

# **TECHNICAL NARRATIVE**

**August 30, 2022**

This Technical Statement was prepared on behalf of QXZ MediaWorks LLC ("QXZ"). QXZ was the winning bidder for MM-FM1150-A, Channel 235A, Richland Springs, Texas in FCC FM Broadcast Auction 109 which was completed on August 12, 2021. QXZ was granted LMS construction permit 0000158484 for Channel 285A, Facility ID No. 762373, Richland Springs and assigned the call sign KQXZ. QXZ herein is filing a construction permit modification application to specify operation at Adamsville, Texas from a new transmit location. The proposal is described in its entirety for the convenience of the FCC staff but the actual requests are made by the application itself. Please refer to the comprehensive Section 307(b) exhibit for more details about the proposed city of license change.

The proposed KQXZ Channel 285A reference site coordinates are located at 31° 17' 19" North Latitude and 98° 16' 01" West Longitude (NAD 83) and the site is fully spaced to all full power FM facilities. The proposed KQXZ Channel 285A application site coordinates are located at 31° 15' 20.3" North Latitude and 98° 10' 30" West Longitude (NAD 83). The proposed application site is an existing tower 101.1 meters in overall height and is registered with FCC Antenna Structure Registration number 1254561. This modification is also compliant with all the requirements of 47CFR §73.207 and 47CFR §73.315 with three exceptions. The application site is short-spaced to co-channel full power FM station KBHT, Channel 285A, Bellmead, Texas and first adjacent full power FM station KHSB-FM, Channel 284A, Kingsland, Texas. QXZ requests processing under Section 73.215 contour protection with respect to KBHT and KHSB-FM.

The proposed Channel 285A facility will operate with 4.2 kW ERP non-directional at 95 meters above ground level and 77.88 meters HAAT. The FCC F(50,50) 70 dBu contour easily covers 100 percent of Adamsville.

The KQXZ application site is not located within 320 kilometers of the border with Mexico. Therefore, Mexican concurrence is not required.

