

Ka,Q/V-Band Earth Station – Commerce City, CO.

Frequency Coordination Report

Ka, Q/V-Band

Receive: 37.5 – 42.5 GHz Transmit: 27.5 – 31.0 GHz, 47.2 – 50.2, 50.4 – 52.4 GHz



Prepared on Behalf of
SPACE EXPLORATION
HOLDINGS

April 29, 2026



Table of Contents

1.	Summary of Results	- 1 -
2.	40/50 GHz Common Carrier and LTTS Coordination	- 1 -
3.	28/40/50 GHz UMFUS Coordination	- 2 -
4.	Earth Station Coordination Data	- 3 -
5.	Contact Information	- 7 -



1. Summary of Results

On behalf of SPACE EXPLORATION HOLDINGS, Comsearch performed a coordination notice under Section 25.203(c) of the FCC's rules for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka, Q/V-band earth station in Commerce City, CO which will receive at 40 GHz and transmit at 28 and 50 GHz¹. Prior-notification letters were sent to the licensees and a copy of the notification data is provided in section four of this report. The earth station coordination was finalized on April 27, 2026.

There are no unresolved objections from any of the incumbent 28/40/50 GHz licensees.

2. 28/40/50 GHz Common Carrier and LTTS Coordination

In accordance with FCC Rules and Regulations, the Ka, Q/V-band earth station in Commerce City, CO was prior-coordinated by Comsearch. A notification letter and datasheets for this earth station were sent to the following 28/40/50 GHz common carrier fixed microwave licensees. These licensees are authorized to operate temporary fixed operations from 38.6 – 40.0 GHz on a nationwide basis or local basis.

Licensee	Authorized Geographic Area
Telstar Communications	Statewide: CO

A notification letter and datasheets for the Ka, Q/V-band earth station in Commerce City, CO were also sent to the following 40 GHz LTTS licensee. This licensee is authorized to operate temporary fixed operations from 38.6 – 40.0 GHz on a market basis.

Licensee	Authorized Geographic Area
Broadcast Sports International, LLC	Nationwide
Remote Facilities Consulting Services Inc.	Nationwide
DCI II Inc	Nationwide

No objections were received from the common carrier or LTTS incumbents.

¹ The proposed earth station will receive in the 37.5 – 42.5 GHz & transmit in the 47.2-50.2 GHz / 50.4-52.4 GHz portion of the Q/V-Band. Ka-band transmissions will be in the 27.5 – 31.0 GHz band.

3. 28/40/50 GHz UMFUS Coordination

There were nine 28/40/50 GHz UMFUS licensees identified within the coordination distance of the proposed earth station. The proposed earth station will operate on frequencies that overlap portions of the UMFUS service which includes the following frequency ranges:

27.5 GHz – 31.0 GHz
37.5 GHz – 42.5 GHz
47.2 GHz – 50.2 GHz

Licensee	Authorized Geographic Area
AT&T	Market Based
Blue Ridge Wireless	Market Based
GeoLinks	Market Based
Monarch Wireless	Market Based
DISH Network	Market Based
UBET	Market Based
T-Mobile	Market Based
Columbia Capital	Market Based
Verizon	Market Based

There were no specific objections from the UMFUS incumbents within the coordination distance at the end of the coordination period.



4. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka, Q/V-band earth station in Commerce City, CO. This data was circulated to all incumbent licensees in the shared 28/40/50 GHz frequency ranges.

Date: 03/25/2026
Job Number: 260326COMSGE05

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign:
Licensee Code: SPACEX
Licensee Name: SpaceX Services, Inc

Site Information

COMMERCE CITY, CO
Venue Name: LIONS AND TIGERS BEARS
Latitude (NAD 83): 39° 53' 28.7" N
Longitude (NAD 83): 104° 51' 21.6" W
Climate Zone: A
Rain Zone: 2
Ground Elevation (AMSL): 1553.06 m / 5095.3 ft

Link Information

Satellite Type: Low Earth Orbit
Mode: TR - Transmit-Receive
Antenna Count: 40
Modulation: Digital
Minimum Elevation Angle: 10.0°
Azimuth Range: 0.0° to 360°
Antenna Centerline (AGL): 1.7 m / 5.6 ft

Antenna Information

Manufacturer: SpaceX
Model: 1.99 meter
Gain / Diameter: 50.0 dBi / 2.0 m
3-dB / 15-dB Beamwidth: 0.50° / 1.00°

Receive - FCC32

SpaceX
1.99 meter
50.0 dBi / 2.0 m
0.50° / 1.00°

Transmit - FCC32

SpaceX
1.99 meter
53.9 dBi / 2.0 m
0.30° / 0.60°

Max Available RF Power (dBW/4 kHz)
(dBW/MHz)

-40.8
-16.8

Maximum EIRP (dBW/4 kHz)
(dBW/MHz)

13.1
37.1

Aggregate EIRP (dBW/MHz)

37.1

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

-151.0 dBW/4 kHz 20%
-128.0 dBW/4 kHz 0.0025%

Frequency Information

Receive 18.0 GHz
Emission / Frequency Range (MHz)
60M0D7W - 480MD7W / 17300.0 - 17800.0
60M0D7W - 480MD7W / 17800.0 - 18600.0
60M0D7W - 480MD7W / 18600.0 - 18800.0
60M0D7W - 480MD7W / 18800.0 - 19300.0
60M0D7W - 480MD7W / 19300.0 - 19700.0
60M0D7W - 480MD7W / 19700.0 - 20200.0
60M0D7W - 480MD7W / 20200.0 - 21200.0

Transmit 28.0 GHz

60M0D7W - 480MD7W / 27500.0 - 29100.0
60M0D7W - 480MD7W / 29100.0 - 29500.0
60M0D7W - 480MD7W / 29500.0 - 30000.0
60M0D7W - 480MD7W / 30000.0 - 31000.0

