

commercial operations or programs and policies.”

The Delaware Department of Natural Resources and Environmental Control did not evaluate environmental justice considerations as part of its revised enhanced I/M program SIP submittal; the CAA and applicable implementing regulations neither prohibit nor require such an evaluation. EPA did not perform an EJ analysis and did not consider EJ in this action. Due to the nature of the action being taken here, this action is expected to have a neutral to positive impact on the air quality of the affected area.

Consideration of EJ is not required as part of this action proposing approval of Delaware’s revision of its enhanced I/M program SIP revision, and there is no information in the record inconsistent with the stated goal of E.O. 12898 of achieving environmental justice for people of color, low-income populations, and Indigenous peoples.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Volatile organic compounds.

Adam Ortiz,

Regional Administrator, Region III.

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 1

[WC Docket Nos. 19–195, 11–10; FCC 24–72; FR ID 233874]

Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Federal Communications Commission (Commission or FCC) seeks comment on proposed changes to the availability data filing and validation processes.

DATES: Comments are due on or before September 16, 2024, and reply comments are due on or before October 15, 2024.

ADDRESSES: You may submit comments, identified by WC Docket No. 19–195

and WC Docket No. 11–10, by any of the following methods:

- **Electronic Filers:** Comments may be filed electronically using the internet by accessing the ECFS: <https://www.fcc.gov/ecfs/>.

- **Paper Filers:** Parties who choose to file by paper must file an original and one copy of each filing.

- Filings may be sent by hand or messenger delivery, by commercial courier, or by the U.S. Postal Service. All filings must be addressed to the Secretary, Federal Communications Commission.

- Hand-delivered or messenger-delivered paper filings for the Commission’s Secretary are accepted between 8 a.m. and 4 p.m. by the FCC’s mailing contractor at 9050 Junction Drive, Annapolis Junction, MD 20701. 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 courier deliveries (any deliveries not by the U.S. Postal Service) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.

- Filings sent by U.S. Postal Service First-Class Mail, Priority Mail, and Priority Mail Express must be sent to 45 L Street NE, 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 email to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202–418–0530.

FOR FURTHER INFORMATION CONTACT: For further information, please contact, Will Holloway, Broadband Data Task Force, at William.Holloway@fcc.gov or (202) 418–2334.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission’s Fourth Further Notice of Proposed Rulemaking in WC Docket Nos. 19–195 and 11–10, released on July 12, 2024. The full text of this document is available at the following internet address: <https://www.fcc.gov/document/fcc-takes-steps-update-broadband-data-collection-processes> or by using the Commission’s EDOCS web page at www.fcc.gov/edocs.

Providing Accountability Through Transparency Act Statement.

The Commission seeks comment on proposed changes to the Broadband Data Collection (BDC) availability data filing process that would limit publication of data on “grandfathered” services, collect terrestrial fixed wireless spectrum authorization information, and additional certifications and supporting data from satellite broadband providers. Additionally, the

Commission seeks comment on amendments and clarifications to several of its BDC data validation rules regarding data retention, sharing Fabric challenges with providers, the professional engineering certification requirement, audits and verification outcomes, restoring locations previously removed from the map, aligning reporting requirements for broadband availability and subscribership data, and adding a new rule section for Fabric challenges. Available at: <https://www.fcc.gov/proposed-rulemakings>.

Ex Parte Rules. This proceeding shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules. 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 presenters written comments, memoranda, or other filings in the proceeding, the presenter may provide citations to 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 § 1.1206(b) of the Commission’s rules. In proceedings governed by § 1.49(f) of the rules 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.

Synopsis

I. Summary of the Fourth Further Notice of Proposed Rulemaking

A. Modifications to the FCC's Availability Data Collection Requirements

1. Limiting Publication of Data on "Grandfathered" Services

1. We seek comment on whether we should limit the publication of availability data to avoid the potential for releasing subscribership information, typically treated as confidential in other contexts, with respect to grandfathered services that providers are phasing out.

2. Background. The Broadband DATA Act mandates that the Commission collect data on the availability of "broadband internet access service" which, for purposes of the Act, "has the meaning given the term in § 8.1(b) of title 47, Code of Federal Regulations, or any successor regulation." Under this rule, broadband internet access service is a "mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up internet access service."

3. In the Third Report and Order (86 FR 18124, April 7, 2021), the Commission clarified that all facilities-based providers of broadband internet access services are required to comply with the requirements of the BDC. Fixed broadband internet access service providers must report the maximum advertised download and upload speeds associated with the service available at a location. Accordingly, the BDC collects availability data from a wide array of service providers encompassing a broad range of technologies and service types. The data collection covers both new and novel services, as well as legacy services that providers are in the process of permanently discontinuing. In the latter case, a filer may provide facilities-based broadband internet access service to existing subscribers at particular locations, but no longer market or sell that service to potential or new customers in the area and would not continue offering the service to a location once the existing subscriber disconnects that service at the location. In such instances, the effect of the filing requirement is that the availability data submitted by the provider for this service could essentially be a list of current subscribers of the service. The Commission routinely treats

subscribership data submitted as part of the FCC's Form 477 as confidential.

4. Certain providers have expressed concern that publishing availability data for grandfathered services could reveal confidential subscribership information. For example, Verizon recently requested confidential treatment of its incumbent local exchange carriers' DSL service availability data submitted as part of its December 2023 BDC filing because the data reflect "only those locations where [Verizon] currently provide[s] service to an existing customer, thereby resulting in the reporting of confidential customer-identifiable location and service information of those customers." Verizon noted that "[a]lthough the Commission generally favors disclosure of service availability information, the nature of the DSL availability information [Verizon is] required to report will reveal the precise number of [its] subscribers in an area, plus the customer address and type of service provided to each DSL customer and cannot be masked by non-customer locations where the service is no longer offered." We seek comment on whether publication of availability data for grandfathered services should be limited.

5. Discussion. We propose to amend our rules to permit filers to indicate that the service offered at a location is a grandfathered service only. We further propose that in cases where a provider submits a request for confidential treatment of such data, and such a request is not denied, we would not publish such data as part of the location-specific availability information in the National Broadband Map (NBM). We also propose that information on the availability of these services would only be disclosed by the Commission on an aggregated, redacted or otherwise de-identified, differentiated or masked basis. The Commission would afford those data the protections from disclosure already established for subscription data gathered via FCC Form 477, and treated as confidential.

6. We believe there are multiple benefits to this approach. First, it would enable the Commission to collect and analyze more in-depth, useful information on the nature of fixed broadband services (whether they are grandfathered or not), thereby forming a more nuanced and comprehensive picture of broadband service availability. Second, it would better protect against potential disclosure of confidential customer information. Third, not showing on the NBM locations where a service has been discontinued and is available only to

legacy subscribers (but not to any new or potential subscribers in the future) could provide more helpful information to consumers about broadband availability. We seek comment on these proposals. Are there any alternative approaches we should consider that would appropriately protect data that could constitute subscribership information and provide accurate information on the services that are actually available at a particular location? Are there alternatives we should consider for the types of information and format the Commission discloses about grandfathered services, or the protections afforded to this data?

7. We seek comment on how to define a "grandfathered" service for purposes of reporting broadband availability and making data on such services potentially eligible for this differentiated treatment on the NBM. We propose to define a "grandfathered" service similar to the definition used in other areas of our rules: any broadband internet access service that is currently provided to an existing end user at a Broadband Serviceable Location, but that a facilities-based provider is discontinuing, has permanently ceased to advertise or market to new or potential subscribers, and would not make available to a new or potential subscriber at the Broadband Serviceable Location. We seek comment on this proposed definition. We note that this proposed definition would not encompass locations where the provider is willing to connect a new end user but the potential customer is "waitlisted" due to capacity constraints that exist on the as-of date of the biannual BDC submission; it would similarly not include locations where a provider is unable to conduct a standard broadband installation within 10 business days due to equipment unavailability, capacity constraints or other limitations. Under our proposal, service to locations in these circumstances would not be considered grandfathered. Would this proposed definition, if adopted, provide sufficient clarity to BDC filers to know whether or not a particular service would be considered a grandfathered service? Are there alternative definitions we should consider?

8. We also seek comment on whether we should adopt any requirements pertaining to the size of the area where the service is no longer advertised or marketed in order to qualify as a "grandfathered" service. Must the provider cease marketing and selling the service throughout its entire footprint before it qualifies as a grandfathered service? How should the Commission treat a service provider with a multi-

state footprint who ceases marketing or selling the service in one or more states, but continues to offer the service in the other state(s) within its footprint? Should such a provider be permitted to claim “grandfathered” status for the service in the state(s) or other remaining geographic area(s) where it no longer markets or sells the service (and would not make it available to new or potential subscribers)?

9. We seek comment on whether we should adopt a process for a provider to “undo” a prior claim of grandfathered status. If we were to adopt such a process, what evidence, if any, should we require the provider to submit in support of a request to reverse a prior claim of grandfathered service status?

10. What measures, if any, should we adopt to protect against potential gaming of the protections we propose for “grandfathered” services? For example, should we require a service provider to include with its request for confidential treatment an affidavit, declaration or other certification that it does not currently market or sell to new or potential subscribers, and will not market or sell to new or potential subscribers in the future, the service reported as a grandfathered service in the system? Should we require that any such certification or other attestation be executed by a corporate officer of the filer? Should we require the filer to submit evidence that it no longer markets or sells to new or potential subscribers the reported service, and, if so, what types of evidence would be acceptable? Are there other measures we could adopt to protect against possible gaming? Alternatively, should Commission staff instead rely upon existing tools, such as verifications, audits, and enforcement mechanisms, to investigate and validate claims of grandfathered services?

11. We also seek comment on whether we should collect information on other attributes related to potential limitations on the availability of a particular broadband service. For example, should we have providers indicate that a service is made available to existing subscribers in an area, but is not marketed or sold in the area temporarily due to capacity constraints on the “as-of” date of the biannual BDC submission (though it will be marketed or sold in the area once those capacity constraints were alleviated)? In addition, while all broadband service transmission technologies are theoretically capacity constrained, certain services—such as spectrum-based terrestrial fixed wireless and satellite services—can be more affected by capacity considerations than

traditional wireline services. In such cases, a provider may be able to connect service on a marginal basis to some, but not all, of the locations included in its availability data (if, theoretically, all the residents or businesses at such locations were to request service at the same time), or it may not be able to offer service to all of the locations at the reported maximum advertised speeds, due to network capacity constraints. Further, some providers have indicated that they offer certain broadband services only on a seasonal basis. Should we amend the BDC fixed availability reporting requirements so that the various circumstances or conditions mentioned above, as well as others, can be captured in the collected data? How should such circumstances, conditions, or factors be reported? What type of burden does distinguishing service attributes place upon facilities-based providers who file data in the BDC?

12. We additionally propose to allow filers to request confidential treatment pursuant to 47 CFR 0.459 for broadband availability data in the limited circumstance where the services are marked as grandfathered and for other analogous situations where the filed data would inherently disclose the coverage information of existing customers. We propose that all other filed broadband availability data submitted in the BDC would be available to the public. The Broadband DATA Act requires the Commission both to collect data from each provider reporting the areas to which it can and does make broadband services available and to allow for consumers and entities to challenge the accuracy of “any information submitted by a provider regarding the availability of broadband internet access services.” The Commission has previously made clear that information filed in the BDC “will be presumed to be non-confidential unless the Commission specifically directs that it be withheld” and has otherwise been skeptical of filer arguments about the confidentiality of broadband availability data generally. We continue to conclude that, in most circumstances, the public interest in disclosure of BDC availability data outweighs any commercial or competitive harm to the provider. Clarifying the circumstances under which we would consider confidentiality requests for availability data would provide additional certainty to filers and challengers of broadband availability data alike, while further streamlining the process by which the Commission processes and publishes

such data. To be clear, we do not propose to limit the circumstances under which filers may request confidential treatment of data other than broadband availability data that are submitted into the BDC, including subscription data or supporting data (including, *e.g.*, link budget parameters or coverage methodology information). We seek comment on this proposal. Are there other categories of broadband availability data for which we should continue to entertain requests for confidential treatment? How can we best balance the goals of the Broadband DATA Act and our responsibilities in administering the BDC program with competing concerns about the sensitivity of required data?

13. We propose requiring service providers to report attributes about the nature of service availability in their location- or area-specific availability data submissions. We propose revising our Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data to enable filers to report, and the BDC system to collect, data reflecting services with a grandfathered status or any other attributes. We seek comment on these proposals.

2. Collecting Terrestrial Fixed Wireless Spectrum Authorization Information

14. We next seek comment on changing our rules to require terrestrial fixed wireless providers to submit additional information that would allow the Commission to better verify terrestrial fixed wireless service availability data submitted in the BDC.

