

Liberty University, Inc.
Exhibit 12-1 – Compliance with CFR 74.1204
New-T, 100.3 MHz, Waynesboro, VA
38-03-58 N, 78-47-54 W, 0.005 kW, 896m RCAMSL

Full Service Contour Overlap Statement – An interference study was prepared to determine the closest full-service authorizations and applications to the proposed FM translator facilities. The full-service broadcast FM radio stations within 50 km of the service contour of any full-service radio station or within 30 km of the pertinent service or interfering contours of any FM translator application or authorization. The pertinent stations, applications and frequency range are:

Call Sign	State	City	Freq	ERP_w	Class	Status	Distance_km
WCYK-FM	VA	STAUNTON	99.7	3300.0	B	LIC	11.36
NEW	VA	WAYNESBORO	100.3	5.0	D	APP	11.25
WQPO	VA	HARRISONBURG	100.7	50000.0	B	LIC	32.74

WQPO Statement with regard to contour overlap - Title 47 CFR Section 74.1204(d) states that, “The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.” Exhibit 12-2 demonstrates that there is overlap with (second) adjacent channel station WQPO. The applicant certifies and demonstrates that no interference will be caused by the instant application because the interfering area, as determined by the “undesired to desired” ratio method of determining interference, is entirely unpopulated. In this case the signal level of the Station WQPO computed f(50,50) contour geographically coincident with the proposed translator site is 66 dBu as demonstrated by Exhibit 12-2. Given a ratio of undesired-to-desired signal differences of 40 dB, (which is the undisputed and standing basis for all FCC second and third adjacent channel interference regulations for FM broadcasting in the US), the interfering contour of the proposed translator is defined as 106 dBu. Due to the lack of “terrain” in the proposed interfering area, the FCC staff recognizes that the “free-space” method of determining distance to contours is far more accurate than the “f” curves at short distances and lower power levels. The proposed interfering contour (free-space method employed) extends 49.64 meters or 162.86 feet from the proposed antenna and since the interfering signal would not extend over any occupied structures, residences, or places of employment and would not extend over any public roads, no interference will be expected, now or in the future and this application complies completely with Section 74.1204 with respect to generated interference by the proposed translator. The map accompanying this exhibit demonstrates this contour to be population, road and structure free within the circle representing the interfering contour.

WCYK Statement with regard to Contour Overlap - Title 47 CFR Section 74.1204(d) states that, “The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.” Exhibit 12-2 demonstrates that there is overlap with (second) adjacent channel station WCYK. The applicant certifies and demonstrates that no interference will be caused by the instant application because the interfering area, as determined by the “undesired to desired” ratio method of determining interference, is entirely unpopulated. In this case the signal level of the Station WCYK computed f(50,50) contour geographically coincident with the proposed translator site is 120 dBu as demonstrated by Exhibit 12-2. Given a ratio of undesired-to-desired signal differences of 40 dB, (which is the undisputed and standing basis for all FCC second and third adjacent channel interference regulations for FM broadcasting in the US), the interfering contour of the proposed translator is defined as 160 dBu. Due to the lack of “terrain” in the proposed interfering area, the FCC staff recognizes that the “free-space” method of determining distance to contours is far more accurate than the “f” curves at short distances and

lower power levels. The proposed interfering contour (free-space method employed) extends 0.1570 meters or 0.515 feet from the proposed antenna and since the interfering signal could not physically extend over any occupied structures, residences, or places of employment and would not extend over any public roads, no interference will be expected, now or in the future and this application complies completely with Section 74.1204 with respect to generated interference by the proposed translator.

Translator Contour Overlap Statement – An interference study was prepared to determine the closest FM translator authorizations and applications to the proposed FM translator facilities. The FM translator stations within the appropriate study and frequency range are:

There are no existing FM Translator authorizations or applications within the affected area.

LPFM Contour Overlap Statement - All LPFM Stations, permits and applications under consideration have been studied using the maximum facilities unless otherwise specified as set forth in 74.1204(a)(4). The LPFM stations within the appropriate study and frequency range are:

There are no LPFM stations within the affected area.

IF Separations Statement – The applicant is categorically exempt from protecting IF stations (53 or 54 channels removed from the proposed). This is due to the translator’s ERP being proposed at a power level under 100 watts, pursuant to 74.1204(g).

Mexican Separations Statement – This application is more than 320 km from the Mexican Border. Therefore, it categorically complies with the provisions of 74.1204(h).

Canadian Separations Statement – This application is more than 320 km from the Canadian Border. Therefore it categorically complies with the provisions of 74.1204(h).

Radial Tabulation of Proposed Contour – Below is a radial tabulation of the distance to contour, radial HAAT and ERP in the Twelve cardinal radials required by FCC regulations.

Site: NEW
 Coordinates: 38-03-58.0 N, 78-47-54.0 W
 Freq: 100.30000 MHz
 ERP: 5.00 W

Bearing	ERP W	HAAT	DH	Distance	Lat	Lon
0	5.00	318	170	8.60	38-08-36.5 N	78-47-54.0 W
30	5.00	313	410	8.44	38-07-54.6 N	78-45-00.2 W
60	5.00	482	110	10.16	38-06-42.3 N	78-41-51.7 W
90	5.00	665	80	11.36	38-03-57.7 N	78-40-06.6 W
120	5.00	674	130	11.42	38-00-52.8 N	78-41-07.4 W
150	5.00	623	230	11.09	37-58-46.8 N	78-44-06.1 W
180	5.00	616	220	11.04	37-58-00.3 N	78-47-54.0 W
210	5.00	508	420	10.31	37-59-08.6 N	78-51-25.8 W
240	5.00	336	430	8.88	38-01-34.1 N	78-53-09.9 W
270	5.00	474	180	10.12	38-03-57.7 N	78-54-50.2 W
300	5.00	480	210	10.16	38-06-42.3 N	78-53-56.2 W
330	5.00	470	80	10.07	38-08-40.4 N	78-51-21.4 W