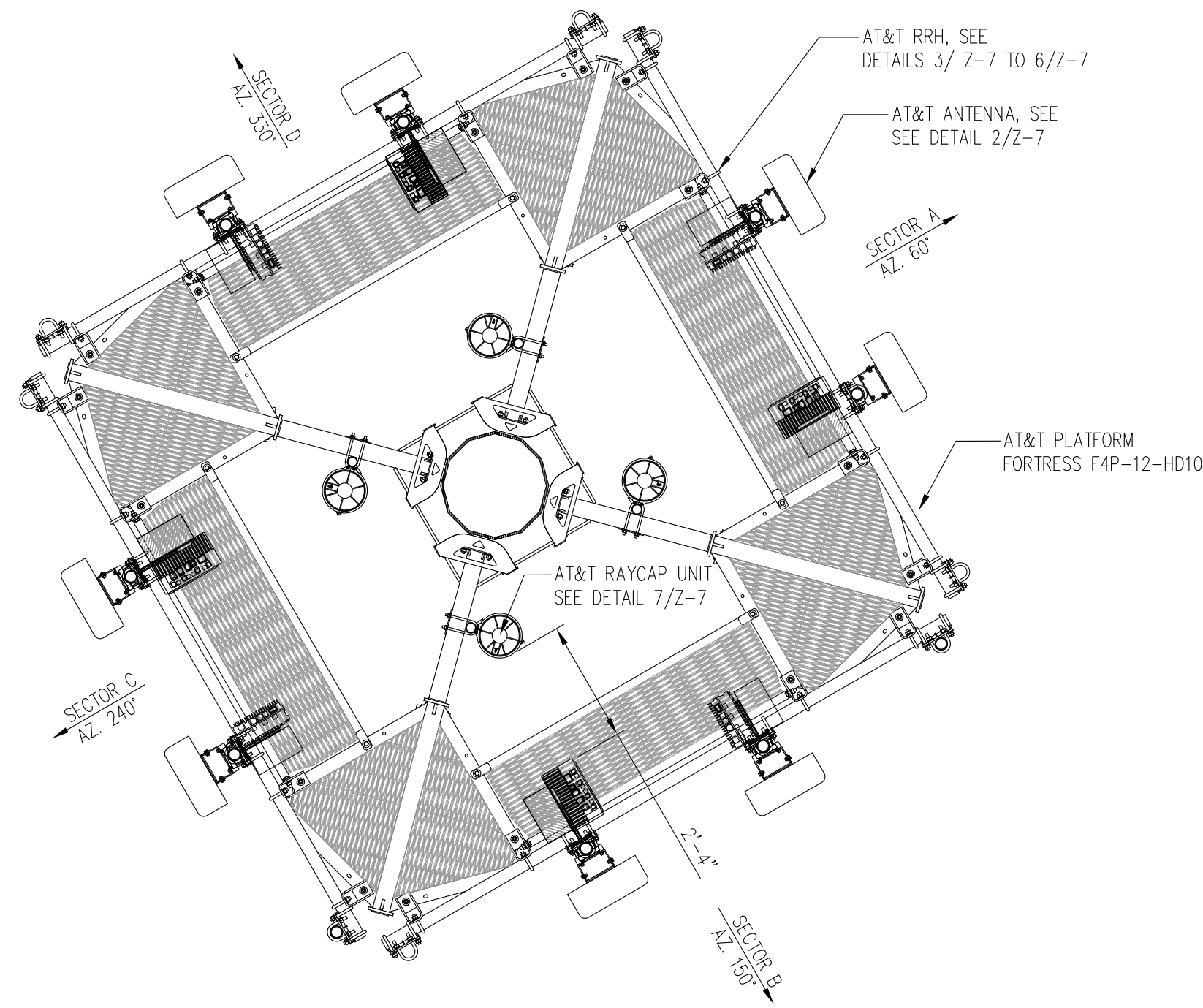
TITLE:

**SITE DETAILS**

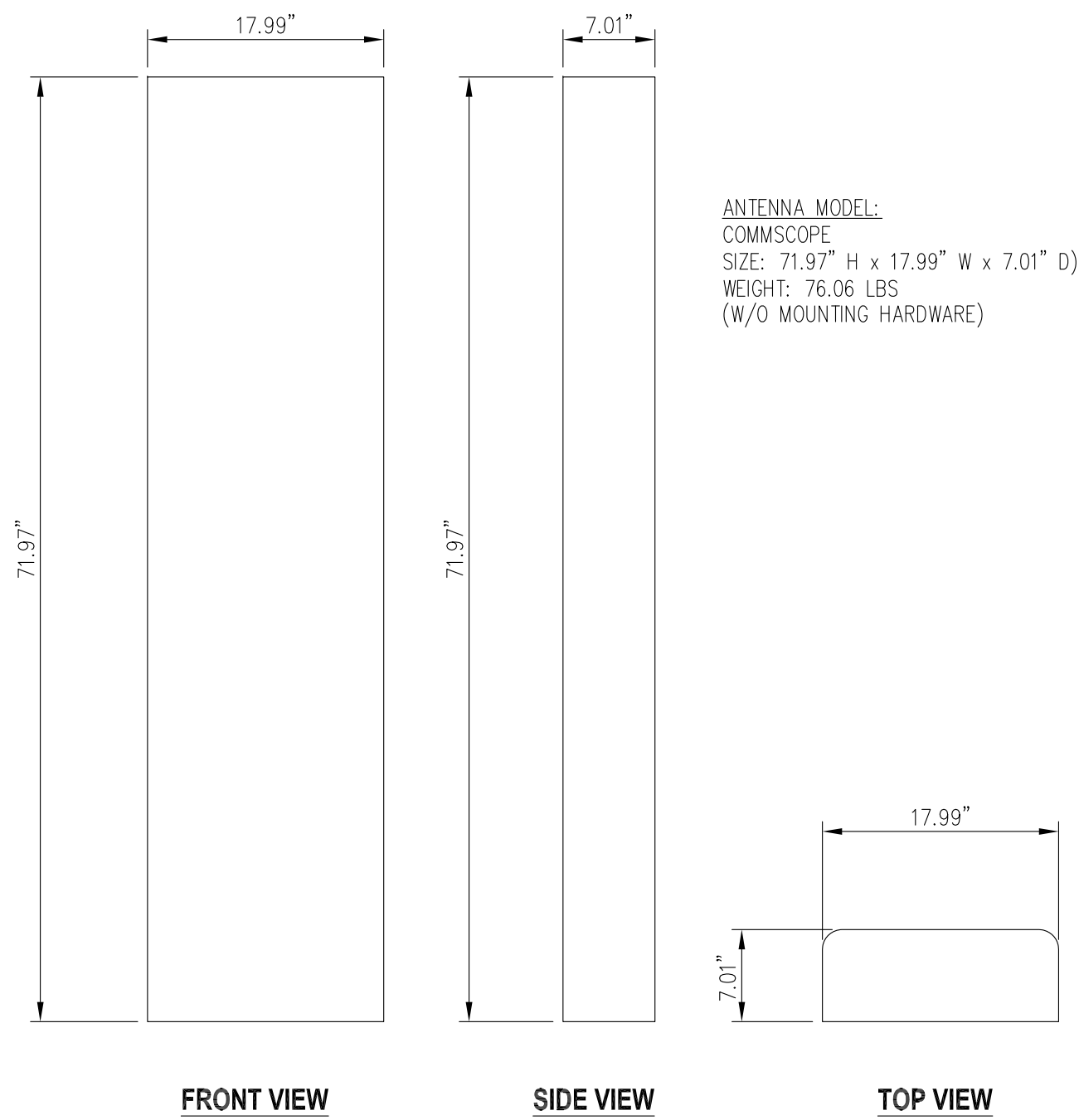
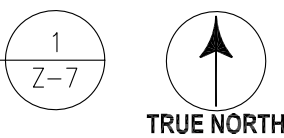
SHEET NUMBER:

**Z-6**

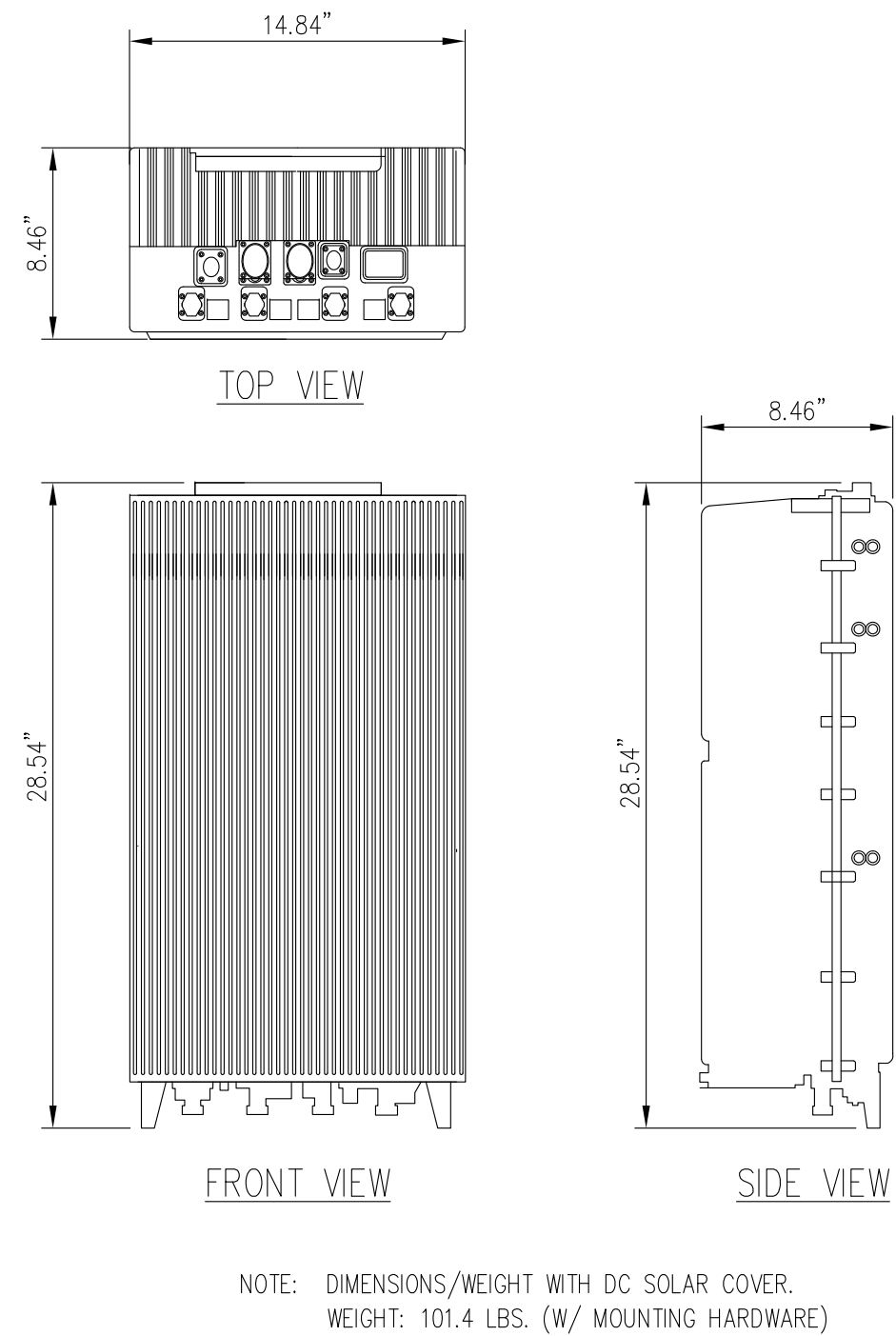
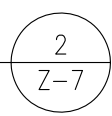




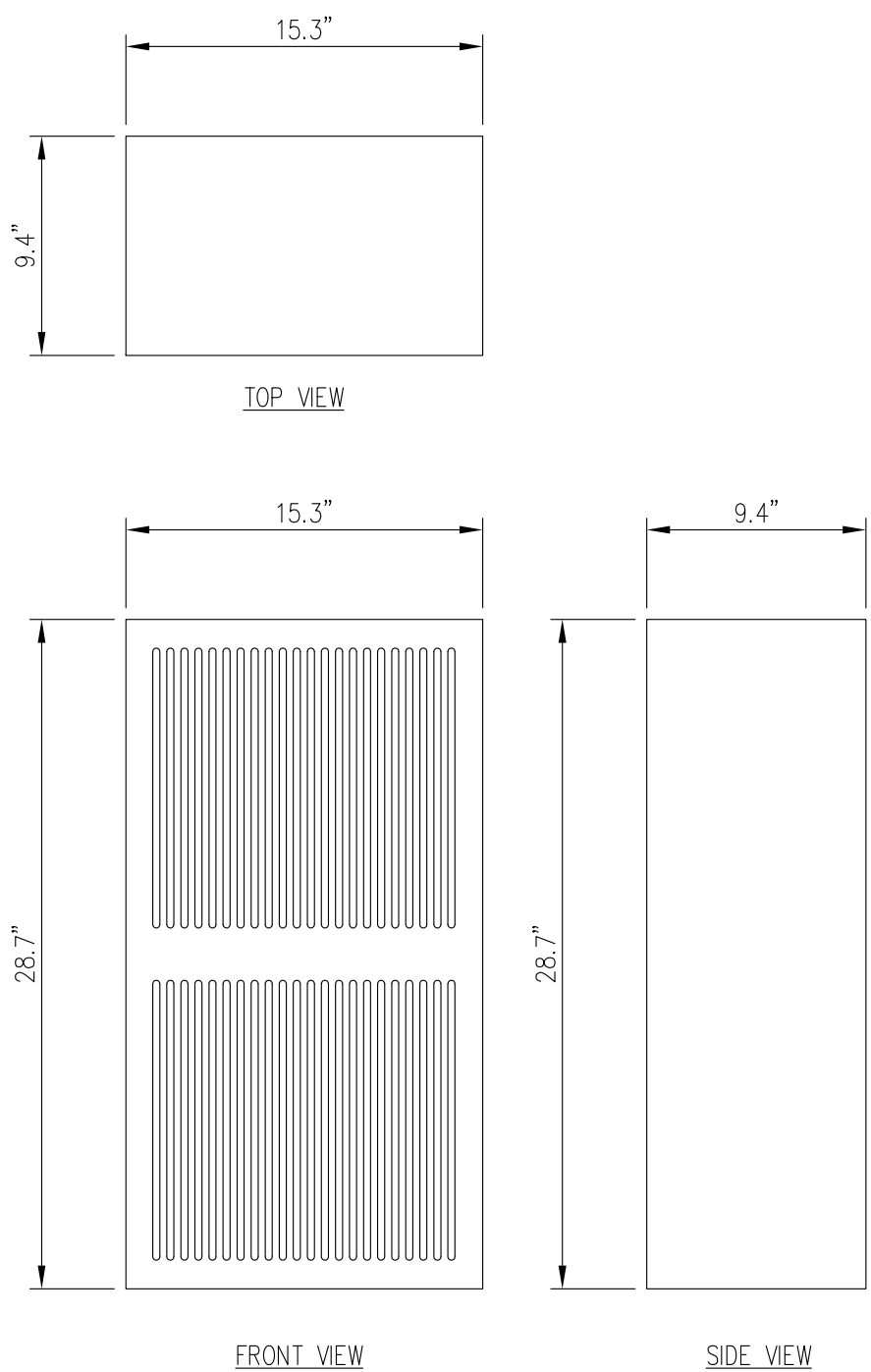
ANTENNA LOCATION PLAN  
SCALE: 3/8"=1'-0"



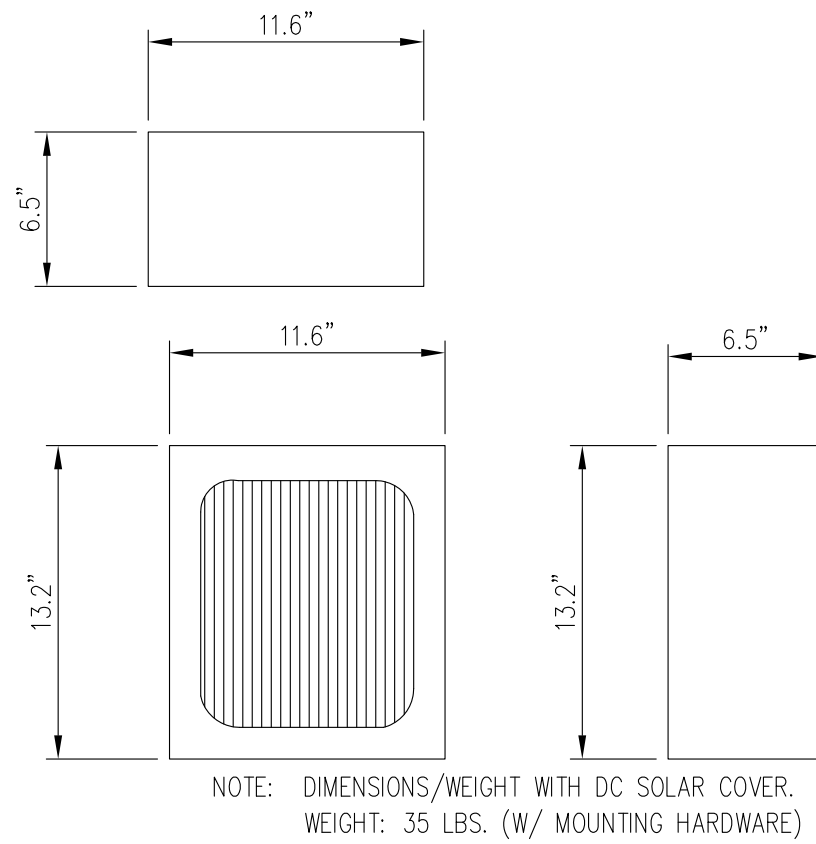
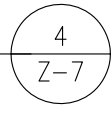
COMMSCOPE NNHH-45B-R4 ANTENNA DETAIL  
SCALE: 1"=1'-0"



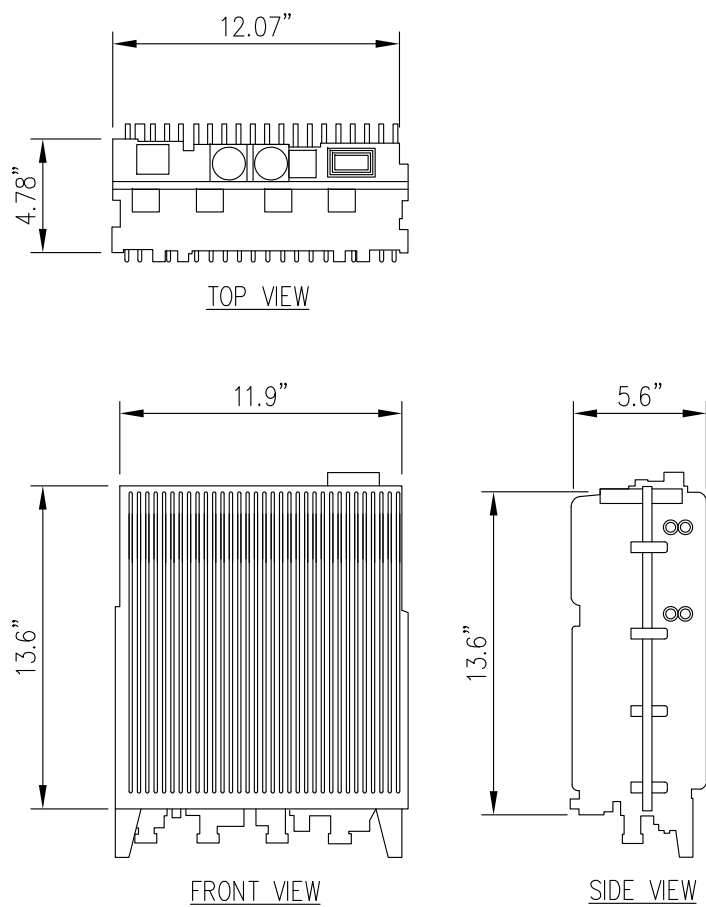
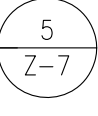
NOKIA AIRSCALE TRIBAND RRH  
4T4R B14/12/B29 370W AHLBBA  
SCALE: 1-1/2"= 1'-0"



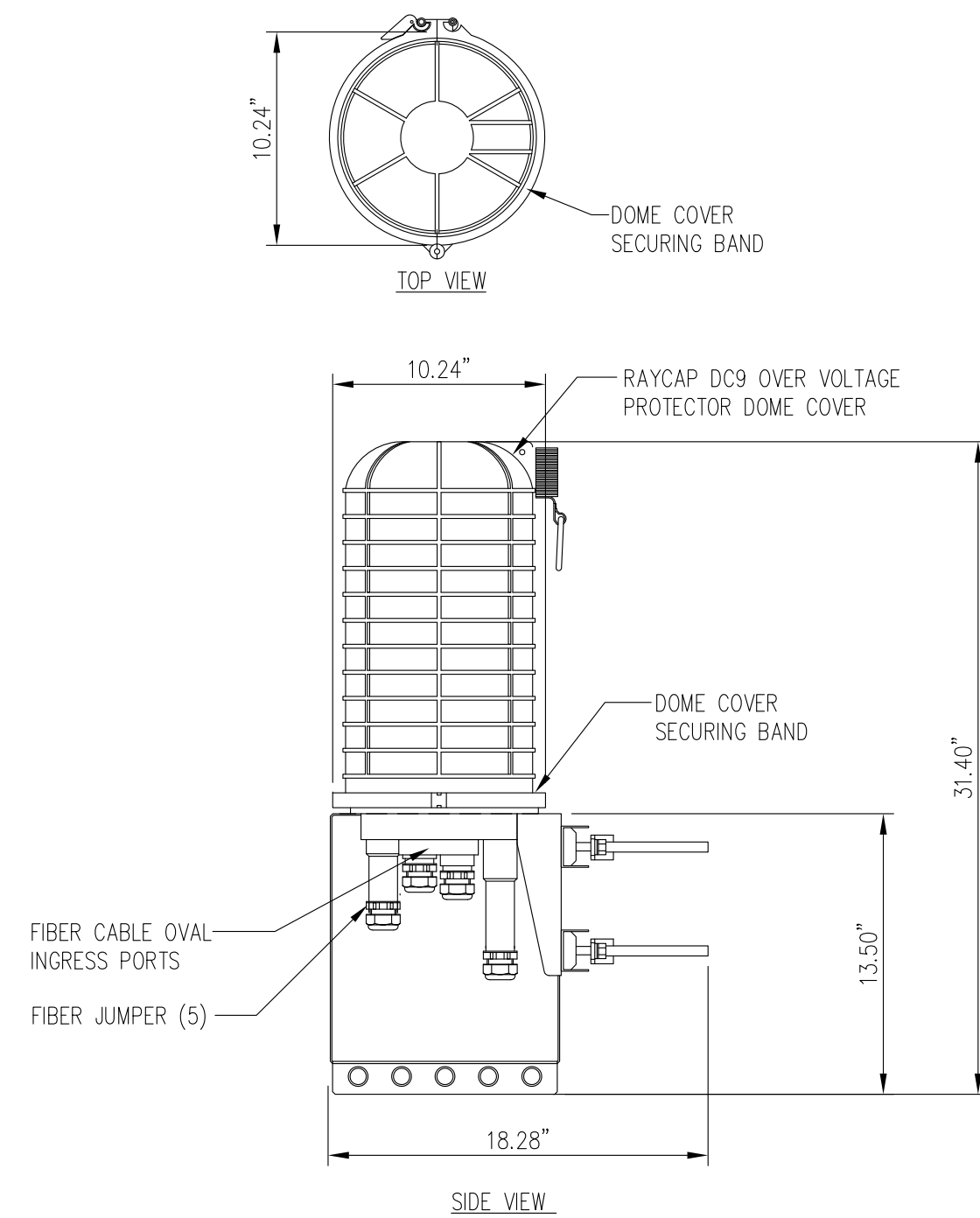
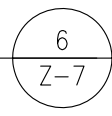
NOKIA AIRSCALE DUAL RRH  
4T4R B25/66 320W AHFIB  
SCALE: 1-1/2"= 1'-0"



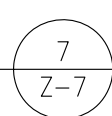
NOKIA AIRSCALE RRH  
4T4R B5 160W AHCA  
SCALE: 1-1/2"= 1'-0"



AHNA AIRSCALE RRH  
4T4R B30 100W  
SCALE: 1-1/2"= 1'-0"



RAYCAP DC9-48-60-24-8C-EV  
DC POWER OVER VOLTAGE PROTECTOR (OVP)  
SCALE: N.T.S.



SUBMITTALS

DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	ARCOLA COMMENTS	
09-23-22	ZONING	

SEAL:



PROJECT NO: 1164.010  
DESIGNER: M.A.  
ENGINEER: M.M.

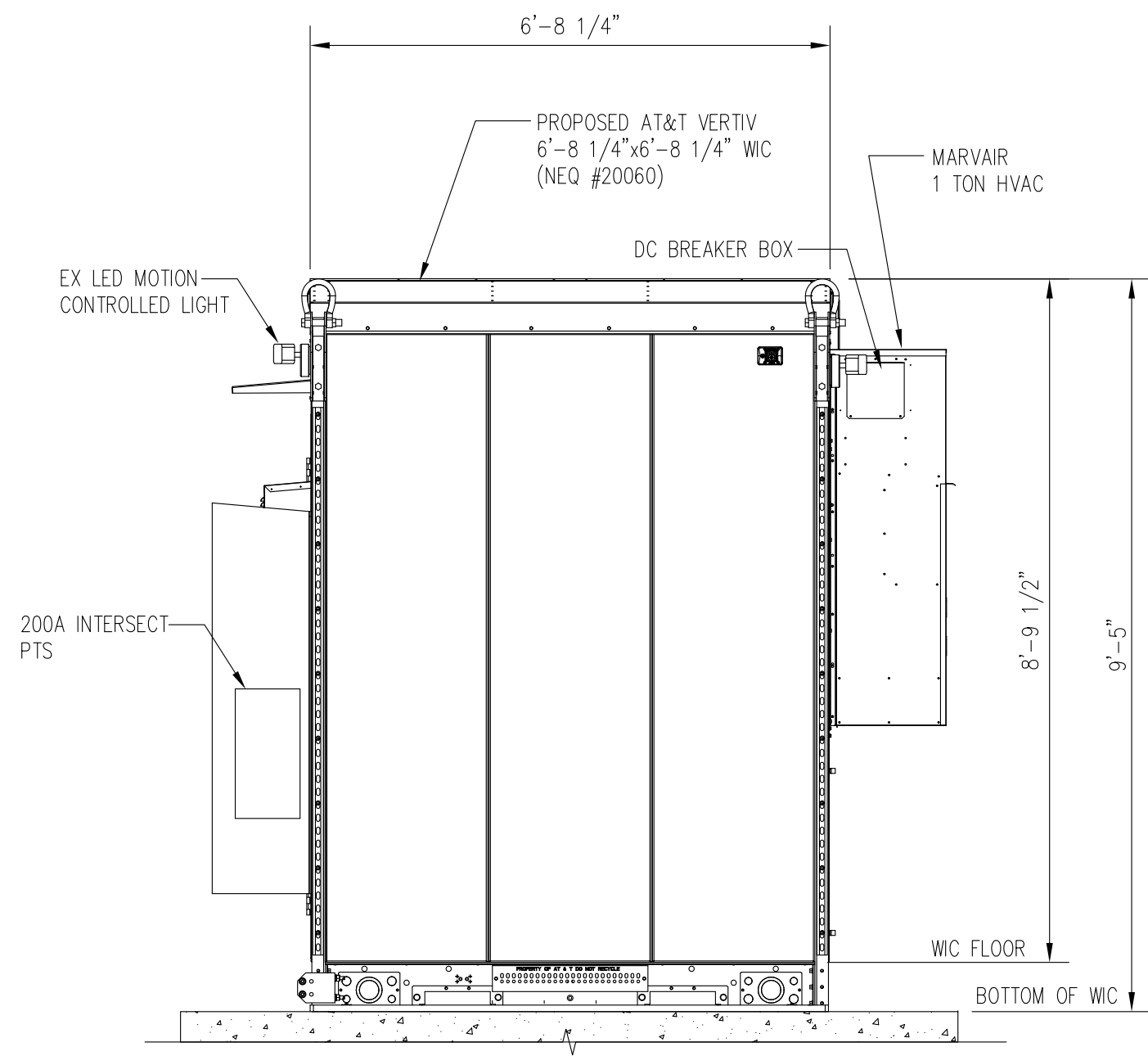
SCALE:  
SCALE AS NOTED

ARCOLA TOWERS  
MD-003 PARAMOUNT  
19224 LONGMEADOW RD.  
HAGERSTOWN, MD 21742

TITLE:  
**AT&T  
ANTENNA LAYOUT,  
SECTION, DETAILS  
AND SCHEDULE**

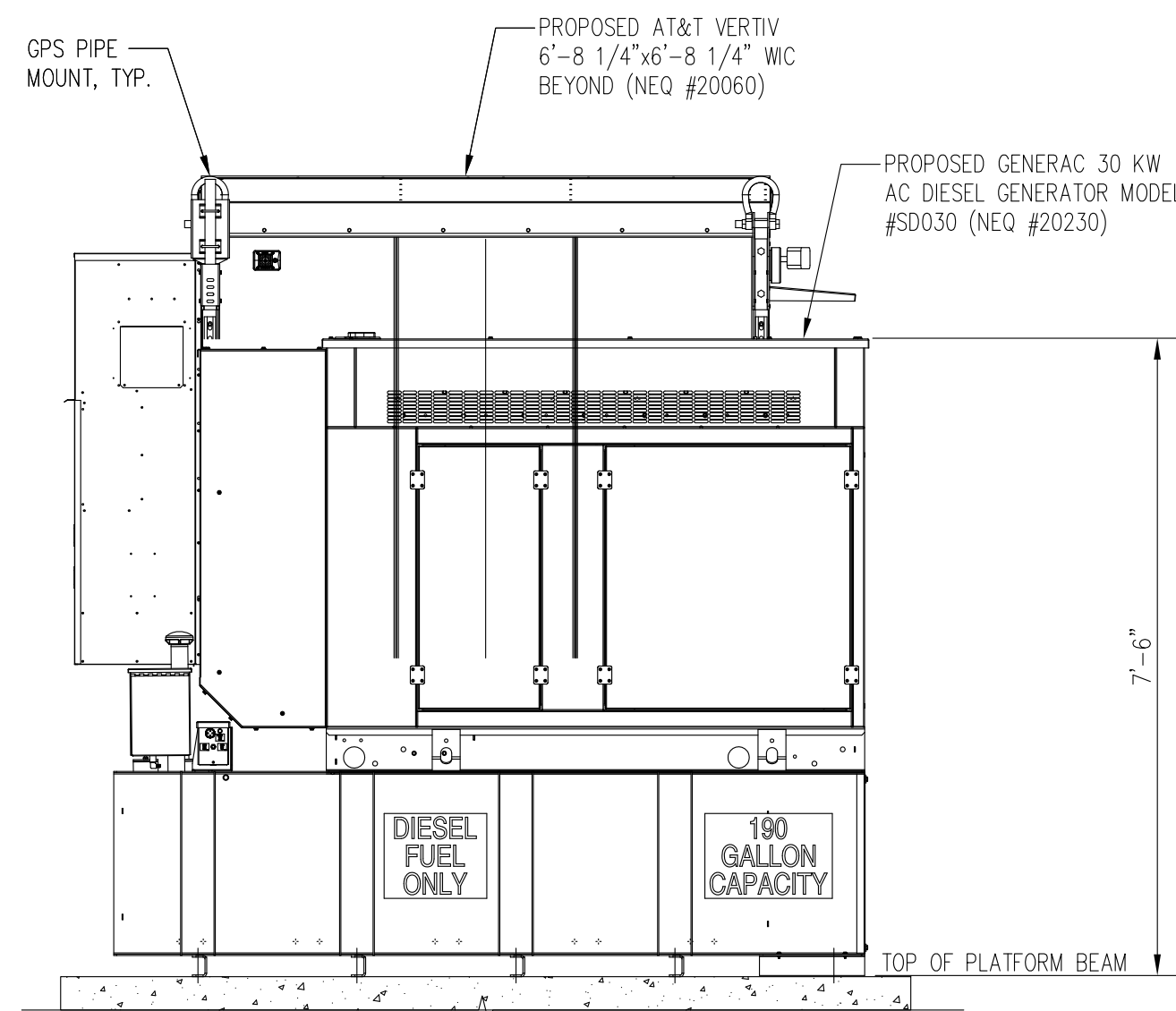
SHEET NUMBER:  
**Z-7**





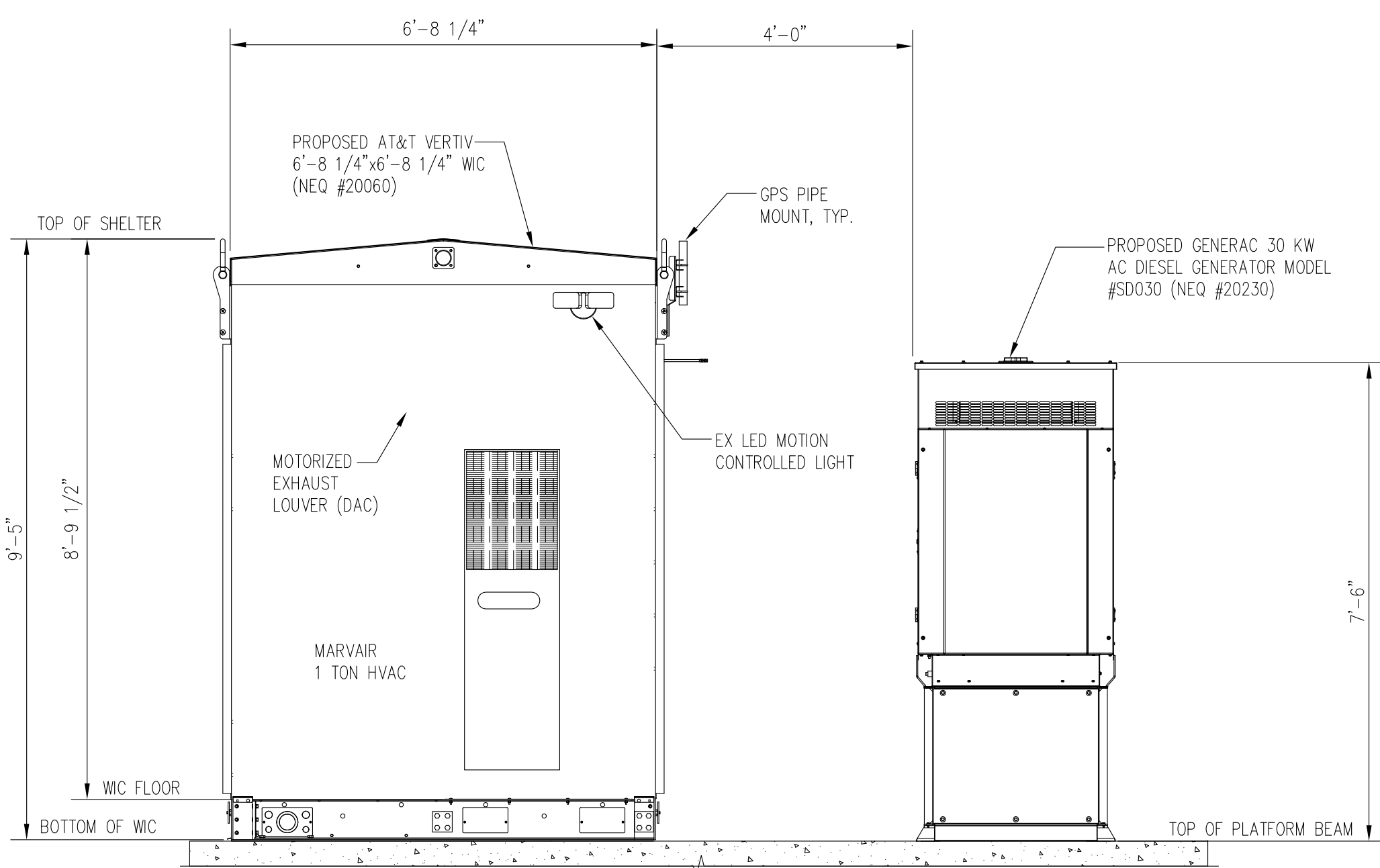
WIC SIDE ELEVATION

1  
Z-8



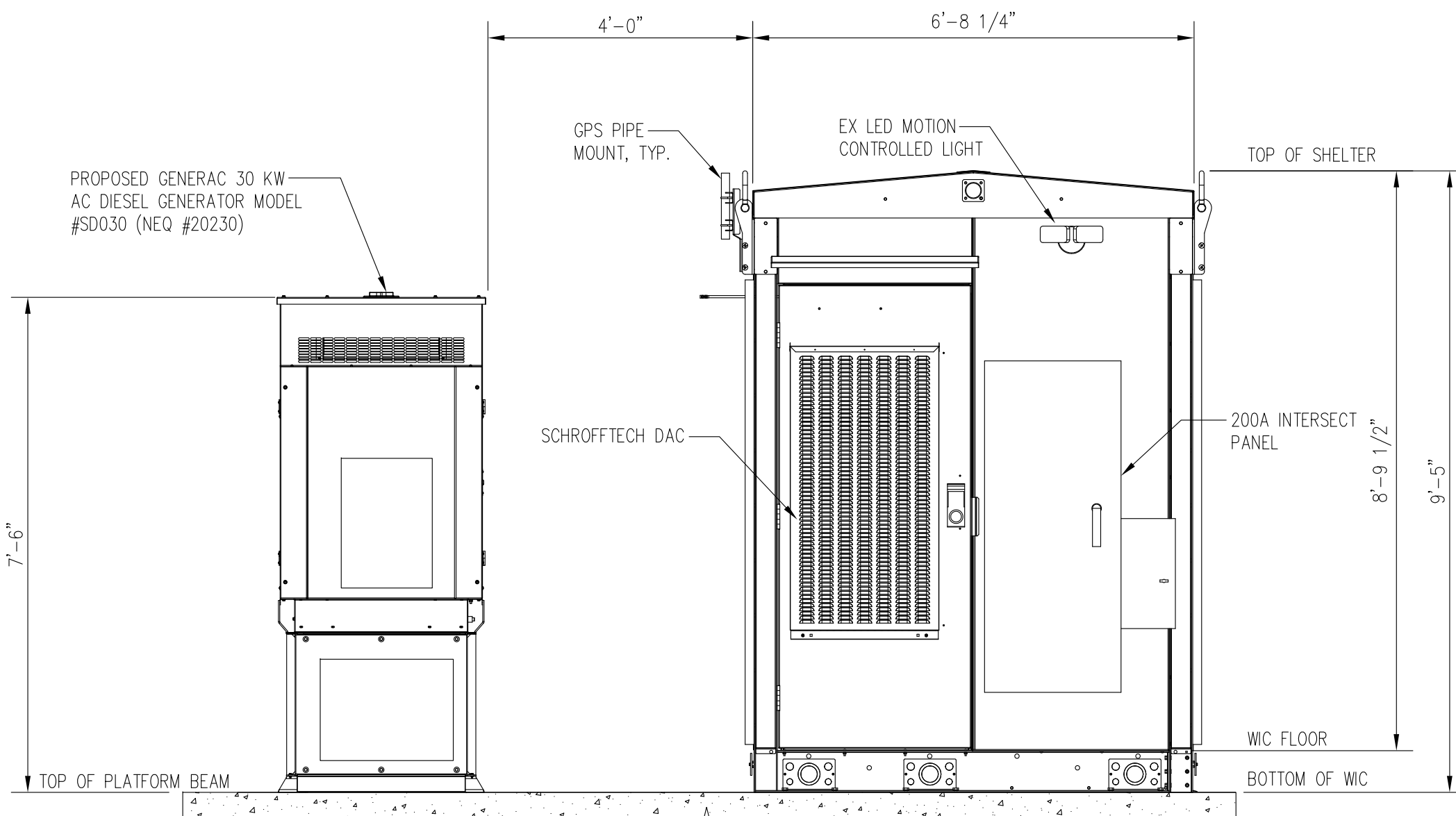
GENERATOR SIDE ELEVATION

2  
Z-8



WIC & GENERATOR BACK ELEVATION

3  
Z-8



WIC & GENERATOR FRONT ELEVATION

4  
Z-8

SUBMITTALS

DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	AROLA COMMENTS	
09-23-22	ZONING	

SEAL:



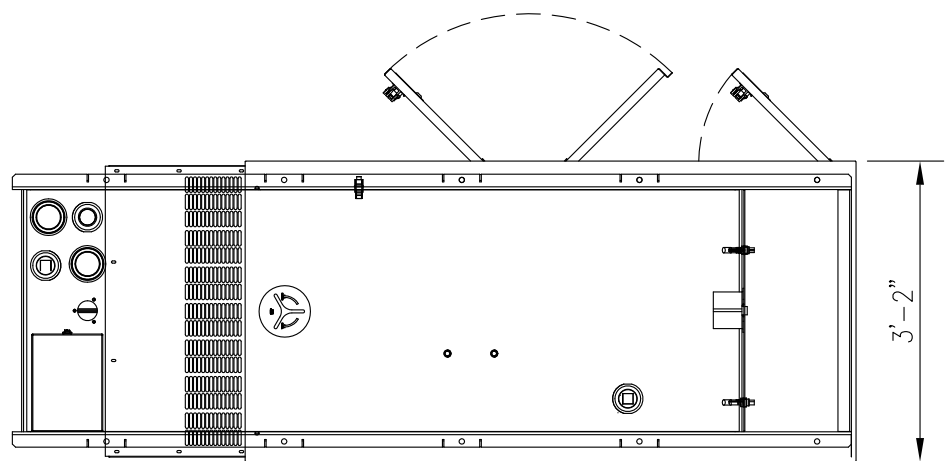
PROJECT NO: 1164.010  
DESIGNER: M.A.  
ENGINEER: M.M.

