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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 1

[WC Docket Nos. 19–195, 11–10; FCC 20–94; FRS 16946]

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 Commission seeks comment on proposals for processes for consumers, governmental entities, and other parties to challenge the availability data represented in the broadband maps; additional processes for verifying broadband availability data submitted by providers; targeted reforms to the FCC Form 477 subscribership data that broadband and voice providers are required to file biannually; and implementing other requirements of the Broadband DATA Act.

DATES: Interested parties may file comments on or before September 8, 2020 and reply comments on or before September 17, 2020. Written comments on the Paperwork Reduction Act proposed information collection requirements must be submitted by the public, Office of Management and Budget (OMB), and other interested parties on or before October 19, 2020.

ADDRESSES: You may submit comments, identified by WC Docket Nos. 19–195 and 11–10, by any of the following methods:

- *Federal Communications Commission's Website:* <http://apps.fcc.gov/ecfs/>. Follow the instructions for submitting comments.
- *People with Disabilities:* Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by email: FCC504@fcc.gov or phone: 202–418–0530 or TTY: 202–418–0432.

For detailed instructions for submitting comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: For further information on this proceeding, contact Kirk Burgee, FCC Wireline Competition Bureau, Competition Policy Division, (202) 418–1599, Kirk.Burgee@fcc.gov, or Garnet Hanly, FCC Wireless Telecommunications Bureau, Competition and Infrastructure Policy Division, (202) 418–0995, Garnet.Hanly@fcc.gov.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Third Further Notice of Proposed Rulemaking (*Third FNPRM*) in WC Docket Nos. 19–195 and 11–10, adopted on July 16, 2020 and released on July 17, 2020. The document is available for download at <https://www.fcc.gov/edocs>. 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 (voice), 202–418–0432 (TTY).

Ex Parte Procedures: The proceeding this *Third FNPRM* initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission's ex parte rules. See 47 CFR 1.1200 through 1.1216. Persons making ex parte presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral ex parte presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the ex parte presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to 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 rule § 1.1206(b). In proceedings governed by rule § 1.49(f) or for which the Commission has made available a method of electronic filing, written ex parte presentations and memoranda summarizing oral ex parte presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's ex parte rules.

Initial Paperwork Reduction Analysis: This document contains proposed new or modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements in this document, subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104–13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, see 44 U.S.C. 3506(c)(4), the Commission seeks specific comment on how it might further reduce the information collection burden for small business concerns with fewer than 25 employees.

Statement of Authority: This *Third FNPRM* is adopted pursuant to sections 1 through 4, 7, 201, 254, 301, 303, 309, 319, 332, 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, and 641 through 646.

Synopsis

I. Third Further Notice of Proposed Rulemaking

1. In this *Third FNPRM*, the Commission seeks comment on what steps are necessary to implement certain other provisions of the Broadband DATA Act. In doing so, the Commission notes that section 806(e) of the Broadband DATA Act provides that “[i]f the Commission, before the date of enactment of this title, has taken an action that, in whole or in part,

implements this title, the Commission shall not be required to revisit such action to the extent that such action is consistent with this title.” Accordingly, the Commission asks that commenters address the extent to which measures already adopted by the Commission meet the requirements of the Broadband DATA Act, as well as what new measures may be necessary.

A. Service Providers Subject to the Collection of Broadband Internet Access Service Data

2. Under the Broadband DATA Act, the Commission must issue rules for the collection of broadband internet access service data from each “provider” of broadband internet access service, with “provider” being defined as “a provider of fixed or mobile broadband internet access service.” The Commission proposes that the providers subject to the requirements adopted in the *Second Report and Order*, published elsewhere in this issue of the **Federal Register**, be limited to “facilities-based providers,” as defined in 47 CFR 1.7001(a)(2). The Commission believes this definition is consistent with the Broadband DATA Act because the Act requires each provider to report where it “has actually built out the broadband network infrastructure,” and a facilities-based provider, rather than a reseller of the facilities-based provider’s services or capacity, is in the best position to know and report such information. If resellers were to report information on broadband availability, it is likely that such information would be less accurate than the data reported by facilities-based providers. In addition, the availability footprints of resold service would overlap those reported by facilities-based providers, given that resellers, by definition, provide service in all or a portion of the same footprint as the facilities-based providers. Further, the definition of facilities-based provider that the Commission proposes to use is the same as that adopted for fixed providers in the *Digital Opportunity Data Collection Order and Further NPRM* (84 FR 43705, Aug. 21, 2019, and 84 FR 43764, Aug. 21, 2019), and it currently applies to providers required to file Form 477 fixed and mobile broadband deployment data. As such, defining “provider” in the same way in the Digital Opportunity Data Collection will enable “the comparison of data and maps” produced under Form 477 with those produced under the Broadband DATA Act, which the Act requires the Commission to do.

B. Standards for Reporting Availability and Quality of Service Data for Fixed Broadband Internet Access Service

3. The Broadband DATA Act requires that rules issued by the Commission provide for uniform standards for the reporting of broadband internet access service data. The Commission believes that, except as noted below, the reporting requirements previously adopted in the *Digital Opportunity Data Collection Order and Further NPRM* for fixed broadband service data are consistent with the Broadband DATA Act’s requirements for reporting on the availability of such services. In particular, the Commission believes that it is consistent with the Broadband DATA Act to require providers of broadband internet access service at advertised speeds exceeding 200 kbps in at least one direction to report broadband availability data under the rules established for the Digital Opportunity Data Collection. The 200 kbps speed threshold is the same as that adopted in the *Digital Opportunity Data Collection Order and Further NPRM* and currently required for Form 477.

4. *Business-Only Service.* The *Digital Opportunity Data Collection Order and Further NPRM* required fixed providers to differentiate in their coverage polygons among service that was residential-only, business-only, or business-and-residential. While the Commission recognizes that there may be drawbacks to requiring fixed providers to report business-only broadband polygons due to the competitively sensitive nature of such data, it recognizes that there may be benefits to collecting and consulting business-only data, for example, in awarding funding for broadband services in other Universal Service Fund programs. As such, the Commission seeks comment on excluding from the Digital Opportunity Data Collection business-only service and instead requiring only a distinction between “residential-only” and “business-and-residential” services by fixed providers. The Commission seeks comment on this approach. In the alternative, should the Commission require the collection of business-only services, including non-mass-market business data services, though not specifically required by the Broadband DATA Act? Would there be a benefit to the Commission having data about the availability of broadband service for businesses and organizations that do not buy mass-market services, including healthcare organizations, schools, libraries, and other government entities? Would business-only availability data be particularly helpful

for informing, for example, E-rate or universal service programs that support health care? Since the Broadband DATA Act focuses on restricting subsidies to unserved areas and avoiding wasteful subsidized overbuilding, could the availability of business-only deployment data for consultation in the E-Rate or Rural Health Care programs, for example, help advance the goals and principles of the statute?

5. *Speed Information for Fixed Services.* As a component of their availability reporting under the Broadband DATA Act, fixed broadband providers must submit “information regarding download and upload speeds, at various thresholds.” The *Digital Opportunity Data Collection Order and Further NPRM* required all fixed providers to submit broadband coverage polygons that reflect the maximum download and upload speeds available in each area, as well as the technology used to provide the service and a differentiation among residential-only, business-only, or residential-and-business broadband services. The Commission proposes that all fixed broadband providers be required to report the maximum advertised download and upload speeds associated with the broadband internet access service that a provider offers in an area. However, for service offered at speeds below 25/3 Mbps, the Commission proposes the use of two speed tiers: One for speeds greater than 200 kbps in at least one direction and less than 10/1 Mbps, and another for speeds greater than or equal to 10/1 Mbps and less than 25/3. For speeds greater than or equal to 25/3 Mbps, the Commission proposes that providers report the maximum advertised download and upload speeds associated with the broadband internet access service provided in an area. The Commission seeks comment on these proposals.

6. *Latency Information for Fixed Services.* The Commission also seeks comment on whether and how to collect latency information for fixed broadband services. Latency refers to the time it takes for a data packet to travel from one point to another in a network, whereas a round-trip latency refers to the time it takes for a data packet to travel from one point to another and then back again. The *Digital Opportunity Data Collection Order and Further NPRM* sought comment on whether fixed providers should be required to report latency levels along with other parameters in their coverage polygons. The Broadband DATA Act provides that latency information shall be collected from fixed broadband providers “if applicable,” and specifically requires

that propagation model-based coverage maps submitted by fixed wireless providers reflect the “speeds and latency” of the service offered by the provider. The Commission proposes to require all fixed broadband service providers to report latency data by indicating whether the network round-trip latency associated with the service offered by each technology and each maximum speed combination in a particular geographic area is less than or equal to a particular threshold. The Commission proposes to use 100 milliseconds (ms)—based on the 95th percentile of measurements—as that threshold, since that is the latency benchmark that recipients of Connect America Fund Phase II model-based support, as well as Connect America Fund Phase II auction support recipients in the Low Latency tier, are required to meet. The Commission proposes to update that benchmark for the Digital Opportunity Data Collection if and when the benchmark is updated in the universal service context. The Commission seeks comment on this proposal and ask whether a lower value should be used as a latency threshold independent of any changes made in the universal service context.

7. As an alternative to having all fixed providers submit latency information, should the Commission determine that the collection of latency data is only applicable to providers of certain types of fixed service? Further, should a more limited set of providers be required to submit more granular data on latency? Would such requirements be consistent with the Broadband DATA Act? For instance, should the Commission require only fixed wireless providers submitting propagation maps to file data indicating the 95th percentile latency values for the services they offer? Should the Commission extend this requirement to satellite providers, given the notable differences in latency values between satellite providers and other fixed providers? Should any latency requirements of satellite providers be limited to non-geostationary-orbit satellites and should such providers report latency values specifically for the apogee of satellites’ orbits or for the greatest path distance between a satellite and ground station? The Commission proposes to direct OEA, in consultation with WCB, IB, and OET, to issue specific guidance to providers on how to measure their network latency for purposes of reporting such information in the Digital Opportunity Data Collection. The Commission seeks comment on these proposals regarding the collection of latency information

and ask commenters to provide detailed explanations for any alternative recommendations, including any alternative latency benchmarks.

8. *Satellite Availability Reporting.* In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission sought comment on how, for the purposes of the Digital Opportunity Data Collection, it could improve upon the existing satellite broadband data collection to reflect more accurately current satellite broadband service availability. The Commission sought comment on whether satellite broadband deployment data reporting near nationwide deployment could be improved by requiring additional information, including the number and location of satellite beams, the capacity used to provide service by an individual satellite to consumers at various speeds, and the number of subscribers served at those speed levels. The Satellite Industry Association and Hughes oppose such reporting and argue that neither beam location nor capacity would provide additional granular information about the reach of the networks or where satellite broadband providers make service available. The Commission continues to seek comment on how to improve upon the existing satellite broadband data collection. Assuming *arguendo* that requiring the reporting of such supply side data is not useful or practical, should the Commission require additional reporting on the demand side by requiring any satellite provider submitting nationwide broadband coverage also to identify the census tracts with at least one reported subscriber? Should the Commission require reporting of where the satellite operator is actively marketing its broadband services? If concrete proposals are not provided to more reasonably represent satellite broadband deployment, the Commission would rely on other mechanisms outlined in the *Second Report and Order* and this *Third FNPRM* 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.

C. Additional Standards for Collection and Reporting of Data for Mobile Broadband Internet Access Service

9. In the *Second Report and Order*, the Commission required that a mobile provider’s propagation model results for 3G, 4G and 5G–NR mobile broadband

technologies be based on standardized parameter values for cell edge probability, cell loading, and clutter that meet or exceed certain specified minimum values. The Commission also required mobile providers to disclose propagation model details and link budget parameters. In this *Third FNPRM*, the Commission seeks comment on whether it should require providers to submit infrastructure information, make additional disclosures concerning the input data, assumptions, and parameter values underlying their propagation models and on whether any additional parameters are necessary to ensure that the Commission collects accurate mobile broadband deployment data.

10. First, the Commission seeks comment on requiring providers to disclose to the Commission additional details of their propagation models and of the link budgets they use for modeling cell edge network throughput (both uplink and downlink). Specifically, the Commission seeks comment on requiring providers to submit a description of sites or areas in their network where drive testing or other verification mechanisms demonstrate measured deviations from the input parameter values or output values included in the link budget(s) submitted to the Commission, and a description of each deviation and its purpose. The Commission seeks comment on whether requiring providers to include this additional information will help it more fully understand and assess propagation model coverage predictions.

11. The Commission also seeks comment on whether it should prescribe propagation modeling standards, such as a minimum value for Reference Signal Received Power (RSRP) or Received Signal Strength Indicator (RSSI). A map showing where the RSRP or RSSI meets or exceeds a minimum value could assist with the verification of expected user speeds. The *Mobility Fund Phase II Investigation Staff Report* discussed the role of signal strength in measuring mobile broadband performance and found “a strong positive relationship between the RSRP signal strength recorded and the percentage of 4G LTE speed tests that achieved a download speed of at least 5 Mbps” Several parties discussed signal strength in their comments in response to the *Digital Opportunity Data Collection Order and Further NPRM* and expressed differing views on whether a standardized or minimum signal strength parameter value is necessary. The Commission seeks additional comment to inform its

determination of whether a minimum signal strength parameter value is appropriate. The Commission recognizes that RSRP or RSSI values may vary based on factors such as spectrum band, network design, or device operating capabilities, but it seeks comment on whether it can establish a minimum signal strength parameter value that accommodates such variation. For example, should the Commission adopt CCA's suggestion that to define a minimum signal strength parameter by technology (e.g., LTE or 5G), spectrum band, and channel size? If so, the Commission seeks comment on what values would be appropriate. Alternatively, in view of the variety of factors that affect signal strength, would it be preferable to adopt an approach that uses a range of signal strength data to verify propagation model coverage predictions? Under such an approach, the Commission could require, for each of the propagation maps submitted, a second set of maps showing RSSI or RSRP signal levels, measured at 1.5 meters above ground level (AGL), from each active cell site. These maps could form color coded "heat maps" showing RSSI or RSRP gradient levels in 10 dB increments from -40 dBm to -120 dBm. The Commission seeks comment on this approach and whether it would be an effective method for verifying coverage predictions.