Max Great Circle Coordination Distance: 225.0 km / 139.8 mi
Precipitation Scatter Contour Radius: 100.0 km / 62.1 mi

100.0 km / 62.1 mi
100.0 km / 62.1 mi



SPACE EXPLORATION HOLDINGS
Ka, Q/V-Band Earth Station – Commerce City, CO
Frequency Coordination Report
28/40/50 GHz

Coordination Values			COMMERCE CIT, CO			
Licensee Name			SpaceX Services, Inc			
Latitude (NAD 83)			39° 53' 28.7" N			
Longitude (NAD 83)			104° 51' 21.6" W			
Ground Elevation (AMSL)			1553.06 m / 5095.3 ft			
Antenna Centerline (AGL)			1.7 m / 5.6 ft			
Antenna Model			SpaceX 1.99 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			-40.8 (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	0.00	80.91	0.00	225.00	0.00	100.00
5	0.00	76.21	0.00	225.00	0.00	100.00
10	0.43	71.57	0.00	225.00	0.00	100.00
15	0.89	66.99	0.00	225.00	0.00	100.00
20	0.48	62.30	0.00	225.00	0.00	100.00
25	0.44	57.70	0.00	225.00	0.00	100.00
30	0.59	53.19	0.00	225.00	0.00	100.00
35	0.24	48.60	0.00	225.00	0.00	100.00
40	0.25	44.18	0.00	225.00	0.00	100.00
45	0.00	39.76	0.00	225.00	0.00	100.00
50	0.25	35.71	0.00	225.00	0.00	100.00
55	0.36	31.81	0.00	225.00	0.00	100.00
60	0.37	28.17	0.00	225.00	0.00	100.00
65	0.37	24.95	0.00	225.00	0.00	100.00
70	0.35	22.32	0.00	225.00	0.00	100.00
75	0.38	20.60	0.00	225.00	0.00	100.00
80	0.41	19.95	0.00	225.00	0.00	100.00
85	0.36	20.41	0.00	225.00	0.00	100.00
90	0.45	22.11	0.00	225.00	0.00	100.00
95	0.53	24.67	0.00	225.00	0.00	100.00
100	0.43	27.73	0.00	225.00	0.00	100.00
105	0.44	31.33	0.00	225.00	0.00	100.00
110	0.47	35.25	0.00	225.00	0.00	100.00
115	0.56	39.42	0.00	225.00	0.00	100.00
120	0.56	43.69	0.00	225.00	0.00	100.00
125	0.56	48.08	0.00	225.00	0.00	100.00
130	0.63	52.58	0.00	225.00	0.00	100.00
135	0.54	57.09	0.00	225.00	0.00	100.00
140	0.62	61.69	0.00	225.00	0.00	100.00
145	0.58	66.30	0.00	225.00	0.00	100.00
150	0.55	70.94	0.00	225.00	0.00	100.00
155	0.57	75.61	0.00	225.00	0.00	100.00
160	0.58	80.29	0.00	225.00	0.00	100.00
165	0.77	84.99	0.00	225.00	0.00	100.00
170	0.50	89.67	0.00	225.00	0.00	100.00
175	0.45	94.37	0.00	225.00	0.00	100.00
180	0.49	99.06	0.00	225.00	0.00	100.00
185	0.47	103.75	0.00	225.00	0.00	100.00

SPACE EXPLORATION HOLDINGS
Ka, Q/V-Band Earth Station – Commerce City, CO
Frequency Coordination Report
28/40/50 GHz

Coordination Values		COMMERCE CIT, CO				
Licensee Name		SpaceX Services, Inc				
Latitude (NAD 83)		39° 53' 28.7" N				
Longitude (NAD 83)		104° 51' 21.6" W				
Ground Elevation (AMSL)		1553.06 m / 5095.3 ft				
Antenna Centerline (AGL)		1.7 m / 5.6 ft				
Antenna Model		SpaceX 1.99 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	0.01%	-128.0 dBW/4 kHz	0.0025%	
Max Available RF Power		-40.8 (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	0.43	108.43	0.00	225.00	0.00	100.00
195	0.32	113.10	0.00	225.00	0.00	100.00
200	0.28	117.74	0.00	225.00	0.00	100.00
205	0.24	122.35	0.00	225.00	0.00	100.00
210	0.00	126.97	0.00	225.00	0.00	100.00
215	0.00	131.48	0.00	225.00	0.00	100.00
220	0.00	135.91	0.00	225.00	0.00	100.00
225	0.00	140.24	0.00	225.00	0.00	100.00
230	0.00	144.42	0.00	225.00	0.00	100.00
235	0.00	148.39	0.00	225.00	0.00	100.00
240	0.00	152.08	0.00	225.00	0.00	100.00
245	0.00	155.34	0.00	225.00	0.00	100.00
250	0.00	157.98	0.00	225.00	0.00	100.00
255	0.21	159.57	0.00	225.00	0.00	100.00
260	0.32	160.14	0.00	225.00	0.00	100.00
265	0.26	159.68	0.00	225.00	0.00	100.00
270	0.29	158.03	0.00	225.00	0.00	100.00
275	0.29	155.52	0.00	225.00	0.00	100.00
280	0.32	152.34	0.00	225.00	0.00	100.00
285	0.35	148.72	0.00	225.00	0.00	100.00
290	0.34	144.81	0.00	225.00	0.00	100.00
295	0.32	140.69	0.00	225.00	0.00	100.00
300	0.23	136.43	0.00	225.00	0.00	100.00
305	0.27	132.01	0.00	225.00	0.00	100.00
310	0.28	127.52	0.00	225.00	0.00	100.00
315	0.27	122.98	0.00	225.00	0.00	100.00
320	0.30	118.38	0.00	225.00	0.00	100.00
325	0.35	113.74	0.00	225.00	0.00	100.00
330	0.36	109.08	0.00	225.00	0.00	100.00
335	0.25	104.42	0.00	225.00	0.00	100.00
340	0.00	99.75	0.00	225.00	0.00	100.00
345	0.00	95.04	0.00	225.00	0.00	100.00
350	0.00	90.33	0.00	225.00	0.00	100.00
355	0.00	85.62	0.00	225.00	0.00	100.00

