

# Exhibit 11

## Engineering Exhibit

Victoria Theatre Project  
St. Paul, MN

Form 318

**Application for Auxiliary Facility**

WVIC-LP  
Fac. 196635

256-L1 (99.1 MHz)  
0.1 kW ERP  
30 meters HAAT  
53 meters HAGL  
310 meters RCAMSL

January 29, 2020

Prepared by Jeff Sibert  
WVIC-LP Engineer

**Victoria Theater Project  
WVIC-LP  
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**Engineering Exhibit**

**Overview:**

Victoria Theater Project (VTP) is requesting an **Auxiliary Facility** for WVIC-LP adjacent to its existing antenna. The technical parameters will be the same, and the antennas will be separated horizontally by a few meters at the same vertical height. WVIC-LP has received several interference complaints due to the proximity of a TV receive antenna. Although VTP's engineer has replaced the TV antenna and installed a filter, the reception problems have not completely been eliminated. VTP has been working with the landlord to determine next steps that would be satisfactory to all parties. The next step would involve the use of a backup antenna that will minimize radiation into the TV antenna, and also moving the TV and/or main antenna in a manner that will hopefully alleviate the interference. WVIC's engineer has a spare antenna that can be used and the lease for WVIC-LP does allow the use of a secondary antenna, therefore we plan to keep both antennas in place. The auxiliary antenna was planned for use by KPPS-LP (of which WVIC's engineer is also involved with) as part of a rebuild (see LMS application 97709 filed January 15, 2020), those plans are on hold until this interference issue is resolved.

Although the use of auxiliary facilities are not contained within the LPFM rules (or cross-referenced in 73.801), the Commission has granted auxiliary facilities when it satisfies 73.807 and is contained within the licensed 60 dBu contour.

**60 dBu contour containment:**

As required by Auxiliary applications, the 60 dBu contour must fully be contained within the the 60 dBu contour of the licensed facility. The antenna will be located just a few meters away from the licensed facility, so the 60 dBu of the auxiliary will still be fully contained within the 60 dBu contour of the main due to it having the same geographic coordinates, power, and height.

**73.807 interference:**

This proposal meets contour clearance for all applications and authorizations on co-channel and first-adjacent frequencies at the present time, except for W256DT. W256DT is grand-fathered short-spaced towards WVIC-LP. The proposed operation in this application will maintain the spacing.

**73.807 interference and request for second adjacent waiver to KSJN:**

This proposal is short-spaced to second-adjacent station KSJN on channel 258 (99.5 MHz), therefore we request a second-adjacent channel waiver using the desired to undesired method established in the Living Way Ministries decision. KSJN operates at 100 kW non-directional from a location approximately 13.6 km to the northwest. KSJN's HAAT towards the direction of the proposed

WVIC-LP transmitter site is approximately 320 meters<sup>1</sup>. The service contour of KSJN is approximately 95 dBu at the proposed transmitter site<sup>2</sup>. Using a 40 dBu U/D ratio, the corresponding 'undesired' interference contour is 135 dBu. A 100 watt signal would place a 135 dBu contour approximately 12 meters from the antenna. The interference will not reach the ground nor will it reach any publicly accessible areas.

We anticipate no interference to KSJN using the criteria established in the Living Way decision. But should actual interference occur (including areas outside the 135 dBu contour) Victoria Theater Project will make good faith efforts to expeditiously resolve the problems.

### **Calculation of height above average terrain and power limits:**

The FCC's HAAT tool<sup>3</sup> was used to calculate the height above average terrain of this proposal. For a radiation center of 53 meters above ground, the height above average terrain equals 30 meters using the Globe database. WVIC requests a 100 watt ERP authorization with a non-directional antenna.

### **Environmental Impact Assessment:**

The proposed tower does not appear to create a significant environmental impact. The applicant answers no to each of the questions under "WORKSHEET 2 - GENERAL ENVIRONMENTAL WORKSHEET" of the published form 318 instructions.

There are no other broadcast facilities nearby. Using the FCC's FM model<sup>4</sup> calculator, areas that would exceed the 200 uW/cm<sup>2</sup> public exposure limit will extend less than 2 meters from the antenna. This is not publicly accessible. Warning signs and/or other appropriate measures will be taken as needed to protect any workers who may come into close contact with the antenna.

### **FAA requirements:**

The proposed antenna will be mounted 2 meters above an existing 51 meter structure, therefore it falls under the "6 meters rule" and does not require further coordination with the FAA.

### **Conclusion:**

Grant of this application is in the public interest because it will allow Victoria Theater Project to return WVIC-LP service to residents of St. Paul as it works through complaints of interference.

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<sup>1</sup> <https://www.fcc.gov/media/radio/haat-calculator>

<sup>2</sup> <https://www.fcc.gov/media/radio/fm-and-tv-propagation-curves>

<sup>3</sup> <https://www.fcc.gov/media/radio/haat-calculator>

<sup>4</sup> <https://www.fcc.gov/general/fm-model>

**Certification:**

I, Jeff Sibert, have prepared the technical exhibits in this application on behalf of Victoria Theater Project and I have discussed the application with its President, Keith Johnson. I believe the application fully complies with all commission rules and regulations, except in limited cases where waivers of said rules have been requested.

Jeff Sibert  
Engineer for WVIC-LP  
January 29, 2020