



**COMSEARCH**<sup>®</sup>  
A CommScope Company

November 15, 2019

Re: Telesat Network Services, Inc.  
MIDDLETOWN, VA  
Call Sign: E160134  
Ka-Band Transmit-Receive Earth Station  
Job Number: 191115COMSGE06

\*\*\*\*\* Revision Notice \*\*\*\*\*

Dear Frequency Coordinator:

This notice is being provided in accordance with Section 25.203(c) of the FCC Rules and Regulations. We are forwarding the attached revised coordination data on behalf of Telesat Network Services, Inc. for modifications to their existing Ka-Band Transmit-Receive Earth Station in MIDDLETOWN, VA.

The coordination notice is being circulated to the owners (or their protection agents) of all existing or proposed terrestrial facilities operating in a shared frequency band within the coordination contours of the proposed station(s). Please update your database with the attached information.

We respectfully request that you examine this data for its interference potential with your system(s). In the event that your analysis identifies potential interference cases that were not previously reported, please contact us by December 20, 2019.

If there are any questions concerning this coordination notice, please contact Comsearch.

Sincerely,

COMSEARCH

Gary K. Edwards  
Senior Manager  
gedwards@comsearch.com

Enclosure(s)

Date: 11/15/2019  
Job Number: 191115COMSGE06

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**Administrative Information**

Status ENGINEER PROPOSAL  
Call Sign E160134  
Licensee Code TELNET  
Licensee Name Telesat Network Services, Inc.

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**Site Information****MIDDLETOWN, VA**

Venue Name  
Latitude (NAD 83) 39° 1' 1.0" N  
Longitude (NAD 83) 78° 17' 28.8" W  
Climate Zone A  
Rain Zone 2  
Ground Elevation (AMSL) 217.92 m / 715.0 ft

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**Link Information**

Satellite Type Geostationary  
Mode TR - Transmit-Receive  
Modulation Digital  
Satellite Arc 63° W to 63° West Longitude  
Azimuth Range 156.5° to 156.5°  
Corresponding Elevation Angles 42.1° / 42.1°  
Antenna Centerline (AGL) 5.0 m / 16.4 ft

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**Antenna Information****Receive - FCC32****Transmit - FCC32**

Manufacturer	General Dynamics	General Dynamics	
Model	9.2 meter	9.2 meter	
Gain / Diameter	63.2 dBi / 9.2 m	66.1 dBi / 9.2 m	
3-dB / 15-dB Beamwidth	0.12° / 0.24°	0.08° / 0.16°	
Max Available RF Power	(dBW/4 kHz) (dBW/MHz)	-21.0 3.0	
Maximum EIRP	(dBW/4 kHz) (dBW/MHz)	45.1 69.1	
Interference Objectives:	Long Term	-156.0 dBW/MHz 20%	-151.0 dBW/4 kHz 20%
	Short Term	-146.0 dBW/MHz 0.01%	-128.0 dBW/4 kHz 0.0025%

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**Frequency Information****Receive 18.0 GHz****Transmit 28.0 GHz**

Emission / Frequency Range (MHz)	500KG7D - 112MG7D / 18300.0 - 18800.0	500KG7D - 112MG7D / 27600.0 - 28600.0
	500KG7D - 112MG7D / 19700.0 - 20200.0	500KG7D - 112MG7D / 29250.0 - 30000.0

Max Great Circle Coordination Distance	140.1 km / 87.0 mi	100.0 km / 62.1 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

