Comprehensive Engineering Statement

prepared for

Williams Broadcasting LLC

K265FL Enid, OK

Facility ID 202813

Channel 265D 0.25 kW 35 meters AGL

Williams Broadcasting LLC ("*Williams*"), is the prospective Licensee of K265FL (file number BNPFT-20180418ADN). The instant application seeks to move the transmitting antenna to a new location and height as a minor modification. In particular, *Williams* proposes to move the station to an unregistered structure located at 36° 23' 53.0"N, 97° 52' 39.5"W (NAD 27). The proposed antenna is a two-bay omnidirectional antenna, mounted at 35 meters AGL. An ERP of 250 Watts is being specified.

Allocation Considerations

The location of the 60 dBμ coverage contour of the authorized and proposed translator lies within the 40 km (25-mile) radius of the licensed coordinates of KGWA(AM), as shown in the map provided as **Figure 1**. As demonstrated, the authorized and the proposed translator coverage contours remain completely within the 40 km radius of KGWA(AM), thus complying with §74.1201(g).

A study of nearby FM facilities on co-channel, adjacent-channel, and intermediate frequencies was conducted to identify which stations require further study to demonstrate compliance under §74.1204. Contour protection for pertinent co-channel and first, second and third adjacent stations is demonstrated in **Figure 2**. There is no prohibited contour overlap to first adjacent stations (shown in pink), and the proposed facility is well outside the 60 dBμ contour of second and third adjacent facilities. The nearest co-channel full service station is KTSO(FM) (Ch. 265C3, Sapulpa, OK) at a distance of 172.3 km, and the nearest co-channel Low Power FM is KSMJ-LP (Ch. 265L1, Edmond, OK) at a distance of 90.1 km.

The proposed site is located more than 800 km from the Canadian or Mexican borders, well beyond the 320 km coordination distance required for translators specified in §74.1235(d). The nearest FCC monitoring station is 504.52 km distant at Grand Island, NE. This distance exceeds the threshold minimum distance specified in §73.1030 that would suggest consideration of the monitoring station. The proposed transmitter site is located 2.42 km from directional AM station KCRC(AM) (1390 kHz, Enid, OK). According to §1.30002(b) of the Rules, proposed construction that is more than 10 wavelengths from a directional array may be assumed to not have a significant

impact on the array. Based on the 1390 kHz authorization for KCRC, the proposal will be located 11.2 wavelengths from KCRC(AM). Thus it is believed that the instant proposal will not have a significant impact on nearby Standard Broadcast station operations.

It is therefore believed that the proposed facility satisfies all of the pertinent Commission Rules and Policies now in effect regarding allocation matters.

Environmental Considerations

The proposed facility will operate with a circularly-polarized ERP of 250 Watts with a two bay omnidirectional antenna at 35 meters AGL on an unregistered structure atop a building in downtown Enid. The proposal intends to increase the overall height of the building structure by 20 feet. §1.1306(c)(1)(iii)(A) states that an Environmental Assessment is categorically excluded if a proposal does not increase the structure by more than 10% or 20 feet, whichever is greater. The instant proposal is to increase the existing 105 foot building by 20 feet. Since the proposed increase is not greater than 20 feet, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

Human Exposure to Radiofrequency Radiation

The proposed operation was evaluated for human exposure to radiofrequency energy using the procedures outlined in the Commission's OET Bulletin No. 65 ("OET 65"). OET 65 describes a means of determining whether a proposed facility meets the radiofrequency exposure guidelines adopted in §1.1310. Under present Commission policy, a facility may be presumed to comply with the limits specified in §1.1310 if it satisfies the exposure criteria set forth in OET 65. Based upon that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

The general population/uncontrolled maximum permitted exposure ("MPE") limit specified in §1.1310 for the entire FM broadcast band is 200 $\mu W/cm^2$. For the purpose of this study, "public access" will be considered at the base of the building at a location two-meters above ground.

