

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

In the Matter of)
Establishing the Digital Opportunity Data) WC Docket No. 19-195
Collection)
Competitive Carriers Association Petition for)
Declaratory Ruling or Limited Waiver Regarding)
the Requirement for a Certified Professional)
Engineer to Certify Broadband Data Collection)
Maps)

DECLARATORY RULING AND LIMITED WAIVER

Adopted: July 8, 2022

Released: July 8, 2022

By the Chiefs, Wireline Competition Bureau, Office of Economics and Analytics, and the Acting Chief, Wireless Telecommunications Bureau:

I. INTRODUCTION

1. In this Declaratory Ruling and Limited Waiver, the Broadband Data Task Force, Wireless Telecommunications Bureau (WTB), Wireline Competition Bureau (WCB), and the Office of Economics and Analytics (OEA) (Bureaus and Office) respond to a Petition for Declaratory Ruling or Limited Waiver filed by the Competitive Carriers Association (CCA). CCA requests that the Commission issue a declaratory ruling to clarify that Broadband Data Collection (BDC) filings may be certified by either an engineer licensed by the relevant state licensure board (i.e., a Professional Engineer (PE)) or an otherwise-qualified engineer.1 In the alternative, CCA requests that the Commission provide a limited waiver from the requirement that a Professional Engineer certify the data.2 In this Declaratory Ruling and Limited Waiver, we clarify our rule and issue a limited waiver of the engineering certification requirement.

II. BACKGROUND

2. In March 2020, Congress passed the Broadband DATA Act requiring the Commission to adopt new rules for “the biannual collection and dissemination of granular data . . . relating to the availability and quality of service with respect to terrestrial fixed, fixed wireless, satellite, and mobile broadband internet access service.”3 In the July 2020 Second Order and Third Further Notice,4 the

1 Petition of Competitive Carriers Association (CCA) for Declaratory Ruling or Limited Waiver, WC Docket No. 19-195 at 8-9 (filed May 13, 2022) (CCA Petition), https://www.fcc.gov/ecfs/search/search-filings/filing/1051393345823.

2 Id. at 9.

3 Broadband Deployment Accuracy and Technological Availability Act, Pub. L. No. 116-130, 134 Stat. 228 (2020) (codified at 47 U.S.C. §§ 641-646) (Broadband DATA Act or Act); 47 U.S.C. § 642(a)(1)(A).

4 See Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program, WC Docket Nos. 19-195, 11-10, Second Report and Order and Third Further Notice of Proposed Rulemaking, 35 FCC Rcd 7460 (2020) (Second Order and Third Further Notice). The BDC was formerly known as the Digital Opportunity Data Collection, or DODC.

Commission established the requirements for the biannual submission of fixed and mobile broadband Internet access service availability data.⁵ As required by the Broadband DATA Act, the Commission required that a corporate officer certify that the statements of fact contained in providers' biannual BDC submissions are true and correct.⁶ The Commission also sought comment on whether to require a certified professional engineer or corporate engineering officer to certify to the accuracy of mobile and fixed service provider submissions, whether to require public filing of those certifications, and whether to establish penalties for violating the certification requirement.⁷ Some commenters expressed support for these proposals while others argued that requiring providers to submit an engineering certification would be overly burdensome.⁸

3. In January 2021, the Commission released the *Third Report and Order*, providing that, in addition to the corporate officer certification required by the *Second Order and Third Further Notice*, each mobile and fixed service provider also must submit a certification of the accuracy of its broadband submissions by a qualified engineer.⁹ The Commission noted that “if a corporate officer is also an engineer and has the requisite knowledge required under the Broadband DATA Act, a provider may submit a single certification that fulfills both requirements.”¹⁰ The Commission indicated that an engineering certification “must state that the certified professional engineer or corporate engineering officer is employed by the service provider and has direct knowledge of, or responsibility for, the generation of the service provider’s [Broadband Data Collection] coverage maps.”¹¹ The Commission required that “[t]he certified professional engineer or corporate engineering officer shall certify that he or she has examined the information contained in the submission and that, to the best of the engineer’s

⁵ *Second Order and Third Further Notice*, 35 FCC Rcd at 7462, para. 3.

⁶ *Id.* at 7486, para. 61 (citing 47 U.S.C. § 642(b)(4)).

⁷ *Id.* at 7506, paras. 111-12.

⁸ Compare AT&T Sept. 8, 2020 Comments at 10-11 (supporting proposal and noting that it ... “should minimize errors as it will ensure that an engineer has thoroughly reviewed and verified the accuracy of the submissions”); WTA Sept. 8, 2020 Comments at 5-6 (supporting proposal and stating that “WTA understands that such an engineering certification will entail an additional regulatory burden and cost for its members. However, WTA members have long been plagued and disadvantaged by exaggerated and inaccurate claims of broadband service availability from other entities. The contemplated engineering certifications will help improve the accuracy of data submissions...”); with ACA Connects Sept. 17, 2020 Reply at 9 (opposing proposal and stating that “an engineering certification would be unnecessary when the Commission can assess the accuracy of certified DODC reports from wireline providers using DOCSIS or FTtx by checking them against industry standards and vendor specifications. An engineering certification requirement would be particularly burdensome for smaller providers, who generally do not have certified engineers on staff...”); NTCA Sept. 8, 2020 Comments at 14 (supporting proposal as helping to “improve the accuracy of the DODC” but noting that “[t]he Commission should, of course, take steps to prevent this requirement from being unworkable or unreasonable – providers need not employ an ‘in-house’ engineer specifically for this purpose, but rather must have one already in their employ or a consulting engineer retained by the provider to review mapping submissions ...”); Verizon Sept. 8, 2020 Comments at 15 (opposing proposal noting that “[g]iven that the corporate officer’s certification will take into account all aspects of the mapping process, a separate engineer’s certification would be redundant and unnecessary”); USTelecom/WISPA Sept. 8, 2020 Comments at 8 (opposing proposal and stating that “[t]he Commission has not analyzed the purported benefits and costs, especially for small providers, of engaging an engineer from outside the company to provide a certification, or any assessment of the rigor that would be required”).

