REQUEST FOR SPECIAL TEMPORARY AUTHORITY
NARRATIVE STATEMENT

(1) Contact Information

If there are any questions regarding this application, please contact:

Name:	Mark Bresnahan
Title:	VP Legal Affairs
Mailing Address:	11140 Aerospace Avenue, Houston TX 77034
Email Address:	mark.bresnahan@onewebtechnologies.net
Phone:	(703) 629-1806

(2) Explanation of why Experimental Authorization is Needed

OneWeb Technologies seeks special temporary authority ("STA") for 6 months beginning November 25, 2023, or as soon as possible thereafter, to test connectivity with a new electronically steered antenna ("ESA") using the operational satellites of the OneWeb non-geostationary, fixed-satellite service ("NGSO FSS") constellation.[1]

(3) Description of Operations to be Conducted and its Purpose

OneWeb Technologies seeks experimental authority to test and validate the performance characteristics of the ESA user terminals at the locations specified in Section 6 of this narrative. These over-the-air tests will be conducted using satellites in the authorized OneWeb NGSO FSS constellation for the purpose of demonstrating multiple functions of the antenna, including: (i) tracking and connectivity capabilities, (ii) handover between satellites; (iii) half-duplex operation and time synchronization; and (iv) throughput speed versus modulation. Completion of these tests will enable OneWeb Technologies to optimize the experimental ESA, thereby benefiting its customers around the world.

For all operations, OneWeb Technologies will comply with the radiofrequency radiation exposure limits in 47 CFR § 1.1310 and all recommended measures in OET Bulletin 65. All proposed operations involving these earth stations will be conducted by OneWeb Technologies on a non-interference basis in the Ku-band.

(4) Time and Dates of Proposed Operation

OneWeb Technologies requests experimental authority for a period of 6 months, beginning November 25, 2023.

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[1] The OneWeb NGSO FSS system was granted U.S. market access by the Commission in June 2017. *See WorldVu Satellites Limited, Petition for a Declaratory Ruling Granting Access to the U.S. Market for the OneWeb NGSO FSS System*, Order and Declaratory Ruling, 32 FCC Rcd 5366 (2017) ("OneWeb Market Access Grant").

(5) Classes of Station

Fixed

(6) Description of the Locations

Site 1: Bristow, VA (Washington Media Port)
Latitude: 38.7837 N
Longitude: 77.5722 W
Operating Range: 1.6 kilometers (See Appendix 1 for Site 1 Map)

Site 2: Aberdeen, MD (Aberdeen Proving Grounds)
Latitude: 39.4638 N
Longitude: 76.1122 W
Operating Range: 9.6 kilometers (See Appendix 2 for Site 2 Map)

(7) Transmit equipment to be used, including name of manufacturer, model, and number of units.

Manufacturer:	Inster
Model:	FoldSat - Electronically Steerable Antenna
Number of Units:	4 (2 at each location)

(8) Requested Frequencies

Transmit:	14.0 - 14.5 GHz
Receive:	10.7 - 12.7 GHz

(9) Maximum effective radiated power (ERP) or equivalent isotropically radiated power (EIRP).

EIRP: 36.6 dBW

(10) Emission designator (see §2.201 of this chapter) or describe emission (bandwidth, modulation, etc.).

Emission Designator:	2M10G7W, 18M0G7W
Transmit bandwidth:	2.16 – 18 MHz
Modulation:	QPSK, 8PSK, and 16QAM
Frequency Tolerance (+/-):	0.0000007 %

(11) Overall height of antenna structure above the ground (if greater than 6 meters above the ground or an existing structure, see part 17 of this Chapter concerning notification to the FAA).

The overall height of the antennas above ground (or above existing structures) will not exceed 5 meters.

(12) Supplemental Technical Data for Antenna Registration.

