

**Goldman Engineering Management  
Auburn, CA**

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Minor CP Modification Application

To BMPH 20151229ADK

KVST (FM), Channel 259C3

**PURPOSE OF FILING**

This Technical Statement and attached exhibits has been prepared on behalf of New Wavo Communication Group, Inc. (“New Wavo”) Permittee of station KVST (FM) facility number 26858, Huntsville, TX in support of a construction permit to increase antenna height at the same tower site on an existing tower which is being extended in height.

**PROPOSED SPECIFICATIONS**

Location (NAD27) (Exhibit E)	30° 36’ 03” N Latitude, 95° 29’ 02” W Longitude
Channel	259C3 (99.7 MHz)
Tower Overall AGL Height-	152m
Tower ASR	FAA Notified (Determination 2016-ASW-8831-OE)
Proposed Antenna	ERI MPX-6E-HW
Antenna AGL Height-	142m
Site AMSL Height-	113m
COR AMSL Height	255m
HAAT (Exhibit E)	155m
ERP (Exhibit F)	10.5kW (Directional, Exhibit A)

## ALLOCATION

The proposed KVST 259C3 facility will be fully spaced under 73.207 to all stations except for KSHN, 260C2, Liberty, TX and KNFX-FM, 257A, Bryan, TX. KVST will operate pursuant to 73.215 contour protection to KSHN and KNFX using a directional antenna. The protected and interfering contours for the proposed operation is shown in Exhibit B.

ComStudy 2.2 search of channel 259 (99.7 MHz Class C3) at 30-36-03.0 N, 95-29-02.0 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
KSHN	LIBERTY	TX 260 C2	110.36	117.00	123.4	-6.6 Exhibit B
KNFX-FM	BRYAN	TX 258 A	82.07	89.00	274.2	-6.9 Exhibit B
KROY	PALACIOS	TX 259 C1	215.13	211.00	192.0	4.1
NEW	HOUSTON	TX 258 LP100	75.35	67.00	178.4	8.3
KOYM-LP	HOUSTON	TX 259 LP100	87.93	78.00	182.2	9.9
NEW	CUNEY	TX 259 A	153.39	142.00	3.9	11.4
KROY	PALACIOS	TX 259 C1	223.70	211.00	191.5	12.7
WACO-FM	WACO	TX 260 C	192.66	176.00	295.7	16.7
KODA	HOUSTON	TX 256 C	113.62	96.00	181.3	17.6
KILT-FM	HOUSTON	TX 262 C	113.62	96.00	181.3	17.6
KODA	HOUSTON	TX 256 C	114.20	96.00	181.3	18.2
KILT-FM	HOUSTON	TX 262 C	114.20	96.00	181.3	18.2
NEW	CUNEY	TX 259 A	162.71	142.00	5.6	20.7

CDBS Data as of 10/14 2016

## COMMUNITY OF LICENSE COVERAGE

As shown in Exhibit C, the 70dBu contour of KVST will completely encompass the community of Huntsville, TX.

## ENVIRONMENTAL CONSIDERATIONS

The proposed KVST facility will utilize a six-bay, half-wave spaced FCC Type 2 antenna located at 142m AGL. Based upon the FCC “FM Model for Windows”<sup>1</sup>, as demonstrated in Exhibit D, the proposed KVST operation will produce 0.4  $\mu\text{W}/\text{cm}^2$  at a distance of 244m from the base of the tower. The RF at 2m AGL from KVST will, therefore be 0.2% of the Maximum Public Exposure Level (MPE). There are no other non-excluded antennas at this site.

Because KVST will contribute less than 5% of the maximum allowable MPE level, it is believed that the impact of the proposed operation should not be considered to be a factor as defined under §1.1307(b)(3), therefore the proposed KVST operation is categorically excluded from further environmental review under §1.1306 of the FCC rules and regulations.

## CERTIFICATION

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direct supervision, and that they are true and correct to the best of his knowledge and belief.