⁹ *Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program*, WC Docket Nos. 19-195, 11-10, Third Report and Order, 36 FCC Rcd 1126, 1144, para. 43 (2021) (*Third Report and Order*).

¹⁰ *Id.* at 1144-45, para. 43.

¹¹ *Id.*

knowledge, information, and belief, all statements of fact contained in the submission are true and correct, and in accordance with the service provider's ordinary course of network design and engineering."¹²

4. A "certified professional engineer" (certified PE or PE) is an engineer possessing a professional license by virtue of completing or passing multiple educational and testing requirements so as to earn a license from a state licensure board.¹³ Every state regulates such certifications.¹⁴

5. On May 13, 2022, CCA filed its petition asking the Commission to clarify that the "rules for engineering certification of broadband data allow certification by either licensed [professional engineers (PEs)] or otherwise qualified engineers who do not hold a PE license."¹⁵ In particular, the petition asks the Commission to clarify "that 'certified professional engineer' includes both (1) licensed PEs and (2) engineers without PE certification who possess the requisite educational background, credentials, and technical subject matter experience and expertise."¹⁶ Additionally, CCA requests that the Commission clarify that the term "corporate engineering officer" requires that "the certifying individual be an engineer, but need not hold a PE license."¹⁷ It asks that we clarify that a "corporate engineering officer" may be "any employee who is an individual possessing a bachelor's of engineering degree who both has 'direct knowledge' and is responsible for the carrier's network design and construction."¹⁸ In the alternative, CCA requests that the Commission grant a limited waiver of the requirement that broadband data be certified by a licensed PE and instead "allow wireless carriers that do not have access to a licensed PE to certify data with an RF engineering professional with specified qualifications."¹⁹ CCA asserts that the "experience and expertise developed by [Radio Frequency (RF)] engineers through their work provides comprehensive skills relevant to broadband deployment [and] ... provides skills comparable to, and perhaps more relevant than, general licensure through the PE . . . exam process."²⁰ On May 17, 2022, the Broadband Data Task Force, WTB, WCB, and OEA released a Public Notice seeking comment on CCA's Petition.²¹

III. DISCUSSION

6. In this *Declaratory Ruling and Limited Waiver*, we respond to CCA's Petition. First, in the *Declaratory Ruling*, we agree that, under the Commission's rules, where a mobile or fixed service provider submits a certification of the accuracy of its broadband submissions from a "corporate engineering officer," the corporate engineering officer does not need to be a certified PE. We believe that the rule would be satisfied, for example, where the corporate officer possesses at least a Bachelor of

¹² *Id.* at 1145, para. 43.

¹³ CCA Petition at 2 (citing National Society of Professional Engineers, *What is a PE?*, <https://www.nspe.org/resources/licensure/what-pe> (last visited June 22, 2022)).

¹⁴ National Society of Professional Engineers, *What is a PE?*, <https://www.nspe.org/resources/licensure/what-pe> (last visited June 22, 2022).

¹⁵ CCA Petition at i.

¹⁶ *Id.* at 8.

¹⁷ *Id.* at 9.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.* at 6-7.

²¹ See *Broadband Data Task Force, Wireless Telecommunications Bureau, Wireline Competition Bureau, and Office of Economics and Analytics Seek Comment on Competitive Carriers Association Petition for Declaratory Ruling or Limited Waiver Regarding the Requirement for a Certified Professional Engineer to Certify Broadband Data Collection Maps*, WC Docket No. 19-195, Public Notice, DA 22-543 (WTB/WCB/OEA May 17, 2022) (CCA Petition Public Notice), 87 Fed. Reg. 31833 (May 25, 2022).

Science (B.S.) in engineering degree and has both “direct knowledge” of, and responsibility for, the carrier’s network design and construction. Next, in the *Limited Waiver*, in response to the record, where a mobile or fixed service provider submits a certification of the accuracy of its broadband submissions from a “certified professional engineer,” we adopt a limited waiver to allow providers, during the term of the waiver, to submit a certification completed by an otherwise-qualified engineer. As a condition of the waiver, to be qualified to certify a provider’s BDC filing, the engineer must have either: (i) a bachelor’s or postgraduate degree in electrical engineering, electronic technology, or another similar technical discipline, and at least seven years of relevant experience in broadband network design and/or performance; or (ii) specialized training relevant to broadband network engineering and design, deployment, and/or performance, and at least ten years of relevant experience in broadband network engineering, design, and/or performance.

