

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
MAIN TRANSMITTER
STANDARD BROADCAST STATION LICENSE
MODIFIED AS OF AUGUST 4, 1966

File No. DL-11,223
Call Letters KCRS

Subject to the provisions of the Communications Act of 1934, subsequent Acts, and Treaties, and Commission Rules made thereunder, and further subject to conditions set forth in this license, ¹/the LICENSEE

MIDLAND BROADCASTING COMPANY

is hereby authorized to use and operate the radio transmitting apparatus hereinafter described for the purpose of broad-
casting for the term beginning August 4, 19 66, and ending August 1, 19 68
~~XXXXXX Eastern Standard Time~~ (3 a.m., Eastern Standard Time)

The licensee shall use and operate said apparatus only in accordance with the following terms:

1. On a frequency of 550 kc.
2. With 1 kilo watts power - directional antenna nighttime

<u>common point</u>	current, <u>4.47</u> amperes
<u>common point</u>	resistance, <u>50.04</u> ohms

and 5 kilo watts power - directional antenna daytime

<u>common point</u>	current, <u>10</u> amperes
<u>common point</u>	resistance, <u>50.04</u> ohms
3. During the following period or periods of time: Unlimited Time.

Average hours of local sunrise and sunset:

Jan. 7:45am to 6:00pm; Feb. 7:30am to 6:30pm;
Mar. 7:00am to 7:00pm; Apr. 6:15am to 7:15pm;
May 5:45am to 7:45pm; June 5:45am to 8:00pm;
July 5:45am to 8:00pm; Aug. 6:15am to 7:30pm;
Sep. 6:30am to 7:00pm; Oct. 6:45am to 6:15pm;
Nov. 7:15am to 5:45pm; Dec. 7:45am to 5:45pm;

4. With the station located at: Central Standard Time.

Midland, Texas

5. With the main studio located at:

3701 West Wall

Midland, Texas

The apparatus herein authorized to be used and operated is located at:

6.0 miles N.E. of downtown

Midland, Texas

North Lat. 32° 04' 10"

West Long. 102° 01' 46"

and is described as follows: RCA, Type No. BTA-ST, Broadcasting Transmitter

(or other transmitter currently listed in the Commission's "Radio Equipment List, Part B, Aural Broadcast Equipment" for the power herein authorized).

Obstruction marking specifications in accordance with paragraphs 1,3,12 & 21 of FCC Form 715 attached.

The Commission reserves the right during said license period of terminating this license or making effective any changes or modification of this license which may be necessary to comply with any decision of the Commission rendered as a result of any hearing held under the rules of the Commission prior to the commencement of this license period or any decision rendered as a result of any such hearing which has been designated but not held, prior to the commencement of this license period.

This license is issued on the licensee's representation that the statements contained in licensee's application are true and that the undertakings therein contained so far as they are consistent herewith, will be carried out in good faith. The licensee shall, during the term of this license, render such broadcasting service as will serve public interest, convenience, or necessity to the full extent of the privileges herein conferred.

This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequency designated in the license beyond the term hereof, nor in any other manner than authorized herein. Neither the license nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This license is subject to the right of use or control by the Government of the United States conferred by section 606 of the Communications Act of 1934.

¹/ This license consists of this page and pages 2 & 3

Dated: August 4, 1966

FEDERAL COMMUNICATIONS COMMISSION,



cb

Ben F. Waple

File No. BL-11253

Call Letters KCRS

Date 8-4-66

1. DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

DA- 2

No. and Type of Elements: **Five uniform cross-section, guyed, series-excited vertical radiators.**

Height above Insulators: **320' (64.5°)**

Overall Height: **325'**

Spacing and Orientation: **Five towers arranged in a trapezoid. Towers 1 & 2 spaced 541.2' (108.9°) on a diagonal side bearing 85° true; Towers 2, 4, & 5 spaced 407' (81.9°) on a parallel side bearing 200° true; Towers 5 & 3 spaced 521.8' (105°) on a diagonal side bearing 310° true; and Towers 3 & 1 spaced 407' (81.9°) on parallel side bearing 20° true. Towers 1, 2, 3, & 4 form nighttime parallelogram, and towers 1, 4, 3, and 5 form daytime parallelogram.**