SPACE EXPLORATION HOLDINGS
Ka, Q/V-Band Earth Station – Commerce City, CO
Frequency Coordination Report
28/40/50 GHz

Date:	03/25/2026		
Job Number:	260326COMSGE05		
Administrative Information			
Status	ENGINEER PROPOSAL		
Call Sign			
Licensee Code	SPACEX		
Licensee Name	SpaceX Services, Inc		
Site Information			
Venue Name	COMMERCE CITY, CO		
Latitude (NAD 83)	LIONS AND TIGERS BEARS		
Longitude (NAD 83)	39° 53' 28.7" N		
Climate Zone	104° 51' 21.6" W		
Rain Zone	A		
Ground Elevation (AMSL)	2		
	1553.06 m / 5095.3 ft		
Link Information			
Satellite Type	Low Earth Orbit		
Mode	TR - Transmit-Receive		
Antenna Count	40		
Modulation	Digital		
Minimum Elevation Angle	10.0°		
Azimuth Range	0.0° to 360°		
Antenna Centerline (AGL)	1.7 m / 5.6 ft		
Antenna Information		Receive - FCC32	Transmit - FCC32
Manufacturer		SpaceX	SpaceX
Model		1.99 meter	1.99 meter
Gain / Diameter		55.9 dBi / 2.0 m	58.1 dBi / 2.0 m
3-dB / 15-dB Beamwidth		0.25° / 0.50°	0.20° / 0.40°
Max Available RF Power	(dBW/4 kHz) (dBW/MHz)		-47.8 -23.8
Maximum EIRP	(dBW/4 kHz) (dBW/MHz)		10.3 34.3
Aggregate EIRP	(dBW/MHz)		34.3
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%
	Short Term	-146.0 dBW/MHz	0.01%
			-151.0 dBW/4 kHz 20%
			-128.0 dBW/4 kHz 0.0025%
Frequency Information		Receive 40.0 GHz	Transmit 50.0 GHz
Emission / Frequency Range (MHz)		60M0D7W - 480MD7W / 37500.0 - 42500.0	60M0D7W - 480MD7W / 47200.0 - 50200.0 60M0D7W - 480MD7W / 50400.0 - 51400.0 60M0D7W - 480MD7W / 51400.0 - 52400.0
Max Great Circle Coordination Distance		225.0 km / 139.8 mi	100.0 km / 62.1 mi
Precipitation Scatter Contour Radius		100.0 km / 62.1 mi	100.0 km / 62.1 mi



SPACE EXPLORATION HOLDINGS
Ka, Q/V-Band Earth Station – Commerce City, CO
Frequency Coordination Report
28/40/50 GHz

Coordination Values		COMMERCE CIT, CO				
Licensee Name		SpaceX Services, Inc				
Latitude (NAD 83)		39° 53' 28.7" N				
Longitude (NAD 83)		104° 51' 21.6" W				
Ground Elevation (AMSL)		1553.06 m / 5095.3 ft				
Antenna Centerline (AGL)		1.7 m / 5.6 ft				
Antenna Model		SpaceX 1.99 meter				
Antenna Mode		Receive 40.0 GHz		Transmit 50.0 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		-47.8 (dBW/4 kHz)				
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 40.0 GHz		Transmit 50.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	80.91	0.00	225.00	0.00	100.00
5	0.00	76.21	0.00	225.00	0.00	100.00
10	0.43	71.57	0.00	225.00	0.00	100.00
15	0.89	66.99	0.00	225.00	0.00	100.00
20	0.48	62.30	0.00	225.00	0.00	100.00
25	0.44	57.70	0.00	225.00	0.00	100.00
30	0.59	53.19	0.00	225.00	0.00	100.00
35	0.24	48.60	0.00	225.00	0.00	100.00
40	0.25	44.18	0.00	225.00	0.00	100.00
45	0.00	39.76	0.00	225.00	0.00	100.00
50	0.25	35.71	0.00	225.00	0.00	100.00
55	0.36	31.81	0.00	225.00	0.00	100.00
60	0.37	28.17	0.00	225.00	0.00	100.00
65	0.37	24.95	0.00	225.00	0.00	100.00
70	0.35	22.32	0.00	225.00	0.00	100.00
75	0.38	20.60	0.00	225.00	0.00	100.00
80	0.41	19.95	0.00	225.00	0.00	100.00
85	0.36	20.41	0.00	225.00	0.00	100.00
90	0.45	22.11	0.00	225.00	0.00	100.00
95	0.53	24.67	0.00	225.00	0.00	100.00
100	0.43	27.73	0.00	225.00	0.00	100.00
105	0.44	31.33	0.00	225.00	0.00	100.00
110	0.47	35.25	0.00	225.00	0.00	100.00
115	0.56	39.42	0.00	225.00	0.00	100.00
120	0.56	43.69	0.00	225.00	0.00	100.00
125	0.56	48.08	0.00	225.00	0.00	100.00
130	0.63	52.58	0.00	225.00	0.00	100.00
135	0.54	57.09	0.00	225.00	0.00	100.00
140	0.62	61.69	0.00	225.00	0.00	100.00
145	0.58	66.30	0.00	225.00	0.00	100.00
150	0.55	70.94	0.00	225.00	0.00	100.00
155	0.57	75.61	0.00	225.00	0.00	100.00
160	0.58	80.29	0.00	225.00	0.00	100.00
165	0.77	84.99	0.00	225.00	0.00	100.00
170	0.50	89.67	0.00	225.00	0.00	100.00
175	0.45	94.37	0.00	225.00	0.00	100.00
180	0.49	99.06	0.00	225.00	0.00	100.00
185	0.47	103.75	0.00	225.00	0.00	100.00