7. *Declaratory Ruling.* In this *Declaratory Ruling*, we clarify that, under section 1.7004(d) of the Commission’s rules, each mobile and fixed service provider could satisfy the requirements of the rule by submitting a certification of the accuracy of its broadband submissions by either a PE or a “corporate engineering officer” who is a corporate officer possessing a B.S. in engineering degree with both “direct knowledge” of, and responsibility for, the carrier’s network design and construction.²² Thus, under section 1.7004(d), we will accept certifications in BDC filings by a certified PE or alternately by a corporate officer with the aforementioned engineering qualifications, without requiring the corporate officer to be a certified PE licensed by a state licensure board.²³

8. Section 1.2 of the Commission’s rules provides that the Commission may, on motion or on its own motion, “issue a declaratory ruling terminating a controversy or removing uncertainty.”²⁴ We grant CCA’s Petition, in part, and provide this clarification to address questions raised in the CCA Petition and the associated record in the proceeding about what is meant by allowing “corporate engineering officers” to make the required engineering certification when submitting BDC filings as set forth in section 1.7004(d) of the Commission’s rules.

9. CCA members and other commenters in the record state that many providers face significant challenges in meeting the Commission’s certification requirement if it is narrowly defined as requiring that only a PE may certify broadband availability data.²⁵ The Commission’s engineering certification requirement contemplates a narrow alternative—namely, certification by a “corporate

²² See 47 CFR § 1.7004(d); see also *Third Report and Order*, 36 FCC Rcd at 1144-45, para. 43; *Second Order and Third Further Notice*, 35 FCC Rcd at 7506, para. 111; CCA Petition at 9. In its petition, CCA notes that section 1.7004(d) “appears to recognize that any engineer possessing the requisite expertise—PE or otherwise—can certify broadband data filings.” CCA Petition at 8. CCA supports this reading of the rule and urges us to clarify that “the certifying corporate engineering officer may be any employee who is an individual possessing a bachelor’s of engineering degree who both has direct knowledge of, and is responsible for, the carrier’s network design and construction.” CCA Petition at 9. Rather, we clarify here that the rule requires this certification be made by a certified PE or a corporate officer who is also an engineer possessing the required knowledge and responsibility for the carrier’s network design and construction as we discuss further *infra*.

²³ If the certifying corporate officer does not possess the requisite engineering qualifications, then a certified PE must also certify the submission in addition to the certifying corporate officer. 47 CFR § 1.7004(d). In any event, a corporate officer must certify the filing. *Id.*

²⁴ 47 CFR § 1.2. The Bureaus and Office issue this *Declaratory Ruling* pursuant to their delegated authority. 47 CFR §§ 0.271, 0.291, 0.331.

²⁵ See CCA Petition at 4-6; see also ACA Connects Comments at 4-6; ACA Connects Reply at 2; BDC Carrier Coalition Comments at 5; CTIA Comments at 4; NCTA Reply at 1-2; NTCA Comments at 3; USTelecom Comments at 5; WISPA Comments at 5; Pine Belt Communications Reply at 2-3; Vermont Department of Public Service (VT DPS) Reply at 1-2.

engineering officer.”²⁶ We agree that, under section 1.7004(d), a corporate engineering officer can qualify by possessing a B.S. degree in engineering so long as the officer has both direct knowledge of, and responsibility for, the carrier’s network design and construction and has direct knowledge of, or responsibility for, the generation of the service provider’s BDC filing.²⁷ We will expect such corporate officer to certify that he or she has examined the information contained in the submission and that, to the best of the engineer’s actual knowledge, information, and belief, all statements of fact contained in the submission are true and correct, and in accordance with the service provider’s ordinary course of network design and engineering.²⁸

10. We acknowledge comments in the record in support of certification only by certified PEs because, in part, certified PEs have an ethical obligation to safeguard the public welfare and public safety.²⁹ Other commenters, on the other hand, maintain that such public welfare concerns are more essential when engineering structures or designing machines where design failures may lead directly to drastic impacts on public safety or health, rather than certifying the accuracy of BDC filings as required by the rule at issue here.³⁰ The Broadband DATA Act makes clear the importance that Congress places on collecting comprehensive, standardized, and highly granular location-by-location data that enables us to publish a map of broadband availability nationwide.³¹ Given the importance of ensuring that the BDC coverage maps are based on data that have gone through rigorous review and analysis by a corporate officer with both a B.S. degree in engineering, and direct knowledge of, and responsibility for, the provider’s network design and construction, we find that certification by a corporate engineering officer with such qualifications is consistent with the purpose of the rule to help ensure that the data meet Congress’s objectives.³² Such qualifications adhere to the Commission provision that a single

²⁶ 47 CFR § 1.7004(d).

²⁷ A corporate engineering officer would have to possess direct knowledge of, and responsibility for, the carrier’s network design and construction in order to certify that the BDC submission is “in accordance with the service provider’s ordinary course of network design and engineering.” *Third Report and Order*, 36 FCC Rcd at 1144-45, para. 43.

²⁸ *Id.*

²⁹ Samuel T. Curtis Comments at 1-3; ACE Comments at 2; HunTel Comments at 1. ACE also notes that use of a PE increases the chances a proposed project can be built as designed, meet requirements, and “will result in government funds being used more appropriately and efficiently.” ACE Comments at 2. The Broadband DATA Act and BDC are directed toward collecting more granular and standardized data on broadband availability. While the data collected as part of the BDC will help direct distribution of future broadband infrastructure funds, whether or not grantees are capable of meeting certain performance requirements is a separate and distinct issue from the data collection which is subject to the engineering certification. We therefore do not find this argument to be a compelling justification for strictly interpreting the certified professional engineer requirement under these circumstances.

³⁰ *See, e.g.*, ACA Connects Reply at 4; BDC Carrier Coalition Comments at 4-5; WISPA Reply at 5-6. RWA agrees not all potential engineering mistakes are equally threatening to public safety but asserts the PE credential is necessary for BDC filings. RWA Comments at 5-6.

