

**Geographic Separation of Sub-Band A  
Base or Fixed Station Receivers and Sub-Band B  
Base or Fixed Station Transmitters**

Separation distance (kilometers)	Effective radiated power (watts)/1/
0.0-0.3	(2/)
0.3-0.5	5
0.5-0.6	10
0.6-0.8	20
0.8-2.0	25
2.0-4.0	50
4.0-5.0	100
5.0-6.0	200
Over 6.0	500

/1/ Transmitter peak envelope power shall be used to determine effective radiated power.

/2/ Stations separated by 0.3 km or less shall not be authorized. This table does not apply to the low-power channels 196-200. See Section 90.729(c).

(e) Phase II licensees authorized on 220-221 MHz frequencies assigned from Sub-band B will be required to geographically separate their base station or fixed station transmitters from the base station or fixed station receivers of Phase I licensees authorized on 221-222 MHz frequencies 200 kHz removed or less in Sub-band A in accordance with the Table in paragraph (d) of this section.

(f) Phase II licensees with base or fixed stations transmitting on 220-221 MHz frequencies assigned from Sub-band B and Phase II licensees with base or fixed station stations receiving on Sub-band A 221-222 MHz frequencies, if such transmitting and receiving frequencies are 200 kHz or less removed from one another, will be required to coordinate the location of their base stations or fixed stations to avoid interference and to cooperate to resolve any instances of interference in accordance with the provisions of Section 90.173(b).

(g) A mobile station is authorized to transmit on any frequency assigned to its associated base station. Mobile units not associated with base stations (see Section 90.720(a)) must operate on "mobile" channels.

(h) A licensee's fixed station is authorized to transmit on any of the licensee's assigned base station frequencies or mobile station frequencies.

(i) Except for nationwide assignments, the separation of co-channel Phase I base stations, or fixed stations transmitting on base station frequencies, shall be 120 kilometers. Except for Phase I licensees seeking license modification in accordance with the provisions of Sections 90.751 and 90.753, shorter separations between such stations will be considered by the Commission on a case-by-case basis upon submission of a technical analysis indicating that at least 10 dB protection will be provided to an existing Phase I station's predicted 38 dBu signal level contour. The existing Phase I station's predicted 38 dBu signal level contour shall be calculated using the F(50,50) field strength chart for Channels 7-13 in Section 73.699 (Fig. 10) of this chapter, with a 9 dB correction factor for antenna height differential. The 10 dB protection to the existing Phase I station's predicted 38 dBu signal level contour shall be calculated using the F(50,10) field strength chart for Channels 7-13 in Section 73.699 (Fig. 10a) of this chapter, with a 9 dB correction factor for antenna height differential.

16. Section 90.725 is amended by revising the section heading and paragraphs (f) and (h) to read as follows:

**Sec. 90.725 Construction requirements for Phase I licensees.**

\* \* \* \* \*

(f) Licensees authorized Phase I non-nationwide systems, or authorized on Channels 161 through 170 or Channels 181 through 185, must construct their systems (*i.e.*, have all specified base stations constructed with all channels) and place their systems in operation, or commence service in accordance with the provisions of Section 90.167, within twelve months of the initial license grant date. Authorizations for systems not constructed and placed in operation, or having commenced service, within twelve months from the date of initial license grant cancel automatically.

\* \* \* \* \*

(h) The requirements and conditions of paragraphs (a) through (e) and paragraph (g) of this section apply to nationwide licensees that construct and operate stations for fixed or paging operations on a primary basis instead of, or in addition to, stations for land mobile operations on a primary basis except that, in satisfying the base station construction and placed in operation requirements of paragraph (a) of this section and the system progress report requirements of paragraphs (d) and (e) of this section, licensees operating stations for fixed operation on a primary basis instead of, or in addition to, stations for land mobile or paging operations on a primary basis in a given geographic area may demonstrate how such fixed stations are providing substantial service to the public in those geographic areas.

17. The section heading of Section 90.727 is revised to read as follows:

**Section 90.727 Extended implementation schedules for Phase I licensees.**

\* \* \* \* \*

18. Section 90.729 is revised to read as follows:

**Section 90.729 Limitations on power and antenna height.**

(a) The permissible effective radiated power (ERP) with respect to antenna heights for land mobile, paging, or fixed stations transmitting on frequencies in the 220-221 MHz band shall be determined from the following Table. These are maximum values and applicants are required to justify power levels requested.

ERP vs. Antenna Height Table /2/

Antenna height above average terrain (HAAT), meters	Effective radiated power, watts /1/
Up to 150	500
150 to 225	250
225 to 300	125
300 to 450	60
450 to 600	30
600 to 750	20
750 to 900	15
900 to 1050	10
Above 1050	5

/1/ Transmitter PEP shall be used to determine ERP.

/2/ These power levels apply to stations used for land mobile, paging, and fixed operations.

(b) The maximum permissible ERP for mobile units is 50 watts. Portable units are considered as mobile units. Licensees operating fixed stations or paging base stations transmitting on frequencies in the 221-222 MHz band may not operate such fixed stations or paging base stations at power levels greater than 50 watts ERP, and may not transmit from antennas that are higher than 7 meters above ground, except that transmissions from antennas

that are higher than 7 meters above ground will be permitted if the effective radiated power of such transmissions is reduced below 50 watts ERP by  $20 \log_{10}(h/7)$  dB, where h is the height of the antenna above ground, in meters.

(c) Base station and fixed station transmissions on base station transmit Channels 196-200 are limited to 2 watts ERP and a maximum antenna height of 6.1 meters (20 ft) above ground. Licensees authorized on these channels may operate at power levels above 2 watts ERP or with a maximum antenna height greater than 6.1 meters (20 ft) above ground if:

(1) They obtain the concurrence of all Phase I and Phase II licensees with base stations or fixed stations receiving on base station receive Channels 1-40 and located within 6 km of their base station or fixed station; and

(2) Their base station or fixed station is not located in the United States/Mexico or United States/Canada border areas.

