

**New FM Station LMS file number 0000159286 Rockford, Iowa
Channel 225A – 92.9 MHz – 6.0 kW ERP DA @ 68 m HAAT**

**Proposed Construction Permit Modification
Channel 234A – 94.7 MHz – 3.1 kW ERP @ 65 m HAAT**

August 23, 2023

Technical Narrative

This Technical Narrative and attached exhibits were prepared on behalf of VCY America, Inc., (“VCY”), permittee of non-commercial educational FM station construction permit 0000159286, Facility ID No. 762523, Rockford, Iowa. VCY herein is filing a minor modification application to modify the construction permit to specify operation on non-adjacent Channel 234A (94.7 MHz). Non-adjacent, same class channel changes are permitted per Section 73.3573(a)(1)(iv) of the Commission’s Rules and Regulations.

This minor modification application is being filed as a group of three contingently related applications. VCY proposes to modify co-owned non-commercial educational station KVDI, Channel 257A, Facility ID No. 6417, Huxley, Iowa with a contingent application to specify operation on Channel 258C2 (99.5 MHz). Also, Eldora Broadcasting, Inc., licensee of KDAO-FM, Facility ID No. 19202, Channel 258A, Eldora, Iowa is filing a contingent minor modification application specifying Channel 225A (92.9 MHz). Details of these contingent applications are contained within the respective FCC minor modifications applications.

The proposed Channel 234A facility would operate on Channel 234A (94.7 MHz) with 3.1 kW non-directional with the transmit antenna located at 61 meters height above ground level and 65 meters HAAT.

The Reference Site Channel Study coordinates are located at 43° 06' 44.5" North Latitude, 92° 55' 47.0" West Longitude (NAD 83). The site is an existing tower registered with Antenna Structure Registration ("ASR") number 1220464. This site is fully spaced to all full power FM station facilities. The Channel 234A Reference Site City Grade Exhibit demonstrates the hypothetical FCC 70 dBu contour (16.2 km.) extends over 100 percent of the corporate limits of Rockford.

The Application Site Channel Study coordinates for Channel 234A are located at 43° 06' 43" North Latitude, 92° 48' 55" West Longitude (NAD 83), is fully spaced to all full power FM stations with two exceptions. It is short spaced to first adjacent full power FM stations KKEZ, Channel 231C1, Fort Dodge, Iowa and KCPI, Channel 235A, Albert Lea, Minnesota. VCY requests processing under Section 73.215 contour protection with respect to KKEZ and KCPI. This modification is also compliant with all the requirements of 47CFR §73.315. The proposed Channel 234A application site facility FCC F(50,50) 70 dBu contour reaches 100 percent of Rockford.

A study has been undertaken and exhibits are provided to show the proposed facility is in compliance with the Commission's radio frequency emission limits and Section 106 Compliance.

