Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Proposed Amendments to the Service Rules Governing Public Safety Narrowband Operations in the 769-775/799-805 MHz Bands	)	PS Docket No. 13-87
	)	
National Public Safety Telecommunications Council Petition for Rulemaking on Aircraft Voice Operations at 700 MHz	)	RM-11433
	)	
National Public Safety Telecommunications Council Petition for Rulemaking to Revise 700 MHz Narrowband Channel Plan	)	RM-11433
	)	
Region 24 700 MHz Regional Planning Committee Petition for Rulemaking	)	WT Docket No. 96-86 PS Docket No. 06-229
	)	
State of Louisiana Petition for Rulemaking	)	RM-11577

ORDER ON RECONSIDERATION AND FURTHER NOTICE OF PROPOSED RULEMAKING

Adopted: August 18, 2016 **Released: August 22, 2016**

Comment Date: 30 days after publication in the Federal Register
Reply Comment Date: 45 days after publication in the Federal Register

By the Commission:

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I. INTRODUCTION

1. On October 24, 2014 the Commission released a *Report and Order* in the captioned proceedings,[1] which, *inter alia,* provided that mobile and portable 700 MHz public safety band radios designed to operate on the 700 MHz interoperability channels would be presumed interoperable if they received Project 25[2] Compliance Acceptance Program (CAP) approval[3] (hereinafter referred to as P25 CAP). To this end, the *Report and Order* amended the Commission's Part 2 equipment certification rules to require that equipment manufacturers include a declaration of CAP compliance with any application for certification of equipment capable of operating on the 700 MHz interoperability channels.[4] In the alternative, the amended rule stated that manufacturers could accompany their equipment certification applications with other documentation demonstrating how the radio submitted for certification complied with Project 25 standards and was interoperable across vendors.[5]

2. Following the release of the *Report and Order*, the Telecommunications Industry Association (TIA) filed a timely petition for reconsideration, strongly supporting the CAP program but expressing concern that requiring CAP compliance before equipment certification would be impractical because radios submitted for equipment certification often lack some of the features essential for public safety interoperability, including features necessary for the radios to receive CAP certification.[6] We agree and modify our rules to allow CAP compliance or the equivalent to be completed after equipment certification but prior to the marketing or sale of that equipment. Thus, we ensure that potential users will have the benefit of CAP testing or the equivalent, and compliance with P25 interoperability standards without disadvantaging radio manufacturers. We find our decision correctly balances manufacturers' need for flexibility against the public's interest in interoperability.

3. Separate from the reconsideration issue, in response to a request for clarification filed by the National Regional Planning Council (NRPC), we clarify that states may delegate administration of the air-ground channels to the 700 MHz Regional Planning Committees (RPCs).[7] We also conform Section

[1] *Proposed Amendments to the Service Rules Governing Public Safety Narrowband Operations in the 769-775/799-805 MHz Bands, et al.,* PS Docket 13-87, *et al.*, Report and Order*,* 29 FCC Rcd 13283 (2014) (*Report and Order*).

[2] Project 25 (P25) refers to the suite of standards for interoperable digital radios contained in the EIA/TIA/ANSI 102 standards documents.

[3] In 2005 Congress funded an independent assessment program to test interoperability of all P25 equipment, and in 2008, the Department of Homeland Security's (DHS) Office for Interoperability and Compatibility (OIC) and the National Institute of Standards and Technology (NIST), in partnership with industry and the emergency response community, launched the P25 Compliance Assessment Program (P25 CAP). *See Report and Order,* 29 FCC Rcd at 13303 ¶ 58. P25 CAP was established as a voluntary program that establishes an independent compliance assessment process to ensure that communications equipment conforms to P25 standards and is interoperable across vendors. *Id*. The program provides emergency response agencies with a means of verifying that the equipment they buy, regardless of vendor, is interoperable and otherwise compliant with the P25 standards. *Id.*

[4] *See* 47 CFR § 2.1033(c)(20). *See also Report and Order*, 29 FCC Rcd at 13303 ¶ 60.

[5] *Id.*

[6] *See* Petition for Reconsideration by the Telecommunications Industry Association, Jan. 2, 2015 at 3 (TIA Petition). *See also* Notice of *Ex Parte* filed by Telecommunications Industry Association Dec. 9, 2014 (*Ex Parte*); TIA June 4, 2015 *Ex Parte* Response to NPSTC *Ex Parte* Dated May 28, 2015 and Filed May 29, 2015.

[7] *See* Letter from William J. Carter, National Regional Planning Council, re WT Docket 13-87 and RM 11433 (filed Sept. 9, 2015) (NRPC Request).

90.535[8] of the Commission's rules to reflect our previous decision to eliminate the 700 MHz narrowbanding deadline. Additionally, we correct Sections 90.209 and 90.210 of the Commission's technical rules to accurately reflect bandwidth limitations and emission masks.[9] Finally, we conform Sections 90.523(a)-(d) to the introductory sentence of Section 90.523,[10] to reflect the restriction of the public safety narrowband spectrum bands to 769-775/799-805 MHz, as required by the Middle Class Tax Relief and Job Creation Act of 2012 (Spectrum Act).[11]

4. We also adopt a *Further Notice of Proposed Rulemaking* to facilitate the use of Vehicular Repeater Systems (VRS) on 700 MHz General Use and State License channels. In the *Report and Order*, we added the 700 MHz Reserve Channels to the General Use pool, to be made available for multiple uses subject to RPC administration, and authorized the RPCs to designate some of the former Reserve Channels for VRS use.[12] The addition of the Reserve Channels to the General Use Pool brought them within the scope of Section 90.537 of the Commission's rules,[13] which requires all 700 MHz systems using six or more General Use or State License channels to be trunked.[14] Following release of the *Report and Order*, the Commonwealth of Virginia requested a waiver of the trunking requirement to allow its VRS system to operate without trunking on State License channels and former Reserve Channels.[15] In light of the growing popularity of VRS systems among public safety entities as a means to enhance system coverage, we find it appropriate to revisit our trunking rule and ask for comment on additional rule changes that may be necessary to accommodate VRS operation in the 700 MHz band.

5. As discussed in the *Order on Reconsideration*, TIA and the National Public Safety Telecommunications Council (NPSTC), suggested that the Department of Homeland Security's (DHS) Project 25 Compliance Assessment Advisory Council (P25 CAP AP)[16] could help define the subset of features radios must have to meet the P25 CAP requirements in the conventional mode of operation. In a responsive filing, the participating members of the P25 CAP AP submitted a list of 15 recommended feature sets and capabilities to facilitate interoperable communications between radios when operating in the conventional mode of P25 using the Common Air Interface[17] (CAI) on the designated 700 MHz interoperability channels.[18] Accordingly, we seek comment on whether to adopt all, some, or none, of the additional feature sets and capabilities recommended.

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[8] *See* 47 CFR § 90.553.

[9] *See* 47 CFR §§ 90.209 and 90.210.

[10] *See* 47 CFR § 90.523.

[11] Pub. L. No. 112-96, 126 Stat. 156.

[12] *See Report and Order*, 29 FCC Rcd at 13301 ¶ 51.

[13] 47 CFR § 90.537.

[14] The underlying purpose of the trunking requirement is to ensure efficient spectrum use. *See Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010*, WT Docket No. 96-86, First Report and Order and Third Notice of Proposed Rulemaking, 14 FCC Rcd 152, 211 ¶ 131 (1998).

[15] *See* Request for Waiver filed by the Commonwealth of Virginia Department of State Police (Jan. 29, 2015) *citing* 47 CFR § 90.537(a) (Virginia Request for Waiver).

[16] The P25 CAP Advisory Panel will provide the "Office for Interoperability and Compatibility (OIC) with federal, state, local, tribal, and territorial perspectives on P25 portable, handheld, and vehicle-mounted radios and infrastructure equipment as used by public safety agencies." Comments of the Project 25 Compliance Assessment Program Advisory Panel at 3 (Jan. 30, 2016).

[17] P25 CAI refers to a standard for digital voice modulation adopted to insure interoperability across P-25 radios of various vendors.

[18] *See infra* Appendix D.

6. We also seek comment on a recommendation by Motorola Solutions, Inc.(Motorola) to clarify Sections 90.547 and 90.548 of the Commission's rules[19] to the effect that 700 MHz radios must be capable of being programmed to operate on the designated interoperability channels.

II. ORDDER ON RECONSIDERATION

7. *TIA Petition.* In its Petition for Reconsideration, TIA affirms that its members "strongly support" the CAP program, but submits that "the Commission should not condition the completion of CAP assessment as a critical step in the device approval process ahead of submission to the FCC for type acceptance."[20] TIA contends that "FCC Type Acceptance" typically occurs before a product is "mature." As an alternative to submission of CAP certification as part of the equipment approval process, TIA suggests that paragraph 60 of the *Report and Order* be revised to eliminate the italicized sentence in the following:

> The record indicates that 700 MHz equipment manufacturers are uniformly participating in the voluntary CAP certification program, which has helped to ensure that 700 MHz radios operating on the narrowband interoperability channels are, in fact, interoperable. No commenting party has suggested otherwise. Therefore, rather than mandate CAP certification, we amend our rules to further encourage voluntary CAP compliance and to give licensees information regarding the basis for vendor assertions that equipment is interoperable. Thus, we adopt a presumption that a manufacturer that submits its equipment for CAP certification is compliant with Section 90.548 of the Commission's rules. *Alternatively, a manufacturer may elect not to submit its equipment for CAP certification, but must disclose in its equipment certification application to the Commission how it determined that its device complies with Project 25 standards and is interoperable across vendors.* Finally, while we do not mandate CAP certification, we encourage 700 MHz licensees to require CAP compliance in their contracts for purchase of equipment.[21]

8. Thus, rather than requiring manufacturers to demonstrate CAP compliance prior to the submission of an application for equipment certification, TIA proposes that manufacturers be permitted to "state that the product has been being (sic) designed to the Project 25 standards."[22] Thus a manufacturer "could identify which Project 25 CAP tests that design intends to pass which is a direct reflection of intended Project 25 compliance and interoperability."[23]

9. TIA also submits that the Commission should recognize that "the [CAP] program faces certain challenges,"[24] the most significant of which are "the vagaries associated with funding support from the Department of Homeland Security (DHS)."[25] It points out that, as of the time the Petition was

[19] 47 CFR §§90.547, 90.548.