SPACE EXPLORATION HOLDINGS
Ka, Q/V-Band Earth Station – Commerce City, CO
Frequency Coordination Report
28/40/50 GHz

Coordination Values			COMMERCE CIT, CO			
Licensee Name			SpaceX Services, Inc			
Latitude (NAD 83)			39° 53' 28.7" N			
Longitude (NAD 83)			104° 51' 21.6" W			
Ground Elevation (AMSL)			1553.06 m / 5095.3 ft			
Antenna Centerline (AGL)			1.7 m / 5.6 ft			
Antenna Model			SpaceX 1.99 meter			
Antenna Mode			Receive 40.0 GHz		Transmit 50.0 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			-47.8 (dBW/4 kHz)			
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 40.0 GHz		Transmit 50.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.43	108.43	0.00	225.00	0.00	100.00
195	0.32	113.10	0.00	225.00	0.00	100.00
200	0.28	117.74	0.00	225.00	0.00	100.00
205	0.24	122.35	0.00	225.00	0.00	100.00
210	0.00	126.97	0.00	225.00	0.00	100.00
215	0.00	131.48	0.00	225.00	0.00	100.00
220	0.00	135.91	0.00	225.00	0.00	100.00
225	0.00	140.24	0.00	225.00	0.00	100.00
230	0.00	144.42	0.00	225.00	0.00	100.00
235	0.00	148.39	0.00	225.00	0.00	100.00
240	0.00	152.08	0.00	225.00	0.00	100.00
245	0.00	155.34	0.00	225.00	0.00	100.00
250	0.00	157.98	0.00	225.00	0.00	100.00
255	0.21	159.57	0.00	225.00	0.00	100.00
260	0.32	160.14	0.00	225.00	0.00	100.00
265	0.26	159.68	0.00	225.00	0.00	100.00
270	0.29	158.03	0.00	225.00	0.00	100.00
275	0.29	155.52	0.00	225.00	0.00	100.00
280	0.32	152.34	0.00	225.00	0.00	100.00
285	0.35	148.72	0.00	225.00	0.00	100.00
290	0.34	144.81	0.00	225.00	0.00	100.00
295	0.32	140.69	0.00	225.00	0.00	100.00
300	0.23	136.43	0.00	225.00	0.00	100.00
305	0.27	132.01	0.00	225.00	0.00	100.00
310	0.28	127.52	0.00	225.00	0.00	100.00
315	0.27	122.98	0.00	225.00	0.00	100.00
320	0.30	118.38	0.00	225.00	0.00	100.00
325	0.35	113.74	0.00	225.00	0.00	100.00
330	0.36	109.08	0.00	225.00	0.00	100.00
335	0.25	104.42	0.00	225.00	0.00	100.00
340	0.00	99.75	0.00	225.00	0.00	100.00
345	0.00	95.04	0.00	225.00	0.00	100.00
350	0.00	90.33	0.00	225.00	0.00	100.00
355	0.00	85.62	0.00	225.00	0.00	100.00



5. Contact Information

For questions or information regarding the Ka, Q/V-band Frequency Coordination Report, please contact:

Contact person:	Gary Edwards
Title:	Senior Manager, Satellite Services
Company:	Comsearch
Address:	21515 Ridgetop Circle, Suite 300, Sterling, VA 20166
Telephone:	703-726-5662
Email:	GEdwards@Comsearch.com
Web site:	www.comsearch.com

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
SpaceX Services, Inc
COMMERCE CITY, CO
Satellite Earth Station

Prepared By:
COMSEARCH
21515 Ridgetop Circle, Suite 300
Sterling, VA 20166
April 28, 2026

TABLE OF CONTENTS

1. CONCLUSIONS	3
2. SUMMARY OF RESULTS	4
3. SUPPLEMENTAL SHOWING	5
4. EARTH STATION COORDINATION DATA.....	7
5. CERTIFICATION.....	14

1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in every case.

3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 03/26/2026.

Company

AMG Technology Investment Group LLC
AT&T Mobility Spectrum LLC - CO
Aerux, LLP
Aspen Skiing Co LLC
BAM Broadband Opco LLC
Board of Water Works of Pueblo Colorado
Boulder, County of
Brainstorm Internet, Inc
Brighton, City of
CBS Broadcasting Inc
Castle Rock Water Utilities
Cellco Partnership - CO/ID/MT/WY/UT
Central Wyoming College
Chevron USA Inc.
Cheyenne Board of Public Utilities
City of Boulder
City of Cheyenne
City of Colorado Springs
City of Longmont
Colorado Callcomm
Commnet Four Corners, LLC
County of Pueblo
Cripple Creek and Victor Gold Mining Co
Dish Wireless LLC
Eagle River Water & Sanitation District
El Paso County Sheriffs Office
ElektraFI NW-CO LLC
ElektraFi LLC
Glass, Laurence B
Gunnison County Electric Association Inc
High West Energy
Inventive Wireless of Nebraska, LLC
K-LOVE, Inc
Kellin Communications
LP Broadband, Inc.
Laramie County Combined Communications
Medicine Bow Technologies, Inc.
Mobile Relay Associates Inc.
Mountain West Technologies Corporation
NE Colorado Cellular, Inc.