Rockford, IA CH234A Reference Site Channel Study

REFERENCE		CLASS = A Int = AA		DISPLAY DATES	
43 06 43.0 N.		Current Spacings to 3rd Adj.		DATA 08-24-23	
92 48 55.0 W.		Channel 234 - 94.7 MHz		SEARCH 08-24-23	
Call	Channel	Location	Azi	Dist	FCC
Lat.	Lng.	Ant	Power	HAAT	Margin
KQOP-LP	LIC 234L1	Charles City	IA 114.2	12.8	66.5
43 03 53.9	92 40 20.6	CN	0.100 kW	-3 M	-53.8
Charles City Educational A BLL20031117AAO					
K234BK	LIC 234D	Britt	IA 284.5	68.7	84.5
43 15 48.9	93 38 02.2	CN	0.250 kW	42 M	-15.9
Minn-Iowa Christian Broadc BLFT20100312AAE					
KKEZ	LIC 233C1	Fort Dodge	IA 239.4	133.0	132.5
42 29 42.9	94 12 33.9	CN	100.000 kW	183 M	0.54
Alpha 3e Licensee LLC Debt BMLH20151228BCD					
KKEZ	ALO 233C1	Fort Dodge	IA 239.4	133.0	132.5
42 29 42.9	94 12 33.9		0.000 kW	299 M	0.54
Alpha 3e Licensee LLC Debt					
KCPI	LIC-N 235A	Albert Lea	MN 322.4	73.4	71.5
43 37 59.8	93 22 15.8	NCN	5.000 kW	90 M	1.9
Alpha 3e Licensee LLC Debt BLH20040825ABI					
KCLH	LIC 234A	Caledonia	MN 58.3	124.2	114.5
43 41 23.8	91 30 09.5	CN	2.100 kW	171 M	9.7
Family Radio, Inc. BLH19941125KD					
KCZE	ALO 236A	New Hampton	IA 98.5	40.9	30.5
43 03 23.9	92 19 06.6		0.000 kW	100 M	10.4
Coloff Media, LLC					
KCZE	LIC 236A	New Hampton	IA 99.8	42.4	30.5
43 02 45.9	92 18 09.6	CN	5.500 kW	103 M	11.9
Coloff Media, LLC BLH19921203KC					
KCPI	ALO 235A	Albert Lea	MN 341.5	88.1	71.5
43 51 47.9	93 09 48.7		0.000 kW	100 M	16.6
Alpha 3e Licensee LLC Debt					
KMCH	ALO 234A	Manchester	IA 121.7	131.3	114.5
42 29 03.0	91 27 19.5		0.000 kW	100 M	16.8
Coloff Media, LLC					
KULT-LP	LIC 233L1	Cedar Falls	IA 156.2	72.6	55.5
42 30 49.9	92 27 30.6	CN	0.100 kW	29 M	17.1
Board Of Control For Stude BLL20031017AAB					
KMCH	LIC 234A	Manchester	IA 118.5	134.0	114.5
42 31 41.9	91 22 53.5	CN	6.000 kW	100 M	19.5
Coloff Media, LLC BLH19911227KB					
KGGO	LIC 235C0	Des Moines	IA 198.0	172.7	151.5
41 37 54.0	93 27 24.8	CN	100.000 kW	325 M	21.2
Radio License Holding Cbc, BMLH19870212KB					

Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
KGGO	ALO 235C0	Des Moines	IA 198.0	172.7	151.5	21.2	
41 37 54.0	93 27 24.8		0.000 kW	450 M			
Radio License Holding Cbc,							
K234DB	LIC 234D	Owatonna	MN 344.8	110.9	84.5	26.4	
44 04 25.9	93 10 48.8	CN	0.250 kW 0 M				
Townsquare Media Faribault 0000131414							
KIFG-FM	ALO 237A	Iowa Falls	IA 206.3	74.1	30.5	43.6	
42 30 48.9	93 12 57.7		0.000 kW	100 M			
Times-Citizen Communicatio							
KIFG-FM	LIC 237A	Iowa Falls	IA 206.3	74.1	30.5	43.6	
42 30 48.9	93 12 57.7	CN	6.000 kW	59 M			
Times-Citizen Communicatio BLH19950511KD							
K235CT	LIC-D 235D	Decorah	IA 75.2	78.1	33.5	44.6	
43 17 12.9	91 53 03.6	DCN	0.250 kW 0 M				
La Communications, Inc. 0000204210							
KYBA	LIC 287C2	Stewartville	MN 8.6	63.0	14.5	48.6	
43 40 22.8	92 41 54.6	CN	50.000 kW	150 M			
Townsquare License, LLC BLH19930205KD							
KYBA	ALO 287C2	Stewartville	MN 7.6	68.1	14.5	53.6	
43 43 08.9	92 42 12.6		0.000 kW	150 M			
Townsquare License, LLC							
KSTP-FM	ALO 233C	St. Paul	MN 353.3	218.3	164.5	53.8	
45 03 44.9	93 08 22.8		0.000 kW	600 M			
Kstp-Fm FCC License Sub, L							
KSTP-FM	LIC 233C	St. Paul	MN 353.3	218.3	164.5	53.8	
45 03 44.8	93 08 22.7	CN	100.000 kW	372 M			
Kstp-Fm FCC License Sub, L BMLH19910923KF							

Ref. Site

Rockford, IA
Latitude: 43-06-43 N
Longitude: 092-48-55 W
ERP: 6.0 kW
HAAT: 100 m
Channel: 234
Frequency: 94.7 MHz

Channel 234A Rockford, Iowa
Hypothetical 70 dBu contour City Grade Exhibit

16.2 km. hypothetical FCC 70 dBu contour

Nora Springs

Rudd

Osage

Floyd

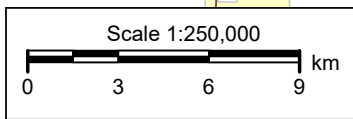
+ Ref. Site

Rockford

Charles City

Floyd

HORIZON
BROADCAST SOLUTIONS



V-Soft Communications LLC ©

Rockford, IA CH234A Application Site Channel Study

REFERENCE				CLASS = A Int = AA			DISPLAY DATES		
43 06 44.5 N.				Current Spacings to 3rd Adj.			DATA	08-24-23	
92 55 47.0 W.				Channel 234 - 94.7 MHz			SEARCH	08-24-23	