[20] TIA Petition at 3.

[21] *See id.* at 8 (emphasis added to highlight TIA's proposed deletion). The TIA Petition does not propose any specific changes to the text of the rules adopted in the *Report and Order.*

[22] *Id*.

[23] *Id*. at 7.

[24] *Id.* at 5.

[25] *Id.*

filed, the CAP governing board had not met in over a year and was not currently recognizing new laboratories for compliance testing.[26]

10. *Responsive Pleadings*. Motorola filed comments supporting the TIA Petition.[27] Motorola submits that "[m]andating P25 CAP certification prior to equipment authorization creates several logistical problems."[28] Among these problems, Motorola asserts, is that equipment authorization occurs at an early stage of development, when a manufacturer can only state that its product is designed to the P25 standard.[29] Although most of Motorola's argument focuses on the difficulties of demonstrating CAP compliance at the equipment authorization stage, it also submits that CAP compliance should be voluntary at any stage and that preexisting technical requirements, standards, and regulatory requirements are sufficient to ensure interoperability.[30] Motorola's proposed solution is to delete new Section 2.1033(c) of the rules, thereby allowing the CAP program "to continue to perform as a voluntary program that offers benefits to the public safety community," while "maintain[ing] efficiency in the equipment authorization process."[31]

11. The National Public Safety Telecommunications Council (NPSTC) filed a reply to the TIA Petition and Motorola comments.[32] In that reply, it supports the rule modifications as adopted in the *Report and Order*. However, should the Commission conclude that it is reasonable to allow manufacturers to wait until after equipment authorization to go through the CAP testing process, or the equivalent, NPSTC recommends that P25 radios be certified to the P25 standard under the provisions of the CAP program, or equivalent, prior to sale and delivery of 700 MHz radios to distributors or to public safety entities.[33] Without independent testing and validation that 700 MHz P25 products actually meet the P25 standard and can interoperate with other P25 devices, NPSTC states that "communications interoperability could suffer."[34] NPSTC adds that "[i]t is important that the benefits of the P25 standard and the CAP Program certification be ensured for public safety entities spending significant taxpayer funds to deploy interoperable communications equipment."[35] To the extent that the P25 CAP program suffers from the challenges described by TIA, "NPSTC also urges that those shortcomings be addressed, and in fact understands that the CAP Governing Board is being reinstated."[36] In a subsequent *ex parte* filing, NPSTC recognizes that tying the CAP process, or equivalent, to the FCC equipment certification

[26] *Id*.

[27] Comments of Motorola Solutions, Feb. 11, 2015, at 6 (Motorola Comments). The Commission's rules call for filing of oppositions and replies in response to a petition for reconsideration of a rulemaking order, but make no provision for comments or reply comments. *See* 47 CFR §§ 1.429(f), (g). Nonetheless, we will consider the comments filed by Motorola, and the reply comments filed by NPSTC, *infra* note 32, in the interest of a more complete record and because no party will be prejudiced by our doing so.

[28] Motorola Comments at 4.

[29] *Id.*

[30] *Id*. at 5-6 *citing* 47 CFR §§ 90.547 and 90.548(a)(1).

[31] *Id.* at 6. In an *ex parte* filing, TIA also suggested that Section 2.1033(c)(20) should be removed. *See* Notice of *Ex Parte* submitted by the Telecommunications Industry Association on June 4, 2015 *re* PS Docket 13-87 (TIA *Ex Parte*).

[32] Reply Comments of the National Public Safety Telecommunications Council, Feb. 23, 2015 (NPSTC Reply Comments).

[33] *Id*. at 5.

[34] *Id*.

[35] *Id*.

[36] *Id*. at 5-6.

process can be problematic for manufacturers.[37] Therefore, NPSTC urges that the Commission amend the rules to ensure that P25 equipment in the 700 MHz band achieves CAP compliance prior to equipment being delivered and/or deployed.

12. Should the Commission decide to address NPSTC's suggestion for P25 radios to be certified to the P25 standard under the provisions of the CAP program, or equivalent, prior to the equipment being delivered and/or deployed, "TIA recommends consideration of alternate proof of interoperability such as a Declaration of Conformity … in the event that the CAP falls short of current or future expectations for independent certification of required interoperability."[38] To address NPSTC's desire for CAP compliance and the TIA's concern about sustainability of the CAP, TIA suggests the following changes to Section 90.548 of the Commission's rules[39] which already addresses P25 interoperability standards:

> (c) Equipment certified by the P25 Compliance Assessment Program and having Supplier's Declaration of Compliance and supporting Summary Test Report approved by the Compliance Assessment Program is presumed to comply with this section. Alternatively, for equipment that is not certified by the P25 Compliance Assessment Program, documentation such as a Declaration of Conformity described in §2.906 shall be provided detailing how the equipment is interoperable across vendors.[40]

13. APCO, however, in an *ex parte* filing, recommends a demonstration of CAP compliance before equipment is authorized by the Commission , or in the alternative, "if the Commission permits devices to go through type acceptance prior to CAP certification, manufacturers should be prohibited from engaging in marketing activities, not just delivering equipment, until after CAP approval."[41] The participating members of the P25 CAP Advisory Panel support APCO's comments "advocating the need for P25 CAP certification prior to 700 MHz radios being submitted for Commission [equipment authorization]."[42] The P25 CAP AP submits that "manufacturer's fears or uncertainty of the time frame associated with CAP certification" fails to account for the recently revamped and reformed CAP program.[43] The P25 CAP AP also agrees "with APCO that the documented abilities and certainties that CAP testing and certification of a radio provides to public safety users and utilized in their daily mission outweighs any inconvenience or 'product to market' needs of the manufacturer."[44]

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[37] *See* Notice of *Ex Parte* submitted by the National Public Safety Telecommunications Council on May 28, 2015 *re* PS Docket 13-87.

[38] *See* TIA *Ex Parte* at 2 *citing* 47 CFR § 2.906. Section 2.906 provides:

(a) A Declaration of Conformity is a procedure where the responsible party, as defined in §2.909, makes measurements or takes other necessary steps to ensure that the equipment complies with the appropriate technical standards. Submittal of a sample unit or representative data to the Commission demonstrating compliance is not required unless specifically requested pursuant to §2.1076.

(b) The Declaration of Conformity attaches to all items subsequently marketed by the responsible party which are identical, as defined in §2.908, to the sample tested and found acceptable by the responsible party.

[39] 47 CFR § 90.548.

[40] *See* TIA *Ex Parte* at 3.

[41] Letter to Marlene H. Dortch, Secretary, FCC from Jeffery S. Cohen, Senior Counsel, APCO (April 7, 2016) (APCO *Ex Parte*).

[42] *See Ex Parte* Comments submitted by the Project 25 Compliance Assessment Program Advisory Panel on June 22, 2016 *re* PS Docket 13-87 (P25 CAP *Ex Parte* Comments).

[43] *Id*. at 3.

[44] *Id*.

14. *Discussion.* The *Report and Order* that is the subject of the TIA Petition "[d]id not mandate CAP certification."[45] Rather, it required that a manufacturer "disclose in its equipment certification application . . . how it determined" – whether from a CAP certification or otherwise – "that its device complies with Project 25 standards and is interoperable across vendors."[46] Focusing primarily on the timing of the determination of interoperability – *i.e*., that the *Report and Order* requires disclosure of this determination to be made at the time the manufacturer files its Part 2 equipment certification application with the FCC – TIA observes that "the timing of tying P25 CAP certification to FCC equipment certification can be problematic for manufacturers as FCC equipment certification may normally be done much earlier in the process."[47] These comments, and the subsequent NPSTC reply comments that address CAP compliance in terms of its role in the FCC equipment certification process, raise two separate questions about our new rule. First, is it premature at the equipment authorization stage to expect the Part 2 applicant manufacturers to have already completed the CAP process, or an alternative procedure for demonstrating interoperability? Second, if we amend the rule to allow the applicant to secure CAP certification, or the equivalent, after the Commission has granted the equipment authorization application, should we also amend the rule to mandate CAP compliance or the equivalent?

15. With respect to the first question, we are persuaded by TIA and Motorola that it is inadvisable to show CAP compliance, or the equivalent, at the time a radio is submitted for equipment certification because of the significant differences in timing associated with these two processes. For example, CAP interoperability testing requires the product to be sufficiently mature to be tested, based on versions ready for shipping.[48] In contrast, Part 2 equipment certification is generally a *prerequisite* for shipping and otherwise marketing the product.[49] To eliminate any ambiguity regarding the timing of CAP testing or the equivalent and whether CAP testing applies to the equipment certification process, and whether CAP testing applies to the equipment certification process, we amend Sections 2.1033(c)(20) and 90.548 of the rules accordingly.[50] We further adopt, with modification, APCO's alternative proposal that the demonstration of CAP compliance, be made before the equipment is marketed for use in the 700 MHz band. We modify the APCO proposal to add "or sold" after "marketed" to address the situation in which a radio might be sold although not first marketed. Although NPSTC suggests that the CAP demonstration could occur prior to equipment delivery or deployment, we conclude that requiring the demonstration to occur prior to marketing or sale establishes a clearer and more readily enforceable standard.[51]

[45] *Report and Order,* 29 FCC Rcd at 13303 ¶ 60.