The formula used for calculating FM signal density in this analysis is essentially the same as equation ten (10) in OET 65:

$$S = (33.4098) (F^{2)} (ERP) / D^2$$

Where:

S = power density in microwatts/cm^2

F = relative field factor

ERP = total (average ERP in Watts)

D = distance in meters

Using the FCC's FM Model program and an EPA Type 1: Ring-and-Stub antenna, it was determined that the proposed facility would contribute a worst-case RF power density of 2.07 μW/cm^2 at two meters above ground level near the antenna support structure, or 1.04 percent of the general population/uncontrolled limit. Thus, based on this analysis, the Commission's limit regarding general population / uncontrolled exposure to RF electromagnetic field is not exceeded at ground level locations near the K265FL site location. No other broadcasters are close enough to have a significant additional contribution to exposure levels at this location.

§1.1307(b)(3) states that facilities are categorically excluded from responsibility for taking any corrective action in the areas where their contribution is less than five percent of the pertinent MPE limit. Since the instant situation meets the five percent exclusion test at all ground level areas, the impact of any other facilities near this site may be considered independently from this proposal. Accordingly, it is believed that the impact of the proposed operation should not be considered to be a factor at ground level as defined under §1.1307(b).

Safety of Tower Workers and the General Public

As demonstrated herein, excessive levels of RF energy will not be caused by the proposal at publicly accessible areas at ground level near the antenna supporting structure. Consequently, members of the general public will not be exposed to RF levels in excess of the Commission's guidelines. Nevertheless, tower access will be restricted and controlled through the use of a locked door. According to information provided by the applicant, appropriate RF exposure warning signs will be posted. In the event that maintenance or other workers gain access to the roof, power output of the translator will be decreased or shut off to protect workers.

With respect to worker safety, it is believed that based on the preceding analysis, excessive exposure would not occur in areas at ground level. A site exposure policy will be employed protecting maintenance workers from excessive exposure when work must be performed on the tower in areas where high RF levels may be present. Such protective measures may include, but will not be limited to, restriction of access to areas where levels in excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines would otherwise be exceeded. On-site RF exposure measurements may also be undertaken to establish the bounds of safe working areas. Based on the preceding, it is believed that the instant proposal may be categorically excluded from environmental processing under §1.1306 of the Rules, hence preparation of an Environmental Assessment is not required.

Conclusion

It is therefore believed that the proposed facility satisfies all of the pertinent Commission Rules and Policies now in effect.

