

Comprehensive Technical Exhibit
Application for Construction Permit
KXMB-DT – Bismarck, North Dakota
Reiten Television, Inc.
March, 2008

General

The following engineering statement and attached exhibits have been prepared for **Reiten Television, Inc.**, licensee of digital television station KXMB-DT (Facility ID: 55686) at Bismarck, North Dakota, and are in support of their application for construction permit for the KXMB-DT post transition facilities.

KXMB currently operates on channel 12 as an NTSC facility, with current DTV operations on channel 23. In the post-transition environment, KXMB-DT will operate on channel 12 pursuant to the Commission's DTV Table of Allotments. This application is therefore being filed to request a construction permit for the post-transition DTV facilities, which will be slightly different than those indicated in the Table of Allotments. The proposed facilities, even though in variance relative to the allocation facilities, will be consistent with Commission policies and rules.

Discussion of KXMB-DT Allotment

In the Commission's Table of Allotments, KXMB-DT is specified as operating in the post-transition environment on channel 12. Appendix B to the Commission's order adopting the Table specifies maximum effective radiated power of 19.1 kW at an antenna center of radiation at 466 meters above average terrain, and lists an Antenna ID of 74459 for KXMB-DT.

The pattern contained within Antenna ID 74459 is of an omnioid shape. This shape is inconsistent with the type of antenna currently utilized by KXMB-TV, which is a General Electric (GE) Model TY54A3. This antenna model is considered a non-directional antenna, and is the antenna with which the proponent will operate KXMB-DT in the post-transition environment. As a result, the facilities for which the applicant is submitting this application vary slightly from the entry in Appendix B, as the applicant seeks to remove the "directional characteristics" of the antenna

specified in the allotment. The directional characteristics imposed on the antenna appear to be the result of the mathematics involved in the replication of the analog Grade B service contour.

In addition to the removal of the directional characteristics of the antenna, a slight coordinate correction for the tower to be utilized is also necessary. The Appendix B allocation for KXMB-DT specifies coordinates of 46-35-17 North Latitude and 100-48-26 West Longitude. The actual geographic coordinates of the structure in NAD27 are 46-35-23 North Latitude and 100-48-20 West Longitude. This change in the geographic coordinates will also result in a change in the center of radiation for the proposed facility above average terrain. Based on a radiation center above ground level of 351 meters with a site elevation of 676.6 meters, the center of radiation for the proposed facility is 444.3 meters above average terrain.¹

Even though the facilities specified in this application are at a slight variance from those specified in the Table of Allotments, this application would be consistent with the freeze waiver policy established by the Commission at paragraph 151 of the Third Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television. The applicant respectfully requests waiver of the freeze pursuant to that policy. It will be demonstrated in this exhibit that the technical parameters contained herein will permit the facility to utilize its current NTSC antenna to avoid a reduction in post-transition service from its analog service area, and would neither increase the authorized service area by more than five miles nor would more than 0.5 percent new interference be caused to other stations.

¹ Center of radiation AMSL is 1027.6 meters. Average terrain calculated through use of linearly interpolated 30 Second NGDC terrain database sampling 360 radials.

It should be noted that the removal of the directional characteristics is not being requested in an attempt to expand or “maximize” the coverage of the allotted facilities, but rather is requested in order to allow the station to utilize its current NTSC antenna in the post-transition environment while still maintaining coverage similar to the analog facility. The map in Exhibit E-1 depicts the proposed 36 dBu F(50,90) service contour, the 36 dBu F(50,90) service contour based on the allocation, and the licensed Grade B service contour for KXMB-TV. As demonstrated on this map the proposed noise limited service contour would not increase by more than five miles in any direction when compared against the allocation service contour. The increase in distance to the noise-limited service contour is less than 1.0 kilometer in any direction, and is therefore *de minimus* in nature. Furthermore, as this map demonstrates the proposed noise limited service contour is very nearly identical to the licensed Grade B service contour for KXMB-TV.

The proposed facility would not cause impermissible interference to other facilities. In order to demonstrate this fact, two interference studies have been included, which have been labeled as Exhibits E-2 and E-3. These studies depict the predicted interference from the proposed facility to other facilities in the region both based on the KXMB-DT proposed facilities in the case of Exhibit E-2, and also based on the proposed KXMB-DT facilities in Exhibit E-3. The effect of potential masking of interference from other facilities in the region was ignored in the study creation.