[46] *Id. See also* 47 CFR § 2.1033(c)(20).

[47] TIA *Ex Parte,* June 4, 2105.

[48] TIA Petition at 6. In an *Ex Parte*, TIA reiterated that "CAP certification depends on the availability of competing products for interoperability testing to be conducted. Consequently, requiring CAP interoperability at the time of application could delay new product introduction." *See* Notice of *Ex Parte* submitted by Telecommunications Industry Association on Nov. 23, 2015 (TIA Nov. 23 *Ex Parte*) *re* PS Docket No. 13-87; PS Docket No. 06-229, WT Docket No. 96-86, RM-11433, RM-11577.

[49] *See, e.g.*, 47 CFR § 2.803.

[50] 47 CFR §§ 2.1033(c)(20), 90.548.

[51] NPSTC Reply Comment at 5. Once a public safety entity has purchased 700 MHz narrowband equipment, it would be logistically difficult and time consuming to reverse the process if the equipment proved non-interoperable. Moreover, the Commission is not generally privy to public safety entities' ordering of equipment, making it difficult to determine, from an enforcement standpoint, whether equipment had achieved CAP certification, or the equivalent, before it was delivered or deployed and activated. Using a "marketing or sale" criterion for compliance, however, is more readily enforceable as the Commission is generally more aware, through trade publications and elsewhere, when equipment is marketed. We also note that "marketing" is used as a criterion for equipment authorization and

(continued….)

16. With respect to the second question, we conclude that CAP compliance or the equivalent should remain voluntary rather than be made mandatory. We agree with APCO regarding the importance of establishing, prior to marketing or sale of 700 MHz equipment, that such equipment actually meets the P25 interoperability standard.[52] However, we find no basis in the record for revisiting our prior determination that voluntary participation in the CAP program is working and that mandating participation could impose unnecessary burdens on the introduction of new products. We also find it significant that all commenting parties strongly support the CAP program and that, as Motorola points out, currently all manufacturers of 700 MHz narrowband radios participate in the program.

17. Accordingly, we amend Section 90.548(c) of the rules[53] to require either CAP compliance, or an equivalent demonstration of compliance with P25 standards and evidence of interoperability across vendors. In response to *ex parte* presentations by manufacturers, NPSTC, APCO and the P25 CAP AP,54 we are further amending Section 90.548(c) of the rules to require either CAP compliance, or an equivalent demonstration of compliance with P25 standards and evidence of interoperability across vendors before radios can be marketed or sold. Submission of a 700 MHz narrowband radio for certification will constitute a representation by the manufacturer that the radio will be shown, by testing, to be interoperable across vendors before it is marketed or sold. We do not implement the APCO proposal, endorsed by the P-25 CAP AP, that CAP certification be accomplished before Commission equipment authorization. While we agree with APCO and the CAP AP that radios should be determined to be CAP compliant before they are placed in the hands of users, we are persuaded by TIA and Motorola that requiring CAP certification, or the equivalent, at the equipment authorization stage could delay the introduction of new equipment into the public safety marketplace.[55]

18. In order to provide assurance that first-responders may safely and seamlessly communicate with one another when using 700 MHz narrowband equipment, we encourage manufacturers to obtain CAP certification. In the alternative, however, manufacturers may conduct and document their own testing protocol and provide information demonstrating that radios are interoperable across vendors and otherwise comply with P25 standards.[56] Despite the requirement that manufacturers obtain CAP certification or equivalent proof of P25 compliance before marketing or sale of 700 MHz narrowband equipment, we will not require manufacturers to submit evidence of CAP compliance, or

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is defined as the "sale or lease, or offering for sale or lease, including advertising for sale or lease, or importation, shipment, or distribution for the purpose of selling or leasing or offering for sale or lease." 47 CFR § 2.803.

[52] NPSTC Reply Comment at 5.

[53] 47 CFR § 90.548(c).

[54] Notice of *Ex Parte* submitted by National Public Safety Telecommunications Council on Nov. 20, 2015 (recommending that the Commission modify the rules as needed to ensure that P25 equipment in the 700 MHz band obtains the P25 CAP certification, or equivalent, prior to the equipment being delivered to public safety entities for deployment); TIA Nov. 23 *Ex Parte* at 2 ("Using a requirement for interoperability test results prior to 'delivery' might be best."); APCO Ex Parte at 1 ("Although APCO prefers that the Commission require that equipment manufacturers obtain CAP certification prior to type acceptance, if the Commission permits devices to go through type acceptance prior to CAP certification, manufacturers should be prohibited from engaging in marketing activities, not just delivering equipment, until after CAP approval"); and P25 CAP *Ex Parte* Comments at 3 (recognizing that APCO also notes that should the Commission determine to permit equipment authorization of 700 MHz radios prior to P25 CAP certification, "manufacturers should be prohibited from delivering or marketing such equipment until CAP certification has been met.").

[55] See *supra* paras. 14-15.

[56] As with radios certified in CAP laboratories, radios tested for interoperability using manufacturers' protocols would be tested against radios already in the marketplace and known to be interoperable.

equivalent, to the Commission.[57] However, manufacturers must be prepared to provide such evidence upon request by the Commission. Moreover, we amend Section 90.548(c) of the Commission's rules to provide that, in the event a radio is found not to be interoperable, the manufacturer must provide evidence that CAP compliance was demonstrated at a CAP-approved laboratory, or such other documentation that shows that the manufacturer's own testing protocol demonstrated compliance with P25 standards and interoperability across vendors, before the radio was marketed or sold. The inability to do so will be deemed a violation of Section 90.548(c) of the Commission's rules and subject to enforcement action, which action may include, without limitation, revocation of the radio's equipment authorization.

19. We also agree with TIA that manufacturers could not demonstrate CAP compliance if the CAP program, due to funding or other limitations is discontinued. To guard against that possibility, we are amending Section 90.548(c) of the rules to state that any requirement for CAP compliance would expire at such time as the Department of Homeland Security (DHS) might discontinue the CAP program. In the event of expiration of the CAP program, however, manufacturers still must document, through testing, that their radios are interoperable across vendors before such radios may be marketed or sold.

20. NPSTC and TIA suggested that operation on the 700 MHz interoperability channels use the P25 Phase 1 (FDMA) conventional mode of operation.[58] NPSTC suggested that the rules should be clear "on what subset of features must meet the P25 CAP requirements under this mode of operation."[59] NPSTC and TIA also observed that DHS recently established the P25 CAP AP and that the AP members may offer guidance on this issue.[60] We agree with NPSTC and TIA that the P25 CAP AP members may be able to help define the features necessary to meet P25 CAP requirements or the equivalent We note that the participating members of the P25 CAP AP submitted recommendations regarding feature sets and capabilities that should be tested. In the companion *Further Notice of Proposed Rulemaking*, we seek comment on those recommendations, and whether they should be incorporated into the Commission's rules.

21. Finally, with respect to public safety interoperability calling channels in general, including the 700 MHz calling channels, we recently sought comment on whether to amend our rules to specify that encryption is prohibited on all interoperability calling channels, whether used by railroad police or others.[61] Our decision in that docket will be applicable here. Recently, the Department of Defense (DoD) issued an Instruction concerning use of encryption on its land mobile radios, and the encryption technology to be used. Non-DoD public safety agencies are not bound by the DoD Instruction, however such agencies may find the contents of the Instruction useful when planning to incorporate encryption in their systems.[62]

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[57] We encourage 700 MHz licensees to require CAP compliance in their contracts for purchase of equipment. *See Report and Order*, 29 FCC Rcd at 13303 ¶ 60.

[58] NPSTC Nov. 20 *Ex Parte* at 2; TIA Nov. 23 *Ex Parte* at 2 (describing that "[g]eneral agreement proposed using a subset of P25, specifically conventional FDMA Air Interface features for use on the 700 MHz Interoperability channels.).

[59] NPSTC Nov. 20 *Ex Parte* at 2.

[60] *Id.*.; TIA Nov. 23 *Ex Parte* at 2 (noting that "[a]nother suggestion was that a list of specific P25 Conventional FDMA Air Interface features to be required might come from the CAP Advisory Panel.").

[61] *See Amendment of Part 90 of the Commission's Rules to Enable Railroad Police Officers to Access Public Safety Interoperability and Mutual Aid Channels*, Notice of Proposed Rulemaking, 30 FCC Rcd 10244, 10251 ¶ 20 (2015).

[62] *See* Department of Defense Instruction Number 4650.10 at 1 (July 28, 2015) accessible at http://www.dtic.mil/whs/directives/corres/pdf/465010p.pdf. Among its objectives, the DoD Instruction "[e]stablishes policy and assigns responsibilities to ensure that LMR systems support interoperable and secure communications with other Federal, State, local, and tribal LMR users.[]" *Id*. The DoD Instruction provides that "[a]ll DoD LMR systems that employ: (1) Encryption will comply with applicable security standards as set by the (continued….)

