



Kessler and Gehman Associates
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**DIGITAL LPTV
CONSTRUCTION
PERMIT
MINOR MODIFICATION
APPLICATION**

**CALL SIGN: W35DZ-D
FACILITY ID: 187450
LOCATION: Algood, TN**

Prepared For:

Lowcountry 34 Media, LLC
14 Tuxedo Drive
Beaufort, SC 29907

Prepared By:

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1.0 INTRODUCTION

Lowcountry 34 Media, LLC is the licensee of a digital translator television broadcast station having call sign W35DZ-D. W35DZ-D has a construction permit¹ to operate on channel 35 using an omni directional antenna with an ERP of 15kW through an antenna mounted 492m AMSL on Antenna Structure Registration (“ASR”) number 1019799. It is proposed to modify the construction permit to

- replace the Dielectric DLP-B omni-directional antenna with a Dielectric DLP-8M/VP directional antenna,
- change transmitter site from ASR 1019799 to 1047124,
- increase the antenna height from 492m to 648.3m AGL,
- and change the polarization from horizontal to elliptical.

W35DZ-D² originated from a construction permit having FCC File Number BNPDTL-20100609AGE on July 11, 2012 and was located at ASR number 1043477. In a series of minor modification filings, the transmitter site has migrated east as demonstrated in Appendix B. It is herein proposed to move the transmitter site to ASR 1047124 which is 7.4 km from the original construction permit and provides 100% coverage of the original protected contour and community of license. We understand that for the purpose of this application FCC staff will use the original construction permit to apply the criteria for a “minor” modification in Section 74.787(b)(1).

2.0 TRANSMITTER LOCATION AND TOWER

It is proposed to move W35DZ-D to ASR 1047124 and side mount the antenna to an existing tower. The proposed facility shall not require modification of the tower height and thus no FAA or FCC ASR filings are necessary.

¹ FCC File No.: 0000157621

² Originally W48EG-D, Facility ID 187450

3.0 ALLOCATION ANALYSIS

Appendix A are the summarized results from TVStudy V2.2.5 which illustrate that there are no interference failures to other facilities.

4.0 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

4.1 General Environmental Requirements

The existing support structure with the addition of the proposed new antenna will not modify any of the following environmental considerations that trigger an environmental assessment:

- 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).

4.2 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, pursuant to the following methodology:

Terrain³ extraction is compiled from the proposed tower site to radial lengths of 0.25 miles in 0.001 mile increments for 360 radials. In this case flat terrain was used to simulate standing on the top floor of the building. 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.

Appendix C is the resulting RFR study demonstrating that the peak exposure is 4.88%. The instant application is compliant with the FCC limits for human exposure to RF radiation and thus is excluded from further environmental processing.

³ Terrain extraction is based upon a 3 arc second point spacing terrain database.

5.0 CERTIFICATION

The foregoing statement and the report regarding the engineering work are true and correct to the best of my knowledge. Executed February 25, 2022.

Kessler and Gehman Associates, Inc.