19. Section 90.731 is removed.

20. Section 90.733 is amended by removing paragraph (d), revising paragraphs (a)(1), and (c) and adding new paragraphs (d), (e), (f), (g), (h), and (i) to read as follows:

**Section 90.733 Permissible operations.**

(a) \* \* \*

(1) (i) For government and non-government land mobile operations, *i.e.*, for base/mobile and mobile relay transmissions, on a primary basis; or

(ii) For the following operations instead of or in addition to a licensee's land mobile operations: one-way or two-way paging operations on a primary basis by all non-Government Phase II licensees, fixed operations on a primary basis by all non-Government Phase II licensees and all Government licensees, one-way or two-way paging or fixed operations on a primary basis by all non-Government Phase I licensees, except that before a non-Government Phase I licensee may operate one-way or two-way paging or fixed systems on a primary basis instead of or in addition to its land mobile operations, it must meet the following requirements:

(A) A nationwide Phase I licensee must;

(1) Meet its two-year benchmark for the construction of its land mobile system base stations as prescribed in Section 90.725(a); and

(2) Provide a new 10-year schedule, as required in Section 90.713(b)(3), for the construction of the fixed and/or paging system it intends to construct instead of, or in addition to, its nationwide land mobile system; and

(3) Certify that the financial showings and all other certifications provided in demonstrating its ability to construct and operate its nationwide land mobile system, as required in Sections 90.713(b), (c) and (d), remain applicable to the nationwide system it intends to construct consisting of fixed and/or paging operations on a primary basis instead of, or in addition to, its land mobile operations; or

(4) In lieu of providing the requirements of paragraph (a)(1)(ii)(A)(3) of this section, provide the financial showings and all other certifications required in Sections

90.713(b), (c) and (d) to demonstrate its ability to construct and operate a nationwide system consisting of fixed and/or paging operations on a primary basis instead of, or in addition to, its land mobile operations.

(B) A non-nationwide Phase I licensee must first meet the requirement to construct its land mobile base station and place it in operation, or commence service (in accordance with Section 90.167) as prescribed in Sections 90.725(f) or 90.727, as applicable.

\* \* \* \* \*

(c) For operations requiring less than a 4 kHz bandwidth, more than a single emission may be utilized within the authorized bandwidth. In such cases, the frequency stability requirements of Section 90.213 do not apply, but the out-of-band emission limits of Section 90.210(f) must be met.

(d) Licensees, except for licensees authorized on Channels 161 through 170 and 181 through 185, may combine any number of their authorized, contiguous channels to form channels wider than 5 kHz. In so doing, licensees must comply with the following spectrum efficiency standard, which will remain in effect through December 31, 2001:

(1) For voice communications, licensees must employ equipment that provides at least one voice channel per 5 kHz of channel bandwidth; and

(2) For data communications, licensees must employ equipment that operates at a data rate of at least 4,800 bits per second per 5 kHz of channel bandwidth.

(3) Licensees authorized on channels other than Channels 161 through 170 and 181 through 185 may combine any number of their authorized, contiguous channels to form channels wider than 5 kHz without complying with the spectrum efficiency standard identified in paragraphs (d)(1) and (d)(2) of this section if they operate with equipment that has been granted type acceptance in accordance with the provisions of Section 90.203(k)(2).

(e) In combining authorized contiguous channels to form channels wider than 5 kHz, the emission limits in Section 90.210(f) must be met only at the outermost edges of the contiguous channels. Transmitters shall be tested to confirm compliance with this requirement with the transmission located as close to the band edges as permitted by the design of the transmitter. The frequency stability requirements in Section 90.213 shall apply only to the outermost of the contiguous channels authorized to the licensee. However, the frequency stability employed for transmissions operating inside the outermost contiguous channels must be such that the emission limits in Section 90.210(f) are met over the temperature and voltage variations prescribed in Section 2.995 of this chapter.

(f) A Phase I non-nationwide licensee operating a paging base station, or a fixed station transmitting on frequencies in the 220-221 MHz band, may only operate such stations at the coordinates of the licensee's authorized land mobile base station.

(g) The transmissions of a Phase I non-nationwide licensee's paging base station, or fixed station transmitting on frequencies in the 220-221 MHz band, must meet the requirements of Sections 90.723(d) and (i), and 90.729, and such a station must operate at the effective

radiated power and antenna height-above-average-terrain prescribed in the licensee's land mobile base station authorization.

(h) Licensees using 220-222 MHz spectrum for geophysical telemetry operations are authorized to operate fixed stations on a secondary, non-interference basis to licensees operating in the 220-222 MHz band on a primary basis under the conditions that such licensees:

(1) Provide notification of their operations to co-channel non-nationwide Phase I licensees with an authorized base station, or fixed station transmitting on frequencies in the 220-221 MHz band, located within 45 km of the secondary licensee's station, to co-channel, Phase II EA or Regional licensee authorized to operate in the EA or REAG in which the secondary licensee's station is located, and to co-channel Phase I or Phase II nationwide licensees;

(2) Operate only at temporary locations in accordance with the provisions of Section 90.137;

(3) Not transmit at a power level greater than one watt ERP;

(4) Not transmit from an antenna higher than 2 meters (6.6 feet) above ground; and

(5) Not operate on Channels 111 through 120, 161 through 170, or 181 through 185.

(i) All licensees constructing and operating base stations or fixed stations on frequencies in the 220-222 MHz band must:

(1) Comply with any rules and international agreements that restrict use of their authorized frequencies, including the provisions of § 90.715 relating to U.S./Mexican border areas;

(2) Comply with the provisions of Section 17.6 of this chapter with regard to antenna structures; and

(3) Comply with the provisions of §§ 1.1301 through 1.1319 of this chapter with regard to actions that may or will have a significant impact on the quality of the human environment.

21. Paragraph (d) of Section 90.735 is revised to read as follows:

**Section 90.735 Station identification.**

\* \* \* \* \*

(d) Digital transmissions may also be identified by digital transmission of the station call sign. A licensee that identifies its station in this manner must provide the Commission, upon its request, information (such as digital codes and algorithms) sufficient to decipher the data transmission to ascertain the call sign transmitted.