Bertram S. Goldman  
Goldman Engineering Management

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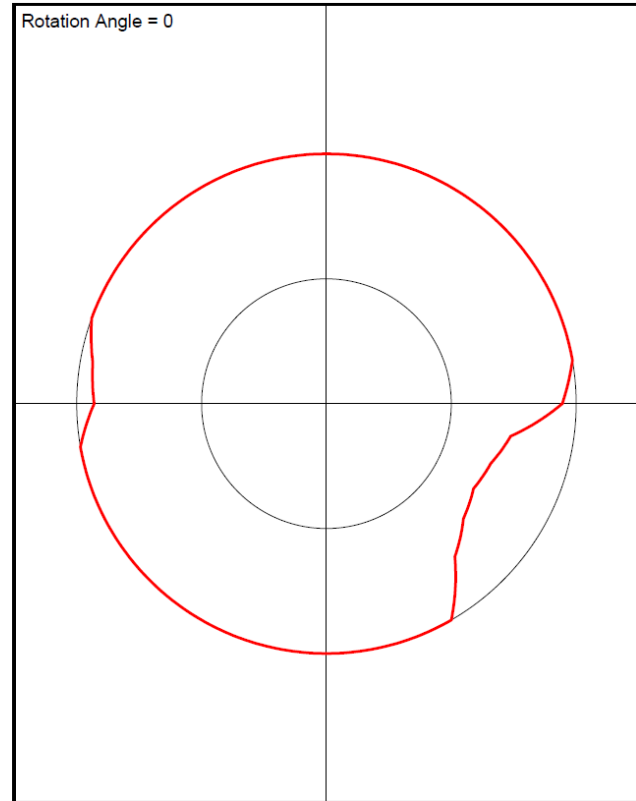
<sup>1</sup> <https://www.fcc.gov/general/fm-model>

## EXHIBIT A- Directional antenna

### KVST PROP Antenna Pattern

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	1.0
5.0	1.0
10.0	1.0
15.0	1.0
20.0	1.0
25.0	1.0
30.0	1.0
35.0	1.0
40.0	1.0
45.0	1.0
50.0	1.0
55.0	1.0
60.0	1.0
65.0	1.0
70.0	1.0
75.0	1.0
80.0	1.0
85.0	0.972
90.0	0.944
95.0	0.8465
100.0	0.749
105.0	0.7245
110.0	0.7
115.0	0.69
120.0	0.68
125.0	0.698
130.0	0.716
135.0	0.758
140.0	0.8
145.0	0.9
150.0	1.0
155.0	1.0
160.0	1.0
165.0	1.0
170.0	1.0
175.0	1.0
180.0	1.0
185.0	1.0
190.0	1.0
195.0	1.0
200.0	1.0
205.0	1.0
210.0	1.0
215.0	1.0
220.0	1.0
225.0	1.0
230.0	1.0
235.0	1.0
240.0	1.0
245.0	1.0
250.0	1.0
255.0	1.0
260.0	1.0
265.0	0.965
270.0	0.93
275.0	0.94
280.0	0.95
285.0	0.975
290.0	1.0
295.0	1.0
300.0	1.0
305.0	1.0
310.0	1.0
315.0	1.0