15. Background. The Broadband DATA Act required the Commission to provide two methods for terrestrial fixed wireless broadband internet access service providers to file their availability data: (1) propagation maps and model details that “satisfy standards that are similar to those applicable to providers of mobile broadband internet access service . . . , taking into account material differences between fixed wireless and mobile broadband internet access service” or (2) as a list of locations that constitute the service area of the provider. The Commission implemented these requirements in the Second Report and Order (85 FR 50886, August 18, 2020). When submitting their availability data, fixed providers must disclose the details of how they generated their coverage polygons or list of locations. The Second Report and Order adopted categories of parameters and details that fixed wireless providers submitting availability coverage polygons based on propagation maps and model details

must disclose to the FCC as part of their BDC submissions. Examples of these requirements include base station information (such as the frequency band(s) used to provide service being mapped, carrier aggregation information, the radio technologies used on each spectrum band, and site information such as the elevation above ground level for each base station), height and power values for receivers or other customer premises equipment, and terrain and clutter information. The Commission did not specify comparable disclosure requirements for supporting data that terrestrial fixed wireless providers that file location lists must submit as part of their biannual BDC submission.

16. In March 2022, prior to the opening of the initial BDC filing window, the Broadband Data Task Force released data specifications detailing the categories and format of data that broadband service providers must submit in the BDC system to satisfy their filing obligation. The data specifications originally included two technology codes to differentiate terrestrial fixed wireless services: technology code 70, used to report unlicensed terrestrial fixed wireless service, and technology code 71, used to report licensed terrestrial fixed wireless service. A third terrestrial fixed wireless technology code (72: Licensed-by-Rule Terrestrial Fixed Wireless) was added in January 2023. The codes are intended to characterize the last-mile fixed wireless technology used to deliver internet access services to end users.

17. The Commission has an affirmative obligation to verify providers' broadband availability data filed in the BDC. In verifying availability based on terrestrial fixed wireless service, we must also ensure that the reported availability is authorized based upon applicable FCC spectrum licenses or other forms of authorizations (as reported by technology category code), as a claim of terrestrial fixed wireless service availability would be invalid if the service provider's operations were unauthorized. There are three ways to be authorized to operate a terrestrial fixed wireless service in accordance with the FCC's rules: providers may possess a license; may be licensed-by-rule (LBR); or may operate via unlicensed spectrum in accordance with Part 15 of the Commission's rules.

18. Discussion. We seek comment on proposed rule changes that will allow the Commission to better verify the terrestrial fixed wireless service availability data submitted in the BDC. First, we propose that fixed wireless

filers reporting licensed service (*i.e.*, technology code 71—Licensed Terrestrial Fixed Wireless) in their biannual BDC filings be required to submit the following additional information: (1) all call signs and lease IDs (including the call sign(s) of the license(s) being leased) associated with the licenses held or leased by the filer that were (or could have been) used to provide broadband service as of the relevant BDC filing date (*i.e.*, June 30 or December 31); and (2) the FCC Registration Number (FRN) of the entity holding the license or lease as recorded in the FCC's Universal Licensing System (ULS). Collecting this information will provide the most direct way to verify the permissibility of these operations, as it will allow staff to compare the reported coverage with the geographic areas associated with spectrum licenses or leases, as well as any transmitter locations, in ULS. If a BDC coverage area is found to be incongruous with the geographic area associated with the provisioning authorization(s) as assessed via call sign data, this may prompt further review by staff, form a credible basis for a verification request, or potentially trigger a future audit. We propose updating the BDC data specifications to implement this requirement. We seek comment on this approach, as well as on potential alternatives to verify coverage of providers offering licensed terrestrial fixed wireless service.

19. We note that terrestrial fixed wireless services operating in the Citizens Broadband Radio Service (CBRS) may be authorized via either Priority Access Licenses or under General Authorized Access (LBR or GAA) rules, and therefore fall under either technology code 71 or 72, respectively, in BDC filings. CBRS operators licensed under the former have associated call signs in ULS, and—as described above—we propose and seek comment on requiring them to report in their biannual BDC filings a comprehensive list of the call signs they use to provide the fixed broadband services reported in the BDC. Service providers authorized using LBR/GAA (*i.e.*, technology code 72) do not receive call signs in ULS for that technology, but records of GAA registrations are maintained by automated frequency coordinators known as Spectrum Access Systems (SAS). Given that the Commission has an obligation to verify all reported broadband coverage, regardless of whether the service is offered using licensed or LBR spectrum, we propose requiring operators that claim LBR/GAA terrestrial fixed

wireless service availability in the BDC using GAA-authorized base stations to provide proof of authorization by a SAS for the relevant BDC filing date. We propose collecting such data in structured formats to ease with its processing and evaluation, and seek comment on the most efficient way to do so. We also seek comment on whether there are other ways to verify the reported coverage of providers using GAA or any other LBR service.

20. Finally, we note that providers offering broadband service using unlicensed terrestrial fixed wireless technology(ies) do not receive call signs in ULS and do not require authorization from a SAS to operate their base stations, though they may be subject to other regulatory requirements, such as static or automated frequency coordination. It therefore is not possible to compare the locations or geographic areas where they report service availability with call signs (as is possible for licensed services) or using SAS database records (as is possible for LBR services). In cases where filers are authorized on an unlicensed basis under part 15 of the FCC's rules, we propose requiring the provider to file the FCC ID(s) of all base station transmission equipment used, and seek comment on whether there are other methods for validating that the service is authorized under the Commission's part 15 rules. We seek comment on this proposal and any other ways, beyond those mentioned above, to verify coverage of terrestrial fixed wireless providers offering service using unlicensed fixed wireless technologies (*i.e.*, technology code 70).

3. Additional Certifications and Supporting Data From Satellite Providers

21. We also seek comment on requiring additional certifications and supporting data from satellite providers to improve the quality of data provided to the BDC and improve the Commission's data validation, verification, and audits of satellite availability data submitted in the BDC.

22. Background. The nature of satellite services presents unique challenges for ensuring the accuracy of data concerning satellite broadband service availability in the BDC. In 2019, the Commission sought comment on how it could “improve upon the existing [Form 477] satellite broadband data collection to reflect more accurately current satellite broadband service availability.” At that time, the Commission “recognized there are issues with the quality of the satellite broadband data that are currently

reported under the existing Form 477.” The Commission sought comment on how to improve the satellite broadband availability data reported in its new data collection, including whether it should collect additional information from satellite service providers, such as the number and location of satellite beams and the capacity used to provide service by individual satellites to consumers at various speeds. The Commission also sought comment on “[w]hat issues should be addressed for [non-geostationary orbit] satellite services in the new data collection as they begin to be offered.”

23. In the Second Report and Order, the Commission “continue[d] to seek comment on how we could improve upon the existing satellite broadband data collection,” including whether demand side data might assist the Commission in better ascertaining the availability of these services. The Commission determined in the Third Further Notice of Proposed Rulemaking (85 FR 50911, August 18, 2020) that, “[i]f concrete proposals are not provided to more reasonably represent satellite broadband deployment, we would rely on other mechanisms . . . including standards for availability reporting, crowdsourced data checks, certifications, audits, and enforcement, potentially as well as currently reported subscriber data, in assessing the accuracy of satellite provider claims of broadband deployment.” The Commission did not obtain concrete proposals in response to the Second Report and Order and, accordingly, in the Third Report and Order, it determined that it would rely upon verification measures to help ensure the accuracy of satellite broadband availability data. The Commission did, however, “remind satellite providers that the standards for availability reporting that apply to all fixed services require that satellite providers include only locations that they are currently serving or meet the broadband installation standard. Satellite providers cannot report an ability to serve an area or location without a reasonable basis for claiming that deployment, taking into account current and expected locations of spot beams, capacity constraints, and other relevant factors.”

24. To enable Commission staff to verify availability data as required by the Broadband DATA Act, Office of Economics and Analytics (OEA), and Space Bureau (SB) recently released updated verification data specifications that include common data fields for fixed broadband service providers, and include fields for satellite infrastructure data that satellite service providers use

to estimate their service and coverage. The Broadband Data Task Force notified service providers (including satellite providers) that they must maintain these supporting data for each reporting period, and that the Commission may collect these data in the context of the Commission’s statutory obligations to verify broadband service availability data.

25. Discussion. According to the BDC submissions as of June 30, 2023, satellite broadband service with speeds of at least 25 Mbps download and 3 Mbps upload is available to 164.7 million Broadband Serviceable Locations, or 99.95% of all Broadband Serviceable Locations in the United States. Satellite broadband service with speeds of at least 100/20 Mbps is available to 164.1 million Broadband Serviceable Locations, or 99.6% of all locations. In the context of recent reports under section 706 of the Communications Act, the Commission has found that both “FCC Form 477 deployment data and BDC service availability data for satellite broadband service may overstate the extent to which satellite broadband service is available.” Given this, and the relatively low subscription rate and capacity limitations for satellite services indicated by available FCC Form 477 data, the Commission declined to include in its analysis of fixed broadband service availability any data on satellite services.

26. We propose that satellite providers must include, as a supporting data file accompanying their biannual availability submissions, the infrastructure data set forth in sections 2.3.1, 2.3.2, and 2.3.4 of the BDC Infrastructure Data Specifications (including any subsequent modifications, amendments or successors to those sections). We seek comment on this proposal.

27. Section 2.3.1 of the BDC Infrastructure Data Specifications specifies the format for the submission of records of general operating parameters of a satellite system. The data gathered pursuant to this section of the specifications include the network type (geostationary satellite orbit (GSO), non-geostationary satellite orbit, or other), the total number of satellites in the active constellation, the number of orbital shells deployed in the active constellation, the overall system downlink capacity and the overall system uplink capacity. Section 2.3.2 specifies the content and format for the submission of more detailed information for each constellation or orbital shell of space stations deployed by the satellite broadband service

provider as of the applicable reporting period. The data gathered pursuant to this section include shell altitude, the orbital location (for GSO systems), inclination angle, orbital plane, number of satellites per orbital plane, shell orbital period, apogee, and perigee, among other data elements. Section 2.3.4 specifies the content and format for the submission of system capacity information for specific geographic regions of the country.

28. We propose to require satellite providers to submit all of the information requested in sections 2.3.1 and 2.3.2 of the BDC Infrastructure Data Specifications (as applicable, depending upon the satellite system type), as well as the capacity data in section 2.3.4 for each state or territory for which the provider claims to make service available as part of its BDC filing. We do not propose requiring satellite providers to submit system capacity information on a county-by-county basis.

Furthermore, we do not propose, at this time, that providers submit the detailed link budget parameters set forth in section 2.3.3 of the specification, but we seek comment on whether the Commission should collect link budget data from satellite providers as part of the availability data submission process, similar to data collected from mobile wireless service providers and terrestrial fixed wireless service providers who submit polygon coverage maps using propagation maps and model details. We seek comment on these proposals and any potential alternatives.

29. We propose to (1) update the BDC Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data to include these categories of data from the BDC Infrastructure Data Specifications, and (2) publish these categories of data received from satellite providers in the Data Download section of the NBM platform, so that interested stakeholders may access the data (similar to supporting data published for other providers and technologies). We further propose that OEA and SB may analyze these data and use them for purposes of verifications and audits of satellite providers, consistent with our processes and procedures for conducting verifications and audits.

30. We seek comment on whether this proposal would place additional burdens upon satellite providers by requiring them to submit this information on a biannual basis. We note that the information included in the satellite provider infrastructure portion of the data specifications is largely based upon categories of data that each provider is required to submit

as part of its FCC Form 312 (Application for Satellite Space and Earth Station Authorizations) and accompanying Schedule S (Technical and Operational Appendix). Are any additional burdens associated with this reporting outweighed by the benefits to the Commission, other federal agencies, state, local, and Tribal governments, researchers and academia, and the public from obtaining more detailed information on the assumptions and modeling parameters underlying satellite providers' coverage claims?

31. Because the data sought through the BDC Infrastructure Data Specifications are based upon information included in a satellite provider's publicly available FCC Form 312 and Schedule S, we tentatively conclude that, should the Commission adopt the requirement that satellite providers include these data with their biannual availability submissions, the data would be presumptively public. Similar to our treatment of most categories of terrestrial fixed wireless infrastructure data, "[w]e believe there is a strong public interest in having as much access to this information as possible in order to facilitate public review and input on its accuracy" We invite comment on whether some of these data raise commercial sensitivities and, if so, whether some categories of the data should be treated as presumptively non-public.

Alternatively, should we treat all of these data as presumptively public, and permit individual requests for confidential treatment pursuant to the Commission's existing rules?