Call	Channel	Location		Azi	Dist	FCC	Margin		
Lat.	Lng.	Ant	Power		HAAT				

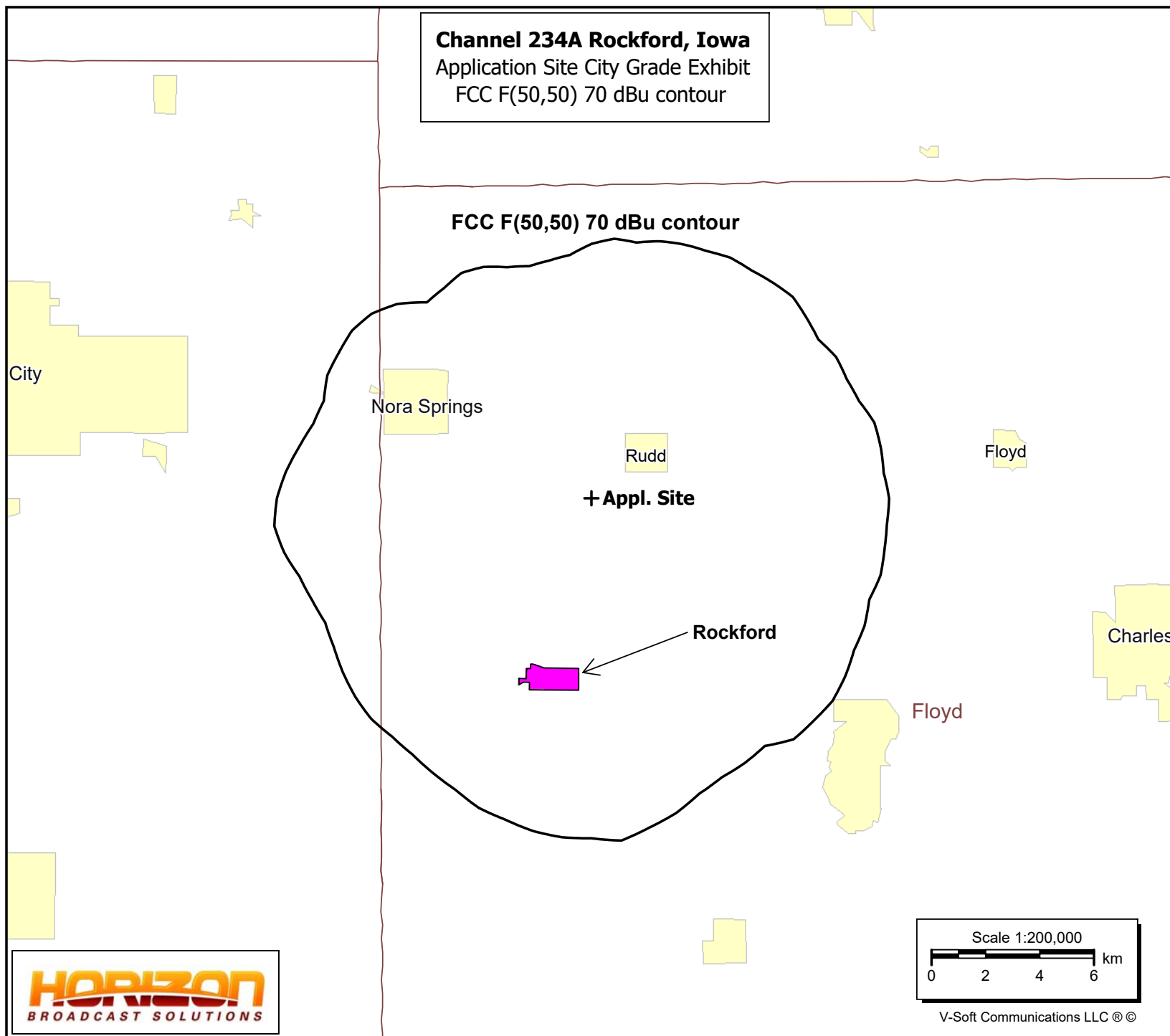
KQOP-LP	LIC	234L1	Charles City	IA	104.1	21.6	66.5	-44.9	
43 03 53.9	92 40 20.6	CN	0.100 kW			-3 M			
Charles City Educational A				BLL20031117AAO					
K234BK	LIC	234D	Britt	IA	286.7	59.7	84.5	-24.8	
43 15 48.9	93 38 02.2	CN	0.250 kW			42 M			
Minn-Iowa Christian Broadc				BLFT20100312AAE					
KKEZ	LIC	233C1	Fort Dodge	IA	237.1	125.1	132.5	-7.4	
42 29 42.9	94 12 33.9	CN	100.000 kW			183 M			
Alpha 3e Licensee LLC Debt				BMLH20151228BCD					
Note: Adopt Section 73.215 contour protection with respect to KKEZ									
KCPI	LIC-N	235A	Albert Lea	MN	328.5	68.0	71.5	-3.5	
43 37 59.8	93 22 15.8	NCN	5.000 kW			90 M			
Alpha 3e Licensee LLC Debt				BLH20040825ABI					
Note: Adopt Section 73.215 contour protection with respect to KCPI									
KCLH	LIC	234A	Caledonia	MN	60.4	132.2	114.5	17.7	
43 41 23.8	91 30 09.5	CN	2.100 kW			171 M			
Family Radio, Inc.				BLH19941125KD					
