limited resolution bandwidth capability when compared to the emission bandwidth, etc., so as to obtain a true maximum composite measurement for the emission in question over the full bandwidth of the channel.

(ii) A Commission-approved average power technique.

Table 1 - Permissible Power and Antenna Heights for Base and Fixed in the 763-768 MHz Band Transmitting a Signal with an Emission Bandwidth of 1 MHz or Less

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts)
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

Table 2 – Permissible Power and Antenna Heights for Base and Fixed Stations in the 763-768 MHz Band Transmitting a Signal with an Emission Bandwidth of 1 MHz or Less

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts)
Above 1372 (4500)	130
Above 1220 (4000) To 1372 (4500)	140
Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	200

Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

Table 3 – Permissible Power and Antenna Heights for Base and Fixed Stations in the 763-768 MHz Band Transmitting a Signal with an Emission Bandwidth Greater than 1 MHz

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) per MHz (watts/MHz)
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

Table 4 – Permissible Power and Antenna Heights for Base and Fixed Stations in the 763-768 MHz Band Transmitting a Signal with an Emission Bandwidth Greater than 1 MHz

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) per MHz (watts/MHz)
Above 1372 (4500)	130
Above 1220 (4000) To 1372 (4500)	140

Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	*200*
Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

(b) For base and fixed stations operating in the 763-768 MHz band in accordance with the provisions of paragraph (a)(5) of this section, the power flux density that would be produced by such stations through a combination of antenna height and vertical gain pattern must not exceed 3000 microwatts per square meter on the ground over the area extending to 1 km from the base of the antenna mounting structure.

51. Section 90.543 is amended by revising the introductory paragraph, deleting the two tables in paragraph (a) concerning "150 kHz" requirements, revising paragraph (b)(1), inserting a new paragraph (e) and revising and redesignating paragraphs (e) and (f) as paragraphs (f) and (g).

§ 90.543 Emission limitations.

Transmitters designed to operate in 769-775 MHz and 799-805 MHz frequency bands must meet the emission limitations in paragraphs (a) through (d) of this section. Transmitters operating in 763-768 MHz and 793-798 MHz bands must meet the emission limitations in (e) of this section.

* * * * *

(b)(1) *Setting reference level.* Set transmitter to maximum output power. Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth to the channel size. For example, for a 6.25 kHz transmitter set the measurement bandwidth to 6.25 kHz. Set the frequency offset of the measurement bandwidth to zero and adjust the center frequency of the instrument to the assigned center frequency to measure the average power level of the transmitter. Record this power level in dBm as the "reference power level."

* * * * *

(e) For operations in the 763-768 MHz and the 793-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations.

(2) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than 65 +

10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations.

(3) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(f) For operations in the 763-775 MHz and 793-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

(g) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

52. Section 90.547 is amended by revising paragraph (a) to read as follows:

§ 90.547 Narrowband interoperability channel capability requirement.

(a) Except as noted in this section, mobile and portable transmitters operating on narrowband channels in the 769-775 MHz and 799-805 MHz frequency bands must be capable of operating on all of the designated nationwide narrowband Interoperability channels pursuant to the standards specified in this part.

* * * * *

53. Section 90.548 is amended by revising paragraph (a) to read as follows:

§ 90.548 Interoperability technical standards.

(a) Transmitters operating on those narrowband channels in the 769-775 and 799-805 MHz band designated for interoperability (See § 90.531) shall conform to the following technical standards:

* * * * *

54. Section 90.551 is amended to read as follows:

§ 90.551 Construction requirements.

Each station authorized under this subpart to operate in the 769-775 MHz and 799-805 MHz frequency bands must be constructed and placed into operation within 12 months from the date of grant of the authorization, except for State channels. However, licensees may request a longer construction period, up to but not exceeding 5 years, pursuant to § 90.155(b). State channels are subject to the build-out requirements in § 90.529.

55. Add the following new subpart AA to Part 90 to read as follows:

SUBPART AA — 700 MHz PUBLIC/PRIVATE PARTNERSHIP

§ 90.1401 Purpose and scope.

The purpose of this subpart, in conjunction with subpart N of Part 27, is to establish rules and procedures relating to the 700 MHz Public/Private Partnership entered between the winning bidder for the Upper 700 MHz D Block license, the Upper 700 MHz D Block licensee, the Network Assets Holder, the Operating Company, the Public Safety Broadband Licensee, and other related entities as the Commission may require or allow. Pursuant to this partnership, the Upper 700 MHz D Block licensee and the Operating Company will be responsible for constructing and operating a nationwide, shared interoperable wireless broadband network used to provide a commercial service and a broadband network service for public safety entities. The shared network assets will be held by the Network Assets Holder, and the Shared Wireless Broadband Network will operate on both the commercial spectrum licensed to the Upper 700 D Block MHz licensee and the public safety broadband spectrum licensed to the Public Safety Broadband Licensee. This subpart of the Part 90 rules sets forth specific provisions relating to the Public Safety Broadband License and the Public Safety Broadband Licensee with respect to the 700 MHz Public/Private Partnership. Subpart N of the Part 27 rules sets forth related provisions applicable to the Upper 700 MHz D Block license, the Upper 700 MHz D Block licensee and other related entities as the Commission may require or allow, with respect to the 700 MHz Public/Private Partnership.

§ 90.1403 Public Safety Broadband License conditions.

(a) The Public Safety Broadband Licensee shall comply with all of the applicable requirements set forth in this subpart and shall comply with the terms of the Network Sharing Agreement and such other agreements as the Commission may require or allow.

(b) The responsibilities of the Public Safety Broadband Licensee shall include the following:

(1) Negotiation of the NSA and such other agreements as the Commission may require or allow with the winning bidder at auction for the Upper 700 MHz Band D Block license, pursuant to the requirements set forth in § 90.1410.

(2) General administration of access to the 763-768 MHz and 793-798 MHz bands by individual public safety entities, including assessment of usage fees and related frequency coordination duties.

(3) Regular interaction with and promotion of the needs of the public safety entities with respect to access and use of the 763-768 MHz and 793-798 MHz bands, within the technical and operational confines of the NSA.

(4) Dealings with equipment vendors on its own or in partnership with the Upper 700 MHz D Block licensee, as appropriate, to achieve and pass on the benefits of economies of scale concerning network and subscriber equipment and applications.

(5) Sole authority, which cannot be waived in the NSA, to approve, in consultation with the Upper 700 MHz D Block licensee, equipment and applications for use by public safety entities on the public safety broadband network. State or local entities may seek review of a decision by the Public Safety Broadband Licensee not to permit certain equipment or applications, or particular specifications for equipment or applications, from the Chief, Public Safety and Homeland Security Bureau.

(6) Coordination of stations operating on 700 MHz public safety broadband spectrum with 700 MHz public safety narrowband stations, including management of the internal public safety guard band.

(7) Oversight and implementation of the relocation of narrowband public safety operations in television channels 63 and 68, and the upper one megahertz of channels 64 and 69.

(8) Exercise of sole discretion, pursuant to § 2.103 of this chapter, whether to permit Federal public safety agency use of the public safety broadband spectrum, with any such use subject to the terms and conditions of the NSA.

(9) Review of requests for waiver submitted by public safety entities to conduct wideband operations pursuant to the procedures and restrictions in connection with such waivers as described in § 90.1432.

§ 90.1405 Shared Wireless Broadband Network.