22. The section heading of Section 90.737 is revised to read as follows:

**Section 90.737 Supplemental reports required of Phase I licensees.**

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23. Section 90.739 is revised to read as follows:

**Section 90.739 Number of systems authorized in a geographical area.**

(a) No licensee will be authorized more than one Phase I system in the 220-222 MHz band in a single category (*i.e.*, one nationwide system, one 5-channel trunked system, one data-only local system of 1 to 5 channels, one unrestricted non-trunked local system of 1 to 5 channels, or one public safety/mutual aid local system of 1 to 5 channels) within 64 kilometers (40 miles) of an existing system authorized to that licensee in the same category, unless the licensee can demonstrate that the additional system is justified on the basis of its communications requirements.

(b) There is no limit on the number of Phase II nationwide, EA or Regional licenses that may be authorized to a single licensee.

24. The section heading and introductory paragraph of Section 90.741 are revised to read as follows:

**Section 90.741 Urban areas for Phase I nationwide systems.**

Licensees of Phase I nationwide systems must construct base stations, or fixed stations transmitting on frequencies in the 220-221 MHz band, in a minimum of 28 of the urban areas listed in the following Table within ten years of initial license grant. A base station, or fixed station, is considered to be within one of the listed urban areas if it is within 60 kilometers (37.3 miles) of the specified coordinates.

\* \* \* \* \*

25. A new Section 90.743 is added to read as follows:

**Section 90.743 Renewal expectancy.**

(a) All licensees seeking renewal of their authorizations at the end of their license term must file a renewal application in accordance with the provisions of Section 90.149. Licensees must demonstrate, in their application, that:

(1) They have provided "substantial" service during their past license term. "Substantial" service is defined in this rule as service that is sound, favorable, and substantially above a level of mediocre service that just might minimally warrant renewal; and

(2) They have substantially complied with applicable FCC rules, policies, and the Communications Act of 1934, as amended.

(b) In order to establish its right to a renewal expectancy, a renewal applicant must submit a showing explaining why it should receive a renewal expectancy. At a minimum, this showing must include:

(1) A description of its current service in terms of geographic coverage and population served;

(2) For an EA, Regional, or nationwide licensee, an explanation of its record of expansion, including a timetable of the construction of new stations to meet changes in demand for service;

(3) A description of its investments in its system;

(4) Copies of all FCC orders finding the licensee to have violated the Communications Act or any FCC rule or policy; and

(5) A list of any pending proceedings that relate to any matter described in this paragraph.

(c) Phase I non-nationwide licensees have license terms of 5 years, and therefore must meet these requirements 5 years from the date of initial authorization in order to receive a renewal expectancy. Phase I nationwide licensees and all Phase II licensees have license terms of 10 years, and therefore must meet these requirements 10 years from the date of initial authorization in order to receive a renewal expectancy.

26. Section 90.751 is revised to read as follows:

**Section 90.751 Minor modifications of Phase I, non-nationwide licenses.**

Phase I non-nationwide licensees will be given an opportunity to seek modification of their license to relocate their initially authorized base station, *i.e.*, locate their base station at a site other than its initially authorized location. The conditions under which modifications will be granted and the procedures for applying for license modifications are described in Sections 90.753, 90.755, and 90.757. For CMRS licensees, these modifications will be treated as minor modifications in accordance with Section 90.164.

27. A new centered heading is added following Section 90.757 to read as follows:

POLICIES GOVERNING THE LICENSING AND USE OF PHASE II EA, REGIONAL AND NATIONWIDE SYSTEMS.

28. A new Section 90.761 is added to read as follows:

**Section 90.761 EA and Regional licenses.**

(a) EA licenses for spectrum blocks listed in Table 2 of Section 90.721(b) are available in 175 Economic Areas (EAs) as defined in Section 90.7.

(b) Regional licenses for spectrum blocks listed in Table 2 of Section 90.721(b) are available in six Regional Economic Area Groupings (REAGs) as defined in Section 90.7.

29. A new Section 90.763 is added to read as follows:

**Section 90.763 EA, Regional and Nationwide system operations.**

(a) A nationwide licensee authorized pursuant to Section 90.717(a) may construct and operate any number of land mobile or paging base stations, or fixed stations, anywhere in the Nation, and transmit on any of its authorized channels, provided that the licensee complies with the requirements of Section 90.733(i).

(b) An EA or Regional licensee authorized pursuant to Section 90.761 may construct and operate any number of land mobile or paging base stations, or fixed stations, anywhere within its authorized EA or REAG, and transmit on any of its authorized channels, provided that:

(1) The licensee affords protection to all authorized co-channel Phase I non-nationwide base stations as follows:

(i) The EA or Regional licensee must locate its land mobile or paging base stations, or fixed stations transmitting on base station transmit frequencies, at least 120 km from the land mobile or paging base stations, or fixed stations transmitting on base station transmit frequencies, of co-channel Phase I licensees, except that separations of less than 120 km shall be considered on a case-by-case basis upon submission by the EA or Regional licensee of:

(A) A technical analysis demonstrating at least 10 dB protection to the predicted 38 dBu service contour of the co-channel Phase I licensee, *i.e.*, demonstrating that the predicted 28 dBu interfering contour of the EA or Regional licensee's base station or fixed station does not overlap the predicted 38 dBu service contour of the co-channel Phase I licensee's base station or fixed station; or

(B) A written letter from the co-channel Phase I licensee consenting to a separation of less than 120 km, or to less than 10 dB protection to the predicted 38 dBu service contour of the licensee's base station or fixed station.

(ii) The Phase I licensee's predicted 38 dBu service contour referred to in paragraph (a)(1)(i) of this section is calculated using the F(50,50) field strength chart for Channels 7-13 in Section 73.699 (Fig. 10) of this chapter, with a 9 dB correction factor for antenna height differential, and is based on the licensee's authorized effective radiated power and antenna height-above-average-terrain. The EA or Regional licensee's predicted 28 dBu interfering contour referred to in paragraph (a)(1)(i) of this section is calculated using the F(50,10) field strength chart for Channels 7-13 in Section 73.699 (Fig. 10a) of this chapter, with a 9 dB correction factor for antenna height differential.

(2) The licensee complies with the requirements of Section 90.733(i).

(3) The licensee limits the field strength of its base stations, or fixed stations operating on base station transmit frequencies, in accordance with the provisions of § 90.771.