³¹ *See generally* 47 U.S.C. § 642; *see also Third Report and Order*, 36 FCC Rcd at 1145, para. 45.

³² *See Third Report and Order*, 36 FCC Rcd at 1145, para. 45. The Commission found that requiring an engineer to review and certify the accuracy of BDC submissions is an appropriate measure to confirm that filers have engaged in the analysis necessary to meet Congress’s objective of developing more accurate data. *Id.* The Broadband DATA Act requires each provider to submit a certification from a corporate officer that has examined the information contained in the submission and can attest that, to the best of the officer’s actual knowledge, information, and belief, all statements of fact contained in the submission are true and correct. 47 U.S.C. § 642(b)(4). The Commission chose to allow both the engineering certification and the corporate officer certification to be completed by the same individual “[i]f a corporate officer is also an engineer and has the requisite knowledge required under the Broadband DATA Act,” and we believe the Commission intended that a corporate

(continued....)

certification may be submitted by a corporate officer if that corporate officer “is also an engineer and has the requisite knowledge required” and “has examined the information contained in the submission.”³³

11. In its petition, CCA also asks the Commission to clarify that a corporate engineering officer need not be a corporate officer and instead “can be any employee who is an individual possessing a bachelor’s of engineering degree who both has ‘direct knowledge’ and is ‘responsible for’ the carrier’s network design and construction.”³⁴ Similarly, another commenter asks the Commission to clarify that, insofar as a provider relies on a certification from a corporate engineering officer, this certifying officer need not be an engineer if their qualifications demonstrate their expertise.³⁵ We decline to grant either of these requests in this *Declaratory Ruling*.³⁶ The plain language of the Commission rule requires a certification by a certified professional engineer or a “corporate engineering officer,” and we lack the authority to alter the plain language of the rule here.³⁷ If a provider relies on a corporate engineering officer to submit a single certification that fulfills both the engineering and corporate officer certification requirements, we believe that corporate officer must also be an engineer meeting some minimum qualifications (i.e., possessing a B.S. degree in engineering and have both “direct knowledge” of, and responsibility for, the carrier’s network design and construction) as discussed above.³⁸ Likewise, the single certification that fulfills both the engineering and corporate officer certification requirements must be made by a corporate officer and not merely “any employee,” notwithstanding whether that employee has an engineering degree and network knowledge and responsibilities. Extending the requirement to allow any employee to certify a BDC filing as a “corporate engineering officer” would undermine the Commission rule and would be a change in the commonly understood definition of “corporate officer” that is beyond our delegated authority.³⁹ To the extent temporary relief is sought from this requirement in the form of a waiver of the requirement, this is addressed more fully below.

engineering officer have engineering credentials when submitting a provider’s single certification helps to better ensure filing accuracy. 47 CFR § 1.7004(d).

³³ See *Third Report and Order*, 36 FCC Rcd at 1144-45, para. 43.

³⁴ CCA Petition at 9.

³⁵ WISPA Comments at 9-10; WISPA Reply at 4.

³⁶ We also decline NTCA’s request to clarify the scope of the required engineering certification. NTCA Reply at 2 (requesting that the Commission clarify that the engineer’s certification will be made with respect to network design, that is, that the provider’s network as designed and engineered is technically capable of delivering the relevant performance metrics claimed to every location within the asserted geography). In the *Third Report and Order*, the Commission determined that the “engineering certification must state that the certified professional engineer or corporate engineering officer is employed by the service provider and has direct knowledge of, or responsibility for, the generation of the service provider’s [Broadband Data Collection] coverage maps.” *Third Report and Order*, 36 FCC Rcd at 1144-45, para. 43. The Commission also required that “the certified professional engineer or corporate engineering officer shall certify that he or she has examined the information contained in the submission and that, to the best of the engineer’s knowledge, information, and belief, all statements of fact contained in the submission are true and correct, and in accordance with the service provider’s ordinary course of network design and engineering.” *Id.* We do not have delegated authority to change the Commission’s determination regarding the required elements of the engineering certification.

³⁷ 47 CFR § 1.7004(d). A certified professional engineer and corporate officer are required to certify BDC filings unless that corporate officer is also an engineer and has the requisite knowledge required under the Broadband DATA Act, in which case, that corporate officer may submit a single certification. *Id.*

³⁸ See *id.*

³⁹ RWA Comments at 3 (noting that to allow any employee to certify in this instance would be to redefine the word “officer”); RWA Reply at 2. The Commission has referred to a “corporate officer” in other proceedings as “any Individual (including senior officers) hired or appointed by the Entity’s board of directors that has actual or apparent authority to exercise day-to-day management responsibilities over an Entity.” *Process Reform for Executive Branch* (continued....)

12. *Limited Waiver.* CCA also requests that the Commission “provide a limited waiver from the requirement that certification be completed by a licensed PE, and instead allow wireless carriers that do not have access to a licensed PE to certify data with an RF engineering professional with specified qualifications.”⁴⁰ We grant the requested waiver, and apply it to all mobile and fixed providers, to the extent described below.

