

RF HAZARD STATEMENT  
FM BROADCAST STATION WMXM(FM)  
LAKE FOREST, ILLINOIS  
CHANNEL 205A 0.295 KW (H & V) 29 M HAAT

As indicated in the attached Figure 1, the proposed transmitting antenna is mounted on a pole supported by an decorative structure on the roof of the Young Hall Building at Lake Forest College. An ERI model LPX-1E omni-directional transmitting antenna is to be employed. The nominal non-directional effective radiated power (ERP) is to be 0.295 kW, circularly polarized.

With respect to the potential for human exposure to radio frequency (RF) radiation at ground level in the vicinity of the building, calculations prepared in accordance with FCC Bulletin OET-65 (Edition 97-01) indicate that the proposal will not result in human exposure to RF radiation at ground level in excess of FCC standards. Power density calculations were conducted at 2-m above ground\* based on the following conservative assumptions, with the following results:

| Call Sign | Channel | Average ERP<br>(kW) | Relative Field<br>Factor <sup>†</sup> | FCC Limit <sup>‡</sup><br>(mW/cm <sup>2</sup> ) | Percentage of<br>Limit |
|-----------|---------|---------------------|---------------------------------------|---|------------------------|
| WMXM(FM)  | 205     | 0.59 (H + V)        | 1.00                                  | 200   | 14.6%                  |

As indicated above, the exposure to RF radiation at 2-m above ground level will not exceed 14.6% of the FCC limit for general population / uncontrolled exposure at any location 2-m above ground in the vicinity of the building.

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\* The radiation center height above ground is 28 m.

† This is a worst-case estimate of the downward antenna elevation pattern relative field factor.

‡ for general population/uncontrolled environments

With respect to the building roof, as indicated in the attached Figure 1, the antenna radiation center will be located 6.7 m above the roof level. Calculations made using the FCC FMMModel 2.1 indicate that the maximum permissible exposure (MPE) for general population/uncontrolled environments will be met all accessible locations on the building roof. Therefore, the proposal complies with the FCC limits for human exposure to RF radiation and it is categorically excluded from environmental processing.

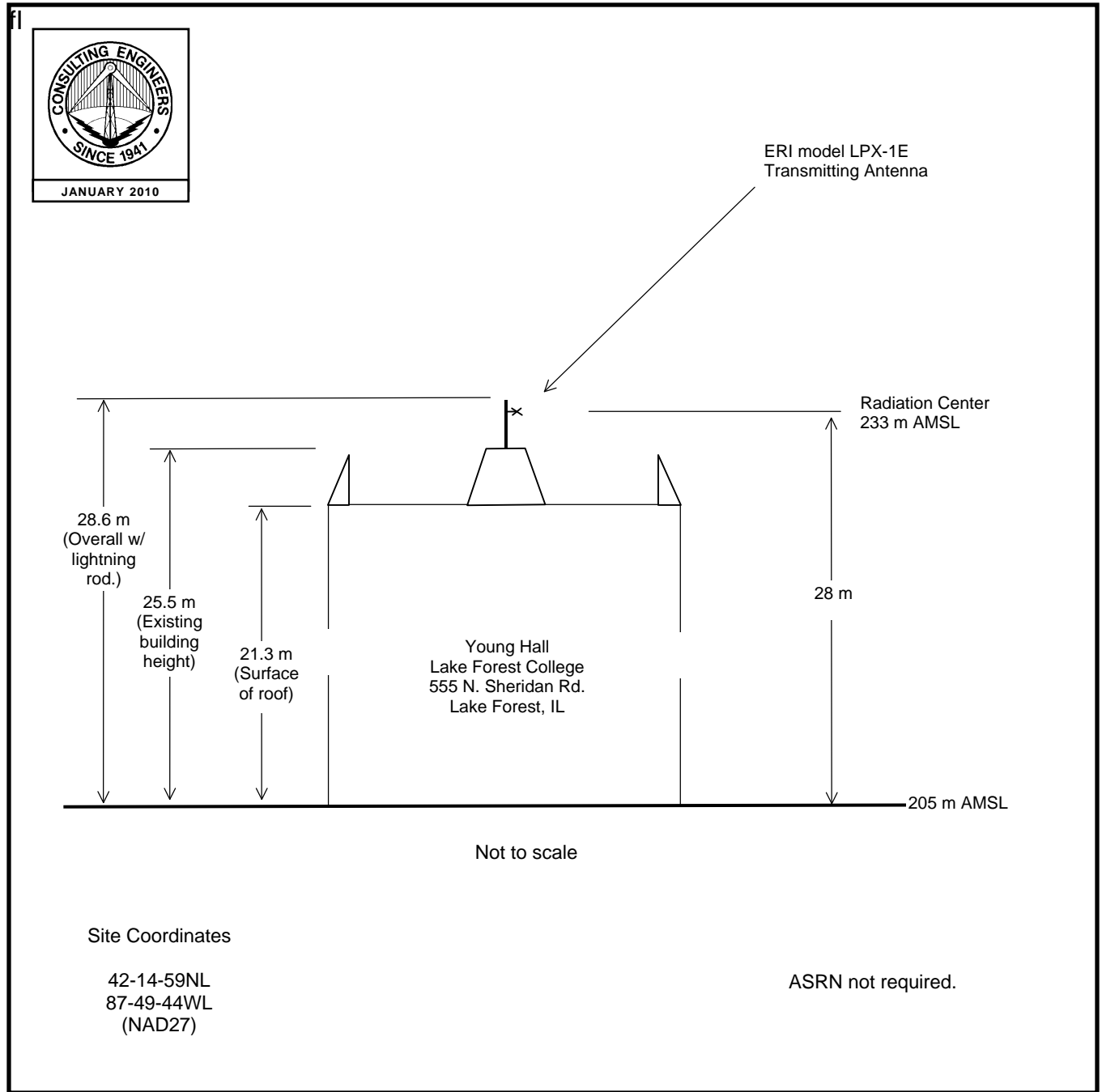
The applicant shall mark and restrict access to the decorative structures on the roof of the building. Also, the applicant shall reduce power or cease operation as necessary to protect persons having access to the antenna and antenna mounting structure from RF radiation in excess of the FCC guidelines.