Non-Directional Antenna: **None used.**

Ground System consists of **120 radials 100' long and 120 radials 450' long about base of each tower, except where shortened and bonded to transverse copper straps midway between towers and where limited to 350' to the north and to 225' to the south property line.**

2. THEORETICAL SPECIFICATIONS

Tower:		#1(NW)	#2(NR)	#3(SW)	#4(EC)	#5(SE)
Phasing:	Night	0°	+ 132°	+ 168°	+ 300°	-----
	Day	0°	-----	-90°	+ 78°	-12°
Field Ratio:	Night	1.0	0.9	0.9	0.81	-----
	Day	1.0	-----	0.1	1.0	0.1

3. OPERATING SPECIFICATIONS

Phase Indication:*	Night	0°	+ 132°	+ 168°	-60°	-----
	Day	0°	-----	-90°	+ 76°	-14°
Antenna Base Currents Ratio:	Night	1.0	0.909	0.909	0.848	-----
	Day	1.0	-----	0.10	1.01	0.09
Phase monitor sample Current Ratio:	Night	1.0	0.9	0.9	0.81	-----
	Day	1.0	-----	0.1	1.0	0.1

*As indicated by vitro type 112 phase monitor.

Phase indications and antenna base currents shall be read and entered in the operating log at least once each hour. Phase monitor sample currents may be read and logged in lieu of base currents provided base currents are read and logged at least once daily, for each pattern.

Field measuring equipment being available at all times and the field intensity at each of the monitoring points being measured at least once every seven days and an appropriate record kept of all measurements so made.

DESCRIPTION OF AND FIELD INTENSITY AT MONITORING POINTS:

Direction of 20.5° True North. From the entrance road to KCRS transmitter building, proceed 1.3 miles southerly to U.S. Highway 80, 6.4 miles easterly to State Farm Road 1208, 4.7 miles northerly to State Farm Road 1212, and 4.3 miles northerly and westerly to a post marked "KCRS" located in the fence line on the south side of the road. The monitoring point is located in the field 110 paces from the fence line toward KCRS. The field intensity measured at this point should not exceed 2.00 mv/m NIGHTTIME.

Direction of 65° True North. From Point 20.5° , return to junction of State Farm Roads 1208 and 1212, and proceed 2.3 miles southerly to a post marked "KCRS" located in the fence line on the west side of the road. The monitoring point is located in the field 100 paces from the fence line toward KCRS. The field intensity measured at this point should not exceed 26.3mv/m NIGHTTIME.

Direction of 118.5° True North. From point 65° , return to U.S. Highway 80, and proceed 3.5 miles westerly to an arrow painted on the north edge of the paved shoulder. The monitoring point is located 10 feet north of the arrow. The field intensity measured at this point should not exceed 4.7 mv/m NIGHTTIME; 4.4 mv/m DAYTIME.

Direction of 133° True North. From Point 118.5° , proceed 0.9 mile westerly on U.S. Highway 80 to an arrow painted on the north edge of the paved shoulder. The monitoring point is located 10 feet north of the arrow. The field intensity measured at this point should not exceed 8.0 mv/m NIGHTTIME; 5.0 mv/m DAYTIME.

Direction of 280° True North. From Point 133° , proceed 4 miles westerly to signal light at Fair Ground Road, 1.9 mile northerly, 1.0 mile westerly, and 3.4 miles northerly on Lamesa Road and State Road 349 to a post marked "KCRS" located in the fence line on the west side of the highway. The monitoring point is located 15 feet east of the post midway between the fence line and the paved shoulder of the road. The field intensity measured at this point should not exceed 11.2 mv/m NIGHTTIME.