III. CLARIFICATION: AIR-GROUND CHANNELS

22. *Background*. In the *Report and Order*, we redesignated the secondary trunking channels and reserved them for low-altitude, low-power, air-ground voice communication (*e.g.* communications between low-altitude aircraft and first responders on the ground).[63] We determined that the states would be in the best position to administer the newly-created air-ground channels, which are adjacent to the interoperability channels generally administered by the states.[64]

23. On September 9, 2015, the National Regional Planning Council (NRPC) requested clarification regarding administration of the air-ground channels.[65] Specifically, the NRPC asks whether the states "have the authority themselves to delegate the administration of Air to Ground channels to other entities, such as 700 MHz regional planning committees, in a manner similar to their authority to delegate [to the RPCs] the administration and coordination of the 700 MHz interoperability channels."

24. *Decision*. The *Report and Order* concluded that the states "are in the best position to manage operations on the newly-designated air-ground channels" but also "encourage[d] the states to coordinate operations on the newly designated air-ground channels with regional planning committees."[66] We clarify that a state may either assume responsibility for the air-ground channels itself - by updating the submission it previously made to assume responsibility for administering the adjacent interoperability channels – or is permitted, in the first instance, to delegate responsibility for approval of air-ground applications to the cognizant RPC. Similarly, a state may hold the air-ground licenses itself or approve other qualified licensees to do so.[67]

IV. CORRECTION TO SECTION 90.535 OF THE COMMISSION'S RULES

25. In the *Report and Order* the Commission eliminated the December 31, 2016 deadline for 700 MHz public safety narrowband licensees to migrate from a 12.5 kilohertz voice efficiency standard to a 6.25 kilohertz voice efficiency standard. It also removed the December 31, 2014 deadline for manufacturers to cease marketing, manufacturing, or importing 700 MHz narrowband equipment not capable of operating at 6.25 kilohertz efficiency.68 In codifying these rule changes, the Commission intended to replace Section 90.535(d)(1-3) with a single rule section §90.535(d).69 However, the rules as published in the Federal Register did not reflect this change. To rectify this ministerial error, we amend Section 90.535(d)[70] by removing the three subparagraphs that continue to make reference to these deadlines.

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NIST Federal Information Processing Standards (FIPS) Level 1 140-2 (Reference (l)), FIPS 197 (Reference (m)), and NIST Special Publication (SP) 800-38A (Reference (n)). Systems will not use the Data Encryption Standard (DES) or Triple DES encryption algorithms. If equipped with encryption capability, be equipped with: (a) A warning (audible or visual) to positively alert the user that a given transmission is not encrypted. (b) Over-the-air rekeying (OTAR) where security or operational requirements do not supersede this capability. (c) Over-the-air-zeroization (OTAZ) or similar related to remote management of encryption keys where security or operational requirements do not supersede this capability." *Id*. at 2

[63] 47 CFR § 90.531(b)(7).

[64] *Report and Order*, 29 FCC Rcd at 13291 ¶ 19.

[65] NRPC Request at 1.

[66] *Report and Order*, 29 FCC Rcd at 13291 ¶ 19 n.53.

[67] *Cf.* 47 CFR § 90.525(b). Where the RPC amends its plan to reflect the delegation, staff shall treat such amendments as major plan amendments under Section 90.527(b) of the Commission's rules.

[68] *See Report and Order,* 29 FCC Rcd at 13286-89 ¶¶ 4-12.

[69] *Id.* at 13323.

[70] 47 CFR § 90.535(d).

V. CORRECTION TO SECTION 90.523 OF THE COMMISSION'S RULES

26. In 2013, the Commission established consolidated service rules for the 758-769 and 788-799 MHz bands, allocated to the First Responder Network Authority (FirstNet) to establish a nationwide public safety broadband network.[71] The Commission also amended Section 90.523 of the rules[72] by revising the introductory text to read as follows:

> This section implements the definition of public safety services contained in 47 U.S.C. 337(f)(1). The following are eligible to hold Commission authorizations for systems operating in the 769-775 MHz and 799-805 MHz frequency bands:

In codifying this rule change, the Commission neglected to revise Section 90.523(a), (b), (c) and (d)[73] to conform those provisions to the introductory text, which was designed to reflect the requirements of the Spectrum Act to issue FirstNet a nationwide license for the 758-769 MHz and 788-799 MHz bands.[74] Specifically, in light of the reallocation of spectrum required by the Spectrum Act, in Section 90.523(a), (b), (c) and (d), "764-776 MHz and 794-806 MHz" should be replaced with "769-775 MHz and 799-805 MHz," which excludes from 700 MHz public safety narrowband spectrum the spectrum that is now statutorily allocated to FirstNet. We have determined that there is good cause to find that it is unnecessary to provide notice and opportunity for public comment before correcting these provisions, since these modifications will simply rectify a ministerial oversight, and reflect a clear statutory mandate over which we have no discretion.[75] Accordingly, we make this finding and, on our own motion, hereby amend Section 90.523 (a), (b), (c) and (d) to supply the correct public safety narrowband frequency designations, i.e., 769-775 MHz and 799-805 MHz.

VI. CORRECTION TO SECTION 90.209 OF THE COMMISSION'S RULES

27. In the *TETRA Report and Order*,[76] the Commission amended the Standard Channel Spacing/Bandwidth table (the table) in Section 90.209(b)(5) of the rules by adding a reference to new footnote 6, which provides that "Operations using equipment designed to operate with a 25 kHz channel bandwidth may be authorized up to a 22 kHz bandwidth if the equipment meets the Adjacent Channel Power limits of § 90.221."[77] However, although the document the Commission released and the Federal Register Summary[78] contained the reference to footnote 6, that reference was not printed in the Code of Federal Regulations. Therefore, we correct Section 90.209 by amending the table in paragraph (b)(5) to add a reference to footnote 6.

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[71] *See Implementing Public Safety Broadband Provisions of the Middle Class Tax Relief and Job Creation Act of 2012*, PS Docket Nos. 12-94, 06-229, Second Report and Order, 28 FCC Rcd 15174 (2013).

[72] 47 CFR § 90.523.

[73] 47 CFR § 90.523(a), (b), (c), (d).

[74] 47 CFR § 90.523(e).

[75] *See* 5 U.S.C. § 553(b) (rendering the Administrative Procedure Act's notice and comment requirements for rulemakings inapplicable when agency "for good cause finds . . . that notice and public procedure . . . are impracticable, unnecessary, or contrary to the public interest").

[76] *Amendment of Part 90 of the Commission's Rules to Permit Terrestrial Trunked Radio (TETRA) Technology*, Report and Order, 27 FCC Rcd 11569 (2012) (*TETRA Report and Order*) at Appendix A.

[77] 47 CFR § 90.209(b)(5) n.6.

[78] *See* Federal Register, Vol. 77, No. 196 (October 10, 2012) 77 FR 61535.

VII. CORRECTION TO SECTION 90.210 OF THE COMMISSION'S RULES

28. We also amend Section 90.210(h)(5) of the Commission's rules[79] to correct a typographical error in the formula for attenuating the power of emissions in the 800 MHz NPSPAC band. Section 90.210(h)(5) presently reads: "On any frequency removed from the center of the authorized bandwidth by more than 25 kHz: At least 43 + log (P) dB." The rule, however, omits the value "10" (i.e. "10 log (P) dB"). This error is long-standing, having first occurred in the NPSPAC report[80] submitted to the Commission in 1987 and replicated in subsequent Commission documents as the Commission made other changes to the rules. The error uniformly was made in connection with the attenuation requirements for Emission Mask H. The omission of the value "10" was obviously an error as all other emission masks in which the initial number was "43" included the "10" and there is no logical reason Mask H would be any different. Further verification of the fact that the omission of "10" was an inadvertent error is that the Commission has described $43 + 10 \log_{10}(P)$ as "our traditional standard" in the context of a default value for spurious emissions on frequencies widely displaced from desired frequencies, and because multiple other Commission proceedings reference the same formula.[81] Accordingly we take this opportunity to correct this ministerial, typographical error.

29. Because the foregoing corrections to rectify typographical errors are non-substantive, there is good cause to find that notice and comment on these corrections are unnecessary and that the corrections should become effective immediately upon publication in the Federal Register.[82]

VIII. FURTHER NOTICE OF PROPOSED RULEMAKING

A. Amendment of the Trunking Rules

30. *Background*. In the *Report and Order*, the Commission reallocated the Reserve Channels to the General Use pool subject to RPC administration.[83] It also gave RPCs the flexibility to designate some of the former Reserve Channels for VRS (MO3) operations subject to certain conditions.[84]

31. After release of the *Report and Order*, the Virginia State Police (Virginia) requested a waiver of the trunking requirement in Section 90.537 of the Commission's rules at it applies to its

[79] 47 CFR § 90.210(h)(5).

[80] National Public Safety Planning Advisory Committee Final Report to the Federal Communications Commission, Sept., 1987. *See Development and Implementation of a Public Safety National Plan and Amendment of Part 90 to Establish Service Rules and Technical Standards for Use of the 821–824/866–869 MHz Bands by the Public Safety Services,* Report and Order, 3 FCC Rcd 905 (1987).