Louis Robert du Treil, Jr.

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Ave.  
Sarasota, FL 34237

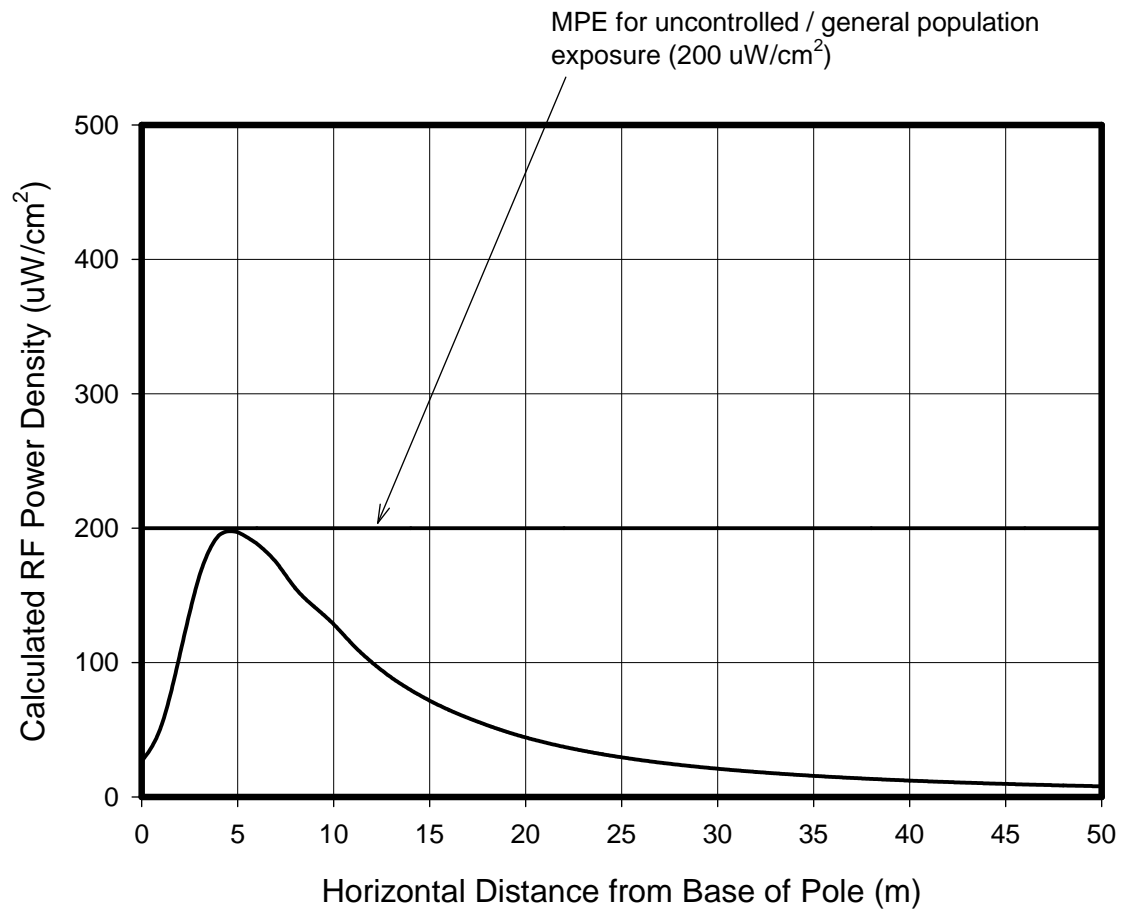
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## WMXM(FM) ANTENNA AND SUPPORTING STRUCTURE

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

Figure 2



RF exposure level calculated based on FCC FMModel 2.1 using circularly polarized ERP of 0.295 kW (0.59 kW total) and ERI 'rototiller' element. Height above roof = 6.7 m.

## CALCULATED RF POWER DENSITY ON BUILDING ROOF

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