(4) The licensee notifies the Commission within 30 days of the completion of the addition, removal, relocation or modification of any of its facilities within its authorized area of

operation. Such notification must be made by submitting an FCC Form 600, and must include the appropriate filing fee, if any.

(c) In the event that the authorization for a co-channel Phase I base station, or fixed station transmitting on base station transmit frequencies, within an EA or Regional licensee's border is terminated or revoked, the EA or Regional licensee's channel obligations to such stations will cease upon deletion of the facility from the Commission's official licensing records, and the EA or Regional licensee then will be able to construct and operate without regard to the previous authorization.

30. A new Section 90.765 is added to read as follows:

**Section 90.765 Licenses term for Phase II licenses.**

Nationwide licenses authorized pursuant to Section 90.717(a), EA and Regional licenses authorized pursuant to Section 90.761, and non-nationwide licenses authorized pursuant to Section 90.720 and Section 90.719(c) will be issued for a term not to exceed ten years.

31. A new Section 90.767 is added to read as follows:

**Section 90.767 Construction and implementation of EA and Regional licenses.**

(a) An EA or Regional licensee must construct a sufficient number of base stations (*i.e.*, base stations for land mobile and/or paging operations) to provide coverage to:

(1) At least one-third of the population of its EA or REAG within five years of the issuance of its initial license; and

(2) At least two-thirds of the population of its EA or REAG within ten years of the issuance of its initial license.

(b) EA and Regional licensees offering fixed services as part of their system, and EA and Regional licensees that have one or more incumbent, co-channel Phase I licensees authorized within their EA or REAG may meet the construction requirements of paragraph (a) of this section by demonstrating an appropriate level of substantial service at their five- and ten-year benchmarks.

(c) Licensees must submit maps or other supporting documents to demonstrate compliance with the construction requirements of paragraphs (a) and (b) of this section.

(d) Failure by an EA or Regional licensee to meet the construction requirements of paragraph (a) or (b) of this section, as applicable, will result in automatic cancellation of its entire EA or Regional license. In such instances, EA or Regional licenses will not be converted to individual, site-by-site authorizations for already constructed stations.

(e) EA and Regional licensees will not be permitted to count the resale of the services of other providers in their EA or REAG, *e.g.*, incumbent, Phase I licensees, to meet the construction requirement of paragraph (a) or (b) of this section, as applicable.

(f) EA and Regional licensees will not be required to construct and place in operation, or commence service on, all of their authorized channels at all of their base stations or fixed stations.

32. A new Section 90.769 is added to read as follows:

**Section 90.769 Construction and implementation of Nationwide licenses.**

(a) A nationwide licensee must construct a sufficient number of base stations (*i.e.*, base stations for land mobile and/or paging operations) to provide coverage to:

(1) A composite area of at least 750,000 square kilometers or 37.5 percent of the United States population within five years of the issuance of its initial license; and

(2) A composite area of at least 1,500,000 square kilometers or 75 percent of the United States population within ten years of the issuance of its initial license.

(b) Nationwide licensees offering fixed services as part of their system may meet the construction requirements of paragraph (a) of this section by demonstrating an appropriate level of substantial service at their five- and ten-year benchmarks.

(c) Licensees must submit maps or other supporting documents to demonstrate compliance with the construction requirements of paragraphs (a) and (b) of this section.

(d) Failure by a nationwide licensee to meet the construction requirements of paragraphs (a) or (b) of this section, as applicable, will result in automatic cancellation of its entire nationwide license. In such instances, nationwide licenses will not be converted to individual, site-by-site authorizations for already constructed stations.

(e) Nationwide licensees will not be required to construct and place in operation, or commence service on, all of their authorized channels at all of their base stations or fixed stations.

33. A new Section 90.771 is added to read as follows:

**Section 90.771 Field strength limits.**

(a) The transmissions from base stations, or fixed stations transmitting on base station transmit frequencies, of EA and Regional licensees may not exceed a predicted 38 dBu field strength at their EA or REAG border. The predicted 38 dBu field strength is calculated using the F(50,50) field strength chart for Channels 7-13 in Section 73.699 (Fig. 10) of this chapter, with a 9 dB correction factor for antenna height differential.

(b) Licensees will be permitted to exceed the predicted 38 dBu field strength required in paragraph (a) of this section if all affected, co-channel EA and Regional licensees agree to the higher field strength.

(c) EA and Regional licensees must coordinate to minimize interference at or near their EA and REAG borders, and must cooperate to resolve any instances of interference in accordance with the provisions of Section 90.173(b).

34. A new Subpart W consisting of Sections 90.1001 through 90.1025 is added to Part 90 to read as follows:

- § 90.1001 220 MHz service subject to competitive bidding.
- § 90.1003 Competitive bidding design for the 220 MHz service.
- § 90.1005 Competitive bidding mechanisms.
- § 90.1007 Withdrawal, default and disqualification payments.
- § 90.1009 Bidding application (FCC Form 175 and 175-S Short-form).
- § 90.1011 Submission of upfront payments and down payments.
- § 90.1013 Long-form application (FCC Form 600).
- § 90.1015 License grant, denial, default, and disqualification.
- § 90.1017 Bidding credits, down payments, and installment payments for small businesses and very small businesses.
- § 90.1019 Eligibility for partitioned licenses.
- § 90.1021 Definitions concerning competitive bidding process.
- § 90.1023 Certifications, disclosures, records maintenance and audits.
- § 90.1025 Petitions to deny and limitations on settlements.

#### **SUBPART W -- COMPETITIVE BIDDING PROCEDURES FOR THE 220 MHz SERVICE**

##### **§ 90.1001 220 MHz service subject to competitive bidding.**

Mutually exclusive initial applications for 220 MHz geographic area licenses are subject to competitive bidding procedures. The procedures set forth in part 1, subpart Q, of this chapter will apply unless otherwise provided in this part.

##### **§ 90.1003 Competitive bidding design for the 220 MHz service.**

A simultaneous multiple round auction will be used to choose from among mutually exclusive initial applications for 220 MHz geographic area licenses, unless the Commission specifies otherwise by Public Notice prior to the competitive bidding procedure.