Exhibits demonstrate the proposed KQXZ Channel 285A facility is in compliance with the Commission's radio frequency emission limits.

# KQXZ Reference Site Channel Study

REFERENCE		CLASS = A Int = AA		DISPLAY DATES	
31 17 19.0 N.				DATA	08-29-22
98 16 01.0 W.		Current Spacings to 3rd Adj.		SEARCH	08-29-22
----- Channel 285 - 104.9 MHz -----					
Call	Channel	Location	Azi	Dist	FCC
Lat.	Lng.	Ant	Power	HAAT	Margin
-----					
NEW/KQXZ	CP -N 285A	Richland Springs	TX 268.4	64.5	114.5
31 16 14.0	98 56 37.6	NCN	0.100 kW	36 M	-50.0
	Qxz Mediaworks LLC		0000158484		
AL15266	ALO 284A	Kingsland	TX 196.1	71.7	71.5
30 40 03.7	98 28 30.1		0.000 kW	100 M	0.15
KBHT	LIC-Z 285A	Bellmead	TX 75.7	115.0	114.5
31 32 15.6	97 05 33.0	ZCN	6.000 kW	100 M	0.54
	M&m Broadcasters, Ltd.		BLH20130813AAM		
KHSB-FM	LIC-Z 284A	Kingsland	TX 179.7	72.0	71.5
30 38 19.7	98 15 45.5	ZCN	1.050 kW	242 M	0.54
	Munbilla Broadcasting Prop		0000193000		
KQMJ	LIC 284A	Blanket	TX 319.8	76.8	71.5
31 48 55.5	98 47 34.2	CN	5.100 kW	109 M	5.3
			BLH20140811AAA		
KTXX-FM	LIC-Z 285A	Bee Cave	TX 163.1	120.4	114.5
30 14 57.5	97 54 06.2	ZCN	3.200 kW	136 M	5.9
	Genuine Austin Radio, L.P.		BLH20100415AAE		
KHTL-LP/K CP	284L1	Killeen	TX 113.1	61.9	55.5
31 04 09.0	97 40 10.0	CY	0.092 kW	31 M	6.4
	Killeen Seventh Day Advent		0000189449		
KVBM-LP	LIC 284L1	Killeen	TX 107.9	62.9	55.5
31 06 47.6	97 38 22.0	CN	0.018 kW	68 M	7.4
	Killeen Seventh Day Advent		BLL20060710ABK		
KUSJ	LIC 288C2	Harker Heights	TX 118.9	69.3	54.5
30 59 09.7	97 37 52.0	CN	33.000 kW	183 M	14.8
	Townsquare Media Killeen-T		BLH19990323KB		
KRYH-LP	LIC 284L1	Temple	TX 103.6	88.5	55.5
31 05 56.6	97 21 54.0	CN	0.032 kW	52 M	33.0
	Power-Up Radio, Inc.		BLL20040213ACX		
KEAN-FM	LIC 286C1	Abilene	TX 311.6	166.7	132.5
32 16 35.5	99 35 39.3	CN	100.000 kW	270 M	34.3
	Townsquare License, LLC		BLH20010730ABR		
KEAN-FM	ALO 286C1	Abilene	TX 311.5	166.8	132.5
32 16 35.5	99 35 40.3		0.000 kW	299 M	34.3
	Townsquare License, LLC				
KUSJ	ALO 288C2	Harker Heights	TX 115.2	92.1	54.5
30 55 58.7	97 23 41.0		0.000 kW	150 M	37.6
	Townsquare Media Killeen-T				

Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
KMIL	LIC-N 286C3	Cameron		TX 111.8	127.3	88.5	38.8
30 51 30.7	97 01 48.0	NCN	15.000 kW		100 M		
	Centex Broadcasting, LLC		BLH20070208AIB				
K231DF	LIC-D 231D	Killeen		TX 113.3	53.2	9.5	43.7
31 05 54.6	97 45 16.1	DCN	0.250 kW	0 M			
	Martin Broadcasting, Inc.		0000160067				
KSZX	STA 288C3	Santa Anna		TX 293.5	98.3	41.5	56.8
31 38 15.5	99 13 05.1	CN	12.000 kW		12 M		
			0000193689				
KSZX	LIC-N 288C3	Santa Anna		TX 293.5	98.3	41.5	56.8
31 38 15.5	99 13 05.1	NCN	12.000 kW		12 M		
			BLH20160919AAH				

**KQXZ Ref. Site**

Adamsville, TX

Latitude: 31-17-19 N

Longitude: 098-16-01 W

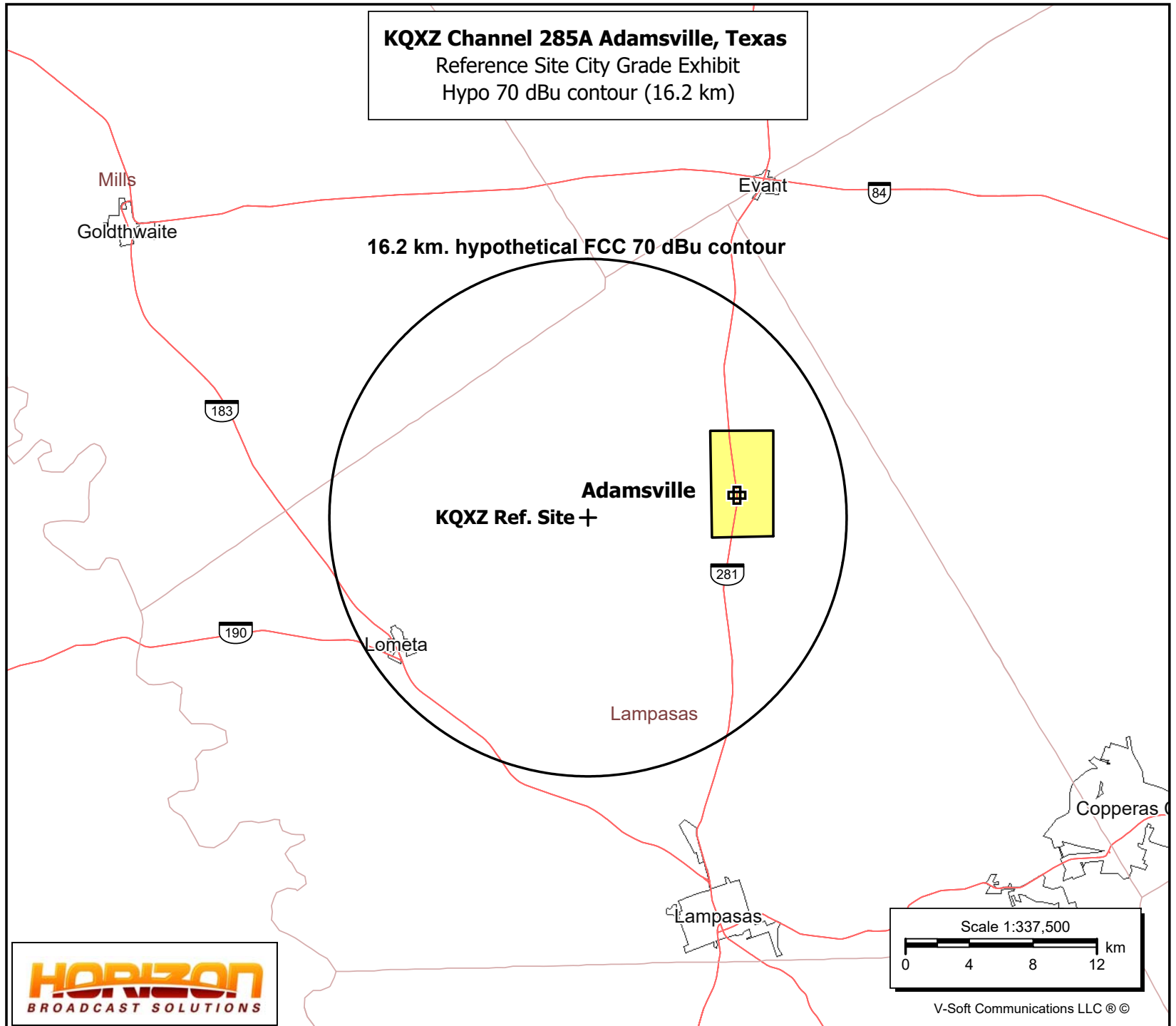
Channel: 285

Frequency: 104.9 MHz

**KQXZ Channel 285A Adamsville, Texas**

Reference Site City Grade Exhibit

Hypo 70 dBu contour (16.2 km)