KGGO	LIC	235C0	Des Moines	IA	194.9	170.1	151.5	18.6	
41 37 54.0	93 27 24.8	CN	100.000 kW			325 M			
Radio License Holding Cbc,				BMLH19870212KB					
KCZE	LIC	236A	New Hampton	IA	98.0	51.6	30.5	21.1	
43 02 45.9	92 18 09.6	CN	5.500 kW			103 M			
Coloff Media, LLC				BLH19921203KC					
KULT-LP	LIC	233L1	Cedar Falls	IA	149.8	76.8	55.5	21.4	
42 30 49.9	92 27 30.6	CN	0.100 kW			29 M			
Board Of Control For Stude				BLL20031017AAB					
K234DB	LIC	234D	Owatonna	MN	349.4	108.7	84.5	24.2	
44 04 25.9	93 10 48.8	CN	0.250 kW	0 M					
Townsquare Media Faribault				0000131414					
KMCH	LIC	234A	Manchester	IA	116.7	142.3	114.5	27.8	
42 31 41.9	91 22 53.5	CN	6.000 kW			100 M			
Coloff Media, LLC				BLH19911227KB					
KIFG-FM	LIC	237A	Iowa Falls	IA	199.4	70.5	30.5	40.0	
42 30 48.9	93 12 57.7	CN	6.000 kW			59 M			
Times-Citizen Communicatio				BLH19950511KD					
KYBA	LIC	287C2	Stewartville	MN	16.6	65.0	14.5	50.5	
43 40 22.8	92 41 54.6	CN	50.000 kW			150 M			
Townsquare License, LLC				BLH19930205KD					