SCALE:  
SCALE AS NOTED

**ARCOLA TOWERS**  
**MD-003 PARAMOUNT**  
**19224 LONGMEADOW RD.**  
**HAGERSTOWN, MD 21742**

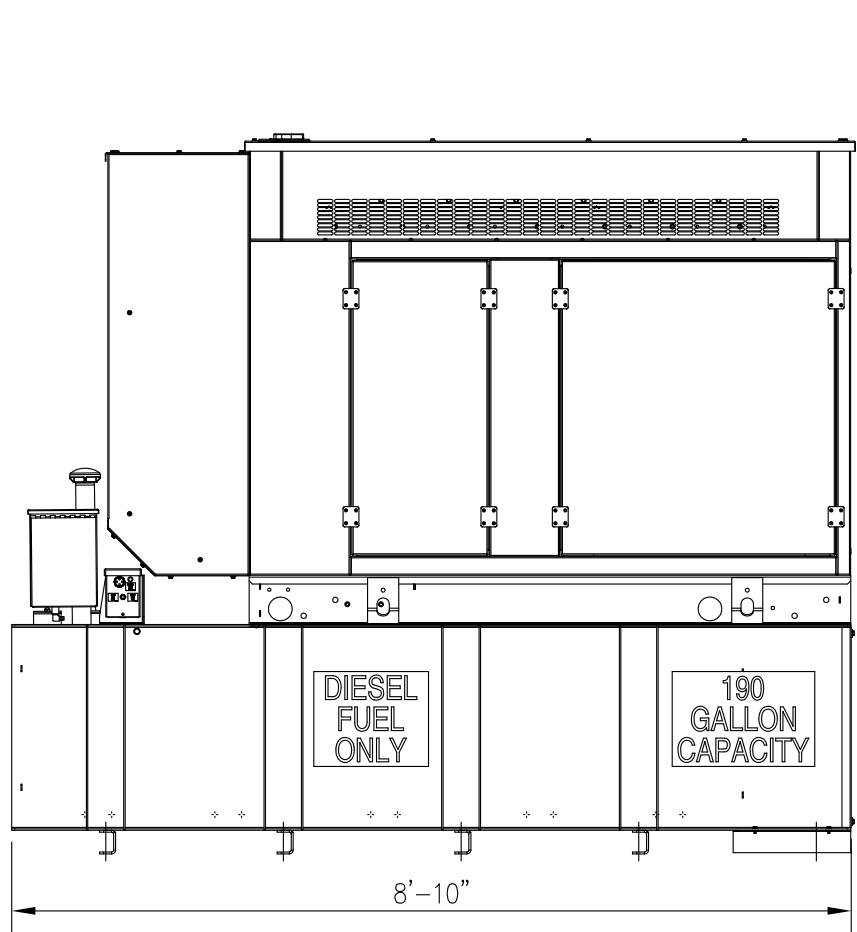
TITLE:  
**AT&T  
EQUIPMENT AND  
GENERATOR  
DETAILS**

SHEET NUMBER:  
**Z-8**

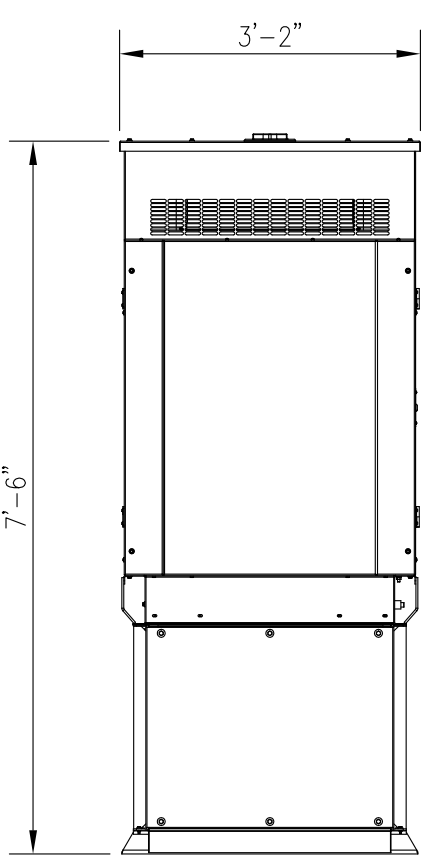


SPECIFICATIONS:  
MODEL #: SD030  
DIMENSIONS: 94.8"Wx91"Hx38"D  
APPROX. WEIGHT: 3,106 LBS.  
NEQ: #20230

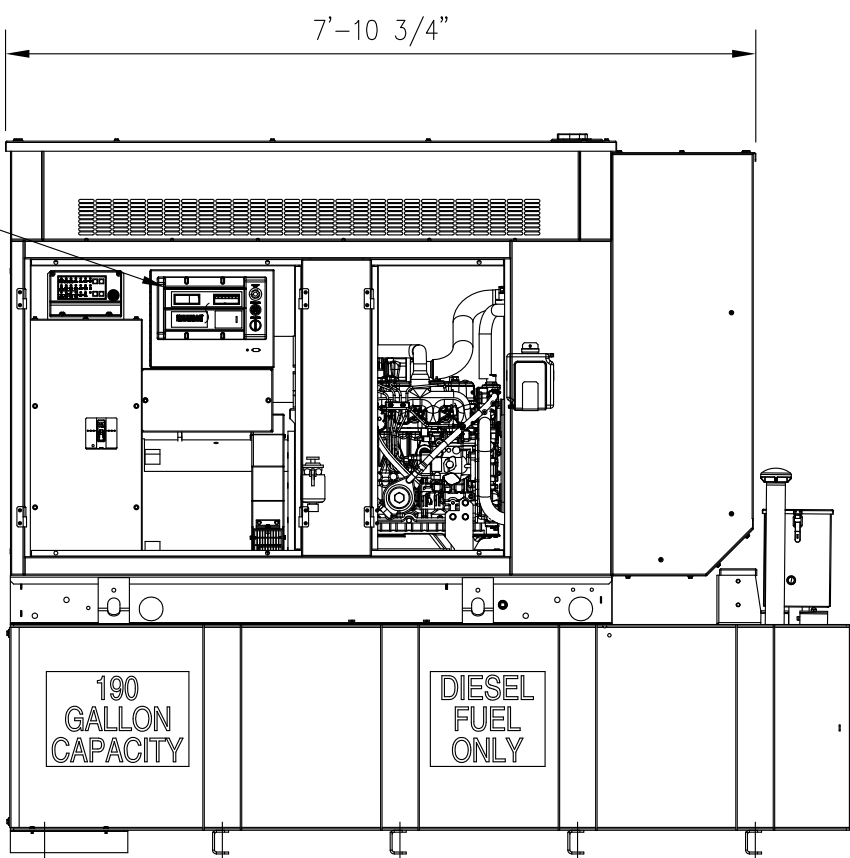
TOP VIEW



LEFT SIDE VIEW



REAR VIEW



RIGHT-SIDE VIEW  
(SHOWN WITH DOORS REMOVED)

GENERAC 30kW AC DIESEL GENERATOR DETAIL

SCALE: 1/2" = 1'-0"

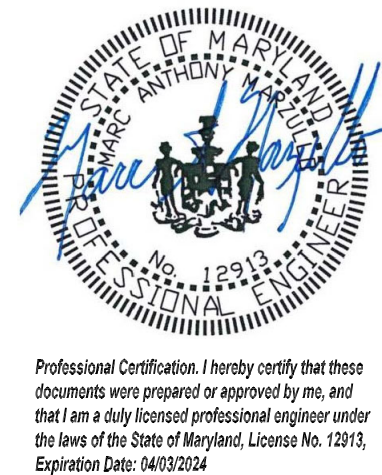
1  
Z-9

**entrex**  
communication services, inc.  
6100 Executive Blvd., Suite 430  
Rockville, MD 20852  
PHONE: (202)408-0960

SUBMITTALS

DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	ARCOLA COMMENTS	
09-23-22	ZONING	

SEAL:



PROJECT NO: 1164.010  
DESIGNER: M.A.  
ENGINEER: M.M.

SCALE:

SCALE AS NOTED

ARCOLA TOWERS  
MD-003 PARAMOUNT  
19224 LONGMEADOW RD.  
HAGERSTOWN, MD 21742

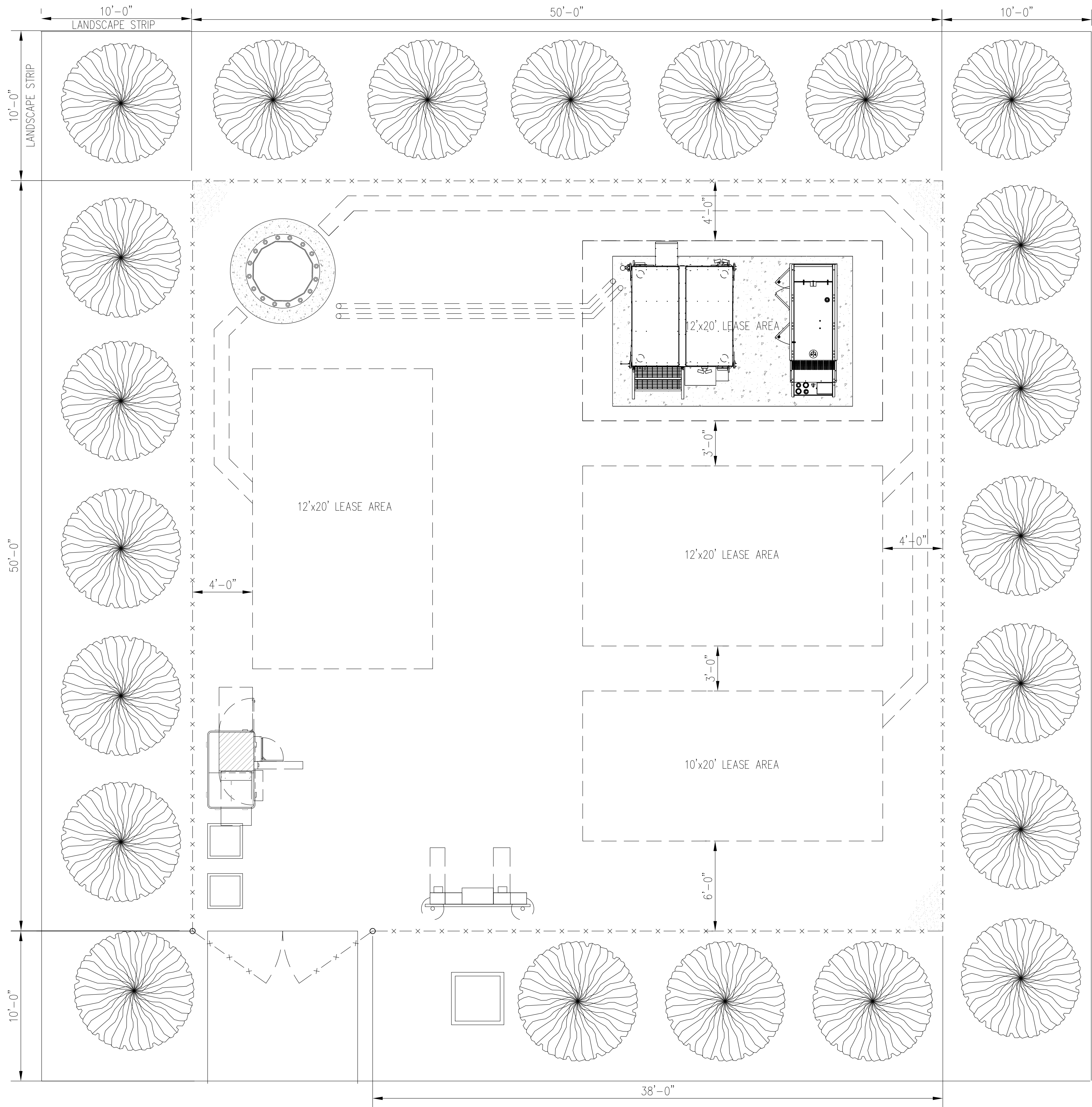
TITLE:

AT&T GENERATOR  
DETAILS

SHEET NUMBER:

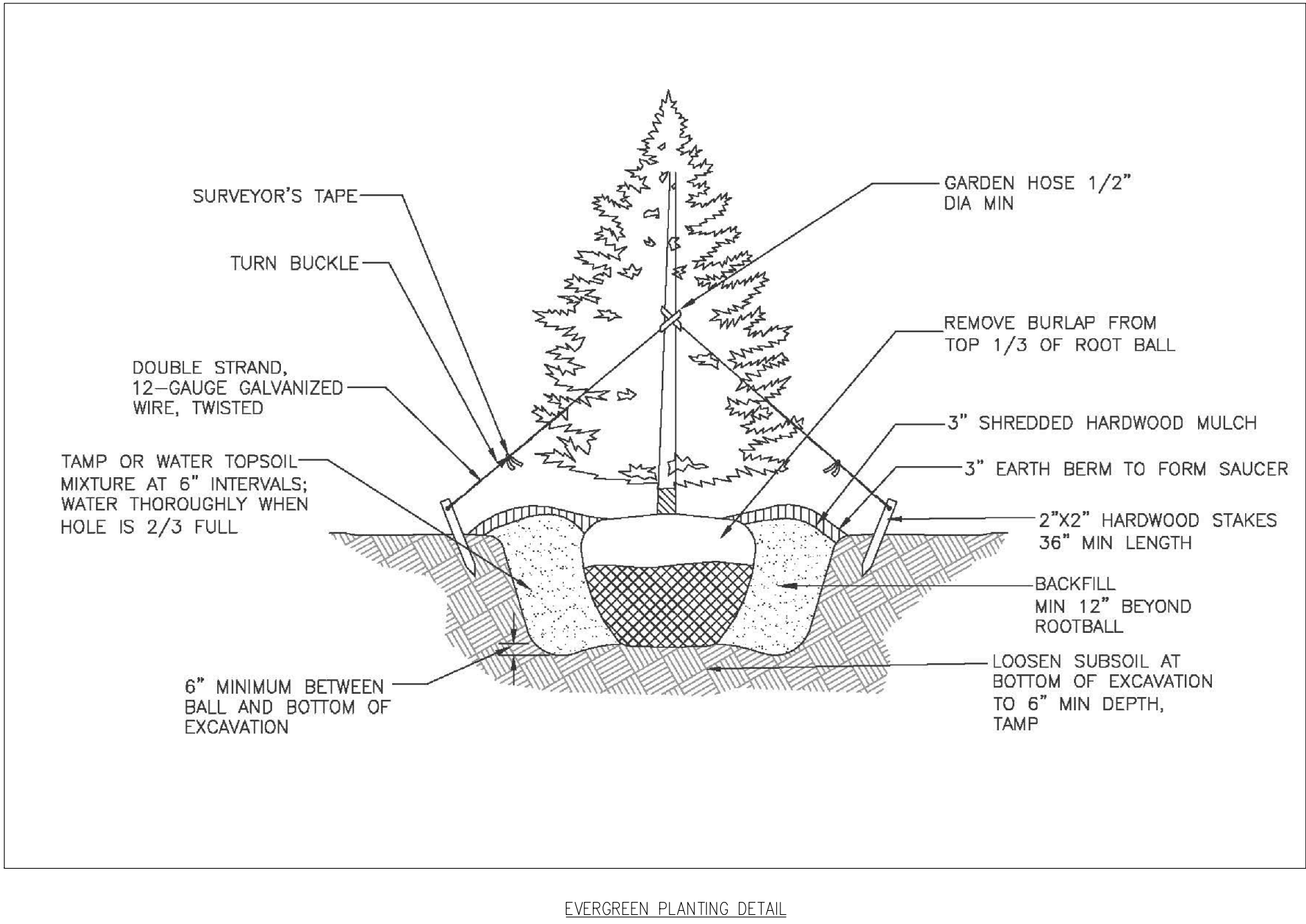
Z-9





LANDSCAPE PLAN  
SCALE: 1/4" = 1'  
1  
Z-10  
TRUE NORTH

LANDSCAPE SCHEDULE									
SYMBOL	BOTANICAL NAME	COMMON NAME	TYPE	QTY.	SPACING/SPREAD	HEIGHT	MULCH TYPE	DROUGHT TOLERANCE	NATIVE STATUS
	THUJA OCCIDENTALIS	EASTERN ARBORVITAE	EVERGREEN	22	10'	6'	WOOD CHIPS	GOOD	EASTERN NORTH AMERICA



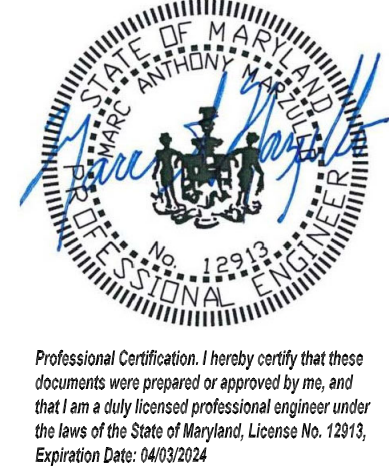
EVERGREEN PLANTING DETAIL

**entrex**  
communication services, inc.  
6100 Executive Blvd., Suite 430  
Rockville, MD 20852  
PHONE: (202)408-0960

SUBMITTALS

DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	ARCOLA COMMENTS	
09-23-22	ZONING	

SEAL:



PROJECT NO: 1164.010  
DESIGNER: R.S.  
ENGINEER: M.M.

SCALE:  
SCALE AS NOTED

ARCOLA TOWERS  
MD-003 PARAMOUNT  
19224 LONGMEADOW RD.  
HAGERSTOWN, MD 21742

TITLE:

LANDSCAPE PLAN

SHEET NUMBER:  
**Z-10**



SITE SIGNAGE DETAILS



MARKETING / ID SIGN  
SCALE: N.T.S.

1  
C-12



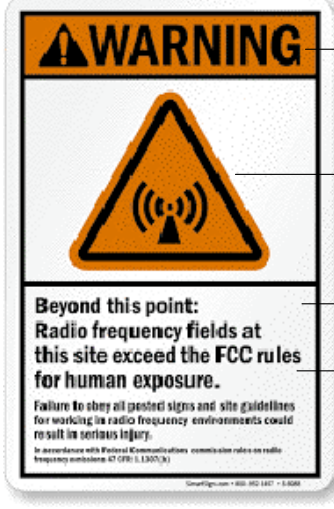
NO TRESPASSING SIGN  
SCALE: N.T.S.

2  
C-12



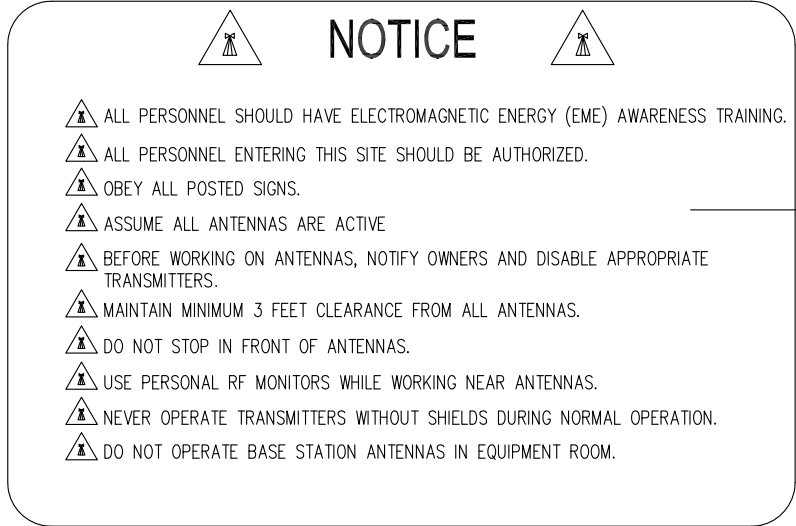
RF NOTICE SIGN  
SCALE: N.T.S.

3  
C-12



RF WARNING SIGN  
SCALE: N.T.S.

5  
C-12

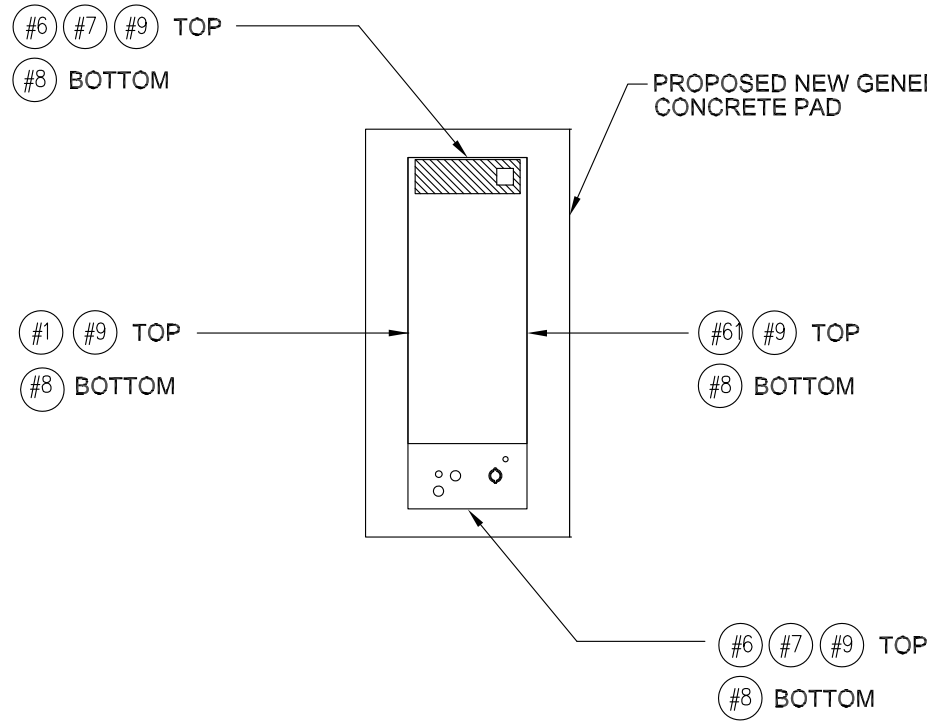


RF NOTICE SIGN 2  
SCALE: N.T.S.

4  
C-12

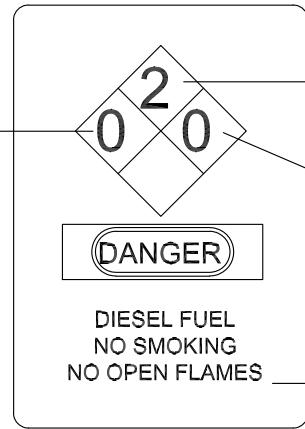
ORANGE BACKGROUND  
W/ BLACK LETTERING  
12"W X 18"H

GENERATOR SIGNAGE DETAILS



SIGN KEY PLAN  
SCALE: N.T.S.

BLUE BACKGROUND W/  
BLACK LETTERING



SIGN DIMENSIONS: 4" WIDE X 14" HIGH

DANGER - DIESEL FUEL - SIGN #1  
SCALE: N.T.S.

6  
C-12



SIGN DIMENSIONS: 30" WIDE X 12" HIGH

FUEL TANK - SIGN #3  
SCALE: N.T.S.

8  
C-12



SIGN DIMENSIONS: 20" WIDE X 14" HIGH

SITE ID - SIGN #2  
SCALE: N.T.S.

7  
C-12



SIGN DIMENSIONS: 8" WIDE X 4" HIGH

EMERGENCY RESPONSE - SIGN #4  
SCALE: N.T.S.

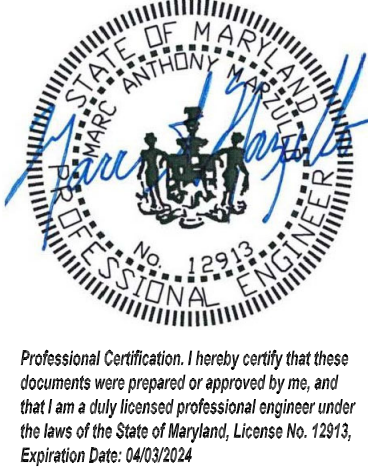
9  
C-12

**entrex**  
communication services, inc.  
6100 Executive Blvd., Suite 430  
Rockville, MD 20852  
PHONE: (202)408-0960

SUBMITTALS

DATE	DESCRIPTION	REV.
08-18-22	ZONING REVIEW	
08-25-22	ZONING REVIEW	
09-15-22	ARCOLA COMMENTS	
09-16-22	ARCOLA COMMENTS	
09-23-22	ZONING	

SEAL:



PROJECT NO: 1164.010  
DESIGNER: R.S.  
ENGINEER: M.M.

SCALE:

SCALE AS NOTED

ARCOLA TOWERS  
MD-003 PARAMOUNT  
19224 LONGMEADOW RD.  
HAGERSTOWN, MD 21742

TITLE:

SIGNAGE

SHEET NUMBER:

Z-11

## **Exhibit 2**



## **Arcola Towers: Paramount**

### **Alternative Candidate Analysis**

Arcola Towers submits this document to address alternative candidates it considered during its selection process. AT&T has a specific search ring in an area along the intersection of Route 11 and Longmeadow Road with a requested antenna centerline of 140 feet.

#### **Existing Structures in the Search Ring**

Arcola Towers was able to confirm there are no existing towers, or other structures closer to 140 ft. in height within the specified search ring, nor within a reasonable distance outside of the search ring. \*Note: the tower shown in the below aerial image is the proposed Arcola Towers site.



#### **Existing Structures outside of the Search Ring**

Arcola Towers then located the nearest existing tower locations as shown on the attached map in a 1 mile radius:






This map illustrates a 1 mile radius from the proposed search ring center, and as shown on the map, there are no existing towers. The closest tower is 1.2 miles to the South West of the search ring and will not cover the intended area.

## Conclusion

As noted above, there are no existing structures of sufficient height within the described search ring, and as noted above, the closest existing tower to the Search Ring Center is 1.2 miles away and too far to cover AT&T's intended coverage area. Arcola has leased a property from a willing landlord whose property will be developed in accordance to Washington County regulations.

I certify that the foregoing is true and correct:

  
\_\_\_\_\_  
Madison Johnson on behalf of Arcola Towers

# **Exhibit 3**



STATE OF MARYLAND

COUNTY OF WASHINGTON

)

)

)

**AFFIDAVIT OF CHRISTIAN WINKLER**

I, Christian Winkler, being duly sworn, hereby state and affirm as follows:

1. This affidavit is based on my own knowledge and I am competent to testify regarding those things about which I have knowledge.

2. I am the President of Arcola Towers, LLC the general partner of Arcola Towers I, LP.

3. Arcola Towers I, LP will be applying to Washington County for a proposed telecommunications facility at 19224 Longmeadow Rd., Hagerstown MD, 21742, the property of K&S Longmeadow, LLC, Map 0025 Grid 0013, for AT&T.

4. Pursuant to Section 4.22.6 of the Washington County Zoning Ordinance, I confirm and agree that one ten (10) foot space on the proposed tower will be specifically reserved for use by Washington County, and that other spaces will be made available to other future users, when possible.

Further affiant sayeth not.

A handwritten signature in blue ink, appearing to read "Christian Winkler", is written over a horizontal line.

Christian Winkler

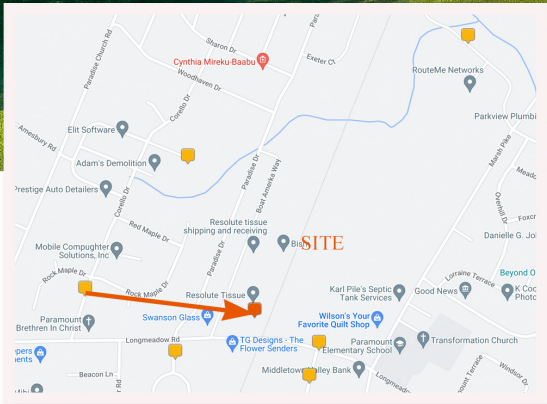
SWORN to before me this  
30 day of August 2022

A handwritten signature in black ink, appearing to read "Olivia Ruth Atterholt", is written over a horizontal line.  
Notary Public for Virginia  
My Commission Expires: 06/30/25



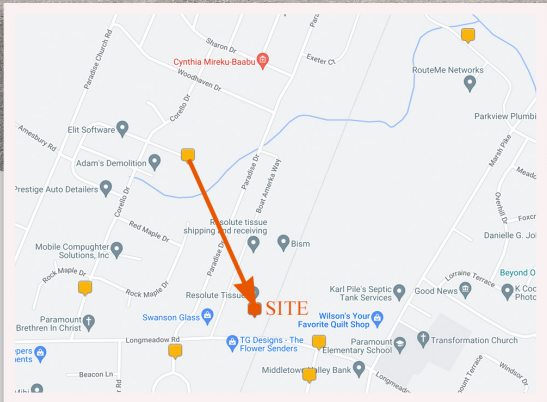
# **Exhibit 4**





# PARAMOUNT PROPOSED MONOPOLE





# PARAMOUNT PROPOSED MONOPOLE



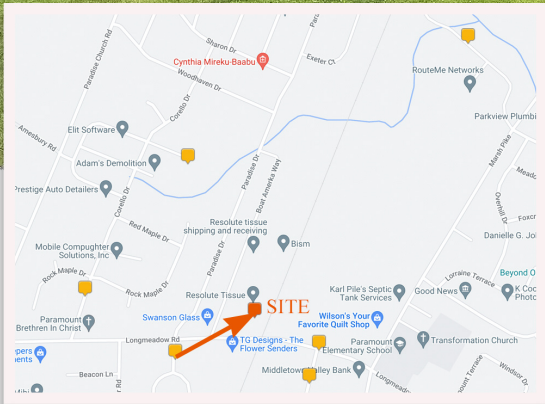
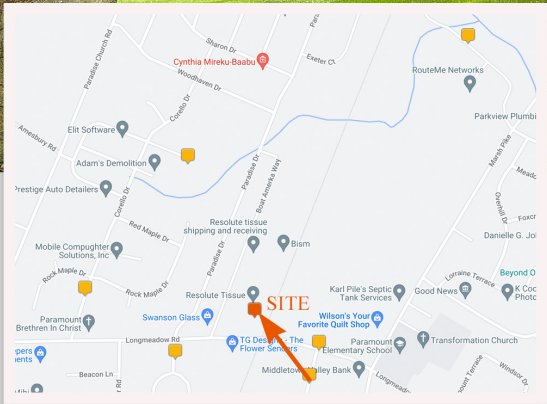


PHOTO #3

PARAMOUNT  
PROPOSED MONOPOLE





PARAMOUNT  
PROPOSED MONOPOLE



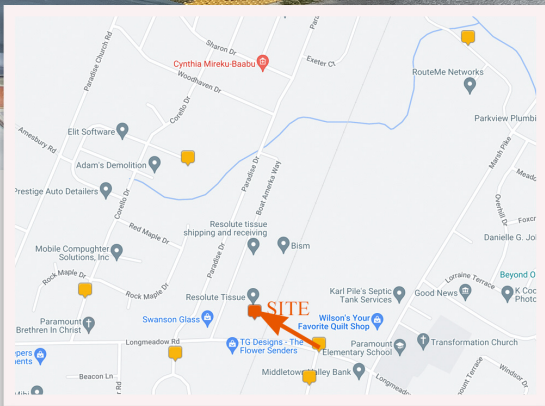


PHOTO #5

PARAMOUNT  
PROPOSED MONOPOLE



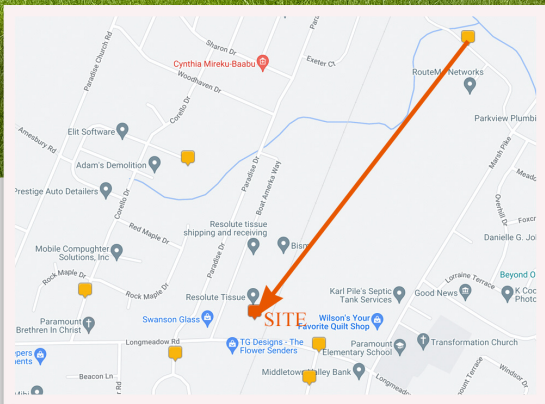


PHOTO #6

PARAMOUNT  
PROPOSED MONOPOLE

# **Exhibit 5**





August 22, 2022

Katherine Rathvon  
Zoning Coordinator,  
Division of Planning & Zoning  
80 West Baltimore St.,  
Hagerstown, MD 21740  
(240) 313-2464  
krathvon@washco-md.net

Re: Proposed Telecommunications Facility at 19224 Longmeadow Rd., Hagerstown, MD 21742,  
the Property of K&S Longmeadow, LLC, Map 0025 Grid 0013, by Arcola Towers for AT&T –  
Telecommunications Facility Application – Tower Removal Letter

Dear Ms. Rathvon,

Arcola Towers, its successors and assigns, provides this statement declaring itself, its successors and assigns of being responsible for compliance with Section 4.22.12 of the Washington County Zoning Ordinance, which requires the following:

- A. A Commercial Communication tower that is out of service for a continuous six (6) month period will be deemed to have been abandoned. The Zoning Administrator may issue a Notice of Abandonment to the Owner of the tower that is deemed to be abandoned. The Owner shall have the right to respond in writing to the Notice of Abandonment setting forth the reasons for operation difficulty and providing a reasonable timeframe for correction action, within thirty (30) days from the date of the Notice. The Administrator shall withdraw the Notice of Abandonment and notify the Owner that the Notice has been withdrawn if the Owner provides information that demonstrates the Tower has not been abandoned.
- B. If the Tower is determined to be abandoned, the Owner of the Tower shall remove the Tower and all related equipment at the Owner's sole expense within three (3) months of the Date of Notice of Abandonment. If the Owner fails to remove the Tower and related equipment, the Administrator may pursue legal action to have the Tower removed at the Owner's expense.

Please contact me should you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Madison Johnson", with a long horizontal flourish extending to the right.

Madison Johnson  
Operations Manager  
(571) 309-5235

## **Exhibit 6**





September 08, 2022

**Subject:** re: Proposed Telecommunications Facility at 19310 LONGMEADOW Road , HAGERSTOWN MD (AT&T Site Name RED ROOF)

To Whom It May Concern,

AT&T Mobility operates a Personal Communication Service authorized by the Federal Communications Commission (FCC) to provide state of the art digital wireless communications in many parts of the nation, including Washington County MD. AT&T Mobility's operations and network are licensed and regulated by the FCC.

The antennas, as proposed and designed for the above noted site, comply with all applicable FCC requirements. In addition, the proposed site meets all applicable ANSI/IEEE C95.1-1992 exposure levels, as adopted by the FCC requirements.

The means used to determine the RF levels for this installation were generated thru the "link budget" i.e. computer model calculation. This formula determines the RF level by calculating the transmit power, antenna gain and equipment specifications of the base station components.

AT&T Mobility is committed to compliance with all government regulations and standards and will undertake the best efforts to prevent harmful radiofrequency interference from its wireless telecommunications facilities to other authorized wireless telecommunications operators in the surrounding area, including those related to public safety. AT&T only operates on the frequencies approved by the Federal Communication Commission for their use. The approved AT&T radio frequencies will not harm others who are operating within their own frequencies.

Please contact me if you have any questions

Sincerely,

A handwritten signature in black ink that reads "Changjie Yang". The signature is stylized with a long horizontal line extending from the end of the name.

Changjie (C.J.) Yang  
Senior RAN Engineer  
RAN Design and RF Engineering  
ATT Washington Baltimore Market  
M: (901) 859-0598



## **RF Justification**

**Site Name: RED ROOF**

**Address: 19310 LONGMEADOW Road, HAGERSTOWN  
(Washington County) MD 21742**

The main objective of this site is to provide AT&T & Firstnet coverage in the Paramount- Long Meadow and Fountain Head Orchard Hills areas of Hagerstown. Area along Longmeadow Road and Marsh Pike

The addition of this site will improve coverage including in-building coverage along Longmeadow Road, Marsh Pike, Paradise Dr, Cherry Tree Dr, Meadowbrook Rd, Paradise Church Rd and adjoining areas.

The Proposed site will also ensure overlap coverage, handoffs and off-load traffic among existing AT&T Sites BOSTETER, GORETTI, SILK TREE and Citi Corp Dr

AT&T is proposing for 150' Rad Center on a Monopole to meet its Coverage and Capacity needs.