New Cingular Wireless PCS LLC -Colorado
Occidental Petroleum Corporation
Olympic Wireless, LLC
PathFinder LLC
Pitkin County
Pueblo, City of
Qwest Corporation
Qwest Broadband Services, Inc.
ResortNet, LLC
Resound Networks
Routt County
San Isabel Telecom, Inc.
South Park Telephone
Southeast Colorado Power Association
State of Colorado
T-Mobile MW LLC
TellerWifi LLC
Union Telephone Company, Inc.
Vail Public Safety Communications
Vero Broadband, LLC
Visionary Communications, Inc.
Visionary Communications, LLC
WES Operating Holdco LLC
Weld, County of
Xbar7 Communications, LLC
Xcel Energy Services, Inc.
Zayo Network Services, LLC
Zero Error Networks, LLC

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 03/25/2026
Job Number: 260326COMSGE05

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign:
Licensee Code: SPACEX
Licensee Name: SpaceX Services, Inc

Site Information

COMMERCE CITY, CO
Venue Name: LIONS AND TIGERS BEARS
Latitude (NAD 83): 39° 53' 28.7" N
Longitude (NAD 83): 104° 51' 21.6" W
Climate Zone: A
Rain Zone: 2
Ground Elevation (AMSL): 1553.06 m / 5095.3 ft

Link Information

Satellite Type: Low Earth Orbit
Mode: TR - Transmit-Receive
Antenna Count: 40
Modulation: Digital
Minimum Elevation Angle: 10.0°
Azimuth Range: 0.0° to 360°
Antenna Centerline (AGL): 1.7 m / 5.6 ft

Antenna Information

Manufacturer:
Model:
Gain / Diameter:
3-dB / 15-dB Beamwidth:

Receive - FCC32

SpaceX
1.99 meter
50.0 dBi / 2.0 m
0.50° / 1.00°

Transmit - FCC32

SpaceX
1.99 meter
53.9 dBi / 2.0 m
0.30° / 0.60°

Max Available RF Power (dBW/4 kHz): -40.8
(dBW/MHz): -16.8

Maximum EIRP (dBW/4 kHz): 13.1
(dBW/MHz): 37.1

Aggregate EIRP (dBW/MHz): 37.1

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%

Frequency Information

Emission / Frequency Range (MHz)

Receive 18.0 GHz

60M0D7W - 480MD7W / 17300.0 - 17800.0
60M0D7W - 480MD7W / 17800.0 - 18600.0
60M0D7W - 480MD7W / 18600.0 - 18800.0
60M0D7W - 480MD7W / 18800.0 - 19300.0
60M0D7W - 480MD7W / 19300.0 - 19700.0
60M0D7W - 480MD7W / 19700.0 - 20200.0
60M0D7W - 480MD7W / 20200.0 - 21200.0

Transmit 28.0 GHz

60M0D7W - 480MD7W / 27500.0 - 29100.0
60M0D7W - 480MD7W / 29100.0 - 29500.0
60M0D7W - 480MD7W / 29500.0 - 30000.0
60M0D7W - 480MD7W / 30000.0 - 31000.0

Max Great Circle Coordination Distance: 225.0 km / 139.8 mi 100.0 km / 62.1 mi
Precipitation Scatter Contour Radius: 100.0 km / 62.1 mi 100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

COMMERCE CIT, CO

Licensee Name SpaceX Services, Inc
Latitude (NAD 83) 39° 53' 28.7" N
Longitude (NAD 83) 104° 51' 21.6" W
Ground Elevation (AMSL) 1553.06 m / 5095.3 ft
Antenna Centerline (AGL) 1.7 m / 5.6 ft
Antenna Model SpaceX 1.99 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 -40.8 (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	0.00	80.91	0.00	225.00	0.00	100.00
5	0.00	76.21	0.00	225.00	0.00	100.00
10	0.43	71.57	0.00	225.00	0.00	100.00
15	0.89	66.99	0.00	225.00	0.00	100.00
20	0.48	62.30	0.00	225.00	0.00	100.00
25	0.44	57.70	0.00	225.00	0.00	100.00
30	0.59	53.19	0.00	225.00	0.00	100.00
35	0.24	48.60	0.00	225.00	0.00	100.00
40	0.25	44.18	0.00	225.00	0.00	100.00
45	0.00	39.76	0.00	225.00	0.00	100.00
50	0.25	35.71	0.00	225.00	0.00	100.00
55	0.36	31.81	0.00	225.00	0.00	100.00
60	0.37	28.17	0.00	225.00	0.00	100.00
65	0.37	24.95	0.00	225.00	0.00	100.00
70	0.35	22.32	0.00	225.00	0.00	100.00
75	0.38	20.60	0.00	225.00	0.00	100.00
80	0.41	19.95	0.00	225.00	0.00	100.00
85	0.36	20.41	0.00	225.00	0.00	100.00
90	0.45	22.11	0.00	225.00	0.00	100.00
95	0.53	24.67	0.00	225.00	0.00	100.00
100	0.43	27.73	0.00	225.00	0.00	100.00
105	0.44	31.33	0.00	225.00	0.00	100.00
110	0.47	35.25	0.00	225.00	0.00	100.00
115	0.56	39.42	0.00	225.00	0.00	100.00
120	0.56	43.69	0.00	225.00	0.00	100.00
125	0.56	48.08	0.00	225.00	0.00	100.00
130	0.63	52.58	0.00	225.00	0.00	100.00
135	0.54	57.09	0.00	225.00	0.00	100.00
140	0.62	61.69	0.00	225.00	0.00	100.00
145	0.58	66.30	0.00	225.00	0.00	100.00
150	0.55	70.94	0.00	225.00	0.00	100.00
155	0.57	75.61	0.00	225.00	0.00	100.00
160	0.58	80.29	0.00	225.00	0.00	100.00
165	0.77	84.99	0.00	225.00	0.00	100.00
170	0.50	89.67	0.00	225.00	0.00	100.00
175	0.45	94.37	0.00	225.00	0.00	100.00
180	0.49	99.06	0.00	225.00	0.00	100.00
185	0.47	103.75	0.00	225.00	0.00	100.00

