Town of South Bristol
6500 West Gannett Hill Road
Naples, NY 14512-9216
585.374.6341

Zoning Board of Appeals Meeting Agenda

Wednesday, July 27, 2022
7:00 pm

Meeting in-person or by joining

Zoom Meeting ID 81038506342, Passcode 824949

https://us02web.zoom.us/j/81038506342?pwd=TtSjsuo0l9se8uuXKBhbMvaWYXF-sP.1

Call to Order

Pledge of Allegiance

Minutes
Approval of April 27, 2022 Zoning Board of Appeals Meeting Minutes

Rules of Order

New Business
Special Use Permit Application 2022-0020
Owner: SBA Towers LLC
Representative: GPD Group for DRW NX LLC
Property: 5776 Stid Hill Rd
Tax Map #: 177.00-1-7.200
Zoned: R-5 (Residential 5 Acre)

Other

Motion to Adjourn

Town of South Bristol Zoning Board of Appeals Meeting Minutes
Wednesday, July 27, 2022

Present: Thomas Burgie
Carol Dulski
Jonathan Gage
Martin Gordon
John Holtz
Barbara Howard

Guests: Justin Butterfield
Mev Cabrales

Call to Order
The meeting of the Town of South Bristol Zoning Board of Appeals was called to order at 7:01 pm followed by the Pledge of Allegiance.

Chairman Burgie: Since I have been on the board, we have not had an application for a special use to amend or build a tower of any type. It is a little bit new to all of us. In fact, there is already a special use permit for this tower. The application is to amend to the tower by putting a new antenna on it. It is not to build a tower. The special use already exists, however, the town code as written says any and all modifications, additions, deletions or changes to antenna towers that operate under a special use permit whether structural or not shall be made by special use permit. Unless it is a repair and this is not a repair. This is an addition to it so it needs to be made by special use, which is a new special use for this specific application. This specific antenna being put on the tower. We may change the code. We had a meeting yesterday and talked about that. We may change the code in the future where it is already under a special use. The Planning Board could theoretically see the site plan and the structural analysis report for adding something to it and say okay it meets everything you are approved. That I think that is where it will go in the future. That could not happen fast enough for this modification that they wanted to do. We are going to do a special use permit application tonight and proceed on that basis.

There was a roll call of board members with all present.

Minutes
Chairman Burgie called for a motion to approve the April 27, 2022 Zoning Board of Appeals meeting minutes as written. Barbara Howard moved to approve the meeting minutes. Jonathan Gage seconded the motion. The motion was unanimously adopted by all board members present.

Rules of Order
Thomas Burgie read the Rules of Order.

New Business

Special Use Permit Application 2022-0020

Owner: SBA Towers LLC
Representative: GPD Group for DRW NX LLC
Property: 5776 Stid Hill Rd
Tax Map #: 177.00-1-7.200
Zoned: R-5 (Residential 5 Acre)

Legal Notice of Public Hearing

Please take notice that the Town of South Bristol Zoning Board of Appeals will hold a public hearing on the following applications:

2022-0020 for property owned by SBA Towers LLC located at 5776 Stid Hill Road, tax map #177.00-1-7.200. The owner and applicant DRW NX LLC are looking for a special use permit for antenna tower to install a new equipment cabinet within 6 foot by 10 foot lease area within the tower compound and 100A electrical service and install new (2) 6 foot MW dishes, (4) SAF radios, associated cabling and associated mounting equipment.

Said hearing will take place on the 27th day of July, 2022 beginning at 7:00 pm at the South Bristol Town Hall, 6500 West Gannett Hill Road, Naples, NY 14512.

All interested parties may provide written comments, appear in person or by representative.

Diane Scholtz Graham
Board Assistant

Chairman Burgie: This is the opportunity for the applicant to present your case. Any information that may amply what you have put in your application.

Justin Butterfield: Appreciate all your time. This is Justin Butterfield with GPD Group. We are representing DRW today as owner and applicant on the existing 199 foot tall telecommunication tower owned by SBA Communications. The team has provided to the Board a structural analysis showing that the equipment being proposed on the tower is sufficient for the installation as well as construction documents signed and sealed by a New York engineer for the installation of the ground and tower equipment. As well as a RF maximum permissible exposure study showing that the equipment being installed on the tower meets FCC regulation in regard to the RF exposure. In addition to that we have provided the tower owner's FCC registration for the structure showing that it is compliance as well as the applicant DRW FCC application to transmit the frequencies on the structure. Under this information provided to the board we would like to seek approval for the installation of equipment on the existing telecommunication tower owned and operated by SBA.

Chairman Burgie: I understood you to say you have applied for an FCC license for this, but you have not received the approval.

Justin Butterfield: That is correct. It is still pending from FCC.

Chairman Burgie: Good. Thank you. This is a special use permit. This is not anything not allowed by the town code. Therefore, the CEO isn't here to really discuss why he did not give the permit because he does not give the permit the Zoning Board of Appeals does give the approval. There is nothing outside the town code. The reason we do a special use permit on the Board is because the Town Board felt that certain things people want to do or build require a little bit more oversight to make sure that it makes sense. It is not just left in the hands of the code enforcement officer. It is actually put to the board to review these things. That is what we are doing here tonight. If it meets the requirements, then we are required to grant the special use. If it does not meet any of the requirements, then we will discuss those as we go through. Any visitation reports? Anyone had the opportunity to visit the tower?
Barbara Howard: I did. Is there any way we can see them instead of just their name?

Diane Graham: Can we see you Mev and Justin? The Board members were asking. Thank you. Nice to see you.

Justin Butterfield: No problem.

Barbara Howard: My visitation I did go up this afternoon. After going up a long driveway, it seems to be a relatively enclosed space. It does not look like anything that anybody lives nearby would even see it. I did not find anything offensive. I am not sure if they have their red or whatever color ribbons on the guy lines. Maybe more than ten feet.

Chairman Burgie: Anybody else?

Diane Graham: Please talk into the microphone. Thank you.

Carol Dulski: I went up there a couple of weeks ago and like Barb said it is pretty remote up there. There was a big truck sitting in the driveway, so I just walked up and saw the dog kennel. I hope I was in the right area and the big tower. I did not have any issues.

Jonathan Gage: I went up the wrong driveway and then did not want to go up the neighbor's driveway without being sure that it was the right place.

Barbara Howard: I probably should put this on record that we actually took down the chain so we could get all the way up there. It is very easy to find the wrong driveway. He knows because he was in the driveway that was the wrong one. We had a very nice chat. He has a very nice dog.

John Holtz: I went up there and just so you know if you are driving your motorcycle you can lift the cable and scoot under on your bike so you do not have to walk all the way up there. I walked around. I do not really know. I am not an engineer, but I tried to figure out where they were going to go. I think the ones you can see they are going below that on the tower. Again, I do not see anything that would require any modification that I could think of.

Chairman Burgie: Thank you. I did not get a chance to go up and see it. Just reading the application. At what height are the antennas being put on the tower?

Justin Butterfield: A 125 feet above ground level.

Chairman Burgie: There is no modification to the tower itself or the height of the tower?

Justin Butterfield: Correct.

Chairman Burgie: Thank you.

Martin Gordon: Tom, I went up too.

Chairman Burgie: I am sorry.

Martin Gordon: It is alright.

Chairman Burgie: Got to speak up.

Martin Gordon: Well, I was just waiting my turn. I went up there and what everybody said before me is true. I concur. The one thing I noticed was the proposed installation height is above some existing antennas, receivers, transmitters that are already on the tower. I think that is significant and it is not the lowest set of antennas on that tower. This drawing we have here on tower elevation I do not think it quite matches the photos I took. I am curious what's the landmark beneath, which this is going to be installed. If you look at a picture can somebody identify that? My other point is I note that the tower is 199 feet tall. I know it is existing, but town code stipulates 195 feet maximum.

Chairman Burgie: This tower was actually built before the town code was written, therefore, it is grandfathered pre-existing non-conforming.

Martin Gordon: One other thing I noticed it not really a site inspection but all the drawings have been properly stamped and sealed by a PE that are registered in New York and it all current.

Diane Graham: It is or is not?

Martin Gordon: They are.

Justin Butterfield: My colleague, Chris Scheks, would of stamped the construction drawings and then SBA hired another engineer to do the structural analysis who is also a New York PE.

Diane Graham: Did you have a question, Martin?

Martin Gordon: No. I just made that observation.

Justin Butterfield: Martin, to clarify your question about the tower height. We submitted to the Planning Board in 1996 there was a variance approved for the tower to be extended to 199.

Martin Gordon: I have no question. I just bring it up as a point of information.

Justin Butterfield: From the ground level on your original question the height would be above grade. So above the ground level of the base of the tower. I believe there is a guy wire elevation just below the elevation of the equipment. That would be a potential landmark to reference on the structure to where the equipment is going to be installed.

Martin Gordon: I do see it now. It is up with other equipment.

Justin Butterfield: There are several remarkable elevations on the structure.

Martin Gordon: Yes.

Chairman Burgie: I lost track of the number of all the antennas that are on it. It is like about twenty or so. There is a lot of equipment on this tower.

Martin Gordon: I guess my other observation is the RF report exposure report that was done by Butcher said that even if you are standing in front of the antenna, you do not exceed occupational hazard guidelines. Pretty benign.

Chairman Burgie: Thank you.

Martin Gordon: I am curious. What are these used for? Where is the link going?

Justin Butterfield: This particular client carrier may run an internal data communication system in which this network is made for their own use. They work in the financial industry so this is all their internal data communications.

Chairman Burgie: Thank you. Anything else Marty? Okay. Time to determine the SEQRA status. SEQRA is the State Environmental Quality Review Act. It is required any time we consider a variance, a special use or anything of that nature. This is just a little bit different in SEQRA in that the six by ten equipment cabinet that will be installed is a Type II. It is a "*construction or expansion of a primary or accessory appurtenant non-residential structure facility involving less than four thousand square feet*" that is 617.5(c)(9). That would a Type II for the actual cabinet that goes in, however, there is nothing in the Type I or Type II list that addresses an addition to an antenna tower. A modification or addition to it. Type I action involves further study. Type II are already determined by the state as not requiring any further study. The third category is unlisted. This is an unlisted addition for the actual two antennas that you are going to be putting on the tower. What we are required to do for the unlisted is to go to the application to the short form part 2 and go step by step through this and make sure there is nothing that would be significant.

1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations? No.

Anybody disagree with me as I go through this please let me know.

2. Will the proposed action result in a change in the use or intensity of use of land? No.
3. Will the proposed action impair the character or quality of the existing community? No.
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)? No.
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway? No.
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities? No.

7. Will the proposed action impact existing:
    a. Public / private water supplies? No.
    b. Public / private wastewater treatment utilities? No.
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural, or aesthetic resources? No.
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna? No.
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems? No.
11. Will the proposed action create a hazard to environmental resources or human health? No.

All of those are no. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Not applicable. All of them are no significant impact.

Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required. We said no.

Check this box if you have determined, based on the information and analysis above, and any supporting documentation that the proposed action will not result in any significant adverse environmental impacts. If anybody disagrees with that, I see no significant impacts.

Jonathan Gage: No. Straight ahead.

Chairman Burgie: We have a Type II and Unlisted and we did the short environmental form and that can cover both of them, Diane.

Diane Graham: Okay.

Chairman Burgie: We will capture that as finding number one when we get to that point. This is where we open it up to a public hearing. If anybody from the public would like to provide a statement in support of or against this is the time to do it. I will close the public hearing. Do we have any public or municipal officer's documentation as appropriate to this case? I do not remember seeing anything.

Diane Graham: Just what they provided.

Chairman Burgie: I open it up to Zoning Board of Appeals discussion and debate period.

John Holtz: Seems pretty cut and dry to me.

Barbara Howard: We are correct that the special use permit that came into play in 1990s is still exactly as it is and not changed. Can we really say no?

Chairman Burgie: That is true. That special use is for the tower. Each one of the antennas that go on the tower under our present code require another special use.

Barbara Howard: I understand it is required.

Chairman Burgie: The original special use and any that have been issued for antennas that are on there are all in effect.

Barbara Howard: That is my assumption.

Chairman Burgie: Anything? Okay. Then it time to determine the findings. As you look at the special use requirements for specifically the antennas on the tower. Almost every requirement in here for them are for the tower. We do not need to go through every one of those because they are not applicable to this special use permit and they have not changed. One thing I want to point out is that although the antennas being put on here are owned by a different owner. The special use permit will be issued to the land owner. Not a big deal. We will issue the special use permit to the tower owner for this application. As I go through all of these, the only thing that I see for tall antenna towers is we a copy of the providers FCC license. The FCC license will have to be provided before construction of these antennas on there. Site plan has been provided and the Planning Board has had an initial review of that. That site plan will approved also by the Planning Board prior to construction. Otherwise, there is not anything specific in the special use requirements for antenna towers that apply here. We have some general requirements by the town code that we need to look at every time.

Finding #1
Thomas Burgie moved that the SEQR status as an unlisted. We reviewed it and there is no potential for significant environmental impact. Jonathan Gage seconded the motion.

All in favor.

Ayes: 5, T. Burgie, C. Dulski, J. Gage, J. Holtz, B. Howard
Nays: 0

Motion carried.

Finding #2
Thomas Burgie moved that the use is consistent with the Town Comprehensive Plan of our Town. Barbara Howard seconded the motion.

All in favor.

Ayes: 5, T. Burgie, C. Dulski, J. Gage, J. Holtz, B. Howard
Nays: 0

Motion carried.

Finding #3
Thomas Burgie moved that the use is consistent with the purposes of the zoning law of our Town. Carol Dulski seconded the motion.

All in favor.

Ayes: 5, T. Burgie, C. Dulski, J. Gage, J. Holtz, B. Howard
Nays: 0

Motion carried.

Finding #4
Thomas Burgie moved that the use will not adversely affect the character of the neighborhood. Barbara Howard seconded the motion.

All in favor.

Ayes: 5, T. Burgie, C. Dulski, J. Gage, J. Holtz, B. Howard
Nays: 0

Motion carried.

Finding #5
Thomas Burgie moved that the use will not be detrimental to nearby properties. Barbara Howard seconded the motion.

All in favor.

Ayes: 5, T. Burgie, C. Dulski, J. Gage, J. Holtz, B. Howard
Nays: 0

Motion carried.

Finding #6
Thomas Burgie moved that the use will not have an adverse impact on the physical or environmental conditions of the neighborhood. Carol Dulski seconded the motion.

All in favor.

Ayes: 5, T. Burgie, C. Dulski, J. Gage, J. Holtz, B. Howard
Nays: 0

Motion carried.

Finding #7
Thomas Burgie moved that this application does meet the special use requirements in paragraph §170-36 Antenna Towers of the Town Code.

Martin Gordon: I have a question about that. Does it even though the tower exceeds the height?

Chairman Burgie: This does not affect the variance that was already given. Once the variance is given for the 199 feet that becomes the new code standard for this tower. So yes it does meet.

John Holtz seconded the motion.

All in favor.

Ayes: 5, T. Burgie, C. Dulski, J. Gage, J. Holtz, B. Howard
Nays: 0

Motion carried.

Chairman Burgie: Any other findings that you would like to make?

Jonathan Gage: You said the condition was the granting of the FCC license.

Chairman Burgie: Condition is next. This is a finding. I agree with you. Marty anything?

Martin Gordon: No.

Chairman Burgie: Any conditions that we need to state.

Jonathan Gage moved to make a condition that DRW NX LLC receive their FCC License before construction. Barbara Howard seconded the motion.

All in favor.

Ayes: 5, T. Burgie, C. Dulski, J. Gage, J. Holtz, B. Howard
Nays: 0

Motion carried.

Chairman Burgie: Any other conditions?

Martin Gordon: It does not apply to this particularly, but the chain across the road is not secure.

Barbara Howard: It is not.

Martin Gordon: Someone wondering up there. There is posted signs and all.

Barbara Howard: They can walk around it too.

Martin Gordon: They could drive a vehicle around it.

Jonathan Gage: You could put a motorcycle under it.

Martin Gordon: It is not a condition. I do not know what the original conditions were for the tower.

Chairman Burgie: It does not say anything in the code that requires attached chain or anything of that nature.

Martin Gordon: There is a requirement for fencing around any areas that will present hazards like RF radiation. That seems to have been done.

Barbara Howard: They are battleship grey.

Chairman Burgie: We good? Okay. Any other conditions? Then may I have a motion from the Board to approve or deny the applicant's request for a special use permit to add on to the tower?

Martin Gordon moved to approve the applicant's request for a special use permit. Barbara Howard seconded the motion.

Vote of the Board:

Thomas Burgie – Aye
Carol Dulski – Aye
Jonathan Gage – Aye
John Holtz – Aye
Barbara Howard – Aye

Motion carried.

Chairman Burgie: Construction cannot start until you have the FCC license. Justin are you still there?

Justin Butterfield: I am. You guys caught me late in the night and the cleaning crew ran through my office. So I had to run out. I appreciate your time. Thank you. Good news. Thanks guys.

Diane Graham: Thank you Mev for being here just in case we needed you.

Mev Cabrales: Thank you. Thank you for having me.

Other

Board Meeting Documents

- Combination digital documents/paper site plans

Town Code Review Update

- Special Use Permits

Motion to Adjourn
Being no further business, Barbara Howard moved to adjourn the meeting. Carol Dulski seconded the motion. The motion was unanimously adopted and the meeting was adjourned at 8:02 pm.

Respectfully submitted,

Diane S. Graham

Diane Scholtz Graham
Board Assistant

Appendix
SBA Towers LLC FCC Registration
Antenna Tower Structural Analysis Report
Radio Frequency Exposure Assessment
DRW NX LLC Application for FCC License
Zoning Board of Appeals Amended Special Use Permit 09.03.1996

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
ANTENNA STRUCTURE REGISTRATION

OWNER: SBA TOWERS, INC.

FCC Registration Number (FRN): 0005793260

ATTN: EDWARD G. ROACH SBA TOWERS, INC. 5900 BROKEN SOUND PARKWAY NW BOCA RATON, FL 33487	**Antenna Structure Registration Number** 1050934
	Issue Date 04-27-2010
Location of Antenna Structure 5776 Stid Hill Road (NY00011-A) Naples, NY	**Ground Elevation (AMSL)** 618.4 **meters**
	Overall Height Above Ground (AGL) 60.7 **meters**
Latitude 42-44-30.1 N **Longitude** 077-23-16.3 W **NAD83**	**Overall Height Above Mean Sea Level (AMSL)** 679.1 **meters**

Painting and Lighting Requirements:
NONE

Conditions:

This registration is effective upon completion of the described antenna structure and notification to the Commission. **YOU MUST NOTIFY THE COMMISSION WITHIN 24 HOURS OF COMPLETION OF CONSTRUCTION OR CANCELLATION OF YOUR PROJECT, please file FCC Form 854.** To file electronically, connect to the antenna structure registration system by pointing your web browser to http://wireless.fcc.gov/antenna. Electronic filing is recommended. You may also file manually by submitting a paper copy of FCC Form 854. Use purpose code "NT" for notification of completion of construction; use purpose code "CA" to cancel your registration.

The Antenna Structure Registration is not an authorization to construct radio facilities or transmit radio signals. It is necessary that all radio equipment on this structure be covered by a valid FCC license or construction permit.

You must immediately provide a copy of this Registration to all tenant licensees and permittees sited on the structure described on this Registration (although not required, you may want to use Certified Mail to obtain proof of receipt), and *display* your Registration Number at the site. See reverse for important information about the Commission's Antenna Structure Registration rules.

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 199 ft Nudd Corporation Guyed Tower

Customer Name: SBA Communications Corp

Customer Site Number: NY00011-A

Customer Site Name: South Bristol

Carrier Name: DRW Canada Co. (App#: 133031-4)

Carrier Site ID / Name: US.NY.SBA.NY00011-A / South Bristol

Site Location: 5776 Stid Hill Road

Naples, New York

Ontario County

Latitude: 42.741683

Longitude: -77.387861

04/26/22

Analysis Result:

Max Structural Usage: 100.7% [Pass]

Max Foundation Usage: 65.1% [Pass]

Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Mohammed Al Rubaye

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 199 ft Nudd Corporation Guyed Tower

Customer Name: SBA Communications Corp

Customer Site Number: NY00011-A

Customer Site Name: South Bristol

Carrier Name: DRW Canada Co. (App#: 133031-4)

Carrier Site ID / Name: US.NY.SBA.NY00011-A / South Bristol

Site Location: 5776 Stid Hill Road

Naples, New York

Ontario County

Latitude: 42.741683

Longitude: -77.387861

Analysis Result:

Max Structural Usage: 100.7% [Pass]

Max Foundation Usage: 65.1% [Pass]

Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Mohammed Al Rubaye

Introduction

The purpose of this report is to summarize the analysis results on the 199 ft Nudd Corporation Guyed Tower to support the proposed antennas and transmission lines in addition to those currently installed.

The pending modification by **TES** listed under Sources of Information was also considered completed and was included in this analysis.