The Shared Wireless Broadband Network developed by the 700 MHz Public/Private Partnership must be designed to meet requirements associated with a nationwide, public safety broadband network. At a minimum, the network must incorporate the following features:

(a) Design for operation over a broadband technology platform that provides mobile voice, video, and data capability that is seamlessly interoperable across public safety local and state agencies, jurisdictions, and geographic areas, and which includes current and evolving state-of-the-art technologies reasonably made available in the commercial marketplace with features beneficial to the public safety community.

(b) Sufficient signal coverage to ensure reliable operation throughout the service area consistent with typical public safety communications systems.

(c) Sufficient robustness to meet the reliability and performance requirements of public safety.

(d) Sufficient capacity to meet the needs of public safety.

(e) Security and encryption consistent with state-of-the-art technologies.

(f) A mechanism to automatically prioritize public safety communications over commercial uses on a real-time basis consistent with the requirements of § 90.1407(c).

(g) Operational capabilities consistent with features and requirements that are typical of current and evolving state-of-the-art public safety systems.

(h) Operational control of the network by the Public Safety Broadband Licensee to the extent necessary to ensure that public safety requirements are met.

§ 90.1407 Spectrum use in the network.

(a) *Spectrum use.* The Shared Wireless Broadband Network will operate using spectrum associated with the Upper 700 MHz D Block license in the 758-763 MHz and 788-793 MHz bands and the Public Safety Broadband License in the adjacent 763-768 MHz and 793-798 MHz bands.

(b) *Access to spectrum in the 763-768 MHz and 793-798 MHz bands.* The Public Safety Broadband Licensee which holds the Public Safety Broadband License, pursuant to Part 90 rules, must lease the spectrum rights associated with this license, pursuant to a spectrum manager leasing arrangement set forth in Part 1 subpart X, to the Upper 700 MHz D Block licensee and the Operating

Company for the entire remaining term of the Public Safety Broadband License to effectuate the 700 MHz Public/Private Partnership. The Upper 700 MHz D Block licensee and the Operating Company, are the only entities that are eligible to lease the spectrum usage rights associated with the Public Safety Broadband License to operate on the 763-768 and 793-798 MHz bands. If the Upper 700 MHz D Block license is cancelled, this spectrum leasing arrangement will automatically terminate.

(c) *Commercial operations in the 763-768 MHz and 793-798 MHz bands.* Commercial operations in the 763-768 MHz and 793-798 MHz bands through the spectrum manager leasing arrangement shall not cause harmful interference to primary users (*i.e.*, public safety users) and cannot claim protection from harmful interference from the primary public safety operations in the 763-768 MHz and 793-798 MHz bands. The network providing commercial operations in the 763-768 MHz and 793-798 MHz bands through the spectrum manager leasing arrangement must be designed to automatically assign priority to public safety users, to the exclusion and/or immediate preemption of any commercial use on a dynamic, real-time priority basis, and to guarantee that public safety users suffer no harmful interference or interruption or degradation of service due to commercial operations in the 763-768 MHz and 793-798 MHz bands.

§ 90.1408 Organization and structure of the 700 MHz Public/Private Partnership.

(a) The Upper 700 MHz D Block licensee and the Network Assets Holder and such other related entities as the Commission may require or allow shall be formed by the winning bidder of the Upper 700 MHz D Block license. The Upper 700 MHz D Block licensee, the Network Assets Holder, and related entities as the Commission may require or allow must be Special Purpose Bankruptcy Remote Entities formed to hold the license, to hold the shared network assets, or for such other purpose as the Commission may require or allow. The winning bidder of the Upper 700 MHz D Block license shall also form the Operating Company, which must also be a Special Purpose Bankruptcy Remote Entity. Upon issuance of the Upper 700 MHz D Block license, the winning bidder will assign all of its rights and obligations under the NSA to the Upper 700 MHz D Block licensee, Network Assets Holder, the Operating Company, and any other related entities that the Commission may require or allow.

(b) The Upper 700 MHz D Block licensee and other related entities as the Commission may require or allow shall have the obligation to build out the Shared Wireless Broadband Network, as provided for in the NSA or otherwise as authorized by the Commission.

§ 90.1410 Network Sharing Agreement.

The relationship between the Upper 700 MHz D Block licensee, the Public Safety Broadband Licensee, and related entities as the Commission may require or allow will be governed by the Network Sharing Agreement (NSA) and such other separate agreements as the Commission may require or allow that are negotiated and entered into between the parties. The NSA must, at a minimum, include the following terms:

(a) All of the substantive rights and obligations of the parties relating to the NSA, as established by the Commission concerning the 700 MHz Public/Private Partnership.

(b) Network specifications that comply with § 27.1305.

(c) The definition of "emergency" for purposes of emergency priority access.

(d) All service fees to be imposed for services to public safety, including fees for normal network service and fees for priority access to the D Block spectrum in an emergency.

(e) A detailed build-out schedule consistent with § 27.1327, including coverage of major highways and interstates, as well as incorporated communities with a population in excess of 3,000.

(f) *The right of the Public Safety Broadband Licensee to determine and approve the* specifications of public safety equipment used on the network and the right to purchase its own subscriber equipment from any vendor it chooses, to the extent such specifications and equipment are consistent with reasonable network control requirements established in the NSA.

(g) The Upper 700 MHz D Block licensee must offer at least one handset suitable for public safety use that includes a seamlessly integrated satellite solution pursuant to the terms, conditions, and timeframes set forth in the NSA.

(h) Any major modification of the terms of the NSA, related agreements or documents, or such other agreements as the Commission may require or allow must be submitted to the Commission for prior approval. All other modifications must be submitted to the Chiefs of the Wireless Telecommunications Bureau and the Public Safety and Homeland Security Bureau for prior approval.

(i) The NSA shall require, in a separate agreement, the granting of an irrevocable and assignable right of first refusal to purchase the network assets if and whenever such assets are otherwise to be sold and an irrevocable and assignable option in favor of the Public Safety Broadband Licensee to purchase the network and all network assets if and whenever the Upper 700 MHz D Block license is cancelled or terminated, by reason of default or for any other reason, for a consideration equivalent to the fair market value of the tangible and intangible assets sold. This right and option shall be senior to, and have priority over, any other right, claim, or interest in or to the network or the network assets. The NSA shall also include a fair market valuation methodology to determine the fair market value of the shared wireless broadband network assets.

(j) The NSA must have a term, not to exceed 10 years from February 17, 2009, that coincides with the terms of the Upper 700 MHz D Block license and the Public Safety Broadband License.

§ 90.1415 Establishment, execution, and application of the Network Sharing Agreement.

The following requirements and processes relate to the establishment, execution, and application of the NSA:

(a) *Approval of NSA as pre-condition for granting the D Block License.* The Public Safety Broadband Licensee must negotiate an NSA and such other agreements as the Commission may require or allow with the winning bidder for the Upper 700 MHz D Block license. The NSA and related agreements or documents must be approved by the Commission and then executed by the relevant parties. Parties to the NSA must also include the Upper 700 MHz D Block licensee, the Network Assets Holder, and the Operating Company, as these entities are defined in § 90.7.