[81] *Development of Operational, Technical and Spectrum Requirements for Meeting Federal State and Local Public Safety Agency Communication Requirements Through the Year 2010*, First Report and Order and Third Notice of Proposed Rulemaking, 14 FCC Rcd 152, 243 (1998). *See also, e.g.,, Amendment of Part 74 to Permit the Use of F3Y Emission for Encrypting Communications of Remote Pickup Broadcast Stations,* Notice of Proposed Rulemaking, 5 FCC Rcd 6682, 6685 (1990). (43 + 10 log(P) or 80 dB as the attenuation required on any frequency removed from the center of the authorized bandwidth) by more than 250% of the authorized bandwidth); *Editorial Amendment of Parts 90 and 94 of the Commission's Rules,* Order, 4 FCC Rcd 5567 (PRB 1989) (changing "at least 43 plus 10 log (mean output in watts) to "43 plus 10 $\log_{10}$ (mean output in watts) decibels)"). *Service Rules for the 746-764 and 776-794 MHz Bands and Revisions to Part 27 of the Commission's Rules,* First Report and Order, 15 FCC Rcd 476, 519 (" Some commenters believe that we should provide OOBE limits in line with the 43 + 10 log P limits currently used to provide interference protection in other wireless services.").

[82] 5 U.S.C. § 553(b)(B), 553(d)(3).

[83] *Report and Order*, 29 FCC Rcd at 13297 ¶ 39.

[84] *Id.* at 13301 ¶ 51. Vehicular repeaters are portable transmitters designed to extend the coverage of radio systems and have the Station Class Code MO3.

statewide network of VRS units known as STARS.[85] Section 90.537 requires all systems using six or more General Use or State License channels to be trunked.[86] Thus, the former Reserve Channels became subject to this requirement when the Commission reallocated them to the General Use pool.

32. Although Virginia has operated STARS on the State Channels for a number of years, it claims it first became aware that the trunking requirement applied to its system only after it requested that the Region 20 700 MHz RPC (Region 20) assign it a number of former Reserve Channels for VRS operation.[87] Virginia claims that, while it recognizes the spectrum efficiency benefits of trunking, no vehicular repeater with trunking technology was available when STARS was implemented.[88] Furthermore, Virginia submits that trunking generally assumes a fixed infrastructure, whereas VRS units are mobile.[89]

33. *Discussion*. We do not believe the issue of trunking on VRS is unique to Virginia. Since release of the *Report and Order,* our staff has received several informal inquiries about how the trunking rule applies to VRS units. Additionally, we recently amended the Part 90 rules to permit public safety licensees to operate VRS on six remote control and telemetry channels in the VHF band.[90] Therefore, in light of our decision to permit low power VRS on the former Reserve Channels, Virginia's waiver request, and the growing use of VRS by public safety, we seek comment on whether or not to amend Section 90.537 to specifically exempt VRS from the 700 MHz narrowband trunking requirement.

34. In particular, we seek comment on the costs and benefits of trunking as applied to VRS. Do VRS units on the market today have the capability to support trunking? If not, would there be any potential benefits to requiring them to do so? For example, is there a spectrum efficiency advantage to trunking VRS units? Could trunking help resolve interference or frequency congestion at the scene of an incident where multiple VRS units are operating?[91] Conversely, what are the costs of adding trunking capability to VRS units? Are there any technical challenges that would be difficult to overcome? Is there a concern that the cost of VRS trunking could increase equipment costs to the point that it would discourage VRS manufacture and deployment? Finally, because the trunking rules promote spectrum efficiency, are the concerns expressed by Virginia a sufficient reason for not being as efficient as possible?

B. Definition of Interoperability Features

35. *Background*. In an *ex parte* conference call on November 19, 2015 among Commission staff, NPSTC, TIA, and radio manufacturers, the parties contended that certain radio features, while not necessarily required by the rules, likely are essential for interoperability, but could not agree on the

[85] Virginia Request for Waiver. Trunking is a technology which searches two or more channels in a radio system and automatically assigns a user to an open channel. *See* 47 CFR § 90.7.

[86] 47 CFR § 90.537(a).

[87] Virginia Request for Waiver at 4. Virginia suggests that State license channels were exempt from the trunking requirements until recently. *Id*. at 3. Virginia notes that the Commission, in April 2013, clarified that the trunking rule applied to State License channels. *Id*. *citing Proposed Amendments to the Service Rules Governing Public Safety Narrowband Operations in the 769-775/799-805 MHz Bands et al.*, PS Docket No. 13-87, *et al*., Seventh Report and Order, 28 FCC Rcd 4783 ¶ 29 (2013).

[88] Virginia Request for Waiver at 4.

[89] *Id*.

[90] *See Amendment of Sections 90.20(d) and 90.265 of the Commission's Rules to Facilitate the Use of Vehicular Repeater Units, et al*, PS Docket No. 13-229, Report and Order, FCC No. 15-103 (rel. Aug. 10, 2015).

[91] Virginia states it has operated VRS units on its STARS system since 2006 and encountered no problems with the VRS that can be attributed to lack of trunking. Virginia Request for Waiver at 3.

precise nature or number of such features.[92] As noted *supra*, paragraph 2020, the DHS OIC has established the P25 CAP AP. On February 1, 2016, the participating members of the P25 CAP AP submitted a list of 15 recommended features sets and capabilities to facilitate interoperable communications when P-25 radios operate in the conventional mode using the CAI on the designated 700 MHz interoperability channels, *see infra* Appendix D.[93]

36. *Discussion*. We seek comment on the recommended feature sets and capabilities, including whether to incorporate all, some or additional features into the Commission's rules. As noted above, we have amended Section 90.548 of the rules to require that mobile or portable transceivers may not be marketed or sold until the transceiver has previously been validated for interoperability by the CAP. In the alternative, manufacturers may employ their own protocol for verifying compliance with Project 25 standards and determining that their product is interoperable among vendors. Further, in the event that field experience reveals that a mobile or portable transceiver is not interoperable, the Commission may require the manufacturer thereof to provide evidence that its product is interoperable among vendors.

37. In light of our decision in the *Order on Reconsideration*, codifying all, some or additional feature sets and capabilities into our rules would promote a transparent, standards-based process for ensuring that equipment manufactured and used on the 700 MHz narrowband interoperability channels in the conventional mode will provide agencies using radios of different manufacturers the ability to communicate effectively with one another and coordinate operations. We seek comment on whether adopting such feature sets and capabilities would (1) establish a baseline for interoperability; (2) inform procurement decisions by Federal, state, local and tribal first responders using Federal funds; and (3) help public safety users determine whether a specific 700 MHz radio is interoperable across vendors and can perform in compliance with our rules before marketing or sale. Further, we seek comment on whether specifying feature sets and capabilities would provide manufacturers added certainty in testing for interoperability and potentially provide public safety agencies with more choices when purchasing equipment or expanding systems. Thus, we seek comment on whether the feature sets and capabilities proposed by the participating members of the P25 CAP AP should be codified in Section 90.548 of our rules.[94] We also seek comment on the potential costs, if any, resulting from codifying all, some, or additional feature sets and capabilities in the rules.

38. We also seek comment on the most effective means to document whether a radio that operates on the 700 MHz narrowband interoperability channels with the referenced feature sets and capabilities would facilitate interoperable communications among public safety users. For example, would these feature sets and capabilities be included in any declaration provided by manufacturers during the CAP testing process or as part of that manufacturer's alternative testing protocol?[95] In that connection, the participating members of the P25 CAP suggest that "an attestation by the manufacturer of the feature sets and capabilities provided by the P25 CAP AP might provide the Commission with some

[92] TIA Nov. 23 *Ex Parte*.

[93] The P25 CAP AP recognizes that "[w]hile some of the user needs identified were drawn from the P25 Statement of Requirements (SOR), these feature sets were not specific to P25 but to the determination of a baseline degree of interoperability expected to be inherent in equipment utilized by the first responder community." P25 CAP AP *Ex Parte* Comments at 4. In that connection, the P25 CAP AP submits that "our goal in outlining those feature sets was to propose user minimal functionality and expectations, not to adhere to the published P25 standards process." *Id*.

[94] *See* § 90.548(d), *infra* Appendix C (proposed new paragraph to § 90.548).

[95] P25 CAP is a formal, independent compliance testing program for land mobile radios for ensuring that communications equipment declared by a supplier to be P25 compliant is tested against the standards with publicly available results.

degree of assurance that a radio that is submitted for type acceptance absent CAP certification can still provide public safety users with some degree of conventional interoperability."[96]

39. Finally, we seek comment on what, if any, additional measures we may or need to take to promote interoperability. The participating members of the P25 CAP AP suggest that "interoperable communications are the result of the use of sufficiently capable equipment utilized by users *in conjunction with* a healthy dialogue between participating agencies. While the functionality of a particular feature set might be inherent in both radios from users of disparate agencies, unless those agencies have coordinated with each other and determined consistent implementation techniques and parameters in their implementation, having common feature sets in radio equipment will provide little benefit to interoperability being achieved."[97] Accordingly, we seek comment on how best to encourage such healthy dialogue among Federal, state, local and tribal agencies in the procurement and operation of interoperable equipment. Should the Commission informally encourage the agencies, funders and manufacturers to adopt voluntary best practices directed to improving interoperability, both technically and operationally? Should interoperability best practices be codified in our rules?

C. Motorola Solutions Petition for Clarification

40. On March 1, 2016, Motorola filed a Petition for Clarification[98] requesting that the Commission clarify the requirement in Section 90.547 of the Commission's rules, as modified in the *Report and Order*, that 700 MHz narrowband radios must be "capable of being programmed to operate" on all of the designated interoperability channels in that band.[99] Motorola asks the Commission to "further specify" that while this language gives public safety agencies discretion over which interoperability channels to program into a device, it does not refer to "any other software, air interface, or technology changes that might be necessary in order for a device to operate over the interoperability channels in a compliant manner." [100] Motorola states "[w]ithout such an interpretation, there is a risk that devices might go into the hands of public safety users without the active capability to operate on any of the interoperability channels using an interoperable technology."[101] In light of our consideration in this *Further Notice* of potential additional modifications to our 700 MHz narrowband interoperability requirements, we seek comment on Motorola's proposed clarification.