12. The Commission also seeks comment on whether it should adopt any other minimum values for particular model parameters not otherwise specified above. For example, the *Mobility Fund Phase II Investigation Staff Report* concluded that the Commission "should be able to obtain more accurate mobile coverage data by specifying additional technical parameters," and it recommended that the Commission adopt standard fading statistics as one parameter for standardized mobile broadband coverage data specifications. Based on this finding, should the Commission require carriers to report the fading standard deviation they use to set a fade margin or otherwise incorporate into their link budgets or propagation models? Should the Commission set minimum values or standardize values for any of the additional parameters it would require carriers to submit? Commenters advocating for the Commission to require reporting (or standardization) of a particular parameter should provide detailed technical justifications for why the parameter or value is necessary or important for the Commission to verify

carriers' propagation models and coverage maps.

13. Finally, the Commission asks whether it should require mobile providers to submit additional coverage maps based on different speed, cell edge probability, or cell loading values. Are there particular use cases or categories of subscribers, such as Machine-to-Machine or Internet-of-Things users, that might benefit from information on 4G LTE or 5G-NR service availability at speeds below the thresholds set forth in the Broadband DATA Act and adopted in the *Second Report and Order*; or are there use cases for which higher thresholds for broadband speed or utilization might make sense? For example, should providers report coverage with cell loading values set to 30% and 70%, in addition to 50%, where all other values were held constant? Having different maps (or map layers) based on these different assumptions could show how the likelihood of establishing or maintaining a mobile broadband connection may change when the network is experiencing different utilization rates. Rather than setting uniform cell-loading values, should the Commission instead require carriers to submit, on a per-cell basis, propagation maps that incorporate a cell-loading value based on busy-hour utilization? The Commission notes that this requirement would be in addition to the requirements it adopted in the *Second Report and Order* that carriers submit maps based on minimum speed, cell-edge probability, and cell loading metrics. Assuming the Commission requires mobile providers to submit additional coverage maps, how should the Commission incorporate this information into the maps it creates pursuant to the Broadband DATA Act? Are there any steps the Commission would need to take to avoid confusing consumers and help ensure that they are able to make reasonable comparisons between mobile broadband providers' coverage areas?

1. Collecting Infrastructure Information

14. In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission proposed to collect certain types of network infrastructure information to be submitted by mobile service providers upon Commission request, and it sought comment on whether the Commission should require mobile providers to submit infrastructure information to verify providers' broadband network coverage. The Commission seeks to refresh the record and seek further comment on collecting infrastructure information as

part of the Digital Opportunity Data Collection.

15. The Commission believes such information could help Commission staff independently verify the accuracy of provider coverage propagation models and maps submitted by mobile wireless service providers. The *Mobility Fund Phase II Investigation Staff Report* concluded that collecting such infrastructure data could help accurately verify mobile broadband coverage. The Commission also believes that infrastructure data could advance the Broadband DATA Act's requirement that it verify the accuracy and reliability of submitted coverage data. At the same time, The Commission recognizes that this is not data it ordinarily collects, and further acknowledges that the collection of infrastructure information could raise commercial sensitivity and national security concerns, as well as impose additional burdens on filers. The Commission seeks additional comment on these views and how best to strike a balance between competing concerns.

16. If the Commission opts to collect this information as part of the Digital Opportunity Data Collection, it seeks comment on what information it should collect, how often it should collect it, and whether filers should regularly submit infrastructure information to the Commission or submit information only on staff request, such as when the need for staff to verify part or all of a filer's network arises. In the *Digital Opportunity Data Collection Further NPRM*, the Commission proposed collecting nine categories of infrastructure information from filers. The Commission notes that some parties, including CTIA and AT&T, support requiring mobile providers to require regular submission of certain infrastructure information relating to the geographic locations of cell sites, while making other more detailed information available upon Commission staff request. The Commission seeks comment on these proposals and other alternatives it should consider, including whether such a rule is necessary in the first instance and whether the benefits of regular reporting would outweigh the costs. Commenters should discuss both the value of collecting this information for ensuring the accuracy of mobile broadband coverage maps and the potential impact on filers.

D. Processes for Verifying Broadband Availability Data Submitted by Providers

17. Pursuant to the Broadband DATA Act, the Commission must issue final rules that establish processes through

which it can “verify the accuracy and reliability” of the broadband internet access service availability data submitted by providers. These requirements are set out in distinct provisions of the Broadband DATA Act, separate from other requirements to establish processes for improving data accuracy and reliability, such as processes for receiving verified data from third parties and governmental mapping entities, crowdsourcing, and a challenge process. Accordingly, the Commission finds that these verification processes are intended to be in addition to other requirements, though there may be overlap and interrelationships between them. The Commission notes, for example, that information received through the crowdsourcing required under section 804(b) of the Broadband DATA Act is to be used to “verify and supplement” availability data collected under section 802(b)(2)(B) of the Act. The Commission seeks comment on this finding.

1. Verifying Mobile Data

18. In this section, the Commission proposes requiring mobile providers to submit a statistically valid sample of on-the-ground data (*i.e.*, both mobile and stationary drive-test data) as an additional method to verify mobile providers’ coverage maps. The Commission seeks comment on ways to develop a statistically valid methodology for the submission and collection of such data as well as how to implement such a requirement in a way that is not cost prohibitive for providers, particularly for small service providers. Further, the Commission requests comment on directing OEA and WTB to determine whether to develop a statistically valid methodology that will be used for determining the locations and frequency for on-the-ground testing as well as the technical parameters for standardizing on-the-ground data, and the Commission seeks comment on potential considerations for developing such a methodology. Finally, the Commission requests comment on whether and how the Commission should use signal strength information submitted by carriers to verify providers’ coverage maps.

19. *On-the-Ground Service Provider Data*. The *2017 Data Collection Improvement FNPRM* (82 FR 40118, Aug. 24, 2017) sought comment on requiring mobile broadband providers to submit speed test data to supplement their model-based data. In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission sought further comment on this issue and asked whether providers already collect such

data in the ordinary course of business. In response to the *2017 Data Collection Improvement FNPRM* and the *Digital Opportunity Data Collection Order and Further NPRM*, some commenters supported using drive-test data as a means of verifying broadband coverage. Providers, on the other hand, argued that collecting such data over their entire network would be unduly burdensome and unnecessary. The *Mobility Fund Phase II Investigation Staff Report*, however, found that drive testing can play an important role in auditing, verifying, and investigating the accuracy of mobile broadband coverage maps submitted to the Commission. The *Mobility Fund Phase II Investigation Staff Report* recommended that the Commission require providers to “submit sufficient actual speed test data sampling that verifies the accuracy of the propagation model used to generate the coverage maps. Actual speed test data is critical to validating the models used to generate the maps.”

20. The Commission proposes requiring mobile service providers to submit on-the-ground test data—from a combination of mobile and stationary tests—as a tool to help the Commission verify their voice and broadband coverage submissions. The Broadband DATA Act requires the Commission to verify the accuracy and reliability of mobile broadband coverage data that mobile providers submit to the Commission. The Commission believes that on-the-ground test data from mobile providers could be a critical component of its verification process. The Commission anticipates, however, that requiring providers to test their entire network would be prohibitively expensive; accordingly, the Commission proposes to require mobile providers to collect a statistically valid, unbiased sample of on-the-ground test data to verify their coverage maps. Industry commenters have indicated either that providers do not collect on-the-ground test data in the ordinary course of business or that they do so only to calibrate their propagation models. Accordingly, the Commission expects that collecting a sample would be more effective in verifying coverage than on-the-ground test data already collected in the ordinary course of business.

21. In order to help verify the accuracy of mobile providers’ submitted coverage maps, the Commission proposes that carriers submit evidence of network performance based on a sample of on-the-ground tests that is statistically appropriate for the area tested. The Commission proposes at a minimum that the speed tests include downlink, uplink, latency, and signal

strength measurements and that they be performed using an end-user application that measures performance between the mobile device and specified test servers. The Commission proposes that speed tests must be taken outdoors. The Commission proposes requiring a combination of mobile and stationary tests to accurately verify the coverage speed maps. The Commission also seeks comment on how it should compare the two types of tests. The Commission requests comment on the parameters that should be specified, such as the time of day within which the tests should be performed and whether it should set limits on the height at which the tests must be conducted. In the case of mobile speed tests, the Commission requests comment on whether it should set limits on vehicle speed and whether it should accept unmanned aircraft system tests. The Commission also seeks comment on how to ensure that providers submit a statistically valid and unbiased sample of tests. For example, how should the tests be distributed between urban and rural areas? How can the Commission ensure that the speed test measurements represent the typical user case for the area covered? How, for example, can the Commission prevent providers from performing their tests close to their towers where signal strength is greatest? In developing its methodology, should the Commission specify the types of equipment that providers can use, including the handsets and any other special equipment necessary for the testing? Should the Commission specify where to place such equipment during the testing? Although the Commission eliminated the requirement to report network coverage on Form 477 by spectrum band in the *Digital Opportunity Data Collection Order and Further NPRM*, it proposes, for verification purposes, to require providers to indicate spectrum bands and bandwidths in submitted mobile and stationary test data. In the context of eliminating the requirement to submit separate Form 477 coverage maps by spectrum band, the Commission acknowledged that it had not yet used such data to analyze deployment in different spectrum bands and that such data were unnecessary to confirm buildout requirements or to determine deployment speeds, as such information was typically provided by mobile providers through other means. *Digital Opportunity Data Collection Order and Further NPRM*, 34 FCC Rcd at 7523–24, paras. 42–43. For on-the-ground test data, however, spectrum band data are essential to be able to understand and

analyze mobile providers' on-the-ground submissions and to use them as a tool to verify mobile coverage maps.

22. The Commission seeks comment on the costs of requiring mobile providers to submit a statistically valid sample of on-the-ground data to verify their network coverage. The Commission recognizes both that it may be difficult to develop a statistically valid methodology governing mobile and stationary tests that eliminates or minimizes selection bias and that on-the-ground testing may prove burdensome and expensive. The Commission requests comment on the potential costs of developing a statistically valid methodology for on-the-ground testing. In addition, the Commission seeks comment on the potential costs for providers to implement such methodology, particularly in light of its proposal to require only a sample of a mobile provider's network. What are the costs of requiring providers to submit both mobile stationary test data? To what extent should the Commission modify its requirements for small providers, if at all?

23. The Commission requests comment on the type of confidentiality protections that it should apply to any on-the-ground data that mobile providers submit. The Broadband DATA Act's privacy provision does not clearly apply to the collection of data submitted to verify the accuracy of coverage data. Should these data be subject to disclosure pursuant to the private-public balancing test in §§ 0.457 and 0.461 of the Commission's rules? Should these data be available to the public during the challenge process?

2. Engineering Certification of Biannual Filings

24. While the Broadband DATA Act requires that each provider must include as part of its filing a certification from a corporate officer, the *Mobility Fund Phase II Investigation Staff Report* included a similar recommendation that the Commission require service providers to include an engineering certification with all data submissions.

25. In the *Second Report and Order*, as required by the Broadband DATA Act, the Commission requires providers to submit a certification from a corporate officer that the statements of fact contained in its biannual submissions are true and correct. The Commission proposes requiring mobile providers in addition to submit a certification of the accuracy of their submissions from a qualified engineer. The Commission also proposes to

require public filing of these certifications. The *Mobility Fund Phase II Investigation Staff Report* recommended that the Commission require providers to include an engineering certification. It found that requiring an engineering certification would help improve the accuracy of submissions by ensuring that providers take into account network performance data showing actual service availability in different areas across the country. The Commission seeks comment on the *Report's* recommendation and on whether requiring both an engineering certification and a certification from a corporate officer would help improve accuracy of provider submissions. To the extent a corporate officer (e.g., a Chief Technology Officer) is both an engineer and has the requisite knowledge required under the Broadband DATA Act, the Commission proposes to require the mobile filer to submit a single certification, which would also attest to the corporate officer's engineering qualifications. The Commission proposes requiring that this certification state that the certified professional engineer or a corporate engineering officer that is employed by the service provider has direct knowledge of, or responsibility for, the generation of the service provider's Commission-filed coverage maps. The Commission proposes requiring that the certified professional engineer or corporate engineering officer 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.

26. The Commission also seeks comment on whether it should require an engineering certification for biannual filings for fixed broadband service providers, as it proposes to do with certifications for mobile service providers. The Commission believes that this step would improve the accuracy of data on availability of fixed services by requiring providers to focus on network performance in certifying the accuracy of their filings, but seek comment on whether the same considerations would apply to fixed services so as to warrant this step. The Commission also seeks comment on any potential penalties for violating the certification.

3. Collection and Use of Verified Data

27. The Commission seeks comment on how best to implement the

Broadband DATA Act's requirement to collect and use "verified" data from third parties and government entities. As an initial matter, the Commission seeks comment on what constitutes "verified" data. If the data are produced by the entity submitting them, should the entity be required to explain the methodology for collecting and producing the data? If the entity gathers the data from providers or other third parties, should the entity be required to attest to the reliability of the data? Also, how should these verified data be "used" in the coverage maps to provide a useful resource? If the provider agrees with the data submitted by the government entity or third party, then the Commission proposes to "use" such data by including the data in the coverage maps. The Commission seeks comment on a process for getting the provider's assessment of this data. The Commission also seeks comment on these proposals and seek ideas on other approaches to verifying and using such data.

28. The Commission proposes requiring third party and governmental entities to attempt to resolve any inconsistent data with the providers. If the third party or governmental provider successfully reconciles its data with the provider, then the Commission would allow those data to be used in the coverage maps. If the third-party or governmental data cannot be reconciled with the provider after a period of 60 days, then the data would be made publicly available and its status noted, but the data would not be included as part of the official coverage maps. The Commission seeks comment on this approach and whether it is consistent with the Broadband DATA Act's mandate that such data be used in the coverage maps. The Commission seeks comment on any other methods for resolving inconsistencies between a provider's data and data submitted by third parties and government entities.

29. In addition, the Commission seeks comment on how to handle instances in which an external data format used by the third party is incompatible with the data submitted by providers—for example, if a state provides data based on geocoded addresses, but the provider submits availability data using shapefiles. The Commission proposes to make publicly available, and note the status of, such incompatible data from governments and third parties, but not to include them in producing the coverage maps. Is this a viable proposal and consistent with the Broadband DATA Act? What else could the Commission do to resolve the incompatibility in formats so that the

data can be useful for the coverage maps?