320.0	1.0
325.0	1.0
330.0	1.0
335.0	1.0
340.0	1.0
345.0	1.0
350.0	1.0
355.0	1.0

EXHIBIT B- 73.215 Allocation Contour Protection

KVST PROP 10.5kW @ 155m HAAT Contour Protection to KSHN, KNFX-FM

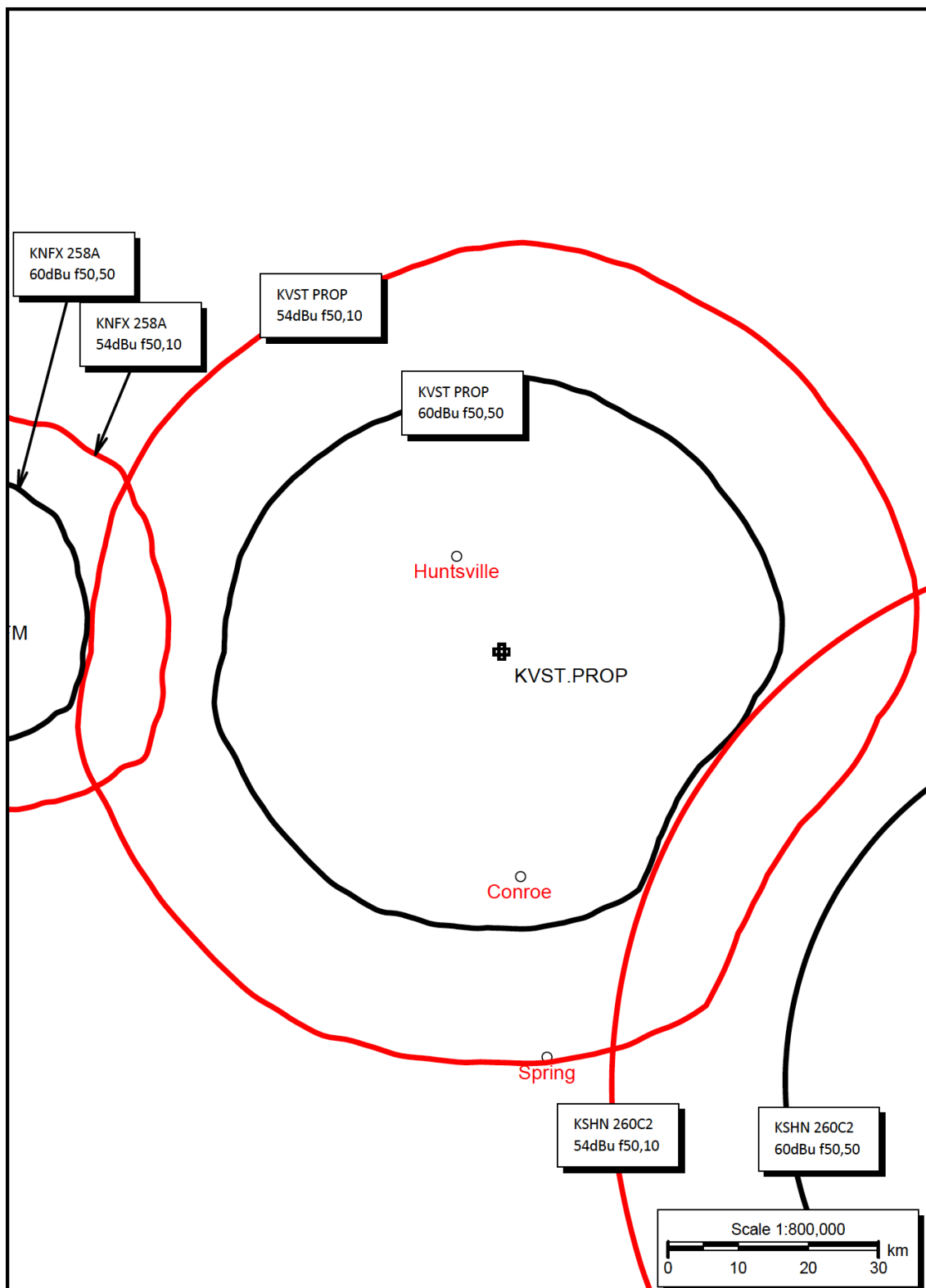
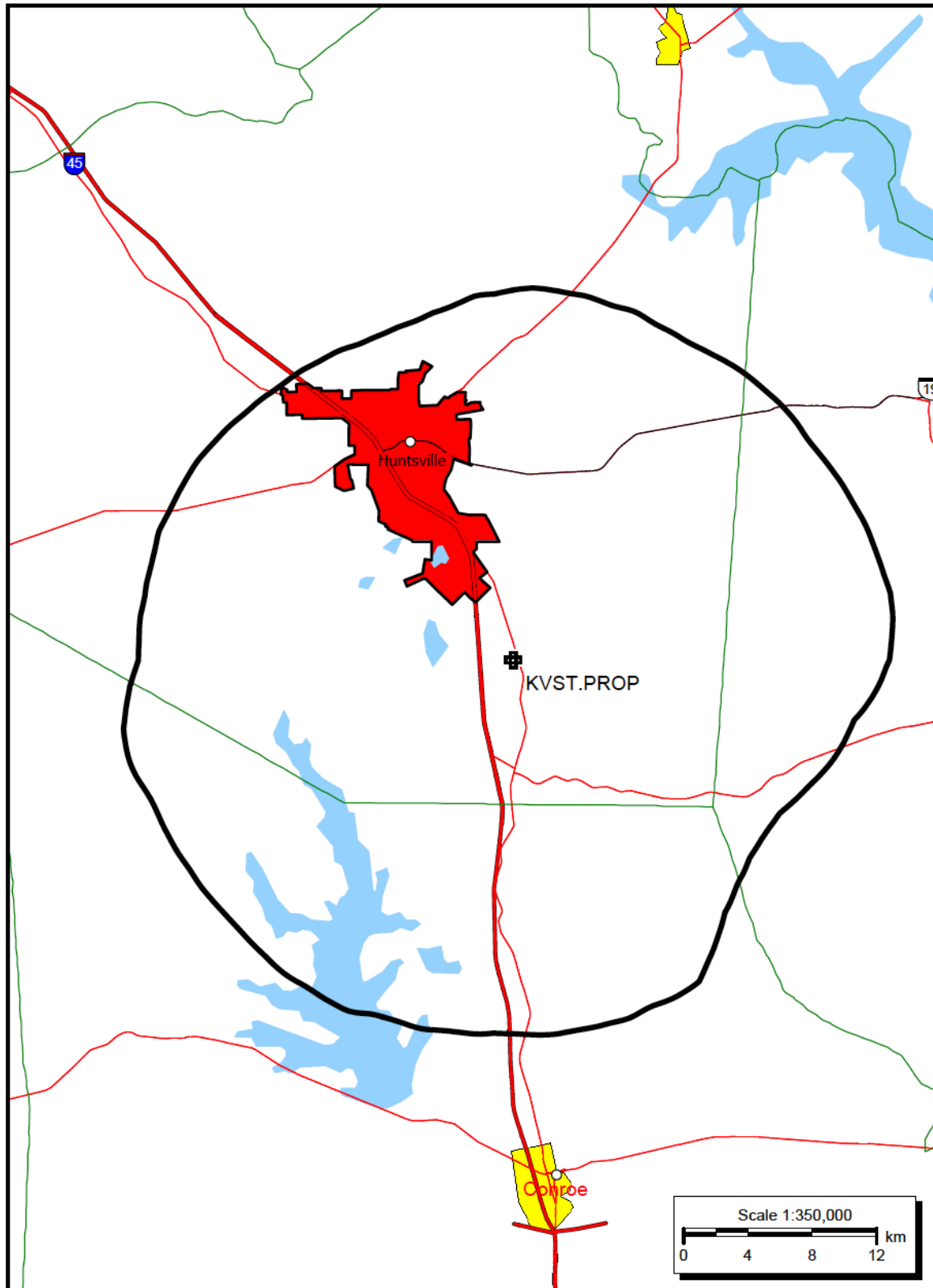
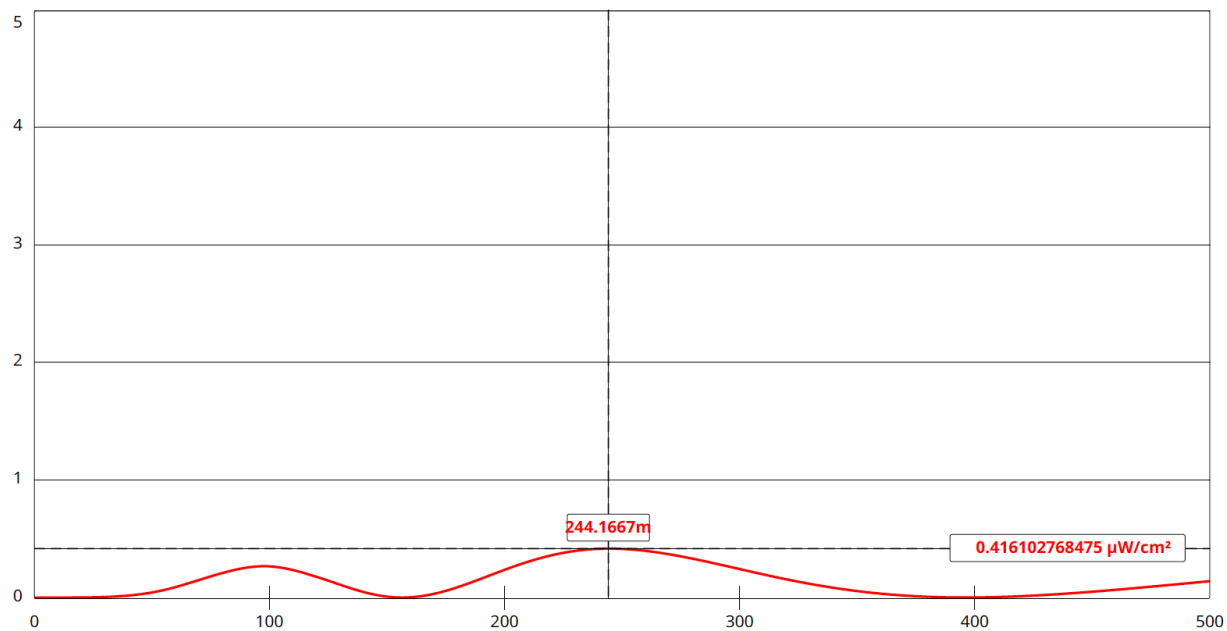




