MID-STATE CONSULTANTS

ENGINEERING STATEMENT

IN SUPPORT OF

APPLICATION FOR MINOR MODIFICATION OF

DIGITAL AUXILIARY FACILITY

WKAR-TV

EAST LANSING, MI

Background

Board of Trustees, Michigan State University (MSU) is the licensee of WKAR-TV, located at East Lansing, MI, which had previously been licensed to operate its digital facility on Ch. 40, but was assigned Ch. 33 as its post-incentive auction channel. WKAR-TV completed its transition to the new channel in June 2018 and the post-incentive auction facility is now licensed (LMS File #0000054990).

WKAR-TV also had a licensed digital auxiliary facility on Ch. 40. Given that WKAR-TV has transitioned its main facility to its post-incentive auction channel, it would now like to transition its digital auxiliary facility to Ch. 33; therefore, WKAR-TV, in the instant application, is applying for a minor modification of its digital auxiliary facility for operation on Ch. 33.

Antenna System and Tower

The new WKAR-TV auxiliary facility will continue using the same site and tower as its main facility. It will operate from a new side-mounted directional ERI I230ECW-8-23 antenna (pattern data attached hereto) that will replace the existing Dielectric TLP-16B-R auxiliary antenna. The antenna will be installed

on the tower (ASR#1265362) and its radiation center at 406.6m will be slightly lower than the radiation center of the current Ch. 40 auxiliary facility (411.5m AMSL).

The proposed WKAR-TV auxiliary facility will incorporate both horizontal (71.0 kW) and vertical polarization (21.0 kW). The vertically polarized radiation component will not exceed the authorized horizontally polarized component in any azimuth.

ERP and Coverage

MSU proposes to operate the auxiliary DTV facility with an ERP of 71 kW; the entire principal community of East Lansing, MI will be well within the predicted F(50,90) 48 dBu contour of this facility. Furthermore, as shown in Figure 1, attached hereto, the predicted noise-limited contour of the proposed auxiliary facility does not extend beyond the noise-limited contour of the licensed main facility (LMS File #0000054990).

Environmental/RFR

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; since the structure is existing and registered, such conditions should not be an issue requiring further consideration.

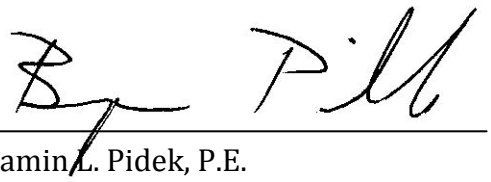
The location of the proposed post-incentive auction facility is assumed to currently be "in compliance" with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst case ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.005651 mW/cm^2, which is less than 5% of the MPE for public exposure (0.391333 mW/cm^2) at

Ch. 33 (584-590 MHz). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain "in compliance" with FCC guidelines.

MSU agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of potential RFR hazards is posted.

Certification

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.



Benjamin L. Pidek, P.E.
August 29, 2018

Mid-State Consultants

WKAR-TV
0000054990
Latitude: 42-42-06.77 N
Longitude: 084-24-47.89 W
ERP: 376.00 kW
Channel: 33
Frequency: 587.0 MHz
AMSL Height: 563.4 m

WKAR-TV (Aux Ch. 33)
Latitude: 42-42-06.77 N
Longitude: 084-24-47.89 W
ERP: 71.00 kW
Channel: 33
Frequency: 587.0 MHz
AMSL Height: 406.6 m

FCC Noise-Limited Contours of WKAR-TV Post Incentive Auction Licensed Main Facility and Proposed Ch. 33 Auxiliary Facility (Red)

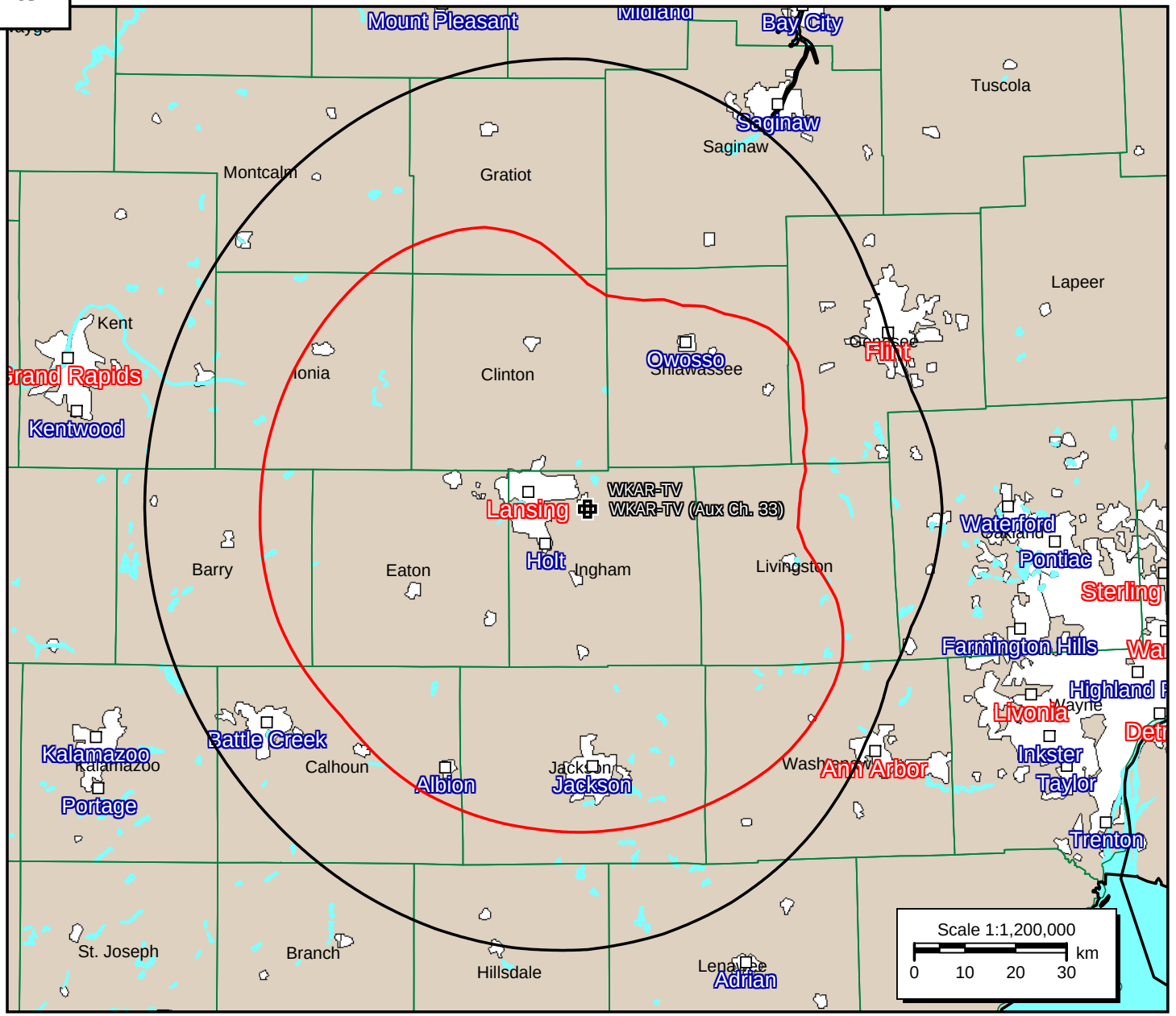


Figure 1
08-25-18