**HORIZON**  
BROADCAST SOLUTIONS

V-Soft Communications LLC ©

# KQXZ Application Site Channel Study

REFERENCE		CLASS = A Int = AA		DISPLAY DATES		
31 15 20.3 N.				DATA	08-29-22	
98 10 30.0 W.		Current Spacings to 3rd Adj.		SEARCH	08-29-22	
----- Channel 285 - 104.9 MHz -----						
Call	Channel	Location	Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power	HAAT		
-----						
NEW/KQXZ	CP -N 285A	Richland Springs	TX 271.5	73.2	114.5	-41.3
31 16 14.0	98 56 37.6	NCN	0.100 kW	36 M		
	Qxz Mediaworks LLC		0000158484			
KBHT	LIC-Z 285A	Bellmead	TX 72.7	107.6	114.5	-6.9
31 32 15.6	97 05 33.0	ZCN	6.000 kW	100 M		
	M&m Broadcasters, Ltd.		BLH20130813AAM			
<b>Note: Adopt Section 73.215 contour protection with respect to KBHT</b>						
KHTL-LP/K	CP 284L1	Killeen	TX 113.2	52.4	55.5	-3.1
31 04 09.0	97 40 10.0	CY	0.092 kW	31 M		
	Killeen Seventh Day Advent		0000189449			
KHSB-FM	LIC-Z 284A	Kingsland	TX 187.0	68.9	71.5	-2.6
30 38 19.7	98 15 45.5	ZCN	1.050 kW	242 M		
	Munbilla Broadcasting Prop		0000193000			
<b>Note: Adopt Section 73.215 contour protection with respect to KSHB-FM</b>						
KVBM-LP	LIC 284L1	Killeen	TX 107.1	53.4	55.5	-2.1
31 06 47.6	97 38 22.0	CN	0.018 kW	68 M		
	Killeen Seventh Day Advent		BLL20060710ABK			
AL15266	ALO 284A	Kingsland	TX 203.7	71.2	71.5	-0.29
30 40 03.7	98 28 30.1		0.000 kW	100 M		
KTXX-FM	LIC-Z 285A	Bee Cave	TX 166.8	114.6	114.5	0.09
30 14 57.5	97 54 06.2	ZCN	3.200 kW	136 M		
	Genuine Austin Radio, L.P.		BLH20100415AAE			
KUSJ	LIC 288C2	Harker Heights	TX 119.9	59.9	54.5	5.4
30 59 09.7	97 37 52.0	CN	33.000 kW	183 M		
	Townsquare Media Killeen-T		BLH19990323KB			
KQMJ	LIC 284A	Blanket	TX 316.9	85.4	71.5	13.9
31 48 55.5	98 47 34.2	CN	5.100 kW	109 M		
			BLH20140811AAA			
KRYH-LP	LIC 284L1	Temple	TX 102.5	79.1	55.5	23.6
31 05 56.6	97 21 54.0	CN	0.032 kW	52 M		
	Power-Up Radio, Inc.		BLL20040213ACX			
KUSJ	ALO 288C2	Harker Heights	TX 115.6	82.6	54.5	28.1
30 55 58.7	97 23 41.0		0.000 kW	150 M		
	Townsquare Media Killeen-T					
KMIL	LIC-N 286C3	Cameron	TX 111.7	117.8	88.5	29.3
30 51 30.7	97 01 48.0	NCN	15.000 kW	100 M		
	Centex Broadcasting, LLC		BLH20070208AIB			
K231DF	LIC-D 231D	Killeen	TX 113.5	43.7	9.5	34.2
31 05 54.6	97 45 16.1	DCN	0.250 kW	0 M		
	Martin Broadcasting, Inc.		0000160067			

