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April 20, 2016

By ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

Re: WC Docket No. 05-25; RM-10593

Dear Ms. Dortch:

On behalf of AT&T and CenturyLink, I hereby submit the attached Second Supplemental Declaration of Mark Israel, Daniel Rubinfeld, and Glenn Woroch ("Israel-Rubinfeld-Woroch Second Supplemental Decl."). The Commission's original releases of data last fall established that competitive carriers have deployed facilities-based networks in the vast majority of census blocks that contain special access demand.[1] The Commission recently released new tables, however, which for the first time provide the *exact distance* of each competitor's fiber network from each unique building with special access demand (within a 1000-meter radius).[2] As the attached declaration shows, these new, more precise data show even more dramatically that the vast majority of locations with special access demand are extremely close to multiple facilities-based competitors – indeed, in most cases, within a few hundred feet.

[1] *See* Mark Israel, Daniel Rubinfeld, and Glenn Woroch, "White Paper: Competitive Analysis of the FCC's Special Access Data Collection," at 16-17 (filed Jan. 28, 2016) ("Israel-Rubinfeld-Woroch Decl.").

[2] FCC, "FCC Special Access Data Collection Project" at 1 (circulated April 4, 2016) ("Cross-Walk Table Delivered to NORC on March 30, 2016: The table provides the shortest distance between each filer's fiber network and the building, though fiber networks more than 1000m from the building were not analyzed. The table contains three fields: BuildingID, which identifies the building; filer_frn, which identifies the competitive provider's fiber network; and DistanceToFiber_Meters, which identifies the distance in meters between the competitive provider's fiber network and the building.").

To begin with, much of the CLEC advocacy on these points fundamentally mischaracterizes how the special access marketplace works. As Professors Israel, Rubinfeld, and Woroch have explained, special access transactions typically exhibit the characteristics of a bidding market.[3] Competitive providers build extensive fiber networks that pass in *close proximity* to the locations that have special access demand. When the opportunity arises, companies bid for the right to serve customers in a building. If a competitive provider wins the business, it then constructs laterals from its fiber network to that building. Accordingly, as the Department of Justice has repeatedly found, special access competition from traditional CLECs constrains ILEC prices in any building that is sufficiently *near* their competitive sunk network facilities, even if those CLECs have not already constructed connections to that building.[4] One of the CLECs' own experts, Professor Baker, has agreed that competition from nearby CLECs constrains ILEC pricing in a given building.[5]

The question, therefore, is not how many competitors have already built a connection into a building (as the CLECs argue),[6] but whether competitors have deployed sunk fiber networks that are close enough to serve that building with the construction of a lateral. On that score, it has been clear for some time that the data collection overwhelmingly refutes the CLECs' case. As Professors Israel, Rubinfeld, and Woroch have previously shown, competitors have deployed their own competitive facilities in more than 95.2 percent of the census blocks nationwide that contain special access demand, and those census blocks, in turn, account for more than 97 percent of the total special access connections and almost 99 percent of business establishments.[7]

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[3] *See* Israel-Rubinfeld-Woroch Decl. at 8-10.

[4] *See*, *e.g.*, Memorandum Opinion and Order, *AT&T Inc. and BellSouth Corp. Application for Transfer of Control*, 22 FCC Rcd. 5662, ¶¶ 41-42, 46 & nn.111-14 (2007) (describing and adopting "screens" employed by DOJ to determine whether a building could be served by alternative facilities, which recognize that competitors with facilities near a building can and do compete for customers in that building).

[5] *See* Declaration of Jonathan B. Baker on Market Power in the Provision of Dedicated (Special Access) Services, *Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Service*, WC Docket No. 05-25; RM-10593, at ¶¶ 40 & n.37, 43 & n.40 (filed Jan. 27, 2016) ("Baker Decl.").

[6] *See, e.g.*, Declaration of Stanley M. Besen and Bridger M. Mitchell, attached to Comments of Sprint Corporation (filed Jan. 27, 2016).