32. What other data could the Commission collect, or processes could the Commission adopt, to improve the accuracy of and insights into satellite providers' broadband availability data? What are the specific sources of such data, and who would be responsible for submitting those to the Commission? Are there additional standardized data specifications the Commission could or should release? What use restrictions or confidentiality concerns would apply to these data, if any? Commenters who advocate that the Commission adopt alternatives to our proposal to collect from satellite providers the existing information set forth in the pertinent sections of the BDC Infrastructure Data Specifications should provide detailed and specific information about their alternative proposals, how the Commission would administer them, and why any such alternative would yield better satellite availability data than gathering additional infrastructure information directly from satellite broadband service providers.

B. BDC Data Validation Processes

33. The Broadband DATA Act requires the Commission to verify the accuracy and reliability of data submitted in the BDC. We seek comment on several proposed changes to our rules to improve the Commission's validation, audit, and Fabric challenge processes, as well as facilitate provider certification of BDC submissions.

1. Data Retention Requirements

34. We seek comment on establishing a set data-retention period for documentation supporting providers' BDC submissions to ensure the Commission has access to necessary documentation for purposes of conducting audits, verifications, and other reviews.

35. Background. Broadband service providers are required to submit information on how they generated their availability data for each technology included in their biannual BDC filings. In particular, fixed service providers must include information on the methodology used to generate their availability data, along with an explanation of how the methodologies were implemented. Terrestrial fixed wireless providers who file their availability data as a coverage polygon are required to submit information about their propagation models, base stations, carriers, link budgets, and clutter categories. Similarly, mobile wireless service providers must include supporting data with their coverage maps, including propagation model details and link budget information.

36. In addition to their biannual submission, service providers must submit data and information to the Commission in response to challenges, verification inquiries, and audits. As discussed above, the Commission has published data specifications detailing the types of infrastructure data, by service type and technology, that must be submitted in response to verification inquiries and audits (and challenges, in instances where mobile wireless service providers are able to respond to mobile challenges with infrastructure data). In the context of most cognizable challenges to mobile broadband coverage data, service providers submit on-the-ground speed test data into the BDC system to rebut the challenge.

37. The Commission maintains these data in the BDC system and supplemental data storage infrastructure. All of the public (*i.e.*, non-confidential) data are made available for view and download from the NBM. However, the Commission has

not adopted a set data-retention period for how long service providers must preserve their availability, subscription, and supporting data or data used to respond to challenges, verification inquiries or audits.

38. Discussion. We propose that broadband service providers be required to retain the underlying data used to create their biannual submissions (including subscription data and supporting data) for at least three years from the applicable "as-of" date (*e.g.*, data used to create a biannual submission for the June 30, 2024, reporting period would need to be retained until June 30, 2027). In addition, we propose that providers be required to retain the data used to respond to challenges, verification inquiries, and audits for a period of three years from the date the provider receives the challenge, verification inquiry, or notification of Commission initiation of an audit. These requirements, if adopted, would go into effect following the effective date of final rules implementing the new data retention periods. We seek comment on these proposals.

39. The Commission requires entities to retain records for applicable data-retention periods in several of its programs. For example, entities that have equipment subject to the equipment authorization procedures must retain the records associated with the authorizations. For equipment that must be certified, "records shall be retained for a one year period after the marketing of the associated equipment has been permanently discontinued." The equipment authorization rules require entities to retain all other records for a two-year period. The rules specify what data must be collected and maintained. Each of the Commission's Universal Service Fund programs also include record retention requirements ranging from three to 10 years.

40. Just as with entities who participate in these other FCC programs, broadband service providers must know for how long they should retain their biannual submissions and the underlying data used to create them. We seek comment on a three-year data retention rule for these data. We believe that the needs of the BDC program support a three-year retention period, based upon the timeline from the relevant as-of date of a biannual availability filing to collection and publication of the data, followed by challenge and verification efforts by Commission staff and, finally, the downstream uses of the data in various funding programs. Do commenters agree? What are the benefits and

burdens of retaining the data for three years? Should we adopt a different retention period, such as five years or possibly longer? Commenters advocating for a longer data-retention period should explain the benefits of a longer retention period and why the benefits outweigh the burdens on providers associated with a longer data-retention period. We propose to adopt a uniform data-retention period for all of the availability, subscription, and supporting data. Are there reasons to adopt different data-retention requirements for certain types of data or portions of the data collection and, if so, what would these be? Are the burdens on smaller providers disproportionately large compared to larger providers? Does the benefit of having uniform retention rules outweigh any such difference in burden on smaller providers?

41. We also seek comment on whether a three-year retention period for data involving challenges, verification inquiries, and audits is sufficient. We propose to adopt the same data-retention period for challenge, verification, and audit response data as for underlying biannual submission data in order to avoid confusion and to provide administrative ease for filers. But should we adopt a longer (or shorter) retention period for these data? As in the case of availability data, we seek comment on whether we should adopt a uniform data-retention period for all types of challenge, verification, and audit response data or if different requirements should apply to certain portions of the data. For example, mobile wireless service providers that respond to challenges or verification inquiries with infrastructure data are required to submit cell-loading data in 15-minute intervals for a one-week period. Should we be concerned that this amount of cell-loading data would be so voluminous to store and maintain that requiring their retention for three years would be unduly burdensome? We also propose to adopt the same retention rules for all providers given that our need to verify and audit data and resolve challenges extends across all industry segments. But are there reasons why we should adopt different standards for some providers or for different technologies? Should the Commission adopt any additional requirements related to challenge, verification or audit response data?

2. Sharing Fabric Challenges With Providers

42. To facilitate the development of new versions of the Fabric, we seek comment on the processes and timing

for sharing Fabric challenges with providers.

43. Background. In September 2022, shortly after the close of the inaugural BDC filing window, the Broadband Data Task Force announced that Fabric licensees could begin submitting bulk Fabric challenges through the BDC system. The Broadband Data Task Force limited these initial Fabric challenge submissions to bulk submissions because the NBM interface was not yet publicly available. For the same reason, only entities who had access to location data through a Fabric license could submit bulk challenges given that the FCC had not yet published location data points on a publicly accessible version of the NBM. The Commission subsequently began accepting Fabric challenges from individual consumers and entities that had not executed a Fabric license agreement when the pre-production draft of the NBM was published. Using the NBM interface, consumers and other non-licensees were then able to submit data to challenge the information associated with Broadband Serviceable Locations (BSLs) reflected in the first version of the Fabric. The publication of the NBM also commenced the individual and bulk availability challenge processes.

44. The Commission accepts Fabric challenges on an ongoing basis throughout the year, and a new version of the Fabric is released in connection with a biannual BDC submission round for the collection of fixed availability data (either as of June 30 or December 31 of each year). Creating the Fabric is a complex process that involves analyzing many data sources, including aerial and satellite imagery, address databases, land and local tax records; reconciling determinations against Fabric challenge adjudications; and preparing data files for Fabric licensees sufficiently in advance of the opening of a biannual BDC submission round. Successful challenges received early in the process of creating the new Fabric version are incorporated in the next Fabric release; those received too late to be incorporated into the process will be evaluated for inclusion in the following version of the Fabric. The Commission and CostQuest Associates, the Fabric data vendor, have processed Fabric challenges in this manner for each iteration of the Fabric.

45. The Infrastructure Investment and Jobs Act of 2021 (IIJA) amended the Broadband DATA Act to require that “[t]he rules issued to establish the challenge process under subparagraph (A) shall include [] a process for the speedy resolution of challenges, which shall require that the Commission

resolve a challenge not later than 90 days after the date on which a final response by a provider to a challenge to the accuracy of a map or information described in subparagraph (A) is complete.” Subparagraph (A) of section 642(b)(5) directs the Commission to “establish a user-friendly challenge process . . . to challenge the accuracy of (i) the coverage maps; (ii) any information submitted by a provider regarding the availability of broadband internet access service; or (iii) the information included in the Fabric.” In establishing the challenge processes, the Commission must both “allow providers to respond to challenges submitted through the challenge process” and “develop an online mechanism, which . . . makes challenge data available in both geographic information system and non-geographic information system formats.”

46. Discussion. Based on our experience with multiple cycles of Fabric challenges, allowing providers to directly respond to Fabric challenges while the most current Fabric is still being developed, rather than waiting until the next Fabric release, would require extensive resources and could lead to delays processing the Fabric. We therefore propose to amend our rules to eliminate the requirement that the BDC system alert a provider of accepted Fabric challenges and that service providers be afforded an opportunity to directly respond to Fabric challenges. Fabric challenge results are made available to providers upon final adjudication, and providers then have an opportunity to challenge any of the results with which they may disagree. Interposing a separate, in-cycle Fabric challenge process would, in most instances, require that the Commission and CostQuest delay the processing of the Fabric. We believe that any limited benefit of creating an in-cycle process for providers to directly respond to Fabric challenges does not outweigh the significant costs in terms of delaying the production of a subsequent iteration of the Fabric.

47. As a practical matter, Fabric challenges do not dispute availability information submitted by providers but, rather, dispute information used by CostQuest to identify locations and the attributes of BSLs. Having now processed several rounds of Fabric challenges, data show that while some providers have submitted Fabric challenges that have resulted in updates to subsequent versions of the Fabric, it is unclear that providers (as a group) have better or more reliable geospatial data on BSL attributes than other groups (e.g., state, local, or Tribal governments,

consumers). Additionally, while it may be relatively straightforward to identify Fabric challenges to locations where a provider has previously reported making broadband service available, the vast majority of challenges to date have been to add a new BSL, which, by definition, does not implicate previously reported availability data (at least as to fixed service providers who report availability using a list of (preexisting) BSLs). Since providers have not previously analyzed whether broadband is available at these proposed locations, and Commission staff could only guess as to which providers it should notify of such challenges, it is also impractical to have providers directly respond to Fabric challenges. For these reasons, the information the Commission collects through the Fabric challenge process, along with the methods used to create the Fabric dataset, do not effectively allow for a process for service providers to directly respond to these challenges. Rather, we believe that the best way for internet service providers to “respond” to Fabric challenges within their availability footprints would be to continue to submit follow-on challenges to challenged or new Fabric locations in a subsequent version of the Fabric. We seek comment on this proposal.

48. We believe that this proposed Fabric challenge process is consistent with the Congressional intent in the Broadband DATA Act that we “allow providers to respond to challenges submitted through the challenge process” In the first instance, we interpret this clause as primarily, if not exclusively, intended to apply to availability challenges filed against service providers. Nothing in our proposed changes would alter the ability of service providers to respond directly to challenges to their fixed (and mobile) availability data. Moreover, unlike with availability challenges, where it is the provider’s data that are being challenged and where the provider has particular interest and specific knowledge, with Fabric challenges, it is unclear the extent to which providers have more or better information than local consumers or governments or others filing challenges to the location information in the Fabric. Finally (and importantly), the FCC publishes data on in-progress Fabric challenges monthly, and on resolved Fabric challenges through the information it makes available when it publishes a new version of the Fabric. Providers are thereby able to “respond” to these pending or resolved Fabric challenges by filing subsequent, follow-

on challenges to such challenges. We seek comment on this interpretation of the Broadband DATA Act.

49. We seek comment on potential alternatives to this proposed process and specific proposals on how they might be implemented. For example, should we allow providers to view and directly respond to customized lists of non-Type-1 Fabric challenges to existing BSLs that fall within their service footprints? If so, then how could the Commission facilitate such a process without delaying the processing of Fabric challenges and the production schedule for subsequent iterations of the Fabric data? Should we also attempt to identify the internet service providers (ISP(s)) that may have an interest in Type-1 Fabric challenges to add new BSLs to the Fabric? If so, then what process should the Commission use to identify ISP(s) interested in these challenges? In particular, how would staff identify areas of interest for non-polygon availability data filers? Could staff create a buffer around the to-be-added location point, and provide notice to all service providers who report service at locations within a certain distance from the point? How could such a process be implemented without delaying the processing of Fabric challenges and the production schedule for subsequent iterations of the Fabric? Should the Commission delay processing of any challenges presented to ISPs for response? Doing so would mean setting aside such challenges for, *e.g.*, 60 days, for providers to respond. That delay would effectively require that any challenges be incorporated into the next version of the Fabric. Alternatively, if the Commission does not delay processing of Fabric challenges for providers to respond, challenges might already be in the process of adjudication—or already adjudicated—before the ISP responds. In such cases, any ISP response would need to be treated as an additional challenge to the same location. Is there any advantage to having an ISP-specific process for a response instead of allowing ISPs to file additional challenges (an option that is already available to ISPs today)? Are there any additional measures we could implement to avoid delays in the event we were to allow for ISPs to directly respond to Fabric challenges? For example, the Commission already creates Fabric challenge adjudication files and change logs for Fabric licensees indicating changes made to the Fabric as a result of the challenge process (as well as updates made by the Commission and CostQuest). Should

(and, if so, then how could) the FCC and CostQuest prepare similar (but separate and distinct) data files to identify pending Fabric challenges for ISPs that they may want to respond to?