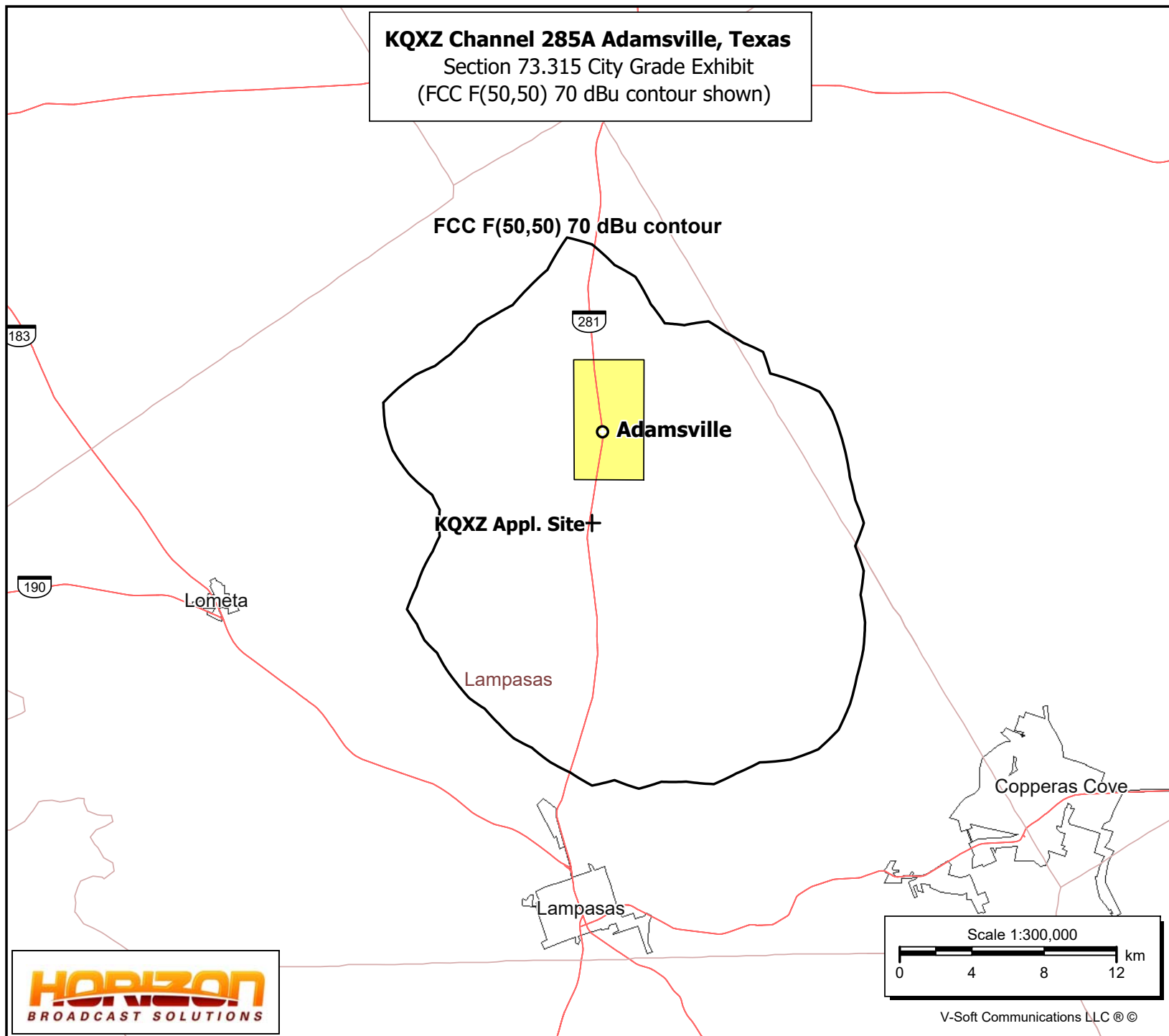
Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
KEAN-FM	LIC	286C1	Abilene	TX	310.6	175.8	43.3
32 16 35.5	99 35 39.3	CN	100.000 kW			270 M	
Townsquare License, LLC BLH20010730ABR							
KEAN-FM	ALO	286C1	Abilene	TX	310.6	175.8	43.3
32 16 35.5	99 35 40.3		0.000 kW			299 M	
Townsquare License, LLC							
KLQB	ALO	282C2	Taylor	TX	139.3	107.2	52.7
30 31 18.7	97 26 41.0		0.000 kW			150 M	
Univision Radio Stations G							

**KQXZ Appl. Site**

Adamsville, TX  
0000158484  
Latitude: 31-15-20.30 N  
Longitude: 098-10-30 W  
ERP: 4.90 kW  
HAAT: 77.88  
Channel: 285  
Frequency: 104.9 MHz  
AMSL Height: 439.7 m  
Elevation: 344.7 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**KQXZ Channel 285A Adamsville, Texas**

Section 73.315 City Grade Exhibit  
(FCC F(50,50) 70 dBu contour shown)





**KQXZ Appl. Site**

Adamsville, TX  
0000158484  
Latitude: 31-15-20.30 N  
Longitude: 098-10-30 W  
ERP: 4.90 kW  
HAAT: 77.88  
Channel: 285  
Frequency: 104.9 MHz  
AMSL Height: 439.7 m  
Elevation: 344.7 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

