Kessler and Gehman Associates
Consultants • Broadcast • Wireless

APPLICATION FOR A NEW TELEVISION AUXILIARY BROADCAST STATION

CALL SIGN: WTJX-TV
FACILITY ID: 70287
LOCATION: CHARLOTTE AMALIE, VI

Prepared For:

Virgin Islands Public
Broadcasting System
Charlotte Amalie,
St. Thomas, VI 00801

Prepared By:

Ryan Wilhour
Consulting Engineering
Kessler and Gehman Associates
507 NW 60th Street, Suite D
Gainesville, FL 32607-2055
352-332-3157 Extension 3
ryan@kesslerandgehman.com
www.kesslerandgehman.com

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1.0 BACKGROUND AND DISCUSSION

Kessler and Gehman Associates, Inc. has been retained by Virgin Islands Public Broadcasting System, licensee of full-power television broadcast station WTJX-TV to prepare a new broadcast auxiliary facility for emergency, maintenance, and test operations. It is proposed to mount a Jampro antenna having model number JA/MS-8 / 36 SHC on a tower having an antenna structure registration number of 1024797 which is located 300' from the main WTJX-TV facility located on antenna structure registration number 1244135.

2.0 ALLOCATION ANALYSIS

Appendix A demonstrates that the proposed broadcast auxiliary facility has a service contour which is 100 percent subsumed by the license WTJX-TV contour as required by 47 C.F.R Section 73.1675. The broadcast auxiliary facility shall also provide Section 73.625 48-dBµV/m F(50,90) principal community coverage to the entire Charlotte Amalie, VI incorporated boundaries. The Appendix A predicted coverage contours were generated using V-Soft Probe-5 software in accordance with § 73.625(b) methodology using F(50,90) propagation curves. The average terrain was extracted from three arc second terrain along eight equally spaced cardinal radials from 3 kilometers to 16 kilometers from the site and beginning from true north.

3.0 National Environmental Policy Act (NEPA)

3.1 General Environmental Requirements

The proposed antenna is to be side mounted to an existing tower which is registered with the FAA and FCC and will not require modification since there is no change in overall height. Since the existing structure has been

previously accepted by the FAA and the FCC, it is thus presumed that the following screening criteria has already been mitigated:

- Require high intensity white lighting.
- Is not located in an official designated wilderness area or wildlife preserve.
- Does not threaten the existence or habitat of endangered species.
- Does not affect districts, sites, buildings, structures or objects significant in American history, architecture, archaeology, engineering or culture that are listed in the National Register of Historic Places or are eligible for listing.
- Does not affect Indian religious sites.
- Is not located in a floodplain
- Does not require construction that involves significant changes in surface features (e.g., wetland fill, deforestation, or water diversion).

3.2 Radio Frequency Radiation (RFR) Compliance.

A theoretical analysis has been conducted of the human exposure to radio frequency radiation ("RFR") using the calculation methodology described in OET Bulletin 65, Edition 97-01. The RFR analysis is conducted pursuant to the following methodology:

Terrain extraction is compiled from the support structure site, if the support structure is on a rooftop with no higher elevations (e.g., elevator shaft) then flat terrain is compiled. Terrain is extracted using radial lengths of 0.25 miles in 0.001-mile increments for 360 radials. The power density is calculated for each terrain point at 6 feet above ground level using the elevation and azimuth pattern of the proposed broadcast antenna. The power density calculations are conducted using the lower edge of the proposed channel frequency. To account

for ground reflections, a coefficient of 1.6 was included in the calculation.

The resulting cylindrical polar analysis is then summarized into a coordinate plane graph using the following methodology:

Starting from the origin the maximum calculated RFR value is determined among the 360-degree radials for each 0.001 mile increment, the value is then converted into a percentage of the maximum allowable general population or uncontrolled exposure and plotted as a function of perpendicular distance from the tower.

The resulting RFR study in Appendix B demonstrates that the peak exposure is 51.2% of the most restrictive permissible exposure threshold. The WTJX-TV auxiliary facility is the only significant radiator within the transmitter site compound and would only be operating when the main antenna is offline. The proposed facility is thus categorically excluded from environmental processing.

