

TECHNICAL EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
RADIO STATION WTRV(FM)  
WALKER, MICHIGAN

MARCH 13, 2006

CH 263A    3 KW    100 M

TECHNICAL EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
RADIO STATION WTRV(FM)  
WALKER, MICHIGAN  
CH 263A    3 KW    100 M

Table of Contents

	Technical Narrative
Figure 1	Proposed Antenna and Supporting Structure
Figure 2	Proposed Transmitter Site Coverage Map
Figure 3	Proposed Transmitter Site Allocation Study

TECHNICAL EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
RADIO STATION WTRV(FM)  
WALKER, MICHIGAN  
CH 263A 3 KW 100 M

Technical Narrative

The technical exhibit of which this narrative is part was prepared to support an application for construction permit for WTRV(FM) on Channel 263A at Walker, Michigan. This application seeks to simply increase the WTRV(FM) antenna height above average terrain to 100 meters and decrease its effective radiated power to 3 kilowatts, thus maintaining the same distance to the 24 km protected contour.

The proposal would not be subject to environmental processing in accordance with Section 1.1306. It is believed that this proposal conforms with all applicable rules and regulations of the FCC.

Proposed Transmitter Location

The transmitting facility will be located on an existing supporting structure. The location is uniquely described by the following geographic coordinates:

43° 00' 59" North Latitude  
85° 44' 24" West Longitude

A sketch showing the antenna and existing supporting structure is shown on Figure 1.

#### Interference Concerns

The 115 dBu predicted "blanketing" contour of the proposed station would extend radially less than 1 kilometer from the transmitting site. The applicant recognizes its responsibility to resolve complaints of interference, including blanketing and receiver-induced interference as required by Sections 73.315(b), 73.316(e) and 73.318.

#### FCC Predicted Coverage Contours

The predicted coverage contours for the proposed operation were calculated in accordance with the provisions of Section 73.313. In accordance with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors.

The average terrain elevations from 3 to 16 kilometers along eight radials evenly spaced at 45 degree intervals were obtained from the last WTRV(FM) application for construction permit.

Figure 2 is a map showing the predicted coverage contours. As the map illustrates, the FCC predicted 70 dBu contour entirely encompasses the principal community of Walker.

Proposed Site Allocation Study

Channel 263A at the proposed site will satisfy the Commission's minimum separation distance requirements, specified in Section 73.207(b) of the Rules, to all known assignments and allotments as shown by the tabulation provided in Figure 3 except to WITL-FM on Channel 264B assigned to Lansing, Michigan. Processing pursuant to Section 73.213(c) is requested towards WITL-FM as WTRV(FM) is a grandfathered equivalent 3 kW/100 m facility and therefore satisfies the minimum 73.213(c) separation distance to WITL-FM for such facilities.

Radiofrequency Electromagnetic Field Exposure

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, *Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*.<sup>1</sup> The power density at the base of the tower was calculated using the appropriate procedure contained in Section 2, Supplement A, *Additional Information for Radio and Television Broadcast Stations*, of the Bulletin.

For the calculation, a combined horizontal and vertical polarized effective radiated power of 6 kilowatts is employed with a radiation center of 82 meters above ground level. Using an assumed "worst-case" downward relative field value of 0.5, it is calculated that the maximum power density at ground level resulting from this facility is 0.008 mW/cm<sup>2</sup>. This is less than five percent of

the maximum Commission guideline value in an uncontrolled environment for a FM radio station.<sup>2</sup>

When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure to radiofrequency electromagnetic will not exceed the FCC guidelines.