(b) *Requirement of negotiation.* Negotiation of an NSA between the winning bidder for the Upper 700 MHz D Block license and the Public Safety Broadband Licensee must commence by the date the winning bidder files its long form application or the date on which the Commission designates the Public Safety Broadband Licensee, whichever is later, and must conclude within six months of that date. Parties to this negotiation are required to negotiate in good faith. Two members of the Commission staff, one from the Wireless Telecommunications Bureau and one from the Public Safety and Homeland Security Bureau, shall be present at all stages of the negotiation as neutral observers.

(c) *Reporting requirements.* Beginning three months from the triggering of the six-month negotiation period, the Public Safety Broadband Licensee and the winning bidder for the Upper 700 MHz D Block license must jointly provide detailed reports, on a monthly basis and subject to a request for confidential treatment, on the progress of the negotiations throughout the remainder of the negotiations. These reports must include descriptions of all material issues that the parties have yet to resolve.

(d) *Submission of final agreement.* As soon as the parties have reached an agreement on all the terms of the NSA, related agreements or documents, and such other agreements as the Commission may require or allow but not later than five business days after the six-month period for negotiation has expired, they must submit the NSA together with all agreements and related documents referenced in the NSA, for review and approval by the full Commission. The Commission will act on the NSA within 60 days of receipt. The Commission may approve the NSA in its entirety, approve with modifications, or require the parties to address additional terms or re-draft existing terms within a specified timeframe. After the NSA is approved, the parties must execute the NSA and such other agreements as the Commission may require or allow and submit executed copies to the Commission within 10 business days of approval.

(e) *Submission of disputed issues.* If the parties have not reached agreement on all terms of the NSA and related agreements by the end of the six-month period, they must notify the Commission not later than five business days after the expiration of the six-month period of the terms on which they have agreed, the nature of the remaining issues, each party's position on each issue, whether additional negotiation is likely to produce an agreement, and, if so, a proposed deadline for reaching agreement on the NSA. Authority is delegated jointly to the Chiefs of the Wireless Telecommunications Bureau and the Public Safety and Homeland Security Bureau to resolve any remaining disputes.

(f) *Resolution of disputes.* Actions to resolve disputes may include, but are not limited to: (1) granting additional time for negotiation; (2) issuing a decision on the disputed issues and requiring the submission of a draft agreement consistent with the decision; (3) directing the parties to further brief the remaining issues in full for immediate Commission decision; and/or (4) immediate denial of the long-form application filed by the winning bidder for the Upper 700 MHz D Block license.

(g) *Default by winning bidder for Upper 700 MHz D Block license.* If the winning bidder for the Upper 700 MHz D Block fails to comply with negotiation or dispute resolution requirements or fails to execute a Commission-approved NSA, its long form application will be denied. If the long form application of the winning bidder of the Upper 700 MHz D Block license is denied for any reason, including as a consequence of an action taken pursuant to subsections (e) and (f), it will be deemed to have defaulted under §1.2109(c) and will be liable for the default payment specified in § 1.2104(g).

§ 90.1420 Failure to comply with the NSA or the Commission's Rules.

(a) Failure to comply with the Commission's rules or the terms of the NSA may warrant cancelling the Public Safety Broadband License. The potential remedies also include, but are not limited to, assigning the license to another entity, directing the Public Safety Broadband Licensee to transfer the assignable right to purchase the assets at fair market value, ordering specific performance, or ordering removal and replacement of individual officers, directors or member organizations of the Public Safety Broadband Licensee.

(b) If the Commission cancels or terminates the Upper 700 MHz D Block license, a fair market

valuation of the shared wireless broadband network assets shall be performed immediately, pursuant to the fair market valuation methodology set forth in the NSA. In the event that the Upper 700 MHz D Block license is awarded to a new entity, the Public Safety Broadband Licensee's option to purchase the network and all network assets if and whenever the Upper 700 MHz D Block license is cancelled or terminated and its right of first refusal to purchase the network assets if and whenever such assets are otherwise to be sold shall be assigned to the new Upper 700 MHz D Block licensee and the new Network Assets Holder.

§ 90.1425 Resolution of disputes after grant of the Upper 700 MHz D Block License.

(a) The Public Safety Broadband Licensee, the Operating Company, the Network Assets Holder, and the Upper 700 MHz D Block licensee may at any time bring a complaint to the Commission based on a claim that another party to the NSA has deviated from the terms of the NSA, or a petition for a declaratory ruling to resolve the proper interpretation of an NSA term or provision. The Commission also may at any time, on its own motion, determine to address any material breach or interpret any NSA term or provision.

(b) The Commission shall have primary responsibility and jurisdiction for adjudicating disputes that arise following execution of the NSA. The Commission may, however, require the parties to first seek a settlement to the dispute or authorize the parties to resolve the dispute through litigation or other means. Breach of license terms, the NSA, or the Commission's rules may result in cancellation of the Public Safety Broadband License, the Upper 700 MHz D Block license, or both.

(c) The Chiefs of the Public Safety and Homeland Security Bureau and the Wireless Telecommunications Bureau are delegated joint responsibility for adjudicating disputes.

§ 90.1430 Local Public Safety build-out and operation.

(a) The Upper 700 MHz D Block licensee and the Operating Company through its lease arrangements shall, except in the two limited circumstances set forth herein, have the exclusive right to build and operate the Shared Wireless Broadband Network.

(b) *Rights to early build-out in areas with a build-out commitment.* In an area where the Upper 700 MHz D Block licensee has committed, in the NSA, to build out by a certain date, a public safety entity may, with the pre-approval of the Public Safety Broadband Licensee and subject to the requirements set forth herein, construct a broadband network in that area at its own expense so long as the network is capable of operating on the Shared Wireless Broadband Network and meets all the requirements and specifications of the network required under the NSA.

(1) *Options for early build-out in areas with a build-out commitment.* In order to obtain authorization to construct a broadband network as set forth above, the requesting public safety entity must agree to one of the following:

(i) to, on its own, or through the Public Safety Broadband Licensee acting on its behalf, construct the network at its own expense, and upon completion of construction, transfer the network to the Upper 700 MHz D Block licensee, which shall then integrate that network into the Shared Wireless Broadband Network constructed pursuant to the NSA; or

(ii) to, in agreement with the Upper 700 MHz D Block licensee, provide all funds necessary for the Upper 700 MHz D Block licensee to complete the early construction of the network, including

any and all additional resource and personnel costs, allowing the Upper 700 MHz D Block licensee at all times to own, operate, and manage the network as an integrated part of the Shared Wireless Broadband Network.

(2) *Negotiation of amendment to NSA.* Under either early build out option set forth above, the Public Safety Broadband Licensee, the Upper 700 MHz D Block licensee, and the public safety entity must, prior to any construction, negotiate an amendment to the NSA regarding this part of the network, specifying ownership rights, fees, and other terms, which may be distinct from the analogous terms governing the Shared Wireless Broadband Network, and such amendment must be approved by the Commission.

(i) Such amendment must provide the terms under which the Upper 700 MHz D Block licensee shall receive full ownership rights and shall compensate the public safety entity (or the Public Safety Broadband Licensee, where appropriate) for the construction of the network; and shall, absent agreement to the contrary, provide for such transfer and compensation to occur prior to the scheduled build out date for such network in the NSA.

(ii) Any right to compensation from the Upper 700 MHz D Block licensee related to such early build-out shall be limited to the cost that would have been incurred had the Upper 700 MHz D Block licensee constructed the network itself in accordance with the original terms and specifications of the NSA, as reasonably determined by the parties and negotiated as part of the required NSA amendment required above. Such costs shall not include costs attributable solely to advancing the date of construction or otherwise expediting the construction process.

