

**NEEDHAM
ZONING BOARD OF APPEALS
AGENDA**

THURSDAY, January 18, 2024 - 7:30PM

Zoom

Meeting ID: 869-6475-7241

To join the meeting click this link: <https://us02web.zoom.us/j/86964757241>

1. Minutes Review and approve Minutes from December 14, 2023 meeting.

2. 460 Hillside Avenue – Decision

3. 7:30PM - 1688 Central Avenue

Holly Clarke, Gregg Darish, Robert DiMase, Matthew and Nicole Heideman, Carl Jonasson, Ann and Peter Lyons, and Eileen Sullivan, appellants, applied to the Board of Appeals for an Appeal of Building Inspector Decision (ABID) of Building Permit BC23-10079 issued to Matt Borrelli and Needham Enterprise LLC dated September 19, 2023, for the construction of a childcare facility. The ABID concludes that the Building Permit plans on file do not demonstrate that the construction, alteration or use as proposed complies with the Zoning By Laws as limited by the Dover Amendment MGL 40A, Section 3 The property is located at 1688 Central Street, Needham, MA in the Single-Residence A (SRA) District. (Continued from December 14, 2023)

Next ZBA Meeting – February 15, 2024

**NEEDHAM
ZONING BOARD OF APPEALS
MINUTES
THURSDAY, December 14, 2023 - 7:30PM**

Charles River Room Public Service Administration Building 500 Dedham Avenue Needham, MA 02492	Also livestreamed on Zoom Meeting ID: 869-6475-7241
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Pursuant to notice published at least 48 hours prior to this date, a meeting of the Needham Board of Appeals was held in the Charles River Room, Public Services Administration Building, 500 Dedham Avenue, Needham and remotely on Zoom on Thursday, December 14, 2023 at 7:30 p.m.

BOARD MEMBERS PRESENT: Jonathan D. Tamkin, Chair, Howard S. Goldman, Vice-Chair, Nikolaos M. Ligris, Peter Friedenberg and Valentina Elzon.

STAFF PRESENT: Daphne M. Collins, Zoning Specialist.

Mr. Tamkin, Chair presided and opened the meeting at 7:30 p.m.

1. MINUTES OF NOVEMBER 16, 2023

Mr. Goldman moved to approve the minutes of November 16, 2023. Mr. Ligris seconded the motion. The motion was unanimously approved.

2. 30 WILSHIRE PARK

WITHDRAWN WITHOUT PREJUDICE

Mr. Ligris moved to accept the request to withdraw the Special Permit without prejudice. Mr. Goldman seconded the motion. The motion was unanimously approved.

3. 460 HILLSIDE AVENUE

APPROVED

4. 320 GROVE STREET

APPROVED

Mr. Tamkin and Mr. Ligris left the meeting at 8:30 PM prior to the opening of the next meeting.

5. 1688 CENTRAL AVENUE

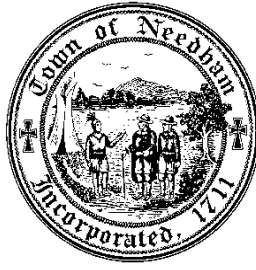
CONTINUED TO JANUARY 18, 2024

Mr. Goldman served as Chair. The public comment portion of the meeting was closed and the meeting was continued for final deliberation and vote to the January 18, 2024 meeting at 7:30 p.m. to be held on Zoom.

The meeting adjourned at 10:30 p.m.

A summary of the discussions on each subject, a list of the documents and other exhibits used at the meeting, the decisions made, and the actions taken at each meeting, including a record of all votes, are set forth in a detailed decision signed by the members voting on the subject and filed with the Town Clerk.

The hearings can be viewed at <http://www.needhamchannel.org/watch-programs/> and <https://www.youtube.com/@TownofNeedhamMA/videos>



**TOWN OF NEEDHAM
MASSACHUSETTS
BOARD OF APPEALS**

Special Permit

***DISH Wireless L.L.C., Applicant
Hillside Investment Group, LLC, owner
460 Hillside Avenue
Map 100, Parcel 3***

December 14, 2023

Dish Wireless, LLC, applied to the Board of Appeals for a Special Permit under Sections 6.7.3.3 (b) (c) and any other applicable section of the By-Law to install as part of their wireless telecommunications network the following equipment: 3 antennas, 6 remote radio units, 3 junctions boxes, 3 fiber cables, and 3 power cables. The property is located at 460 Hillside Avenue, Needham, MA in the Industrial (I) District. A public hearing was held in the Charles River Room, Public Service Administration Building, 500 Dedham Avenue, on Thursday, December 14, 2023 at 7:30 p.m. The meeting was livestreamed on Zoom.

Documents of Record:

- Application for Hearing, Clerk stamped October, 23, 2023.
- Revised Application for Hearing, Clerk stamped October 31, 2023.
- Letter prepared by Andrew Gorham of Network Building and Consulting, NB+C, undated.
- Plans T-1, Z-1, A1-A6, E1-E3, G1-G3, GN-2-6, ST1-2, RF-1 prepared by NB+C, stamped by Krupakran Kolanbaivelu, Massachusetts registered professional engineer, dated October 23, 2023.
- Letter authorizing application prepared by NB+C signed by Kenneth Shapiro, Principal, Hillside Investment Group, LLC, dated September 28, 2023.
- Images Views 1-3 of Parking Loop from the Northeast, West and North of current and proposed conditions; and the Location Map.
- Dish Wireless RF Equipment Information for 460 Hillside Avenue, Needham, MA, BOBOS0105S8A Rev 2, dated August 2, 2023.
- Letter from Lee Newman, Director of Planning and Community Development, dated October 3, 2023.
- Letter from Joseph Prondak, Building Commissioner, December 5, 2023.
- Letter from Thomas A. Ryder, Assistant Town Engineer, December 5, 2023.

- Email from Chief Tom Conroy, Fire Department, December 5, 2023.
- Email from Chief John Schlittler, Police Department, December 4, 2023.
- Email from Tara Gurge, Assistant Public Health Director, December 5, 2023

December 16, 2023

The Board included Jonathan D. Tamkin, Chair; Howard S. Goldman, Vice-Chair; and Nikolaos M. Ligris, Member. Also in attendance were Peter Friedenber, Associate Member; and Valentina Elzon, Associate Member. Mr. Tamkin opened the hearing at 7:32 p.m. by reading the notice of hearing.

Andrew Gorham, engineer for Network Building and Consulting (“NB+C”) appeared representing Dish Wireless, L.L.C. in the installation of the wireless antennas. Mr. Gorham noted that as a result of the merger of T-Mobile and Sprint three years ago, Dish Wireless became the fourth largest carrier who is now positioned to build out their own network. The proposed project is part of this new network. The relief sought is to allow two eight feet tall antennae to be installed at 2.9 feet from the roof edge where ten feet are required.

Mr. Gorham explained that NB+C is planning to install three antennae, three remote radio units (RRU) and cabling along the building. They will be using the same route of previous carriers who have vacated the location. He identified the Alpha, Beta and Gamma sectors of the roof top plan (Building Plan Sheet A1) where proposed Dish equipment will be installed.

Mr. Tamkin asked what other carriers are on this building. Mr. Gorham noted that T-Mobile, ATT and Verizon shared the roof.

Mr. Tamkin asked for the report regarding compliance of the radio frequencies with FCC guidelines, and the report from the structural engineer. Mr. Gorham noted the blue seal stamp of a registered Professional Engineer on all the plans certify that the plans and Dish wireless sites are within the 600mhz FCC compliance. Mr. Tamkin requested a report attesting to that compliance. Mr. Gorham agreed to submit a letter from their engineer certifying compliance.

Mr. Tamkin asked about the engineering report attesting to the structural integrity of the building. Mr. Gorham reported that their full services engineering team ran a full analysis of the structural integrity of the building to handle the load of the equipment. He noted that that analysis was not included in the application. He offered to send a copy of the analysis. Mr. Tamkin noted that they are required as part of the issuance of a Special Permit and will be made a condition of the Special Permit.

Mr. Goldman asked why not install the antennae at ten feet as required by the By-Law. Mr. Gorham responded that the roof is crowded by other carriers and HVAC equipment. Clustering Dish equipment was preferred as it would minimize interference with existing equipment. In addition, selecting a building that is already identified as a wireless hub was preferred to selecting a new building roof. All the equipment will be painted to match the surroundings. The simulation photos showing the current and proposed conditions was highlighted to indicate their concealment of the proposed equipment.

Mr. Goldman asked what the building use was. Mr. Gorham said the building was used for general office use.

Comments received:

- The Fire Department had no comment.
- The Police Department was concerned about interference with public safety radio operations. Mr. Gorham asserted there would be no interference and that the frequency is different from the public radio frequency. Mr. Tamkin asked that it be noted in the affidavit regarding compliance with FCC regulations.
- The Health Department requested assurance that the additional equipment does not cause risk of public health safety or nuisance concerns.
- The Building Department noted that roof mounted antenna not more than 10 feet high are required to be set back from the edge of the roof at least the distance equal to their height. Two of the proposed antennae are 8 feet in height and are setback 2.9 feet from the roof edge which requires a Special Permit under Section 6.7.3.3 (b) of the By Law. The wall mounted antenna is located below the top of the wall and is proposed to be painted to match the façade and is allowed by right.
- The Planning Board had no comment.
- The Engineering Department had no comment or objection.

There were no comments from the public. The public comment portion of the meeting was closed.

Mr. Ligris requested that the engineering affidavit include that the frequency will not interfere with the public safety frequency and that its submission be a condition of the Special Permit.

Mr. Goldman had no objection and was satisfied with the rationale for seeking relief for the location of two of the antennae. His concerns regarding any interference with public safety frequencies were allayed.

Mr. Tamkin inquired about the equipment on the ground and the lease agreement. Mr. Gorham responded that there will be a three foot by five foot platform for the generator; and that there is a lease agreement. Mr. Tamkin requested that the lease be submitted with the financials redacted.

Mr. Tamkin asked about the noise of the equipment and generator and how frequently is it tested. Mr. Gorham said that the equipment is in compliance with FCC requirements and does not make noise and has to be tested per FCC requirements. Mr. Goldman said that the Board requires that once the generator is installed that it be tested for noise and that it operates as intended.

Ms. Collins noted that the Board conditions the testing of generators during working hours to ensure noise does not disturb abutting residents. Mr. Tamkin inquired when generators are tested. Mr. Gorham responded that the generators are tested as needed and there is no noise associated when the generators kick on and off in the evening. Mr. Tamkin requested that an affidavit be submitted addressing the sound study of the generators attesting to their compliance

to FCC standards.

Mr. Goldman moved to grant a Special Permit to Dish Wireless, LLC, under Sections 6.7.3.3 (b) (c) and any other applicable section of the By-Law to install as part of their wireless telecommunications network the following equipment: 3 antennas, 6 remote radio units, 3 junctions boxes, 3 fiber cables, and 3 power cables in accordance with the plans submitted with the following conditions:

That affidavits stamped by a registered professional engineer will be submitted certifying that:

- a) the structural integrity of the building supports the installation of the proposed equipment;
- b) the equipment frequency will not interfere with public safety radio operations;
- c) the proposed network complies with FCC guidelines; and
- d) the noise generated by the generators when tested is in compliance with FCC standards.

Mr. Ligris seconded the motion. The motion was unanimously approved.

Mr. Tamkin requested that all the affidavit(s) requested be submitted as soon as possible so that they may be reflected in the Decision.

The meeting adjourned at 7:51 p.m.

Findings:

On the basis of the evidence presented at the hearing, the Board makes the following findings:

1. The premises is located in the Industrial District and improved with a three-story office building. In a decision dated April 28, 2005, the Board found that the building is 40 feet 8 inches in height which exceeds the current limitation of 40 feet. In addition, there is an extended elevator shaft that extends an additional 9 feet 8 inches bringing the total height of the building to 50 feet 4 inches. The building exceeds the current height limit, was constructed prior to the adoption of the height limitation in the District and constitutes a lawful nonconforming building.
2. The applicant proposes to install three antennas, six remote radio units, three junctions boxes, three fiber cables, and three power cables on the roof of the building as part of the build out of their wireless communication network.
3. Two of the antennas are eight feet high but set back only 2.9 feet from the roof edge and not at least the distance equal to their height per Section 6.7.3.1 (e) of the By-law and therefore requires a Special Permit under 6.7.3.3 (b).
4. One antenna is located below the top of the wall. It is proposed to be painted to match the façade and will not obscure or conceal existing architectural features on the façade on which it is mounted as allowed per right under Section 6.7.3.1(f) per a current photo and the photographic superimpositions submitted.

5. The applicant is licensed by the Federal Communications Commission to construct and operate a wireless telecommunications network.
6. The applicant will submit to the Board and Building Inspector an affidavit from their engineer or a radio frequency consultant that the radio frequency energy will comply with the FCC limits for the public and with FCC standards on interference and will not interfere with the public safety radio frequency.
7. The applicant will submit a structural analysis from their engineer to the Board and Building Inspector certifying as to the structural safety of the installation.
8. The applicant will submit to the Board and Building Inspector an affidavit from their engineer or radio frequency consultant demonstrating that the noise level of the generator at the site is designed to mitigate sound generation on the environment and is in compliance with federal, state and local requirements.
9. The facility is near residential use and a sound test shall be conducted by the applicant within 30 days after the installation of the generator is completed and shall be submitted to the Building Department.
10. The sound tests shall be conducted upon the complaint of noise and the test results shall be submitted to the Building Commissioner. The applicant will be responsible at its expense for making any modification required based on these tests.
11. The proposed installation is consistent with the policies set forth in Section 6.7.1 of the Zoning By-law including maximizing the use of existing buildings, encouraging co-location of equipment and concealing new equipment and the criteria set forth in Section 6.7.5 of the Zoning By-law.
12. The proposed installation is consistent with the general purposes of the Zoning By-law, is designed in a manner compatible with the existing natural features of the site, is compatible with the characteristics of the surrounding area and does not have a demonstrable adverse impact on the surrounding area.
13. The issuance of a special permit will not result in the violation of any dimensional, parking or intensity regulation with which the structure was theretofore in conformity.
14. The proposed installation will not be substantially more detrimental to the neighborhood than the existing nonconforming structure.

Decision:

On the basis of the foregoing findings, following due and open deliberation, upon motion duly made and seconded, the Board by unanimous vote, grants the applicant a Special Permit under Section 1.4.6 and Section 6.7.3.3(b) of the Zoning By-law to install wireless communication equipment on the roof of the existing building at 460 Hillside Avenue, in accordance with the plans submitted with the application and subject to the conditions that:

- a) the applicant shall submit a structural analysis to the Board and Building Inspector in a form satisfactory to the Building Inspector as a condition to obtaining a building permit;
- b) the applicant will submit to the Board and Building Inspector an affidavit of a radio frequency consultant that the radio frequency energy will comply with the FCC limits for the public and with FCC standards on interference and will not interfere with the public safety radio frequency;
- c) the applicant will submit to the Board and Building Inspector an affidavit demonstrating that the noise level of the generator at the site is designed to mitigate sound generation on the environment and is in compliance with federal, state and local requirements.
 - Thirty days after the installation is completed a sound test will be conducted and the results submitted to the Building Department.
 - A sound test of the generator shall be required on the occasion of complaints of noise, the test to be submitted to the Building Department and any necessary modification required will be the responsibility of the applicant.

Jonathan D. Tamkin, Chair

Howard S. Goldman, Vice-Chair

Nikolaos M. Ligris, Member

Daphne Collins

From: Andrew Gorham <agorham@nbcllc.com>
Sent: Friday, December 15, 2023 1:12 PM
To: Daphne Collins
Cc: Kristopher Kopycinski
Subject: RE: 460 Hillside Avenue - ZBA Public Hearing
Attachments: BOBOS01058A_Redacted_ExecutedLease_20230915064920.pdf;
BOBOS01058A_StructuralAnalysis_.pdf

Hi Daphne,

As a follow up to last night's meeting, please see attached for the redacted version of the lease, as well as the structural analysis conducted for this location. The RF affidavit from DISH certifying that the site is, a. within FCC compliance and b. will not interfere with local emergency radio communications, has been requested and is forthcoming.