Sources of Information

Tower Drawings	Nudd Corporation, Project #6246 dated October 7, 1998 FDH, Inc., Job #06-0247T dated February 29, 2006
Foundation Drawing	FDH Engineering, Inc., Mapping Project #06-0153N dated February 24, 2006
Geotechnical Report	FDH Engineering, Inc., Project #1421951600 dated January 21, 2014
Modification Drawings	FDH Engineering, Inc., Project #06-0153E dated March 17, 2006 FDH Engineering, Inc., Project #09-08155E S2 dated October 28, 2010 FDH Engineering, Inc., Project #146D131400 dated September 19, 2014
Pending Modification	TES Pending Job # 114359. Dated 03/03/2022

Analysis Criteria

The comprehensive analysis was performed in accordance with the requirements and stipulations of the TIA-222-H. In accordance with this standard, the structure was analyzed using **TESTowers,** a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	110.0 mph (3-Sec. Gust) (Ultimate wind speed)
Basic Wind Speed with Ice:	40 mph (3-Sec. Gust) with 1”1/2 radial ice concurrent
Operational Wind Speed:	60 mph + 0” Radial ice
Standard/Codes:	TIA-222-H / 2018 IBC / 2020 Building Code of New York State
Exposure Category:	B
Structure Class:	II
Topographic Category:	3
Crest Height:	849 ft
Seismic Parameters:	SS = 0.15, S1 = 0.047

This structural analysis is based upon the tower being classified as Structure Class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft.)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	195.0	6	JMA Wireless MX10FIT865- Panel	(3) Sector Frames - Armor Tower 8' HD-UPNY w/ Mounting Brackets	(6) 1 5/8" (2) 1 5/8" Hybrid	Verizon
2		3	Samsung MT6407-77A- Panel			
3		3	Commscope TD-850B-10LTE78- Diplexer			
4		3	Samsung B2/B66A RRH-BR049 (RFV01U-D1A)-RRU			
5		3	Samsung B5/B13 RRF-BRO4C (RFV01U-D2A)-RRU			
6		1	Samsung CBRS RRH-RT 440-48A-RRU			
7		1	Raycap RxxDC-3315-PF-48-OVP			
9	186.0	6	Andrew - SBJAH4-1D65C-DL - Panel	(3) 12' T-Frame (3) SitePro STK-U Stiff Arm Kits	(12) 1 5/8" (6) 3/4" DC (2) 7/16" Fiber	AT&T
10		3	Andrew - SBNH-1D6565C - Panel			
11		3	Andrew - E15Z01P13 - TMA/TTA			
12		6	KMW KDXCV0012017 Diplexer -			
13		3	Ericsson 8843 B2/B66A RRU -			
14		3	Ericsson RRUS-11 Band 12 -			
15		3	Ericsson RRUS-4415 B30 RRU -			
16		3	Ericsson RRUS-4478 B5 RRU -			
17		3	Raycap DC6-48-60-18-8F COVP -			
18	185.5	1	Decibel - DB408 - Whip		(1) 7/8"	Pfeiffer
19	180.0	1	Cushcraft - PR450 CU - Dish	Pipe	(1) 7/8"	
20	167.0	3	Andrew HBXX-6517DS-A2M - Panel	(3) T-Frame (Valmont VFA10-U)	(4) 1 5/8" Fiber (1) 1/2"	T-Mobile
21		3	RFS APXVAARR24_43-U-NA20 - Panel			
22		3	Ericsson AIR6449 B41 - Panel			
23		3	Ericsson 4449 B71 + B85 - RRU			
24		3	Ericsson 4415 B66A - RRU			
25		3	Ericsson RRUS 4424 B25 - RRU			
26		1	GPS - Whip			
27	160.0	3	Commscope - TTTT65AP-1XR - Panel	(3) 12' T-Frame (Mod) (3) Sitepro SPTB	(3) 1.76" Fiber	Sprint Nextel
28		3	Commscope - NNVV-65B-R4 - Panel			
29		3	Samsung - RRH-P4 – RRU			
30		3	Samsung - RRH-B8 – RRU			
31		3	Samsung - RRH-C4 - RRU			
32		3	Samsung EP96-04223A			
33		3	Samsung EP96-04225A			
34	159.0	2	Decibel - DB420	(3) 18’ T-Frames	(1) 7/8"	Pfeiffer
36	102.0	1	Andrew P4-57W- Dish	Mounting Bracket	(1) 5/8"	Verizon
37	102.0	-	-	(1) 18” Standoff	(1) 7/8	-
38	92.0	1	Cushcraft - PR450 CU - Dish	(1) 2’ Standoff	(1) 7/8"	Pfeiffer
39	75.5	1	Cushcraft - PR450 CU - Dish	Pipe	(1) 7/8"	
40	64.5	1	Cushcraft - PR450 CU - Dish	Pipe	(1) 7/8"	

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
35	125.0	2	Commscope USX6-6W - Dish	(2) Commscope PM-SC4-96	(6) 1/2" (6) 1/4" Cat6 (6) 1/4" Copper	DRW Canada Co.
36		4	SAF SAF ODU			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

Tower Component	Legs	Diagonals	Horizontals	Guy Wires
Max. Usage:	**100.7%**	**94.3%**	**58.3%**	**92.2%**
Pass/Fail	**Pass**	**Pass**	**Pass**	**Pass**

Foundations

	Base Reactions		Inner Anchors	
Reactions (kips)	Axial	Shear	Uplift	Shear
Analysis Reactions	186.8	1.5	66.0	50.8

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 0.1362 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the structure and its foundation will be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the design TIA-222-H Standard after the following pending modification is successfully completed.

- Pending modification design drawing by **TES** Job # 114359

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC.** Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.

2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.

3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.

4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Structure: NY00011-A-SBA

Site Name:	South Bristol			**Code:**	TIA-222-H	4/26/2022
Type:	Guyed	**Base Shape:**	Triangle	**Basic WS:**	110.00	
Height:	199.00 (ft)	**Base Width:**	0.00	**Basic Ice WS:**	40.00	
Base Elev:	0.00 (ft)	**Top Width:**	2.50	**Operational WS:**	60.00	Page: 1

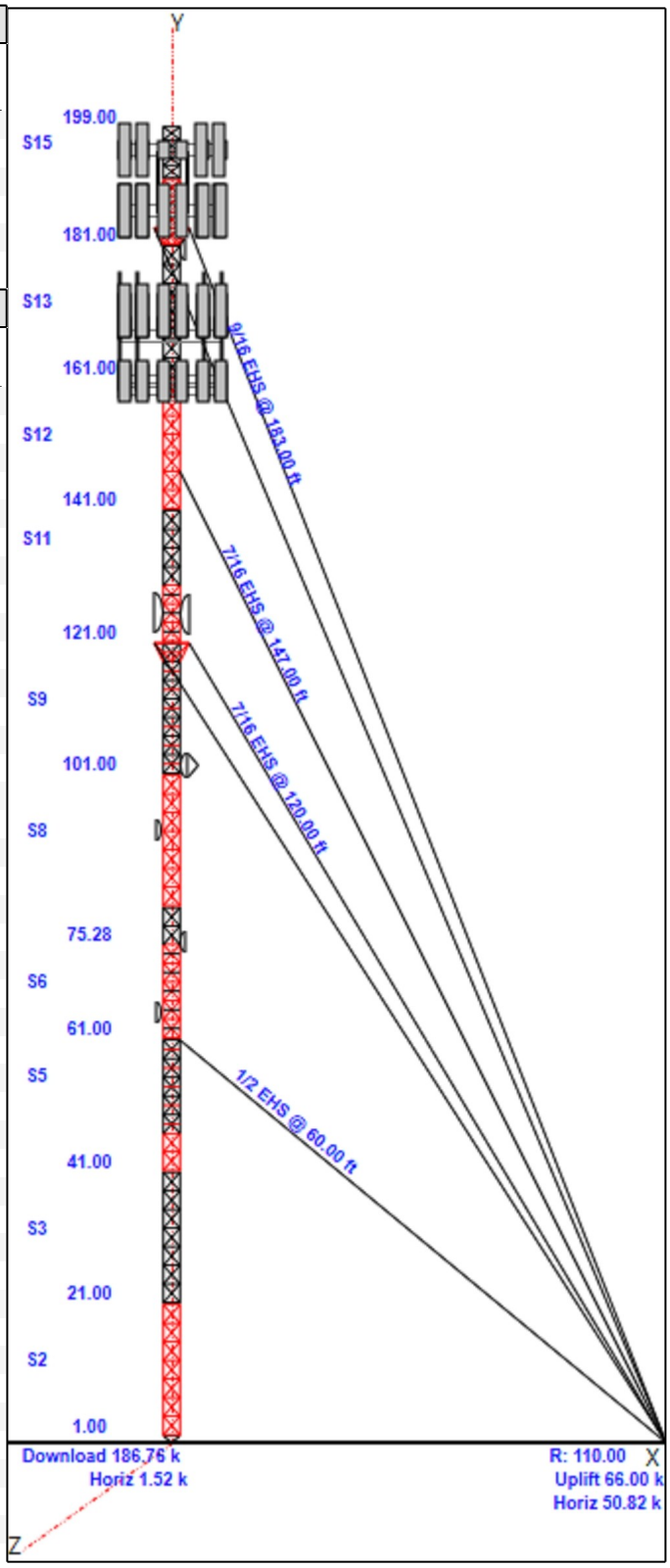
IES Tower Engineering Solutions

Section Properties

Sect	Leg Members	Diagonal Members	Horizontal Members
1	WBM W8 x 21		WBM W8 x 21
2-9	SOL 1 3/4" SOLID	SOL 1/2" SOLID	SAE 1.25x1.25x0.1875
10	SOL 1 3/4" SOLID	PLT 3"x1/4"	SAE 2X2X0.25
11-13	SOL 1 3/4" SOLID	SOL 1/2" SOLID	SAE 1.25x1.25x0.1875
14	SOL 1 1/2" SOLID	MOD 1/2"SR+L1.75x1/4	SAE 1.25x1.25x0.1875
15	SOL 1 1/2" SOLID	SOL 1/2" SOLID	SOL 1/2" SOLID

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description
199.00	199.00	1	Lightning Rod
195.00	195.00	3	TD-850B-10LTE78
195.00	195.00	3	B2/B66A RRH-BR049 (RFV01U-D1A)
195.00	195.00	3	B5/B13 RRF-BRO4C (RFV01U-D2A)
195.00	195.00	1	CBRS RRH-RT 440-48A
195.00	195.00	1	RxxDC-3315-PF-48
195.00	195.00	6	MX10FIT865-xx
195.00	195.00	3	Armor Tower 8' HD-UPNY
195.00	195.00	3	MT6407-77A
186.00	186.00	3	Ericsson RRUS-11 Band 12
186.00	186.00	3	Raycap DC6-48-60-18-8F COVP
186.00	186.00	3	12' T-Frame [411C-9R60/STK-U]
186.00	186.00	3	Ericsson RRUS-4478 B5 RRU
186.00	186.00	6	KMW KDXCV0012017 Diplexer
186.00	186.00	3	SBNH-1D6565C
186.00	186.00	3	E15Z01P13
186.00	186.00	6	SBJAH4-1D65C-DL
186.00	186.00	3	Ericsson 8843 B2/B66A RRU
186.00	186.00	3	Ericsson RRUS-4415 B30 RRU
185.50	190.20	1	DB408
180.00	180.00	1	5' x 1" Pipe Mount
180.00	180.00	1	PR450 CU
167.00	167.00	3	Valmont VFA10-U T-Frame
167.00	167.00	1	GPS
167.00	170.12	3	HBXX-6517DS-A2M
167.00	171.00	3	APXVAARR24_43-U-NA20
167.00	168.38	3	AIR6449 B41
167.00	167.75	3	4449 B71 + B85
167.00	167.00	3	Radio 4415 B66A
167.00	167.00	3	RRUS 4424 B25
160.00	160.00	3	12' T-Frame (Mod)
160.00	160.00	3	TTTT65AP-1XR
160.00	160.00	3	NNVV-65B-R4
160.00	160.00	3	RRH-B8
160.00	160.00	3	RRH-C4
160.00	160.00	3	Samsung EP96-04223A - JB
160.00	160.00	3	Samsung EP96-04225A - JB
160.00	160.00	3	RRH-P4
159.00	159.00	3	18' T-Frame
159.00	167.83	2	DB420
125.00	125.00	1	Pipe Mount
125.00	125.00	2	PM-SC4-96
125.00	125.00	2	Commscope USX6-6W



Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

125.00	125.00	4	SAF SAF ODU
102.00	102.00	1	Empty Standoff
102.00	102.00	1	P4-57W w/ Radome
102.00	102.00	1	Pipe Mount
92.00	92.00	1	Standoff
92.00	92.00	1	PR450 CU
75.50	75.50	1	Pipe Mount
75.50	75.50	1	PR450 CU
64.50	64.50	1	PR450 CU

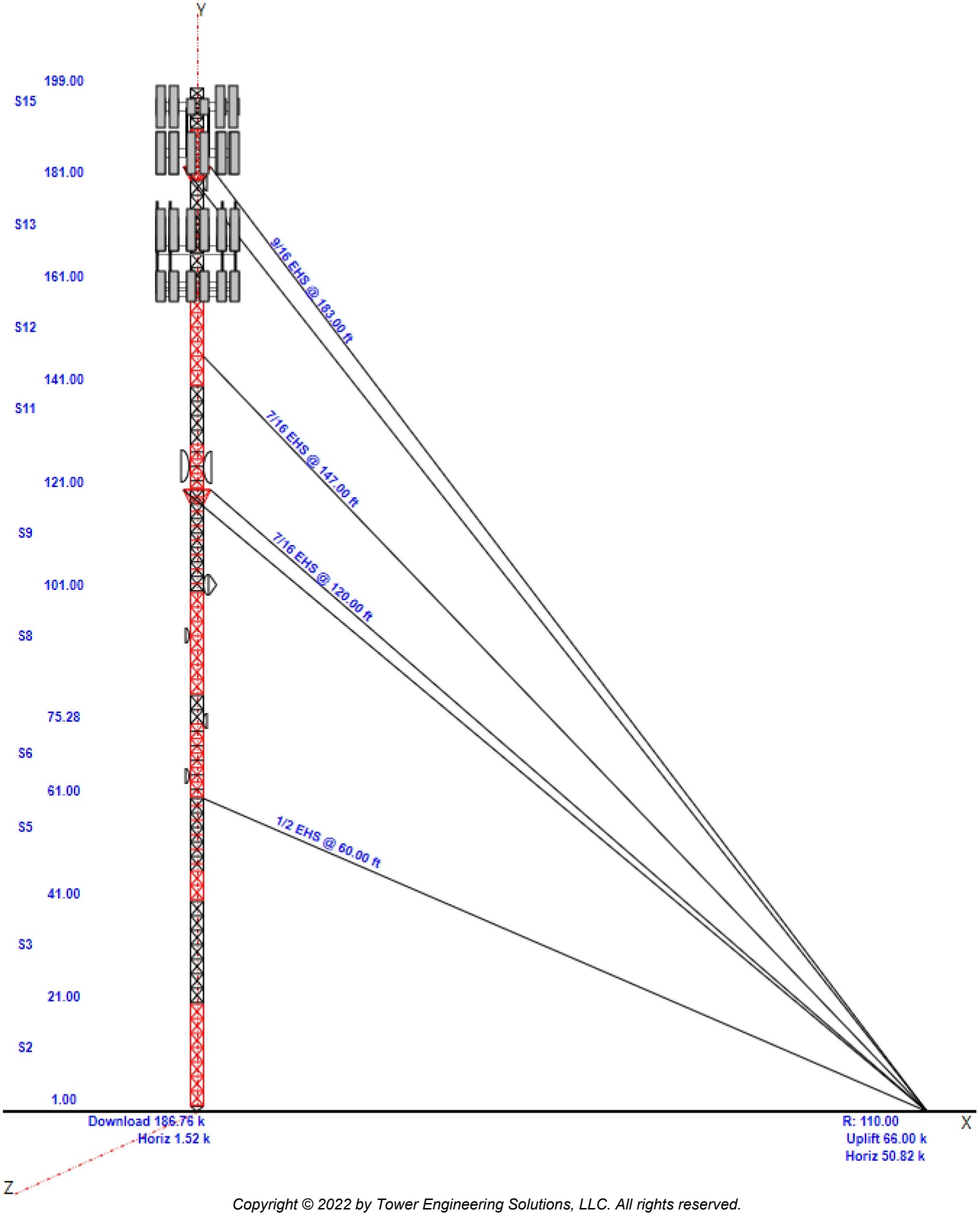
Linear Appurtenances

Elev From (ft)	Elev To (ft)	Qty	Description
0.00	195.00	6	1 5/8" Coax
0.00	195.00	2	1 5/8" Hybrid
0.00	186.00	4	1 5/8" Coax
0.00	186.00	6	1 5/8" Coax
0.00	186.00	2	1 5/8" Coax
0.00	186.00	6	3/4" DC
0.00	186.00	2	7/16" Fiber
0.00	185.50	1	7/8" Coax
0.00	180.00	1	7/8" Coax
0.00	167.00	4	1 5/8" Fiber
0.00	167.00	1	1/2" Coax
0.00	160.00	3	1.76" Fiber
0.00	159.00	1	7/8" Coax
0.00	125.00	6	1/2" Coax
0.00	125.00	6	1/4" Cat6
0.00	125.00	6	1/4" Copper
0.00	102.00	1	5/8" Coax
0.00	102.00	1	7/8" Coax
0.00	92.00	1	7/8" Coax
0.00	75.50	1	7/8" Coax
0.00	64.50	1	7/8" Coax
0.00	64.50	1	W/G Ladder

Max Guy Wire

92.21% @ 146.7854 ft - 7/16 EHS

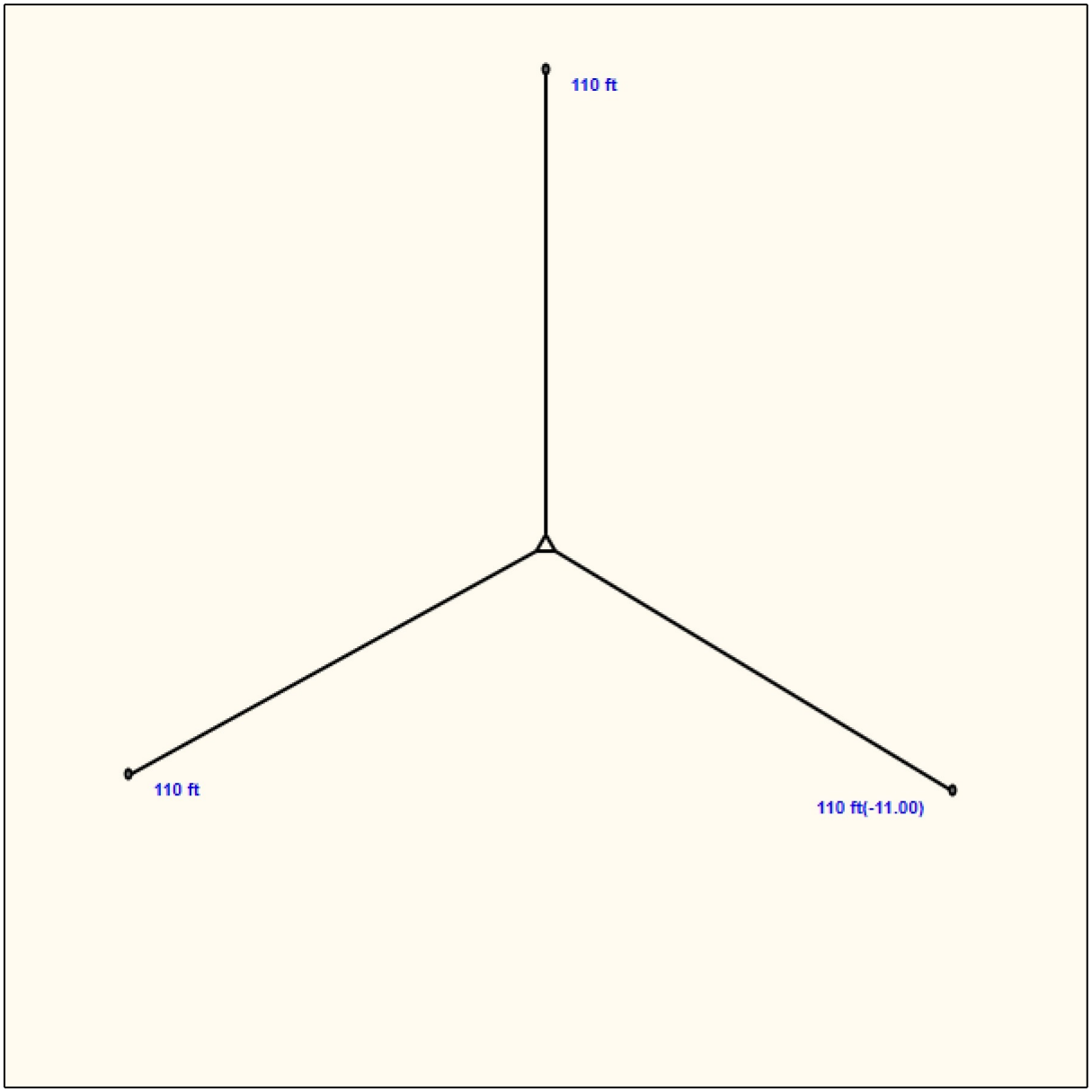
Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.



Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Anchor Drops with Guy Radius - Structure: NY00011-A-SBA

Site Name:	South Bristol			**Code:**	EIA_H	4/26/2022
Type:	Guyed	**Base Shape:**	Triangle	**Basic WS:**	110.00	
Height:	199.00 (ft)	**Base Width:**	0.00	**Basic Ice WS:**	40.00	
Base Elev:	0.00 (ft)	**Top Width:**	2.50	**Operational WS:**	60.00	Page: 4



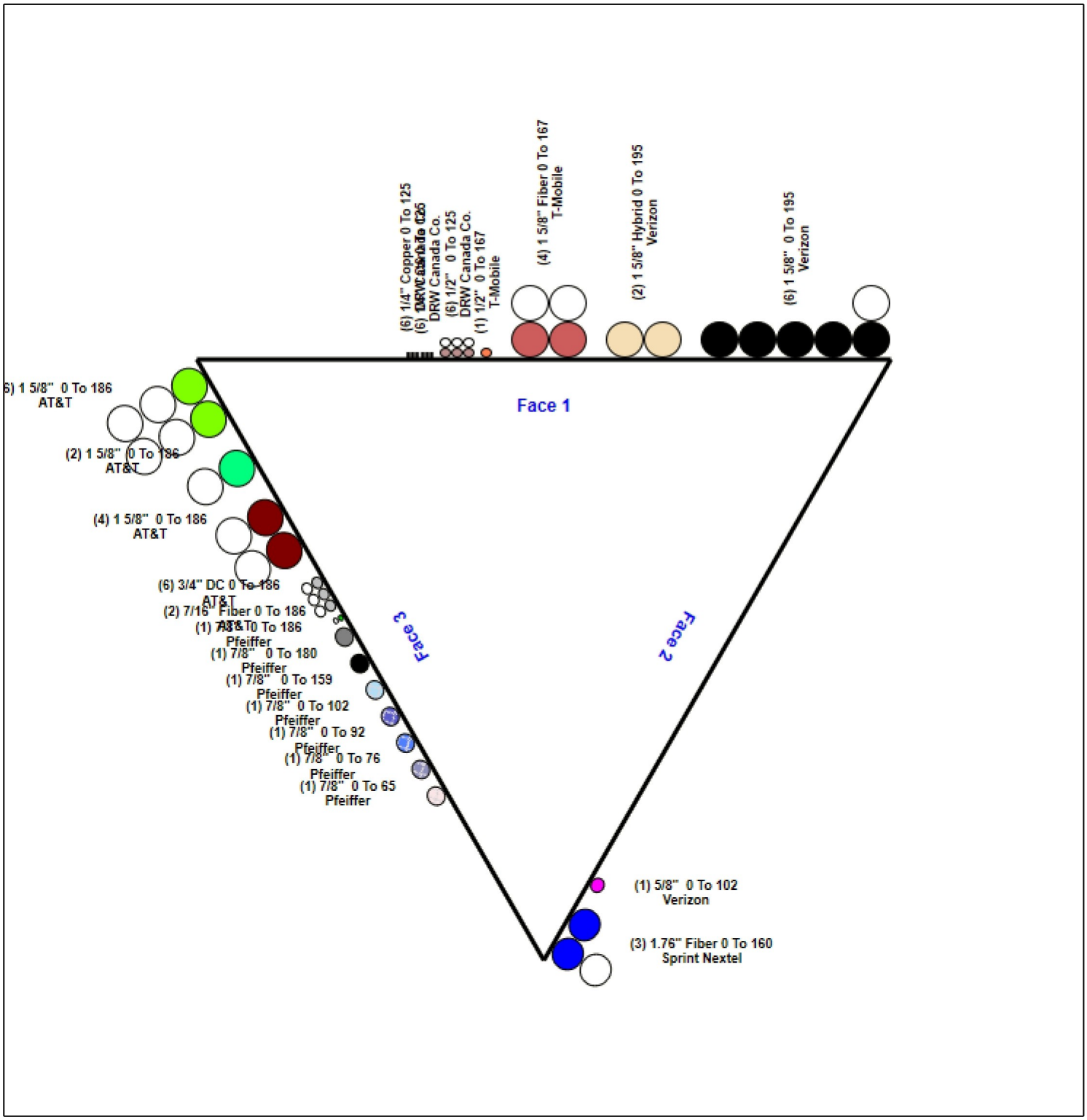
Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Structure: NY00011-A-SBA - Coax Line Placement

Type: Guyed
Site Name: South Bristol
Height: 199.00 (ft)

4/26/2022

Tower Engineering Solutions



Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Loading Summary

Structure:	NY00011-A-SBA		**Code:**	TIA-222-H	4/26/2022
Site Name:	South Bristol		**Exposure:**	B	
Height:	199.00 (ft)		**Crest Height:**	849.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	0.85	**Topography:** 3	**Struct Class:**	II	Page: 6