30. The Commission seeks comment on the flexibility in the Broadband DATA Act to collect third-party availability data when the Commission determines that it is in the public interest to use such data in the development of the coverage maps or the verification of data submitted by providers. The Commission proposes to accept broadband internet access service availability data from any third party that is able to demonstrate that it has employed a sound and reliable methodology in collecting, organizing, and verifying coverage data or location data. However, the Commission proposes to only use such data if, in its discretion, it determines that the data would make the coverage maps (or the data underlying the coverage maps) more accurate. The Commission seeks comment on this proposal and on any alternatives where collecting and using third-party data would improve the coverage maps or the underlying provider-submitted data. For example, should the Commission use third-party data only to verify the availability data submitted by providers? Also, what factors should drive the Commission's public interest determination to accept and use the third-party data? The Commission proposes to use factors such as whether the third party specializes in gathering and/or analyzing broadband availability data, the format and type of data submitted (are they compatible and comparable with the providers' data), and the extent to which the entity demonstrates that its collection, organization, and verification methodologies are sound and would appreciably improve the accuracy and reliability of the coverage maps. Finally, the Commission proposes to require third parties submitting verified data to certify that the information it is submitting is true and accurate to the best of their actual knowledge, information, and belief, consistent with the certification requirements the Commission proposes to apply to providers in connection with their availability data.

4. Additional Options for Collecting Verified Data on Mobile Service

31. As discussed above, the Commission proposes to require mobile providers to submit on-the-ground test data to assist the Commission in verifying their data submissions. In this section, the Commission proposes to collect voluntarily-submitted "verified" on-the-ground data on mobile service from "[s]tate, local, and Tribal governmental entities that are primarily

responsible for mapping or tracking broadband internet access service" and from Federal agencies for use in the mobile coverage maps the Commission creates. The Commission also seeks comment on whether to collect voluntarily-submitted "verified" on-the-ground data from other third parties, including other non-federal governmental entities and mobile providers that submit data unrelated to their own networks, for use in the coverage maps. In addition, to meet the Broadband DATA Act's mandate to conclude a process that tests the feasibility of partnering with one or more Federal agencies to collect information to verify and supplement broadband information submitted by providers, the Commission proposes to launch a pilot program with a Federal agency with a delivery fleet, such as the United States Postal Service (USPS). The Commission seeks comment on how to implement this pilot program.

32. *On-the-Ground Data from Government Entities and Third Parties.* The Commission seeks to refresh the record on accepting on-the-ground data from certain state, local, and Tribal governmental entities as well as from other third parties. The *Digital Opportunity Data Collection Order and Further NPRM* sought comment on whether to contract with third parties to deliver speed test data. In response to the *Digital Opportunity Data Collection Order and Further NPRM*, the California PUC argued that the Commission or third parties not affiliated with providers should conduct nationwide drive-testing and that the Commission should accept data collected through tests conducted by states or their contractors. The City of New York also supported submission of voluntary speed-test data produced by local governments. Verizon maintained that, if the Commission were to obtain third-party sources of test data, including structured sample data, it would be reasonable to *supplement* providers' submissions but unreasonable to use such data to *validate* providers' submissions, given inherent *variability* in such data.

33. The Commission seeks comment on whether it should adopt standards or requirements that these data must satisfy. The Commission also seeks comment on whether the Commission has discretion, under the Act, not to use such data if it determines that such data is not reliable or helpful for creation of the coverage maps. The Commission also seeks comment on whether, and under what conditions, the Commission should accept verified on-the-ground data from other third parties. The

Commission proposes to define "other third parties" to include all entities not mentioned in section 642(a)(2)(A) and (C) of the Act, including non-federal governmental entities that are not primarily responsible for mapping or tracking broadband internet access service, service providers that submit data on other providers' network coverage and performance, and other entities, such as third-party entities that routinely collect on-the-ground data. The Commission seeks comment on this proposed definition. Would data from other third parties help the Commission develop more accurate mobile coverage maps and verify providers' submitted data? If the Commission collects data from other third parties, should it specify the procedures and parameters for on-the-ground testing that the Commission will accept, as discussed in more detail above? Should the third-party be required to certify the methods by which the data were collected? The Commission seeks comment on whether establishing required procedures and standards will ensure the accuracy of these data. Will third parties be able to manipulate the procedures to generate inaccurate coverage data?

34. The Commission seeks comment on whether it can set technical standards for on-the-ground data that it collects from government and third parties, and if so, what standards it should require for such data. In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission sought comment on ways to define a drive-testing process that would yield a useful dataset to verify provider data. The Commission notes that the data speed that users experience depends on both the deployed network and the performance capabilities of the device. The Commission believes that adopting standardized methodologies, testing parameters, and minimum device performance capabilities that apply equally to on-the-ground data submitted by providers to verify their network (as discussed in section IV.D.1., above) and to on-the-ground data voluntarily submitted by state, local, and Tribal governmental entities, other third parties, and Federal agencies (including through a pilot program) will assist the Commission in collecting verified data. Accordingly, the Commission proposes that any standardized requirements should be the same as those it adopts for service providers submitting on-the-ground data to verify their coverage data, as discussed above. For government and third-party on-the-ground test data, should the Commission set parameters

and methodologies such as equipment standards, requirements for placement of equipment, and time-of-day testing requirements? Should the Commission require a combination of mobile and stationary test data? To the extent the Commission adopts methodologies and parameters, can parties still manipulate such tests to generate inaccurate results? What, if anything, can the Commission do to prevent such manipulation?

35. Should the Commission consider accepting any other forms of verified on-the-ground data besides mobile and/or stationary test data? In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission sought comment on the use of aerial drone testing and other technologies to verify data accuracy, with a particular emphasis on using such technologies to conduct sample audits of provider-submitted mobile deployment data, but few commenters addressed this issue. The Commission seeks to refresh the record on the extent to which the Commission could verify and use such data in the creation of its mobile broadband maps. Are such data sufficiently reliable for use in the mobile broadband coverage maps? Would third parties have an interest in submitting such data for use in the Commission's coverage maps?

36. *Federal Agency Delivery Fleet Pilot Program*. Section 644(b)(2)(B) of the Broadband DATA Act requires the Commission, within one year of the Act's enactment, to "conclude a process that tests the feasibility of partnering with Federal agencies that operate delivery fleet vehicles, including the United States Postal Service, to facilitate the collection and submission" of data that can be used to verify and supplement broadband coverage information. After the feasibility testing, the Commission must publish a report determining "whether the partnerships with Federal agencies . . . are able to facilitate the collection and submission of information" to verify and supplement mobile broadband data submitted by providers. The Commission seeks comment on how best to comply with these mandates.

37. The Commission believes that it should study the feasibility of partnering with Federal agencies by seeking to develop a pilot program that would install drive-test hardware on last-mile federal delivery fleet vehicles in certain sample markets to perform drive tests during a typical delivery route. How can the Commission develop a cost-effective pilot program with USPS or another Federal agency that would yield useful data? What steps could the Commission take to address concerns

about the validity of drive-test data more generally? For example, should the Commission focus its pilot program on rural areas, where there are greater concerns with mobile coverage, or on markets where coverage is disputed? The Commission seeks comment on whether the pilot program should also incorporate stationary testing.

38. What other considerations should guide the Commission's decisions in establishing a pilot program with a federal agency that operates delivery fleet vehicles, such as USPS? For instance, in a Government Accountability Office (GAO) Report that considered the feasibility of USPS delivery vehicles collecting mobile wireless coverage and performance data, GAO identified two potential limitations: large up-front costs and complex technical specifications. The Commission seeks comment on the likely costs of a pilot program. What procedures could the Commission implement to address concerns with requiring delivery workers to perform technically complex tasks? Can drive-testing be automated so that delivery vehicles can collect data passively? The Commission seeks comment on possible best practices for obtaining reliable drive-test data, including whether technicians would be required to install and calibrate test equipment; whether drivers would have to be trained to perform tests; and whether, in order to ensure a statistically valid sample, multiple drive-tests would be required on the same route. Would there be any legal or other constraints inherent in partnering with USPS for such a pilot program? For example, USPS Rural Carrier Associates "serv[e] thousands of families and businesses in rural and suburban areas while traveling millions of miles daily" but typically use their own vehicles for mail delivery. Are there challenges to deploying drive testing equipment in vehicles not owned by the USPS? Are there other Federal agencies "that operate delivery fleet vehicles," as the Broadband DATA Act states?

39. Finally, should the Commission also consider exploring a pilot program with a private entity that operates a large fleet of delivery vehicles, such as UPS or Federal Express? Are private entities better equipped than Federal agencies to operate such a program? Are there other private entities that routinely cover a high enough percentage of the roads?

E. Challenge Process

40. In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission explained that "input from

the people who live and work in the areas that a service provider purports to serve also plays a vital role in ensuring the quality of these maps, helping to identify areas where the data submitted do not align with the reality on the ground." The Commission seeks comment on how best to implement a user-friendly challenge process consistent with the Broadband DATA Act.

41. Pursuant to the Broadband DATA Act, the Commission must establish a user-friendly challenge process through which consumers, State, local, and Tribal governmental entities, and other entities or individuals may submit coverage data to challenge the accuracy of the coverage maps, broadband availability information submitted by providers, or information included in the Fabric. In establishing the rules for the challenge process, the Commission must take into consideration a number of factors, including: (1) The types and granularity of information to be provided in a challenge; (2) the need to mitigate time and expense in submitting or responding to a challenge; (3) the costs to consumers and providers from misallocating funds based on outdated or inaccurate information in coverage maps; (4) lessons learned from comments submitted in the Mobility Fund Phase II challenge process; and (5) the need for user-friendly submission formats to promote participation in the process. The process also must include the verification of data submitted through the challenge process and allow providers to respond to challenges to their data. The Commission must develop an online mechanism for submitting challenges: (1) That is integrated into the coverage maps, (2) that allows an eligible entity or individual to submit a challenge, (3) that makes challenge data available in both GIS and non-GIS formats, and (4) that clearly identifies broadband availability and speeds as reported by providers. The rules establishing the challenge process also must include processes for the speedy resolution of challenges and for updating the Commission's coverage maps and data as challenges are resolved.

1. Online Tracking System

42. In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission directed OEA to work with the Administrator to create an online portal for State, local, and Tribal governmental entities and members of the public to review and dispute the broadband coverage data filed by fixed providers under the new Digital Opportunity Data Collection. The

Broadband DATA Act does not permit USAC to develop the new portal, however, and, as described above, the portal must be flexible enough to handle broadband internet access service mapping, availability, and location challenges for both fixed and mobile providers. The Commission proposes that the online mechanism for receiving and tracking challenges be accessible through the same portal that is proposed to be used for crowdsourced submissions, and that it provide easy, direct access to the challenge data as well as broadband availability data the Commission collects from providers, including speed and latency data. The Commission seeks comment on this proposal and on any alternatives for tracking challenges. For example, in the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission asked whether the tracking portal could be similar to the Commission's existing consumer complaints database. The Commission also seeks comment on the best user-friendly format for filing, responding to, and tracking challenges, as well as on what other steps may be required to ensure that the challenge portal complies with the requirements of the Broadband DATA Act.

2. Consumer Challenge Process

43. The challenge process must be available for consumers, as well as for State, local, and Tribal governmental entities and other entities. The Commission anticipates that the issues raised in individual consumer challenges may differ from those raised by entities, so it proposes to establish separate sets of requirements and procedures for consumer challengers.

a. Consumer Challenges of Fixed Data

44. *Service Availability and Coverage Map Data.* The Commission proposes to collect the following information from consumers seeking to challenging coverage map data or the availability of service at a particular location: (1) The name and contact information of the challenger (e.g., address, phone number, and/or email); (2) the street address and geographic coordinates (latitude/longitude) of the location(s) at which the consumer is disputing the availability of broadband internet access service; (3) a representation that the challenger owns or resides at the location or is authorized to request and receive service there; (4) the name of the provider whose coverage is being disputed; (5) a category of availability dispute, selected from pre-established options on the portal (e.g., no actual service offering at location; provider

failed to install within ten business days of valid order for service; provider denied request for service; installation attempted but unsuccessful; reported speed not available); and (6) text and documentary evidence and details of a request for service (or attempted request for service), including the date, method, and content of the request and details of the response from the provider. As required by the Broadband DATA Act, the platform for this submission would be integrated with the coverage maps so that the challenger would have ready access to broadband availability information reported at the location that is subject to the challenge.

45. The Commission concludes that collecting this information would appropriately balance the burden on the challenger and provider, would facilitate challenge participation, and would adequately verify the information collected, as required by the Broadband DATA Act. The Commission seeks comment on this conclusion.

46. The Commission also seeks comment on the information that it proposes to collect for challenges to fixed service availability and coverage data. Is there additional information that the Commission should collect or are any of the proposed types of information not needed to present a clear picture of a challenge? Is the information the Commission proposes to collect comprehensive enough to cover all challenges considered by the Broadband DATA Act? The Commission also believes that requiring detailed information to support a challenge will inhibit the submission of frivolous or malicious filings. The Commission seeks comment on this assumption.

47. Regarding the information requested from a consumer challenger, the Commission seeks comment on the specificity it should require for contact information and whether there are any privacy concerns with requesting this information (e.g., whether the Commission should require both telephone numbers and email addresses). With regard to geographic coordinates, the Commission proposes to require that challenges be brought only on a location-specific basis, whether the challenge be for coverage maps, availability, or the Fabric. The Commission seeks comment on this proposal and on any better alternatives.

48. Also, in order to ensure the reliability of the data submitted, the Commission proposes that an individual, or an authorized officer or signatory of an entity, certify 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 submission are true and correct. Because providers must certify in a similar fashion with regard to their availability filings, the Commission believes it is appropriate that a challenge to the substance of such filings be supported with certification that have comparable terms. The Commission also propose that, if allowed to challenge multiple locations at once, the challenger must certify that this is true for each of the locations. The Commission seeks comment on these proposals.

49. Once a challenge is submitted to the online portal, the Broadband DATA Act requires the Commission to allow providers to respond. As an initial matter, the Commission proposes that its online portal should automatically notify a provider that a challenge has been filed against it. The Commission believes that sending an automatic notification to providers is appropriate as it should promote active engagement, awareness, and responsiveness by providers. The Commission seeks comment on this proposal and on any alternatives to alerting providers to the filing of a challenge in the portal.

50. The Commission proposes requiring providers to submit a reply to a challenge in the online portal within 30 days of being notified of the challenge. The Commission further proposes that a provider's failure to submit a reply within the required period, or its acceptance of the assertions in the challenge, result in removal of the location from the Commission's official coverage map. The Commission seeks comment on this approach and on alternative time periods and alternative approaches. For example, NTCA has proposed a 60-day reply period for providers. Any timetable for a provider response must balance the burdens on the provider versus the public's interest in rapid resolution of disputes so that the Commission has the best broadband internet access service deployment data available for funding decisions and reporting. The Commission also wants to assess the burdens on providers (especially small providers) in responding to challenges.

