Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	MB Docket No. 87-268
Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service	)	

COMMENTS OF BARRINGTON BAY CITY LICENSE LLC

Barrington Bay City License LLC ("Barrington"), licensee of WBSF(TV), Channel 46, Bay City, Michigan ("WBSF"), submits these comments to request that the Commission seek Canadian concurrence to the allotment it proposed for WBSF in its Seventh Further Notice of Proposed Rulemaking concerning the proposed DTV Table of Allotments (the "Proposed DTV Table").[1] The allotment proposed by the Commission would allow Barrington to quickly provide post-transition digital service to its community, and it would not cause any interference to Canadian residents.

I. BACKGROUND

WBSF is the CW Network affiliate serving the Saginaw-Bay City DMA, located in northern Michigan, approximately 130 kilometers from the Canadian border. WBSF currently operates as an analog facility on channel 46 with a maximum effective radiated power ("ERP") of 1600 kW at 306 meters height above average terrain ("HAAT"). WBSF has received a tentative channel designation to operate on channel 46

[1] *See Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, Seventh Further Notice of Proposed Rulemaking, MB Docket No. 87-268, FCC 06-150 (rel. Oct. 20, 2006) ("Seventh FNPRM").

after the close of the digital transition. Accordingly, Barrington anticipates that it will convert WBSF's channel 46 operation to digital at the time of the transition and will continue broadcasting after its transition to a comparable service area.

WBSF's proximity to Canada necessitates Canadian coordination before the Commission can finalize WBSF's DTV allotment.[2] Likewise, WBSF's analog facilities were subject to Canadian coordination, and Barrington designed WBSF to employ a directional antenna to avoid Canadian interference. In the *Seventh FNPRM*, the Commission proposed an allotment for WBSF that was consistent with the station's existing service area.[3] The Commission also announced, however, that Industry Canada had objected to WBSF's allotment and sought comment on how the Canadian objection should be addressed.[4]

II. THE PROPOSED ALLOTMENT WOULD CREATE NO CANADIAN INTERFERENCE.

Although the *Seventh FNPRM* does not identify the nature of Industry Canada's objection, Barrington anticipates that Canada's concern relates to interference with the Canadian channel 46 allotment in Sarnia, Ontario. Specifically, Industry Canada's objection presumably arises out of the results of an initial interference study

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[2] Letter of Understanding Between the Federal Communications Commission of the United States of America and Industry Canada Related to the Use of the 54-72 MHz, 76-88 MHz and 470-806 MHz Bands for the Digital Television Broadcasting Service Along the Common Border (Sep. 22, 2000), *available at* http://www.fcc.gov/ib/sand/agree/files/can-bc/can-dtv.pdf ("DTV LOU").

[3] *See* FCC File No. BPCT-19960710KZ.

[4] *Seventh FNPRM* at ¶ 49.

conducted under the procedures set forth in the Commission's Letter of Understanding with Industry Canada.[5]

Under the terms of the *DTV LOU*, if the initial study − using pertinent HAAT obtained from terrain data and TV propagation curves − reflected the possibility of interference, Industry Canada should have conducted a terrain-based propagation study to determine whether there was a realistic risk of interference from WBSF.[6] The terrain-based interference analysis commissioned by Barrington, however, reflects that the proposed allotment will not cause any interference to either the current Sarnia allotment or to the authorized post-transition Sarnia allotment.

The *DTV LOU* reflects an allotment for a very low power station, CBLN, to operate in Sarnia at an ERP of 200 watts and a HAAT of 100 meters.[7] The allotment also reflects that CBLN will be authorized to increase its power to 400 watts after the transition.[8] Consistent with these allotments, Barrington's consulting engineer was asked to determine whether the Commission's proposed WBSF allotment would cause any interference to either CBLN's current allotted facilities or to its planned post-transition

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[5] Appendix 3 of the *DTV LOU* describes the procedures by which the FCC and Industry Canada determined whether proposed initial allotments were acceptable. In the absence of additional information and consistent with the terms of the LOU, Barrington assumes that Industry Canada followed these procedures with respect to the WBSF proposed allotment.