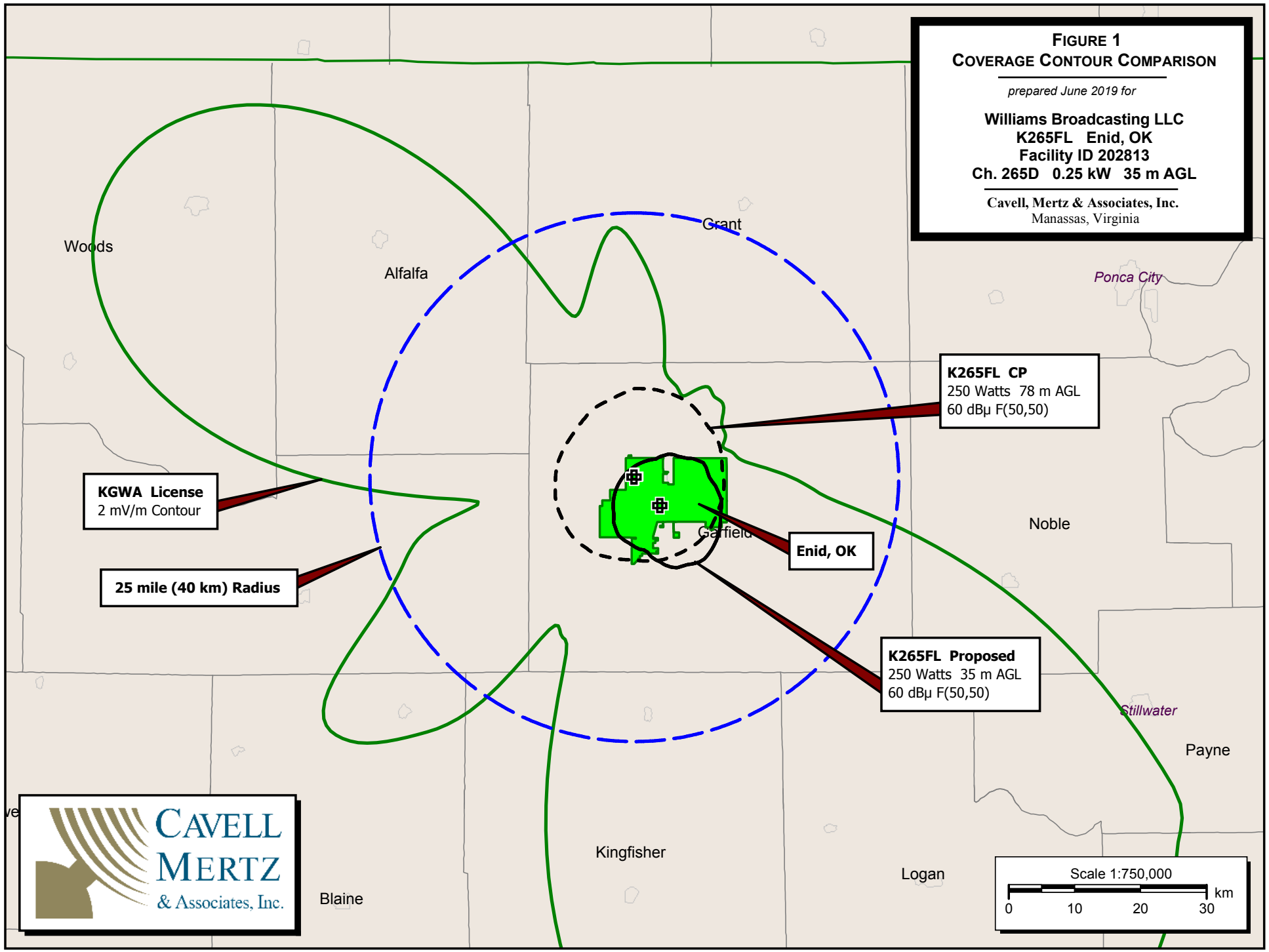
FIGURE 1
COVERAGE CONTOUR COMPARISON
prepared June 2019 for
Williams Broadcasting LLC
K265FL Enid, OK
Facility ID 202813
Ch. 265D 0.25 kW 35 m AGL
Cavell, Mertz & Associates, Inc.
Manassas, Virginia
Woods
Alfalfa
Grant
Ponca City
Noble
Garfield
Enid, OK
Kingfisher
Logan
Payne
Stillwater
Blaine
K265FL CP
250 Watts 78 m AGL
60 dBµ F(50,50)
KGWA License
2 mV/m Contour
25 mile (40 km) Radius
K265FL Proposed
250 Watts 35 m AGL
60 dBµ F(50,50)
CAVELL MERTZ & Associates, Inc.
Scale 1:750,000
0 10 20 30 km

