Nokia Solutions and Networks US LLC

Address: 600 Mountain Ave Murray Hill, NJ 07974

## RE: Antenna Registration: Directional Antenna Information and Description Of testing License Service Application, File 0778-EX-CN-2020

This is the exhibit for the directional antenna Fixed/Base Stations:

- Integrated Antenna; 128 elements, Dual Polarized 8x8 Arrays
- 12° Min BW, Horizontal and Vertical
- Horizontal Scanning Angle: 90° (3 dB)
  - Vertical Scanning Angle: 30° (3 dB)

Nokia proposes to operate initially using 64 and 256 QAM modulation. BPSK and 256QAM modulation may be used in later phases.

Narrative -

5G growth is extremely critical for US mobile network revolution. Band n258 plays a vital role in adding high speed access network. Nokia needs STA to test and operationalize the solutions using 26GHz spectrum.

Yours Sincerely, Glenn A. Steitz Senior Manager 5G Demonstrations and Solutions Nokia Solutions and Networks <u>Genn.steitz@nokia-bell-labs.com</u> 973-214-0028