Because, in this instance, WBSF is not sufficiently distant from Sarnia to meet the test in paragraph 2, Industry Canada presumably conducted "a study using pertinent Height Above Average Terrain (HAAT) in directions toward affected stations obtained from terrain data and TV propagation curves." *DTV LOU* at 74, ¶ 3.

[6] *Id.* at ¶ 4.

[7] *DTV LOU*, Apx. 1B, at 43.

[8] *Id.*

facilities. As demonstrated by the attached engineering analysis by D.L. Markley & Associates, Inc., there would be no interference between the proposed WBSF allotment and either CBLN allotment.[9]

Consistent with the *DTV LOU*, allotments are generally deemed acceptable from an international coordination perspective where, as here, they create no interference to an existing allotment. Accordingly, the Commission should take steps to finalize coordination with Industry Canada for the allotment as proposed.

III. CANADIAN VIEWERS WOULD NOT RECEIVE INTERFERENCE EVEN IF THE SARNIA ALLOTMENT WERE DRASTICALLY EXPANDED.

As noted above, the relevant analysis for purposes of determining whether objectionable interference exists is to the existing Sarnia allotments. It is worth noting, however, that, even assuming that the Sarnia channel 46 operation were expanded dramatically beyond what is currently allotted, any interference would be limited to U.S. land area.

To determine whether WBSF would cause interference to Canadian viewers if the Sarnia allotment were expanded, Barrington's consulting engineer conducted an interference analysis assuming a hypothetical facility at Sarnia that operates at a much greater power than the CBLN allotments − 1 megawatt of power at 305 meters HAAT. Even at this greatly expanded power, Barrington's engineering analysis, conducted consistent with the procedures in the *DTV LOU*, reflected that this hypothetical facility would be subject to no interference from WBSF over Canadian land

[9] D.L. Markley & Assoc., Inc., Engineering Statement (Jan. 22, 2007), attached hereto at Exhibit 1 ("Engineering Statement").

area.[10] To the extent that any interference at all would be caused, it would affect only United States land area near Flint, Michigan.[11]

The agreement between the United States and Canada to coordinate broadcast allotments reflects each nation's need to ensure that its residents are able to receive domestic television signals without cross-border interference. That interest is not operative with respect to interference to Canadian stations whose signals happen to reach into the United States; under these circumstances, it is the FCC that must exercise control to ensure that viewers in the United States can receive U.S. stations. The Commission has acknowledged this principle, for example, when it requested Canadian concurrence for an allotment conditioned on the applicant's agreement to "operate the station directionally so as to avoid interference with the stations *over Canadian land area*."[12]

Given the lack of any interference with respect to the allotments proposed by Canada in Sarnia, it is unclear what basis Canada has to object to the WBSF allotment. Moreover, even assuming an expanded future operation, there is still no potential for interference to Canadian viewers. While an analysis of these expanded operations is not legally required, it further illustrates the absence of interference concerns with respect to the WBSF allotment.

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[10] *Id.* at 3.

[11] *See id.* at 3 & Map 3.

[12] *Amendment of Section 73.202(b), Table of Allotments, FM Broadcast Stations*, 11 FCC Rcd. 6674 (1996) (emphasis supplied).

IV. FAILURE TO AFFIRM THE WBSF ALLOTMENT COULD RESULT IN REDUCED SERVICE AREA OR DELAY THE STATION'S DIGITAL TRANSITION.

Maintaining WBSF's operation on channel 46 is the best way to promote the station's transition to digital operation, and Barrington stands ready to make the changes necessary to operate in digital on channel 46. Switching WBSF's allotment to another channel would invariably delay the availability of digital service to the station's viewers. Likewise, reducing power to accommodate Industry Canada's concerns would unnecessarily deprive viewers in WBSF's service area of digital service while providing no appreciable benefit to the Sarnia allotment, which, as shown above, would not receive interference in either case.

If, notwithstanding the public interest benefits of maintaining the WBSF allotment as proposed, the Commission considers changing the channel of WBSF's allotment, the Commission staff should involve Barrington in the process to ensure that any change in facilities is technically feasible based on the existing WBSF equipment, and that it does not result in a reduced service area or delay digital service by requiring substantial additional construction or equipment installation.