In the creation of these studies not only was the effect of masking ignored, but the assumption was made that many of the stations involved may be in the same situation as the applicant with regard to the mathematical directional characteristics applied to antennas that should clearly be considered non-directional. For such facilities listed in Appendix B, the assumption for the basis of the interference calculations was that these facilities would ultimately

operate at the allocated parameters with a non-directional antenna if their antenna ID represented a pattern that was nearly non-directional. Several of the facilities, however, clearly have directional antennas by virtue of the particular antennas imposed. In those cases, especially where the ultimate post-transition facility was already licensed, a construction permit issued in 2008, or an application submitted in 2008 was pending before the Commission the directional pattern identical to that specified under the appropriate Antenna ID in the CDBS was utilized.

The first of these two studies, contained in Exhibit E-2, is based on the proposed KXMB-DT facilities. This study included all facilities of interest in the region. This study demonstrates that the proposed facility would cause interference to four stations. Specifically these four facilities are KXMC-DT at Minot, North Dakota, KNRR-DT at Pembina, North Dakota, KTTM-DT at Huron, South Dakota, and KQSD-DT at Lowry, South Dakota. In each case the predicted interference was minimal with two of the facilities (KTTM-DT and KQSD-DT) having no affected population.² The second study depicts the interference from the proposed facility to the four above mentioned facilities based on the KXMB-DT allocation parameters. In both cases minimal political detail has been plotted on the maps to better identify predicted areas of interference.

These two studies demonstrate the proposed facility would be compliant with the requirement that the proposed facility not create new interference of more than 0.5 percent. In fact, these two studies demonstrate that the change from the Appendix B facilities to the proposed KXMB-DT facilities would not increase the population predicted to receive to interference. The only changes that would result with the parameter modifications discussed are insignificant changes in the land area receiving interference.

² KXMC-DT was considered to utilize a non-directional antenna with all other allocation parameters identical to those in Appendix B. KXMC-DT is licensed to Reiten Television, Inc., and the facilities utilized for the purpose of these studies are those described in a separate construction permit application for that facility.

This application demonstrates the public interest would be served by waiving the filing freeze in this instance and promptly approving this application. All of the filing freeze waiver criteria would be met by the facility proposed in this application.

DTV Checklist – FCC Form 301 Section III-D

The appropriate items on Section III-D of FCC Form 301 have been answered. This application is for the post-transition facilities for KXMB-DT. As a result, items 1(a), 1(d), 1(e), and 2-5 have been answered per the instructions. This section of the comprehensive technical exhibit will, however, provide additional information relative to these responses.

The proposed DTV facilities described in this application will operate on the DTV channel established for the station. Specifically, the proposed facilities would utilize channel 12 in the post-transition environment. This is the channel on which the applicant current operates an NTSC facility. The response of “yes” has therefore been provided under item 1(a).

Under item 1(d), a question is posed concerning the expansion of the noise limited service contour beyond the established value indicated in Appendix B. This question has been answered “yes” although the proposed facilities expand the noise limited service contour along several azimuths by an amount less than five miles. As previously discussed, this minimal extension of the noise limited service contour is the result of the removal of the directional characteristics added to the allocation. It is respectfully submitted that the consistency of this minimal expansion of the service area with Commission proceedings should not preclude rapid processing of this application

The response to item 1(e) is tied to the previous response provided under item 1(d). A response of “yes” is provided since the population within the proposed noise limited service contour would essentially match the population within the Appendix B noise limited service contour. Specifically, by 2000 Census data 131,585 persons reside within the proposed noise limited service contour while 131,534 persons reside within the Appendix B noise limited service contour. This increase in population of 51 persons is 0.04 percent of the population within the allocation noise limited service contour. It should be noted that the Grade B service contour of the corresponding analog facility has a resident population of 131,471 persons. Using this contour as a baseline, the proposed facility would increase the population served by the analog facility by 114 persons or 0.09 percent.

The proposed facility will not have a significant environmental impact. The facility, as a result, will not fall under Section 1.1307 of the Commission’s Rules. More detailed information concerning this response will be contained in section of this technical exhibit pertinent to the Tech Box portion of FCC Form 301.