Tower Engineering Solutions

Discrete Appurtenances Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	Ice Weight (lb)	Ice CaAa (sf)	Len (in)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
199.00	Lightning Rod	1	5.00	0.500	29.11	2.509	72.000	1.000	1.000	1.00	1.00	0.000
195.00	TD-850B-10LTE78	3	52.91	1.840	125.46	2.869	15.800	14.000	6.000	0.80	0.67	0.000
195.00	B2/B66A RRH-BR049	3	84.40	1.870	175.82	2.540	15.000	15.000	10.000	0.80	0.67	0.000
195.00	B5/B13 RRF-BRO4C (RFV01U-D2A)	3	84.40	1.870	175.82	2.540	15.000	15.000	10.000	0.80	0.67	0.000
195.00	CBRS RRH-RT 440-48A	1	18.60	0.990	50.49	1.475	13.900	8.600	4.200	0.80	0.67	0.000
195.00	RxxDC-3315-PF-48	1	32.00	4.060	160.60	5.006	29.500	16.500	12.600	0.80	1.00	0.000
195.00	MX10FIT865-xx	6	59.00	11.610	426.31	13.517	95.900	12.200	10.700	0.80	0.95	0.000
195.00	Armor Tower 8' HD-UPNY	3	626.00	17.200	1330.42	42.084	0.000	0.000	0.000	0.75	0.75	0.000
195.00	MT6407-77A	3	79.40	4.690	221.46	5.788	35.100	16.100	5.500	0.80	0.70	0.000
186.00	Ericsson RRUS-11 Band 12	3	50.00	2.520	131.29	3.247	17.800	17.300	7.200	0.80	0.50	0.000
186.00	Raycap DC6-48-60-18-8F COVP	3	32.80	0.920	105.96	1.423	24.000	11.000	18.500	0.80	0.50	0.000
186.00	12' T-Frame [411C-9R60/STK-U]	3	450.00	17.500	1170.83	33.478	0.000	0.000	0.000	0.75	0.75	0.000
186.00	Ericsson RRUS-4478 B5 RRU	3	59.50	1.840	115.21	2.469	18.100	13.400	8.260	0.80	0.50	0.000
186.00	KMW KDXCV0012017 Diplexer	6	6.60	0.410	19.29	0.955	7.480	5.700	2.890	0.80	0.50	0.000
186.00	SBNH-1D6565C	3	60.80	11.470	303.40	15.200	96.400	11.900	7.100	0.80	0.80	0.000
186.00	E15Z01P13	3	24.00	0.910	56.75	1.735	13.600	7.200	5.500	0.80	0.50	0.000
186.00	SBJAH4-1D65C-DL	6	71.00	11.860	423.19	14.749	96.000	13.800	8.200	0.80	0.77	0.000
186.00	Ericsson 8843 B2/B66A RRU	3	72.00	1.640	125.75	2.210	14.900	13.200	10.900	0.80	0.50	0.000
186.00	Ericsson RRUS-4415 B30 RRU	3	47.40	1.640	95.99	2.231	16.530	13.460	6.290	0.80	0.50	0.000
185.50	DB408	1	17.00	2.900	159.61	13.505	112.800	0.000	0.000	1.00	1.00	4.700
180.00	5' x 1" Pipe Mount	1	40.00	1.000	71.83	1.796	0.000	0.000	0.000	1.00	1.00	0.000
180.00	PR450 CU	1	119.00	10.850	397.53	12.680	0.000	0.000	0.000	1.00	1.00	0.000
167.00	Valmont VFA10-U T-Frame	3	285.00	12.500	738.61	23.840	0.000	0.000	0.000	0.75	0.75	0.000
167.00	GPS	1	10.00	1.000	43.42	1.812	12.000	9.000	6.000	1.00	1.00	0.000
167.00	HBXX-6517DS-A2M	3	40.80	8.550	241.72	11.877	74.900	12.000	6.500	0.80	0.77	3.121
167.00	APXVAARR24_43-U-NA20	3	128.00	20.240	612.96	22.418	95.900	24.000	7.800	0.80	0.70	3.996
167.00	AIR6449 B41	3	103.00	5.650	259.31	6.734	33.100	20.500	8.300	0.80	0.71	1.379
167.00	4449 B71 + B85	3	73.20	1.970	139.03	2.619	17.900	13.200	10.600	0.80	0.67	0.746
167.00	Radio 4415 B66A	3	46.20	1.860	119.18	2.498	16.500	13.400	6.200	0.80	0.67	0.000
167.00	RRUS 4424 B25	3	88.00	1.840	169.87	2.465	16.500	13.500	9.600	0.80	0.67	0.000
160.00	12' T-Frame (Mod)	3	330.00	18.400	621.29	28.841	0.000	0.000	0.000	0.75	0.75	0.000
160.00	TTTT65AP-1XR	3	33.00	6.990	216.43	8.334	63.300	12.000	4.600	0.80	0.76	0.000
160.00	NNVV-65B-R4	3	84.70	12.270	437.49	13.914	72.000	19.600	7.800	0.80	0.74	0.000
160.00	RRH-B8	3	59.70	2.670	137.80	3.406	21.200	15.000	8.000	0.80	0.57	0.000
160.00	RRH-C4	3	48.50	1.180	199.33	2.061	15.000	12.500	7.600	0.80	0.57	0.000
160.00	Samsung EP96-04223A - JB	3	3.30	0.160	25.72	0.718	11.000	3.900	3.100	0.80	0.57	0.000
160.00	Samsung EP96-04225A - JB	3	2.00	0.160	25.12	0.744	11.500	3.900	3.100	0.80	0.57	0.000
160.00	RRH-P4	3	62.70	2.740	146.71	3.517	23.800	13.800	9.000	0.80	0.57	0.000
159.00	18' T-Frame	3	309.90	14.500	583.45	22.728	0.000	0.000	0.000	0.75	0.75	0.000
159.00	DB420	2	31.50	4.130	175.46	15.506	212.000	0.000	0.000	1.00	1.00	8.833
125.00	Pipe Mount	1	30.00	2.100	53.29	3.730	0.000	0.000	0.000	1.00	1.00	0.000
125.00	PM-SC4-96	2	67.90	2.600	120.61	4.618	0.000	0.000	0.000	1.00	1.00	0.000
125.00	Commscope USX6-6W	2	359.00	40.270	1249.17	44.397	76.500	76.500	60.800	1.00	1.00	0.000
125.00	SAF SAF ODU	4	7.70	1.220	35.55	2.104	11.200	11.200	3.100	1.00	0.50	0.000
102.00	Empty Standoff	1	23.00	2.000	40.68	3.537	0.000	0.000	0.000	1.00	1.00	0.000
102.00	P4-57W w/ Radome	1	149.00	11.350	517.16	13.156	49.100	49.100	11.000	1.00	1.00	0.000
102.00	Pipe Mount	1	30.00	2.100	53.06	3.714	0.000	0.000	0.000	1.00	1.00	0.000
92.00	Standoff	1	23.00	2.000	40.38	3.511	0.000	0.000	0.000	1.00	1.00	0.000

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Loading Summary

Structure:	NY00011-A-SBA		**Code:**	TIA-222-H	4/26/2022
Site Name:	South Bristol		**Exposure:**	B	
Height:	199.00 (ft)		**Crest Height:**	849.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	0.85	**Topography:** 3	**Struct Class:**	II	Page: 7

IES
Tower Engineering Solutions

92.00	PR450 CU	1	119.00	10.850	383.46	12.588	0.000	0.000	0.000	1.00	1.00	0.000
75.50	Pipe Mount	1	30.00	2.100	52.10	3.647	0.000	0.000	0.000	1.00	1.00	0.000
75.50	PR450 CU	1	119.00	10.850	376.80	12.544	0.000	0.000	0.000	1.00	1.00	0.000
64.50	PR450 CU	1	119.00	10.850	376.80	12.544	0.000	0.000	0.000	1.00	1.00	0.000
	Totals:	**131**	**12,915.63**		**37,676.21**						**Number of Appurtenances :**	**52**

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Loading Summary

Structure:	NY00011-A-SBA		**Code:**	TIA-222-H	4/26/2022
Site Name:	South Bristol		**Exposure:**	B	
Height:	199.00 (ft)		**Crest Height:**	849.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	0.85	**Topography:** 3	**Struct Class:**	II	Page: 8

IES
Tower Engineering Solutions

Linear Appurtenances Properties

Elev. From (ft)	Elev. To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	195.00	1 5/8" Coax	6	1.98	1.04	75.00	1	Block		N	0.50	1.00	
0.00	195.00	1 5/8" Hybrid	2	2.00	1.10	100.00	1	Individual NR		N	1.00	1.00	
0.00	186.00	1 5/8" Coax	4	1.98	1.04	50.00	3	Block		N	0.50	1.00	
0.00	186.00	1 5/8" Coax	6	1.98	1.04	33.30	3	Block		N	0.40	1.00	
0.00	186.00	1 5/8" Coax	2	1.98	1.04	50.00	3	Block		N	1.00	1.00	
0.00	186.00	3/4" DC	6	0.75	0.40	50.00	3	Block		N	1.00	1.00	
0.00	186.00	7/16" Fiber	2	0.44	0.05	50.00	3	Block		N	1.00	1.00	
0.00	185.50	7/8" Coax	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
0.00	180.00	7/8" Coax	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
0.00	167.00	1 5/8" Fiber	4	2.00	1.10	50.00	1	Block		N	0.40	1.00	
0.00	167.00	1/2" Coax	1	0.65	0.16	100.00	1	Individual NR		N	1.00	1.00	
0.00	160.00	1.76" Fiber	3	1.76	0.50	50.00	2	Block		N	1.00	1.00	
0.00	159.00	7/8" Coax	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
0.00	125.00	1/2" Coax	6	0.65	0.16	50.00	1	Block		N	1.00	1.00	
0.00	125.00	1/4" Cat6	6	0.25	0.04	50.00	1	Block		N	1.00	1.00	
0.00	125.00	1/4" Copper	6	0.25	0.04	50.00	1	Block		N	1.00	1.00	
0.00	102.00	5/8" Coax	1	0.87	0.15	100.00	2	Individual NR		N	1.00	1.00	
0.00	102.00	7/8" Coax	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
0.00	92.00	7/8" Coax	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
0.00	75.50	7/8" Coax	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
0.00	64.50	7/8" Coax	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
0.00	64.50	W/G Ladder	1	3.00	6.00	100.00	3	Individual NR		N	1.00	1.00	

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Section Forces

Structure:	NY00011-A-SBA	**Code:**	TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 3	**Struct Class:**	II	Page: 9	

TES Tower Engineering Solutions

Load Case: 1.2D + 1.0W Normal Wind — 1.2D + 1.0W 110 mph Wind at Normal To Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	25.79	2.337	0.00	0.00	1.00	2.10	1.00	1.00	0.00	2.34	5.17	0.00	375.3	0.0	107.58	0.00	89.30
2	11.0	25.66	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	100.82	0.00	1,801.5	0.0	377.48	1738.10	2,115.58
3	31.0	25.69	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	100.82	0.00	1,801.5	0.0	377.94	1740.23	2,118.16
4	43.9	28.21	0.736	2.27	0.00	0.20	2.60	1.00	1.00	0.00	2.05	28.83	0.00	524.4	0.0	127.96	546.46	674.42
5	53.9	29.79	3.377	5.68	0.00	0.24	2.47	1.00	1.00	0.00	6.72	71.98	0.00	1,424.5	0.0	419.98	1440.39	1,860.37
6	68.1	31.66	3.555	5.68	0.00	0.24	2.45	1.00	1.00	0.00	6.90	68.29	0.00	1,349.6	0.0	455.98	1424.68	1,880.66
7	78.1	32.78	0.490	2.27	0.00	0.18	2.66	1.00	1.00	0.00	1.80	26.37	0.00	462.9	0.0	133.25	566.39	699.64
8	91.0	34.06	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	91.28	0.00	1,626.9	0.0	500.95	2038.47	2,539.42
9	111.0	35.75	4.878	7.94	0.00	0.24	2.46	1.00	1.00	0.00	9.56	87.13	0.00	1,805.7	0.0	714.84	2048.88	2,763.72
10	125.3	36.79	3.271	2.50	0.00	0.25	2.42	1.00	1.00	0.00	4.74	34.64	0.00	986.9	0.0	359.02	842.81	1,201.83
11	135.3	37.46	0.981	4.54	0.00	0.18	2.66	1.00	1.00	0.00	3.60	43.13	0.00	888.5	0.0	304.70	1074.09	1,378.79
12	151.0	38.41	2.029	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.63	74.84	0.00	1,568.8	0.0	570.01	1912.63	2,482.63
13	171.0	39.49	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	58.83	0.00	1,442.2	0.0	580.91	1548.49	2,129.40
14	186.0	40.22	1.237	9.02	0.00	0.39	2.08	1.00	1.00	0.00	7.09	20.21	0.00	817.7	0.0	504.98	526.27	1,031.25
15	195.0	40.63	0.000	3.51	0.00	0.17	2.71	1.00	1.00	0.00	2.03	5.29	0.00	304.5	0.0	190.46	131.63	322.09
														17,180.8	**0.0**			**23,287.26**

Load Case: 1.2D + 1.0W 60° Wind — 1.2D + 1.0W 110 mph Wind at 60° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	25.79	2.337	0.00	0.00	1.00	2.10	0.80	1.00	0.00	1.87	5.17	0.00	375.3	0.0	86.06	0.00	86.06
2	11.0	25.66	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	100.82	0.00	1,801.5	0.0	354.89	1738.10	2,092.99
3	31.0	25.69	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	100.82	0.00	1,801.5	0.0	355.32	1740.23	2,095.54
4	43.9	28.21	0.736	2.27	0.00	0.20	2.60	0.80	1.00	0.00	1.90	28.83	0.00	524.4	0.0	118.78	546.46	665.24
5	53.9	29.79	3.377	5.68	0.00	0.24	2.47	0.80	1.00	0.00	6.04	71.98	0.00	1,424.5	0.0	377.76	1440.39	1,818.15
6	68.1	31.66	3.555	5.68	0.00	0.24	2.45	0.80	1.00	0.00	6.19	68.29	0.00	1,349.6	0.0	409.01	1424.68	1,833.69
7	78.1	32.78	0.490	2.27	0.00	0.18	2.66	0.80	1.00	0.00	1.70	26.37	0.00	462.9	0.0	125.99	566.39	692.38
8	91.0	34.06	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	91.28	0.00	1,626.9	0.0	470.97	2038.47	2,509.44
9	111.0	35.75	4.878	7.94	0.00	0.24	2.46	0.80	1.00	0.00	8.58	87.13	0.00	1,805.7	0.0	641.88	2048.88	2,690.76
10	125.3	36.79	3.271	2.50	0.00	0.25	2.42	0.80	1.00	0.00	4.08	34.64	0.00	986.9	0.0	309.43	842.81	1,152.24
11	135.3	37.46	0.981	4.54	0.00	0.18	2.66	0.80	1.00	0.00	3.41	43.13	0.00	888.5	0.0	288.12	1074.09	1,362.20
12	151.0	38.41	2.029	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.22	74.84	0.00	1,568.8	0.0	535.09	1912.63	2,447.72
13	171.0	39.49	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	58.83	0.00	1,442.2	0.0	546.15	1548.49	2,094.64
14	186.0	40.22	1.237	9.02	0.00	0.39	2.08	0.80	1.00	0.00	6.84	20.21	0.00	817.7	0.0	487.37	526.27	1,013.64
15	195.0	40.63	0.000	3.51	0.00	0.17	2.71	0.80	1.00	0.00	2.03	5.29	0.00	304.5	0.0	190.46	131.63	322.09
														17,180.8	**0.0**			**22,876.78**

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Section Forces

Structure:	NY00011-A-SBA	**Code:**	TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85	**Topography:** 3	**Struct Class:**	II	Page: 10

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 90° Wind — 1.2D + 1.0W 110 mph Wind at 90° From Face

Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Dead Load Factor: 0.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	25.79	2.337	0.00	0.00	1.00	2.10	0.85	1.00	0.00	1.99	5.17	0.00	375.3	0.0	91.44	0.00	91.44
2	11.0	25.66	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	100.82	0.00	1,801.5	0.0	360.53	1738.10	2,098.64
3	31.0	25.69	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	100.82	0.00	1,801.5	0.0	360.97	1740.23	2,101.20
4	43.9	28.21	0.736	2.27	0.00	0.20	2.60	0.85	1.00	0.00	1.94	28.83	0.00	524.4	0.0	121.07	546.46	667.54
5	53.9	29.79	3.377	5.68	0.00	0.24	2.47	0.85	1.00	0.00	6.21	71.98	0.00	1,424.5	0.0	388.31	1440.39	1,828.70
6	68.1	31.66	3.555	5.68	0.00	0.24	2.45	0.85	1.00	0.00	6.37	68.29	0.00	1,349.6	0.0	420.75	1424.68	1,845.43
7	78.1	32.78	0.490	2.27	0.00	0.18	2.66	0.85	1.00	0.00	1.73	26.37	0.00	462.9	0.0	127.81	566.39	694.19
8	91.0	34.06	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	91.28	0.00	1,626.9	0.0	478.46	2038.47	2,516.94
9	111.0	35.75	4.878	7.94	0.00	0.24	2.46	0.85	1.00	0.00	8.83	87.13	0.00	1,805.7	0.0	660.12	2048.88	2,709.00
10	125.3	36.79	3.271	2.50	0.00	0.25	2.42	0.85	1.00	0.00	4.24	34.64	0.00	986.9	0.0	321.82	842.81	1,164.64
11	135.3	37.46	0.981	4.54	0.00	0.18	2.66	0.85	1.00	0.00	3.46	43.13	0.00	888.5	0.0	292.26	1074.09	1,366.35
12	151.0	38.41	2.029	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.32	74.84	0.00	1,568.8	0.0	543.82	1912.63	2,456.45
13	171.0	39.49	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	58.83	0.00	1,442.2	0.0	554.84	1548.49	2,103.33
14	186.0	40.22	1.237	9.02	0.00	0.39	2.08	0.85	1.00	0.00	6.91	20.21	0.00	817.7	0.0	491.77	526.27	1,018.04
15	195.0	40.63	0.000	3.51	0.00	0.17	2.71	0.85	1.00	0.00	2.03	5.29	0.00	304.5	0.0	190.46	131.63	322.09
														17,180.8	**0.0**			**22,983.97**

Load Case: 0.9D + 1.0W Normal Wind — 0.9D + 1.0W 110 mph Wind at Normal To Face

Wind Load Factor: 1.00
Dead Load Factor: 0.90
Ice Dead Load Factor: 0.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	25.79	2.337	0.00	0.00	1.00	2.10	1.00	1.00	0.00	2.34	5.17	0.00	281.5	0.0	107.58	0.00	107.58
2	11.0	25.66	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	100.82	0.00	1,351.1	0.0	377.48	1738.10	2,115.58
3	31.0	25.69	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	100.82	0.00	1,351.1	0.0	377.94	1740.23	2,118.16
4	43.9	28.21	0.736	2.27	0.00	0.20	2.60	1.00	1.00	0.00	2.05	28.83	0.00	393.3	0.0	127.96	546.46	674.42
5	53.9	29.79	3.377	5.68	0.00	0.24	2.47	1.00	1.00	0.00	6.72	71.98	0.00	1,068.3	0.0	419.98	1440.39	1,860.37
6	68.1	31.66	3.555	5.68	0.00	0.24	2.45	1.00	1.00	0.00	6.90	68.29	0.00	1,012.2	0.0	455.98	1424.68	1,880.66
7	78.1	32.78	0.490	2.27	0.00	0.18	2.66	1.00	1.00	0.00	1.80	26.37	0.00	347.2	0.0	133.25	566.39	699.64
8	91.0	34.06	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	91.28	0.00	1,220.2	0.0	500.95	2038.47	2,539.42
9	111.0	35.75	4.878	7.94	0.00	0.24	2.46	1.00	1.00	0.00	9.56	87.13	0.00	1,354.3	0.0	714.84	2048.88	2,763.72
10	125.3	36.79	3.271	2.50	0.00	0.25	2.42	1.00	1.00	0.00	4.74	34.64	0.00	740.2	0.0	359.02	842.81	1,201.83
11	135.3	37.46	0.981	4.54	0.00	0.18	2.66	1.00	1.00	0.00	3.60	43.13	0.00	666.4	0.0	304.70	1074.09	1,378.79
12	151.0	38.41	2.029	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.63	74.84	0.00	1,176.6	0.0	570.01	1912.63	2,482.63
13	171.0	39.49	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	58.83	0.00	1,081.7	0.0	580.91	1548.49	2,129.40
14	186.0	40.22	1.237	9.02	0.00	0.39	2.08	1.00	1.00	0.00	7.09	20.21	0.00	613.3	0.0	504.98	526.27	1,031.25
15	195.0	40.63	0.000	3.51	0.00	0.17	2.71	1.00	1.00	0.00	2.03	5.29	0.00	228.4	0.0	190.46	131.63	322.09
														12,885.6	**0.0**			**23,305.54**

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Section Forces

Structure:	NY00011-A-SBA	**Code:**	TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 3	**Struct Class:**	II	Page: 11	

TES Tower Engineering Solutions

Load Case: 0.9D + 1.0W 60° Wind — 0.9D + 1.0W 110 mph Wind at 60° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 0.90

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	25.79	2.337	0.00	0.00	1.00	2.10	0.80	1.00	0.00	1.87	5.17	0.00	281.5	0.0	86.06	0.00	86.06
2	11.0	25.66	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	100.82	0.00	1,351.1	0.0	354.89	1738.10	2,092.99
3	31.0	25.69	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	100.82	0.00	1,351.1	0.0	355.32	1740.23	2,095.54
4	43.9	28.21	0.736	2.27	0.00	0.20	2.60	0.80	1.00	0.00	1.90	28.83	0.00	393.3	0.0	118.78	546.46	665.24
5	53.9	29.79	3.377	5.68	0.00	0.24	2.47	0.80	1.00	0.00	6.04	71.98	0.00	1,068.3	0.0	377.76	1440.39	1,818.15
6	68.1	31.66	3.555	5.68	0.00	0.24	2.45	0.80	1.00	0.00	6.19	68.29	0.00	1,012.2	0.0	409.01	1424.68	1,833.69
7	78.1	32.78	0.490	2.27	0.00	0.18	2.66	0.80	1.00	0.00	1.70	26.37	0.00	347.2	0.0	125.99	566.39	692.38
8	91.0	34.06	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	91.28	0.00	1,220.2	0.0	470.97	2038.47	2,509.44
9	111.0	35.75	4.878	7.94	0.00	0.24	2.46	0.80	1.00	0.00	8.58	87.13	0.00	1,354.3	0.0	641.88	2048.88	2,690.76
10	125.3	36.79	3.271	2.50	0.00	0.25	2.42	0.80	1.00	0.00	4.08	34.64	0.00	740.2	0.0	309.43	842.81	1,152.24
11	135.3	37.46	0.981	4.54	0.00	0.18	2.66	0.80	1.00	0.00	3.41	43.13	0.00	666.4	0.0	288.12	1074.09	1,362.20
12	151.0	38.41	2.029	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.22	74.84	0.00	1,176.6	0.0	535.09	1912.63	2,447.72
13	171.0	39.49	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	58.83	0.00	1,081.7	0.0	546.15	1548.49	2,094.64
14	186.0	40.22	1.237	9.02	0.00	0.39	2.08	0.80	1.00	0.00	6.84	20.21	0.00	613.3	0.0	487.37	526.27	1,013.64
15	195.0	40.63	0.000	3.51	0.00	0.17	2.71	0.80	1.00	0.00	2.03	5.29	0.00	228.4	0.0	190.46	131.63	322.09
														12,885.6	**0.0**			**22,876.78**