13. Section 1.3 of the Commission’s rules provides that the Commission may “on its own motion or on petition” waive a rule “for good cause shown, in whole or in part, at any time.”⁴¹ The Commission may find that the “good cause shown” standard is met when (1) “special circumstances warrant a deviation from the general rule;” and (2) “such deviation will serve the public interest.”⁴² A rule waiver may serve the public interest when the relief would not undermine the policy objectives of the rule.⁴³ In this case, granting a limited waiver of section 1.7004(d) of the Commission’s rule requiring broadband availability data to be certified by a certified PE meets both of these tests.⁴⁴ We therefore waive the requirement for all mobile and fixed providers for purposes of certifying to the broadband availability data to be collected during the first three filing cycles of the BDC (i.e., data as of June 30, 2022, December 31, 2022, and June 30, 2023).⁴⁵ We find that waiving the requirement for the first three filing cycles will provide sufficient time for providers to become accustomed to filing data in the BDC system and to either obtain the necessary engineering support to certify their broadband data filings in accordance with section 1.7004(d).

Review of Certain FCC Applications and Petitions Involving Foreign Ownership, IB Docket No. 16-155, Second Report and Order, FCC 21-104, at 7 para. 9, n. 32 (Oct. 1, 2021) (quoting *International Bureau Seeks Comment on Standard Questions for Applicants Whose Applications Will Be Referred to the Executive Branch for Review Due to Foreign Ownership*, IB Docket No. 16-155, Public Notice, 35 FCC Rcd 14906, 14913 (IB 2020) (see Attachment A/International Section 214)). We find that this definition comports with a commonly understood definition of “corporate officer” and that this designation does not encompass “any employee” of the company as suggested by the CCA Petition. Rather, “corporate officer” is a particular level of appointment within a company or organization and not just any employee of the company.

⁴⁰ CCA Petition at 9.

⁴¹ 47 CFR § 1.3. The Bureaus and Office issue this *Declaratory Ruling and Limited Waiver* pursuant to their delegated authority. 47 CFR §§ 0.271, 0.291, 0.331.

⁴² See, e.g., *Ne. Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990); see *WAIT Radio v. FCC*, 418 F.2d 1153, 1157-59 (D.C. Cir. 1969) (*WAIT Radio*).

⁴³ See *WAIT Radio*, 418 F.2d at 1155, 1157.

⁴⁴ See 47 CFR § 1.7004(d).

⁴⁵ The waiver we adopt also applies to government entities and third parties to the extent they choose to file verified broadband availability data. In the *Third Report and Order*, the Commission determined that government and third parties choosing to file broadband availability data must file such data in the same portal and under the same parameters as providers (e.g., formatting requirements, required information, certifications). *Third Report and Order*, 36 FCC Rcd at 1152, para. 63. In its reply comments on CCA’s petition, the VT DPS requests that if the Commission permits certification of filings by qualified engineers who are not PEs, “then there should be the same requirement for governmental entities who have technical and actual knowledge of and have engaged in the verification of broadband availability data.” VT DPS Reply at 2. It argues that “governmental entities primarily responsible for mapping or tracking broadband Internet access service coverage in their areas have staff who are otherwise qualified to certify broadband availability data who are not engineers.” *Id.* We agree that the waiver of the requirement to submit an engineering certification from a certified PE should also apply with respect to the engineering certification requirement that applies to government entities and third parties submitting verified broadband availability data. As described further herein, however, engineering certifications still must be certified by otherwise-qualified engineers. Although we recognize that government entities may have staff trained in mapping and tracking broadband coverage, we find that maintaining the requirement that engineers certify BDC filings is necessary to ensure that the submissions are consistent with professional engineering standards.

14. We find that the lack of certified professional engineers specializing in RF engineering and broadband network design constitutes “special circumstances” that warrant a deviation from the general rule that certified professional engineers must certify the accuracy of providers’ biannual BDC broadband data submissions. When the Commission adopted the requirement that providers submit an engineering certification, it considered arguments that imposing such a requirement would be particularly burdensome for smaller providers because they generally do not have certified engineers on staff and that there was a limited supply of outside certified engineers, especially in rural and remote areas.⁴⁶ The Commission determined, however, that requiring an engineering certification would not be overly burdensome or costly given the importance of ensuring the accuracy of coverage maps.⁴⁷ The Commission noted that requiring that an engineer review and certify the accuracy of a provider’s submissions is an appropriate measure to confirm that filers have engaged in the analysis necessary to meet Congress’s objective of developing more accurate data.⁴⁸

15. In its petition, CCA provides additional information about the extent to which there is a lack of certified professional engineers who specialize in RF engineering and the reasons for the shortage. It states that “[t]he RF engineering community is characterized by a scarcity of licensed PEs. This scarcity arises from differences in state-level RF engineering practice requirements and an industry view that PE licensing is neither necessary nor desirable to demonstrate RF engineering competence.”⁴⁹ CCA further explains that “states have generally not required PE licensure for RF engineers.”⁵⁰ The majority of commenters agree with CCA that there are an insufficient number of certified PEs with RF engineering and broadband network design expertise.⁵¹ Others, however, dispute CCA’s claims.⁵² For example, RWA argues that “CCA provides no support” for its assertion that there is a PE shortage and states that “[t]he National Council of Examiners for Engineering and Surveying (‘NCEES’) estimates that there was

⁴⁶ ACA Connects Sept. 17, 2020 Reply at 9; ACA Connects Sept. 8, 2020 Comments at 25-26.

⁴⁷ *Third Report and Order*, 36 FCC Rcd at 1145, para. 45.

⁴⁸ *Id.*

⁴⁹ CCA Petition at 4.