Prepared by:

**Gaurav Behl**  
RF Engineer  
[gb943a@att.com](mailto:gb943a@att.com)

Approved by:

**Sandeep Gupta**  
RF Design Manager

**AT&T Mobility**  
7150 Standard Drive  
Hanover, MD  
21076

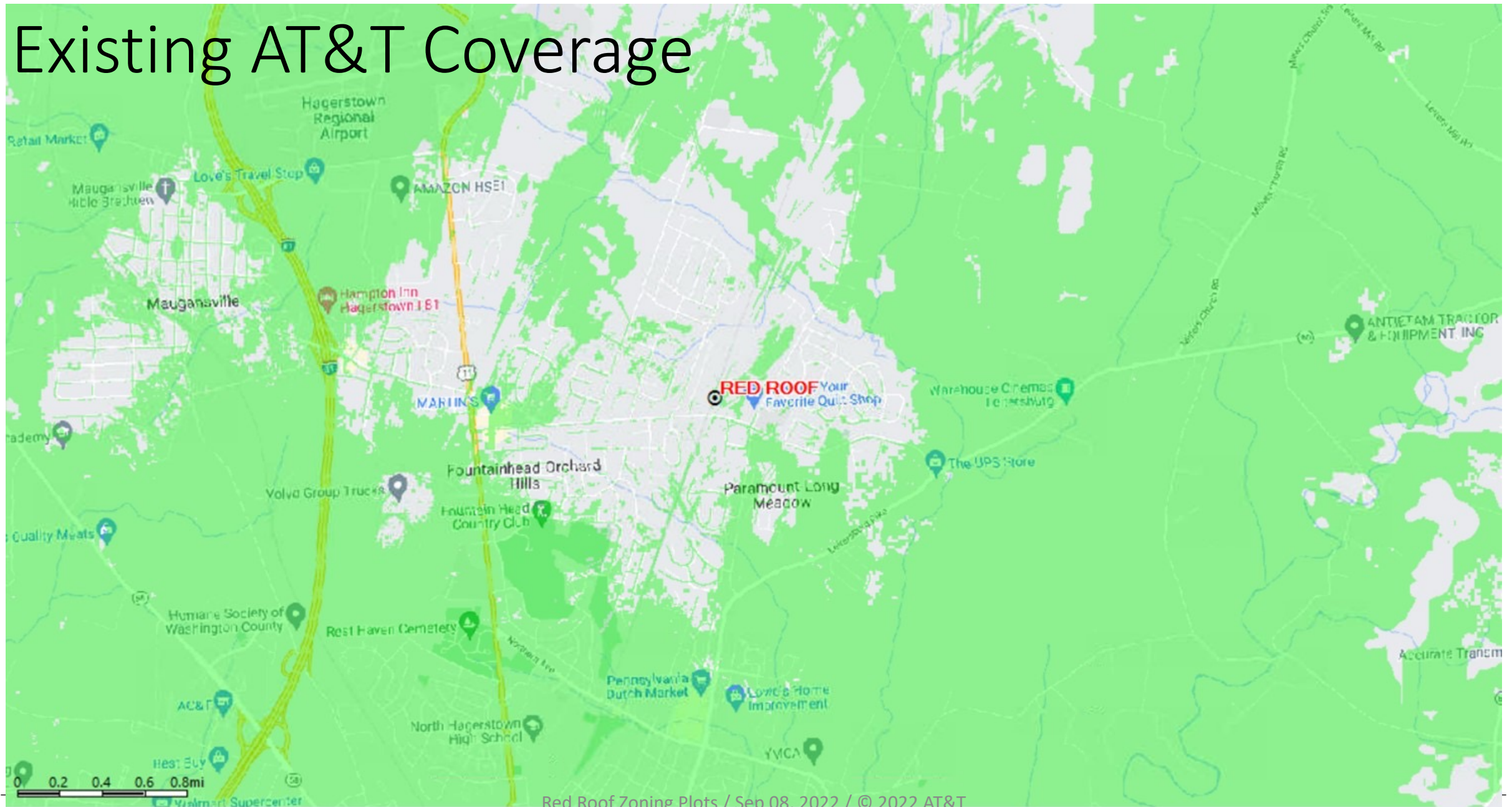


# Red Roof FA# 12691002

## Washington County Coverage Plots

Sept 08<sup>th</sup>, 2022

# Existing AT&T Coverage

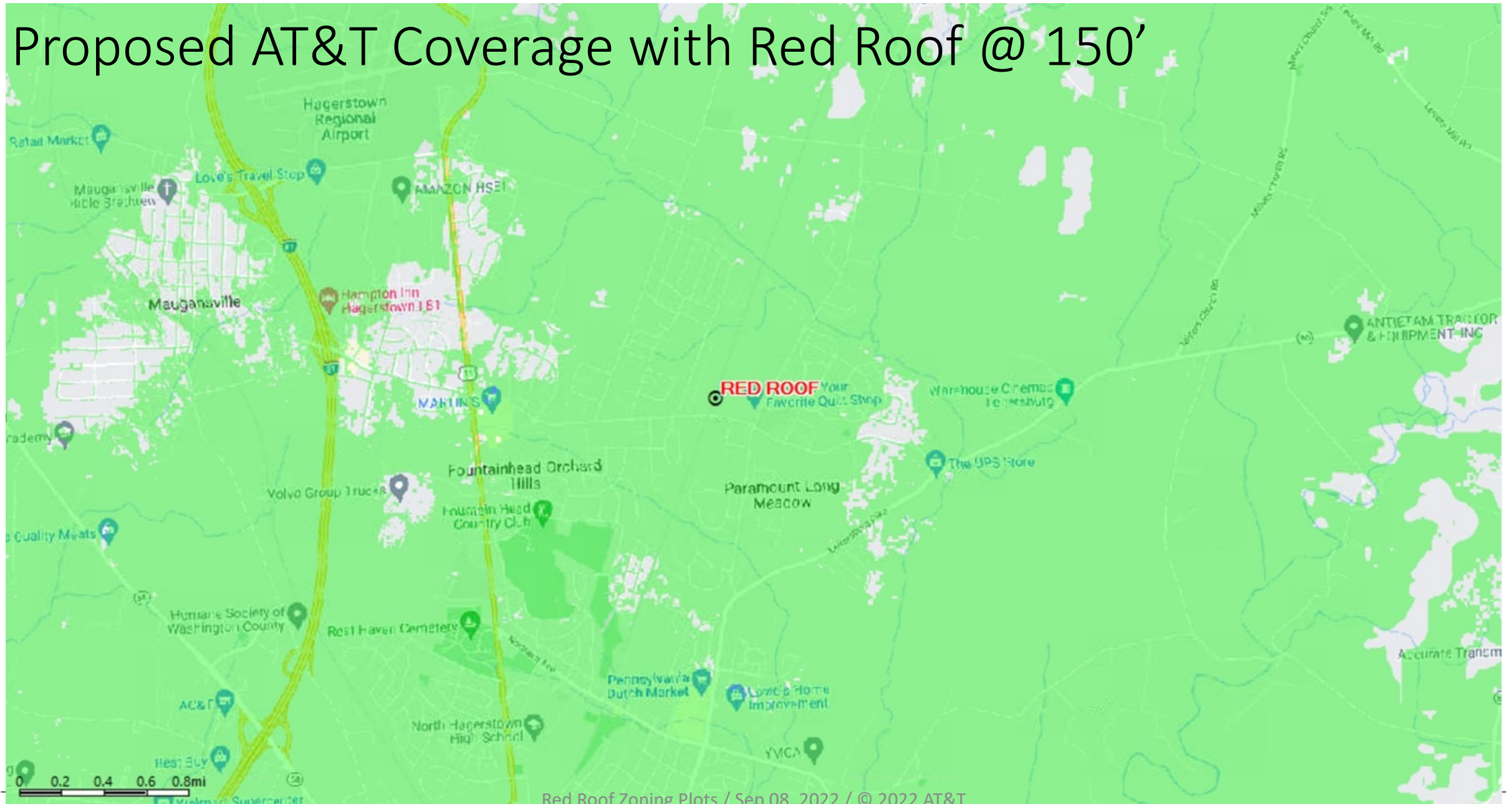


Red Roof Zoning Plots / Sep 08, 2022 / © 2022 AT&T

Intellectual Property - AT&T Proprietary (Internal Use Only)



# Proposed AT&T Coverage with Red Roof @ 150'



FA	Site Name	Longitude	Latitude	Address	City	State	County	Zip	STRUCTURE TYPE	Status
10096066	BEELERS SUMMIT	-77.665194	39.394667	19845 VICTOR LANE	ROHRERSVILLE	MD	WASHINGTON	21779	MONOPOLE	On-Air
14701043	GORETTI	-77.716555	39.660445	1110 PENNSYLVANIA AVENUE	HAGERSTOWN	MD	WASHINGTON	21742	MONOPOLE	On-Air
14944708	LYLES	-77.7158611	39.5855777	18809 WAGAMAN ROAD	HAGERSTOWN	MD	WASHINGTON	21740	WATER TANK	On-Air
10106407	SILK TREE	-77.667251	39.664739	20204 OLD FORGE ROAD	HAGERSTOWN	MD	WASHINGTON	21742	SELF SUPPORT	On-Air
10072862	MD2760BOSTETER	-77.733889	39.667778	1402 MARSHALL STREET	HAGERSTOWN	MD	WASHINGTON	21740	SELF SUPPORT	On-Air
10072247	HORST SILO	-78.029747	39.637668	11800 ERNESTVILLE ROAD	BIG POOL	MD	WASHINGTON	21711	SILO	On-Air
10072284	ZITTELSTOWN	-77.62086111	39.48430556	6132 OLD NATIONAL PIKE	BOONSBORO	MD	WASHINGTON	21713	SILO	On-Air
10072861	MD27635HORTHIL	-77.606944	39.540556	21842 NATIONAL PIKE	BOONSBORO	MD	WASHINGTON	21713	SELF SUPPORT	On-Air
10072863	BOONESBORO	-77.64657	39.505038	44-A SAINT PAUL STREET	BOONSBORO	MD	WASHINGTON	21713	MONOPOLE	On-Air
10106346	MD2765CLEARSPG	-77.968806	39.647	US 40 WEST OF CLEAR SPRING	CLEAR SPRING	MD	WASHINGTON	21722	SELF SUPPORT	On-Air
10106345	HAWBAKER	-77.914524	39.651069	12229 ASHTON ROAD	CLEAR SPRING	MD	WASHINGTON	21722	MONOPOLE	On-Air
10072327	MD2767ROCCOCO	-77.72002	39.64176	7 EAST WASHINGTON STREET	HAGERSTOWN	MD	WASHINGTON	21740	ROOFTOP	On-Air
10072238	OLD NATIONAL	-77.690002	39.562315	9004 OLD NATIONAL PIKE	HAGERSTOWN	MD	WASHINGTON	21740	SILO	On-Air
10072858	MD2769MCSWAIN	-77.747565	39.642952	118 HJUMP ROAD	HAGERSTOWN	MD	WASHINGTON	21740	MONOPOLE	On-Air
10073177	CITICORP DR	-77.738403	39.7211	CORNER OF SR-163 AND CROWN LANE	HAGERSTOWN	MD	WASHINGTON	21740	SELF SUPPORT	On-Air
10072337	LANDIS RD	-77.646193	39.597357	10405 ROCK BOTTOM LANE	HAGERSTOWN	MD	WASHINGTON	21742	SELF SUPPORT	On-Air
10072864	WILCOX DR	-77.7817	39.6106	16907 VIRGINIA AVENUE	WILLIAMSPORT	MD	WASHINGTON	21795	SELF SUPPORT	On-Air
10096438	FUNKSTOWN	-77.689201	39.6012	201 ALLSTAR COURT	HAGERSTOWN	MD	WASHINGTON	21740	MONOPOLE	On-Air
10072236	COVERIDGE	-78.18231	39.709982	14601 WARFORDSBURG ROAD	HANCOCK	MD	WASHINGTON	21750	SELF SUPPORT	On-Air
10072264	MCKEE SOUTH RIDGE	-78.24422222	39.70694444	3857 RESLEY ROAD	HANCOCK	MD	WASHINGTON	21750	MONOPOLE	On-Air
10072276	STUMPF RD	-78.29561111	39.71255556	14724 STUMP ROAD	HANCOCK	MD	WASHINGTON	21750	MONOPOLE	On-Air
10072855	BIG POOL	-78.08844444	39.683	13518 ORCHARD RIDGE	HANCOCK	MD	WASHINGTON	21750	SELF SUPPORT	On-Air
10073176	TOLLGATE RD	-78.146717	39.702941	14365 TOLL GATE RIDGE ROAD	HANCOCK	MD	WASHINGTON	21750	SELF SUPPORT	On-Air
10096322	FLICKERSVILLE	-77.69913889	39.46075	5431 REDHILL ROAD	HAGERSTOWN	MD	WASHINGTON	21740	SELF SUPPORT	On-Air
10072319	MD2783REPUBLCN	-77.594399	39.638302	11664 MAPLEVILLE ROAD	SMITHSBURG	MD	WASHINGTON	21783	MONOPOLE	On-Air
10072834	MESUM	-77.55854	39.66142	FRUIT TREE DRIVE	SMITHSBURG	MD	WASHINGTON	21783	UTILITY	On-Air
10072304	SPICKLER	-77.858902	39.649799	12146 CEDAR RIDGE ROAD	WILLIAMSPORT	MD	WASHINGTON	21795	SELF SUPPORT	On-Air
10072883	MD2786HIPPIITY	-77.807454	39.588419	10033 GOVERNOR LANE BOULEVARD	WILLIAMSPORT	MD	WASHINGTON	21795	SELF SUPPORT	On-Air
10124712	MD3684BLACKRCK	-77.665833	39.594722	20034 BEAVER CREEK	HAGERSTOWN	MD	WASHINGTON	21740	SELF SUPPORT	On-Air
10124700	MD3697DUALHWAY	-77.691389	39.612778	1801 DUAL HIGHWAY	HAGERSTOWN	MD	WASHINGTON	21740	ROOFTOP	On-Air
10124739	MD3710MAPLEVL	-77.654167	39.564722	9102 MAPLEVILLE ROAD	BOONSBORO	MD	WASHINGTON	21713	SELF SUPPORT	On-Air
10124736	MD3713DOWNSVIL	-77.742642	39.611649	18120C WEST OAK RIDGE DRIVE	HAGERSTOWN	MD	WASHINGTON	21740	SELF SUPPORT	On-Air
10124735	MD3715HANCOCK	-78.194	39.700556	34 TALIAFERRO ROAD AND 126 WEST HIGH STREET	HANCOCK	MD	WASHINGTON	21750	WATER TANK	On-Air
10124733	MD3717HUYETT	-77.816389	39.645833	12062 SMITHFIELD FARM LANE	HAGERSTOWN	MD	WASHINGTON	21740	SELF SUPPORT	On-Air
10124358	QUARRY DOBSON	-77.682472	39.652861	650 SECURITY ROAD	HAGERSTOWN	MD	WASHINGTON	21740	SILO	On-Air
10126341	MD3742RINGGOLD	-77.575889	39.697806	14016 SMITHSBURG PIKE	SMITHSBURG	MD	WASHINGTON	21783	SELF SUPPORT	On-Air
10124356	MD3743SELEADR	-77.662778	39.629167	11507 ROBINWOOD DRIVE	HAGERSTOWN	MD	WASHINGTON	21742	ROOFTOP	On-Air
10124355	MD3744SHARPSBG	-77.749694	39.454833	121 WEST HIGH STREET	SHARPSBURG	MD	WASHINGTON	21782	WATER TANK	On-Air
10127146	VENICE INN DOBSON	-77.710833	39.6375	431 DUAL HIGHWAY	HAGERSTOWN	MD	WASHINGTON	21740	ROOFTOP	On-Air
10128578	LAPPANS	-77.72475	39.551222	18526 LAPPANS ROAD	BOONSBORO	MD	WASHINGTON	21713	SELF SUPPORT	On-Air
10132702	ROWLAND	-77.708528	39.624583	957 COMMONWEALTH AVENUE	HAGERSTOWN	MD	WASHINGTON	21740	SELF SUPPORT	On-Air
10134986	CEARFOSS	-77.83496389	39.71309167	15322 FAIRVIEW ROAD	HAGERSTOWN	MD	WASHINGTON	21740	SELF SUPPORT	On-Air
10134994	WETA CASCADE	-77.51361111	39.69647222	13413 PEN MAR HIGH ROCK ROAD	CASCADE	MD	WASHINGTON	21719	SELF SUPPORT	On-Air
10153700	WASHINGTON COUNTY HEALTH IDAS	-77.67967	39.622185	11116 MEDICAL CAMPUS ROAD	HAGERSTOWN	MD	WASHINGTON	21742	INBUILDING	On-Air
12802651	VOLVO NORTH AMERICA IDAS	-77.72836	39.680222	13302 PENNSYLVANIA AVENUE	HAGERSTOWN	MD	WASHINGTON	21742	INBUILDING	On-Air
12691002	RED ROOF	-77.699191	39.685274			MD	FREDERICK		MONOPOLE	Proposed Site
14564626	STOTLER	-77.780158	39.635195	11676 HOPEWELL ROAD	HAGERSTOWN	MD	WASHINGTON	21740	MONOPOLE	Proposed Site
15165121	FORT FREDERICK	-78.002394	39.622614	11274 GEHR ROAD	BIG POOL	MD	WASHINGTON	21711	MONOPOLE	Proposed Site



# **Exhibit 7**

Date: 6<sup>th</sup> October, 2022

Arcola Towers

Attn: Madi Johnson

SUBJECT: Project Number: 562902-P1  
Site Name: Paramount, Hagerstown, MD  
Structure Designed with a Theoretical Fall Radius of 0-ft (Fall within 70' or less)

Communications structures designed by Valmont are sized in accordance with the latest governing revision of the ANSI/TIA 222 standard unless otherwise requested by our customer. This standard has been approved by ANSI/ASCE, which has dealt with the design of antenna support structures for over 50 years. The TIA standard, based on provisions of this nationally known specification, has a long history of reliability. Its core philosophy is first and foremost to safeguard and maintain the health and welfare of the public.

Valmont's communication structures have proven to be very reliable products. To our knowledge Valmont has never experienced an in-service failure of a communication structure due to weather induced overloading. We use the latest standards, wind speed information, and sophisticated analytical tools to ensure that we maintain our unblemished record for quality.

This structure is designed to the following criteria:

- Exposure Category C
- Topographical Category 1
- Risk Category II
- Site Elevation 595 feet
- 111 MPH Ultimate Wind Speed (no ice) per ASCE 7-16
- 40 MPH with 1.0 inch ice per ANSI/TIA-222-H

The theoretical failure point is at the structure midpoint or above by purposely over designing the structural components below this point. The predicted mode of wind induced failure would be local buckling of the shaft at or above the midpoint with the upper section(s) folding over onto the intact lower section(s). The result, if it were to fail, would be a theoretical "zero fall zone" at ground level.

I hope these comments address any issues that you might encounter relative to the anticipated performance of this structure.

Sincerely,

Chandra Sekhar Rugada,  
Assistant Manager - Design  
Email: [Chandra.Rao@Valmont.Com](mailto:Chandra.Rao@Valmont.Com)



# **Exhibit 8**

4795 0147

③/6

CLERK OF THE CIRCUIT COURT  
WASHINGTON COUNTY

**RECORD AND RETURN TO:**

**Commonwealth Land Title Insurance Co**  
**1 North Charles Street, Suite 400**  
**Baltimore, Maryland 21201**  
**Sherry Dorsey/14-0116-CL**

**SPECIAL WARRANTY DEED**

THIS SPECIAL WARRANTY DEED is made and entered into as of this 16<sup>th</sup> day of July 2014, by and between FPG-STIP HAGERSTOWN, LLC, a Delaware limited liability company ("**Grantor**"), whose address is c/o Fortis Property Group, LLC, 45 Main Street, Suite 800, Brooklyn, New York 11201, and CAMELOT REAL ESTATE LLC, a Maryland limited liability company ("**Grantee**"), whose address is c/o National Golden Tissue, Inc., 858 Willow Circle, Hagerstown, Maryland 21740.

**WITNESS:**

For Five Million Six Hundred Thousand and No/100 Dollars (\$5,600,000.00) and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, Grantor hereby GRANTS, BARGAINS, SELLS and CONVEYS unto Grantee, and its successors and assigns, in fee simple, that certain parcel of land located in Washington County, Maryland and more particularly described on Exhibit A attached hereto and made a part hereof, together with any improvements thereon and any fixtures that are permanently affixed to any such improvements (collectively, the "**Property**");

Subject to and with the benefit of all covenants, conditions, restrictions, easements, rights of way, reservations and matter of record or that would be disclosed by a survey or inspection of the Property and real estate taxes that are not yet due and payable;

To have and to hold the Property to the use and benefit of Grantee, its successors and assigns, in fee simple.

Grantor covenants to warrant specially the Property hereby granted, and to execute such further assurances of the Property as may be requisite.

This Deed is made without any covenant, warranty or representation by, or recourse against, Grantor except to the extent expressly provided herein except as expressly set forth in the Agreement (as hereinafter defined) and in any other documents delivered by Grantor to Grantee simultaneously herewith (and subject to the limitations set forth in the last sentence of this paragraph). By acceptance of this Deed, Grantee specifically acknowledges that, Grantee is not relying on (and Grantor does hereby disclaim and renounce) any representations or warranties of any kind or nature whatsoever, whether oral or written, express, implied, statutory or otherwise, from Grantor, regarding or relating to (a) the operation of the Property or uses or merchantability or fitness of any portion of the Property for a particular purpose; (b) the physical



CLERK OF THE CIRCUIT COURT  
WASHINGTON COUNTY

condition of the Property or the condition or safety of the Property or suitability of the Property for a particular purpose, or (c) the condition or status of Grantor's or Grantee's title to the Property. Grantor hereby disclaims and, by its acceptance of this Deed Grantee hereby waives and releases, any implied or statutory warranties or guaranties of fitness, merchantability or any other statutory or implied warranty or guaranty of any kind or nature regarding or relating to the Property, including any warranty regarding the condition or status of Grantor's or Grantee's title to the Property. Grantee acknowledges and agrees that the provisions of this paragraph were a material factor in Grantor's agreement to convey the Property to Grantee and Grantor would not have conveyed the Property to Grantee unless Grantor is expressly released and Grantee waives the rights as set forth in this paragraph. Notwithstanding the foregoing, nothing in this Deed shall prevent Grantee from relying on any representations and warranties: (i) that are expressly set forth in that certain Agreement of Purchase and Sale between Grantor, as seller, and Grantor, as buyer, dated March 1, 2014 (as amended, the "Agreement") and any other documents delivered by Grantor simultaneously herewith (including this Deed) and (ii) that, under the terms of the Agreement, expressly survive the delivery of this Deed, subject to all time, dollar and other limitations on Grantor's liability set forth in the Agreement.

*[Signatures on following page.]*

4795 0149

CLERK OF THE CIRCUIT COURT  
WASHINGTON COUNTY

IN WITNESS WHEREOF, the Grantor has duly executed this Special Warranty Deed as of the day, month and year first above written.

GRANTOR:

FPG-STIP HAGERSTOWN, LLC,  
a Delaware limited liability company

WITNESS:

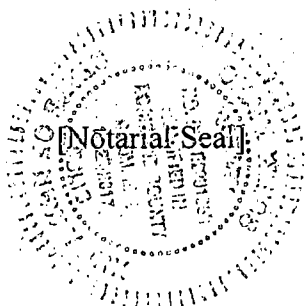
Hayandery

By:

Name: Joel KestenbaumTitle: President

I, Chaim Weiss, the undersigned Notary Public, in and for the jurisdiction aforesaid, do hereby certify that Joel Kestenbaum, known to me, or satisfactorily proven to be the President of FPG-STIP HAGERSTOWN, LLC, a Delaware limited liability company qualified to do business in Maryland (the "Company"), a party to the foregoing annexed Special Warranty Deed, personally appeared before me in such jurisdiction this day, and he acknowledged such Special Warranty Deed to be his act and deed on behalf of the Company, and that he executed and delivered the same as such.

GIVEN under my hand and seal this 15 day of July, 2014.



Chaim Weiss  
Notary Public  
My commission expires: \_\_\_\_\_

CHAIM WEISS  
Notary Public, State of New York  
No. 01WE6291958  
Qualified in Rockland County  
My Commission Expires October 28, 2017

I hereby certify that this Deed has been prepared under my supervision and that I am an attorney admitted to practice before the Court of Appeals of Maryland.

Name: David Kestner

DENNIS J. WEAVER  
CLERK OF THE CIRCUIT COURT  
FOR WASHINGTON COUNTY  
IMPROVEMENT FEE 40-  
RECORDING FEE 20-  
RECORDING TAX 42,560-  
COUNTY TRANSFER TAX 27,750-  
TRANSFER TAX 28,000-  
TOTAL 98,370-

IMPROVEMENT F	40.00
RECORDING FEE	20.00
RECORDATION T	42,560.00
TR TAX COUNTY	27,750.00
TR TAX STATE	28,000.00
TOTAL	98,370.00
Reg # 1402	Recpt # 4917
DJW 1LR	Blk # 1206
Jul 21, 2014	01:00 PM

TODD L. HERSHEY, TREASURER  
TAXES PAID 7-17-14



IN WITNESS WHEREOF, the Grantor has duly executed this Special Warranty Deed as of the day, month and year first above written.

GRANTOR:

WITNESS:

FPG-STIP HAGERSTOWN, LLC,  
a Delaware limited liability company

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

I, \_\_\_\_\_, the undersigned Notary Public, in and for the jurisdiction aforesaid, do hereby certify that \_\_\_\_\_, known to me, or satisfactorily proven to be the \_\_\_\_\_ of FPG-STIP HAGERSTOWN, LLC, a Delaware limited liability company qualified to do business in Maryland (the "Company"), a party to the a foregoing annexed Special Warranty Deed, personally appeared before me in such jurisdiction this day, and he acknowledged such Special Warranty Deed to be his act and deed on behalf of the Company, and that he executed and delivered the same as such.

GIVEN under my hand and seal this \_\_\_\_ day of July, 2014.

[Notarial Seal]

\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_

I hereby certify that this Deed has been prepared under my supervision and that I am an attorney admitted to practice before the Court of Appeals of Maryland.

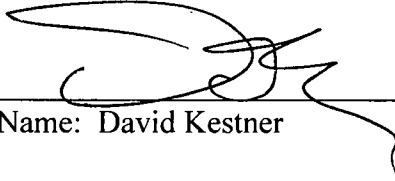
  
\_\_\_\_\_  
Name: David Kestner

EXHIBIT A

## Property

Situate on the northern side of Longmeadow Road near its intersection with the Western Maryland Railway Company right-of-way near Paramount, Election District No. 27, Washington County, Maryland and more particularly described in accordance with a recent survey by Davis, Renn & Shrader, Inc. as follows:

Beginning at a 5/8" Re-bar set in the north margin line of Long Meadow Road said Re-bar being also at the end of the 5<sup>th</sup> or S. 86°09'45" E. 219.50 feet line of a conveyance from the Mitchel-Tyler Company to the Washington County Commissioners recorded in Liber 443, folio 461 among the Washington County land records and running thence with said Road right-of-way and said 5<sup>th</sup> line reversed, N. 86°09'45" W. 219.50' to a 5/8" Re-bar set in the north margin line of Longmeadow road; thence with the 4<sup>th</sup> line of said conveyance reversed and corrected in a recent survey by Davis, Renn & Shrader, Inc., N. 03°57'38" W. 20.03' to a 5/8" Re-bar set; thence with the north margin line of Longmeadow Road and the 3<sup>rd</sup> line of said conveyance reversed N. 86°09'45" W. 216.50' to a 5/8" Re-bar set; thence with the east margin line of Porter Chemical Road and with the remaining portion, after the aforesaid conveyance from Harold M. Porter to Mitchel-Tyler Company recorded in Liber 376, folio 603, of Washington County land records N. 26°29'46" E. 2,154.96' to a recovered iron pin in concrete; thence with the 3<sup>rd</sup> line of the said Porter conveyance S. 63°30'14" E. 412.50' to a recovered iron pin in concrete in the western margin line of the Western Maryland Railway Company, now the C.S.X. Railroad; thence binding thereon and running with the remainder of the 4<sup>th</sup> line of the said Porter conveyance, S. 26°29'46" W. 2,004.26'; to the place of beginning.

**TOGETHER WITH** a non-exclusive right of way for ingress and egress from the land described above, in common with others, over the bed of the 50 foot street running northward from the Longmeadow Church Road along the west side and with the fourth (4<sup>th</sup>) line of the land described above.



4795 0152

**2014**  
**MARYLAND**  
**FORM****Certification of Exemption from Withholding Upon  
Disposition of Maryland Real Estate  
Affidavit of Residence or Principal Residence**CLERK OF THE CIRCUIT COURT  
WASHINGTON COUNTY

Based on the certification below, Transferor claims exemption from the tax withholding requirements of §10-912 of the Tax-General Article, Annotated Code of Maryland. Section 10-912 provides that certain tax payments must be withheld and paid when a deed or other instrument that effects a change in

ownership of real property is presented for recordation. The requirements of §10-912 do not apply when a transferor provides a certification of Maryland residence or certification that the transferred property is the transferor's principal residence.

**1. Transferor Information**

Name of Transferor

FPG-STIP Hagerstown, LLC

**2. Reasons for Exemption****Resident Status**

I, Transferor, am a resident of the State of Maryland.

✓ Transferor is a resident entity as defined in Code of Maryland Regulations (COMAR) 03.04.12.02B(11), I am an agent of Transferor, and I have authority to sign this document on Transferor's behalf.

**Principal Residence**

Although I am no longer a resident of the State of Maryland, the Property is my principal residence as defined in IRC 121 and is recorded as such with the State Department of Assessments and Taxation.

**Under penalty of perjury, I certify that I have examined this declaration and that, to the best of my knowledge, it is true, correct, and complete.**

**3a. Individual Transferors**

Witness

Name

Signature

**3b. Entity Transferors**

Witness/Attest

K Hayardery

Name of Entity

FPG-STIP Hagerstown, LLC

By

Name

Joel Kestenbaum

Title

President

State of Maryland Land Instrument Intake Sheet

☐ Baltimore City ☒ County: WASHINGTON

Information provided is for the use of the Clerk's Office, State Department of Assessments and Taxation, and County Finance Office only.  
(Type or Print in Black Ink Only - All Copies Must Be Legible)

4795 0153

CLERK OF THE CIRCUIT COURT  
WASHINGTON COUNTY

Type(s) of Instruments	( <input checked="" type="checkbox"/> Check Box If Addendum Intake Form is Attached.)					
	[1] Deed [ ] Mortgage [1] Other: FS- Term [2] Deed of Trust [ ] Lease [1] Other: D of Release [1] Other: FS					
Conveyance Type (Check Box)	<input type="checkbox"/> Improved Sale Arms-Length [1] <input type="checkbox"/> Unimproved Sale Arms-Length [2] <input type="checkbox"/> Multiple Accounts Arms-Length [3] <input type="checkbox"/> Not an Arms-Length Sale [9]					
Tax Exemptions (if Applicable)	Recordation					
Cite or Explain Authority	State Transfer					
	County Transfer					
Consideration and Tax Calculations	Consideration Amount			Finance Office Use Only		
	Purchase Price/Consideration			Transfer and Recordation Tax Consideration		
	Any New Mortgage			Transfer Tax Consideration		
	Balance of Existing Mortgage			X ( ) % =		
	Other: 2 <sup>nd</sup> Mortgage to Wash Co Commissioners			Less Exemption Amount =		
	Other:			Total Transfer Tax =		
	Full Cash Value			Recordation Tax Consideration		
Fees	Amount of Fees		Doc.1	Doc. 2	Agent:	
	Recording Charge		20.00	20.00	Tax Bill:	
	Surcharge		40.00	40.00	C.B. Credit:	
	State Recordation Tax				Ag. Tax/Other:	
	State Transfer Tax					
	County Transfer Tax					
	Other					
Description of Property SDAT requires submission of all applicable information. A maximum of 40 characters will be indexed in accordance with the priority cited in Real Property Article Section 3-104(g)(3)(i).	District	Property Tax ID No. (1)	Grantor Liber/Folio	Map	Parcel No.	Var. LOG
	27	019196		25	297	<input type="checkbox"/> (5)
	Subdivision Name		Lot 3(a)	Block(3b)	Sect/AR(3c)	Plat Ref.
	College Park					
	Location / Address of Property Being Conveyed (2)					
	19224 Longmeadow Road					
	Other Property Identifiers (if applicable)				Water Meter Account No.	
	Residential <input type="checkbox"/> or Non-Residential <input checked="" type="checkbox"/> Fee simple <input checked="" type="checkbox"/> or Ground Rent <input type="checkbox"/> Amount:					
	Partial Conveyance? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Description/Amt. of SqFt/Acreage Transferred:					
Transferred From	Doc.1 - Grantor(s) Name(s)			Doc. 2 - Grantor(s) Names(s)		
	U.S. Bank National Association			US Bank National Association		
	Doc. 1 Owner(s) of Record, if different from Grantor(s)			Doc. 2 Owner(s) of Record, if different from Grantor(s)		
Transferred To	Doc. 1 - Grantee(s) Name(s)			Doc. 2 - Grantee(s) Name(s)		
	CIBC Inc.			FPG-STIP Hagerstown, LLC		
	New Owner's (Grantee) Mailing Address					
Other Names to be Indexed	c/o National Golden Tissue, Inc., 858 Willow Circle, Hagerstown, MD 21740					
	Doc. 1 - Additional Names to be Indexed (Optional)			Doc. 2-Additional Names to be Indexed (Optional)		
	FPG-STIP Hagerstown, LLC					
Contact/Mail Information	Instrument Submitted By or Contact Person					<input checked="" type="checkbox"/> Return to Contact Person
	Name: Sherry Dorsey					<input type="checkbox"/> Hold for Pickup
	Firm: Commonwealth Land Title Insurance Company					<input type="checkbox"/> Return Address Provided
	Address: 1 North Charles Street, Suite 400, Baltimore, MD 21201					
	Phone: 410-230-9595					
IMPORTANT: BOTH THE ORIGINAL DEED AND A PHOTOCOPY MUST ACCOMPANY EACH TRANSFER						
Assessment Information	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Will the property being conveyed be the grantee's principal residence?					
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Does transfer include personal property? If yes, identify:					
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Was property surveyed? If yes, attach copy of survey (if recorded, no copy required).					
Assessment Use Only - Do Not Write Below This Line						
<input type="checkbox"/> Terminal Verification <input type="checkbox"/> Agricultural Verification <input type="checkbox"/> Whole <input type="checkbox"/> Part <input type="checkbox"/> Tran. Process Verification						
Transfer Number:		Date Received:		Deed Reference:		Assigned Property No.:
Year	20	20	Geo.	Map	Sub	Block
Land			Zoning	Grid	Plat	Lot
Buildings			Use	Parcel	Section	Occ.Cd.
Total			Town Cd.	Ex.St.	Ex.Cd.	
REMARKS:						

Space Reserved for Circuit Court

WASHINGTON COUNTY CIRCUIT COURT (Land Records) DJW 4795, p. 0153, MSA\_CE18\_4747, Date available 07/24/2014. Printed 05/06/2022.



# **Exhibit 9**



Valmont Structures  
28800 Ida Street  
Valley, NE 68064  
(402) 359-2201  
Engineer: CR  
Reviewed by: CR

# Drilled Pier Foundation Design Calculations

Valmont Order Number: 562902  
Customer: Arcola Towers  
Site: Paramount, Hagerstown, MD  
Pole Height: 149 ft (150 ft agl)



valmont

STRUCTURES

CUSTOMER INFORMATION

SITE INFORMATION

DRAWING INFORMATION

REPORT INFORMATION

DESIGN PARAMETERS

Customer:

Site:

State:

Project #

Drawing No.

Geotechnical Report

Geotechnical Report Water Depth

Run Date:

Version:

Engineer:

Address:

TIA Revision:

Arcola Towers

Paramount, Hagerstown

MD

562902

MD562902FP

TIA-H Annex F Presumptive Soil Parameters for Clay

ft

10-06-22

3.11

CR

Valley

H

Seismic Design Category

A

Pole Geometry

Pole Height =  
Bolt Circle =  
Number of Bolts =  
Bolt Diameter =  
Bolt Projection =  
Bolt Length =  
Bottom Template Diameter =

149  
68.00  
24  
1.75  
9.50  
66.0  
71.5

ft  
in  
  
in  
in  
in  
in

Pole Loads

Foundation Maximum Stress =  
Factored Moment =  
Factored Shear =  
Factored Weight =  
Shear Height =  
e (col offset) =

100  
5503.7  
45.02  
55.12  
122.3  
1198.2

%  
ft-kips  
kips  
kips  
ft  
in

Moment and Shear increased by maximum stress value.

Anchor Bolt Load

Factored Moment =  
Factored Shear =  
Factored Weight =

66044  
45.02  
55.12

in-kips  
kips  
kips

Plastic Anchor Bolt Force Calculation Method

Anchor Bolt Info

Grade:  
F\_u =  
F\_y =  
Area tensile =

A615 Gr75  
100.0  
75.0  
1.90

kci  
ksi  
in²

TIA-G Presumptive Soil Clay

TIA-G Presumptive Soil Sand

TIA-H Presumptive Soil Clay

TIA-H Presumptive Soil Sand

Passive Pressure Calculations

Factor = 0.75

N INPUT

Layer	Depth Start (ft)	Depth End (ft)	c (psf)	φ (degrees)	γ (pcf)	lateral pressure start (psf)	lateral pressure end (psf)	Den x Depth (psf)	Kp	Allowable Overburden	slope (psf/ft)
1	0	100	1000	0	110	1500	9750	11000	1.00	11000	
2	0					0	0	0	1.00	11000	
3	0					0	0	0	1.00	11000	
4	0					0	0	0	1.00	11000	
5	0					0	0	0	1.00	11000	
6	0					0	0	0	1.00	11000	
7	0					0	0	0	1.00	11000	
8	0					0	0	0	1.00	11000	
9	0					0	0	0	1.00	11000	
10	0					0	0	0	1.00	11000	

Soil Summary

Ultimate Pas Pressure psf Start

Ultimate Pas Press Slope psf/ft

ZERO = GROUND LINE

Depth Start (ft)

Depth End (ft)

End Prss

Max Moment (ft)

(in-kips)

(ft-kips)

Ground\_Line

(Depth\_Mmax)

Passive Pressure ft

dft = Applied Shear

Level #	Ultimate Pas Pressure psf Start	Ultimate Pas Press Slope psf/ft	Depth Start (ft)	Depth End (ft)	End Prss	Max Moment (ft)	(in-kips)	(ft-kips)
1	1500	82.50	0	100	9750	3.64		
2	0	0.00	0	0	0			
3	0	0.00	0	0	0			
4	0	0.00	0	0	0			
5	0	0.00	0	0	0			
6	0	0.00	0	0	0			
7	0	0.00	0	0	0			
8	0	0.00	0	0	0			
9	0	0.00	0	0	0			
10	0	0.00	0	0	0			

Footings Concrete Geometry

Cap Height (Above Ground Line) =

Diameter Pier =

Length (below ground) =

Concrete Volume =

Spacing

L/D Ratio = 4.7

OK

34.88 in

Anchor Bolt Radius (to outer face)

35.75 in

Template Radius

39.23 in

Inner Edge of Hook/Rebar

Summation of shear and passive pressure forces to find LID: ΣFx = 0

Load Inflection-Point Depth (LID)= 22.80 ft

Summation of moments about LID: ΣM\_LIP = RM\_total - OTM >= 0

OTM = 6552.6 ft-kips

RM\_total = 6614

Resisting

Soil FS above allowable

Shear\_applied = 45.0 kips

Shear\_resisting = 45.39

= 1.01

= 1.01

= RM\_total / OTM

= resisting V/applied V

Weight = 55.1 kips

Foundation Load Properties				About Load Inflection Point				V_max kips
Level #	Passive Pressure psf Start	Pas Press Slope psf/ft	Zero = Ground Line Depth Start (ft) Depth End (ft)	Forces Constant kips	Forces Slope kips	Moments Constant ft-kips	Moments Slope ft-kips	
1	1500	83	0.0	22.8	256.5	160.8	2924	1222
2	3381	83	22.8	100.0	-322.0	-49.9	2045	422

Footing Reinforcement Requirements

Tie Bar #

Ties OK

Tie Vertical Spacing

Number of Ties

Area\_Ties

MP\_Tc

MP\_Rin

MP\_Asteel

MP\_Esteel

MP\_Isteel

EI

S

M\_t

OM\_t

Bars Per Bundle

Vertical Bar #

Bar Count

Φ\_shear

Φ\_flexure

MP\_Fty\_T&V

MP\_Fty\_T&V\_ALL

Shaft Bending CSR

ΦVs

4

1.00 ft

38 -

0.40 in²

4 in

39.9 in

32.9 in²

29000 ksi

26143 in⁴

758136554 in²·lb/in³

<

# Pier Shear Check

f'c 4500 psi Concrete compression properties  
d 5.91 ft Distance from extreme com fiber to cent of tension reaction group

## Calculate the Concrete Shear Strength

$$V_c = 2 * (f_c')^{0.5} * b_w * d = 856 \text{ kips} \quad 22.5.5.1$$

Given:

$$b_w = 90 \text{ in} \quad \text{diameter}$$

$$d = 70.9 \text{ in}$$

$$\Phi_c = 0.85$$

$$\Phi_c V_c = 728 \text{ Kips}$$

## Cross-Sectional Dimension Check

$$\Phi * (V_c + 8 * \sqrt{f_c'} * b_w * d) \geq V_u$$

$$2912 \text{ kips} \geq 371.9 \text{ kips} \quad 22.5.1.2$$

## Calculate the Reinforcement Shear Strength

#4 horizontal ties at 12" spacing

$$V_s = \frac{A_v * f_y * d}{s} \quad 22.5.10.5.3$$

Given:

$$A_v = 0.4 \text{ in}^2$$

$$f_y = 60 \text{ ksi}$$

$$d = 5.91 \text{ Ft}$$

$$s = 1 \text{ Ft}$$

$$\Phi_s = 0.85$$

$$\Phi_s V_s = 120.6 \text{ Kips}$$

The Maximum Shear in the Pier occurs at Reaction Inflection Point 22.8'

$$\Phi * (V_s + V_c) \geq V_u \quad 22.5.10.1$$

$$\Phi V_c + \Phi V_s > V_u$$

$$727.8 \text{ Kips} + 120.6 \text{ Kips} > 371.9 \text{ kips}$$

$$848.4 \text{ Kips} > 371.9 \text{ kips} \quad \text{====> OK}$$

## Anchor Bolt Embedment Check

Development Length Demand  $L_{d\_min} = 12 \text{ in} \quad 25.4.2.1$

Casting Location Factor  $\psi_t = 1 \quad 25.4.2.4$

Coating Factor  $\psi_e = 1 \quad 25.4.2.4$

Epoxy **N**

$\psi_t \psi_e = 1 \quad 25.4.2.4$

Size Factor  $\psi_s = 1 \quad 25.4.2.4$

Concrete Weight Factor  $\lambda = 1 \quad 25.4.2.4$

$c_b = 4.64 \quad 25.4.2.4$

Transverse Reinforcement Index  $k_{tr} = 0 \quad 25.4.2.3$

Confinement Term  $c' = 2.5000 \quad 25.4.2.3$

Rebar Development Length in Tension  $L_d = 34.1 \text{ in} \quad 25.4.2.2$

$2 \text{ in}$

Pullout Angle **35** deg  $17.4$

Anchor Bolt Embedment in Concrete  $A_b = 56.5 \text{ in}$

Available Development Length  $L_{da} = 48.4 \text{ in}$

Required Development Length  $L_{d\_reqd} = 32.95 \text{ in}$

Check Anchor Engagement **OK**

Excess Reinforcement Ratio  $0.967 \quad 25.4.10.1$

Minimum Rebar Ratio  $0.005 \quad 16.3.4$

Minimum Anchor Bolt Embedment  $11.7 \text{ in} \quad \text{TIA Rev H 9.6}$

Check Anchor Bolt Length **OK**

Embedment Length  $56.50 \text{ in}$

25 Times Diameter  $43.75 \text{ in}$

Concrete Pryout Check Required **No**  $\text{TIA Rev H 9.6}$



Site: Paramount, Hagerstown, MD  
Dwg: MD562902FP

By: CR  
Check: CR  
Date: 10-06-22

Drilled Pier Analysis  
Pole Structure  
Customer: Arcola Towers

# Pullout Strength of Anchor in Tension

17.4.3

Net bearing area of the headed stud(s) or anchor bolt(s)  
Pullout strength in tension of a single headed stud or bolt  
Assumes the anchor is located in a region of concrete member  
where analysis indicates no cracking at service load levels.