##### **§ 90.1005 Competitive bidding mechanisms.**

(a) **Sequencing.** The Commission will establish and may vary the sequence in which 220 MHz geographic area licenses are auctioned.

- (b) Grouping. The Commission will determine which licenses will be auctioned simultaneously or in combination.
- (c) Minimum Bid Increments. The Commission may, by public announcement before or during an auction, require minimum bid increments in dollar or percentage terms.
- (d) Stopping Rules. The Commission may establish stopping rules before or during an auction in order to terminate the auction within a reasonable time.
- (e) Activity Rules. The Commission may establish activity rules which require a minimum amount of bidding activity. In the event that the Commission establishes an activity rule in connection with a simultaneous multiple round auction, each bidder may request waivers of such rule during the auction. The Commission may, by public announcement either before or during the auction, specify or vary the number of waivers available to each bidder.

**§ 90.1007 Withdrawal, default and disqualification payments.**

The Commission will impose payments on bidders who withdraw high bids during the course of an auction, who default on payments due after an auction terminates, or who are disqualified. When the Commission conducts a simultaneous multiple round auction, payments will be calculated as set forth in §§ 1.2104(g) and 1.2109 of this chapter. When the amount of such a payment cannot be determined, a deposit of up to 20 percent of the amount bid on the license will be required.

**§ 90.1009 Bidding application (FCC Form 175 and 175-S Short-form).**

Each applicant to participate in competitive bidding for 220 MHz geographic area licenses must submit an application (FCC Forms 175 and 175-S) pursuant to the provisions of § 1.2105 of this chapter.

**§ 90.1011 Submission of upfront payments and down payments.**

- (a) The Commission will require applicants to submit an upfront payment prior to the start of a 220 MHz service auction. The amount of the upfront payment for each geographic area license auctioned and the procedures for submitting it will be set forth by the Wireless Telecommunications Bureau in a Public Notice in accordance with § 1.2106 of this chapter.
- (b) Each winning bidder in a 220 MHz service auction, except those that qualify as small businesses or very small businesses pursuant to § 90.1021(b)(1) or § 90.1021(b)(2), must submit a down payment to the Commission in an amount sufficient to bring its total deposits up to 20 percent of its winning bid within ten (10) business days following the release of a Public Notice announcing the close of bidding. Small businesses and very small businesses must submit a down payment to the Commission in accordance with § 90.1017(c).

**§ 90.1013 Long-form application (FCC Form 600).**

Each successful bidder for a 220 MHz geographic area license must submit a long-form application (FCC Form 600) within ten (10) business days after being notified by Public Notice that it is the winning bidder. Applications for 220 MHz geographic area licenses on FCC Form 600 must be submitted in accordance with § 1.2107 of this chapter, all applicable procedures set forth in the rules in this part, and any applicable Public Notices that the Commission may issue in connection with an auction. After an auction, the Commission will not accept long-form applications for 220 MHz geographic area licenses from anyone other than the auction winners and parties seeking partitioned licenses pursuant to agreements with auction winners under § 90.1019 of this chapter.

**§ 90.1015 License grant, denial, default, and disqualification.**

(a) Each winning bidder, except those eligible for installment payments, will be required to pay the full balance of its winning bid within ten (10) business days following Public Notice that the Commission is prepared to award the license.

(b) A bidder that withdraws its bid subsequent to the close of bidding, defaults on a payment due, or is disqualified, is subject to the payments specified in § 1.2104(g), § 1.2109, and § 90.1007 of this chapter, as applicable.

**§ 90.1017 Bidding credits, down payments, and installment payments for small businesses and very small businesses.**

(a) Bidding Credits. A winning bidder that qualifies as a small business or a consortium of small businesses as defined in § 90.1021(b)(1) or § 90.1021(b)(4) may use a bidding credit of 10 percent to lower the cost of its winning bid. A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in § 90.1021(b)(2) or § 90.1021(b)(4) may use a bidding credit of 25 percent to lower the cost of its winning bid.

(b) Unjust Enrichment - Bidding Credits

(1) If a small business or very small business (as defined in §§ 90.1021(b)(1) and 90.1021(b)(2), respectively) that utilizes a bidding credit under this section seeks to transfer control or assign an authorization to an entity that is not a small business or a very small business, or seeks to make any other change in ownership that would result in the licensee losing eligibility as a small business or very small business, the small business or very small business must seek Commission approval and reimburse the U.S. government for the amount of the bidding credit, plus interest at the rate imposed for installment financing at the time the license was awarded, as a condition of approval of the assignment, transfer, or other ownership change.

(2) If a very small business (as defined in § 90.1021(b)(2)) that utilizes a bidding credit under this section seeks to transfer control or assign an authorization to a small business meeting the eligibility standards for a lower bidding credit, or seeks to make any other change in ownership that would result in the licensee qualifying for a lower bidding credit under this

section, the licensee must seek Commission approval and reimburse the U.S. government for the difference between the amount of the bidding credit obtained by the licensee and the bidding credit for which the assignee, transferee, or licensee is eligible under this section, plus interest at the rate imposed for installment financing at the time the license was awarded, as a condition of the approval of such assignment, transfer, or other ownership change.

(3) The amount of payments made pursuant to paragraphs (b)(1) and (b)(2) of this section will be reduced over time as follows: A transfer in the first two years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit (or the difference between the bidding credit obtained by the original licensee and the bidding credit for which the post-transfer licensee is eligible); in year 3 of the license term the payment will be 75 percent; in year 4 the payment will be 50 percent; and in year 5 the payment will be 25 percent, after which there will be no assessment.

(c) Down Payments. Winning bidders in a 220 MHz service auction that qualify as small businesses under § 90.1021(b)(1) or very small businesses under § 90.1021(b)(2) must submit a down payment to the Commission in an amount sufficient to bring their total deposits up to 20 percent of their winning bids. Small businesses and very small businesses must bring their deposit up to 10 percent of their winning bids within ten (10) business days following a Public Notice announcing the close of bidding. Prior to licensing, by a date and time to be specified by Public Notice, they must pay an additional 10 percent.