[7] Israel-Rubinfeld-Woroch Decl. at 16-17. These figures include cable company connection data from the National Broadband Plan mapping project, but even if those data are excluded, the data collection still shows that competitive providers have deployed facilities-based networks in more

Census blocks with special access demand are quite small: the median size of all MSA census blocks for which providers reported a special access location is 0.02 square miles.[8] Thus, the Commission's original data releases already made clear that competitors have generally deployed fiber at ranges within which the CLECs acknowledge they are typically willing to construct laterals.[9]

The new tables showing precise distances, however, confirm much more dramatically that the vast majority of locations with special access demand have competitive fiber even closer than the census-block-level data suggested. The Commission's new table shows that buildings that have only an ILEC connection are, on average, only 364 feet from the closest CLEC fiber network.[10] The distribution of these distances is even more striking: half of these "ILEC-only" buildings are within *88 feet* of the nearest CLEC network, and 75 percent are within 456 feet.[11] These new data show – quite clearly – that the great majority of buildings with special access demand are *very* close to a competitive fiber network and, by any reasonable standard, are within easy range of a lateral extension. And, these calculations are based solely on the Commission's own data collection, which excludes all cable special access services offered over hybrid fiber/cable facilities, as well as the substantial growth in all competitive networks that has occurred since 2013.

Some CLECs have insisted that the Commission should consider a location competitive only if there are *two* or more CLECs in or near that location. Professors Israel, Rubinfeld, and

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than 80 percent of census blocks with special access demand, covering more than 88 percent of special access locations and over 92 percent of business establishments. *Id.* at 17.

[8] *Id.* at 11 & n.19 (noting that the median is a better measure because 75 percent of the metropolitan census blocks with special access service have an area less than 0.0746 square miles, which is in the range of about half of the mean size). Indeed, two thirds of census blocks with special access demand in MSAs contain a *single building*. *See* Reply Declaration of Mark Israel, Daniel Rubinfeld & Glenn Woroch, *Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Service*, WC Docket No. 05-25; RM-10593, at ¶ 4 (filed Feb. 19, 2016) ("Israel-Rubinfeld-Woroch Reply Decl.").

[9] Israel-Rubinfeld-Woroch Second Supplemental Decl. at ¶ 10.

[10] *Id.* at ¶ 5.

[11] *Id.* Slicing the data a slightly different way, more than 71 percent of buildings that currently have only an ILEC connection are within 375 feet of competitive fiber, more than 76 percent are within 500 feet of competitive fiber, and more than 88 percent are within 1000 feet of competitive fiber. *Id.* at ¶ 6.

Woroch have refuted these contentions, and the Department of Justice has consistently held to the contrary in analyzing the special access marketplace.[12] Even so, the newly released tables show that there are in fact two or more CLECs either in or very close to the majority of buildings with special access demand.[13] Moreover, those buildings contain a much larger percentage of the overall demand. In AT&T's region, AT&T serves 85 percent of its total bandwidth in buildings that have at least two additional providers that are either in or have fiber within 1,000 feet of those buildings.[14] In CenturyLink's region, CenturyLink serves 86 percent of its total bandwidth in buildings that have two additional providers at those buildings and/or with fiber within 1,000 feet of the buildings.[15]

Others have suggested that services that offer less than 50 Mbps are not subject to competition. The Commission's new tables refute these contentions as well. For example, 59 percent AT&T's below-50 Mbps services capacity is in buildings that are within 1000 feet of at least two competitors' fiber facilities.[16] The comparable figures for CenturyLink are almost exactly the same.[17]

In short, in light of these new data tables, the Commission cannot credibly deny that the vast majority of special access locations and demand are subject to intense facilities-based competition. The data clearly show that competitors have deployed facilities-based networks

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[12] *Id.* at ¶ 8; *see, e.g.*, Memorandum Opinion and Order, *AT&T Inc. and BellSouth Corp., Application for Transfer of Control*, 22 FCC Rcd 566, at ¶¶ 41-42 (2007) (emphasis added) (discussing DOJ consent decree in which the DOJ found anticompetitive harm to be "unlikely" in buildings where even one additional competitor was actually present, or could reasonably be expected to compete based on distance screens).

[13] Israel-Rubinfeld-Woroch Second Supplemental Decl. at ¶¶ 11-12 (59 percent of buildings with special access demand that are served by an ILEC have two or more competitors in addition to the ILEC within 1000 feet of the building, which drop only to 55 percent for 800 feet and 47 percent for 500 feet).