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

COMMERCE CIT, CO

Licensee Name	SpaceX Services, Inc		
Latitude (NAD 83)	39° 53' 28.7" N		
Longitude (NAD 83)	104° 51' 21.6" W		
Ground Elevation (AMSL)	1553.06 m / 5095.3 ft		
Antenna Centerline (AGL)	1.7 m / 5.6 ft		
Antenna Model	SpaceX 1.99 meter		
Antenna Mode	Receive 18.0 GHz		
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	Transmit 28.0 GHz
Short Term	-146.0 dBW/MHz	0.01%	-151.0 dBW/4 kHz
Max Available RF Power			-128.0 dBW/4 kHz
			20%
			0.0025%
			-40.8 (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	0.43	108.43	0.00	225.00	0.00	100.00
195	0.32	113.10	0.00	225.00	0.00	100.00
200	0.28	117.74	0.00	225.00	0.00	100.00
205	0.24	122.35	0.00	225.00	0.00	100.00
210	0.00	126.97	0.00	225.00	0.00	100.00
215	0.00	131.48	0.00	225.00	0.00	100.00
220	0.00	135.91	0.00	225.00	0.00	100.00
225	0.00	140.24	0.00	225.00	0.00	100.00
230	0.00	144.42	0.00	225.00	0.00	100.00
235	0.00	148.39	0.00	225.00	0.00	100.00
240	0.00	152.08	0.00	225.00	0.00	100.00
245	0.00	155.34	0.00	225.00	0.00	100.00
250	0.00	157.98	0.00	225.00	0.00	100.00
255	0.21	159.57	0.00	225.00	0.00	100.00
260	0.32	160.14	0.00	225.00	0.00	100.00
265	0.26	159.68	0.00	225.00	0.00	100.00
270	0.29	158.03	0.00	225.00	0.00	100.00
275	0.29	155.52	0.00	225.00	0.00	100.00
280	0.32	152.34	0.00	225.00	0.00	100.00
285	0.35	148.72	0.00	225.00	0.00	100.00
290	0.34	144.81	0.00	225.00	0.00	100.00
295	0.32	140.69	0.00	225.00	0.00	100.00
300	0.23	136.43	0.00	225.00	0.00	100.00
305	0.27	132.01	0.00	225.00	0.00	100.00
310	0.28	127.52	0.00	225.00	0.00	100.00
315	0.27	122.98	0.00	225.00	0.00	100.00
320	0.30	118.38	0.00	225.00	0.00	100.00
325	0.35	113.74	0.00	225.00	0.00	100.00
330	0.36	109.08	0.00	225.00	0.00	100.00
335	0.25	104.42	0.00	225.00	0.00	100.00
340	0.00	99.75	0.00	225.00	0.00	100.00
345	0.00	95.04	0.00	225.00	0.00	100.00
350	0.00	90.33	0.00	225.00	0.00	100.00
355	0.00	85.62	0.00	225.00	0.00	100.00

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 03/25/2026
Job Number: 260326COMSGE05

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign:
Licensee Code: SPACEX
Licensee Name: SpaceX Services, Inc

Site Information

COMMERCE CITY, CO
Venue Name: LIONS AND TIGERS BEARS
Latitude (NAD 83): 39° 53' 28.7" N
Longitude (NAD 83): 104° 51' 21.6" W
Climate Zone: A
Rain Zone: 2
Ground Elevation (AMSL): 1553.06 m / 5095.3 ft

Link Information

Satellite Type: Low Earth Orbit
Mode: TR - Transmit-Receive
Antenna Count: 40
Modulation: Digital
Minimum Elevation Angle: 10.0°
Azimuth Range: 0.0° to 360°
Antenna Centerline (AGL): 1.7 m / 5.6 ft

Antenna Information

	Receive - FCC32	Transmit - FCC32
Manufacturer	SpaceX	SpaceX
Model	1.99 meter	1.99 meter
Gain / Diameter	55.9 dBi / 2.0 m	58.1 dBi / 2.0 m
3-dB / 15-dB Beamwidth	0.25° / 0.50°	0.20° / 0.40°

Max Available RF Power	(dBW/4 kHz)	-47.8
	(dBW/MHz)	-23.8

Maximum EIRP	(dBW/4 kHz)	10.3
	(dBW/MHz)	34.3

Aggregate EIRP	(dBW/MHz)	34.3
----------------	-----------	------

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%

Frequency Information

	Receive 40.0 GHz	Transmit 50.0 GHz
Emission / Frequency Range (MHz)	60M0D7W - 480MD7W / 37500.0 - 42500.0	60M0D7W - 480MD7W / 47200.0 - 50200.0 60M0D7W - 480MD7W / 50400.0 - 51400.0 60M0D7W - 480MD7W / 51400.0 - 52400.0