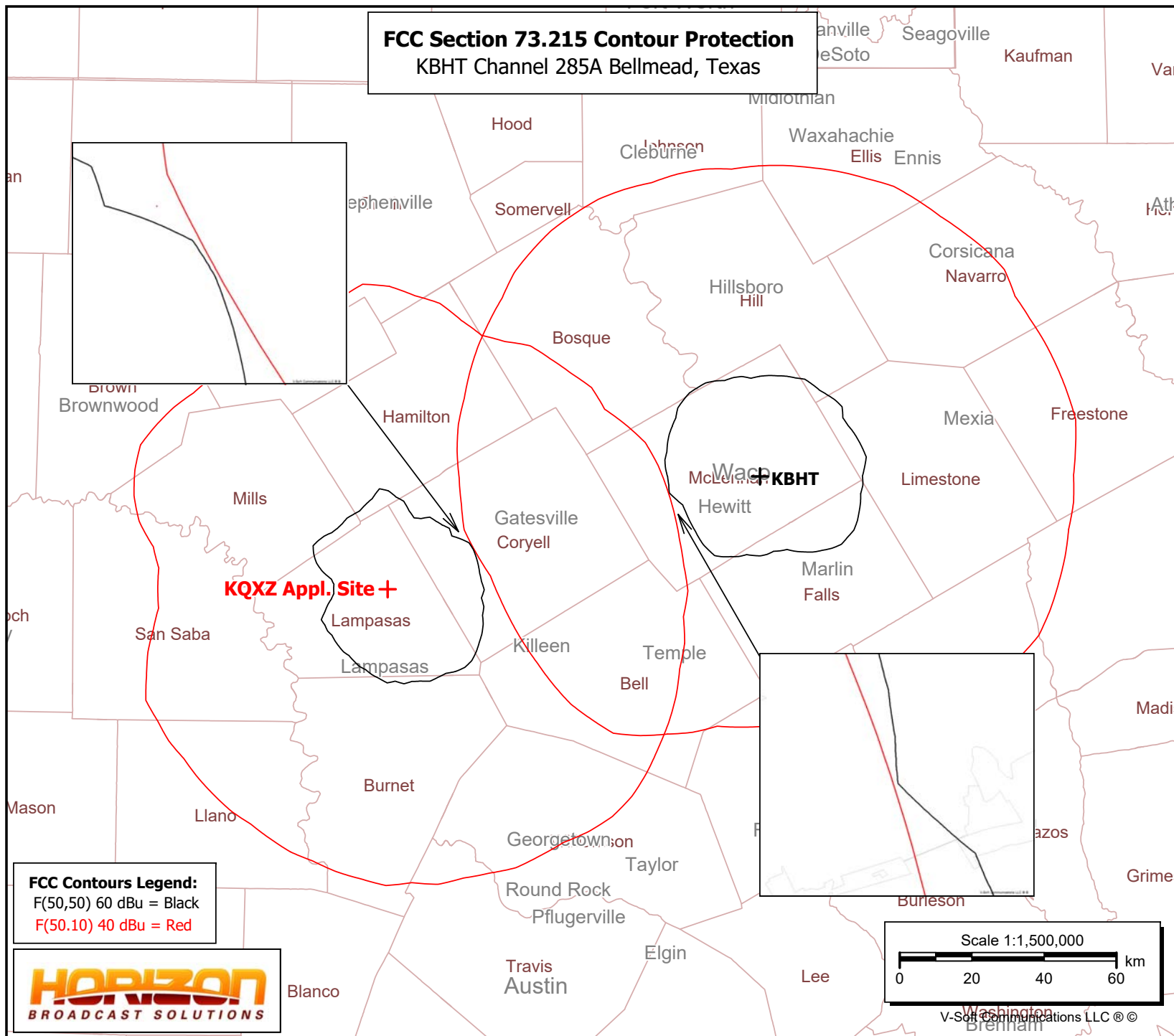
**FCC Section 73.215 Contour Protection**  
KBHT Channel 285A Bellmead, Texas**KBHT**

Bellmead, TX  
BLH20130813AAM  
Latitude: 31-32-15.60 N  
Longitude: 097-05-33 W  
ERP: 6.00 kW  
HAAT: 100.0  
Channel: 285  
Frequency: 104.9 MHz  
AMSL Height: 238.0 m  
Elevation: 117.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**FCC Contours Legend:**

F(50,50) 60 dBu = Black  
F(50,10) 40 dBu = Red

**HORIZON**  
BROADCAST SOLUTIONS



**KQXZ Appl. Site**

Adamsville, TX  
0000158484  
Latitude: 31-15-20.30 N  
Longitude: 098-10-30 W  
ERP: 4.90 kW  
HAAT: 77.88  
Channel: 285  
Frequency: 104.9 MHz  
AMSL Height: 439.7 m  
Elevation: 344.7 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