[14] *Id.* at ¶ 13. This figure is 83 percent for AT&T-served buildings with two additional providers within 800 feet and 78 percent for AT&T-served buildings with two additional providers within 500 feet.

[15] *Id.* These figures are 84 percent for CenturyLink-served buildings with two additional providers within 800 feet and 81 percent for CenturyLink-served buildings with two additional providers within 500 feet. *Id.*

[16] *Id.* at ¶ 14.

[17] *Id.*

that are in, or very close to, most of the buildings served by ILECs. If the Commission intends to follow the data, the only viable and defensible conclusion is that the special access marketplace is robustly competitive.

Sincerely,

/s/ Christopher T. Shenk
Christopher T. Shenk
Counsel for AT&T

Enclosure

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

SECOND SUPPLEMENTAL DECLARATION OF

MARK ISRAEL, DANIEL RUBINFELD AND GLENN WOROCH

April 20, 2016

I. PURPOSE AND SUMMARY

1. At the request of AT&T and CenturyLink, we address the following three topics in this declaration:

- *First*, this declaration summarizes our analysis of the new tables recently released by the Commission showing the distances from buildings with special access demand to competitive fiber facilities.[1] We show that these new tables confirm that competitors have widely deployed fiber facilities close to buildings with special access demand. For instance, these data show that 75 percent of buildings with only an ILEC special access connection are within 500 feet of at least one additional competitor's fiber facilities. As we have previously explained, two competitors (an ILEC and one other competitor) connected to or nearby a building are sufficient to ensure vigorous competition for customers in the building.[2]
- *Second*, this declaration refutes assertions made by certain CLECs that most buildings with special access demand have only one or two providers competing for customers.[3] As we demonstrate below, these assertions are based on the erroneous assumption that only providers that have already deployed fiber connections to a building pose competition for customers in that building. As the FCC, the DOJ, courts, and the competitive provider declarations all concluded, providers also compete for customers and constrain prices in buildings that are nearby their facilities. When those nearby facilities are taken into account, three or more providers (typically an ILEC and two competitors) compete for customers in the vast majority of buildings accounting for the vast majority of special access bandwidth demand. For example, our analysis shows that buildings with three or more competitors account for 85 percent of the special access bandwidth provided by AT&T and 86 percent of the special access bandwidth provided by CenturyLink.

[1] An FCC-created cross-walk file called BuildingDistanceToFiber was added by NORC to the data enclave on March 30, 2016.
[2] Mark Israel, Daniel Rubinfeld and Glenn Woroch, "Competitive Analysis of the FCC's Special Access Data Collection," White Paper (Jan. 28, 2016) ("Israel-Rubinfeld-Woroch White Paper") at pp. 8-10.
[3] *See, e.g.*, the report entitled "Special Access Data Unveiled: Incumbents Overwhelmingly Dominate the Market for Special Access Services" (Apr. 7, 2016) which reproduces market share calculations found in the Declaration of Stanley M. Besen and Bridger M. Mitchell (Jan. 27, 2016) ("Besen and Mitchell Decl."), Table 1. *See* also Comments of Birch Communications, Inc., BT Americas Inc., EarthLink, Inc., and Level 3 Communications, LLC, Special Access for Price Cap Local Exchange Carriers, WC Docket No. 05-25; RM-10593 (Jan. 27, 2016) ("Joint CLECs' Comments") at pp. 30-31; the Declaration of William P. Zarakas and Susan M. Gately ("Zarakas and Gately Decl."), Tables 2, 4, 5 and 6; and Supplemental Declaration of William P. Zarakas (Mar. 23, 2016) ("Zarakas Supp. Decl.").

- *Third*, we explain that the recently submitted analyses by CLECs and their supporters (including the regression analyses submitted by Prof. Baker) are based on outdated data that has since been updated by the Commission.