EXHIBIT C- Community Coverage

KVST Proposed Community Coverage, Huntsville, TX



## EXHIBIT D- FM MODEL FOR WINDOWS



Channel Selection	Channel 259 (99.7 MHz) 		
<a href="#">Antenna Type +</a>	EPA Type 2: Opposed V Dipole 		
Height (m)	<input type="text" value="142"/>	Distance (m)	<input type="text" value="500"/>
ERP-H (W)	<input type="text" value="10500"/>	ERP-V (W)	<input type="text" value="10500"/>
Num of Elements	<input type="text" value="6"/>	Element Spacing ( $\lambda$ )	<input type="text" value="0.5"/>
Num of Points	<input type="text" value="600"/>	Apply	

## EXHIBIT E- HAAT CALCULATION

### Antenna Height Above Average Terrain Calculations -- Results

#### Input Data

Latitude **30° 36' 3" North**  
Longitude **95° 29' 2" West** (NAD 27)

These coordinates convert to NAD 83 coordinates of  
30° 36' 03.71", North, 95° 29' 02.79" West (NAD 83).

Height of antenna radiation center above mean sea level: **255** meters AMSL

Number of Evenly Spaced Radials = **72** 0° is referenced to True North

#### Results

Calculated HAAT = **155 meters**

Antenna Height Above Average Terrain calculated  
using 1 km [GLOBE terrain data](#)

#### Individual "Radial HAAT" Values, in meters

0°	146.0 m	120°	152.6 m	240°	170.9 m
5°	148.5 m	125°	146.2 m	245°	173.3 m
10°	147.3 m	130°	143.0 m	250°	179.4 m
15°	147.0 m	135°	143.9 m	255°	175.8 m
20°	145.6 m	140°	148.9 m	260°	171.2 m
25°	143.0 m	145°	151.4 m	265°	169.6 m
30°	143.0 m	150°	154.1 m	270°	166.7 m
35°	145.2 m	155°	154.2 m	275°	165.4 m
40°	147.4 m	160°	153.7 m	280°	162.4 m
45°	147.2 m	165°	156.1 m	285°	159.7 m
50°	147.0 m	170°	157.8 m	290°	158.4 m
55°	146.4 m	175°	155.0 m	295°	155.7 m
60°	149.3 m	180°	154.3 m	300°	153.9 m
65°	151.8 m	185°	155.5 m	305°	149.7 m
70°	154.0 m	190°	157.2 m	310°	147.1 m
75°	156.3 m	195°	157.8 m	315°	143.2 m
80°	159.9 m	200°	162.0 m	320°	140.3 m
85°	162.8 m	205°	165.6 m	325°	138.0 m
90°	163.8 m	210°	166.1 m	330°	132.5 m
95°	165.2 m	215°	169.3 m	335°	130.9 m
100°	168.3 m	220°	166.1 m	340°	129.5 m
105°	169.2 m	225°	167.3 m	345°	133.4 m
110°	164.4 m	230°	170.2 m	350°	138.0 m
115°	160.2 m	235°	169.1 m	355°	142.3 m



EXHIBIT F- MAXIMUM ERP CALCULATION

**FMpower Results**

**Class C3 facilites for equivalency determination:**

Reference ERP = 25.000 kW ERP

Reference HAAT= 100 meters HAAT

F(50,50) 60 dBu protected contour at 39.1 km distance

**Equivalent ERP = 10.500 kilowatts (kW)**  
(rounded per 47 CFR 73.212)

Unrounded ERP = 10.317 kW for 155 meters HAAT

C, C0, C1, C2, and C3 stations are authorized in TX.