For instance, the section length of WBSF's transmission line permits WBSF to broadcast only on certain channels,[13] and a change to other channels would be both time-consuming and expensive. Likewise, Barrington installed a directional antenna to accommodate Industry Canada's concerns with respect to analog interference. A change to WBSF's directional pattern would involve extensive engineering, would be very costly, and would delay WBSF's transition to digital service.

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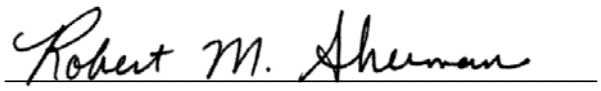
[13] Barrington believes that these channels include 42, 38, 37, 34, 33, 30, and 29.

In any case, in order to ensure adequate service to the Bay City community as WBSF transitions to digital operation, any changed allotment should allow WBSF to replicate its current analog Grade B coverage and maintain the 0.0% interference level specified in the *Seventh FNPRM*.

* * *

For the foregoing reasons, Barrington respectfully requests that the Commission work with Industry Canada to finalize the proposed allotment for WBSF on channel 46. That allotment would preserve maximum service to the residents of WBSF's Bay City community as WBSF transitions to digital facilities and would create no interference over Canadian land area.

Respectfully submitted,



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January 25, 2007

Engineering Statement

The following engineering statement and attached exhibits have been prepared for Barrington Bay City License LLC, licensee of television station WBSF(TV) at Bay City, Michigan, and pertain to its comments concerning the Commission's proposed final DTV table of allotments.

In the Commission's DTV table of allotments contained in the Seventh Further Notice of Proposed Rulemaking (MB Docket No. 87-268), Barrington was allocated DTV operation on channel 46 at a center of radiation of 306 meters above average terrain. This allotment also specified the use of a directional antenna. WBSF currently operates as an analog facility with a maximum effective radiated power of 1600 kW with the antenna center of radiation at 306 meters above average terrain. The analog facility utilizes a directional pattern. This particular pattern will be utilized in WBSF's digital facility, and will replicate the Grade B analog coverage.

As the Seventh Further Notice indicates in paragraph 48, the Canadian Government has objected to the proposed allotment of DT channel 46 at Bay City for WBSF. This objection is apparently related to the Canadian allocation at Sarnia, Ontario for digital channel 46. Interference studies have been performed relative to the current Sarnia allocation, the indicated post-transition Sarnia allocation, and a hypothetical digital Sarnia facility that would operate with an

effective radiated power of 1000 kW at a center of radiation of 305 meters above average terrain. These studies demonstrate that no objectionable interference to CBLN is predicted to occur at allocation facilities. Even assuming expanded facilities of 1000 kW ERP, any interference that does occur would be limited to land area within the United States.

The first map following this text depicts the interference study for the allocated WBSF-DT facilities relative to the current allotment facilities of CBLN-DT at Sarnia, Ontario. In the case of CBLN, the effective radiated power utilized is 0.200 kW and a center of radiation at 100 meters above average terrain. These parameters are those specified in the digital television international agreement between the governments of the United States and Canada. As this map demonstrates, no interference is predicted to occur to CBLN from WBSF-DT either in the United States or in Canada.

The second map in this statement depicts the areas of predicted interference to CBLN at its post-conversion DTV facilities. At these facilities, the station would have an effective radiated power of 0.400 kW and a center of radiation at 100 meters above average terrain. The increase in effective radiated power to 0.400 kW is based on a notation in the international agreement stating that this will be the value authorized following the conclusion of the transition

period. This map also demonstrates that no interference is predicted to occur to CBLN either in Canada or the United States.

The third map depicts the predicted interference between WBSF-DT and CBLN based on the assumption that CBLN operates with an effective radiated power of 1000 kW and a center of radiation at 305 meters above average terrain. These particular facilities were used for this illustrative analysis because they are considerably greater than the authorized CBLN facilities. As this map demonstrates, the only predicted interference to this hypothetical station is located within the United States. No interference is predicted to occur within the geographic boundaries of Canada.