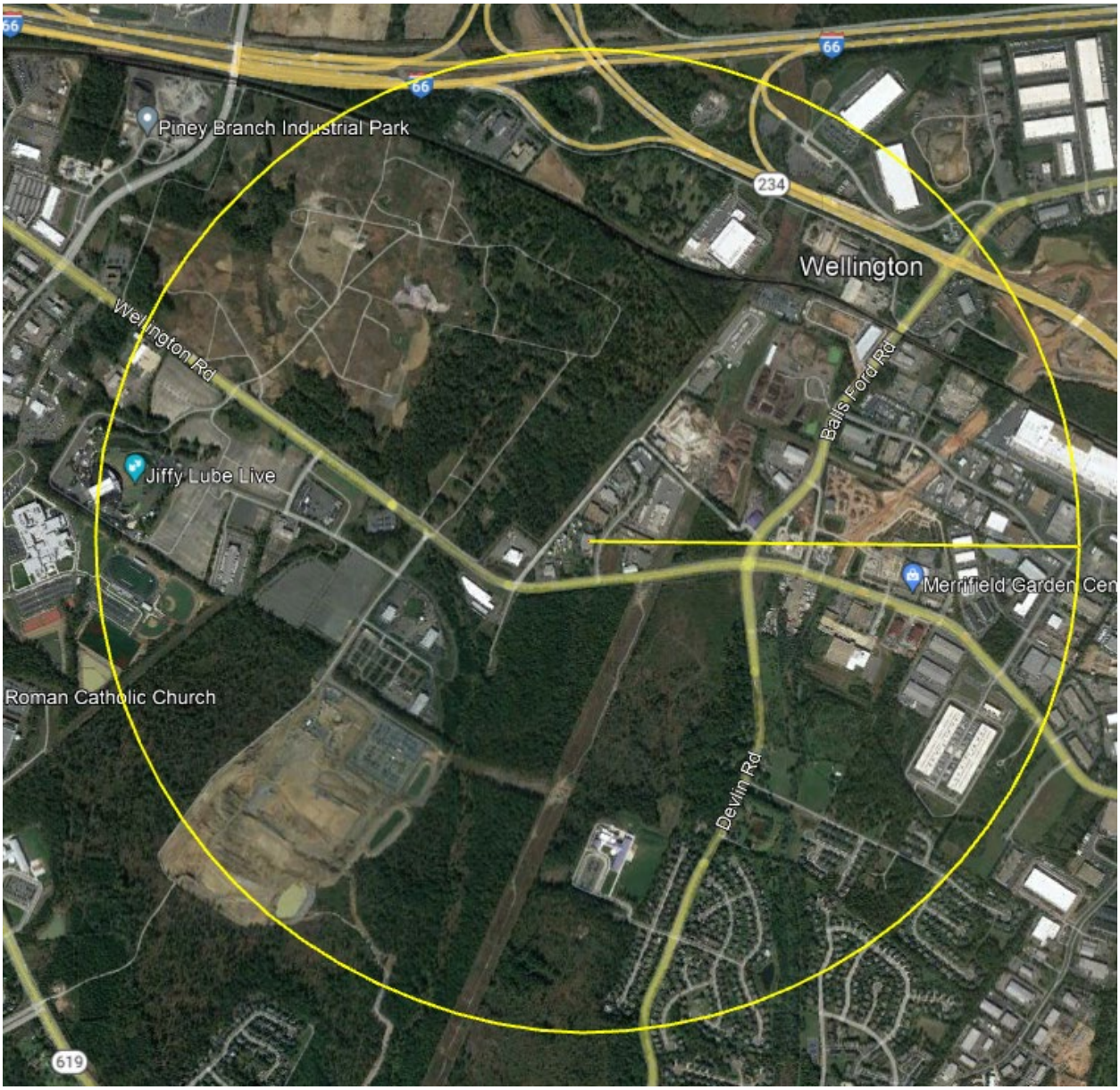
Parameters		Ku-band Antenna
Beam Width at Half Power Point	Horizontal Plane	3.0° at 14.25 GHz
	Vertical Plane	3.0° to 3.4° at 14.25 GHz
Orientation in Horizontal Plane		0° – 360°
Orientation in Vertical Plane		37° – 90°
Antenna Size	Diameter	0.43 m

(13) Point of Contact for Tests

In the event any harmful interference has been identified in relation to these tests, the point of contact who can immediately cease operations of the experimental ESA terminals is as follows.

Name: Nick Brown
Title: Principal Engineer
Phone: 571-325-7950
Email: nick.brown@sessd.com

Appendix 1: Site 1 Map – Bristow, VA 1 mile radius (1.6 km)



Appendix 2: Site 2 Map – APG, MD 6 mile radius (9.6 km)