

**§ 90.305 Location of stations.**

(a) The transmitter site(s) for base station(s), including mobile relay stations, shall be located not more than 80 km. (50 mi.) from the geographic center of the urbanized area listed in § 90.303.

(b) Mobile units shall be operated within 48 km. (30 mi.) of their associated base station or stations. Such units may not be operated aboard aircraft in flight except as provided for in § 90.315(i).

(c) Control stations must be located within the area of operation of the mobile units.

(d) Base and control stations shall be located a minimum of 1.6 km. (1 mi.) from local television stations operating on UHF TV channels separated by 2, 3, 4, 5, 7, and 8 TV channels from the television channel in which the base station will operate.

**§ 90.307 Protection criteria.**

The tables and figures listed in § 90.309 shall be used to determine the effective radiated power (ERP) and antenna height of the proposed land mobile base station and the ERP for the associated control station (control station antenna height shall not exceed 31 meters (100 feet) above average terrain (AAT)).

(a) Base stations operating on the frequencies available for land mobile use in any urbanized area and having an antenna height (AAT) less than 152 meters (500 feet) shall afford protection to co-channel and adjacent channel television stations in accordance with the values set out in tables A and E of § 90.309, except for channel 15 in New York, NY, and Cleveland, OH, and channel 16 in Detroit, MI, where protection will be in accordance with the values set forth in tables B and E in 47 CFR 90.309.

(b) For base stations having antenna heights between 152 and 914 meters (500–3000 feet) above average terrain, the effective radiated power must be reduced below 1 kilowatt in accordance with the values shown in the power reduction graph in Figure A in § 90.309, except for channel 15 in New York, NY, and Cleveland, OH, and channel 16 in Detroit, MI, where the effective radiated power must be reduced in accordance with Figure B in § 90.309. For

heights of more than 152 meters (500 feet) above average terrain, the distance to the radio path horizon will be calculated assuming smooth earth. If the distance so determined equals or exceeds the distance to the Grade B contour of a co-channel TV station (Grade B contour defined in § 73.683(a) of this chapter), an authorization will not be granted unless it can be shown that actual terrain considerations are such as to provide the desired protection at the Grade B contour, or that the effective radiated power will be further reduced so that, assuming free space attenuation, the desired protection at the Grade B contour will be achieved.

(c) Mobile units and control stations operating on the frequencies available for land mobile use in any given urbanized area shall afford protection to co-channel and adjacent channel television stations in accordance with the values set forth in table C in § 90.309 and paragraph (d) of this section except for channel 15 in New York, NY, and Cleveland, OH, and channel 16 in Detroit, MI, where protection will be in accordance with the values set forth in table D in § 90.309 and paragraph (d) of this section.

(d) The minimum distance between a land mobile base station which has associated mobile units and a protected adjacent channel television station is 145 km (90 miles).

(e) The television stations to be protected (co-channel, adjacent channel, IM, and IF) in any given urbanized area, in accordance with the provisions of paragraphs (a), (b), (c), and (d) of this section, are identified in the Commission's publication "TV stations to be considered in the preparation of Applications for Land Mobile Facilities in the Band 470–512 MHz." The publication is available at the offices of the Federal Communications Commission in Washington, DC or upon the request of interested persons.

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**§ 90.309 Tables and figures.**

(a) *Directions for using the tables.* (1) Using the method specified in § 1.958 of this chapter, determine the distances between the proposed land mobile base station and the protected co-channel