(3) *Operations.* The public safety entity may not commence operations on the network until ownership of the network has been transferred to the Upper 700 MHz D Block licensee. Further, no operations shall be allowed except those authorized and conducted pursuant to the authority of the Public Safety Broadband Licensee.

(4) *Attribution of early build-out to national benchmarks.* Upon completion of construction, transfer of ownership to the Upper 700 MHz D Block licensee, and compensation as required herein, if applicable, the Upper 700 MHz D Block licensee may include the network constructed pursuant to the early build-out provisions herein for purposes of determining whether it has met its national build-out benchmarks and the build-out requirements of the NSA.

(5) *Rights to build out and operate in areas without a build-out commitment.* In areas for which the NSA does not require the Upper 700 MHz D Block licensee to build out the Shared Wireless Broadband Network, a public safety entity may build out and operate a separate, exclusive network in the 700 MHz public safety broadband spectrum at any time, provided the public safety entity has received the written approval of the Public Safety Broadband Licensee and operates its independent network pursuant to a spectrum leasing arrangement into which the public safety entity has entered with the Public Safety Broadband Licensee.

(i) Such leasing arrangement shall not require the approval or consent of the Upper 700 MHz D Block licensee; however, the Public Safety Broadband Licensee must provide the Upper 700 MHz D Block licensee with notice of the public safety entity's intent to construct in that area within 30 days of receipt of a request from a public safety entity seeking to exercise this option, and shall inform the Upper 700 MHz D Block licensee of the public safety entity's anticipated build-out date(s).

(ii) Should the Upper 700 MHz D Block licensee, within 30 calendar days from receipt of notice of the public safety entity's intent to construct in that area, certify in writing to the Public Safety

Broadband Licensee that it will build out the shared network in the area within a reasonable time of the anticipated build-out date(s), as determined by the Public Safety Broadband Licensee, the Public Safety Broadband Licensee shall not allow the public safety entity to build and operate its own *separate exclusive network in that area, provided that the Upper 700 MHz D Block licensee and the* Public Safety Broadband Licensee execute an amendment to the NSA indicating the Upper 700 MHz D Block licensee's commitment to build the network in that area. Such commitment shall become enforceable against the Upper 700 MHz D Block licensee as part of its overall build-out requirements.

(iii) If the Upper 700 MHz D Block licensee does not exercise its option to commit to build out the network in the requested area within 30 calendar days of receipt of notice of the public safety entity's intent to construct in such area, the Public Safety Broadband Licensee and the public safety entity may proceed with a spectrum leasing arrangement, which must be filed with and approved by the Commission prior to the public safety entity commencing any operations. The spectrum leasing arrangement must take the form of a spectrum manager leasing arrangement under the rules specified in § 1.9020 of this chapter, and incorporate the following conditions:

(a) The network must provide broadband operations;

(b) The network must be fully interoperable with the Shared Wireless Broadband Network;

(c) The network must be available for use by any public safety entity in the area;

(d) The network must satisfy any other terms or conditions required by the Public Safety Broadband Licensee; and

(e) The public safety entity must construct and place into operation its network within one year of the effective date of the spectrum manager leasing arrangement. If the public safety entity fails to place the network into operation within one year, the Public Safety Broadband Licensee shall terminate the spectrum leasing arrangement pursuant to § 1.9020(h)(3). The public safety entity may also seek extended implementation authority from the Commission pursuant to the requirements of § 90.629 of this Part.

(6) Except as set forth herein, the separate network is not required to meet the other specifications of the Shared Wireless Broadband Network. Absent agreement of the public safety entity, the Public Safety Broadband Licensee, and the Upper 700 MHz D Block licensee, the separate network may not operate using any spectrum associated with the Upper 700 MHz D Block license.

(7) The Public Safety Broadband Licensee must file with the Commission any spectrum manager leasing arrangement as specified in § 1.9020(e) of this chapter; such filing shall identify the public safety entity leasing the spectrum, the particular areas of spectrum leased as part of this build-out option, and the specific network infrastructure and equipment deployed on such leased spectrum.

§ 90.1432 Conditions for waiver to allow limited and temporary wideband operations in the 700 MHz Public Safety spectrum.

(a) *Wideband operations in the 700 MHz Public Safety spectrum.* Wideband operations are prohibited in the public safety allocation of the 700 MHz band public safety spectrum except where the Commission has granted a waiver pursuant to §§ 1.3 and 1.925 of this chapter and subject to the additional conditions and requirements specified below. Grants of waiver are restricted to the

deployment of a wideband system in the consolidated narrowband portion or the internal public safety guard band portion of the public safety broadband spectrum. Where spectrum in the narrowband segment or internal guard band segment is unavailable for wideband operations, public safety entities may request a waiver to operate in the upper 1.25 megahertz of the public safety broadband spectrum.

(b) Any public safety entity seeking to conduct wideband operations within the public safety allocation must file a request for waiver that is accompanied by an application for authorization and includes the following information:

(1) a letter from the Public Safety Broadband Licensee, confirming that the proposed wideband deployment is not inconsistent with the broadband deployment plan for the affected or adjacent service areas; and

(2) a description of the conditions or transition requirements, if any, agreed to between the applicant and the Public Safety Broadband Licensee.

(c) *Additional requirement for wideband operations in the narrowband segment and Internal Guard Band.* If an applicant seeks permission to deploy wideband systems in the narrowband segment, its waiver request must also include a letter from the appropriate regional planning committee or state licensee confirming that the proposed wideband deployment will not disrupt any regional or state planning efforts that are underway.

(d) *Additional requirements and conditions for wideband operations in the broadband segment.* Permission to conduct wideband operations in the broadband segment will be granted only where spectrum in the narrowband segment or the internal guard band is unavailable for wideband operations. In no event will permission be granted to conduct wideband operations in geographic areas scheduled for broadband deployment within the first three years of the build-out plan for the Shared Wireless Broadband Network.

(1) An applicant seeking permission to deploy wideband systems in the broadband segment must have first issued a request for proposal (RFP) that permitted interested parties to submit broadband proposals that are technically consistent with the Shared Wireless Broadband Network.

(2) A request for waiver that seeks permission to deploy wideband systems in the broadband segment must include the following information:

(i) a substantially supported, detailed technical showing demonstrating that insufficient spectrum in the narrowband segment or the internal guard band is available to support the desired wideband operations;

(ii) a showing that rejected responses to the required broadband network RFP were more costly, provided less coverage as measured by throughput at the network edge, or were otherwise inferior to the accepted wideband proposal; and

(iii) a detailed plan for integration of such wideband system into the Shared Wireless Broadband Network. This plan must specify how and by what date the wideband applicant will integrate its proposed wideband system into Shared Wireless Broadband Network and must include a certification that the public safety entity will not seek reimbursement for any costs involved in converting the wideband system to Shared Wireless Broadband Network upon completion of that network in the applicant's geographic area.

(3) Authority to conduct wideband operations in the broadband segment of the public safety spectrum will be subject to the following conditions:

(i) All devices operating on the wideband system must be designed to interoperate with Shared Wireless Broadband Network;

(ii) All waivers will expire automatically upon the Upper 700 MHz D Block licensee's initiation of service in the service area covered by such waiver.