As it relates to equipment, all of our equipment will be located within the building. Our engineers have confirmed that any equipment located outside on the ground level, including any generators, does not belong to DISH Wireless, eliminating the need for a sound test.

Thank you,
Andrew

From: Daphne Collins <dcollins@needhamma.gov>
Sent: Thursday, December 14, 2023 3:33 PM
To: Andrew Gorham <agorham@nbcllc.com>; Kristopher Kopycinski <kkopycinski@nbcllc.com>
Subject: 460 Hillside Avenue - ZBA Public Hearing

Andrew and Kris-

We look forward to your presentation regarding the Dish Wireless equipment at 460 Hillside Avenue.

Please be prepared to share the report which confirms that the facility conforms with the FCC standards and how structural and noise issues are being addressed. The Zoom Screen Share feature is available for projection but make sure you bring your own devices.

I am enclosing the Zoning By-Law Chapter 6 so you are ready to address the issues identified under 6.7.4 Submittal Requirements and 6.75 Decision Criteria (pages 211-214).

<https://www.needhamma.gov/DocumentCenter/View/16643/Zoning-By-Law-2022---Chapter-6?bidId=>

See you this evening.

Daphne

Daphne M. Collins

Zoning Specialist

Phone 781-455-7550, x 261

Web <https://www.needhamma.gov/>

<https://needhamma.gov/1101/Board-of-Appeals>



AFFIDAVIT OF RADIO FREQUENCY ENGINEER

The undersigned, in support of the proposal by DISH Wireless L.L.C. to install and operate a Wireless Communications Facility on the property located at 460 Hillside Avenue, Needham Heights, Massachusetts, under penalties of perjury does hereby testify and depose as follows:

1. My name is Sameer Parakkavetty, I have a Degree in Electronics and Communications from Karnatak University (Karnataka, India) and I am employed as a Radio Frequency Engineer for DISH Wireless L.L.C. I am the Radio Frequency Design Engineer responsible for the DISH Wireless network design in the area of Massachusetts that includes the Town of Needham Heights.
2. DISH Wireless is a national provider of wireless voice and data services in the United States.
3. The above mentioned location is within an area where DISH Wireless has identified a need to locate a Wireless Telecommunications Facility. The search area was determined by the fact that wireless service needs significant improvement in this area of Needham Heights. Furthermore, it was determined that the wireless service provided by a facility in this area would connect well with those of existing and proposed facilities in the surrounding area. To date, DISH Wireless has been unable to successfully locate a wireless communications facility in this locale. A site acquisition firm was hired by DISH Wireless to identify potential sites within the search area.
4. I have personal knowledge of the proposed Wireless Telecommunications Facility to be located at 460 Hillside Avenue in the Town of Needham Heights as well as the other existing and proposed Wireless Telecommunications Facility locations used in DISH Wireless' system in Needham Heights and the surrounding areas. I have analyzed the potential benefits this site would represent to DISH Wireless' network and its' users through radio frequency propagation modeling. I employed computer simulations to determine network requirements, and to identify system requirements. These simulations modeled characteristics such as antenna types, antenna height, output power, terrain, ground elevations and RF propagation effects of the utilized frequencies.
5. Propagation simulation at the proposed location has determined that an antenna center-line height of no less than 37 and 46 feet above ground level at this location will satisfy the service requirements for DISH Wireless' network. Any reduction in the proposed height and/or antenna configuration would result in coverage footprint shrinkage. This would significantly limit the site's effectiveness in connecting with surrounding sites and severely impact the level of service DISH Wireless is attempting to provide at this location. Changes to the site configuration would limit the site's ability to resolve the significant existing network requirements in the Town of Needham Heights.

6. I have concluded that the proposed Wireless Telecommunications Facility at 460 Hillside Avenue fulfills the present network and quality objectives that motivated DISH Wireless to establish a search ring in this vicinity. Radio frequency propagation modeling establishes that this installation will accomplish DISH Wireless' network goals.
7. All proposed wireless communications equipment will be installed, erected, maintained and operated in compliance with all applicable Federal, State and local regulations, including, but not limited to the radio frequency emissions regulations adopted by the Federal Communications Commission (FCC). All equipment proposed is authorized by the FCC Guidelines for Evaluating the Environmental effects of Radio Frequency Emissions. The radio frequency exposure levels generated by the proposed facility are substantially within the maximum allowable health and safety standards established by the FCC.
8. Providing wireless communication services is a benefit to the residents and businesses of the Town of Needham Heights as well as to mobile customers travelling throughout the area. The proposed location is well suited to meet DISH Wireless' network requirements for the area due to its location and topographic characteristics. Without the proposed facility, DISH Wireless will be unable to provide reliable wireless communication services in this area of the Town of Needham Heights.

Signed and sworn under pains and penalties of perjury on this 8th day of January, 2024.



Sameer Parakkavetty - Radio Frequency (RF) Design Engineer
DISH Wireless L.L.C.



NB+C Engineering Services

Proposed Rooftop Antenna Installation

Prepared for Dish Wireless

SITE INFORMATION

Address	460 Hillside Avenue
	Needham, MA 02494, Norfolk County
	Latitude: 42.291173°
	Longitude: -71.236352°
Dish Site Number	BOBOS01058A
NB+C Project Number	100753
Date	March 23, 2022

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1.0 INTRODUCTION

The existing structure is a 39'-3" (±) tall building located in Needham, MA. Dish has proposed to install the equipment as listed in Table 1 below. As per your request, **Network Building + Consulting Engineering Services ("NB+C ES")** has performed a structural analysis to determine if the loads induced due to the proposed installation can be safely supported by the existing steel framing and to verify if the structure is in compliance with the applicable codes and standards. Information we have received and used for this analysis includes:

- Preliminary Construction Drawings prepared by **NB+C ES** dated March 10, 2022
- Mount Analysis report prepared by **NB+C ES** dated March 3, 2022
- RFDS provided by Dish dated June 07, 2021
- Design Visit Photos and Notes prepared by **NB+C ES** dated September 13, 2021

2.0 APPURTENANCE LOADING

Table 1 – Final Antenna and Cable Information

Center Line Elevation (ft)	No. of Antennas	Antenna Model/ Mount	Carrier	Feed Line (in)
46'-0"	(2)	(2) JMA MX08FRO665-21 Panel Antennas (2) Fujitsu TA08025-B605 RRHs (2) Fujitsu TA08025-B604 RRHs (2) Raycap RDIDC-3045-PF-48	Dish	(3) 8AWG 0.79" Dia. Power Cables (3) NWS 0.33" Dia. Fiber Cables
37'-0"	(1)	(1) JMA MX08FRO665-21 Panel Antennas (1) Fujitsu TA08025-B605 RRHs (1) Fujitsu TA08025-B604 RRHs (1) Raycap RDIDC-3045-PF-48		
Equipment Platform	-	(1) Enersys Cabinet (1) PPC (1) Telco Enclosure		

Proposed equipment in **BOLD**.

3.0 ASSUMPTIONS

This report is based on the theoretical capacity of the existing building structural elements and is not an assessment of the overall suitability of the existing structure or its components for any particular use other than specified here in this report:

- This report makes no warranties, expressed and/or implied, and disclaims any liability arising from material, fabrication and erection of the existing structure or proposed equipment, and any other proposed components or appurtenances.
- All proposed antennas, mounts, coaxial cable and appurtenances are assumed to be properly installed and configured according to manufacturer requirements.
- All existing structural elements are assumed to be in place and in good condition as evident by site audit photos and visual site observations and were previously designed and constructed in accordance with applicable codes and standards.
- Contractor to verify existing site conditions including the antenna mount connections to existing exterior wall and antenna locations prior to fabrication and construction. In the event the existing conditions are different than the assumptions made in this report, this must be brought to the structural engineer's attention before proceeding any further with bidding, fabrication and/or erection.
- The existing steel beam, to which the cylindrical antennas concealments will be mounted, is a W16x36, according to measurements taken in the field by NB+C personnel.

4.0 APPLICABLE CODES AND STANDARDS

The existing structure was analyzed/designed per the provisions of following applicable codes and standards:

- *The Massachusetts State Building Code - 780 CMR, Incorporating the 2015 International Building Code*
- *ANSI/TIA-222-G – Structural Standards for Antenna Supporting Structures and Antennas*
- *Minimum Design Loads for Buildings and Other Structures ASCE/SEI 7-10*
- *AISC Manual of Steel Construction, 14th Edition – ANSI/AISC 360-10*
- *2015 International Existing Building Code*

5.0 ANALYSIS

Design Loads:

- Ultimate wind speed: 128 mph
- Risk Category: II
- Exposure: B
- Ice thickness: 1 in
- Ice wind speed: 50 mph

6.0 CONCLUSIONS & RECOMMENDATIONS

Based on the performed analysis of this structure for applied gravity and lateral loads, the structures were determined to have adequate structural capacity to support the proposed Dish telecommunication appurtenances and are in compliance with building codes and standards listed in this report.

The proposed antennas at Beta and Gamma sector will be mounted within custom cylindrical concealments to 3.5" nominal diameter pipes mounts and bolted to the existing steel beam on the roof (see Preliminary Construction Drawings prepared by NB+C and dated 03/10/2022). The proposed RRHs will also be mounted within the cylindrical concealments. The OVP devices will be mounted to proposed Unistrut and bolted to the existing steel beam. The results of our analysis show that the existing steel beam will be stressed to a maximum of 92% of its design capacity. Therefore, the structure was deemed adequate to support the proposed loading. Refer to Appendix A of this report for detailed calculations.

The antenna at Alpha sector will be mounted to a 2" nominal Sch. 40 x 6' long pipe mast and attached directly to the building façade with a SitePro1 SBWM wall mount. The mount at Alpha sector is considered a flush mount; therefore, no additional wind loading is imparted on the structure due to the proposed installation.

The overall increase in the effective projected wind area and the gravity load on the existing building structure due to the proposed installation is less than 10% and 5% respectively, which is deemed acceptable per Section 1103.3 of IEBC 2015. Hence, a global analysis of the existing building was not performed.

The conclusions reached by **NB+C ES** in this report are only applicable for the previously mentioned existing structural members supporting the Dish telecommunication antennas and support frame. Further, no structural qualification is made or implied by this report for existing structural members not supporting the proposed equipment and supporting frames.

NB+C Engineering Services, LLC

Prepared by: Linda Gallagher, E.I.T.

Respectfully submitted by:

Krupakaran Kolandaivelu, P.E.

Vice President of Engineering
MA PE License # 50019

3/23/2022



APPENDIX A: CALCULATIONS

Building Rooftop Structural Analysis:

Site Information:

Site Name: BOBOS01058A

Address: 460 Hillside Avenue, Needham MA, 02494

Location: Needham, MA

ASCE 7-10 Reference

Risk category:	II	Section 26.7.3, pg 251
Exposure:	Exp := "B"	Section 26.7.3, pg 251
Topographic factor:	$K_{zt} := 1.0$	Section 28.8.2, pg 254
Wind directional factor:	$K_d := 0.85$	Table 26.6-1, pg 250
Ultimate wind speed:	$V := 128 \text{ mph}$	Figure 26.5-1 A-C, pgs 247-249
Antenna height: (mid point)	$h_a := 46 \text{ ft} \quad z := 46\text{ft}$	
Gust response factor:	$G := 0.85$	Section 26.9.1, Pg. 254
Velocity Pressure Coefficient:	$z_g := \begin{cases} 1200 & \text{if Exp} = \text{"B"} \\ 900 & \text{if Exp} = \text{"C"} \\ 700 & \text{if Exp} = \text{"D"} \end{cases} = 1200$ $\alpha := \begin{cases} 7 & \text{if Exp} = \text{"B"} \\ 9.5 & \text{if Exp} = \text{"C"} \\ 11.5 & \text{if Exp} = \text{"D"} \end{cases} = 7$ $K_z := 2.01 \cdot \left(\frac{h_a}{z_g} \right)^{\frac{2}{\alpha}} = 0.792$	Table 26.9-1, pg 256
Velocity pressure:	$q_z := 0.00256 \cdot K_z \cdot K_{zt} \cdot K_d \cdot V^2 \cdot \text{psf}$ $q_z = 28.22 \cdot \text{psf}$	Equation 27.3-1, Pg. 260

Force Coefficient:

$C_f(l, d, \text{type}) :=$

$$l_d \leftarrow \frac{1}{d}$$

Figure 29.5-1, pg 312

$C_{\text{flat}} \leftarrow$

$$1.3 \quad \text{if } l_d \leq 1.0$$

$$1.3 + \frac{0.1(l_d - 1)}{6} \quad \text{if } 1 < l_d < 7$$

$$1.4 \quad \text{if } l_d = 7$$

$$1.4 + \frac{0.6(l_d - 7)}{18} \quad \text{if } 7 < l_d < 25$$

$$2.0 \quad \text{if } 25 \leq l_d$$

$C_{\text{round}} \leftarrow$

$$0.7 \quad \text{if } l_d \leq 1.0$$

$$0.7 + \frac{0.1(l_d - 1)}{6} \quad \text{if } 1 < l_d < 7$$

$$0.8 \quad \text{if } l_d = 7$$

$$0.8 + \frac{0.6(l_d - 7)}{18} \quad \text{if } 7 < l_d < 25$$

$$1.2 \quad \text{if } 25 \leq l_d$$

return C_{flat} if type = "flat"

return C_{round} if type = "round"

Design Wind Force:

$F_f(l, d, \text{type}) :=$

$$C_f \leftarrow C_f(l, d, \text{type})$$

$$A_f \leftarrow l \cdot d$$

$$F \leftarrow 0.6q_z \cdot G \cdot C_f \cdot A_f$$

Eq 29.5-2, pg 308
(ASD Load Combinations)

DISH LOADING:

Appurtenance Configuration:

- (1) Proposed JMA MX08FRO665-21 Panel Antennas
- (1) Proposed Fujitsu TA08025-B605 RRHs
- (1) Proposed Fujitsu TA08025-B604 RRHs
- (1) Proposed Raycap RDIDC-3045-PF-48

Antenna 1: JMA MX08FRO665-21 Panel Antennas

Dimensions: $h_1 := 72\text{in}$ $w_1 := 20\text{in}$ $d_1 := 8\text{in}$ $P_1 := 82.5\text{lbf}$
(Concealed)

RRU 1: Fujitsu TA08025-B605 RRHs

Dimensions: $h_2 := 14.9\text{in}$ $w_2 := 15.7\text{in}$ $d_2 := 9.0\text{in}$ $P_2 := 74.9\text{lbf}$
(Concealed)

RRU 2: Fujitsu TA08025-B604 RRHs

Dimensions: $h_3 := 14.9\text{in}$ $w_3 := 15.7\text{in}$ $d_3 := 7.8\text{in}$ $P_3 := 63.9\text{lbf}$
(Concealed)

Dist Box: Raycap RDIDC-3045-PF-48

Dimensions: $h_4 := 19\text{in}$ $w_4 := 16.21\text{in}$ $d_4 := 9.64\text{in}$ $P_4 := 21\text{lbf}$

Equipment Cross Section Type: $\text{type}_4 := \text{"flat"}$

Wind Load: $F_4 := F_f(h_4, w_4, \text{type}_4) = 40\text{·lbf}$

Moment Arm: $r_4 := 3\text{ft}$

Platform Dimensions:

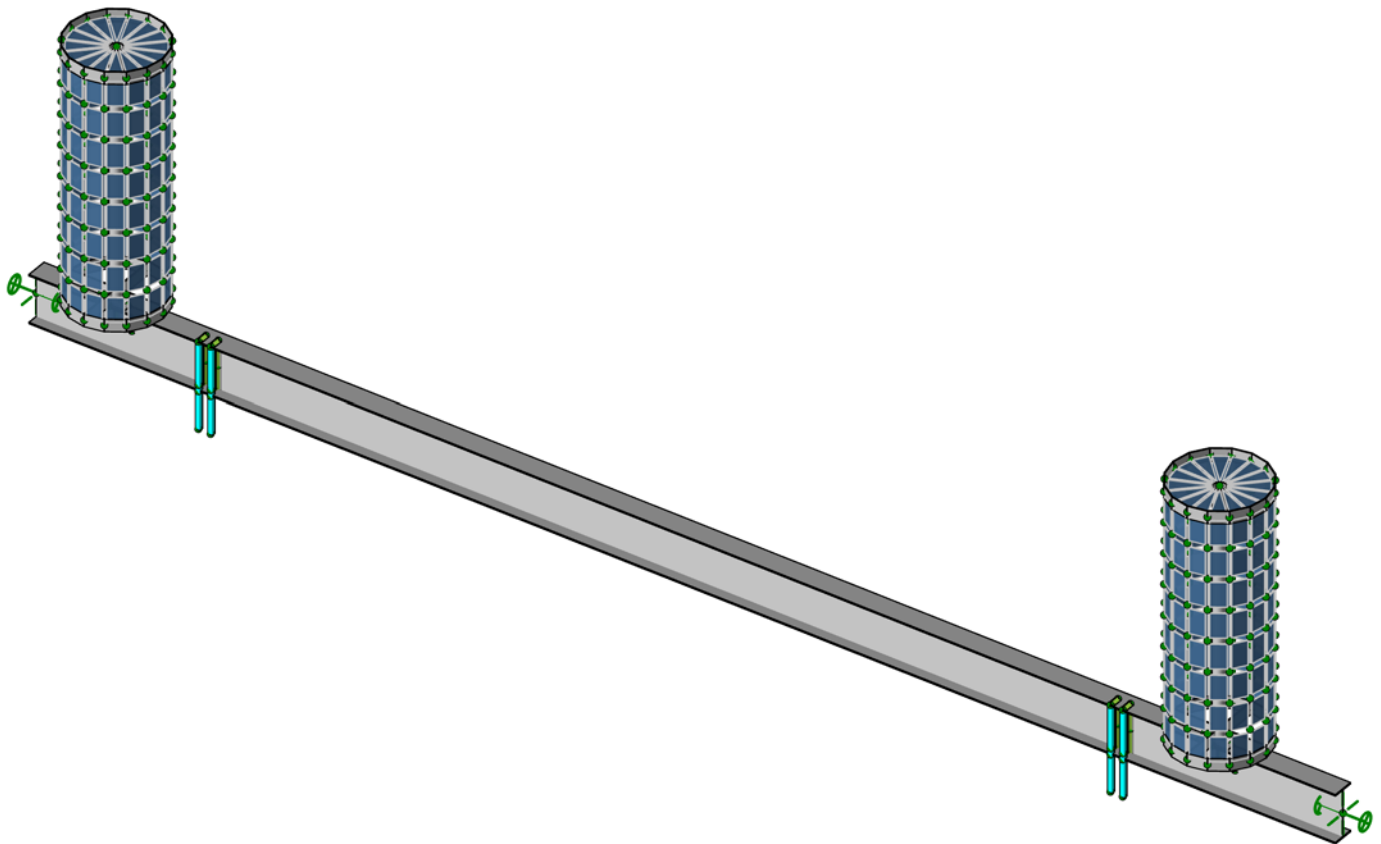
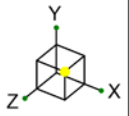
Tributary Width: 7.5-ft

Design Live Load:

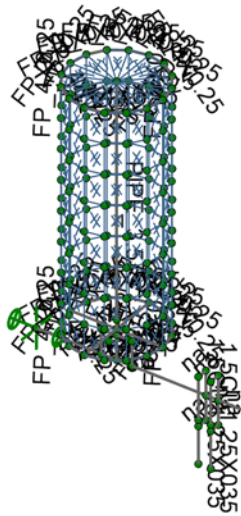
LL = 125 psf

Snow Load:

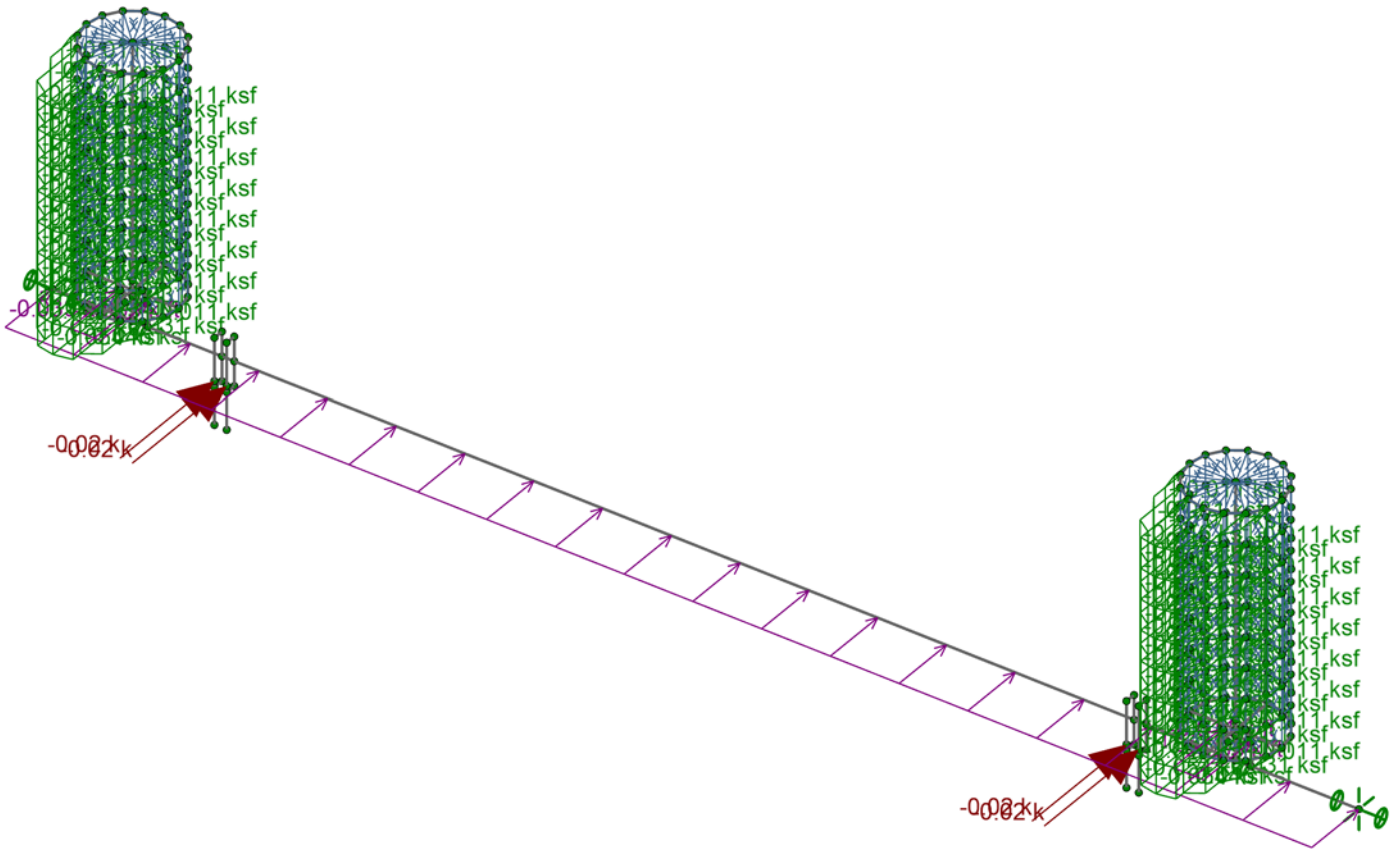
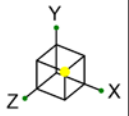
Ground Snow Load	$p_g := 40\text{psf}$
Thermal Factor	$C_t := 1.0$
Exposure Factor	$C_e := 0.9$
Snow Importance Factor	$I_s := 1.0$
Minimum Snow Load	$p_m := 20\text{ psf}$
Roof Slope Factor	$C_s := 1.0$
Flat Roof Snow Load	$p_f := 0.7 \cdot C_t \cdot C_e \cdot I_s \cdot p_g = 25.2 \cdot \text{psf}$
Balanced Snow Load	$p_s := p_f \cdot C_s = 25.2 \cdot \text{psf}$



NB+C - ES	BOBOS01058A - Beta Gamma	SK-1
LG		Mar 23, 2022
100753		Mount Analysis Tool v2.2.2_beta g...
Rendering		



NB+C - ES	BOBOS01058A - Beta Gamma	SK-2
LG		Mar 23, 2022
100753		Member Shapes



Loads: BLC 1, Front Wind (Wo)

NB+C - ES

LG

100753

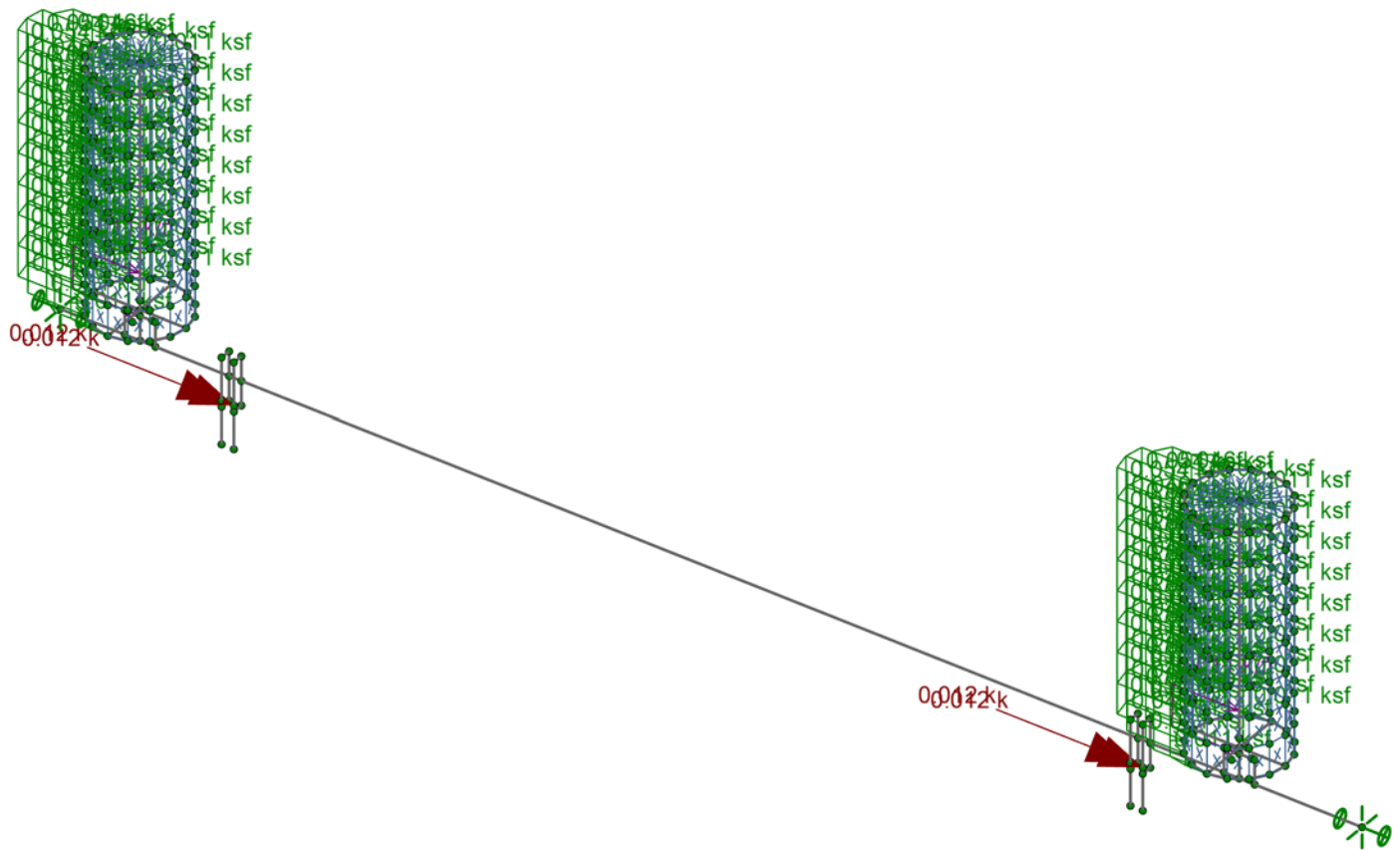
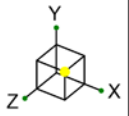
BOBOS01058A - Beta Gamma

Front Wind Load

SK-3

Mar 23, 2022

Mount Analysis Tool v2.2.2_beta g...



Loads: BLC 2, Side Wind (Wo)

NB+C - ES

LG

100753

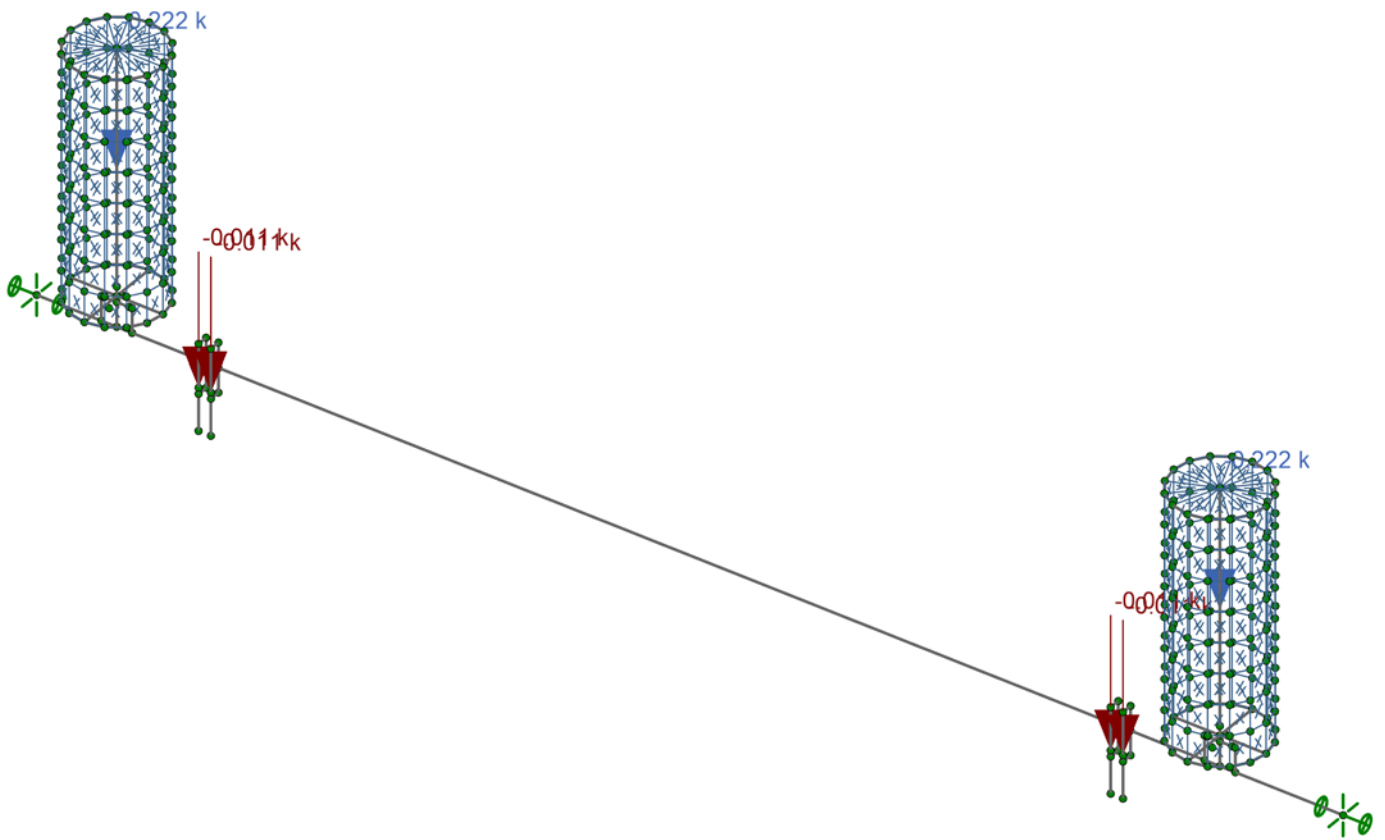
BOBOS01058A - Beta Gamma

Side Wind Load

SK-4

Mar 23, 2022

Mount Analysis Tool v2.2.2_beta g...



