

Requested Modifications

Rev. 3/26/2020

0029-EX-CM-2020

Below, we briefly describe the requested technical changes relative to the existing authorization under the callsign WJ2XJE.

1. Addition of transmit frequencies (technical parameters as listed on Form 442)
 - a. 1665-1675 MHz — LEO to GEO.
 - b. 1626.5 – 1660.5 MHz — LEO to GEO.

2. Removal of transmit frequencies

None

3. Modification of existing transmit frequencies
 - a. 9650 MHz
 - i. Change of center frequency from 9650 MHz to 9600 MHz
 - ii. Increased bandwidth from 500 MHz to 600 MHz.
 - iii. Increased power from 407.38 W / 8222.4 kW ERP to 600 W / 24.26 MW ERP.
 - b. 8025 – 8400 MHz
 - i. Reduction of power from 8.4 / 582 W ERP to 3.5 W / 242 W ERP
 - c. 8027 MHz
 - i. Increase of bandwidth from 1.0 MHz to 1.4 MHz
 - ii. Reduction of power from 1.7 W / 2.9 W ERP to 1.0 W / 1.7 W ERP

4. Addition of U.S. Earth Stations

Note that earth stations will be operated by third parties. Accordingly, technical information relating to these transmissions will be provided by the appropriate third party earth station operators in the context of their separate authorization requests.

City	Country	Lon [deg]	Lat [deg]	Antenna Type
Boardman, OR	USA	-83.197	40.100	5.0 m Antenna Type 2
Kileville, OH	USA	-119.632	45.855	5.0 m Antenna Type 2

5. Addition of Non-U.S. Earth Stations

City	Country	Antenna Type
Hartebeesthoek	South Africa	3.7 m Antenna
Awarua	New Zealand	3.7 m Antenna
Tripoli	Greece	5.0 m Antenna Type 1
Dublin	Ireland	Antenna Type 2
Vasteras	Sweden	5.0 m Antenna Type 2

Cape Town	South Africa	5.0 m Antenna Type 2
Manama	Bahrain	5.0 m Antenna Type 2
Sydney	Australia	m Antenna Type2

6. Removal of Earth Stations

None

7. Uplink Frequencies

The proposed Capella system will also receive transmissions on the following frequencies. Because the Capella system will not transmit on these frequencies, Capella is not seeking corresponding experimental authorization to engage in these transmissions. However, in each case, these transmissions will be permitted by authorizations held by third parties. These receive-only frequencies are listed here for informational purposes only.

- 2035-2037 MHz — Earth to space.
- 1518 MHz-1559 — GEO to LEO.