



LANDMARK LAND SURVEYING, INC.

Civil Engineers, Land Surveyors & CAD Drafting
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May 14, 2018

To Whom It May Concern:

RE: DIRECTIONAL ANTENNA [ONE (1) BAY]
KKML, MINDEN, LOUISIANA

This is to certify that I, Paul W. Culpepper, am a Professional Land Surveyor, in and for the State of Louisiana, license number 4817 and on April 27, 2018, a survey was made under my direct supervision for the installation of the one (1) bay directional FM antenna for radio Station KKML, Minden, Louisiana.

The following steps were taken to provide for the accurate positioning of the aforementioned antenna by Landmark Land Surveying, Inc. A control survey was performed upon the existing tower and the surrounding property monuments using a GNSS/GPS unit tied into the local/national TopNet network. A control line was established several hundred feet from the base of the tower with a bearing/azimuth corrected to the TopNet network and a point to be occupied by a Total Station surveying instrument was established at the same time. Calculations and corrections were made so that the survey crew could turn the correct angle right from the control line to the tower leg upon which the antenna was being mounted to establish a direction for the antenna to be oriented to at a true azimuth of 350 degrees or a bearing of North 10 degrees West. The accuracy factor (margin of error) of this antenna installation via the aforementioned procedure is plus or minus one minute (one 60th of a degree) horizontally.

At the conclusion of the Directional Antenna [one (1) bay] mounting procedure we found that the antenna was installed in accordance with the manufactures, SWR, instructions and aimed/pointed at the true azimuth of 350 degrees or North 10 degrees West (bearing).

To the above statement, I do attest by attaching my signature; in blue ink; and professional seal in black ink.




Paul W. Culpepper, P.S. # 4817; Dated May 14, 2018.