Loads: BLC 5, Dead Load (DL)

NB+C - ES

LG

100753

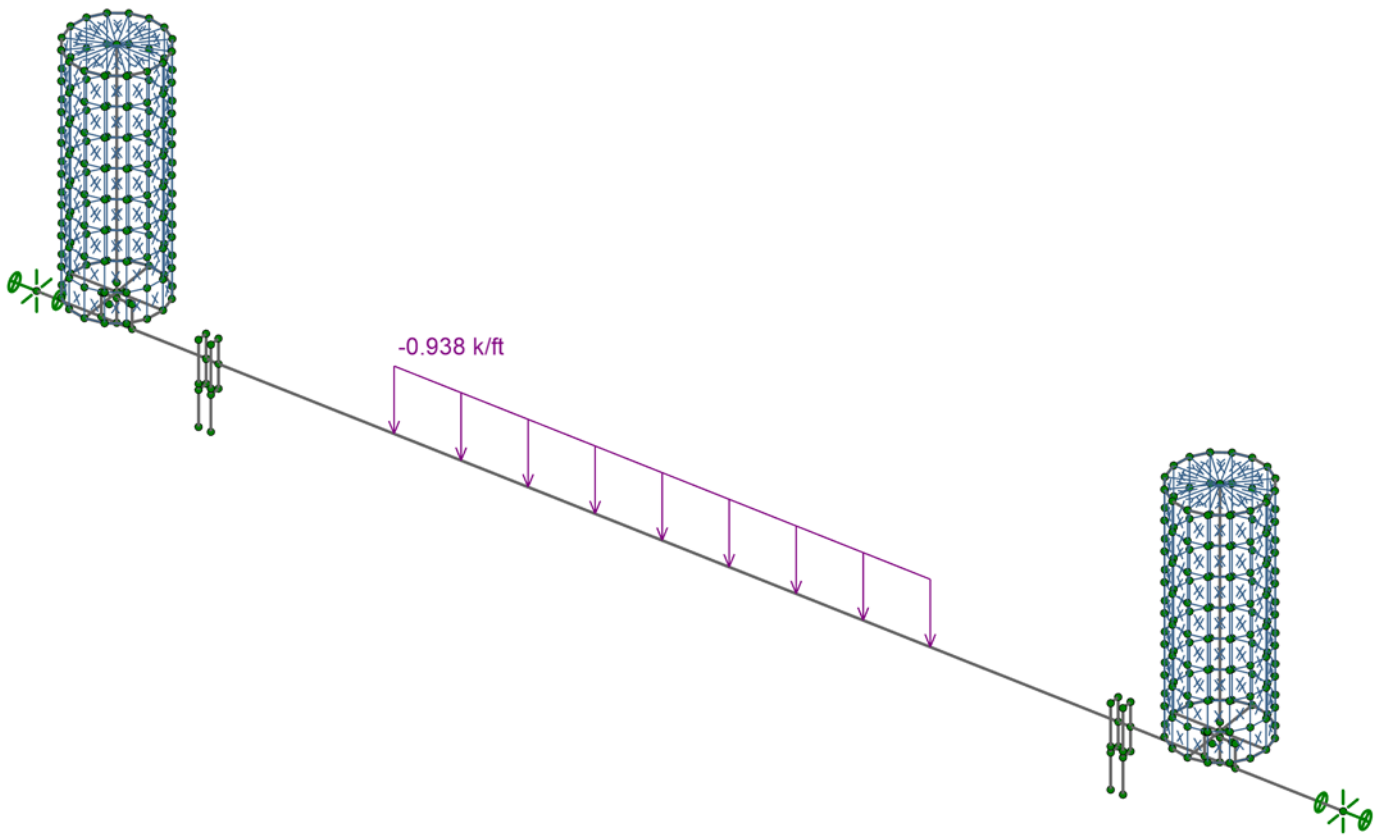
BOBOS01058A - Beta Gamma

Dead Load

SK-5

Mar 23, 2022

Mount Analysis Tool v2.2.2_beta g...



Loads: BLC 3, Live Load (LL)

NB+C - ES

LG

100753

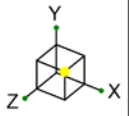
BOBOS01058A - Beta Gamma

Live Load

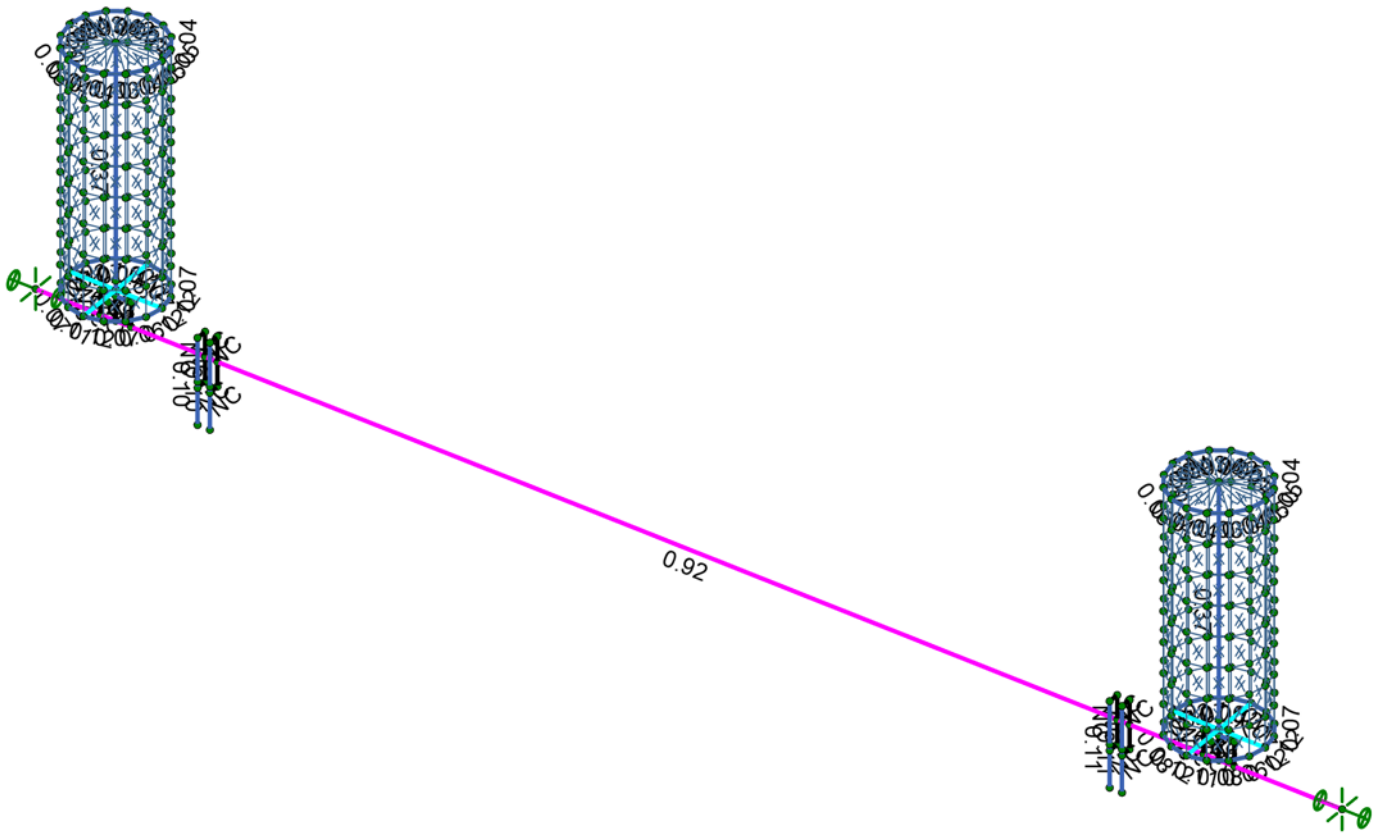
SK-6

Mar 23, 2022

Mount Analysis Tool v2.2.2_beta g...



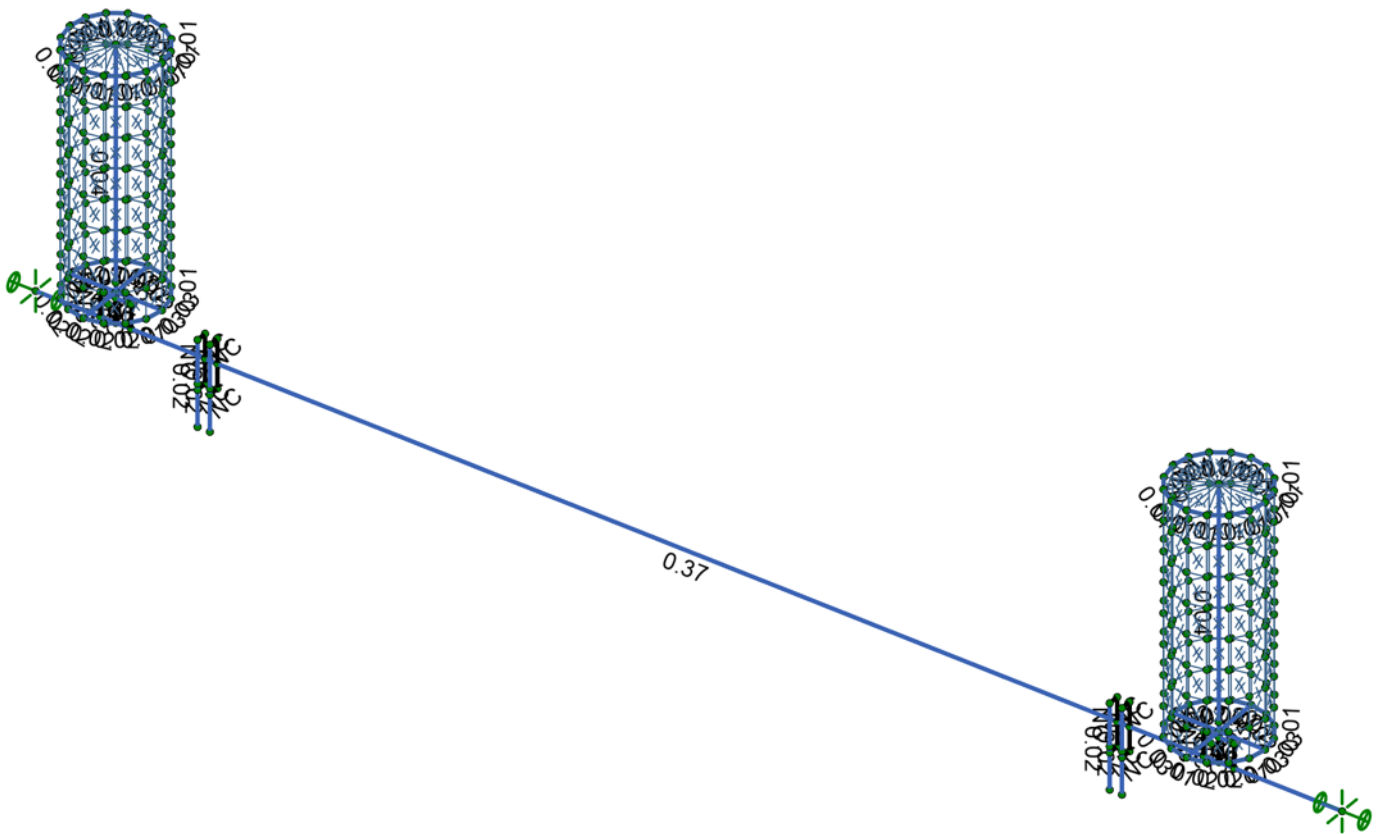
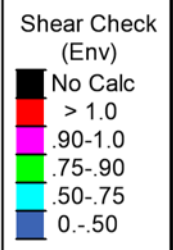
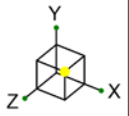
Code Check (Env)	
No Calc	
> 1.0	
.90-1.0	
.75-.90	
.50-.75	
0.-.50	



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

NB+C - ES	BOBOS01058A - Beta Gamma	SK-7
LG		Mar 23, 2022
100753		Mount Analysis Tool v2.2.2_beta g...

Bending Check



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

NB+C - ES	BOBOS01058A - Beta Gamma	SK-8
LG		Mar 23, 2022
100753		Mount Analysis Tool v2.2.2_beta g...

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [$10^{-6} F^{-1}$]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
8	A913 Gr.65	29000	11154	0.3	0.65	0.49	65	1.1	80	1.1
9	FRP	2800	450	0.35	0.44	0.12	16.67	1.5	50	1.2
10	A500 Gr.42	29000	11154	0.3	0.65	0.49	42	1.3	58	1.1
11	A500 Gr.46	29000	11154	0.3	0.65	0.49	46	1.2	58	1.1
12	A 53 G. B	29000	11154	0.3	0.65	0.49	35	1.5	58	1.2
13	Q235	29000	11154	0.3	0.65	0.49	35	1.5	58	1.2
14	FRP 1525	2800	1077	0.3	0.7	0.115	30	1.1	32	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	Plate 2	FP 4x0.25	Beam	RECT	A36 Gr.36	Typical	1	0.005	1.333	0.02
2	PIPE 3.5	PIPE 3.5	Column	Pipe	A53 Gr.B	Typical	2.5	4.52	4.52	9.04
3	PL7x1	Plate7x1	Beam	RECT	A36 Gr.36	Typical	7	0.583	28.583	2.123
4	W16x36	W16X36	Beam	Wide Flange	A992	Typical	10.6	24.5	448	0.545

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [$10^{-6} F^{-1}$]	Density [k/ft ³]	Yield [ksi]	Fu [ksi]
1	A653 SS Gr33	29500	11346	0.3	0.65	0.49	33	45
2	A653 SS Gr50/1	29500	11346	0.3	0.65	0.49	50	65
3	A570 Gr.33	29500	11346	0.3	0.65	0.49	33	52
4	A607 C1 Gr.55	29500	11346	0.3	0.65	0.49	55	70
5	A570 33	29500	11346	0.3	0.65	0.49	33	52
6	A607 C1 55	29500	11346	0.3	0.65	0.49	55	70

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	CF1A	8CU1.25X057	Beam	None	A653 SS Gr33	Typical	0.581	0.057	4.41	0.00063
2	CF1A_1	8CU1.25X057	Beam	None	A570 Gr.33	Typical	0.581	0.057	4.41	0.00063
3	CF1	1.5CU1.25X035	Beam	None	A570 Gr.33	Typical	0.131	0.022	0.052	5.4e-05
4	Unistrut	1.5CU1.25X035	Beam	CU	A570_33	Typical	0.131	0.022	0.052	5.4e-05