(e) *Secondary status of wideband operations.* All wideband operations permitted under this section shall be secondary to the authorized narrowband or broadband applications, as applicable.

(f) *License terms for wideband operations.* Any secondary license to conduct wideband operations in the public safety spectrum shall have a term of no more than five years.

(g) *Renewal of wideband authorization.* Any request for renewal of an initial authorization to conduct wideband operations shall be filed not less than 180 days prior to expiration of the license. All renewal requests must include a showing that continued operation of the wideband system is in the public interest and must be accompanied by a letter from the Public Safety Broadband Licensee confirming that continuing wideband operations are not inconsistent with the broadband deployment plan for the affected or adjacent service areas. The license term for any renewal of a license granted under the waiver provisions herein shall not exceed three years. No more than one license renewal will be granted.

(h) *Grandfathered wideband STA operations.* Upon request, the Public Safety and Homeland Security Bureau may grant a public safety entity that has constructed, deployed, and was operating a wideband system as of July 31, 2007 pursuant to STA to extend the STA grant for periods of no more than 180 days until, but not later than, six months following the selection of the Public Safety Broadband Licensee.

§ 90.1435 Prohibition on discontinuance of Public Safety operations.

The Upper 700 MHz D Block licensee, the Operating Company, and the Network Assets Holder are prohibited from discontinuing or degrading the broadband network service provided to the Public Safety Broadband Licensee or to public safety entities unless either at the request of the entity or entities in question or it has first obtained the approval of the Commission. The Upper 700 MHz D Block licensee shall notify the affected public safety entity or entities and the Public Safety Broadband Licensee at least 30 days prior to any unrequested discontinuance or degradation of network service.

§ 90.1440 Reporting obligations.

(a) The Upper 700 MHz D Block licensee and the Public Safety Broadband Licensee shall jointly file quarterly reports with the Commission. These reports shall include audited financial statements, how the specific requirements of public safety are being met, detailed information on the areas where broadband service has been deployed, which public safety entities are using the broadband network in each area of operation, what types of applications are in use in each area of operation, and the number of declared emergencies in each area of operation.

(b) The Public Safety Broadband Licensee and the Upper 700 MHz D Block licensee have joint responsibility to register the base station locations with the Commission, providing basic technical information, including geographic location.

APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[1150] an Initial Regulatory Flexibility Analysis (IRFA) was included in the *700 MHz Further Notice*[1151] in WT Docket No. 06-150, WT Docket No. 01-309; WT Docket No. 06-169, WT Docket No. 03-264, CC Docket No. 94-102, PS Docket No. 06-229, and WT Docket No. 96-86. [1152] The Commission sought written public comment on the proposals in these dockets, including comment on the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.[1153]

2. Although Section 213 of the Consolidated Appropriations Act of 2000 provides that the RFA shall not apply to the rules and competitive bidding procedures for frequencies in the 746-806 MHz Band,[1154] the Commission believes that it would serve the public interest to analyze the possible significant economic impact of the proposed policy and rule changes in this band on small entities. Accordingly, this FRFA contains an analysis of this impact in connection with all spectrum that falls

[1150] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[1151] *See* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, WT Docket 03-264, Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules, WT Docket No. 06-169, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, WT Docket No. 96-86, *Report and Order and Further Notice of Proposed Rulemaking*, 22 FCC Rcd 8064 (2007) (*700 MHz Report and Order* and *700 MHz Further Notice*, respectively).

[1152] *See* Service Rules for the 698-749746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, and Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, *Notice of Proposed Rule Making, Fourth Further Notice of Proposed Rule Making, and Second Further Notice of Proposed Rule Making*, 21 FCC Rcd 9345, 9394 (2006) (*"700 MHz Commercial Services Notice"); Former* Nextel Communications, Inc. 01-309, Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, WT Docket 03-264, Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules, Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, WT Docket Nos. 06-169 and 96-86, *Notice of Proposed Rule Making*, 21 FCC Rcd 10413, 10440 (2006) ("*700 MHz Guard Bands Notice*");",);, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, WT Docket No. 96-86, *Ninth Report and Order and Further Notice of Proposed Rule Making*, 2121*Rulemaking*, 22 FCC Rcd 14837, 14853 (2006) ("8064 (2007) (*700 MHz Public Safety Ninth Report and Order* and *700 MHz Further Notice*"", respectively).

[1153] *See* 5 U.S.C. § 604.

[1154] In particular, this exemption extends to the requirements imposed by Chapter 6 of Title 5, United States Code, Section 3 of the Small Business Act (15 U.S.C. 632) and Sections 3507 and 3512 of Title 44, United States Code. Consolidated Appropriations Act 2000, Pub. L. No. 106-113, 113 Stat. 2502, Appendix E, Sec. 213(a)(4)(A)-(B); *see* 145 Cong. Rec. H12493-94 (Nov. 17, 1999); 47 U.S.C.A. 337 note at Sec. 213(a)(4)(A)-(B).

within the scope of this *Second Report and Order*, including spectrum in the 746-806 MHz Band.

A. Need for, and Objectives of, the Rules

3. *In the Second Report and Order*, the Commission takes a number of steps to facilitate access to spectrum and the provision of service to consumers, especially those in rural areas, and to simplify and clarify our rules related to the commercial 700 MHz spectrum. It designates a spectrum block in the upper portions of the commercial spectrum for a commercial licensee that will be part of a public/private partnership (the "700 MHz Public/Private Partnership") entered with a national public safety broadband licensee for the public safety broadband spectrum, in a reconfigured 700 MHz Public Safety Band, to promote the development of nationwide interoperable broadband services for public safety users. The Commission also changes the location of the existing 700 MHz Guard Band licenses, provides for a one megahertz shift of the other commercial spectrum blocks in the Upper 700 MHz Band and the 700 MHz Public Safety Band, and reduces the size of the Guard Band B Block to make two additional megahertz of commercial spectrum available for auction.

4. The band plan provides a balanced mix of geographic service area licenses and spectrum block sizes for the 62 megahertz of commercial spectrum to be auctioned. The Commission determined that it will auction two 12-megahertz spectrum blocks (comprised of paired 6-megahertz blocks), one licensed by Cellular Market Areas (CMAs) and one by Economic Areas (EAs); one 22-megahertz spectrum block (paired 11-megahertz blocks) by Regional Economic Area Groupings (REAGs); and one 6-megahertz unpaired spectrum block by EAs. It also designates one 10-megahertz spectrum block (paired 5-megahertz blocks), the Upper 700 MHz Band D Block, to be licensed on a nationwide basis and used as part of the 700 MHz Public/Private Partnership entered between this commercial licensee and the licensee that will be assigned the public safety broadband spectrum (hereinafter, the Public Safety Broadband Licensee).

5. In addition, the Commission replaces the current "substantial service" requirements for 700 MHz Band commercial licenses that have not been auctioned with significantly more stringent performance requirements, and makes unserved areas available to third parties who wish to provide service to these areas. By adopting these more rigorous requirements, the Commission ensures that the 700 MHz Commercial Services licensees put the spectrum to use throughout the course of their license terms and serve the majority of users in their license areas Additionally, for one commercial spectrum block in the 700 MHz Band – the Upper 700 MHz C Block (700 MHz C Block)– the Commission imposes requirements on those licensees to provide open platforms for devices and applications, and concludes that it would not serve the public interest at this time to mandate broader openness requirements.