Max Great Circle Coordination Distance	225.0 km / 139.8 mi	100.0 km / 62.1 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values		COMMERCE CIT, CO		
Licensee Name		SpaceX Services, Inc		
Latitude (NAD 83)		39° 53' 28.7" N		
Longitude (NAD 83)		104° 51' 21.6" W		
Ground Elevation (AMSL)		1553.06 m / 5095.3 ft		
Antenna Centerline (AGL)		1.7 m / 5.6 ft		
Antenna Model		SpaceX 1.99 meter		
Antenna Mode		Receive 40.0 GHz		Transmit 50.0 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		-47.8 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 40.0 GHz		Transmit 50.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	80.91	0.00	225.00	0.00	100.00
5	0.00	76.21	0.00	225.00	0.00	100.00
10	0.43	71.57	0.00	225.00	0.00	100.00
15	0.89	66.99	0.00	225.00	0.00	100.00
20	0.48	62.30	0.00	225.00	0.00	100.00
25	0.44	57.70	0.00	225.00	0.00	100.00
30	0.59	53.19	0.00	225.00	0.00	100.00
35	0.24	48.60	0.00	225.00	0.00	100.00
40	0.25	44.18	0.00	225.00	0.00	100.00
45	0.00	39.76	0.00	225.00	0.00	100.00
50	0.25	35.71	0.00	225.00	0.00	100.00
55	0.36	31.81	0.00	225.00	0.00	100.00
60	0.37	28.17	0.00	225.00	0.00	100.00
65	0.37	24.95	0.00	225.00	0.00	100.00
70	0.35	22.32	0.00	225.00	0.00	100.00
75	0.38	20.60	0.00	225.00	0.00	100.00
80	0.41	19.95	0.00	225.00	0.00	100.00
85	0.36	20.41	0.00	225.00	0.00	100.00
90	0.45	22.11	0.00	225.00	0.00	100.00
95	0.53	24.67	0.00	225.00	0.00	100.00
100	0.43	27.73	0.00	225.00	0.00	100.00
105	0.44	31.33	0.00	225.00	0.00	100.00
110	0.47	35.25	0.00	225.00	0.00	100.00
115	0.56	39.42	0.00	225.00	0.00	100.00
120	0.56	43.69	0.00	225.00	0.00	100.00
125	0.56	48.08	0.00	225.00	0.00	100.00
130	0.63	52.58	0.00	225.00	0.00	100.00
135	0.54	57.09	0.00	225.00	0.00	100.00
140	0.62	61.69	0.00	225.00	0.00	100.00
145	0.58	66.30	0.00	225.00	0.00	100.00
150	0.55	70.94	0.00	225.00	0.00	100.00
155	0.57	75.61	0.00	225.00	0.00	100.00
160	0.58	80.29	0.00	225.00	0.00	100.00
165	0.77	84.99	0.00	225.00	0.00	100.00
170	0.50	89.67	0.00	225.00	0.00	100.00
175	0.45	94.37	0.00	225.00	0.00	100.00
180	0.49	99.06	0.00	225.00	0.00	100.00
185	0.47	103.75	0.00	225.00	0.00	100.00

COMSEARCH

Earth Station Data Sheet

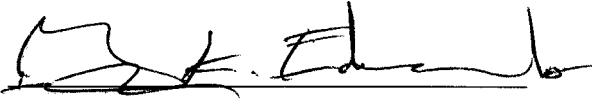
19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values		COMMERCE CIT, CO		
Licensee Name		SpaceX Services, Inc		
Latitude (NAD 83)		39° 53' 28.7" N		
Longitude (NAD 83)		104° 51' 21.6" W		
Ground Elevation (AMSL)		1553.06 m / 5095.3 ft		
Antenna Centerline (AGL)		1.7 m / 5.6 ft		
Antenna Model		SpaceX 1.99 meter		
Antenna Mode		Receive 40.0 GHz		Transmit 50.0 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		-47.8 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 40.0 GHz		Transmit 50.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.43	108.43	0.00	225.00	0.00	100.00
195	0.32	113.10	0.00	225.00	0.00	100.00
200	0.28	117.74	0.00	225.00	0.00	100.00
205	0.24	122.35	0.00	225.00	0.00	100.00
210	0.00	126.97	0.00	225.00	0.00	100.00
215	0.00	131.48	0.00	225.00	0.00	100.00
220	0.00	135.91	0.00	225.00	0.00	100.00
225	0.00	140.24	0.00	225.00	0.00	100.00
230	0.00	144.42	0.00	225.00	0.00	100.00
235	0.00	148.39	0.00	225.00	0.00	100.00
240	0.00	152.08	0.00	225.00	0.00	100.00
245	0.00	155.34	0.00	225.00	0.00	100.00
250	0.00	157.98	0.00	225.00	0.00	100.00
255	0.21	159.57	0.00	225.00	0.00	100.00
260	0.32	160.14	0.00	225.00	0.00	100.00
265	0.26	159.68	0.00	225.00	0.00	100.00
270	0.29	158.03	0.00	225.00	0.00	100.00
275	0.29	155.52	0.00	225.00	0.00	100.00
280	0.32	152.34	0.00	225.00	0.00	100.00
285	0.35	148.72	0.00	225.00	0.00	100.00
290	0.34	144.81	0.00	225.00	0.00	100.00
295	0.32	140.69	0.00	225.00	0.00	100.00
300	0.23	136.43	0.00	225.00	0.00	100.00
305	0.27	132.01	0.00	225.00	0.00	100.00
310	0.28	127.52	0.00	225.00	0.00	100.00
315	0.27	122.98	0.00	225.00	0.00	100.00
320	0.30	118.38	0.00	225.00	0.00	100.00
325	0.35	113.74	0.00	225.00	0.00	100.00
330	0.36	109.08	0.00	225.00	0.00	100.00
335	0.25	104.42	0.00	225.00	0.00	100.00
340	0.00	99.75	0.00	225.00	0.00	100.00
345	0.00	95.04	0.00	225.00	0.00	100.00
350	0.00	90.33	0.00	225.00	0.00	100.00
355	0.00	85.62	0.00	225.00	0.00	100.00

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: 

Gary K. Edwards
Senior Manager
COMSEARCH
21515 Ridgetop Circle, Suite 300
Sterling, VA 20166

DATED: April 28, 2026



E-band Frequency Coordination Report

**The “Lions and Tigers and Bears...” Gateway
(Commerce City, CO)**

March 23, 2026



Summary

SpaceX performed a coordination notice under Section 25.203(c), Section 25.251, and Appendix 7 of the ITU's Radio Regulations. Prior-notification letters with earth station details were sent to potentially affected terrestrial licensees; a copy of these details are available in this report. The earth station coordination was finalized on April 07, 2026. No objections were received from any terrestrial licensees.