Under Appendix 3 of the digital television agreement between Canada and the United States, the procedure for assessing the compatibility of assignments and allotments in the plan is described. This appendix lists specific steps to be taken to comply with the provisions of the plan. Because the proposed allotment at Bay City does not meet the spacing requirements with respect to the Sarnia allotment, it is inferred that Industry Canada has concerns over the results of a study conducted under paragraph 3. Consistent with the procedures under Appendix 3 of the agreement, a terrain-based propagation/interference study was conducted. The exhibits in this statement clearly demonstrate that there is no predicted interference to CBLN from WBSF-DT within Canada at allocation

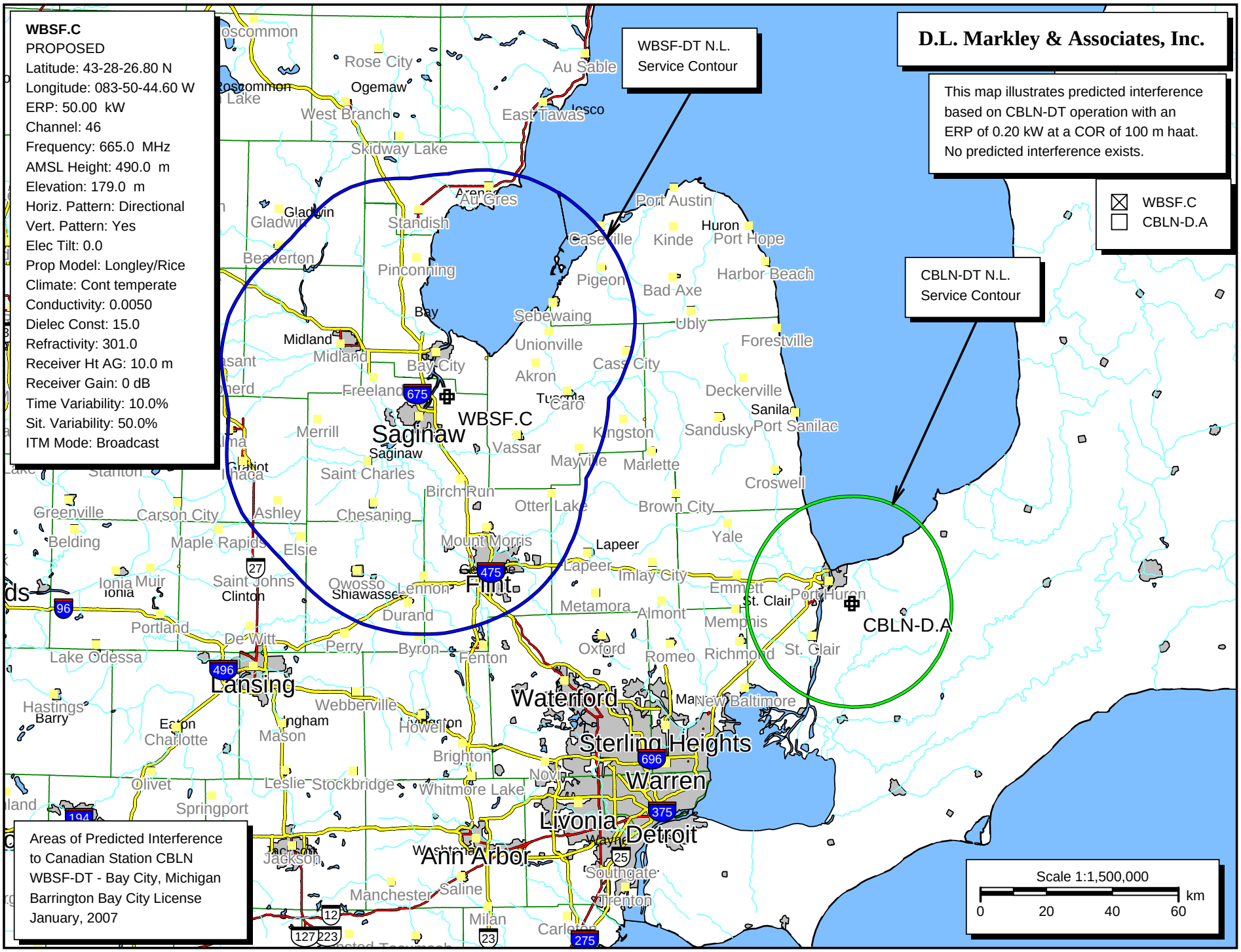
parameters. Moreover, even assuming an expanded DTV operation at 1000 kW ERP, any interference would be limited to land area within the United States. It is therefore respectfully submitted that the proposed allotment for WBSF-DT should be granted as Canadian television stations cannot reasonably be expected to be protected from interference within the United States.