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M32A	N508	N506		Plate 2	Beam	RECT	A36 Gr.36	Typical
2	M34A	N482	N526		Plate 2	Beam	RECT	A36 Gr.36	Typical
3	M33A	N484	N482		Plate 2	Beam	RECT	A36 Gr.36	Typical
4	M35A	N526	N520		Plate 2	Beam	RECT	A36 Gr.36	Typical
5	M36A	N520	N514		Plate 2	Beam	RECT	A36 Gr.36	Typical
6	M37A_1	N514	N508		Plate 2	Beam	RECT	A36 Gr.36	Typical
7	M38A	N508	N502		Plate 2	Beam	RECT	A36 Gr.36	Typical
8	M39A	N502	N496		Plate 2	Beam	RECT	A36 Gr.36	Typical
9	M40A	N496	N490		Plate 2	Beam	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
10	M41B	N490	N484		Plate 2	Beam	RECT	A36 Gr.36	Typical
11	M43	N524	N518		Plate 2	Beam	RECT	A36 Gr.36	Typical
12	M44B	N518	N512		Plate 2	Beam	RECT	A36 Gr.36	Typical
13	M45	N512	N506		Plate 2	Beam	RECT	A36 Gr.36	Typical
14	M46 1	N506	N500		Plate 2	Beam	RECT	A36 Gr.36	Typical
15	M47 1	N500	N494		Plate 2	Beam	RECT	A36 Gr.36	Typical
16	M48 1	N494	N488		Plate 2	Beam	RECT	A36 Gr.36	Typical
17	M52	N481	N525		Plate 2	Beam	RECT	A36 Gr.36	Typical
18	M53	N525	N519		Plate 2	Beam	RECT	A36 Gr.36	Typical
19	M54 1	N519	N513		Plate 2	Beam	RECT	A36 Gr.36	Typical
20	M55	N513	N507		Plate 2	Beam	RECT	A36 Gr.36	Typical
21	M56	N507	N501		Plate 2	Beam	RECT	A36 Gr.36	Typical
22	M57	N501	N495		Plate 2	Beam	RECT	A36 Gr.36	Typical
23	M58 1	N495	N489		Plate 2	Beam	RECT	A36 Gr.36	Typical
24	M59 1	N489	N483		Plate 2	Beam	RECT	A36 Gr.36	Typical
25	M60 1	N483	N523		Plate 2	Beam	RECT	A36 Gr.36	Typical
26	M61 1	N523	N517		Plate 2	Beam	RECT	A36 Gr.36	Typical
27	M62	N517	N511		Plate 2	Beam	RECT	A36 Gr.36	Typical
28	M63	N511	N505		Plate 2	Beam	RECT	A36 Gr.36	Typical
29	M64	N505	N499		Plate 2	Beam	RECT	A36 Gr.36	Typical
30	M65 1	N499	N493		Plate 2	Beam	RECT	A36 Gr.36	Typical
31	M66 1	N493	N487		Plate 2	Beam	RECT	A36 Gr.36	Typical
32	M67	N487	N481		Plate 2	Beam	RECT	A36 Gr.36	Typical
33	M1	N263	N1		PIPE 3.5	Column	Pipe	A53 Gr.B	Typical
34	M40	N166	N14		W16x36	Beam	Wide Flange	A992	Typical
35	M41	N202	N185		Plate 2	Beam	RECT	A36 Gr.36	Typical
36	M44	N211	N202		Plate 2	Beam	RECT	A36 Gr.36	Typical
37	M46	N188	N182		Plate 2	Beam	RECT	A36 Gr.36	Typical
38	M47	N170	N223		Plate 2	Beam	RECT	A36 Gr.36	Typical
39	M48	N178	N170		Plate 2	Beam	RECT	A36 Gr.36	Typical
40	M50	N168	N175		Plate 2	Beam	RECT	A36 Gr.36	Typical
41	M51	N223	N217		Plate 2	Beam	RECT	A36 Gr.36	Typical
42	M54	N217	N211		Plate 2	Beam	RECT	A36 Gr.36	Typical
43	M59	N202	N195		Plate 2	Beam	RECT	A36 Gr.36	Typical
44	M60	N190	N188		Plate 2	Beam	RECT	A36 Gr.36	Typical
45	M61	N195	N192		Plate 2	Beam	RECT	A36 Gr.36	Typical
46	M66	N192	N184		Plate 2	Beam	RECT	A36 Gr.36	Typical
47	M68	N184	N178		Plate 2	Beam	RECT	A36 Gr.36	Typical
48	M69	N219	N212		Plate 2	Beam	RECT	A36 Gr.36	Typical
49	M70	N212	N207		Plate 2	Beam	RECT	A36 Gr.36	Typical
50	M71	N198	N176		Plate 2	Beam	RECT	A36 Gr.36	Typical
51	M72	N207	N185		Plate 2	Beam	RECT	A36 Gr.36	Typical
52	M73	N176	N187		Plate 2	Beam	RECT	A36 Gr.36	Typical
53	M74	N185	N190		Plate 2	Beam	RECT	A36 Gr.36	Typical
54	M75	N182	N170		Plate 2	Beam	RECT	A36 Gr.36	Typical
55	M76	N199	N204		Plate 2	Beam	RECT	A36 Gr.36	Typical
56	M77	N177	N221		Plate 2	Beam	RECT	A36 Gr.36	Typical
57	M78	N221	N216		Plate 2	Beam	RECT	A36 Gr.36	Typical
58	M79	N216	N208		Plate 2	Beam	RECT	A36 Gr.36	Typical
59	M81	N200	N194		Plate 2	Beam	RECT	A36 Gr.36	Typical
60	M82	N194	N191		Plate 2	Beam	RECT	A36 Gr.36	Typical
61	M83	N187	N179		Plate 2	Beam	RECT	A36 Gr.36	Typical
62	M84	N191	N168		Plate 2	Beam	RECT	A36 Gr.36	Typical
63	M85	N171	N169		PIPE 3.5	Column	Pipe	A53 Gr.B	Typical
64	M86	N175	N214		Plate 2	Beam	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
65	M87	N214	N199		Plate 2	Beam	RECT	A36 Gr.36	Typical
66	M88	N179	N177		Plate 2	Beam	RECT	A36 Gr.36	Typical
67	M89	N169	N337		RIGID	None	None	RIGID	Typical
68	M90	N1	N338		RIGID	None	None	RIGID	Typical
69	M91	N319	N339		RIGID	None	None	RIGID	Typical
70	M80	N219	N178		Plate 2	Beam	RECT	A36 Gr.36	Typical
71	M92	N340	N341		RIGID	None	None	RIGID	Typical
72	M97	N484	N524		Plate 2	Beam	RECT	A36 Gr.36	Typical
73	M93	N18	N342		RIGID	None	None	RIGID	Typical
74	M98	N482	N488		Plate 2	Beam	RECT	A36 Gr.36	Typical
75	M94	N343	N344		RIGID	None	None	RIGID	Typical
76	M99	N320	N322		Unistrut	Beam	CU	A570 33	Typical
77	M95	N319	N340	90	PL7x1	Beam	RECT	A36 Gr.36	Typical
78	M100	N321	N323		Unistrut	Beam	CU	A570 33	Typical
79	M96	N18	N343	90	PL7x1	Beam	RECT	A36 Gr.36	Typical
80	M102	N328	N329		Unistrut	Beam	CU	A570 33	Typical
81	M103	N327	N330		Unistrut	Beam	CU	A570 33	Typical
82	M105	N204	N198		Plate 2	Beam	RECT	A36 Gr.36	Typical
83	M106	N200	N208		Plate 2	Beam	RECT	A36 Gr.36	Typical
84	M101	N328	N347		RIGID	None	None	RIGID	Typical
85	M104	N327	N336		RIGID	None	None	RIGID	Typical
86	M107	N336	N349		RIGID	None	None	RIGID	Typical
87	M108	N349	N353		RIGID	None	None	RIGID	Typical
88	M109	N347	N350		RIGID	None	None	RIGID	Typical
89	M110	N350	N355		RIGID	None	None	RIGID	Typical
90	M111	N320	N346		RIGID	None	None	RIGID	Typical
91	M112	N346	N351		RIGID	None	None	RIGID	Typical
92	M113	N351	N354		RIGID	None	None	RIGID	Typical
93	M114	N321	N335		RIGID	None	None	RIGID	Typical
94	M115	N335	N348		RIGID	None	None	RIGID	Typical
95	M116	N348	N352		RIGID	None	None	RIGID	Typical

Basic Load Cases

	BLC Description	Category	X Gravity	Nodal	Point	Distributed	Surface(Plate/Wall)
1	Front Wind (Wo)	WLZ		4		4	128
2	Side Wind (Wo)	WLX		4		2	256
3	Live Load (LL)	LL				1	
4	Snow Load (SL)	SL				2	
5	Dead Load (DL)	DL		4	2		
6	Ice Dead (Di)	None					
7	Front Seismic	None					
8	Side Seismic	None	1				
9	Maintenance 1 (Lm)	None					
10	Maintenance 2 (Lm)	None					
11	Maintenance 3 (Lm)	None					
12	Maintenance 4 (Lm)	None					
13	Maintenance 1 (Lv)	None					
14	Maintenance 2 (Lv)	None					
15	Maintenance 3 (Lv)	None					
16	Maintenance 4 (Lv)	None					

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Deflection 1	Yes	Y	DL	1										
2	Deflection 2	Yes	Y	LL	1										
3	Deflection 3	Yes	Y	DL	1	LL	1								
4	IBC 16-8	Yes	Y	DL	1										
5	IBC 16-9	Yes	Y	DL	1	LL	1	LLS	1						
6	IBC 16-10 (b)	Yes	Y	DL	1	SL	1	SLN	1						
7	IBC 16-11 (b)	Yes	Y	DL	1	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75		
8		Yes	Y	DL	1	WLZ	0.6								
9		Yes	Y	DL	1	WLX	0.6								
10		Yes	Y	DL	1	WLZ	-0.6								
11		Yes	Y	DL	1	WLX	-0.6								
12		Yes	Y	DL	1	WLZ	0.6	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
13		Yes	Y	DL	1	WLX	0.6	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
14		Yes	Y	DL	1	WLZ	-0.6	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
15		Yes	Y	DL	1	WLX	-0.6	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
16		Yes	Y	DL	0.6	WLZ	0.6								
17		Yes	Y	DL	0.6	WLX	0.6								
18		Yes	Y	DL	0.6	WLZ	-0.6								
19		Yes	Y	DL	0.6	WLX	-0.6								

Load Combination Design

	Description	CD	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
1	Deflection 1		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Deflection 2		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Deflection 3		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	IBC 16-8	0.9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	IBC 16-9		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	IBC 16-10 (b)	1.15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	IBC 16-11 (b)	1.15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8		1.15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9		1.15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10		1.15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11		1.15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12		1.15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Envelope AISC 14TH (360-10): ASD Member Steel Code Checks

Member	Shape	Code Check	Loc[in]	LCShear	Check	Loc[in]	DirLC	Pnc/om	[k]	Pnt/om	[k]	Mnyy/om	[k-ft]	Mnzz/om	[k-ft]	Cb	Eqn
1	M32A	FP 4x0.25	0.672	15	12	0.052	15	y	12	0.87	21.557	0.112	1.28	1.34	H1-1a		
2	M34A	FP 4x0.25	0.117	0	13	0.03	5.853	y	13	15.227	21.557	0.112	1.796	1.708	H1-1b		
3	M33A	FP 4x0.25	0.695	15	13	0.059	15	y	13	0.87	21.557	0.112	1.276	1.336	H1-1a		
4	M35A	FP 4x0.25	0.059	5.853	12	0.014	5.853	y	15	15.227	21.557	0.112	1.796	1.97	H1-1b		
5	M36A	FP 4x0.25	0.075	0	12	0.024	5.853	y	18	15.227	21.557	0.112	1.796	2.165	H1-1b		
6	M37A	1FP 4x0.25	0.114	5.853	10	0.015	5.853	y	12	15.227	21.557	0.112	1.796	1.882	H1-1b		
7	M38A	FP 4x0.25	0.121	0	14	0.013	5.853	y	8	15.227	21.557	0.112	1.796	1.894	H1-1b		
8	M39A	FP 4x0.25	0.077	5.853	14	0.026	5.853	y	14	15.227	21.557	0.112	1.796	2.012	H1-1b		

Envelope AISC 14TH (360-10): ASD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
9	M40A	FP 4x0.25	0.068	0	15	0.021	5.853	y	15	15.227	21.557	0.112	1.796	1.633	H1-1b
10	M41B	FP 4x0.25	0.12	5.853	11	0.021	5.853	y	11	15.227	21.557	0.112	1.796	1.746	H1-1b
11	M43	FP 4x0.25	0.073	5.853	10	0.021	5.853	y	15	15.227	21.557	0.112	1.796	1.925	H1-1b
12	M44B	FP 4x0.25	0.059	0	12	0.018	5.853	y	10	15.227	21.557	0.112	1.796	1.88	H1-1b
13	M45	FP 4x0.25	0.117	5.853	12	0.023	5.853	y	12	15.227	21.557	0.112	1.796	1.777	H1-1b
14	M46 1	FP 4x0.25	0.113	0	8	0.023	5.853	y	8	15.227	21.557	0.112	1.796	1.771	H1-1b
15	M47 1	FP 4x0.25	0.066	5.853	15	0.016	5.853	y	14	15.227	21.557	0.112	1.796	1.795	H1-1b
16	M48 1	FP 4x0.25	0.071	0	14	0.014	5.853	y	15	15.227	21.557	0.112	1.796	2.271	H1-1b
17	M52	FP 4x0.25	0.05	0	13	0.007	5.853	y	12	15.227	21.557	0.112	1.685	1.01	H1-1b
18	M53	FP 4x0.25	0.04	0	9	0.007	5.853	y	12	15.227	21.557	0.112	1.724	1.034	H1-1b
19	M54 1	FP 4x0.25	0.035	5.853	14	0.006	5.853	y	13	15.227	21.557	0.112	1.681	1.008	H1-1b
20	M55	FP 4x0.25	0.036	5.853	14	0.007	5.853	y	13	15.227	21.557	0.112	1.669	1.001	H1-1b
21	M56	FP 4x0.25	0.036	0	10	0.008	5.853	y	13	15.227	21.557	0.112	1.674	1.004	H1-1b
22	M57	FP 4x0.25	0.034	0	10	0.007	5.853	y	13	15.227	21.557	0.112	1.682	1.009	H1-1b
23	M58 1	FP 4x0.25	0.034	5.853	11	0.007	5.853	y	8	15.227	21.557	0.112	1.684	1.009	H1-1b
24	M59 1	FP 4x0.25	0.037	5.853	11	0.007	5.853	y	8	15.227	21.557	0.112	1.672	1.002	H1-1b
25	M60 1	FP 4x0.25	0.037	0	11	0.007	5.853	y	10	15.227	21.557	0.112	1.672	1.002	H1-1b
26	M61 1	FP 4x0.25	0.034	0	11	0.005	5.853	y	10	15.227	21.557	0.112	1.684	1.009	H1-1b
27	M62	FP 4x0.25	0.041	5.853	8	0.007	5.853	y	13	15.227	21.557	0.112	1.721	1.032	H1-1b
28	M63	FP 4x0.25	0.049	5.853	8	0.008	5.853	y	13	15.227	21.557	0.112	1.683	1.009	H1-1b
29	M64	FP 4x0.25	0.049	0	12	0.007	5.853	y	13	15.227	21.557	0.112	1.685	1.01	H1-1b
30	M65 1	FP 4x0.25	0.04	0	12	0.006	5.853	y	13	15.227	21.557	0.112	1.724	1.033	H1-1b
31	M66 1	FP 4x0.25	0.04	5.853	9	0.005	5.853	y	8	15.227	21.557	0.112	1.724	1.034	H1-1b
32	M67	FP 4x0.25	0.05	5.853	13	0.007	5.853	y	8	15.227	21.557	0.112	1.685	1.01	H1-1b
33	M1	PIPE 3.5	0.371	82	13	0.04	82		14	43.314	52.395	5.292	5.292	3	H1-1b
34	M40	W16X36	0.92	207.583	14	0.367	393.083	z	12	43.19	317.365	26.946	120.141	1	H1-1b
35	M41	FP 4x0.25	0.691	15	12	0.055	15	y	12	0.87	21.557	0.112	1.278	1.339	H1-1a
36	M44	FP 4x0.25	0.122	5.853	14	0.015	5.853	y	14	15.227	21.557	0.112	1.796	1.822	H1-1b
37	M46	FP 4x0.25	0.07	0	10	0.013	5.853	y	13	15.227	21.557	0.112	1.796	2.213	H1-1b
38	M47	FP 4x0.25	0.117	0	9	0.029	5.853	y	9	15.227	21.557	0.112	1.796	1.713	H1-1b
39	M48	FP 4x0.25	0.691	15	17	0.06	15	y	15	0.87	21.557	0.112	1.277	1.338	H1-1a
40	M50	FP 4x0.25	0.037	5.853	15	0.008	5.853	y	12	15.227	21.557	0.112	1.672	1.002	H1-1b
41	M51	FP 4x0.25	0.06	5.853	14	0.013	5.853	y	13	15.227	21.557	0.112	1.796	2.153	H1-1b
42	M54	FP 4x0.25	0.074	0	14	0.024	5.853	y	14	15.227	21.557	0.112	1.796	1.907	H1-1b
43	M59	FP 4x0.25	0.114	0	10	0.018	5.853	y	12	15.227	21.557	0.112	1.796	1.811	H1-1b
44	M60	FP 4x0.25	0.067	5.853	13	0.016	5.853	y	10	15.227	21.557	0.112	1.796	1.5	H1-1b
45	M61	FP 4x0.25	0.075	5.853	12	0.022	5.853	y	18	15.227	21.557	0.112	1.796	2.153	H1-1b
46	M66	FP 4x0.25	0.068	0	11	0.021	5.853	y	13	15.227	21.557	0.112	1.796	1.566	H1-1b
47	M68	FP 4x0.25	0.12	5.853	15	0.022	5.853	y	15	15.227	21.557	0.112	1.796	1.735	H1-1b
48	M69	FP 4x0.25	0.068	5.853	14	0.021	5.853	y	13	15.227	21.557	0.112	1.796	2.188	H1-1b
49	M70	FP 4x0.25	0.059	0	14	0.015	5.853	y	14	15.227	21.557	0.112	1.796	2.148	H1-1b
50	M71	FP 4x0.25	0.05	0	8	0.007	5.853	y	15	15.227	21.557	0.112	1.683	1.009	H1-1b
51	M72	FP 4x0.25	0.112	5.853	8	0.026	5.853	y	8	15.227	21.557	0.112	1.796	1.742	H1-1b
52	M73	FP 4x0.25	0.041	0	8	0.006	5.853	y	15	15.227	21.557	0.112	1.721	1.032	H1-1b
53	M74	FP 4x0.25	0.118	0	12	0.025	5.853	y	12	15.227	21.557	0.112	1.796	1.749	H1-1b
54	M75	FP 4x0.25	0.117	5.853	9	0.029	5.853	y	9	15.227	21.557	0.112	1.796	1.713	H1-1b
55	M76	FP 4x0.25	0.04	5.853	12	0.007	5.853	y	15	15.227	21.557	0.112	1.725	1.034	H1-1b
56	M77	FP 4x0.25	0.05	0	9	0.008	5.853	y	8	15.227	21.557	0.112	1.685	1.01	H1-1b
57	M78	FP 4x0.25	0.04	0	9	0.007	5.853	y	8	15.227	21.557	0.112	1.724	1.034	H1-1b
58	M79	FP 4x0.25	0.034	5.853	10	0.006	5.853	y	15	15.227	21.557	0.112	1.683	1.009	H1-1b
59	M81	FP 4x0.25	0.037	0	14	0.008	5.853	y	15	15.227	21.557	0.112	1.67	1.001	H1-1b
60	M82	FP 4x0.25	0.035	0	14	0.007	5.853	y	15	15.227	21.557	0.112	1.682	1.009	H1-1b
61	M83	FP 4x0.25	0.04	5.853	9	0.006	5.853	y	10	15.227	21.557	0.112	1.724	1.034	H1-1b
62	M84	FP 4x0.25	0.034	5.853	15	0.007	5.853	y	12	15.227	21.557	0.112	1.684	1.01	H1-1b
63	M85	PIPE 3.5	0.372	82	15	0.04	82		14	43.314	52.395	5.292	5.292	1.021	H1-1b