Appl. Site CP Mod

Rockford, IA
0000159286
Latitude: 43-06-44.50 N
Longitude: 092-55-47 W
ERP: 3.10 kW
HAAT: 65.01
Channel: 234
Frequency: 94.7 MHz
AMSL Height: 396.8 m
Elevation: 335.8 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

Channel 234A Rockford, Iowa

Application Site City Grade Exhibit
FCC F(50,50) 70 dBu contour



Appl. Site CP Mod

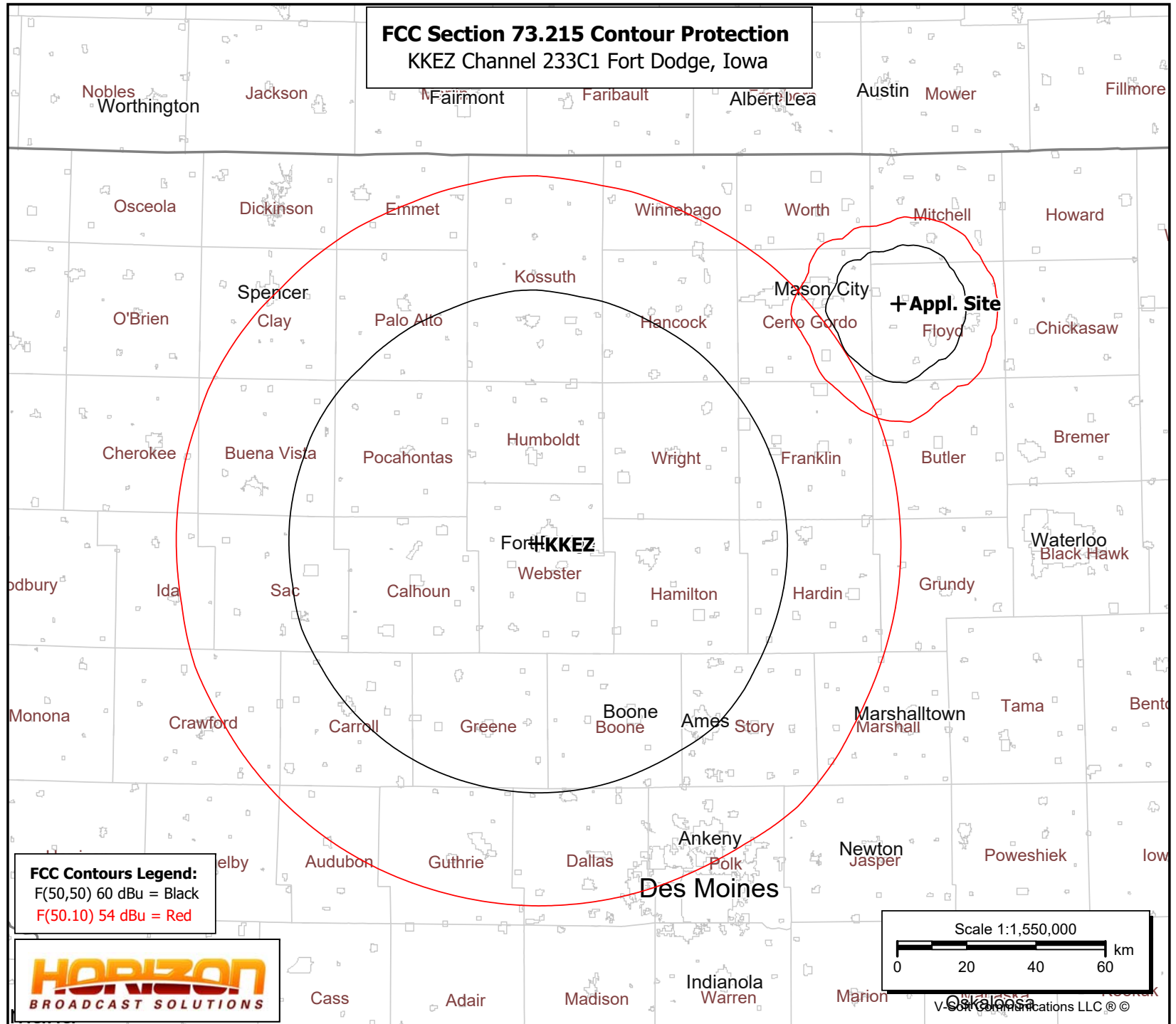
Rockford, IA
0000159286
Latitude: 43-06-44.50 N
Longitude: 092-55-47 W
ERP: 3.10 kW
HAAT: 65.01
Channel: 234
Frequency: 94.7 MHz
AMSL Height: 396.8 m
Elevation: 335.8 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

KKEZ

Fort Dodge, IA
BMLH20151228BCD
Latitude: 42-29-42.90 N
Longitude: 094-12-33.90 W
ERP: 100.00 kW
HAAT: 299 m
Channel: 233
Frequency: 94.5 MHz
AMSL Height: 638.0 m
Elevation: 342.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

