

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A NEW CHANNEL 212 (90.3 MHZ) CLASS A NONCOMMERCIAL EDUCATIONAL FM (NCE FM) CONSTRUCTION PERMIT APPLICATION FOR GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION (GPTC) REQUESTING TO SERVE KINGSLAND, GA AND THE SURROUNDING COMMUNITIES.

The firm Kessler and Gehman Associates was retained by Georgia Public Telecommunications Commission (GPTC) to prepare engineering studies and the engineering portion of a construction permit application for a new noncommercial education FM (NCE FM) facility which will be electronically filed in the 2021 filing window for new reserved band (channels 201-220) NCE FM radio stations.¹ The proposed NCE FM facility will distribute valuable educational broadcasting services over the air to the public within the state of Georgia and will provide service to a population that is not currently served by GPTC.

DISCUSSION

GPTC is the licensee of nine NCE digital television full-service broadcast stations² and sixteen NCE FM full-service broadcast stations³ providing an educational television and radio network service to the public in the state of Georgia. GPTC understands its responsibilities as a public radio network and realizes the importance of maximizing coverage in the state of Georgia to the highest degree for the benefit of the public and the need to provide substantive and meaningful educational programming as well as essential “state of emergency” type notifications for immediate response type conditions. Accordingly, GPTC is responsibly utilizing this rare NCE FM filing window opportunity to respectfully request FCC authorization for a new NCE FM full-service broadcast facility in the vicinity of Kingsland, Georgia to expand its public radio coverage to thousands of people in the state of Georgia that do not currently receive an NCE FM aural service from GPTC. Referring to the attached GPTC Statewide NCE FM map, it can be seen that GPTC’s sixteen licensed NCE FM full-

¹ DA 21-463

² WABW-TV, WACS-TV, WCES-TV, WGTW-TV, WJSP-TV, WMUM-TV, WNGH-TV, WVAN-TV, WXGA-TV

³ WABR-FM, WACG-FM, WGPB-FM, WJSP-FM, WJWV-FM, WMUM-FM, WNGH-FM, WNGU-FM, WPPR-FM, WSVH-FM, WUGA-FM, WUNV-FM, WUWG-FM, WWET-FM, WWIO-FM, WXVS-FM

service facilities do not fully serve the state Georgia (red 60 dBu contours) and that the proposed Channel 212 station (green 60 dBu contour) would provide NCE FM service to areas not currently served by GPTC in the state of Georgia. The addition of the proposed NCE FM Channel 212 Kingsland, GA station would fill-in areas in Georgia encompassing portions of the following three counties: 1) Camden County; 2) Charlton County; and 3) Glynn County which would provide valuable educational content to areas currently unserved by GPTC and would therefore greatly serve the public interest. The proposed facility would also serve population in Nassau County, FL.

TRANSMITTER LOCATION (REASONABLE SITE ASSURANCE)

The proposed new NCE-FM facility’s antenna shall be side-mounted on an existing 400 ft AGL support structure owned by Pinnacle Towers LLC and Crown Castle Atlantic Company LLC (individually, “Crown Castle”) with antenna structure registration number 1216182 and located approximately 16.6 km NNW (344°) of Kingsland, GA. It is proposed to side-mount a directional, circularly polarized antenna on the tower with an antenna height radiation center 321 AGL. The attached “Reasonable Site Assurance Letter” from Crown Castle demonstrates that Crown Castle is willing to lease space on its tower to GPTC for its proposed NCE FM facility. Crown Castle informed GPTC that it has sufficient space on its tower for GPTC to mount a new 4-bay FM antenna with an antenna height radiation center of 321 ft AGL. The Crown Castle contact information from the person providing reasonable assurance is depicted below.

Ignacio Martinez

Market Sales Manager – South Area
Crown Castle
Office: 847-273-2957
Cell: 917-806-9772
Email: Ignacio.Martinez@crowncastle.com

Accordingly, the proposed facility complies with the “Reasonable Site Assurance” requirement that its specified site will be available for the construction and operation of its proposed facilities requirement⁴.

⁴ See Schedule 340, Technical Certifications – Reasonable Site Assurance.

ANTENNA DATA

The antenna azimuth pattern for the proposed new NCE FM Channel 212 facility is a calculated envelope pattern. The attached NCE FM Antenna Envelope Azimuth Pattern exhibit plots the proposed azimuth pattern every ten degrees and demonstrates that the 2 dB per 10 degree requirement and the 15 dB front to back ratio requirement are satisfied pursuant to §73.316 of the FCC rules.

PRINCIPAL COMMUNITY

The attached “Technical Parameters” exhibit demonstrates compliance with §73.515 of the FCC rules such that the that the proposed principal community of Kingsland, GA will be completely encompassed by the proposed new NCE FM facility’s F(50,50) 60.0 dBuV/m contour in all azimuthal directions. Therefore, the proposed transmitter location, based on the proposed effective radiated power (ERP) and antenna height above average terrain (HAAT), will provide a minimum field strength of 1 mV/m (60 dBu) over at least 50 percent of the proposed Kingsland, GA community of license and it will also reach more than 50 percent of the population within the community as required.

