§ 1.30001 Definitions.

For purposes of this subpart:

(a) *Wavelength at the AM frequency*. In this subpart, critical distances from an AM station are described in terms of the AM wavelength. The AM wavelength, expressed in meters, is computed as follows:

(300 meters)/(AM frequency in megahertz) = AM wavelength in meters.

For example, at the AM frequency of 1000 kHz, or 1 MHz, the wavelength is (300/1 MHz) = 300 meters.

(b) *Electrical degrees at the AM frequency*. This term describes the height of a proposed tower as a function of the frequency of a nearby AM station. To compute tower height in electrical degrees, first determine the AM wavelength in meters as described in paragraph (a) of this section. Tower height in electrical degrees is computed as follows: (Tower height in meters)/(AM wavelength in meters) × 360 degrees = Tower height in electrical degrees. For example, if the AM frequency is 1000 kHz, then the wavelength is 300 meters, per paragraph (a) of this section. A nearby tower 75 meters tall is therefore [75/300] × 360 = 90 electrical degrees tall at the AM frequency.

(c) *Proponent*. The term proponent refers in this section to the party proposing tower construction or significant modification of an existing tower or proposing installation of an antenna on an AM tower.

(d) *Distance from the AM station*. The distance shall be calculated from the tower coordinates in the case of a nondirectional AM station, or from the array center coordinates given in CDBS or any successor database for a directional AM station.

§ 1.30002 Tower construction or modification near AM stations.

(a) Proponents of construction or significant modification of a tower which is within one wavelength of a nondirectional AM station, and is taller than 60 electrical degrees at the AM frequency, must notify the AM station at least 30 days in advance of the commencement of construction. The proponent shall examine the potential impact of the construction or modification as described in paragraph (c) of this section. If the construction or modification would distort the radiation pattern by more than 2 dB, the proponent shall be responsible for the installation and maintenance of any detuning apparatus necessary to restore proper operation of the nondirectional antenna.

(b) Proponents of construction or significant modification of a tower which is within the lesser of 10 wavelengths or 3 kilometers of a directional AM station, and is taller than 36 electrical degrees at the AM frequency, must notify the AM station at least 30 days in advance of the commencement of construction. The proponent shall examine the potential impact of the construction or modification as described in paragraph (c) of this section. If the construction or modification would result in radiation in excess of the AM station's licensed standard pattern or augmented standard pattern values, the proponent shall be responsible for the installation and maintenance of any detuning apparatus necessary to restore proper operation of the directional antenna.

(c) Proponents of construction or significant modification of a tower within the distances defined in paragraphs (a) and (b) of this section of an AM station shall examine the potential effects thereof using a moment method analysis. The moment method analysis shall consist of a model of the AM antenna together with the potential reradiating tower in a lossless environment. The model shall employ the methodology specified in § 73.151(c) of this chapter, except that the AM antenna elements may be modeled as a series of thin wires driven to produce the required radiation pattern, without any requirement for measurement of tower impedances.

(d) A significant modification of a tower in the immediate vicinity of an AM station is defined as follows:

(1) Any change that would alter the tower's physical height by 5 electrical degrees or more at the AM frequency; or

(2) The addition or replacement of one or more antennas or transmission lines on a tower that has been detuned or base-insulated.