The proposed facility will also comply with the provisions of Section 73.625 of the Commission’s Rules. Additional information concerning this response will be provided in the subsequent Tech Box section of this exhibit.

The requirements of Section 73.1030 of the Commission’s Rules are not applicable in this particular case. The proposed facility would not operate in any of the zones described in the referenced section, and is not in close proximity to any of the installations described in that section. The response of “yes” to this item is thus applicable.

The structure utilized for the facilities described in this application has been registered with the Commission. Specifically an Antenna Structure Registration Number of 1038718 has been assigned to the tower.

Tech Box – FCC Form 301 Section III-D

This section of the technical exhibit contains additional information relative to the responses required on the Tech Box section of FCC Form 301. Responses to items numbered 1 through 9 in this section have been answered in the appropriate blanks on the form page.

The antenna that would be utilized by the proposed facility is a General Electric (GE) model TY54A3. This is the same antenna that has been in use by the NTSC facility. This antenna is a non-directional antenna with 0.7 degrees of electrical beamtilt and no mechanical beamtilt. Items described under Section 73.625(c)(3) of the Commission's Rules have been omitted from this application since the proposed antenna is considered non-directional antenna.

The tower utilized by the proposed DTV facility would support no other proposed or authorized facilities in the post-transition environment. The tower would not be part of an AM radiation system, and no proposed or authorized AM facilities are located within 3.2 kilometers of the structure. The proposed facility therefore complies with Section 73.625(c) of the Commission's Rules.

As indicated on the form pages, the proposed facility would satisfy the post-transition interference protection provisions of Section 73.616 of the Commission's Rules. Two interference

studies have been previously discussed in this technical exhibit. These interference studies are contained in Exhibits E-2 and E-3.

The proposed KXMB-DT facilities would satisfy the principal community coverage requirements of Section 73.625 of the Commission's Rules. Exhibit E-4 is a map illustrating the predicted coverage of the proposed facility. As this map demonstrates, the entire community of license, Bismarck, North Dakota, would be served with a signal level of greater than 43 dBu. For reference purposes, the 36 dBu F(50,90) service contour has also been included on this map.

The proposed KXMB-DT facility would not constitute a substantial environmental impact as previously discussed. The absence of a significant environmental impact by the proposed facility is based on two considerations. The first of these considerations is the fact that the proposed facility would utilize the existing KXMB transmission facility. Since no new excavation or construction would result, no additional environmental impact to the area would result.

Secondly, the proposed facility would not constitute an RF exposure hazard to persons at the site. For the proposed facility a worst case scenario was assumed using equations contained in OET Bulletin 65. The worst case scenario assumes that all energy radiating from each of the antenna would be directed at the ground. The worst-case predicted power density for KXMB-DT is determined by the following equation:

$$S = \frac{33.4(E_{\text{rel}})^2(ERP)}{h^2}$$

Since all radiation is assumed to be directed at the ground, the relative field component is assigned 1.0 as a value. The effective radiated power is simply the maximum effective radiated

power of the facilities in Watts for KXMB-DT. The denominator term is the height of the center of radiation minus 2 meters to accommodate the average human height. The predicted worst-case power density from the proposed facility is $5.24 \mu\text{W}/\text{cm}^2$. Since this worst case power density is less than the $200 \mu\text{W}/\text{cm}^2$ limit imposed under the uncontrolled environment condition of the applicable safety standard, the proposed facility will not constitute an RF exposure hazard to persons.

In order to protect workers having access to the site from being exposed to levels of non-ionizing radiation which may exceed the applicable safety standards, the applicant certifies that it will coordinate with other present and future users of the site. Such coordination will include, but is not necessarily limited to, a reduction in transmitter power or cessation of operation.

Affidavit

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.