Ryan Wilhour
Consulting Engineer

W35DZ-D – Construction Permit Minor Modification

Algood, TN

APPENDIX A – TVStudy V2.2.5 Allocation Analysis

Study created: 2022.02.25 06:58:12

Study build station data: LMS TV 2022-02-22

Proposal: W35DZ-D D35 LD CP ALGOOD, TN
File number: W35DZ at WCTE
Facility ID: 187450
Station data: User record
Record ID: 1086
Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WNPX-LD	N20-	TX	LIC	NASHVILLE, TN	BLTTL20021119ABM	130.6 km
No	W34EY-D	D34	DC	LIC	HUNTSVILLE, AL	BLANK0000069366	192.6
No	WATC-DT	D34	DT	LIC	ATLANTA, GA	BLANK0000107129	247.8
No	W34FG-D	D34	LD	LIC	BOWLING GREEN, KY	BLANK0000120154	138.8
No	WKMJ-TV	D34	DT	LIC	LOUISVILLE, KY	BLANK0000087448	247.5
Yes	WVLT-TV	D34	DT	LIC	KNOXVILLE, TN	BLANK0000081956	126.2
No	WJNK-LD	D34z	LD	LIC	NASHVILLE, TN	BLANK0000025145	130.6
No	WJNK-LD	D34z	LD	CP	NASHVILLE, TN	BLANK0000150185	130.6
No	WOTM-LD	D35	LD	CP	Birmingham, AL	BLANK0000184796	331.2
No	WOTM-LD	D35	LD	LIC	Birmingham, AL	BLANK0000184910	331.2
No	WHVD-LD	D35	LD	LIC	HUNTSVILLE, AL	BLANK0000129320	192.6
No	WEAC-CD	D35	DC	LIC	JACKSONVILLE, AL	BLANK0000112954	287.7
No	WUVG-DT	D35	LD	LIC	ATHENS, GA	BLANK0000081844	299.1
No	WDTA-LD	D35	LD	LIC	ATLANTA, GA	BLANK0000126643	284.5
No	WLTZ	D35	DT	LIC	COLUMBUS, GA	BLCDT20060627ABT	415.1
No	K49EP-D	D35	LD	CP	EVANSVILLE, IN	BLANK0000071777	256.6
No	WTWO	D35	DT	LIC	TERRE HAUTE, IN	BLANK0000086897	385.7
Yes	WCTZ-LD	D35	LD	LIC	BOWLING GREEN, KY	BLANK0000141734	130.6
Yes	WKLE	D35	DT	LIC	LEXINGTON, KY	BLANK0000087400	210.0
Yes	W35DT-D	D35	LD	LIC	BEAVER DAM, NC	BLANK0000114227	266.5
No	W35CO-D	D35-	LD	LIC	BURNSVILLE, NC	BLANK0000137595	275.1
No	W35CK-D	D35	LD	LIC	HIGHLANDS, NC	BLANK0000130265	229.8
No	WPTD	D35	DT	LIC	DAYTON, OH	BLANK0000087301	405.7
No	WMYA-TV	D35	DT	LIC	ANDERSON, SC	BLANK0000120378	326.0
Yes	WTCI	D35	DT	CP	CHATTANOOGA, TN	BLANK0000034751	107.6
Yes	WTCI	D35	DT	LIC	CHATTANOOGA, TN	BLANK0000144354	107.6
No	WBBJ-TV	D35	DT	LIC	JACKSON, TN	BLANK0000116047	307.3
No	WCYB-TV	D35	LD	CP	BRISTOL, VA	BLANK0000054449	291.4
Yes	WCYB-TV	D35	DT	CP	BRISTOL, VA	BLANK0000153389	291.4
No	WJDW-LD	D35	LD	LIC	TAZEWELL, VA	BLDTL20110525ADU	358.2
No	WAVE	D36	DT	LIC	LOUISVILLE, KY	BLANK0000089043	247.7
No	WCNT-LP	N36-	TX	LIC	CHATTANOOGA, TN	BLTTL20050908AAJ	105.0
Yes	WTVF	D36	DT	LIC	NASHVILLE, TN	BLANK0000090378	129.9
Yes	WTVF	D36	DT	LIC	NASHVILLE, TN	BLANK0000115766	129.9
No	WVLR	D36	DT	LIC	TAZEWELL, TN	BLANK0000097858	154.1

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D35
Mask: Full Service
Latitude: 36 10 26.00 N (NAD83)
Longitude: 85 20 37.00 W
Height AMSL: 648.3 m
HAAT: 228.9 m
Peak ERP: 15.0 kW
Antenna: DLP-8M/VP 350.0 deg

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Elev Pattn: Generic
Elec Tilt: 1.00

50.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	12.4 kW	293.3 m	54.3 km
45.0	14.7	231.5	51.7
90.0	7.02	138.3	42.3
135.0	0.853	101.0	28.6
180.0	0.773	193.3	34.3
225.0	3.00	285.2	46.3
270.0	11.4	278.6	53.1
315.0	13.8	310.1	55.8

Distance to Canadian border: 653.5 km

Distance to Mexican border: 1578.8 km

Conditions at FCC monitoring station: Powder Springs GA
Bearing: 167.4 degrees Distance: 263.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 290.2 degrees Distance: 1788.2 km