6. The *Second Report and Order* also revises the 700 MHz band plan with respect to the Upper 700 MHz Guard Bands, such that all existing A Block licenses relocate to a reconfigured A Block between the C and D Blocks, pursuant to an agreement between all but one of the Guard Bands licensees. As part of this agreement, the existing B Block licenses are relinquished, and the B Block is reconfigured from 4 to 2 megahertz and located immediately above the public safety narrowband spectrum. The reconfigured B Block serves as a guard band to protect the public safety narrowband channels, and remains empty as a commercial allocation at this time. With respect to the Guard Bands licensee that did not participate in the agreement, its one A Block license and two B Block licenses are grandfathered, with minor modifications to facilitate the overall revised band plan. In addition to these band plan issues with respect to the Guard Bands, the *Second Report and Order* also revises the service rules with respect to the reconfigured A Block, bringing it largely into parity with the adjacent Commercial Services spectrum given the new spectral location and its relationship to the rest of the band including the public safety spectrum.

7. Further, the Second Report and Order seeks to achieve broadband communications capabilities consistent with a nationwide interoperability standard for public safety. The Commission

expects that modern public safety services will increasingly depend on the advanced communications capabilities afforded by wireless broadband technologies, which should enable first responders to perform their vital safety-of-life and other critical roles. The Second Report and Order re-designates the wideband spectrum to broadband use consistent with a nationwide interoperability standard, and prohibits wideband operations on a going forward basis in the newly designated broadband spectrum. The Second Report and Order also consolidates the narrowband spectrum to the top of the Public Safety Band, locates the broadband spectrum at the bottom of the Public Safety Band, and divides these segments with an internal guard band. This reconfiguration reduces the amount of spectrum necessary to separate and protect the public safety broadband and narrowband allocations, and facilitates partnerships between public safety broadband operations and adjacent commercial broadband technologies, thereby optimizing the 700 MHz public safety band plan. Finally, in order to promote the rapid deployment of a nationwide, interoperable broadband public safety network, the Second Report and Order creates a single nationwide geographic area Public Safety Broadband License which will be administered by a single Public Safety Broadband Licensee.

8. With regard to auctions-related issues, the Commission decides to utilize anonymous bidding to enhance the effectiveness of the auction of 700 MHz licenses, as well as allowing package bidding for the Upper 700 MHz Band C Block, and decides not to grant a "new entrant" bidding credit for the 700 MHz Band licenses. The Commission also declines to impose eligibility restrictions for the licenses in the 700 MHz Band. Finally, the Commission will offer bidding credits in the D Block, as described fully below.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

9. No comments specifically addressed the IRFAs from any of the respective proceedings. We have nonetheless addressed small entity issues found in comments in this FRFA.

C. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply

10. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the proposed rules, if adopted.[1155] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[1156] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[1157] A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).[1158]

11. *Small Businesses*. Nationwide, there are a total of approximately 22.4 million small businesses, according to SBA data.[1159]

[1155] 5 U.S.C. § 604(a)(3).

[1156] 5 U.S.C. § 601(6).

[1157] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

[1158] 15 U.S.C. § 632.

[1159] *See* SBA, Programs and Services, SBA Pamphlet No. CO-0028, at page 40 (July 2002).

12. *Small Organizations*. Nationwide, there are approximately 1.6 million small organizations.[1160]

13. *Governmental Entities*. The term "small governmental jurisdiction" is defined as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."[1161] As of 2002, there were approximately 87,525 governmental jurisdictions in the United States.[1162] This number includes 38,967 county governments, municipalities, and townships, of which 37,373 (approximately 95.9%) have populations of fewer than 50,000, and of which 1,594 have populations of 50,000 or more. Thus, we estimate the number of small governmental jurisdictions overall to be 85,931 or fewer.

14. *Wireless Service Providers*. The SBA has developed a small business size standard for wireless firms within the two broad economic census categories of "Paging"[1163] and "Cellular and Other Wireless Telecommunications."[1164] Under both categories, the SBA deems a wireless business to be small if it has 1,500 or fewer employees. For the census category of Paging, Census Bureau data for 2002 show that there were 807 firms in this category that operated for the entire year.[1165] Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.[1166] Thus, under this category and associated small business size standard, the majority of firms can be considered small. For the census category of Cellular and Other Wireless Telecommunications, Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.[1167] Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.[1168] Thus, under this second category and size standard, the majority of firms can, again, be considered small.

15. When identifying small entities that could be affected by the Commission's new rules, this FRFA provides information describing auctions results, including the number of small entities that were winning bidders. However, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily reflect the total number of small entities currently in a particular service. The Commission does not generally require that licensees later provide business size information, except in the context of an assignment or transfer of control application where unjust enrichment issues are implicated.

16. *700 MHz Guard Band Licenses*. In the *700 MHz Guard Band Order*, the Commission

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[1160] Independent Sector, The New Nonprofit Almanac & Desk Reference (2002).

[1161] 5 U.S.C. § 601(5).

[1162] U.S. Census Bureau, Statistical Abstract of the United States: 2006, Section 8, pages 272-273, Tables 415 and 417.

[1163] 13 C.F.R. § 121.201, NAICS code 517211.

[1164] 13 C.F.R. § 121.201, NAICS code 517212.

[1165] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization," Table 5, NAICS code 517211 (issued Nov. 2005).

[1166] *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

[1167] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization," Table 5, NAICS code 517212 (issued Nov. 2005).

[1168] *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

adopted size standards for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.[1169] A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years.[1170] Additionally, a "very 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.[1171] SBA approval of these definitions is not required.[1172] An auction of 52 Major Economic Area (MEA) licenses commenced on September 6, 2000, and closed on September 21, 2000.[1173] Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.[1174]

17. Upper 700 MHz Band Licenses. The Commission released a *Report and Order* authorizing service in the Upper 700 MHz band.[1175] An auction for these licenses, previously scheduled for January 13, 2003, was postponed.[1176]

18. Lower 700 MHz Band Licenses. The Commission adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits.[1177] The Commission has defined a small business as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years.[1178] A very small business is defined as 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.[1179] Additionally, the Lower 700 MHz Band has a third category of small business status that may be claimed for Metropolitan/Rural Service Area (MSA/RSA) licenses. The third category is entrepreneur, which is defined as an entity that, together with its affiliates and controlling principals, has

[1169] *See* Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299 (2000).

[1170] *Id.* at 5343 ¶ 108.

[1171] *Id.*

[1172] *Id.* At 5343 ¶ 108 n.246 (for the 746-764 MHz and 776-704 MHz bands, the Commission is exempt from 15 U.S.C. § 632, which requires Federal agencies to obtain Small Business Administration approval before adopting small business size standards).

[1173] *See* "700 MHz Guard Bands Auction Closes: Winning Bidders Announced," *Public Notice*, 15 FCC Rcd 18026 (2000).

[1174] *See* "700 MHz Guard Bands Auctions Closes: Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 4590 (WTB 2001).

[1175] Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Memorandum Opinion and Order*, 16 FCC Rcd 1239 (2001).

[1176] *See* "Auction of Licenses for 747-762 and 777-792 MHz Bands (Auction No. 31) Is Rescheduled," *Public Notice*, 16 FCC Rcd 13079 (WTB 2003).

[1177] *See* Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), *Report and Order*, 17 FCC Rcd 1022 (2002).

