

VERIZON PENNSYLVANIA INC.
STATEMENT NO. 1.0

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DOCUMENT

INVESTIGATION INTO THE
REGULATION OF INCUMBENT LOCAL
EXCHANGE CARRIERS TO UNBUNDLE
NETWORK ELEMENTS

DOCKET NO. I-00030099

VERIZON PENNSYLVANIA INC.

STATEMENT NO. 1.0
(DIRECT TESTIMONY)

WITNESSES: Debra M. Berry
Carlo Michael Peduto, II

DATED: October 31, 2003

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ATTACHMENTS:

- Attachment 1: Map showing locations of CLEC switches being used to provide local service in Pennsylvania
- Attachment 2: Chart showing the results of the Line Count Study with the E911 additions
- Attachment 3: Map illustrating the markets where CLEC activity meets the self-provisioning trigger in Pennsylvania
- Attachment 4 Chart of CLEC tariff references
- Attachment 5: Three maps depicting transport routes by LATA
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- Attachment 7: Copies of the Methods & Procedure for conducting the physical inspections and verification forms
- Attachment 8: CLEC tariff and web pages

1 **I. INTRODUCTION**

2 **Q. MS. BERRY, PLEASE STATE YOUR FULL NAME AND BUSINESS**
3 **ADDRESS.**

4
5 A. My name is Debra M. Berry. My business address is 1717 Arch Street,
6 Philadelphia, Pennsylvania, 19103.

7 **Q. BY WHOM ARE YOU EMPLOYED, AND IN WHAT CAPACITY?**

8
9 A. I am employed by Verizon. My position is Director-Regulatory Planning.

10 **Q. WHAT ARE THE RESPONSIBILITIES OF YOUR CURRENT**
11 **POSITION?**

12
13 A. My responsibilities include developing Verizon's regulatory policies, directing
14 filings, and other regulatory activities involving the Pennsylvania and Delaware
15 State Commissions.

16 **Q. PLEASE BRIEFLY OUTLINE YOUR EXPERIENCE IN THE**
17 **TELECOMMUNICATIONS INDUSTRY AND EDUCATIONAL**
18 **BACKGROUND.**

19
20 A. I joined Diamond State Telephone Company in 1970 where I held a variety of
21 positions including Supervising Service Foreman, supervising installation and repair
22 technicians, and Manager of the Customer Service Center. After a period of time
23 with Diamond State Telephone and then Bell Atlantic in Arlington, Virginia, and
24 BELLCORE in Washington, D.C., I achieved my current position of Director-
25 Regulatory in 1990. I earned a Masters of Business Administration from St.
26 Joseph's University in May 1997.

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1 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PENNSYLVANIA**
2 **PUBLIC UTILITY COMMISSION?**

3
4 A. Yes. I testified before this Commission on behalf of Verizon in the proceeding to set
5 statewide access rates for the two Verizon Pennsylvania companies. I have also
6 testified on behalf of Verizon North in its Chapter 30 case and Verizon PA in its
7 Petition to Amend its Network Modernization Plan. Most recently, I submitted
8 testimony in the Commission's Triennial Review "90-day case."

9 **Q. MR. PEDUTO, PLEASE STATE YOUR FULL NAME AND BUSINESS**
10 **ADDRESS.**

11
12 A. My name is Carlo Michael Peduto, II. I am generally known as "Mike." My
13 business address is 515 Deerhorn Ct., Millersville, MD 21108.

14 **Q. BY WHOM ARE YOU EMPLOYED, AND IN WHAT CAPACITY?**

15
16 A. I am the Managing Principal of Stevton Consulting, LLC. I am providing consulting
17 services to Verizon in this matter. Through Stevton Consulting, I provide a variety
18 of services to the Telcom Industry, including business process re-engineering,
19 consulting on CLEC-ILEC relations, and litigation support, including expert
20 testimony, as in this case.

21 **Q. PLEASE BRIEFLY OUTLINE YOUR EXPERIENCE IN THE**
22 **TELECOMMUNICATIONS INDUSTRY AND EDUCATIONAL**
23 **BACKGROUND.**

24
25 A. I have a Bachelors Degree in Physics-Engineering from Loyola College in
26 Maryland. I was employed by Verizon (and its predecessor companies) from 1973
27 to 2001, in positions of increasing technical and managerial responsibility. From
28 1973 to 1978, I held technical and supervisory positions in central office and outside

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1 plant engineering. After being promoted to the Manager level in December 1978, I
2 was responsible for various operations, including engineering and operations
3 budgets, outside plant construction (field operations), outside plant maintenance
4 (both center and field operations), and switching operations. I was promoted in
5 March 1990 to Director and subsequently held positions in outside plant operations,
6 involving engineering, construction, installation, and maintenance. From 1997 to
7 1999, I was the Director -- Wholesale Operations, where I implemented and then
8 managed the organization formed by Bell Atlantic to serve its wholesale customers,
9 including Resellers and CLECs. After Bell Atlantic's merger with NYNEX, I
10 assumed responsibility for wholesale operations in all fourteen states of the
11 combined companies. In all of these positions, I worked closely with wholesale
12 customers in the provisioning and maintenance of transport services, particularly as
13 competing carriers and wholesale providers aggressively built their transport and
14 loop networks during the "Telecom Boom" of the late 1990s.

15
16 In 1999, I became the Director – Program Management in the Wholesale Services
17 Organization, where I was responsible for implementing key business initiatives for
18 Verizon's Wholesale organization. In that capacity, I worked on-site with a number
19 of CLECs, including Cavalier Telephone and Broadslate Networks, to resolve
20 operational issues between Verizon and these other carriers, including issues
21 concerning transport and loop facilities ordered by the CLECs from Verizon.

22

1 In September 2001, I left Verizon to establish and become managing principal of
2 Stevton Consulting, LLC.

3 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PENNSYLVANIA**
4 **PUBLIC UTILITY COMMISSION?**

5
6 A. Yes. As a Verizon employee, I testified before the Pennsylvania Commission in the
7 271 Hearings. As a consultant, I testified on behalf of Verizon in the Commission's
8 generic proceeding on Unbundled Network Element rates (Docket No. R-
9 00016683).

10 **Q. MS. BERRY AND MR. PEDUTO, WHAT IS THE PURPOSE OF YOUR**
11 **TESTIMONY IN THIS PROCEEDING?**

12
13 A. The purpose of our testimony is to present the evidence demonstrating that under the
14 standards set forth in the Federal Communications Commission's ("FCC") *Triennial*
15 *Review* order ("TRO")¹ Verizon is not required to unbundle mass market switching
16 for the relevant markets or dedicated transport for the specific routes described in
17 our testimony.

18
19 The TRO established a two-step process for demonstrating "no impairment." As a
20 threshold matter, we understand that the Commission *must* find no impairment if
21 certain objective evidentiary "triggers" are satisfied. If the triggers are met, then the
22 Commission is required to find no impairment without further analysis. Only if the

¹ *Review of Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket No. 01-338; *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98; *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, FCC 03-36 (rel. August 21, 2003) ("TRO").

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1 triggers are not met would the Commission proceed to the second step and consider
2 evidence of “potential deployment” of the relevant network elements. For both mass
3 market switching and dedicated transport, this testimony demonstrates that the
4 FCC’s objective triggers are satisfied, and therefore the testimony does not attempt
5 to provide evidence relevant to the second step of “potential deployment.”
6

7 The first section of our testimony addresses the FCC’s “triggers” for mass market
8 switching; it does not address whether future self-deployment of switches to serve
9 mass-market customers in a particular market is economically possible. We
10 describe the two triggers established by the FCC for mass market switching, which
11 are “a principal mechanism for use by states in evaluating whether requesting
12 carriers are in fact not impaired in a particular market.” TRO ¶ 498. A “trigger” is a
13 set of objective standards established by the FCC that, if met, requires the state
14 commission to find “no impairment.” Next, we describe the relevant market
15 definitions for applying the triggers, including the geographic market and the cutoff
16 point for differentiating between “mass market” and “DSL enterprise” customers
17 within the relevant geographic market. Third, we describe the evidence that Verizon
18 has gathered to support its showing under the self-provisioning trigger for mass
19 market switching. Fourth, we identify the markets in Pennsylvania that meet the
20 FCC’s switching trigger based on the evidence. In particular, this testimony will
21 demonstrate that there are a substantial number of CLECs that are using their own
22 switching to serve mass market customers within Verizon’s serving territory in

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1 several Metropolitan Statistical Areas (“MSAs”) in Pennsylvania. As a result, those
2 market areas satisfy the FCC’s switching trigger, both at the MSA level and within
3 Density Cells 1, 2 and 3 within the Philadelphia, Allentown, Reading, Lancaster,
4 Harrisburg, Scranton/Wilkes-Barre and Pittsburgh MSAs.

5
6 The second part of our testimony shows that Verizon is not required to unbundle
7 dedicated transport on the fiber transport routes described here because they meet
8 the objective “triggers” set forth in the FCC’s TRO. The TRO requires a state
9 commission to find that competing carriers are not impaired without access to
10 Verizon’s unbundled dedicated interoffice transmission (or transport) facilities if
11 Verizon meets either of two objective “triggers.” The principal purpose of our
12 testimony is to apply those dedicated interoffice transport triggers in three
13 Pennsylvania LATAs, Philadelphia (which includes Delaware), Pittsburgh, and
14 Capital (LATAs 228, 234, and 226, respectively). We describe the FCC’s
15 “triggers” and explain how they are to be applied, and then we present Verizon’s
16 evidence, drawn largely from internal and public sources, that other carriers have
17 deployed fiber transport routes in Philadelphia, Pittsburgh and Harrisburg meeting
18 one or both of the FCC’s triggers.

19
20 Finally, we briefly address the issue of high capacity loops. The FCC in its
21 *Triennial Review* order established two triggers for the state commission to apply to
22 determine whether competing carriers are impaired without access to Verizon’s

1 unbundled high capacity loops. Therefore, in the third part of our testimony, we
2 explain that because information about where carriers other than Verizon have
3 deployed high capacity loops is almost exclusively within the control of those other
4 carriers, Verizon cannot present a triggers case for high capacity loops before it
5 receives information from those carriers through the discovery process.

6
7 **II. MASS MARKET SWITCHING TRIGGERS**

8
9
10 **Q. PLEASE EXPLAIN THE FCC'S TRIGGER ANALYSIS FOR MASS**
11 **MARKET SWITCHING.**

12
13 A. In the *Triennial Review Order*, the FCC found that “there are few barriers to
14 deploying competitive switches to serve customers in the enterprise market at the
15 DS1 capacity and above, and thus no operational or economic impairment on a
16 national basis.” TRO ¶ 451. By contrast, the FCC determined that, on a national
17 basis, CLECs are impaired without access to unbundled local circuit switching for
18 mass market customers (*i.e.*, residential and business customers served over loops
19 operating below the DS1 level). TRO ¶ 459. Nevertheless, the FCC recognized that
20 “a more granular analysis may reveal that a particular market is not subject to
21 impairment in the absence of unbundled local switching.” TRO ¶ 461. Therefore,
22 the FCC directed the states to apply a two-step process to determine whether there is
23 no impairment in a particular market within a state.

24

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1 First, state commissions must apply two mandatory, objective “triggers,” which look
2 at evidence of actual facilities-based competition in the market. Under the “self-
3 provisioning trigger,” a state “*must* find ‘no impairment’ when three or more
4 unaffiliated competing carriers are serving mass market customers in a particular
5 market with the use of their own switches.” TRO ¶ 501. Under the “competitive
6 wholesale trigger,” states must find no impairment where there are two or more
7 unaffiliated CLECs that offer wholesale switching service to other carriers in a
8 particular market using their own switches. TRO ¶ 504. There are currently few
9 wholesale providers of switching, other than ILECs. Therefore, Verizon is not
10 attempting at this time to make a showing under the competitive wholesale facilities
11 trigger for switching, but will rely instead on the self-provisioning trigger.

12
13 It is only after the Commission has examined the objective trigger evidence, and
14 made a determination that neither trigger is met in a market, that this Commission
15 may then conduct an analysis of the potential for CLECs to deploy their own
16 switches to serve mass market customers in the relevant geographic market, given
17 economic and operational conditions in that market. TRO ¶ 506. Of course, if the
18 triggers have been met – indicating that a number of real world CLECs are already
19 operating their own switches in a market – there is no need to prove in theory that
20 they potentially might operate in that market. Verizon does not intend to offer a
21 potential deployment case in Pennsylvania at this time, and therefore, this testimony
22 does not analyze the potential for new switch deployment in this testimony. It

1 presents only objective evidence of actual existing CLEC switch deployment under
2 the trigger test.