⁵⁰ *Id.*

⁵¹ *See, e.g.*, ACA Connects Comments at 4 (noting that it had interviewed member companies and stating that “[o]ne company’s General Manager recounted how in his 15 years in the position, he had met all of two network engineers who he was aware to be PEs. This same General Manager added that it is rare for small providers even to have personnel with undergraduate engineering degrees on their staff”); ACA Connects Reply at 2; BDC Carrier Coalition Comments at 4 (stating that “[s]mall rural carriers in many cases are confronted with a serious shortage of RF engineers who are licensed PEs and also have the requisite experience and knowledge to certify the carriers’ broadband mapping data”); CTIA Comments at 4 (stating that “CTIA agrees with CCA that ‘[t]here simply are not enough licensed PEs on wireless carriers’ internal staff or among external consultant resources, with the expertise relevant to certifying broadband deployment data”); IT&E Comments at 2 (stating that “IT&E’s head of regulatory compliance has a doctorate in engineering but is not licensed as a PE in either CNMI or Guam. The professional engineers that are licensed in IT&E’s insular service areas have limited knowledge of RF or the testing methods used”); USTelecom Comments at 2 (confirming “CCA’s assertion that the professional licensure designation of a Professional Engineer is more prevalent in the context of structural engineering disciplines and is not a role or licensure that is relevant or common in the telecommunications space”); V-COMM LLC Reply at 3 (“V-COMM agrees with CCA in that the reality of the wireless industry is there are very few licensed professional engineers that provide RF engineering services.”); WISPA Comments at 7 (stating that “there is a lack of available PEs with experience in RF engineering, and that shortage would be exacerbated with the first submissions that will require the initial retention of the PE firm, the set-up of baseline data for each sector and the preparation of reports to generate the certification. Moreover, PE firms will be doing this work for the first time as well”).

⁵² *See, e.g.*, RWA Comments at 5; Samuel T. Curtis Comments at 2-3; Vantage Point Solutions Reply at 3.

a total of 927,970 professionally licensed engineers in 2021.⁵³ Although some commenters argue that there are a sufficient number of certified PEs, these commenters do not address whether the available certified PEs have relevant experience in the fields of RF engineering and broadband network design, and the majority of evidence in the record suggests that most certified PEs lack such expertise. Based on the weight of the evidence in the record regarding the extent and degree to which there are an insufficient number of available certified PEs with relevant expertise, we find that special circumstances exist sufficient to warrant a limited waiver of section 1.7004(d).

16. We also find that the limited waiver we grant to providers is in the public interest and is consistent with the policy objectives of section 1.7004(d). Section 1.7004(d) requires that an engineer review and certify the accuracy of the broadband availability data submitted by mobile and fixed providers as part of the BDC.⁵⁴ This requirement was adopted to ensure that filers have engaged in the analysis necessary to meet Congress's objective of developing more accurate broadband coverage data.⁵⁵ We find that granting a limited waiver of the rule is consistent with the policy objectives of the rule because providers will still be required, under the terms of the limited waiver we adopt, to have an engineer review and certify their BDC submissions to help ensure the accuracy of the broadband data they submit. The limited waiver we adopt only modifies the engineering certification requirement to allow providers to use otherwise-qualified engineers who are not certified PEs to make the required certifications. Evidence in the record shows that many of the engineers employed by providers do not hold PE licenses but do have the specialized RF engineering and broadband network design expertise and experience that would qualify them to certify the accuracy of providers' broadband data submissions.⁵⁶

17. We also find that adopting a limited waiver will serve the public interest because it will help ensure timely submissions of BDC filings by eliminating the potential delays that could be associated with attempting to hire or retain certified PEs to review providers' broadband data. The inaugural BDC filing deadline is less than two months away and there is a critical public need for the broadband deployment data providers will submit.⁵⁷ Timely submission of broadband data is particularly important because the data will serve as the basis for the distribution of many of the broadband deployment funds established by Congress in the Infrastructure Investment and Jobs Act.⁵⁸ Providers have submitted evidence in the record indicating that there are an insufficient number of currently available certified PEs with relevant expertise and that they are therefore likely to face delays in

⁵³ RWA Comments at 5. Another commenter references "over 4,994 Professional Engineers currently employed in the United States" but does not specify how many of these PEs have the requisite expertise in the design and operation of broadband networks. Samuel T. Curtis Comments at 2-3.

⁵⁴ 47 CFR § 1.7004(d).

⁵⁵ *Third Report and Order*, 36 FCC Red at 1145, para. 45.

⁵⁶ See, e.g., CCA Petition at 6 ("[t]oday's RF engineering workforce is well equipped to satisfy the Commission's objective to produce reliable broadband availability data because of RF engineers' specialization in precisely the engineering knowledge and skills required to evaluate broadband deployment"); USTelecom Comments at 2-3 ("[b]oth RF engineers and fixed network engineers have specific training and experience that provides them with skills necessary to design and manage networks. This very specific skillset is precisely the type of training and experience the Commission acknowledges it is seeking in the context of the preparation and submission of BDC filings").

⁵⁷ See *Broadband Data Task Force and Office of Economics and Analytics Announce Inaugural Broadband Data Collection Filing Dates*, WC Docket Nos. 19-195, 11-10, Public Notice, DA 22-182, at 9, para. 22 (OEA Feb. 22, 2022) (*BDC Filing Window Public Notice*).