51. The Commission proposes that a provider disputing a challenge must provide evidence in its reply to the challenger that it has either verified the existence of service or evaluated its capability of provisioning service at the location of the dispute and that it is currently providing service or is willing and able to provide service to the challenger at that location. Once a

provider submits its objection to the challenge, the location will be identified on the public coverage maps as “in dispute/pending resolution.” The challenger and provider would then have 60 days from the provider’s reply to resolve the dispute. If the parties are unable to reach consensus within those 60 days, then the Commission will review the evidence and make a determination (based on a preponderance of the evidence, with the burden on the provider to demonstrate service availability), either: (1) In favor of the challenger, in which case the provider must remove the location from its Digital Opportunity Data Collection polygon within 30 days of the decision; or (2) in favor of the provider, in which case the location will no longer be subject to the “in dispute/pending resolution” designation on the coverage maps. A provider failing to respond to a challenge, or a challenger failing to respond to a provider’s reply, would result in a finding for the other party. The Commission seeks comment on this multi-step dispute resolution proposal and the timelines therein.

52. The Commission also seeks comment on its proposed use of the “preponderance of the evidence” standard in resolving disputes between challengers and providers. Based on this evidentiary standard, the Commission would weigh the presented evidence and determine whether the challenger had initially established evidence of a lack of service and, if so, whether the service provider has shown by the greater weight of the evidence that it makes service available at the challenger’s location. The Commission seeks comment on potential alternatives. For example, in response to the *Digital Opportunity Data Collection Order and Further NPRM*, the Broadband Mapping Coalition proposed a “clear and convincing” evidence standard, with the burden of proof on the challenger, for resolving challenges, which “is intermediate, being more than mere preponderance, but not to extent of such certainty as is required beyond reasonable doubt as in criminal cases.” NCTA recommends that the dispute resolution framework “should be an evidence-based challenge process that places substantive evidentiary requirements on the party submitting the challenge, requires a response from the provider, and leads to a decision by the Commission if there is no resolution between the parties.” The Commission seeks comment on the dispute resolution framework and whether it should put the burden of proof in the challenge process on the challenger.

53. One of the benefits of the proposed approach is that it balances the interest in avoiding unreliable or malicious availability and location disputes with the need to have finality in disputes to enhance the accuracy of the provider’s data and coverage maps. The Commission believes the process it proposes would encourage the sharing of information and opportunities for cooperation that will result in many challenges being resolved promptly without the need for Commission intervention. The Commission’s goal is to establish a dispute resolution process that achieves the Broadband DATA Act’s objectives while minimizing burdens on the parties and conserving valuable Commission resources to the maximum extent possible.

54. *Consumer Challenge of Fabric Data*. The Commission proposes a different process for consumers to challenge information in the Fabric. The Commission anticipates that challenges to location information in the Fabric would not generally require the involvement of a broadband provider. The Commission proposes, however, that challenges to the Fabric data will be filed on the same portal as challenges of availability and coverage map data, with the submission of much of the same information. As with consumer challenges to availability and coverage map data, for challenges to the Fabric, the Commission proposes to provide a selection of pre-established categories of disputes, including, for example: Placement of location on the map is wrong (geocoder/broadband serviceable location); location is not broadband serviceable (e.g., condemned, not a habitable structure); or serviceable location is not reflected in the Fabric. The Commission also proposes to provide an “other” option, along with the opportunity in the portal for submitting text or documentary evidence in support of the challenge. The Commission proposes that the challenge process platform provide each challenger with an acknowledgement of its submission and information about the process, including expected timing, and it proposes that the portal notify any affected providers of the challenge and allow, but not require, them to submit information relating to the Fabric challenge. The Commission proposes to establish a goal of resolving challenges to the Fabric within 60 days of receipt of the challenge and seek comment on that proposal.

b. Consumer Challenges of Mobile Coverage Data

55. The Commission seeks comment on how to create a user-friendly

challenge process that encourages participation to maximize the accuracy of the maps, while also accounting for the variable nature of wireless service. However, the Commission recognizes that resolving challenges to mobile coverage maps presents unique challenges not present with regard to fixed broadband availability challenges.

56. For consumers seeking to challenge mobile broadband coverage map data, the Commission proposes to collect the following information: (1) The name and contact information of challenger (e.g., address, phone number, and/or email address); (2) the street address or geographic coordinates (latitude/longitude) of the location(s) at which mobile broadband internet access service coverage is disputed; (3) the name of the provider whose coverage is being disputed; (4) a representation that the challenger is a subscriber of the provider that is the subject of the challenge; (5) a category of dispute, selected from pre-established options on the portal (e.g., no mobile broadband signal at a location; mobile broadband speed below defined technology speed parameter at a location); and (6) information regarding the available mobile broadband service. The Commission seeks comment about whether the information it proposes to collect from consumer challengers would cover all the potential challenges authorized by the Act and facilitate participation in the challenge process, while being detailed enough to discourage frivolous filings. Would it be enough to verify the legitimacy of the challenge and provide enough information for the challenged party to respond? Should the Commission require the submission of other information or should it not require the submission of certain information listed above? Consistent with its proposed process for consumer challenges in the fixed context, the Commission proposes that a mobile challenger certify that an authorized person has 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 submission are true and correct.

57. In addition to challenges regarding the availability of mobile broadband service, the Commission proposes to allow challenges by consumers based on quality of service metrics such as delivered user speeds. The Commission believes that allowing such challenges would help it verify the accuracy of mobile coverage maps by providing it with a source of on-the-ground data that reflects consumer experience in areas across the country. The Commission

seeks comment on its proposal. What are the advantages and disadvantages of permitting consumers to make such challenges? The Commission proposes requiring consumers who are challenging quality of service metrics (such as download or upload speeds) to submit speed test evidence. For consumers using third-party mobile speed test applications to collect data for their challenges, the Commission proposes to adopt the same procedures for qualifying applications as the Commission uses for receiving crowdsource data. The Commission seeks comment on whether it should establish rules for consumer challengers requiring a minimum number of speed test observations, specifying the distance between speed tests, or requiring that speed tests be conducted during a defined time frame. The Commission seeks comment on whether it should require the use of a specific speed test application, such as the FCC Speed Test application or another application. Would requiring the submission of speed test data be consistent with the Broadband DATA Act's requirement that the Commission develop an online mechanism to receive challenges? Would adopting these additional requirements be consistent with the requirement that the Commission create a user-friendly challenge process as required by the Broadband DATA Act? Alternatively, should the Commission limit challenges in the mobile context to those based only on evidence of a lack of service availability? Would doing so be consistent with the requirements of the Broadband DATA Act? The Commission also seeks comment on whether and how it should use signal strength information submitted by carriers, assuming the Commission adopts such a requirement, as part of the challenge process. As noted above, end user throughput can be affected by factors other than signal strength, but often signal strength correlates to expected throughput. Based on this relationship between signal strength and throughput, the Commission seeks comment on the role signal strength information could play in the challenge process. Should the Commission adopt a different evidentiary standard or burden of proof in cases where a party submits a challenge in an area where the carrier's RSRP/RSSI falls below a specified threshold? If so, then what RSRP/RSSI value would be appropriate?

58. The Commission proposes to use generally the same processes and timeframes for mobile service providers to respond to challenges in the mobile

context as it proposes to use in the fixed context. Consistent with its proposal for fixed services, the Commission proposes that its dispute tracking portal automatically push notifications through to mobile providers regarding filings made against them and that providers seeking to dispute a challenge be required to submit a reply to a challenge in the online portal within 30 days of being notified of the challenge. The Commission seeks comment on this proposal. For challenges involving the delivered speeds associated with a mobile broadband service, the Commission proposes that a provider disputing a challenge from a mobile consumer must provide evidence in its reply to the challenger that it has evaluated the speed of its service at the location of the dispute and determined that the delivered speeds of the service match the speeds indicated on the provider's coverage map. The Commission proposes that the rest of the challenge process for consumers follow the same approach as for consumer challenges in the fixed context. The Commission seeks comment on this approach and on any better alternatives to ensure that it and the provider have complete and accurate information about the challenge. Additionally, the Commission seeks comment on whether the rules for consumer challenges should require uniform measurements per grid cell similar to what the Commission proposes to adopt for challenges by governmental and other non-consumer entities as set forth below.

3. Challenges by Governmental and Other Entities

a. Challenges by Governmental and Other Entities to Fixed Data

59. *Challenges by Governmental and Other Entities to Service Availability and Coverage.* The Commission also proposes to establish two processes for challenges to fixed data by State, local, or Tribal governmental entities or other entities: One for availability and coverage map challenges and one for challenges to Fabric data. These entities will not under normal circumstances be consumers of mass-market broadband services and so the Commission anticipates that the challenges they initiate will be typically in the form of bulk challenges of provider availability, coverage map, or Fabric data. The Commission seeks comment on this conclusion. The Commission proposes to establish a portal for entity challenges on the same platform used for consumer challenges.

60. While government organizations or other entities (e.g., businesses, trade groups, other organizations) can be customers of a provider at a location (and follow the challenge process above laid out for consumers (or potential consumers) at a specific location), the Commission proposes to allow them also to file challenges for locations where they are not customers or potential customers. In those situations, the Commission proposes to require some of the same information from the challenger as for consumer availability challenges, including: (1) The name and contact information for the challenger; (2) the geographic coordinates (latitude/longitude) or the street addresses of the location(s) at which coverage is disputed; (3) the name[s] of the provider[s] whose availability data are being disputed; (4) narrative description of dispute (e.g., no actual service offering at location; provider failed to install within ten business days of valid order for service; provider denied request for service; installation[s] attempted but unsuccessful; reported speed not available for purchase); (5) evidence/details supporting dispute, including (a) methodology, (b) basis for determinations underlying the challenge, and (c) communications with provider, if any, and outcome; and (6) a certification that the information submitted with the challenge is accurate, equivalent to the certification made by providers in submitting their availability data. The Commission also proposes that the processes and timeframes for provider replies and dispute resolution follow the same approach as for consumer challenges to availability and coverage. The Commission seeks comment on this approach and on any better alternatives to ensure that the Commission and the provider have complete and accurate information about the challenge.

61. *Challenges by Governmental and Other Entities to the Fabric.* The Commission proposes that governmental and other entities' challenges to locations in the Fabric be initiated on the same portal as their challenges to availability, with the same filing requirements as consumer challenges to the Fabric, including the name and contact information for the challenger and the geographic coordinates (latitude/longitude) or the street addresses of the location(s) for which the entity disputes the Fabric data, as well as a description of the disputed information and evidence/details that support the challenge. As with consumer challenges to Fabric data, the Commission proposes to

establish a goal of resolving disputes of data in the Fabric within 60 days of receipt of the challenge and seek comment on that proposal.

62. The Commission seeks comment on these proposals and specifically on whether they would appropriately balance the considerations the Broadband DATA Act requires it to take into account in establishing the challenge process.

b. Challenges by Governmental and Other Entities to Mobile Data

63. *Minimum Requirements for Challengers.* Consistent with its proposal for consumers in the mobile context, the Commission proposes to allow challenges from governmental and other entities based on both mobile broadband service availability and quality of service metrics such as delivered speeds. For challenges involving delivered speeds, however, the Commission proposes that governmental and other entities follow a different process for submitting standardized challenge data.

64. In the Mobility Fund Phase II proceeding, the Commission required challengers to submit proof of lack of 4G LTE coverage in the form of actual outdoor download throughput speed test measurements to reflect actual consumer experience throughout the entire challenged area. In particular, the Commission adopted a requirement that a challenger must take measurements that were no more than one-half of a kilometer apart from one another in each challenged area and required challengers to demonstrate measured speeds falling below the applicable parameters in 75% of the challenged area. Challengers also faced additional evidentiary requirements, including a requirement to use pre-approved handset models, to purchase a service plan from each provider in the challenged area, and to conduct speed tests during a specified timeframe.

65. In response to the *Digital Opportunity Data Collection Order and Further NPRM*, at least one commenter argued that the evidentiary standards the Commission adopted for the Mobility Fund challenge process were burdensome and difficult to meet, particularly for small entities. CCA explained that collecting drive test data to dispute coverage was a significant challenge because “many rural areas that could be challenged have thousands of square kilometer blocks that must be separately analyzed to determine whether any carrier is providing service.” CCA also claimed that the requirement to provide evidence demonstrating lack of coverage

in 75% of the area being challenged limited small provider participation because as many as half of rural blocks did “not have enough drivable roads to meet the Commission’s 75-percent benchmark.” While WTA expressed support for a challenge process generally, it noted that establishing a challenge process in the mobile context is difficult because of the need to collect evidence of mobile broadband performance over vast areas.

66. The Commission proposes to adopt an approach for governmental and other non-consumer entities submitting challenge data that is similar to the process for demonstrating compliance with performance requirements that the Commission has proposed in the *5G Fund NPRM* (85 FR 31616, May 26, 2020). Under such an approach, the Commission would overlay a uniform grid of one square kilometer (1 km by 1 km) grid cells on each carrier’s propagation model-based coverage maps. The Commission would then require governmental and other entities interested in challenging the accuracy of a carrier’s map to submit user speed test measurement data showing measured user throughput speeds in the area they wish to challenge. For example, the Commission could require challengers to submit at least 3 speed test measurements per square kilometer grid cell in the disputed area demonstrating that measured throughput speeds do not match reported service levels. Measurement data indicating speed levels below applicable parameters in the challenged area would constitute evidence that a provider’s coverage map may not be accurate. The Commission seeks comment on the feasibility of this approach for governmental and other entities in the context of the challenge process. The Commission seeks comment on the minimum number of measurements that should be required in each grid cell. Would a minimum testing requirement of 3 speed test measurements per square kilometer grid cell in the challenged area provide sufficient data while minimizing costs and logistical burdens for challengers? Does the Commission need to adopt any requirements concerning the three speed tests, such as requiring a minimum distance between tests? Or, should the Commission require a different number of speed test measurements? Are there other types of drive tests that can be conducted with more frequent observations? Alternatively, should the Commission require challengers to submit speed test measurements in a defined percentage of grid cells in a challenged area? What

percentage of grid cells would provide a representative sample of coverage in an area? Should the Commission require challengers to submit measurements in 15% of grid cells in the challenged area? Would doing so provide a sufficient sample size on which to base a challenge filing? Are there alternative approaches that would not require challengers to submit speed test data?