Envelope AISI 14TH (360-10): ASD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
64	M86	FP 4x0.25	0.037	0	15	0.007	5.853	y	8	15.227	21.557	0.112	1.672	1.002	H1-1b
65	M87	FP 4x0.25	0.034	0	15	0.006	5.853	y	8	15.227	21.557	0.112	1.684	1.01	H1-1b
66	M88	FP 4x0.25	0.05	5.853	9	0.007	5.853	y	10	15.227	21.557	0.112	1.685	1.01	H1-1b
67	M80	FP 4x0.25	0.12	5.853	15	0.022	5.853	y	15	15.227	21.557	0.112	1.796	1.735	H1-1b
68	M97	FP 4x0.25	0.12	0	11	0.021	5.853	y	11	15.227	21.557	0.112	1.796	1.746	H1-1b
69	M98	FP 4x0.25	0.117	0	13	0.03	5.853	y	13	15.227	21.557	0.112	1.796	1.708	H1-1b
70	M95	Plate7x1	0.163	5	12	0.069	0	y	12	141.66	150.898	3.144	22.006	1.221	H1-1b
71	M96	Plate7x1	0.194	5	12	0.064	10	y	12	141.66	150.898	3.144	22.006	1.153	H1-1b
72	M105	FP 4x0.25	0.049	5.853	12	0.008	5.853	y	15	15.227	21.557	0.112	1.686	1.011	H1-1b
73	M106	FP 4x0.25	0.036	0	10	0.007	5.853	y	15	15.227	21.557	0.112	1.673	1.003	H1-1b

Envelope AISI S100-12: ASD Member Cold Formed Steel Code Checks

Member	Shape	Code	Check	Loc[in]	LC	Shear	Check	Loc[in]	Dir	LC	Pn/Om[k]	Tn/Om[k]	Mnyy/Om[k-ft]	Mnzz/Om[k-ft]	Cb	Cmyy	Cmzz	Eqn
1	M99	1.5CU1.25X035	0.104	15.75	12	0.015	15.75	y	13	0.993	2.589	0.015	0.081	2.941	0.6	0.6	C5.2.1-3	
2	M100	1.5CU1.25X035	0.104	15.75	12	0.015	15.75	y	13	0.993	2.589	0.015	0.081	2.941	0.6	0.6	C5.2.1-3	
3	M102	1.5CU1.25X035	0.107	15.75	12	0.015	15.75	y	15	0.993	2.589	0.015	0.08	1	0.6	0.6	C5.2.1-3	
4	M103	1.5CU1.25X035	0.108	15.75	12	0.015	15.75	y	15	0.993	2.589	0.015	0.081	2.941	0.6	0.6	C5.2.1-3	

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N166	max	1.069	15	7.341	5	0.96	12	2.243	8	0	19	0	19
2		min	-0.579	17	0.022	17	-0.96	14	-2.221	10	0	1	0	1
3	N14	max	0.545	19	6.748	5	0.923	16	2.04	8	0	19	0	19
4		min	-1.036	13	0.012	19	-0.923	10	-2.007	10	0	1	0	1
5	Totals:	max	1.144	15	14.089	5	1.884	8						
6		min	-1.144	17	0.293	18	-1.884	10						

ASCE 7 Hazards Report

Address:

460 Hillside Avenue
Needham Heights, Massachusetts
02494

Standard:

ASCE/SEI 7-10

Risk Category: II

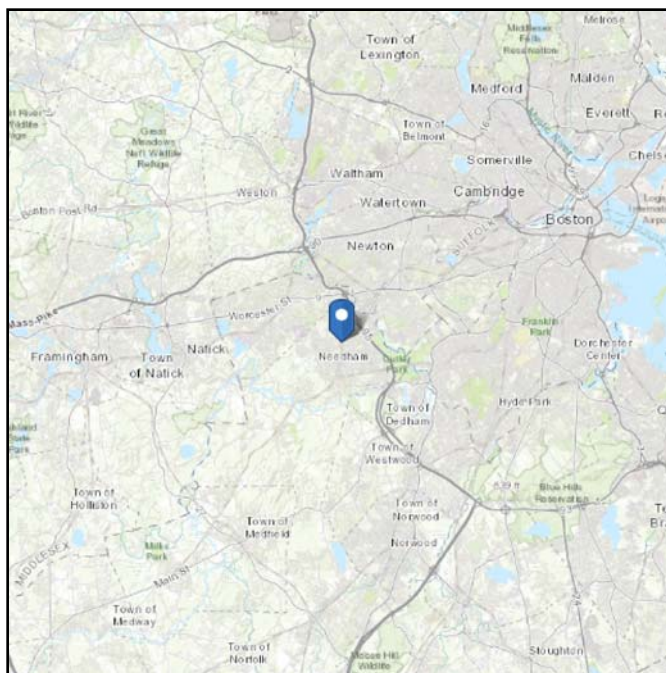
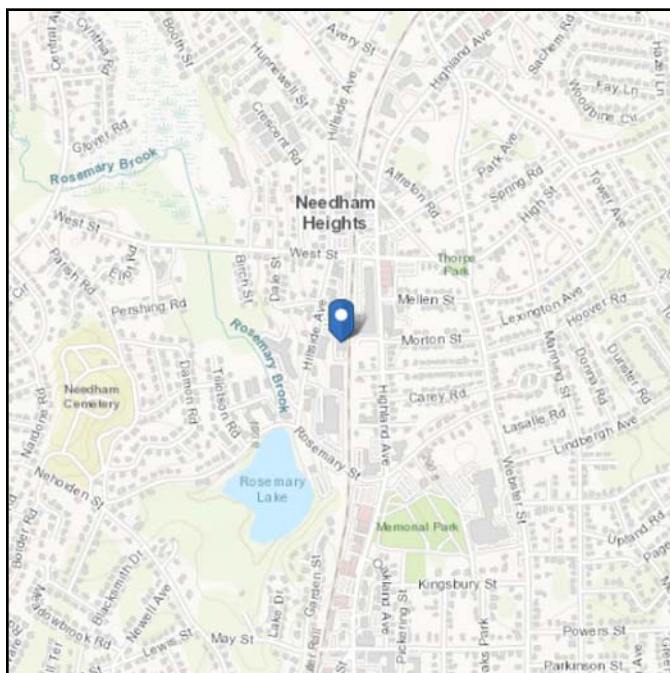
Soil Class:

D - Stiff Soil

Elevation: 171.46 ft (NAVD 88)

Latitude: 42.29088

Longitude: -71.236512



Wind

Results:

Wind Speed	128 Vmph
10-year MRI	79 Vmph
25-year MRI	88 Vmph
50-year MRI	96 Vmph
100-year MRI	104 Vmph

Date Accessed:

ASCE/SEI 7-10 Fig. 26.5-1A and Figs. CC-1–CC-4, and Section 26.5.2, incorporating errata of March 12, 2014

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

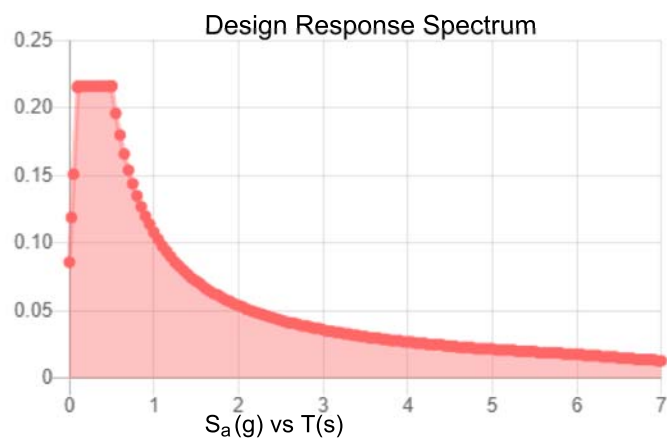
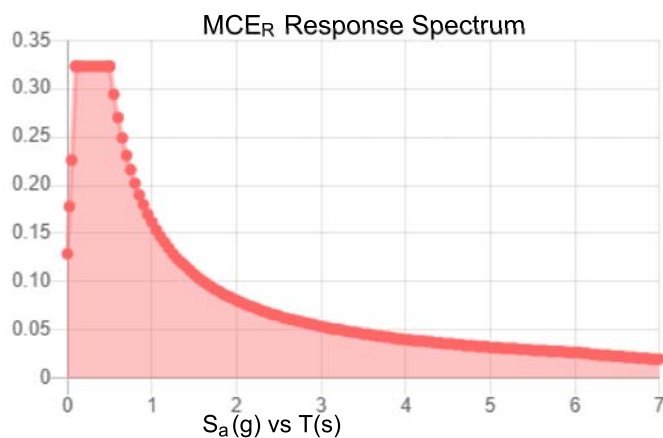
Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Site Soil Class: D - Stiff Soil

Results:

S_S :	0.202	S_{DS} :	0.216
S_1 :	0.067	S_{D1} :	0.108
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.106
S_{MS} :	0.323	PGA _M :	0.168
S_{M1} :	0.162	F_{PGA} :	1.588
		I_e :	1

Seismic Design Category B



Data Accessed: Wed Feb 09 2022

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 1.00 in.
Concurrent Temperature: 15 F
Gust Speed 50 mph

Data Source: Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed: Wed Feb 09 2022

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Snow

Results:

Ground Snow Load, p_g : 40 lb/ft²
Elevation: 171.5 ft

Data Source: ASCE/SEI 7-10, Fig. 7-1.

Date Accessed: Wed Feb 09 2022

Values provided are ground snow loads. In areas designated "case study required," extreme local variations in ground snow loads preclude mapping at this scale. Site-specific case studies are required to establish ground snow loads at elevations not covered.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

SITE LEASE AGREEMENT

This Site Lease Agreement (the “**Agreement**”) is made and effective as of the date the last Party executes this Agreement (the “**Effective Date**”), by and between Hillside Investment Group, LLC having a place of business at 460 Hillside Avenue, Needham, MA. 02494 (“**Landlord**”), and DISH Wireless L.L.C., a Colorado limited liability company having a place of business at 9601 S. Meridian Blvd., Englewood, Colorado 80112 (“**Tenant**,” and together with Landlord, the “**Parties**,” each a “**Party**”).

WITNESSETH:

1. Definitions.

“**Affiliate(s)**” means, with respect to a Party, any person or entity, directly or indirectly, controlling, controlled by, or under common control with such Party, in each case for so long as such control continues. For purposes of this definition, “control” shall mean (i) the ownership, directly or indirectly, or at least fifty percent (50%) of either: (a) the voting rights attached to issued voting shares; or (b) the power to elect fifty percent (50%) of the directors of such entity, or (ii) the ability to direct the actions of the entity. Notwithstanding the preceding, for purposes of this Agreement, EchoStar Corporation and its direct and indirect subsidiaries shall not be deemed to be “Affiliates” of Tenant unless after the Effective Date any such entity qualifies as a direct or indirect subsidiary of DISH Network Corporation.

“**Applicable Law**” means any applicable federal, state or local act, law, statute, ordinance, building code, rule, regulation or permit, or any order, judgment, consent or approval of any Governmental Authority having jurisdiction over the Parties or this Agreement.

“**Governmental Authority**” means any: (i) federal, state, county, municipal, tribal or other local government and any political subdivision thereof having jurisdiction over the Parties or this Agreement; (ii) any court or administrative tribunal exercising proper jurisdiction; or (iii) any other governmental, quasi-governmental, self-regulatory, judicial, public or statutory instrumentality, authority, body, agency, bureau or entity of competent jurisdiction.

“**Installation**” means the installation of Tenant’s Equipment at the Premises.

“**Permitted Modifications**” means adding, replacing, or modifying Tenant’s Equipment within the Premises.

“**Property**” means that certain parcel of real property upon which the Structure is located.

“**Structure**” means that certain structure of which the Premises are a part.

2. Premises, Term, Rent and Contingencies.

2.1 Premises. Landlord is the owner of the Property located at 460 Hillside Avenue, Needham, MA. as more particularly described in Exhibit A. Landlord leases to Tenant approximately 35 square feet of space for the use and operation of its facilities as such are initially described in Exhibit B, collectively referred to as the “**Premises**”. Landlord also grants to Tenant: (a) the right to use, in common with others and only if Landlord has the right to authorize the use of same, any available electrical systems and/or fiber installed at the Property to support Tenant’s Installation; and (b) any easements on, over, under, and across the Property for utilities, fiber

DISH Site Name: BOBOS01058A

Market: Boston

Confidential & Proprietary

Lease Version: 1.0

and access to the Premises in such locations as Landlord shall approve, such approval not to be unreasonably withheld. Landlord agrees that providers of utility or fiber services may use such easement(s) and/or available conduit(s) for the installation of any equipment necessary to provide utility or fiber service. If the existing utility or fiber sources located within the Premises or on the Property are insufficient for Tenant's Permitted Use, Landlord agrees to grant Tenant and/or the applicable third-party utility or fiber provider the right, at Tenant's sole cost and expense, to install such utilities or fiber on, over and/or under the Property as is necessary for Tenant's Permitted Use, subject to the approval of Landlord in its reasonable discretion. In the exercise of its rights hereunder, Tenant shall not interfere with the use and operation of any other tenant or licensee of Landlord at the Property, including without limitation other cell/frequency carriers/operators who have rooftop agreements with the Landlord.

2.2 Term. This Agreement shall be effective as of the Effective Date. The initial term of this Agreement (the "**Initial Term**") will commence on the first (1st) day of the month following the date upon which the Tenant has received all Governmental Approvals as defined below (the "**Commencement Date**"), and will expire on the last day of the month that is sixty (60) months after the Commencement Date unless terminated sooner, renewed or extended in accordance with this Agreement. The Initial Term shall automatically renew for up to four (4) additional terms of sixty (60) months each (each, a "**Renewal Term**" and together with the Initial Term, the "**Term**"). However, Tenant may, in Tenant's sole and absolute discretion, elect not to renew the lease at the end of the then-current Term by giving Landlord written Notice at least six (6) months prior to the end of the then-current Term. The Parties agree that, subject to the Contingencies, this Agreement constitutes a binding and valid obligation on each Party and that each Party has vested rights in this Agreement as of the Effective Date.