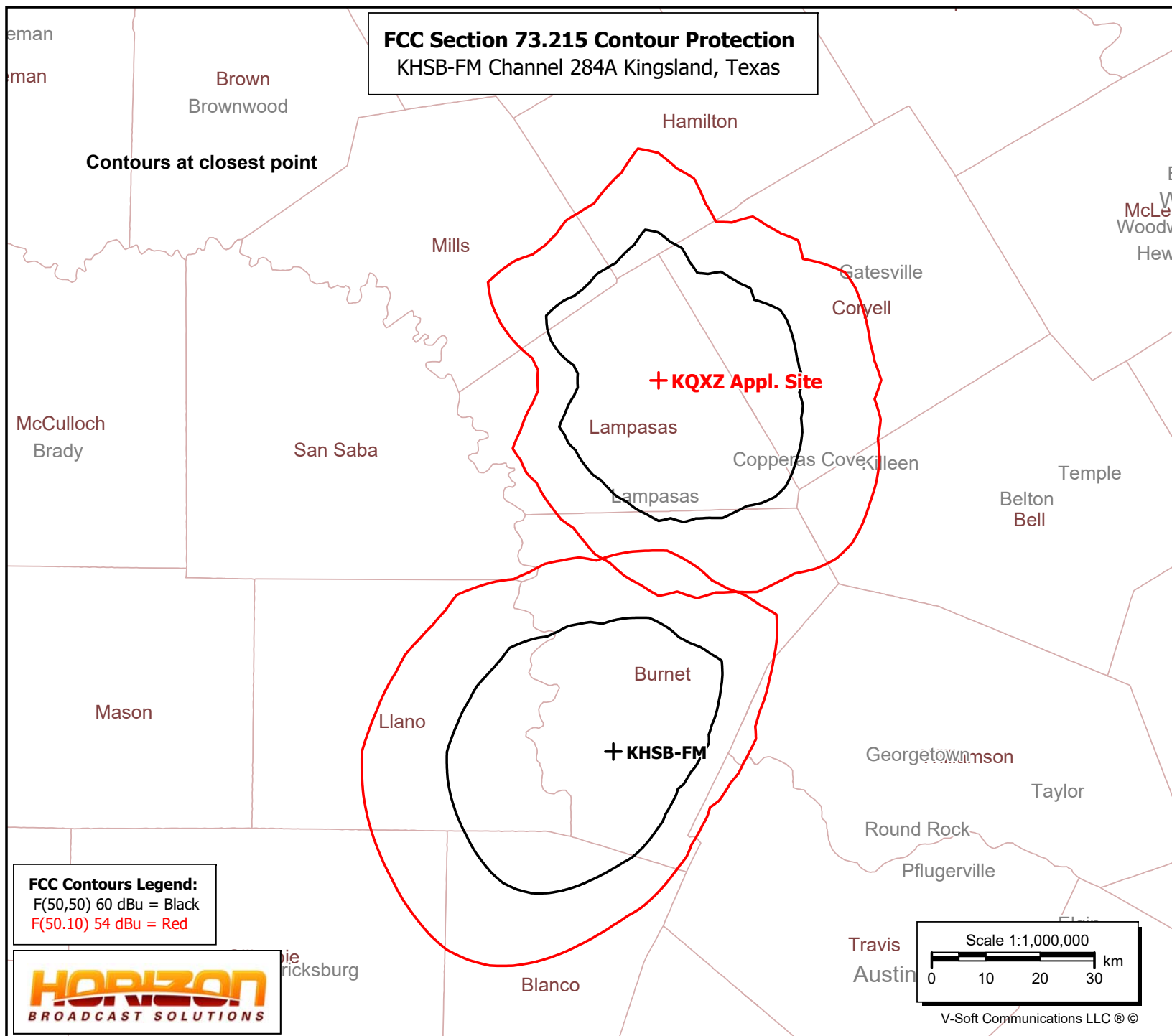
**KHSB-FM**

Kingsland, TX  
0000193000  
Latitude: 30-38-19.70 N  
Longitude: 098-15-45.50 W  
ERP: 1.05 kW  
HAAT: 242.0  
Channel: 284  
Frequency: 104.7 MHz  
AMSL Height: 563.0 m  
Elevation: 341.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**FCC Contours Legend:**

