## T Z SAWYER TECHNICAL CONSULTANTS

2130 HUTCHISON GROVE COURT, SUITE 100 FALLS CHURCH, VIRGINIA 22043 TELEPHONE (703) 848-2130 / (202) 642-2130

ENGINEERING STATEMENT IN SUPPORT OF STA REQUEST WHFL-CD, GOLDSBORO, NORTH CAROLINA POST REPACK CHANNEL 7 - MAX. DA POWER 3.0 KW FACILITY ID: 22485

WHFL-CD seeks an STA to operate with facilities utilizing a JAM JHD HV2-1/1 directional panel antenna. (JAM = JAMPRO) due to shipping damage to its specified repack channel antenna.

## **Current Construction Permit:**

The WHFL-CD repack construction permit allows for post-repack operation on Channel 7 with a non-directional (omni) operation and a maximum radiated power of 3.0 kilowatts utilizing circular polarization. The antenna has a center of radiation height above mean sea level of 155.4 meters (RCAMSL).

## Proposed STA Operation:

The proposed STA operation is for a maximum directional radiated power of 3.0 kilowatts on Channel 7 unitizing horizontal only polarization. The antenna will have an antenna center of radiation height above mean sea level of 117.3 meters (RCAMSL).

The JAM JHD HV2-1/1 is a 1-bay antenna and does not employ beam tilt. The antenna main lobe will be orientated to 40 degrees true as noted on the FCC LMS STA application form.

As the proposed STA operation is completely contained within the authorized construction permit contour no additional interference to other facilities can occur as confirmed by the FCC's TVStudy program.

## Environmental Impact:

Operation of the proposed facility will not involve the exposure of workers or the general public to levels of radio frequency electromagnetic fields exceeding guidelines adopted by the Federal Communications Commission. The calculated power density level 2-meters above ground near the base of the tower is predicted to be 0.0011 mW/cm or less. The computed power density is 0.11% of the Commission's guidelines for a worker/controlled area and 0.55% for a public/uncontrolled area. As these levels are far below the guidelines, no further study is required.

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs are posted at the site. The applicant will coordinate exposure procedures with any co-located facilities and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

Respectfully submitted,

Timothy Z. Sawyer, Consulting Engineer T Z Sawyer Technical Consultants 2130 Hutchison Grove Court, Suite 100 Falls Church, VA 22043 September 10, 2019