IX. PROCEDURAL MATTERS

41. *Supplemental Final Regulatory Flexibility Analysis*. As required by the Regulatory Flexibility Act, as amended (RFA),[102] a Final Regulatory Flexibility Analysis (FRFA) was incorporated in the *Report and Order*.[103] As noted therein, there were no comments that specifically addressed the rules and policies proposed in the previous Initial Regulatory Flexibility Analysis. In view of the fact that we have adopted further rule amendments in this *Order on Reconsideration*, we have included this

[96] P25 CAP AP *Ex Parte* Comments at 5.

[97] P25 CAP AP Comments at 4 and 8.

[98] Petition for Clarification of Motorola Solutions, Inc., March 1, 2016 (Motorola Petition). PowerTrunk, Inc. filed comments opposing the Motorola Petition. Comments of PowerTrunk, Inc., March 7, 2016.

[99] 47 CFR §§90.547, 90.548.

[100] Motorola Petition at 3.

[101] *Id.*

[102] The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

[103] *See Report and Order*, 29 FCC Rcd at 13315 (Appendix A).

Supplemental Final Regulatory Flexibility Analysis, which incorporates the FRFA by reference except as noted below.

42. This *Order on Reconsideration* amends the rules adopted in the *Report and Order* in this proceeding to provide manufacturers with greater flexibility in the equipment authorization process. Those rules required demonstration of Project 25 compliance (through CAP or otherwise) at the time of the filing of the equipment authorization application, when certain aspects of CAP compliance may be more difficult to demonstrate (e.g., the lack of availability of product versions needed for interoperability testing). Instead, the *Order on Reconsideration* requires CAP certification (or other demonstration of Project 25 compliance) before radios may be marketed or sold. This change preserves public safety interoperability goals while providing manufacturers with needed additional flexibility. This *Order on Reconsideration* also clarifies that States may delegate the administration of the air-ground channels to 700 MHz Regional Planning Committees; amends Section 90.523 of the rules to accurately reflect the 700 MHz narrowband public safety bands; and amends Section 90.535 of the rules to implement the Commission's decision to eliminate the 700 MHz narrowbanding mandate. Finally, the *Order on Reconsideration* corrects Sections 90.209 and 90.210 of the Commission's technical rules to accurately reflect the correct bandwidth limitations and emission masks.

43. *Initial Regulatory Flexibility Analysis.* As further required by the RFA, the Commission has also prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the proposed rule changes set forth in the foregoing *Further Notice of Proposed Rulemaking* portion of this document The IRFA is set forth in Appendix A. Written public comments are requested in the IRFA. These comments must be filed in accordance with the same filing deadlines as comments filed in response to the *Further Notice of Proposed Rulemaking* as set forth on the first page of this document, and have a separate and distinct heading designating them as responses to the IRFA.

44. The *Order on Reconsideration and Further Notice of Proposed Rulemaking,* including the Supplemental Final Regulatory Flexibility Analysis and a copy of the Initial Regulatory Flexibility Analysis, will be sent to the Chief Counsel for Advocacy of the Small Business Administration. A copy of this Order on Reconsideration and Further Notice of Proposed Rulemaking and this Supplemental Final Regulatory Flexibility Analysis and Initial Regulatory Flexibility Analysis (or summaries thereof) will also be published in the Federal Register.[104]

45. *Paperwork Reduction Act Analysis*. The Commission's 2014 *Report and Order* contained information collection requirements subject to the Paperwork Reduction Act of 1980, as amended (PRA),[105] which have been approved by the Office of Management and Budget (OMB) under OMB Control Number: 3060-1198. The *Order on Reconsideration* contains new information collection requirements and will be submitted to OMB for review under section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on these modified information collection requirements. The *Further Notice of Proposed Rulemaking* does not contain new or modified information collection requirements subject to the PRA In addition, therefore, it does not contain any new or modified "information collection burden for small business concerns with fewer than 25 employees," pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. § 3506(c)(4).

46. *Congressional Review Act*. The Commission will send a copy of this *Order on Reconsideration and Further Notice of Proposed Rulemaking* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act (CRA). *See* 5 U.S.C. § 801(a)(1)(A).

[104] Small Business Act, § 15 U.S.C. §§ 603-04.

[105] 44 U.S.C. §§ 3501 *et seq.*

Comment Filing Procedures

47. Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: http://fjallfoss.fcc.gov/ecfs2/.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

  Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

  - All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
  - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
  - U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.
- People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

48. Interested parties may view documents filed in this proceeding on the Commission's Electronic Comment Filing System (ECFS) using the following steps: (1) Access ECFS at http://www.fcc.gov/cgb/ecfs. (2) In the introductory screen, click on "Search for Filed Comments." (3) In the "Proceeding" box, enter the numerals in the docket number. (4) Click on the box marked "Retrieve Document List." A link to each document is provided in the document list. The public may inspect and copy filings and comments during regular business hours at the FCC Reference Information Center, 445 12th Street, SW, Room CY-A257, Washington, DC 20554. The public may also download this *Order on Reconsideration and Further Notice of Proposed Rulemaking* from the Commission's web site at http://www.fcc.gov/.

Ex Parte Rules – Permit-But-Disclose Proceeding

49. This proceeding shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.[106] Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to

[106] 47 CFR § 1.1200 *et seq*.

such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with 47 CFR § 1.1206(b). In proceedings governed by 47 CFR § 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

Further Information.

50. Accordingly, IT IS ORDERED that, pursuant to Sections 1, 4(i), 303, 316, 332, 337, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 303, 316, 332, 337, 405, this Order on Reconsideration and Further Notice of Proposed Rulemaking IS HEREBY ADOPTED.

X. ORDERING CLAUSES

51. IT IS ORDERED pursuant to Sections 4(i) and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 405, and Section 1.429 of the Commission's rules, 47 CFR § 1.429, that the Petition for Reconsideration filed by the Telecommunications Industries Association on January 2, 2015, IS GRANTED to the extent discussed herein.

52. IT IS FURTHER ORDERED that Sections 2.1033(c)(20), 90.209, 90.210, 90.523, 90.535(d) and 90.548(c) of the Commission's rules are AMENDED as set forth in Appendix B. The amendments to Sections 2.1033(c)(20) and 90.548(c) shall become effective thirty days after publication in the Federal Register, except for (1) those rules and requirements that require approval by the Office of Management and Budget (OMB) under the Paperwork Reduction Act, which shall become effective after the Commission publishes a notice in the Federal Register announcing such approval and the relevant effective date. The amendments to Sections 90.209, 90.210, 90.523, and 90.535(d) shall become effective on publication of this Order on Reconsideration and Further Notice of Proposed Rulemaking in the Federal Register.

53. IT IS FURTHER ORDERED that pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments on the Further Notice of Proposed Rulemaking on or before 30 days after publication in the Federal Register, and reply comments on or before 45 days after publication in the Federal Register.

54. IT IS FURTHER ORDERED, that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Order on Reconsideration and Further Notice of Proposed Rulemaking, including the Supplemental Final Regulatory Flexibility Analysis and the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A
Initial Regulatory Flexibility Analysis
(Further Notice of Proposed Rulemaking)

1. As required by the Regulatory Flexibility Act of 1980, as amended ("RFA"),[1] the Commission has prepared this Initial Regulatory Flexibility Analysis ("IRFA") of the possible significant economic impact on a substantial number of small entities that might result from adoption of the rules proposed in the *Notice of Proposed Rulemaking*. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the applicable deadlines for initial comments, or reply comments, as specified in the *Further Notice*. The Commission will send a copy of the *Notice of Proposed Rulemaking*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration ("SBA").[2] In addition, the *Notice of Proposed Rulemaking* and this IRFA (or summaries thereof) will be published in the Federal Register.[3]

Need for, and Objectives of, the Proposed Rules

2. In the *Further Notice of Proposed Rulemaking*, we seek comment on whether to amend the Commission's rules governing 700 MHz public safety narrowband spectrum at 769-775 MHz and 799-805 MHz. The rule changes we seek comment on are intended to promote flexible and efficient use of public safety narrowband spectrum in the 700 MHz band while reducing the regulatory burdens on licensees wherever possible. In order to achieve these objectives, we seek comment in the *Further Notice of Proposed Rulemaking* on exempting low power vehicular repeater systems from the narrowband trunking requirements. Exempting low power vehicular repeaters systems from the trunking requirements would facilitate rapid deployment of low power vehicular repeater systems as well as reduce burdens on public safety entities. We seek comment on whether to clarify the rules concerning the requirement that 700 MHz radios be capable of being programmed to operate on the designated interoperability channels. Clarification would provide greater certainty to equipment manufacturers on the required performance of their equipment. We also seek comment on whether to adopt a list of recommended feature sets and capabilities in order to ensure that radios operating in the conventional mode on the designated 700 MHz narrowband interoperability channels are in fact interoperable across vendors. Adopting such a list would promote certainty for public safety and manufacturers as well as promote competition in the public safety equipment market. We also seek comment on whether the Commission should instead informally encourage the agencies, funders and manufacturers to adopt voluntary best practices directed to improving interoperability, both technically and operationally.

Legal Basis

3. The legal basis for any action that may be taken pursuant to this *Notice of Proposed Rulemaking* is contained in Sections 1, 4(i), 303, 316, 332, and 337 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 1, 154(i), 303, 316, 332, and 337.

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

4. 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.4 The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and

[1] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-12, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, 110 Stat. 857 (1996).

