Northeast Colorado Cellular d/b/a Viaero Wireless

Application for Experimental Authority
To Undertake Testing in the 3700 – 3800 MHz Band

Narrative Statement

Northeast Colorado Cellular d/b/a Viaero Wireless ("Viaero") seeks authority to undertake testing in the 3700 – 3800 MHz band to assess the propagation characteristics and real-world throughput of wireless operations in that band. Viaero seeks to commence testing on November 13, 2020 for a two-year period. Viaero is an established wireless telecommunications service provider, serving primarily rural areas of Colorado.

Antenna/Transmitter Specifications

Base Station(s):

Antenna/Transmitter: AirSpan AS1000 Base Station

Radius of operation (in km): 15

Specify location of each base station:

Site 1: FT Morgan Office, CO
Address: 1224 West Platte Avenue, Fort Morgan, CO 80701
Latitude: 40° 15' 10.22" N 103° 48' 57.16" W
AMSL (in meters): 1319.78
Distance to Nearest Aircraft Landing Area (in km): 9.12

Beam width at half-power point: 90°
Orientation in the horizontal plane: 30° / 150° / 270°
Orientation in the vertical plane: 0°
Antenna Height: 58.52 meters (antenna centerline)
Will the antenna be on an existing structure? Yes. 59.44-meter Self-supporting tower.

Site 2: Brush, CO
Address: 18700 MCR 27, Brush, CO 80723
Latitude: 40° 16' 18.93" N 103° 38' 21.81" W
AMSL (in meters): 1290.70
Distance to Nearest Aircraft Landing Area (in km): 5.07

Beam width at half-power point: 90°
Orientation in the horizontal plane: 30° / 150° / 270°
Orientation in the vertical plane: 0°
Antenna Height: 58.52 meters (antenna centerline)

Will the antenna be on an existing structure? Yes. 59.44-meter Guyed Tower

Site 3: Hillrose, CO
Address: 25728 County Road X, Hillrose, CO 80733
Latitude: 40° 20' 3.84" N 103° 28' 27.27" W
AMSL (in meters): 1285.60
Distance to Nearest Aircraft Landing Area (in km): 11.94

Beam width at half-power point: 90°
Orientation in the horizontal plane: 30° / 150° / 270°
Orientation in the vertical plane: 0°
Antenna Height, 45.72 meters (antenna centerline)
Will the antenna be on an existing structure? Yes. 45.72-meter Self Supporting Tower

Site 4: Sterling West, CO
Address: 15446 County Road 28.1, Sterling, CO 80751
Latitude: 40° 37' 31.16" N 103° 17' 16.64" W
AMSL (in meters): 1240.50
Distance to Nearest Aircraft Landing Area (in km): 2.26

Beam width at half-power point: 90°
Orientation in the horizontal plane: 30° / 150° / 270°
Orientation in the vertical plane: 0°
Antenna Height: 38.1 meters (antenna centerline)
Will the antenna be on an existing structure? Yes. 38.1-meter Self Supporting Tower

Site 5: Atwood, CO
Address: 3951 County Road 31, Merino, CO 80741
Latitude: 40° 29' 36.66" N 103° 17' 41.48" W
AMSL (in meters): 1225.83
Distance to Nearest Aircraft Landing Area (in km): 13.81 km

Beam width at half-power point: 90°
Orientation in the horizontal plane: 30° / 150° / 270°
Orientation in the vertical plane: 0°
Antenna Height: 54.86 meters (antenna centerline)
Will the antenna be on an existing structure? Yes. 54.86-meter Self Supporting Tower

<u>Remote Points (End User Devices)</u>

Antenna/Transmitter: BEC QI3BEC6900R21

How many end-user devices do you seek to test: 50

Device Specifications

Device Type	Manufacturer and Model Number	Input Power (in Watts)	Maximum ERP (in Watts – add antenna gain to input power)
Base Station	AirSpan AS1000	4.98	250 W ERP
End User Device	BEC6900R21	0.199	6.3 W EIRP

For each transmitter, please provide the following (typically, the data is the same for each transmitter)

Emission designator: 17M9D9W
Modulating signal: QAM256
Bandwidth: 20 MHz

Frequency Coordination

Viaero will undertake frequency coordination prior to any operations to ensure that its testing will not interfere with incumbent FSS earth station or incumbent FS operators.

Stop buzzer point of contact

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