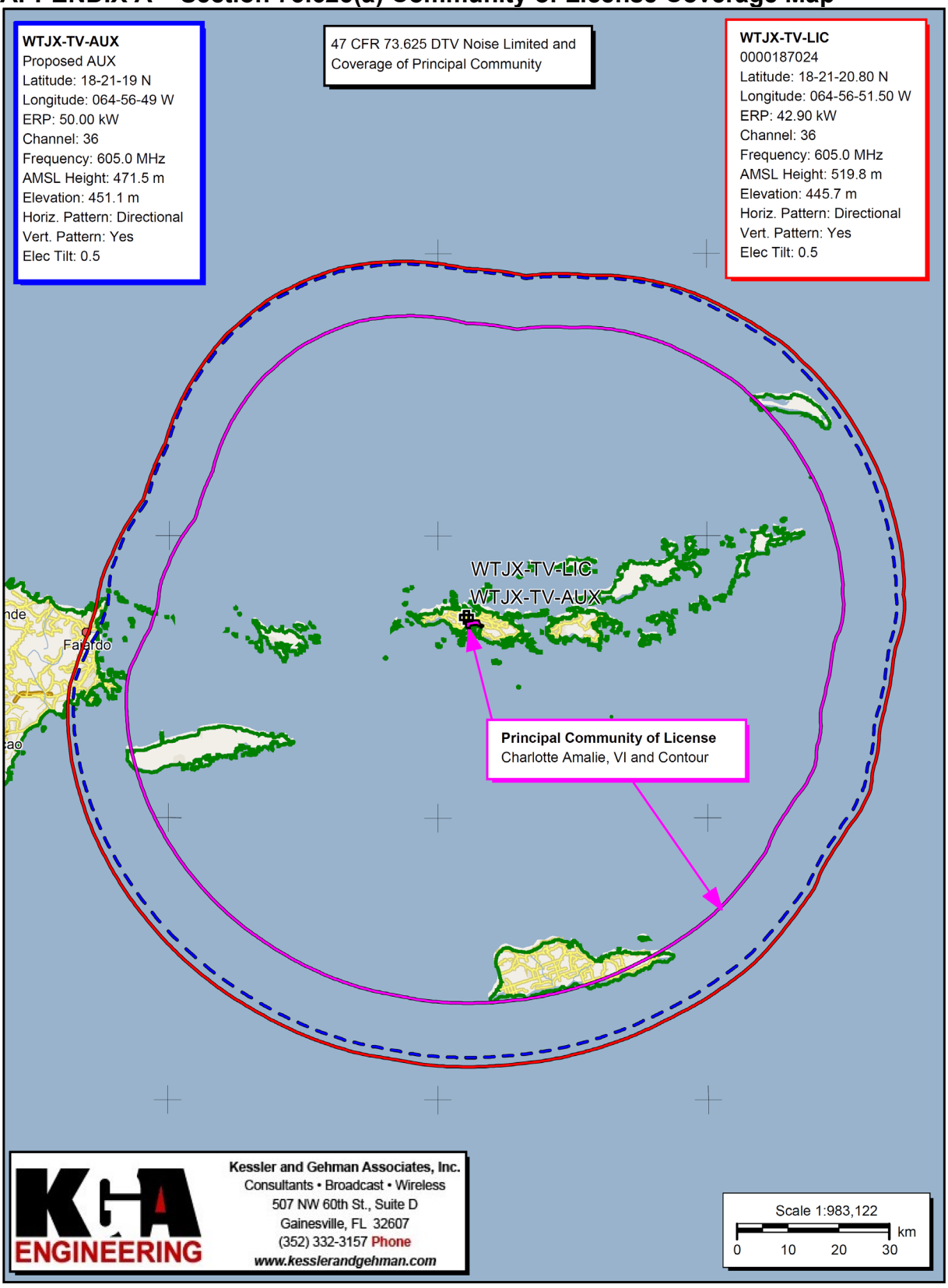
4.0 CERTIFICATION

The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge.

Ryan Wilhour

Consulting Engineer
March 24, 2022

APPENDIX A – Section 73.625(a) Community of License Coverage Map



APPENDIX B – Far Field Exposure to RF Emissions