67. The Commission proposes that tests must be conducted using a device certified by the service provider that is the subject of the challenge as compatible with its service. The Commission further proposes that each speed test be taken between the hours of 6:00 a.m. and 12:00 a.m. (midnight) local time and that each test be taken outdoors. The Commission proposes to require challengers to provide test data from a combination of mobile and stationary tests. For in-vehicle tests, the Commission seeks comment about whether it should specify the maximum vehicle speed during which tests may be taken and whether challengers should be required to report the speed of the vehicle at the time of the measurements. If tests are conducted with the device in the vehicle, the Commission proposes that the measurements must be calibrated to accurately represent outdoor operation and that the calibration procedures be provided with the analysis. The Commission also proposes to require that speed test data be substantiated by the certification of a qualified engineer or official. To the extent governmental or other non-consumer entities use third-party applications to collect data used for their challenge process, the Commission proposes that the Commission will adopt the same procedures for qualifying applications as it uses for receiving crowdsource data and consumer challenge data. The Commission seeks comment on this proposal. The Commission also seeks comment on whether and how a challenger might game the results of a challenge. If so, how might the Commission prevent such gaming?

68. The Commission acknowledges that a mobile service provider might have different motives for challenging a competitor’s propagation models and coverage maps than governmental entities and other third parties that do not provide competing mobile broadband internet access service. Should the Commission allow competing mobile service providers to submit challenges, and if so, should the Commission adopt different evidentiary standards for mobile service providers than for governmental agencies and other third parties that are not service

providers? The Commission also seek comment on whether to establish different evidentiary standards or permit challengers to use different measurements methods in rural areas. The Commission seeks comment on its proposals and asks commenters to discuss any other measures it should adopt to help ensure that it receives useful data while minimizing the time, expense, and administrative burden for both challengers and providers.

69. Lastly, the Commission seeks comment on whether the minimum requirements and other standardization procedures it proposes here for challenging mobile broadband coverage data, if adopted, would ensure the reliability of the data sufficient to satisfy its obligations under the Broadband DATA Act. If not, then what other processes would be necessary for the Commission to verify and ensure the reliability of the challenge process data in accordance with the Act?

70. *Challenge Responses.* The Commission proposes to generally use the same challenge response processes and timeframes for challenges by governmental and other entities as it proposes to use for challenges made by those entities involving fixed services. For cases where a mobile provider seeks to rebut a governmental or other entity's allegation regarding delivered speeds, however, the Commission proposes the following. The Commission will allow the provider to submit comprehensive on-the-ground data, or a statistically valid and sufficient sample of such data to verify its coverage maps in the challenged area. The Commission also proposes that the Bureaus have the option to require carriers to submit other data as necessary. The Commission further proposes that mobile service providers be subject to the same speed test measurement parameters it ultimately adopts for challengers. The Commission seeks comment on its proposals.

71. In order to facilitate the resolution of challenges in the mobile context, the Commission seeks comment on requiring providers to submit a standardized "challenge evaluation map" of specific geographic areas being challenged using a Commission-approved propagation model. In the *Second Report and Order*, the Commission requires that a provider's propagation model results be based on certain standardized parameters (and their corresponding minimum values) that the Commission establishes for cell edge probability, cell loading, and clutter. The Commission also require that providers must use the same optimized propagation models and

parameters that they use in their normal course of network planning and design. Notwithstanding these standardized parameters, there remain many differences among the propagation models used by providers which may result in coverage maps that are difficult for potential challengers to analyze and contrast across providers and different RF environments. Moreover, the propagation models used by providers in their normal course of business contain RF network engineering parameters that are proprietary and unique, which may make it more difficult for Commission staff to resolve challenges to the results produced by these propagation models.

72. To address these issues, the Commission seeks comment on whether to require providers, as part of the challenge process, to produce a standardized "challenge evaluation map" of specific geographic areas being challenged using a Commission-approved propagation model (e.g., Longley-Rice, or E-Hata), so that third parties and the Commission are able to analyze the technical and statistical factors that lead to variations in actual coverage and user experience. Such a Commission-approved standard model, implemented by the service provider(s), would produce signal strength predictions, as well as predictions of expected minimum downlink and uplink user speeds, based on provider specific system parameters (such as spectrum band and bandwidth deployed, transmit power, etc.). The Commission believes that the use of such a standardized propagation model would afford the Commission and challengers additional insight into the expected minimum coverage and speed performance, to resolve the challenge of validating providers' claims beyond what is provided in the maps produced using providers' proprietary and unique RF parameters, especially in challenged areas. However, by requiring coverage prediction in specific geographic areas through the use of a standardized propagation model, the Commission recognizes that there may be an additional information collection burden associated with requesting this additional information from licensees. Therefore, the Commission seeks comment on the costs and benefits of this proposed requirement and whether adopting it would be consistent with the Broadband DATA Act requirement that the Commission consider "... the need to mitigate the time and expense incurred by, and the administrative burdens placed on, entities and

individuals in . . . responding to challenges."

73. Are there other alternatives that would achieve the results of balancing the desired outcome of having more transparent maps and predictions with less calibration error and uncertainty? Can a standard model be produced by providers without undue additional burden, given the more extensive and detailed normal-course-of-business RF propagation modeling that providers perform using proprietary tools?

74. For commenters who favor the adoption of a standardized propagation model, the Commission seeks comment on the appropriate open RF propagation model(s) and its applicability to meet the accuracy expectations of this proceeding. Is Longley-Rice and/or E-Hata appropriate for the Commission to use for this purpose? How could such models be calibrated, such as through the use of clutter databases and models, to be adequately reflective of their effects on propagation in specific geographic areas? For example, path loss exponents and/or other modeling parameters such as clutter loss may be geographically dependent on the propagation path between two points (between transmitter and receiver) and significantly influence predicted coverage and performance. Commenters should specify how their recommended model(s) would provide the Commission and challengers the insight necessary to evaluate the coverage maps and performance claims produced by providers in their normal course of network planning and design.

75. Could a public dataset(s) of geospatial RF propagation parameters be developed and used, so that a standard evaluation model, or models, may be calibrated for the public benefit? Are there incentives and policies that the Commission should promote to encourage greater transparency and the development of trusted public propagation data in the public's interest? Commenters should specify which parameters should or should not be disclosed to the Commission with supporting reasons for their position on each parameter.

76. The Commission also seeks comment on when in the process providers should be required to submit these new coverage maps, if the Commission adopts this requirement to standardize challenge evaluation maps. Should providers submit such maps on a calendar basis or only when coverage and performance is challenged in a specific area? Could the use of standardized challenge evaluation maps reduce the need and cost burden of measurement test campaigns? What

other methods or processes can be used to evaluate providers' coverage maps under a challenge process? The Commission seeks comment on the above, as well as the relative costs and benefits of these alternative approaches.

77. *Framework for Verifying Data.* The Commission seeks comment on the data that should be used in the framework and how such data should be analyzed in ways not otherwise proposed in this *Third FNPRM*. What metrics from on-the-ground test results and crowdsourced data should be analyzed in the framework and how? To improve its ability to verify provider data, the Commission proposes that the framework require results from a certain number of on-the-ground or crowdsourced tests in an area. How many tests are needed to adequately assess coverage in a particular grid cell, set of grid cells, the area covered by a cell site, or a larger portion of a network? In assessing this number, the Commission must consider that test results will be from particular points or lines within a grid cell, while coverage maps depict much larger areas. How often should test results be taken (*i.e.*, across a range of dates and times of day)? How should the Commission account for peak hour or other time-based variations in network traffic?

78. What, if any, additional infrastructure data should the Commission include in the framework? The Commission proposes to obtain busy hour metrics for individual cell sites and include that data, as well as backhaul speed and technology, into its analysis. Are there other metrics and data sources that the framework should incorporate? The Commission also proposes to include population data and roadway traffic patterns. Should traffic pattern data be used to assess the level of cell loading on the network? If a mobile connection can be established in an area at one point, or one point in time, but not another, especially if the lack of a connection can be explained by high traffic or another factor, should the map of coverage in that area be deemed accurate and reliable? The Commission proposes to include a confidence rating within the framework, given the amount of data and level of network traffic variation to account for. The Commission proposes that the framework treat urban and rural areas differently. The Commission seeks comment on this proposal. The Commission asks that commenters provide in-depth explanations of how various types of on-the-ground tests, crowdsourced data, infrastructure data, and other data can be used to verify

mobile coverage pursuant to this framework.

4. Public Availability of Information Filed in the Challenge Process

79. The Broadband DATA Act requires the Commission to establish processes and procedures whereby entities or individuals submitting non-public or competitively sensitive information can protect the security, privacy, and confidentiality of that information with regard to Fabric data and broadband internet access service data that they submit. While the Broadband DATA Act does not expressly require the Commission to extend such protection to data submitted as part of the challenge process, the Commission proposes to do so in a limited capacity. In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission stated that "public input on fixed broadband service coverage will be most effective if some types of data collected in this process are routinely made available to the public." As a result, the Commission directed USAC to make public information about the location that is the subject of the challenge (including the street address and/or coordinates (latitude and longitude)), the name of the provider, and any relevant details concerning the basis for challenging the reported broadband coverage. The Commission proposes to adopt the same requirements for information submitted as part of its proposed challenge process (with the exception of the Administrator's involvement), and seeks comment on that approach and any better alternatives. Specifically, the Commission asks whether the information to be made public is too much or too little to adequately inform the public about the nature of a challenge. The Commission also proposes to keep all other challenge information private, unless disclosure "would be helpful to improve the quality of broadband data reporting." The Commission seeks comment on the extent of this exception and under what circumstances the Commission would make any other challenge information available to the public.

80. In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission also directed that any input from the public on broadband coverage service data be made available as soon as is practical after submission. The Commission did not specify a timeline for making such data publicly available, but expected that there would be regular releases of data. The Commission seeks comment on the procedures and timing for making available the public data

submitted as part of the challenge process. One option would be to make such information available and searchable in the Digital Opportunity Data Collection, without any official release of data. Another option would be to regularly issue public notices with the appropriate information. The Commission seeks comment on the best option for accomplishing its goal of making public challenge data available.

F. Broadband Serviceable Location Database

81. In the *Second Report and Order*, the Commission adopted the Fabric as required by section 642(b) of the Broadband DATA Act, along with other basic Fabric elements prescribed in the Act. As noted in the *Second Report and Order*, the Broadband DATA Act authorizes the Commission to contract for the creation and maintenance of the Fabric, subject to Federal Acquisition Regulations, but it has not been appropriated funding to cover the cost of implementing the Fabric. The Commission intends to initiate a procurement process promptly once adequate funding has been appropriated, and it expects to address many of the technical aspects of the Fabric in the course of that process.

82. In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission sought comment on a number of issues related to the implementation of a comprehensive location database, including how it should define a broadband serviceable location, how to treat multi-structure parcels and multi-tenant environments, and the best way to check the quality of the database. While technical issues related to the Fabric can be addressed in the procurement process, the Commission seek comment on certain proposals related to the Fabric.

83. The Broadband DATA Act requires that the Fabric include "all locations in the United States where fixed broadband internet access service can be installed." In order to create the Fabric, the Commission will need to provide greater specificity on the criteria to determine whether a location can have fixed broadband service installed at it. In the context of the Connect America Fund (CAF), a "location" is a residential or business location to which providers would extend mass market broadband and voice services. Carriers are directed to base residential locations served on the Census Bureau's definition of a "housing unit," and to report "the locations of businesses that they would expect to demand consumer-grade broadband services, which typically are

small businesses.” The Commission proposes to adopt the CAF approach and seek comment on this proposal.

84. As the Commission has done in the CAF context, the Commission proposes to have the Fabric reflect a location as a single point, defined by both geographic coordinates (latitude and longitude) and street address. As the Commission stated in the *Digital Opportunity Data Collection Order and Further NPRM*, “[w]e anticipate that this would be the coordinates of a building on a parcel,” to which broadband can be installed. In cases where there are multiple buildings on a parcel, the Commission proposes that all of the buildings on a parcel to which broadband can be installed, and only those buildings, be included in the Fabric. The Commission believes that recording each location as a single point has an advantage over reporting the outlines of each building (*i.e.*, a polygon for each location), the latter of which will increase the difficulty of creating the database and the amount of data required, without meaningfully improving the quality of the database. The Commission seeks comment on this proposal.

85. Because the Commission specified that a residential location should be based on the definition of a housing unit, locations in the CAF context include the individual units in Multi-Tenant Environments (MTEs), such as an apartment building or office building, not simply the buildings themselves. The Commission seeks comment on whether to use the same approach for the Fabric, particularly given that fixed providers likely would not offer service only to some units in an MTE. Should each unit in a building be assigned a unique identifier, or should the building be assigned a unique identifier and the number of units recorded, which is more analogous to the process used for the Connect America Fund? Is it feasible to record the location of each individual unit within an MTE? What are the trade-offs of identifying a separate latitude/longitude (and perhaps altitude) point for each unit versus recording a single point for the building and its total number of units? The Commission is concerned that the added complexity of identifying individual units as individual locations—far more locations and the need to differentiate not just latitude and longitude, but also potentially altitude—would outweigh any benefits. The Commission seeks comment on this assumption.

86. Further, the Commission seeks comment on whether to identify each location as a residential or business

location, which the Broadband Mapping Coalition claims to be a “critical step to ensure that datasets can be appropriately selected and calibrated.”

87. The Commission also seeks comment on how to ensure the quality of the Fabric. The Commission notes that there are different types of errors possible in such a database, for example, incorrectly counting a structure that cannot have a broadband service installation as a location, such as a dilapidated house or a shed. Another type of error could be to exclude locations that should be included, such as a home in a heavily forested area that does not appear on satellite imagery. Finally, there also could be errors about the characteristics of a location, such as identifying the wrong building from among several on a parcel as the one that is broadband serviceable. Given the potential for errors, what data sources and methods can the Commission staff use to verify the accuracy of the Fabric? Should 2020 Census data, the National Address Database, Open Address Database, and/or other sources be used? Should staff manually verify a statistically valid sample of locations in the database? If so, what methods should they use for that verification? The Commission seeks comment on these and other approaches to ensure that the Fabric is accurate.

G. Enforcement

88. In the *Second Report and Order*, the Commission adopts the Broadband DATA Act requirement that it is unlawful to willfully and knowingly, or recklessly, submit information or data that is materially inaccurate or incomplete with respect to the availability or the quality of broadband internet access service. The Commission seeks comment on several aspects of the Broadband DATA Act’s enforcement requirement. As an initial matter, how should the Commission determine whether an entity or individual “willfully and knowingly” or “recklessly” submitted inaccurate or incomplete information?