⁵⁸ Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 60102(c)(1), (c)(3), 135 Stat. 429 (2021), <https://www.govinfo.gov/content/pkg/BILLS-117hr3684enr/pdf/BILLS-117hr3684enr.pdf>.

submitting their BDC data absent a waiver.⁵⁹ We find that granting a limited waiver of the requirement that mobile and fixed providers use certified PEs will help ensure that providers submit their BDC filings on time because it will allow them to use their current broadband network design and RF engineering staff (subject to the required qualifications specified below), to review and certify their submissions.

18. During the limited term of the waiver, we require mobile and fixed providers to include with their BDC submissions a certification from an otherwise-qualified engineer in accordance with the requirements of section 1.7004(d).⁶⁰ In its petition, CCA states that “[i]f the Commission seeks to specify qualification standards or requirements for engineers to certify broadband data, it should adopt qualifications directly relevant to broadband availability assessment” and provides examples of the types of qualifications it argues are relevant.⁶¹ In particular, CCA suggests, among other things, that the academic qualifications include a “Bachelor of Science degree in Electrical Engineering, Electronic Technology, or other similar technical disciplines.”⁶² Some commenters express support for such an

⁵⁹ See, e.g., ACA Connects Comments at 6 (stating that “[a]ll of the above sources of scarcity of PEs available to wired network providers militate towards the same conclusion. Simply put, absent Commission action as fashioned herein, many providers will be unable to get the required engineering certification, and, consequently, will be unable to make their BDC filings timely, if at all.”); ACA Connects Reply at 2 (“This PE shortage will result in many providers being unable to get the required engineering certification, and, consequently, being unable to make their BDC filings timely, if at all; or, incurring unduly burdensome costs to enlist a PE.”); WISPA Comments at 7 (stating that “[g]iven the short time period for thousands of fixed and mobile providers to submit their BDC coverage maps, WISPA envisions a shortfall in available external PE resources to assist providers in meeting the September 1, 2022 filing deadline”).

⁶⁰ Under section 1.7004(d), the engineer must state that he or she “is employed by the provider and has direct knowledge of, or responsibility for, the generation of the provider’s [Broadband Data Collection] filing.” 47 CFR § 1.7004(d). In addition, the engineer must certify “that he or she has examined the information contained in the submission and that, to the best of the engineer’s actual knowledge, information, and belief, all statements of fact contained in the submission are true and correct and in accordance with the service provider’s ordinary course of network design and engineering.” 47 CFR § 1.7004(d). We note the limited waiver we adopt today constitutes no change whatsoever to sections 1.7006(e) or 1.7006(f) because the “qualified engineer” provision in those rules does not require professional certification. 47 CFR § 1.7006(e)(4)(iv)(D)(2), (f)(1)(iii).

⁶¹ CCA Petition at 9-10 (emphasis omitted). CCA recommends that the Commission consider the following types of qualifications: (1) academic qualifications, i.e., a “Bachelor of Science degree in Electrical Engineering, Electronic Technology, or other similar technical disciplines”; (2) particularized experience, i.e., “10 or more years of demonstrated experience with spectrum propagation models” and “5 years of wireless network RF design and/or mobile network performance optimization experience”; (3) specific RF and propagation modelling experience, i.e., “[f]amiliarity with industry standard RF propagation tools such as Atoll, Asset, Planet, or EDX,” “[a]ccess to, and successful completion of training with, relevant RF propagation tools,” and “[e]xperience in propagation model calibration, RF propagation tool setup”; and (4) relevant knowledge base, i.e., a “[d]emonstrated technical familiarity with the wireless carrier’s network or responsibility for the oversight of the wireless carrier’s network,” “[e]xperience in drive test collection and drive test data collection tools (e.g., Wireless Metrix, PCTel, Keysight, Viavi, Agilent, etc.),” and “[e]xperience with various technologies such as 3G, 4G, and 5G, Link Budget Parameters, and GIS formatting.” *Id.*

⁶² *Id.*; see also NTCA Reply Comments at 3-4.

approach.⁶³ Others oppose adoption of specific standards for engineers.⁶⁴ CTIA, for example, urges the Commission to use the approach used in the Rural Digital Opportunity Fund proceeding and require that the engineering certification “describe the [certifying] engineer’s qualifications such that the certifier’s expertise is apparent.”⁶⁵ WISPA agrees that CCA’s suggested qualifications should not be mandated and recommends that “the certifying engineer or technician should include an explanation of his or her technical credentials as part of the BDC submission from among the four categories CCA suggests.”⁶⁶

19. We do not agree that an open-ended requirement which would require a case-by-case analysis of an engineer’s qualifications would serve the public interest. Instead we find that specifying minimum qualifications for engineers certifying BDC submissions is necessary to ensure that the submissions are reviewed by engineers with relevant expertise. We are not persuaded that adopting an approach similar to that used in the Rural Digital Opportunity Fund proceeding would be feasible in the context of the BDC because the BDC will involve filings from significantly more providers. We find that specifying a minimum set of qualifications rather than requiring Commission staff to make an individualized assessment of each engineer’s qualifications will create a more efficient process while ensuring that qualified engineers review BDC submissions. Therefore, as a condition of the waiver we grant today, engineers certifying BDC submissions must possess either: (i) a bachelor’s or postgraduate