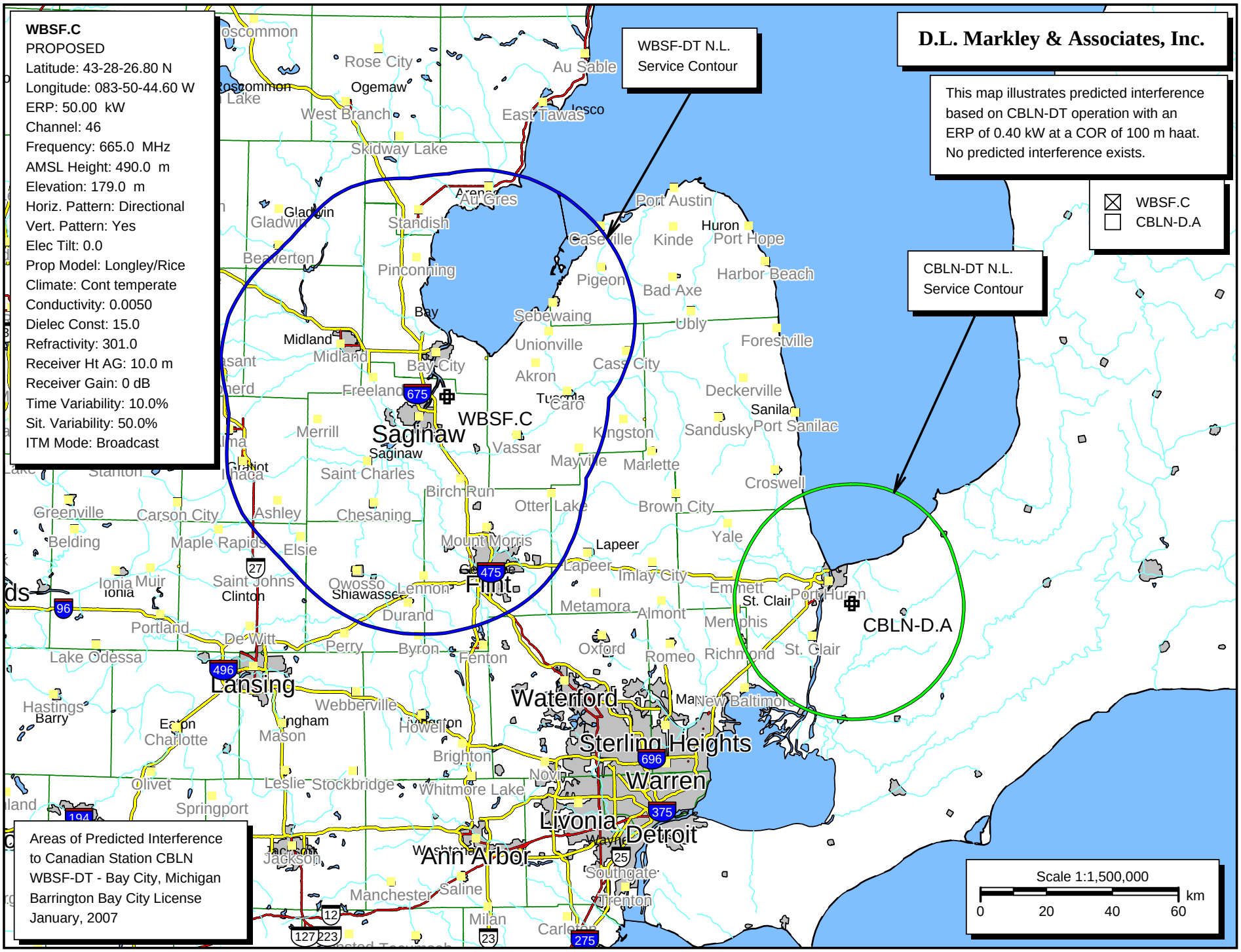
As the Seventh Further Notice of Proposes Rulemaking indicates, the current channel 46 WBSF-DT allocation predicts that 0.0 percent of the resident population within the service area receives interference.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.