II. PROXIMITY OF COMPETITIVE FIBER TO BUILDINGS WITH SPECIAL ACCESS DEMAND.

2. We previously demonstrated that special access competition is not limited to those buildings where special access providers have already deployed connections.[4] Rather, as confirmed by the CLECs' own declarants, competitive providers deploy fiber networks in areas where there is demand for special access services, use those networks to compete for customers located in buildings in the vicinity of those fiber networks, and then deploy connections to buildings where they win customers. Accordingly, the Federal Communications Commission ("Commission") and the Department of Justice ("DOJ") have historically rejected analyses of competition in the special access marketplace that rely solely on building connections, focusing instead on whether providers have deployed facilities within the vicinity of buildings with special access demand.[5]

3. In our earlier submissions in this proceeding, we used the Commission's special access data collection ("SADC") to show that competitive providers have deployed facilities in more than 95 percent of all MSA census blocks with special access demand. These census blocks are quite small, and consequently the competitive facilities deployed within these census blocks can generally be extended to all or most buildings within the census blocks.[6] Specifically, we calculated that the median size of all MSA census blocks for which providers reported a special access location is less than 0.02 square miles.[7] In urban areas, two thirds of census blocks contain a single building.[8] As we explained earlier, this implies that if a competitor's facilities

[4] Israel-Rubinfeld-Woroch White Paper at pp. 8-10. *See* also Declaration of Mark Israel, Daniel Rubinfeld, and Glenn Woroch, *Special Access for Price Cap Local Exchange Carriers*, WC Docket No. 05-25; RM-10593, ¶¶ 44-45 (Feb. 19, 2016) ("Israel-Rubinfeld-Woroch Decl."), attached to Reply Comments of AT&T, *Special Access for Price Cap Local Exchange Carriers*, WC Docket No. 05-25; RM-10593 (Feb. 19, 2016); *see, also, id.* ¶ 48 (citing CLEC declarations confirming that providers compete in this way).
[5] *See, e.g.*, Israel-Rubinfeld-Woroch Decl. ¶ 45 (citing FCC and DOJ orders).
[6] Israel-Rubinfeld-Woroch White Paper, at p.11.
[7] Further, 75 percent of the metropolitan census blocks with special access service have an area less than 0.0746 square miles which is in the range of about half of the mean size. Consequently, the median size of a census block better reflects that "average" than the mean size for these data. *See id.* n.19.
[8] *See*, Israel-Rubinfeld-Woroch Decl., ¶ 4.

were located at one corner of a median-sized census block, it would need to extend its facilities by only about 1,000 feet to reach the opposite corner. Of course, there is no reason to believe that competitive providers deploy fiber networks in far corners of census blocks away from the locations they hope to serve. Consequently, we concluded that competitive providers are likely much closer than even the relatively small median size of a census block would indicate.

4. We understand that the Commission collected fiber maps from competitive providers that were used to estimate the distances of competitors' fiber facilities to locations with special access demand.[9] The Commission did not release those fiber maps in the data enclave, citing national security concerns. Instead, the Commission released a table that is intended to provide, based on the fiber maps, the distance of each competitive provider's fiber facilities to buildings with demand for special access services—provided the two are no more than 1,000 meters apart.[10]

5. This newly released table confirms that competitive providers have in fact deployed their fiber facilities far closer to buildings with special access demand than is indicated by census block sizes. In particular, we used this fiber/distance table to compute the average distance of the closest competitive fiber to buildings with special access demand that are served only by ILECs.[11] This analysis shows that, on average, such buildings are within about 364 feet of competitive fiber. The distribution of distances from competitive fiber is shown in the table below. As the table shows, half of these buildings are within 88 feet of competitive fiber facilities and 75 percent of these buildings are within 456 feet of competitive fiber facilities. Moreover, these measured distances are conservatively low because they account only for competitive *fiber* facilities, and do not account for non-fiber competitive facilities, including the hybrid fiber-coaxial facilities used by cable companies to provide special access services.

[9] Table II.A.5 of the SADC.
[10] Our analysis is based on the definition of "building" used by the Commission in its cross-walk tables.
[11] The calculations included in this report were made for all areas served by price cap LECs (whether MSAs or rural service areas), whereas we limited much of the analysis in our previous declarations to MSA areas.