Above signature is digitized copy of actual signature
License Expires November 30, 2009

Jeremy D. Ruck, PE
March 19, 2008

KXMBTV

BLCT2615

Latitude: 46-35-17 N

Longitude: 100-48-26 W

ERP: 316.00 kW

Channel: 12-

Frequency: 206.5 MHz

AMSL Height: 1035.0 m

Horiz. Pattern: Omni

Vert. Pattern: Yes

Elec Tilt: 0.0

Prop Model: FCC Method

KXMB-DT.ALLOC

ALLOCATION

Latitude: 46-35-17 N

Longitude: 100-48-26 W

ERP: 19.10 kW

Channel: 12

Frequency: 207.0 MHz

AMSL Height: 1035.0 m

Horiz. Pattern: Directional

Vert. Pattern: Yes

Elec Tilt: 0.0

Prop Model: FCC Method

KXMB-DT.PRO

PROPOSED

Latitude: 46-35-23 N

Longitude: 100-48-20 W

ERP: 19.10 kW

Channel: 12

Frequency: 207.0 MHz

AMSL Height: 1027.6 m

Horiz. Pattern: Omni

Vert. Pattern: Yes

Elec Tilt: 0.0

Prop Model: FCC Method


Exhibit E-1

Service Contour Comparison

KXMB-DT - Bismarck, North Dakota

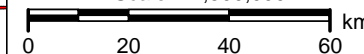
Reiten Television, Inc.

March, 2008

D.L. Markley & Associates, Inc. KXMB-TV Grade B Service Contour KXMB-DT Allocation Noise-Limited Service Contour KXMB-DT Proposed Noise-Limited Service Contour

Note: All three contours are plotted, however, near congruent nature of contours results in difficult resolution of individual contours plotted on this map.

Scale 1:1,500,000



KXMB-DT.PRO**PROPOSED**

Latitude: 46-35-23 N

Longitude: 100-48-20 W

ERP: 19.10 kW

Channel: 12

Frequency: 207.0 MHz

AMSL Height: 1027.6 m

Horiz. Pattern: Omni

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

D.L. Markley & Associates, Inc.

- ☒ KXMB-DT.PRO
- ☐ KRII-DT.APP
- ☐ WIRT-DT.ALL
- ☐ KEYC-DT.ALL
- ☐ KARE-D.APP
- ☐ KCCW-DT.ALL
- ☐ KULR-DT.LIC
- ☐ KBZK-DT.LIC
- ☐ KTVH-DT.MOD
- ☐ KBAO-DT.ALL
- ☐ KUFM-D.CP
- ☐ KECI-DT.ALL
- ☐ KFME-DT.CP
- ☒ KXMC-DT.ALL
- ☒ KNRR-DT.ALL
- ☐ KPSD-DT.CP
- ☒ KTTM-D.APP
- ☒ KQSD-D.CP
- ☐ KPLO-DT.LIC
- ☐ KELO-DT.APP
- ☐ KSFY-DT.ALL
- ☐ KCWY-DT.ALL
- ☐ KDEV-DT.LIC
- ☐ KSGW-DT.LIC

KXMC-DT.ALL

KXMB-DT.PRO

KQSD-D.CP

KPSD-DT.CP

Exhibit E-2

Predicted Areas of Interference

Based on Proposed Facilities

KXMB-DT - Bismarck, North Dakota

Reiten Television, Inc.

March, 2008

Scale 1:3,000,000

0 40 80 120 km

Exhibit E-2
Outgoing Interference Population Report
Based on Proposed KXMB-DT Facilities

KXMB-DT.PRO (12) Bismarck, ND - PROPOSED
Broadcast Type: Digital Service: V
Lat: 46-35-23 N Lng: 100-48-20 W ERP: 19.1 kW AMSL: 1027.6 m
TV Outgoing Interference Study
Signal Resolution: 1.0 km
Consider NTSC Taboo: Yes
KWX error points are considered to
be interference free coverage.
of radials computed for contours: 72
Contours calculated using 8 radial HAAT.
LR Profile Spacing Increment: 0.1 km
Masked interference points are being counted
as interference free.
Pop Centroid DB: 2000 US Census (SF1)

Study Date: 3/19/2008
TV Database Date: 3/19/2008

Primary Terrain: V-Soft 30 Second US Database
Secondary Terrain: V-Soft 3 Second US Terrain

Population Database: 2000 US Census (SF1)

Stations Considered:

Call Letters	City	State	Dist	Bear
KRII-DT.APP (11)	Chisholm	MN	611.3	73.8
WIRT-DT.ALL (13)	Hibbing	MN	603.3	78.8
KEYC-DT.ALL (12)	Mankato	MN	581.6	118.1
KARE-D.APP (11)	Minneapolis	MN	618.9	103.1
KCCW-DT.ALL (12)	Walker	MN	486.4	83.2
KULR-DT.LIC (11)	Billings	MT	597.3	263.9
KBZK-DT.LIC (13)	Bozeman	MT	783.2	266.2
KTVH-DT.MOD (12)	Helena	MT	833.0	275.8
KBAO-DT.ALL (13)	Lewistown	MT	667.9	278.8
KUFM-D.CP (11)	Missoula	MT	1005.2	276.1
KECI-DT.ALL (13)	Missoula	MT	1007.1	277.5
KFME-DT.CP (13)	Fargo	ND	279.6	79.0
KXMC-DT.ALL (13)	Minot	ND	167.4	346.2
KNRR-DT.ALL (12)	Pembina	ND	369.2	42.3
KPSD-DT.CP (13)	Eagle Butte	SD	204.8	214.1
KTTM-D.APP (12)	Huron	SD	329.8	142.9
KQSD-D.CP (11)	Lowry	SD	159.1	156.2
KPLO-DT.LIC (13)	Reliance	SD	306.5	161.6
KELO-DT.APP (11)	Sioux Falls	SD	479.0	133.9

KSFY-DT.ALL (13)	Sioux Falls	SD	479.0	133.9
KCWY-DT.ALL (12)	Casper	WY	613.4	227.8
KDEV-DT.LIC (11)	Cheyenne	WY	758.7	209.4
KSGW-DT.LIC (13)	Sheridan	WY	538.3	248.3

Call	Area	HUnits	Contour	Masked	Ix	Unmasked	Ix	%
KRII-DT.APP (11)	0.0	0	124,190		0		0	0.0
WIRT-DT.ALL (13)	0.0	0	117,419		0		0	0.0
KEYC-DT.ALL (12)	0.0	0	404,185		0		0	0.0
KARE-D.APP (11)	0.0	0	3,474,389		0		0	0.0
KCCW-DT.ALL (12)	0.0	0	96,208		0		0	0.0
KULR-DT.LIC (11)	0.0	0	156,967		0		0	0.0
KBZK-DT.LIC (13)	0.0	0	92,858		0		0	0.0
KTVH-DT.MOD (12)	0.0	0	204,443		0		0	0.0
KBAO-DT.ALL (13)	0.0	0	19,652		0		0	0.0
KUFM-D.CP (11)	0.0	0	159,008		0		0	0.0
KECI-DT.ALL (13)	0.0	0	186,797		0		0	0.0
KFME-DT.CP (13)	0.0	0	254,638		0		0	0.0
KXMC-DT.ALL (13)	1.7	3	95,539		0		5	0.0
KNRR-DT.ALL (12)	130.0	170	36,220		0		306	0.8
KPSD-DT.CP (13)	0.0	0	19,994		0		0	0.0
KTTM-D.APP (12)	28.8	0	68,338		0		0	0.0
KQSD-D.CP (11)	11.1	0	26,952		0		0	0.0
KPLO-DT.LIC (13)	0.0	0	56,147		0		0	0.0
KELO-DT.APP (11)	0.0	0	622,103		0		0	0.0
KSFY-DT.ALL (13)	0.0	0	622,103		0		0	0.0
KCWY-DT.ALL (12)	0.0	0	70,641		0		0	0.0
KDEV-DT.LIC (11)	0.0	0	2,804,346		0		0	0.0
KSGW-DT.LIC (13)	0.0	0	54,652		0		0	0.0

	Housing Units	Population
North Dakota		
Cavalier County		
Total	2,725	4,831
KNRR-DT.ALL (12)	13	26
McLean County		
Total	5,264	9,311
KXMC-DT.ALL (13)	3	5
Nelson County		
Total	2,014	3,715
KNRR-DT.ALL (12)	0	0
Ramsey County		
Total	5,729	12,066
KNRR-DT.ALL (12)	152	274
Walsh County		
Total	5,757	12,389
KNRR-DT.ALL (12)	5	6
South Dakota		
Corson County		

Total	1,536	4,181
KQSD-D.CP (11)	0	0
Hand County		
Total	1,840	3,741
KTTM-D.APP (12)	0	0
Spink County		
Total	3,352	7,454
KTTM-D.APP (12)	0	0

KXMB-DT.ALL**ALLOCATION**

Latitude: 46-35-17 N

Longitude: 100-48-26 W

ERP: 19.10 kW

Channel: 12

Frequency: 207.0 MHz

AMSL Height: 1035.0 m

Elevation: 684.0 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

D.L. Markley & Associates, Inc.