[2] *See* 5 U.S.C. § 603(a).

[3] *Id*.

[4] 5 U.S.C. §§ 603(b)(3), 604(a)(3).

"small governmental jurisdiction."5 In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.6 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).7

5. *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.[8] For the purpose of determining whether a Public Safety Radio licensee is a small business as defined by the SBA, we use the broad census category, Wireless Telecommunications Carriers (except Satellite).

6. The Wireless Telecommunications Carriers (except satellite) industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services.[9] The appropriate size standard under SBA rules for the category Wireless Telecommunications Carriers (except satellite) is that a business is small if it has 1,500 or fewer employees.[10] Census data for 2007 show that there were 1,383 firms that operated for the entire year.[11] Of this total, 1,368 firms had employment of fewer than 1000 employees.[12] Thus under this category and the associated small business size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small.[13]

7. The Commission does not require Public Safety Radio licensees to disclose information about number of employees, so the Commission does not have information that could be used to determine how many Public Safety Radio licensees constitute small entities under this definition.

8. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* The US. Census defines this industry as comprising "establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by the establishments are: transmitting and receiving antennas, cable television equipment,

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[5] 5 U.S.C. § 601(6).

[6] 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 terms which are appropriate to the activities of the agency and publishes such definitions(s) in the Federal Register."

[7] 15 U.S.C. § 632.

[8] *See* subparts A and B of Part 90 of the Commission's Rules, 47 CFR §§ 90.1-90.22.

[9] U.S. Census Bureau, North American Industry Classification System, Definition of "Wireless Telecommunications Carriers (except Satellite)," NAICS code 517210, available at <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517210&search=2007%20NAICS%20Search>

[10] *See* 13 CFR 121.201, NAICS Code 517210

[11] U.S. Census Bureau, 2007 Economic Census of the United States, Table EC0751SSSZ5, Information: Subject Series - Estab and Firm Size: Employment Size of Firms for the United States: 2007, , NAICS Code 517210, available at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ5&prodType=table

[12] Id. Available 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 "1,000 employees or more".

[13] *Id.*

GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.[14] The SBA has established a size standard for this industry which classifies any businesses in this industry as small if it has 750 or fewer employees.[15] Census data for 2007 indicate that 939 such businesses operated in that year. Of that number, 912 businesses operated with fewer than 500 employees. Based on this data, we conclude that a majority of businesses in this industry are small by the SBA standard.

Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

9. No rule proposed in the *Further* Notice *of Proposed Rulemaking* will entail additional reporting, recordkeeping, and/or third-party consultation or other compliance requirement.

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

10. The RFA requires an agency to describe any significant, specifically small business alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): "(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) and exemption from coverage of the rule, or any part thereof, for small entities."[16]

11. The *Further Notice of Proposed Rulemaking* seeks comment on a proposed change to the rules covering operation of public safety systems on narrowband spectrum in the 700 MHz band. Specifically, the *Further Notice of Proposed Rulemaking* seeks comment on whether the proposed rule changes to Section 90.537 of the Commission's rules will promote efficient use of public safety narrowband spectrum in the band while reducing economic burdens on licensees. For the 700 MHz General Use and State License channels, Section 90.537 provides that "[a]ll systems using six or more narrowband channels in the 769-775 MHz and 799-805 MHz frequency bands must be trunked systems, except for those described in paragraph (b) of this section." In order to strike the proper balance between these two objectives, the *Further Notice of Proposed Rulemaking* seeks comment, *inter alia,* on exempting low power vehicular repeaters from the 700 MHz narrowband trunking requirements. The *Further Notice of Proposed Rulemaking* also seeks comment on maximizing interoperability by adopting a list of feature sets and capabilities in radios designed to operate in the conventional mode on the designated 700 MHz narrowband interoperability channels. Currently, the Commission's rules do not specify feature sets or capabilities that will promote interoperability across vendors and between users. Thus, we seek comment on whether it would be beneficial to incorporate into our rule specific feature sets and capabilities for radios designed to operate on the 700 MHz narrowband interoperability channels.

Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

12. None.

[14] http://www.census.gov/cgi-bin/sssd.naics/naicsrch

[15] 13 C.F.R 121201 (NAICs Code 334220).

[16] 5 U.S.C. §§ 603(c)(1)-(c)(4).

APPENDIX B

Final Rules

(*Order on Reconsideration*)

Part 2 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 2— FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

The authority citation for Part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302, 303, 307, 336, and 337, unless otherwise noted.

1. Section 2.1033(c) is amended as follows:

§ 2.1033 Certification Required

*****

(c) *****

(20) Before equipment operating under part 90 of this chapter and capable of operating on the 700 MHz interoperability channels (See § 90.531(b)(1) of this chapter) may be marketed or sold, the manufacturer thereof shall have a Compliance Assessment Program Supplier's Declaration of Conformity and Summary Test Report or, alternatively, a document detailing how the manufacturer determined that its equipment complies with § 90.548 of this chapter and that the equipment is interoperable across vendors. Submission of a 700 MHz narrowband radio for certification will constitute a representation by the manufacturer that the radio will be shown, by testing, to be interoperable across vendors before it is marketed or sold.

Part 90 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 90—PRIVATE LAND MOBILE RADIO SERVICES

The authority citation for Part 90 continues to read as follows:

AUTHORITY: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7), and Title VI of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96, 126 Stat. 156.

2. Section 90.209 is revised by amending the table in paragraph (b)(5) to add a reference to footnote 6 to the table to read as follows:

§ 90.209 Bandwidth limitations.

* * * * *

(b) * * *

(5) * * *

STANDARD CHANNEL SPACING/BANDWIDTH

Frequency band (MHz)	Channel spacing (kHz)	Authorized bandwidth (kHz)
***		
406-512[2]	[1]6.25	[1, 3, 6]20/11.25/6

***	20	20
809-824/854-869	25	[6]20
***		

* * * * *

3. Section 90.210 is revised by amending the paragraph (h)(5) to read as follows:

§ 90.210 Emission Masks.

* * * * *

(h) * * *

(5) On any frequency removed from the center of the authorized bandwidth by more than 25 kHz: At least 43 + 10 log (P) dB.

* * * * *

4. Section 90.523 is revised by amending paragraphs (a), (b), (c) and (d) to read as follows:

90.523 Eligibility.

* * * * *

(a) *State or local government entities.* Any territory, possession, state, city, county, town, or similar State or local governmental entity is eligible to hold authorizations in the 769-775 MHz and 799-805 MHz frequency bands.

(b) *Nongovernmental organizations.* A nongovernmental organization (NGO) that provides services, the sole or principal purpose of which is to protect the safety of life, health, or property, is eligible to hold an authorization for a system operating in the 769-775 MHz and 799-805 MHz frequency bands for transmission or reception of communications essential to providing such services if (and only for so long as) the NGO applicant/licensee:

(1) Has the ongoing support (to operate such system) of a state or local governmental entity whose mission is the oversight of or provision of services, the sole or principal purpose of which is to protect the safety of life, health, or property;

(2) Operates such authorized system solely for transmission of communication essential to providing services the sole or principal purpose of which is to protect the safety of life, health, or property; and

(3) All applications submitted by NGOs must be accompanied by a new, written certification of support (for the NGO applicant to operate the applied-for system) by the state or local governmental entity referenced in paragraph (b)(1) of this section.

(c) *All NGO authorizations are conditional.* NGOs assume all risks associated with operating under conditional authority. Authorizations issued to NGOs to operate systems in the 769-775 MHz and 799-805 MHz frequency bands include the following condition: If at any time the supporting governmental entity (see paragraph (b)(1)) notifies the Commission in writing of such governmental entity's termination of its authorization of a NGO's operation of a system in the 769-775 MHz and 799-805 MHz frequency bands, the NGO's application shall be dismissed automatically or, if authorized by the Commission, the NGO's authorization shall terminate automatically.

(d) Paragraphs (a) and (b) notwithstanding, no entity is eligible to hold an authorization for a system operating in the 769-775 MHz and 799-805 MHz frequency bands on the basis of services, the sole or principal purpose of which is to protect the safety of life, health or property, that such entity makes commercially available to the public.

* * * * *

5. Section 90.535(d) is revised by deleting subparagraphs (1-3) from paragraph (d) so that paragraph (d) in its entirety reads as follows:

§ 90.535 Modulation and spectrum usage efficiency requirements.

* * * * *

(d) Transmitters designed to operate on the channels listed in paragraphs (b)(2), (b)(5), (b)(6) and (b)(7) of § 90.531 must be capable of operating in the voice mode at an efficiency of at least one voice path per 12.5 kHz of spectrum bandwidth.

* * * * *

6. Section 90.548(c) is amended to read as follows:

§90.548 Interoperability Technical Standards.

* * * * *

(c) Transceivers capable of operating on the interoperability channels listed in § 90.531(b)(1) shall not be marketed or sold until the transceiver has previously been certified for interoperability by the Compliance Assessment Program (CAP) administered by the U.S. Department of Homeland Security; provided, however, that this requirement is suspended if the CAP is discontinued. Submission of a 700 MHz narrowband radio for certification will constitute a representation by the manufacturer that the radio will be shown, by testing, to be interoperable across vendors before it is marketed or sold. In the alternative, manufacturers may employ their own protocol for verifying compliance with Project 25 standards and determining that their product is interoperable among vendors. In the event that field experience reveals that a transceiver is not interoperable, the Commission may require the manufacturer thereof to provide evidence of compliance with this § 90.548.