$$N_{pn} = \psi_{c,p} N_p$$

$$A_{bg} = 4.144 \text{ in}^2$$

$$N_p = A_{bg} 8 f'_c$$

$$\psi_{c,p} = 1.4$$

$$N_p = 149.2 \text{ kips}$$

$$\phi = 0.75$$

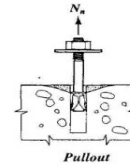
$$N_{pn} = 208.9 \text{ kips}$$

$$\phi N_p = 156.6 \text{ kips}$$

Maximum bolt force from pole analysis

$$N_u = 129.43 \text{ kips}$$

$\phi N_p > N_u$  Check **OK**



## Concrete Side-Face Blowout Strength of Headed Anchor in Tension

17.4.4

Single Anchor:

$$N_{sb} = 160 c A_{bg}^{1/2} f_c^{1/2}$$

Distance from center of anchor shaft to edge of concrete  
Distance from center of anchor shaft to edge of  
concrete in direction orthogonal to  $C = C_{a1}$ .

$$C = C_{a1} = 11.0 \text{ in}$$

$$C_{a2} = 43.1 \text{ in}$$

$$C_{a2}/C_{a1} = 3.92$$

$$\text{Use } 3.00$$

$$\text{Seismic Factor } 0.75$$

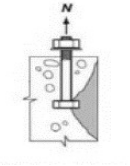
$$\phi = 0.75$$

$$\text{Factor} = 1.00$$

$$N_{sb} = 240.3 \text{ kips}$$

$$\phi N_{sb} = 135.2 \text{ kips}$$

$\phi N_{sb} > N_u$  Check **OK**



Multiple Anchors:

$$N_{sbq} = (1 + S/6C_{a1}) N_{sb}$$

Spacing of the outer anchors along the edge of the group.

$$S_o = 8.90 \text{ in}$$

Effective anchor embedment depth

$$h_{ef} = 56.5 \text{ in}$$

The largest edge distance

$$C_{a,max} = 43.1 \text{ in}$$

Number of edges surrounding anchor or group of anchors

$$\text{edges } 2$$

Controlling length

$$L_{ef} = 56.5 \text{ in}$$

$$N_{sbq} = 272.8 \text{ kips}$$

$$\phi N_{sbq} = 153.4 \text{ kips}$$

$\phi N_{sbq} > N_u$  Check **OK**



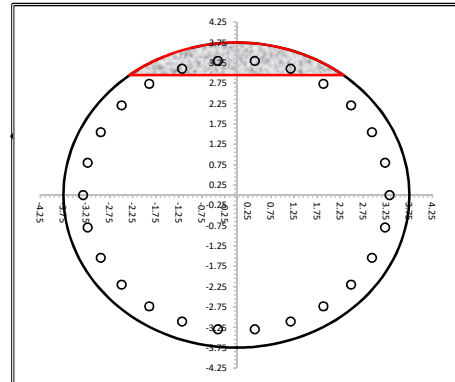
Site: Paramount, Hagerstown, MD  
Dwg: MD562902FP

By:	CR	Drilled Pier Analysis
Check:	CR	Pole Structure
Date:	10-06-22	Customer: Arcola Towers



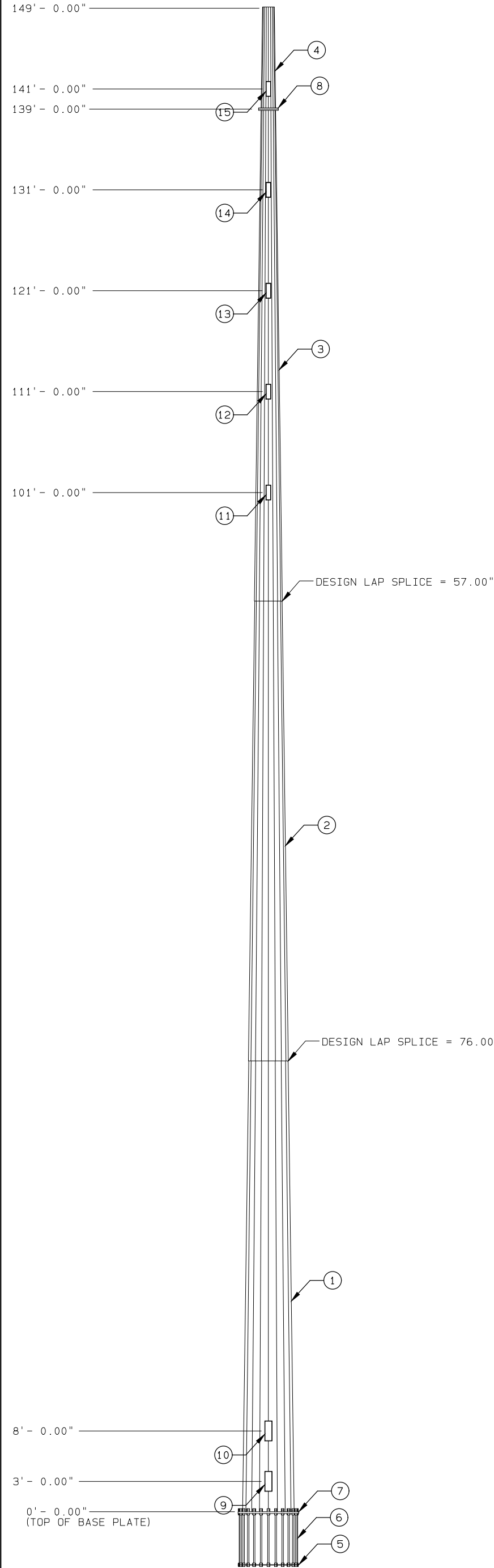
# MAXIMUM FACTORED MOMENT OF A CIRCULAR SECTION

Reinforcement Yield Strength	60	ksi
Reinforcement Modulus of Elasticity	29000	ksi
Axial Load (Negative for Compression)	-55.12155	kips
Limiting Compressive Strain	0.003	in/in
Reinforcement Yield Strain	0.00207	in/in
Pier Diameter	7.50	ft
Vertical Rebar Diameter	1.270	in
Vertical Rebar Quantity	26	
Vertical Rebar Area	1.2668	in <sup>2</sup>
Tie Rebar Diameter	0.500	in
Concrete Clear Cover	4.0	in
Rebar Cage Diameter (to Center of Vertical Bars)	79.730	in
Concrete Compressive Strength	4500	psi
Distance From Extre Edge to Neutral Axis	11.64	in
ACI Factor per Table 22.2.2.4.3 ( $\beta_1$ )	0.8250	
Depth of Equivalent Stress Block	9.6	in
Distance from Centroid to Neutral Axis	33.4	in
Angle from Centroid to Compression Zone	38.1	deg
Area of Concrete in Compression	364.1	in <sup>2</sup>
Distance from Centroid of Concrete in Compression to Centroid of Pier	39.3	in
Concrete Compression Force	1373	kips
Total Reinforcement Forces	-1318	kips
Axial Load	-55.12155	kips
Sum of Axial Forces	-1373	kips
Sum of Forces in Concrete	0.000	kips
Moment of Concrete in Compression	4494	ft-kips
Total Reinforcement Moment	2025	ft-kips
Nominal Strength of Column	6519	ft-kips
Tensile Strain in Extreme Layer of Reinforcement	-0.0188	in/in
ACI Strength Reduction Factor	0.900	
Factored Moment Strength of Column	70404	in-kips

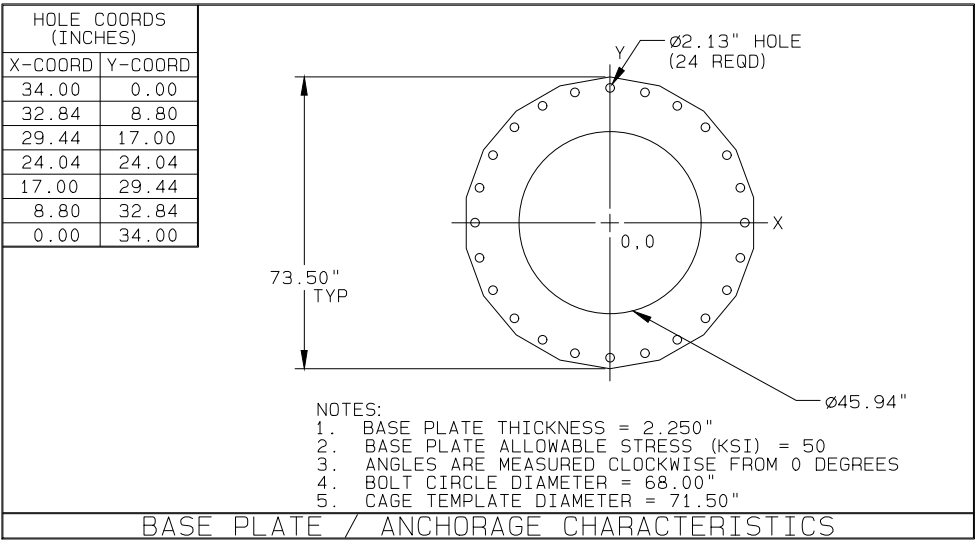


OK

ACI 318-14 21.2.2



ITEM ID	NO. REQD	FEATURES	UNIT WEIGHT (LBS)	WEIGHT (LBS)
1	1	SECTION A VALMONT S-22 0.375" THK (A572 GR65)	10,819	10,819
2	1	SECTION B VALMONT S-22 0.375" THK (A572 GR65)	7,882	7,882
3	1	SECTION C VALMONT S-22 0.313" THK (A572 GR65)	4,072	4,072
4	1	SECTION D VALMONT S-22 0.188" THK (A572 GR65)	310	310
5	1	BOTTOM CAGE PLATE	138	138
6	24	1.75" ANCHOR BOLT, LENGTH=5.50' A615 GR75	64	1,522
7	1	BASE PLATE VALMONT S-56 2.250" THK (A572 GR50)	1,540	1,540
8	2	FLANGE PLATE	143	286
	1	TOP CAGE PLATE (REMOVE BEFORE SETTING POLE)	180	180
	10	BOLT 1.00" DIA		
	1	SAFETY CLIMBING CABLE (LENGTH = 139.00')	108	108
	3	GROUNDING LUG	2	6
		GALVANIZING	460	460
	181	STEP AND CLIP (VALMONT STANDARD)	1	181
9	2	HAND HOLE HVY (9" x 24") @ 220°, 310°	52	104
10	2	HAND HOLE HVY (9" x 24") @ 40°, 220°	52	104
11	3	HAND HOLE STD (6" x 18")	18	54
12	3	HAND HOLE STD (6" x 18")	18	54
13	3	HAND HOLE STD (6" x 18")	18	54
14	3	HAND HOLE STD (6" x 18")	18	54
15	3	HAND HOLE STD (6" x 18")	18	54
	1	POLE CAP	12	12



- NOTES:
1. FACTORED BASE REACTIONS  
MOMENT = 66,044 IN-KIPS  
SHEAR = 45,016 #  
VERTICAL = 55,122 #
  2. GALVANIZED PER ASTM A-123.
  3. DESIGN CRITERIA: TIA-222-H
  4. THIS STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING LOADING:  
EXPOSURE CATEGORY = C  
TOPOGRAPHY CATEGORY = 1  
RISK CATEGORY = II  
SITE ELEVATION = 595 FT  
EARTHQUAKE SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS SS = 0.12  
EARTHQUAKE SPECTRAL RESPONSE ACCELERATION AT ONE SECOND S1 = 0.04  
EARTHQUAKE SITE CLASS = D  
WIND LOAD CASES ARE BASED ON 3 SECOND GUST AND 700 YEAR MRI  
A. CASE 1: WIND = 111 MPH WIND SPEED  
B. CASE 2: WIND = 40 MPH ICE AND WIND SPEED  
DESIGN ICE THICKNESS = 1.00 IN  
C. CASE 3: WIND = 60 MPH WIND SPEED  
D. CASE 4: SEISMIC  
E. CASE 5: SEISMIC  
F. EQUIPMENT
- | DESCRIPTION          | ABP MTG HT. (FT) | ABP CENTROID HT. (FT) | WITHOUT ICE EPA (FT**2) | WITHOUT ICE WT (LBS) | WITH ICE EPA (FT**2) | WITH ICE WT (LBS) |
|----------------------|------------------|-----------------------|-------------------------|----------------------|----------------------|-------------------|
| 1-2 FT LIGHTNING ROD | 149.00           | 150.00                | 2.00                    | 50                   | 4.00                 | 100               |
| 1-250 SQ FT EPA      | 144.00           | 144.00                | 250.00                  | 7000                 | 500.00               | 14000             |
| 1-200 SQ FT EPA      | 134.00           | 134.00                | 200.00                  | 4500                 | 400.00               | 9000              |
| 1-200 SQ FT EPA      | 124.00           | 124.00                | 200.00                  | 4500                 | 400.00               | 9000              |
| 1-150 SQ FT EPA      | 114.00           | 114.00                | 150.00                  | 4500                 | 300.00               | 9000              |
5. FEEDLINES ARE PLACED INTERIOR TO THE POLE SHAFT (UNLESS NOTED OTHERWISE)
  6. TOTAL POLE HEIGHT IS 150 FT AGL
  7. ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE (APPROX. 1 FT AGL)
  8. 18 SIDED SHAFT
  9. VALMONT STANDARD HANDHOLE SIZES USED
  10. MAX TOWER RATING: 0.99
  11. DESIGNED TO 70' FALL ZONE RADIUS
  12. ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.





Valmont Microflect  
3575 25<sup>th</sup> St. SE  
Salem, Oregon 97302 USA  
1-800-547-2151

Communication Structure Calculations  
for  
Arcola Towers  
Paramount, Hagerstown, MD

562902-P1

Thursday, 06 October 2022

Prepared By:  
Chandra Rao

Reviewed By:  
CR

Proprietary Information

These documents, drawings and/or calculations and all information related to them are the exclusive property and the proprietary information of Valmont Industries, Inc. and are furnished solely upon the conditions that they will be retained in strictest confidence and shall not be duplicated, used or disclosed in whole or in part for any purpose, in any way, without the prior written permission of Valmont Industries, Inc.





Valmont Microflect  
3575 25<sup>th</sup> St. SE  
Salem, Oregon 97302 USA  
1-800-547-2151

## Table Of Contents

PROJECT SUMMARY.....	S1-S3
<b>ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD .....</b>	<b>1</b>

### Proprietary Information

These documents, drawings and/or calculations and all information related to them are the exclusive property and the proprietary information of Valmont Industries, Inc. and are furnished solely upon the conditions that they will be retained in strictest confidence and shall not be duplicated, used or disclosed in whole or in part for any purpose, in any way, without the prior written permission of Valmont Industries, Inc.

Valmont Industries, Inc.  
Project Summary  
Arcola Towers  
562902

Structure Identifier	Pole Height (ft)	Emb. Length (ft)	Anchor Bolts			Shaft Diameters			Weight (lb)								Global Base Reactions For Pole Shaft Governing Load Case				
			Max Bolt Circle (in)	Anchor Bolt Length (in)	Qty	Base (in)	Ground Line (in)	Top (in)	Sect A	Sect B	Sect C	Sect D	Sect E	Sect F	Base Plate	Anchor Bolts	Load Case Identifier	Moment (in-kip)	Shear (kips)	Axial (kips)	Max Defl (in)
562902-P1	149.00	----	68.00	66	24	61.25	61.25	14.00	10819	7882	4072	310	----	----	1540	1522	WIND	66044	45.0	53.6	159

Valmont Industries, Inc.  
Project Summary  
Arcola Towers  
562902

Structure Identifier	Shaft Yield Stress (ksi)	Shaft Taper  (in/ft)	Shaft Shape	Anchor Bolt Diameter (in)	Base Plate Width/ Length (in)	Base Plate Thickness  (in)	Camber  (in)	Length (ft)						Thickness (in)					
								Sect A	Sect B	Sect C	Sect D	Sect E	Sect F	Sect A	Sect B	Sect C	Sect D	Sect E	Sect F
562902-P1	65	0.326	18	1.75	72.38	2.25	0.0	51.00	50.33	48.75	10.00	----	----	0.375	0.375	0.313	0.188	----	----



Valmont Industries, Inc.  
Project Summary  
Arcola Towers  
562902

Structure Identifier	Section Data																
	"A"	"A"	"B"	"B"	"C"	"C"	"D"	"D"	"E"	"E"	"F"	"F"	"A"-"B"	"B"-"C"	"C"-"D"	"D"-"E"	"E"-"F"
	Base Diameter (in)	Top Diameter (in)	Base Diameter (in)	Top Diameter (in)	Base Diameter (in)	Top Diameter (in)	Base Diameter (in)	Top Diameter (in)	Base Diameter (in)	Top Diameter (in)	Base Diameter (in)	Top Diameter (in)	Joint Type	Joint Type	Joint Type	Joint Type	Joint Type
562902-P1	61.25	44.61	47.42	31.00	33.17	17.26	17.26	14.00	----	----	----	----	Slip Joint	Slip Joint	Flange		----

# Valmont Industries, Inc. Engineering Data

## \*\*\* OVERVIEW \*\*\*

1. Structure design conforms to TIA-222-H including:
  - 111 mph Wind Speed (3 second gust, 700 year mean recurrence interval)
  - 40 mph Ice Wind (500 year mean recurrence interval)
  - 1.00 in ice thickness
  - 60.0 mph Basic Wind Speed with no ice for twist and sway
  - Exposure Category C
  - Risk Category II
  - Topographic Category 1
  - Site Elevation = 595 (ft) above mean sea level
  - Spectral response acceleration at short periods and 1 sec.:  $S_s = 0.12$  &  $S_1 = 0.04$
  - Site class = D
2. Feedlines are assumed to be placed interior to the pole
3. Total pole height is 150.0 ft agl
4. Elevations are measured from top of base plate (approximately 1.0 ft agl)
5. Valmont standard handhole sizes used
6. Max tower rating: 0.99
7. Designed to 70' fall zone radius

## \*\*\* Structure Anchorage Information \*\*\*

Pole Height (ft):	149.0	Number of Anchor Bolts:	24
Bolt Circle (in):	68.00	Diameter of Anchor Bolts (in):	1.75
Base Shear (lbs):	45016	Length of Anchor Bolts (in):	66.00
Base Vertical (lbs):	55122	Projection Length (in):	9.50
Base Moment (in-kips):	66044	Template OD (in):	71.50

## \*\*\* Loading Data\*\*\*

Qty	Description	ABP Height (ft)	Without Ice		With Ice	
			EPA (ft <sup>2</sup> )	Weight (lbs)	EPA (ft <sup>2</sup> )	Weight (lbs)
1	2 FT LIGHTNING ROD	149.00	2.00	50	4.00	100
1	250 SQ FT EPA	144.00	250.00	7000	500.00	14000
1	200 SQ FT EPA	134.00	200.00	4500	400.00	9000
1	200 SQ FT EPA	124.00	200.00	4500	400.00	9000
1	150 SQ FT EPA	114.00	150.00	4500	300.00	9000

\*\*\* SUMMARY \*\*\*

Design Code: TIA-222-H

----- DESIGN SUMMARY -----

Height Above Base Plate	149'- 0.00"	Dia. at Top of Baseplate (in)	61.250	Pole Shaft Weight (lbs)	23084
		Top Diameter (in)	14.000		
		Pole Taper (in/ft)	0.32634	Shape:	18 Sides
Connections Between Sections	/First/	/Second/	/Third/		
Height Above Ground	51'- 0.00"	95'- 0.00"	139'- 0.00"		
Type	Slip Joint	Slip Joint	Flange Joint		
Overlap Length (in)	76	57	0		
Maximum Axial Force (lbs)	67063	55800	17338		
Section Characteristics	/First/	/Second/	/Third/	/Fourth/	
Base Diameter (in)	61.250	47.423	33.173	17.263	
Top Diameter (in)	44.607	30.997	17.263	14.000	
Thickness (in)	0.37500	0.37500	0.31250	0.18750	
Length	51'- 0.00"	50'- 4.00"	48'- 9.00"	10'- 0.00"	
Weight (lbs)	10819	7882	4072	310	
Yield Strength (ksi)	65.00	65.00	65.00	65.00	
Section Shape	18 Sides	18 Sides	18 Sides	18 Sides	

----- ANALYSIS SUMMARY -----

	Pt. of Fixity	Governing Level Sec.1	Governing Level Sec.2	Governing Level Sec.3	Governing Level Sec.4	Pole Top
Governing Load Case	WIND	WIND	WIND	WIND	WIND	WIND
Height (ft)	0.00	24.00	51.00	95.00	139.00	149.00
Resultant Moment (in-kips)	66044	53230	39208	17334	775	1
Shear Force (lbs)	45104	43850	42599	40417	12813	98
Axial Force (lbs)	53508	46110	36858	25622	6685	43
Effective Yield Strength (ksi)	69.60	73.93	78.39	82.49	82.55	82.55
Combined Interaction Value	0.98	0.98	0.95	0.99	0.26	0.00
Total Deflection (in)	0.00	2.98	14.55	57.23	137.15	158.85

Note: Diameters are outside, measured across the flats  
 Forces and moments are reported in the local element coordinate system



SUMMARY OF SECTION DIMENSIONS AS DETAILED

Height Above Base Plate 149'- 0.00" Dia. at Top of Baseplate (in) 61.250 Pole Shaft Weight (lbs) 23084

Top Diameter (in) 14.000

Pole Taper (in/ft) 0.32634 Shape: 18 Sides

Connections Between Sections	/First/	/Second/	/Third/
Height Above Ground	51'- 0.00"	95'- 0.00"	139'- 0.00"
Type	Slip Joint	Slip Joint	Flange Joint
Flange Thickness (in)			1.500
Weld Root Gap (in)			0.250

Theoretical Design Section Dimensions	/First/	/Second/	/Third/	/Fourth/
Base Diameter (in)	61.250	47.423	33.173	17.263
Top Diameter (in)	44.607	30.997	17.263	14.000
Thickness (in)	0.37500	0.37500	0.31250	0.18750
Length	51'- 0.00"	50'- 4.00"	48'- 9.00"	10'- 0.00"

As Detailed Section Characteristics	/First/	/Second/	/Third/	/Fourth/
BasePlate/Flange thk.at Base (in)	2.250	0.000	0.000	1.500
Weld Root Gap at Base (in)	0.000	0.000	0.000	0.250
Base Diameter (in)	61.250	47.423	33.173	17.216
Top Diameter (in)	44.607	30.997	17.311	14.000
Thickness (in)	0.37500	0.37500	0.31250	0.18750
Length	51'- 0.00"	50'- 4.00"	48'- 7.25"	9'-10.25"
Taper (in/ft)	0.32634	0.32634	0.32634	0.32634
Weld Root Gap at Top (in)	0.000	0.000	0.250	0.000
BasePlate/Flange thk. at Top (in)	0.000	0.000	1.500	0.000

Note: Diameter are outside, measured across the flats

BY VALMONT INDUSTRIES  
Design Id: 562902-P1

FOR:

ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD

DATE 10/06/2022  
IMPAX 25.1.19.3

\*\*\* POLE SHAFT POINT OF FIXITY REACTIONS \*\*\*

Loading Case Identifier	Moments About X-Axis (in-kips)	Moments About Y-Axis (in-kips)	Moments Resultant (X & Y) (in-kips)	Moments Torsional (in-kips)	Vertical Force (lbs)	Shear In X-Direction (lbs)	Shear In Y-Direction (lbs)	Shear Resultant (X & Y) (lbs)	Notes
WIND	50593	-42452	66044	0	53581	28936	34485	45016	
ICE + WIND	13925	-11685	18178	0	85134	7403	8823	11518	
T+S	13153	-11037	17170	0	44100	7577	9030	11788	
Seismic	1612	-1353	2105	0	53988	849	1012	1322	
Seismic 2	1582	-1328	2065	0	38518	849	1012	1322	

Note: Positive vertical force is downward.

Reactions are considered in the global coordinate system.

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1

DATE 10/06/2022  
 IMPAX 25.1.19.3

\*\*\* INPUT LOADS \*\*\*

Design Code TIA-222-H  
 Loading Case WIND ( 1.2 D + 1.0 Wo )

Basic Wind Velocity is 111.00 mph Ice Thickness 0.00  
 Wind Orientation is 50.0 Degrees Clockwise From +X Axis  
 Structure Weight Overload Factor is 1.200  
 Exposure C, Gust Factor 1.10  
 Risk Category II, Topographic Category 1, Crest Height 0.00 ft  
 Orientations are Measured Clockwise From +X Axis  
 Positive Y Axis is 90 Degrees Clockwise From +X Axis  
 Foundation Rotation of 0.00 Degrees  
 Flange Weight 180 lbs (unfactored) 2 @ 139.0 ft  
 Elevation of structure base above surrounding terrain = 1.00 ft

Orientation of System  
 +\*\*\*\*\* +X-Axis  
 \* \* (Transverse)  
 \* \*  
 \* \*  
 (Longitudinal) \* \* (Vertical)  
 +Y-Axis \* \* +Z-Axis

Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	149.00	150.00	0.00	50.00	57	68	60	2.00	1-2 ft lightn
2	144.00	144.00	0.00	50.00	7095	8455	8400	250.00	1-250 sq ft E
3	134.00	134.00	0.00	50.00	5591	6663	5400	200.00	1-200 sq ft E
4	124.00	124.00	0.00	50.00	5501	6556	5400	200.00	1-200 sq ft E
5	114.00	114.00	0.00	50.00	4054	4831	5400	150.00	1-150 sq ft E



BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1

DATE 10/06/2022  
 IMPAX 25.1.19.3

\*\*\* INPUT LOADS \*\*\*

Design Code TIA-222-H  
 Loading Case ICE + WIND ( 1.2 D + 1.0 Wi + 1.0 Di )

Basic Wind Velocity is 40.00 mph Ice Thickness 1.00  
 Wind Orientation is 50.0 Degrees Clockwise From +X Axis  
 Structure Weight Overload Factor is 1.200  
 Exposure C, Gust Factor 1.10  
 Risk Category II, Topographic Category 1, Crest Height 0.00 ft  
 Orientations are Measured Clockwise From +X Axis  
 Positive Y Axis is 90 Degrees Clockwise From +X Axis  
 Foundation Rotation of 0.00 Degrees  
 Flange Weight 180 lbs (unfactored) 2 @ 139.0 ft  
 Elevation of structure base above surrounding terrain = 1.00 ft

Orientation of System  
 +\*\*\*\*\* +X-Axis  
 \* \* (Transverse)  
 \* \*  
 \* \*  
 (Longitudinal) \* \* (Vertical)  
 +Y-Axis \* \* +Z-Axis

Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	149.00	150.00	0.00	50.00	15	18	120	4.00	1-2 ft lightn
2	144.00	144.00	0.00	50.00	1843	2196	16800	500.00	1-250 sq ft E
3	134.00	134.00	0.00	50.00	1452	1731	10800	400.00	1-200 sq ft E
4	124.00	124.00	0.00	50.00	1429	1703	10800	400.00	1-200 sq ft E
5	114.00	114.00	0.00	50.00	1053	1255	10800	300.00	1-150 sq ft E

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1

DATE 10/06/2022  
 IMPAX 25.1.19.3

\*\*\* INPUT LOADS \*\*\*

Design Code TIA-222-H  
 Loading Case T+S ( 1.0 D + 1.0 Wo )

Basic Wind Velocity is 60.00 mph Ice Thickness 0.00  
 Wind Orientation is 50.0 Degrees Clockwise From +X Axis  
 Structure Weight Overload Factor is 1.000  
 Exposure C, Gust Factor 1.10  
 Risk Category II, Topographic Category 1, Crest Height 0.00 ft  
 Orientations are Measured Clockwise From +X Axis  
 Positive Y Axis is 90 Degrees Clockwise From +X Axis  
 Foundation Rotation of 0.00 Degrees  
 Flange Weight 180 lbs (unfactored) 2 @ 139.0 ft  
 Elevation of structure base above surrounding terrain = 1.00 ft

Orientation of System  
 +\*\*\*\*\* +X-Axis  
 \* \* (Transverse)  
 \* \*  
 \* \*  
 (Longitudinal) \* \* (Vertical)  
 +Y-Axis \* \* +Z-Axis

Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	149.00	150.00	0.00	50.00	15	18	50	2.00	1-2 ft lightn
2	144.00	144.00	0.00	50.00	1855	2210	7000	250.00	1-250 sq ft E
3	134.00	134.00	0.00	50.00	1462	1742	4500	200.00	1-200 sq ft E
4	124.00	124.00	0.00	50.00	1438	1714	4500	200.00	1-200 sq ft E
5	114.00	114.00	0.00	50.00	1060	1263	4500	150.00	1-150 sq ft E

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1

DATE 10/06/2022  
 IMPAX 25.1.19.3

\*\*\* INPUT LOADS \*\*\*

Design Code TIA-222-H  
 Loading Case Seismic (1.2 D + 1.0 Ev + 1.0 Eh)  
 Seismic analysis following the Equivalent Lateral Force Procedure  
 Risk Category: II  
 Site Class: D  
 Response Acceleration at short periods: 0.12  
 Response Acceleration at one second: 0.04  
 The above are used to obtain the acceleration and velocity based site coefficients Fa and Fv  
 Foundation Rotation of 0.00 Degrees  
 Flange Weight 180 lbs (unfactored) 2 @ 139.0 ft  
 Elevation of structure base above surrounding terrain = 1.00 ft

Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	149.00	150.00	0.00	50.00	0	0	60	2.00	1-2 ft lightn
2	144.00	144.00	0.00	50.00	0	0	8400	250.00	1-250 sq ft E
3	134.00	134.00	0.00	50.00	0	0	5400	200.00	1-200 sq ft E
4	124.00	124.00	0.00	50.00	0	0	5400	200.00	1-200 sq ft E
5	114.00	114.00	0.00	50.00	0	0	5400	150.00	1-150 sq ft E



BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1

DATE 10/06/2022  
 IMPAX 25.1.19.3

\*\*\* INPUT LOADS \*\*\*

Design Code TIA-222-H  
 Loading Case Seismic 2 (0.9 D - 1.0 Ev + 1.0 Eh)  
 Seismic analysis following the Equivalent Lateral Force Procedure  
 Risk Category: II  
 Site Class: D  
 Response Acceleration at short periods: 0.12  
 Response Acceleration at one second: 0.04  
 The above are used to obtain the acceleration and velocity based site coefficients Fa and Fv  
 Foundation Rotation of 0.00 Degrees  
 Flange Weight 180 lbs (unfactored) 2 @ 139.0 ft  
 Elevation of structure base above surrounding terrain = 1.00 ft

Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	149.00	150.00	0.00	50.00	0	0	45	2.00	1-2 ft lightn
2	144.00	144.00	0.00	50.00	0	0	6300	250.00	1-250 sq ft E
3	134.00	134.00	0.00	50.00	0	0	4050	200.00	1-200 sq ft E
4	124.00	124.00	0.00	50.00	0	0	4050	200.00	1-200 sq ft E
5	114.00	114.00	0.00	50.00	0	0	4050	150.00	1-150 sq ft E

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Equivalent Lateral Force Values for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

W = 44,051 lbs  
 Cs = 0.03  
 Vs = 1,322 lbs  
 Sds = 0.13  
 Ev = 1,128 lbs  
 Fa = 1.60  
 Fv = 2.40  
 k = 2.00  
 f1 = 0.31 Hz

Distance From Fixity	Weight			Load Distribution	Lateral Seismic Force
H	Wx	H^k	H^k * Wx	Factor	Fx
(ft)	(lbs)				(lbs)
149.00	50	22,201.00	1,110,050	0.0024	3
146.50	147	21,462.25	3,151,849	0.0067	9
144.00	7,000	20,736.00	145,152,000	0.3107	411
143.67	21	20,640.11	429,913	0.0009	1
143.33	2	20,544.44	41,089	0.0001	0
141.17	143	19,928.03	2,840,692	0.0061	8
139.00	359	19,321.00	6,936,239	0.0148	20
138.63	43	19,216.89	822,922	0.0018	2
138.25	2	19,113.06	38,226	0.0001	0
136.13	254	18,530.02	4,713,395	0.0101	13
134.00	4,500	17,956.00	80,802,000	0.1729	229
133.00	127	17,689.00	2,239,165	0.0048	6
132.00	4	17,424.00	69,696	0.0001	0
130.50	198	17,030.25	3,374,345	0.0072	10
127.38	226	16,224.39	3,664,052	0.0078	10
125.75	4	15,813.06	63,252	0.0001	0
124.88	126	15,593.77	1,971,405	0.0042	6
124.00	4,500	15,376.00	69,192,000	0.1481	196
121.75	341	14,823.06	5,048,371	0.0108	14
119.50	2	14,280.25	28,561	0.0001	0
119.25	39	14,220.56	557,709	0.0012	2
116.50	407	13,572.25	5,528,372	0.0118	16
114.00	4,500	12,996.00	58,482,000	0.1252	165
113.63	63	12,910.64	819,494	0.0018	2
113.25	4	12,825.56	51,302	0.0001	0
111.13	371	12,348.77	4,586,208	0.0098	13
108.50	90	11,772.25	1,062,764	0.0023	3
108.00	2	11,664.00	23,328	0.0001	0
106.00	372	11,236.00	4,181,167	0.0089	12
103.00	193	10,609.00	2,044,032	0.0044	6
102.00	3	10,404.00	31,212	0.0001	0
100.50	297	10,100.25	3,002,451	0.0064	8
97.88	229	9,579.52	2,198,058	0.0047	6

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Equivalent Lateral Force Values for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Distance From Fixity H (ft)	Weight Wx (lbs)	H^k	H^k * Wx	Load Distribution Factor	Lateral Seismic Force Fx (lbs)
96.75	3	9,360.56	28,082	0.0001	0
95.88	182	9,192.02	1,675,880	0.0036	5
94.50	230	8,930.25	2,051,142	0.0044	6
92.38	763	8,533.14	6,512,578	0.0139	18
90.75	2	8,235.56	16,471	0.0000	0
90.50	120	8,190.25	980,279	0.0021	3
89.63	163	8,032.64	1,309,634	0.0028	4
87.08	513	7,583.51	3,889,304	0.0083	11
85.17	2	7,253.36	14,507	0.0000	0
84.58	160	7,154.34	1,144,293	0.0024	3
82.73	355	6,844.12	2,427,455	0.0052	7
80.19	363	6,430.04	2,335,491	0.0050	7
78.92	4	6,227.84	24,911	0.0001	0
76.46	727	5,845.88	4,249,062	0.0091	12
73.33	203	5,377.78	1,089,636	0.0023	3
72.67	2	5,280.44	10,561	0.0000	0
70.83	569	5,017.36	2,856,463	0.0061	8
67.71	412	4,584.42	1,887,766	0.0040	5
66.42	2	4,411.17	8,822	0.0000	0
65.21	393	4,252.13	1,671,926	0.0036	5
62.71	429	3,932.34	1,686,384	0.0036	5
61.42	2	3,772.01	7,544	0.0000	0
60.21	409	3,625.04	1,483,252	0.0032	4
57.08	665	3,258.51	2,166,444	0.0046	6
55.17	2	3,043.36	6,087	0.0000	0
54.58	206	2,979.34	614,349	0.0013	2
52.50	538	2,756.25	1,484,232	0.0032	4
49.96	756	2,495.84	1,885,806	0.0040	5
48.92	2	2,392.84	4,786	0.0000	0
46.79	1,577	2,189.46	3,452,693	0.0074	10
44.33	125	1,965.44	245,360	0.0005	1
43.63	141	1,903.14	268,616	0.0006	1
43.25	2	1,870.56	3,741	0.0000	0
41.13	814	1,691.27	1,376,447	0.0029	4
38.00	391	1,444.00	564,968	0.0012	2
37.00	3	1,369.00	4,107	0.0000	0
35.50	597	1,260.25	752,105	0.0016	2
32.38	660	1,048.14	691,717	0.0015	2
30.75	3	945.56	2,837	0.0000	0
29.88	361	892.52	322,321	0.0007	1
26.75	947	715.56	677,800	0.0015	2
24.50	2	600.25	1,201	0.0000	0
24.25	107	588.06	62,864	0.0001	0



BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Equivalent Lateral Force Values for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Distance From Fixity	Weight			Load Distribution	Lateral Seismic Force
H (ft)	Wx (lbs)	H^k	H^k * Wx	Factor	Fx (lbs)
21.50	1,087	462.25	502,544	0.0011	1
18.63	166	346.89	57,558	0.0001	0
18.25	2	333.06	666	0.0000	0
16.13	954	260.02	248,129	0.0005	1
13.00	457	169.00	77,290	0.0002	0
12.00	2	144.00	288	0.0000	0
10.50	696	110.25	76,725	0.0002	0
6.50	1,186	42.25	50,121	0.0001	0
2.00	973	4.00	3,891	0.0000	0

\*\*\* Properties \*\*\*

Connection Locations	Distance From Base (ft)	Diameter Across Flats (in)	Wall Thickness (in)	D/t Across Flats	w/t Across Flats	Moments of Inertia (in^4)	Area (in^2)
Top of Sect 4	149.00	14.000	0.1875	74.67	11.40	198	8.22
	144.00	15.632	0.1875	83.37	12.94	277	9.19
	143.33	15.849	0.1875	84.53	13.14	289	9.32
	139.00	17.263	0.1875	92.07	14.47	374	10.16
Top of Sect 3	139.00	17.263	0.3125	55.24	7.98	610	16.81
	138.25	17.508	0.3125	56.03	8.12	637	17.06
	134.00	18.895	0.3125	60.46	8.90	804	18.43
	132.00	19.548	0.3125	62.55	9.27	892	19.08
	129.00	20.527	0.3125	65.69	9.82	1035	20.05
	125.75	21.587	0.3125	69.08	10.42	1206	21.10
	124.00	22.159	0.3125	70.91	10.74	1306	21.67
	119.50	23.627	0.3125	75.61	11.57	1588	23.12
	119.00	23.790	0.3125	76.13	11.66	1621	23.29
	114.00	25.422	0.3125	81.35	12.58	1983	24.90
	113.25	25.667	0.3125	82.13	12.72	2042	25.15
	109.00	27.054	0.3125	86.57	13.50	2395	26.52
	108.00	27.380	0.3125	87.62	13.69	2484	26.85
	104.00	28.685	0.3125	91.79	14.42	2861	28.14
	102.00	29.338	0.3125	93.88	14.79	3063	28.79
	99.00	30.317	0.3125	97.01	15.34	3384	29.76
	96.75	31.051	0.3125	99.36	15.76	3638	30.49
	95.00	31.622	0.3125	101.19	16.08	3845	31.05
Top of Sect 2	95.00	30.997	0.3750	82.66	12.81	4317	36.45
	94.00	31.324	0.3750	83.53	12.97	4456	36.84
	90.75	32.384	0.3750	86.36	13.46	4930	38.10
Base of Sect 3	90.25	32.548	0.3750	86.79	13.54	5006	38.29
	89.00	32.956	0.3750	87.88	13.73	5199	38.78
	85.17	34.207	0.3750	91.22	14.32	5821	40.27
	84.00	34.587	0.3750	92.23	14.50	6020	40.72
	81.46	35.417	0.3750	94.44	14.89	6468	41.71
	78.92	36.246	0.3750	96.66	15.28	6938	42.69
	74.00	37.851	0.3750	100.94	16.03	7912	44.60
	72.67	38.286	0.3750	102.10	16.24	8191	45.12
	69.00	39.482	0.3750	105.29	16.80	8991	46.55
	66.42	40.325	0.3750	107.53	17.20	9585	47.55
	64.00	41.114	0.3750	109.64	17.57	10164	48.49
	61.42	41.957	0.3750	111.89	17.97	10808	49.49
	59.00	42.746	0.3750	113.99	18.34	11435	50.43

\*\*\* Properties \*\*\*

Connection Locations	Distance From Base (ft)	Diameter Across Flats (in)	Wall Thickness (in)	D/t Across Flats	w/t Across Flats	Moments of Inertia (in <sup>4</sup> )	Area (in <sup>2</sup> )
	55.17	43.997	0.3750	117.32	18.92	12478	51.92
	54.00	44.378	0.3750	118.34	19.10	12807	52.37
	51.00	45.357	0.3750	120.95	19.56	13681	53.54
Top of Sect 1	51.00	44.607	0.3750	118.95	19.21	13008	52.64
	48.92	45.286	0.3750	120.76	19.53	13617	53.45
Base of Sect 2	44.67	46.673	0.3750	124.46	20.18	14918	55.10
	44.00	46.891	0.3750	125.04	20.29	15130	55.36
	43.25	47.136	0.3750	125.70	20.40	15370	55.65
	39.00	48.523	0.3750	129.39	21.05	16778	57.31
	37.00	49.175	0.3750	131.13	21.36	17470	58.08
	34.00	50.154	0.3750	133.74	21.82	18542	59.25
	30.75	51.215	0.3750	136.57	22.32	19753	60.51
	29.00	51.786	0.3750	138.10	22.59	20426	61.19
	24.50	53.255	0.3750	142.01	23.28	22227	62.94
	24.00	53.418	0.3750	142.45	23.35	22433	63.13
	19.00	55.049	0.3750	146.80	24.12	24568	65.07
	18.25	55.294	0.3750	147.45	24.24	24900	65.37
	14.00	56.681	0.3750	151.15	24.89	26834	67.02
	12.00	57.334	0.3750	152.89	25.20	27778	67.79
	9.00	58.313	0.3750	155.50	25.66	29235	68.96
	4.00	59.945	0.3750	159.85	26.42	31775	70.90
Pt of Fixity	0.00	61.250	0.3750	163.33	27.04	33910	72.45



BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
149.00	1	-1	1	0	63	75	98	43
144.00	9	-8	12	0	162	193	252	216
144.00	9	-8	12	0	8118	9674	12629	6477
143.33	86	-73	113	0	8132	9691	12651	6502
143.33	86	-73	113	0	8136	9696	12658	6517
139.00	594	-498	775	0	8236	9815	12813	6685
139.00	594	-498	775	0	8280	9867	12881	7127
138.25	683	-573	891	0	8300	9892	12913	7178
138.25	683	-573	891	0	8303	9895	12917	7199
134.00	1191	-999	1555	0	8426	10042	13109	7499
134.00	1191	-999	1555	0	14526	17311	22598	11329
132.00	1607	-1349	2098	0	14588	17385	22695	11479
132.00	1607	-1349	2098	0	14584	17380	22688	11536
129.00	2235	-1876	2918	0	14654	17464	22798	11854
125.75	2919	-2449	3810	0	14766	17597	22972	12121
125.75	2919	-2449	3810	0	14755	17585	22955	12195
124.00	3289	-2760	4293	0	14818	17660	23053	12345
124.00	3289	-2760	4293	0	20770	24753	32313	16400
119.50	4631	-3886	6045	0	20940	24955	32577	16803
119.50	4631	-3886	6045	0	20909	24919	32529	16925
119.00	4781	-4011	6241	0	20879	24883	32482	17119
114.00	6281	-5270	8199	0	21082	25124	32797	17602
114.00	6281	-5270	8199	0	25551	30450	39750	22165
113.25	6555	-5500	8557	0	25582	30488	39799	22240
113.25	6555	-5500	8557	0	25534	30430	39723	22418
109.00	8113	-6807	10590	0	25648	30566	39901	23048
108.00	8480	-7115	11069	0	25692	30619	39970	23155
108.00	8480	-7115	11069	0	25634	30550	39880	23340
104.00	9951	-8350	12991	0	25731	30664	40030	24008
102.00	10689	-8969	13953	0	25824	30776	40176	24237
102.00	10689	-8969	13953	0	25763	30703	40080	24427
99.00	11797	-9899	15400	0	25828	30781	40181	24980
96.75	12630	-10598	16487	0	25938	30912	40353	25253
96.75	12630	-10598	16487	0	25892	30857	40281	25405
95.00	13279	-11142	17334	0	25980	30961	40417	25622
95.00	13279	-11142	17334	0	25939	30913	40354	25722
94.00	13650	-11454	17819	0	25942	30916	40358	26137
90.75	14861	-12470	19399	0	26143	31155	40671	27047
90.75	14861	-12470	19399	0	26099	31103	40602	27173
90.25	15047	-12626	19643	0	26105	31111	40612	27373

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case WIND									
Dist. From									
Base	Mx	My	Resultant	Torsion	Shear	Shear	Resultant		
(ft)	(in-kips)	(in-kips)	Mx & My	(in-kips)	X-Dir.	Y-Dir.	Shear	Axial	
			(in-kips)		(lbs)	(lbs)	(lbs)	(lbs)	
89.00	15515	-13018	20253	0	26099	31103	40602	27733	
85.17	16951	-14224	22128	0	26304	31348	40922	28345	
85.17	16951	-14224	22128	0	26241	31273	40824	28508	
84.00	17389	-14591	22700	0	26251	31285	40840	28817	
81.46	18346	-15394	23949	0	26318	31365	40944	29400	
78.92	19305	-16199	25201	0	26461	31535	41165	29835	
78.92	19305	-16199	25201	0	26370	31427	41025	30065	
74.00	21169	-17763	27635	0	26560	31653	41320	31124	
72.67	21677	-18189	28297	0	26637	31745	41440	31366	
72.67	21677	-18189	28297	0	26575	31670	41343	31514	
69.00	23076	-19363	30123	0	26699	31819	41537	32376	
66.42	24065	-20193	31415	0	26853	32002	41776	32869	
66.42	24065	-20193	31415	0	26790	31927	41678	33012	
64.00	24993	-20972	32627	0	26863	32014	41792	33621	
61.42	25989	-21807	33926	0	27019	32200	42034	34135	
61.42	25989	-21807	33926	0	26956	32124	41935	34273	
59.00	26923	-22591	35145	0	27014	32194	42026	34929	
55.17	28410	-23839	37087	0	27248	32473	42390	35725	
55.17	28410	-23839	37087	0	27184	32397	42291	35859	
54.00	28864	-24220	37680	0	27197	32413	42312	36212	
51.00	30035	-25203	39208	0	27382	32632	42599	36858	
51.00	30035	-25203	39208	0	27309	32545	42485	36989	
48.92	30851	-25887	40273	0	27451	32715	42707	37895	
48.92	30851	-25887	40273	0	27366	32613	42573	38060	
44.67	32523	-27290	42456	0	27580	32869	42907	40077	
44.00	32786	-27511	42799	0	27599	32891	42937	40262	
43.25	33082	-27759	43186	0	27645	32946	43008	40431	
43.25	33082	-27759	43186	0	27579	32867	42905	40556	
39.00	34766	-29173	45384	0	27742	33062	43159	41684	
37.00	35562	-29840	46422	0	27863	33206	43348	42154	
37.00	35562	-29840	46422	0	27801	33132	43251	42275	
34.00	36758	-30844	47985	0	27890	33238	43389	43136	
30.75	38059	-31935	49683	0	28085	33470	43692	43928	
30.75	38059	-31935	49683	0	28022	33396	43595	44045	
29.00	38762	-32525	50600	0	28036	33412	43617	44616	
24.50	40575	-34046	52966	0	28302	33729	44031	45753	
24.50	40575	-34046	52966	0	28235	33650	43927	45865	
24.00	40777	-34216	53230	0	28186	33591	43850	46110	
19.00	42802	-35915	55875	0	28391	33835	44169	47536	
18.25	43107	-36171	56272	0	28434	33886	44235	47735	

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
18.25	43107	-36171	56272	0	28369	33809	44135	47839
14.00	44839	-37624	58533	0	28516	33984	44363	49110
12.00	45656	-38310	59599	0	28625	34114	44533	49659
12.00	45656	-38310	59599	0	28561	34038	44433	49760
9.00	46885	-39341	61204	0	28615	34102	44516	50748
4.00	48941	-41066	63888	0	28767	34283	44753	52340
0.00	50593	-42452	66044	0	28992	34552	45104	53508

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case WIND

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
149.00	102.1	121.7	158.8	10.3	10
144.00	95.1	113.4	148.0	9.3	10
144.00	95.1	113.4	148.0	9.3	10
143.33	94.2	112.2	146.5	9.1	10
143.33	94.2	112.2	146.5	9.1	10
139.00	88.2	105.1	137.1	8.3	10
139.00	88.2	105.1	137.1	8.3	10
138.25	87.1	103.8	135.5	8.1	10
138.25	87.1	103.8	135.5	8.1	10
134.00	81.3	96.9	126.5	7.3	10
134.00	81.3	96.9	126.5	7.3	10
132.00	78.6	93.7	122.3	7.0	10
132.00	78.6	93.7	122.3	7.0	10
129.00	74.6	89.0	116.1	6.4	9.82
125.75	70.4	83.9	109.5	5.9	9.59
125.75	70.4	83.9	109.5	5.9	9.59
124.00	68.2	81.3	106.1	5.6	9.45
124.00	68.2	81.3	106.1	5.6	9.45
119.50	62.6	74.6	97.4	4.9	9.07
119.50	62.6	74.6	97.4	4.9	9.07
119.00	62.0	73.9	96.4	4.8	9.03
114.00	56.1	66.8	87.2	4.1	8.55
114.00	56.1	66.8	87.2	4.1	8.55
113.25	55.2	65.8	85.9	4.0	8.48
113.25	55.2	65.8	85.9	4.0	8.48
109.00	50.5	60.2	78.6	3.5	8.04
108.00	49.4	58.9	76.9	3.3	7.94
108.00	49.4	58.9	76.9	3.3	7.94
104.00	45.3	54.0	70.4	2.9	7.51
102.00	43.3	51.6	67.4	2.7	7.30
102.00	43.3	51.6	67.4	2.7	7.30
99.00	40.4	48.2	62.9	2.4	6.97
96.75	38.3	45.7	59.7	2.2	6.73
96.75	38.3	45.7	59.7	2.2	6.73
95.00	36.8	43.8	57.2	2.1	6.54
95.00	36.8	43.8	57.2	2.1	6.54
94.00	35.9	42.8	55.9	2.0	6.45
90.75	33.2	39.5	51.6	1.8	6.14
90.75	33.2	39.5	51.6	1.8	6.14
90.25	32.8	39.0	51.0	1.7	6.10
89.00	31.7	37.8	49.4	1.7	5.98
85.17	28.7	34.3	44.7	1.4	5.63



BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case WIND

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
85.17	28.7	34.3	44.7	1.4	5.63
84.00	27.9	33.2	43.4	1.3	5.53
81.46	26.0	31.0	40.5	1.2	5.30
78.92	24.2	28.9	37.7	1.1	5.08
78.92	24.2	28.9	37.7	1.1	5.08
74.00	21.0	25.1	32.7	0.9	4.67
72.67	20.2	24.1	31.4	0.8	4.56
72.67	20.2	24.1	31.4	0.8	4.56
69.00	18.0	21.5	28.0	0.7	4.26
66.42	16.6	19.8	25.8	0.6	4.06
66.42	16.6	19.8	25.8	0.6	4.06
64.00	15.3	18.2	23.8	0.5	3.87
61.42	14.0	16.7	21.7	0.5	3.68
61.42	14.0	16.7	21.7	0.5	3.68
59.00	12.8	15.3	19.9	0.4	3.50
55.17	11.1	13.2	17.2	0.3	3.22
55.17	11.1	13.2	17.2	0.3	3.22
54.00	10.6	12.6	16.5	0.3	3.14
51.00	9.4	11.1	14.5	0.3	2.94
51.00	9.4	11.1	14.5	0.3	2.94
48.92	8.5	10.2	13.3	0.2	2.79
48.92	8.5	10.2	13.3	0.2	2.79
44.67	7.0	8.4	10.9	0.2	2.50
44.00	6.8	8.1	10.6	0.2	2.45
43.25	6.6	7.8	10.2	0.2	2.40
43.25	6.6	7.8	10.2	0.2	2.40
39.00	5.3	6.3	8.2	0.1	2.12
37.00	4.7	5.6	7.3	0.1	2.00
37.00	4.7	5.6	7.3	0.1	2.00
34.00	4.0	4.7	6.1	0.1	1.81
30.75	3.2	3.8	5.0	0.1	1.61
30.75	3.2	3.8	5.0	0.1	1.61
29.00	2.8	3.4	4.4	0.0	1.51
24.50	2.0	2.4	3.1	0.0	1.25
24.50	2.0	2.4	3.1	0.0	1.25
24.00	1.9	2.3	3.0	0.0	1.22
19.00	1.2	1.4	1.8	0.0	0.95
18.25	1.1	1.3	1.7	0.0	0.91
18.25	1.1	1.3	1.7	0.0	0.91
14.00	0.6	0.8	1.0	0.0	0.68
12.00	0.5	0.6	0.7	0.0	0.58

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case WIND

Distance			Defl.		
From	Defl.	Defl.	Resultant	Defl.	
Base	X-Dir	Y-Dir	X & Y	Z-Dir	Rotation
(ft)	(in)	(in)	(in)	(in)	(deg.)
12.00	0.5	0.6	0.7	0.0	0.58
9.00	0.3	0.3	0.4	0.0	0.43
4.00	0.1	0.1	0.1	0.0	0.19
0.00	0.0	0.0	0.0	0.0	0.00

Loading Case WIND

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
149.00	534,291	2,300	160,287	2,204	0.00	0.00	0.00	0.00	0.01
144.00	597,409	2,880	179,223	2,756	0.01	0.00	0.08	0.00	0.02
143.33	605,824	2,962	181,747	2,834	0.01	0.04	0.08	0.00	0.06
139.00	660,526	3,525	198,158	3,369	0.01	0.24	0.07	0.00	0.26
139.00	1,092,818	5,747	327,846	5,533	0.01	0.15	0.04	0.00	0.16
138.25	1,108,598	5,916	332,579	5,694	0.01	0.17	0.04	0.00	0.18
134.00	1,198,014	6,917	359,404	6,649	0.01	0.25	0.07	0.00	0.27
132.00	1,240,092	7,416	372,028	7,125	0.01	0.31	0.07	0.00	0.33
129.00	1,303,210	8,196	390,963	7,868	0.01	0.40	0.06	0.00	0.41
125.75	1,371,587	9,086	411,476	8,716	0.01	0.47	0.06	0.00	0.48
124.00	1,408,406	9,584	422,522	9,190	0.01	0.50	0.08	0.00	0.52
119.50	1,503,082	10,925	450,924	10,467	0.01	0.61	0.08	0.00	0.63
119.00	1,513,601	11,080	454,080	10,614	0.01	0.63	0.08	0.00	0.64
114.00	1,618,797	12,684	485,639	12,141	0.02	0.72	0.09	0.00	0.74
113.25	1,634,576	12,934	490,373	12,379	0.02	0.74	0.09	0.00	0.76
109.00	1,723,993	14,397	517,198	13,770	0.01	0.82	0.09	0.00	0.84
108.00	1,745,032	14,752	523,510	14,108	0.01	0.83	0.08	0.00	0.86
104.00	1,829,188	16,218	548,756	15,502	0.01	0.89	0.08	0.00	0.91
102.00	1,871,267	16,977	561,380	16,223	0.01	0.91	0.08	0.00	0.93
99.00	1,934,384	18,148	580,315	17,336	0.01	0.94	0.08	0.00	0.96
96.75	1,981,722	19,051	594,517	18,195	0.01	0.96	0.08	0.00	0.98
95.00	2,018,541	19,755	605,562	18,877	0.01	0.97	0.07	0.00	0.99
95.00	2,369,061	22,643	710,718	21,669	0.01	0.85	0.06	0.00	0.87
94.00	2,394,308	23,131	718,292	22,133	0.01	0.86	0.06	0.00	0.87
90.75	2,476,361	24,753	742,908	23,676	0.01	0.87	0.06	0.00	0.89
90.25	2,488,984	25,007	746,695	23,918	0.01	0.87	0.06	0.00	0.89
89.00	2,520,543	25,649	756,163	24,528	0.01	0.88	0.06	0.00	0.89
85.17	2,617,323	27,668	785,197	26,448	0.01	0.89	0.06	0.00	0.90
84.00	2,646,778	28,298	794,033	27,047	0.01	0.89	0.06	0.00	0.91
81.46	2,710,947	29,694	813,284	28,374	0.01	0.90	0.06	0.00	0.91
78.92	2,775,117	31,124	832,535	29,733	0.01	0.90	0.05	0.00	0.91
74.00	2,899,248	33,982	869,774	32,453	0.01	0.90	0.05	0.00	0.92
72.67	2,932,910	34,678	879,873	33,211	0.01	0.91	0.05	0.00	0.92
69.00	3,025,483	36,616	907,645	35,340	0.01	0.91	0.05	0.00	0.93
66.42	3,090,704	38,001	927,211	36,880	0.01	0.92	0.05	0.00	0.93
64.00	3,151,717	39,311	945,515	38,351	0.01	0.92	0.05	0.00	0.94
61.42	3,216,939	40,726	965,082	39,955	0.01	0.93	0.05	0.00	0.94
59.00	3,277,952	42,063	983,386	41,485	0.01	0.93	0.05	0.00	0.94
55.17	3,374,732	44,208	1,012,420	43,970	0.01	0.93	0.05	0.00	0.95

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Stresses for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case WIND

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
54.00	3,404,187	44,867	1,021,256	44,741	0.01	0.93	0.05	0.00	0.95
51.00	3,479,928	46,572	1,043,978	46,754	0.01	0.94	0.05	0.00	0.95
51.00	3,421,905	45,264	1,026,572	45,208	0.01	0.96	0.05	0.00	0.98
48.92	3,474,503	46,450	1,042,351	46,609	0.01	0.96	0.05	0.00	0.98
44.67	3,581,803	48,892	1,074,541	49,532	0.01	0.96	0.04	0.00	0.98
44.00	3,598,634	49,278	1,079,590	49,998	0.01	0.97	0.04	0.00	0.98
43.25	3,617,569	49,713	1,085,271	50,526	0.01	0.97	0.04	0.00	0.98
39.00	3,724,869	52,195	1,117,461	53,568	0.01	0.97	0.04	0.00	0.98
37.00	3,775,363	53,373	1,132,609	55,030	0.01	0.97	0.04	0.00	0.98
34.00	3,851,104	55,150	1,155,331	57,260	0.01	0.97	0.04	0.00	0.98
30.75	3,933,156	57,089	1,179,947	59,726	0.01	0.97	0.04	0.00	0.98
29.00	3,977,339	58,138	1,193,202	61,075	0.01	0.97	0.04	0.00	0.98
24.50	4,090,950	60,851	1,227,285	64,614	0.01	0.97	0.04	0.00	0.98
24.00	4,103,574	61,154	1,231,072	65,014	0.01	0.97	0.04	0.00	0.98
19.00	4,229,808	64,195	1,268,943	69,075	0.01	0.97	0.04	0.00	0.98
18.25	4,248,744	64,653	1,274,623	69,695	0.01	0.97	0.04	0.00	0.98
14.00	4,356,043	67,256	1,306,813	73,260	0.01	0.97	0.04	0.00	0.98
12.00	4,406,537	68,485	1,321,961	74,968	0.01	0.97	0.04	0.00	0.98
9.00	4,482,278	70,332	1,344,683	77,567	0.01	0.97	0.04	0.00	0.98
4.00	4,608,513	73,420	1,382,554	81,998	0.01	0.97	0.04	0.00	0.98
0.00	4,709,501	75,897	1,412,850	85,631	0.01	0.97	0.04	0.00	0.98



BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case ICE + WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
149.00	0	0	0	0	19	23	29	119
144.00	3	-3	4	0	57	68	89	398
144.00	3	-3	4	0	2467	2941	3839	17024
143.33	27	-22	35	0	2473	2947	3847	17063
143.33	27	-22	35	0	2469	2942	3841	17067
139.00	181	-152	236	0	2505	2986	3898	17338
139.00	181	-152	236	0	2515	2997	3913	17770
138.25	208	-174	271	0	2522	3006	3924	17840
138.25	208	-174	271	0	2517	2999	3915	17844
134.00	362	-304	472	0	2559	3050	3981	18256
134.00	362	-304	472	0	4353	5188	6772	28930
132.00	487	-408	635	0	4374	5213	6805	29135
132.00	487	-408	635	0	4360	5196	6783	29145
129.00	675	-566	881	0	4372	5210	6801	29473
125.75	879	-737	1147	0	4408	5254	6858	29838
125.75	879	-737	1147	0	4390	5232	6830	29849
124.00	989	-830	1291	0	4410	5256	6861	30054
124.00	989	-830	1291	0	6135	7311	9544	40748
119.50	1385	-1162	1808	0	6188	7375	9627	41298
119.50	1385	-1162	1808	0	6159	7339	9581	41311
119.00	1429	-1199	1866	0	6129	7304	9534	41387
114.00	1870	-1569	2441	0	6191	7378	9631	42044
114.00	1870	-1569	2441	0	7500	8939	11668	52778
113.25	1950	-1636	2546	0	7510	8950	11683	52880
113.25	1950	-1636	2546	0	7465	8897	11614	52901
109.00	2406	-2019	3140	0	7472	8905	11624	53515
108.00	2513	-2108	3280	0	7485	8920	11644	53661
108.00	2513	-2108	3280	0	7438	8864	11571	53679
104.00	2940	-2467	3837	0	7433	8858	11564	54298
102.00	3152	-2645	4115	0	7460	8890	11606	54607
102.00	3152	-2645	4115	0	7411	8833	11530	54627
99.00	3471	-2913	4532	0	7401	8820	11514	55122
96.75	3710	-3113	4843	0	7432	8857	11562	55491
96.75	3710	-3113	4843	0	7393	8810	11501	55507
95.00	3895	-3269	5085	0	7417	8840	11539	55800
95.00	3895	-3269	5085	0	7391	8809	11499	55808
94.00	4001	-3357	5223	0	7372	8786	11469	56173
90.75	4345	-3646	5672	0	7431	8855	11560	57346
90.75	4345	-3646	5672	0	7397	8816	11508	57359
90.25	4398	-3690	5741	0	7391	8808	11498	57547

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case ICE + WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
89.00	4530	-3801	5914	0	7365	8778	11458	57812
85.17	4936	-4142	6443	0	7422	8845	11546	58599
85.17	4936	-4142	6443	0	7378	8793	11478	58615
84.00	5059	-4245	6604	0	7364	8776	11456	58870
81.46	5327	-4470	6954	0	7358	8769	11447	59426
78.92	5595	-4695	7304	0	7396	8815	11507	59983
78.92	5595	-4695	7304	0	7334	8741	11410	60006
74.00	6114	-5130	7981	0	7357	8767	11445	61134
72.67	6254	-5248	8164	0	7377	8792	11477	61444
72.67	6254	-5248	8164	0	7337	8744	11414	61458
69.00	6640	-5572	8668	0	7343	8751	11423	62343
66.42	6912	-5800	9023	0	7382	8798	11485	62972
66.42	6912	-5800	9023	0	7343	8751	11423	62985
64.00	7167	-6014	9356	0	7341	8749	11421	63596
61.42	7439	-6242	9711	0	7381	8796	11483	64250
61.42	7439	-6242	9711	0	7342	8750	11423	64263
59.00	7693	-6455	10043	0	7333	8739	11408	64899
55.17	8097	-6794	10570	0	7392	8809	11500	65911
55.17	8097	-6794	10570	0	7354	8765	11442	65924
54.00	8220	-6897	10730	0	7342	8750	11422	66245
51.00	8536	-7162	11142	0	7388	8805	11494	67063
51.00	8536	-7162	11142	0	7351	8760	11435	67074
48.92	8755	-7346	11429	0	7388	8805	11493	68220
48.92	8755	-7346	11429	0	7340	8748	11419	68235
44.67	9204	-7723	12014	0	7378	8792	11478	70634
44.00	9274	-7782	12106	0	7377	8792	11477	70826
43.25	9353	-7848	12210	0	7388	8805	11494	71040
43.25	9353	-7848	12210	0	7351	8761	11437	71051
39.00	9802	-8225	12796	0	7369	8782	11464	72293
37.00	10013	-8402	13071	0	7399	8818	11511	72883
37.00	10013	-8402	13071	0	7363	8775	11455	72896
34.00	10330	-8668	13485	0	7363	8775	11455	73806
30.75	10673	-8956	13933	0	7411	8832	11529	74799
30.75	10673	-8956	13933	0	7375	8790	11474	74811
29.00	10858	-9111	14174	0	7358	8769	11447	75363
24.50	11334	-9510	14795	0	7422	8846	11547	76782
24.50	11334	-9510	14795	0	7388	8805	11493	76793
24.00	11387	-9555	14864	0	7358	8769	11448	76961
19.00	11915	-9998	15554	0	7389	8806	11496	78592
18.25	11995	-10065	15658	0	7399	8818	11511	78839

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case ICE + WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
18.25	11995	-10065	15658	0	7367	8780	11461	78849
14.00	12444	-10442	16245	0	7383	8798	11485	80274
12.00	12656	-10619	16521	0	7409	8829	11526	80950
12.00	12656	-10619	16521	0	7377	8791	11476	80959
9.00	12973	-10886	16935	0	7366	8778	11459	81994
4.00	13502	-11329	17626	0	7375	8790	11474	83737
0.00	13925	-11685	18178	0	7428	8852	11556	85128

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case ICE + WIND

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
149.00	29.3	34.9	45.5	0.9	3.03
144.00	27.2	32.4	42.4	0.8	3.03
144.00	27.2	32.4	42.4	0.8	3.03
143.33	27.0	32.1	41.9	0.8	3.03
143.33	27.0	32.1	41.9	0.8	3.03
139.00	25.2	30.0	39.2	0.8	2.98
139.00	25.2	30.0	39.2	0.8	2.98
138.25	24.9	29.7	38.7	0.7	2.98
138.25	24.9	29.7	38.7	0.7	2.98
134.00	23.2	27.7	36.1	0.7	2.92
134.00	23.2	27.7	36.1	0.7	2.92
132.00	22.4	26.7	34.9	0.6	2.89
132.00	22.4	26.7	34.9	0.6	2.89
129.00	21.3	25.4	33.1	0.6	2.84
125.75	20.0	23.9	31.2	0.5	2.77
125.75	20.0	23.9	31.2	0.5	2.77
124.00	19.4	23.1	30.2	0.5	2.73
124.00	19.4	23.1	30.2	0.5	2.73
119.50	17.8	21.2	27.7	0.5	2.61
119.50	17.8	21.2	27.7	0.5	2.61
119.00	17.6	21.0	27.4	0.5	2.60
114.00	15.9	18.9	24.7	0.4	2.46
114.00	15.9	18.9	24.7	0.4	2.46
113.25	15.7	18.7	24.4	0.4	2.44
113.25	15.7	18.7	24.4	0.4	2.44
109.00	14.3	17.0	22.2	0.3	2.31
108.00	14.0	16.7	21.8	0.3	2.28
108.00	14.0	16.7	21.8	0.3	2.28
104.00	12.8	15.2	19.9	0.3	2.15
102.00	12.2	14.6	19.0	0.3	2.09
102.00	12.2	14.6	19.0	0.3	2.09
99.00	11.4	13.6	17.7	0.2	1.99
96.75	10.8	12.9	16.8	0.2	1.92
96.75	10.8	12.9	16.8	0.2	1.92
95.00	10.4	12.4	16.1	0.2	1.86
95.00	10.4	12.4	16.1	0.2	1.86
94.00	10.1	12.1	15.7	0.2	1.84
90.75	9.3	11.1	14.5	0.2	1.75
90.75	9.3	11.1	14.5	0.2	1.75
90.25	9.2	11.0	14.3	0.2	1.73
89.00	8.9	10.6	13.9	0.2	1.70
85.17	8.1	9.6	12.6	0.2	1.60



BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case ICE + WIND

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
85.17	8.1	9.6	12.6	0.2	1.60
84.00	7.8	9.3	12.2	0.1	1.57
81.46	7.3	8.7	11.4	0.1	1.50
78.92	6.8	8.1	10.6	0.1	1.44
78.92	6.8	8.1	10.6	0.1	1.44
74.00	5.9	7.0	9.2	0.1	1.32
72.67	5.7	6.7	8.8	0.1	1.29
72.67	5.7	6.7	8.8	0.1	1.29
69.00	5.0	6.0	7.8	0.1	1.20
66.42	4.6	5.5	7.2	0.1	1.14
66.42	4.6	5.5	7.2	0.1	1.14
64.00	4.3	5.1	6.6	0.1	1.09
61.42	3.9	4.6	6.1	0.1	1.03
61.42	3.9	4.6	6.1	0.1	1.03
59.00	3.6	4.3	5.6	0.1	0.98
55.17	3.1	3.7	4.8	0.1	0.90
55.17	3.1	3.7	4.8	0.1	0.90
54.00	2.9	3.5	4.6	0.1	0.88
51.00	2.6	3.1	4.0	0.0	0.82
51.00	2.6	3.1	4.0	0.0	0.82
48.92	2.4	2.8	3.7	0.0	0.78
48.92	2.4	2.8	3.7	0.0	0.78
44.67	2.0	2.3	3.0	0.0	0.70
44.00	1.9	2.3	2.9	0.0	0.68
43.25	1.8	2.2	2.8	0.0	0.67
43.25	1.8	2.2	2.8	0.0	0.67
39.00	1.5	1.7	2.3	0.0	0.59
37.00	1.3	1.6	2.0	0.0	0.56
37.00	1.3	1.6	2.0	0.0	0.56
34.00	1.1	1.3	1.7	0.0	0.50
30.75	0.9	1.1	1.4	0.0	0.45
30.75	0.9	1.1	1.4	0.0	0.45
29.00	0.8	0.9	1.2	0.0	0.42
24.50	0.6	0.7	0.9	0.0	0.35
24.50	0.6	0.7	0.9	0.0	0.35
24.00	0.5	0.6	0.8	0.0	0.34
19.00	0.3	0.4	0.5	0.0	0.26
18.25	0.3	0.4	0.5	0.0	0.25
18.25	0.3	0.4	0.5	0.0	0.25
14.00	0.2	0.2	0.3	0.0	0.19
12.00	0.1	0.2	0.2	0.0	0.16

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
Design Id: 562902-P1  
Deflections for Pole

DATE 10/06/2022  
IMPAX 25.1.19.3

Loading Case ICE + WIND

Distance			Defl.		
From	Defl.	Defl.	Resultant	Defl.	
Base	X-Dir	Y-Dir	X & Y	Z-Dir	Rotation
(ft)	(in)	(in)	(in)	(in)	(deg.)
12.00	0.1	0.2	0.2	0.0	0.16
9.00	0.1	0.1	0.1	0.0	0.12
4.00	0.0	0.0	0.0	0.0	0.05
0.00	0.0	0.0	0.0	0.0	0.00

Loading Case ICE + WIND

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
149.00	534,291	2,300	160,287	2,204	0.00	0.00	0.00	0.00	0.01
144.00	597,409	2,880	179,223	2,756	0.03	0.00	0.02	0.00	0.03
143.33	605,824	2,962	181,747	2,834	0.03	0.01	0.02	0.00	0.04
139.00	660,526	3,525	198,158	3,369	0.03	0.07	0.02	0.00	0.10
139.00	1,092,818	5,747	327,846	5,533	0.02	0.05	0.01	0.00	0.06
138.25	1,108,598	5,916	332,579	5,694	0.02	0.05	0.01	0.00	0.07
134.00	1,198,014	6,917	359,404	6,649	0.03	0.08	0.02	0.00	0.10
132.00	1,240,092	7,416	372,028	7,125	0.03	0.10	0.02	0.00	0.12
129.00	1,303,210	8,196	390,963	7,868	0.03	0.12	0.02	0.00	0.14
125.75	1,371,587	9,086	411,476	8,716	0.02	0.14	0.02	0.00	0.16
124.00	1,408,406	9,584	422,522	9,190	0.03	0.15	0.03	0.00	0.18
119.50	1,503,082	10,925	450,924	10,467	0.03	0.18	0.02	0.00	0.21
119.00	1,513,601	11,080	454,080	10,614	0.03	0.19	0.02	0.00	0.22
114.00	1,618,797	12,684	485,639	12,141	0.04	0.21	0.03	0.00	0.25
113.25	1,634,576	12,934	490,373	12,379	0.04	0.22	0.03	0.00	0.26
109.00	1,723,993	14,397	517,198	13,770	0.03	0.24	0.02	0.00	0.28
108.00	1,745,032	14,752	523,510	14,108	0.03	0.25	0.02	0.00	0.28
104.00	1,829,188	16,218	548,756	15,502	0.03	0.26	0.02	0.00	0.30
102.00	1,871,267	16,977	561,380	16,223	0.03	0.27	0.02	0.00	0.30
99.00	1,934,384	18,148	580,315	17,336	0.03	0.28	0.02	0.00	0.31
96.75	1,981,722	19,051	594,517	18,195	0.03	0.28	0.02	0.00	0.31
95.00	2,018,541	19,755	605,562	18,877	0.03	0.29	0.02	0.00	0.32
95.00	2,369,061	22,643	710,718	21,669	0.03	0.25	0.02	0.00	0.28
94.00	2,394,308	23,131	718,292	22,133	0.03	0.25	0.02	0.00	0.28
90.75	2,476,361	24,753	742,908	23,676	0.03	0.25	0.02	0.00	0.28
90.25	2,488,984	25,007	746,695	23,918	0.03	0.26	0.02	0.00	0.28
89.00	2,520,543	25,649	756,163	24,528	0.03	0.26	0.02	0.00	0.28
85.17	2,617,323	27,668	785,197	26,448	0.02	0.26	0.02	0.00	0.28
84.00	2,646,778	28,298	794,033	27,047	0.02	0.26	0.02	0.00	0.28
81.46	2,710,947	29,694	813,284	28,374	0.02	0.26	0.02	0.00	0.28
78.92	2,775,117	31,124	832,535	29,733	0.02	0.26	0.02	0.00	0.29
74.00	2,899,248	33,982	869,774	32,453	0.02	0.26	0.01	0.00	0.28
72.67	2,932,910	34,678	879,873	33,211	0.02	0.26	0.01	0.00	0.29
69.00	3,025,483	36,616	907,645	35,340	0.02	0.26	0.01	0.00	0.29
66.42	3,090,704	38,001	927,211	36,880	0.02	0.26	0.01	0.00	0.29
64.00	3,151,717	39,311	945,515	38,351	0.02	0.26	0.01	0.00	0.29
61.42	3,216,939	40,726	965,082	39,955	0.02	0.26	0.01	0.00	0.29
59.00	3,277,952	42,063	983,386	41,485	0.02	0.27	0.01	0.00	0.29
55.17	3,374,732	44,208	1,012,420	43,970	0.02	0.27	0.01	0.00	0.29

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Stresses for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case ICE + WIND

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
54.00	3,404,187	44,867	1,021,256	44,741	0.02	0.27	0.01	0.00	0.29
51.00	3,479,928	46,572	1,043,978	46,754	0.02	0.27	0.01	0.00	0.29
51.00	3,421,905	45,264	1,026,572	45,208	0.02	0.27	0.01	0.00	0.30
48.92	3,474,503	46,450	1,042,351	46,609	0.02	0.27	0.01	0.00	0.30
44.67	3,581,803	48,892	1,074,541	49,532	0.02	0.27	0.01	0.00	0.30
44.00	3,598,634	49,278	1,079,590	49,998	0.02	0.27	0.01	0.00	0.29
43.25	3,617,569	49,713	1,085,271	50,526	0.02	0.27	0.01	0.00	0.29
39.00	3,724,869	52,195	1,117,461	53,568	0.02	0.27	0.01	0.00	0.29
37.00	3,775,363	53,373	1,132,609	55,030	0.02	0.27	0.01	0.00	0.29
34.00	3,851,104	55,150	1,155,331	57,260	0.02	0.27	0.01	0.00	0.29
30.75	3,933,156	57,089	1,179,947	59,726	0.02	0.27	0.01	0.00	0.29
29.00	3,977,339	58,138	1,193,202	61,075	0.02	0.27	0.01	0.00	0.29
24.50	4,090,950	60,851	1,227,285	64,614	0.02	0.27	0.01	0.00	0.29
24.00	4,103,574	61,154	1,231,072	65,014	0.02	0.27	0.01	0.00	0.29
19.00	4,229,808	64,195	1,268,943	69,075	0.02	0.27	0.01	0.00	0.29
18.25	4,248,744	64,653	1,274,623	69,695	0.02	0.27	0.01	0.00	0.29
14.00	4,356,043	67,256	1,306,813	73,260	0.02	0.27	0.01	0.00	0.29
12.00	4,406,537	68,485	1,321,961	74,968	0.02	0.27	0.01	0.00	0.29
9.00	4,482,278	70,332	1,344,683	77,567	0.02	0.27	0.01	0.00	0.29
4.00	4,608,513	73,420	1,382,554	81,998	0.02	0.27	0.01	0.00	0.29
0.00	4,709,501	75,897	1,412,850	85,631	0.02	0.27	0.01	0.00	0.29



BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case T+S								
Dist. From								
Base	Mx	My	Resultant	Torsion	Shear	Shear	Resultant	Axial
(ft)	(in-kips)	(in-kips)	Mx & My	(in-kips)	X-Dir.	Y-Dir.	Shear	(lbs)
			(in-kips)		(lbs)	(lbs)	(lbs)	
149.00	0	0	0	0	16	20	26	49
144.00	2	-2	3	0	42	50	65	196
144.00	2	-2	3	0	2107	2511	3278	7051
143.33	22	-19	29	0	2111	2515	3284	7072
143.33	22	-19	29	0	2112	2517	3285	7075
139.00	154	-129	201	0	2137	2547	3325	7217
139.00	154	-129	201	0	2146	2558	3339	7577
138.25	177	-149	231	0	2152	2564	3347	7620
138.25	177	-149	231	0	2152	2565	3348	7623
134.00	309	-259	403	0	2183	2602	3397	7877
134.00	309	-259	403	0	3772	4495	5868	12271
132.00	417	-350	544	0	3788	4514	5892	12398
132.00	417	-350	544	0	3786	4512	5890	12405
129.00	580	-487	757	0	3803	4532	5917	12609
125.75	757	-636	989	0	3831	4566	5961	12834
125.75	757	-636	989	0	3828	4562	5956	12843
124.00	853	-716	1114	0	3844	4581	5981	12969
124.00	853	-716	1114	0	5393	6427	8390	17379
119.50	1202	-1008	1569	0	5436	6478	8456	17719
119.50	1202	-1008	1569	0	5427	6468	8443	17729
119.00	1241	-1041	1620	0	5419	6458	8430	17778
114.00	1630	-1368	2128	0	5470	6519	8510	18185
114.00	1630	-1368	2128	0	6626	7896	10308	22629
113.25	1701	-1427	2221	0	6634	7906	10321	22692
113.25	1701	-1427	2221	0	6621	7891	10301	22708
109.00	2105	-1766	2748	0	6649	7925	10345	23092
108.00	2200	-1846	2872	0	6661	7938	10362	23182
108.00	2200	-1846	2872	0	6646	7920	10339	23196
104.00	2582	-2166	3370	0	6670	7949	10377	23583
102.00	2773	-2327	3619	0	6694	7977	10414	23776
102.00	2773	-2327	3619	0	6678	7959	10390	23791
99.00	3060	-2568	3994	0	6695	7979	10416	24102
96.75	3276	-2749	4276	0	6723	8012	10459	24331
96.75	3276	-2749	4276	0	6712	7999	10442	24344
95.00	3444	-2890	4496	0	6734	8025	10476	24526
95.00	3444	-2890	4496	0	6724	8013	10461	24533
94.00	3540	-2971	4622	0	6725	8014	10462	24772
90.75	3854	-3234	5031	0	6775	8074	10539	25535
90.75	3854	-3234	5031	0	6764	8061	10523	25545
90.25	3902	-3275	5094	0	6766	8063	10526	25669

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case T+S									
Dist. From									
Base	Mx	My	Resultant	Torsion	Shear	Shear	Resultant	Axial	
(ft)	(in-kips)	(in-kips)	Mx & My	(in-kips)	X-Dir.	Y-Dir.	Shear	(lbs)	
			(in-kips)		(lbs)	(lbs)	(lbs)		
89.00	4024	-3376	5252	0	6765	8062	10524	25843	
85.17	4396	-3689	5738	0	6817	8124	10606	26355	
85.17	4396	-3689	5738	0	6802	8106	10582	26368	
84.00	4509	-3784	5887	0	6806	8111	10588	26536	
81.46	4758	-3992	6210	0	6824	8132	10616	26901	
78.92	5006	-4201	6535	0	6860	8175	10672	27264	
78.92	5006	-4201	6535	0	6839	8150	10640	27284	
74.00	5490	-4606	7166	0	6889	8210	10718	28023	
72.67	5621	-4717	7338	0	6909	8234	10748	28226	
72.67	5621	-4717	7338	0	6894	8217	10726	28237	
69.00	5984	-5021	7812	0	6928	8257	10779	28819	
66.42	6241	-5237	8147	0	6968	8304	10840	29230	
66.42	6241	-5237	8147	0	6953	8287	10818	29242	
64.00	6482	-5439	8461	0	6974	8311	10850	29644	
61.42	6740	-5656	8799	0	7014	8359	10912	30073	
61.42	6740	-5656	8799	0	7000	8342	10889	30084	
59.00	6983	-5859	9115	0	7017	8363	10917	30505	
55.17	7369	-6183	9620	0	7077	8434	11010	31169	
55.17	7369	-6183	9620	0	7063	8417	10988	31180	
54.00	7487	-6282	9774	0	7068	8423	10996	31394	
51.00	7791	-6538	10171	0	7115	8480	11070	31932	
51.00	7791	-6538	10171	0	7099	8460	11044	31941	
48.92	8003	-6716	10448	0	7135	8503	11100	32696	
48.92	8003	-6716	10448	0	7116	8481	11071	32709	
44.67	8438	-7080	11015	0	7173	8548	11159	34295	
44.00	8507	-7138	11104	0	7178	8555	11168	34422	
43.25	8584	-7202	11205	0	7190	8569	11186	34563	
43.25	8584	-7202	11205	0	7176	8552	11163	34573	
39.00	9022	-7570	11777	0	7221	8606	11234	35398	
37.00	9229	-7744	12047	0	7252	8643	11283	35789	
37.00	9229	-7744	12047	0	7239	8627	11262	35800	
34.00	9540	-8005	12454	0	7266	8659	11303	36406	
30.75	9879	-8290	12896	0	7316	8719	11382	37066	
30.75	9879	-8290	12896	0	7303	8703	11361	37077	
29.00	10062	-8443	13135	0	7310	8712	11372	37447	
24.50	10535	-8840	13752	0	7379	8794	11479	38395	
24.50	10535	-8840	13752	0	7365	8777	11457	38404	
24.00	10588	-8884	13821	0	7355	8766	11443	38519	
19.00	11116	-9328	14511	0	7412	8833	11531	39614	
18.25	11196	-9394	14615	0	7423	8846	11548	39780	