FCC Section 73.215 Contour Protection

KKEZ Channel 233C1 Fort Dodge, Iowa



Appl. Site CP Mod

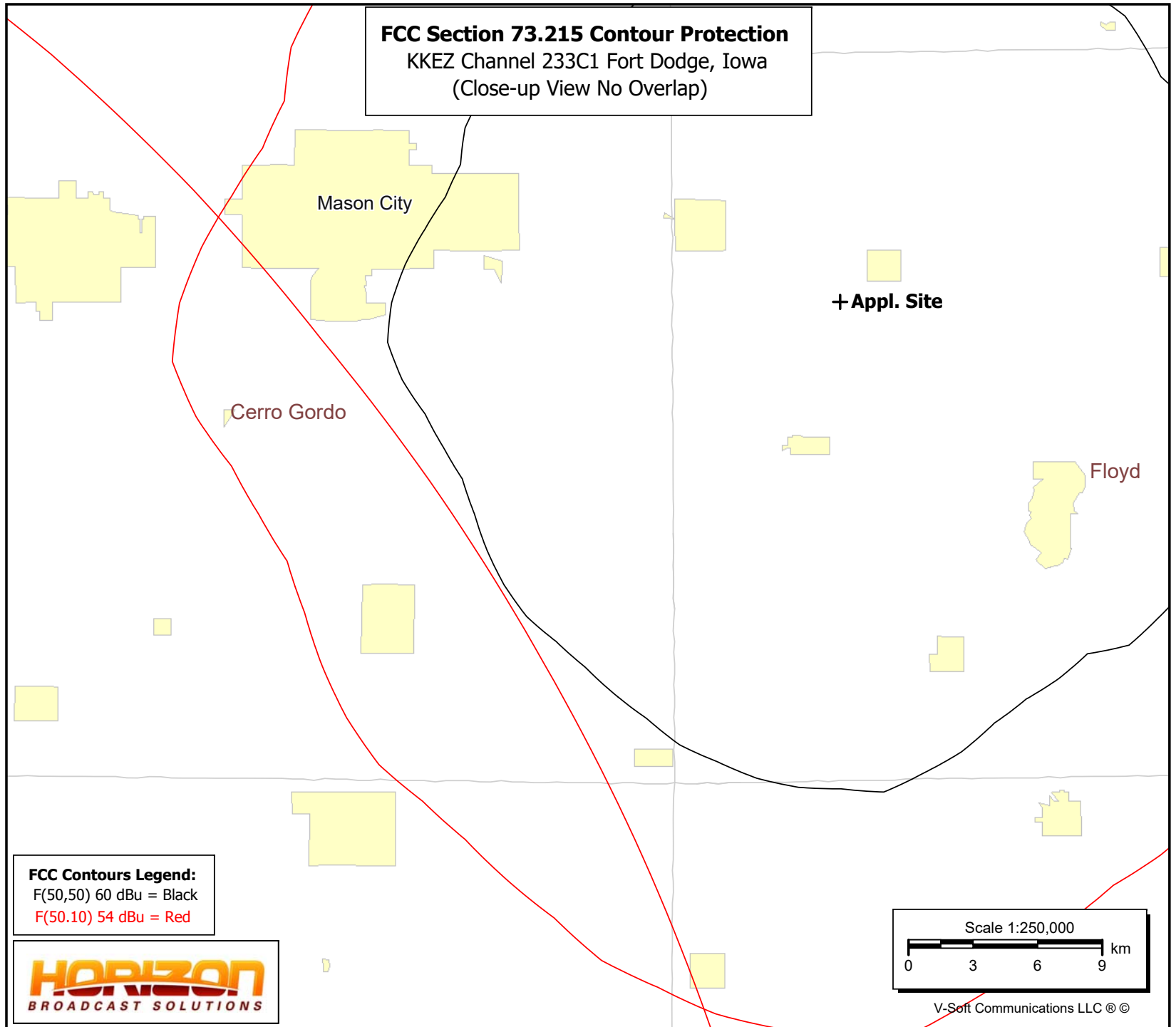
Rockford, IA
0000159286
Latitude: 43-06-44.50 N
Longitude: 092-55-47 W
ERP: 3.10 kW
HAAT: 65.01
Channel: 234
Frequency: 94.7 MHz
AMSL Height: 396.8 m
Elevation: 335.8 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

KKEZ

Fort Dodge, IA
BMLH20151228BCD
Latitude: 42-29-42.90 N
Longitude: 094-12-33.90 W
ERP: 100.00 kW
HAAT: 299 m
Channel: 233
Frequency: 94.5 MHz
AMSL Height: 638.0 m
Elevation: 342.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

FCC Section 73.215 Contour Protection

KKEZ Channel 233C1 Fort Dodge, Iowa
(Close-up View No Overlap)