89. “Willfully and knowingly” seems to presume that such information was submitted intentionally, and the Commission seeks comment on the evidence needed to prove an entity or individual’s intent. The Commission has generally found intent in cases where a false statement is “coupled with proof that the party . . . [knew] of its falsity.” In addition, the Commission notes that other statutes that it enforces include a similar standard of proof. For example, section 510(a) of the Communications Act similarly provides that the United States may seize

equipment that is used or sold “with willful and knowing intent to violate” section 301 or 302a of the Communications Act. Should the Commission apply “willfully and knowingly” in the same manner in this context? “Recklessly” suggests something less than intent yet more than mere negligence. What evidence would the Commission need to show that an entity or individual recklessly submitted materially inaccurate or incomplete information?

90. The Commission also seeks comment on the definition of “materially inaccurate or incomplete.” What level of inaccuracy or incompleteness does the information submitted to the Commission have to reach before it should be considered material? Could it involve just one location or must there be multiple locations involved for the inaccurate or incomplete information to be material? The Commission asks whether it should adopt a quantitative or qualitative standard for determining materiality and what that standard should be. In addition, the Commission notes that § 1.17 of its rules require that truthful and accurate statements be provided to the Commission in investigatory and adjudicatory matters. Specifically, § 1.17(a)(2) makes it unlawful to “provide material factual information that is incorrect or omit material information.” The Commission has held that a false statement may constitute an actionable violation of that rule, even absent an intent to deceive, if it is provided without a reasonable basis for believing that the statement is correct and not misleading.

91. The Commission seeks comment on the scope of the information subject to the enforcement requirements. The Broadband DATA Act makes it unlawful to submit “information or data . . . that is materially inaccurate or incomplete information or data with respect to availability of broadband internet access or the quality of service with respect to broadband internet access service.” Because these are the only two types of information required to be reported under the Broadband DATA Act, should enforcement of the prohibition in the Broadband DATA Act be limited to any data or information supplied in biannual Digital Opportunity Data Collection filings? Or, could enforcement be brought against availability and quality of service data submitted in other contexts (*e.g.*, the challenge process, the crowdsourcing process, by governments or third parties pursuant to 47 U.S.C. 642(a)(2))? The Commission also seeks comment on whether the reference in section 803 of

the Broadband DATA Act to the submission of “information and data under this title” applies to filings that are not specifically contemplated by the Act (e.g., the proposed mandatory submission of speed-test data by providers).

92. *Penalties for the submission of materially inaccurate or incomplete data.* The Commission also seeks comment on the scope of appropriate penalties for submitting materially inaccurate or incomplete information, including any civil penalties under the Commission’s rules or other applicable statutes and rules. Should the Commission establish a base forfeiture amount, subject to adjustment pursuant to section 503(b) of the Act? If so, what should that base amount be? The Commission seeks comment on the recommendation from the State of Colorado that enforcement actions should include making the provider ineligible to receive USF funds and/or a forfeiture of previously committed USF funds. The Commission also seek comment on the proposal of the Next Century Cities that the Commission should set a “simple and transparent standard that offers multiple warnings before an escalating set of sanctions that takes into account the geographic reach of a provider.” Would such an approach send an appropriate signal to filers regarding the importance of their filings and the need for them to ensure their accuracy? Alternatively, should the Commission look at a provider’s filing as a singular whole or do it need to consider whether a filing could have multiple omissions or inaccurate data that could each be considered a separate violation?

93. The Commission proposes to adopt an approach that properly distinguishes between those entities that make a conscientious, good faith effort to provide accurate data and those that fail to take their reporting obligations seriously or affirmatively manipulate the data being reported. The Commission agrees with the Broadband Mapping Coalition that reporting entities that make a good faith effort to comply fully and carefully with reporting obligations should not be sanctioned if their data prove to be flawed in some way, provided that any errors be quickly and appropriately addressed. The Commission also agrees with commenters who argue that, while providers are responsible for submitting accurate Digital Opportunity Data Collection data, an excessively aggressive enforcement stance could lead providers to be overly cautious in their filings and possibly distort the

coverage maps. The Commission seeks comment on this approach.

94. Finally, the Commission seeks comment on whether section 803 of the Broadband DATA Act is an exclusive remedy for all actions under that law or whether behavior that may be actionable under existing provisions of the Communications Act or its rules remain subject to enforcement under the Commission’s general section 503 authority. For example, under rule 1.17(a)(2), provision of written information to the Commission without a reasoned basis is actionable under the Commission’s existing authority today. How should this, and other existing provisions, apply?

95. Penalties for failure to file. Similar to the conclusion that the Commission reached in the *Digital Opportunity Data Collection Order and Further NPRM*, it proposes that a failure to timely file required data in the new Digital Opportunity Data Collection may lead to enforcement action and/or penalties as set forth in the Communications Act and other applicable laws. The Commission seeks comment on the specific penalties that should be imposed if a provider fails to timely submit its Digital Opportunity Data Collection filings. In instances in which enforcement action and/or penalties are appropriate, should the Commission propose higher fine levels for either failures to file or for misrepresentation of material data? We note that we have the discretion to upwardly or downwardly adjust from the base forfeiture, taking into account the particular facts of each individual case. The Commission’s Forfeiture Policy Statement and Amendment of Section 1.80 of the Rules to Incorporate the Forfeiture Guidelines, *Report and Order*, 62 FR 43474, Aug. 14, 1997, 12 FCC Rcd 17087, 17098–99, para. 22 (1997). How should the Commission address the extent of untimeliness?

96. *Filing corrected data.* The Commission proposes that providers must revise their Digital Opportunity Data Collection filings any time they discover an inaccuracy, omission, or significant reporting error in the original data that they submit, whether through self-discovery, the crowdsourcing process, Commission discovery, or otherwise. In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission sought comment on how quickly providers should be required to correct any data where they do not refute a lack of coverage. While several commenters argued that providers should be allowed to file any corrections at their next Digital Opportunity Data Collection filing

opportunity, the Commission proposes instead that providers should file corrections within 45 days of their discovery of incorrect data. The Commission proposes that any corrected filings be accompanied by the same level of certifications that accompany the original filings and further propose that, for calculation of the statute of limitations, the one-year limit would begin to accrue on the date of the corrected filing, where the correction was timely under the Commission’s rules. The Commission believes that this timing would help ensure that the most accurate data possible are available at any particular time. The Commission seeks comment on this proposal and on any better alternatives.

97. *Scope of Required Corrections.* The Commission asked in the *Digital Opportunity Data Collection Order and Further NPRM* whether providers should be required to refile earlier Digital Opportunity Data Collection reports where it is determined that current availability data are incorrect. Based on that record, the Commission proposes that corrections generally should be forward-looking only, although providers must reflect in their next biannual filing any corrections made as a result of the challenge or crowdsourcing processes. The Commission seeks comment on this proposal and any better alternatives.

H. Details on the Creation of Coverage Maps

98. In the *Second Report and Order*, the Commission adopted requirements pursuant to the Broadband DATA Act to take the granular broadband availability data submitted by providers and others and create the Broadband Map and two different maps depicting the availability of, respectively, fixed and mobile broadband internet access service. The Broadband DATA Act requires that the Broadband Map depict “the extent of the availability of broadband internet access service in the United States, without regard to whether that service is fixed broadband internet access service or mobile broadband internet access service, which shall be based on data collected by the Commission from all providers.” The Commission proposes to implement this by publishing aggregated broadband availability data in the Broadband Map that does not distinguish between fixed or mobile data. With regard to the other two maps, the Commission proposes to create maps that identify carrier-specific fixed and mobile coverage data, including reported technologies and speeds by provider. The Commission seeks comment on these proposals and if there

are other steps it should take to ensure that it fulfills the requirements of the Broadband DATA Act in connection with these maps. Are there other features or datasets that would be helpful to inform the Commission and the public with regard to broadband availability?

I. Technical Assistance

99. Pursuant to the Broadband DATA Act, the Commission must hold annual workshops for Tribal governments in each of the 12 Bureau of Indian Affairs regions to provide technical assistance with the collection and submission of data. In addition, every year the Commission, in consultation with the Tribes, must review the need for continued workshops. The Commission seeks comment on the type of technical assistance the Tribes will need to help them collect and submit data under the Broadband DATA Act's provision allowing State, local, and Tribal government entities that are primarily responsible for mapping or tracking broadband internet access service coverage in their areas to provide verified data for use in the coverage maps.

100. The Broadband DATA Act also requires the Commission to establish a process in which a provider that has fewer than 100,000 active broadband internet access service connections may request and receive assistance from the Commission with respect to GIS data processing to ensure that the provider is able to comply with the Broadband DATA Act in a timely and accurate manner. In response to the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission received several comments asking it to provide technical assistance to small providers. Subject to receiving adequate funding to support it, the Commission proposes to make service-desk help available, as well as providing clear instructions on the form for the Digital Opportunity Data Collection, to aid providers in making their filings. The Commission seeks comment on the extent of such technical assistance and any other help that small providers will need to comply with the Broadband DATA Act.

101. Pursuant to the Broadband DATA Act, the Commission also must provide technical assistance to consumers and State, local, and Tribal governments with respect to the challenge process, which must include detailed tutorials and webinars and the provision of Commission staff to provide assistance throughout the challenge process. The Commission seeks comment on the type of technical

assistance with the challenge process that it should provide pursuant to this requirement, taking into account the current lack of funding for the Commission to implement the provisions of the Broadband DATA Act.

J. Form 477 Reforms

102. Pursuant to the Broadband DATA Act, not later than 180 days after the Commission's broadband internet access service collection rules take effect, the Commission must: (1) Reform the Form 477 broadband deployment service availability collection process to achieve the purposes of the Broadband DATA Act in a manner that enables the comparison of data and coverage maps produced before the implementation of the Broadband DATA Act with data and coverage maps produced after implementation of the Broadband DATA Act and maintains the public availability of broadband internet access service deployment data; and (2) harmonize reporting requirements and procedures regarding the deployment of broadband internet access service that are in effect before the new rules are effective with those in effect after the new rules are effective. The measures the Commission proposes in this *Third FNPRM* would only increase the granularity of broadband availability data that the Commission collects so that comparison of new availability data with the data currently collected would only require the aggregation of the new data to the geographic scale currently employed. The Commission proposes to publish the new broadband availability data it collects in aggregated forms, so as to allow comparisons with the data it collects now. The Commission believes that these measures will comply with the requirements under the Broadband DATA Act concerning the ability to compare the new and existing data. The Commission seeks comment on this conclusion and, to the extent that commenters disagree, it seeks comment on any measures it should adopt to ensure compliance with this requirement of the Broadband DATA Act.

1. Mobile Subscriber Data

103. In the *Digital Opportunity Data Collection Order and Further NPRM*, the Commission made several changes to its collection of mobile voice and broadband subscriber data in order to obtain more granular data and to improve the usefulness of such data. The Commission required mobile providers to submit broadband and voice subscriber information at the census-tract level based on the subscriber's place of primary use for

postpaid subscribers and based on the subscriber's telephone number for prepaid and resold subscribers. Under the *Digital Opportunity Data Collection Order and Further NPRM*, the revised mobile broadband and voice subscription reporting requirements were to take effect for submissions filed on June 30, 2020. The Broadband DATA Act directs the Commission to "continue to collect and publicly report subscription data that the Commission collected through the Form 477 broadband deployment service availability process, as in effect on July 1, 2019."

104. The Commission interprets the plain language of the Broadband DATA Act as requiring the collection of Form 477 subscription information pursuant to the rules in effect on July 1, 2019, which is before the date the *Digital Opportunity Data Collection Order and Further NPRM* was adopted. The Commission therefore proposes that for Form 477 filings as of December 31, 2020 and beyond, mobile providers report subscription data under the rules in effect on July 1, 2019 and not under the rule changes adopted in the *Digital Opportunity Data Collection Order and Further NPRM*. While the Broadband DATA Act generally addresses reporting requirements for broadband and not voice service, in order to avoid having potentially inconsistent reporting requirements for mobile broadband and voice subscriptions, the Commission proposes that, going forward, both mobile voice and mobile broadband subscribership data be reported under the Form 477 rules in effect on July 1, 2019. The Commission seeks comment on this proposal and its interpretation of the Broadband DATA Act.

2. Sunsetting FCC Form 477 Census Block Reporting for Fixed Providers

105. In order to ensure continuity in its fixed broadband deployment data, the Commission proposes to continue the current census-based deployment data collection under Form 477 for at least one reporting cycle after the new granular reporting collection commences. The Commission seeks comment on sunsetting the census-block broadband deployment reporting in the FCC Form 477 and the timing of doing so.

106. Pursuant to §§ 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated in the **DATES** section of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See *Electronic Filing of*

Documents in Rulemaking Proceedings, 63 FR 24121 (1998).

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

- *Paper Filers:* Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

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

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.

- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street SW, Washington, DC 20554.

- Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19. See FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy, Public Notice, DA 20-304 (March 19, 2020). <https://www.fcc.gov/document/fcc-closes-headquarters-open-window-and-changes-hand-delivery-policy>.

107. *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 (voice), 202-418-0432 (tty).

108. In addition to filing comments with the Secretary, a copy of any comments on the Paperwork Reduction Act information collection modifications proposed herein should be submitted to the Commission via email to PRA@fcc.gov and to Cathy.Williams@fcc.gov or Nicole.Ongele@fcc.gov. Include in the comments the OMB control number.

II. Procedural Matters

Initial Regulatory Flexibility Analysis

109. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the 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 this *Third FNPRM*. The Commission requests written public comment on this IRFA, including any alternative proposals that will reduce the impact on small entities. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *Third FNPRM*. The Commission will send a copy of the *Third FNPRM*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the *Third FNPRM* and IRFA (or summaries thereof) will be published in the **Federal Register**.

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

110. The Commission continues its ongoing efforts to collect accurate and granular broadband deployment data so that it can bring broadband to those areas most in need of it. In the *Third FNPRM*, the Commission raises issues for consideration and seeks comment on additional steps it can take to obtain more reliable data on the availability and quality of service of broadband internet access service and how it should implement the requirements in the Broadband DATA Act. Specifically, the Commission seeks comment about the standards for collecting and disseminating availability and quality of service data from providers on a biannual basis. Further, the Commission asks about a range of options for verifying the data submitted by providers, including a challenge process, an engineering certification for biannual filers, and obtaining data from government entities and certain third parties. The Commission also provides tentative conclusions and seeks comment on how to implement provider coverage map verification methods for mobile services and on how best to use mobile data. While some of the tools the Commission requests comment on are required by the Broadband DATA Act, the Commission also inquires about various ways to use other data sources to verify the accuracy of provider coverage maps. Further, the Commission seeks comment on the details for establishing the Broadband Serviceable Location Fabric (Fabric) and for the creation of coverage maps depicting broadband availability. Finally, the Commission asks about enforcement issues if providers either fail to make their required filings or they submit materially inaccurate or incomplete data.

