

Ericsson submits this application for Special Temporary Authority to conduct 5G trials with US Cellular during November 2016. We were previously granted Special Temporary Authority to conduct these trials,<sup>1</sup> but have revised the output power and so are re-filing an application. The demo will be outdoors, with the antenna mounted on the side of a US Cellular Tower.<sup>2</sup>

Antenna Information/ FAA Notice will be Required

The antenna will be mounted on a tower, below the top of the tower, but at 123 feet. Because of the frequencies we will be using, notice to the FAA will be required. Since we have determined that we must file notice with the FAA, we are not submitting information about the antenna height, ground elevation, a sketch of the tower, etc. as part of this application. We will not operate without receiving the required FAA approval. We are submitting the STA request at this time so that the FCC and FAA processes can run simultaneously and hopefully be completed by the planned timeframe for the trials, November 2016.

Output Power

The maximum EIRP will be 53dBm.

Request to Operate on Government Spectrum

Ericsson is requesting to operate on the government spectrum band only because the few prototypes we have available for trials/demos were designed in Sweden to operate on the band. Although we have submitted numerous requests for STAs to demo 5G on this band, we have no plans to request that this spectrum be repurposed for commercial use.

We have been granted authorization to operate on this spectrum numerous times for 5G trials and demos without causing any interference to government users. Because of the [REDACTED], these trials likewise will not interfere with existing users. Out of an abundance of caution for the government systems in the requested band, we are nonetheless providing a 24-hour emergency contact to turn off any transmissions should interference be detected. The contact information is: Keith Shank, 214-679-4362.

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<sup>1</sup> See File No. 1210-EX-ST-2016.

<sup>2</sup> The tower's Antenna Structure Registration Number is 1047794. The location is provided on Form 442.

**Ericsson**

**Exhibit to STA Application, File No. 1455-EX-ST-2016**

**Date Filed: October 6, 2016**

Directional Antenna Information

The base station, which has a directional antenna, will be located on the side of the US Cellular tower. The antenna will be at 123 feet high and [REDACTED].

The antenna parameters will be:

Polarization: [REDACTED]

Horizontal HPBW: [REDACTED]

Vertical HPBW: [REDACTED]

Antenna gain: [REDACTED]

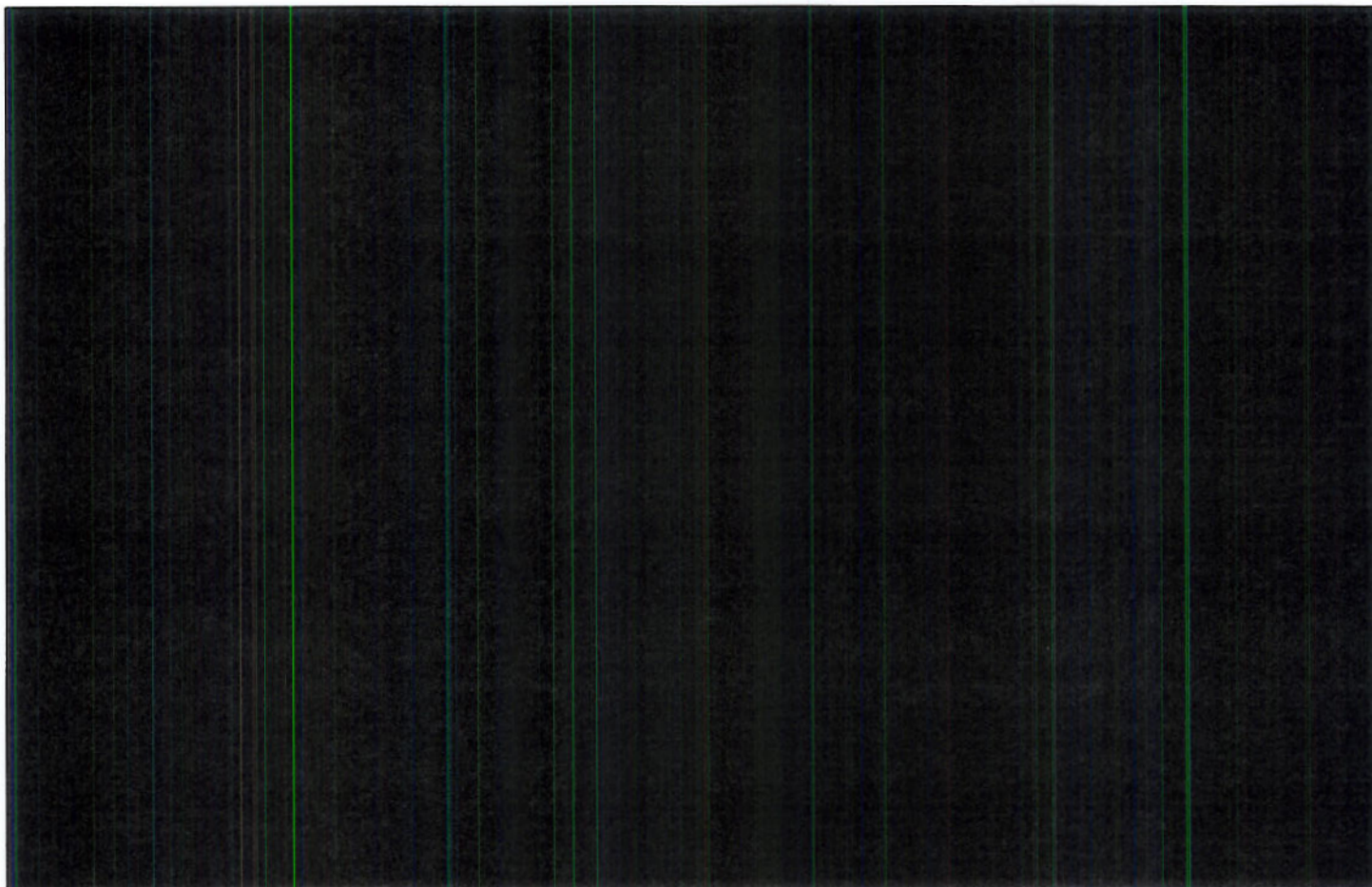
EIRP:  $\leq 53$  dBm

Electrical tilt: [REDACTED]

Mechanical tilt: [REDACTED]

**Ericsson**  
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**Diagram for the V-pol antenna elements: azimuth**



**Diagram for the V-pol antenna elements: elevation.**