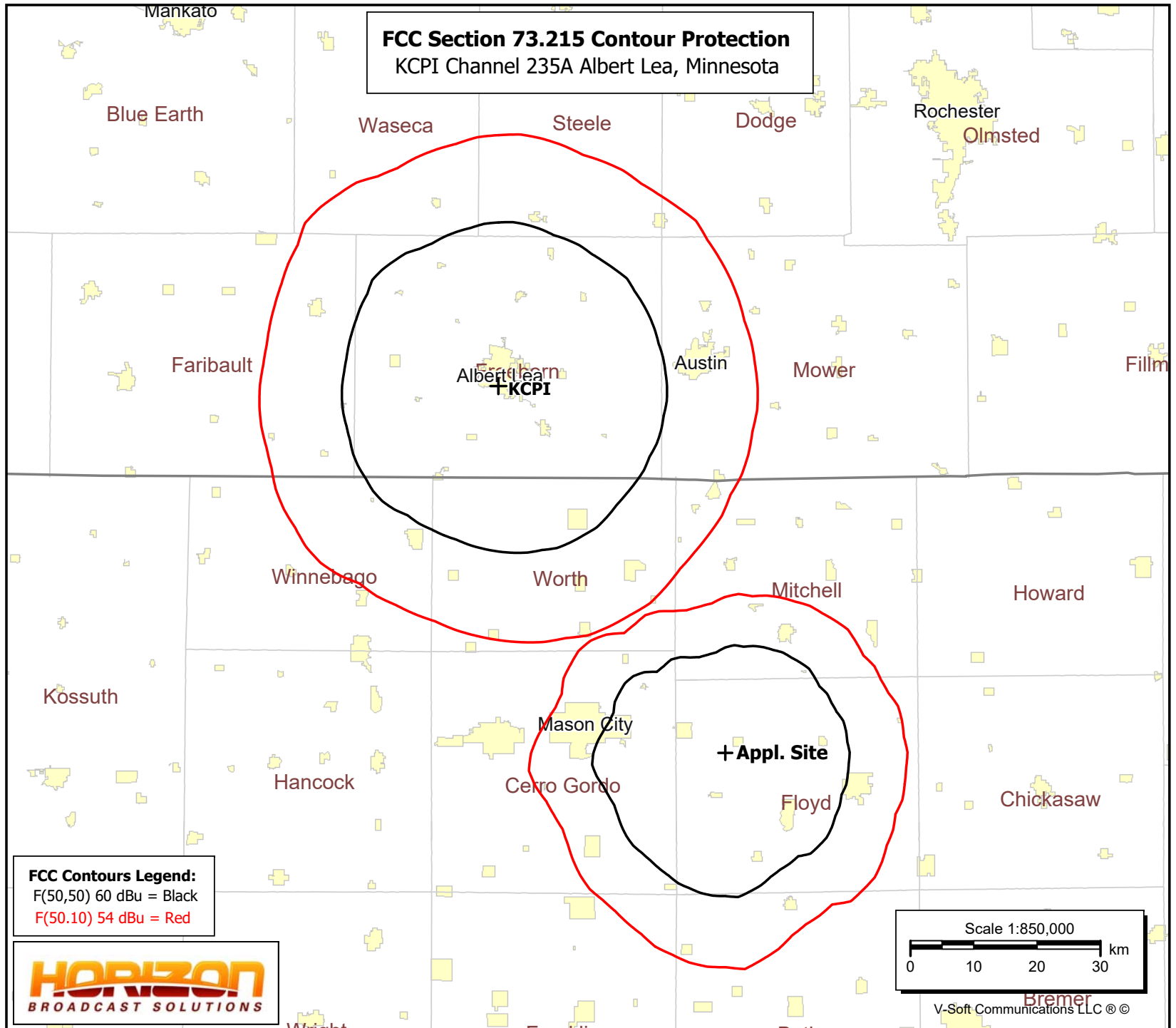


Appl. Site CP Mod

Rockford, IA
0000159286
Latitude: 43-06-44.50 N
Longitude: 092-55-47 W
ERP: 3.10 kW
HAAT: 65.01
Channel: 234
Frequency: 94.7 MHz
AMSL Height: 396.8 m
Elevation: 335.8 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

KCPI

Albert Lea, MN
BLH20040825ABI
Latitude: 43-37-59.80 N
Longitude: 093-22-15.80 W
ERP: 5.00 kW
HAAT: 90.0
Channel: 235
Frequency: 94.9 MHz
AMSL Height: 474.0 m
Elevation: 372.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