F(50,50) 60 dBu = Black  
F(50,10) 54 dBu = Red

**HORIZON**  
BROADCAST SOLUTIONS

**FCC Section 73.215 Contour Protection**  
KHSB-FM Channel 284A Kingsland, Texas

**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. QXZ MediaWorks LLC ("QXZ") is the permittee of FCC LMS construction permit 0000158484 for KQXZ, Facility ID 762373, Channel 285A, Richland Springs, Texas. QXZ is modifying construction permit 0000158484 by requesting Channel 285A (104.9 MHz) at Adamsville, Texas. The proposed KQXZ Channel 285A application site is an existing water tower 101.1 meters in overall height and is registered with Antenna Structure Registration ("ASR") number 1254561. The application site coordinates are 31° 15' 20.3" N ~ 98° 10' 0" W (NAD 83). The transmit antenna will be a side mounted ERI LP-2E two bay circularly polarized antenna with a center of radiation of 95 meters AGL. KQXZ would operate with 4.9 kW ERP non-directional at 77.88 meters HAAT. Because QXZ proposes to operate KQXZ from an existing water tower and no changes are being made to the tower or antenna, 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 for Windows Program under Type 3 Opposed "U" dipole. The maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is 5.438  $\mu\text{W}/\text{cm}$  at 62.4 meters, which is 2.719 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

## Radio Frequency Safety

FCC Policy on Human Exposure

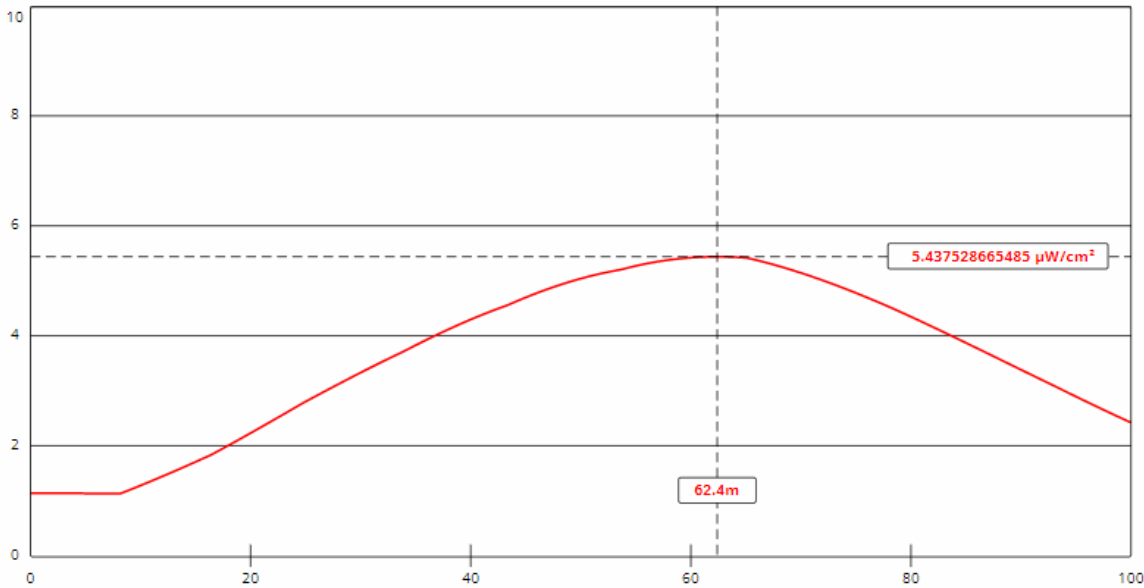
RF Safety FAQ

Body Tissue Dielectric Parameters

RF Safety Highlighted Releases

FM Model

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....](#)



[View Tabular Results +](#)

Channel Selection	Channel 285 (104.9 MHz) ▼		
Antenna Type +	EPA Type 3: Opposed U Dipole ▼		
Height (m)	<input type="text" value="95"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="4900"/>	ERP-V (W)	<input type="text" value="4900"/>
Num of Elements	<input type="text" value="2"/>	$\lambda$	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	

Bureau/Office:  
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