Distances of Competitive Fiber To Buildings Served Only By ILECs

Percentile	Distance to Fiber (Feet) All Areas
25th Percentile	17
50th Percentile	88
75th Percentile	456
90th Percentile	1,107
95th Percentile	1,685
99th Percentile	2,770
Mean	364

Sources: Responses to Questions II.A.4 and II.B.3; FCC Crosswalks IIA04_Building_xWalk_Method2, IIB03_Building_xWalk_Method2, and BuildingDistanceToFiber; U.S. Census Bureau.

Notes:

1) Distribution excludes buildings which the FCC could not identify fiber facilities within 1,000 meters.

2) Excludes buildings exclusively associated with UNE or UCL connections.

3) Buildings served by CLEC affiliates of an ILEC company within the ILEC's serving territory are treated as having an ILEC present.

6. We also computed the percentage of buildings with special access service provided only by ILECs that are within 375, 500, 800, 1,000 and 2,640 feet (0.5 miles) of competitive fiber. As shown in the table below, more than 71 percent of buildings that currently have only an ILEC connection are within 375 feet of competitive fiber, more than 76 percent are within 500 feet of competitive fiber, more than 85 percent are within 800 feet of competitive fiber, more than 88 percent are within 1,000 feet of competitive fiber, and virtually all of these buildings are within 0.5 miles of competitive fiber.[12] We note that the declarations submitted by competitors in this proceeding state that competitors compete for customers within this range of distances from their

[12] We find very similar results when examining just Phase II areas. These metrics are based on the universe of buildings with special access demand as reported in the cross-walk tables released by the Commission on March 30, 2016 that show the distance from each building with special access demand to competitive fiber facilities. Because this table lists only those buildings that have one or more competitive fiber networks within 1,000 meters, the estimates reported in our tables exclude buildings with competitive fiber more than 1,000 meters away. Our analysis identifies a small number of such buildings and consequently including them would not have a significant impact on our results. Of the nearly 757,500 buildings with special access demand that have only an ILEC connection, only about 63,600 buildings (about 8%) are farther than 1,000 meters from competitive fiber.

fiber networks, meaning that these calculations indicate that competitive fiber is relevant for nearly all buildings with special access demand.[13]

Extent of Competitive Fiber To Nearby Buildings Served Only By ILECs

Distance to Fiber (Feet)	Share of Buildings within Distance
375	71.5%
500	76.7%
800	85.1%
1,000	88.5%
2,640 (*i.e.* 0.5 miles)	98.7%

Sources: Responses to Questions II.A.4 and II.B.3; FCC Crosswalks IIA04_Building_xWalk_Method2, IIB03_Building_xWalk_Method2, and BuildingDistanceToFiber; U.S. Census Bureau.

Notes:

1) Shares exclude buildings which the FCC could not identify fiber facilities within 1,000 meters.

2) Excludes buildings exclusively associated with UNE or UCL connections.

3) Buildings served by CLEC affiliates of an ILEC company within the ILEC's serving territory are treated as having an ILEC present.

7. The analyses above focuses on the extent to which ILEC-only buildings have competitive fiber within close proximity. We have also estimated the percentage of all buildings with special access connections (according to the 2013 SADC) served by a non-ILEC, *i.e.*, where a non-ILEC either has a connection or has fiber facilities within using the same distance thresholds as above. This analysis confirms that more than 74 percent of all buildings have a competing provider connection, or are within 375 feet of competitive fiber facilities; 78 percent have a competing provider connection, or are within 500 feet of competitive fiber facilities; over 83 percent have a competing provider connection, or are within 800 feet of competitive fiber facilities; 86 percent have a competing provider connection, or are within 1,000 feet of competitive fiber facilities;

[13] In addition, we note that the figures in the tables above exclude buildings that are only served by a competitive provider. The FCC cross-walk data indicate that approximately 209,000 buildings (or 20 percent of all buildings) which have special access connections are not served by an ILEC, nor through UNE/UCL suppliers. Moreover, as we demonstrated in our initial White Paper, non-ILEC providers have substantially expanded their fiber networks since 2013 (Israel-Rubinfeld-Woroch White Paper, Sect. III.C at pp. 22-25).

and nearly 93 percent have a competing provider connection, or are within a half mile of competitive fiber facilities.[14]

Extent of Competitive Provider Coverage to Buildings

Distance to Fiber (Feet)	Share of Buildings with Competitive Provider at or within Distance
375	74.5%
500	78.1%
800	83.7%
1,000	86.1%
2,640 (*i.e.* 0.5 miles)	92.9%

Sources: Responses to Questions II.A.4 and II.B.3; FCC Crosswalks IIA04_Building_xWalk_Method2, IIB03_Building_xWalk_Method2, and BuildingDistanceToFiber; U.S. Census Bureau.