Study cell size: 1.00 km
Profile point spacing: 1.00 km

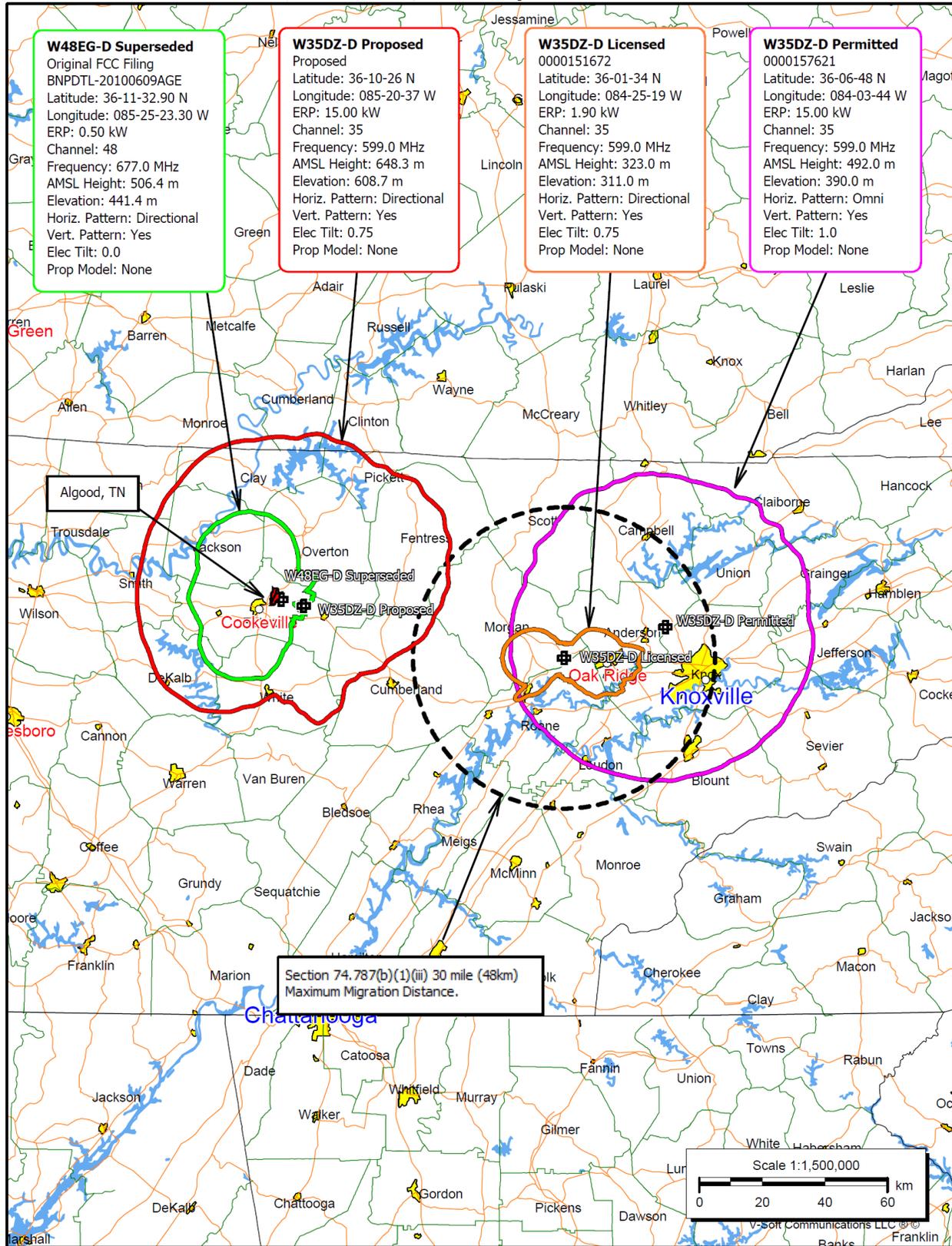
Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Proposal causes 0.03% interference to BLANK0000081956 LIC scenario 1
Proposal causes 0.05% interference to BLANK0000141734 LIC scenario 1
Proposal causes 0.00% interference to BLANK0000087400 LIC scenario 1
Proposal causes no interference to BLANK0000114227 LIC
Proposal causes 0.46% interference to BLANK0000034751 CP scenario 2
Proposal causes 0.46% interference to BLANK0000144354 LIC scenario 2
Proposal causes no interference to BLANK0000153389 CP
Proposal causes 0.12% interference to BLANK0000090378 LIC scenario 1
Proposal causes 0.12% interference to BLANK0000115766 LIC scenario 1

---- Below is IX received by proposal W35DZ at WCTE ----

Proposal receives 2.33% interference from scenario 1
Proposal receives 2.33% interference from scenario 2
Proposal receives 2.33% interference from scenario 3
Proposal receives 2.33% interference from scenario 4
No IX check failures found.

APPENDIX B – Licensed, Permitted, and Proposed Contour



APPENDIX C – Far Field Exposure to RF Emissions