FCC Section 73.215 Contour Protection
KCPI Channel 235A Albert Lea, Minnesota

**Human Exposure to Radiofrequency Electromagnetic Field
&
Section 106 Compliance
(Environmental)**

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. 1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997, regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. VCY America, Inc. ("VCY") is the permittee for FM construction permit 0000159286, Channel 225A, Facility ID No. 762523, Rockford, IA. VCY herein proposes to modify the Rockford construction permit to specify operation on non-adjacent Channel 234A (94.7 MHz) from the same transmit location. The existing tower 80.8 meters in overall height and is located at 41° 35' 20.2" N ~ 93° 32' 17.8" W (NAD 83). The tower is registered with the Antenna Registration Structure "ASR" number 1220464. The proposed transmit antenna is an ERI Model LP-2E two bay full wave circular polarized non-directional antenna with a center of radiation of 61.0 meters AGL. The proposed modified facility would operate on Channel 234A, with 3.1 kW ERP non-directional at 65 meters HAAT. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of § 1.1306 of the FCC Rules. The proposed Channel 234A facility would operate from an existing tower and no modifications are being made to the tower. Therefore, it is believed to be exempt from a Section 106 review by the SHPO/THPO.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. The ERI antenna is included in the revised OET FM Model Program under Type 3, Opposed "U" dipole. Using the Type 3 antenna selection, the maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is 8.55 $\mu\text{W}/\text{cm}$ at 39.6 meters, which is 4.28 percent of the general population/uncontrolled maximum permitted exposure limit. This is below the five percent threshold limit described in 1.1307(b) regarding sites with multiple emitters, which excludes applicant from responsibility for taking any corrective action in areas where the proposal's contribution is less than five percent.

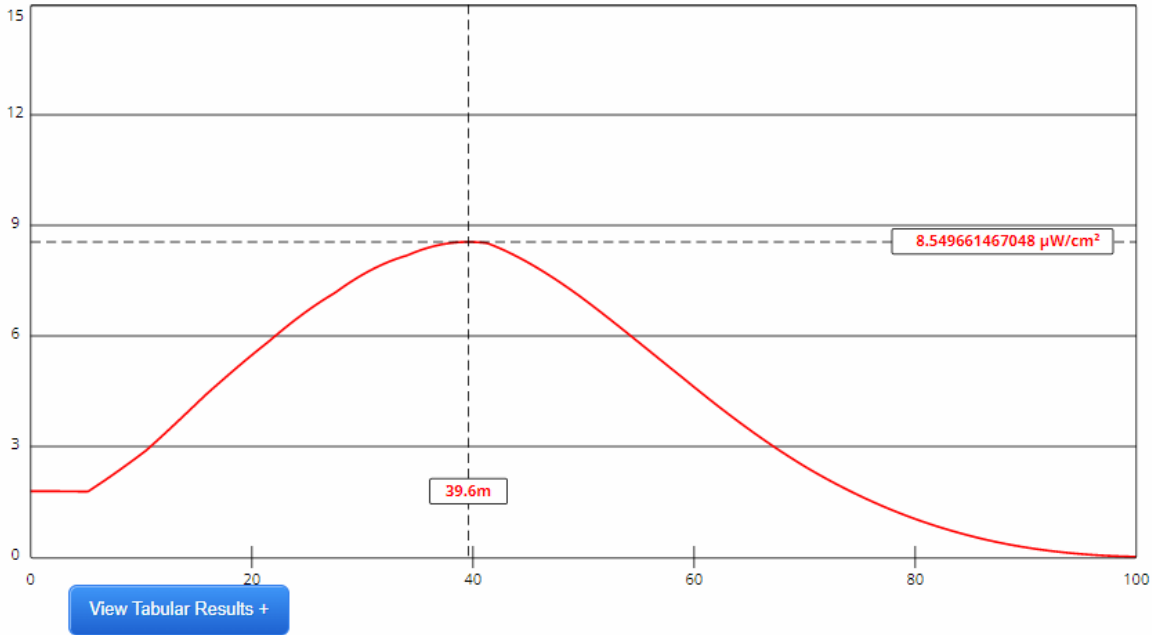
The applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

FM Model

Electromagnetic Compatibility Division

- FM Model
- FCC Policy on Human Exposure
- RF Safety FAQ
- Body Tissue Dielectric Parameters
- RF Safety Highlighted Releases

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data published in 1985 by the EPA. [Show More....](#)



Channel Selection	Channel 234 (94.7 MHz) ▼		
Antenna Type +	EPA Type 3: Opposed U Dipole ▼		
Height (m)	61	Distance (m)	100
ERP-H (W)	3100	ERP-V (W)	3100
Num of Elements	2	λ	1
Num of Points	500	Apply	