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case T+S

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
18.25	11196	-9394	14615	0	7409	8830	11527	39789
14.00	11648	-9774	15205	0	7451	8880	11592	40752
12.00	11861	-9953	15484	0	7480	8914	11636	41209
12.00	11861	-9953	15484	0	7466	8898	11615	41218
9.00	12183	-10223	15903	0	7485	8920	11645	41924
4.00	12721	-10674	16605	0	7530	8974	11715	43122
0.00	13153	-11037	17170	0	7589	9045	11807	44095

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case T+S

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
149.00	26.6	31.7	41.3	0.7	2.71
144.00	24.8	29.5	38.5	0.7	2.71
144.00	24.8	29.5	38.5	0.7	2.71
143.33	24.5	29.2	38.1	0.7	2.71
143.33	24.5	29.2	38.1	0.7	2.71
139.00	22.9	27.3	35.7	0.6	2.67
139.00	22.9	27.3	35.7	0.6	2.67
138.25	22.7	27.0	35.3	0.6	2.67
138.25	22.7	27.0	35.3	0.6	2.67
134.00	21.2	25.2	32.9	0.5	2.62
134.00	21.2	25.2	32.9	0.5	2.62
132.00	20.5	24.4	31.8	0.5	2.60
132.00	20.5	24.4	31.8	0.5	2.60
129.00	19.4	23.1	30.2	0.5	2.55
125.75	18.3	21.8	28.5	0.4	2.49
125.75	18.3	21.8	28.5	0.4	2.49
124.00	17.7	21.1	27.6	0.4	2.45
124.00	17.7	21.1	27.6	0.4	2.45
119.50	16.3	19.4	25.3	0.4	2.35
119.50	16.3	19.4	25.3	0.4	2.35
119.00	16.1	19.2	25.1	0.4	2.34
114.00	14.6	17.4	22.7	0.3	2.22
114.00	14.6	17.4	22.7	0.3	2.22
113.25	14.4	17.1	22.3	0.3	2.20
113.25	14.4	17.1	22.3	0.3	2.20
109.00	13.1	15.6	20.4	0.3	2.09
108.00	12.8	15.3	20.0	0.3	2.06
108.00	12.8	15.3	20.0	0.3	2.06
104.00	11.8	14.0	18.3	0.2	1.95
102.00	11.3	13.4	17.5	0.2	1.89
102.00	11.3	13.4	17.5	0.2	1.89
99.00	10.5	12.5	16.3	0.2	1.81
96.75	10.0	11.9	15.5	0.2	1.75
96.75	10.0	11.9	15.5	0.2	1.75
95.00	9.6	11.4	14.9	0.2	1.70
95.00	9.6	11.4	14.9	0.2	1.70
94.00	9.3	11.1	14.5	0.2	1.67
90.75	8.6	10.3	13.4	0.1	1.59
90.75	8.6	10.3	13.4	0.1	1.59
90.25	8.5	10.1	13.2	0.1	1.58
89.00	8.2	9.8	12.8	0.1	1.55
85.17	7.5	8.9	11.6	0.1	1.46



BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case T+S

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
85.17	7.5	8.9	11.6	0.1	1.46
84.00	7.2	8.6	11.3	0.1	1.43
81.46	6.8	8.1	10.5	0.1	1.38
78.92	6.3	7.5	9.8	0.1	1.32
78.92	6.3	7.5	9.8	0.1	1.32
74.00	5.5	6.5	8.5	0.1	1.21
72.67	5.2	6.3	8.2	0.1	1.18
72.67	5.2	6.3	8.2	0.1	1.18
69.00	4.7	5.6	7.3	0.1	1.11
66.42	4.3	5.1	6.7	0.1	1.05
66.42	4.3	5.1	6.7	0.1	1.05
64.00	4.0	4.7	6.2	0.1	1.00
61.42	3.6	4.3	5.6	0.0	0.95
61.42	3.6	4.3	5.6	0.0	0.95
59.00	3.3	4.0	5.2	0.0	0.91
55.17	2.9	3.4	4.5	0.0	0.84
55.17	2.9	3.4	4.5	0.0	0.84
54.00	2.7	3.3	4.3	0.0	0.82
51.00	2.4	2.9	3.8	0.0	0.76
51.00	2.4	2.9	3.8	0.0	0.76
48.92	2.2	2.6	3.5	0.0	0.72
48.92	2.2	2.6	3.5	0.0	0.72
44.67	1.8	2.2	2.8	0.0	0.65
44.00	1.8	2.1	2.8	0.0	0.64
43.25	1.7	2.0	2.7	0.0	0.62
43.25	1.7	2.0	2.7	0.0	0.62
39.00	1.4	1.6	2.1	0.0	0.55
37.00	1.2	1.5	1.9	0.0	0.52
37.00	1.2	1.5	1.9	0.0	0.52
34.00	1.0	1.2	1.6	0.0	0.47
30.75	0.8	1.0	1.3	0.0	0.42
30.75	0.8	1.0	1.3	0.0	0.42
29.00	0.7	0.9	1.1	0.0	0.39
24.50	0.5	0.6	0.8	0.0	0.33
24.50	0.5	0.6	0.8	0.0	0.33
24.00	0.5	0.6	0.8	0.0	0.32
19.00	0.3	0.4	0.5	0.0	0.25
18.25	0.3	0.3	0.4	0.0	0.24
18.25	0.3	0.3	0.4	0.0	0.24
14.00	0.2	0.2	0.3	0.0	0.18
12.00	0.1	0.1	0.2	0.0	0.15

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case T+S

Distance			Defl.		
From	Defl.	Defl.	Resultant	Defl.	
Base	X-Dir	Y-Dir	X & Y	Z-Dir	Rotation
(ft)	(in)	(in)	(in)	(in)	(deg.)
12.00	0.1	0.1	0.2	0.0	0.15
9.00	0.1	0.1	0.1	0.0	0.11
4.00	0.0	0.0	0.0	0.0	0.05
0.00	0.0	0.0	0.0	0.0	0.00

Loading Case T+S

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
149.00	534,291	2,300	160,287	2,204	0.00	0.00	0.00	0.00	0.01
144.00	597,409	2,880	179,223	2,756	0.01	0.00	0.02	0.00	0.01
143.33	605,824	2,962	181,747	2,834	0.01	0.01	0.02	0.00	0.02
139.00	660,526	3,525	198,158	3,369	0.01	0.06	0.02	0.00	0.08
139.00	1,092,818	5,747	327,846	5,533	0.01	0.04	0.01	0.00	0.05
138.25	1,108,598	5,916	332,579	5,694	0.01	0.04	0.01	0.00	0.05
134.00	1,198,014	6,917	359,404	6,649	0.01	0.06	0.02	0.00	0.08
132.00	1,240,092	7,416	372,028	7,125	0.01	0.08	0.02	0.00	0.09
129.00	1,303,210	8,196	390,963	7,868	0.01	0.10	0.02	0.00	0.11
125.75	1,371,587	9,086	411,476	8,716	0.01	0.12	0.02	0.00	0.13
124.00	1,408,406	9,584	422,522	9,190	0.01	0.13	0.02	0.00	0.14
119.50	1,503,082	10,925	450,924	10,467	0.01	0.16	0.02	0.00	0.17
119.00	1,513,601	11,080	454,080	10,614	0.01	0.16	0.02	0.00	0.18
114.00	1,618,797	12,684	485,639	12,141	0.02	0.19	0.02	0.00	0.20
113.25	1,634,576	12,934	490,373	12,379	0.02	0.19	0.02	0.00	0.21
109.00	1,723,993	14,397	517,198	13,770	0.01	0.21	0.02	0.00	0.23
108.00	1,745,032	14,752	523,510	14,108	0.01	0.22	0.02	0.00	0.23
104.00	1,829,188	16,218	548,756	15,502	0.01	0.23	0.02	0.00	0.25
102.00	1,871,267	16,977	561,380	16,223	0.01	0.24	0.02	0.00	0.25
99.00	1,934,384	18,148	580,315	17,336	0.01	0.24	0.02	0.00	0.26
96.75	1,981,722	19,051	594,517	18,195	0.01	0.25	0.02	0.00	0.26
95.00	2,018,541	19,755	605,562	18,877	0.01	0.25	0.02	0.00	0.27
95.00	2,369,061	22,643	710,718	21,669	0.01	0.22	0.02	0.00	0.23
94.00	2,394,308	23,131	718,292	22,133	0.01	0.22	0.02	0.00	0.23
90.75	2,476,361	24,753	742,908	23,676	0.01	0.23	0.02	0.00	0.24
90.25	2,488,984	25,007	746,695	23,918	0.01	0.23	0.02	0.00	0.24
89.00	2,520,543	25,649	756,163	24,528	0.01	0.23	0.02	0.00	0.24
85.17	2,617,323	27,668	785,197	26,448	0.01	0.23	0.01	0.00	0.24
84.00	2,646,778	28,298	794,033	27,047	0.01	0.23	0.01	0.00	0.24
81.46	2,710,947	29,694	813,284	28,374	0.01	0.23	0.01	0.00	0.24
78.92	2,775,117	31,124	832,535	29,733	0.01	0.23	0.01	0.00	0.24
74.00	2,899,248	33,982	869,774	32,453	0.01	0.23	0.01	0.00	0.25
72.67	2,932,910	34,678	879,873	33,211	0.01	0.24	0.01	0.00	0.25
69.00	3,025,483	36,616	907,645	35,340	0.01	0.24	0.01	0.00	0.25
66.42	3,090,704	38,001	927,211	36,880	0.01	0.24	0.01	0.00	0.25
64.00	3,151,717	39,311	945,515	38,351	0.01	0.24	0.01	0.00	0.25
61.42	3,216,939	40,726	965,082	39,955	0.01	0.24	0.01	0.00	0.25
59.00	3,277,952	42,063	983,386	41,485	0.01	0.24	0.01	0.00	0.25
55.17	3,374,732	44,208	1,012,420	43,970	0.01	0.24	0.01	0.00	0.25

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Stresses for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case T+S

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
54.00	3,404,187	44,867	1,021,256	44,741	0.01	0.24	0.01	0.00	0.25
51.00	3,479,928	46,572	1,043,978	46,754	0.01	0.24	0.01	0.00	0.25
51.00	3,421,905	45,264	1,026,572	45,208	0.01	0.25	0.01	0.00	0.26
48.92	3,474,503	46,450	1,042,351	46,609	0.01	0.25	0.01	0.00	0.26
44.67	3,581,803	48,892	1,074,541	49,532	0.01	0.25	0.01	0.00	0.26
44.00	3,598,634	49,278	1,079,590	49,998	0.01	0.25	0.01	0.00	0.26
43.25	3,617,569	49,713	1,085,271	50,526	0.01	0.25	0.01	0.00	0.26
39.00	3,724,869	52,195	1,117,461	53,568	0.01	0.25	0.01	0.00	0.26
37.00	3,775,363	53,373	1,132,609	55,030	0.01	0.25	0.01	0.00	0.26
34.00	3,851,104	55,150	1,155,331	57,260	0.01	0.25	0.01	0.00	0.26
30.75	3,933,156	57,089	1,179,947	59,726	0.01	0.25	0.01	0.00	0.26
29.00	3,977,339	58,138	1,193,202	61,075	0.01	0.25	0.01	0.00	0.26
24.50	4,090,950	60,851	1,227,285	64,614	0.01	0.25	0.01	0.00	0.26
24.00	4,103,574	61,154	1,231,072	65,014	0.01	0.25	0.01	0.00	0.26
19.00	4,229,808	64,195	1,268,943	69,075	0.01	0.25	0.01	0.00	0.26
18.25	4,248,744	64,653	1,274,623	69,695	0.01	0.25	0.01	0.00	0.26
14.00	4,356,043	67,256	1,306,813	73,260	0.01	0.25	0.01	0.00	0.26
12.00	4,406,537	68,485	1,321,961	74,968	0.01	0.25	0.01	0.00	0.26
9.00	4,482,278	70,332	1,344,683	77,567	0.01	0.25	0.01	0.00	0.26
4.00	4,608,513	73,420	1,382,554	81,998	0.01	0.25	0.01	0.00	0.26
0.00	4,709,501	75,897	1,412,850	85,631	0.01	0.25	0.01	0.00	0.26



BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
149.00	0	0	0	0	2	3	4	61
144.00	0	0	1	0	9	10	14	241
144.00	0	0	1	0	306	365	476	8818
143.33	3	-3	4	0	307	366	478	8843
143.33	3	-3	4	0	307	366	478	8846
139.00	23	-19	29	0	313	373	487	9020
139.00	23	-19	29	0	327	389	508	9460
138.25	26	-22	34	0	329	392	511	9513
138.25	26	-22	34	0	328	391	511	9515
134.00	46	-39	60	0	338	403	526	9827
134.00	46	-39	60	0	505	602	786	15341
132.00	61	-51	79	0	510	607	793	15496
132.00	61	-51	79	0	509	606	792	15501
129.00	83	-69	108	0	515	613	800	15744
125.75	107	-90	140	0	522	622	812	16020
125.75	107	-90	140	0	521	621	811	16025
124.00	120	-101	157	0	525	626	817	16180
124.00	120	-101	157	0	668	796	1040	21694
119.50	163	-137	213	0	679	809	1056	22112
119.50	163	-137	213	0	677	807	1053	22114
119.00	168	-141	220	0	676	806	1052	22163
114.00	217	-182	283	0	688	820	1070	22662
114.00	217	-182	283	0	809	964	1258	28176
113.25	226	-189	295	0	811	966	1261	28254
113.25	226	-189	295	0	808	963	1257	28259
109.00	275	-231	359	0	815	971	1267	28714
108.00	287	-241	374	0	817	974	1271	28825
108.00	287	-241	374	0	814	970	1267	28828
104.00	334	-280	435	0	819	977	1275	29284
102.00	357	-300	466	0	824	982	1282	29520
102.00	357	-300	466	0	821	978	1277	29524
99.00	392	-329	512	0	824	982	1282	29888
96.75	419	-352	547	0	829	988	1289	30170
96.75	419	-352	547	0	827	985	1286	30174
95.00	440	-369	574	0	830	989	1291	30397
95.00	440	-369	574	0	829	987	1289	30397
94.00	452	-379	590	0	831	990	1292	30679
90.75	491	-412	640	0	845	1007	1314	31614
90.75	491	-412	640	0	843	1004	1311	31617
90.25	497	-417	648	0	844	1006	1313	31763

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
89.00	512	-429	668	0	844	1006	1313	31963
85.17	558	-468	729	0	852	1016	1326	32592
85.17	558	-468	729	0	850	1012	1322	32594
84.00	572	-480	747	0	850	1013	1322	32791
81.46	603	-506	788	0	853	1016	1326	33225
78.92	634	-532	828	0	858	1022	1334	33671
78.92	634	-532	828	0	854	1017	1328	33676
74.00	695	-583	907	0	860	1025	1337	34567
72.67	711	-597	928	0	862	1027	1341	34815
72.67	711	-597	928	0	860	1024	1337	34818
69.00	756	-635	987	0	863	1028	1342	35516
66.42	788	-662	1029	0	867	1033	1348	36020
66.42	788	-662	1029	0	864	1030	1345	36023
64.00	818	-687	1068	0	865	1031	1346	36505
61.42	850	-714	1110	0	869	1036	1352	37030
61.42	850	-714	1110	0	867	1033	1348	37033
59.00	880	-739	1149	0	867	1033	1349	37535
55.17	928	-779	1211	0	872	1039	1356	38350
55.17	928	-779	1211	0	869	1036	1352	38352
54.00	943	-791	1230	0	869	1035	1352	38605
51.00	980	-822	1279	0	872	1039	1357	39265
51.00	980	-822	1279	0	870	1036	1353	39265
48.92	1006	-844	1313	0	874	1042	1360	40191
48.92	1006	-844	1313	0	871	1038	1355	40194
44.67	1059	-889	1382	0	876	1044	1363	42127
44.00	1067	-896	1393	0	876	1044	1363	42280
43.25	1077	-904	1406	0	877	1045	1364	42453
43.25	1077	-904	1406	0	874	1042	1360	42455
39.00	1130	-948	1475	0	874	1042	1360	43453
37.00	1155	-969	1508	0	876	1044	1362	43932
37.00	1155	-969	1508	0	873	1041	1359	43936
34.00	1193	-1001	1557	0	872	1039	1357	44668
30.75	1233	-1035	1610	0	874	1041	1359	45476
30.75	1233	-1035	1610	0	871	1038	1356	45480
29.00	1255	-1053	1638	0	869	1036	1352	45923
24.50	1311	-1100	1711	0	871	1038	1355	47084
24.50	1311	-1100	1711	0	869	1035	1351	47086
24.00	1317	-1105	1719	0	866	1032	1347	47218
19.00	1379	-1157	1800	0	865	1031	1345	48550
18.25	1388	-1165	1812	0	865	1031	1346	48754

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
18.25	1388	-1165	1812	0	863	1028	1342	48756
14.00	1441	-1209	1881	0	860	1025	1339	49926
12.00	1465	-1230	1913	0	861	1026	1339	50486
12.00	1465	-1230	1913	0	858	1023	1335	50489
9.00	1502	-1261	1961	0	855	1019	1330	51342
4.00	1563	-1312	2041	0	851	1014	1324	52796
0.00	1612	-1353	2105	0	851	1015	1324	53988

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
149.00	3.4	4.0	5.2	0.1	0.35
144.00	3.1	3.7	4.9	0.1	0.35
144.00	3.1	3.7	4.9	0.1	0.35
143.33	3.1	3.7	4.8	0.1	0.35
143.33	3.1	3.7	4.8	0.1	0.35
139.00	2.9	3.5	4.5	0.1	0.34
139.00	2.9	3.5	4.5	0.1	0.34
138.25	2.9	3.4	4.4	0.1	0.34
138.25	2.9	3.4	4.4	0.1	0.34
134.00	2.7	3.2	4.1	0.1	0.34
134.00	2.7	3.2	4.1	0.1	0.34
132.00	2.6	3.1	4.0	0.1	0.33
132.00	2.6	3.1	4.0	0.1	0.33
129.00	2.4	2.9	3.8	0.1	0.33
125.75	2.3	2.7	3.6	0.0	0.32
125.75	2.3	2.7	3.6	0.0	0.32
124.00	2.2	2.7	3.5	0.0	0.31
124.00	2.2	2.7	3.5	0.0	0.31
119.50	2.0	2.4	3.2	0.0	0.30
119.50	2.0	2.4	3.2	0.0	0.30
119.00	2.0	2.4	3.1	0.0	0.30
114.00	1.8	2.2	2.8	0.0	0.28
114.00	1.8	2.2	2.8	0.0	0.28
113.25	1.8	2.1	2.8	0.0	0.28
113.25	1.8	2.1	2.8	0.0	0.28
109.00	1.6	2.0	2.6	0.0	0.26
108.00	1.6	1.9	2.5	0.0	0.26
108.00	1.6	1.9	2.5	0.0	0.26
104.00	1.5	1.8	2.3	0.0	0.25
102.00	1.4	1.7	2.2	0.0	0.24
102.00	1.4	1.7	2.2	0.0	0.24
99.00	1.3	1.6	2.0	0.0	0.23
96.75	1.2	1.5	1.9	0.0	0.22
96.75	1.2	1.5	1.9	0.0	0.22
95.00	1.2	1.4	1.9	0.0	0.21
95.00	1.2	1.4	1.9	0.0	0.21
94.00	1.2	1.4	1.8	0.0	0.21
90.75	1.1	1.3	1.7	0.0	0.20
90.75	1.1	1.3	1.7	0.0	0.20
90.25	1.1	1.3	1.7	0.0	0.20
89.00	1.0	1.2	1.6	0.0	0.19
85.17	0.9	1.1	1.4	0.0	0.18



BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
85.17	0.9	1.1	1.4	0.0	0.18
84.00	0.9	1.1	1.4	0.0	0.18
81.46	0.8	1.0	1.3	0.0	0.17
78.92	0.8	0.9	1.2	0.0	0.17
78.92	0.8	0.9	1.2	0.0	0.17
74.00	0.7	0.8	1.1	0.0	0.15
72.67	0.7	0.8	1.0	0.0	0.15
72.67	0.7	0.8	1.0	0.0	0.15
69.00	0.6	0.7	0.9	0.0	0.14
66.42	0.5	0.6	0.8	0.0	0.13
66.42	0.5	0.6	0.8	0.0	0.13
64.00	0.5	0.6	0.8	0.0	0.13
61.42	0.5	0.5	0.7	0.0	0.12
61.42	0.5	0.5	0.7	0.0	0.12
59.00	0.4	0.5	0.6	0.0	0.11
55.17	0.4	0.4	0.6	0.0	0.10
55.17	0.4	0.4	0.6	0.0	0.10
54.00	0.3	0.4	0.5	0.0	0.10
51.00	0.3	0.4	0.5	0.0	0.09
51.00	0.3	0.4	0.5	0.0	0.09
48.92	0.3	0.3	0.4	0.0	0.09
48.92	0.3	0.3	0.4	0.0	0.09
44.67	0.2	0.3	0.4	0.0	0.08
44.00	0.2	0.3	0.3	0.0	0.08
43.25	0.2	0.3	0.3	0.0	0.08
43.25	0.2	0.3	0.3	0.0	0.08
39.00	0.2	0.2	0.3	0.0	0.07
37.00	0.2	0.2	0.2	0.0	0.06
37.00	0.2	0.2	0.2	0.0	0.06
34.00	0.1	0.2	0.2	0.0	0.06
30.75	0.1	0.1	0.2	0.0	0.05
30.75	0.1	0.1	0.2	0.0	0.05
29.00	0.1	0.1	0.1	0.0	0.05
24.50	0.1	0.1	0.1	0.0	0.04
24.50	0.1	0.1	0.1	0.0	0.04
24.00	0.1	0.1	0.1	0.0	0.04
19.00	0.0	0.0	0.1	0.0	0.03
18.25	0.0	0.0	0.1	0.0	0.03
18.25	0.0	0.0	0.1	0.0	0.03
14.00	0.0	0.0	0.0	0.0	0.02
12.00	0.0	0.0	0.0	0.0	0.02

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic

Distance			Defl.		
From	Defl.	Defl.	Resultant	Defl.	
Base	X-Dir	Y-Dir	X & Y	Z-Dir	Rotation
(ft)	(in)	(in)	(in)	(in)	(deg.)
12.00	0.0	0.0	0.0	0.0	0.02
9.00	0.0	0.0	0.0	0.0	0.01
4.00	0.0	0.0	0.0	0.0	0.01
0.00	0.0	0.0	0.0	0.0	0.00

Loading Case Seismic

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
149.00	534,291	2,300	160,287	2,204	0.00	0.00	0.00	0.00	0.01
144.00	597,409	2,880	179,223	2,756	0.02	0.00	0.00	0.00	0.02
143.33	605,824	2,962	181,747	2,834	0.02	0.00	0.00	0.00	0.02
139.00	660,526	3,525	198,158	3,369	0.02	0.01	0.00	0.00	0.02
139.00	1,092,818	5,747	327,846	5,533	0.01	0.01	0.00	0.00	0.02
138.25	1,108,598	5,916	332,579	5,694	0.01	0.01	0.00	0.00	0.02
134.00	1,198,014	6,917	359,404	6,649	0.01	0.01	0.00	0.00	0.02
132.00	1,240,092	7,416	372,028	7,125	0.01	0.01	0.00	0.00	0.03
129.00	1,303,210	8,196	390,963	7,868	0.01	0.01	0.00	0.00	0.03
125.75	1,371,587	9,086	411,476	8,716	0.01	0.02	0.00	0.00	0.03
124.00	1,408,406	9,584	422,522	9,190	0.02	0.02	0.00	0.00	0.04
119.50	1,503,082	10,925	450,924	10,467	0.02	0.02	0.00	0.00	0.04
119.00	1,513,601	11,080	454,080	10,614	0.02	0.02	0.00	0.00	0.04
114.00	1,618,797	12,684	485,639	12,141	0.02	0.02	0.00	0.00	0.04
113.25	1,634,576	12,934	490,373	12,379	0.02	0.03	0.00	0.00	0.04
109.00	1,723,993	14,397	517,198	13,770	0.02	0.03	0.00	0.00	0.05
108.00	1,745,032	14,752	523,510	14,108	0.02	0.03	0.00	0.00	0.05
104.00	1,829,188	16,218	548,756	15,502	0.02	0.03	0.00	0.00	0.05
102.00	1,871,267	16,977	561,380	16,223	0.02	0.03	0.00	0.00	0.05
99.00	1,934,384	18,148	580,315	17,336	0.02	0.03	0.00	0.00	0.05
96.75	1,981,722	19,051	594,517	18,195	0.02	0.03	0.00	0.00	0.05
95.00	2,018,541	19,755	605,562	18,877	0.02	0.03	0.00	0.00	0.05
95.00	2,369,061	22,643	710,718	21,669	0.01	0.03	0.00	0.00	0.04
94.00	2,394,308	23,131	718,292	22,133	0.01	0.03	0.00	0.00	0.04
90.75	2,476,361	24,753	742,908	23,676	0.01	0.03	0.00	0.00	0.04
90.25	2,488,984	25,007	746,695	23,918	0.01	0.03	0.00	0.00	0.04
89.00	2,520,543	25,649	756,163	24,528	0.01	0.03	0.00	0.00	0.04
85.17	2,617,323	27,668	785,197	26,448	0.01	0.03	0.00	0.00	0.04
84.00	2,646,778	28,298	794,033	27,047	0.01	0.03	0.00	0.00	0.04
81.46	2,710,947	29,694	813,284	28,374	0.01	0.03	0.00	0.00	0.04
78.92	2,775,117	31,124	832,535	29,733	0.01	0.03	0.00	0.00	0.04
74.00	2,899,248	33,982	869,774	32,453	0.01	0.03	0.00	0.00	0.04
72.67	2,932,910	34,678	879,873	33,211	0.01	0.03	0.00	0.00	0.04
69.00	3,025,483	36,616	907,645	35,340	0.01	0.03	0.00	0.00	0.04
66.42	3,090,704	38,001	927,211	36,880	0.01	0.03	0.00	0.00	0.04
64.00	3,151,717	39,311	945,515	38,351	0.01	0.03	0.00	0.00	0.04
61.42	3,216,939	40,726	965,082	39,955	0.01	0.03	0.00	0.00	0.04
59.00	3,277,952	42,063	983,386	41,485	0.01	0.03	0.00	0.00	0.04
55.17	3,374,732	44,208	1,012,420	43,970	0.01	0.03	0.00	0.00	0.04

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Stresses for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
54.00	3,404,187	44,867	1,021,256	44,741	0.01	0.03	0.00	0.00	0.04
51.00	3,479,928	46,572	1,043,978	46,754	0.01	0.03	0.00	0.00	0.04
51.00	3,421,905	45,264	1,026,572	45,208	0.01	0.03	0.00	0.00	0.04
48.92	3,474,503	46,450	1,042,351	46,609	0.01	0.03	0.00	0.00	0.04
44.67	3,581,803	48,892	1,074,541	49,532	0.01	0.03	0.00	0.00	0.04
44.00	3,598,634	49,278	1,079,590	49,998	0.01	0.03	0.00	0.00	0.04
43.25	3,617,569	49,713	1,085,271	50,526	0.01	0.03	0.00	0.00	0.04
39.00	3,724,869	52,195	1,117,461	53,568	0.01	0.03	0.00	0.00	0.04
37.00	3,775,363	53,373	1,132,609	55,030	0.01	0.03	0.00	0.00	0.04
34.00	3,851,104	55,150	1,155,331	57,260	0.01	0.03	0.00	0.00	0.04
30.75	3,933,156	57,089	1,179,947	59,726	0.01	0.03	0.00	0.00	0.04
29.00	3,977,339	58,138	1,193,202	61,075	0.01	0.03	0.00	0.00	0.04
24.50	4,090,950	60,851	1,227,285	64,614	0.01	0.03	0.00	0.00	0.04
24.00	4,103,574	61,154	1,231,072	65,014	0.01	0.03	0.00	0.00	0.04
19.00	4,229,808	64,195	1,268,943	69,075	0.01	0.03	0.00	0.00	0.04
18.25	4,248,744	64,653	1,274,623	69,695	0.01	0.03	0.00	0.00	0.04
14.00	4,356,043	67,256	1,306,813	73,260	0.01	0.03	0.00	0.00	0.04
12.00	4,406,537	68,485	1,321,961	74,968	0.01	0.03	0.00	0.00	0.04
9.00	4,482,278	70,332	1,344,683	77,567	0.01	0.03	0.00	0.00	0.04
4.00	4,608,513	73,420	1,382,554	81,998	0.01	0.03	0.00	0.00	0.04
0.00	4,709,501	75,897	1,412,850	85,631	0.01	0.03	0.00	0.00	0.04

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic 2

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
149.00	0	0	0	0	2	3	3	44
144.00	0	0	1	0	8	10	13	172
144.00	0	0	1	0	296	352	460	6290
143.33	3	-3	4	0	296	353	461	6309
143.33	3	-3	4	0	296	353	461	6310
139.00	22	-18	28	0	302	360	470	6435
139.00	22	-18	28	0	316	376	491	6749
138.25	25	-21	33	0	317	378	494	6786
138.25	25	-21	33	0	317	378	493	6788
134.00	45	-38	58	0	326	389	508	7010
134.00	45	-38	58	0	487	581	758	10944
132.00	59	-49	77	0	492	586	765	11054
132.00	59	-49	77	0	491	585	764	11058
129.00	80	-67	104	0	497	592	773	11231
125.75	103	-87	135	0	504	601	785	11429
125.75	103	-87	135	0	504	600	784	11432
124.00	116	-97	151	0	508	605	790	11543
124.00	116	-97	151	0	645	769	1004	15477
119.50	158	-132	206	0	656	781	1020	15774
119.50	158	-132	206	0	654	780	1018	15776
119.00	162	-136	212	0	654	779	1017	15811
114.00	210	-176	274	0	665	793	1035	16167
114.00	210	-176	274	0	782	932	1216	20101
113.25	218	-183	285	0	783	934	1219	20156
113.25	218	-183	285	0	782	932	1216	20160
109.00	266	-223	347	0	789	940	1227	20485
108.00	277	-232	362	0	791	943	1231	20564
108.00	277	-232	362	0	789	940	1228	20566
104.00	322	-271	421	0	795	948	1237	20891
102.00	345	-290	451	0	799	953	1244	21060
102.00	345	-290	451	0	797	950	1240	21063
99.00	380	-319	496	0	801	955	1247	21323
96.75	405	-340	529	0	806	960	1254	21523
96.75	405	-340	529	0	804	958	1251	21526
95.00	426	-357	556	0	808	962	1256	21685
95.00	426	-357	556	0	806	961	1255	21686
94.00	437	-367	571	0	809	964	1259	21887
90.75	475	-399	620	0	822	980	1279	22554
90.75	475	-399	620	0	821	978	1277	22556
90.25	481	-404	628	0	822	980	1279	22660



BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic 2

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
89.00	496	-416	647	0	823	981	1281	22803
85.17	541	-454	706	0	831	991	1293	23251
85.17	541	-454	706	0	829	988	1290	23253
84.00	555	-466	724	0	830	989	1292	23393
81.46	585	-491	764	0	833	993	1297	23704
78.92	616	-517	804	0	838	999	1304	24021
78.92	616	-517	804	0	836	996	1300	24025
74.00	675	-566	881	0	842	1004	1310	24661
72.67	691	-580	902	0	844	1006	1314	24838
72.67	691	-580	902	0	843	1004	1311	24840
69.00	735	-617	960	0	846	1009	1317	25338
66.42	766	-643	1000	0	850	1013	1323	25698
66.42	766	-643	1000	0	848	1011	1320	25700
64.00	796	-668	1039	0	850	1013	1323	26044
61.42	827	-694	1080	0	854	1018	1328	26419
61.42	827	-694	1080	0	852	1015	1326	26420
59.00	857	-719	1118	0	853	1017	1327	26778
55.17	904	-758	1180	0	858	1022	1334	27360
55.17	904	-758	1180	0	856	1020	1332	27362
54.00	918	-770	1198	0	856	1020	1331	27542
51.00	955	-801	1246	0	859	1024	1336	28013
51.00	955	-801	1246	0	857	1022	1334	28013
48.92	980	-823	1280	0	861	1027	1340	28674
48.92	980	-823	1280	0	859	1024	1337	28676
44.67	1033	-867	1348	0	865	1031	1346	30055
44.00	1041	-874	1359	0	865	1031	1346	30164
43.25	1050	-881	1371	0	866	1032	1347	30287
43.25	1050	-881	1371	0	864	1029	1344	30289
39.00	1103	-925	1440	0	865	1030	1345	31001
37.00	1128	-946	1472	0	866	1032	1347	31343
37.00	1128	-946	1472	0	864	1030	1344	31346
34.00	1165	-977	1520	0	864	1029	1344	31868
30.75	1205	-1011	1573	0	865	1031	1346	32445
30.75	1205	-1011	1573	0	864	1029	1344	32447
29.00	1227	-1029	1601	0	862	1028	1341	32763
24.50	1282	-1076	1674	0	864	1030	1344	33592
24.50	1282	-1076	1674	0	862	1028	1341	33593
24.00	1288	-1081	1682	0	861	1026	1339	33687
19.00	1350	-1133	1762	0	860	1025	1338	34638
18.25	1359	-1140	1774	0	860	1025	1338	34783

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Forces and Moments for Pole in the Local Element Coordinate System

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic 2

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
18.25	1359	-1140	1774	0	858	1023	1335	34785
14.00	1411	-1184	1842	0	857	1021	1333	35619
12.00	1436	-1205	1874	0	857	1022	1334	36019
12.00	1436	-1205	1874	0	856	1020	1331	36021
9.00	1472	-1236	1922	0	853	1017	1328	36630
4.00	1534	-1287	2002	0	851	1014	1323	37667
0.00	1582	-1328	2065	0	851	1014	1324	38518

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic 2

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
149.00	3.3	3.9	5.1	0.0	0.34
144.00	3.0	3.6	4.7	0.0	0.34
144.00	3.0	3.6	4.7	0.0	0.34
143.33	3.0	3.6	4.7	0.0	0.34
143.33	3.0	3.6	4.7	0.0	0.34
139.00	2.8	3.4	4.4	0.0	0.33
139.00	2.8	3.4	4.4	0.0	0.33
138.25	2.8	3.3	4.3	0.0	0.33
138.25	2.8	3.3	4.3	0.0	0.33
134.00	2.6	3.1	4.0	0.0	0.33
134.00	2.6	3.1	4.0	0.0	0.33
132.00	2.5	3.0	3.9	0.0	0.32
132.00	2.5	3.0	3.9	0.0	0.32
129.00	2.4	2.8	3.7	0.0	0.32
125.75	2.2	2.7	3.5	0.0	0.31
125.75	2.2	2.7	3.5	0.0	0.31
124.00	2.2	2.6	3.4	0.0	0.30
124.00	2.2	2.6	3.4	0.0	0.30
119.50	2.0	2.4	3.1	0.0	0.29
119.50	2.0	2.4	3.1	0.0	0.29
119.00	2.0	2.3	3.1	0.0	0.29
114.00	1.8	2.1	2.8	0.0	0.27
114.00	1.8	2.1	2.8	0.0	0.27
113.25	1.8	2.1	2.7	0.0	0.27
113.25	1.8	2.1	2.7	0.0	0.27
109.00	1.6	1.9	2.5	0.0	0.26
108.00	1.6	1.9	2.4	0.0	0.25
108.00	1.6	1.9	2.4	0.0	0.25
104.00	1.4	1.7	2.2	0.0	0.24
102.00	1.4	1.6	2.1	0.0	0.23
102.00	1.4	1.6	2.1	0.0	0.23
99.00	1.3	1.5	2.0	0.0	0.22
96.75	1.2	1.4	1.9	0.0	0.21
96.75	1.2	1.4	1.9	0.0	0.21
95.00	1.2	1.4	1.8	0.0	0.21
95.00	1.2	1.4	1.8	0.0	0.21
94.00	1.1	1.4	1.8	0.0	0.20
90.75	1.1	1.3	1.6	0.0	0.19
90.75	1.1	1.3	1.6	0.0	0.19
90.25	1.0	1.2	1.6	0.0	0.19
89.00	1.0	1.2	1.6	0.0	0.19
85.17	0.9	1.1	1.4	0.0	0.18

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic 2

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
85.17	0.9	1.1	1.4	0.0	0.18
84.00	0.9	1.1	1.4	0.0	0.18
81.46	0.8	1.0	1.3	0.0	0.17
78.92	0.8	0.9	1.2	0.0	0.16
78.92	0.8	0.9	1.2	0.0	0.16
74.00	0.7	0.8	1.0	0.0	0.15
72.67	0.6	0.8	1.0	0.0	0.14
72.67	0.6	0.8	1.0	0.0	0.14
69.00	0.6	0.7	0.9	0.0	0.13
66.42	0.5	0.6	0.8	0.0	0.13
66.42	0.5	0.6	0.8	0.0	0.13
64.00	0.5	0.6	0.8	0.0	0.12
61.42	0.4	0.5	0.7	0.0	0.12
61.42	0.4	0.5	0.7	0.0	0.12
59.00	0.4	0.5	0.6	0.0	0.11
55.17	0.3	0.4	0.5	0.0	0.10
55.17	0.3	0.4	0.5	0.0	0.10
54.00	0.3	0.4	0.5	0.0	0.10
51.00	0.3	0.4	0.5	0.0	0.09
51.00	0.3	0.4	0.5	0.0	0.09
48.92	0.3	0.3	0.4	0.0	0.09
48.92	0.3	0.3	0.4	0.0	0.09
44.67	0.2	0.3	0.3	0.0	0.08
44.00	0.2	0.3	0.3	0.0	0.08
43.25	0.2	0.2	0.3	0.0	0.08
43.25	0.2	0.2	0.3	0.0	0.08
39.00	0.2	0.2	0.3	0.0	0.07
37.00	0.1	0.2	0.2	0.0	0.06
37.00	0.1	0.2	0.2	0.0	0.06
34.00	0.1	0.1	0.2	0.0	0.06
30.75	0.1	0.1	0.2	0.0	0.05
30.75	0.1	0.1	0.2	0.0	0.05
29.00	0.1	0.1	0.1	0.0	0.05
24.50	0.1	0.1	0.1	0.0	0.04
24.50	0.1	0.1	0.1	0.0	0.04
24.00	0.1	0.1	0.1	0.0	0.04
19.00	0.0	0.0	0.1	0.0	0.03
18.25	0.0	0.0	0.1	0.0	0.03
18.25	0.0	0.0	0.1	0.0	0.03
14.00	0.0	0.0	0.0	0.0	0.02
12.00	0.0	0.0	0.0	0.0	0.02

BY VALMONT INDUSTRIES      FOR:      ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Deflections for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic 2

Distance			Defl.		
From	Defl.	Defl.	Resultant	Defl.	
Base	X-Dir	Y-Dir	X & Y	Z-Dir	Rotation
(ft)	(in)	(in)	(in)	(in)	(deg.)
12.00	0.0	0.0	0.0	0.0	0.02
9.00	0.0	0.0	0.0	0.0	0.01
4.00	0.0	0.0	0.0	0.0	0.01
0.00	0.0	0.0	0.0	0.0	0.00