01/22/2007
Date

Jeremy D. Ruck, Consulting Engineer


WBSF.C
PROPOSED
Latitude: 43-28-26.80 N
Longitude: 083-50-44.60 W
ERP: 50.00 kW
Channel: 46
Frequency: 665.0 MHz
AMSL Height: 490.0 m
Elevation: 179.0 m
Horiz. Pattern: Directional
Vert. Pattern: Yes
Elec Tilt: 0.0
Prop Model: Longley/Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 301.0
Receiver Ht AG: 10.0 m
Receiver Gain: 0 dB
Time Variability: 10.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast
WBSF-DT N.L.
Service Contour
D.L. Markley & Associates, Inc.
This map illustrates predicted interference based on CBLN-DT operation with an ERP of 0.20 kW at a COR of 100 m haat. No predicted interference exists.
WBSF.C
CBLN-D.A
CBLN-DT N.L.
Service Contour
WBSF.C
CBLN-D.A
Saginaw
Flint
Lansing
Waterford
Sterling Heights
Warren
Livonia
Detroit
Ann Arbor
Bay City
Midland
Port Huron
Areas of Predicted Interference
to Canadian Station CBLN
WBSF-DT - Bay City, Michigan
Barrington Bay City License
January, 2007
Scale 1:1,500,000
0
20
40
60
km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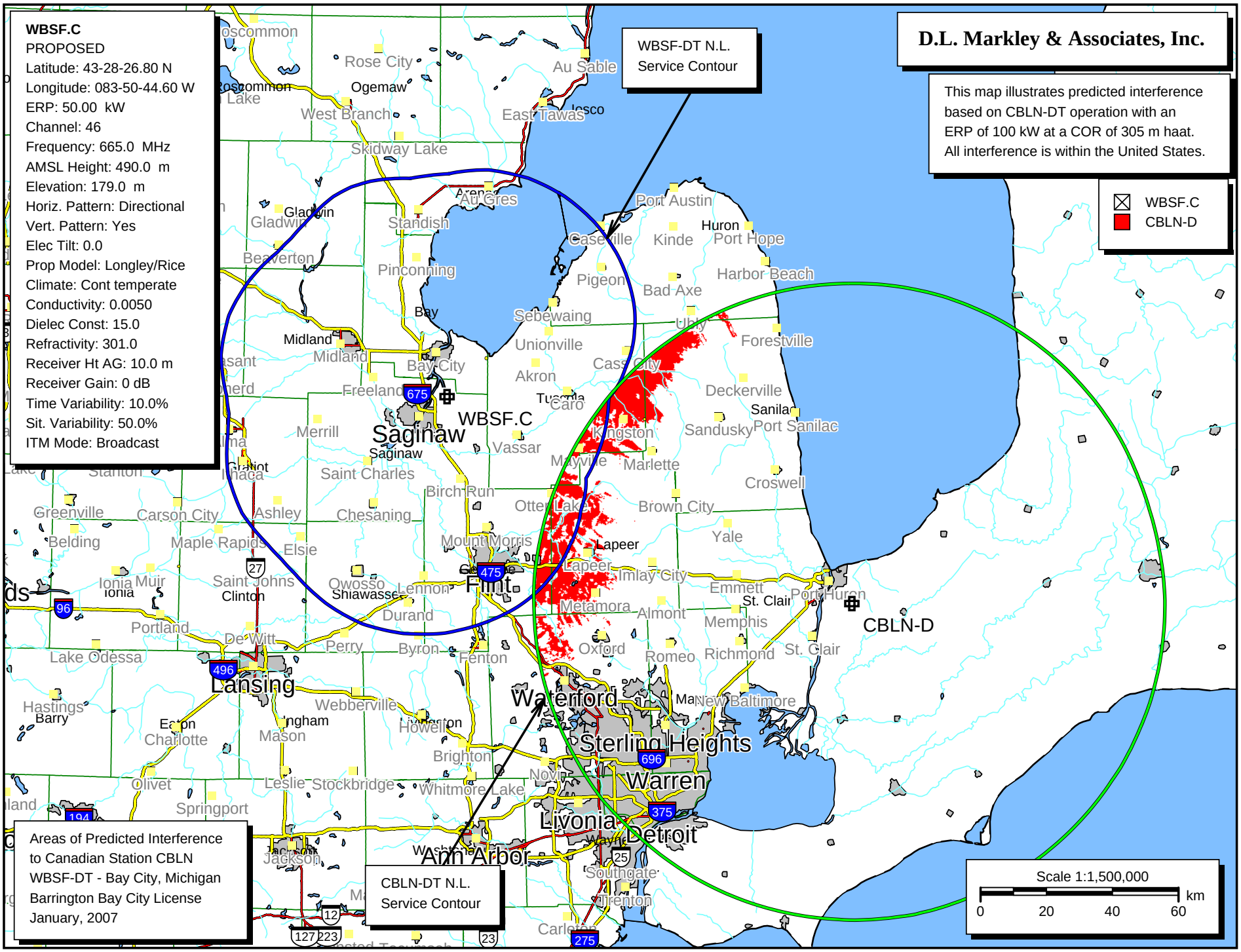
Receiver Ht AG: 10.0 m
Receiver Gain: 0 dB
Time Variability: 10.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast
WBSF-DT N.L.
Service Contour
D.L. Markley & Associates, Inc.
This map illustrates predicted interference based on CBLN-DT operation with an ERP of 0.40 kW at a COR of 100 m haat. No predicted interference exists.
WBSF.C
CBLN-D.A
CBLN-DT N.L.
Service Contour
WBSF.C
Saginaw
Flint
Lansing
Waterford
Sterling Heights
Warren
Livonia
Detroit
Ann Arbor
CBLN-D.A
Port Huron