3 **Q. IN APPLYING THE SELF-PROVISIONING TRIGGER, MAY THE**
4 **COMMISSION LOOK AT SUBJECTIVE EVIDENCE OF IMPAIRMENT?**

5 A. No. The self-provisioning trigger is deliberately objective. It is assessed entirely
6 through the application of data, rather than by the consideration of more subjective
7 experiences, theories, estimates, opinions, and predictions. This objectivity allows
8 trigger determinations to be made quickly and accurately, and avoids the need for
9 “protracted proceedings.” TRO ¶ 498. In fact, other than the objective count of
10 CLECs, “states *shall not* evaluate any other factors, such as the financial stability or
11 well-being of the competitive switch providers.” TRO ¶ 500 (emphasis added).

12
13 In its September 17, 2003 *Errata*, the FCC clarified that subjective considerations,
14 such as a CLEC’s economic and operational ability to serve all customers in a
15 market, or a CLEC’s willingness to do so, *do not apply* to the self-provisioning
16 switching trigger. *Errata* at No. 21. Instead, this trigger is straightforward: the
17 Commission *must* find “no impairment” for unbundled switching when three or
18 more unaffiliated competing carriers are serving mass market customers in a
19 particular market, except in extraordinary circumstances, which do not exist in
20 Pennsylvania. TRO ¶ 501.

21
22 **A. Market Definition**
23

1 **Q. HOW IS THE RELEVANT GEOGRAPHIC MARKET DEFINED FOR**
2 **THE TRIGGER ANALYSIS?**

3 A. The FCC instructed the states to apply the switching triggers on a granular basis to
4 each identifiable geographic market in the state. Rule 319(d)(2)(i) provides:

5 Market definition. A state commission shall define the markets in
6 which it will evaluate impairment by determining the relevant
7 geographic area to include each market. In defining markets, a
8 state commission shall take into consideration the locations of
9 mass market customers actually being served (if any) by
10 competitors, the variation in factors affecting competitors' ability
11 to serve each group of customers, and competitors' ability to target
12 and serve specific markets profitably and efficiently using
13 currently available technologies. A state commission shall not
14 define the relevant geographic area as the entire state.

15 47 C.F.R. § 51.319(d)(2)(i). The FCC gave further guidance in the text of the
16 Order, cautioning "states should not define the market so narrowly that a
17 competitor serving that market alone would not be able to take advantage of
18 available scale and scope economies from serving a wider market." TRO ¶ 495.
19 Moreover, the FCC expected that the market definition for switching would be
20 broader than for transport (which is narrowly defined by the FCC on a route-by-
21 route basis), since "a switch can theoretically serve wide areas." TRO ¶ 495
22 n.1536.

23
24 The FCC noted that a state commission may choose to consider various factors,
25 including "how UNE loop rates vary across the state," "how retail rates vary
26 geographically," among other considerations. TRO ¶ 496. However, it is not

1 necessary to reinvent the wheel, since the FCC authorized state commissions to
2 use existing geographic market definitions for the purposes of the trigger analysis.
3 TRO ¶ 496.

4 **Q. WHAT IS THE APPROPRIATE GEOGRAPHIC MARKET DEFINITION**
5 **FOR PENNSYLVANIA?**

6 A. The Commission should adopt an existing geographic market definition for
7 application of the self-provisioning trigger. Among the existing definitions,
8 Metropolitan Statistical Areas (“MSAs”) and Density Cells are the most appropriate.
9 MSAs have well-established geographic boundaries set by the federal Office of
10 Management and Budget (“OMB”) that are available from publicly available
11 sources, and they are specifically designed to capture economic communities of
12 interest.² For this reason, MSAs are often used to define local markets for purposes
13 of telecommunications regulation. For example, the FCC itself has used MSAs for
14 its existing unbundled switching carve-out for end users with 4 or more DS0 lines.³
15 In addition, in its *Pricing Flexibility Order*, the FCC held that “MSAs best reflect
16 the scope of competitive entry, and therefore are a logical basis for measuring the

² See Office of Management and Budget, Standards for Defining Metropolitan and Micropolitan Statistical Areas: Federal Register: December 27, 2000 (Volume 65, Number 249), p. 82238.

³ *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, Third Report and Order and Fourth Notice of Proposed Rulemaking (rel. November 5, 1999) (the “UNE Remand Order”) at ¶¶ 276-98; *Triennial Review Order* at ¶ 497.

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1 extent of competition.”⁴

2

3 Moreover, MSAs meet each of the three criteria for defining the market established
4 by the FCC. MSAs reflect the geographic reach of newspaper, radio, and television
5 advertising. This permits CLECs to “target specific markets economically and
6 efficiently” throughout the MSA. TRO ¶ 495. Second, MSAs strike a sensible
7 balance between the interests of limiting “variation in factors affecting competitors’
8 ability to serve each group of customers” (TRO ¶ 495) and ensuring that the
9 implementation of both the impairment test – and subsequent regulatory relief – do
10 not impose undue administrative burdens on the Commission and the parties. The
11 FCC has found that MSAs are “narrow[] enough so that the competitive conditions
12 within each area are reasonably similar, yet broad[] enough to be administratively
13 workable.” *Id.* at 74. By contrast, “defining geographic areas smaller than MSAs
14 would force incumbents to file additional pricing flexibility petitions, and, although
15 these petitions might produce a more finely-tuned picture of competitive conditions,
16 the record does not suggest that this level of detail justifies the increased expenses
17 and administrative burdens associated with these proposals.” *Id.*

18

19 Third, MSAs are particularly compelling as a market definition in Pennsylvania
20 because they “take into consideration the locations of customers actually being

⁴ *Access Charge Reform*, Fifth Report and Order and FNPRM, 14 FCC Rcd. 14,221 (August 27, 1999) (“*Pricing Flexibility Order*”).

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1 served . . . by competitors.” TRO ¶ 495. The evidence and maps described later in
2 this testimony show an unmistakable correlation between the population centers
3 represented by certain MSAs and the location of customers actually served by
4 competitors using their own switches.

5
6 Within MSAs, the Commission may choose to define the market more narrowly,
7 by differentiating among the pricing Density Cells within those MSAs. As with
8 the MSA as a whole, the evidence presented later in this testimony shows that
9 customers served by self-provisioned CLEC switches within a particular MSA are
10 more concentrated within the more dense Density Cells than in the least dense
11 areas within those MSAs, although facilities-based competition exists in all
12 Density Cells in the state. Therefore, Density Cells also reflect “the locations of
13 customers actually being served” by competitors using their own switches.
14 Moreover, Density Cells satisfy the other two criteria established by the FCC.
15 First, they take into account “variation of factors affecting competitors’ ability to
16 serve each group of customers.” TRO ¶ 495. Both Verizon PA retail rates and
17 UNE loop rates vary by Density Cell, and thus CLECs face similar competitive
18 conditions within Density Cells within a particular MSA. As the FCC recognized,
19 “if UNE loop rates vary substantially across a state, and this variation is likely to
20 lead to a different finding concerning the existence of impairment in different
21 parts of the state, the state commission should consider separating zones with high
22 and low UNE loop rates for purposes of assessing impairment.” TRO ¶ 496

1 n.1538. Moreover, revenue potential and ease of serving customers in an area are
2 likely to vary based on population density, which is already reflected in the
3 existing Density Cell designations established by the Commission. Second,
4 competitors may be able to target particular customers within particular Density
5 Cell rate zones, as the FCC itself recognized. TRO ¶ 495 n. 1539. Therefore,
6 Density Cells within particular MSAs meet the criteria established by the FCC in
7 the Order.

8 **Q. SHOULD THE COMMISSION DEFINE THE RELEVANT**
9 **GEOGRAPHIC MARKET AT THE WIRE CENTER LEVEL?**

10 A. No, it should not. Defining the market at such an overly granular level would
11 completely ignore available scale and scope economies that the CLEC would enjoy
12 by serving a wider market, contrary to the admonition of the FCC. Requiring that
13 the trigger be satisfied in every individual wire center would completely ignore
14 similar competitive conditions in other areas within the same “community of
15 interest” and in adjoining areas with similar densities of customers and potential
16 revenues. Moreover, CLECs do not enter the mass market at the wire center level,
17 nor do they make their decisions to deploy switches to serve a particular market on a
18 wire center-by-wire center basis, or even at the rate center level. As AT&T argued
19 in an arbitration proceeding with Verizon New Jersey before the New Jersey Public
20 Utilities Board, “[e]fficiency demands that CLECs deploy switches to serve broad
21 geographic areas, and not within each specific rate center for which Verizon has

1 built out its network.”⁵ Therefore, wire centers are too small and woefully under-
2 inclusive for purposes of the impairment analysis, and would result in a finding of
3 impairment where there clearly is none based on the objective criteria presented in
4 this testimony.

5 **Q. IN ITS OCTOBER 2, 2003 PROCEDURAL ORDER THIS COMMISSION**
6 **DIRECTED THE PARTIES TO “ADDRESS WHETHER THE**
7 **COMMISSION HAS ALREADY ADOPTED AN APPLICABLE MARKET**
8 **DEFINITION” EITHER IN THE GLOBAL ORDER OR THE BUSINESS**
9 **COMPETITIVE CASE. (P. 14). PLEASE RESPOND.**

10
11 A. The Commission is apparently referring to different standards that were set in those
12 orders based on the customer’s annual total billed revenue (TBR). A TBR standard
13 is not an appropriate means to define the market for purposes of this proceeding,
14 which requires that *geographical* markets be determined. In addition, a standard
15 based on the TBR would be much too complex to administer and could result in
16 arbitrary distinctions between customers that are actually similarly situated. The
17 geographical market Verizon is proposing here is consistent with Verizon’s petition
18 for reconsideration in the Business Competitive Case, where Verizon suggested that
19 to the extent any “geographic line” is to be drawn for partial reclassification
20 purposes, that line is most practically defined according to the geographic
21 boundaries of the Density Cells that this Commission itself established and has
22 relied upon to define Pennsylvania’s telecommunications markets.

⁵ Panel Rebuttal Testimony of AT&T Communications of NJ, L.P. et al., Docket No. TO00110893 (March 18, 2003), at 46.

1 Q. HOW SHOULD THE COMMISSION DIFFERENTIATE BETWEEN
2 MASS MARKET CUSTOMERS AND DS1 ENTERPRISE CUSTOMERS
3 IN PENNSYLVANIA?

4 A. According to the FCC, “DS1 enterprise customers are characterized by relatively
5 intense, often data-centric, demand for telecommunications service sufficient to
6 justify service via high-capacity loops at the DS1 capacity and above.” TRO ¶ 451.
7 Therefore, for the purposes of its impairment analysis, DS1 enterprise customers are
8 “those customers for which it is economically feasible for a competing carrier to
9 provide voice service with its own switch using a DS1 or above loop.” TRO ¶ 451
10 n. 1376.

11

12 Mass market customers, on the other hand, “are analog voice customers that
13 purchase only a limited number of POTS lines, and can only be economically
14 served via DS0 loops.” TRO ¶ 497. “Mass market” refers not only to residential
15 customers, but also to business customers that do not use DS1 capacity facilities.
16 The FCC recognized that, “[a]t some point, customers taking a sufficient number
17 of multiple DS0 loops could be served in a manner similar to that described above
18 for enterprise customers – that is, voice services provided over one or several
19 DS1s, including the same variety and quality of services and customer care that
20 enterprise customers receive.” TRO ¶ 497. However, the FCC left it to the states
21 to determine where the cutoff point should be between mass market and enterprise

1 customers, which “may be the point where it makes economic sense for a multi-
2 line customer to be served via a DS1 loop.” *Id.*

3
4 At its simplest, this “cutoff” should be between customers actually being served
5 with one or more voice grade DS0 circuits and customers actually being served by
6 DS1 loops. It is the objective behavior of the CLEC that should drive the
7 determination of whether or not it “makes economic sense” for that CLEC to
8 serve particular customers over DS1 loops, rather than over multiple voice grade
9 DS0 lines. If a CLEC is currently serving a customer using DS0 loops –
10 regardless of how many – it has already made the determination on its own that it
11 is most economical to serve the customer as a mass-market customer, rather than
12 as a DS1 enterprise customer. In other words, if it made “economic sense” to
13 serve the customer over a DS1, then the CLEC would, in fact, be doing so. This
14 objective test is more reliable, and grounded in the realities of the marketplace,
15 than an arbitrary “cutoff” at a particular number of lines, regardless of whether the
16 customer is actually being served as a DS1 customer. Indeed, AT&T has argued
17 that the FCC should define mass market customers as “any customer location that
18 a CLEC serves with voice-grade loops.” Comments of AT&T Corp. at 204-205,
19 *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange*
20 *Carriers*, WC Docket No. 01-338 (FCC filed Apr. 5, 2003). Moreover, other
21 CLECs have argued for a crossover point as high as 18 lines or more, claiming,

1 for example, that a lower cut-off for mass market customers “does not reflect the
2 real-world economics of serving a customer through self-provisioned switching,
3 and should be changed [to 18 lines] to reflect those economic realities.”
4 Comments of Z-Tel Communications Inc., *Review of the Section 251 Unbundling*
5 *Obligations of Incumbent Local Exchange Carriers*, WC Docket No. 01-338
6 (FCC filed Apr. 5, 2003), at 50-51 (emphasis added).