(d) Installment Payments

(1) Each licensee that qualifies as a small business under § 90.1021(b)(1) or as a very small business under § 90.1021(b)(2) may pay the remaining 80 percent of the net auction price for the license in installment payments over the term of the geographic area license. Interest charges shall be fixed at the time of licensing at a rate equal to the rate for ten-year U.S. Treasury obligations plus 2.5 percent. An eligible licensee may make interest-only payments for two years. Payments of interest and principal shall be amortized over the remaining eight years of the license term.

(2) Late installment payment. Any licensee that submits a scheduled installment payment more than fifteen days late will be charged a late payment fee equal to five percent of the amount of the past due payment.

(3) Payments will be applied in the following order: late charges, interest charges, principal payments.

(e) Unjust Enrichment - Installment Payments

(1) If a licensee that utilizes installment financing under this section seeks to assign or transfer control of its license to an entity not meeting the eligibility standards for installment financing, the licensee must seek Commission approval and make full payment of the remaining unpaid principal and unpaid interest accrued through the date of assignment or transfer as a condition of Commission approval.

(2) If a licensee that utilizes installment financing under this section seeks to make any change in ownership structure that would result in the licensee losing eligibility for installment payments, the licensee shall first seek Commission approval before making such a change in ownership structure and must make full payment of the remaining unpaid principal and unpaid interest accrued through the date of such change in ownership structure as a condition of Commission approval.

#### **§ 90.1019 Eligibility for partitioned licenses.**

If partitioned licenses are being applied for in conjunction with a license(s) to be awarded through competitive bidding procedures --

(a) The applicable procedures for filing short-form applications and for submitting upfront payments and down payments contained in this chapter shall be followed by the applicant, who must disclose as part of its short-form application all parties to agreement(s) with or among other entities to partition the license pursuant to this section, if won at auction (see 47 CFR § 1.2105(a)(2)(viii));

(b) Each party to an agreement to partition the license must file a long-form application (FCC Form 600) for its respective, mutually agreed-upon geographic license area together with the application for the remainder of the geographic license area filed by the auction winner.

(c) If the partitioned license is being applied for as a partial assignment of the geographic area license following grant of the initial license, request for authorization for partial assignment of a license shall be made pursuant to § 90.153.

#### **§ 90.1021 Definitions concerning competitive bidding process.**

(a) Scope. The definitions in this section apply to §§ 90.1001 through 90.1025, unless otherwise specified in those sections.

(b) Small Business; Very Small Business; Consortium of Small Businesses or Very Small Businesses.

(1) A small business is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.

(3) For purposes of determining whether an entity meets either of the definitions set forth in paragraph (b)(1) or (b)(2) of this section, the gross revenues of the entity, its affiliates, and controlling principals shall be considered on a cumulative basis and aggregated.

(4) A consortium of small businesses (or a consortium of very small businesses) is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (b)(1) of this section or each of which individually satisfies the definition in paragraph (b)(2) of this section. Where an applicant (or licensee) is a consortium of small businesses (or very small businesses), the gross revenues of each small business (or very small business) shall not be aggregated.

(c) Gross Revenues. Gross revenues shall mean all income received by an entity, whether earned or passive, before any deductions are made for costs of doing business (e.g., cost of goods sold). Gross revenues are evidenced by audited financial statements for the relevant number of calendar or fiscal years preceding the filing of the applicant's short-form application (FCC Form 175). If an entity was not in existence for all or part of the relevant period, gross revenues shall be evidenced by the audited financial statements of the entity's predecessor-in-interest or, if there is no identifiable predecessor-in-interest, unaudited financial statements certified by the applicant as accurate. When an applicant does not otherwise use audited financial statements, its gross revenues may be certified by its chief financial officer or its equivalent.

(d) Affiliate.

(1) Basis for Affiliation. An individual or entity is an affiliate of an applicant if such individual or entity:

- (i) Directly or indirectly controls or has the power to control the applicant, or
- (ii) Is directly or indirectly controlled by the applicant, or
- (iii) Is directly or indirectly controlled by a third party or parties who also control or have the power to control the applicant, or
- (iv) Has an "identity of interest" with the applicant.

(2) Nature of control in determining affiliation.

(i) Every business concern is considered to have one or more parties who directly or indirectly control or have the power to control it. Control may be affirmative or negative and it is immaterial whether it is exercised so long as the power to control exists.

Example for paragraph (d)(2)(i). An applicant owning 50 percent of the voting stock of another concern would have negative power to control such concern since such party can block any action of the other stockholders. Also, the bylaws of a corporation may permit a stockholder with less than 50 percent of the voting stock to block any actions taken by the other stockholders in the other entity. Affiliation exists when the applicant has the power to control a concern while at the same time another person, or persons, are in control of the concern at the will of the party or parties with the power of control.

(ii) Control can arise through stock ownership; occupancy of director, officer, or key employee positions; contractual or other business relations; or combinations of these and other factors. A key employee is an employee who, because of his/her position in the concern, has a critical influence in or substantive control over the operations or management of the concern.

(iii) Control can arise through management positions if the voting stock is so widely distributed that no effective control can be established.

Example for paragraph (d)(2)(iii). In a corporation where the officers and directors own various size blocks of stock totaling 40 percent of the corporation's voting stock, but no officer or director has a block sufficient to give him/her control or the power to control and the remaining 60 percent is widely distributed with no individual stockholder having a stock interest greater than 10 percent, management has the power to control. If persons with such management control of the other entity are controlling principals of the applicant, the other entity will be deemed an affiliate of the applicant.

(3) Identity of interest between and among persons.

Affiliation can arise between or among two or more persons with an identity of interest, such as members of the same family or persons with common investments. In determining if the applicant controls or is controlled by a concern, persons with an identity of interest will be treated as though they were one person.

(i) Spousal Affiliation. Both spouses are deemed to own or control or have the power to control interests owned or controlled by either of them, unless they are subject to a legal separation recognized by a court of competent jurisdiction in the United States.