-  KXMB-DT.ALL
-  KXMC-DT.PRO
-  KNRR-DT.ALL
-  KTTM-D.APP
-  KQSD-D.CP

**KXMC-DT.PRO****KXMB-DT.ALL****KQSD-D.CP****Exhibit E-3**

Predicted Areas of Interference

Based on KXMB-DT Allocation

KXMB-DT - Bismarck, North Dakota

Reiten Television, Inc.

March, 2008

Scale 1:3,000,000


0 40 80 120 km**K**

Exhibit E-3
 Outgoing Interference Population Report
 Based on KXMB-DT Appendix B Allocation Facilities

KXMB-DT.ALL (12) Bismarck, ND - ALLOCATION
 Broadcast Type: Digital Service: V
 Lat: 46-35-17 N Lng: 100-48-26 W ERP: 19.1 kW AMSL: 1035.0 m
 TV Outgoing Interference Study
 Signal Resolution: 1.0 km
 Consider NTSC Taboo: Yes
 KWX error points are considered to
 be interference free coverage.
 # of radials computed for contours: 72
 Contours calculated using 8 radial HAAT.
 LR Profile Spacing Increment: 0.1 km
 Masked interference points are being counted
 as interference free.
 Pop Centroid DB: 2000 US Census (SF1)

Study Date: 3/19/2008
 TV Database Date: 3/19/2008

Primary Terrain: V-Soft 30 Second US Database
 Secondary Terrain: V-Soft 3 Second US Terrain

Population Database: 2000 US Census (SF1)

 Stations Considered:

Call Letters	City	State	Dist	Bear
KXMC-DT.PRO (13)	Minot	ND	167.5	346.2
KNRR-DT.ALL (12)	Pembina	ND	369.4	42.3
KTTM-D.APP (12)	Huron	SD	329.7	142.9
KQSD-D.CP (11)	Lowry	SD	159.0	156.1

Call	Area	HUnits	Contour	Masked Ix	Unmasked Ix	%
KXMC-DT.PRO (13)	1.7	3	95,539	0	5	0.0
KNRR-DT.ALL (12)	126.0	169	36,220	0	306	0.8
KTTM-D.APP (12)	27.9	0	68,338	0	0	0.0
KQSD-D.CP (11)	12.8	0	26,952	0	0	0.0



 Housing Units Population
 North Dakota
 Cavalier County
 Total 2,725 4,831
 KNRR-DT.ALL (12) 12 26

McLean County		
Total	5,264	9,311
KXMC-DT.PRO (13)	3	5
Nelson County		
Total	2,014	3,715
KNRR-DT.ALL (12)	0	0
Ramsey County		
Total	5,729	12,066
KNRR-DT.ALL (12)	152	274
Walsh County		
Total	5,757	12,389
KNRR-DT.ALL (12)	5	6
South Dakota		
Corson County		
Total	1,536	4,181
KQSD-D.CP (11)	0	0
Hand County		
Total	1,840	3,741
KTTM-D.APP (12)	0	0
Spink County		
Total	3,352	7,454
KTTM-D.APP (12)	0	0

PROPOSED
Latitude: 46-35-23 N
Longitude: 100-48-20 W
ERP: 19.10 kW
Channel: 12
Frequency: 207.0 MHz
AMSL Height: 1027.6 m
Horiz. Pattern: Omni
Vert. Pattern: Yes
Elec Tilt: 0.0
Prop Model: FCC Method

City of License
Bismarck, North Dakota

D.L. Markley & Associates, Inc.

 Proposed 43 dBu F(50,90) Service Contour
 Proposed 36 dBu F(50,90) Service Contour

KXMB-DT.PRO B

Exhibit E-4
Proposed Service Contours
KXMB-DT - Bismarck, North Dakota
Reiten Television, Inc.
March, 2008

Scale 1:1,500,000