ANTENNA TOWER(S) OR SUPPORTING STRUCTURE(S)

It is to be expressly understood that the issuance of these specifications is in no way to be considered as precluding additional or modified marking or lighting as may hereafter be required under the provisions of Section 303(q) of the Communications Act of 1934, as amended,

1 Antenna structures shall be painted throughout their height with alternate bands of aviation surface orange and white, terminating with aviation surface orange bands at both top and bottom. The width of the bands shall be equal and approximately one-seventh the height of the structure, provided however, that the bands shall not be more than 40 feet nor less than 1-1/2 feet in width. All towers shall be cleaned or repainted as often as necessary to maintain good visibility.

2 There shall be installed at the top of the tower at least two 100-, 107-, 111- or 116-watt lamps (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in aviation red obstruction light globes. The two lights shall burn simultaneously from sunset to sunrise and shall be positioned so as to insure unobstructed visibility of at least one of the lights from aircraft at any angle of approach. A light sensitive control device or an astronomical dial clock and time switch may be used to control the obstruction lighting in lieu of manual control. When a light sensitive device is used it should be adjusted so that the lights will be turned on at a north sky light intensity level of about thirty-five foot candles and turned off at a north sky light intensity level of about fifty-eight foot candles.

3 There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 500- or 620-watt lamps (FS-40, Code Beacon type), both lamps to burn simultaneously, and equipped with aviation red color filters. Where a rod or other construction of not more than 30 feet in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute with a period of darkness equal to one-half of the luminous period.

4 At approximately one-half of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

5 At approximately two-fifths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

6 On levels at approximately two-thirds and one third of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

7 On levels at approximately four-sevenths and two-sevenths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

8 On levels at approximately three-fourths, one-half and one-fourth of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

9 On levels at approximately two-thirds, four-ninths and two-ninths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

10 On levels at approximately four-fifths, three-fifths, two-fifths, and one-fifth of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

11 At the approximate mid point of the over-all height of the tower there shall be installed at least two 100-, 107-, 111- or 116-watt lamps (#100 A21/TS, #107 A21/TS, #111 A21/TS, or #116 A21/TS, respectively) enclosed in aviation red obstruction light globes. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any angle of approach.

12 On levels at approximately two-thirds and one-third of the over-all height of the tower, there shall be installed at least two 100-, 107-, 111- or 116-watt lamps (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in aviation red obstruction light globes. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any angle of approach.

13 On levels at approximately three-fourths and one-fourth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

14 On levels at approximately four-fifths, three-fifths and one-fifth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

15 On levels at approximately five-sixths, one-half, and one-sixth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

16 On levels at approximately six-sevenths, five-sevenths, three-sevenths and one-seventh of the over-all height of the tower at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

17 On levels at approximately seven-eighths, five-eighths, three-eighths, and one-eighth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

18 On levels at approximately eight-ninths, seven-ninths, five-ninths, one-third and one-ninth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

19 On levels at approximately nine-tenths, seven-tenths, one-half, three-tenths, and one-tenth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

20 All lighting shall be exhibited from sunset to sunrise unless otherwise specified.

21 All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on at a north sky light intensity level of about 35 foot candles and turned off at a north sky light intensity level of about 58 foot candles.

22 During construction of an antenna structure, for which obstruction lighting is required, at least two 100-, 107-, 111- or 116-watt lamps (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in aviation red obstruction light globes, shall be installed at the uppermost point of the structure. In addition, as the height of the structure exceeds each level at which permanent obstruction lights will be required, two similar lights shall be installed at each such level. These temporary warning lights shall be displayed nightly from sunset to sunrise until the permanent obstruction lights have been installed and placed in operation, and shall be positioned so as to insure unobstructed visibility of at least one of the lights at any angle of approach. In lieu of the above temporary warning lights, the permanent obstruction lighting fixtures may be installed and operated at each required level as each such level is exceeded in height during construction.