the noise-limited service levels specified in §73.622(e) of this chapter. The extremity of this area (noise-limited perimeter) is calculated from the authorized maximum radiated power (without depression angle correction), the horizontal radiation pattern, and height above average terrain in the pertinent direction, using the signal propagation method specified in §73.625(b) of this chapter.

(b)(1) An application to construct a new low power TV or TV translator station or change the facilities of an existing station will not be accepted if it specifies a site which is located within the noise-limited service perimeter of a co-channel DTV station.

(2) Due to the frequency spacing which exists between TV channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, adjacent channel protection standards shall not be applicable to these pairs of channels.

(c) The low power TV, TV translator or TV booster station field strength is calculated from the proposed effective radiated power (ERP) and the antenna height above average terrain (HAAT) in pertinent directions.

(1) For co-channel protection, the field strength is calculated using Figure 9a, 10a, or 10c of §73.699 (F(50,10) charts) of part 73 of this chapter.

(2) For adjacent channel protection, the field strength is calculated using Figure 9, 10, or 10b of §73.699 (F(50,50) charts) of part 73 of this chapter.

(d) A low power TV, TV translator or TV booster station application will not be accepted if the ratio in dB of its field strength to that of the DTV station (L/D ratio) fails to meet the following:

(1) −2 dB or less for co-channel operations. This maximum L/D ratio for co-channel interference to DTV service is only valid at locations where the signal-to-noise (S/N) ratio is 25 dB or greater. At the edge of the noise-limited service area, where the S/N ratio is 16 dB, the maximum L/D ratio for co-channel interference from analog low power TV, TV translator or TV booster service into DTV service is −21 dB. At locations where the S/N ratio is greater than 16 dB but less than 25 dB, the maximum L/D field strength ratios are found from the following Table (for values between measured values, linear interpolation can be used):

Signal-to-noise ratio(dB)	DTV-to-low power ratio (dB)
16.00	21.00
16.35	19.94
17.35	17.69
18.35	16.44
19.35	7.19
20.35	4.69
21.35	3.69
22.35	2.94
23.35	2.44
25.00	2.00

(2) + 48 dB for adjacent channel operations at:

(i) The DTV noise-limited perimeter if a low power TV, TV translator or TV booster station is located outside that perimeter.

(ii) At all points within the DTV noise-limited area if a low power TV or TV translator is located within the DTV noise-limited perimeter, as demonstrated by the applicant.

[62 FR 26721, May 14, 1997, as amended at 63 FR 13563, Mar. 20, 1998; 64 FR 4327, Jan. 28, 1999]

§74.707 Low power TV and TV translator station protection.

(a)(1) A low power TV or TV translator will be protected from interference from other low power TV or TV translator stations, or TV booster stations within the following predicted contours:

(i) 62 dBu for stations on Channels 2 through 6;

(ii) 68 dBu for stations on Channels 7 through 13; and

(iii) 74 dBu for stations on Channels 14 through 69.

Existing licensees and permittees that did not furnish sufficient data required to calculate the above contours by April 15, 1983 are assigned protected contours having the following radii:

Up to 0.001 kW VHF/UHF—1 mile (1.6 km) from transmitter site
Up to 0.01 kW VHF; up to 0.1 k/W UHF—2 miles (3.2 km) from transmitter site
Up to 0.1 kW VHF; up to 1 kW UHF—4 miles (6.4 km) from transmitter site

New applicants must submit the required information; they cannot rely on this table.

(2) The low power TV or TV translator station protected contour is calculated from the authorized effective radiated power and antenna height above average terrain, using Figure 9, 10, or 10b of §73.699 (F(50,50) charts) of Part 73 of this chapter.

(b)(1) An application to construct a new low power TV, TV translator, or TV booster station or change the facilities of an existing station will not be accepted if it specifies a site which is within the protected contour of a co-channel or first adjacent channel low power TV, TV translator, or TV booster station, except that a TV booster station may be located within the protected contour of its co-channel primary station.

(2) Due to the frequency spacing which exists between TV Channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, adjacent channel protection standards shall not be applicable to these pairs of channels. (See §73.603(a) of Part 73 of this chapter.)

(3) A UHF low power TV, TV translator, or TV booster construction permit application will not be accepted if it specifies a site within the UHF low power TV, TV translator, or TV booster station's protected contour and proposes operation on a channel that is 15 channels above the channel in use by the low power TV, TV translator, or TV booster station.

(c) The low power TV, TV translator, or TV booster construction permit application field strength is calculated from the proposed effective radiated power (ERP) and the antenna above average terrain (HAAT) in pertinent directions.

(1) For co-channel protection, the field strength is calculated using Figure 9a, 10a, or 10c of §73.699 (F(50,10) charts) of Part 73 of this chapter.

(2) For low power TV, TV translator, or TV booster applications that do not specify the same channel as the low power TV, TV translator, or TV booster station to be protected, the field strength is calculated using Figure 9, 10, or 10b of §73.699 (F(50,50) charts) of Part 73 of this chapter.

(d) A low power TV, TV translator, or TV booster station application will not be accepted if the ratio in dB of its field strength to that of the authorized low power TV, TV translator, or TV booster station at its protected contour fails to meet the following:

(1) −45 dB for co-channel operations without offset carrier frequency operation or −28 dB for offset carrier frequency operation. An application requesting offset carrier frequency operation must include the following:

(i) A requested offset designation (zero, plus, or minus) identifying the proposed direction of the 10 kHz offset from the standard carrier frequencies of the requested channel. If the offset designation is not different from that of the station being protected, or if the station being protected is not maintaining its frequencies within the tolerance specified in §74.761 for offset operation, the −45 dB ratio must be used.