Load Case: 0.9D + 1.0W 90° Wind — 0.9D + 1.0W 110 mph Wind at 90° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 0.90

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	25.79	2.337	0.00	0.00	1.00	2.10	0.85	1.00	0.00	1.99	5.17	0.00	281.5	0.0	91.44	0.00	91.44
2	11.0	25.66	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	100.82	0.00	1,351.1	0.0	360.53	1738.10	2,098.64
3	31.0	25.69	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	100.82	0.00	1,351.1	0.0	360.97	1740.23	2,101.20
4	43.9	28.21	0.736	2.27	0.00	0.20	2.60	0.85	1.00	0.00	1.94	28.83	0.00	393.3	0.0	121.07	546.46	667.54
5	53.9	29.79	3.377	5.68	0.00	0.24	2.47	0.85	1.00	0.00	6.21	71.98	0.00	1,068.3	0.0	388.31	1440.39	1,828.70
6	68.1	31.66	3.555	5.68	0.00	0.24	2.45	0.85	1.00	0.00	6.37	68.29	0.00	1,012.2	0.0	420.75	1424.68	1,845.43
7	78.1	32.78	0.490	2.27	0.00	0.18	2.66	0.85	1.00	0.00	1.73	26.37	0.00	347.2	0.0	127.81	566.39	694.19
8	91.0	34.06	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	91.28	0.00	1,220.2	0.0	478.46	2038.47	2,516.94
9	111.0	35.75	4.878	7.94	0.00	0.24	2.46	0.85	1.00	0.00	8.83	87.13	0.00	1,354.3	0.0	660.12	2048.88	2,709.00
10	125.3	36.79	3.271	2.50	0.00	0.25	2.42	0.85	1.00	0.00	4.24	34.64	0.00	740.2	0.0	321.82	842.81	1,164.64
11	135.3	37.46	0.981	4.54	0.00	0.18	2.66	0.85	1.00	0.00	3.46	43.13	0.00	666.4	0.0	292.26	1074.09	1,366.35
12	151.0	38.41	2.029	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.32	74.84	0.00	1,176.6	0.0	543.82	1912.63	2,456.45
13	171.0	39.49	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	58.83	0.00	1,081.7	0.0	554.84	1548.49	2,103.33
14	186.0	40.22	1.237	9.02	0.00	0.39	2.08	0.85	1.00	0.00	6.91	20.21	0.00	613.3	0.0	491.77	526.27	1,018.04
15	195.0	40.63	0.000	3.51	0.00	0.17	2.71	0.85	1.00	0.00	2.03	5.29	0.00	228.4	0.0	190.46	131.63	322.09
														12,885.6	**0.0**			**22,983.97**

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Section Forces

Structure:	NY00011-A-SBA	**Code:**	TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 3	**Struct Class:**	II	Page: 12	

TES Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi Normal Wind — 1.2D + 1.0Di + 1.0Wi 40 mph Wind at Normal From Face

Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Dead Load Factor: 1.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	3.41	2.337	1.14	1.14	1.00	2.10	1.00	1.00	1.14	3.48	7.45	2.09	710.7	335.5	21.17	0.00	21.17
2	11.0	3.39	1.962	37.01	29.06	0.67	1.78	1.00	1.00	1.55	31.29	165.34	56.76	7,304.6	5503.1	160.41	298.52	458.92
3	31.0	3.40	1.962	40.08	32.14	0.72	1.78	1.00	1.00	1.71	35.03	171.88	62.76	8,131.0	6329.5	179.88	271.07	450.96
4	43.9	3.73	0.736	12.25	9.99	0.77	1.80	1.00	1.00	1.77	11.35	49.81	18.55	2,459.5	1935.1	64.70	69.76	134.46
5	53.9	3.94	3.377	29.34	23.66	0.78	1.80	1.00	1.00	1.80	28.90	125.32	47.19	6,635.5	5211.0	174.28	181.53	355.82
6	68.1	4.19	3.555	30.62	24.94	0.81	1.82	1.00	1.00	1.84	30.97	119.43	44.90	6,587.6	5238.1	201.01	154.87	355.89
7	78.1	4.34	0.490	12.02	9.75	0.74	1.78	1.00	1.00	1.86	10.60	46.66	16.06	2,347.7	1884.8	69.69	84.11	153.80
8	91.0	4.50	1.962	43.41	35.47	0.77	1.79	1.00	1.00	1.89	39.35	163.15	53.84	8,346.7	6719.8	270.38	272.07	542.45
9	111.0	4.73	4.878	44.02	36.07	0.82	1.84	1.00	1.00	1.92	44.77	160.18	39.07	8,938.6	7132.9	330.25	199.94	530.18
10	125.3	4.87	3.271	18.57	16.07	0.86	1.87	1.00	1.00	1.94	20.56	60.84	16.63	4,425.8	3438.9	159.06	64.26	223.32
11	135.3	4.95	0.981	25.04	20.50	0.77	1.79	1.00	1.00	1.95	22.55	71.95	22.32	4,242.4	3353.9	170.41	130.34	300.75
12	151.0	5.08	2.029	44.94	36.99	0.79	1.81	1.00	1.00	1.97	41.53	125.47	38.75	7,554.1	5985.3	324.31	209.70	534.01
13	171.0	5.22	1.962	45.30	37.35	0.79	1.81	1.00	1.00	1.99	41.92	100.23	28.19	6,670.3	5228.1	337.10	165.81	502.91
14	186.0	5.32	1.237	29.15	20.13	1.00	2.10	1.00	1.00	2.00	32.10	31.80	8.18	3,391.7	2574.0	304.72	0.00	304.72
15	195.0	5.37	0.000	21.51	18.00	0.91	1.94	1.00	1.00	2.01	20.98	6.64	2.68	1,407.5	1103.1	185.51	5.35	190.86
														79,153.8	**61973.0**			**5,060.23**

Load Case: 1.2D + 1.0Di + 1.0Wi 60° Wind — 1.2D + 1.0Di + 1.0Wi 40 mph Wind at 60° From Face

Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Dead Load Factor: 1.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	3.41	2.337	1.14	1.14	1.00	2.10	0.80	1.00	1.14	3.01	7.45	2.09	710.7	335.5	18.32	0.00	18.32
2	11.0	3.39	1.962	37.01	29.06	0.67	1.78	0.80	1.00	1.55	30.90	165.34	56.76	7,304.6	5503.1	158.39	298.52	456.91
3	31.0	3.40	1.962	40.08	32.14	0.72	1.78	0.80	1.00	1.71	34.64	171.88	62.76	8,131.0	6329.5	177.87	271.07	448.94
4	43.9	3.73	0.736	12.25	9.99	0.77	1.80	0.80	1.00	1.77	11.20	49.81	18.55	2,459.5	1935.1	63.87	69.76	133.62
5	53.9	3.94	3.377	29.34	23.66	0.78	1.80	0.80	1.00	1.80	28.23	125.32	47.19	6,635.5	5211.0	170.21	181.53	351.74
6	68.1	4.19	3.555	30.62	24.94	0.81	1.82	0.80	1.00	1.84	30.26	119.43	44.90	6,587.6	5238.1	196.40	154.87	351.27
7	78.1	4.34	0.490	12.02	9.75	0.74	1.78	0.80	1.00	1.86	10.51	46.66	16.06	2,347.7	1884.8	69.05	84.11	153.16
8	91.0	4.50	1.962	43.41	35.47	0.77	1.79	0.80	1.00	1.89	38.96	163.15	53.84	8,346.7	6719.8	267.69	272.07	539.76
9	111.0	4.73	4.878	44.02	36.07	0.82	1.84	0.80	1.00	1.92	43.79	160.18	39.07	8,938.6	7132.9	323.05	199.94	522.99
10	125.3	4.87	3.271	18.57	16.07	0.86	1.87	0.80	1.00	1.94	19.91	60.84	16.63	4,425.8	3438.9	154.00	64.26	218.26
11	135.3	4.95	0.981	25.04	20.50	0.77	1.79	0.80	1.00	1.95	22.35	71.95	22.32	4,242.4	3353.9	168.93	130.34	299.27
12	151.0	5.08	2.029	44.94	36.99	0.79	1.81	0.80	1.00	1.97	41.13	125.47	38.75	7,554.1	5985.3	321.14	209.70	530.84
13	171.0	5.22	1.962	45.30	37.35	0.79	1.81	0.80	1.00	1.99	41.53	100.23	28.19	6,670.3	5228.1	333.95	165.81	499.76
14	186.0	5.32	1.237	29.15	20.13	1.00	2.10	0.80	1.00	2.00	31.85	31.80	8.18	3,391.7	2574.0	302.37	0.00	302.37
15	195.0	5.37	0.000	21.51	18.00	0.91	1.94	0.80	1.00	2.01	20.98	6.64	2.68	1,407.5	1103.1	185.51	5.35	190.86
														79,153.8	**61973.0**			**5,018.08**

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Section Forces

Structure:	NY00011-A-SBA	**Code:**	TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 3	**Struct Class:**	II	Page: 13	

TES Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 90° Wind — 1.2D + 1.0Di + 1.0Wi 40 mph Wind at 90° From Face

Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Dead Load Factor: 1.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	3.41	2.337	1.14	1.14	1.00	2.10	0.85	1.00	1.14	3.13	7.45	2.09	710.7	335.5	19.03	0.00	19.03
2	11.0	3.39	1.962	37.01	29.06	0.67	1.78	0.85	1.00	1.55	31.00	165.34	56.76	7,304.6	5503.1	158.90	298.52	457.41
3	31.0	3.40	1.962	40.08	32.14	0.72	1.78	0.85	1.00	1.71	34.74	171.88	62.76	8,131.0	6329.5	178.37	271.07	449.45
4	43.9	3.73	0.736	12.25	9.99	0.77	1.80	0.85	1.00	1.77	11.24	49.81	18.55	2,459.5	1935.1	64.08	69.76	133.83
5	53.9	3.94	3.377	29.34	23.66	0.78	1.80	0.85	1.00	1.80	28.40	125.32	47.19	6,635.5	5211.0	171.23	181.53	352.76
6	68.1	4.19	3.555	30.62	24.94	0.81	1.82	0.85	1.00	1.84	30.43	119.43	44.90	6,587.6	5238.1	197.55	154.87	352.43
7	78.1	4.34	0.490	12.02	9.75	0.74	1.78	0.85	1.00	1.86	10.53	46.66	16.06	2,347.7	1884.8	69.21	84.11	153.32
8	91.0	4.50	1.962	43.41	35.47	0.77	1.79	0.85	1.00	1.89	39.06	163.15	53.84	8,346.7	6719.8	268.36	272.07	540.43
9	111.0	4.73	4.878	44.02	36.07	0.82	1.84	0.85	1.00	1.92	44.04	160.18	39.07	8,938.6	7132.9	324.85	199.94	524.79
10	125.3	4.87	3.271	18.57	16.07	0.86	1.87	0.85	1.00	1.94	20.07	60.84	16.63	4,425.8	3438.9	155.27	64.26	219.53
11	135.3	4.95	0.981	25.04	20.50	0.77	1.79	0.85	1.00	1.95	22.40	71.95	22.32	4,242.4	3353.9	169.30	130.34	299.64
12	151.0	5.08	2.029	44.94	36.99	0.79	1.81	0.85	1.00	1.97	41.23	125.47	38.75	7,554.1	5985.3	321.93	209.70	531.63
13	171.0	5.22	1.962	45.30	37.35	0.79	1.81	0.85	1.00	1.99	41.63	100.23	28.19	6,670.3	5228.1	334.74	165.81	500.55
14	186.0	5.32	1.237	29.15	20.13	1.00	2.10	0.85	1.00	2.00	31.91	31.80	8.18	3,391.7	2574.0	302.96	0.00	302.96
15	195.0	5.37	0.000	21.51	18.00	0.91	1.94	0.85	1.00	2.01	20.98	6.64	2.68	1,407.5	1103.1	185.51	5.35	190.86
														79,153.8	**61973.0**			**5,028.62**

Load Case: 1.0D + 1.0W Normal Wind — 1.0D + 1.0W 60 mph Wind at Normal To Face

Wind Load Factor: 1.00
Dead Load Factor: 1.00
Ice Dead Load Factor: 0.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	7.67	2.337	0.00	0.00	1.00	2.10	1.00	1.00	0.00	2.34	5.17	0.00	312.7	0.0	32.01	0.00	32.01
2	11.0	7.64	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	100.82	0.00	1,501.2	0.0	112.31	517.12	629.43
3	31.0	7.64	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	100.82	0.00	1,501.2	0.0	112.44	517.75	630.20
4	43.9	8.39	0.736	2.27	0.00	0.20	2.60	1.00	1.00	0.00	2.05	28.83	0.00	437.0	0.0	38.07	162.58	200.65
5	53.9	8.86	3.377	5.68	0.00	0.24	2.47	1.00	1.00	0.00	6.72	71.98	0.00	1,187.0	0.0	124.95	428.55	553.50
6	68.1	9.42	3.555	5.68	0.00	0.24	2.45	1.00	1.00	0.00	6.90	68.29	0.00	1,124.6	0.0	135.66	423.87	559.53
7	78.1	9.75	0.490	2.27	0.00	0.18	2.66	1.00	1.00	0.00	1.80	26.37	0.00	385.8	0.0	39.65	168.51	208.16
8	91.0	10.13	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	91.28	0.00	1,355.7	0.0	149.04	606.49	755.53
9	111.0	10.64	4.878	7.94	0.00	0.24	2.46	1.00	1.00	0.00	9.56	87.13	0.00	1,504.8	0.0	212.68	609.58	822.26
10	125.3	10.95	3.271	2.50	0.00	0.25	2.42	1.00	1.00	0.00	4.74	34.64	0.00	822.4	0.0	106.81	250.75	357.57
11	135.3	11.14	0.981	4.54	0.00	0.18	2.66	1.00	1.00	0.00	3.60	43.13	0.00	740.4	0.0	90.65	319.56	410.22
12	151.0	11.43	2.029	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.63	74.84	0.00	1,307.3	0.0	169.59	569.05	738.63
13	171.0	11.75	1.962	7.94	0.00	0.19	2.64	1.00	1.00	0.00	6.56	58.83	0.00	1,201.9	0.0	172.83	460.71	633.54
14	186.0	11.97	1.237	9.02	0.00	0.39	2.08	1.00	1.00	0.00	7.09	20.21	0.00	681.4	0.0	150.24	156.58	306.82
15	195.0	12.09	0.000	3.51	0.00	0.17	2.71	1.00	1.00	0.00	2.03	5.29	0.00	253.7	0.0	56.67	39.16	95.83
														14,317.3	**0.0**			**6,933.88**

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Section Forces

Structure:	NY00011-A-SBA	**Code:**	TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85	**Topography:** 3	**Struct Class:**	II	Page: 14

IES Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60° Wind — 1.0D + 1.0W 60 mph Wind at 60° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.00

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	7.67	2.337	0.00	0.00	1.00	2.10	0.80	1.00	0.00	1.87	5.17	0.00	312.7	0.0	25.61	0.00	25.61
2	11.0	7.64	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	100.82	0.00	1,501.2	0.0	105.59	517.12	622.71
3	31.0	7.64	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	100.82	0.00	1,501.2	0.0	105.71	517.75	623.47
4	43.9	8.39	0.736	2.27	0.00	0.20	2.60	0.80	1.00	0.00	1.90	28.83	0.00	437.0	0.0	35.34	162.58	197.92
5	53.9	8.86	3.377	5.68	0.00	0.24	2.47	0.80	1.00	0.00	6.04	71.98	0.00	1,187.0	0.0	112.39	428.55	540.94
6	68.1	9.42	3.555	5.68	0.00	0.24	2.45	0.80	1.00	0.00	6.19	68.29	0.00	1,124.6	0.0	121.69	423.87	545.56
7	78.1	9.75	0.490	2.27	0.00	0.18	2.66	0.80	1.00	0.00	1.70	26.37	0.00	385.8	0.0	37.48	168.51	206.00
8	91.0	10.13	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	91.28	0.00	1,355.7	0.0	140.12	606.49	746.61
9	111.0	10.64	4.878	7.94	0.00	0.24	2.46	0.80	1.00	0.00	8.58	87.13	0.00	1,504.8	0.0	190.97	609.58	800.56
10	125.3	10.95	3.271	2.50	0.00	0.25	2.42	0.80	1.00	0.00	4.08	34.64	0.00	822.4	0.0	92.06	250.75	342.82
11	135.3	11.14	0.981	4.54	0.00	0.18	2.66	0.80	1.00	0.00	3.41	43.13	0.00	740.4	0.0	85.72	319.56	405.28
12	151.0	11.43	2.029	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.22	74.84	0.00	1,307.3	0.0	159.20	569.05	728.25
13	171.0	11.75	1.962	7.94	0.00	0.19	2.64	0.80	1.00	0.00	6.16	58.83	0.00	1,201.9	0.0	162.49	460.71	623.20
14	186.0	11.97	1.237	9.02	0.00	0.39	2.08	0.80	1.00	0.00	6.84	20.21	0.00	681.4	0.0	145.00	156.58	301.58
15	195.0	12.09	0.000	3.51	0.00	0.17	2.71	0.80	1.00	0.00	2.03	5.29	0.00	253.7	0.0	56.67	39.16	95.83
														14,317.3	**0.0**			**6,806.32**

Load Case: 1.0D + 1.0W 90° Wind — 1.0D + 1.0W 60 mph Wind at 90° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.00

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	0.5	7.67	2.337	0.00	0.00	1.00	2.10	0.85	1.00	0.00	1.99	5.17	0.00	312.7	0.0	27.21	0.00	27.21
2	11.0	7.64	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	100.82	0.00	1,501.2	0.0	107.27	517.12	624.39
3	31.0	7.64	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	100.82	0.00	1,501.2	0.0	107.40	517.75	625.15
4	43.9	8.39	0.736	2.27	0.00	0.20	2.60	0.85	1.00	0.00	1.94	28.83	0.00	437.0	0.0	36.02	162.58	198.61
5	53.9	8.86	3.377	5.68	0.00	0.24	2.47	0.85	1.00	0.00	6.21	71.98	0.00	1,187.0	0.0	115.53	428.55	544.08
6	68.1	9.42	3.555	5.68	0.00	0.24	2.45	0.85	1.00	0.00	6.37	68.29	0.00	1,124.6	0.0	125.18	423.87	549.06
7	78.1	9.75	0.490	2.27	0.00	0.18	2.66	0.85	1.00	0.00	1.73	26.37	0.00	385.8	0.0	38.03	168.51	206.54
8	91.0	10.13	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	91.28	0.00	1,355.7	0.0	142.35	606.49	748.84
9	111.0	10.64	4.878	7.94	0.00	0.24	2.46	0.85	1.00	0.00	8.83	87.13	0.00	1,504.8	0.0	196.40	609.58	805.98
10	125.3	10.95	3.271	2.50	0.00	0.25	2.42	0.85	1.00	0.00	4.24	34.64	0.00	822.4	0.0	95.75	250.75	346.50
11	135.3	11.14	0.981	4.54	0.00	0.18	2.66	0.85	1.00	0.00	3.46	43.13	0.00	740.4	0.0	86.95	319.56	406.52
12	151.0	11.43	2.029	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.32	74.84	0.00	1,307.3	0.0	161.80	569.05	730.84
13	171.0	11.75	1.962	7.94	0.00	0.19	2.64	0.85	1.00	0.00	6.26	58.83	0.00	1,201.9	0.0	165.08	460.71	625.78
14	186.0	11.97	1.237	9.02	0.00	0.39	2.08	0.85	1.00	0.00	6.91	20.21	0.00	681.4	0.0	146.31	156.58	302.89
15	195.0	12.09	0.000	3.51	0.00	0.17	2.71	0.85	1.00	0.00	2.03	5.29	0.00	253.7	0.0	56.67	39.16	95.83
														14,317.3	**0.0**			**6,838.21**

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Force/Stress Compression Summary

Structure:	NY00011-A-SBA	**Code:**	EIA/TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 3	**Struct Class:**	II	Page: 15	

TES Tower Engineering Solutions

LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	1	WBM - W8 x 21	-105.44	1.2D + 1.0Di + 1.0Wi 60° Wind	1.76	100	100	100	16.72	44.00	239.59	44.0	Member Y
2	21	SOL - 1 3/4" SOLID	-65.48	1.2D + 1.0Di + 1.0Wi 60° Wind	2.81	100	100	100	77.07	44.00	65.00	100.7	Member X
3	41	SOL - 1 3/4" SOLID	-64.24	1.2D + 1.0Di + 1.0Wi 60° Wind	2.81	100	100	100	77.07	44.00	65.00	98.8	Member X
4	46.72	SOL - 1 3/4" SOLID	-59.40	1.2D + 1.0Di + 1.0Wi 60° Wind	2.78	100	100	100	76.17	44.00	65.58	90.6	Member X
5	61	SOL - 1 3/4" SOLID	-70.93	1.2D + 1.0W Normal Wind	2.82	50	50	50	38.71	44.00	86.49	82.0	Member X
6	75.28	SOL - 1 3/4" SOLID	-70.60	1.2D + 1.0W Normal Wind	2.82	50	50	50	38.71	44.00	86.49	81.6	Member X
7	81	SOL - 1 3/4" SOLID	-50.37	1.2D + 1.0Di + 1.0Wi 90° Wind	2.78	100	100	100	76.17	44.00	65.58	76.8	Member X
8	101	SOL - 1 3/4" SOLID	-49.12	1.2D + 1.0Di + 1.0Wi Normal	2.81	100	100	100	77.07	44.00	65.00	75.6	Member X
9	121	SOL - 1 3/4" SOLID	-66.98	1.2D + 1.0W Normal Wind	2.81	50	50	50	38.53	44.00	86.57	77.4	Member X
10	129.5	SOL - 1 3/4" SOLID	-66.62	1.2D + 1.0W Normal Wind	2.80	50	50	50	38.42	44.00	86.62	76.9	Member X
11	141	SOL - 1 3/4" SOLID	-49.14	1.2D + 1.0W Normal Wind	2.82	100	100	100	77.24	44.00	64.89	75.7	Member X
12	161	SOL - 1 3/4" SOLID	-47.18	1.2D + 1.0W 90° Wind	2.81	100	100	100	77.07	44.00	65.00	72.6	Member X
13	181	SOL - 1 3/4" SOLID	-47.13	1.2D + 1.0W 90° Wind	2.81	100	100	100	77.07	44.00	65.00	72.5	Member X
14	191	SOL - 1 1/2" SOLID	-26.09	1.2D + 1.0W Normal Wind	2.42	100	100	100	77.34	44.00	47.62	54.8	Member X
15	199	SOL - 1 1/2" SOLID	-6.86	1.2D + 1.0W Normal Wind	1.93	100	100	100	61.68	50.00	60.21	11.4	Member X