50. Finally, we propose to interpret section 60102(h)(2)(E)(i) of the IJJA as inapplicable to Fabric challenges and revise our rules to make this clear. The statute requires the Commission to resolve challenges “not later than 90 days after the date on which a final response by a provider . . . is complete.” To the extent we amend our rules to provide that an ISP does not “respond” to an initial Fabric challenge (and instead the Commission would resolve such challenges as part of its publication of a subsequent version of the Fabric), the deadline required under the statute would not apply to Fabric challenges. Do commenters agree with our proposed interpretation of the IJJA? We believe this approach to the Fabric challenge process would facilitate efficient resolution of challenges, consistent with the requirements of the IJJA, while maintaining the Commission’s flexibility to assess data that may be submitted by providers through a subsequent challenge to a later iteration of the Fabric. We note that the majority of Fabric challenges are processed and resolved well within 90 days of submission, particularly those that can be resolved based on the data submitted by filers without any need for manual or secondary review of satellite imagery. Challenges that are deemed successful based on such processing need to be reconciled with and incorporated into the next version of the Fabric, and are therefore tied to the biannual cadence of Fabric releases (*i.e.*, a challenge is only fully accepted when incorporated into the next Fabric vintage). Moreover, the Broadband Data Task Force has historically announced target dates for submitting Fabric challenges that will be processed in time for inclusion in the next iteration of the Fabric. Given that challenges submitted by this date are adjudicated in advance of the creation of the next release of Fabric data, these challenges are usually resolved approximately 90 days from the date of their filing.

3. Professional Engineering Certification

51. We next seek comment on whether we should eliminate the requirement in our rules that parties submitting verified broadband data in the BDC provide a certification by a licensed professional engineer if not submitted by a corporate engineering officer. To address concerns about licensed professional engineer shortages, Wireline Competition Bureau

(WCB), OEA, and Wireless Telecommunications Bureau (WTB) have waived this requirement for several filing periods and instead relied on other measures to ensure we receive accurate coverage maps that are based on data that are consistent with professional engineering standards. Accordingly, we seek comment on whether this requirement should be eliminated and replaced with other measures.

52. Background. The Broadband DATA Act requires that broadband service providers “shall include in each [BDC] submission a certification from a corporate officer of the provider that the officer has examined the information contained in the submission and 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.” In the Third Report and Order, the Commission expanded this requirement so that, in addition to a certification from a corporate officer, service providers must also submit a certification by a qualified engineer, who must be either a certified professional engineer or a corporate engineering officer. The Commission noted that this engineering certification requirement also applies to government entities and third parties that submit verified broadband data. The Commission explained that the purpose of the engineering certification is to “ensur[e] the accuracy of coverage maps and that they be based on data that are consistent with professional engineering standards.”

53. WCB, OEA, and WTB have waived this requirement several times over the past several years due to a shortage of professional engineers. In May 2022, the Competitive Carriers Association (CCA) filed a Petition for Declaratory Ruling or Limited Waiver, asking the Commission to clarify that 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.” In its Petition, CCA noted that “[t]he RF [radio frequency] engineering community is characterized by a scarcity of licensed PEs” because “[s]tate professional licensing boards issue PE licenses based on the fulfillment of state-specific education, examination, and experience requirements [and] states have generally not required PE licensure for RF engineers.” CCA went on to assert that “[t]he experience and expertise developed by 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.”

54. WCB, OEA, and WTB subsequently issued the 2022 BDC PE Order in which they (1) clarified that when a fixed or mobile provider submits a certification from a corporate engineering officer, such corporate engineering officer does not need to be a certified PE; and (2) waived the requirement that a fixed or mobile provider submit a certification from a “certified professional engineer,” allowing instead the submission of a certification completed by an otherwise-qualified engineer. In issuing the waiver, WCB, OEA, and WTB found 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.” The waiver specified that an “otherwise-qualified” engineer must meet certain minimum qualifications in lieu of state PE licensure in order to certify a BDC filing; specifically, the engineer must “possess 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.” The waiver applied to all mobile and fixed broadband service providers for each of the first three BDC filing cycles (*i.e.*, data as of June 30, 2022, December 31, 2022, and June 30, 2023).

55. In August 2023, CCA and USTelecom—The Broadband Association jointly submitted a petition to extend the 2022 BDC PE Order. The Waiver Extension Petition reported that circumstances had not changed for the industry in the year since adoption of the 2022 BDC PE Order. It further asserted that the minimum qualifications adopted for “otherwise-qualified” engineers in the 2022 BDC PE Order required experience that “provides skills comparable to, and perhaps more relevant than, general PE licensure in the context of the BDC.” On November 30, 2023, WCB, OEA, and WTB granted the Waiver Extension Petition for another three filing cycles

(*i.e.*, data as of December 31, 2023, June 30, 2024, and December 31, 2024), subject to certain conditions.

56. Discussion. As noted above, since the inception of the BDC, we have granted multiple waivers of the certified PE requirement. We propose to permanently eliminate the requirement under § 1.7004(d) that an engineering certification, to the extent not submitted by a corporate engineering officer, must be submitted by a certified PE. In its place we propose to amend § 1.7004(d) to state that all providers must submit a certification to the accuracy of their submissions by a “qualified engineer,” and we propose to define “qualified engineer” consistent with the engineering qualifications that WCB, OEA, and WTB adopted in the 2022 BDC PE Order and the PE Waiver Extension Order. We seek comment on our proposal.

57. Specifically, we propose to allow for the engineering certification to be submitted by (i) a corporate officer possessing a Bachelor of Science (B.S.) in engineering degree and who has direct knowledge of and responsibility for the carrier’s network design and construction; (ii) an engineer possessing 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 (iii) an employee with specialized training relevant to broadband network engineering and design, deployment, and/or performance, and at least 10 years of relevant experience in broadband network engineering, design, and/or performance.

58. We further propose to modify the rule to clarify that a certifying engineer does not necessarily need to be a full-time employee of the broadband service provider but instead could be an independent contractor or third-party consultant. We do, however, propose to maintain the remaining requirements in § 1.7004(d), including that the certifying engineer: (i) has direct knowledge of, or responsibility for, the generation of the provider’s BDC filing; and (ii) has examined the information contained in the BDC 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.

59. In light of the other mechanisms available to the Commission, such as system validations and the existing corporate officer certification, we do not believe that a certification by a certified

PE is necessary to ensure the submission of high-quality data as part of the BDC. Moreover, the Commission has other tools at its disposal to ensure the ongoing improvement in BDC data, including the challenge, verification, and audit processes. Given all of these other processes, we do not believe the certified professional engineer requirement—at least in its current form—is necessary. Rather, we believe that the potential costs and burdens of the certified PE requirement outweigh its potential benefits. We propose that, consistent with our actions in the PE Waiver Extension Order, all providers be required to retain their infrastructure data in support of their biannual submissions and produce those data upon request as part of the Commission's efforts to validate availability data. We seek comment on these proposals and conclusions.

60. Does the limited availability of certified PE resources since the launch of the BDC support modifying the current requirement? Do commenters believe that state licensure requirements will change in the near term such that certified PEs with RF or fixed broadband network deployment experience will become more available? We seek updated data on the availability of licensed PEs. Commenters who assert that certified PEs will soon become available should provide evidence in support of their claims.

61. Assuming that we eliminate the requirement that a certified PE complete the engineering certification, do commenters agree that the alternative qualifications adopted in the 2022 BDC PE Order and the PE Waiver Extension Order are sufficient to ensure reliable BDC data are submitted by service providers? If commenters believe we should adopt different qualifications, what should those qualifications be and why should we adopt these qualifications rather than the qualifications in the prior waiver orders?

4. Audit and Verification Determinations

62. We next seek comment on our rule and procedures governing determinations made as a result of audits and verifications, including the removal of locations or areas if an audit or verification determines the data are deficient or unverifiable.

63. Background. As discussed earlier, the Broadband DATA Act requires that the Commission conduct audits to ensure that providers are complying with their reporting requirements. The Act also requires the Commission to verify the accuracy and reliability of

availability data submissions in accordance with measures established by the Commission. In the final rule published elsewhere in this issue of the **Federal Register**, we delegate authority to OEA, in coordination with WTB, WCB, and SB to continue to perform audits and verifications using the tools currently available, including authority to establish methodologies and procedures for selecting service providers and locations or areas subject to verification or audit. At the conclusion of a verification or an audit, a provider must submit revised availability data to align with the conclusions of the verification or audit. In the case of mobile wireless coverage subject to a verification inquiry, we have also made clear that “we may treat any targeted [mobile wireless coverage] areas that . . . fail verification as a failure to file required data in a timely manner and that the Commission may make modifications to the data presented on the broadband map (*i.e.*, by removing some or all of the targeted area from the provider's coverage maps).” But we have not been as explicit in announcing that similar procedures and remedies would apply in response to determinations made as a result of verification of fixed availability data or in the case of audits (of both fixed and mobile data).

64. Discussion. We seek comment on formalized procedures to govern determinations made as a result of audits and verifications of information submitted by fixed and mobile broadband service providers in their biannual BDC submissions. Specifically, we seek comment on whether we should amend § 1.7009 of the Commission's rules to explicitly state that Commission staff may remove locations or areas from a provider's availability data should an audit or verification find that the data are deficient or unverifiable. While we seek comment on whether amendments to § 1.7009 would help to clarify for broadband service providers the potential ramifications stemming from a verification or audit, we emphasize that our doing so does not diminish our existing authority to remove locations or areas from a provider's claimed availability data on a case-by-case basis as a result of a verification or an audit.

65. Section 1.7009(d) requires that providers “file corrected data when they discover inaccuracy, omission, or significant reporting error in the original data that they submitted, whether through self-discovery, the crowdsourcing process, the challenge process, the Commission verification process, or otherwise.” We tentatively conclude

that it would be beneficial to clarify in our rule that, in the event a provider's response to a verification inquiry or an audit does not support its availability filing—whether due to an incomplete response or where the response demonstrates that service is not available—pursuant to § 1.7009(d)(1), the provider must correct its availability data within 30 days of OEA or WTB, WCB, or SB (as relevant), notifying the provider of this finding. Consistent with our statutory obligations, and our processes for mobile wireless coverage verifications, in the event of an adverse audit or verification finding that is not appealed, or, in the event of an appeal, by a Commission decision resolving the appeal adversely to the provider, we propose that the failure to correct data within the 30-day timeframe may result in OEA, in coordination with WTB, WCB, or SB (as relevant), amending or removing from the NBM the provider's availability data. For example, an adverse audit determination would give the provider 30 days to either appeal the decision or to submit corrected data regarding specified areas; in the event the provider does not appeal the adverse audit decision, and does not submit corrected data within 30 days, OEA may remove the targeted areas subject to the audit from the NBM. Alternatively, OEA may determine that the provider's data are so unreliable as to warrant removal of all of the provider's availability data (not just for the targeted areas) from the NBM. In either scenario, the BDC will notify the provider in writing of either the alternation or removal of the provider's data. We find that this procedure is consistent with our statutory obligation to publish verified data and the current Commission process. We additionally note that the Commission already has established rules to submit an application for review of action taken pursuant to delegated authority, and a petition for reconsideration in a non-rulemaking proceeding that providers may avail themselves of in the event of an unfavorable bureau-level determination. We seek comment on this proposal.

5. Data Requirements for Restoration of Locations Lost or Conceded to Challenges

66. We seek comment on the data requirements for restoring locations or areas where infrastructure data under the existing data specifications are not relevant to the underlying fixed challenge code, and also seek comment on using speed test data for restoration of mobile coverage areas.

67. Background. In the Declaratory Ruling in the final rule published

elsewhere in this issue of the **Federal Register**, we clarify that in instances where a provider's claimed availability at a location or area was previously removed from the NBM as a result of a challenge, verification or audit, the provider may submit evidence in a subsequent BDC filing window demonstrating that it can make service available at that location or area and that the circumstances surrounding the previous removal no longer exist. As discussed in further detail above, this process is consistent with providers' obligations to report accurate data about the broadband services that they make available on a biannual basis, and is necessary to advance the Commission's goal of publishing accurate and precise data about where internet services are, and are not, available across the United States.

68. **Fixed Availability Challenges.** As noted above, in the case of most types of fixed challenges, the Commission would evaluate infrastructure data, such as the information contained in the Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes, to confirm that the provider makes the claimed service available and therefore to substantiate a location restoration. While infrastructure data is relevant to location restoration in most instances, there are specific fixed challenge reason codes where this type of data may not be as closely aligned with the reason for the challenge. For example, fixed service can be challenged based on a showing that the provider requested more than a standard installation fee to connect the location with service (*i.e.*, Challenge Category Code 3), or the provider failed to schedule a service installation within 10 business days (Challenge Category Code 1), or the provider did not install service at the agreed upon time (Challenge Category Code 2). In these instances, infrastructure data may not adequately demonstrate that the location presently warrants being restored to the NBM. This may be particularly so in the case of individual challenges, since they are more likely to capture unique attributes of a single location (such as a long driveway, a large hill, unique topography or building materials, etc.), as compared to bulk challenges that typically implicate several locations in a community and more often relate to a lack of infrastructure.