APPENDIX C

Proposed Rules

(*Further Notice of Proposed Rulemaking*)

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR part 90 as follows:

PART 90—PRIVATE LAND MOBILE RADIO SERVICE

1. The authority citation for part 90 continues to read as follows:

AUTHORITY: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7), and Title VI of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96, 126 Stat. 156.

2. Paragraph (a) of Section 90.537 is amended to read as follows:

§90.537 Trunking requirement.

(a) *General use and State License channels.* All systems using six or more narrowband channels in the 769-775 MHz and 799-805 MHz frequency bands must be trunked systems, except for low power vehicular repeaters (MO3) authorized on General Use and State License channels and those described in paragraph (b) of this section.

* * *

3. A new paragraph (d) is added to Section 90.548 to read as follows:

§90.548 Interoperability Technical Standards.

* * * * *

(d) Mobile and portable transceivers must at a minimum include the following feature sets and capabilities while operating in the conventional mode in order to be validated for compliance with the Project 25 standards.

(1) A subscriber unit must be capable of issuing an emergency alarm in a conventional system conforming to the following standard: TIA 102.BAAD-A Conventional Procedures, Section 4.2.2., released February 2010.

(2) A subscriber unit must be capable of setting the emergency bit on all voice transmissions to notify units operating on the same channel that the user has declared an emergency situation conforming to the following standard: Project 25 Statement of Requirements, Section 2.1.2.25.1., released December 11, 2013.

(3) A subscriber unit must conform to the unit and accessory mil-spec requirements in accordance with the following standard: Project 25 Statement of Requirements, Sections 1.3.3 through 1.3.3.5., released December 11, 2013.

(4) A subscriber unit must be capable of issuing group calls in a conventional system in conformance with the following standard: Project 25 Statement of Requirements, Section 2.1.2.1., released December 11, 2013.

(5) A subscriber unit must be capable of issuing private calls in a conventional system in conformance with the following standard: Project 25 Statement of Requirements, Section 2.1.2.3., released December 11, 2013.

(6) The three Project 25 standard squelch modes must be supported in conformance with the following standard: Project 25 Statement of Requirements, Section 2.1.2.30, as effective on December 11, 2013.

(7) A subscriber unit must properly implement the special "Reserved" conventional network access code (NAC) and talkgroup in conformance with the following standard: TIA TSB-102.CABA, released October 2010.

(8) A subscriber unit must include “No Call” Talk Group ($0000) and “All Call” Talk Group ($FFFF) in conformance with the following standard: Project 25 Statement of Requirements, Section 2.1.2.34., released December 11, 2013.

(9) A subscriber unit must be able to transmit and receive the appropriate status symbols to indicate that a channel is busy in both direct and repeater mode in conformance with the following standard: TIA TSB-102.CABA, released October 2010.

(10) A subscriber units must be compatible with C4FM and CQPSK Modulation in conformance with the following standard: TIA TSB-102.CABA, released December 11, 2013.

(11) A fixed conventional repeater must be able to repeat the correct/matching network access code (NAC) for all subscriber call types (clear and encrypted) using the same output NAC in conformance with the following standard: TIA TSB-102.CABA, released December 11, 2013.

(12) A fixed conventional repeater must be able to repeat the correct/matching network access code (NAC) for all subscriber call types (clear and encrypted) using a different output NAC in conformance with the following standard: TIA TSB-102.CABA, released December 11, 2013.

(13) A fixed conventional repeater must be able to reject (no repeat) all input transmissions with incorrect network access code (NAC) in conformance with the following standard; TIA TSB-102.CABA, released December 11, 2013.

(14) A fixed conventional repeater must be able to support the correct status symbol indicating when an input channel is busy in conformance with the following standard: TIA TSB-102.CABA, released December 11, 2013.

(15) A fixed conventional repeater must be able to support the correct implementation of special reserved network access code (NAC) values $293, $F7E, and $F7F in conformance with the following standard: TIA TSB-102.CABA, released December 11, 2013.

APPENDIX D

The following capabilities and feature sets are identified in several documents for reference including the P25 Statement of Requirements, released December 11, 2013, TSB-102.CABA Conventional Interoperability Tests and TIA 102.BAAD-A Conventional Procedures, Section 4.2.2; released September 23, 2003:

1. EMERGENCY ALARM IN A CONVENTIONAL SYSTEM (CONVENTIONAL AND SIMPLEX) (P25 SOR 2.1.2.17) TIA 102.BAAD-A Conventional Procedures, Section 4.2.2.

This mandatory P25 feature provides a method for a user of a subscriber unit to notify a dispatcher of an emergency or distress situation without having to speak.

2. EMERGENCY CALL WITH RESET FROM FIELD UNIT AND OPTIONAL CHANNEL REVERT.

This mandatory P25 feature (P25 SOR 2.1.2.25.1) sets the emergency bit on all voice transmissions from a subscriber unit to notify units operating on the same channel that the user has declared an emergency situation.

3. SUBSCRIBER UNIT AND ACCESSORY MIL-SPEC REQUIREMENTS (SOR 1.3.3 thru 1.3.3.5 Mandatory).

4. GROUP CALLS IN A CONVENTIONAL SYSTEM (SOR 2.1.2.1 Mandatory).

5. PRIVATE CALLS IN A CONVENTIONAL SYSTEM (SOR 2.1.2.3 Mandatory).

6. THE THREE P25 STANDARD SQUELCH MODES MUST BE SUPPORTED: MONITOR, NORMAL SQUELCH, AND SELECTIVE SQUELCH IN STANDARD (SOR 2.1.2.30 MANDATORY).

"Monitor Squelch" enables the receiver to unmute on any recognizable voice signal.
"Normal Squelch" enables the receiver to unmute on any voice signal that has the correct network access code (NAC)
"Selective" Squelch" enables the radio receiver to unmute only upon receiving a transmission with a NAC equal to the receivers NAC AND specifically address to the unit, either through the proper destination ID for an individual call or a proper talk-group ID for a talk group call. This feature gives radio system administrators the flexibility to utilize the 700 MHz interoperability frequencies in a way that meets their needs.

7. SUBSCRIBERS MUST PROPERLY IMPLEMENT THE SPECIAL "RESERVED" CONVENTIONAL NAC AND TALKGROUP VALUES AS DEFINED BY THE P25 STANDARD AND CONSISTENT WITH
TSB-102.CABA. released February 1, 2002 (MANDATORY)
$293=the "default" NAC
$F7E=a receiver set for this NAC will unsquelch on any NAC received
$F7F=a receiver set for this NAC will pass all P25 signals & repeater transmitter will retransmit the received NAC. For repeater use only.

8. INCLUSION OF "NO CALL" TALK GROUP ($0000) AND "ALL CALL" TALK GROUP ($FFFF) IN P25 SUBSCRIBER RADIOS (SOR 2.1.2.34 Mandatory)
Subscriber radios shall support the two (2) special conventional "reserved" talkgroups of $0000 "No Call" and $FFFF "All Call".

Subscribers set for talkgroup $0000 and using Selective Squelch shall only unmute on All Calls or individuals calls to their specific Unit ID.
Subscribers set to any talkgroup with Selective Squelch shall always unmute for a received All Call. See TIA 102.BAAC-A CAI, June 2001 Reserved Values, Section 2.5

9. SUBSCRIBERS NEED TO TRANSMIT AND RECEIVE THE APPROPRIATE STATUS SYMBOLS, AS DEFINED BY THE P25 STANDARD, TO INDICATE CHANNEL BUSY IN BOTH DIRECT AND REPEATER MODE, AS DESCRIBED IN TSB-102.CABA released February 1, 2002. *The Status Symbols detailed by the P25 Standard provide a mechanism for subscribers to avoid transmitting while the frequency is occupied. P25 Status Symbols also allow subscribers on conventional repeater channels to know when the input channel is busy and inhibit transmit if programmed to do so. This "polite" operation based on Status Symbols is compatible with a repeater's "hang time".*

10. SUBSCRIBERS MUST BE COMPATIBLE WITH C4FM AND CQPSK MODULATION, AS DEFINED BY THE P25 STANDARD AND DESCRIBED IN TSB-102.CABA, released February 1,2002.

11. FIXED CONVENTIONAL REPEATERS MUST SUPPORT THE CORRECT/MATCHING NAC VOICE MESSAGE REPEAT (ALL SUBSCRIBER CALL TYPES, CLEAR & ENCRYPTED), SAME OUTPUT NAC AS OUTLINED IN TSB-102.CABA, released February 2002.

12. FIXED CONVENTIONAL REPEATERS MUST SUPPORT THE CORRECT/MATCHING NAC VOICE MESSAGE REPEAT (ALL SUBSCRIBER CALL TYPES, CLEAR & ENCRYPTED), DIFFERENT OUTPUT NAC AS OUTLINED IN TSB-102.CABA, released February 2002.

13. FIXED CONVENTIONAL REPEATERS MUST SUPPORT THE REJECTION (NO REPEAT) OF ALL INPUT TRANSMISSIONS WITH INCORRECT NAC AS OUTLINED IN TSB-102.CABA, released February 1, 2002.

14. FIXED CONVENTIONAL REPEATERS MUST SUPPORT THE CORRECT STATUS SYMBOL OPERATION INDICATING WHEN INPUT IS BUSY AS OUTLINED IN TSB-102.CABA, released February 2002.

15. FIXED CONVENTIONAL REPEATERS MUST SUPPORT THE CORRECT IMPLEMENTATION OF SPECIAL RESERVED NAC VALUES $293, $F7E, AND $F7F AS OUTLINED IN TSB-102.CABA, released February 1, 2002.