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
1	1										0.00	0	0				
2	21	SAE - 1.25x1.25x0.1875	-1.61	1.2D + 1.0W 90° Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			13.5	Member Z
3	41	SAE - 1.25x1.25x0.1875	-1.27	1.2D + 1.0W 90° Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			10.6	Member Z
4	46.7	SAE - 1.25x1.25x0.1875	-2.07	1.2D + 1.0W 90° Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			17.2	Member Z
5	61	SAE - 1.25x1.25x0.1875	-2.69	1.2D + 1.0W 90° Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			22.4	Member Z
6	75.2	SAE - 1.25x1.25x0.1875	-2.96	1.2D + 1.0W 90° Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			24.7	Member Z
7	81	SAE - 1.25x1.25x0.1875	-1.67	1.2D + 1.0W 90° Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			13.9	Member Z
8	101	SAE - 1.25x1.25x0.1875	-0.95	1.2D + 1.0W 90° Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			8.0	Member Z
9	121	SAE - 1.25x1.25x0.1875	-2.56	1.2D + 1.0W 60° Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			21.3	Member Z
10	129.	SAE - 2X2X0.25	-3.46	1.2D + 1.0W Normal Wind	2.50	100	100	100	53.71	36.00	30.77	0	0			11.2	Member Z
11	141	SAE - 1.25x1.25x0.1875	-2.00	0.9D + 1.0W 90° Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			16.7	Member Z
12	161	SAE - 1.25x1.25x0.1875	-3.91	1.2D + 1.0W 90° Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			32.7	Member Z
13	181	SAE - 1.25x1.25x0.1875	-3.09	1.2D + 1.0W Normal Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			25.8	Member Z
14	191	SAE - 1.25x1.25x0.1875	-6.99	0.9D + 1.0W Normal Wind	2.50	100	100	100	86.07	36.00	11.98	0	0			58.3	Member Z
15	199	SOL - 1/2" SOLID	-0.41	0.9D + 1.0W 60° Wind	2.50	100	100	100	168.00	36.00	1.57	0	0			26.1	Member X

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
1	1				0.00						0.00	0	0				
2	21	SOL - 1/2" SOLID	0.00	1.2D + 1.0W Normal Wind	3.76	50	50	50	162.47	36.00	1.68	0	0				T-Only
3	41	SOL - 1/2" SOLID	-0.03	1.2D + 1.0W Normal Wind	3.76	50	50	50	162.47	36.00	1.68	0	0				T-Only
4	46.7	SOL - 1/2" SOLID	-0.05	1.2D + 1.0W Normal Wind	3.74	50	50	50	161.42	36.00	1.70	0	0				T-Only
5	61	SOL - 1/2" SOLID	-1.56	1.2D + 1.0W Normal Wind	3.77	50	50	50	162.89	36.00	1.67	0	0				T-Only
6	75.2	SOL - 1/2" SOLID	-1.27	1.2D + 1.0W Normal Wind	3.77	50	50	50	162.89	36.00	1.67	0	0				T-Only
7	81	SOL - 1/2" SOLID	-1.67	1.2D + 1.0W Normal Wind	3.74	50	50	50	161.42	36.00	1.70	0	0				T-Only
8	101	SOL - 1/2" SOLID	-0.03	1.2D + 1.0W Normal Wind	3.76	50	50	50	162.47	36.00	1.68	0	0				T-Only
9	121	SOL - 1/2" SOLID	-1.59	1.2D + 1.0W Normal Wind	3.76	50	50	50	162.47	36.00	1.68	0	0				T-Only
10	129.	PLT - 3"x1/4"	-0.27	1.2D + 1.0W Normal Wind	3.75	50	50	50	280.82	36.00	2.15	0	0				T-Only
11	141	SOL - 1/2" SOLID	-0.80	1.2D + 1.0W Normal Wind	3.77	50	50	50	162.67	36.00	1.68	0	0				T-Only

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Force/Stress Compression Summary

Structure:	NY00011-A-SBA	**Code:**	EIA/TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 3	**Struct Class:**	II	Page: 16	

IES
Tower Engineering Solutions

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
12	161	SOL - 1/2" SOLID	-1.60	1.2D + 1.0W Normal Wind	3.76	50	50	50	162.47	36.00	1.68	0	0				T-Only
13	181	SOL - 1/2" SOLID	-0.29	1.2D + 1.0W Normal Wind	3.76	50	50	50	162.47	36.00	1.68	0	0				T-Only
14	191	MOD - 1/2"SR+L1.75x1/4	-3.82	1.2D + 1.0W 90° Wind	3.48	50	50	14	27.34	36.00	5.48	0	0			69.7	Member X
15	199	SOL - 1/2" SOLID	-1.60	1.2D + 1.0W Normal Wind	3.16	50	50	50	136.37	36.00	2.38	0	0				T-Only

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Force/Stress Tension Summary

Structure:	NY00011-A-SBA	**Code:**	EIA/TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 3	**Struct Class:**	II	Page: 17	

TES Tower Engineering Solutions

LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	1				0	0.00		
2	21				0	0.00		
3	41				0	0.00		
4	46.72				0	0.00		
5	61				0	0.00		
6	75.28				0	0.00		
7	81				0	0.00		
8	101				0	0.00		
9	121	SOL - 1 3/4" SOLID	10.74	0.9D + 1.0W 60° Wind	44	95.25	11.3	Member
10	129.57	SOL - 1 3/4" SOLID	10.79	0.9D + 1.0W 60° Wind	44	95.25	11.3	Member
11	141				0	0.00		
12	161	SOL - 1 3/4" SOLID	5.46	0.9D + 1.0W 90° Wind	44	95.25	5.7	Member
13	181	SOL - 1 3/4" SOLID	6.63	0.9D + 1.0W 90° Wind	44	95.25	7.0	Member
14	191	SOL - 1 1/2" SOLID	20.66	0.9D + 1.0W 60° Wind	44	69.98	29.5	Member
15	199	SOL - 1 1/2" SOLID	6.37	0.9D + 1.0W 60° Wind	50	79.52	8.0	Member

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	1	WBM - W8 x 21	44.90	1.2D + 1.0Di + 1.0Wi 90	36	199.58	0	0				22.5	Member
2	21	SAE - 1.25x1.25x0.1875	4.01	1.2D + 1.0Di + 1.0Wi No	36	14.06	0	0				28.5	Member
3	41	SAE - 1.25x1.25x0.1875	1.93	1.2D + 1.0W 60° Wind	36	14.06	0	0				13.7	Member
4	46.72	SAE - 1.25x1.25x0.1875	1.58	1.2D + 1.0W 60° Wind	36	14.06	0	0				11.2	Member
5	61	SAE - 1.25x1.25x0.1875	2.08	0.9D + 1.0W 60° Wind	36	14.06	0	0				14.8	Member
6	75.28	SAE - 1.25x1.25x0.1875	1.89	1.2D + 1.0W 60° Wind	36	14.06	0	0				13.4	Member
7	81	SAE - 1.25x1.25x0.1875	1.45	1.2D + 1.0W 60° Wind	36	14.06	0	0				10.3	Member
8	101	SAE - 1.25x1.25x0.1875	1.90	1.2D + 1.0W 90° Wind	36	14.06	0	0				13.5	Member
9	121	SAE - 1.25x1.25x0.1875	3.37	1.2D + 1.0W 60° Wind	36	14.06	0	0				24.0	Member
10	129.57	SAE - 2X2X0.25	2.80	1.2D + 1.0W 60° Wind	36	30.46	0	0				9.2	Member
11	141	SAE - 1.25x1.25x0.1875	1.61	1.2D + 1.0Di + 1.0Wi 60	36	14.06	0	0				11.5	Member
12	161	SAE - 1.25x1.25x0.1875	1.99	1.2D + 1.0W Normal Wi	36	14.06	0	0				14.1	Member
13	181	SAE - 1.25x1.25x0.1875	2.26	1.2D + 1.0W Normal Wi	36	14.06	0	0				16.0	Member
14	191	SAE - 1.25x1.25x0.1875	7.97	1.2D + 1.0W 60° Wind	36	14.06	0	0				56.7	Member
15	199	SOL - 1/2" SOLID	0.45	1.2D + 1.0W Normal Wi	36	6.36	0	0				7.1	Member

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	1	-	0.00		44	0.00	0	0					
2	21	SOL - 1/2" SOLID	2.49	1.2D + 1.0W 90° Wind	36	6.36	0	0				39.1	Member
3	41	SOL - 1/2" SOLID	2.16	1.2D + 1.0W 90° Wind	36	6.36	0	0				34.0	Member
4	46.72	SOL - 1/2" SOLID	2.95	1.2D + 1.0W 90° Wind	36	6.36	0	0				46.4	Member
5	61	SOL - 1/2" SOLID	4.24	1.2D + 1.0W 90° Wind	36	6.36	0	0				66.6	Member
6	75.28	SOL - 1/2" SOLID	4.59	0.9D + 1.0W 90° Wind	36	6.36	0	0				72.2	Member
7	81	SOL - 1/2" SOLID	2.56	1.2D + 1.0W 90° Wind	36	6.36	0	0				40.2	Member
8	101	SOL - 1/2" SOLID	1.68	0.9D + 1.0W 90° Wind	36	6.36	0	0				26.3	Member
9	121	SOL - 1/2" SOLID	3.70	0.9D + 1.0W Normal Wi	36	6.36	0	0				58.1	Member
10	129.57	PLT - 3"x1/4"	6.48	0.9D + 1.0W Normal Wi	36	24.30	0	0				26.7	Member
11	141	SOL - 1/2" SOLID	3.10	0.9D + 1.0W 90° Wind	36	6.36	0	0				48.7	Member
12	161	SOL - 1/2" SOLID	6.00	1.2D + 1.0W 90° Wind	36	6.36	0	0				94.3	Member

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Force/Stress Tension Summary

Structure:	NY00011-A-SBA	**Code:**	EIA/TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 3	**Struct Class:**	II	Page: 18	

IES
Tower Engineering Solutions

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
13	181	SOL - 1/2" SOLID	4.94	1.2D + 1.0W 90° Wind	36	6.36	0	0				77.7	Member
14	191	MOD - 1/2"SR+L1.75x1/4_rO	3.68	0.9D + 1.0W 90° Wind	36	6.36	0	0				57.9	Member
15	199	SOL - 1/2" SOLID	1.78	0.9D + 1.0W 90° Wind	36	6.36	0	0				28.0	Member

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Seismic Section Forces

Structure:	NY00011-A-SBA	**Code:**	TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 3	**Struct Class:**	II	Page: 19	

IES Tower Engineering Solutions

Load Case: 1.2D + 1.0Ev + 1.0Eh

Dead Load Factor	1.20	**Sds**	0.160	**Ss**	0.1500	**Fa**	1.6000	**Ke**	1.0000	**TL**	6.0000
Seismic Load Factor	1.00	**Sd1**	0.075	**S1**	0.0470	**Fv**	2.4000	**Kg**	0.0060	**Cs**	0.0534
Seismic Importance Factor	1.00	**W1**	0.000	**R**	3.0000	**Vs**	1.5577	**T**	0.4343	**f1**	2.3026

Sect #	Elev (ft)	Wz (lb)	Lateral Fsz (lbs)	Vertical Ev (lbs)
1	0.50	312.74	0.07	10.01
2	11.00	1501.2	7.13	48.06
3	31.00	1501.2	20.09	48.06
4	43.86	437.03	8.27	13.99
5	53.86	1282.3	29.81	41.05
6	68.14	1243.6	36.57	39.82
7	78.14	534.77	18.03	17.12
8	91.00	1497.7	58.82	47.95
9	111.00	1903.8	91.21	60.95
10	125.28	1737.0	93.93	55.61
11	135.28	740.45	43.23	23.71
12	151.00	4171.7	271.87	133.56
13	171.00	3663.4	270.37	117.29
14	186.00	3966.2	318.40	126.98
15	195.00	3444.6	289.90	110.28

Load Case: 0.9D + 1.0Ev + 1.0Eh

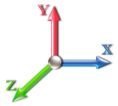
Dead Load Factor	0.90	**Sds**	0.160	**Ss**	0.1500	**Fa**	1.6000	**Ke**	1.0000	**TL**	6.0000
Seismic Load Factor	1.00	**Sd1**	0.075	**S1**	0.0470	**Fv**	2.4000	**Kg**	0.0060	**Cs**	0.0534
Seismic Importance Factor	1.00	**W1**	0.000	**R**	3.0000	**Vs**	1.5577	**T**	0.4343	**f1**	2.3026

Sect #	Elev (ft)	Wz (lb)	Lateral Fsz (lbs)	Vertical Ev (lbs)
1	0.50	312.74	0.07	10.01
2	11.00	1501.2	7.13	48.06
3	31.00	1501.2	20.09	48.06
4	43.86	437.03	8.27	13.99
5	53.86	1282.3	29.81	41.05
6	68.14	1243.6	36.57	39.82
7	78.14	534.77	18.03	17.12
8	91.00	1497.7	58.82	47.95
9	111.00	1903.8	91.21	60.95
10	125.28	1737.0	93.93	55.61
11	135.28	740.45	43.23	23.71
12	151.00	4171.7	271.87	133.56
13	171.00	3663.4	270.37	117.29
14	186.00	3966.2	318.40	126.98
15	195.00	3444.6	289.90	110.28

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Support Forces Summary

Structure:	NY00011-A-SBA		**Code:**	TIA-222-H	4/26/2022
Site Name:	South Bristol		**Exposure:**	B	
Height:	199.00 (ft)		**Crest Height:**	849.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	0.85	**Topography:** 3	**Struct Class:**	II	Page: 20



IES
Tower Engineering Solutions

Load Case	Node	FX (kips)	FY (kips)	FZ (kips)	(-) = Uplift (+) = Down
1.2D + 1.0W Normal Wind	1	0.08	146.63	-0.39	
	A1	0.00	-1.74	0.70	
	A1b	37.15	-53.08	-23.06	
	A1a	-37.24	-57.42	-23.10	
1.2D + 1.0W 60° Wind	1	-1.24	106.43	-0.76	
	A1	-0.75	-5.66	4.14	
	A1b	3.16	-5.76	-2.69	
	A1a	-40.56	-60.88	-23.43	
1.2D + 1.0W 90° Wind	1	-0.71	134.41	-0.45	
	A1	-1.27	-31.82	25.96	
	A1b	0.88	-2.33	-0.93	
	A1a	-44.47	-66.00	-24.59	
0.9D + 1.0W Normal Wind	1	0.07	138.21	-0.52	
	A1	0.00	-1.75	0.71	
	A1b	37.08	-52.95	-23.01	
	A1a	-37.17	-57.27	-23.04	
0.9D + 1.0W 60° Wind	1	-1.30	98.33	-0.78	
	A1	-0.75	-5.71	4.16	
	A1b	3.20	-5.80	-2.71	
	A1a	-40.54	-60.84	-23.41	
0.9D + 1.0W 90° Wind	1	-0.81	126.05	-0.42	
	A1	-1.27	-31.73	25.89	
	A1b	0.89	-2.35	-0.94	
	A1a	-44.39	-65.86	-24.55	
1.2D + 1.0Di + 1.0Wi Normal Wind	1	0.05	186.40	-0.14	
	A1	0.00	-8.77	9.34	
	A1b	17.55	-21.63	-11.08	
	A1a	-17.62	-23.59	-11.14	
1.2D + 1.0Di + 1.0Wi 60° Wind	1	-0.06	186.76	-0.04	
	A1	-0.80	-13.13	13.00	
	A1b	10.86	-13.16	-7.19	
	A1a	-21.26	-28.34	-12.28	
1.2D + 1.0Di + 1.0Wi 90° Wind	1	-0.09	186.57	0.04	
	A1	-0.98	-17.33	16.84	
	A1b	8.69	-9.97	-5.48	
	A1a	-20.62	-27.00	-11.41	
1.2D + 1.0Ev + 1.0Eh	1	0.00	72.83	0.00	
	A1	0.00	-10.50	9.18	
	A1b	9.27	-12.67	-5.35	
	A1a	-9.25	-13.71	-5.34	
0.9D + 1.0Ev + 1.0Eh	1	0.00	65.17	0.00	
	A1	0.00	-10.73	9.36	
	A1b	9.41	-12.89	-5.44	
	A1a	-9.40	-13.95	-5.43	

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

1.0D + 1.0W Normal Wind	1	0.00	63.63	-0.56
	A1	0.00	-1.05	0.90
	A1b	11.62	-16.20	-6.99
	A1a	-11.62	-17.54	-7.00
1.0D + 1.0W 60° Wind	1	-0.49	62.76	-0.29
	A1	-0.22	-5.75	4.66
	A1b	3.92	-5.78	-2.52
	A1a	-14.92	-22.47	-8.62
1.0D + 1.0W 90° Wind	1	-0.54	63.64	-0.03
	A1	-0.28	-11.07	9.18
	A1b	1.58	-2.40	-1.04
	A1a	-14.32	-21.37	-8.11

Max Reactions (kips)	Base	Anchor 1
Vertical	186.76	66.00
Horizontal	1.52	50.82

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Cable Forces Summary

Structure:	NY00011-A-SBA	**Code:**	TIA-222-H	4/26/2022	
Site Name:	South Bristol	**Exposure:**	B		
Height:	199.00 (ft)	**Crest Height:**	849.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 3	**Struct Class:**	II	Page: 22	

Tower Engineering Solutions

Load Case	Elevation (ft)	Cable	Node 1	Node 2	Allow Tension (kips)	Applied Tension (kips)	Use %
1.2D + 1.0W Normal Wind	60.83	1/2 EHS	A1	28	16.02	0.06	0
			A1b	28a	16.02	10.75	67
			A1a	28b	16.02	11.27	70
	120.83	7/16 EHS	A1	T2	12.48	0.23	2
			A1a	T2b	12.48	9.31	75
			A1b	T2a	12.48	8.87	71
			A1b	T2	12.48	9.08	73
			A1a	T2a	12.48	9.61	77
			A1	T2b	12.48	0.24	2
	146.79		A1	68	12.48	0.36	3
			A1b	68a	12.48	9.31	75
			A1a	68b	12.48	9.80	79
	183.58	9/16 EHS	A1	T4	21.00	0.71	3
			A1a	T4b	21.00	16.89	80
			A1b	T4a	21.00	16.13	77
			A1b	T4	21.00	16.16	77
			A1a	T4a	21.00	16.75	80
			A1	T4b	21.00	0.71	3
1.2D + 1.0W 60° Wind	60.83	1/2 EHS	A1	28	16.02	0.86	5
			A1b	28a	16.02	0.72	5
			A1a	28b	16.02	12.09	75
	120.83	7/16 EHS	A1	T2	12.48	0.96	8
			A1a	T2b	12.48	10.21	82
			A1b	T2a	12.48	0.87	7
			A1b	T2	12.48	0.88	7
			A1a	T2a	12.48	10.09	81
			A1	T2b	12.48	0.91	7
	146.79		A1	68	12.48	1.06	8
			A1b	68a	12.48	1.05	8
			A1a	68b	12.48	10.66	85
	183.58	9/16 EHS	A1	T4	21.00	1.95	9
			A1a	T4b	21.00	17.63	84
			A1b	T4a	21.00	2.02	10
			A1b	T4	21.00	2.07	10
			A1a	T4a	21.00	17.59	84
			A1	T4b	21.00	1.85	9
1.2D + 1.0W 90° Wind	60.83	1/2 EHS	A1	28	16.02	6.47	40
			A1b	28a	16.02	0.19	1
			A1a	28b	16.02	13.23	83
	120.83	7/16 EHS	A1	T2	12.48	5.59	45
			A1a	T2b	12.48	11.25	90
			A1b	T2a	12.48	0.34	3
			A1b	T2	12.48	0.35	3
			A1a	T2a	12.48	10.93	88
			A1	T2b	12.48	5.31	43
	146.79		A1	68	12.48	5.41	43
			A1b	68a	12.48	0.46	4
			A1a	68b	12.48	11.51	92
	183.58	9/16 EHS	A1	T4	21.00	9.83	47
			A1a	T4b	21.00	18.86	90
			A1b	T4a	21.00	0.88	4
			A1b	T4	21.00	0.90	4
			A1a	T4a	21.00	19.07	91
			A1	T4b	21.00	9.59	46

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

0.9D + 1.0W Normal Wind	60.83	1/2 EHS	A1	28	16.02	0.06	0
			A1b	28a	16.02	10.76	67
			A1a	28b	16.02	11.29	70
	120.83	7/16 EHS	A1	T2	12.48	0.24	2
			A1a	T2b	12.48	9.30	75
			A1b	T2a	12.48	8.86	71
			A1b	T2	12.48	9.07	73
			A1a	T2a	12.48	9.59	77
			A1	T2b	12.48	0.24	2
	146.79		A1	68	12.48	0.36	3
			A1b	68a	12.48	9.29	74
			A1a	68b	12.48	9.77	78
	183.58	9/16 EHS	A1	T4	21.00	0.72	3
			A1a	T4b	21.00	16.84	80
			A1b	T4a	21.00	16.07	77
			A1b	T4	21.00	16.10	77
			A1a	T4a	21.00	16.68	79
			A1	T4b	21.00	0.72	3
0.9D + 1.0W 60° Wind	60.83	1/2 EHS	A1	28	16.02	0.85	5
			A1b	28a	16.02	0.73	5
			A1a	28b	16.02	12.09	75
	120.83	7/16 EHS	A1	T2	12.48	0.96	8
			A1a	T2b	12.48	10.19	82
			A1b	T2a	12.48	0.88	7
			A1b	T2	12.48	0.89	7
			A1a	T2a	12.48	10.10	81
			A1	T2b	12.48	0.91	7
	146.79		A1	68	12.48	1.07	9
			A1b	68a	12.48	1.06	8
			A1a	68b	12.48	10.65	85
	183.58	9/16 EHS	A1	T4	21.00	1.97	9
			A1a	T4b	21.00	17.63	84
			A1b	T4a	21.00	2.04	10
			A1b	T4	21.00	2.08	10
			A1a	T4a	21.00	17.58	84
			A1	T4b	21.00	1.87	9
0.9D + 1.0W 90° Wind	60.83	1/2 EHS	A1	28	16.02	6.47	40
			A1b	28a	16.02	0.19	1
			A1a	28b	16.02	13.23	83
	120.83	7/16 EHS	A1	T2	12.48	5.56	45
			A1a	T2b	12.48	11.21	90
			A1b	T2a	12.48	0.34	3
			A1b	T2	12.48	0.35	3
			A1a	T2a	12.48	10.92	88
			A1	T2b	12.48	5.30	42
	146.79		A1	68	12.48	5.41	43
			A1b	68a	12.48	0.47	4
			A1a	68b	12.48	11.47	92
	183.58	9/16 EHS	A1	T4	21.00	9.81	47
			A1a	T4b	21.00	18.82	90
			A1b	T4a	21.00	0.88	4
			A1b	T4	21.00	0.91	4
			A1a	T4a	21.00	19.02	91
			A1	T4b	21.00	9.54	45
1.2D + 1.0Di + 1.0Wi Normal Wind	60.83	1/2 EHS	A1	28	16.02	3.23	20
			A1b	28a	16.02	5.65	35
			A1a	28b	16.02	6.02	38
	120.83	7/16 EHS	A1	T2	12.48	2.70	22
			A1a	T2b	12.48	5.03	40
			A1b	T2a	12.48	4.74	38
			A1b	T2	12.48	4.80	38
			A1a	T2a	12.48	5.01	40
			A1	T2b	12.48	2.72	22
	146.79		A1	68	12.48	2.58	21
			A1b	68a	12.48	5.03	40
			A1a	68b	12.48	5.27	42
	183.58	9/16 EHS	A1	T4	21.00	3.30	16