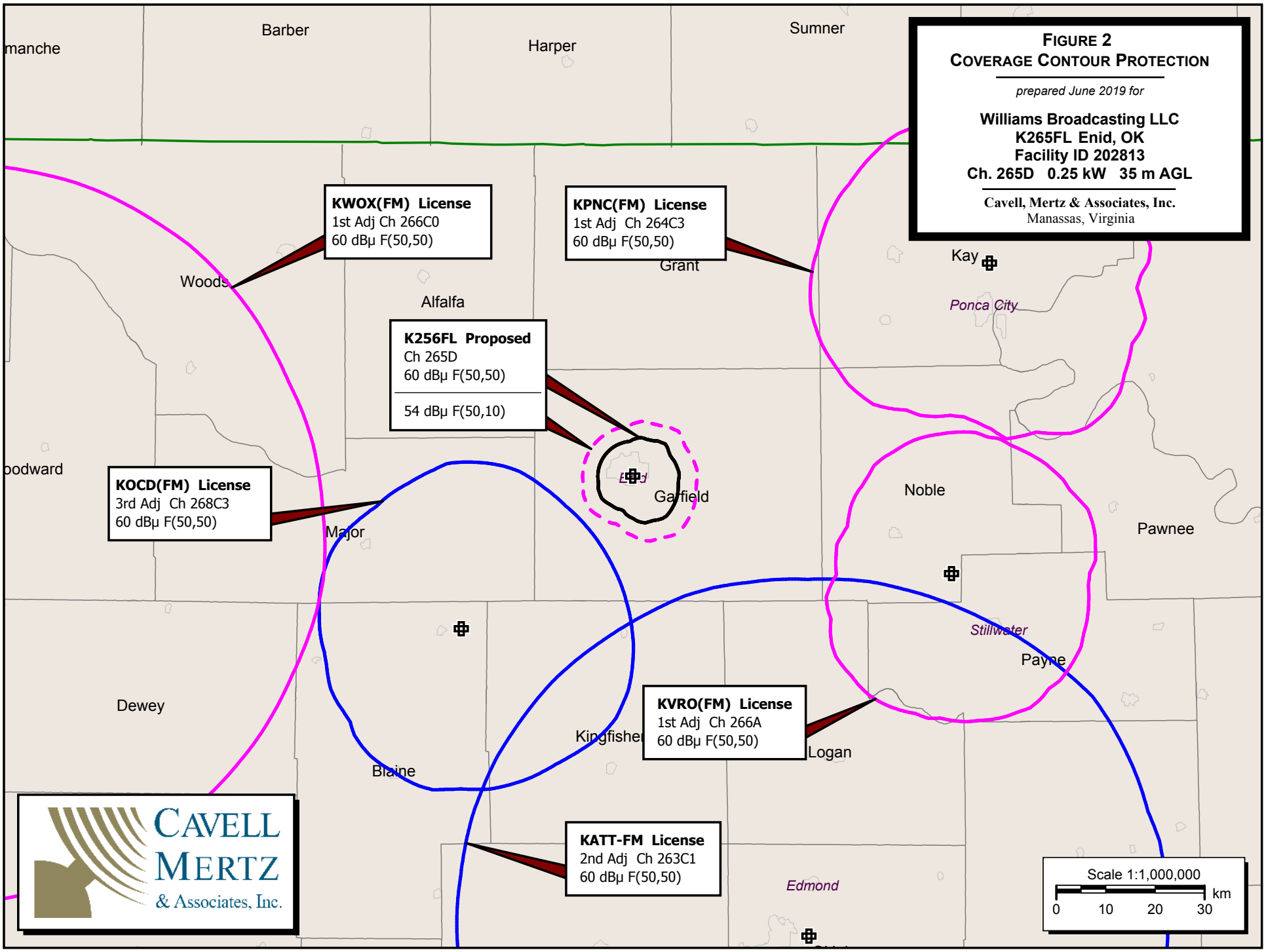
FIGURE 2
COVERAGE CONTOUR PROTECTION
prepared June 2019 for
Williams Broadcasting LLC
K265FL Enid, OK
Facility ID 202813
Ch. 265D 0.25 kW 35 m AGL
Cavell, Mertz & Associates, Inc.
Manassas, Virginia
KWOX(FM) License
1st Adj Ch 266C0
60 dBµ F(50,50)
KPNC(FM) License
1st Adj Ch 264C3
60 dBµ F(50,50)
K256FL Proposed
Ch 265D
60 dBµ F(50,50)
54 dBµ F(50,10)
KOCD(FM) License
3rd Adj Ch 268C3
60 dBµ F(50,50)
KVRO(FM) License
1st Adj Ch 266A
60 dBµ F(50,50)
KATT-FM License
2nd Adj Ch 263C1
60 dBµ F(50,50)
Barber
Harper
Sumner
Woods
Alfalfa
Grant
Kay
Ponca City
Garfield
Noble
Pawnee
Major
Stillwater
Payne
Dewey
Kingfisher
Logan
Blaine
Edmond
Scale 1:1,000,000
km
0 10 20 30
CAVELL MERTZ
& Associates, Inc.