[1178] *Id.* at 1087-88 ¶ 172.

[1179] *Id.*

average gross revenues that are not more than $3 million for the preceding three years.[1180] The SBA has approved these small size standards.[1181] An auction of 740 licenses (one license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)) commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were sold to 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business or entrepreneur status and won a total of 329 licenses.[1182] A second auction commenced on May 28, 2003, and closed on June 13, 2003, and included 256 licenses: 5 EAG licenses and 476 CMA licenses.[1183] Seventeen winning bidders claimed small or very small business status and won sixty licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.[1184]

19. *Public Safety Radio Licensees*. As a general matter, public safety radio licensees include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services.[1185] The SBA rules contain a small business size standard for cellular and other wireless telecommunications companies, which encompasses business entities engaged in wireless communications employing no more than 1,500 persons.[1186] According to Census Bureau data for 2002, in this category there were 8,863 firms that operated for the entire year.[1187] Of this total, 401 firms had 100 or more employees, and the remainder had fewer than 100 employees.[1188] With respect to local governments, in particular, since many governmental entities as well as private businesses comprise the licensees for these services, we include under public safety services the number of government entities affected.

20. *Wireless Communications Equipment Manufacturers: Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing*. While these entities are merely

[1180] *Id.* at 1088 ¶ 173.

[1181] *See* Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated August 10, 1999.

[1182] *See* "Lower 700 MHz Band Auction Closes," *Public Notice*, 17 FCC Rcd 17272 (WTB 2002).

[1183] *See* "Lower 700 MHz Band Auction Closes," *Public Notice*, 18 FCC Rcd 11873 (WTB 2003).

[1184] *Id.*

[1185] *See* subparts A and B of Part 90 of the Commission's Rules, 47 C.F.R. §§ 90.1-90.22. Police licensees include 26,608 licensees that serve state, county, and municipal enforcement through telephony (voice), telegraphy (code), and teletype and facsimile (printed material). Fire licensees include 22,677 licensees comprised of private volunteer or professional fire companies, as well as units under governmental control. Public Safety Radio Pool licensees also include 40,512 licensees that are state, county, or municipal entities that use radio for official purposes. There are also 7,325 forestry service licensees comprised of licensees from state departments of conservation and private forest organizations that set up communications networks among fire lookout towers and ground crews. The 9,480 state and local governments are highway maintenance licensees that provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. Emergency medical licensees (1,460) use these channels for emergency medical service communications related to the delivery of emergency medical treatment. Another 19,478 licensees include medical services, rescue organizations, veterinarians, persons with disabilities, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities.

[1186] *See* 13 C.F.R. § 121.201 (NAICS code 517212); U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Employment Size of Establishments for the United States: 2002," Table 2, NAICS code 517212.

[1187] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Employment Size of Establishments for the United States: 2002," Table 2, NAICS code 517212.

[1188] *Id.*

indirectly affected our action, we see are describing them to achieve a fuller record. The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment."[1189] The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees.[1190] According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year.[1191] Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999.[1192] Thus, under this size standard, the majority of firms can be considered small.

21. *Software Publishers*. While these entities are merely indirectly affected by our action, we are describing them to achieve a fuller record. These companies may design, develop or publish software and may provide other support services to software purchasers, such as providing documentation or assisting in installation. The companies may also design software to meet the needs of specific users.[1193] The SBA has developed a small business size standard of $23 million or less in average annual receipts for the category of Software Publishers.[1194] For Software Publishers, Census Bureau data for 2002 indicate that there were 6,155 firms in the category that operated for the entire year.[1195] Of these, 7,633 had annual receipts of under $10 million, and an additional 403 firms had receipts of between $10 million and $24, 999,999. For providers of Custom Computer Programming Services, the Census Bureau data indicate that there were 32,269 firms that operated for the entire year.[1196] Of these, 31,416 had annual receipts of under $10 million, and an additional 565 firms had receipts of between $10 million and $24,999,999. Consequently, we estimate that the majority of the firms in this category are small entities that may be affected by our action.

[1189] U.S. Census Bureau, 2002 NAICS Definitions, "334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing"; http://www.census.gov/epcd/naics02/def/NDEF334.HTM#N3342.

[1190] 13 C.F.R. § 121.201, NAICS code 334220.

[1191] U.S. Census Bureau, American FactFinder, 2002 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 334220 (released May 26, 2005); http://factfinder.census.gov. The number of "establishments" is a less helpful indicator of small business prevalence in this context than would be the number of "firms" or "companies," because the latter take into account the concept of common ownership or control. Any single physical location for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses. In this category, the Census breaks-out data for firms or companies only to give the total number of such entities for 2002, which was 929.

[1192] *Id.* An additional 18 establishments had employment of 1,000 or more.

[1193] *See* U.S. Census Bureau, "2002 NAICS Definitions: 511210 Software Publishers"; http://www.census.gov/epcd/naics02/def/NDEF511.HTM.

[1194] 13 C.F.R. § 121.201, NAICS code 511210.

[1195] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 511210 (issued Nov. 2005).

[1196] U.S. Census Bureau, 2002 Economic Census, Subject Series: Professional, Scientific, and Technical Services, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 541511 (issued Nov. 2005).

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

22. The projected reporting, recordkeeping, and other compliance requirements resulting from the *Second Report and Order* will apply to all entities in the same manner. The Commission believes that applying the same rules equally to all entities in this context promotes fairness. The Commission does not believe that the costs and/or administrative burdens associated with the rules will unduly burden small entities. The revisions the Commission adopts should benefit small entities by giving them more information, more flexibility, and more options for gaining access to valuable wireless spectrum.

23. Performance Requirements. In this *Second Report and Order*, the Commission replaces the current "substantial service" requirements for the 700 MHz Band commercial licenses that have not been auctioned with significantly more stringent performance requirements. These include the use of interim and end-of-term benchmarks, with geographic area benchmarks for licenses based on CMAs and EAs, and population benchmarks for licenses based on REAGs. Licensees must meet the interim requirement within four years of the end of the DTV transition. Failure to meet the interim requirement will result in a two-year reduction in license term, as well as possible enforcement action, including forfeitures. Licensees that fail to meet the end-of-term benchmarks will be subject to a "keep-what-you-use" rule, under which the licensee will lose its authorization for unserved portions of its license area, which will be automatically returned to the Commission for reassignment.

24. Licensees must demonstrate compliance with our interim and end-of-term construction benchmarks by filing a construction notification with the Commission within 15 days of the passage of the relevant benchmark certifying that they have met our performance requirements or, if they have not met our performance requirements, they must file a description and certification of the areas for which they are providing service. The information contained in the licensee's construction notification must include electronic coverage maps and other supporting documentation. The electronic coverage maps must clearly and accurately depict the boundaries of each EA or CMA in the licensee's service territory, and the areas where the licensee's signal strength is sufficient to provide service to users. In addition to filing electronic coverage maps, each licensee must file supporting documentation certifying the type of service it is providing for each EA or CMA within its license service territory.

25. Guard Band Issues. The *Second Report and Order* relocates the A Block away from the public safety narrowband spectrum with respect to the upper half of the original paired A Block. Accordingly, the reconfigured A Block no longer serves as a guard band to protect the public safety spectrum from commercial operations. The existing frequency coordination requirement, which was created to protect public safety operations from Guard Bands operations, is therefore eliminated with respect to the reconfigured A Block.