(ii) Kinship Affiliation. Immediate family members will be presumed to own or control or have the power to control interests owned or controlled by other immediate family members. In this context "immediate family member" means father, mother, husband, wife, son, daughter, brother, sister, father- or mother-in-law, son- or daughter-in-law, brother- or sister-in-law, step-father or -mother, step-brother or -sister, step-son or -daughter, half-brother or -sister. This presumption may be rebutted by showing that:

- (A) The family members are estranged,
- (B) The family ties are remote, or
- (C) The family members are not closely involved with each other in business matters.

Example for paragraph (d)(3)(ii). A owns a controlling interest in Corporation X. A's sister-in-law, B, has a controlling interest in a 220 MHz service geographic area license application. Because A and B have a presumptive kinship affiliation, A's interest in Corporation X is attributable to B, and thus to the applicant, unless B rebuts the presumption with the necessary showing.

(4) Affiliation through stock ownership.

(i) An applicant is presumed to control or have the power to control a concern if he/she owns or controls or has the power to control 50 percent or more of its voting stock.

(ii) An applicant is presumed to control or have the power to control a concern even though he/she owns, controls, or has the power to control less than 50 percent of the concern's voting stock, if the block of stock he/she owns, controls, or has the power to control is large as compared with any other outstanding block of stock.

(iii) If two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, such minority holdings are equal or approximately equal in size, and the aggregate of these minority holdings is large as compared with any other stock holding, the presumption arises that each one of these persons individually controls or has the power to control the concern; however, such presumption may be rebutted by a showing that such control or power to control, in fact, does not exist.

(5) Affiliation arising under stock options, convertible debentures, and agreements to merge. Stock options, convertible debentures, and agreements to merge (including agreements in principle) are generally considered to have a present effect on the power to control the concern. Therefore, in making a size determination, such options, debentures, and agreements will generally be treated as though the rights held thereunder had been exercised. However, neither an affiliate nor an applicant can use such options and debentures to appear to terminate its control over another concern before it actually does so.

Example 1 for paragraph (d)(5). If company B holds an option to purchase a controlling interest in company A, who holds a controlling interest in a 220 MHz service geographic area license application, the situation is treated as though company B had exercised its rights and had become owner of a controlling interest in company A. The gross revenues of company B must be taken into account in determining the size of the applicant.

Example 2 for paragraph (d)(5). If a large company, BigCo, holds 70% (70 of 100 outstanding shares) of the voting stock of company A, who holds a controlling interest in a 220 MHz service geographic area license application, and gives a third party, SmallCo, an option to purchase 50 of the 70 shares owned by BigCo, BigCo will be deemed to be an affiliate of company A, and thus the applicant, until SmallCo actually exercises its options to purchase such shares. In order to prevent BigCo from circumventing the intent of the rule, which requires such options to be considered on a fully diluted basis, the option is not considered to have present effect in this case.

Example 3 for paragraph (d)(5). If company A has entered into an agreement to merge with company B in the future, the situation is treated as though the merger has taken place.

(6) Affiliation under voting trusts.

service geographic area license which qualifies as a small business, very small business, consortium of small businesses, or consortium of very small businesses, shall append the following information as an exhibit to its FCC Form 175:

(1) The identity of the applicant's affiliates and controlling principals, and, if a consortium of small businesses (or consortium of very small businesses), the members of the joint venture; and

(2) The applicant's gross revenues, computed in accordance with § 90.1021.

**(b) Long-Form Applications: Certifications and Disclosure.**

In addition to the requirements in § 90.1013, each applicant submitting a long-form application for a 220 MHz service geographic area license and qualifying as a small business or very small business shall, in an exhibit to its long-form application:

(1) Disclose separately and in the aggregate the gross revenues, computed in accordance with § 90.1021, for each of the following: the applicant, the applicant's affiliates, the applicant's controlling principals, and, if a consortium of small businesses (or consortium of very small businesses), the members of the joint venture;

(2) List and summarize all agreements or other instruments (with appropriate references to specific provisions in the text of such agreements and instruments) that support the applicant's eligibility as a small business or very small business under §§ 90.1017 through 90.1023, including the establishment of de facto and de jure control; such agreements and instruments include, but are not limited to, articles of incorporation and bylaws, shareholder agreements, voting or other trust agreements, franchise agreements, and any other relevant agreements including letters of intent, oral or written; and

(3) List and summarize any investor protection agreements, including rights of first refusal, supermajority clauses, options, veto rights, and rights to hire and fire employees and to appoint members to boards of directors or management committees.

**(c) Records Maintenance.** All winning bidders qualifying as small businesses or very small businesses shall maintain at their principal place of business an updated file of ownership, revenue, and asset information, including any documents necessary to establish eligibility as a small business or very small business and/or consortium of small businesses (or consortium of very small businesses) under § 90.1021. Licensees (and their successors-in-interest) shall maintain such files for the term of the license. Applicants that do not obtain the license(s) for which they applied shall maintain such files until the grant of such license(s) is final, or one year from the date of the filing of their short-form application (FCC Form 175), whichever is earlier.

**(d) Audits.**

(1) Applicants and licensees claiming eligibility as a small business or very small business or consortium of small businesses (or consortium of very small businesses) under §§ 90.1017

(i) Stock interests held in trust shall be deemed controlled by any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will.

(ii) If a trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the stock interests held in trust will be deemed controlled by the grantor or beneficiary, as appropriate.

(iii) If the primary purpose of a voting trust, or similar agreement, is to separate voting power from beneficial ownership of voting stock for the purpose of shifting control of or the power to control a concern in order that such concern or another concern may meet the Commission's size standards, such voting trust shall not be considered valid for this purpose regardless of whether it is or is not recognized within the appropriate jurisdiction.

(7) Affiliation through common management. Affiliation generally arises where officers, directors, or key employees serve as the majority or otherwise as the controlling element of the board of directors and/or the management of another entity.

(8) Affiliation through common facilities. Affiliation generally arises where one concern shares office space and/or employees and/or other facilities with another concern, particularly where such concerns are in the same or related industry or field of operations, or where such concerns were formerly affiliated, and through these sharing arrangements one concern has control, or potential control, of the other concern.

(9) Affiliation through contractual relationships. Affiliation generally arises where one concern is dependent upon another concern for contracts and business to such a degree that one concern has control, or potential control, of the other concern.

