

EXHIBIT F

**MOBILITY FUND PHASE II
COVERAGE MAPS INVESTIGATION**

STAFF REPORT

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I. INTRODUCTION

1. Bridging the digital divide is the Federal Communications Commission’s top priority, and accurate broadband deployment data are critical to this mission. As part of the Commission’s ongoing effort to reform universal service funding of mobile wireless services and focus subsidies on unserved areas rather than on areas that already have service, the Commission unanimously adopted a new data collection of 4G Long-Term Evolution (LTE) mobile broadband coverage maps and a challenge process to determine areas eligible for support in the Mobility Fund Phase II (MF-II) auction. The largest mobile providers supported both this data collection and the challenge process. After mobile providers submitted coverage maps to the Commission and during the challenge process, some parties raised concerns regarding the accuracy of the maps submitted by providers. Based on these parties’ complaints and its own review of the record, staff became concerned that maps submitted by Verizon, U.S. Cellular, and T-Mobile overstated their coverage and thus were not accurate reflections of actual coverage.

2. Mobile providers are responsible for submitting accurate coverage maps in accordance with the Commission’s rules and orders. In response to these concerns and based upon a preliminary staff review of the challenger data, on December 7, 2018, the Commission launched an investigation into whether one or more major mobile providers violated the requirements of the one-time collection of coverage data. The investigation was led by the Rural Broadband Auctions Task Force in coordination with the Office of Economics and Analytics, Enforcement Bureau, Wireless Telecommunications Bureau, Wireline Competition Bureau, and the Office of Engineering and Technology. Commission staff initially requested information directly from several providers in order to understand providers’ mapping processes, and later issued subpoenas to Verizon and U.S. Cellular.

3. The Commission dispatched Enforcement Bureau field agents to conduct speed tests of the Verizon, U.S. Cellular, and T-Mobile networks. Commission field agents measured on-the-ground network performance in 12 states across six drive test routes,¹ conducting a total of 24,649 tests and driving nearly 10,000 miles in the course of this testing. Field agents also conducted 5,916 stationary speed tests at 42 distinct locations in nine states. Commission staff analyzed the speed test data from both the staff tests and MF-II challengers' speed tests and compared these test data with the maps submitted for the MF-II data collection as well as with maps providers had previously submitted to the Commission in other proceedings. This report documents the steps and processes undertaken by staff to investigate the coverage maps, analyzes speed tests taken by staff and submitted by challengers, and explains why discrepancies may exist between the submitted maps and actual coverage.

4. Through the investigation, staff discovered that the MF-II coverage maps submitted by Verizon, U.S. Cellular, and T-Mobile likely overstated each provider's actual coverage and did not reflect on-the-ground performance in many instances. Only 62.3% of staff drive tests achieved at least the minimum download speed predicted by the coverage maps—with U.S. Cellular achieving that speed in only 45.0% of such tests, T-Mobile in 63.2% of tests, and Verizon in 64.3% of tests. Similarly, staff stationary tests showed that each provider achieved sufficient download speeds meeting the minimum cell edge probability in fewer than half of all test locations (20 of 42 locations). In addition, staff was unable to obtain any 4G LTE signal for 38% of drive tests on U.S. Cellular's network, 21.3% of drive tests on T-Mobile's network, and 16.2% of drive tests on Verizon's network, despite each provider reporting coverage in the relevant area.

5. The Commission and the public must be able to rely on the deployment data that providers submit to the Commission. Inaccurate data jeopardize the ability of the Commission to focus our limited universal service funds on the unserved areas that need the most support. Accordingly, and considering the findings in this report, the Rural Broadband Auctions Task Force makes the following recommendations:

6. *First*, the Commission should terminate the MF-II Challenge Process. The MF-II coverage maps submitted by several providers are not a sufficiently reliable or accurate basis upon which to complete the challenge process as it was designed. The MF-II Challenge Process was designed to resolve coverage disputes regarding generally reliable maps; it was not designed to correct generally overstated coverage maps.

7. *Second*, the Commission should release an Enforcement Advisory on broadband deployment data submissions, including a detailing of the penalties associated with filings that violate federal law, both for the continuing FCC Form 477 filings and the new Digital Opportunity Data Collection. Overstating mobile broadband coverage misleads the public and can misallocate our limited universal service funds, and thus it must be met with meaningful consequences.

8. *Third*, the Commission should analyze and verify the technical mapping data submitted in the most recent Form 477 filings of Verizon, U.S. Cellular, and T-Mobile to determine whether they meet the Form 477 requirements. Staff recommends that the Commission assemble a team with the requisite expertise and resources to audit the accuracy of mobile broadband coverage maps submitted to the Commission. The Commission should further consider seeking appropriations from Congress to carry out drive testing, as appropriate. While Form 477 currently affords providers significant discretion in

¹ Although staff focused its testing on these six drive test routes in particular states, some tests were taken in neighboring states along several test routes. Specifically, a portion of tests were taken in Arizona on the New Mexico test route; in Kansas, New Mexico, and Texas on the Oklahoma test route; in Wyoming and North Dakota on the Montana test route; and in Massachusetts and New Hampshire on the Vermont test route. Tests on the Alabama and Arizona drive test routes were taken entirely within those states.