69. We propose to implement these requirements through revisions and updates to the data specification to account for the information a provider must submit when seeking to restore a location lost or conceded to fixed

Challenge Category Codes 1, 2, and 3 (or other cases where infrastructure data would not be informative of whether or not to restore the location). We seek comment on the types of data or evidence that should be considered to justify restoration of locations previously conceded or lost to fixed Challenge Category Codes 1, 2, and 3 or other cases where infrastructure data would not be informative of whether or not to restore the location. What type of information would sufficiently demonstrate that a provider can make service available with a standard installation fee, or within 10 business days? Should different types of evidence be provided for individual as compared to bulk challenges submitted under these Challenge Category Codes? What type of information supports a provider's ability to schedule installation within 10 business days of a request for service when it previously could not do so at a particular location? Should we allow locations which were removed under these circumstances to be restored after a certain amount of time has passed? If so, what is the appropriate amount of time that must pass, and should we seek any supporting information to restore those locations aside from the passage of time?

70. **Mobile Availability Challenges.** Similarly, the Commission will consider infrastructure data to confirm that a mobile provider makes the claimed service available and therefore to substantiate restoration of a Removed Area resulting from a successful mobile challenge (or verification inquiry or audit). In addition to infrastructure data, we seek comment on whether we should also allow mobile providers to restore an area by providing on-the-ground speed test data. Could speed test data sufficiently support restoration of a previously removed hexagon? Under what circumstances should we accept on-the-ground speed test data (either in lieu of, or in addition to, infrastructure data) when a mobile provider seeks to restore a Removed Area? In the event we were to allow for submission of speed test data, should we require mobile service providers to collect these data using the parameters adopted for submittal of mobile challenge rebuttal speed test data, or are there different parameters to the speed testing methodology that we should seek for this type of data to support restoration? For additional speed test data to support restoration, is it necessary that the tests are conducted after the challenge has been upheld, or could the tests be collected any time after the as-of date of

the relevant BDC data vintage? If commenters believe that tests should be conducted after the challenge has been resolved, should we require a certain amount of time to pass before we find such data compelling? We propose to implement these requirements through revisions and updates to the data specification for the information a mobile wireless service provider must submit when seeking to restore a previously Removed Area, should we allow for submission of speed test data. We seek comment on these proposals.

6. Aligning Reporting Requirements for Broadband Availability and Subscribership Data

71. **Background.** While broadband availability data are now gathered through the BDC, the Commission continues to collect counts of "broadband connections" in service—broadband subscribership—using the FCC Form 477. Facilities-based entities providing internet access service currently submit information for both the BDC and Form 477 within a common online filing application. The data about broadband availability collected pursuant to the Broadband DATA Act and BDC rules, as well as the data about broadband connections (*i.e.*, subscriptions) collected under the Form 477 rules, are separately validated as they are ingested by the BDC system, and then checked against each other to ensure consistency and accuracy after individual files are ingested and prior to entities certifying and submitting their biannual submissions.

72. The operational definition of "broadband" in the context of FCC Form 477 subscribership is slightly different than that used in the BDC for broadband availability. As noted above, the Broadband DATA Act defines "broadband internet access service" for purposes of the BDC as a "mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up internet access service." The existing Form 477 rules define a "broadband connection" as a "wired line, wireless channel, or satellite service that terminates at an end user location or mobile device and enables the end user to receive information from and/or send information to the internet at information transfer rates exceeding 200 kilobits per second (kbps) in at least one direction."

73. Discussion. We propose to modify the definition of “broadband connection” used in Form 477 so that it aligns with the definition of “broadband internet access service” used in the BDC. Specifically, we propose to require facilities-based providers of broadband internet access service to submit in Form 477 counts of “broadband internet access service connections” in service, with that term defined as connections that provide mass-market broadband internet access as defined and described in 47 CFR 8.1(b). This change would put the Form 477 on the same definitional footing as the BDC, as well as Broadband Labeling. Taking this step would also be consistent with the Broadband DATA Act’s direction to the Commission to “harmonize reporting requirements and procedures regarding the deployment of broadband internet access service” for the FCC Form 477 with those adopted for the BDC. We believe our proposal will allow the Commission to streamline its rules, reduce confusion among filers, and impose consistency on the broadband data it collects in the BDC and FCC Form 477. We seek comment on this proposal.

74. We believe the definition of broadband internet access service is, on net, narrower than the definition of a broadband connection. Broadband connections are not limited to include only “mass-market retail” services. Such connections therefore include those providing types of internet access services that are not sold on a standardized basis. These non-mass market connections are currently in scope for reporting on FCC Form 477 but not in the BDC. Changing the Form 477 rules to focus solely on mass-market services would render custom internet access services out of scope for that collection, and providers specializing purely in such services would no longer be required to file. Within the Form 477, there is currently no way to determine the share of total reported broadband connections that are sold as non-mass market services, but our expectation is that it is small. In addition, such connections are arguably sold into a different market. Given that, we seek comment on whether no longer collecting data on such connections is worthwhile, particularly in light of the reduced filing burden to providers of such services and the benefits of data consistency.

75. An alternative to conforming the scope of the Form 477 to meet the BDC, is to instead change the Form 477 to capture mass market and non-mass market connections separately. That is, in addition to the current requirement to

separately report “consumer” and “total” broadband connections in service, the Commission could require filers to further parse consumer, and by extension, non-consumer, connections based on whether the connections are mass market or not. This would likely increase the burden on filers but would make it possible to compare the Form 477 data on mass-market broadband connections in service to the BDC availability data, as well as other broadband data collections, while leaving the scope of the Form 477 unchanged. We invite comment on this alternative approach.

7. New Rule Subsection for Fabric Challenge Process

76. Finally, we seek comment on changes to our rules to better distinguish between fixed availability and Fabric challenge processes. The current rules for Fabric challenges are nested within a section of the BDC rules titled “Fixed service challenge process” (47 CFR 1.7006(d)). This section largely addresses the rules for the submission and processing of fixed availability challenges. But the fixed availability and Fabric challenge processes are different, and many of the provisions in rule § 1.7006(d) are either inapplicable or not well suited to the Fabric challenge process. Further, the reference in the first sentence of the rule to “challenge[s] to the accuracy of the coverage maps at a particular location, any information submitted by a provider regarding the availability of broadband internet access service, or the Fabric” creates a potential misconception that all provisions of the rule apply equally to both fixed availability and Fabric challenges.

77. We propose amending § 1.7006 of the Commission’s rules to create a new subsection for the Fabric challenge process and to remove the Fabric challenge provisions in § 1.7006(d) from those pertinent to the fixed availability challenge process. We seek comment on our proposal to create a new subsection in rule § 1.7006 for Fabric challenges.

78. Promoting Digital Equity and Inclusion. The Commission, as part of its continuing effort to advance digital equity for all, including people of color, persons with disabilities, persons who live in rural or Tribal areas, and others who are or have been historically underserved, marginalized, or adversely affected by persistent poverty or inequality, invites comment on any equity-related considerations, and invites comment on any benefits (if any) that may be associated with the proposals and issues discussed herein. Specifically, we seek comment on how

our proposals may promote or inhibit advances in diversity, equity, inclusion, and accessibility, as well as the scope of the Commission’s relevant legal authority.

79. *Paperwork Reduction Act (PRA)*. The *Fourth Further Notice of Proposed Rulemaking (Fourth FNPRM)* may contain new and modified information collection requirements subject to the PRA, Public Law 104–13. The Office of Management and Budget, the general public, and other Federal agencies are invited to comment on new or modified information collection requirements contained in the *Fourth FNPRM*.

II. Ordering Clauses

80. Accordingly, *it is ordered*, pursuant to sections 1 through 4, 7, 201, 254, 301, 303, 309, 319, 332, 403, and 641 through 646 of the Communications Act of 1934, as amended, 47 U.S.C. 151 through 154, 157, 201, 254, 301, 303, 309, 319, 332, 403, 641 through 646, the *Fourth Further Notice of Proposed Rulemaking IS ADOPTED*.

81. *It is further ordered* that, pursuant to applicable procedures set forth in §§ 1.415 and 1.419 of the Commission’s rules, 47 CFR 1.415, 1.419, interested parties may file comments on the *Fourth Further Notice of Proposed Rulemaking* on or before 30 days following publication in the **Federal Register**, and reply comments on or before 60 days following publication in the **Federal Register**.

82. *It is further ordered* that the Office of the Secretary *shall send* a copy of the *Fourth Further Notice of Proposed Rulemaking*, including the Final Regulatory Flexibility Analysis and the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

III. Initial Regulatory Flexibility Analysis

83. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Federal Communications Commission (Commission) has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities from the policies and rules proposed in the *Fourth FNPRM*. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *Fourth FNPRM*. The Commission will send a copy of the *Fourth FNPRM*, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the *Fourth FNPRM* and IRFA

(or summaries thereof) will be published in the **Federal Register**.

A. Need for, and Objectives of, the Proposed Rules

84. The Commission continues its ongoing efforts to collect accurate and granular broadband deployment data so that we can bring broadband to those areas most in need of it. In the Fourth FNPRM, the Commission proposes targeted changes designed to either improve the processes for filers or to further ensure that we continue to receive high-quality data through our data collection efforts and seeks comment on additional steps we can take to obtain more reliable data on the availability and quality of service of broadband internet access. Specifically, we seek comment on proposed enhancements to the availability data filing process, as well as possible clarifications to several of our data-validation tools. This includes revising our definition of broadband availability to exclude legacy services, collecting terrestrial fixed wireless call sign data, obtaining supporting data from satellite service providers, data retention requirements, and audit rules and processes.

B. Legal Basis

85. The proposed action is authorized pursuant to sections 1–5, 201–206, 214, 218–220, 251, 252, 254, 256, 303(r), 332, 403, 405, and 641–646 of the Communications Act of 1934.

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

86. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small-business concern” under the Small Business Act. 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 SBA.

Total Small Entities

87. Small Businesses, Small Organizations, Small Governmental Jurisdictions. Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe, at the outset, three

broad groups of small entities that could be directly affected herein. First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from SBA’s Office of Advocacy, in general a small business is an independent business having fewer than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States, which translates to 33.2 million businesses.

88. Next, the type of small entity described as a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.” The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations. Nationwide, for tax year 2022, there were approximately 530,109 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.

89. Finally, the small entity described as a “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.” U.S. Census Bureau data from the 2022 Census of Governments indicate there were 90,837 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States. Of this number, there were 36,845 general purpose governments (county, municipal, and town or township) with populations of less than 50,000 and 11,879 special purpose governments (independent school districts) with enrollment populations of less than 50,000. Accordingly, based on the 2022 U.S. Census of Governments data, we estimate that at least 48,724 entities fall into the category of “small governmental jurisdictions.”

Broadband Internet Access Service Providers

90. To ensure that this IRFA describes the universe of small entities that our action might affect, we discuss in turn several different types of entities that might be providing broadband internet access service.

91. Wired Broadband Internet Access Service Providers (Wired ISPs). Providers of wired broadband internet access service include various types of providers except dial-up internet access providers. Wireline service that

terminates at an end user location or mobile device and enables the end user to receive information from and/or send information to the internet at information transfer rates exceeding 200 kilobits per second (kbps) in at least one direction is classified as a broadband connection under the Commission’s rules. Wired broadband internet services fall in the Wired Telecommunications Carriers industry. The SBA small business size standard for this industry classifies firms having 1,500 or fewer employees as small. U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year. Of this number, 2,964 firms operated with fewer than 250 employees.

92. Additionally, according to Commission data on internet access services as of June 30, 2019, nationwide there were approximately 2,747 providers of connections over 200 kbps in at least one direction using various wireline technologies. The Commission does not collect data on the number of employees for providers of these services, therefore, at this time we are not able to estimate the number of providers that would qualify as small under the SBA’s small business size standard. However, in light of the general data on fixed technology service providers in the Commission’s 2022 Communications Marketplace Report, we believe that the majority of wireline internet access service providers can be considered small entities.

93. Internet Service Providers (Non-Broadband). Internet access service providers using client-supplied telecommunications connections (e.g., dial-up ISPs) as well as Voice over Internet Protocol (VoIP) service providers using client-supplied telecommunications connections fall in the industry classification of All Other Telecommunications. The SBA small business size standard for this industry classifies firms with annual receipts of \$35 million or less as small. For this industry, U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that operated for the entire year. Of those firms, 1,039 had revenue of less than \$25 million. Consequently, under the SBA size standard a majority of firms in this industry can be considered small.