7
8 Therefore, based on the CLECs own representations, the mass market “cut-off”
9 should reflect the economic realities of serving real world customers – as reflected
10 by the CLECs’ marketplace choice between deploying DS0 loops or DS1 loops to
11 particular customer locations. If the CLEC has made the economic decision to
12 treat the customer as a mass market customer and to serve the customer location
13 using voice-grade loops, then the DS0 lines at that customer location should be
14 counted as such for the purposes of the switching impairment analysis.

15
16 **B. Evidence Of Actual Deployment In Pennsylvania**

17
18 **Q. HAS THERE BEEN SUBSTANTIAL DEPLOYMENT OF CLEC-OWNED**
19 **SWITCHES IN PENNSYLVANIA?**

20 A. Most definitely. The record of competitive switch deployment in Pennsylvania
21 establishes that competitors are already serving customers of all kinds using their
22 own switches on a widespread basis throughout the Commonwealth. Competing
23 carriers operate at least 54 *known* local circuit switches that are physically located

1 within Pennsylvania, and approximately 24 competing carriers of all sizes have
2 deployed local circuit switches in Pennsylvania.⁶ See Table 1 below.

Table 1. CLECs That Have Deployed Local Circuit Switches in Pennsylvania			
CLEC	Switch Total	CLEC	Switch Total
AT&T	10	US LEC	2
		Broadstreet	1
Adelphia (Telcove)	7	Broadview	1
		Cavalier	1
Choice One	4	Connect!	1
WorldCom	4	D&E	1
XO	3	e.spire	1
Allegiance Telecom	2	HTC Communications	1
Corecomm	2	Net2000	1
CTSI	2	PaeTec	1
Focal Communications	2	Penn Telecom	1
Intermedia	2	SBC	1
RCN	2	Winstar	1
<i>Source: February 2003 LERG.</i>			

3 This is consistent with the record nationwide, where competing carriers operate
4 approximately 1,300 circuit switches, including more than 500 within Verizon's
5 30-state region.⁷

⁶ The information in this table reflects data as it appears in the Local Exchange Routing Guide ("LERG"). There may be instances in which a CLEC switch is assigned to a particular CLEC in the LERG, but where it has in fact been assigned for use by another competitive carrier, such as a successor carrier. See Telcordia, February 2003 LERG.

⁷ See Telcordia, February 2003 LERG; New Paradigm Resources Group, Inc. CLEC Report 2003 at Chapter 5.

1

2 In addition, CLEC packet switches are already a very significant competitive
3 alternative to ILEC circuit switches, as the FCC has recognized. Packet switches
4 substitute for circuit switches to the extent that traffic can be routed directly to a
5 packet switch, without first being routed through a circuit switch. All forms of
6 telecommunications traffic can now be transmitted and switched, end-to-end, in
7 digital rather than analog format.

8

9 To illustrate the significant deployment of switches of all kinds, the map attached as
10 Attachment 1 shows the locations of CLEC switches being used to provide local
11 service in Pennsylvania (including packet switches, circuit switches, remote
12 switches and “soft” switches), based on data obtained from the LERG.

13 **Q. ARE CLECS USING THESE SWITCHES TO SERVE MASS MARKET**
14 **CUSTOMERS IN PENNSYLVANIA?**

15 A. Yes, the evidence clearly demonstrates that many of these switches are being used
16 for mass market services, as I explain below. Moreover, CLECs can, and do, serve
17 customers in Pennsylvania using switches located in other states. For example,
18 Cavalier Telephone, LLC-PA serves⁴ a number of exchanges in Pennsylvania using
19 switches that are physically located in Delaware. Indeed, a single switch can serve
20 an entire LATA or state, or multiple LATAs and/or states.⁸ For example, AT&T

⁸ See *UNE Remand Order* ¶ 261 (“[S]witches deployed by competitive LECs may be able to serve a larger geographic area than switches deployed by the incumbent LEC,

1 claims that the switches of its CLEC affiliate, TCG, can “connect virtually any
2 qualifying customer in a LATA.”⁹

3
4 **Q. WHAT TYPE OF EVIDENCE DID VERIZON USE TO SATISFY THE**
5 **SELF-PROVISIONING TRIGGER?**

6 A. Verizon has collected and analyzed data, at the wire center level, using two sources
7 of data maintained by Verizon. First, Verizon used its internal databases to
8 determine where, and to whom, Verizon leases stand-alone UNE loops in
9 Pennsylvania (the “Line Count Study”). Second, in response to the Commission’s
10 Information requests, Verizon used the E911 database to determine the number of
11 residential customers served by carriers that bypass Verizon’s network to serve mass
12 market customers over their own loop facilities (such as cable telephony providers)
13 and to identify those carriers.

14 **Q. HOW DOES THE LINE COUNT STUDY SHOW WHERE CLECS ARE**
15 **PROVIDING THEIR OWN MASS MARKET SWITCHING?**

16 A. Voice service carriers that lease stand-alone UNE loops from Verizon, without
17 unbundled switching from Verizon, are necessarily using their own switches to
18 provide service to the customers connected to those loops. Therefore, to determine
19 where CLECs are serving mass market customers, Verizon identified, by wire
20 center, all CLECs leasing loops below the DS1 level, that is, 2-wire or 4-wire stand-

thereby reducing the direct, fixed cost of purchasing circuit switching capacity and allowing requesting carriers to create their own switching efficiencies.”).

⁹ Panel Direct Testimony of AT&T Communications of NJ, L.P. et al., Docket No. TO00110893 (February 25, 2003), at 75.

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1 alone voice grade loops (including EELs), from Verizon as of June 30, 2003. In
2 addition, Verizon counted the number of individual UNE loops ordered at each
3 customer address (not merely each building address, since there may be multiple
4 customer addresses within a building). Verizon counted affiliated carriers as a single
5 carrier to avoid double-counting affiliates within a particular wire center. In
6 addition, Verizon did not count CLECs that provide solely data services over copper
7 loop facilities, without offering voice services.

8 **Q. DOES THE LINE COUNT STUDY ALONE CAPTURE ALL MASS**
9 **MARKET CUSTOMERS SERVED BY CLECS USING THEIR**
10 **SWITCHES?**

11 A. No. The Line Count Study is under-inclusive because it does not identify CLECs
12 that serve mass market customers using both their own switching and their own loop
13 facilities, thus by-passing Verizon's network entirely. The most obvious of these are
14 cable telephony providers that use their own coaxial cable facilities, along with their
15 own switching, to provide telecommunications services to their (largely) residential
16 customers. In its rules, the FCC expressly includes "intermodal providers of service
17 comparable in quality to that of the incumbent LEC" for the purposes of the
18 switching triggers. 47 C.F.R. § 51.319(d)(2)(iii)(A)(1)-(2). Although the FCC
19 found that wireless service was not yet comparable to ILEC services for the
20 purposes of the triggers and thus it did "not expect state commissions to consider
21 CMRS providers in their application of the triggers," TRO ¶ 1549 n.499, it imposed
22 no such limitation on cable telephony, which offers the same voice quality and

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1 broadband capabilities to customers as traditional voice service over telephone
2 company loops.

3

4 Several major cable operators have upgraded their networks to provide mass-market
5 voice service. Two cable operators – Comcast and Cox – have deployed
6 commercial circuit switched cable telephony throughout much of their service
7 areas,¹⁰ and several others have deployed it on a more limited basis.¹¹ Nationwide,
8 cable telephony is now available to more than 15 million U.S. homes –

¹⁰ See Cox Communications, *The Case For Cable Telephony* at 1 (Apr. 2002) <http://www.cox.com/PressRoom/Case%20for%20Cable%20Telephony.pdf> (“The company installed switches and other necessary telecom equipment and delivers calls over its own broadband network, becoming one of the first companies to offer consumers a competitive choice for telecom services. Along with AT&T Broadband [now Comcast], Cox is one of only two U.S. broadband cable companies widely offering competitive circuit-switched, facilities-based phone service.”); Brian L. Roberts, President, Comcast Corporation, *Opening Statement Before the Senate Subcommittee on Antitrust, Competition and Business, and Consumer Rights* (Apr. 23, 2002) (“We can take advantage of AT&T Broadband’s considerable expertise and experience in providing circuit-switched phone over cable. That will let us give millions more customers a true choice between facilities-based telephone providers.”).

¹¹ See M. Stump and K. Brown, *Comcast Plunges Into Telephony*, *Multichannel News* at 5 (Dec. 24, 2001); *Cabling Home*, *Nashville Bus. J.* at 17 (Feb. 1, 2002); *Eighth Video Competition Report*; T. Kerver, *Operator of the Year*, *Cablevision* (Oct. 22, 2001). There currently are two major cable operators – Comcast and Cox – and a third smaller one, Insight, that are actively deploying circuit-switched cable telephony to new areas. See Yahoo! Business, *AT&T and Comcast Remain On Watch Neg* (Dec. 20, 2001), http://biz.yahoo.com/bw/011220/202353_1.html; K. Darce, *Local Phone Arena Gets New Players*, *Times-Picayune* at 1 (Feb. 8, 2002); Insight Communications, *Services*, <http://www.insight-com.com/services/>.

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1 approximately 15 percent of the mass market.¹² More than three million homes
2 currently subscribe.¹³
3
4 In Pennsylvania, Comcast (formerly AT&T Broadband) has deployed circuit-
5 switched cable telephony in Pittsburgh, where it launched service in
6 December 1999.¹⁴ Comcast is the incumbent cable operator in Pittsburgh with over
7 350,000 cable customers,¹⁵ and the company makes telephony service available to
8 80 percent of subscribers in the city and the surrounding suburbs in Allegheny
9 County.¹⁶ Comcast has a market trial of its voice-over-IP telephony service
10 underway in Philadelphia and has also announced plans to commercially deploy the

¹² Comcast Press Release, *Comcast Full Year and Fourth Quarter Results Meet or Exceed All Operating and Financial Goals* (Feb. 27, 2003); Cox Communications Press Release, *Cox Communications Announces Fourth Quarter Financial Results for 2002; Strong Demand for Cox's Digital Services Builds Solid Foundation for Continued Growth in 2003* (Feb. 12, 2003); Cablevision Systems Press Release, *Cablevision Systems Corporation Reports Fourth Quarter 2002 Financial Results* (Feb. 11, 2003); RCN Press Release, *RCN Announces Fourth Quarter and Year-End 2002 Results* (Mar. 13, 2003); Charter Press Release, *Charter Announces 2002 Operating Results and Restated Financial Results for 2001 and 2000; Company Will Extend Filing of Form 10-K* (Apr. 1, 2003); Insight Communications Press Release, *Insight Communications Announces Fourth Quarter and Year-End 2002 Results* (Feb. 25, 2003); Knology, Inc., Form 10-K (SEC filed Mar. 31, 2003).

¹³ Ind. Anal. & Tech. Div., FCC, *Local Telephone Competition: Status as of December 31, 2002* at Table 5 (June 2003).

¹⁴ CED/iNDEPTH, *Convergence Emergence: The Advanced Services Deployment Handbook* at 18 (Oct. 2002).

¹⁵ P. Sabatini, *Pittsburgh's Premium Cable Upgrade Includes \$5 Fee*, Pittsburgh Post-Gazette (Feb. 19, 2003).

¹⁶ 'New' Comcast Shares Trading, Pittsburgh Business Times (Nov. 19, 2002), <http://pittsburgh.bizjournals.com/pittsburgh/stories/2002/11/18/daily20.html>.

1 service in Philadelphia later in 2003.¹⁷ Comcast's Philadelphia system is comprised
2 of approximately two million cable subscribers.¹⁸

3
4 RCN has deployed its cable telephony service in Philadelphia and the Lehigh
5 Valley.¹⁹ The cable telephony service was launched in Philadelphia in March 2000
6 and Lehigh Valley in 1997.²⁰ RCN's Philadelphia system passes 81,000 homes,²¹
7 and its Lehigh Valley system passes 176,000 homes.²² Indeed, RCN's market share
8 for telephone service in Lehigh Valley reached 16 percent in September 2002.²³

9 **Q. HOW HAS VERIZON IDENTIFIED CUSTOMERS OF CLECS**
10 **BYPASSING ITS NETWORK?**

11 A. To determine the location of these bypass customers, Verizon looked at residential
12 listings in the E911 database for customers of known cable telephony providers in
13 Pennsylvania. The E911 database, however, does not identify the Verizon wire

¹⁷ Rian Wren, Senior Vice President, Comcast, presentation at Comcast Analyst Day (May 16, 2003); CED/iNDEPTH, *Convergence Emergence: The Advanced Services Deployment Handbook* at 18 (Oct. 2002).