B. Legal Basis

111. 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, as amended, 47 U.S.C. 151-155, 201-206, 214, 218-220, 251, 252, 254, 256, 303(r), 332, 403, 405, 641-646.

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

112. 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 the Small Business Administration (SBA).

1. Total Small Entities

113. *Small Businesses, Small Organizations, Small Governmental Jurisdictions.* The Commission's actions, over time, may affect small entities that are not easily categorized at present. The Commission therefore describes here, 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 the 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 28.8 million businesses.

114. 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." Nationwide, as of August 2016, there were approximately 356,494 small organizations based on registration and tax data filed by nonprofits with the Internal Revenue Service (IRS).

115. 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 2012 Census of Governments indicate that there were 90,056 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States. Based on this data, the Commission estimates that at least 49,316 local government jurisdictions fall in the category of “small governmental jurisdictions.”

2. Broadband Internet Access Service Providers

116. To ensure that this IRFA describes the universe of small entities that its action might affect, the Commission discusses in turn several different types of entities that might be providing broadband internet access service.

117. *Internet Service Providers (Broadband)*. Broadband internet service providers include wired (e.g., cable, DSL) and VoIP service providers using their own operated wired telecommunications infrastructure fall in the category of Wired Telecommunication Carriers. Wired Telecommunications Carriers are comprised of 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 telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies. The SBA size standard for this category classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees. Consequently, under this size standard the majority of firms in this industry can be considered small.

118. *Internet Service Providers (Non-Broadband)*. Internet access service providers such as Dial-up internet service providers, VoIP service providers using client-supplied telecommunications connections, and internet service providers using client-supplied telecommunications connections (e.g., dial-up ISPs) fall in the category of All Other Telecommunications. The SBA has developed a small business size standard for All Other Telecommunications, which consists of all such firms with gross annual receipts of \$32.5 million or less. For this category, U.S. Census Bureau data for 2012 show that there were 1,442 firms that operated for the entire year. Of

these firms, a total of 1,400 had gross annual receipts of less than \$25 million. Consequently, under this size standard, a majority of firms in this industry can be considered small.

3. Wireline Providers

119. *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.” The SBA has developed a small business size standard for Wired Telecommunications Carriers, which consists of all such companies having 1,500 or fewer employees. U.S. Census Bureau data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees. Thus, under this size standard, the majority of firms in this industry can be considered small.

120. *Local Exchange Carriers (LECs)*. Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. The closest applicable NAICS Code category is Wired Telecommunications Carriers. Under the applicable SBA size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, U.S. Census data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees. Thus, under this category and the associated size standard, the Commission estimates that the majority of local exchange carriers are small entities.

121. *Incumbent Local Exchange Carriers (Incumbent LECs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange services. The closest applicable NAICS Code category is Wired Telecommunications Carriers.

Under the applicable SBA size standard, such a business is small if it has 1,500 or fewer employees. According to U.S. Census Bureau data for 2012, 3,117 firms operated in that year. Of this total, 3,083 operated with fewer than 1,000 employees. Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by its actions. According to Commission data, 1,307 Incumbent LECs reported that they were incumbent local exchange service providers. Of this total, an estimated 1,006 have 1,500 or fewer employees. Thus, using the SBA’s size standard, the majority of Incumbent LECs can be considered small entities.

122. *Competitive Local Exchange Carriers (Competitive LECs)*, *Competitive Access Providers (CAPs)*, *Shared-Tenant Service Providers*, and *Other Local Service Providers*. Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate NAICS Code category is Wired Telecommunications Carriers and under that size standard, such a business is small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2012 indicate that 3,117 firms operated during that year. Of that number, 3,083 operated with fewer than 1,000 employees. Based on these data, the Commission concludes that the majority of Competitive LECs, CAPs, Shared-Tenant Service Providers, and Other Local Service Providers, are small entities. According to Commission data, 1,442 carriers reported that they were engaged in the provision of either competitive local exchange services or competitive access provider services. Of these 1,442 carriers, an estimated 1,256 have 1,500 or fewer employees. In addition, 17 carriers have reported that they are Shared-Tenant Service Providers, and all 17 are estimated to have 1,500 or fewer employees. Also, 72 carriers have reported that they are Other Local Service Providers. Of this total, 70 have 1,500 or fewer employees. Consequently, based on internally researched FCC data, the Commission estimates that most providers of competitive local exchange service, competitive access providers, Shared-Tenant Service Providers, and Other Local Service Providers are small entities.

123. *Interexchange Carriers (IXCs)*. Neither the Commission nor the SBA has developed a definition for Interexchange Carriers. The closest NAICS Code category is Wired Telecommunications Carriers. The applicable size standard under SBA rules consists of all such companies

having 1,500 or fewer employees. U.S. Census Bureau data for 2012 indicate that 3,117 firms operated during that year. Of that number, 3,083 operated with fewer than 1,000 employees. According to internally developed Commission data, 359 companies reported that their primary telecommunications service activity was the provision of interexchange services. Of this total, an estimated 317 have 1,500 or fewer employees. Consequently, the Commission estimates that the majority of interexchange service providers are small entities.

124. *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 size standard under SBA rules is the category of Wired Telecommunications Carriers. Under the size standard for Wired Telecommunications Carriers, such a business is small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees. Thus, under this size standard, the majority of firms in this industry can be considered small.

125. According to Commission data, 33 carriers have reported that they are engaged in the provision of operator services. Of these, an estimated 31 have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that the majority of OSPs are small entities.

126. *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. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers and the applicable small business size standard under SBA rules consists of all such companies having 1,500 or fewer employees. U.S. Census data for 2012 indicate that 3,117 firms operated during that year. Of that number, 3,083 operated with fewer than 1,000 employees. According to Commission data, 284 companies reported that their primary telecommunications service activity was the provision of other toll carriage. Of these, an estimated 279 have 1,500 or fewer employees. Consequently, the

Commission estimates that most Other Toll Carriers are small entities.

4. Wireless Providers—Fixed and Mobile

127. The broadband internet access service provider category covered by this Order 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, the Commission notes 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.

128. *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 appropriate size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees. For this industry, U.S. Census data for 2012 show that there were 967 firms that operated for the entire year. Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1,000 employees or more. Thus, under this category and the associated size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities.

129. The Commission's own data—available in its Universal Licensing System—indicate that, as of August 31, 2018, there are 265 Cellular licensees that will be affected by its actions. The Commission does not know how many of these licensees are small, as the Commission does not collect that information for these types of entities. Similarly, according to internally-developed Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and

Specialized Mobile Radio (SMR) Telephony services. Of this total, an estimated 261 have 1,500 or fewer employees, and 152 have more than 1,500 employees. Thus, using available data, the Commission estimates that the majority of wireless firms can be considered small.

130. *Wireless Communications Services*. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined “small business” for the wireless communications services (WCS) auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” as an entity with average gross revenues of \$15 million for each of the three preceding years. The SBA approved these small business size standards. In the Commission's auction for geographic area licenses in the WCS there were seven winning bidders that qualified as “very small business” entities, and one that qualified as a “small business” entity.

131. *1670–1675 MHz Services*. This service can be used for fixed and mobile uses, except aeronautical mobile. An auction for one license in the 1670–1675 MHz band was conducted in 2003. One license was awarded. The winning bidder was not a small entity.

132. *Wireless Telephony*. Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. The closest applicable SBA category is Wireless Telecommunications Carriers (except Satellite). Under the SBA small business size standard, a business is small if it has 1,500 or fewer employees. For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year. Of this total, 955 firms had fewer than 1,000 employees and 12 firms had 1,000 employees or more. Thus, under this category and the associated size standard, the Commission estimates that a majority of these entities can be considered small. According to Commission data, 413 carriers reported that they were engaged in wireless telephony. Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees. Therefore, more than half of these entities can be considered small.

133. *Broadband Personal Communications Service*. The broadband personal communications services (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The

Commission initially defined a “small business” for C- and F-Block licenses as an entity that has average gross revenues of \$40 million or less in the three previous calendar years. For F-Block licenses, an additional small business size standard for “very small business” was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years. These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA. No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that claimed small business status in the first two C-Block auctions. A total of 93 bidders that claimed small business status won approximately 40% of the 1,479 licenses in the first auction for the D, E, and F Blocks. On April 15, 1999, the Commission completed the reauction of 347 C-, D-, E-, and F-Block licenses in Auction No. 22. Of the 57 winning bidders in that auction, 48 claimed small business status and won 277 licenses.

134. On January 26, 2001, the Commission completed the auction of 422 C and F Block Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in that auction, 29 claimed small business status. Subsequent events concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant. On February 15, 2005, the Commission completed an auction of 242 C-, D-, E-, and F-Block licenses in Auction No. 58. Of the 24 winning bidders in that auction, 16 claimed small business status and won 156 licenses. On May 21, 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction No. 71. Of the 12 winning bidders in that auction, five claimed small business status and won 18 licenses. On August 20, 2008, the Commission completed the auction of 20 C-, D-, E-, and F-Block Broadband PCS licenses in Auction No. 78. Of the eight winning bidders for Broadband PCS licenses in that auction, six claimed small business status and won 14 licenses.

135. *Specialized Mobile Radio Licenses.* The Commission awards “small entity” bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than \$15 million in each of the three previous

calendar years. The Commission awards “very small entity” bidding credits to firms that had revenues of no more than \$3 million in each of the three previous calendar years. The SBA approved these small business size standards for the 900 MHz Service. The Commission held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction began on December 5, 1995, and closed on April 15, 1996. Sixty bidders claiming that they qualified as small businesses under the \$15 million size standard won 263 geographic area licenses in the 900 MHz SMR band. The 800 MHz SMR auction for the upper 200 channels began on October 28, 1997, and was completed on December 8, 1997. Ten bidders claiming that they qualified as small businesses under the \$15 million size standard won 38 geographic area licenses for the upper 200 channels in the 800 MHz SMR band. A second auction for the 800 MHz band was held on January 10, 2002, and closed on January 17, 2002, and included 23 BEA licenses. One bidder claiming small business status won five licenses.

136. The auction of the 1,053 800 MHz SMR geographic area licenses for the General Category channels was conducted in 2000. Eleven bidders won 108 geographic area licenses for the General Category channels in the 800 MHz SMR band and qualified as small businesses under the \$15 million size standard. In an auction completed in 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were awarded. Of the 22 winning bidders, 19 claimed small business status and won 129 licenses. Thus, combining all four auctions, 41 winning bidders for geographic licenses in the 800 MHz SMR band claimed status as small businesses.

137. In addition, there are numerous incumbent site-by-site SMR licenses and licensees with extended implementation authorizations in the 800 and 900 MHz bands. The Commission does not know how many firms provide 800 MHz or 900 MHz geographic area SMR service pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than \$15 million. One firm has over \$15 million in revenues. In addition, the Commission does not know how many of these firms have 1,500 or fewer employees, which is the SBA-determined size standard. The Commission assumes, for purposes of this analysis, that all of the remaining extended implementation authorizations are held by small entities, as defined by the SBA.

138. *Lower 700 MHz Band Licenses.* The Commission previously adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits. 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. A “very small business” is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years. Additionally, the lower 700 MHz Service had a third category of small business status for Metropolitan/Rural Service Area (MSA/RSA) licenses—“entrepreneur”—which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years. The SBA approved these small size standards. An auction of 740 licenses (one license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)) commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were won by 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business, or entrepreneur status and won a total of 329 licenses. A second auction commenced on May 28, 2003, closed on June 13, 2003, and included 256 licenses: 5 EAG licenses and 476 Cellular Market Area licenses. Seventeen winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses. On July 26, 2005, the Commission completed an auction of five licenses in the Lower 700 MHz band (Auction No. 60). There were three winning bidders for the five licenses. All three winning bidders claimed small business status.

139. In 2007, the Commission reexamined its rules governing the 700 MHz band in the *700 MHz Second Report and Order* (72 FR 48814, Aug. 24, 2007). An auction of 700 MHz licenses commenced January 24, 2008, and closed on March 18, 2008, which included 176 Economic Area licenses in the A Block, 734 Cellular Market Area licenses in the B Block, and 176 EA licenses in the E Block. Twenty winning bidders, claiming small business status (those with attributable average annual gross revenues that exceed \$15 million

and do not exceed \$40 million for the preceding three years) won 49 licenses. Thirty-three winning bidders claiming very small business status (those with attributable average annual gross revenues that do not exceed \$15 million for the preceding three years) won 325 licenses.

140. *Upper 700 MHz Band Licenses.* In the 700 MHz *Second Report and Order*, the Commission revised its rules regarding Upper 700 MHz licenses. On January 24, 2008, the Commission commenced Auction 73 in which several licenses in the Upper 700 MHz band were available for licensing: 12 Regional Economic Area Grouping licenses in the C Block, and one nationwide license in the D Block. The auction concluded on March 18, 2008, with 3 winning bidders claiming very small business status (those with attributable average annual gross revenues that do not exceed \$15 million for the preceding three years) and winning five licenses.

141. *700 MHz Guard Band Licensees.* In 2000, in the 700 MHz Guard Band Order (65 FR 17594, April 4, 2000), the Commission adopted size standards for “small businesses” and “very small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years. Additionally, a very small business is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years. SBA approval of these definitions is not required. An auction of 52 Major Economic Area licenses commenced on September 6, 2000, and closed on September 21, 2000. Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001 and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.

142. *Air-Ground Radiotelephone Service.* The Commission previously used the SBA’s small business size standard applicable to Wireless Telecommunications Carriers (except Satellite) for this service. The appropriate size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees. For this

industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year. Of this total, 955 firms had fewer than 1,000 employees and 12 had employment of 1,000 employees or more. There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and the Commission estimates that almost all of them qualify as small entities under the SBA definition.

143. For purposes of assigning Air-Ground Radiotelephone Service licenses through competitive bidding, the Commission has defined “small business” as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding \$40 million. A “very small business” is defined as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding \$15 million. The SBA approved these definitions. In May 2006, the Commission completed an auction of nationwide commercial Air-Ground Radiotelephone Service licenses in the 800 MHz band (Auction No. 65). On June 2, 2006, the auction closed with two winning bidders winning two Air-Ground Radiotelephone Services licenses. Neither of the winning bidders claimed small business status.