Methodology

SpaceX has completed an interference analysis based on accepted international and Commission methodologies demonstrating that this satellite earth station will not cause harmful interference to existing terrestrial facilities in the band. Specifically, for each known receiver within the great circle coordination distance surrounding the proposed earth station, SpaceX calculated the expected interference/noise ratio (I/N) to the receiver, assuming the SpaceX antenna properties listed on the following page, SpaceX site layout and design, free-space propagation without terrain or clutter, and actual characteristics of receiver(s) obtained from the 70/80/90 GHz link-registration database. Even under these conservative assumptions, SpaceX's analysis confirms that this earth station will not cause interference exceeding 1.0 dB of degradation to the static threshold of existing 70/80 GHz links within the great circle coordination distance.¹

Operators contacted

Prior-coordination letters were sent to the following operators:

1. Aerux
2. Aerux Broadband
3. Aerux LLP
4. Aurora Organic Dairy
5. Aviat Networks
6. BAIConnect
7. BAM Broadband Opco LLC
8. BNSF Railway Co
9. BOB, LLC
10. BOB, LLC dba Business Only Broadband
11. Bel Air Internet, LLC
12. Boingo Wireless, Inc.
13. Cellco Partnership
14. Ceragon Networks, Inc.

¹ If there were any cases in which the interference threshold was exceeded in the conservative free-space analysis for any relevant receiver, SpaceX conducted an additional analysis with more realistic assumptions of terrain and clutter, under which the interference threshold was not exceeded for any relevant receiver. This further ensures that there will be no above-threshold interference to existing receivers.

15. Chevron USA Inc.
16. City of Aurora
17. Davis Wright Tremaine LLP
18. Denver, City and County Of
19. Digis LLC
20. E.I. Computer Systems Inc
21. Elevations Ethernet LLC
22. Inventive Wireless of Nebraska, LLC
23. KNS Communications Consultants
24. Live Wire Networks, Inc
25. Micronet Communications, Inc.
26. NE Colorado Cellular, Inc.
27. Netunwired LLC
28. Parker Water and Sanitation District
29. REMEC Broadband Wireless Networks LLC DBA Bridgewave Communications
30. ResortNet, LLC
31. Siklu, Inc
32. Skywire LLC
33. SpaceX
34. T-MOBILE LICENSE LLC
35. TellerWifi LLC
36. University Corp for Atmospheric Research
37. Verizon
38. Vero Broadband, LLC
39. Verso Networks Inc
40. WES Operating Holdco LLC
41. Webpass Inc
42. Webpass, Inc
43. Widmo Holdings LLC

Earth Station Data

This section presents the data that was circulated to all operators that met the criteria for notification for this earth station.

Site Information:

- Transmitting station name: The "Lions and Tigers and Bears..." Gateway
- Transmitting station coordinates: 39.8913, -104.856
- Ground Elevation (AMSL): 1554.0 m
- Antenna Count: 40
- Aggregate EIRP toward the horizon: -9 dBW/MHz

Frequency Information:

- Transmit: 81-86 GHz
- Receive: 71-76 GHz
- Max Great Circle Coordination Distance: 127 km
- Rain Scatter Coordination Distance Contour: 6 km

Link Information:

- Satellite Type: Low Earth Orbit
- Mode: TR – Transmit-Receive
- Modulation: Digital
- Minimum Elevation Angle: 15.0°
- Azimuth Range: 0.0° to 360.0°
- Antenna Centerline (AGL): 0.0 m

Antenna Information:

- Manufacturer: SpaceX
- Model/Diameter: 1.99m
- Gain: 60.9 dBi at 83.5 GHz
- Max Available RF Power: -20.8 dBW/MHz
- Horizon Gain: 0 dBi
- Maximum EIRP: 40.1 dBW/MHz (main beam)
- Permissible RF Interference Power Level²: I/N ≤ -6 dB
- Antenna Mask: ITU-R S.580

² See 47 CFR § 101.105(a)(5)(i). This I/N value would cause a maximum of 1.0 dB of degradation to the static threshold of the protected receiver.

Horizon Angle by Azimuth:

All values are in degrees

Azimuth	Horizon Angle
0.0	-0.05
5.0	-0.05
10.0	-0.05
15.0	-0.02
20.0	0.12
25.0	0.28
30.0	0.45
35.0	0.56
40.0	0.47
45.0	0.45
50.0	0.22
55.0	0.36
60.0	0.19
65.0	0.24
70.0	0.30
75.0	0.32
80.0	0.37
85.0	0.41
90.0	0.44
95.0	0.44
100.0	0.49
105.0	0.54
110.0	0.55
115.0	0.57
120.0	0.60
125.0	0.61
130.0	0.69
135.0	0.67
140.0	0.64
145.0	0.64
150.0	0.61
155.0	0.57
160.0	0.48
165.0	0.73
170.0	0.52
175.0	0.48
180.0	0.51
185.0	0.47
190.0	0.59
195.0	0.56



Frequency Coordination Report
E-Band Earth Station

200.0	0.60
205.0	0.52
210.0	0.77
215.0	0.89
220.0	0.86
225.0	1.05
230.0	1.26
235.0	1.35
240.0	1.62
245.0	1.65
250.0	1.30
255.0	1.26
260.0	1.51
265.0	1.46
270.0	1.63
275.0	1.34
280.0	1.41
285.0	1.69
290.0	1.70
295.0	1.34
300.0	1.26
305.0	1.19
310.0	0.90
315.0	1.12
320.0	0.75
325.0	0.63
330.0	0.33
335.0	0.24
340.0	0.17
345.0	0.16
350.0	0.07
355.0	-0.04