2.3 Rent. Beginning on the Commencement Date and continuing through the term of this Agreement, Tenant shall pay Landlord rent for the Premises ("**Rent**") in the amount of [REDACTED] per month, subject to adjustment as provided below. The first Rent payment shall be made within twenty (20) business days of the Commencement Date, with subsequent rent payable by the fifth (5th) day of each month. On each anniversary of the Commencement Date, the Rent shall be automatically increased by an amount equal to [REDACTED] of the then-current Rent. Payments shall be delivered to the address designated by Landlord in Section 12.11, or by electronic payment. All payments for any fractional month shall be prorated based upon the number of days during such month that the payment obligation was in force ("**Payment Terms**").

2.4 Contingencies. The Parties acknowledge and agree that Tenant's ability to lawfully use the Premises is contingent upon Tenant obtaining all certificates, permits, approvals and other authorizations that may be required by any Governmental Authority in accordance with Applicable Law (collectively, the "**Governmental Approvals**") on or before six (6) months from the date hereof ("Approval Period"). Tenant will use diligent efforts to obtain all such Governmental Approvals promptly. Landlord hereby authorizes Tenant, at Tenant's sole cost and expense, to file and submit for Governmental Approvals. Landlord shall: (a) cooperate with Tenant in Tenant's efforts to obtain such Governmental Approvals; (b) promptly execute and deliver all documents reasonably necessary to obtain and maintain the Government Approvals; and (c) not take any action that would materially adversely affect Tenant's ability to obtain and/or maintain the Governmental Approvals. If: (i) any application for Governmental Approvals is rejected, conditioned, materially delayed or otherwise not approved for any or no reason; or (ii) Tenant determines, in Tenant's sole and absolute discretion, that such Governmental Approvals cannot be obtained in a timely and commercially reasonable manner (clauses (i) and (ii) collectively, the "**Contingencies**"), then, Tenant shall have the right in its sole and absolute discretion to terminate this Agreement immediately upon Notice to Landlord given prior to the expiration of the Approval Period, without penalty or further obligation to Landlord (or Landlord's affiliates, employees, officers, agents or lenders), time being of the Essence as to any such notice. Failure by the Tenant to give such notice before the expiration of the

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Approval Period shall constitute a waiver of this contingency and the Commencement date shall be deemed to be the first day of the month following the expiration of the Approval Period. If, following the Commencement Date, and through no fault of Tenant, any Governmental Approval issued to Tenant is canceled, expires, lapses or is otherwise withdrawn or terminated by the applicable Governmental Authority, then Tenant shall have the right in its sole and absolute discretion to terminate this Agreement upon ninety (90) days' Notice to Landlord without penalty or further obligation to Landlord (or Landlord's affiliates, employees, officers, agents or lenders). If this Agreement is terminated, this Agreement shall be of no further force or effect (except as set forth to the contrary herein).

3. Use, Access and Modifications to Tenant's Equipment.

3.1 Tenant's Permitted Use. Landlord agrees that Tenant may use the Premises for the purpose of the installation, operation, maintenance and management of a telecommunications facility (including, without limitation, equipment designed to transmit and receive radio frequency signals) (collectively, "**Tenant's Equipment**"), which shall include the right to replace, repair, add, or otherwise modify any or all of Tenant's Equipment and the frequencies over which Tenant's Equipment operates ("**Tenant's Permitted Use**"). Landlord acknowledges and agrees that if radio frequency signage and/or barricades are required by Applicable Law, Tenant shall have the right to install the same on the Property in a manner acceptable to Landlord, provided that no signage which would result in a reduction of signage available to the tenants of the Property shall be permitted without the consent of the Landlord which may be withheld in its sole discretion. Landlord hereby approves the signage as reflected in Exhibit B. Shrouding, painting and shielding shall be done as needed to the extent the equipment is visible at ground level, with such work to be approved by the Landlord, such approval not to be unreasonably withheld. The location of the tray carrying the cables will be located during construction, working with the Landlord as to same. Tenant will designate a point person to coordinate work with the Landlord and all work will be done during business hours with Tenant using diligent efforts to minimize noise, fumes and other disruption to the occupants of the building.

3.2 Access. Commencing on the Effective Date and continuing throughout the Term, Tenant, its employees, agents and contractors shall have the right to access to the Premises during business days and during normal business hours, upon 24 hours' notice to Landlord and at no additional cost or expense to Tenant for purposes of investigations, inspections, measurements and the like. Further, Landlord grants to Tenant the right of ingress and egress to the Structure and the Premises in areas which are approved by Landlord and only needed for Tenant's investigations. Commencing on the Commencement Date and continuing throughout the Term, Tenant, its employees, agents and contractors shall have the right to access to the Premises 24 hours per day, 7 days per week, upon 24 hours' notice to Landlord, except in cases of emergency, and at no additional cost or expense to Tenant. Further, Landlord grants to Tenant the right of ingress and egress to the Structure and the Premises. At all times after the Effective Date, Tenant and its agents, contractors and employee shall conduct themselves, during such access, in a manner that will not interfere with the use and operation of the Property by other tenants, in particular cell/radio frequency providers who have rooftop agreements with the Landlord.

3.3 Modifications to Tenant's Equipment. After Tenant's initial Installation, Tenant may make Permitted Modifications, including those which allow Tenant to: (i) modify or add additional technologies; and (ii) modify or add equipment within the Premises; in either case, without incurring any increase in the then-current Rent, or other modification of the terms and conditions set forth in this Agreement. For any modification or addition that is not a Permitted Modification, Tenant shall seek Landlord's approval of Tenant's installation plans

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and specifications prior to commencing any such addition or modification which approval may be reasonably conditioned.

4. Utilities, Liens and Taxes.

4.1 Utilities. Tenant may use and make reasonable modifications to the Premises' electrical system to accommodate the electrical requirements of Tenant's Equipment at Tenant's sole cost and expense. Tenant fully responsible for utility meter install and monthly service charge in tenant's name. Landlord shall not require Tenant to pay any additional charge, fee or other amount for use of such electricity or the facilities associated therewith. Any such modification or work shall require Landlord's approval, such approval not to be unreasonably withheld.

4.2 Liens. Tenant will prevent any lien from attaching to the Structure or any part thereof. If any lien is filed purporting to be for labor or material furnished or to be furnished at the request of Tenant, then Tenant shall do all acts necessary to discharge such lien by payment, satisfaction or posting of bond within sixty (60) days of receipt of Notice of the same from Landlord; provided, that Tenant may contest any such lien if Tenant causes such lien to be discharged by Court Order via posting of cash or a letter of credit in the amount of said lien as security for its payment within such sixty (60) day period, and thereafter diligently contests such lien. In the event Tenant fails to deposit the aforementioned security and fails to pay any lien claim after entry of final judgment in favor of the claimant, then Landlord shall have the right to expend all sums reasonably necessary to discharge the lien claim and charge Tenant the cost thereof, including interest at [REDACTED] until paid and including all costs incurred by Landlord in connection with the same, including reasonable attorneys' fees. In lieu of the forgoing remedy, Landlord may terminate this Lease effective upon written notice to the Tenant.

4.3 Taxes. Landlord shall pay all taxes that accrue against the Structure during the Term. If any such tax or excise is levied or assessed directly against Tenant, then Tenant shall be responsible for and shall pay the taxing authority. Tenant shall be liable for all taxes against Tenant's personal property or Tenant's equipment and fixtures placed in the Premises, whether levied or assessed against Landlord or Tenant. Landlord shall reasonably cooperate with Tenant, at Tenant's expense, in any appeal or challenge to Taxes. If, as a result of any appeal or challenge by Tenant, there is a reduction, credit or repayment received by Landlord for any Taxes previously paid by Tenant, Landlord agrees to promptly reimburse to Tenant the amount of said reduction, credit or repayment. If Tenant does not have the standing rights to pursue a good faith and reasonable dispute of any Taxes under this section, Landlord will pursue such dispute at Tenant's sole cost and expense upon written request of Tenant.

5. Interference and Relocation of Tenant's Equipment.

5.1 Interference. Tenant agrees to use reasonable efforts to ensure that Tenant's Equipment does not cause Interference (as defined below) with any equipment installed at the Structure as of the Effective Date. Following the Effective Date, Landlord agrees not to install or to permit others to install any structure or equipment which would block or otherwise interfere with any transmission or reception by Tenant's Equipment ("**Interference**"). If Interference continues for a period more than forty-eight (48) hours following a Party's receipt of notification thereof, Landlord shall use reasonable efforts cause any interfering party to cease operating, and/or relocate, the source of Interference, or to reduce the power sufficiently to minimize the Interference until such Interference can be remedied.

5.2 Relocation of Tenant's Equipment. Following Tenant's receipt of a written Notice from Landlord, Tenant agrees to temporarily relocate its equipment to a mutually agreed upon location on the Property (a "**Temporary Location**") to facilitate Landlord's performance of maintenance, repair or similar work at the Property

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or in or on the Structure, provided that: (a) Landlord pays all costs incurred by Tenant for relocating Tenant's Equipment to the Temporary Location as well as back to the original location; (b) Landlord gives Tenant at least five (5) months prior written Notice (except in the case of a bona fide emergency which is reasonably likely to result in damage or injury to persons, the Structure or the Property (an "**Emergency**"), in which event Landlord will provide the greatest amount of notice possible under the circumstances; and (c) except for an Emergency Tenant shall not be required to relocate its equipment to a Temporary Location more than one (1) time within any five (5) year period. If Tenant's use of the Temporary Location requires Tenant to undergo re-zoning or re-permitting, Landlord shall not require Tenant to relocate Tenant's Equipment, absent an Emergency, until Tenant's receipt of all Governmental Approvals applicable to Tenant's use of the Temporary Location.

6. Maintenance and Repair Obligations.

6.1 Landlord Maintenance of the Structure. Landlord represents and warrants that, as of the Effective Date, the Structure, the Structure's systems and all structural elements of the Structure are in compliance with Applicable Law. Throughout the term of this Agreement, Landlord shall maintain, at its sole cost and expense, the Structure and the Property (but not Tenant's Equipment located thereon) in good operating condition. Landlord shall not have any obligation to maintain, repair or replace Tenant's Equipment except to the extent required due to the acts and/or omissions of Landlord, Landlord's agents, or contractors. Tenant may take all actions necessary, in Tenant's reasonable discretion, to secure and/or restrict access to Tenant's Equipment.

6.2 Tenant Maintenance of Tenant's Equipment. Tenant assumes sole responsibility for the maintenance, repair and/or replacement of Tenant's Equipment, except as set forth in Section 6.1. Tenant agrees to perform all maintenance, repair or replacement of Tenant's Equipment ("**Tenant Maintenance**") in accordance with Applicable Law, and in a good and workmanlike manner. Tenant shall not be permitted to conduct Tenant Maintenance in a manner that would materially increase the size of the Premises.

7. Surrender and Hold Over.

7.1 Surrender. Except as set forth to the contrary herein, within ninety (90) days following the expiration or termination of this Agreement (the "**Equipment Removal Period**"), in accordance with the terms of this Agreement, Tenant will surrender the Premises to Landlord in a condition similar to that which existed immediately prior to Tenant's Installation together with any additions, alteration and improvements to the Premises, in either case, normal wear and tear excepted. Tenant shall continue to pay monthly rent during the Equipment Removal Period. However, if Tenant's Equipment is not removed during the Equipment Removal Period, Tenant will be deemed to be in Hold Over (as defined in Section 7.2 below) until Tenant's Equipment is removed from the Premises. During normal business hours, and without interference with the use and operation of the Property by other tenants of the Property, Tenant shall have the right to access the Premises or remove any or all of Tenant's Equipment from the Premises at any time during the Term or the Equipment Removal Period.

7.2 Hold Over. If Tenant occupies the Premises beyond the Equipment Removal Period without Landlord's written consent ("**Hold Over**"), Tenant will be deemed to occupy the Premises as a tenant at sufferance, except that Tenant shall pay Landlord a use and occupancy fee equal to [REDACTED] of the then current monthly Rent applicable at the expiration or termination of the Agreement, prorated for the number of days of such hold over.

8. Default, Remedies and Termination.

8.1 Default. If any of the following events occur during the Term (each a "Default"), then the non-Defaulting Party may elect one or more of the remedies set forth below in this Section 8 or seek any other remedy

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available: (a) Tenant's failure to make any payment required by this Agreement within ten (10) days after receipt of written Notice from the Landlord of such failure to pay; (b) failure by either Party to observe or perform any other provision of this Agreement where such failure: (1) continues for a period of thirty (30) days after written Notice thereof from the non-Defaulting Party and the Defaulting Party has failed to cure or commenced the cure of such Default; and/or (2) based upon Tenant's reasonable determination, materially affects Tenant's ability to transmit or receive wireless communications signals to or from the Premises; (c) either Party files a petition in bankruptcy or insolvency or for reorganization or arrangement under the bankruptcy laws or under any insolvency act of any state, or admits the material allegations of any such petition by answer or otherwise, or is dissolved or makes an assignment for the benefit of creditors; and/or (d) involuntary proceedings under any such bankruptcy law or insolvency act or for the dissolution of either Party are instituted against either Party, or a receiver or trustee is appointed for all or substantially all of the property of either Party, and such proceeding is not dismissed, or such receivership or trusteeship vacated within sixty (60) days after such institution or appointment.

8.2 Remedies. Upon the occurrence of any uncured Default, the non-Defaulting Party may thereafter terminate this Agreement immediately upon written Notice to the other Party without prejudice to any other remedies the non-Defaulting Party may have at law or in equity. In furtherance of the foregoing and without limiting the Landlord's rights hereunder or at law or in equity, in the event of a default by Tenant hereunder, beyond any applicable cure period, the Tenant shall be responsible, immediately, for payment of all sums then due and owing hereunder to Landlord and all monthly rent due from the time of such default through the end of the then current lease term together with interest on unpaid sums in the amount of [REDACTED] per annum. Tenant shall be liable for all reasonable costs of collection incurred by Landlord, including reasonable attorney's fees and expenses.

8.3 Termination. Tenant shall have the right to terminate this Agreement without further liability upon thirty (30) days prior written Notice to Landlord due to any one or more of the following: (i) changes in Applicable Law which prohibit or adversely affect Tenant's ability to operate Tenant's Equipment at the Premises; (ii) Tenant, in its sole discretion, determines that Tenant's Permitted Use of the Premises is obsolete or unnecessary; (iii) Landlord or a third party installs any structure, equipment, or other item which blocks, hinders, limits, or prevents Tenant from being able to use the Tenant Equipment for Tenant's Permitted Use. In the event that Tenant terminates pursuant to subsection (ii) herein, Tenant shall pay to Landlord a termination fee equal to three (3) months' then-current rent. No such notice of early termination shall be effective unless and until Tenant shall have commenced occupancy and paid rent hereunder for at least thirty (30) months.

9. Limitation of Liability and Indemnification.

9.1 Limitation of Liability. EXCEPT FOR EACH PARTY'S INDEMNIFICATION OBLIGATIONS SET FORTH BELOW IN THIS SECTION 9, NEITHER PARTY NOR ANY OF ITS AGENTS, CONTRACTORS OR EMPLOYEES, SHALL BE LIABLE TO THE OTHER PARTY OR ANY PERSON CLAIMING THROUGH THAT PARTY FOR ANY EXEMPLARY, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR ANY CAUSE WHATSOEVER, INCLUDING, WITHOUT LIMITATION, CLAIMS CAUSED BY OR RESULTING FROM THE NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THAT PARTY, ITS AGENTS, CONTRACTORS OR EMPLOYEES.