Notes:

1) Shares include buildings which the FCC could not identify fiber facilities within 1,000 meters.

2) Excludes buildings exclusively associated with UNE or UCL connections.

3) Buildings served by CLEC affiliates of an ILEC company within the ILEC's serving territory are treated as having an ILEC present.

III. THE NUMBER OF COMPETITORS CLOSE TO ILEC BUILDINGS.

8. Some commenters have argued that two or more competitors are needed to achieve a "competitive outcome" and have asserted that most buildings with special access demand are served by only the ILEC, or by the ILEC and just one other provider.[15] We demonstrated in our initial submission, and again in our reply declaration, that competition from even a single competitive special access provider is likely to ensure vigorous competition.[16] Once a provider has deployed special access capacity, it has an incentive to upgrade and expand those facilities to increase capacity. For this reason, each competitor with facilities at or near to a building will typically be able to serve economically all demand in the building. Each competitor, therefore, has a strong economic incentive to compete for all customers in a building. Thus, with even one

[14] This analysis, and all the analyses in this declaration, ignore the actual and potential competition provided by cable business Internet access (*i.e.*, so-called cable "best-efforts") services.
[15] *See, e.g.*, Besen and Mitchell Decl., Table 1 and ¶¶ 43-48.
[16] Israel-Rubinfeld-Woroch White Paper, Sect. II.B at pp. 8-12 and Israel-Rubinfeld-Woroch Decl., ¶ 19 and ¶¶ 44-50.

competitor connected to (or nearby) a building, customers within the building will generally benefit from vigorous competition among providers attempting to generate additional returns on largely sunk investments.

9. In any event, it is not true that most buildings are served by only an ILEC or only by an ILEC and a single other provider. This assertion is based on two incorrect assumptions: (1) competition occurs only among providers that have already deployed connections to a building, and (2) cable companies do not compete for special access customers.

10. As explained above, providers deploy fiber networks, compete for customers within the vicinity of those fiber networks, and deploy connections to buildings with customers they win. Therefore, the correct measure of the number of competitors at a building is the number of competitors already connected to a building *and/or* that have deployed facilities nearby the building. The CLECs' economic declarant, Prof. Baker, acknowledged the importance of accounting for competition from nearby fiber (which he defined as fiber within about a half mile of a building).[17] And the CLECs themselves agree that they compete for customers in buildings nearby their facilities.[18]

11. Using the Commission's 2013 data collection, including the newly released fiber/distance tables, we estimated the proportion of buildings with special access demand that are served by an ILEC and that also have at least *two* additional competitors, either connected to the building or within 1,000 feet of the building. This analysis shows that 59 percent of buildings with special access demand that are served by an ILEC have two or more competitors in addition to the ILEC. This high percentage changes only slightly when the fiber distances are instead constrained to shorter distances of 800 feet (55 percent) or 500 feet (47 percent), thus demonstrating the robustness of our finding. These figures increase by 24 to 27 percentage points when considering competition from *at least one* additional competitor.

[17] The Declaration of Jonathan B. Baker on Market Power in the Provision of Dedicated (Special Access) Services, *Special Access for Price Cap Local Exchange Carriers*, WC Docket No. 05-25; RM-10593 (Jan. 27, 2016) ("Baker Decl."), at n. 37, n. 40, and ¶ 43.

[18] Declaration of Dan Deem, Douglas Derstine, Mike Kozlowski, Arthur Nichols, Joe Scattareggia, and Drew Smith ("Deem, et al. Decl.") at ¶ 51."), attached to Comments of Windstream Services, LLC, *Special Access for Price Cap Local Exchange Carriers*, WC Docket No. 05-25; RM-10593 (Jan. 27, 2016). *See also*, Declaration of Michael Chambless, *Special Access for Price Cap Local Exchange Carriers*, WC Docket No. 05-25; RM-10593 (Jan. 22, 2016 at ¶ 26.