⁶³ See, e.g., ACA Connects Comments at 7-8 (proposing that “the Commission declare that for providers with fewer than 100,000 active broadband connections (i.e., smaller providers), where at least 90 percent of the provider’s deployed broadband connections are coax, fiber, or HFC, an employee serving in a role of responsibility for a provider’s network design and/or performance may sign the engineering certification if such employee has at least 10 years overall experience in network design and/or performance, and at least three years of such experience at the company that is relying on such employee’s certification”); ACA Connects Reply at 3 (noting that, under its proposal, “the employee would not need to hold a PE license, or have a Bachelor’s degree in Engineering (BSE), in order to sign the engineering certification”); NTCA Reply at 4 (recommending that engineers have “(1) as ACA Connects proposes, ‘at least 10 years overall experience in network design and/or performance;’ (2) as CCA suggests a ‘Bachelor of Science degree in Electrical Engineering, Electronic Technology, or other similar technical disciplines’ and (3) a supervisory position within the company, as well as direct responsibility for overseeing the provider’s network design” (footnotes omitted)); USTelecom Comments at 5 (recommending that “fixed service providers should be permitted to have the certifying engineer be an employee (or a contracted and paid consultant) of the provider who possesses a Bachelor’s degree in Engineering or other specialized training and five (5) years requisite experience, and who has ‘direct knowledge’ or directly participated in the development of the provider’s broadband data and maps”).

⁶⁴ See, e.g., CTIA Comments at 5 (noting that “a Commission-prescribed list of qualifications . . . would introduce unnecessary complexity and would invariably include too many or too few of the qualifications that various members of industry require of the engineers who certify broadband data”).

⁶⁵ *Id.* at 5-6 (quoting *Rural Digital Opportunity Fund Phase I Auction Scheduled for October 29, 2020 Notice and Filing Requirements and Other Procedures for Auction 904*, Public Notice, 35 FCC Rcd 6077, 6167, para. 301 n.513 (2020)); *id.* at 6 (contending that adopting such an approach would “enable the Commission to determine whether the engineer is qualified and will provide valuable flexibility to broadband providers”); see also NRECA Reply at 4-5. In the Rural Digital Opportunity Fund proceeding, the Commission required each long-form applicant to demonstrate that it had a design plan with supportable technologies to meet the relevant Rural Digital Opportunity Fund public interest obligations in the areas covered by the winning bids by submitting technical information to support the operational assertions made in the short-form application. *Connect America Fund*, WC Docket Nos. 19-126, 10-90, Report and Order, 35 FCC Rcd 686, 726, para. 90 (2020). As part of this requirement the Commission required applicants to submit a detailed network diagram certified by a professional engineer. *Id.* The Commission stated that for purposes of that requirement, “while it is not necessary that the professional engineer certifying the network have a Professional Engineer license, the certification should describe the professional engineer’s qualifications such that the certifier’s expertise is apparent.” *Rural Digital Opportunity Fund Phase I Auction Scheduled for October 29, 2020; Notice and Filing Requirements and Other Procedures for Auction 904*, Public Notice, 35 FCC Rcd 6077, 6167, para. 301, n.513 (2020).

⁶⁶ WISPA Comments at 9-10.

degree in electrical engineering, electronic technology, or another similar technical discipline, and at least seven years of relevant experience in broadband network design and/or performance; or (ii) specialized training relevant to broadband network engineering and design, deployment, and/or performance, and at least ten years of relevant experience in broadband network engineering, design, and/or performance. Although there are likely to be variations among engineers based on the provider's network and the types of services they work with, we expect that qualified engineers experienced in broadband network design and/or performance would have proficient knowledge of mobile and/or fixed broadband technologies, RF link budgets and propagation modeling, RF network design and optimization, and experience with field testing, remote testing, drive-test collection, and/or other data collection, data processing, and mapping tools. We recognize that commenters offered a range of differing recommendations for qualifications that should be required.⁶⁷ We find that a minimum of seven years of experience for engineers with a bachelor's or postgraduate degree in electrical engineering, electronic technology, or another similar technical discipline, and ten years of experience for engineers with specialized training relevant to broadband network engineering and design, deployment, and/or performance is needed to gain the knowledge outlined above since it would take at least two to three years to be proficient in each technical specialty. We also find that the combined education or training and types of specialized experience qualifications we outline above serve the public interest in ensuring that the certifying engineers have relevant education or training and significant broadband network experience while at the same time providing flexibility for providers seeking to use their technical staff to complete the required certification.

20. To the extent that a provider wishes to avail itself of the waiver we issue today it should include the following language in the "Explanations and Comments" box of its submission in the BDC system⁶⁸: "The engineer certifying our submission meets the minimum qualifications outlined in the *Declaratory Ruling and Limited Waiver* adopted on July 8, 2022 in WC Docket No. 19-195."

IV. ORDERING CLAUSES

21. Accordingly, IT IS ORDERED that, pursuant to the authority contained in sections 1-4, of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151-154, and sections 1.2 and 1.3 of the Commission's rules, 47 CFR §§ 1.2, 1.3, that this Declaratory Ruling is ADOPTED and section 1.7004(d), 47 CFR §1.7004(d) is WAIVED to the extent indicated herein.

22. This action is taken by the Acting Chief of the Wireless Telecommunications Bureau, and the Chiefs of the Office and Economics and Analytics and the Wireline Competition Bureau under delegated authority pursuant to sections 0.21, 0.91, 0.131, 0.271, 0.291, and 0.331 of the Commission's rules, 47 CFR §§ 0.21, 0.91, 0.131, 0.271, 0.291, and 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Joel Taubenblatt

Acting Chief, Wireless Telecommunications Bureau

⁶⁷ See *supra* note 63.

⁶⁸ See Federal Communications Commission, Federal Communications Commission Broadband Data Collection BDC System User Guide 138 (2022), <https://us-fcc.app.box.com/v/bdc-filer-user-guide>.

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