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

1.2D + 1.0Di + 1.0Wi Normal Wind	183.58	9/16 EHS	A1a	T4b	21.00	7.90	38
			A1b	T4a	21.00	7.46	36
			A1b	T4	21.00	7.55	36
			A1a	T4a	21.00	7.81	37
			A1	T4b	21.00	3.29	16
1.2D + 1.0Di + 1.0Wi 60° Wind	60.83	1/2 EHS	A1	28	16.02	3.93	25
			A1b	28a	16.02	3.91	24
			A1a	28b	16.02	6.66	42
	120.83	7/16 EHS	A1	T2	12.48	3.36	27
			A1a	T2b	12.48	5.76	46
			A1b	T2a	12.48	3.30	26
			A1b	T2	12.48	3.34	27
			A1a	T2a	12.48	5.75	46
			A1	T2b	12.48	3.31	27
	146.79		A1	68	12.48	3.41	27
			A1b	68a	12.48	3.40	27
			A1a	68b	12.48	6.10	49
	183.58	9/16 EHS	A1	T4	21.00	4.86	23
			A1a	T4b	21.00	9.42	45
			A1b	T4a	21.00	4.78	23
			A1b	T4	21.00	4.88	23
			A1a	T4a	21.00	9.42	45
			A1	T4b	21.00	4.73	23
1.2D + 1.0Di + 1.0Wi 90° Wind	60.83	1/2 EHS	A1	28	16.02	4.80	30
			A1b	28a	16.02	3.37	21
			A1a	28b	16.02	6.53	41
	120.83	7/16 EHS	A1	T2	12.48	4.10	33
			A1a	T2b	12.48	5.59	45
			A1b	T2a	12.48	2.84	23
			A1b	T2	12.48	2.83	23
			A1a	T2a	12.48	5.56	45
			A1	T2b	12.48	4.01	32
	146.79		A1	68	12.48	4.23	34
			A1b	68a	12.48	2.78	22
			A1a	68b	12.48	5.88	47
	183.58	9/16 EHS	A1	T4	21.00	6.18	29
			A1a	T4b	21.00	8.93	43
			A1b	T4a	21.00	3.73	18
			A1b	T4	21.00	3.80	18
			A1a	T4a	21.00	8.97	43
			A1	T4b	21.00	6.05	29
1.2D + 1.0Ev + 1.0Eh	60.83	1/2 EHS	A1	28	16.02	3.36	21
			A1b	28a	16.02	3.48	22
			A1a	28b	16.02	3.63	23
	120.83	7/16 EHS	A1	T2	12.48	1.58	13
			A1a	T2b	12.48	1.93	15
			A1b	T2a	12.48	1.83	15
			A1b	T2	12.48	1.83	15
			A1a	T2a	12.48	1.94	16
			A1	T2b	12.48	1.58	13
	146.79		A1	68	12.48	1.38	11
			A1b	68a	12.48	1.75	14
			A1a	68b	12.48	1.85	15
	183.58	9/16 EHS	A1	T4	21.00	3.39	16
			A1a	T4b	21.00	4.38	21
			A1b	T4a	21.00	4.23	20
			A1b	T4	21.00	4.22	20
			A1a	T4a	21.00	4.40	21
			A1	T4b	21.00	3.38	16
0.9D + 1.0Ev + 1.0Eh	60.83	1/2 EHS	A1	28	16.02	3.38	21
			A1b	28a	16.02	3.51	22
			A1a	28b	16.02	3.66	23
	120.83	7/16 EHS	A1	T2	12.48	1.62	13
			A1a	T2b	12.48	1.97	16
			A1b	T2a	12.48	1.87	15
			A1b	T2	12.48	1.86	15

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

0.9D + 1.0Ev + 1.0Eh	120.83	7/16 EHS	A1a	T2a	12.48	1.98	16
			A1	T2b	12.48	1.62	13
	146.79		A1	68	12.48	1.42	11
			A1b	68a	12.48	1.79	14
			A1a	68b	12.48	1.89	15
	183.58	9/16 EHS	A1	T4	21.00	3.46	16
			A1a	T4b	21.00	4.45	21
			A1b	T4a	21.00	4.31	21
			A1b	T4	21.00	4.29	20
			A1a	T4a	21.00	4.47	21
			A1	T4b	21.00	3.46	16
1.0D + 1.0W Normal Wind	60.83	1/2 EHS	A1	28	16.02	0.48	3
			A1b	28a	16.02	3.83	24
			A1a	28b	16.02	4.01	25
	120.83	7/16 EHS	A1	T2	12.48	0.08	1
			A1a	T2b	12.48	2.71	22
			A1b	T2a	12.48	2.53	20
			A1b	T2	12.48	2.64	21
			A1a	T2a	12.48	2.74	22
			A1	T2b	12.48	0.08	1
	146.79		A1	68	12.48	0.10	1
			A1b	68a	12.48	2.55	20
			A1a	68b	12.48	2.69	22
	183.58	9/16 EHS	A1	T4	21.00	0.56	3
			A1a	T4b	21.00	5.49	26
			A1b	T4a	21.00	5.10	24
			A1b	T4	21.00	5.27	25
			A1a	T4a	21.00	5.32	25
			A1	T4b	21.00	0.55	3
1.0D + 1.0W 60° Wind	60.83	1/2 EHS	A1	28	16.02	1.37	9
			A1b	28a	16.02	1.35	8
			A1a	28b	16.02	4.78	30
	120.83	7/16 EHS	A1	T2	12.48	0.77	6
			A1a	T2b	12.48	3.52	28
			A1b	T2a	12.48	0.73	6
			A1b	T2	12.48	0.74	6
			A1a	T2a	12.48	3.49	28
			A1	T2b	12.48	0.74	6
	146.79		A1	68	12.48	0.80	6
			A1b	68a	12.48	0.79	6
			A1a	68b	12.48	3.58	29
	183.58	9/16 EHS	A1	T4	21.00	2.21	11
			A1a	T4b	21.00	6.91	33
			A1b	T4a	21.00	2.14	10
			A1b	T4	21.00	2.23	11
			A1a	T4a	21.00	6.91	33
			A1	T4b	21.00	2.08	10
1.0D + 1.0W 90° Wind	60.83	1/2 EHS	A1	28	16.02	2.63	16
			A1b	28a	16.02	0.61	4
			A1a	28b	16.02	4.65	29
	120.83	7/16 EHS	A1	T2	12.48	1.74	14
			A1a	T2b	12.48	3.41	27
			A1b	T2a	12.48	0.26	2
			A1b	T2	12.48	0.28	2
			A1a	T2a	12.48	3.33	27
			A1	T2b	12.48	1.63	13
	146.79		A1	68	12.48	1.66	13
			A1b	68a	12.48	0.32	3
			A1a	68b	12.48	3.40	27
	183.58	9/16 EHS	A1	T4	21.00	3.81	18
			A1a	T4b	21.00	6.46	31
			A1b	T4a	21.00	1.01	5
			A1b	T4	21.00	1.07	5
			A1a	T4a	21.00	6.56	31
			A1	T4b	21.00	3.60	17

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Max Reactions

Base:	186.76 (Vertical)	1.52 (Horizontal)
Anchor 1:	66.00 (Vertical)	50.82 (Horizontal)

Max Usages

Max Leg: 100.7% (1.2D + 1.0Di + 1.0Wi 60° Wind - Sect 2)
Max Diag: 94.3% (1.2D + 1.0W 90° Wind - Sect 12)
Max Horiz: 58.3% (0.9D + 1.0W Normal Wind - Sect 14)
Max Cable: 92.2% (1.2D + 1.0W 90° Wind) - Elev: 147 ft

Max Deflection, Twist and Sway

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
0.9D + 1.0Ev + 1.0Eh - Normal To Face	63.99	0.0081	0.0000	0.0130
	75.28	0.0106	0.0000	0.0101
	92.40	0.0135	0.0001	0.0117
	101.17	0.0152	0.0001	0.0119
	123.97	0.0220	0.0002	0.0273
	158.02	0.0428	0.0001	0.0395
	160.83	0.0447	0.0001	0.0399
	166.79	0.0486	0.0001	0.0370
	180.83	0.0574	-0.0003	0.0304
	186.00	0.0611	0.0003	0.0540
	195.00	0.0692	0.0000	0.0528
	199.00	0.0728	0.0001	0.0534
0.9D + 1.0W 110 mph Wind at 60° From Face	63.99	0.4810	0.4233	0.5545
	75.28	0.5958	0.3950	0.5961
	92.40	0.7535	0.4028	0.4527
	101.17	0.8144	0.3200	0.3297
	123.97	0.9533	0.2004	0.5871
	158.02	1.3675	0.2619	0.6514
	160.83	1.3992	0.2602	0.6170
	166.79	1.4487	0.2605	0.6177
	180.83	1.5066	0.2456	0.1426
	186.00	1.5380	0.2294	0.5098
	195.00	1.6143	0.2235	0.4976
	199.00	1.6466	0.2234	0.4795
0.9D + 1.0W 110 mph Wind at 90° From Face	63.99	0.7571	0.6045	0.8819
	75.28	0.9348	0.7357	0.9134
	92.40	1.1870	0.8180	0.7462
	101.17	1.2883	0.6545	0.6343
	123.97	1.5345	0.2985	0.9048
	158.02	2.1255	0.1313	0.7746
	160.83	2.1698	0.1107	0.9139
	166.79	2.2489	0.0857	0.2425
	180.83	2.3777	-0.0847	0.3871
	186.00	2.4357	-0.0949	0.7668
	195.00	2.5579	-0.0912	0.7806
	199.00	2.6107	-0.0912	0.7642

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

0.9D + 1.0W 110 mph Wind at Normal To Face	63.99	0.8159	-0.3000	0.9020
	75.28	1.0143	-0.4752	0.9525
	92.40	1.2766	-0.1485	0.8298
	101.17	1.3844	0.0279	0.6617
	123.97	1.6791	-0.2823	1.0151
	158.02	2.3704	0.0370	1.4124
	160.83	2.4279	0.0481	1.1032
	166.79	2.5327	0.0703	1.4857
	180.83	2.7227	0.1529	0.5857
	186.00	2.8025	0.1322	1.1215
	195.00	2.9635	0.1309	1.0284
	199.00	3.0334	0.1312	1.0095
1.0D + 1.0W 60 mph Wind at 60° From Face	63.99	0.1140	0.0832	0.1157
	75.28	0.1394	0.0743	0.1353
	92.40	0.1767	0.0741	0.1102
	101.17	0.1917	0.0621	0.0855
	123.97	0.2275	0.0344	0.1271
	158.02	0.3159	0.0256	0.1199
	160.83	0.3219	0.0245	0.1218
	166.79	0.3316	0.0229	0.1551
	180.83	0.3425	0.0238	0.0231
	186.00	0.3477	0.0184	0.1008
	195.00	0.3629	0.0169	0.0987
	199.00	0.3692	0.0169	0.0930
1.0D + 1.0W 60 mph Wind at 90° From Face	63.99	0.1302	0.1701	0.1354
	75.28	0.1599	0.1598	0.1580
	92.40	0.2033	0.1498	0.1300
	101.17	0.2208	0.1312	0.1027
	123.97	0.2604	0.1054	0.1362
	158.02	0.3375	0.0655	0.0512
	160.83	0.3417	0.0614	0.0959
	166.79	0.3474	0.0535	0.1367
	180.83	0.3483	0.0406	0.0743
	186.00	0.3500	0.0353	0.0595
	195.00	0.3593	0.0337	0.0671
	199.00	0.3629	0.0336	0.0622
1.0D + 1.0W 60 mph Wind at Normal To Face	63.99	0.1352	-0.0725	0.1349
	75.28	0.1667	-0.0823	0.1536
	92.40	0.2080	-0.0709	0.1200
	101.17	0.2241	-0.0658	0.0874
	123.97	0.2584	-0.0819	0.1203
	158.02	0.3244	-0.0317	0.1475
	160.83	0.3281	-0.0268	0.0575
	166.79	0.3327	-0.0171	0.1930
	180.83	0.3310	0.0130	0.0831
	186.00	0.3315	0.0080	0.0721
	195.00	0.3387	0.0067	0.0465
	199.00	0.3414	0.0067	0.0410
1.2D + 1.0Di + 1.0Wi 40 mph Wind at 60° From Face	63.99	0.1336	0.0565	0.1380
	75.28	0.1730	-0.0791	0.2603
	92.40	0.2174	-0.1382	0.1218
	101.17	0.2272	0.0142	0.0541
	123.97	0.2577	0.0277	0.1974
	158.02	0.3584	0.0342	0.1459
	160.83	0.3656	0.0329	0.1577
	166.79	0.3787	0.0310	0.1133
	180.83	0.4003	0.0287	0.0409
	186.00	0.4087	0.0270	0.1257
	195.00	0.4287	0.0251	0.1299
	199.00	0.4373	0.0251	0.1259

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

1.2D + 1.0Di + 1.0Wi 40 mph Wind at 90° From Face	63.99	0.1476	0.1575	0.1392
	75.28	0.1825	0.5251	0.2227
	92.40	0.2183	0.5469	0.1743
	101.17	0.2181	0.1435	0.0810
	123.97	0.2381	0.0906	0.1493
	158.02	0.3199	0.0264	0.0442
	160.83	0.3253	0.0262	0.1329
	166.79	0.3349	0.0263	0.0395
	180.83	0.3480	0.0280	0.0381
	186.00	0.3533	0.0274	0.0660
	195.00	0.3677	0.0253	0.0941
	199.00	0.3737	0.0253	0.0906
1.2D + 1.0Di + 1.0Wi 40 mph Wind at Normal From Face	63.99	0.1489	0.1021	0.1651
	75.28	0.1784	0.5336	0.0997
	92.40	0.1918	0.1649	0.1325
	101.17	0.1938	-0.0107	0.0384
	123.97	0.2008	-0.0939	0.1271
	158.02	0.2637	0.0018	0.1990
	160.83	0.2683	0.0040	0.0628
	166.79	0.2756	0.0088	0.1447
	180.83	0.2843	0.0223	0.0292
	186.00	0.2879	0.0198	0.1191
	195.00	0.2997	0.0180	0.0769
	199.00	0.3045	0.0180	0.0737
1.2D + 1.0Ev + 1.0Eh - Normal To Face	63.99	0.0082	0.0000	0.0130
	75.28	0.0105	0.0001	0.0101
	92.40	0.0134	0.0001	0.0117
	101.17	0.0152	0.0001	0.0119
	123.97	0.0219	0.0002	0.0274
	158.02	0.0428	0.0001	0.0396
	160.83	0.0447	0.0001	0.0400
	166.79	0.0486	0.0001	0.0371
	180.83	0.0574	-0.0003	0.0304
	186.00	0.0611	0.0003	0.0541
	195.00	0.0692	0.0000	0.0529
	199.00	0.0729	0.0001	0.0535
1.2D + 1.0W 110 mph Wind at 60° From Face	63.99	0.4835	0.4195	0.5714
	75.28	0.5993	0.3999	0.6018
	92.40	0.7603	0.4566	0.4551
	101.17	0.8212	0.3705	0.3291
	123.97	0.9603	0.2413	0.5810
	158.02	1.3757	0.1828	0.6611
	160.83	1.4078	0.1834	0.6255
	166.79	1.4579	0.2262	0.6588
	180.83	1.5165	0.2311	0.1465
	186.00	1.5483	0.2155	0.5145
	195.00	1.6252	0.2095	0.5018
	199.00	1.6577	0.2094	0.4836
1.2D + 1.0W 110 mph Wind at 90° From Face	63.99	0.7608	0.6284	0.8929
	75.28	0.9407	0.7727	0.9250
	92.40	1.2001	0.9133	0.7716
	101.17	1.3002	0.6996	0.6422
	123.97	1.5495	0.3208	0.8895
	158.02	2.1460	0.0674	0.7921
	160.83	2.1912	0.0598	0.9323
	166.79	2.2704	0.0434	0.2590
	180.83	2.4038	-0.1117	0.4008
	186.00	2.4631	-0.1214	0.7817
	195.00	2.5876	-0.1176	0.7951
	199.00	2.6414	-0.1175	0.7787

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

1.2D + 1.0W 110 mph Wind at Normal To Face	63.99	0.8178	-0.2258	0.9114
	75.28	1.0142	-0.3180	0.9734
	92.40	1.2833	-0.0913	0.8439
	101.17	1.3953	0.1036	0.6667
	123.97	1.6923	-0.2882	1.0444
	158.02	2.3938	0.0170	1.4321
	160.83	2.4522	0.0296	1.1214
	166.79	2.5587	0.0541	1.5016
	180.83	2.7523	0.1443	0.5992
	186.00	2.8334	0.1240	1.1376
	195.00	2.9970	0.1228	1.0443
	199.00	3.0679	0.1230	1.0253

Copyright © 2022 by Tower Engineering Solutions, LLC. All rights reserved.

Guyed Tower Base Design

			Date: 4/26/2022
Customer Name:	SBA Communications Corp	**TIA Standard:**	TIA-222-H
Site Name:		**Structure Height (Ft.):**	199
Site Nmber:	NY00011-A-SBA	**Engineer Name:**	M. Al Rubaye
Engr. Number:	128291	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Guyed Tower

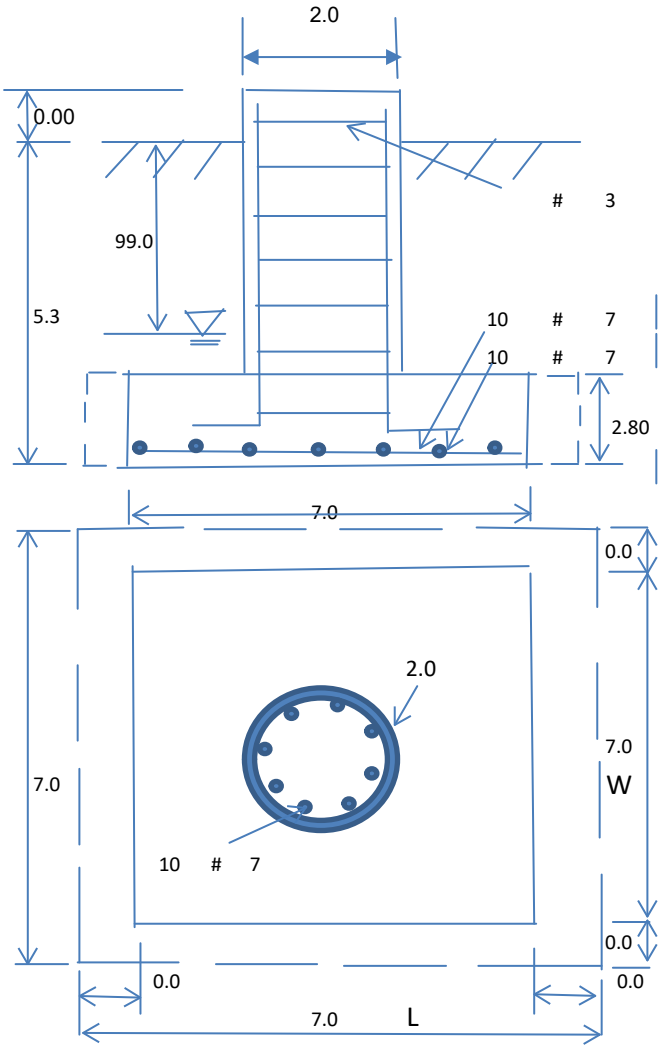
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	186.8	Shear Force (Kips):	1.5
Uplift Force (Kips):	0.0	Moment (Kips-ft):	
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	2.0	Depth of Base BG (ft.):	5.3
Pier Height A. G. (ft.):	0.00	Thickness of Pad (ft):	2.80
Length of Pad (ft.):	7	Width of Pad (ft.):	7
Final Length of pad (ft)	7.0	Final width of pad (ft):	7.0



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	7	Tie / Stirrup Size #:	3	
Qty. of Vertical Rebars:	10	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	7	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	10	Qty. of Rebar in Pad (W):	10	

Soil Design Parameters:

Soil Unit Weight (pcf):	115.0	Soil Buoyant Weight:	52.6	Pcf		
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	30000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
					Angle from Bottm of Pad:	25

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.6

Total Dry Soil Volume (cu. Ft.):	114.65	Total Dry Soil Weight (Kips):	13.18
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	13.18	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	145.05	Total Dry Concrete Weight (Kips):	21.76
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	21.76	Total Vertical Load on Base (Kips):	221.70

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	3915.0	<	Allowable Factored Soil Bearing (psf):	18000	0.22	OK!
Calculated Foundation Allowable Axail Capacity (Kips):	882.0	>	Design Factored Axial Load (Kips):	193	0.22	OK!

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	0.65	Wind Load Factor on Concrete Design:	1.00		
				Load/ Capacity Ratio	
(1) Concrete Pier:					
Vertical Steel Rebar Area (sq. in./each):	0.60	Tie / Stirrup Area (sq. in./each):	0.11		
Calculated Moment Capacity (Mn,Kips-Ft):	227.0 >	Design Factored Moment (Mu, Kips-Ft	3.8	0.02	OK!
Calculated Shear Capacity (Kips):	58.3 >	Design Factored Shear (Kips):	1.5	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	324.0 >	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	591.9 >	Design Factored Axial Load (Pu Kips):	186.8	0.32	OK!
Moment & Axial Strength Combination(Pu/Pn+Mu/Mn):	0.33 OK!				
Pier Reinforcement Ratio:	0.013				
(2).Concrete Pad:					
One-Way Design Shear Capacity (L-Dir. Kips);	208.2 >	One-Way Factored Shear (L-Dir Kips):	0.0	0.00	OK!
One-Way Design Shear Capacity (W-Dir. Kips):	208.2 >	One-Way Factored Shear (W-Dir Kips)	0.0	0.00	OK!
Two-Way Design Shear Capacity (Kips):	843.3 >	Two-Way Factored Shear (Kips):	125.1	0.15	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0024 OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0024		OK!
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	791.7 >	Moment at Bottom (L-Direct. K-Ft):	85.6	0.11	OK!
Lower Steel Pad Moment Capacity (W-Dir. Kips-ft):	791.7 >	Moment at Bottom (W-Dir. Kips-Ft):	85.6	0.11	OK!

