

Marietta College
 Marietta, Ohio
Comprehensive Engineering Exhibit

Proposed: Ch. 248-LP, 97.5 MHZ., at Marietta, Ohio

Existing Tower, ASR #1222994, 39° 25' 8.3", 81° 26' 33.4", 2023-AGL-8891-OE

This is an existing tower owned by the College. It is presently used for the College's reserved band station WMRT, and Class D/ten watt station WCMO. Upon the grant of a construction permit, the license for WCMO will either be divested or returned, and the antenna for the low power station installed in place of the WCMO antenna.

A.T. & T Mobility operates a cellular installation at the top of this 245' tower, the aeronautical study was filed at their request. Plans are to install 5G equipment later this year.

Allocation Study

Freq.	Channel	Call	City of License	Distance	Brng.	Required
WVVV*	Ch. 245A	96.9 MHZ	Williamstown, WV	10.19 KM	208°	29 KM*
WBNS	Ch. 246B	97.1 MHZ	Columbus, Ohio	149.14 KM	296°	67 KM
WDBS	Ch. 246B-1	97.1 MHZ	Sutton, WV	137.32 KM	141°	46 KM
WKWK	Ch. 247B	97.3 MHZ	Wheeling, WV	98.50 KM	40°	97 KM
WQBE	Ch. 248B	97.5 MHZ	Charleston, WV	115.40 KM	192°	112 KM
WCJO	Ch. 249A	97.7 MHZ	Jackson, Ohio	108.70 KM	247°	56 KM
WILE	Ch. 249A	97.7 MHZ	Byesville, Ohio	71.08 KM	346°	56 KM
WNCI	Ch. 250B	97.9 MHZ	Columbus, Ohio	147.12 KM	295°	67 KM
WKKW	Ch. 250B	97.9 MHZ	Fairmont, WV	118.89 KM	90°	67 KM
WMGA	Ch. 250A	97.9 MHZ	Kenova, WV	145.54 KM	221°	29 KM
W251CP*	Ch. 251D	98.1 MHZ	Parkersburg, WV	10.19 KM	208°	21 KM*

As the above table indicates, this site meets all of the minimum separation requirements of 47 CFR Section 73.807. The two third adjacent signals, WVVV* and W251CP*, do not

carry radio reading services, and need not be protected by the low power station unless there is actual interference. See Section 73.810. WMOA, a Class C non-directional AM station on 1490 KHZ, is 2.9 kilometers, 1.8 miles to the west of this site. The nearest airport, Mid Ohio Valley Regional, is 8.2 KM, 5.2 miles, southeast of this site. The station licenses and antenna structure registration have been amended recently to reflect minor coordinate and elevation errors discovered during the recent aeronautical study (2023-AGL-8891-OE).

Environmental. Construction of the low power station will only require very minor changes to the tower, namely, an exchange of one antenna bay for an identical model antenna bay tuned to the new frequency for the LPFM station. The site is used for two FM stations, reserved band WMRT, and Class D/ten watt WCMO. The construction required will be the removal of the current WCMO single bay antenna tuned to 98.5 MHZ, to be replaced with another single bay antenna of the same type (SWR FM 1/1), but tuned to the new frequency of 97.5 MHZ.

RF Exposure. As noted, this is the site of reserved band station WMRT, operating with a center of radiation 55 meters above ground, and a combined ERP (H + V) of 18.4 KW. At ground level, the field from the WMRT signal is 22% of the maximum allowed for public exposure. Adding the 200 watt signal (H + V) from the proposed low power antenna at 24 meters AG only adds about 1.4%., or a total of 23.4% of the maximum allowed public exposure levels.

However, this site, on the top of a hill owned by the college, is not open to the general public. The area around the base of the tower, approximately 37' X 70', is completely enclosed by a six foot high chain link fence. Inside this enclosure are the equipment shelters for the FM stations, and for the cellular equipment, and an emergency generator for the radio station.

A local contract engineer is on-call to shut down the transmission equipment whenever climbers are working on the tower.