Charles A. Cooper

March 13, 2006

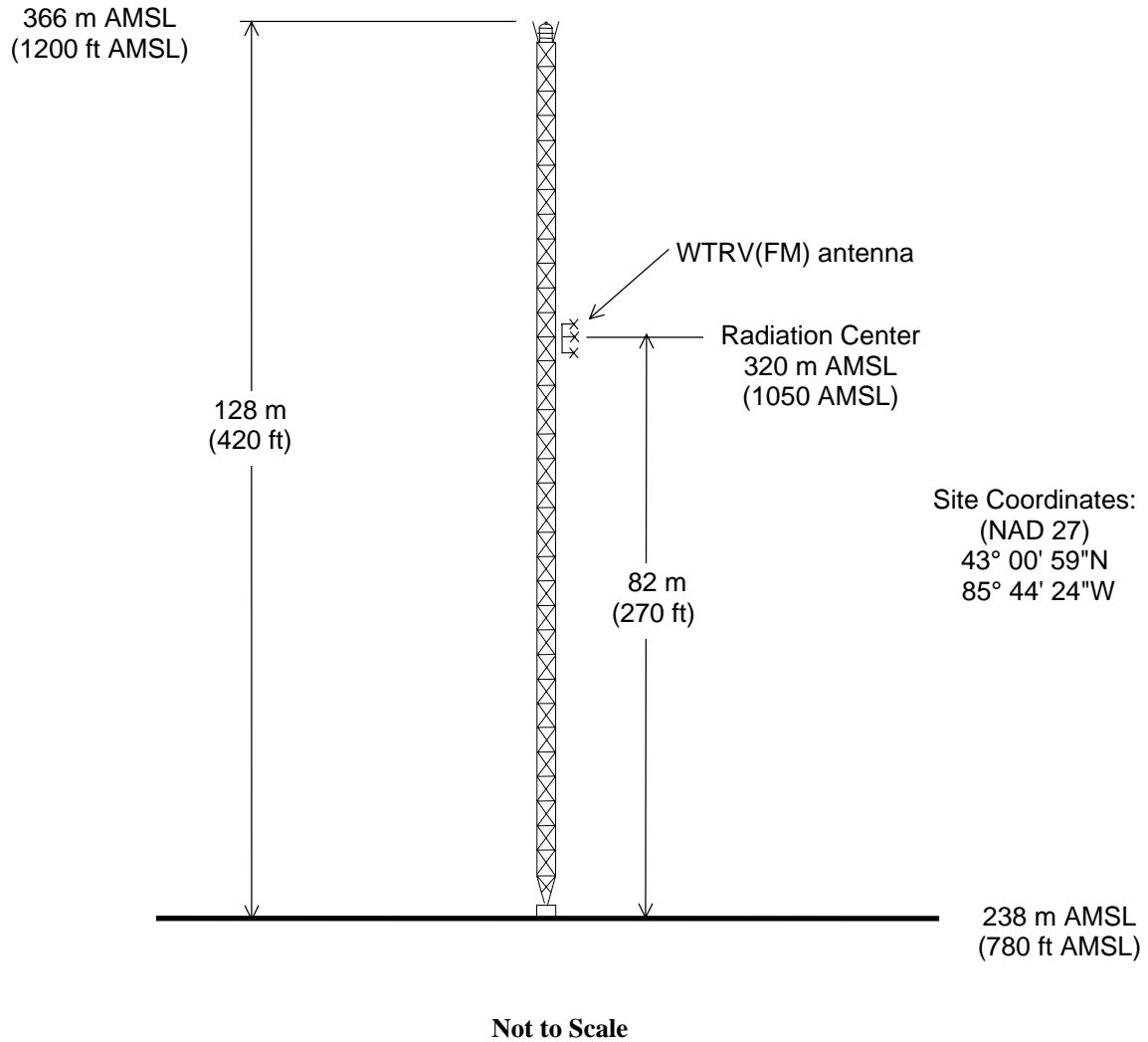
du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
941.329.6000

---

<sup>1</sup> OET Bulletin 65, Second Edition 97-01, August, 1997.

<sup>2</sup> The FCC maximum guideline for a FM broadcast station in an uncontrolled environment is 0.2 mW/cm<sup>2</sup>.