12. The results are similar when we consider only those buildings in which AT&T or CenturyLink provides special access service as an ILEC. For example, 60 percent of buildings served by AT&T have two or more additional competitors with fiber within 1,000 feet. When the distance threshold is lowered to 800 feet, 56 percent of those buildings have two or more additional competitors; at a threshold of 500 feet, 48 percent have two or more additional competitors. Similarly, for CenturyLink, 55 percent of the buildings it serves have two or more competitors with fiber within 1,000 feet, and 51 percent with fiber within 800 feet, and 43 percent with fiber within 500 feet. These figures increase by 24 to 27 percentage points when considering competition from at least one additional competitor (rather than at least two additional competitors).

13. We also conducted a similar analysis based on the amount of bandwidth that AT&T and CenturyLink provided at buildings where AT&T has and CenturyLink have connections. We found that, of the total special access bandwidth provided by AT&T, 85 percent of that bandwidth was supplied to buildings with two additional providers at those buildings and/or with competitive fiber within 1,000 feet of the buildings. This figure is 83 percent for AT&T-served buildings with two additional providers within 800 feet and 78 percent for AT&T-served buildings with two additional providers within 500 feet.[19] Similarly, 86 percent of CenturyLink's bandwidth was provided at buildings having two (or more) competitive providers within 1,000 feet; 84 percent within 800 feet, and 81 percent within 500 feet. These figures increase by 8 to 13 percentage points when considering competition from at least one additional competitor.

14. Shares for all building classifications and distance thresholds are reported in the table below. The table further identifies the portion of bandwidth of special access service at AT&T and CenturyLink ILEC locations reported in II.A.4 and II.B.3 that are below 50 Mbps and below 10 Mbps. Those calculations show, for instance, that 59 percent of AT&T's aggregate bandwidth from sub-50 Mbps locations are in buildings that have two or more competitors at or within 1,000 feet of its buildings. Similarly, 55 percent of CenturyLink's aggregate bandwidth

[19] Shares of AT&T's and CenturyLink's bandwidth at buildings with two or more competitors in addition to these ILECs were calculated using the carriers' raw submissions of II.A.4 and II.B.3 that were supplied to us directly by AT&T and CenturyLink. We used the raw data to compute the bandwidth figures because the bandwidth data contained in the SADC mask the actual bandwidth of any connection that exceeds 1Gbps.

from sub-50 Mbps locations faces this same extent of competition. The bandwidth shares when we limit to sub-10 Mbps locations are approximately the same as the sub-50 Mbps locations. As expected, the bandwidth shares of AT&T and CenturyLink buildings with one or more providers within the threshold distances are significantly higher. These figures increase by 23 to 28 percentage points when considering competition from at least one additional competitor.

Competition in ILEC Buildings with Two or More Additional Competitors

Share of:	ILEC + 2 or More Providers at or within:		
	1,000 Feet of Building	800 Feet of Building	500 Feet of Building
All ILEC Buildings	59%	55%	47%
AT&T ILEC Buildings	60%	56%	48%
CenturyLink ILEC Buildings	55%	51%	43%
AT&T Bandwidth at its ILEC Buildings	85%	83%	78%
CenturyLink Bandwidth at its ILEC Buildings	86%	84%	81%
AT&T Bandwidth of Sub-50 Mbps Locations at its ILEC Buildings	59%	55%	46%
CenturyLink Bandwidth of Sub-50 Mbps Locations at its ILEC Buildings	55%	52%	44%
AT&T Bandwidth of Sub-10 Mbps Locations at its ILEC Buildings	59%	55%	46%
CenturyLink Bandwidth of Sub-10 Mbps Locations at its ILEC Buildings	53%	49%	41%