¹⁸ Charlie Thurston, President – Advertising Sales, Comcast, presentation at Comcast Analyst Day (May 16, 2003).

¹⁹ CED/iNDEPTH, *Convergence Emergence: The Advanced Services Deployment Handbook* at 18 (Oct. 2002).

²⁰ CED/iNDEPTH, *Convergence Emergence: The Advanced Services Deployment Handbook* at 18 (Oct. 2002).

²¹ C. Berg, *RCN: A Long Road to Profits; Operator of Cable TV, Phone and Internet Services is Deep in Debt*, Morning Call (Allentown, PA) (Sept. 22, 2002).

²² C. Berg, *RCN: A Long Road to Profits; Operator of Cable TV, Phone and Internet Services is Deep in Debt*, Morning Call (Allentown, PA) (Sept. 22, 2002).

²³ C. Berg, *RCN: A Long Road to Profits; Operator of Cable TV, Phone and Internet Services is Deep in Debt*, Morning Call (Allentown, PA) (Sept. 22, 2002).

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1 center areas where the CLEC customers are located. Therefore, Verizon used the
2 LERG database to trace those customers based on their telephone number
3 NPA/NXX. Every NPA/NXX is associated with a Common Language Location
4 Identifier (“CLLI”) code in the LERG, which is used to determine the routing of
5 traffic in the network. Verizon identified the 8-digit CLLI codes associated with the
6 NPA/NXXs assigned to the bypass CLEC customers and used the information to
7 locate the customers in one of two ways. In some cases, the 8-digit CLLI codes are
8 Verizon CLLI codes, which themselves identify the wire center locations of the
9 customers. This occurs where the telephone numbers were originally Verizon
10 numbers, but were ported by Verizon to the CLEC when the customers switched
11 carriers. In other cases, the 8-digit CLLI codes are CLEC CLLI codes. This occurs
12 where the CLEC uses its own NPA/NXX codes to serve its customers. Although the
13 CLEC CLLI codes are not directly associated with particular Verizon wire centers in
14 the LERG, they identify the particular CLEC rate centers where those customers are
15 located. Verizon was then able to identify the Verizon wire centers that fall within
16 the boundaries of those rate centers (also using the LERG), and identified the CLEC
17 as a qualifying carrier for the purposes of the self-provisioning trigger in each of
18 them.

19 **Q. WHAT DO THE LINE COUNT STUDY AND E911 DATA SHOW?**

20 A. The results of the Line Count Study with the E911 additions described above are set
21 forth in the chart attached to this testimony as Attachment 2. In addition, the map
22 attached as Attachment 3 illustrates graphically the markets where, based on this

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1 data, CLEC activity meets the self-provisioning trigger in Pennsylvania. In
2 particular, Attachment 3 shows the number of CLECs serving mass-market
3 customers by wire center within the MSA boundaries in Pennsylvania (as currently
4 defined by OMB) based on the data in Attachment 2. In addition, Attachment 3
5 shows the density zone designation for each wire center within each MSA.²⁴

6
7 As the data and the map demonstrate, Verizon meets the mass market switching
8 trigger in the Density Cell 1, 2 and 3 areas within the Philadelphia, Pittsburgh,
9 Harrisburg, Allentown, Reading, Scranton/Wilkes-Barre, and Lancaster MSAs. In
10 particular, the data show that there are a total of 14 unaffiliated CLECs currently
11 serving mass market customers with their own switches in the state. In addition to
12 the objective evidence that they are serving mass market customers from the Line
13 Count Study and E911 data, each of these carriers holds themselves out as providing
14 voice service to residential or business customers, or both, in Pennsylvania. *See*
15 Attachment 4 (CLEC Tariff References). Of those, 13 are serving mass market
16 customers in the Philadelphia MSA; 8 are serving mass market customers in the
17 Pittsburgh MSA; 5 are serving mass market customers in the Harrisburg MSA; 4 are

²⁴ Verizon has organized the data by wire center for administrative convenience only. The Commission should *not* define the geographic market at the level of individual wire centers, for the reasons we explained earlier in our testimony. Such a definition would ignore available scale and scope economies of serving a wider market, in violation of the FCC's Order. TRO ¶ 495. There is no requirement – nor should there be – that Verizon meet the 3-CLEC threshold in each and every wire center within the relevant market.

1 serving mass market customers in the Reading MSA; 7 are serving mass market
2 customers in the Allentown MSA; 5 are serving mass market customers in the
3 Scranton/Wilkes-Barre MSA; and 4 are serving mass market customers in the
4 Lancaster MSA – all using their own switches. This is more than sufficient to
5 satisfy the self-provisioning trigger in each of these markets.

6
7 **Q. ARE THERE ANY OTHER CARRIERS PROVIDING VOICE SERVICE**
8 **TO MASS MARKET CUSTOMERS IN THE RELEVANT GEOGRAPHIC**
9 **MARKET USING THEIR OWN SWITCHES THAT ARE NOT**
10 **CAPTURED BY THIS DATA?**

11
12 A. Yes. For example, the data do not capture competition from packet-switched,
13 Internet Protocol telephony service, such as the service provided by Vonage – “the
14 broadband phone company.”²⁵ Vonage provides phone service to customers over
15 residential broadband Internet connections, such as cable modem service. In one
16 year, Vonage has gained over 25,000 subscribers nationwide, and transmits 1.5
17 million calls per week over its VoIP network.²⁶ As of May 2003, the company’s
18 stated goal was to acquire 100,000 customers before the end of the year.²⁷

19
20 Vonage represents that its service is not just comparable in quality, but superior to,
21 Verizon service. Vonage refers to itself as an “all-inclusive home phone service”

²⁵ See Vonage, *Vonage DigitalVoice: The Broadband Phone Company*,
<http://www.vonage.com/>.

²⁶ Vonage Press Release, *Vonage Becomes First Broadband Telephony Provider To
Activate 25,000 Lines* (May 22, 2003).

²⁷ See Vonage Press Release, *Vonage Calls the Gardner-Nelson Project* (May 6, 2003).

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1 that is “like the home phone service you have today - only better!”²⁸ It claims to be
2 the “key to easy and affordable communications, by offering flat-rate calling plans
3 that include all of the features, as well as many features not available from Verizon
4 like online voicemail retrieval and area code selection.”²⁹ In addition, the company
5 recently announced a partnership with Intrado to provide 911 emergency calling
6 services to Vonage customers.³⁰

7
8 Vonage is actively marketing its services in Pennsylvania. According to press
9 releases, Vonage launched its DigitalVoice service using VoIP technology in
10 Philadelphia and Pittsburgh in September 2002, and Harrisburg in March 2003.³¹ In
11 August 2003, it “announced the availability of service in Erie, State College and
12 Altoona, Pennsylvania,” enabling Vonage customers throughout Northwestern and
13 Central Pennsylvania [to] keep their current numbers or choose telephone numbers

²⁸ http://www.vonage.com/learn_tour.php.

²⁹ Vonage Press Release, *Vonage DigitalVoice Launches Service in Harrisburg, Pennsylvania* (Mar. 7, 2003) (quoting Vonage chairman and CEO Jeffrey Citron).

³⁰ Vonage Press Release, *Intrado and Vonage Digital Voice Partner To Provide Emergency Calling Solution* (Mar. 25, 2003).

³¹ See Vonage Press Release, *Vonage DigitalVoice Launches Service in Philadelphia* (Sept. 17, 2002); Vonage Press Release, *Vonage DigitalVoice Launches New Phone Service in Pittsburgh* (Sept. 19, 2002); Vonage Press Release, *Vonage DigitalVoice Launches Service in Harrisburg, Pennsylvania* (Mar. 7, 2003). Vonage provides service in the following Pennsylvania area codes: 215, 267, 412, 484, 610, and 717. Vonage, *Available Area Codes*, http://www.vonage.com/area_codes.php.

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1 within the popular (814) area code.”³² Vonage also recently announced a
2 partnership with Armstrong Cable “to deploy broadband telephony service to
3 Armstrong’s cable television customers across five states,” including
4 Pennsylvania.³³ In fact, according to its consumer website, Vonage is currently
5 offering service in substantially all of the 215, 267, 412, 484, 610, 717, 724, and 814
6 area codes in Pennsylvania.³⁴ To date, however, Verizon has not been able to
7 identify the physical location of actual Vonage customers based on Verizon’s own
8 data, and thus Verizon has not counted Vonage toward its trigger showing at this
9 time. The Commission, however, should count Vonage among the carriers
10 providing widespread mass market switched service in Pennsylvania.

11 **Q. ARE THERE ANY OTHER REASONS WHY VERIZON’S TRIGGER**
12 **DATA UNDERCOUNT THE NUMBER OF MASS MARKET**
13 **CUSTOMERS SERVED BY COMPETITIVE SWITCHES?**

14 A. Yes. For example, the Line Count Study and the E911 data do not include business
15 customers of cable telephony providers using their own loop facilities. Although
16 cable networks are ubiquitous in residential markets, they also reach many small
17 business customers. While it is difficult to obtain figures limited to just small
18 businesses, Credit Lyonnais estimates that “six million small- to medium-sized
19 businesses (SMB) are located within a few hundred feet of the local hybrid

³² Vonage Press Release, *Vonage Launches Service in Erie, State College and Altoona, Pennsylvania* (Aug. 14, 2003).

³³ Vonage Press Release, *Vonage Digital Voice Announces Private Label Partnership with Armstrong* (June 9, 2003).

³⁴ http://www.vonage.com/area_codes.php.

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1 fiber/coaxial network . . . [w]ith the current cable infrastructure passing nearly 2.5
2 million SMBs today.”³⁵ By comparison, there are an estimated 10.5 million small
3 and medium businesses nationwide (2.2 million with 5-99 employees; 85,000 with
4 100-999 employees; and 8.2 million characterized as small office/home office).³⁶
5 And, of course, because smaller businesses tend to be concentrated in areas that
6 cable passes already, the percentage of small businesses passed by cable today is
7 even higher than for small and medium-sized businesses combined. Cable operators
8 themselves have acknowledged that there are many businesses that lie on or in close
9 proximity to their networks.³⁷

10

³⁵ J. Shim & R. Read, Credit Lyonnais Securities, *The U.S. Cable Industry – Act I* at 196 (Nov. 20, 2002).

³⁶ Kneko Burney, In-Stat/MDR, *The Big Comeback? Excerpts from ‘Business Broadband in a Changed Economy* at 2, 4 & Fig. 2 (May 2002).

³⁷ See, e.g., A. Figler, *Turning Businesses into Customers*, CableWorld (Dec. 9, 2002) (Charter spokesman David Andersen: “over 600,000 small- and medium-sized businesses located within reach of our networks”); G. Lawyer and C. Wolter, *The Cable Giant Stirs*, Sounding Board Magazine (Dec. 1, 2001), <http://www.soundingboardmag.com/articles/1c1vox.html> (quoting Geoff Tudor, president and CEO, Advent Networks: “Cox realized there were 300,000 small businesses within 50 feet of their coaxial drops, easily reachable. . . That could greatly expand the network’s revenue-generation potential.”); A. Figler, *Turning Businesses into Customers*, CableWorld (Dec. 9, 2002) (quoting Ken Fitzpatrick, senior vice president of commercial services for Time Warner Cable: “[w]e’ve got an infrastructure there that is just ripe for commercial services . . . We pass 1.2 million businesses”); M. Stump, *Road Runner Gears Up ‘Business Class’ Offer*, Multichannel News (Feb. 25, 2002) (quoting Jason Welz, vice president of commercial services for Time Warner Road Runner: “[c]able is not incredibly difficult to get to the business,” and “[m]ost RBOCs, CLECs and ILECs have ignored that space.”).

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1 Nevertheless, neither the Line Count Study nor the E911 database identifies the
2 location of these customers. While they may appear as business listings in the E911
3 database, those listings do not differentiate between mass market business customers
4 and DS1 enterprise customers. Rather than make an arbitrary assumption about how
5 many of these business customers are mass market, Verizon is not counting them in
6 its analysis at this time.