**Coordination Values****MIDDLETOWN, VA**

Licensee Name	Telesat Network Services, Inc.		
Latitude (NAD 83)	39° 1' 1.0" N		
Longitude (NAD 83)	78° 17' 28.8" W		
Ground Elevation (AMSL)	217.92 m / 715.0 ft		
Antenna Centerline (AGL)	5.0 m / 16.4 ft		
Antenna Model	GD 9.2 meter		
Antenna Mode	Receive 18.0 GHz		Transmit 28.0 GHz
Interference Objectives:	Long Term	-156.0 dBW/MHz	20% -151.0 dBW/4 kHz 20%
	Short Term	-146.0 dBW/MHz	0.01% -128.0 dBW/4 kHz 0.0025%
Max Available RF Power			-21.0 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.29	133.13	-10.00	129.01	-10.00	100.00
5	0.20	130.87	-10.00	136.11	-10.00	100.00
10	0.33	128.47	-10.00	126.84	-10.00	100.00
15	0.30	125.70	-10.00	129.24	-10.00	100.00
20	0.29	122.74	-10.00	129.30	-10.00	100.00
25	0.00	119.47	-10.00	136.18	-10.00	100.00
30	0.00	116.21	-10.00	136.18	-10.00	100.00
35	0.00	112.83	-10.00	136.18	-10.00	100.00
40	0.00	109.35	-10.00	136.18	-10.00	100.00
45	0.00	105.80	-10.00	136.18	-10.00	100.00
50	0.00	102.19	-10.00	136.18	-10.00	100.00
55	0.00	98.53	-10.00	136.18	-10.00	100.00
60	0.00	94.84	-10.00	136.18	-10.00	100.00
65	0.00	91.13	-10.00	136.18	-10.00	100.00
70	0.00	87.42	-10.00	136.18	-10.00	100.00
75	0.00	83.72	-10.00	136.18	-10.00	100.00
80	0.00	80.05	-10.00	136.18	-10.00	100.00
85	0.00	76.40	-10.00	136.18	-10.00	100.00
90	0.00	72.81	-10.00	136.18	-10.00	100.00
95	0.00	69.29	-10.00	136.18	-10.00	100.00
100	0.00	65.84	-10.00	136.18	-10.00	100.00
105	0.00	62.51	-10.00	136.18	-10.00	100.00
110	0.00	59.30	-10.00	136.18	-10.00	100.00
115	0.00	56.26	-10.00	136.18	-10.00	100.00
120	0.00	53.40	-10.00	136.18	-10.00	100.00
125	0.00	50.77	-10.00	136.18	-10.00	100.00
130	0.00	48.41	-10.00	136.18	-10.00	100.00
135	0.00	46.35	-9.65	137.14	-9.65	100.00
140	0.00	44.66	-9.25	138.26	-9.25	100.00
145	0.00	43.37	-8.93	139.16	-8.93	100.00
150	0.00	42.51	-8.71	139.77	-8.71	100.00
155	0.00	42.12	-8.61	140.05	-8.61	100.00
160	0.00	42.22	-8.64	139.99	-8.64	100.00
165	0.00	42.79	-8.78	139.57	-8.78	100.00
170	0.00	43.82	-9.04	138.84	-9.04	100.00
175	0.00	45.27	-9.40	137.85	-9.40	100.00
180	0.00	47.11	-9.83	136.65	-9.83	100.00
185	0.35	49.02	-10.00	125.33	-10.00	100.00

Coordination Values		MIDDLETOWN, VA			
Licensee Name		Telesat Network Services, Inc.			
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Longitude (NAD 83)		78° 17' 28.8" W			
Ground Elevation (AMSL)		217.92 m / 715.0 ft			
Antenna Centerline (AGL)		5.0 m / 16.4 ft			
Antenna Model		GD 9.2 meter			
Antenna Mode		Receive 18.0 GHz		Transmit 28.0 GHz	
Interference Objectives: Long Term		-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%
Short Term		-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%
Max Available RF Power		-21.0 (dBW/4 kHz)			

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	1.60	50.63	-10.00	100.00	-10.00	100.00
195	1.67	53.42	-10.00	100.00	-10.00	100.00
200	2.98	55.74	-10.00	100.00	-10.00	100.00
205	3.08	59.00	-10.00	100.00	-10.00	100.00
210	3.09	62.45	-10.00	100.00	-10.00	100.00
215	2.12	66.38	-10.00	100.00	-10.00	100.00
220	0.68	70.43	-10.00	106.59	-10.00	100.00
225	0.00	74.20	-10.00	136.18	-10.00	100.00
230	0.00	77.81	-10.00	136.18	-10.00	100.00
235	0.00	81.47	-10.00	136.18	-10.00	100.00
240	0.00	85.16	-10.00	136.18	-10.00	100.00
245	0.00	88.87	-10.00	136.18	-10.00	100.00
250	0.00	92.58	-10.00	136.18	-10.00	100.00
255	0.00	96.28	-10.00	136.18	-10.00	100.00
260	0.00	99.95	-10.00	136.18	-10.00	100.00
265	0.00	103.60	-10.00	136.18	-10.00	100.00
270	0.00	107.19	-10.00	136.18	-10.00	100.00
275	0.00	110.71	-10.00	136.18	-10.00	100.00
280	0.24	114.25	-10.00	133.23	-10.00	100.00
285	0.24	117.60	-10.00	133.27	-10.00	100.00
290	0.22	120.81	-10.00	134.87	-10.00	100.00
295	0.24	123.89	-10.00	132.74	-10.00	100.00
300	0.23	126.75	-10.00	134.11	-10.00	100.00
305	0.00	129.23	-10.00	136.18	-10.00	100.00
310	0.22	131.77	-10.00	134.65	-10.00	100.00
315	0.00	133.65	-10.00	136.18	-10.00	100.00
320	0.00	135.34	-10.00	136.18	-10.00	100.00
325	0.00	136.63	-10.00	136.18	-10.00	100.00
330	0.22	137.71	-10.00	134.49	-10.00	100.00
335	0.23	138.10	-10.00	134.07	-10.00	100.00
340	0.27	138.05	-10.00	130.69	-10.00	100.00
345	0.38	137.58	-10.00	123.35	-10.00	100.00
350	0.44	136.59	-10.00	118.88	-10.00	100.00
355	0.36	135.05	-10.00	124.42	-10.00	100.00