Competition in ILEC Buildings with One or More Additional Competitors

Share of:	ILEC + 1 or More Providers at or within:		
	1,000 Feet of Building	800 Feet of Building	500 Feet of Building
All ILEC Buildings	83%	80%	74%
AT&T ILEC Buildings	84%	81%	75%
CenturyLink ILEC Buildings	80%	77%	70%
AT&T Bandwidth at its ILEC Buildings	95%	94%	91%
CenturyLink Bandwidth at its ILEC Buildings	94%	93%	90%
AT&T Bandwidth of Sub-50 Mbps Locations at its ILEC Buildings	82%	79%	73%
CenturyLink Bandwidth of Sub-50 Mbps Locations at its ILEC Buildings	79%	77%	71%
AT&T Bandwidth of Sub-10 Mbps Locations at its ILEC Buildings	83%	80%	74%
CenturyLink Bandwidth of Sub-10 Mbps Locations at its ILEC Buildings	78%	75%	69%

Sources: Responses to Questions II A 1, II B 1, II A 4 and II B 3; AT&T and CenturyLink raw submissions in response to Questions II A 4 and II B 3; FCC Crosswalks IIA04_Building_xWalk_Method2, IIB03_Building_xWalk_Method2, and BuildingDistanceToFiber; U S Census Bureau

Notes:

1) Excludes buildings exclusively associated with UNE or UCL connections

2) Buildings served by CLEC affiliates of an ILEC company within the ILEC's serving territory are treated as having an ILEC present

3) Providers counted by parent company and deduplicated across datasets

15. These metrics understate the actual portion of buildings having special access competitors because they exclude last-mile facilities associated with cable companies' Hybrid-Fiber Coax ("HFC") networks. Cable companies were not required to provide the last-mile portion of their networks to Table II.A.5 and consequently the FCC was unable to construct a cross-walk with distances between buildings and HFC last-mile facilities. Given the small size of the average census block and given the ubiquity of DOCSIS 3.0, the above figures would be even larger if one included last-mile cable facilities' nearby to buildings with ILEC service. If,

furthermore, last-mile copper and fiber facilities that are missing from the SADC were added to the totals, the number of buildings with two or more competitors would be even larger.

IV. THE CLEC ANALYSES ARE BASED ON OUTDATED DATA.

16. Lastly, Prof. Baker's calculation of the portion of buildings served only by an ILEC (or only one ILEC and one competitive provider), and hence several submissions that rely on that calculation, are based on incorrect data.[20] Prof. Baker used the original cross-walks that link special access locations to FCC-designated "buildings."[21] The Commission has since released two updated versions of these tables which contain a different number of ILEC and CLEC building connections and corrects an error in which "multiple locations with the same reported address were not treated as being in the same building."[22] Thus, the computations based on the original cross-walk tables as relied upon by Prof. Baker – which have different numbers for ILEC and CLEC buildings than the more current cross-walk table – are outdated.

17. Finally, it is important to keep in mind that the SADC data were collected for the 2013 calendar year, and that there has been substantial expansion of competitive fiber facilities in the intervening two and half years. The most dramatic evidence of this expansion was registered as rapid growth of Ethernet special access services.[23]

[20] *See* Baker Decl. at Table 1.
[21] This information was contained in two files, IIA04_Building_xWalk and IIB03_Building_xWalk, that were delivered by FCC to NORC on January 12, 2016. .
[22] On February 3, 2016, the Commission released a second building cross-walk table, and on March 10, 2016, the Commission issued a "corrected" version of this second table. *See* FCC Special Access Data Collection Project, "Additional Information on the Data and Information Hosted by NORC (Prepared by the Wireline Competition Bureau Staff)."
[23] *See*, for example, Israel-Rubinfeld-Woroch White Paper at Section III.C. Also, FCC Chairman Wheeler acknowledged the growth of IP-based special access services in his April 8, 2016 blog entitled "Out with the Old, In with the New."

VERIFICATION

I hereby swear under penalty of perjury that, based on the best information available to me, the foregoing is true and correct.

/s/ Mark A. Israel
Mark A. Israel

Dated: April 20, 2016

VERIFICATION

I hereby swear under penalty of perjury that, based on the best information available to me, the foregoing is true and correct.

/s/ Daniel Rubinfeld
Daniel Rubinfeld

Dated: April 20, 2016

VERIFICATION

I hereby swear under penalty of perjury that, based on the best information available to me, the foregoing is true and correct.

/s/ Glenn Woroch
Glenn Woroch

Dated: April 20, 2016