7
8 The Line Count Study and E911 database also fail to capture a large number of mass
9 market customers located in apartment buildings and multi-tenant office buildings,
10 whose lines are aggregated on DS1 facilities, and then disaggregated onto separate
11 DS0 lines to serve multiple customers within the building. These residential and
12 business customers do not meet the definition of DS1 enterprise customers because
13 they are not, on an individual customer line-count basis, served using a DS1.
14 Indeed, approximately 30-35 percent of the population lives in multi-dwelling units
15 that might be served in this manner.³⁸ It is only when they are aggregated with other
16 mass-market customers that it makes economic sense to use a DS1 to serve them
17 collectively. Although several CLEC affiliates of incumbent LECs have taken this

³⁸ See, e.g., Robert Currey, Vice Chairman, RCN Corporation, Prepared Testimony before the Senate Subcommittee on Antitrust, Business Rights, and Competition, Committee on the Judiciary, *Cable and Video: Competitive Choices*, Federal News Service (Apr. 4, 2001) (“About 30-35 percent of the population lives in multiple dwelling units (MDUs), such as apartments, cooperatives or condominiums.”).

1 approach,³⁹ the information regarding the number and location of these customers is
2 uniquely within the knowledge of the CLECs, and Verizon has limited ability to
3 capture this data for the purposes of its initial case. The Commission should require
4 the CLECs to provide this and all other relevant data on their provision of switched
5 voice service in Pennsylvania on an expedited basis for the Commission's
6 consideration.

7
8 **C. Conclusion Regarding Local Switching Triggers**

9
10 **Q. PLEASE SUMMARIZE YOUR CONCLUSION REGARDING THE**
11 **LOCAL SWITCHING TRIGGERS.**

12 A. As the data in Attachments 2 and 3 show, Verizon meets the mass market switching
13 trigger in the Density Cell 1, 2 and 3 areas of the Philadelphia, Pittsburgh,
14 Harrisburg, Allentown, Reading, Scranton/Wilkes-Barre, and Lancaster MSAs.
15 There are a total of 14 unaffiliated CLECs currently serving mass market customers
16 with their own switches in the state. Thirteen are serving mass market customers in
17 the Philadelphia MSA; 8 are serving mass market customers in the Pittsburgh MSA;
18 5 are serving mass market customers in the Harrisburg MSA; 4 are serving mass
19 market customers in the Reading MSA; 7 are serving mass market customers in the
20 Allentown MSA; 5 are serving mass market customers in the Scranton/Wilkes-Barre
21 MSA; and 4 are serving mass market customers in the Lancaster MSA. Therefore,
22 the Commission must find no impairment in each of these markets in Pennsylvania.

³⁹ New Paradigm Resources Group, Inc., *Competitive IOC Report 2001*, Ch. 4 at 2 (1st ed. 2001).

1

2 **III. DEDICATED INTEROFFICE TRANSPORT TRIGGERS**

3 **A. Description of the Triggers for Dedicated Interoffice Transport**

4
5 **Q. BY WAY OF BACKGROUND, WHAT ARE DEDICATED INTEROFFICE**
6 **TRANSPORT FACILITIES?**

7
8 A. “Dedicated interoffice transmission facilities (transport) are facilities dedicated to a
9 particular customer or competitive carrier that it uses for transmission among
10 incumbent LEC central offices and tandem offices.” TRO ¶ 361. The FCC’s
11 definition therefore excludes “shared transport,” which are transmission facilities
12 shared by more than one carrier. TRO ¶ 361, n.1100, ¶ 533, n.1633.

13
14 **Q. PLEASE DESCRIBE THE FCC’S TWO OBJECTIVE TRIGGERS FOR**
15 **IDENTIFYING THE INTEROFFICE TRANSPORT ROUTES FOR**
16 **WHICH COMPETING CARRIERS ARE NOT IMPAIRED WITHOUT**
17 **ACCESS TO VERIZON’S FACILITIES?**

18
19 A. In its *Triennial Review* order, the FCC found that requesting carriers are impaired on
20 a nationwide basis without access to unbundled dark fiber, DS1, and DS3 dedicated
21 transport facilities. TRO ¶ 359. The FCC recognized, however, that competing
22 carriers often self-provision dedicated transport facilities or obtain them on a
23 wholesale basis from carriers other than the incumbent LEC. The FCC authorized
24 the state commissions to determine the specific routes that meet one or both of two
25 objective triggers – which show that CLECs are already providing non-ILEC
26 transport facilities, either to themselves (self-provisioning trigger) or to other carriers
27 (wholesale trigger).. If a state commission finds that either trigger is met for a route,

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1 the state commission “must make a finding of non-impairment,” and “the incumbent
2 LEC will no longer be required to unbundle that transport along that route[.]” TRO
3 ¶¶ 400, 411; *see also* TRO ¶ 405. In other words, when a transport route meets one
4 or both of the FCC’s triggers, the state commission conducting the route-specific
5 review *must* find that the FCC’s national finding of impairment has been overcome.

6
7 The first of the FCC triggers looks at whether competing carriers have *self-deployed*
8 or *self-provisioned* dark fiber and DS3 capacity transport facilities. Under the self-
9 provisioning trigger, the Commission must find no impairment if *three or more*
10 unaffiliated competing carriers have deployed along a particular route their own dark
11 fiber or DS3 transport facilities. TRO ¶¶ 405-411. The FCC has also determined
12 that the self-provisioning trigger is satisfied if, on a particular route and for dark
13 fiber and DS3 facilities, there are at least two unaffiliated competing carriers using
14 their own interoffice transport facilities, and at least one additional carrier willing to
15 provide transport facilities at wholesale. TRO ¶ 408 n.1264. Leased “dark fiber” is
16 considered to be that carrier’s own fiber for purpose of applying the self-
17 provisioning trigger. If the carrier has attached its own electronics to activate the
18 leased dark fiber at a DS3 level, the activated fiber is also considered the carrier’s
19 own. TRO ¶ 408.

20
21 The second FCC trigger looks at whether dark fiber, DS1, and DS3 interoffice
22 transport facilities are available from other carriers on a *wholesale* basis. Under this

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1 test, competing carriers are not impaired without access to Verizon's transport
2 facilities if there are "two or more alternative transport providers, not affiliated with
3 each other or the incumbent LEC, immediately capable and willing to provide
4 transport at a specific capacity of transport on a route." TRO ¶ 400. Dark fiber that
5 is leased from a carrier other than the incumbent LEC, and then offered on a
6 wholesale basis, is considered to be the buying carrier's own dark fiber. Similarly,
7 dark fiber obtained as an unbundled network element from Verizon counts as the
8 buying carrier's own fiber if that carrier attaches its own electronics and offers the
9 activated fiber at wholesale. TRO ¶ 416.

10

11 **Q. WHAT IS A ROUTE?**

12

13 A. As defined by the FCC, a "route" is any direct *or indirect* connection between two
14 Verizon wire centers or switches. In other words, "a 'route' may connect Verizon
15 wire centers or switches that are not directly connected to each other." TRO ¶ 402
16 n.1246. Thus, under the FCC's definition of a route, if a pair of Verizon wire
17 centers meets either of the FCC's two triggers, competing carriers are not entitled to
18 unbundled access to Verizon dedicated interoffice transmission facilities that directly
19 or indirectly connect that pair of wire centers.

20

21 **Q. WHAT DOES THE FCC REQUIRE AS FAR AS OPERATIONAL**
22 **READINESS?**

23

24 A. To count toward the triggers, the FCC requires the transmission facility to be
25 operationally ready to provide transport between Verizon wire centers. This

1 condition is satisfied if a carrier has an operational collocation arrangement and has
2 pulled fiber into that arrangement (generally known as “fiber-based collocation”).
3 The FCC made clear in its *Triennial Review* order that “[c]ollocation may be in a
4 more traditional collocation space or fiber can be terminated on a fiber distribution
5 frame.” TRO ¶ 406 n.1257.

6
7 **Q. PLEASE SUMMARIZE THE FCC’S RULES CONCERNING ITS TWO**
8 **OBJECTIVE TRIGGERS FOR DEDICATED INTEROFFICE**
9 **TRANSPORT?**

10
11 **A.** To summarize the FCC’s regulations:

- 12 • The FCC’s self-provisioning trigger requires that a route connecting a pair
13 of Verizon wire centers have at least the same three competing carriers (or
14 at least the same two competing carriers and a wholesale provider), with
15 operational, fiber-based collocation arrangements, and that these carriers
16 have deployed dark fiber or DS3 level transport facilities.
- 17 • The FCC’s wholesale trigger requires that a route connecting a pair of
18 Verizon wire centers have at least two wholesale providers, with
19 operational, fiber-based collocation arrangements, offering dark fiber, DS1
20 or DS3 level transport facilities to other carriers. •
- 21 • If either trigger is met, Verizon is no longer required to make available
22 unbundled dedicated transport on any Verizon transmission routes that
23 directly or indirectly connect that pair of Verizon wire centers.

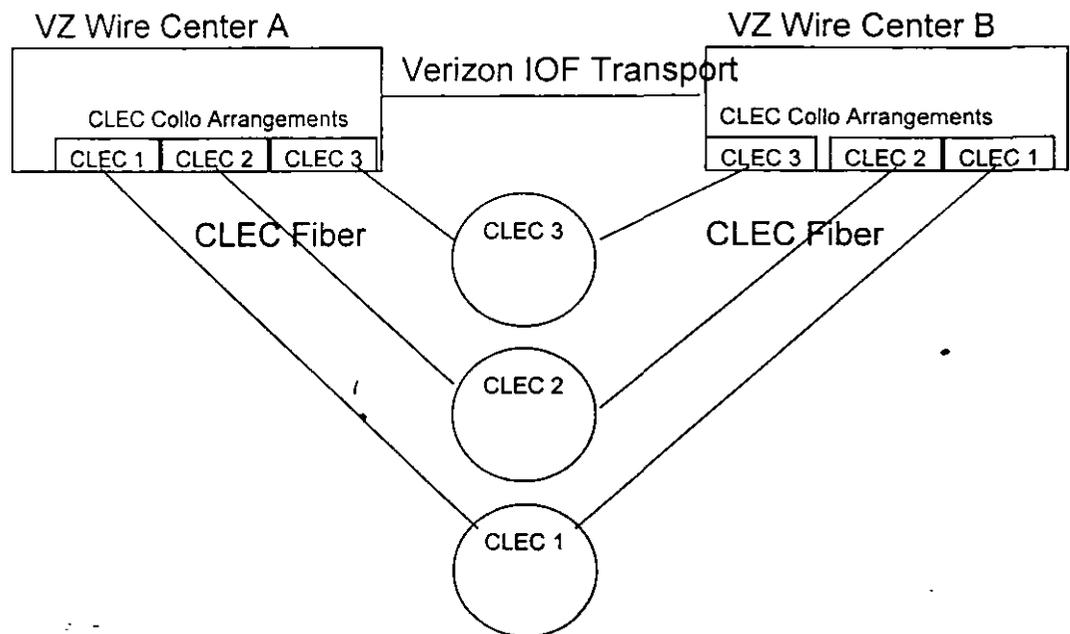
24 In the diagram below, we illustrate how local exchange carriers, both incumbent

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1 LECs and CLECs, typically connect Verizon wire centers using dedicated interoffice
2 transport. In this diagram, three CLECs have dedicated interoffice transport on
3 operational fiber between their respective collocation arrangements in Verizon Wire
4 Centers A and B. Each of these CLECs has dark fiber in their transport facilities,
5 and each has channelized their facilities to provide DS3 and DS1 level services.

6
7 The FCC's self-provisioning trigger is met in this example because CLECs 1, 2, and
8 3 have deployed their own operational fiber with dark fiber and DS3 level services
9 on the route between Verizon Wire Centers A and B. And if we assume that
10 CLECs 1 and 2 offer their transport facilities to other carriers at wholesale, then the
11 arrangement also meets the FCC's wholesale trigger for dark fiber, DS1, and DS3.

12
13



14
15
16

1 Q. THE FCC'S TWO TRIGGERS APPLY TO DIFFERENT "CAPACITIES"
2 OF TRANSPORT. WHAT DETERMINES THE CAPACITY AT WHICH
3 FIBER TRANSPORT FACILITIES OPERATE?
4

5 A. The capacity of fiber optic cable is almost exclusively based on the equipment that a
6 carrier attaches to activate or "light" the fiber. As the FCC found in its Triennial
7 Review Order, when carriers deploy new transport facilities, they deploy fiber optic
8 facilities, and those facilities can operate at a wide range of capacities, from DS0 to
9 OC192. TRO ¶ 372. Fiber optic cable is also "channelized" – that is, larger
10 capacity facilities are subdivided into smaller capacity facilities – by attaching the
11 appropriate electronics at both ends of the fiber cable to provide these various
12 capacities. For example, lower capacity DS1 and DS3 facilities are channelized
13 simultaneously within the larger capacity OC12 or OC48 facility. The electronic
14 equipment used to activate these various levels of capacity is widely available.