26. Open Platforms for Devices and Applications. In this *Second Report and Order*, the Commission adopts a requirement for the 700 MHz C Block licensees to provide open platforms for devices and applications. 700 MHz C Block licensees must allow customers, device manufacturers, third-party application developers and others to use or develop the devices and applications of their choosing on the 700 MHz C Block network so long as they meet all applicable regulatory requirements and comply with reasonable conditions related to the management of the wireless network. The Commission does not, at this time, specify a particular process for wireless service providers to develop reasonable network management and openness standards, including through participation in standards setting organizations. The Commission expects licensees to publish their standards once adopted, which will be non-proprietary, such that they would be open to any third party vendors and that the standards applied to third parties will be no more restrictive than those applied to the provider's preferred vendors. The Commission also requires 700 MHz C Block licensees to provide to potential customers notice of the customers' rights to request the attachment of a device or application to the licensee's network, and notice

of the licensee's process for customers to make such requests, including the relevant network criteria. In addition, 700 MHz C Block licensees are required to establish a reasonable process for expeditiously reviewing and processing requests to employ devices and applications on the licensee's network and offer a specific explanation for denial of any such request, and an opportunity for amendment of the request to accommodate the provider's concerns. The Commission also provides for its existing complaint procedures to be invoked if a violation of this requirement occurs. Once a complainant sets forth a *prima facie* case that the 700 MHz C Block licensee has refused to attach a device or application in violation of the requirement or has otherwise violated the rule, the 700 MHz C Block licensee shall have the burden of proof to demonstrate that it has adopted reasonable network standards and reasonably applied those standards in the complainant's case. The Commission commits to rule on these complaints within 180 days.

27. Public Safety Broadband. The *Second Report and Order* re-designates the wideband spectrum to broadband use consistent with a nationwide interoperability standard, and prohibits wideband operations on a going forward basis. The Commission will only grant limited exceptions to this rule through a waiver process. As a result of the decision to prohibit wideband operations outside of this waiver process, Regional Planning Committee plans already approved or on file with the Commission will require amendment. The *Second Report and Order* also consolidates the narrowband channels to the top of the public safety band, locates the broadband spectrum at the bottom of the public safety band, divides these segments with an internal guard band, and creates a single Public Safety Broadband License/Licensee to promote the rapid deployment of a nationwide, interoperable broadband public safety network. The relocation of public safety narrowband operations in the consolidated channels will entail some additional reporting, recordkeeping and compliance efforts by existing public safety entities with regard to the number and location of their affected narrowband handsets and base stations. The *Second Report and Order* does not otherwise propose any additional reporting, recordkeeping or other compliance requirements.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

28. The RFA requires an agency to describe in the IRFA any significant alternatives that it has considered in reaching its proposed approach, which may include (among others) the following four alternatives: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.[1197] We hereby incorporate by reference the discussion in the Second Report and Order of our consideration of the impact on small entities of the rules we adopt here.

29. Band Plan Issues. The *Second Report and Order* revises the 700 MHz band plan for the commercial services and public safety services in a manner that will improve the opportunity of small entities to obtain valuable wireless spectrum by providing smaller licensing areas that better meet the needs of small entities. The Commission's goals for the 700 MHz Band are to promote dissemination of licenses among a wide variety of applicants, including small entities, accommodate the competing need for both large and small licensing areas, meet the various needs expressed by potential entrants seeking access to spectrum and incumbents seeking additional spectrum, and provide for large spectrum blocks that can facilitate broadband deployment in the band. To achieve these goals the revised plan provides for two 12-megahertz spectrum blocks (comprised of paired 6-megahertz blocks), one licensed by CMAs and one by EAs; one 22-megahertz spectrum block (paired 11-megahertz blocks) by REAGs; and one 6-

[1197] 5 U.S.C. § 603(c).

megahertz unpaired spectrum block by EAs. The revision also designates one 10-megahertz spectrum block (paired 5-megahertz blocks), the Upper 700 MHz D Block, to be licensed on a nationwide basis and used as part of the 700 MHz Public/Private Partnership.

30. Providing for an additional 700 MHz Band spectrum block licensed on a CMA basis (the B Block) will increase the opportunity of small entities to obtain smaller license areas that meet their needs while avoiding the transaction costs associated with obtaining access to spectrum in the secondary market, costs that are incurred when these small providers must arrange the terms by which another licensee grants access to its spectrum by means of partitioning, disaggregation, or spectrum leasing.

31. In addition, the Commission adopts EAs as the geographic service area for licenses in Block A of the Lower 700 MHz Band, making 176 licenses available in this block. The Commission also adopts EAs for the unpaired 6-megahertz E block of the Lower 700 MHz Band which further enhances the mix of geographic sizes for licenses in the band. These decisions will also create opportunities for small entities to acquire license for small geographic service areas in the Lower 700 MHz Band.

32. Frequency Coordination and the Guard Bands. The service area definition for the Upper 700 MHz Guard Bands is the MEA, which is a smaller license area and therefore can provide greater opportunities for small entrants than larger service area definitions such as the REAG. Accordingly, among the licensed Guard Bands and the lessees currently using their spectrum, there may be a significant number of small entities. Additionally, continued operations in the Guard Bands A Block may continue to involve a significant number of small entities through Secondary Markets arrangements. Since the *Second Report and Order* removes the requirement for all A Block operations to be frequency coordinated with public safety entities, any small entity engaged in ownership of, or operations on, the A Block will find the frequency coordination burden lifted to their significant benefit.

33. Performance Requirements. In this *Second Report and Order*, the Commission adopts stringent performance requirements for the 700 MHz Commercial Services licenses in order to promote the provision of innovative services to consumers throughout the license areas, including in rural areas. With regard to geographic-based benchmarks for licenses based on CMAs and EAs, the Commission seeks to promote service across as much of the geographic area of the country as is practicable. Parties that seek to acquire licenses based on CMAs and EAs may be small and rural providers that are less likely to provide regional or nationwide service, but they nonetheless play an important role in bringing new services to consumers in many of these more rural areas. The use of small license areas such as CMAs will create opportunities for small and rural businesses and will foster the deployment of competitive wireless broadband services in rural areas. Because the Commission adopts smaller geographic license areas such as CMAs to facilitate the provision of service, including broadband, in rural areas, it also adopts performance requirements that are designed to ensure that service is offered to consumers in these areas. Because of the 700 MHz band's excellent propagation characteristics and suitability for delivering advanced wireless services to rural areas, the Commission establishes benchmarks that require build-out to a significant portion of the geographic are in those markets. In addition, the performance requirements adopted here will discourage larger entities from purchasing spectrum for the purpose of warehousing it and thus may provide small entities with a greater chance of obtaining valuable spectrum.

34. In the *Second Report and Order*, the Commission adopts population-based benchmarks for REAG licensees with large geographic areas in order to facilitate the roll out of advanced services on a nationwide or regional basis. Because of the significant capital investment and logistical challenges associated with building a regional or nationwide system without existing infrastructure, population benchmarks, rather than geographic benchmarks, will best allow a potential new entrant to achieve the economies of scale needed for a viable business model, while also ensuring that a majority of the population in a given region may have access to these services. Moreover, the performance requirements adopted here will discourage larger entities from purchasing spectrum for the purpose of warehousing it and thus may provide small entities with a greater chance of obtaining valuable spectrum.