(10) Affiliation under joint venture arrangements.

(i) A joint venture for size determination purposes is an association of concerns and/or individuals, with interests in any degree or proportion, formed by contract, express or implied, to engage in and carry out a single, specific business venture for joint profit for which purpose they combine their efforts, property, money, skill and knowledge, but not on a continuing or permanent basis for conducting business generally. The determination whether an entity is a joint venture is based upon the facts of the business operation, regardless of how the business operation may be designated by the parties involved. An agreement to share profits/losses proportionate to each party's contribution to the business operation is a significant factor in determining whether the business operation is a joint venture.

(ii) The parties to a joint venture are considered to be affiliated with each other.

### § 90.1023 Certifications, disclosures, records maintenance and audits.

(a) Short-Form Applications: Certifications and Disclosure. In addition to certifications and disclosures required in part 1, subpart Q, of this chapter, each applicant for a 220 MHz

through 90.1023 shall be subject to audits by the Commission. Selection for audit may be random, on information, or on the basis of other factors.

(2) Consent to such audits is part of the certification included in the short-form application (FCC Form 175). Such consent shall include consent to the audit of the applicant's or licensee's books, documents and other material (including accounting procedures and practices) regardless of form or type, sufficient to confirm that such applicant's or licensee's representations are, and remain, accurate. Such consent shall include inspection at all reasonable times of the facilities, or parts thereof, engaged in providing and transacting business, or keeping records regarding licensed 220 MHz service, and shall also include consent to the interview of principals, employees, customers and suppliers of the applicant or licensee.

(e) Definitions. The terms affiliate, small business, very small business, consortium of small businesses (or consortium of very small businesses), and gross revenues used in this section are defined in § 90.1021.

**§ 90.1025 Petitions to deny and limitations on settlements.**

(a) Procedures regarding petitions to deny long-form applications in the 220 MHz service will be governed by §§ 1.2108(b) through 1.2108(d) and § 90.163 of this chapter.

(b) The consideration that an individual or an entity will be permitted to receive for agreeing to withdraw an application or a petition to deny will be limited by the provisions set forth in § 90.162 and § 1.2105(c) of this chapter.

## APPENDIX C

## LIST OF PARTIES FILING COMMENTS AND REPLY COMMENTS

The following is the list of parties filing comments and reply comments in this proceeding

COMMENTS

Puerto Rico Telephone Company  
Fairfield Industries, Inc. (Fairfield)  
Association of Public-Safety Communications Officials-International, Inc. (APCO)  
Airborne Freight Corporation (Airborne)  
Echo Group L.P. (Echo)  
Pagemart Operations, Inc. (Pagemart)  
Fleet Maintenance, Inc. (Fleet)  
Columbia Cellular Corporation (Columbia)  
SMR Advisory Group (SMR)  
SEA Inc. (SEA)  
Roamer One, Inc. (Roamer)  
Personal Communications Industry Association (PCIA)  
Industrial Telecommunications Association, Inc. (ITA)  
Ericsson Corporation (Ericsson)  
PLMRS Narrowband Corp. (PLMRS)  
E.F. Johnson Company (Johnson)  
Comtech Communications, Inc. (Comtech)  
Incom Communications Corporation (Incom)  
American Mobile Telecommunications Association, Inc. (AMTA)  
UTC, The Telecommunications Association (UTC)  
Metricom, Inc. (Metricom)  
Global Cellular Communications, Inc. (Global)  
360 Mobile Data Joint Venture (360 Mobile)  
Overall Wireless Communications Corporation (Overall Wireless)  
Pronet Inc. (Pronet)  
Securicor Radiocom, Ltd. (Securicor)  
U.S. Mobilcomm, Inc. (U.S. Mobilcomm)  
U.S. Central, Inc. (U. S. Central)  
Michael R. Kelley d/b/a/ Shannondale Wireless (Kelley)  
Suncom Mobile & Data, Inc. (Suncom)  
Mtel Technologies, Inc. (Mtel)  
Washington Legal Foundation (WLF)  
Paging Network, Inc. (Pagenet)

REPLY COMMENTS

Securicor  
Pronet  
Suncom  
Mtel  
Global  
Incom  
Comtech  
Fairfield  
SEA  
SMR  
Metricom  
Columbia  
Pagenet  
US Mobil  
AMTA

## APPENDIX D

## CODES AND NAMES FOR ECONOMIC AREAS (EAs)

Codes from 001 to 172 are assigned to the new EAs in approximate geographic order, beginning with 001 in northern Maine, continuing south to Florida, then north to the Great Lakes, and continuing in a serpentine pattern to the West Coast. Except for the Western Oklahoma EA (126), the Northern Michigan EA (058), and the 17 EAs that mainly correspond to consolidated metropolitan statistical areas (CMSAs), each EA is named for the metropolitan area or city that is the node of its largest component economic area (CEA) and that is usually, but not always, the largest metropolitan area or city in the EA. Each CEA consists of a single economic node and the surrounding counties that are economically related to the node. The following list provides EA codes and names. EA boundaries and codes are shown on the map following the list.

## EA

## Code Name

001	Bangor, ME
002	Portland, ME
003	Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH
004	Burlington, VT
005	Albany-Schenectady-Troy, NY
006	Syracuse, NY
007	Rochester, NY
008	Buffalo-Niagara Falls, NY
009	State College, PA
010	New York-No. New Jersey-Long Island, NY-NJ-CT-PA
011	Harrisburg-Lebanon-Carlisle, PA
012	Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD
013	Washington-Baltimore, DC-MD-VA-WV
014	Salisbury, MD
015	Richmond-Petersburg, VA
016	Staunton, VA
017	Roanoke, VA
018	Greensboro-Winston-Salem-High Point, NC
019	Raleigh-Durham-Chapel Hill, NC
020	Norfolk-Virginia Beach-Newport News, VA-NC
021	Greenville, NC
022	Fayetteville, NC
023	Charlotte-Gastonia-Rock Hill, NC-SC
024	Columbia, SC
025	Wilmington, NC
026	Charleston-North Charleston, SC
027	Augusta-Aiken, GA-SC
028	Savannah, GA
029	Jacksonville, FL