15
16 Q. WHAT DOES IT MEAN TO OPERATE A FIBER OPTIC TRANSPORT
17 FACILITY AT OCN, DS1, OR DS3 LEVELS OF CAPACITY?
18

19 A. OCn transport refers to the technical distinction (*i.e.*, Optical Carrier or "OC") and
20 the capacity (*i.e.*, "n") of fiber optic cable. For example, an optical carrier-level 3 –
21 or OC3 capacity circuit – is capable of transporting up to three DS3 circuits (an OC3
22 is approximately 155 Mbps, while three DS3s are 135 Mbps), but terminates on a
23 different type of electronic interface.

24
25 DS1 and DS3 transport likewise refer to the technical distinction (*i.e.*, Digital Signal
26 or "DS") and capacity. The elemental speed is a DS0, which is a voice grade line

1 with a bandwidth of 64 Kbps. A DS1 capacity circuit contains the equivalent of 24
2 voice-grade or DS0 channels. A DS3 capacity circuit contains the equivalent of 28
3 DS1 channels or 672 DS0 channels.

4
5 **Q. THE FCC'S DEDICATED TRANSPORT TRIGGERS ARE SEPARATELY**
6 **APPLIED TO DARK FIBER FACILITIES. WHAT IS DARK FIBER?**

7
8 A. Dark fiber is fiber optic strands of cable that have been deployed, but have not been
9 activated or "lit" through connections to electronics (which would make the fiber
10 capable of carrying communications). See, e.g., TRO ¶¶ 359 n.1097, 381.

11
12 **B. Verizon's Evidence Of Routes Meeting The Triggers**

13
14 **Q. PLEASE DESCRIBE VERIZON'S EVIDENCE OF INTEROFFICE**
15 **TRANSPORT ROUTES IN HARRISBURG, PHILADELPHIA, AND**
16 **PITTSBURGH THAT MEET THE FCC'S TRIGGERS FOR**
17 **INTEROFFICE TRANSPORT?**

18
19 A. Verizon has evidence that 647 pairs of Verizon wire centers -- or 647 direct routes --
20 in the Capital, Philadelphia, and Pittsburgh LATAs meet one or both of the FCC's
21 triggers. Verizon is asking this Commission to rule on 644 of these routes.⁴⁰ There
22 are three pairs of Verizon wire centers that meet one or both of the FCC's triggers in
23 the Capital LATA (LATA 226), 368 pairs in Philadelphia (LATA 228), and 276
24 pairs in Pittsburgh (LATA 234):

25

⁴⁰ The Philadelphia LATA includes Delaware. There are three routes in that LATA that both originate and terminate in Delaware; the Commission should not address those routes.

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	Pairs of Verizon Wire Centers With ≥ 3 Self-Provisioning Carriers	Pairs of Verizon Wire Centers With ≥ 2 Wholesale Providers	Pairs of Verizon Wire Centers With Either ≥ 3 Self-Provisioning Carriers Or ≥ 2 Wholesale Providers
Capital (LATA 226)	3	3	3
Philadelphia (LATA 228)	185	368	368
Pittsburgh (LATA 234)	201	276	276
Total Number of Verizon Wire Center Pairs (or Direct Transport Routes)	389	647	647

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Attached to our testimony as Attachment 5 are three maps presenting, by LATA, the evidence summarized in the table above. The first map (Map 1) shows the 3 direct routes in the Capital LATA (226) meeting one or both of the FCC's triggers. The direct routes that meet the FCC's triggers are shown as blue lines. Notably, although there are scores of Verizon wire centers in the Capital LATA, Verizon seeks relief for direct routes that originate or terminate in only three wire centers, although there could well be more routes that meet the FCC's triggers.

The second map (Map 2) shows the 368 direct routes in the Philadelphia LATA (228) meeting the FCC's triggers, including routes in Delaware. The third map (Map 3) shows the 276 direct routes in Pittsburgh meeting the FCC's triggers. The many blue lines in Philadelphia and Pittsburgh illustrating the many direct routes

1 meeting the FCC's triggers reflect the vast amount of fiber that carriers other than
2 Verizon have deployed over the last decade. As you would expect, the wire centers
3 with multiple CLECs and wholesale providers with operational, fiber-based
4 collocation arrangements tend to be clustered in these highly populated urban areas.

5
6 **Q. PLEASE DESCRIBE VERIZON'S EVIDENCE OF TRANSPORT**
7 **ROUTES IN THESE THREE PENNSYLVANIA LATAS MEETING THE**
8 **SELF-PROVISIONING TEST?**
9

10 A. Verizon's evidence shows that there are 389 pairs of Verizon wire centers in
11 Harrisburg, Philadelphia, and Pittsburgh meeting the FCC's *self-provisioning* trigger
12 for dark fiber and DS3 capacity facilities. Each pair has (at least) the same three
13 unaffiliated competing carriers with operational, fiber-based collocation facilities. In
14 fact, in these three LATAs, approximately 160 pairs of Verizon wire centers have
15 four or more unaffiliated competing carriers with operational, fiber-based
16 collocation arrangements.

17
18 Verizon's evidence on the direct transport routes meeting the FCC's self-
19 deployment trigger is presented for each of the three LATAs in Attachment 6,
20 sections A, A.1, and A.2. The proprietary version of these attachments filed with the
21 Commission identifies the CLECs with operational, fiber-based collocation
22 arrangements in the Verizon wire centers. CLEC names are removed from the
23 public versions of Attachment 6, sections A, A.1, and A.2.
24

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1 Attachment 6, section A shows the pairs of wire centers meeting the FCC's self-
2 provisioning trigger in the Capital LATA (226). The first Verizon wire center in the
3 pair – Camp Hill (CPHLPACH) -- is shown in the first two columns of Attachment
4 6, section A. The third and fourth columns show that two other Verizon wire centers
5 in the Capital LATA – Harrisburg 1 (HRBGPAHA) and Lancaster (LNCSPALA) –
6 have three CLECs in common with the Camp Hill wire center.

7
8 The next pair of Verizon wire centers identified in Attachment 6, section A is
9 Harrisburg 1 and Lancaster. In both Harrisburg and Lancaster, there are the same
10 five CLECs with operational, fiber-based collocation arrangements. Thus, these
11 wire centers easily meet and exceed the FCC's self-provisioning trigger.

12
13 Attachment 6, section A.1 presents the same information – the pairs of Verizon
14 wire centers and the specific CLECs in common – for the Philadelphia LATA
15 (228). For example, the Verizon Allentown center (ALTWPAAL), the wire
16 center identified on the first line and first two columns of Attachment 6, section
17 A.1, has the same three or more CLECs in common with seven different Verizon
18 wire centers, namely, Bethlehem, Conshohocken, Hatboro, Paoli, Locust 1,
19 Market 1, and Pennypacker 1.

20
21 For the Pittsburgh LATA (234), this same basic information is shown on
22 Attachment 6, section A.2. For example, the first Verizon wire center identified

1 is Bellevue (Wire Center 1). There are three or more CLECs in both the Bellevue
2 wire center and in each of the seventeen Verizon wire centers identified the in
3 column under Wire Center 2.

4
5 **Q. PLEASE DESCRIBE VERIZON'S EVIDENCE OF TRANSPORT**
6 **ROUTES MEETING THE FCC'S WHOLESALE TRIGGER?**

7
8 A. In Harrisburg, Philadelphia, and Pittsburgh, 647 pairs of Verizon wire centers meet
9 the FCC's *wholesale* trigger for dark fiber, and DS1 and DS3 capacity facilities.
10 Each pair of wire centers has (at least) the same two or more carriers that offer
11 transport services to other carriers, including arrangements such as competitive
12 access transport terminations (known as "CATTs").

13
14 Verizon's evidence on the transport routes meeting the FCC's wholesale trigger is
15 shown, by Verizon wire center and wholesale provider, for the Capital LATA
16 (226) in Attachment 6, section B, the Philadelphia LATA (228) in Attachment 6,
17 section B.1, and the Pittsburgh LATA (234) in Attachment 6, section B.2. For
18 example, Attachment 6, section B shows that, in the Capital LATA, the Verizon
19 Camp Hill wire center (CPALTWPAAL) has the same two wholesale providers in
20 common with the Harrisburg and Lancaster wire centers ((HRBGPAHA and
21 LNCSPALA). The Harrisburg wire center has two wholesale providers in
22 common with the Lancaster wire center.

23

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1 The vast majority of competing carriers that have deployed fiber transport facilities
2 for their own use have also indicated in public statements and filings that they will
3 lease those facilities to other carriers. For this reason, based on the criteria that
4 Verizon used to identify which carriers offer transport facilities at wholesale
5 (described below), the same pairs of Verizon wire centers that meet the self-
6 deployment trigger also meet the wholesale trigger. A similar set of sections to
7 Attachment 6 depicts the pairs of wire centers that meet either of the triggers: for the
8 Capital LATA (226) in Attachment 6, section C, the Philadelphia LATA (228) in
9 Attachment 6, section C.1, and the Pittsburgh LATA (234) in Attachment 6, section
10 C.2.

11
12 In addition, many companies have deployed fiber transport facilities primarily, if not
13 exclusively, for use by other carriers. In Pennsylvania, these companies include
14 Allegiance, Telcove, and Choice One. This explains why there are 258 pairs of
15 Verizon wire centers that meet the FCC's wholesale trigger, but not the self-
16 provisioning trigger.

17
18 **Q. ARE THE TRANSPORT FACILITIES THAT VERIZON HAS**
19 **IDENTIFIED AS MEETING THE FCC'S TRIGGERS OPERATIONAL,**
20 **AND DO THEY CONTAIN FIBER?**

21
22 A. Yes. To count toward either of the FCC's triggers, the transport facility must be
23 "operationally ready to provide transport into or out of" the Verizon wire centers,
24 *i.e.*, the carrier's collocation facility must be provisioned and powered, and its fiber

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1 must have been pulled into the collocation arrangement. TRO ¶ 406 nn.1256, 1257.
2 We are confident that the transport facilities that Verizon has identified as meeting
3 one or both of the FCC's triggers both meet the FCC's definition of "operationally
4 ready" and use fiber optics. We have reached this conclusion because, over the
5 course of several months last summer, Verizon conducted physical inspections of *all*
6 collocation arrangements included in this triggers case. Inspectors checked each
7 collocation facility in those Verizon wire centers to verify that there is powered
8 equipment in place (*i.e.*, it is operational), and that the collocating carrier had non-
9 Verizon fiber optic cable that both terminated at its collocation facility and left the
10 wire center. Verizon adopted rigorous controls to ensure the reliability of these data,
11 including supervision by the director in charge of provisioning collocation
12 throughout Verizon, written procedures for each step of the inspection process,
13 standard forms that were filled out by each inspector, signed statements by the
14 inspectors verifying the accuracy and reliability of the information provided and the
15 inspector's compliance with the written procedures, and signed statements by each
16 inspector's supervisor confirming that the inspector followed the appropriate
17 procedures. A collocation arrangement is included in Verizon's triggers case *only* if,
18 through this rigorous process of inspection and verification, it was found to be
19 operational and to have non-Verizon fiber. Copies of the Methods & Procedure for
20 conducting the physical inspections, and verification forms, are attached to our
21 testimony as Attachment 7.
22

1 Verizon's approach to this case has been conservative. Of the 507 Verizon wire
2 centers in the five Pennsylvania LATAs (Delaware is part of the Philadelphia
3 LATA), Verizon inspected less than 20%, and seeks relief from this Commission
4 for routes that originate and terminate in an even lower percentage of Verizon
5 wire centers. Put differently, there are *over 28,000 possible intraLATA direct*
6 *transport routes* in Pennsylvania and Delaware, but Verizon is asking the
7 Commission for relief for only *644 direct routes* or pairs of wire centers (less than
8 3%).⁴¹

9
10 **Q. IF A CARRIER HAS OPERATIONAL FIBER IN TWO VERIZON WIRE**
11 **CENTERS IN A LATA, IS IT REASONABLE TO ASSUME THAT THE**
12 **CARRIER HAS A TRANSPORT ROUTE BETWEEN THOSE VERIZON**
13 **WIRE CENTERS?**

14
15 **A.** Yes. In our experience, when carriers in Verizon's territories deploy their own fiber
16 transport facilities they typically deploy fiber optic rings that connect to their points-
17 of-presence (or "POPs") in the LATA and various customer premises, in addition to
18 connecting to Verizon's wire centers. Therefore, if the same carrier has fiber-based
19 facilities in two Verizon wire centers in a LATA, it is very reasonable to assume that
20 those fiber facilities are part of a CLEC-operated ring and that traffic can be routed
21 from one Verizon wire center to the other. It is also reasonable to assume that these
22 CLEC-operated fiber rings connect to the CLEC's POP, and that traffic can flow to

⁴¹ Although there are 647 routes in the five Pennsylvania LATAs that meet one or both of the FCC's transport triggers, Verizon is not asking the Commission for relief on three routes that both originate and terminate in Delaware.