Loading Case Seismic 2

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
149.00	534,291	2,300	160,287	2,204	0.00	0.00	0.00	0.00	0.01
144.00	597,409	2,880	179,223	2,756	0.01	0.00	0.00	0.00	0.01
143.33	605,824	2,962	181,747	2,834	0.01	0.00	0.00	0.00	0.01
139.00	660,526	3,525	198,158	3,369	0.01	0.01	0.00	0.00	0.02
139.00	1,092,818	5,747	327,846	5,533	0.01	0.01	0.00	0.00	0.01
138.25	1,108,598	5,916	332,579	5,694	0.01	0.01	0.00	0.00	0.01
134.00	1,198,014	6,917	359,404	6,649	0.01	0.01	0.00	0.00	0.02
132.00	1,240,092	7,416	372,028	7,125	0.01	0.01	0.00	0.00	0.02
129.00	1,303,210	8,196	390,963	7,868	0.01	0.01	0.00	0.00	0.02
125.75	1,371,587	9,086	411,476	8,716	0.01	0.02	0.00	0.00	0.03
124.00	1,408,406	9,584	422,522	9,190	0.01	0.02	0.00	0.00	0.03
119.50	1,503,082	10,925	450,924	10,467	0.01	0.02	0.00	0.00	0.03
119.00	1,513,601	11,080	454,080	10,614	0.01	0.02	0.00	0.00	0.03
114.00	1,618,797	12,684	485,639	12,141	0.01	0.02	0.00	0.00	0.04
113.25	1,634,576	12,934	490,373	12,379	0.01	0.02	0.00	0.00	0.04
109.00	1,723,993	14,397	517,198	13,770	0.01	0.03	0.00	0.00	0.04
108.00	1,745,032	14,752	523,510	14,108	0.01	0.03	0.00	0.00	0.04
104.00	1,829,188	16,218	548,756	15,502	0.01	0.03	0.00	0.00	0.04
102.00	1,871,267	16,977	561,380	16,223	0.01	0.03	0.00	0.00	0.04
99.00	1,934,384	18,148	580,315	17,336	0.01	0.03	0.00	0.00	0.04
96.75	1,981,722	19,051	594,517	18,195	0.01	0.03	0.00	0.00	0.04
95.00	2,018,541	19,755	605,562	18,877	0.01	0.03	0.00	0.00	0.04
95.00	2,369,061	22,643	710,718	21,669	0.01	0.03	0.00	0.00	0.04
94.00	2,394,308	23,131	718,292	22,133	0.01	0.03	0.00	0.00	0.04
90.75	2,476,361	24,753	742,908	23,676	0.01	0.03	0.00	0.00	0.04
90.25	2,488,984	25,007	746,695	23,918	0.01	0.03	0.00	0.00	0.04
89.00	2,520,543	25,649	756,163	24,528	0.01	0.03	0.00	0.00	0.04
85.17	2,617,323	27,668	785,197	26,448	0.01	0.03	0.00	0.00	0.04
84.00	2,646,778	28,298	794,033	27,047	0.01	0.03	0.00	0.00	0.04
81.46	2,710,947	29,694	813,284	28,374	0.01	0.03	0.00	0.00	0.04
78.92	2,775,117	31,124	832,535	29,733	0.01	0.03	0.00	0.00	0.04
74.00	2,899,248	33,982	869,774	32,453	0.01	0.03	0.00	0.00	0.04
72.67	2,932,910	34,678	879,873	33,211	0.01	0.03	0.00	0.00	0.04
69.00	3,025,483	36,616	907,645	35,340	0.01	0.03	0.00	0.00	0.04
66.42	3,090,704	38,001	927,211	36,880	0.01	0.03	0.00	0.00	0.04
64.00	3,151,717	39,311	945,515	38,351	0.01	0.03	0.00	0.00	0.04
61.42	3,216,939	40,726	965,082	39,955	0.01	0.03	0.00	0.00	0.04
59.00	3,277,952	42,063	983,386	41,485	0.01	0.03	0.00	0.00	0.04
55.17	3,374,732	44,208	1,012,420	43,970	0.01	0.03	0.00	0.00	0.04

BY VALMONT INDUSTRIES FOR: ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD  
 Design Id: 562902-P1  
 Stresses for Pole

DATE 10/06/2022  
 IMPAX 25.1.19.3

Loading Case Seismic 2

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
54.00	3,404,187	44,867	1,021,256	44,741	0.01	0.03	0.00	0.00	0.04
51.00	3,479,928	46,572	1,043,978	46,754	0.01	0.03	0.00	0.00	0.04
51.00	3,421,905	45,264	1,026,572	45,208	0.01	0.03	0.00	0.00	0.04
48.92	3,474,503	46,450	1,042,351	46,609	0.01	0.03	0.00	0.00	0.04
44.67	3,581,803	48,892	1,074,541	49,532	0.01	0.03	0.00	0.00	0.04
44.00	3,598,634	49,278	1,079,590	49,998	0.01	0.03	0.00	0.00	0.04
43.25	3,617,569	49,713	1,085,271	50,526	0.01	0.03	0.00	0.00	0.04
39.00	3,724,869	52,195	1,117,461	53,568	0.01	0.03	0.00	0.00	0.04
37.00	3,775,363	53,373	1,132,609	55,030	0.01	0.03	0.00	0.00	0.04
34.00	3,851,104	55,150	1,155,331	57,260	0.01	0.03	0.00	0.00	0.04
30.75	3,933,156	57,089	1,179,947	59,726	0.01	0.03	0.00	0.00	0.04
29.00	3,977,339	58,138	1,193,202	61,075	0.01	0.03	0.00	0.00	0.04
24.50	4,090,950	60,851	1,227,285	64,614	0.01	0.03	0.00	0.00	0.04
24.00	4,103,574	61,154	1,231,072	65,014	0.01	0.03	0.00	0.00	0.04
19.00	4,229,808	64,195	1,268,943	69,075	0.01	0.03	0.00	0.00	0.04
18.25	4,248,744	64,653	1,274,623	69,695	0.01	0.03	0.00	0.00	0.04
14.00	4,356,043	67,256	1,306,813	73,260	0.01	0.03	0.00	0.00	0.04
12.00	4,406,537	68,485	1,321,961	74,968	0.01	0.03	0.00	0.00	0.04
9.00	4,482,278	70,332	1,344,683	77,567	0.01	0.03	0.00	0.00	0.04
4.00	4,608,513	73,420	1,382,554	81,998	0.01	0.03	0.00	0.00	0.04
0.00	4,709,501	75,897	1,412,850	85,631	0.01	0.03	0.00	0.00	0.04

MINIMUM DEFLECTION RATIO // DEFLECTION LIMIT / DEFLECTION // IS

F L A N G E A N A L Y S I S

FLANGE FOR THE C - D JOINT : SIZED FOR SHAFT MOMENT CAPACITY

Input Data

=====

Applied Reactions

Resultant Moment = 3,221 in-kips  
 Torsion = 0 in-kips  
 Resultant Shear = 0 lbs  
 Axial = 0 lbs

Results

=====

Bolts

Maximum Bolt Axial Force = 50,045 lbs  
 Maximum Bolt Shear = 1,281 lbs  
 Tensile Strength = 120 ksi  
 Axial Capacity = 54,540 lbs  
 Axial Stress = 83 ksi  
 Shear Capacity = 26,507 lbs  
 Shear Stress = 0 psi  
 Combined Stress Ratio = 0.84

Bolts

Number of Bolts = 10  
 Bolt Diameter = 1.00 in  
 Bolt Material = A325  
 Bolt Circle = 21.03 in

Flange

Weight = 143 lbs  
 Controlling Stress = Bending  
 Maximum Stress Ratio = 0.42  
 Bending Stress Ratio = 0.42  
 Shear Stress Ratio = 0.41  
 Bearing Stress Ratio = 0.42

Flange

Outside Diameter = 23.53 in  
 Thickness = 1.500 in  
 Yield Strength = 50 ksi  
 Tensile Strength = 65 ksi  
 Valmont Material Spec. = S-56  
 Center Hole Diameter = 10.64 in  
 Vent Hole Diameter = 4.00 in  
 Vent hole 1, X Coordinate = 5.44 in  
 Vent hole 1, Y Coordinate = 0.00 in  
 Vent hole 2, X Coordinate = -5.44 in  
 Vent hole 2, Y Coordinate = 0.00 in

Tube

No. of sides = 18  
 Design Diameter = 17.263 in  
 Detailed "C" Sect. Dia = 17.311 in  
 Detailed "D" Sect. Dia = 17.216 in  
 Thickness = 0.3125 in  
 Thickness for M. Cap. = 0.1875 in  
 Yield = 65 ksi

\*\*\* BOLT COORDINATES \*\*\*

BOLT NO.	X-COORD	Y-COORD		BOLT NO.	X-COORD	Y-COORD
1	10.51	0.00	*	2	8.51	6.18
3	3.25	10.00	*			

BY VALMONT INDUSTRIES FOR:  
Design Id: 562902-P1

ARCOLA TOWERS 149.0' POLE, SITE: PARAMOUNT, HAGERSTOWN, MD

DATE 10/06/2022  
IMPAX 25.1.19.3

NUMBER OF BOLTS	DIAMETER (IN.)	LENGTH (IN.)	WEIGHT (KIPS)	SHIPPED AS	PROJECTION LENGTH (IN.)	GALVANIZED LENGTH (IN.)	THREAD SIZE
24	1.750	66.00	1.52	BOLTS, TEMPLATES	9.50	66.00	5-UNC-2A
STEEL SPEC. VALMONT	STEEL SPECIF.	MAXIMUM BOLT FORCE (KIPS)	MAXIMUM BOLT SHEAR FORCE (KIPS)	NOMINAL STRENGTH (KIPS)	STRESS AREA (SQ. IN.)	INTERACTION VALUE	CONFIGURATION OF BOTTOM END
S23	A615	129.43	1.88	142.50	1.90	0.91	THREADED WITH HEAVY HEX HEAD NUT

\*\*\* BOLT COORDINATES (IN.) \*\*\*

BOLT NO.	X-COORD	Y-COORD	*	BOLT NO.	X-COORD	Y-COORD
1	34.000	0.000	*	2	32.841	8.800
3	29.445	17.000	*	4	24.042	24.042
5	17.000	29.445	*	6	8.800	32.841
7	0.000	34.000	*			

MAX. BOLT CIRCLE = 68.00 IN.

TEMPLATE DIAMETER = 71.50 IN.

\*\*\* BASE PLATE CHARACTERISTICS GOVERNED BY LOADING CASE WIND \*\*\*

BASE PLATE DIAMETER (IN.)	BASE PLATE THICKNESS (IN.)	ACTUAL WEIGHT (KIPS)	RAW MATERIAL WEIGHT (KIPS)	POLE DIAM. (MAJOR DIAM.) (IN.)
72.38	2.25	1.54	3.39	61.25
EFFECTIVE PLATE WIDTH (IN.)	PLASTIC SECTION MOD. (CU. IN.)	MOMENT IN BASE PLATE (IN. -K)	PLASTIC MOMENT (IN. -K)	FACTORED RESISTING MOM. (IN. -K)
8.02	10.15	436.82	507.36	456.63
STEEL SPECIF. VALMONT	STEEL SPECIF. OTHER	EFFECTIVE YIELD STRESS (KSI)	STRESS RATIO	
S56	A572	50	0.96	

** LOADS AT POLE BASE IN THE GLOBAL COORDINATE SYSTEM *****						LOADING CASES *****	
LOADING CASE IDENTIFICATION	WIND	ICE + WIND	T+S	Seismic	Seismic 2	]MAX CRITERION- LOAD CASE	
MOMENT ABT. X-AXIS (IN-KIP)	50592	13925	13152	1612	1582	]MOMENT ABT. X WIND	
MOMENT ABT. Y-AXIS (IN-KIP)	-42452	-11684	-11036	-1352	-1327	]MOMENT ABT. Y WIND	
SHEAR FORCE (LB.)	45016	11517	11788	1321	1321	]RES. MOMENT WIND	
VERTICAL FORCE (LB.)	53581	85133	44099	53988	38517	]SHEAR FORCE WIND	
						]BOLT FORCE WIND	
						]BOLT TENSION WIND	

## **Exhibit 10**



## **AFFIDAVIT OF CONSENT AND SUPPORT OF TELECOMMUNICATIONS TOWER APPLICATION**

Whereas, **Robert Flint, President of Longmeadow Volunteer Fire Company, Inc.**, “Affiant” of full age being duly sworn according to law deposes and says that the Fire Company’s principal place of business is 19307 Longmeadow Road, Hagerstown, Maryland 21742, and that the Fire Company is the owner of Tax Parcel Numbers 27-026095, Map 0025, Parcel 0170; and, 27-020011, Map 25, Parcel 172; and 27-026109, Map 0025, Parcel 170, hereinafter known as the “Affected Parcel” to K & S Longmeadow LLC., a Maryland Limited Liability Corporation, hereinafter known as “K & S” the owner of the premises known as 19224 Longmeadow Road, Hagerstown, Maryland 21742 and as Tax Parcel Number 27-019196 as shown on the tax assessment map of Washington County, Maryland, hereinafter referred to as “the Development Parcel.”

Whereas, Affected Parcel is classified as (RS) Residential Suburban on the Washington County Zoning Map and the Affected Parcel Corner is approximately 265 feet more or less from a Proposed Cellular Tower on the Development Parcel as shown on the attached Map as derived from the Parcel and Zoning Locator portal of Washington County, Maryland.

Whereas, Arcola Towers I, LP has informed the Affiant of their intent to construct a telecommunications facility and monopole tower with associated antennas and other equipment at a final contemplated height of 150 feet or less with the maximum height as finally determined by the Zoning Board, along with associated ground equipment enclosed by a fenced compound with a tower center to occur as close as 265 feet as shown on the attached drawing.

Whereas, the Zoning Ordinance of Washington County, Maryland, Section 4.22 Commercial Communication Towers, Section (A), Design Requirements, subsection (1) contains the following specific requirement regarding the minimum distance of proposed towers from adjoining property lines, to wit:

1. Subject to a minimum setback of a distance equaling the total height of the tower and equipment. The setback shall be measured from the base of the tower to the boundary line

of the property owned, leased, or controlled by easement by the applicant.

2. Subject to a minimum distance requirement of a distance equaling the height of the tower and equipment plus 200 feet from the RT, RS, RU, RM and RV districts or the nearest part of any existing dwelling, school, church, or institution for human care, in any other district.
3. That in the event the Zoning Board were to grant approval for a 150 foot monopole the calculated minimum distance from the Affiants Affected Parcel to the center of the tower would be 350 feet under the ordinance, while the actual distance would be 265 more or less.

Whereas, Affiant acknowledges that the proposed locations of the tower currently being considered by K & S and their Applicant and Lessee, Arcola Towers LP I shall cause the distance from the base of the tower to the Affected Parcel property lines to be as close as (265) feet depending on final Site Design. Affiant further acknowledges that plans and applications for Variance, Special Exception, are other relief from the tower distance from property lines under the ordinance are contained or contemplated in Site Plans, and Construction Drawings as currently or hereinafter presented to the Washington County Zoning Administrators, Planning Commission, and/or Zoning Board of Appeals, and/or any other Land Use authorities, Commissions and Boards of jurisdiction.

Whereas, Affiant acknowledges that given the current use of K & S Facility, including Resolute Tissue and other operations, the addition of the proposed tower will not exacerbate or otherwise diminish the intended use or enjoyment of Affiant, nor adversely affect the view scape or enjoyment of the Adjoining Parcel, and further does not oppose telecommunication development for the benefit of Affiant on Adjoining Lands.

Now, THEREFORE, Affiant as owner of Adjoining Parcel, hereby states and affirms that he has no objection of the project contemplated in Exhibit A attached hereto.

Witness:

Longmeadow Volunteer Fire Company, Inc.

By: 

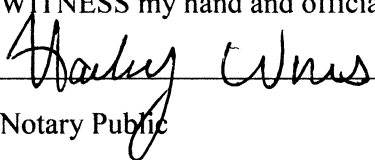
Print Name: Robert Flint

President

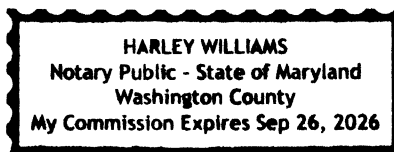
STATE OF MARYLAND           )  
  ) SS  
COUNTY OF WASHINGTON    )

On December 9, 2022, before me, Harley Williams,  
Notary Public, personally appeared Robert Flint, President of  
the Longmeadow Volunteer Fire Company, Inc. personally known to me (or proved to me on the  
basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within  
instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized  
capacit(ies), and that by his/her/their signature(s) on the instrument, the person(s), or the entity  
upon behalf of which the person(s) acted, executed the instrument.

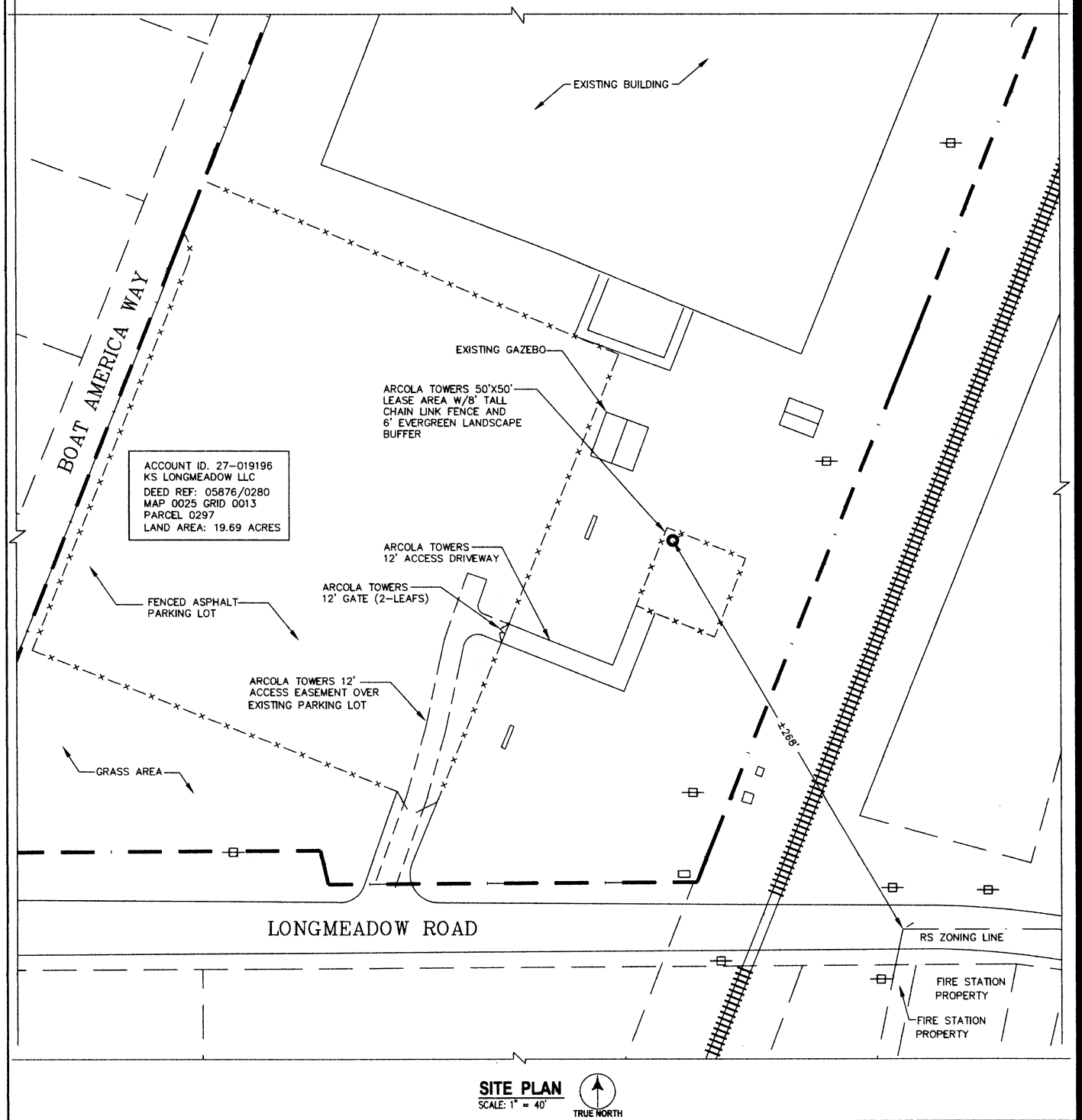
WITNESS my hand and official seal.

  
Notary Public

(SEAL)



# FIRE STATION EXHIBIT (PAGE 1 of 1)



6100 Executive Boulevard, Suite 430  
Rockville, MD 20852  
Phone: 202-408-0960



## SUBMITTALS

DATE	DESCRIPTION	REV.
05-27-22	EXHIBIT REVIEW	
06-02-22	EXHIBIT REVIEW	

## FIRE STATION EXHIBIT

ARCOLA TOWER SITE - PARAMOUNT  
19224 LONGMEADOW ROAD  
HAGERSTOWN, MD 21742

TITLE:

**SITE PLAN**

PROJECT NO.

1164.010



# WASHINGTON COUNTY BOARD OF ZONING APPEALS

747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

## ZONING APPEAL

**Property Owner:** Bernard Kefauver Jr & Sondra Riggs  
546 Prospect Hill Road  
Knoxville MD 21758

**Appellant:** Bernard R. Kefauver Jr.  
546 Prospect Hill Road  
Knoxville MD 21758

**Property Location:** 546 Prospect Hill Road  
Knoxville, MD 21758

**Description Of Appeal:** Special exception to establish a gunsmithing/gun repair shop as a resident business in existing accessory structure

**Docket No:** AP2023-006  
**Tax ID No:** 11009832  
**Zoning:** EC  
**RB Overlay:** No  
**Zoning Overlay:**  
**Filed Date:** 01/24/2023  
**Hearing Date:** 02/15/2023

**Appellant's Legal Interest In Above Property:**

<b>Owner:</b> Yes	<b>Contract to Rent/Lease:</b> No
<b>Lessee:</b> No	<b>Contract to Purchase:</b> No
<b>Other:</b>	

**Previous Petition/Appeal Docket No(s):** AP2020-023

**Applicable Ordinance Sections:** Washington County Zoning Ordinance: Section 3.3(1) J

**Reason For Hardship:**

**If Appeal of Ruling, Date Of Ruling:**

**Ruling Official/Agency:**

**Existing Use:** Single Family Dwelling  
**Proposed Use:** Resident Business/Single Family Dwelling

**Previous Use Ceased For At Least 6 Months:**  
**Date Ceased:**

**Area Devoted To Non-Conforming Use -**  
**Existing:**  
**Proposed:**

I hereby affirm that all of the statements and information contained in or filed with this appeal are true and correct.

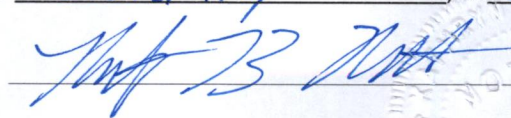
  
Appellant Signature

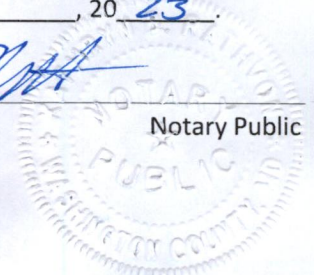
State Of Maryland, Washington County to-wit:

Sworn and subscribed before me this 24 day of January, 20 23.

**Kathryn B Rathvon**  
NOTARY PUBLIC  
WASHINGTON COUNTY  
MARYLAND

My Commission Expires NOVEMBER 07, 2025

  
Notary Public







WASHINGTON COUNTY BOARD OF ZONING APPEALS

747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

## AFFIDAVIT IN COMPLIANCE WITH SECTION 25.51(C)

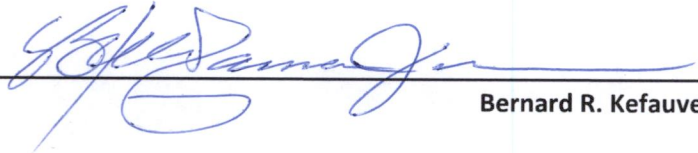
Docket No: AP2023-006

**State of Maryland Washington County, To Wit:**

On 1/24/2023, before me the subscriber, a Notary of the public of the State and County aforesaid, personally appeared Bernard R. Kefauver Jr. and made oath in due form of law as follows:

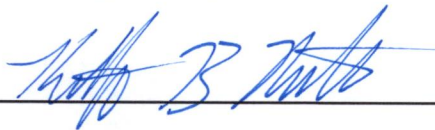
Bernard R. Kefauver Jr. will post the zoning notice sign(s) given to me by the Zoning Administrator in accordance with Section 25.51(c) of the Washington County Zoning Ordinance for the above captioned Board of Appeals case, scheduled for public hearing on 02/15/2023, and that said sign(s) will be erected on the subject property in accordance with the required distances and positioning as set out in the attached posting instructions.

Sign(s) will be posted on 01/31/2023 and will remain until after the above hearing date.



Bernard R. Kefauver Jr.

Sworn and subscribed before me the day and year first above written.

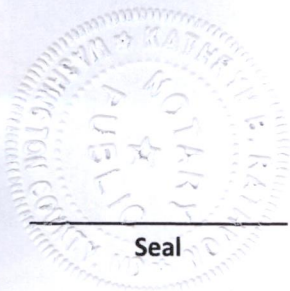


Notary Public

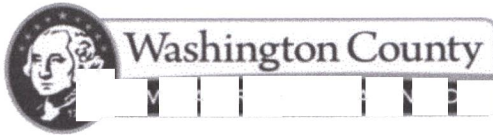
Kathryn B Rathvon  
NOTARY PUBLIC  
WASHINGTON COUNTY  
MARYLAND

MY COMMISSION EXPIRES NOVEMBER 07, 2025

My Commission Expires



Seal



## BOARD OF ZONING APPEALS

747 Northern Avenue | Hagerstown, MD 21742 | P: 240.313.2430 | F: 240.313.2461 | Hearing Impaired: 7-1-1

WWW.WASHCO-MD.NET

### Appeal for Special Exception

Appeal is hereby made for a special exception under the Washington County Zoning Ordinance as follows:

Location 546 PROSPECT HILL ROAD KNOXVILLE, MARYLAND 21758

Appellant's present legal interest in above property: (Check One)

☒ Owner (Including Joint Ownership) ☐ Lessee ☐ Contract to rent/lease  
☐ Contract to Purchase ☐ Other \_\_\_\_\_

Use Proposed: GUNSMITH, GUN REPAIR

Zoning Ordinance section and subsection(s) providing for proposed use: 3.3(1) J

If filing functionally similar to a principal permitted use or special exception use, please list the use and describe the use similarities:

#### Provide Detailed Explanation on Separate Sheet

Has any previous petition or appeal involving this property been made to the Board?

☐ Yes ☒ No

If yes, give docket number(s): \_\_\_\_\_

Additional comments, if any: \_\_\_\_\_

I hereby certify that I have, to the best of my knowledge, accurately supplied the information required for the above referenced appeal.

[Signature]  
Signature of Appellant

1dirtybore@gmail.com  
Email of Appellant

546 PROSPECT HILL RD KNOXVILLE, MD 21758  
Address of Appellant

240-818-1047  
Phone Number of Appellant

This appeal form is to be used to assist the customer in gathering the information necessary to submit an application. However, the application shall be processed in person.

Dear Board members,

1/22/2023

I own a home at 546 Prospect Hill Road, Knoxville Maryland 21758 and is located and zoned environmental conservation in Washington county. I received my certificate of occupancy on 12/07/2020 (record number 2020-04738) to operate a home business on a part-time basis in a pre-existing structure.

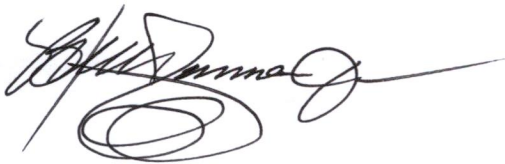
The business I operate is service based whereas, I repair and service firearms by appointment only. This business has not caused an increase in traffic or an increase in noise. All business materials and supplies are delivered via USPS and does not create an influx of delivery traffic.

The certificate of occupancy states, "no customer" and was noted that customer interaction would take place at the local gun club where a portion of my business is generated. It has been identified through the ATF compliance check that customer exchange has to take place at my business address prompting the request to amend the certificate of occupancy to allow customer exchange at Prospect Hill, Lot 7.

Stated before this a part-time based business and the customer impact would be a limited to minimal impact on the development at Prospect Hill. Within the two years of having the certificate of occupancy I have had ten customer exchanges.

I hope you consider the request to amend the certificate of occupancy to allow customers on site by appointment only. Thank you for your time and consideration in this appeal.

Sincerely,

A handwritten signature in black ink, appearing to read "Anna J. [unclear]", with a large, stylized flourish at the end.



SHOP:  
26' x 35'  
{ 910 }  
{ SQ FT. }





# WASHINGTON COUNTY BOARD OF ZONING APPEALS

747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

## ZONING APPEAL

**Property Owner:** Sean & Jennifer Barrie  
1232 C Street North East  
Washington DC 20002

**Appellant:** Paul Harmon  
19119 Solomons Gap Lane  
Keedysville MD 21756

**Property Location:** 1044 Harpers Ferry Road  
Knoxville, MD 21758

**Description Of Appeal:** Variance from the required 50 ft. rear yard setback to 47.8 ft. for constructed single family dwelling foundation.

**Docket No:** AP2023-007  
**Tax ID No:** 11011462  
**Zoning:** EC  
**RB Overlay:** No  
**Zoning Overlay:**  
**Filed Date:** 01/26/2023  
**Hearing Date:** 02/15/2023

**Appellant's Legal Interest In Above Property:**

<b>Owner:</b>	No	<b>Contract to Rent/Lease:</b>	No
<b>Lessee:</b>	No	<b>Contract to Purchase:</b>	No
<b>Other:</b>	Builder		

**Previous Petition/Appeal Docket No(s):**

**Applicable Ordinance Sections:** Washington County Zoning Ordinance Section: 5B.5

**Reason For Hardship:** Excessive excavation would be required to remove existing tree root systems and standing live trees.

**If Appeal of Ruling, Date Of Ruling:**

**Ruling Official/Agency:**

**Existing Use:** Foundation for Single Family Dwelling  
**Proposed Use:** Single Family Dwelling

**Previous Use Ceased For At Least 6 Months:** **Date Ceased:**

**Area Devoted To Non-Conforming Use -** **Existing:**  
**Proposed:**

I hearby affirm that all of the statements and information contained in or filed with this appeal are true and correct.

Appellant Signature

State Of Maryland, Washington County to-wit:

Sworn and subscribed before me this 26 day of January, 2023.

**Kathryn B Rathvon**  
NOTARY PUBLIC  
WASHINGTON COUNTY  
MARYLAND  
My Commission Expires NOVEMBER 07, 2025

Notary Public





WASHINGTON COUNTY BOARD OF ZONING APPEALS

747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

## AFFIDAVIT IN COMPLIANCE WITH SECTION 25.51(C)

Docket No: AP2023-007

State of Maryland Washington County, To Wit:

On 1/26/2023, before me the subscriber, a Notary of the public of the State and County aforesaid, personally appeared Melani Harmon and made oath in due form of law as follows:

Melani Harmon will post the zoning notice sign(s) given to me by the Zoning Administrator in accordance with Section 25.51(c) of the Washington County Zoning Ordinance for the above captioned Board of Appeals case, scheduled for public hearing on 02/15/2023, and that said sign(s) will be erected on the subject property in accordance with the required distances and positioning as set out in the attached posting instructions.

Sign(s) will be posted on 01/31/2023 and will remain until after the above hearing date.

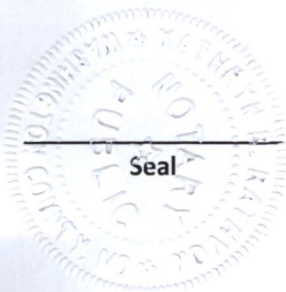
Melani Harmon

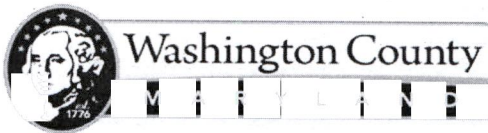
Sworn and subscribed before me the day and year first above written.

Kathryn B Rathvon  
NOTARY PUBLIC  
WASHINGTON COUNTY  
MARYLAND  
MY COMMISSION EXPIRES NOVEMBER 07, 2025

Notary Public

My Commission Expires





## BOARD OF ZONING APPEALS

747 Northern Avenue | Hagerstown, MD 21742 | P: 240.313.2430 | F: 240.313.2461 | Hearing Impaired:

7-1-1 WWW.WASHCO-MD.NET

### Appeal for Variance

Appeal is hereby made for a variance from a requirement of the Washington County Zoning Ordinance as follows:

Location 1044 Harpers Ferry Road, Knoxville, MD 21758

Appellant's present legal interest in above property: (Check One)

☐ Owner (Including Joint Ownership) ☐ Lessee ☐ Contract to rent/lease  
☐ Contract to Purchase ☒ Other Builder

Specify the Ordinance section and subsection from which the variance is desired:

Section 5B.5 Residential Lot size and Bulk Dimensions. Year yard 50 ft setback.

Specify the particular requirement(s) from which a variance is desired in that section or subsection:

A 50 ft rear setback/BRL was required (per Section 5B.5) for a single family home being built on property. A 47.8 ft. BRL was needed to avoid excessive excavation due to existing tree root systems and standing live trees.

Describe the nature and extent of the desired variance from Ordinance requirements: listed above:

Builder encroached approximately 26" into 50 ft MBSL while positioning foundation to avoid existing tree roots' removal and excessive earth disturbance that was unfavorable and cost prohibitive to the Owner. Moving the foundation further away from BRL would have exceeded the LOD.

Describe reason(s) why the Ordinance requirement(s) in question would result in peculiar and/or unusual practical difficulties to or would impose exceptional or undue hardship upon the owner of the property if the requested variance were not granted:

### Provide Detailed Explanation on Separate Sheet

Has any previous petition or appeal involving this property been made to the Board?

☐ Yes ☒ No

If yes, list docket number(s): \_\_\_\_\_

I hereby certify that I have, to the best of my knowledge, accurately supplied the information required for the above referenced appeal.

  
Signature of Appellant

19119 Solomons Gap Lane, Keedysville, MD 21756  
Address and of Appellant

paul@harmonbuilders.com  
Email of Appellant

240.674.0106  
Phone Number of Appellant

This appeal form is to be used to assist the customer in gathering the information necessary to submit an application. However, the application shall be processed in person.





BOARD OF ZONING APPEALS  
OWNER REPRESENTATIVE AFFIDAVIT

This is to certify that Paul Harmon and/or Melani Harmon of Harmon Builders, LLC  
is authorized to file an appeal with the Washington County Board of Appeals for  
Variance for rear 50 ft setback on property  
located Barrie, lot #6 1044 Harpers Ferry Road, Knoxville, MD 21758 (Map 87, Parcel 214)  
The said work is authorized by Sean & Jennifer Barrie  
the property owner in fee.

PROPERTY OWNER

Jennifer Barrie  
Name  
1044 Harpers Ferry Rd.  
Address  
Knoxville, MD 21758  
City, State, Zip Code

[Signature]  
Owner's Signature

Sworn and subscribed before me this 25 day of January, 2023.

[Signature]  
Notary Public

My Commission Expires:

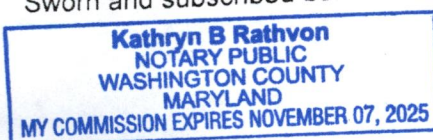


AUTHORIZED REPRESENTATIVE

Melani A. Harmon—Owner, Harmon Builders  
Name  
19119 Solomons Gap Lane  
Address  
Keedysville, MD. 21756  
City, State, Zip Code

[Signature]  
Authorized Representative's Signature

Sworn and subscribed before me this 26 day of Jan., 2023.



[Signature]  
Notary Public

My Commission Expires:

747 Northern Avenue | Hagerstown, MD 21742 | P: 240.313.2430 | F: 240.313.2461 | Hearing Impaired: 7-1-1

Harmon Builders LLC  
19119 Solomons Gap Lane  
Keedysville, MD 21756

301.663.9101 (O)  
301.685-6190 (F)  
240.674.0107 (C)

paul@harmonbuilders.com  
melani@harmonbuilders.com  
www.harmonbuilders.com



MHIC No. 66247  
MHBR No. 4452

January 25, 2023

**Describe reason(s) why the Ordinance requirement(s) in question would result in peculiar and/or unusual practical difficulties to or would impose exceptional or undue hardship upon the owner of the property if the requested variance were not granted:**

Section 5B.5 Residential Lot Size and Bulk Dimensions; Subsection, Dwelling, Single Family: Rear yard 50 ft. setback would inflict practical difficulty for several reasons as described below.

Builder encroached approximately 26" into 50 ft rear MBSL while positioning the foundation to avoid existing tree root removal, and excessive earth and tree disturbance. Moreover, strict compliance was deemed unfavorable and cost prohibitive to Owner and would negatively impact the existing forestry land. *The criteria to adhere to this 50 ft setback/BRL ordinance would cause practical difficulty according to Section 25.56 of the Washington County Zoning Ordinance.*

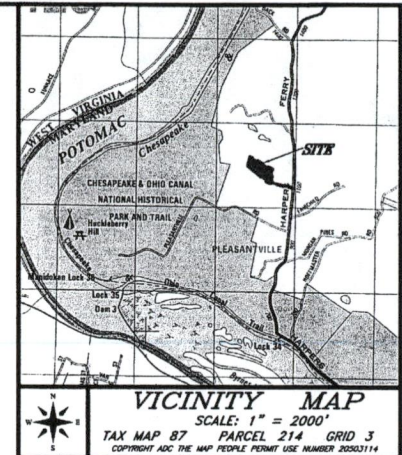
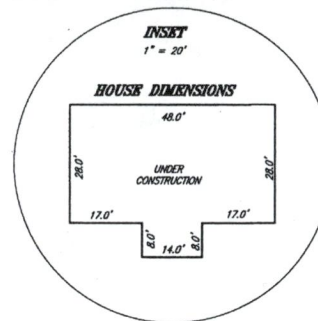
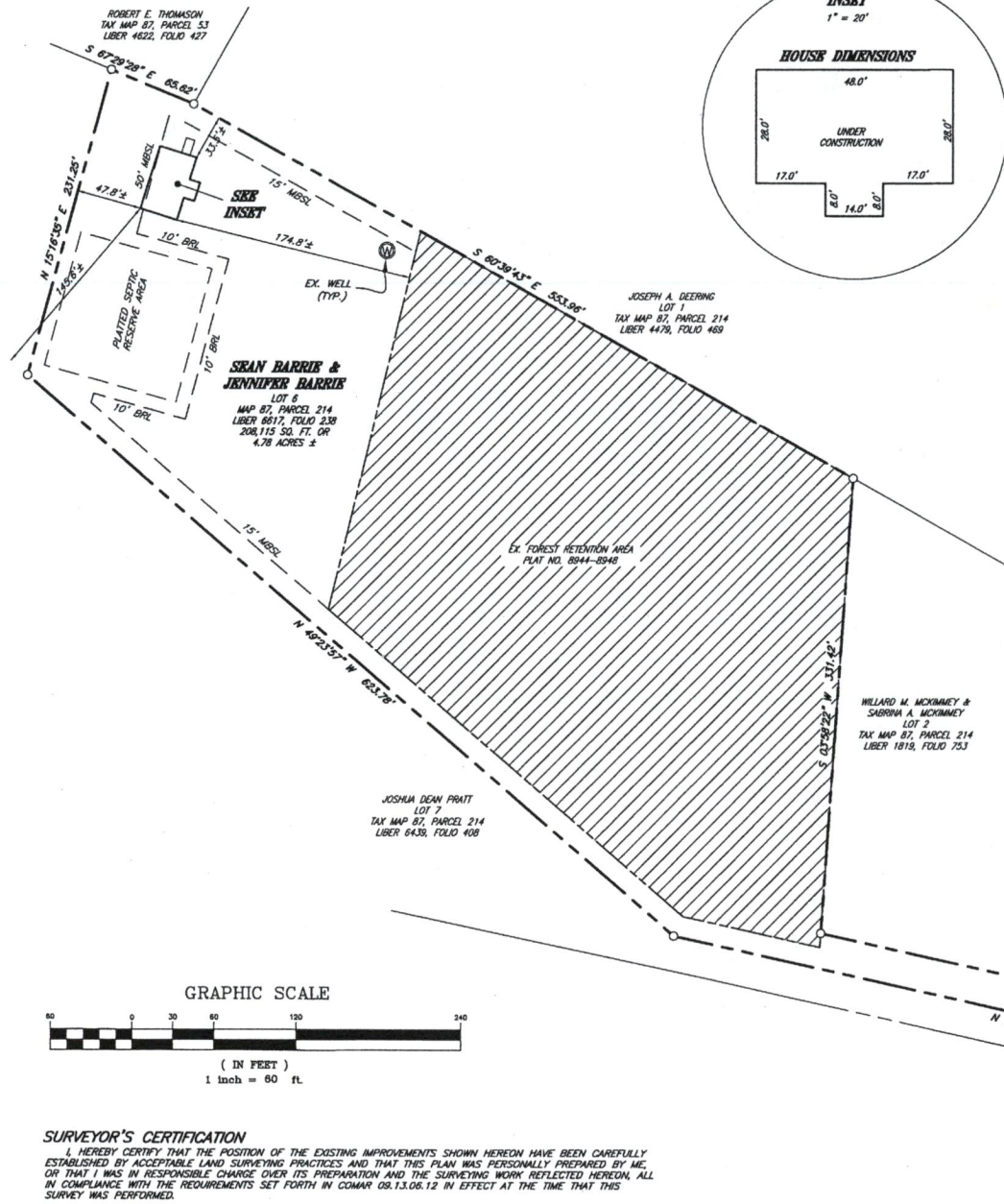
1. The original survey boundary marker the Builder located upon positioning the foundation and measuring the rear BRL was not the correct or final survey pin unearthed during the recent house location survey—skewing the property line upon computing the initial setback measurement.
2. When the Builder was positioning the foundation, existing trees and deep tree root systems were encountered, which were found unfavorably positioned to the front (east) of foundation.
3. The discovery of wide and deep tree roots made it cost prohibitive for Owners to extract, and their removal would negatively impact the environment— this includes: the LOD, existing trees, roots and forestry environment.
4. Moving the foundation within the 50 foot BRL would have created excessive excavation, tree felling, and disturbed earth that would have exceeded the LOD and negatively affected the site forestry land.