ASRN: 1007106



## ANTENNA AND SUPPORTING STRUCTURE

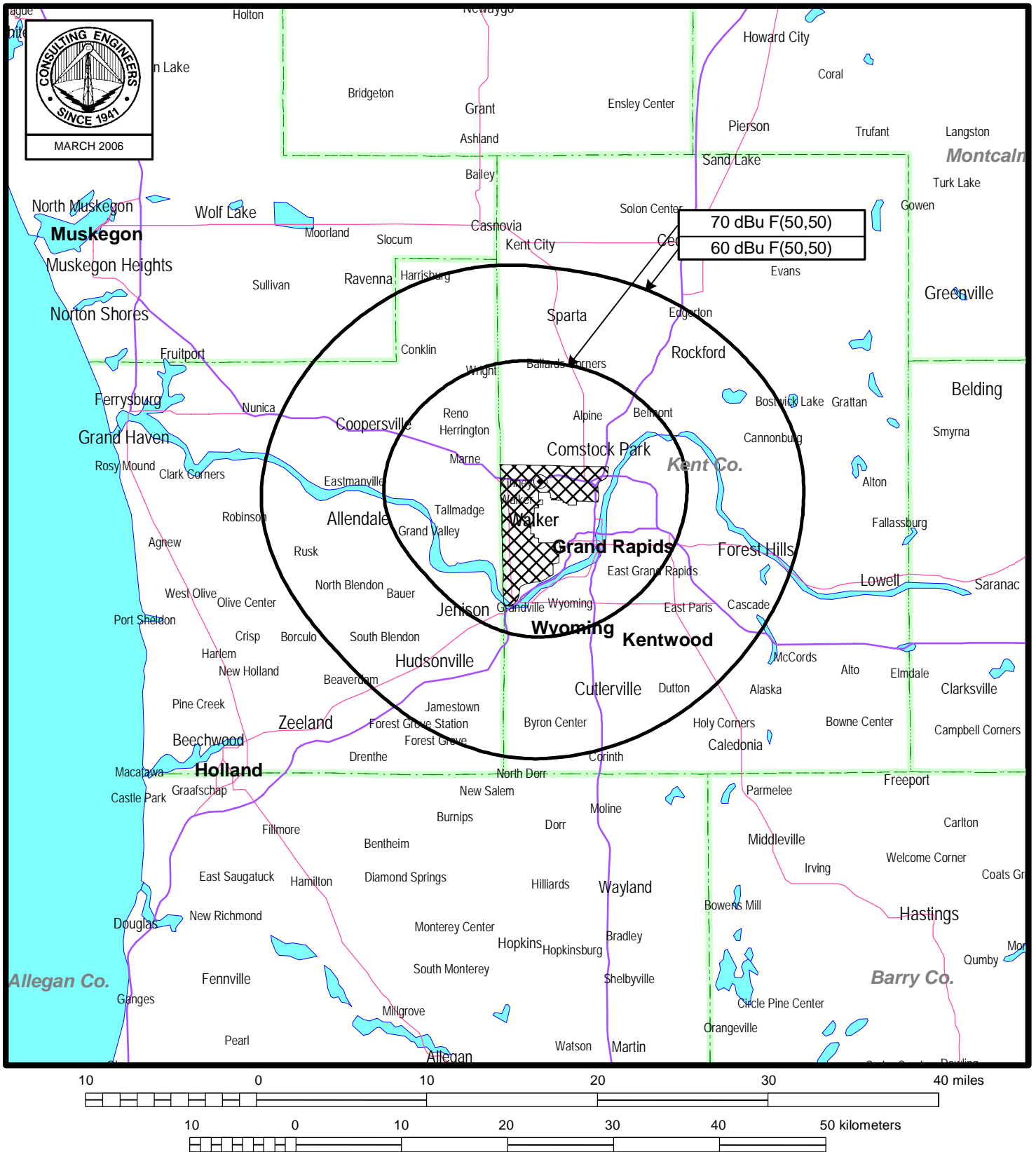
FM STATION WTRV(FM)

WALKER, MICHIGAN

CH 263A 3 KW 100 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

**Figure 2**



## **FCC PREDICTED COVERAGE CONTOURS**

**FM STATION WTRV(FM)**

**WALKER, MICHIGAN**

**CH 263A 3 KW 100 M**

du Treil, Lundin & Rackley, Inc Sarasota, Florida



TECHNICAL EXHIBIT  
 APPLICATION FOR FM CONSTRUCTION PERMIT  
 RADIO STATION WTRV(FM)  
 WALKER, MICHIGAN  
 CH 263A 3 KW 100 M

Channel 263A Allocation Study at Existing Site

43° 00' 59" North Latitude  
 085° 44' 24" West Longitude

Call Id	City St	Status	File Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. min
WAYG 24772	GRAND RAPID MI	BLD LIC C	20050809ACJ	210A 89.9	4.9 63	Y 43436	42-58-40 85-35-44	N	110.0	12.54	10.0
WVIB 73994	HOLTON MI	BLH LIC C	20041118ACA	261A 100.1	2.9 144	Y 41221	43-18-50 86-09-17	N	314.7	47.22	31.0
WBCH-FM 3989	HASTINGS MI	BMLH LIC C	20040629AAF	261A 100.1	3 90	N	42-37-34 85-16-41	N	138.9	57.50	31.0
WTRV 72529	WALKER MI	BLH LIC C	19930716KZ	263A 100.5	3.5 92	N	43-00-59 85-44-24	N	90.0	0.00	
<i>(Applicant's existing facility.)</i>											
WITL-FM 46706	LANSING MI	BLH LIC C	19850610KF	264B 100.7	26.5 196	N	42-40-33 84-30-00	N	110.1	108.20	113.0
<i>(Section 73.213(c) processing requested toward WITL-FM.)</i>											
WQXC-FM 22128	MOTSEGO MI	BLH LIC C	19810507AH	265A 100.9	3 91	N	42-30-31 85-46-08	N	182.4	56.46	31.0