

**ENGINEERING EXHIBIT
APPLICATION FOR
MODIFICATION OF LICENSE
STATION WBXD-LP
THE BOX WORLDWIDE LLC
DETROIT, MICHIGAN
CH 23z 50 KW (MAX-DA) 427 METERS AMSL**

ENGINEERING STATEMENT

The Engineering Exhibit, of which this statement is part, was prepared in accordance with the Rules of the Federal Communications Commission (FCC) and pursuant to the provisions of Section III of FCC Form 346 on behalf of The Box Worldwide LLC (herein The Box) in support of an application for a construction permit to modify the facilities of low power television station WBXD-LP, Detroit, Michigan.

WBXD-LP is licensed for operation on channel 5 with maximum peak visual effective radiated power (ERP) of 0.04 kilowatts (kW) and antenna radiation center height above mean sea level (AMSL) of 391 meters. WLMB-DT, Toledo, Ohio, has filed an application, FCC File Number, BPCDT-19991027ADB, for DTV operation on channel 5. The proposed WLMB-DT transmitter site is 104 kilometers from the licensed WBXD-LP operation. This is well within the displacement eligibility distance of 280 kilometers for low-band VHF stations

specified in Section 73.3572(a)(4)(iv)(A) of the FCC Rules. Thus, The Box is eligible to file a minor change application to specify a new operating channel for WBXD-LP.

The Box proposes to modify the WBXD-LP operation to specify operation on channel 23, with a maximum peak visual ERP of 50 kW. The Box proposes to relocate WBXD-LP to an existing supporting structure located at the geographic coordinates 42° 26' 52" North Latitude, 83° 10' 23" West Longitude, referenced to the 1927 North American Datum (NAD27). The FCC Antenna Structure Registration Number for the existing tower is 1003429.

The Box proposes to employ a Dielectric Communications, type TLP-16F, directional antenna. The proposed antenna will be mounted with the main lobe of radiation oriented at 90° True. The proposed antenna is on the FCC list of "off-the-shelf" directional antennas. The antenna will have a radiation center height of 217 meters AGL, 427 meters AMSL.

The proposed modification of the WBXD-LP facilities will not have a significant environmental impact. The existing WBXD-LP transmitter site is a multiple-user site. Neither workers nor the general public will be exposed to

electromagnetic field strengths exceeding the maximum permissible exposure (MPE) levels set forth in Section 1.1310 of the FCC Rules. At a reference point two meters above ground level (AGL) at the base of the supporting structure, the calculated exposure arising from the WBXD-LP operation proposed herein is predicted to be 0.00072 milliwatt per square centimeter (mW/cm^2) or 0.21 percent of the MPE level for general public/uncontrolled exposures of $0.35 \text{ mW}/\text{cm}^2$ at 524 MHz, the lower edge of channel 23. The foregoing calculation assumes a vertical plane relative field factor of 0.20 at steep depression angles for the proposed WBXD-LP antenna, a ground reflection coefficient of 1.6, and an aural ERP equal to 10 percent of the maximum peak visual ERP. Since the proposed WBXD-LP operation will contribute less than 5.0 percent of the MPE for general population/uncontrolled exposure at any location on the ground at the multiple-user site, WBXD-LP is not considered a “significant contributor” to the RF exposure environment pursuant to *OET Bulletin 65, Edition 97-01*. Thus, contributions to exposure from other sources in the vicinity of the WBXD-LP site were not taken into account in this analysis.

With respect to occupational exposures, The Box and the other licensees at the existing site will employ procedures to assure that workers on

the tower in the vicinity of energized antennas are not exposed to levels in excess of the FCC MPE's for Occupational/Controlled exposure.

Other environmental concerns do not apply in this case as WBXD-LP proposes use of an existing supporting structure. Use of an existing supporting structure is considered environmentally desirable, and this proposal is believed to be categorically excluded from environmental processing pursuant to Section 1.1306 of the FCC Rules.