Areas of Predicted Interference
to Canadian Station CBLN
WBSF-DT - Bay City, Michigan
Barrington Bay City License
January, 2007
Scale 1:1,500,000
0
20
40
60
km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Sit. Variability: 50.0%
ITM Mode: Broadcast
WBSF-DT N.L.
Service Contour
D.L. Markley & Associates, Inc.
This map illustrates predicted interference based on CBLN-DT operation with an ERP of 100 kW at a COR of 305 m haat. All interference is within the United States.
WBSF.C
CBLN-D
Saginaw
WBSF.C
Flint
CBLN-D
Lansing
Waterford
Sterling Heights
Warren
Livonia
Detroit
Ann Arbor
Bay City
Midland
Port Huron
Lapeer
Marlette
Caro
Vassar
Owosso
Ionia
Clinton
Saint Johns
Mount Morris
Birch Run
Otter Lake
Brown City
Yale
Croswell
Sandusky
Port Sanilac
Deckerville
Forestville
Harbor Beach
Bad Axe
Port Austin
Huron
Port Hope
Kinde
Pigeon
Sebewaing
Unionville
Akron
Cass City
Kingston
Marlette
Imlay City
Metamora
Almont
Memphis
Richmond
St. Clair
Romeo
Oxford
Emmett
Fenton
Byron
Perry
De Witt
Portland
Durand
Lennon
Chesaning
Saint Charles
Merrill
Freeland
Standish
Pinconning
Au Gres
Au Sable
East Tawas
Tawas
Rose City
Ogemaw
West Branch
Skidway Lake
Gladwin
Beaverton
Greenville
Carson City
Ashley
Belding
Maple Rapids
Elsie
Ionia
Muir
Lake Odessa
Hastings
Barry
Eaton
Charlotte
Mason
Webberville
Howell
Brighton
Whitmore Lake
Leslie
Stockbridge
Olivet
Springport
Jackson
Southgate
Trenton
Carleton
New Baltimore
Mayville
Areas of Predicted Interference to Canadian Station CBLN
WBSF-DT - Bay City, Michigan
Barrington Bay City License
January, 2007
CBLN-DT N.L.
Service Contour
Scale 1:1,500,000
km
0
20
40
60