1 and from all parts of the carrier's network through the POP.

2
3 Verizon has come forward with evidence showing that these carriers' transport
4 facilities can connect each of the pairs of wire centers we have identified as having
5 their fiber-based collocation arrangements. The burden is now properly put on
6 competing carriers if they wish to attempt to show that a specific route cannot in fact
7 be connected within their network. Absent such particularized, route-specific
8 evidence, however, the Commission should rely on Verizon's evidence that these
9 carriers' networks connect together the transport facilities we have shown exist at
10 each end of each identified route.

11
12 **Q. DO YOU BELIEVE THAT THESE FIBER TRANSPORT FACILITIES**
13 **DEPLOYED BY OTHER CARRIERS ARE USED FOR DS1 AND DS3**
14 **TRANSPORT?**

15
16 A. Yes. In identifying the routes meeting the FCC's triggers, Verizon made the
17 reasonable assumptions that when competing carriers deploy fiber and attach OCn
18 electronics (*e.g.*, OC48 multiplexers), they then subdivide -- *i.e.*, channelize -- the
19 OCn system into the lower transport levels required by their customers, including
20 DS3s and DS1s. There is no doubt that fiber transport facilities are *capable of*
21 operating at various levels of capacity; the capacity of the fiber is almost entirely a
22 function of the electronics that a carrier attaches, not something inherent in the fiber
23 itself. Once the fiber is deployed, it is operated at a DS1, DS3, OC48 or higher level
24 -- or at all of these levels simultaneously -- simply by changing the electronics. It is

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1 also beyond dispute that the electronics used to channelize the OCn system to DS1
2 and DS3 transport levels are commonly available.

3
4 Verizon's assumption that competing carriers who deploy fiber optics generally
5 build OCn level transport facilities, capable of channelization to DS1 or DS3, is
6 consistent with standard industry practices. Few if any carriers deploy transport
7 facilities to accommodate *only* a DS1 or *only* a DS3. TRO ¶¶ 386, 391. To the
8 contrary, as the FCC found in its *Triennial Review Order*, carriers deploying fiber
9 transport facilities almost always build at an OCn speed. TRO ¶ 382 ("The record
10 indicates that when competing carriers self-deploy transport facilities, they often
11 deploy fiber optic facilities that are activated at OCn levels."). For example, AT&T
12 reports that it, along with "most carriers, including incumbent LECs," TRO ¶ 372
13 n.1144, generally constructs its interoffice transport networks at an OC48 capacity.
14 Verizon's interoffice transport facilities likewise are generally built at an OC48
15 capacity.

16
17 These OCn facilities are then subdivided or channelized to a DS1 or DS3 level
18 because these are the levels at which transport is typically requested by end user
19 customers. There is considerable public evidence that competing carriers deploy
20 DS3 and DS1 circuits over their OC transport facilities in Pennsylvania: This
21 evidence is appended to this testimony as Attachment 8, and separately numbered
22 within that exhibit. For example:

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- 1 • Cavalier offers private line data transport service ranging in speed from
2 DS1 to OC48 over the same facility;⁴²
- 3 • XO offers a commercial private line services at DS1, DS3, and OC-x;⁴³
- 4 • Telcove (Adelphia Business Solutions) advertises transport at a full range
5 of capacities, from DS1 to OC48;⁴⁴
- 6 • MCI, which claims to have “the most scalable IP network available,”
7 offers end users “speeds from dial to OCn48;”⁴⁵ and
- 8 • AT&T offers private line services at all speeds up to OC192, including
9 DS3.⁴⁶

10 The assumptions underlying Verizon’s self-deployment trigger case are entirely
11 consistent with the way transport facilities commonly are constructed and operated.

12 The Commission therefore should find that self-provisioned fiber optic transport
13 facilities carry individual DS3 circuits -- unless a carrier shows, for a particular
14 route, that it is not carrying DS3 circuits over its fiber facility.

⁴² Cavalier’s Competitive Access Provider Services Tariff, PA PUC No. 3, Original Sheet 42-46 (identifies dedicated intrastate access services at a DS3 level). (Attachment 8.1).

⁴³ XO Pennsylvania, Inc. Tariff, Access Services, Pa. PUC No. 9, Supplement No. 2, Original Pages 80.4-80.9. (Attachment 8.2).

⁴⁴ www.adelphia.com/business_solutions/local_private_line.cfm. (Attachment 8.3).

⁴⁵ <http://global.mci.com/about/network>. (Attachment 8.4). MCI advertises private line services encompassing “all speeds from Voice Grade to OC12c.” www.global.mci.com/us/enterprise/data/privatelines/domestic.

⁴⁶ AT&T Communications of Pennsylvania, LLC, Pa. PUC No. 17, § 10, Original Sheet 1-12; <http://www.business.att.com/default/index.jsp?pageid=wholesale-data&branchid=wholesale>. (Attachment 8.5).

1

2 **Q. DO THESE FIBER TRANSPORT FACILITIES ALSO CONTAIN DARK**
3 **FIBER?**

4

5 A. It is virtually certain that all self-provisioned transport facilities have dark fiber.

6

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Dark fiber is simply fiber optic cable “that has not been activated through connections to optronics that light it, and thereby render it capable of carrying communications.” TRO ¶ 381. It is a truism, therefore, that all fiber transport facilities, regardless of the capacities at which they now operate, once consisted entirely of dark fiber. Put differently, evidence of “lit” fiber automatically is evidence that a carrier has self-provisioned dark fiber.

Additionally, as a matter of basic network engineering and sound economics, the vast majority of self-provisioned fiber transport facilities will have spare fibers. It is simply inconceivable that a carrier would incur the “large fixed and sunk costs [] required to self-provision fiber transport facilities,” including the costs of obtaining rights of way, digging up the streets and attaching cable to poles, and deploying the fiber, without leaving even a single strand of dark fiber. Fiber transport facilities are always installed with extra fiber to meet projected demand growth. Furthermore, fiber cables are commonly manufactured and deployed in increments of 12 fiber strands (i.e., 12, 24, 48, etc., fibers per cable). Verizon looked at data from fiber-based collocation applications in Pennsylvania. These data indicated that most CLECs requested the ability to pull two 24-strand fiber cables (or 48 fibers) through

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1 Verizon's cable vault to their collocation arrangements. OCn electronics (e.g., fiber
2 multiplexers) generally require only 4 fibers to activate ("light") the fiber to provide
3 dedicated transport. The difference between the large number of fibers CLECs
4 anticipated pulling into their collocation arrangements and the small number of
5 fibers required for dedicated transport strongly suggests the existence of spare fiber.
6 And if there is unlit fiber in a self-deployed transport facility, the facility meets the
7 FCC's self-deployment trigger for dark fiber.

8
9 Here again, Verizon has come forward with evidence showing that these carriers'
10 fiber transport facilities almost certainly also include dark fiber. The burden is now
11 properly put on competing carriers if they wish to attempt to show that a specific
12 route in fact has no dark fiber on it. Absent such particularized, route-specific
13 evidence, however, the Commission should rely on Verizon's evidence that these
14 carriers' fiber networks also include available dark fiber on each identified route.

15
16 **Q. HOW DID VERIZON IDENTIFY CARRIERS OFFERING TRANSPORT**
17 **FACILITIES ON A WHOLESALE BASIS, AND THE CAPACITIES AT**
18 **WHICH THOSE FACILITIES ARE OFFERED?**

19
20 **A.** There is considerable evidence that allows Verizon to identify routes that are likely
21 to qualify for the wholesale trigger.

- 22 • If a carrier holds itself out as a wholesale provider on its website -- and
23 does not limit its representation to particular routes -- Verizon identified
24 the carrier as a wholesale provider.

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- 1 • Carriers that supply transport facilities to Universal Access, Inc. are
2 wholesale providers, and Verizon identified them as such. Universal
3 Access is as a broker of transport services, and is a certificated carrier in
4 all of Verizon's territories, including Pennsylvania. *All* carriers that sell
5 transport facilities to Universal Access are selling to another carrier, and,
6 therefore, are appropriately considered wholesale providers. In addition,
7 Universal Access indicates in its web site materials that many of its
8 customers are carriers, further supporting Verizon's conclusion that
9 Universal Access' suppliers are wholesale providers.
- 10 • If a carrier has a CATT arrangement in any of Verizon's wire centers,
11 which is an arrangement specifically designed for wholesale providers,
12 Verizon considered the carrier to be a wholesale provider.
- 13 • Verizon identified a carrier as a wholesale provider if it is listed in the
14 New Paradigm CLEC Report 2003 as offering dedicated access transport,
15 unless the offering is limited to particular routes, and unless the carrier
16 indicates that it will not provide its dedicated access transport to other
17 carriers. The New Paradigm Resources Group ("NPRG"), which prepared
18 the New Paradigm CLEC Report, provides, among other things, business
19 planning advice to CLECs. NPRG reports that it gets information from
20 the CLECs themselves, and provides these carriers with the opportunity to
21 provide direct input on coverage.
- 22

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1 The vast majority of the carriers that Verizon has identified as offering wholesale
2 meet more than one of these criteria. For example, Cavalier is identified in the New
3 Paradigm Report as offering dedicated access transport (and there is no indication
4 that Cavalier will not sell to another carrier), and also advertises its wholesale
5 services on its website. In addition, a number of the carriers that Verizon has
6 identified as wholesale providers, such as MFN (now AboveNet) and Allegience,
7 have filed competitive access tariffs in Pennsylvania.

8
9 Verizon has come forward with evidence showing that these carriers hold
10 themselves out as offering transport facilities on a wholesale basis. The burden is
11 now properly put on competing carriers if they wish to attempt to show that a
12 specific route is not available at wholesale. Absent such particularized, route-
13 specific evidence, however, the Commission should rely on Verizon's evidence of a
14 carrier's general willingness to offer its transport facilities on a wholesale basis and
15 treat all such carrier's transport facilities as available for leasing at wholesale.

16
17 Finally, Verizon assumes that a carrier that has deployed fiber transport facilities and
18 is willing to provide transport over those facilities to other carriers is providing (or is
19 willing to provide) various levels of capacity at wholesale, including dark fiber,
20 DS1, and DS3. This assumption is supported by substantial public evidence, which
21 is appended to this testimony as Attachment 8 and separately numbered within that
22 attachment:

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- 1 • Looking Glass Network offers access services to other carriers “at varying
2 transmission speeds” including DS3; it also offers dark fiber;⁴⁷
3 • AboveNet (formerly MFN) offers wholesale dark fiber transport,⁴⁸ and
4 “speeds up to OC 48;”⁴⁹
5 • City Signal Communications offers a range of wholesale services,
6 including dark fiber,⁵⁰ and
7 • XO offers transport at wholesale in Pennsylvania, at a range of
8 capacities.⁵¹

9 Therefore, unless there is specific evidence that a carrier has refused to sell to other
10 carriers specific capacities and dark fiber on a particular transport route, the
11 Commission should find that a wholesale provider will sell DS1 and DS3 transport
12 over its fiber facilities, as well as dark fiber.

13

⁴⁷ Looking Glass Networks, Inc., PA PUC Tariff No. 1, Original Page 56, 5.4.1.3; see also www.lglass.net/products/darkfiber.jsp. (Attachment 8.6).

⁴⁸ www.mfn.com/products/darkfiber.shtm. (Attachment 8.7).

⁴⁹ www.abovenet.com/products/transport-jpbandwidth.html. (Attachment 8.7).

⁵⁰ City Signal Communications, which is based in suburban Philadelphia, “delivers metro dark fiber solutions enabling services providers and enterprise customers to deploy broadband applications.” www.citysignal.com/default.asp. (Attachment 8.8)

⁵¹ www.xo.com/products/carrier/portfolio.html. (Attachment 8.9).

1 **C. Conclusion Regarding Dedicated Transport Triggers**

2
3 **Q. PLEASE SUMMARIZE THE CONCLUSIONS YOU DRAW FROM YOUR**
4 **TESTIMONY ON DEDICATED INTEROFFICE TRANSPORT?**

5
6 A. Verizon has presented compelling evidence that, in the Capital, Philadelphia, and
7 Pittsburgh LATAs, 647 direct routes (or pairs of Verizon wire centers) meet one or
8 both the FCC's two objective triggers for dedicated transport. Because Verizon has
9 taken a very conservative approach in this proceeding by limiting its presentation (1)
10 to only three of the five LATAs in Pennsylvania, and then again (2) to only Verizon
11 wire centers in those three LATAs that it physically inspected to confirm the
12 existence of fiber-based collocation, there may be many more transport routes that
13 meet the FCC's triggers. Verizon takes no position on those routes in this case.