FIRST NCE AURAL SERVICE

N/A – station will not provide a first NCE aural service.

SECOND NCE AURAL SERVICE

N/A – station will not provide a second NCE aural service or an aggregated first and second NCE aural service.

INTERFERENCE STUDIES

The attached NCE FM Interference Study was calculated using V-Soft’s FMCommander Version 7.1.43 professional FM allocation software, USGS 03 second terrain elevation database, and the most recent FCC FM and TV (for TV6) databases. The attached NCE FM Interference Study verifies that the proposed new NCE FM Channel 212 facility’s F(50,10) interfering contours will not overlap any applicable station’s F(50,50) 60.0 dBuV/m protected service contours and that the proposed new NCE FM Channel 212 facility’s F(50,50) 60.0 dBuV/m protected service contour will not be overlapped by any applicable station’s F(50,10) interfering contours.

TV CHANNEL 6 STUDIES - INTERFERENCE ACCEPTANCE

The attached TV Channel 6 spacing study was calculated using V-Soft's FMCommander Version 7.1.43 professional FM allocation software, the USGS 3 second terrain elevation database, and the most recent FCC FM and TV (for TV Channel 6 studies) databases. §73.525(a)(1) of the FCC Rules states that an affected TV Channel 6 station is a TV broadcast station operating on Channel 6 that is located within 195 km of an NCE FM station operating on Channel 212. The attached TV Channel 6 spacing study demonstrates that the licensed WABW-DT Channel *6 post-transition DTV facility is the closest TV Channel 6 station with respect to the proposed new NCE FM facility's transmitter site location. The proposed new NCE FM facility's tower site is approximately 227.0 km from the WABW-DT Channel *6 broadcast facility (see attached TV Channel 6 study); therefore, the WABW-DT Channel *6 post-transition broadcast facility is not considered an affected TV Channel 6 station since it is not within 195 km of the proposed new NCE-FM Channel 206 facility. Accordingly, the new NCE-FM station fully complies with §73.525 of the FCC rules pertaining to TV Channel 6 stations.

AREA AND POPULATION ANALYSIS

The population counts within the proposed new NCE FM facility's 60 dBu (1 mV/m) service contour were determined using U.S. Census 2010 data as specified in NCE FM New Station Filing Procedures and Requirements Public Notice (DA 21-885). The area excluding water and population gain within the proposed new NCE FM facility's 60 dBu (1 mV/m contour) is predicted to be 1,700.7 sq. km and 49,123 persons respectively. The attached Technical Parameters exhibit was calculated using V-Soft's Probe 5 professional signal propagation software as well as Worksheet #8 (Technical Parameters) which utilizes the centroid method of counting persons within each of the relevant census blocks using 2010 Census data and calculates contours based on the standard predicted contours established in §73.313(c) of the FCC Rules.

INTERMEDIATE FREQUENCY INTERFERENCE (53RD & 54TH CHANNELS)

The proposed new NCE FM facility's site will meet all separation requirements pertaining to intermediate frequency ("IF") interference. The closest IF station with respect to distance from the proposed new NCE FM facility's transmitter site ($212 + 53 = 265$ & $212 + 54 = 266$) is the licensed WLVH-FM Channel 266 Class C2 facility located approximately 133.8 km from the

proposed new NCE FM facility's transmitter site where a separation of 14.5 km is required; therefore, the distance is easily met with a margin of 119.3 km.

FM BLANKETING INTERFERENCE

Blanketing is defined as interference to the reception of other broadcast stations which is caused by the presence of an FM broadcast signal of 115 dBu (562 mV/m) or greater signal strength in the area adjacent to the antenna of the transmitting station. The 115 dBu contour is referred to as the blanketing contour and the area within this contour is referred to as the blanketing area. The proposed new NCE FM Channel 212 facility's blanketing contour extends 0.97 km from its transmitter site and it is understood that GPTC must assume full financial responsibility for remedying new complaints of blanketing interference for a period of one year to all broadcast stations within the proposed new NCE FM facility's blanketing contour.

CERTIFICATION

This engineering technical statement was prepared by William T. Godfrey, Jr., with the professional firm Kessler and Gehman Associates, Inc., Telecommunications Consulting Engineers having offices in Gainesville, Florida, and has been working with the firm in the field of television and radio broadcast consulting since 1998 and his qualifications are a matter of record with the Federal Communications Commission. Mr. Godfrey is a Graduate from the University of North Florida and a Distinguished Military Graduate from the University of Florida. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.

A handwritten signature in blue ink that reads 'William T. Godfrey, Jr.'.

WILLIAM T. GODFREY, JR., CBT
Kessler and Gehman Associates, Inc.
Consulting Engineers

November 2, 2021