Wireline Providers

94. Wired Telecommunications Carriers. The U.S. Census Bureau defines this industry as establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of

voice, data, text, sound, and video using wired communications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry. Wired Telecommunications Carriers are also referred to as wireline carriers or fixed local service providers.

95. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small. U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year. Of this number, 2,964 firms operated with fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 4,590 providers that reported they were engaged in the provision of fixed local services. Of these providers, the Commission estimates that 4,146 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

96. Local Exchange Carriers (LECs). Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. Providers of these services include both incumbent and competitive local exchange service providers. Wired Telecommunications Carriers is the closest industry with an SBA small business size standard. Wired Telecommunications Carriers are also referred to as wireline carriers or fixed local service providers. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small. U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year. Of this number, 2,964 firms operated with fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 4,590 providers that reported they were fixed local exchange service providers. Of

these providers, the Commission estimates that 4,146 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

97. Incumbent Local Exchange Carriers (Incumbent LECs). Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange carriers. Wired Telecommunications Carriers is the closest industry with an SBA small business size standard. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small. U.S. Census Bureau data for 2017 show that there were 3,054 firms in this industry that operated for the entire year. Of this number, 2,964 firms operated with fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 1,212 providers that reported they were incumbent local exchange service providers. Of these providers, the Commission estimates that 916 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, the Commission estimates that the majority of incumbent local exchange carriers can be considered small entities.

98. Competitive Local Exchange Carriers (CLECs). Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. Providers of these services include several types of competitive local exchange service providers. Wired Telecommunications Carriers is the closest industry with a SBA small business size standard. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small. U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year. Of this number, 2,964 firms operated with fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 3,378 providers that reported they were competitive local exchange service providers. Of these providers, the Commission estimates that 3,230 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard,

most of these providers can be considered small entities.

99. Interexchange Carriers (IXCs). Neither the Commission nor the SBA have developed a small business size standard specifically for Interexchange Carriers. Wired Telecommunications Carriers is the closest industry with an SBA small business size standard. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small. U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year. Of this number, 2,964 firms operated with fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 127 providers that reported they were engaged in the provision of interexchange services. Of these providers, the Commission estimates that 109 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, the Commission estimates that the majority of providers in this industry can be considered small entities.

100. Operator Service Providers (OSPs). Neither the Commission nor the SBA has developed a small business size standard specifically for operator service providers. The closest applicable industry with an SBA small business size standard is Wired Telecommunications Carriers. The SBA small business size standard classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 3,054 firms in this industry that operated for the entire year. Of this number, 2,964 firms operated with fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 20 providers that reported they were engaged in the provision of operator services. Of these providers, the Commission estimates that all 20 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, all of these providers can be considered small entities.

101. Other Toll Carriers. Neither the Commission nor the SBA has developed a definition for small businesses specifically applicable to Other Toll Carriers. This category includes toll carriers that do not fall within the categories of interexchange carriers, operator service providers, prepaid calling card providers, satellite service carriers, or toll resellers. Wired

Telecommunications Carriers is the closest industry with an SBA small business size standard. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small. U.S. Census Bureau data for 2017 show that there were 3,054 firms in this industry that operated for the entire year. Of this number, 2,964 firms operated with fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 90 providers that reported they were engaged in the provision of other toll services. Of these providers, the Commission estimates that 87 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

Wireless Providers—Fixed and Mobile

102. The broadband internet access service provider category covered by the Fourth FNPRM may cover multiple wireless firms and categories of wireless services. Thus, to the extent the wireless services listed below are used by wireless firms for broadband internet access service, the proposed actions may have an impact on those small businesses as set forth above and further below. In addition, for those services subject to auctions, we note that, as a general matter, the number of winning bidders that claim to qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments and transfers or reportable eligibility events, unjust enrichment issues are implicated.

103. Wireless Telecommunications Carriers (except Satellite). This 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 services, paging services, wireless internet access, and wireless video services. The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year. Of that number, 2,837 firms employed fewer than 250 employees. Additionally, based on Commission data in the 2022

Universal Service Monitoring Report, as of December 31, 2021, there were 594 providers that reported they were engaged in the provision of wireless services. Of these providers, the Commission estimates that 511 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

104. Wireless Communications Services. Wireless Communications Services (WCS) can be used for a variety of fixed, mobile, radiolocation, and digital audio broadcasting satellite services. Wireless spectrum is made available and licensed for the provision of wireless communications services in several frequency bands subject to part 27 of the Commission's rules. Wireless Telecommunications Carriers (except Satellite) is the closest industry with an SBA small business size standard applicable to these services. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

105. The Commission's small business size standards with respect to WCS involve eligibility for bidding credits and installment payments in the auction of licenses for the various frequency bands included in WCS. When bidding credits are adopted for the auction of licenses in WCS frequency bands, such credits may be available to several types of small businesses based average gross revenues (small, very small and entrepreneur) pursuant to the competitive bidding rules adopted in conjunction with the requirements for the auction and/or as identified in the designated entities section in part 27 of the Commission's rules for the specific WCS frequency bands.

106. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of

employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

107. 1670–1675 MHz Services. These wireless communications services can be used for fixed and mobile uses, except aeronautical mobile. Wireless Telecommunications Carriers (except Satellite) is the closest industry with an SBA small business size standard applicable to these services. The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

108. According to Commission data as of November 2021, there were three active licenses in this service. The Commission's small business size standards with respect to 1670–1675 MHz Services involve eligibility for bidding credits and installment payments in the auction of licenses for these services. For licenses in the 1670–1675 MHz service band, a “small business” is defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and a “very small business” is defined as an entity that, together with its affiliates and controlling interests, has had average annual gross revenues not exceeding \$15 million for the preceding three years. The 1670–1675 MHz service band auction's winning bidder did not claim small business status.

109. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

110. Wireless Telephony. Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. The closest applicable industry with an SBA small business size standard is Wireless Telecommunications Carriers (except Satellite). The size standard for this industry under SBA rules is that a business is small if it has 1,500 or fewer employees. For this industry, U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 331 providers that reported they were engaged in the provision of cellular, personal communications services, and specialized mobile radio services. Of these providers, the Commission estimates that 255 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

111. Broadband Personal Communications Service. The broadband personal communications services (PCS) spectrum encompasses services in the 1850–1910 and 1930–1990 MHz bands. The closest industry with an SBA small business size standard applicable to these services is Wireless Telecommunications Carriers (except Satellite). The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

112. Based on Commission data as of November 2021, there were approximately 5,060 active licenses in the Broadband PCS service. The Commission's small business size standards with respect to Broadband PCS involve eligibility for bidding credits and installment payments in the auction of licenses for these services. In auctions for these licenses, the Commission defined "small business" as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and a "very small business" as an entity that, together with its affiliates and controlling interests, has had

average annual gross revenues not exceeding \$15 million for the preceding three years. Winning bidders claiming small business credits won Broadband PCS licenses in C, D, E, and F Blocks.

113. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

114. Specialized Mobile Radio Licenses. Special Mobile Radio (SMR) licenses allow licensees to provide land mobile communications services (other than radiolocation services) in the 800 MHz and 900 MHz spectrum bands on a commercial basis including but not limited to services used for voice and data communications, paging, and facsimile services, to individuals, Federal Government entities, and other entities licensed under part 90 of the Commission's rules. Wireless Telecommunications Carriers (except Satellite) is the closest industry with an SBA small business size standard applicable to these services. The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees. For this industry, U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 95 providers that reported they were of SMR (dispatch) providers. Of this number, the Commission estimates that all 95 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, these 119 SMR licensees can be considered small entities.

115. Based on Commission data as of December 2021, there were 3,924 active SMR licenses. However, since the Commission does not collect data on the number of employees for licensees providing SMR services, at this time we are not able to estimate the number of licensees with active licenses that

would qualify as small under the SBA's small business size standard. Nevertheless, for purposes of this analysis the Commission estimates that the majority of SMR licensees can be considered small entities using the SBA's small business size standard.

116. Lower 700 MHz Band Licenses. The lower 700 MHz band encompasses spectrum in the 698–746 MHz frequency bands. Permissible operations in these bands include flexible fixed, mobile, and broadcast uses, including mobile and other digital new broadcast operation; fixed and mobile wireless commercial services (including frequency division duplex (FDD)- and time division duplex (TDD)-based services); as well as fixed and mobile wireless uses for private, internal radio needs, two-way interactive, cellular, and mobile television broadcasting services. Wireless Telecommunications Carriers (except Satellite) is the closest industry with an SBA small business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

117. According to Commission data as of December 2021, there were approximately 2,824 active Lower 700 MHz Band licenses. The Commission's small business size standards with respect to Lower 700 MHz Band licensees involve eligibility for bidding credits and installment payments in the auction of licenses. For auctions of Lower 700 MHz Band licenses the Commission adopted criteria for three groups of small businesses. A very small business was defined as an entity that, together with its affiliates and controlling interests, has average annual gross revenues not exceeding \$15 million for the preceding three years, a small business was defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and an entrepreneur was defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$3 million for the preceding three years. In auctions for Lower 700 MHz Band licenses seventy-two winning bidders claiming a small business classification won 329 licenses, twenty-six winning bidders

claiming a small business classification won 214 licenses, and three winning bidders claiming a small business classification won all five auctioned licenses.

118. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

119. Upper 700 MHz Band Licenses. The upper 700 MHz band encompasses spectrum in the 746–806 MHz bands. Upper 700 MHz D Block licenses are nationwide licenses associated with the 758–763 MHz and 788–793 MHz bands. Permissible operations in these bands include flexible fixed, mobile, and broadcast uses, including mobile and other digital new broadcast operation; fixed and mobile wireless commercial services (including FDD- and TDD-based services); as well as fixed and mobile wireless uses for private, internal radio needs, two-way interactive, cellular, and mobile television broadcasting services. Wireless Telecommunications Carriers (except Satellite) is the closest industry with an SBA small business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of that number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

120. According to Commission data as of December 2021, there were approximately 152 active Upper 700 MHz Band licenses. The Commission's small business size standards with respect to Upper 700 MHz Band licensees involve eligibility for bidding credits and installment payments in the auction of licenses. For the auction of these licenses, the Commission defined a "small business" as an entity that,

together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years, and a "very small business" an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years. Pursuant to these definitions, three winning bidders claiming very small business status won five of the twelve available licenses.

121. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

122. 700 MHz Guard Band Licensees. The 700 MHz Guard Band encompasses spectrum in 746–747/776–777 MHz and 762–764/792–794 MHz frequency bands. Wireless Telecommunications Carriers (except Satellite) is the closest industry with an SBA small business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

123. According to Commission data as of December 2021, there were approximately 224 active 700 MHz Guard Band licenses. The Commission's small business size standards with respect to 700 MHz Guard Band licensees involve eligibility for bidding credits and installment payments in the auction of licenses. For the auction of these licenses, the Commission defined a "small business" as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years, and a "very small business" an entity that, together with its affiliates and controlling

principals, has average gross revenues that are not more than \$15 million for the preceding three years. Pursuant to these definitions, five winning bidders claiming one of the small business status classifications won 26 licenses, and one winning bidder claiming small business won two licenses. None of the winning bidders claiming a small business status classification in these 700 MHz Guard Band license auctions had an active license as of December 2021.

124. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

125. Air-Ground Radiotelephone Service. Air-Ground Radiotelephone Service is a wireless service in which licensees are authorized to offer and provide radio telecommunications service for hire to subscribers in aircraft. A licensee may provide any type of air-ground service (*i.e.*, voice telephony, broadband internet, data, etc.) to aircraft of any type, and serve any or all aviation markets (commercial, government, and general). A licensee must provide service to aircraft and may not provide ancillary land mobile or fixed services in the 800 MHz air-ground spectrum.

126. The closest industry with an SBA small business size standard applicable to these services is Wireless Telecommunications Carriers (except Satellite). The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

127. Based on Commission data as of December 2021, there were approximately four licensees with 110 active licenses in the Air-Ground Radiotelephone Service. The

Commission's small business size standards with respect to Air-Ground Radiotelephone Service involve eligibility for bidding credits and installment payments in the auction of licenses. For purposes of auctions, the Commission defined "small business" as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and a "very small business" as an entity that, together with its affiliates and controlling interests, has had average annual gross revenues not exceeding \$15 million for the preceding three years. In the auction of Air-Ground Radiotelephone Service licenses in the 800 MHz band, neither of the two winning bidders claimed small business status.

128. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, the Commission does not collect data on the number of employees for licensees providing these services therefore, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

129. Advanced Wireless Services (AWS)—(1710–1755 MHz and 2110–2155 MHz bands (AWS-1); 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz bands (AWS-2); 2155–2175 MHz band (AWS-3); 2000–2020 MHz and 2180–2200 MHz (AWS-4)). Spectrum is made available and licensed in these bands for the provision of various wireless communications services. Wireless Telecommunications Carriers (except Satellite) is the closest industry with an SBA small business size standard applicable to these services. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

130. According to Commission data as of December 2021, there were

approximately 4,472 active AWS licenses. The Commission's small business size standards with respect to AWS involve eligibility for bidding credits and installment payments in the auction of licenses for these services. For the auction of AWS licenses, the Commission defined a "small business" as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a "very small business" as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million. Pursuant to these definitions, 57 winning bidders claiming status as small or very small businesses won 215 of 1,087 licenses. In the most recent auction of AWS licenses 15 of 37 bidders qualifying for status as small or very small businesses won licenses.

131. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

132. 3650–3700 MHz band. Wireless broadband service licensing in the 3650–3700 MHz band provides for nationwide, non-exclusive licensing of terrestrial operations, utilizing contention-based technologies, in the 3650 MHz band (*i.e.*, 3650–3700 MHz). Licensees are permitted to provide services on a non-common carrier and/or on a common carrier basis. Wireless broadband services in the 3650–3700 MHz band fall in the Wireless Telecommunications Carriers (except Satellite) industry with an SBA small business size standard that classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

133. The Commission has not developed a small business size standard applicable to 3650–3700 MHz

band licensees. Based on the licenses that have been granted, however, we estimate that the majority of licensees in this service are small internet Access Service Providers (ISPs). As of November 2021, Commission data shows that there were 902 active licenses in the 3650–3700 MHz band. However, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

134. Fixed Microwave Services. Fixed microwave services include common carrier, private-operational fixed, and broadcast auxiliary radio services. They also include the Upper Microwave Flexible Use Service (UMFUS), Millimeter Wave Service (70/80/90 GHz), Local Multipoint Distribution Service (LMDS), the Digital Electronic Message Service (DEMS), 24 GHz Service, Multiple Address Systems (MAS), and Multichannel Video Distribution and Data Service (MVDDS), where in some bands licensees can choose between common carrier and non-common carrier status. Wireless Telecommunications Carriers (except Satellite) is the closest industry with an SBA small business size standard applicable to these services. The SBA small size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of fixed microwave service licensees can be considered small.

135. The Commission's small business size standards with respect to fixed microwave services involve eligibility for bidding credits and installment payments in the auction of licenses for the various frequency bands included in fixed microwave services. When bidding credits are adopted for the auction of licenses in fixed microwave services frequency bands, such credits may be available to several types of small businesses based average gross revenues (small, very small and entrepreneur) pursuant to the competitive bidding rules adopted in conjunction with the requirements for the auction and/or as identified in part 101 of the Commission's rules for the specific fixed microwave services frequency bands.

136. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

137. Broadband Radio Service and Educational Broadband Service. Broadband Radio Service systems, previously referred to as Multipoint Distribution Service (MDS) and Multichannel Multipoint Distribution Service (MMDS) systems, and "wireless cable," transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) (previously referred to as the Instructional Television Fixed Service (ITFS)). Wireless cable operators that use spectrum in the BRS often supplemented with leased channels from the EBS, provide a competitive alternative to wired cable and other multichannel video programming distributors. Wireless cable programming to subscribers resembles cable television, but instead of coaxial cable, wireless cable uses microwave channels.

138. In light of the use of wireless frequencies by BRS and EBS services, the closest industry with an SBA small business size standard applicable to these services is Wireless Telecommunications Carriers (except Satellite). The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

139. According to Commission data as of December 2021, there were approximately 5,869 active BRS and EBS licenses. The Commission's small business size standards with respect to

BRS involves eligibility for bidding credits and installment payments in the auction of licenses for these services. For the auction of BRS licenses, the Commission adopted criteria for three groups of small businesses. A very small business is an entity that, together with its affiliates and controlling interests, has average annual gross revenues exceed \$3 million and did not exceed \$15 million for the preceding three years, a small business is an entity that, together with its affiliates and controlling interests, has average gross revenues exceed \$15 million and did not exceed \$40 million for the preceding three years, and an entrepreneur is an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$3 million for the preceding three years. Of the ten winning bidders for BRS licenses, two bidders claiming the small business status won 4 licenses, one bidder claiming the very small business status won three licenses and two bidders claiming entrepreneur status won six licenses. One of the winning bidders claiming a small business status classification in the BRS license auction has an active licenses as of December 2021.

140. The Commission's small business size standards for EBS define a small business as an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than \$55 million for the preceding five (5) years, and a very small business is an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than \$20 million for the preceding five (5) years. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

Satellite Service Providers

141. Satellite Telecommunications. This industry comprises firms "primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications." Satellite telecommunications service providers include satellite and earth station operators. The SBA small business size standard for this industry classifies a business with \$38.5 million or less in annual receipts as small. U.S. Census Bureau data for 2017 show that 275 firms in this industry operated for the entire year. Of this number, 242 firms had revenue of less than \$25 million. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 65 providers that reported they were engaged in the provision of satellite telecommunications services. Of these providers, the Commission estimates that approximately 42 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, a little more than half of these providers can be considered small entities.

142. All Other Telecommunications. This industry is comprised of establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Providers of internet services (e.g., dial-up ISPs) or VoIP services, via client-supplied telecommunications connections are also included in this industry. The SBA small business size standard for this industry classifies firms with annual receipts of \$35 million or less as small. U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that operated for the entire year. Of those firms, 1,039 had revenue of less than \$25 million. Based on this data, the Commission estimates that the majority of "All Other Telecommunications" firms can be considered small.

Cable Service Providers

143. Because section 706 of the Act requires us to monitor the deployment of broadband using any technology, we anticipate that some broadband service providers may not provide telephone service. Accordingly, we describe below other types of firms that may provide broadband services, including cable companies, MDS providers, and utilities, among others.

144. Cable and Other Subscription Programming. The U.S. Census Bureau defines this industry as establishments primarily engaged in operating studios and facilities for the broadcasting of programs on a subscription or fee basis. The broadcast programming is typically narrowcast in nature (e.g., limited format, such as news, sports, education, or youth-oriented). These establishments produce programming in their own facilities or acquire programming from external sources. The programming material is usually delivered to a third party, such as cable systems or direct-to-home satellite systems, for transmission to viewers. The SBA small business size standard for this industry classifies firms with annual receipts less than \$41.5 million as small. Based on U.S. Census Bureau data for 2017, 378 firms operated in this industry during that year. Of that number, 149 firms operated with revenue of less than \$25 million a year and 44 firms operated with revenue of \$25 million or more. Based on this data, the Commission estimates that a majority of firms in this industry are small.

145. Cable Companies and Systems (Rate Regulation). The Commission has developed its own small business size standard for the purpose of cable rate regulation. Under the Commission's rules, a "small cable company" is one serving 400,000 or fewer subscribers nationwide. Based on industry data, there are about 420 cable companies in the U.S. Of these, only seven have more than 400,000 subscribers. In addition, under the Commission's rules, a "small system" is a cable system serving 15,000 or fewer subscribers. Based on industry data, there are about 4,139 cable systems (headends) in the U.S. Of these, about 639 have more than 15,000 subscribers. Accordingly, the Commission estimates that the majority of cable companies and cable systems are small.

146. Cable System Operators (Telecom Act Standard). The Communications Act of 1934, as amended, contains a size standard for a "small cable operator," which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer

than one percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000." For purposes of the Telecom Act Standard, the Commission determined that a cable system operator that serves fewer than 498,000 subscribers, either directly or through affiliates, will meet the definition of a small cable operator. Based on industry data, only six cable system operators have more than 498,000 subscribers. Accordingly, the Commission estimates that the majority of cable system operators are small under this size standard. We note however, that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million. Therefore, we are unable at this time to estimate with greater precision the number of cable system operators that would qualify as small cable operators under the definition in the Communications Act.

All Other Telecommunications

147. Electric Power Generators, Transmitters, and Distributors. The U.S. Census Bureau defines the utilities sector industry as comprised of "establishments, primarily engaged in generating, transmitting, and/or distributing electric power. Establishments in this industry group may perform one or more of the following activities: (1) operate generation facilities that produce electric energy; (2) operate transmission systems that convey the electricity from the generation facility to the distribution system; and (3) operate distribution systems that convey electric power received from the generation facility or the transmission system to the final consumer." This industry group is categorized based on fuel source and includes Hydroelectric Power Generation, Fossil Fuel Electric Power Generation, Nuclear Electric Power Generation, Solar Electric Power Generation, Wind Electric Power Generation, Geothermal Electric Power Generation, Biomass Electric Power Generation, Other Electric Power Generation, Electric Bulk Power Transmission and Control and Electric Power Distribution.

148. The SBA has established a small business size standard for each of these groups based on the number of employees which ranges from having fewer than 250 employees to having fewer than 1,000 employees. U.S. Census Bureau data for 2017 indicate that for the Electric Power Generation, Transmission and Distribution industry

there were 1,693 firms that operated in this industry for the entire year. Of this number, 1,552 firms had less than 250 employees. Based on this data and the associated SBA size standards, the majority of firms in this industry can be considered small entities.

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

149. Certain potential modifications proposed in the Fourth FNPRM, if adopted, would impose new reporting, recordkeeping, or other compliance requirements on some small entities while others would reduce the burden on such entities. Specifically, in the Fourth FNPRM, we propose enhancements to the availability data collection requirements that, if adopted, would amend our rules to continue to collect availability data on legacy services but to not include such services in the location-specific availability information published on the National Broadband Map. Once broadband internet access service has actually been discontinued, the filer would not be required to submit broadband availability data for the service upon the next subsequent BDC filing period following the grant of the discontinuance petition.

150. In addition, the Commission proposes that fixed wireless filers reporting licensed service in their biannual BDC filings also be required to provide call sign data. We also propose updates to the BDC reporting requirements, that if adopted, would improve the quality of satellite service provider availability data submitted as part of the biannual data submission process. Specifically, we propose that satellite service providers must include, as a supporting data file accompanied with their biannual availability submissions, the infrastructure data set forth in BDC Infrastructure Data Specification.

151. In addition, as a means of improving the accuracy and reliability of broadband internet access service data, the Commission proposes a number of methods to verify the information in the providers' filings, including adoption of data retention requirements and more specific audit procedures. Specifically, we propose that broadband service providers retain the underlying data used to create their availability filings (including supporting data) for three years from the applicable "as-of" date. Data used to rebut challenges or respond to verifications inquiries or audits would be retained for three years as well. In response to a BDC

audit request, providers would have 60 days to submit the applicable supporting documentation. The adoption of any of these verification processes could subject small entities and other providers to additional submission, recordkeeping, and compliance requirements.

152. In addition, we propose to eliminate the requirement under rule § 1.7004(d) that an engineering certification, to the extent not submitted by a corporate engineering officer, must be submitted by a licensed PE. Instead, we propose to amend rule § 1.7004(d) to require that providers submit certifications by a “qualified engineer,” as defined by the engineering qualifications the Broadband Data Task Force adopted in previous orders. This certifying engineer would not need to be a full time employee, but would be required to have direct knowledge and familiarity with the BDC filing. We believe that the potential costs and burdens of the licensed PE requirement outweigh its potential benefits, and thus propose to eliminate the requirement.

153. The issues raised for consideration and comment in the Fourth FNPRM may require small entities to hire attorneys, engineers, consultants, or other professionals. At this time, however, the Commission cannot quantify the cost of compliance with any potential rule changes and compliance obligations for small entities that may result from the Fourth FNPRM. We expect our requests for information on potential burdens on small entities associated with matters raised in the Fourth FNPRM will provide us with information to assist with our evaluation of the cost of compliance on small entities of any reporting, recordkeeping, or other compliance requirements we adopt.

D. Steps Taken To Minimize the Significant Economic Impact on Small Entities and Significant Alternatives Considered

154. The RFA requires an agency to describe any significant, specifically small business, alternatives that could minimize impacts to small entities that it has considered in reaching its proposed approach, which may include (among others) the following four alternatives: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for such small entities; (3) the use of performance, rather than design, standards; and (4) an exemption

from coverage of the rule, or any part thereof, for such small entities.

155. As an initial matter, several of the proposals in the Fourth FNPRM are unlikely to negatively impact small businesses. For example, we propose to eliminate the licensed professional engineering certification and instead propose to require certifications by a “qualified engineer,” as defined in previous BDC orders. This proposal, if adopted, will save some small entities from having to pay a professional engineer to certify their filings. The Fourth FNPRM additionally proposes to keep confidential certain legacy availability data to protect customers’ identity while still enabling the Commission to continue to analyze availability on “grandfathered” services.