9.2 Tenant's Indemnity. Except to the extent caused by the breach of this Agreement by Landlord or the acts or omissions of Landlord, its officers, agents, employees, contractors, or any other person or entity for whom Landlord is legally responsible, Tenant shall defend, indemnify and hold Landlord and its officers, directors, shareholders, employees, agents and representatives ("**Landlord's Representatives**") harmless from and against any and all claims, demands, litigation, settlements, judgments, damages, liabilities, costs and expenses (including,

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without limitation, reasonable attorneys' fees) (individually or collectively, a **"Claim"**) arising directly or indirectly out of: (i) any act or omission of Tenant, its officers, agents, employees, contractors, or any other person or entity for whom Tenant is legally responsible (**"Tenant's Representatives"**); or (ii) a breach of any representation, warranty or covenant of Tenant contained or incorporated in this Agreement. Tenant's obligations under this Section 9.2 shall survive the expiration or earlier termination of this Agreement for two (2) years.

9.3 Intentionally Deleted.

9.4 Indemnification Procedure. The Party seeking indemnification (the **"Indemnified Party"**) shall promptly send Notice to the Party from whom indemnification is being sought (the **"Indemnifying Party"**) of the claim or suit for which indemnification is sought. The Indemnified Party shall not make any admission as to liability or agree to any settlement of or compromise any claim without the prior written consent of the Indemnifying Party. The Indemnified Party shall, at the Indemnifying Party request and expense, give the Indemnifying Party all reasonable assistance in connection with those negotiations and litigation.

10. Insurance.

10.1 Landlord Obligations. Throughout the Term, Landlord shall maintain, at Landlord's sole cost and expense, the following insurance coverage Commercial General Liability of not less than [REDACTED] per occurrence and [REDACTED] aggregate. The insurance required of Landlord hereunder may be maintained by a blanket or master policy that includes properties other than the Property.

10.2 Tenant Obligations. From and after the Effective Date, Tenant shall maintain, at Tenant's sole cost and expense, the following insurance coverage: (i) workers' compensation insurance with no less than the minimum limits required by Applicable Law; (ii) employer's liability insurance with such limits as required by Applicable Law; and (iii) Commercial General Liability with a minimum limit of [REDACTED] per occurrence and [REDACTED] aggregate.

10.3 Insurance Requirements. All policies required by this Section 10 shall be issued by insurers that are (1) licensed to do business in the state in which the Property and/or Structure are located, and (2) rated A- or better by Best's Key Rating Guide.

10.4 Waiver of Subrogation. To the fullest extent permitted by law, Landlord and Tenant for themselves and any and all parties claiming under or through them, including, without limitation, their respective insurers, hereby mutually release and discharge each other and the other's Affiliates, and their respective officers, directors, shareholders, agents, employees, contractors, and/or any other person or entity for whom a Party is legally responsible from any claims for damage to any person or to the Premises or any other real or personal property that are or are claimed to have been caused by or result from risks insured against under any insurance policies carried by the waiving party and in force at the time of such damage and hereby waive any right of subrogation that might otherwise exist in or accrue to any person on account thereof. All policies required to be carried by either Party herein shall contain an endorsement in favor of the other Party waiving the insurance company's right of subrogation against such other Party. THIS RELEASE SHALL APPLY EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE FAULT OR NEGLIGENCE OF A PARTY HERETO OR BY ANY PERSON FOR WHICH SUCH PARTY IS RESPONSIBLE. EACH PARTY AGREES TO NOTIFY ITS INSURANCE CARRIER(S) OF THIS PROVISION.

11. Representations and Warranties.

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11.1 Representations and Warranties. Landlord represents, warrants and covenants that: (a) Landlord has the right and authority to execute and perform this Agreement; (b) there are no liens, judgments or other title matters materially and adversely affecting Landlord's title to the Property; (c) there are no covenants, easements or restrictions that prevent the use of the Premises for Tenant's Permitted Use; (d) the Structure and the Premises are in good repair and suitable for Tenant's Permitted Use; (e) Landlord will comply with all federal, state, and local laws in connection with any substances brought on to the Property and/or Structure that are identified as toxic or hazardous by any Applicable Law, ordinance or regulation ("**Hazardous Substance**"); and (f) Tenant's use and quiet enjoyment of the Premises shall not be disturbed. Landlord is responsible for any loss or damage, including remediation, with respect to Hazardous Substances as per Applicable Law. Tenant shall release and indemnify Landlord from and against any and all claims or damages arising out of the presence of Hazardous Substances brought onto the Property by Tenant, or the violation of any Applicable Law ordinance or regulation, by Tenant or its agents, employees, contractors or invitees. Landlord understands and agrees that notwithstanding anything contained in this Agreement to the contrary, in no event shall Tenant have any liability whatsoever with respect to any Hazardous Substance that was on, about, adjacent to, under or near the Structure prior to the Effective Date, or that was generated, possessed, used, stored, released, spilled, treated, transported, manufactured, refined, handled, produced or disposed of on, about, adjacent to, under or near the Property and/or Structure by: (1) Landlord, its agents, employees, contractors or invitees; or (2) any third party who is not an employee, agent, contractor or invitee of Tenant.

12. Miscellaneous.

12.1 Assignment. Tenant may not assign or otherwise transfer any of its rights or obligations under this Agreement to any third party without the prior written approval of the Landlord, which consent shall not be unreasonably withheld, conditioned or delayed. Notwithstanding the foregoing, Tenant may assign or transfer, upon at least sixty (60) days' notice to Landlord all of its rights and/or obligations under the Agreement to: (i) an Affiliate; (ii) a successor entity to its business, whether by merger, consolidation, reorganization, or by sale of all or substantially all of its assets or stock; (iii) any entity in which a Party or its Affiliates have any direct or indirect equity investment; and/or (iv) any other entity directly or indirectly controlling, controlled by or under common control with any of the foregoing, and in each case, such assignment, transfer or other such transaction shall not be considered an assignment under this Section 12.1 requiring consent and, provided that notice shall have been given as provided above, and provided that in each instance such assignee shall have agreed in writing to assume the obligations of the Tenant hereunder, the Landlord shall have no right to delay, alter or impede such assignment or transfer.

12.2 Rights Upon Sale of Property or Structure. Should Landlord, at any time during the Term, sell or transfer all or any part of the Property or the Structure to a purchaser other than Tenant, such transfer shall be subject to this Agreement. If Landlord completes any such transfer without executing such a written instrument, then Landlord shall not be released from its obligations to Tenant under this Agreement, and Tenant shall have the right to look to Landlord and the third party for the full performance of this Agreement.

12.3 Subordination and Non-Disturbance. This Agreement shall be subordinate to any mortgage, deed of trust, or other security agreement (each a "**Mortgage**") by Landlord which, from time to time, may encumber all or part of the Property; provided, however, the lender under every such Mortgage shall, in the event of a foreclosure of Landlord's interest, recognize the validity of this Agreement and Tenant's right to remain in occupancy of and have access to the Premises, as long as no Default by Tenant exists under this Agreement. If the Property is encumbered by a Mortgage, then Landlord shall, promptly following Tenant's request, obtain and furnish to Tenant a non-disturbance agreement, in recordable form, for each such Mortgage.

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12.4 Condemnation. If all or any portion of the Premises is condemned, taken by a Governmental Authority or otherwise appropriated by the exercise of the right of eminent domain or a deed or conveyance in lieu of eminent domain (each, a “**Taking**”), either Party hereto shall have the right to terminate this Agreement immediately upon Notice to the other Party. If either Party elects to terminate this Agreement, the Rent set forth herein shall be abated, and Tenant’s liability therefor will cease as of the date of such Taking, this Agreement shall terminate as of such date, and any prepaid rent shall be returned to Tenant. If this Agreement is not terminated as herein provided, then it shall continue in full force and effect, and Landlord shall, within a reasonable time after possession is physically taken by the condemning authority restore the remaining portion of the Premises to render it reasonably suitable for the uses permitted by this Agreement and the Rent shall be proportionately and equitably reduced. Notwithstanding the foregoing, Landlord shall not be obligated to expend an amount greater than the proceeds received from the condemning authority less all expenses reasonably incurred in connection therewith (including attorneys’ fees) for the restoration. All compensation awarded in connection with a Taking shall be the property of Landlord, provided that if allowed under Applicable Law and only if and to the extent that Landlord’s award will not be diminished or otherwise affected, Tenant may apply for and keep as its property a separate award for (i) the value of Tenant’s leasehold interest; (ii) the value of Tenant’s Equipment or other personal property of Tenant; and (ii) Tenant’s relocation expenses .

12.5 Recording. If requested by Tenant, Landlord and Tenant agree to execute a Memorandum of Lease that Tenant may record at Tenant’s sole cost and expense. The date set forth in the Memorandum of Lease is for recording purposes only, and bears no reference to commencement of the Term or rent payments of any kind.

12.6 Force Majeure. Notwithstanding anything to the contrary in this Agreement, neither Party shall be liable to the other Party for nonperformance or delay in performance of any of its obligations under this Agreement due to causes beyond its reasonable control, including, without limitation, strikes, lockouts, pandemics, labor troubles, acts of God, accidents, technical failure governmental restrictions, insurrections, riots, enemy act, war, civil commotion, fire, explosion, flood, windstorm, earthquake, natural disaster or other casualty (“**Force Majeure**”). Upon the occurrence of a Force Majeure condition, the affected Party shall immediately notify the other Party with as much detail as possible and shall promptly inform the other Party of any further developments. Immediately after the Force Majeure event is removed or abates, the affected Party shall perform such obligations with all due speed. Neither Party shall be deemed in default of this Agreement to the extent that a delay or other breach is due to or related to a Force Majeure event. A proportion of the Rent herein reserved, according to the extent that such Force Majeure event shall interfere with the full enjoyment and use of the Premises, shall be suspended and abated from the date of commencement of such Force Majeure event until the date that such Force Majeure event subsides. If such Force Majeure event prevents the affected Party from performing its obligations under this Agreement, in whole or in part, for a period of forty-five (45) or more days, then the other Party may terminate this Agreement immediately upon Notice to the affected Party. Pandemic will not be considered an excuse for nonpayment of rent hereunder.

12.7 Successors and Assigns. The respective rights and obligations provided in this Agreement shall bind and shall continue to apply for the benefit of the Parties hereto, their legal representative, heirs, successors and permitted assigns. No rights however, shall continue to apply for the benefit of any assignee, unless such assignment was made in accordance with Section 12.1 of this Agreement.

12.8 Governing Law and Construction. This Agreement shall be construed, governed and enforced in accordance with the laws of the state in which the Premises is located. The section and paragraph headings contained in this Agreement are solely for reference purposes, and shall not affect in any way the meaning or interpretation of this Agreement.

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12.9 Severability. Each provision of this Agreement shall be construed as separable and divisible from every other provision and the enforceability of any one provision shall not limit the enforceability, in whole or in part, of any other provision. If a court or administrative body of competent jurisdiction holds any provision of this Agreement to be invalid, illegal, void or less than fully enforceable as to time, scope or otherwise, such provision shall be construed by limiting and reducing it so that such provision is valid, legal and fully enforceable while preserving to the greatest extent permissible the original intent of the parties; the remaining terms and conditions of this Agreement shall not be affected by such alteration, and shall remain in full force and effect.

12.10 Waiver; Remedies. It is agreed that, except as expressly set forth in this Agreement, the rights and remedies herein provided in case of Default or breach by either Landlord or Tenant are cumulative and shall not affect in any manner any other remedies that the non-breaching Party may have by reason of such default or breach. The exercise of any right or remedy herein provided shall be without prejudice to the right to exercise any other right or remedy provided herein, at law, in equity or otherwise. In addition to, and not in limitation of, the preceding, the Parties acknowledge and agree that there will not be an adequate remedy at law for noncompliance with the provisions of Section 5, and therefore either Party shall have the right to equitable remedies, including, without limitation, injunctive relief and specific performance.

12.11 Notice. All notices or requests that are required or permitted to be given pursuant to this Agreement must be given in writing by certified US mail (postage pre-paid) with return receipt requested or by courier service (charges prepaid), or solely in the case of notice to Landlord by email, to the party to be notified, addressed to such party at the address(es) or email address(es) set forth below, or such other address(es), email address(es) or fax number(s) as such Party may have substituted by written notice (given in accordance with this Section 12.12) to the other Party ("**Notice**"). The sending of such Notice to the proper email address (in the case of email transmission) or the receipt of such Notice (in the case of delivery by first-class certified mail or by courier service) will constitute the giving thereof.

If to be given to Landlord:

Hillside Investment Group LLC
460 Hillside Avenue
Needham, MA. 02494
Attention: Kenneth Shapiro, Manager

If to be given to Tenant:

DISH Wireless LLC
Attn: Lease Administration
5701 South Santa Fe Blvd.
Littleton, Colorado 80120

12.12 Entire Agreement. This Agreement sets forth the entire, final and complete understanding between the Parties hereto regarding the subject matter of this Agreement, and it supersedes and replaces all previous understandings or agreements, written, oral, or implied, regarding the subject matter of this Agreement made or existing before the date of this Agreement. Except as expressly provided by this Agreement, no waiver or modification of any of the terms or conditions of this Agreement shall be effective unless in writing and signed

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by both Parties. Any provision of this Agreement that logically would be expected to survive termination or expiration, shall survive for a reasonable time period under the circumstances, whether or not specifically provided in this Agreement.

12.13 Compliance with Law. Each Party shall, with respect to its actions and/or inactions pursuant to and in connection with this Agreement, comply with all applicable statutes, laws, rules, ordinances, codes and governmental or quasi-governmental orders or regulations (in each case, whether federal, state, local or otherwise) and all amendments thereto, now enacted or hereafter promulgated and in force during the term of this Agreement, a Renewal Term or any extension of either of the foregoing.

12.14 Counterparts. This Agreement may be executed in any number of identical counterparts and, if so executed, shall constitute one agreement, binding on all the Parties hereto, notwithstanding that all the Parties are not signatories to the original or the same counterpart. Execution of this Agreement by facsimile or electronic signature shall be effective to create a binding agreement and, if requested, Landlord and Tenant agree to exchange original signed counterparts in their possession.

12.15 Attorneys' Fees. If an action is brought by either Party for breach of any covenant and/or to enforce or interpret any provision of this Agreement, the prevailing Party shall be entitled to recover its costs, expenses and reasonable attorneys' fees, both at trial and on appeal, in addition to all other sums allowed by law.

12.16 Incorporation of Exhibits. All exhibits referenced herein and attached hereto are hereby incorporated herein in their entirety by this reference.

[Remainder of page intentionally left blank. Signature page follows.]

IN WITNESS WHEREOF, the Parties have caused their duly authorized representatives to execute this Agreement as of the Effective Date.

LANDLORD:

HILLSIDE INVESTMENT GROUP, LLC

By:  _____
Name: Kenneth Shapiro
Its: Member
Date: 9/5/2023

TENANT:

DISH WIRELESS L.L.C.

By:  _____
Name: Satish sharma
Its: EVP
Date: 9/14/2023

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EXHIBIT ALEGAL DESCRIPTION OF PROPERTY

That Certain parcel of land situated in the Town of Needham, County of Norfolk, Commonwealth of Massachusetts, situated off the easterly side of Hillside Avenue and on the southerly side of a private way, 40 feet wide, more or less, sometimes called Easy Street, said parcel being shown as Lot A2, containing 40,910 square feet of land on a plan by J. Edward Bamber, C.E., dated February 4, 1969, recorded with the Norfolk Registry of Deeds as Plan No. 187 of 1970, as Book 4652, Page 717, and being more particularly bounded and described, according to said plan, as follows:

Northerly by Easy Street, eighty-four and 83/100 (84.83) feet;

Easterly by the right of way of the New York, New Haven and Hartford Railroad Co. (Woonsocket Branch) three hundred ninety-two and 31/100 (392.31) feet;

Southerly by Lot A1 on said plan, one hundred ten (110.00) feet; and

Westerly by land now or formerly of the William Carter Co., by tow lines comprising the westerly boundary of a ten foot easement over the within described parcel and measuring respectively two hundred fifty-three and 35/100 (253.35) feet and one hundred thirty-two and 92/100 (132.92) feet.

Together with the benefit of an easement for passage, parking and utilities in a certain way for all purposes for which ways may be used in the Town of Needham and together with the benefits of a non exclusive easement for all purposes for which ways may be used in the Town of Needham over the forty feet (40') private way shown on said plans as Easy Street, both easements being referred to in a deed recorded at Book 2544, Page 273, as they are affected by Amendment of Easement dated May 2, 1998, recorded at Book 12503, Page 201, all in accordance with the terms thereof

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EXHIBIT B

SITE PLAN

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