(ii) A description of the means by which the low power TV, TV translator, or TV booster station's frequencies will be maintained within the tolerances specified in §74.761 for offset operation.

(2) 6 dB when the protected low power TV or TV translator station operates on a VHF channel that is one channel above the requested channel.

(3) 12 dB when the protected low power TV or TV translator station operates on a VHF channel that is one channel below the requested channel.

(4) 15 dB when the protected low power TV or TV translator station operates on a UHF channel that is one channel above or below the requested channel.

(5) 6 dB when the protected low power TV or TV translator station operates on a UHF channel that is fifteen channels below the requested channel.

(e) As an alternative to the preceding paragraphs of §74.707, an applicant for a low power TV or TV translator station may make full use of terrain shielding and Longley-Rice terrain dependent propagation prediction methods to demonstrate that the proposed facility would not be likely to cause interference to low power TV, TV translator and TV booster stations. Guidance on using the Longley-Rice methodology is provided in *OET Bulletin No. 69* (but also *see* §74.793(d)). Copies of *OET Bulletin No. 69* may be inspected during normal business hours at the:

Federal Communications Commission, Room CY–C203, 445 12th Street, SW., Reference Information Center, Washington, DC 20554. This document is also available through the Internet on the FCC Home Page at *http://www.fcc.gov*.

[47 FR 21498, May 18, 1982, as amended at 47 FR 35990, Aug. 18, 1982; 48 FR 21487, May 12, 1983; 52 FR 31403, Aug. 20, 1987; 62 FR 26722, May 14, 1997; 65 FR 58467, Sept. 29, 2000; 69 FR 69332, Nov. 29, 2004]

§ 74.708 Class A TV and digital Class A TV station protection.

(a) The Class A TV and digital Class A TV station protected contours are specified in § 73.6010 of this chapter.

(b) An application to construct a new low power TV, TV translator, or TV booster station or change the facilities of an existing station will not be accepted if it fails to protect an authorized Class A TV or digital Class A TV station or an application for such a station filed prior to the date the low power TV, TV translator, or TV booster application is filed.

(c) Applications for low power TV, TV translator and TV booster stations shall protect Class A TV stations pursuant to the requirements specified in paragraphs (b) through (e) of § 74.707.

(d) Applications for low power TV, TV translator and TV booster stations shall protect digital Class A TV stations pursuant to the following requirements:

(i) An application must not specify an antenna site within the protected contour of a co-channel digital Class A TV station.

(ii) The ratio in dB of the field strength of the low power TV, TV translator or TV booster station to that of the digital Class A TV station must meet the requirements specified in paragraph (d) of § 74.706, calculated using the propagation methods specified in paragraph (c) of that section.

[65 FR 30012, May 10, 2000]

§ 74.709 Land mobile station protection.

(a) Stations in the Land Mobile Radio Service, using the following channels in the indicated cities will be protected from interference caused by low power TV or TV translator stations, and low power TV and TV translator stations must accept any interference from stations in the land mobile service operating on the following channels:

City	Channels	Coordinates	
		Latitude	Longitude
Boston, MA	14, 16	42°21′24″	071°03′24″
Chicago, IL	14, 15	41°52′28″	087°38′22″
Cleveland, OH	14, 15	41°29′51″	081°41′50″
Dallas, TX	16	32°47′09″	096°47′37″
Detroit, MI	15, 16	42°19′48″	083°02′57″
Houston, TX	17	29°45′26″	095°21′37″
Los Angeles, CA	14, 16, 20	34°03′15″	118°18′28″
Miami, FL	14	25°46′37″	080°11′32″
New York, NY	14, 15, 16	40°45′06″	073°59′39″
Philadelphia, PA	19, 20	39°56′58″	075°09′21″
Pittsburgh, PA	14, 18	40°26′19″	080°00′00″
San Francisco, CA	16, 17	37°46′39″	122°24′40″
Washington, DC	17, 18	38°53′51″	077°00′33″

(b) The protected contours for the land mobile radio service are 130 kilometers from the above coordinates, except where limited by the following:

(1) If the land mobile channel is the same as the channel in the following list, the land mobile protected contour excludes the area within 145 kilometers of the corresponding coordinates from list below. Except if the land mobile channel is 15 in New York or Cleveland or 16 in Detroit, the land mobile protected contour excludes the area within 95 kilometers of the corresponding coordinates from the list below.

(2) If the land mobile channel is one channel above or below the channel in the following list, the land mobile protected contour excludes the area within 95 kilometers of the corresponding coordinates from the list below.

City	Channel	Coordinates	
		Latitude	Longitude
San Diego, CA	15	32°41′48″	116°56′10″
Waterbury, CT	20	41°31′02″	073°01′00″
Washington, DC	14	38°57′17″	077°00′17″
Washington, DC	20	38°57′49″	077°06′18″
Champaign, IL	15	40°04′11″	087°54′45″
Jacksonville, IL	14	39°45′52″	090°30′29″
Ft. Wayne, IN	15	41°05′35″	085°10′42″
South Bend, IN	16	41°36′20″	086°12′44″
Salisbury, MD	16	38°24′15″	075°34′45″
Mt. Pleasant, MI	14	43°34′24″	084°46′21″
Hanover, NH	15	43°42′30″	072°09′16″
Canton, OH	17	40°51′04″	081°16′37″
Cleveland, OH	19	41°21′19″	081°44′24″
Oxford, OH	14	39°30′26″	084°44′09″
Zanesville, OH	18	39°55′42″	081°59′06″
Elmira-Corning, NY	18	42°06′20″	076°52′17″
Harrisburg, PA	21	40°20′44″	076°52′09″
Johnstown, PA	19	40°19′47″	078°53′45″
Lancaster, PA	15	40°15′45″	076°27′49″