144. *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)). For the AWS–1 bands, 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. For AWS–2 and AWS–3, although the Commission does not know for certain which entities are likely to apply for these frequencies, it notes that the AWS–1 bands are comparable to those used for cellular service and personal communications service. The Commission has not yet adopted size standards for the AWS–2 or AWS–3 bands but proposes to treat both AWS–2 and AWS–3 similarly to broadband PCS service and AWS–1 service due to the comparable capital requirements and other factors, such as issues involved in relocating incumbents and developing markets, technologies, and services.

145. *3650–3700 MHz band.* In March 2005, the Commission released a *Report and Order and Memorandum Opinion and Order* (70 FR 24712, May 11, 2005)

that provides for nationwide, non-exclusive licensing of terrestrial operations, using contention-based technologies, in the 3650 MHz band (*i.e.*, 3650–3700 MHz). As of April 2010, more than 1,270 licenses have been granted and more than 7,433 sites have been registered. The Commission has not developed a definition of small entities applicable to 3650–3700 MHz band nationwide, non-exclusive licensees. However, the Commission estimates that the majority of these licensees are internet Access Service Providers (ISPs) and that most of those licensees are small businesses.

146. *Fixed Microwave Services.* Microwave services include common carrier, private-operational fixed, and broadcast auxiliary radio services. They also include the Local Multipoint Distribution Service (LMDS), the Digital Electronic Message Service (DEMS), and the 24 GHz Service, where licensees can choose between common carrier and non-common carrier status. At present, there are approximately 36,708 common carrier fixed licensees and 59,291 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. There are approximately 135 LMDS licensees, three DEMS licensees, and three 24 GHz licensees. The Commission has not yet defined a small business with respect to microwave services. The closest applicable SBA category is Wireless Telecommunications Carriers (except Satellite), and the appropriate size standard for this category under SBA rules is that such a business is small if it has 1,500 or fewer employees. For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year. Of this total, 955 firms had fewer than 1,000 employees and 12 had employment of 1,000 employees or more. Thus, under this SBA category and the associated size standard, the Commission estimates that a majority of fixed microwave service licensees can be considered small.

147. The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus is unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA’s small business size standard. Consequently, the Commission estimates that there are up to 36,708 common carrier fixed licensees and up to 59,291 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services that may be small and may be affected by the

rules and policies adopted herein. The Commission notes, however, that the common carrier microwave fixed licensee category does include some large entities.

148. *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)). In connection with the 1996 BRS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of no more than \$40 million in the previous three calendar years. The BRS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs). Of the 67 auction winners, 61 met the definition of a small business. BRS also includes licensees of stations authorized prior to the auction. At this time, the Commission estimates that of the 61 small business BRS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent BRS licensees that are considered small entities. After adding the number of small business auction licensees to the number of incumbent licensees not already counted, the Commission finds that there are currently approximately 440 BRS licensees that are defined as small businesses under either the SBA or the Commission’s rules.

149. In 2009, the Commission conducted Auction 86, the sale of 78 licenses in the BRS areas. The Commission offered three levels of bidding credits: (1) A bidder with attributed average annual gross revenues that exceed \$15 million and do not exceed \$40 million for the preceding three years (small business) received a 15% discount on its winning bid; (2) a bidder with attributed average annual gross revenues that exceed \$3 million and do not exceed \$15 million for the preceding three years (very small business) received a 25% discount on its winning bid; and (3) a bidder with attributed average annual gross revenues that do not exceed \$3 million for the preceding three years (entrepreneur) received a 35% discount on its winning

bid. Auction 86 concluded in 2009 with the sale of 61 licenses. Of the ten winning bidders, two bidders that claimed small business status won 4 licenses; one bidder that claimed very small business status won three licenses; and two bidders that claimed entrepreneur status won six licenses.

150. In addition, the SBA’s Cable Television Distribution Services small business size standard is applicable to EBS. There are presently 2,436 EBS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities. Thus, the Commission estimates that at least 2,336 licensees are small businesses. Since 2007, Cable Television Distribution Services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: “This industry comprises 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 telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies.” The SBA has developed a small business size standard for this category, which is: All such firms having 1,500 or fewer employees. To gauge small business prevalence for these cable services the Commission must, however, use the most current census data that are based on the previous category of Cable and Other Program Distribution and its associated size standard: All such firms having \$13.5 million or less in annual receipts. For this industry, U.S. Census data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees. Thus, the majority of these firms can be considered small.

5. Satellite Service Providers

151. *Satellite Telecommunications Providers.* This category 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 category has a small business size standard of \$32.5 million or less in average annual receipts, under SBA rules. For this category, U.S.

Census Bureau data for 2012 show that there were a total of 333 firms that operated for the entire year. Of this total, 299 firms had annual receipts of less than \$25 million. Consequently, the Commission estimates that the majority of satellite telecommunications providers are small entities.

152. *All Other Telecommunications.* The “All Other Telecommunications” category is comprised of entities that are 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. Establishments providing internet services or voice over internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry. The SBA has developed a small business size standard for “All Other Telecommunications,” which consists of all such firms with gross annual receipts of \$32.5 million or less. For this category, U.S. Census Bureau data for 2012 show that there were 1,442 firms that operated for the entire year. Of these firms, a total of 1,400 had gross annual receipts of less than \$25 million. Consequently, a majority of “All Other Telecommunications” firms potentially affected by the Commission’s action can be considered small.

6. Cable Service Providers

153. Because section 706 of the Act requires the Commission to monitor the deployment of broadband using any technology, it anticipates that some broadband service providers may not provide telephone service. Accordingly, the Commission describes below other types of firms that may provide broadband services, including cable companies, MDS providers, and utilities, among others.

154. *Cable and Other Subscription Programming.* This industry comprises 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 size standard for this industry establishes as small, any company in this category which has annual receipts of \$38.5 million or less. According to 2012 U.S. Census Bureau data, 367 firms operated for the entire year. Of that number, 319 operated with annual receipts of less than \$25 million a year and 48 firms operated with annual receipts of \$25 million or more. Based on this data, the Commission estimates that the majority of firms operating in this industry are small.

155. *Cable Companies and Systems (Rate Regulation)*. The Commission has developed its own small business size standards 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. Industry data indicate that there are currently 4,600 active cable systems in the United States. Of this total, all but nine cable operators nationwide are small under the 400,000-subscriber size standard. In addition, under the Commission's rate regulation rules, a "small system" is a cable system serving 15,000 or fewer subscribers. Current Commission records show 4,600 cable systems nationwide. Of this total, 3,900 cable systems have fewer than 15,000 subscribers, and 700 systems have 15,000 or more subscribers, based on the same records. Thus, under this standard as well, the Commission estimates that most cable systems are small entities.

156. *Cable System Operators (Telecom Act Standard)*. The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1% 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." There are approximately 52,403,705 cable video subscribers in the United States today. Accordingly, an operator serving fewer than 524,037 subscribers shall be deemed a small operator if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate. Based on available data, the Commission finds that all but nine incumbent cable operators are small entities under this size standard. The Commission notes that it neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million.

Although it seems certain that some of these cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million, the Commission is 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.

7. All Other Telecommunications

157. *Electric Power Generators, Transmitters, and Distributors*. This U.S. industry is comprised of establishments that are primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes entities 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. Entities providing internet services or voice over internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry. The closest applicable SBA category is "All Other Telecommunications". The SBA's small business size standard for "All Other Telecommunications," consists of all such firms with gross annual receipts of \$32.5 million or less. For this category, U.S. Census data for 2012 show that there were 1,442 firms that operated for the entire year. Of these firms, a total of 1,400 had gross annual receipts of less than \$25 million. Consequently, the Commission estimates that under this category and the associated size standard the majority of these firms can be considered small entities.

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

158. The potential modifications proposed in the *Third FNPRM*, if adopted, would impose some new reporting, recordkeeping, or other compliance requirements on some small entities. Specifically, in addition to information adopted in the *Second Report and Order*, the Commission proposes that providers of broadband internet access service submit latency information (for fixed providers), backhaul speed and technology for each base station (for fixed wireless providers), and details of their propagation models (for mobile providers). All providers of broadband internet access service would be

required to provide a certification from a qualified engineer that the information provided in their biannual Digital Opportunity Data Collection Collections filings are true and correct. They also would be able to challenge the broadband coverage maps, providers' availability data, or data in the Fabric.

159. 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 a challenge process and receiving verified data from third parties and governmental mapping entities. The Commission also seeks comment on how to implement provider coverage map verification and enhancement tools for mobile services, including on-the-ground data, infrastructure data, and a challenge process. The adoption of any of these verification processes could subject small entities and other providers to additional submission, recordkeeping, and compliance requirements.

160. In addition, since the Broadband DATA Act grants fixed broadband internet access service providers the ability to submit availability data using a list of addresses or locations, the Commission seeks comment on how to implement a location-based reporting requirement for small entities and other providers. The Commission also seeks comment on whether to impose penalties for providers that file materially inaccurate or incomplete data related to availability or quality of broadband internet access service. The Commission also asks about the scope and timing of filing corrected data when it is determined that a provider's Digital Opportunity Data Collection information is inaccurate or incomplete. If adopted, any of these requirements could impose additional reporting, recordkeeping, or other compliance obligations on small entities.

161. The issues raised for consideration and comment in the *Third 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 *Third FNPRM*. The Commission expects its requests for information on potential burdens on small entities associated with matters raised in the *Third FNPRM* will provide it with information to assist with its evaluation of the cost of compliance on small entities of any reporting,

recordkeeping, or other compliance requirements the Commission adopts.

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

162. None.

List of Subjects in 47 CFR Part 1

Broadband, Broadband Mapping, Communications, Internet, Reporting and recordkeeping requirements, Satellites, Radio, Telecommunications.

Federal Communications Commission.

Marlene Dortch,
Secretary.

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, unless otherwise noted.

■ 2. Amend § 1.7006 by adding paragraph (c) to read as follows:

§ 1.7006 Data verification.

* * * * *

(c) *Challenge process.* Consumers; State, local, and Tribal governmental entities; and other entities or individuals may submit coverage data in the Digital Opportunity Data Collection portal to challenge the accuracy at a location of the coverage maps; any information submitted by a provider regarding the availability of broadband internet access service; or the Fabric.

(1) Challengers must provide in their submissions:

(i) Name and contact information (e.g., address, phone number, email);

(ii) The street address or geographic coordinates (latitude/longitude) of the location(s) at which broadband internet access service coverage is being challenged;

(iii) Name of provider being challenged;

(iv) Category of dispute, selected from pre-established options on the portal;

(v) For customers or potential customers challenging availability or the coverage maps, evidence and details of a request for service (or attempted request for service), including the date, method, and content of the request and details of the response from the provider, while for non-customers challenging availability or the coverage maps, evidence showing no availability

at the disputed location (e.g., screen shot, emails). For consumers seeking to challenge mobile broadband coverage map data, information regarding the available mobile broadband service;

(vi) For challengers disputing locations in the Broadband Location Fabric, details and evidence about the disputed location;

(vii) For customer or potential customer availability or coverage map challengers, a representation that the challenger resides or does business at the location of the dispute or is authorized to request service there. For consumers seeking to challenge mobile broadband coverage map data, a representation that the challenger is a subscriber of the provider who is the subject of the challenge;

(viii) 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; and

(ix) For consumers disputing mobile broadband throughput speeds, speed test evidence. For governmental and other entities disputing mobile broadband throughput speeds, speed test measurement data showing measured throughput speeds in the area they wish to challenge. Governmental and other entities must conduct speed tests using a device certified by the service provider that is the subject of the challenge as compatible with its service and must conduct speed tests outdoors and between the hours of 6:00 a.m. and 12:00 a.m. (midnight) local time. Governmental and other entities must also substantiate speed test data by the certification of a qualified engineer or official.

(2) The online portal shall alert a provider if there has been a challenge submitted against it.

(3) For availability and coverage map challenges, within 30 days of receiving an alert, a provider shall reply in the portal by:

(i) Accepting the allegation(s) raised by the challenger, in which case the provider shall submit a correction for the challenged location in the online portal within 30 days of its portal response; or

(ii) Denying the allegation(s) raised by the challenger, in which case the provider shall, within 60 days after providing notice of its rejection in the portal:

(A) Provide evidence to the challenger that the provider serves (or could serve) the challenged location. For consumer

challenges involving the delivered speeds associated with a mobile broadband service, provide evidence that the provider has evaluated the speed of its service at the location of the dispute and determined that the delivered speeds of the service match the speeds indicated on the provider's coverage map. For governmental and other entity challenges involving the delivered speeds associated with a mobile broadband service, provide comprehensive on-the-ground data, or a statistically valid and sufficient sample of such data to verify coverage maps in the challenged area;

(B) Indicate in the online portal that such communication to the challenger was made; and

(C) Attempt to resolve the dispute with the challenger.

(4) Failure to respond to the challenger within the applicable timeframes shall result in a default finding against the provider, resulting in mandatory corrections to the provider's Digital Opportunity Data Collection information as requested by the challenger. Providers shall submit any such corrections within 30 days of the missed reply deadline or the Commission will make the corrections on its own and incorporate such change into the coverage maps or Broadband Location Fabric.

(5) Once a provider submits its response, the location shall be identified on the coverage maps as "in dispute/pending resolution."

(6) If the parties are unable to reach consensus within 60 days after submission of the provider's reply in the portal, then the Commission will review the evidence and make a determination, based on a preponderance of the evidence standard with the burden of proof on the challenger, either:

(i) In favor of the challenger, in which case the provider shall update its Digital Opportunity Data Collection information within 30 days of the decision; or

(ii) In favor of the provider, in which case the location will no longer be subject to the "in dispute/pending resolution" designation on the coverage maps.

(7) For challenges to the Fabric, the Commission shall resolve such challenges within 60 days of receiving the filing.

(8) The provider shall retain for its records, for at least six months after the challenge dispute is resolved, any evidence showing that it actually serves (or could serve) the location being challenged, as well as documentation regarding its communication with the challenger.

(9) Government entities (State, local, Tribal) may file challenges in bulk, but each challenge must contain the requirements set forth in paragraph (c)(1) of this section.

(10) 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)),

the name of the provider, and any relevant details concerning the basis for the challenge.

■ 3. Amend § 1.7009 by adding a sentence at the end of paragraph (a) and adding paragraph (b) to read as follows:

§ 1.7009 Enforcement.

(a) * * * Such action may lead to enforcement action and/or penalties as

set forth in the Communications Act and other applicable laws.

(b) Failure to make the Digital Opportunity Data Collection filing in accordance with this subpart may lead to enforcement action pursuant to the Communications Act of 1934, as amended, and any other applicable law.

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