Last re ised on 1/3/2022

TES Tower Engineering Solutions	**Guy Anchor Analysis and Design**		Date 4/26/2022
Custo mer Nam e:	**SBA Com munic ations Cor p**	T A S tandard:	**IA222**
Site Name:		Str uctur e H eight (Ft.):	**1**
Site Nmber:	**N 11 A SBA**	E ngineer Nam e:	**M. Al R ubaye**
Engr . Num ber :	**1221**	Engine er Login D:	

Foundation Ino btained rom: DraingsCalc ulations **Number o Anbors:** *1 Set* *Failure model: ew*

Soil Design aramet rs:

Soil nit Weight (pcf):	*122.0*	*Soil uoant Weight:*	*65.0*	*cf*	*Cohesion of Soils (psf):*	*0*
		nit W eight of Water:	*62.4*	*pcf*	Internal Angle of Friction (°)	*33*
ltimate lat eral pressure (psf):	*2250*	*ltimate Sin Fr iction:*	*550*	*sf*	*Coefficient of Shear Friction:*	*0.30*
Conical Failure Angle from Top:	*30*	*Failure Angle from ottm*	*30*			

ate rial roe rties:

Concrete Strength (psi):	*3000*	*ni t Weight of Concrete:*	*150.0*	*psf*	*Horiontal Rebar Y ield (psi):*	*60000*
Shear Strength Reduction Factor:	*0.75*				*Fleure Streng th Reduction Factor:*	*0.9*

A. Inner Anchors:

Radius (ft.): *110*

. Design eactions (Factored):

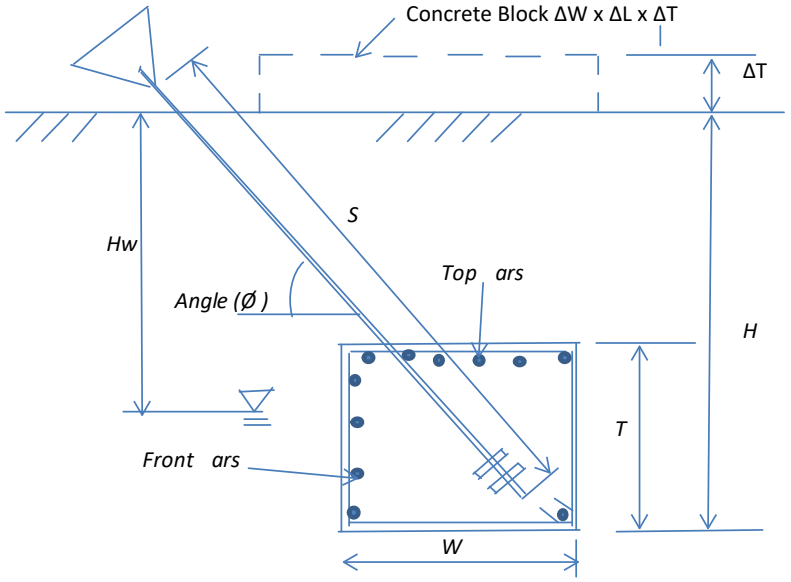
plift (ips:)	*66.0*	*Shear (ips)*	*50.8*	*Angle of force resultant (Ø):*	*52.4*

. Foundation Geometeis:

loc ase Dept h .. S. (ft):	*8.0*	*loc with/without toe*	*o*	*Water Table below grade (ft):*	*99.00*
Length of Anchor loc (L ft .):	*15.0*	*Width of Anchor loc:*	*4.0* *ft.*	*Thicness of Anchor loc (ft.):*	*3.0*
Concrete loc top of Anchor	*o*				

1 . Inner Ancors

H t.	8.0	Raius t .	110
t.	15.0	Hwt.	99.0
T t.	.0	t.	4.0
S t .	10.	Angle	52.4
Top bars			6
ront bars			6
Concrete olume Cu. Y/E ac			6.6



3. Foundation Analysis and Design:

Total Dry Soil Volume (cu. Ft.):	617.87	Total Dry Soil Weight (Kips):	144.06
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	75.38	Weight of the Concrete Block at Top (Kips):	0.00
Total Dry Concrete Volume (cu. Ft.):	180.00	Total Dry Concrete Weight (Kip):	27.00
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	27.00	Weight Reduction Factor:	0.9
Soil Uplift Strength Reduction Factor A:	0.75	Shear Strength Reduction Factor:	0.75
Soil Uplift Strength Reduction Factor B:	0.9		

4. Check Soil and Foundation Capacities:

Nominal Factored Uplift Resistance:	104.27	Kips >	Design Uplift Force (Kips):	66.0	OK!
Ultimate Shear Friction Resistance at base:	5.88	Kips	Ultimate Resistance Pressure:	2250.0	Psf
Factored Shear Resistance:	90.25	Kips >	Design Shear Force (Kips):	50.8	OK!

5. Design Concrete Block:

Rebar Size (#):	6	Wind Load Factor on Concrete Design:	1.00	
Qty. of the Rebar at top of the block:	3	Qty. of the Rebar in the front of the block:	3	
Area of Single Rebar (sq. in.):	0.44	Factor for concrete compression zone:	0.85	
One Way Shear due to Shear Force (Kips):	25.4	One Way Shear Capacity for shear (kips):	130.1	OK!
One Way Shear due to Uplift (Kips):	33.0	One Way Shear Capacity for uplift (kips):	126.2	OK!
Moment due to Shear Load (Kips-ft):	95.3	Flexural Capacity for Shear Load (Kips-ft):	261.3	OK!
Moment due to uplift Load (Kips-ft):	123.7	Flexural Capacity for uplift Load (Kips-ft):	190.0	OK!
Ratio of Design Moment/Moment capacity:	0.65	Minimum ratio of rebar (top & front) :	0.12	OK!
Max. Ratio of Shear Force/Shear capacity:	0.26	OK!		

Sublight Engineering PLLC

SBA.NY00011-A
RF EXPOSURE ASSESSMENT
GPD Group

Site: SBA.NY00011-A
Address: 5776 STID HILL ROAD
NAPLES, NY 14512
County: ONTARIO
Location: 42.741683°, -77.387861°

Abstract

Based on this assessment, RF exposure levels in accessible areas near this installation will be below FCC limits for the General Public.

Matthew J Butcher
Registered Professional Engineer
State of New York 085237

Warning: It is a violation of New York State Law, Article 145, Section §7209 for any person, unless acting under the direction of a licensed professional engineer, to alter this document in any way.

July 22, 2022

Matthew J Butcher
matt@sublight.net

RF Exposure Assessment

Sublight Engineering PLLC (Sublight) has been asked to assess compliance with the Federal Communications Commission (FCC) Radio Frequency (RF) exposure limits near the proposed installation SBA.NY00011-A detailed below. GPD Group engaged Sublight and provided information for this assessment.

DRW NX LLC propose to add equipment at this location. The new installation will operate in the 6 GHz point-to-point microwave band.

This assessment reviewed RF exposure with respect to FCC limits in all areas near the antenna using worst-case computer modeling.

Based on this assessment, RF exposure levels in accessible areas near this installation will be below FCC limits for the General Public.

Installation Location

This assessment covers the pole mounted antenna detailed below:

Site: SBA.NY00011-A
Address: 5776 STID HILL ROAD NAPLES, NY 14512
County: ONTARIO
Location: 42.741683°, -77.387861°

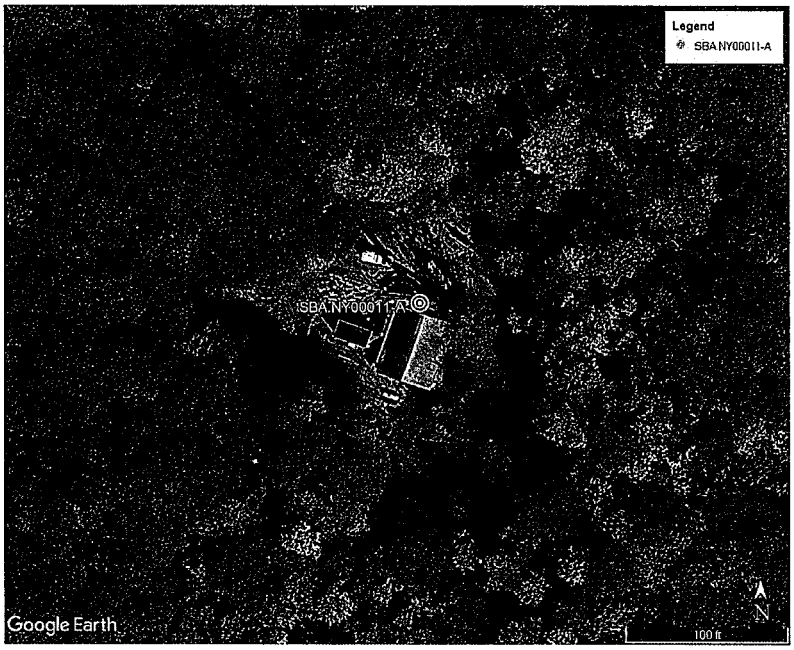


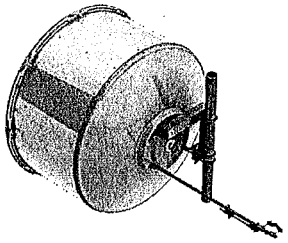
Figure 1 Site Location

Antenna and Transmitter Information

The proposed DRW NX installation will install two microwave dish antennas on an existing 199 foot above ground level communications tower.

The antennas proposed are CommScope USX6-6W-6GR microwave dishes.

USX6-6W-6GR



1.8m | 6ft Sentinel® Ultra High Performance, Super High XPD Antenna, dual-polarized, 5.925 – 7.125 GHz, grey, CPR137G flange

Dimensions

Diameter, nominal	1.8 m | 6 ft

Electrical Specifications

Operating Frequency Band	5.925 – 7.125 GHz
Gain, Low Band	38.3 dBi
Gain, Mid Band	38.8 dBi
Gain, Top Band	39.3 dBi
Boresite Cross Polarization Discrimination (XPD)	40 dB
Front-to-Back Ratio	76 dB
Beamwidth, Horizontal	1.8 °
Beamwidth, Vertical	1.8 °

Figure 2 USX6-6W-6GR Antenna Parameters

The antenna mount points are 125 feet above ground level. They are oriented at 124° and 305° relative to true north.

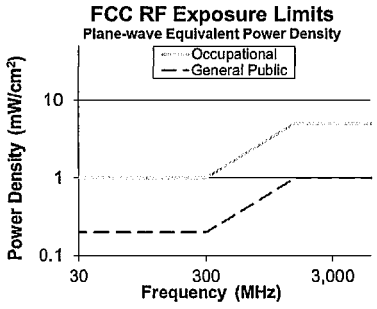
The FCC Application (File number 0010136014) indicates the 124° transmitter will operate at 6375.14 MHz with a power of 65.8 dBm EIRP or 0.5 Watt transmit power and the 305° transmitter will operate at 6315.14 MHz with a power of 64.8 dBm EIRP or 0.4 Watt transmit power.

RF Exposure Ray-Tracing Assessment

This RF Exposure assessment is based on power density modeling and a comparison with whole body exposure limits set by the Federal Communications Commission (FCC), as addressed most recently in 2019[1], and codified in their rules[2]. The FCC has two limits: one for the General Public and a less conservative or higher limit for Occupational workers. An Occupational worker is defined as someone who through training and notification can understand and control their exposure to RF that they may encounter in the workplace. Everyone else is considered the General Public. In this assessment, both limits are considered but the stricter, General Public, limits are used to determine compliance.

This assessment uses maximum power to the antennas and conservative modeling techniques to determine the greatest possible extent of compliance boundaries. Outside the boundaries, exposure levels will always be below the limits. Most of the time, the actual power will be much less, likely by a large margin, so levels will be below exposure limits even within the boundaries.

FCC plane-wave equivalent power density limits for maximum permissible exposure are derived from the whole-body SAR limits and expressed in milliwatts per square centimeter (mW/cm^2). FCC exposure limits are for continuous exposure spatial-averaged over the whole body and time-averaged, over 6 minutes for Occupational and 30 minutes for General Public limits. To account for changes in absorption relative to frequency, the limits are dependent on the frequency of the RF energy. This graph indicates that frequency relationship.



To calculate exposure and compliance boundaries, power density from each source (exposure value by frequency EV_f) is divided by the appropriate exposure limit (EL_f), creating an exposure ratio (ER_f).

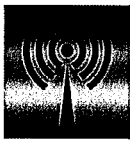
$$ER_f = \frac{EV_f}{EL_f}$$

Ratios from each source are combined to determine a total exposure ratio TER. This ratio is used to determine exposure and compliance boundaries.

$$TER = \sum_{i=1}^{n} ER_i$$

[1] FCC-19-126 *Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields; Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies*

[2] 47 CFR § 1.1310 Radiofrequency radiation exposure limits, US Code of Federal Regulations



RF power density levels are calculated using the IXUS Modeler[3]. IXUS employs a synthetic ray tracing method for panel and omnidirectional antennas and a conservative cylindrical envelope method for microwave dish (parabolic reflector / aperture) antennas.

The ray tracing method is an advanced computation method described in IEC 62232[4]. The power is summed from elemental sources representing the individual components of the antenna. These elemental sources are selected by an analysis of published manufacturer datasheets and antenna pattern information. Ray tracing algorithms typically overestimate RF field strength due to absorption of RF energy in the ground, building walls and other man-made structures.

The conservative cylindrical envelope method for microwave dish antennas from ETSI[5] is used to determine worst-case RF power density. This technique is derived from common configurations and shown to be conservative based on measurement results from real systems. Dish antennas are extremely directional and almost all the RF energy is confined to a cylindrical beam in the direction the antenna is pointed, levels outside the beam are negligible.

IXUS combines results from all sources to create graphic 3D compliance boundaries around antennas.

Assessment Details

The following depictions graphically show compliance boundaries with respect to the antenna(s) and their surroundings. Yellow indicates areas that may exceed the FCC's General Public exposure limits while red indicates areas that may exceed the Occupational limits.

This installation is of such low power it produced no levels which exceed the Occupational or General Public limit, even right at the face of the antennas. To show the modeling, light blue areas indicate levels more than 5% or 1/20th of the General Public exposure limit, but which do not exceed that limit.

Because of the low power to the antennas for this installation there are no areas that exceed either the Occupational or General Public limit. For the same reason, RF exposure levels from this installation on the ground are effectively zero and unmeasurable with equipment designed for RF exposure assessments.

---

[3] IXUS EMF Compliance Management Software version 4.3 (6) (Calculator 16.10) provided by Alphawave Mobile Network Products http://www.ixusapp.com.

[4] IEC 62232:2017, Determination of RF field strength and SAR in the vicinity of radiocommunication base stations for the purpose of evaluating human exposure, International Electrotechnical Commission, Geneva.

[5] ETSI TR 102 457. Fixed Radio Systems; Evaluation of the ElectroMagnetic Field (EMF) radiated by Line-of-Sight (LoS) fixed radio stations using parabolic dish directional antennas. V2.1.0 (2018-09)

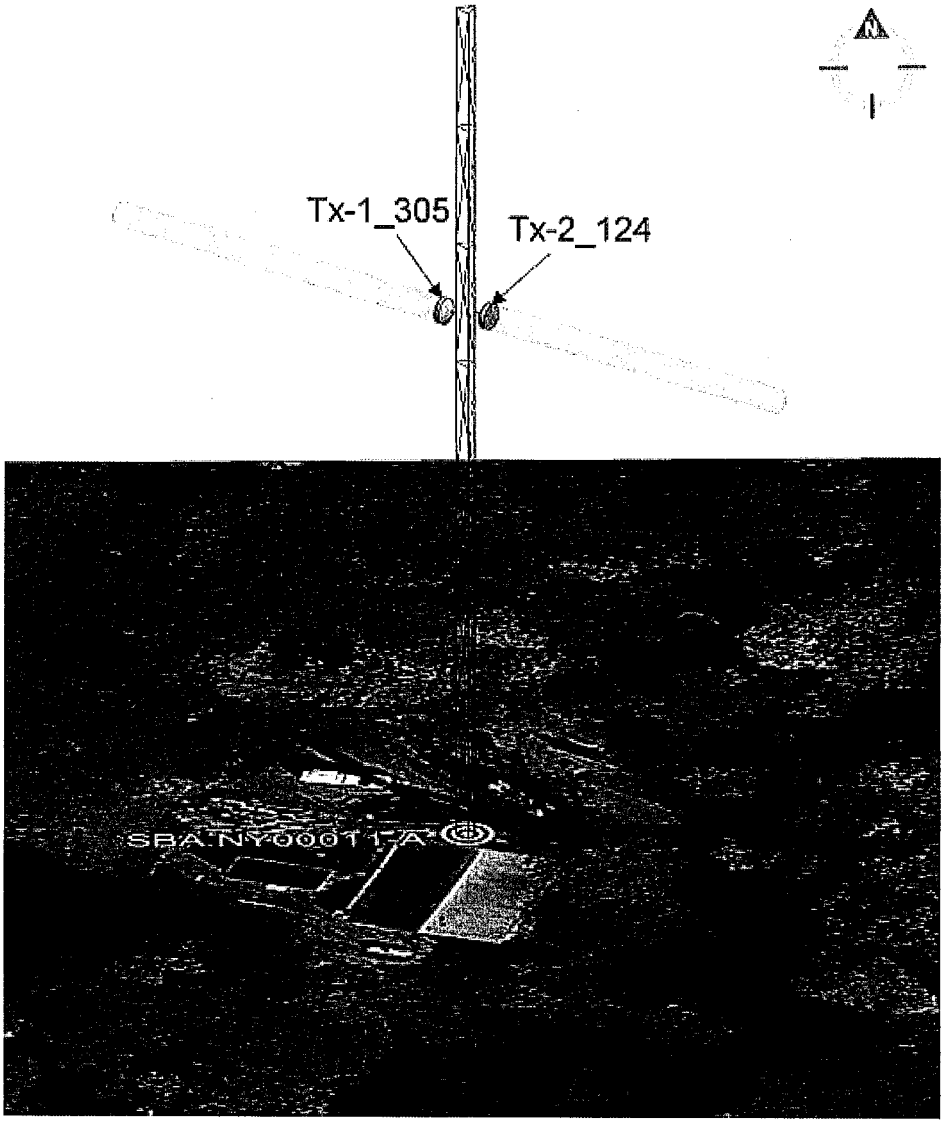


Figure 3 Exposure Modeling – All areas below exposure limits

General Public Boundary: 0 feet Horizontally from the antenna

RF Safety Program

SBA Towers Inc., the tower owner, has an RF Exposure Safety Program for their transmitting sites. Part of this program requires the installation of signs near antennas where workers could access areas that exceed FCC RF exposure limits.

Because this installation will have no effect on RF exposure levels on or around the tower, there will be no need to update the existing RF Exposure Safety Program

Conclusions

This assessment concludes that RF exposure levels from this installation will be below FCC limits for the General Public in all areas.

This engineer hereby certifies that this wireless facilities, operated by DRW NX LLC, will comply with the RF exposure limits set forth by the FCC and as required by federal law.

If you have any questions on this assessment, please contact Sublight Engineering PLLC.

Engineering Statement

My professional engineer seal on this document certifies and affirms that:

I am registered as a Professional Engineer.

I am the principal of Sublight Engineering PLLC, in Arlington, Virginia.

I provide RF engineering services.

I am thoroughly familiar with the rules and regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC radiofrequency radiation exposure limits.

That I have prepared this RF Exposure Assessment and believe it to be true and accurate to the best of my knowledge.

July 22, 2022

Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 07/19/2022 at 16:16:27
File Number: 0010136014

FCC 601
Main Form

FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

Approved by OMB
3060 - 0798
See instructions for public burden estimate

1) Radio Service Code: **MG** **General Information**	1a) Existing Radio Service Code:

2) (Select only one) **(NE)**
NE - New **RO** - Renewal Only **AU** - Administrative Update **NT** - Required Notifications
MD - Modification **RM** - Renewal/Modification **WD** - Withdrawal of Application **EX** - Requests for Extension of Time
AM - Amendment **CA** - Cancellation of License **RL** – Registered Location/Link

3a) If this application is for a **S**pecial Temporary Authorization (STA), enter the code and attach the required exhibit as described in the instructions. Otherwise enter '**N/A**' (Not Applicable).	(**N**)**M S N/A**
3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( )**Y**es **N**o
4) If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, or Administrative Update, enter the call sign of the existing FCC license. If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign
6a) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD /
6b) If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers (**C**), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs (**P**)?	( )**C P**
7) Is this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	(**N**)**Y**es **N**o
8) Are attachments (other than associated schedules) being filed with this application?	(**Y**)**Y**es **N**o

Fees, Waivers, and Exemptions

9) Is the Applicant exempt from FCC application fees?	(**N**)**Y**es **N**o
10) Is the Applicant exempt from FCC regulatory fees?	(**N**)**Y**es **N**o
11) Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	(**N**)**Y**es **N**o
12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	(**N**)**Y**es **N**o

Applicant Information

13) FCC Registration Number (FRN):
0021176847

14) Applicant/Licensee Legal Entity Type: (Select One)
( )Individual ( )Unincorporated Association ( )Trust ( )Government Entity ( )Corporation (**X**)Limited Liability Company
( )General Partnership ( )Limited Partnership ( )Limited Liability Partnership ( )Consortium
( ) Other: _____

15) If the Licensee name is being updated, is the update a result from the sale (or transfer of control) of the license(s) to party and for which proper Commission approval has not been received or proper notification not provided? ( )**Y**es **N**o

16) First Name (if individual):	MI:	Last Name:	Suffix:

17) Legal Entity Name (if other than individual):
Webline Holdings LLC

18) Attention To:
Network Services

19) P.O. Box:	And/Or	20) Street Address**:**
		40 Richards Avenue, 3rd Floor

21) City:	22) State:	23) Zip Code:
Norwalk	**CT**	**06854**

24) Telephone Number:	25) Fax:
(203)286-4628	

26) E-Mail Address:
fcc-info@weblineholdings.com

27) **Demographics (Optional)**

Race:	Ethnicity:	Gender:
( )American Indian or Alaska Native	( )Hispanic or Latino	( )Male
( )Asian	( )Not Hispanic or Latino	( )Female
( )Black or African-American		
( )Native Hawaiian or Other Pacific Islander		
( )White		

Real Party in Interest

28) Name of Real Party in Interest of Applicant (If different from Applicant):	29) FCC Registration Number (FRN) of Real Party in Interest:
BNI Services	**0021172671**

Contact Information (If different from the Applicant)
(____) Check here if same as Applicant.

30) First Name:	MI:	Last Name:	Suffix:

31) Company Name:

32) Attention To:

33) P.O. Box:	And /Or	34) Street Address**:**

35) City:	36) State:	37) Zip Code:

38) Telephone Number**:**	39) Fax:

40) E-Mail Address:

Reference Copy

Regulatory Status

41) This filing is for authorization to provide or use the following type(s) of radio service offering (enter all that apply):

( )**C**ommon Carrier ( )**N**on-Common Carrier (**X**)**P**rivate, internal communications ( )**B**roadcast Services ( )**B**and **M**anager

Type of Radio Service

42) This filing is for authorization to provide the following type(s) of radio service (choose all that apply):

(**X**)**F**ixed ( )**M**obile ( )**R**adiolocation ( )**S**atellite (sound) ( )**B**roadcast Services

43) Does the Applicant propose to provide service interconnected to the public telephone network? (**N**)**Y**es **N**o

Alien Ownership Questions (If any answer is 'Y", provide an attachment explaining the circumstances. In preparing the attachment, refer to the Main Form Instructions for the "Alien Ownership Questions".)

44) Is the Applicant a foreign government or the representative of any foreign government?	(**N**)**Y**es **N**o
45) Is the Applicant an alien or the representative of an alien?	(**N**)**Y**es **N**o
46) Is the Applicant a corporation organized under the laws of any foreign government?	(**N**)**Y**es **N**o
47) Is the Applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	(**N**)**Y**es **N**o

Reference Copy

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country? (**N**) **Y**es **N**o

48b) If the answer to 47 or 48a is 'Y' select one of the choices below.

☐ The Applicant is exempt from the provisions of Section 310(b).

It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showing that the requested license(s) is exempt from the provisions of Section 310(b).

☐ The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.

If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applicant since the issuance of its ruling.

☐ The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.990(a) and is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.994(b).

If checked, and if the Applicant *received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 or Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.*

If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).

If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFR § 1.994(b). See Main Form Instructions for Items 47 or 48a, as applicable.

☐ The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFR § 1.990(a) in a petition filed contemporaneously with the Commission.

If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).

Reference Copy

Basic Qualification Questions

49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission?	(**N**)Yes No
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(**N**)Yes No
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition? **Note: If the answer to any of 49-51 is 'Y'**, attach an exhibit explaining the circumstances.	(**N**)Yes No

Aeronautical Advisory Station (Unicom) Certification

52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not have a control tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations located at the airport within ten days prior to application.	

Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership

53a) Will the requested facilities be used to provide multichannel video programming service?	( )Yes No
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities? **Note: If the answer to question 53b is 'Y'**, attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	( )Yes No

Broadband Radio Service and Educational Broadband Service (Part 27)

54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203? **Note: If the answer to item 54 is 'N',** attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	( )Yes No
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221? **Note: If the answer to item 55 is 'N',** attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	( )Yes No

For Applicants Who Participated in an Auction

56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership? **Note: If the answer to item 56 is 'Y',** attach an exhibit listing all members of the qualifying rural wireless partnership, including their FRN numbers.	( )Yes No

For Renewal Applicants

57) Operation/Performance Requirement Certification

[For a site-based license]: Applicant certifies that it is continuing to operate consistent with its most recently filed construction notification (or most recent authorization, if no construction notification was required).	( ) Yes No
[For a geographic license, commercial service - licensee in its initial license term with an interim performance requirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term following the interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.	( ) Yes No
[For a geographic license, commercial service - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]	( ) Yes No
[For a geographic license, commercial service - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of any subsequent license terms.	( ) Yes No
[For a geographic license, private systems - licensee in its initial license term with an interim performance requirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term following the interim performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of operation required by its final performance requirement through the end of the license term.	( ) Yes No
[For a geographic license, private systems - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]	( ) Yes No

Reference Copy

[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	( ) **Y**es **N**o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	( ) **Y**es **N**o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	( ) **Y**es **N**o

Discontinuance of Service Certification

58) Applicant certifies that no permanent discontinuance of service or operation, as applicable, occurred during its current license term. **Note: If the response to either item 57 or item 58 is 'N'**, attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to qualifying tribal land as defined in 47 CFR § 1.2110(e)(3)(i); and (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.	( ) **Y**es **N**o

Regulatory Compliance Certification [same for all]

59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended. **Note: If the response to item 59 is 'N'**, attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.	( ) **Y**es **N**o

General Certification Statements

1)	The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application.
2)	The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.* *If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
3)	The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
4)	The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). *See* 47 CFR § 1.2002(b) for the definition of "party to the application" as used in this certification.
5)	The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
6)	The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
7)	The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
8)	The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
9)	The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

Reference Copy

Signature

60)Typed or Printed Name of Party Authorized to Sign

First Name:	MI:	Last Name:	Suffix:
Daniel		**Walz**	

61) Title: **Authorized Representative**

Signature:	62) Date:
Daniel Walz	**07/19/2022**

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, § 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, § 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, § 503).

Reference Copy

FCC 601
Schedule I

Technical Data Schedule for the Fixed Microwave and Microwave Broadcast Auxiliary Services (Parts 101 and 74)

Approved by OMB
3060 - 0798
See 601 Main Form Instructions for public burden estimate

Reference Copy

Administrative Information

1) Is this application being filed as part of a pack?	(**N**)Yes/No
2a) If the answer to Item 1 is 'Yes', enter the pack identification number (required if the pack identification number has already been assigned by the FCC):	
2b) Pack Name:	

3) Type of Operation (refer to instructions) Check One Only:	4) Station Class:	5) DEMS only: SMSA:
(**X**)Permanent Fixed Point to Point ( )18 GHz Low Power ( )Multiple Address System (MAS) ( )31 GHz ( )Temporary Fixed/Mobile ( )38 GHz ( )Digital Electronic Message Service (DEMS)	**FXO**	

6) If this request is for a Modification, Renewal/Modification, or Amendment of a currently pending application, does it, along with all minor Modification or Amendment requests filed since you applied for a new authorization or since the last major action was granted by the Commission, produce a cumulative effect that would equal or exceed the criteria for a major filing?	( )Yes/No
7) Has frequency coordination been completed for this application?	(**Y**)Yes/No

Frequency Coordinator Information

Complete Items 8 through 11 if not self-coordinated

8) Frequency Coordination Number	9) Name of Frequency Coordinator	10) Telephone Number	11) Coordination Date
220601COMSDS01	**COMSEARCH**	**(703)636-5234**	**06/01/2022**

Broadcast Auxiliary Only

If there is an associated Parent Station, provide:	12a) Facility Id of Parent Station:	12b) Radio Service of Parent Station:	12c) City and State of Parent Station Principal Community:

If there is no associated parent station, applicant certifies that it is a Broadcast Network Entity and completes Item 13.	13) State of Primary Operation:

Control Point (Technical Point of Contact)

14) Action **A/M**	15) Location Street Address, City or Town, County/Borough/Parish, State	16) Telephone Number

FCC 601
Schedule I
Supplement 1

Location Data

1) Action Requested: (**A**) **A**dd **M**od **D**el		2) Location Number**:** **1**
3) Location Description**:** **T Transmit Location**	4) Area of Operation Code**:**	5) Location Name**:** **FCC1050934**
6) FCC Antenna Structure Registration Number, FCC 854 File Number or N/A: **1050934**		
7) Latitude (DD-MM-SS.S): **42-44-30.1** **NAD83** (**N**) N or S		8) Longitude (DDD-MM-SS.S)**:** **077-23-16.3** **NAD83** (**W**) E or W
9) Street Address, Name of Landing Area, or Other Location Description: **5776 Stid Hill Road (NY00011-A)**		
10) City: **Naples**	11) State**:** **NY**	12) County/Borough/Parish: **ONTARIO**
13) Elevation of Site AMSL (meters) ('a' in antenna structure example)**:** **618.4**	14) Overall Ht AGL Without Appurtenances (meters) ('b' in antenna structure example)**:** **57.9**	15) Overall Ht AGL With Appurtenances (meters) ('c' in antenna structure example)**:** **60.7**
16) Support Structure Type: **LTOWER**		
17) Radius (km)**:**		
18) Maximum Latitude (DD-MM-SS.S): **NAD83** **Use for rectangle only (Northwest corner)** ( ) N or S **- -**		19) Maximum Longitude (DDD-MM-SS.S)**:** **NAD83** **Use for rectangle only (Northwest corner)** ( ) E or W **- -**
20) Do you propose to operate in an area that requires frequency coordination with Canada? ( ) **Y**es **N**o		
21) Description: (only for Area of Operation Code 'O')		
22) Would Commission grant of Authorization for this location be an action which may have a significant environmental effect? See Section 1.1307 of 47 CFR. If 'Yes', submit an environmental assessment as required by 47 CFR, Sections 1.1308 and 1.1311. ( ) **Y**es **N**o **N**		
23a) If the site is located in one of the Quiet Zones listed in Item 23b of the Instructions, provide the date (mm/dd/yyyy) that the proper Quiet Zone entity was notified: ____/____/____		
23b) Has the Applicant obtained prior written consent from the proper Quiet Zone entity for the same technical parameters that are specified in this application? ( ) **Y**es **N**o		
24) Do you propose to operate in an area that requires frequency coordination with Mexico? ( ) **Y**es **N**o		

Reference Copy

FCC 601
Schedule I
Supplement 1

Location Data

1) Action Requested: (**A**) **A**dd **M**od **D**el	2) Location Number**:** **2**	
3) Location Description**:** **R Receive Location**	4) Area of Operation Code**:**	5) Location Name**:** **ATC307075**
6) FCC Antenna Structure Registration Number, FCC 854 File Number or N/A:		
7) Latitude (DD-MM-SS.S): **NAD83** **43-12-40.6** (**N**) N or S	8) Longitude (DDD-MM-SS.S)**:** **078-17-51.3** **NAD83** (**W**) E or W	
9) Street Address, Name of Landing Area, or Other Location Description:		
10) City:	11) State**:**	12) County/Borough/Parish:
13) Elevation of Site AMSL (meters) ('a' in antenna structure example)**:** **196.6**	14) Overall Ht AGL Without Appurtenances (meters) ('b' in antenna structure example)**:**	15) Overall Ht AGL With Appurtenances (meters) ('c' in antenna structure example)**:**
16) Support Structure Type:		
17) Radius (km)**:**		
18) Maximum Latitude (DD-MM-SS.S): **NAD83** **Use for rectangle only (Northwest corner)** ( ) N or S **- -**	19) Maximum Longitude (DDD-MM-SS.S)**:** **NAD83** **Use for rectangle only (Northwest corner)** ( ) E or W **- -**	
20) Do you propose to operate in an area that requires frequency coordination with Canada? ( ) **Y**es **N**o		
21) Description: (only for Area of Operation Code 'O')		
22) Would Commission grant of Authorization for this location be an action which may have a significant environmental effect? See Section 1.1307 of 47 CFR. If 'Yes', submit an environmental assessment as required by 47 CFR, Sections 1.1308 and 1.1311. ( ) **Y**es **N**o		
23a) If the site is located in one of the Quiet Zones listed in Item 23b of the Instructions, provide the date (mm/dd/yyyy) that the proper Quiet Zone entity was notified: ____/____/____		
23b) Has the Applicant obtained prior written consent from the proper Quiet Zone entity for the same technical parameters that are specified in this application? ( ) **Y**es **N**o		
24) Do you propose to operate in an area that requires frequency coordination with Mexico? ( ) **Y**es **N**o		

Reference Copy

FCC 601
Schedule I
Supplement 1

Location Data

1) Action Requested: (**A**) **A**dd **M**od **D**el		2) Location Number**:** **3**
3) Location Description**:** **R Receive Location**	4) Area of Operation Code**:**	5) Location Name**:** **CCI1048240**
6) FCC Antenna Structure Registration Number, FCC 854 File Number or N/A:		
7) Latitude (DD-MM-SS.S): **NAD83** **42-23-10.4** (**N**) N or S		8) Longitude (DDD-MM-SS.S)**:** **NAD83** **076-40-08.3** (**W**) E or W
9) Street Address, Name of Landing Area, or Other Location Description:		
10) City:	11) State**:**	12) County/Borough/Parish:
13) Elevation of Site AMSL (meters) ('a' in antenna structure example)**:** **640.1**	14) Overall Ht AGL Without Appurtenances (meters) ('b' in antenna structure example)**:**	15) Overall Ht AGL With Appurtenances (meters) ('c' in antenna structure example)**:**
16) Support Structure Type:		
17) Radius (km)**:**		
18) Maximum Latitude (DD-MM-SS.S): **NAD83** **Use for rectangle only (Northwest corner)** ( ) N or S **- -**		19) Maximum Longitude (DDD-MM-SS.S)**:** **NAD83** **Use for rectangle only (Northwest corner)** ( ) E or W **- -**
20) Do you propose to operate in an area that requires frequency coordination with Canada? ( ) **Y**es **N**o		
21) Description: (only for Area of Operation Code 'O')		
22) Would Commission grant of Authorization for this location be an action which may have a significant environmental effect? See Section 1.1307 of 47 CFR. If 'Yes', submit an environmental assessment as required by 47 CFR, Sections 1.1308 and 1.1311. ( ) **Y**es **N**o		
23a) If the site is located in one of the Quiet Zones listed in Item 23b of the Instructions, provide the date (mm/dd/yyyy) that the proper Quiet Zone entity was notified: ____/____/____		
23b) Has the Applicant obtained prior written consent from the proper Quiet Zone entity for the same technical parameters that are specified in this application? ( ) **Y**es **N**o		
24) Do you propose to operate in an area that requires frequency coordination with Mexico? ( ) **Y**es **N**o		

Reference Copy

FCC 601
Schedule I
Supplement 2 **Path Data**

Transmit Location

1) Transmit location name: **FCC1050934**	2) Path number: **1**
3) Action Requested: (**A**) **A**dd New Path **M**odify Existing Path **D**elete Existing Path	

4a) For MAS or DEMS only, MAS or DEMS Sub-Type of Operation (Enter only one per path):	4b) Path code (Enter only one per path):
MAS or DEMS ( )Fixed Two-way Master-Remote/Nodal-User ( )Multiple Two-way Master-Remote/Nodal-User **MAS ONLY** ( )Fixed One-way Outbound Master ( )Multiple One-way Outbound Master ( )Fixed One-way Inbound Master ( )Mobile Master	**MAS** ( ) Master to Remote ( ) Remote to Master **DEMS** ( )Nodal to User ( )User to Nodal

Transmit Antenna

5) Antenna Manufacturer: **Commscope**	6) Antenna Model Number: **USX6-6W**	
7) Height to Center of Antenna AGL (meters): **38.1**	8) Beamwidth (degrees): **1.8**	9) Antenna Gain (dBi): **38.8**
10) Diversity Antenna Height AGL (meters):	11) Diversity Beamwidth (degrees):	12) Diversity Antenna Gain (dBi):
13) Elevation (Tilt) Angle (degrees): **-1.0**	14) Polarization: **S**	15) Azimuth to RX Location or Passive Repeater (degrees): **305.4**
16) Periscope Reflector Dimensions (meters): Height: Width:	17) Periscope Reflector Separation (meters):	

18) If the final receiver is located outside of the United States, enter the country in the space provided and attach an exhibit explaining circumstances.

19) Does this path include passive repeater? (**N**)**Y**es **N**o

20) Does this filing add or modify emanations in the 5925 - 7075 MHz band pointing within 2 degrees of the Geostationary Satellite Arc with EIRP greater than 65 dBm, or in the 12700 - 13250 MHz band pointing within 1.5 degrees of the Geostationary Satellite Arc with EIRP greater than 75 dBm? (**N**)**Y**es **N**o

If 'Yes', answer the following questions below and attach waiver request explaining circumstances.

20a) Angular Separation between main beam and Geostationary Satellite Arc (degrees). Include Orbital Calculations in the wavier exhibit. _____

20b) Does the Applicant certify that there is no alternative to the proposed transmission path? ( )**Y**es **N**o

20c) Does the Applicant certify that the proposed operation will not cause interference to an authorized satellite system? ( )**Y**es **N**o

Final Receiver

21) Receiver Location Name: **ATC307075**		
22) Receiver antenna manufacturer: **Commscope**	23) Receiver antenna model number: **USX6-6W**	
24) Receiver Call Sign:		
25) Height to Center of RX Antenna AGL (meters): **79.3**	26) RX Antenna Beamwidth (degrees): **1.8**	27) RX Antenna Gain (dBi): **38.8**
28) Diversity RX Antenna Height AGL (meters):	29) Diversity RX Antenna Beamwidth (degrees):	30) Diversity RX Antenna Gain (dBi):
31) RX Periscope Reflector Dimensions (meters): Height: Width:	32) RX Periscope Reflector Separation (meters):	

Reference Copy

FCC 601
Schedule I
Supplement 2 **Path Data**

Transmit Location

1) Transmit location name: **FCC1050934**	2) Path number: **2**
3) Action Requested: (**A**) **A**dd New Path **M**odify Existing Path **D**elete Existing Path	
4a) For MAS or DEMS only, MAS or DEMS Sub-Type of Operation (Enter only one per path)**:** **MAS or DEMS** ( )Fixed Two-way Master-Remote/Nodal-User ( )Multiple Two-way Master-Remote/Nodal-User **MAS ONLY** ( )Fixed One-way Outbound Master ( )Multiple One-way Outbound Master ( )Fixed One-way Inbound Master ( )Mobile Master	4b) Path code (Enter only one per path)**:** **MAS** ( ) Master to Remote ( ) Remote to Master **DEMS** ( )Nodal to User ( )User to Nodal

Transmit Antenna

5) Antenna Manufacturer**:** **Commscope**	6) Antenna Model Number**:** **USX6-6W**	
7) Height to Center of Antenna AGL (meters)**:** **38.1**	8) Beamwidth (degrees)**:** **1.8**	9) Antenna Gain (dBi)**:** **38.8**
10) Diversity Antenna Height AGL (meters)**:**	11) Diversity Beamwidth (degrees)**:**	12) Diversity Antenna Gain (dBi)**:**
13) Elevation (Tilt) Angle (degrees)**:** **0.0**	14) Polarization**:** **S**	15) Azimuth to RX Location or Passive Repeater (degrees)**:** **123.5**
16) Periscope Reflector Dimensions (meters)**:** Height: Width**:**	17) Periscope Reflector Separation (meters):	
18) If the final receiver is located outside of the United States, enter the country in the space provided and attach an exhibit explaining circumstances.		
19) Does this path include passive repeater? (**N**)**Y**es **N**o		
20) Does this filing add or modify emanations in the 5925 - 7075 MHz band pointing within 2 degrees of the Geostationary Satellite Arc with EIRP greater than 65 dBm, or in the 12700 - 13250 MHz band pointing within 1.5 degrees of the Geostationary Satellite Arc with EIRP greater than 75 dBm? (**N**)**Y**es **N**o If 'Yes', answer the following questions below and attach waiver request explaining circumstances. 20a) Angular Separation between main beam and Geostationary Satellite Arc (degrees). Include Orbital Calculations in the wavier exhibit. _____ 20b) Does the Applicant certify that there is no alternative to the proposed transmission path? ( )**Y**es **N**o 20c) Does the Applicant certify that the proposed operation will not cause interference to an authorized satellite system? ( )**Y**es **N**o		

Final Receiver

21) Receiver Location Name: **CCI1048240**		
22) Receiver antenna manufacturer: **Commscope**	23) Receiver antenna model number: **USX6-6W**	
24) Receiver Call Sign:		
25) Height to Center of RX Antenna AGL (meters): **33.5**	26) RX Antenna Beamwidth (degrees): **1.8**	27) RX Antenna Gain (dBi): **38.8**
28) Diversity RX Antenna Height AGL (meters):	29) Diversity RX Antenna Beamwidth (degrees):	30) Diversity RX Antenna Gain (dBi):
31) RX Periscope Reflector Dimensions (meters): Height: Width:	32) RX Periscope Reflector Separation (meters):	

Reference Copy

FCC 601
Schedule I
Supplement 3

Passive Repeaters (PR)

Transmit Location

1) Transmit Location Name:	2) Path Number:

3) Action Requested: ( ) **A**dd New Passive Repeater **M**odify Existing Passive Repeater **D**elete Existing Passive Repeater

Passive Repeater Information

4) Passive Repeater Id: ( )	5) Passive Repeater Sequence Number: ( )	
6) Passive Repeater Location Name:		
7) Passive Repeater Antenna Manufacturer:	8) Passive Repeater Antenna Model Number:	
9) Height to Center of Passive Repeater Antenna AGL (meters)**:**	10) Back-to-Back RX Dish Gain (dBi)**:**	11) Back-to-Back TX Dish Gain (dBi)**:**
12) Reflector Dimensions (meters): Height**:** Width**:**	13) Transmit Polarization**:**	14) Azimuth to RX Location or Next Passive Repeater:

Reference Copy

Supplement 4

Frequency Data

Transmitter Location Information

1) Transmit Location Name: **FCC1050934**	2) Path Number: **1**

Frequency Information

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**65.8**	**30M0D7W (A)**	**183000.0**	**128QAM**
	New **006375.14000000**						

11) Transmitter Manufacturer	12) Transmitter Model	13) Automatic Transmitter Power Control
SAF TEHNIKA	**CFL SPRINT MXM REPEATER**	**N**

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**65.8**	**30M0D7W (A)**	**157000.0**	**64QAM**
	New **006375.14000000**						

11) Transmitter Manufacturer	12) Transmitter Model	13) Automatic Transmitter Power Control
SAF TEHNIKA	**CFL SPRINT MXM REPEATER**	**N**

Reference Copy

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**65.8**	**30M0D7W (A)**	**133000.0**	**32QAM**
	New **006375.14000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**65.8**	**30M0D7W (A)**	**107000.0**	**16QAM**
	New **006375.14000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

Reference Copy

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**65.8**	**30M0D7W (A)**	**183000.0**	**128QAM**
	New **006404.79000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**65.8**	**30M0D7W (A)**	**157000.0**	**64QAM**
	New **006404.79000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

Reference Copy

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**65.8**	**30M0D7W (A)**	**133000.0**	**32QAM**
	New **006404.79000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**65.8**	**30M0D7W (A)**	**107000.0**	**16QAM**
	New **006404.79000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

Reference Copy

1) Transmit Location Name: **FCC1050934**	2) Path Number: **2**

Frequency Information

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**64.8**	**30M0D7W (A)**	**183000.0**	**128QAM**
	New **006315.84000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**64.8**	**30M0D7W (A)**	**157000.0**	**64QAM**
	New **006315.84000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

Reference Copy

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**64.8**	**30M0D7W (A)**	**133000.0**	**32QAM**
	New **006315.84000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**64.8**	**30M0D7W (A)**	**107000.0**	**16QAM**
	New **006315.84000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

Reference Copy

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**64.8**	**30M0D7W (A)**	**183000.0**	**128QAM**
	New **006345.49000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**64.8**	**30M0D7W (A)**	**157000.0**	**64QAM**
	New **006345.49000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

Reference Copy

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**64.8**	**30M0D7W (A)**	**133000.0**	**32QAM**
	New **006345.49000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
A	**Existing (if mod)**		**0.00030**	**64.8**	**30M0D7W (A)**	**107000.0**	**16QAM**
	New **006345.49000000**						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	SAF TEHNIKA		**CFL SPRINT MXM REPEATER**	**N**			

Reference Copy

Attachment(s):

Type	Description	Date Entered
O	Supplemental Showing	07/19/2022
AM	Certification	07/19/2022

Town of South Bristol
6500 Gannett Hill Road - West
Naples, New York 14512-9216
(716) 374-6341

Zoning Board of Appeals

September 3, 1996

Regarding the application of Jeffrey Pfeiffer/T J Communications, 6350 Bills Road, Naples, New York 14512, requesting a modification to an existing special use permit and a variance to Section 170-36(J)(2)(b) of the Zoning Ordinance to allow for the modification and reinforcement of an existing radio tower located on Stid Hill, Tax Map #177.00-1-7.200.

Owner of Record: Barbara Echter Zoned: R-2
Application No. 96-054Z

The Board finds:

1. That the Zoning Board of Appeals has the authority to modify the requirements of Section 170-36 because of changes in technology since the Tower District language was written.

2. That new technology requires the provision for 12 foot long antenna standoffs and may also require an increase in height from the present allowed 180 feet to a maximum of 199 feet allowed by the Zoning Law.

3. That because these antenna modifications require a strengthening of the mast structure such strengthening is permitted provided that the diameter of the resulting mast not exceed 30 inches.

4. That this is a Type II action under SEQR as this is a modification of an existing structure.

5. That the proposed use is consistent with the general development plans of the town because of the public use and essential services clause.

6. That the proposed use is consistent with the purposes of the Zoning Law (Section 1.2), such as the promotion of the health, safety and general welfare of the Town, and the conservation of the natural beauty of the land, streams, forests and hills as the subject tower was previously approved, currently exists, and there has been no objections expressed by the public.

7. That the location, size and use of the structure and the use of the land are such that they will be in harmony with the orderly development and the intent of the zoned district as the existing tower was allowed by special use permit for public use and essential services.

8. That the operation of the use is not objectionable to the users of adjacent properties as no one expressed opposition during the public hearing and no written letters

of objection were received by the Zoning Board of Appeals.

9. That all applicable conditions of SEQRA (the State Environmental Quality Review Act) have been met.

10. That all conditions for Land Conservation Districts have been met, where applicable.

The Board bases its findings on:

1. An application form received by the Zoning Board of Appeals dated August 14, 1996.

2. Testimony given by the applicant during the public hearing held on August 28, 1996.

NOW, THEREFORE, based on the above findings, the Board grants the following:

1. A tower height of 199 feet.

2. Standoffs of 12 feet.

3. Modification of the structure up to 30 inches in diameter.

BE IT RESOLVED, that the applicant's request to modify and reinforce an existing radio tower be GRANTED.

ZONING BOARD OF APPEALS

Anne Galbraith

Anne Galbraith
Chairperson

/drm
cc: CEO file
B. Collins-Town Clerk