156. To assist the Commission’s evaluation of the economic impact on small entities as a result of actions that may result from proposals and issues raised for consideration in the Fourth FNPRM, and to better explore options and alternatives, the Commission has sought comment from the public on how best to implement the requirements in the Broadband DATA Act. More specifically, the Commission seeks comment on what additional burdens are associated with implementing more specific audit provisions, and seeks to balance our statutory obligation to ensure accurate data with minimizing the burden on providers. In addition, we sought comment on whether the proposed three-year data retention policy places a burden on smaller providers disproportionately compared to larger ISPs, and, alternatively, whether we should consider a five-year retention period. We also sought comment on the burdens that would be placed on satellite service providers by requiring them to submit additional infrastructure information on a biannual basis, and any additional or alternative data that we could collect to improve the accuracy and granularity of satellite providers’ broadband availability data.

157. More generally, the proposals and questions set forth in the Fourth FNPRM were designed to enable the Commission to understand the benefits, impact, and potential burdens associated with the different approaches that the Commission can pursue to achieve its objective of improving accuracy and reliability of its data collections. Before reaching its final conclusions and taking action in this proceeding, the Commission expects to review the comments filed in response to the Fourth FNPRM and more fully consider the economic impact on small entities and how any impact can be minimized.

E. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rules

158. None.

List of Subjects in 47 CFR Part 1

Administrative practice and procedure, Broadband, Reporting and recordkeeping requirements, Telecommunications.

Federal Communications Commission

Katura Jackson,

Federal Register Liaison Officer.

Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR part 1 as follows:

PART 1—PRACTICE AND PROCEDURE

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

Authority: 47 U.S.C. chs. 2, 5, 9, 13; 28 U.S.C. 2461 note; 47 U.S.C. 1754, unless otherwise noted.

■ 2. Amend § 1.7001 by:

■ a. Removing the heading from paragraph (a);

■ b. Removing and reserving paragraph (a)(1); and

■ c. Adding paragraphs (a)(21) and (g).

The additions read as follows:

§ 1.7001 Scope and content of filed reports.

(a) * * *

(21) *Grandfathered service.* A broadband internet access service that is currently provided to an existing end user at a broadband serviceable location, but that a facilities-based provider has permanently ceased to advertise or market to new or potential subscribers and would not make available to a new or potential subscriber at the broadband serviceable location.

* * * * *

(g) Facilities-based providers shall retain the underlying data used to create their biannual FCC Form 477 submissions (including supporting data) for at least three years after the applicable “as-of” reporting date (*i.e.*, June 30 or December 31).

■ 3. Amend § 1.7004 by:

■ a. Redesignating paragraphs (c)(3) through (7) as paragraphs (c)(5) through (9);

■ b. Adding new paragraphs (c)(3) and (4); and

■ c. Revising and republishing paragraph (d).

The additions and revision read as follows:

§ 1.7004 Scope, content, and frequency of Broadband Data Collection filings.

* * * * *

(c) * * *

(3) Fixed wireless broadband internet access service providers must disclose the following spectrum authorization information related to their broadband availability data:

(i) For broadband internet access services provided using licensed spectrum:

(A) All call signs and lease IDs (including the call sign(s) of the license(s) being leased) associated with the licenses held or leased by the filer and were (or could have been) used to provide broadband service as of the relevant Broadband Data Collection (BDC) filing date; and

(B) The FCC Registration Number of the entity holding the license or lease as recorded in the FCC's Universal Licensing System.

(ii) For broadband internet access services provided using licensed-by-rule spectrum:

(A) Proof of authorization by a Spectrum Access System pursuant to part 96 of this chapter as of the relevant BDC filing date.

(B) [Reserved]

(iii) For broadband internet access services provided using unlicensed operations pursuant to part 15 of this chapter:

(A) The FCC ID(s) of all base station transmission equipment used to provide the service as of the relevant BDC filing date.

(B) [Reserved]

(4) Satellite broadband internet access service providers must disclose the following information related to their broadband availability data:

(i) Information on the general operating parameters of the satellite system active as-of the relevant filing period, including network type, the total number of satellites in the active constellation, the number of orbital shells deployed in the active constellation, the overall system downlink capacity, and the overall system uplink capacity;

(ii) Information on each constellation or orbital shell of space stations deployed by the satellite system active as-of the relevant filing period, including shell altitude, orbital location (for GSO systems), inclination angle, orbital plane, number of satellites per orbital plane, shell orbital period, apogee, and perigee; and

(iii) For each state or territory for which the facilities-based provider of satellite broadband internet access

service claims coverage, system capacity information for each state or territory.

* * * * *

(d) Providers shall include in each Broadband Data Collection filing a certification signed by a corporate officer of the provider that the officer has examined the information contained in the submission and 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. All providers also shall submit a certification of the accuracy of its submissions by a qualified engineer. The engineering certification shall state that the qualified engineer is employed by the provider and has direct knowledge of, or responsibility for, the generation of the provider's Broadband Data Collection filing. The qualified engineer shall also 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. 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. A "qualified engineer," for purposes of this certification, shall be:

(1) A corporate officer possessing a Bachelor of Science (B.S.) in engineering degree and who has direct knowledge of and responsibility for the carrier's network design and construction;

(2) An engineer possessing 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

(3) An employee with specialized training relevant to broadband network engineering and design, deployment, and/or performance, and at least 10 years of relevant experience in broadband network engineering, design, and/or performance.

■ 4. Amend § 1.7005 by revising paragraph (a)(1) to read as follows:

§ 1.7005 Disclosure of data in the Fabric and Broadband Data Collection filings.

(a) * * *

(1) Withholding from public inspection all data required to be kept confidential pursuant to § 0.457 of this chapter, location-specific data on grandfathered services (though the

Office of Economics and Analytics may make publicly available aggregated information or data related to such services), and all personally identifiable information submitted in connection with the information contained in the Fabric, the dataset supporting the Fabric, and availability data submitted pursuant to § 1.7004; and

* * * * *

- 5. Amend § 1.7006 by:
■ a. Revising the section heading and paragraph (d) introductory text;
■ b. Removing and reserving paragraphs (d)(1)(vii) and (d)(9); and
■ c. Adding paragraphs (g) and (h).

The revisions and addition read as follows:

§ 1.7006 Data retention and verification.

* * * * *

(d) Fixed service challenge process. State, local, and Tribal governmental entities, consumers, and other entities or individuals may submit data in an online portal to challenge the accuracy of the coverage maps at a particular location and any information submitted by a provider regarding the availability of broadband internet access service.

* * * * *

(g) Broadband serviceable location Fabric challenge process. State, local, and Tribal governmental entities, consumers, and other entities or individuals may submit data in an online portal to challenge the accuracy of the information in the Fabric.

(1) Fabric challengers must provide in their submissions:

- (i) Name and contact information (e.g., address, phone number, email);
(ii) For a missing broadband-serviceable location, the geographic coordinates (latitude/longitude) of the location, along with an address for the location (if an address is available), a unit count, and the building type (selected from pre-established options on the portal);
(iii) For an existing broadband-serviceable location, category of dispute, selected from pre-established options on the portal;
(iv) Details and evidence about the challenged location; and
(v) A certification from an individual or an authorized officer or signatory of a challenger that the person examined the information contained in the challenge and that, to the best of the person's actual knowledge, information, and belief, all statements of fact contained in the challenge are true and correct.

(2) The Commission shall seek to resolve such challenges within 90 days of receiving the challenge filing in the online portal.

(3) Government entities or other entities may file challenges at multiple locations in a single challenge, but each challenge must contain all of the requirements set forth in paragraph (g)(1) of this section.

(4) Once a challenge containing all the required elements is submitted in the online portal, the location shall be identified on the coverage maps as “in dispute/pending resolution.” The Commission shall make public information about the location that is the subject of the challenge, including the street address and/or coordinates (latitude and longitude) and any relevant details concerning the basis for the challenge.

(h) *Data retention.* Facilities-based providers shall retain the underlying data used to create their biannual Broadband Data Collection submissions (including supporting data) for at least three years after the applicable “as-of” reporting date (*i.e.*, June 30 or December 31). In addition, facilities-based providers shall also retain any and all data related to responses to the data verification efforts set forth in paragraphs (a) through (g) of this section for at least three years from the date the provider receives notice of a challenge, verification inquiry, or initiation of an audit.

■ 6. Amend § 1.7009 by adding paragraph (e) to read as follows:

§ 1.7009 Enforcement.

* * * * *

(e) If, as a result of a verification inquiry or audit performed pursuant to § 1.7006, Commission staff request that a provider submit corrected availability data, and the provider fails to submit corrected data by the required date, then the Office of Economics and Analytics (OEA), in coordination with the Wireless Telecommunications Bureau, Wireline Competition Bureau, or Space Bureau (as appropriate), may remove locations or areas from the availability data published in the National Broadband Map pursuant to 47 U.S.C. 642(c). In such an instance, the BDC system will notify the provider in writing that some or all of its availability data have been altered or removed from the National Broadband Map. OEA will abstain from altering or removing locations or areas subject to an audit or verification for which the provider has filed an application for review or petition for reconsideration until such time as the Commission rules upon any such application or petition. During this period the locations or areas

may be indicated as “in dispute” on the National Broadband Map.

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DEPARTMENT OF DEFENSE

Defense Acquisition Regulations System

48 CFR Parts 204, 212, 217, and 252

[Docket DARS–2020–0034]

RIN 0750–AK81

Defense Federal Acquisition Regulation Supplement: Assessing Contractor Implementation of Cybersecurity Requirements (DFARS Case 2019–D041)

AGENCY: Defense Acquisition Regulations System, Department of Defense (DoD).

ACTION: Proposed rule.

SUMMARY: DoD is proposing to amend the Defense Federal Acquisition Regulation Supplement (DFARS) to incorporate contractual requirements related to the proposed Cybersecurity Maturity Model Certification 2.0 program rule, Cybersecurity Maturity Model Certification Program. This proposed DFARS rule also partially implements a section of the National Defense Authorization Act for Fiscal Year 2020 that directed the Secretary of Defense to develop a consistent, comprehensive framework to enhance cybersecurity for the U.S. defense industrial base.

DATES: Comments on the proposed rule should be submitted in writing to the address shown below on or before October 15, 2024, to be considered in the formation of a final rule.

ADDRESSES: Submit comments identified by DFARS Case 2019–D041, using either of the following methods:

○ *Federal eRulemaking Portal:* <https://www.regulations.gov>. Search for DFARS Case 2019–D041. Select “Comment” and follow the instructions to submit a comment. Please include “DFARS Case 2019–D041” on any attached documents.

○ *Email:* osd.dfars@mail.mil. Include DFARS Case 2019–D041 in the subject line of the message.

Comments received generally will be posted without change to <https://www.regulations.gov>, including any personal information provided. To confirm receipt of your comment(s), please check <https://www.regulations.gov>, approximately

two to three days after submission to verify posting.

FOR FURTHER INFORMATION CONTACT: Ms. Heather Kitchens, telephone 571–296–7152.

SUPPLEMENTARY INFORMATION:

I. Background

DoD is proposing to revise the DFARS to implement the contractual requirements related to the Cybersecurity Maturity Model Certification (CMMC) 2.0 program, published in the **Federal Register** as a proposed rule affecting 32 CFR part 170 on December 26, 2023, at 88 FR 89058. CMMC 2.0 provides a framework for assessing contractor implementation of cybersecurity requirements and enhancing the protection of unclassified information within the DoD supply chain. This proposed DFARS rule also partially implements section 1648 of the National Defense Authorization Act for Fiscal Year 2020 (Pub. L. 116–92), which directed the Secretary of Defense to develop a consistent, comprehensive framework to enhance cybersecurity for the U.S. defense industrial base no later than February 1, 2020.

On September 29, 2020, an interim rule under DFARS Case 2019–D041, Assessing Contractor Implementation of Cybersecurity Requirements, was published in the **Federal Register** at 85 FR 61505, effective November 30, 2020. On November 17, 2021, the notice, “Cybersecurity Maturity Model Certification (CMMC) 2.0 Updates and Way Forward” was published in the **Federal Register** at 86 FR 64100 to suspend the CMMC 1.0 pilot efforts. The purpose of suspending the CMMC 1.0 pilot efforts was to allow for development of CMMC 2.0. On December 26, 2023, DoD published in the **Federal Register** at 88 FR 89058 a proposed CMMC 2.0 program rule, Cybersecurity Maturity Model Certification Program, to propose the establishment of the CMMC 2.0 program requirements at 32 CFR part 170.

II. Discussion and Analysis

The proposed changes to the existing DFARS language are primarily to: (1) add references to the CMMC 2.0 program requirements proposed at 32 CFR part 170; (2) add definitions for controlled unclassified information (CUI) and DoD unique identifier (DoD UID) to the subpart; (3) establish a solicitation provision and prescription; and (4) revise the existing clause language and prescription.

DoD is implementing a phased rollout of CMMC. Over a three-year period CMMC will be phased in based on the