**County Notes:**

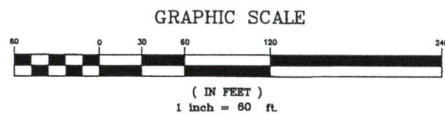
**Practical Difficulty**

1. Strict compliance would unreasonably prevent the use of the property for a permitted purpose or render conformance unnecessarily burdensome; and
2. Denying the variances would do substantial injustice to the applicant and a lesser relaxation than that applied for would not give substantial relief; and
3. Granting the variance would observe the spirit of the Ordinance and secure public safety and welfare.





- NOTES:**
1. MBSL DENOTES MINIMUM BUILDING SETBACK LINE.
  2. BRL DENOTES BUILDING RESTRICTION LINE.
  3. PARCEL SHOWN HEREON BEING ALL OF LOT 6 AS SHOWN ON A FINAL PLAT RECORDED AT PLAT NO. 8944-8946 AMONG THE LAND RECORDS OF WASHINGTON COUNTY, MARYLAND.
  4. PARCEL SHOWN HEREON IS NOT WITHIN ANY 100 YEAR FLOODPLAIN AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP 24043C04550. EFFECTIVE DATE: AUGUST 15, 2017.



**SURVEYOR'S CERTIFICATION**

I HEREBY CERTIFY THAT THE POSITION OF THE EXISTING IMPROVEMENTS SHOWN HEREON HAVE BEEN CAREFULLY ESTABLISHED BY ACCEPTABLE LAND SURVEYING PRACTICES AND THAT THIS PLAN WAS PERSONALLY PREPARED BY ME, OR THAT I WAS IN RESPONSIBLE CHARGE OVER ITS PREPARATION AND THE SURVEYING WORK REFLECTED HEREON, ALL IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN COMAR 08.13.06.12 IN EFFECT AT THE TIME THAT THIS SURVEY WAS PERFORMED.

DATE: 01/10/2023

George E. Magel  
 GEORGE E. MAGEL  
 MARYLAND PROFESSIONAL LAND SURVEYOR No. 21052  
 (EXPIRATION/RENEWAL DATE: 8/24/2024)

NOTE: IMPROVEMENTS SHOWN ON THIS SURVEY ARE AS OF 1/17/2023



**WALL CHECK**  
 LOT 6 - LANDS OF  
**SEAN & JENNIFER BARRIE**

SITUATE AT 1044 HARRIS FERRY ROAD  
 WASHINGTON COUNTY, MARYLAND

DRAWN BY: A.M.S.		DATE: 1/17/23		<b>FOX &amp; ASSOCIATES, INC.</b> ENGINEERS • SURVEYORS • PLANNERS 881 MT. AETNA ROAD HAGERSTOWN, MARYLAND 21740 PHONE: (301)733-8603 FAX: (301)733-1853	<b>FOX &amp; ASSOCIATES, INC.</b> 82 WORMAN'S MILL CT. STE. 'G' FREDERICK, MARYLAND 21701 PHONE: (301)698-0800 FAX: (301)293-6009	DISTRICT <u>11</u>
CHECKED BY: G.E.N.		DATE: 1/18/23				TAX MAP No. <u>87</u>
SCALE: 1" = 80'						DWG. No. <u>C - 3502</u>



**Attention:** Katie Rathvon  
Zoning Coordinator, Division of Planning & Zoning  
Washington County Building & Permits  
747 Northern Avenue,  
Hagerstown, MD, 21742

Re: Rear Setback Variance  
Barrie Project, #2022-04547  
1044 Harpers Ferry Road  
Knoxville, MD. 21758

January 23, 2023

Dear Ms. Rathvon, et al:

I am Joshua Pratt and owner of property (lot #7, plat 8P44), located at 1042 Harpers Ferry Road, Knoxville, Maryland, which borders the west and south sides of the Barrie's property located at 1044 Harpers Ferry Road, Knoxville, Maryland. Mr. Paul Harmon of Harmon Builders is the General Contractor hired by the Barries to build their home at 1044 Harpers Ferry Road. I spoke to Mr. Harmon on January 22, 2023 and he made me aware of the recent encroaching setback (47.8 feet) measurement on the rear southwestern corner of the Barrie's lot. I understand that this setback is outside of the 50 foot BRL, and not trespassing on my property. I am not opposed to this new BRL measurement of 47.8 feet from the Barrie's property line.

If you have any questions, please contact me at your convenience— Joshua Dean Pratt,  
703.554.4431.

Sincerely,

A handwritten signature in black ink that reads "Josh Pratt". The signature is written in a cursive, flowing style.

Joshua Dean Pratt



WASHINGTON COUNTY BOARD OF ZONING APPEALS

747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

## ZONING APPEAL

**Property Owner:** Gary & Megan Leigh Hoffman Jr.  
1521 Hoffmaster Road  
Knoxville MD 21758

**Appellant:** Gary Hoffman Jr.  
1521 Hoffmaster Road  
Knoxville MD 21758

**Property Location:** 1521 Hoffmaster Road  
Knoxville, MD 21758

**Description Of Appeal:** Variance from the required 40 ft. front setback from the future right of way for the county road to 28 ft. for constructed single family dwelling.

**Docket No:** AP2023-008

**Tax ID No:** 11000835

**Zoning:** EC

**RB Overlay:** No

**Zoning Overlay:**

**Filed Date:** 01/26/2023

**Hearing Date:** 02/15/2023

**Appellant's Legal Interest In Above Property:** **Owner:** Yes

**Lessee:** No

**Other:**

**Contract to Rent/Lease:** No

**Contract to Purchase:** No

**Previous Petition/Appeal Docket No(s):**

**Applicable Ordinance Sections:** Washington County Zoning Ordinance Section: 5B.5

**Reason For Hardship:** Location survey inspection did not occur during the foundation inspections, dwelling is now substantially completed.

**If Appeal of Ruling, Date Of Ruling:**

**Ruling Official/Agency:**

**Existing Use:** Single Family Dwelling

**Proposed Use:** Single Family Dwelling

**Previous Use Ceased For At Least 6 Months:**

**Date Ceased:**

**Area Devoted To Non-Conforming Use -**

**Existing:**

**Proposed:**

I hearby affirm that all of the statements and information contained in or filed with this appeal are true and correct.

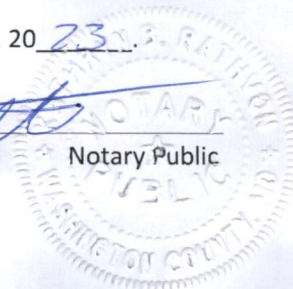
Appellant Signature

State Of Maryland, Washington County to-wit:

Sworn and subscribed before me this 26 day of January, 20 23.



Notary Public





WASHINGTON COUNTY BOARD OF ZONING APPEALS

747 Northern Avenue | Hagerstown, MD 21742-2723 | P:240.313.2430 | F:240.313.2431 | Hearing Impaired: 7-1-1

## AFFIDAVIT IN COMPLIANCE WITH SECTION 25.51(C)

Docket No: AP2023-008

State of Maryland Washington County, To Wit:

On 1/26/2023, before me the subscriber, a Notary of the public of the State and County aforesaid, personally appeared Gary Hoffman Jr and made oath in due form of law as follows:

Gary Hoffman Jr will post the zoning notice sign(s) given to me by the Zoning Administrator in accordance with Section 25.51(c) of the Washington County Zoning Ordinance for the above captioned Board of Appeals case, scheduled for public hearing on 02/15/2023, and that said sign(s) will be erected on the subject property in accordance with the required distances and positioning as set out in the attached posting instructions.

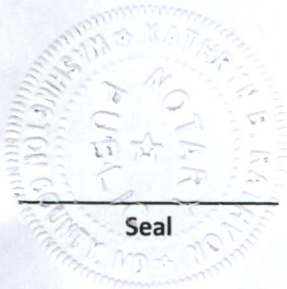
Sign(s) will be posted on 01/31/2023 and will remain until after the above hearing date.

Gary Hoffman Jr

Sworn and subscribed before me the day and year first above written.

Kathryn B Rathvon  
NOTARY PUBLIC  
WASHINGTON COUNTY  
MARYLAND  
MY COMMISSION EXPIRES NOVEMBER 07, 2025

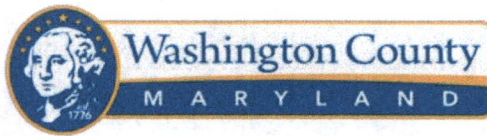
Notary Public



Seal

My Commission Expires





## BOARD OF ZONING APPEALS

80 West Baltimore Street | Hagerstown, MD 21740 | P: 240.313.2460 | F: 240.313.2461 | Hearing Impaired: 7-1-1

WWW.WASHCO-MD.NET

### **Appeal for Variance**

Appeal is hereby made for a variance from a requirement of the Washington County Zoning Ordinance as follows:

Location 1521 Hoffmaster Road, Knoxville, MD 21758

Appellant's present legal interest in above property: (Check One)

☒ Owner (Including Joint Ownership) ☐ Lessee ☐ Contract to rent/lease

☐ Contract to Purchase ☐ Other \_\_\_\_\_

Specify the Ordinance section and subsection from which the variance is desired:

Section 5B.5 Yard Setback

Specify the particular requirement(s) from which a variance is desired in that section or subsection:

Single Family Dwelling 40 foot Front Yard Setback.

Describe the nature and extent of the desired variance from Ordinance requirements: listed above:

Desired variance is to reduce the 40 foot front yard setback requirement to a 28 foot front yard setback.

Describe reason(s) why the Ordinance requirement(s) in question would result in peculiar and/or unusual practical difficulties to or would impose exceptional or undue hardship upon the owner of the property if the requested variance were not granted:


### **Provide Detailed Explanation on Separate Sheet**

Has any previous petition or appeal involving this property been made to the Board?

☐ Yes ☒ No

If yes, list docket number(s): \_\_\_\_\_

I hereby certify that I have, to the best of my knowledge, accurately supplied the information required for the above referenced appeal.

  
Signature of Appellant

thehoffmans2013@gmail.com

Email of Appellant

Gary Lee Hoffman, Jr.

1521 Hoffmaster Road, Knoxville, MD 21758

Address and of Appellant

240-329-7277

Phone Number of Appellant

This appeal form is to be used to assist the customer in gathering the information necessary to submit an application. However, the application shall be processed in person.

January 25, 2023

Gary Lee Hoffman, Jr. Appellant  
Megan Lee Hoffman  
1521 Hoffmaster Road  
Knoxville, MD 21758

## **BZA Variance Criteria**

The subject property is located at 1521 Hoffmaster Road in Knoxville, MD and was originally developed around 1979 with a mobile home and a few outbuildings. The property has been in possession of the appellant's in-laws since 1989 and by his wife, Megan Lee Hoffman directly since 2013. Since 1989, this property has been primarily a rental property until 2022 when it was conveyed to the appellant and his wife. The property is currently within the 'EC' Environmental Conservation Zoning District, which requires a 40' minimum front yard setback for single family dwellings. In 2022, the appellant engaged Triad Engineering, Inc. to prepare a Plot Plan for the new proposed dwelling (see Exhibit "A") which shows the proposed dwelling to be within the 40' front yard setback. This is where the dwelling was intended to be constructed at this time. The Hoffman's and their contractors acquired permits from Washington County to proceed with construction. They have since removed the mobile home and constructed the new dwelling, however due an error during construction, the new dwelling was constructed within the 40' front yard setback as shown on the Foundation As-Built Survey performed by Triad Engineering, Inc. (see Exhibit "B"). Per this survey, the dwelling was constructed 12' over the front yard setback, which is why the appellant is requesting a variance from Section 5B.5 of the Zoning Ordinance and a reduction of the front yard setback from 40' to 28'.

### **A. Practical Difficulty**

1. Due to the dwelling already being constructed and this error being found near the end of the construction process, strict compliance with the required front yard setback would render conformance unnecessarily burdensome.

2. Considering the above information, denying the variances would do substantial injustice to the applicant and a relaxation lesser than the 28 foot front yard being applied for would not give substantial relief.

3. Granting the variance would observe the spirit of the Ordinance and not impede on public safety and welfare. The dwelling is located outside of the future right of way for Hoffmaster Road and the portion of dwelling that is over the setback is actually the right side. Due to the Owner's preferred position of the dwelling, the front of the dwelling actually faces to the Northeast and is not perpendicular to the existing public road.

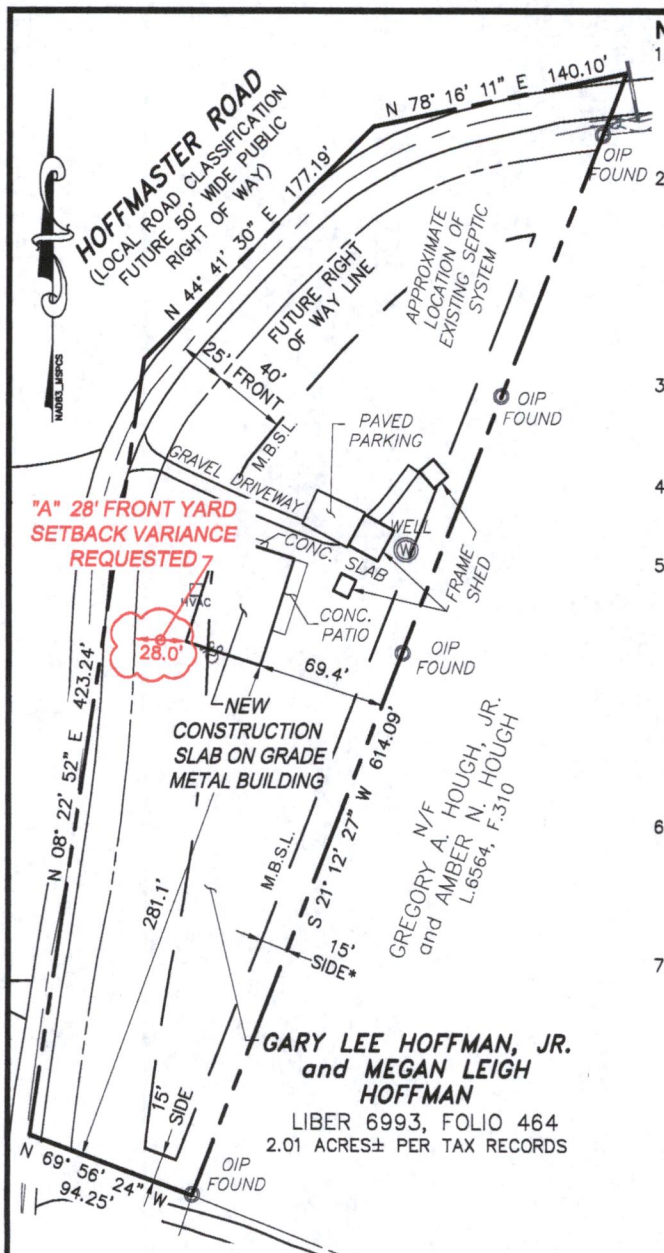


B. Undue Hardship

1. Due to the fact the dwelling is already constructed, under roof and the appellant was in the process of acquiring a Use and Occupancy permit to finally move in and enjoy their newly constructed dwelling, strict compliance with the Ordinance would prevent the applicant and owner from securing a reasonable return from or make reasonable use of this lot.

2. This lot does have a certain amount of underlying rock and is considerably smaller than the surrounding properties. The building envelope is long and slender, being much wider than it is deep, which is why the proposed location was chosen. Being the odd shape combined with the location of rock might be why the dwelling was constructed at it's current location and makes this hardship peculiar to the property and contrasts with those of other property owner's in the same district.

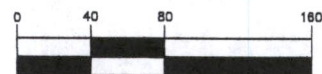
3. As stated previously, there was an error during construction and the new dwelling was constructed within the 40' front yard setback. This hardship is not the result of the applicant's own actions.



# NOTES:

- REFERENCE IS HEREBY MADE TO A PLAT ENTITLED, "BOUNDARY SURVEY FOR RONALD WHITE", AND RECORDED AMONG THE LAND RECORDS OF WASHINGTON COUNTY, MARYLAND AS PLAT NO. 1392.
- REFERENCE IS HEREBY MADE TO A PLAT ENTITLED, "PRELIMINARY/FINAL PLAT OF SUBDIVISION (PARCELS A AND B), SIMPLIFIED PLAT OF SUBDIVISION (PARCELS C AND D) FOR MICHAEL AND NANCY WRIGHT & ANN RENEE NICODEMUS AND ROY MARION RICKERDS II AND RECORDED AMONG THE AFORESAID LAND RECORDS AS PLAT NO. 3344.
- BOUNDARY LINES SHOWN HEREON ARE PER A FIELD SURVEY BY TRIAD ENGINEERING, INC. HORIZONTAL DATUM IS NAD83 MARYLAND STATE PLANE COORDINATE SYSTEM.
- CURRENTLY ZONED "EC" ENVIRONMENTAL CONSERVATION DISTRICT PER WASHINGTON COUNTY, MARYLAND ZONING ORDINANCE.
- MINIMUM BUILDING SETBACK LINES (M.B.S.L.) FOR SINGLE FAMILY DWELLING PER ZONING ORDINANCE: FRONT=40' SIDE=15' REAR\*=50' \* CORNER LOT SHALL MAINTAIN THE SPECIFIED FRONT YARD SETBACK ALONG BOTH STREET FRONTAGES. SETBACKS FROM THE REMAINING PROPERTY LINES SHALL BE MEASURED AS IF THEY WERE SIDE YARD SETBACKS. REAR SETBACK SHALL BE MEASURED AS IF THEY WERE SIDE DUE TO DUAL STREET FRONTAGE.
- PROPERTY SHOWN HEREON IS IN ZONE X, AREA OF MINIMAL FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAPS OF WASHINGTON COUNTY, MARYLAND, PANEL NUMBER 24043C0455D, WITH AN EFFECTIVE DATE OF AUGUST 15, 2017.
- THE PURPOSE OF THIS DRAWING IS TO SHOW THE LOCATION OF THE NEWLY CONSTRUCTED DWELLING FOUNDATION.

## GRAPHIC SCALE



( IN FEET )

1 inch = 80 ft.

## VARIANCE REQUEST

DEPICTED VARIANCE	SECTION OF ZONING ORDINANCE	TYPE OF REGULATION	ORDINANCE REQUIREMENT	PROPOSED DIMENSION (VARIANCE REQUESTED)
"A"	5B.5	FRONT YARD SETBACK	MINIMUM 40 FEET	28 FEET

CADD FILE:

03230054-Roberts-WC.dwg

DRAWN BY:

TEAM

CHECKED BY:

R.D.B.

DATE:

01/25/2023

SCALE:

1"=80'

## BOARD OF ZONING APPEALS EXHIBIT

GARY LEE HOFFMAN, JR. AND MEGAN LEIGH HOFFMAN

SITUATED AT 1521 HOFFMASTER ROAD IN KNOXVILLE,

WASHINGTON COUNTY, MARYLAND

ELECTION DISTRICT #11

TAX MAP: 0085

PARCEL: 0113

FILE NO:

JOB NO: 03220054

SHEET 1 of 1

**TRIAD**

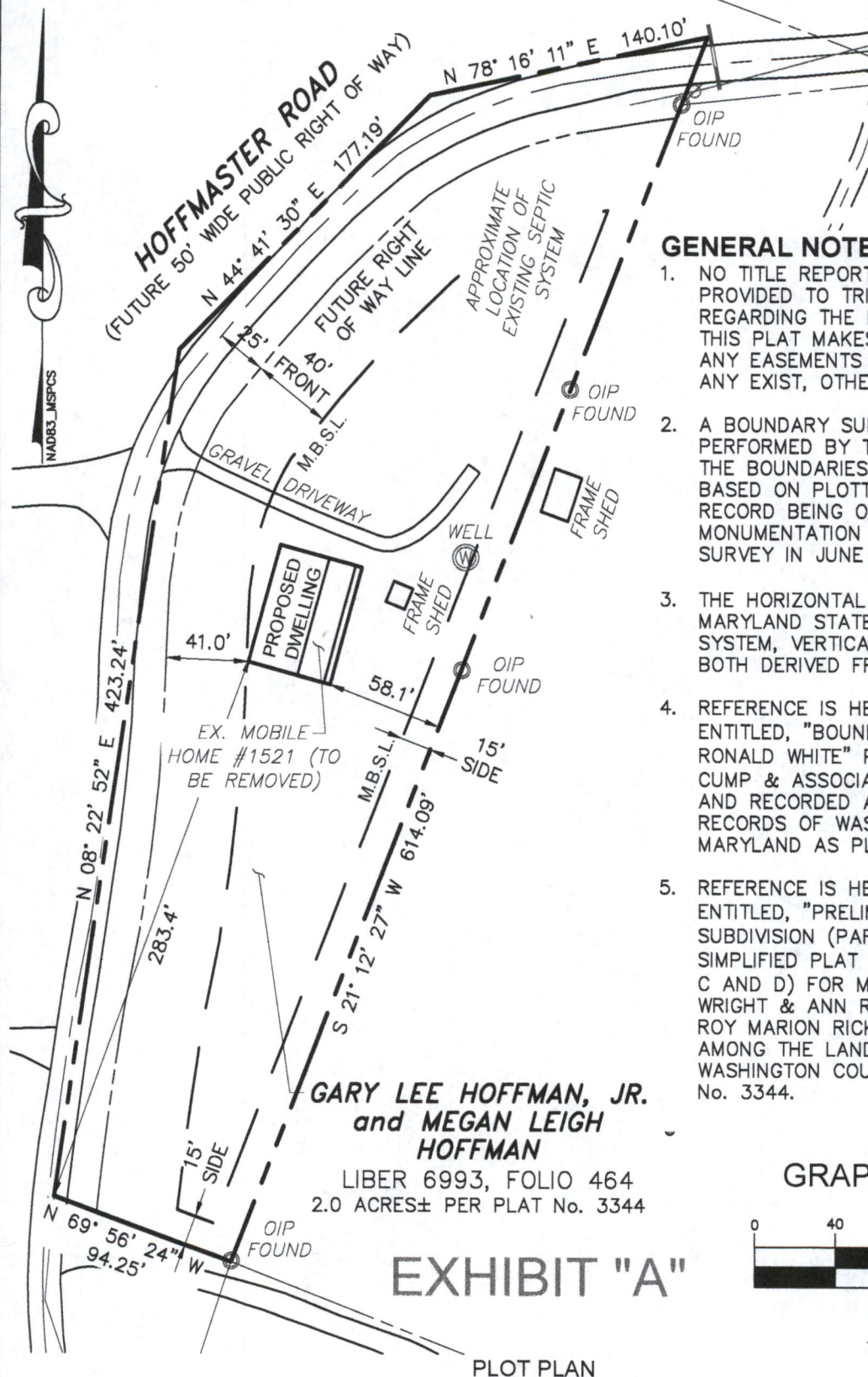
TRIAD ENGINEERING, INC.

www.triadeng.com

1075-D SHERMAN AVENUE

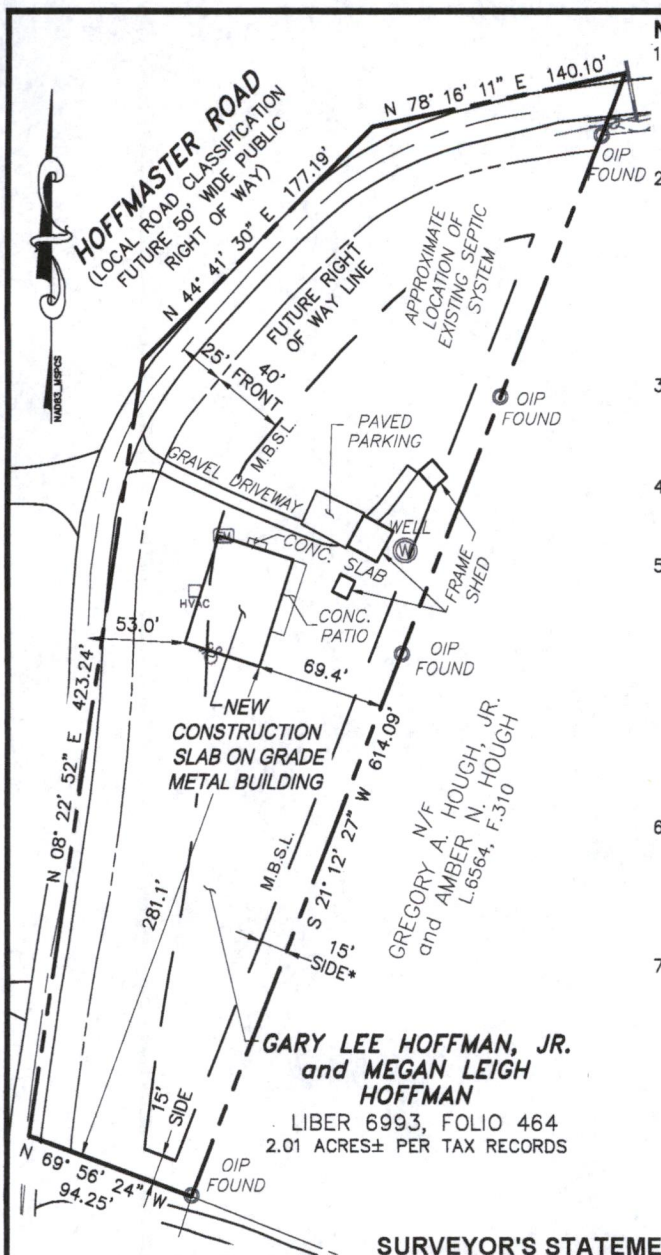
HAGERSTOWN, MD 21740





1075-D SHERMAN AVENUE  
HAGERSTOWN, MD 21740

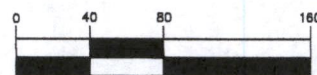




# NOTES:

1. REFERENCE IS HEREBY MADE TO A PLAT ENTITLED, "BOUNDARY SURVEY FOR RONALD WHITE", AND RECORDED AMONG THE LAND RECORDS OF WASHINGTON COUNTY, MARYLAND AS PLAT NO. 1392.
2. REFERENCE IS HEREBY MADE TO A PLAT ENTITLED, "PRELIMINARY/FINAL PLAT OF SUBDIVISION (PARCELS A AND B), SIMPLIFIED PLAT OF SUBDIVISION (PARCELS C AND D) FOR MICHAEL AND NANCY WRIGHT & ANN RENEE NICODEMUS AND ROY MARION RICKERDS II AND RECORDED AMONG THE AFORESAID LAND RECORDS AS PLAT NO. 3344.
3. BOUNDARY LINES SHOWN HEREON ARE PER A FIELD SURVEY BY TRIAD ENGINEERING, INC. HORIZONTAL DATUM IS NAD83 MARYLAND STATE PLANE COORDINATE SYSTEM.
4. CURRENTLY ZONED "EC" ENVIRONMENTAL CONSERVATION DISTRICT PER WASHINGTON COUNTY, MARYLAND ZONING ORDINANCE.
5. MINIMUM BUILDING SETBACK LINES (M.B.S.L.) FOR SINGLE FAMILY DWELLING PER ZONING ORDINANCE: FRONT=40' SIDE=15' REAR\*=50' \* CORNER LOT SHALL MAINTAIN THE SPECIFIED FRONT YARD SETBACK ALONG BOTH STREET FRONTAGES. SETBACKS FROM THE REMAINING PROPERTY LINES SHALL BE MEASURED AS IF THEY WERE SIDE YARD SETBACKS. REAR SETBACK SHALL BE MEASURED AS IF THEY WERE SIDE DUE TO DUAL STREET FRONTAGE.
6. PROPERTY SHOWN HEREON IS IN ZONE X, AREA OF MINIMAL FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAPS OF WASHINGTON COUNTY, MARYLAND, PANEL NUMBER 24043C0455D, WITH AN EFFECTIVE DATE OF AUGUST 15, 2017.
7. THE PURPOSE OF THIS DRAWING IS TO SHOW THE LOCATION OF THE NEWLY CONSTRUCTED DWELLING FOUNDATION.

## GRAPHIC SCALE



(IN FEET)

1 inch = 80 ft.

## SURVEYOR'S STATEMENT

I HEREBY CERTIFY THAT THE FOUNDATION SHOWN HEREON IS WITHIN THE METES AND BOUNDS OF THE LAND CONVEYED BY WESLEY H. ROBERTS AKA WESLEY HOWARD ROBERTS AND MEAGAN LEIGH HOFFMAN AKA MEGAN LEIGH ROBERTS UNTO GARY LEE HOFFMAN, JR., AND MEGAN LEIGH HOFFMAN BY DEED DATED APRIL 22, 2022 AND RECORDED AMONG THE LAND RECORDS OF WASHINGTON COUNTY, MARYLAND IN LIBER 6993, AT FOLIO 464, AND THAT THE FOUNDATION SHOWN HEREON WAS LOCATED BY ACCEPTED FIELD PRACTICES ON JANUARY 20, 2023. THIS PLAT IS NOT FOR DETERMINING PROPERTY LINES, BUT PREPARED FOR EXCLUSIVE USE OF PRESENT OWNERS OF PROPERTY AND ALSO THOSE WHO PURCHASE, MORTGAGE, OR GUARANTEE THE TITLE THERETO, AND AS TO THEM I WARRANT THE ACCURACY OF THIS PLAT. THIS PLAT IS OF BENEFIT TO A CONSUMER ONLY INsofar AS IT IS REQUIRED BY A LENDER OR A TITLE INSURANCE COMPANY OR ITS AGENT IN CONNECTION WITH THE CONTEMPLATED TRANSFER, FINANCING, OR RE-FINANCING. PROPERTY CORNERS HAVE NOT BEEN ESTABLISHED OR SET BY THIS FIRM. PROPERTY LINES SHOWN HAVE BEEN TAKEN FROM EXISTING FIELD MONUMENTATION AND/OR SURVEYS AND CURRENT DEEDS OF RECORD. THIS PLAT IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATION OF FENCES, GARAGES, BUILDINGS, OR OTHER EXISTING OR FUTURE IMPROVEMENTS. THIS PLAT DOES NOT PROVIDE FOR THE ACCURATE IDENTIFICATION OF PROPERTY BOUNDARY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING. WE ASSUME NO RESPONSIBILITY FOR ANY RIGHTS OF WAY, EASEMENTS OR SETBACK LINES RECORDED OR UNRECORDED, NOT APPEARING ON THE RECORD PLAT AND/OR CLEARLY DEFINED IN TITLE DEED REFERRED TO HEREON. NO TITLE REPORT FURNISHED.

01/25/2023  
DATE

RONALD D. BIDLE, JR.  
MARYLAND REGISTRATION #21517  
EXPIRES 07/13/2023

EXHIBIT "B"



CADD FILE:

03230054-Roberts-WC.dwg

## FOUNDATION AS-BUILT

GARY LEE HOFFMAN, JR. AND MEGAN LEIGH HOFFMAN  
SITUATED AT 1521 HOFFMASTER ROAD IN KNOXVILLE,  
WASHINGTON COUNTY, MARYLAND

DRAWN BY:

CHECKED BY:

TEAM

R.D.B.

ELECTION DISTRICT #11

TAX MAP: 0085

PARCEL: 0113

DATE:

SCALE:

01/25/2023

1"=80'

FILE NO:

JOB NO: 03220054

SHEET 1 of 1

**TRIAD**  
TRIAD ENGINEERING, INC.  
www.triadeng.com

1075-D SHERMAN AVENUE  
HAGERSTOWN, MD 21740

## BOARD OF APPEALS OF WASHINGTON COUNTY

### AMENDED RULES OF PROCEDURE

(Adopted ~~July 5, 2006~~)

#### General Governing Rules

The Board of Appeals of Washington County shall be governed by the provisions of all applicable state statutes, local laws, ordinances, and these rules. These rules have been adopted and promulgated pursuant to the Washington County Zoning Ordinance, Section 25.2(e).

#### Officers and Duties

##### (1) Chair and Vice Chair

The Board shall elect annually from its members, by a majority vote, a chair, who may be elected to succeed himself or herself. The Board may elect a vice-chair. The chair, or in his or her absence or incapacity, the vice-chair or an acting chair, shall decide all points of order, procedure, and evidence, and may administer oaths and compel the attendance of witnesses.

Formatted: Justified

##### (2) Secretary

In accordance with Section 25.3 of the Zoning Ordinance, the Board shall have a secretary in attendance at all meetings. The secretary shall make a recorded transcript of all proceedings, and shall keep records of all its official actions, all of which shall be immediately filed in the office of the Board and shall be a public record. The secretary shall keep a record of the proceedings of each meeting and each hearing which shall include: the vote of each member on each question or, if absent or failing to vote, indicating such fact; the names and addresses of all witnesses; a summary of the facts on which the decision is based; the decision rendered; and other official actions of the Board.

Formatted: Justified

#### Meetings

##### (1) Quorum

A quorum shall consist of three members of the Board.

##### (2) Time of Meeting

- a. Regular meetings shall be held, generally twice per month, on alternate Wednesdays at ~~7:00~~ 6:00 PM, or at such other day and hour as the chair may



designate. The first regular meeting in April shall constitute the annual organizational meeting of the Board.

Formatted: Justified

- b. Special meetings may be called by the chair at any time provided that at least 48 hours notice shall be given each member before a special meeting is held. The chair shall call a special meeting within 10 days of receipt of a written request from any two members of the Board.

### (3) Meetings Public

All meetings of the Board shall be open to the public.

### (4) Cancellation of Meetings

Whenever there are no appeals for special exceptions or variances or other pertinent business to be considered at a regular meeting, the chair may dispense with such meeting by so notifying each member at least 48 hours prior to the time set for such meeting:

Formatted: Justified

### (5) Order of Business

The order of business shall be:

- a. Introduction of members and others present;
- b. Explanation of quorum and voting;
- c. Public hearings in an order as determined by the Board;
- d. Deliberations;
- e. Other business; and
- f. Adjournment.

### (6) Voting and Disqualification of Members

All matters shall be decided by voice vote. All decisions shall require the affirmative vote of three (3) members of the Board present at such hearing. No member of the Board shall sit in a hearing of or vote on any matter in which he or she is personally or financially interested, nor shall he or she vote on any appeal without having attended the hearing thereon.

Formatted: Justified

## **Inspection of Property**

When the Board exercises its discretion to view a property subject to appeal pursuant to the Ordinance, the Chair shall designate a time and date for at least two (2) members to inspect the subject property, before or after the hearing, but prior to the Board's determination of the appeal.

Formatted: Justified

## **Public Hearings**

### (1) Matters Requiring Public Hearings

A public hearing shall be required in all appeals from any order, requirement, decision, or determination made by an administrative official or agency whose duty it is to enforce planning or zoning ordinances; in all appeals for special exceptions to the Zoning

Ordinance; in all appeals from the terms of the Zoning Ordinance; remanded cases from a higher court; and in all other matters in which the Board has jurisdiction. The Board shall exercise the powers granted in Section 25 of the Zoning Ordinance.

Formatted: Justified

#### (2) Notice of Hearings

No appeal shall be decided until after due notice has been given and a public hearing has been held thereon. Due notice of a hearing shall be as follows:

Formatted: Justified

- a. Notice of the hearing shall be advertised in two consecutive issues of a newspaper having general circulation in the County. The first insertion shall appear in such newspaper at least fifteen (15) days prior to such hearing.
- b. By posting or causing to be posted conspicuously a zoning notice on the property which is the subject of the application or appeal. The zoning notice shall be no less than twenty-two (22) inches by twenty-eight (28) inches in size, and shall be posted at least fourteen (14) days before the date of the hearing.
- c. The Board shall mail notice of the hearing to the appellant or applicant or his or her attorney or agent at least fifteen (15) days before the date of the hearing.
- d. The Board may also, insofar as practicable, mail notices of the hearing of an appeal to all property owners who adjoin or confront the subject property. Compliance with this subparagraph shall not be a requirement of proper legal notice and no hearing or action taken thereon shall be deemed invalid or illegal because of any failure to mail the notices provided for in this subparagraph.

Formatted: Justified, Indent: Left: 1", Hanging: 0.19"

#### (3) Postponement of Hearing

A hearing may be postponed by the Board upon the request of a party for good cause. When it is not practicable for the Board as a whole to decide upon a request for a postponement, the Chair of the Board, in his or her sole discretion, may render such a decision.

Formatted: Justified

#### (4) Conduct of Public Hearings

##### a. Appearance of Applicant

Any person may appear in person or by agent or attorney at any public hearing. If a person fails to appear either in person, by agent or attorney, the appeal shall be denied.

Formatted: Justified, Indent: Left: 1.5", First line: 0"

##### b. Tardy Appearances

The applicant shall be present and ready to present his or her case within fifteen (15) minutes of the time it is called. If the applicant is not

Formatted: Justified

present and ready when the case is called, but appears within fifteen (15) minutes after the case is called, the case can be heard after the case then before the Board if the witnesses are still present. After other witnesses for the applicant's case have been dismissed, the case shall not be heard.

c. Order of Proceedings

The order of proceedings in the hearing of each case at a public hearing shall be as follows:

- (1) Reading of the public notice for the hearing by the chair;
- (2) Presentations by County staff regarding the case;
- (3) Reading of written comments or reports concerning the appeal, in the discretion of the Board;
- (4) Sworn testimony of witnesses in favor of the appeal;
- (5) Sworn testimony of witnesses in opposition to the appeal;
- (6) Sworn testimony in rebuttal, in the discretion of the Board  
(The right to rebut and explain adverse testimony may be allowed in the discretion of the Board); and
- (7) Closing arguments, if requested by the Board.

Formatted: Indent: First line: 1.5"

Formatted: Indent: First line: 1.5"

d. Time Limitations

Applicants shall have ten (10) minutes in which to present their request and may, upon request to and permission of the Board, receive an additional twenty (20) minutes for their presentation. Following the Applicant's case in chief, other individuals may receive three (3) minutes to testify, except in the circumstance where an individual is representing a group, in which case said individual shall be given eight (8) minutes to testify.

Those Applicants requesting the additional twenty (20) minutes shall have their case automatically moved to the end of the docket.

For extraordinary cause, the Board may extend any time period set forth herein, or otherwise modify or suspend these Rules, to uphold the spirit of the Ordinance and to do substantial justice.

e. Evidence

The Board shall determine matters of relevancy, materiality and competency of evidence in its discretion. Property owners, as well as affected parties and the general public, are encouraged to provide input of relevant evidence into the hearings, without the requirement of

adherence to strict judicial principles pertaining to the rules of evidence. Hearsay evidence is admissible if credible and of sufficient probative force. It may even be the sole basis for a decision.

Applicants shall submit all documents, materials and exhibits which are intended to be presented by 12:00 p.m. noon, at least one (1) business day prior to the scheduled hearing. Failure to do so may result in the Board refusing to consider such evidence, unless good cause is otherwise demonstrated by the Applicant.

Formatted: Justified, Indent: Left: 1.5", First line: 0"

f. Cross Examination

If hearings are adversarial in nature, witnesses may be cross-examined. A party must request the right to cross-examine a witness or that party shall be deemed to have waived the right to cross-examine.

g. Conclusions of Board Members

Conclusions of Board members shall be based upon the evidence and not upon the opinions of individual Board members.

**Decisions**

**(1) Form of Decisions**

All decisions of the Board of Appeals shall be in the form of written opinions. The basis for the determination of each appeal and the material facts found by the Board from the hearing shall be set forth in the decision and shall constitute a part of the record. The decision may, in the discretion of the Board, also contain conditions and safeguards on any grant of relief to the applicant.

**(2) Time of Decision**

The Board shall render its written decision pursuant to Section 25.55 of the Ordinance.

**(3) Notice of Decision**

A written copy of the decision of the Board shall be mailed to the applicant or his attorney or agent by certified mail, return receipt requested, where the application is denied or where specific conditions are imposed. All other decisions may be sent by regular mail.

**Amendments**

These rules may be amended at any regular meeting by an affirmative vote of not less than four members of the Board, provided that such amendment has been presented in writing to each member of the Board at least 48 hours preceding the meeting at which the vote is taken.