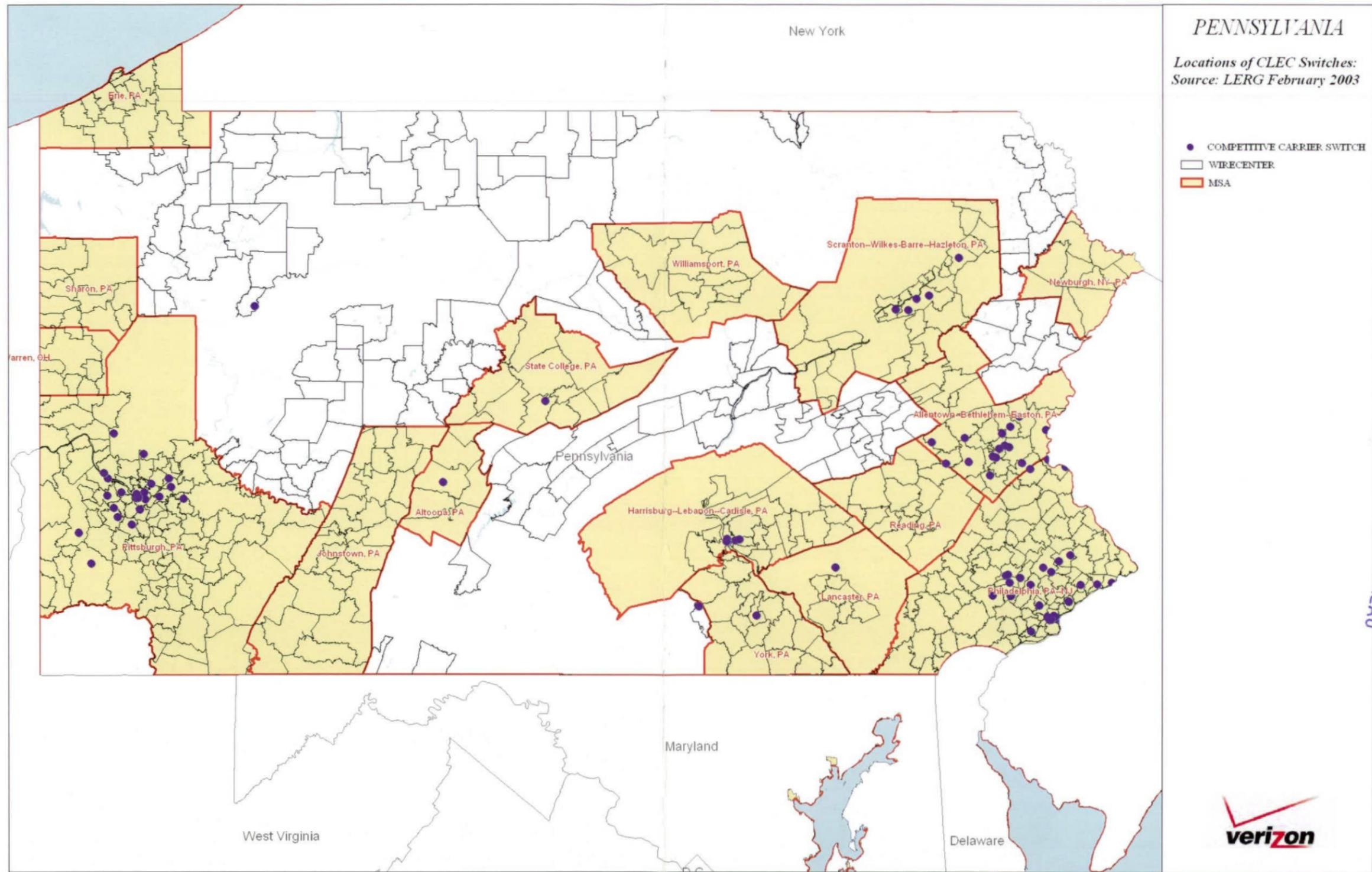
14
15 **IV. VERIZON'S HIGH CAPACITY LOOPS TRIGGERS CASE**

16 **Q. IS VERIZON PRESENTING EVIDENCE OF THE HIGH CAPACITY**
17 **LOOPS DEPLOYED BY OTHER CARRIERS THAT MEET THE FCC'S**
18 **TWO TRIGGERS?**

19
20 A. Not at this time. Verizon does not know the specific buildings to which other
21 carriers have deployed high capacity loops; this information is in the hands of those
22 other carriers. Verizon may submit evidence on buildings meeting the high capacity
23 loop triggers once it has received the necessary information from other carriers
24 through the discovery process.

25
26 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

27
28 A. Yes.



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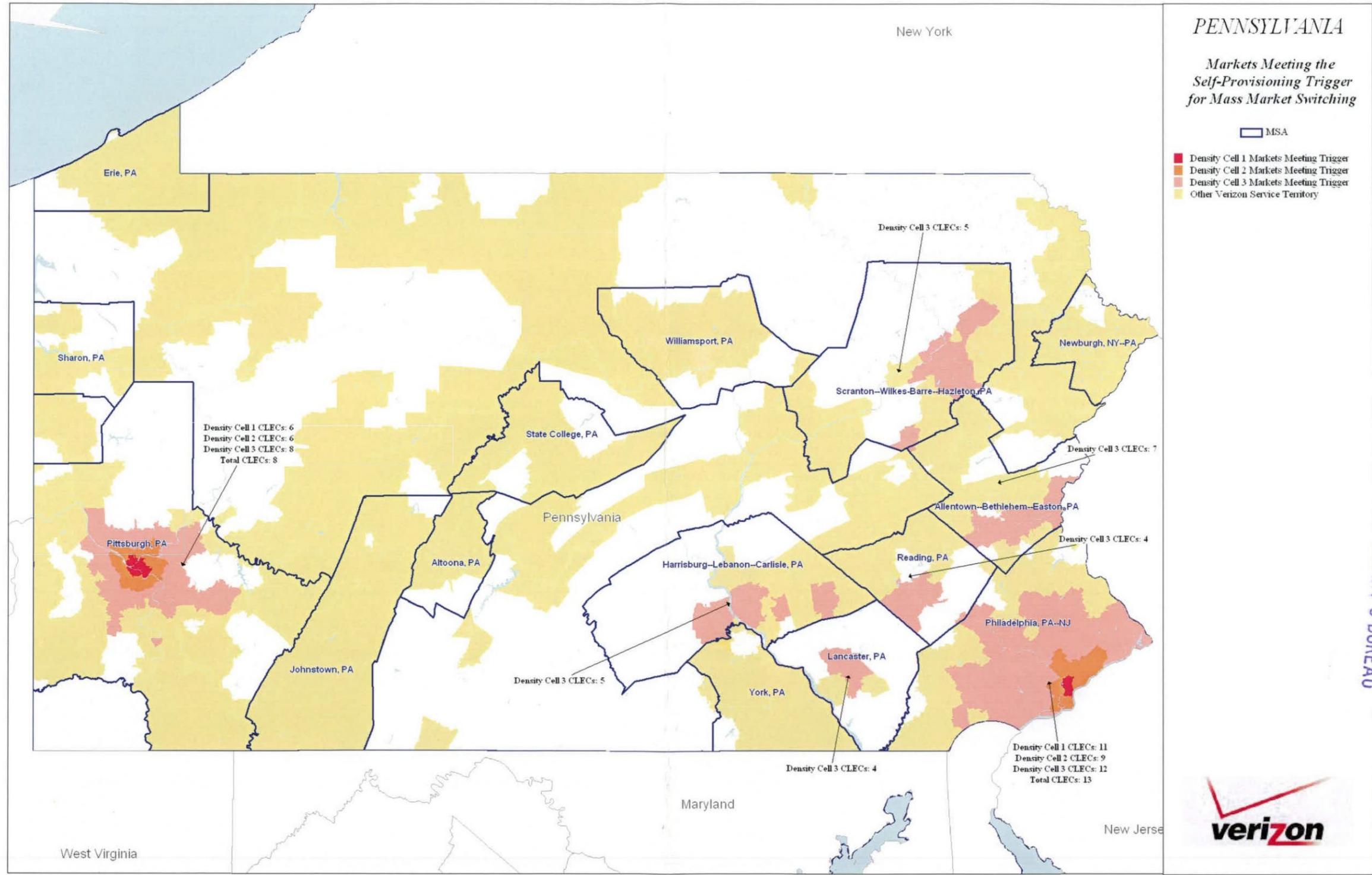
Verizon PA Attachment 1

**Attachment 2
PUBLIC VERSION**

Pennsylvania -- Combined Results of Loop and Facilities-Based Studies

MSA Name	Std CLEC Name	Total
Sum of Total		
ALLENTOWN-BETHLEHEM-EASTON PA	CLEC # 07	42,371
	CLEC # 08	515
	CLEC # 24	6,173
	CLEC # 33	266
	CLEC # 45	39
	CLEC # 53	2,735
	CLEC # 57	317
ALLENTOWN-BETHLEHEM-EASTON PA Total		52,416
HARRISBURG-LEBANON-CARLISLE PA	CLEC # 08	8,739
	CLEC # 24	2,971
	CLEC # 53	1,246
	CLEC # 57	593
	CLEC # 71	776
HARRISBURG-LEBANON-CARLISLE PA Total		14,325
LANCASTER PA	CLEC # 08	3,746
	CLEC # 24	725
	CLEC # 53	1,045
	CLEC # 71	2,432
LANCASTER PA Total		7,948
PHILADELPHIA PA-NJ	CLEC # 03	9,536
	CLEC # 07	16,022
	CLEC # 08	406
	CLEC # 16	114
	CLEC # 24	1
	CLEC # 25	6,565
	CLEC # 26	1,969
	CLEC # 33	25,574
	CLEC # 45	25,366
	CLEC # 53	4,120
	CLEC # 57	1,787
	CLEC # 71	1,574
CLEC # 74	35	
PHILADELPHIA PA-NJ Total		93,069
PITTSBURGH PA	CLEC # 03	1,909
	CLEC # 12	6,408
	CLEC # 16	101,805
	CLEC # 24	25,692
	CLEC # 26	2,426
	CLEC # 33	4,534
	CLEC # 57	1
	CLEC # 64	35
PITTSBURGH PA Total		142,810
READING PA	CLEC # 07	1
	CLEC # 08	4,235
	CLEC # 53	1,341
	CLEC # 71	4,100
READING PA Total		9,677
SCRANTON--WILKES-BARRE--HAZLETON PA	CLEC # 07	2
	CLEC # 08	11,955
	CLEC # 24	4,491
	CLEC # 53	813
	CLEC # 57	180
SCRANTON--WILKES-BARRE--HAZLETON PA Total		17,441
Grand Total		337,686

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Verizon PA Attachment 3

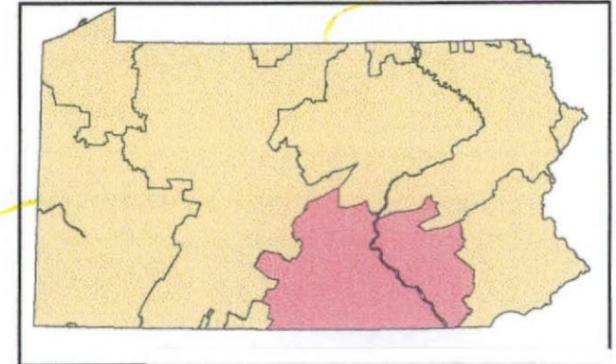
**Tariff References for CLECs Offering Local Exchange Service to
Residential and/or Business Customers in Pennsylvania**

Carrier:	Mass Market	
	Residential	Business
Adelphia (TelCove)	PUC Tariff #1, Sec. 6	PUC Tariff #1, Sec. 7
Allegiance	PUC Tariff #1, Sec. 7	PUC Tariff #1, Sec. 7 and 12 (Bundled Packages)
AT&T	PUC #25, Sec. 5 and 6	PUC #16, Sec. 7 and price list
Broadview Networks	PUC #1 Tariff, Sec. 4 and 5	PUC #1 Tariff, Sec. 4 and 5
Cavalier	PUC #1 Tariff, Sec. 3 and 8	PUC #1 Tariff, Sec. 3 and 8
Choice One	PUC #1 Tariff, Sec. 7, 19 - 21	PUC #1 Tariff, Sec. 7, 19 - 21
Commonwealth Comm (CTSI)	PUC #1 Tariff, Sec. 2	PUC #1 Tariff, Sec. 2
D&E Systems	PUC #1 Tariff, Sec. 2	PUC #1 Tariff, Sec. 2
Fibernet	Not Tariffed	PUC #2 Tariff, Sec. 4
Penn Telecom	PUC Tariff #2, Sec. 3.1.2	PUC Tariff #2, Sec. 3.1.2
RCN	PUC Tariff #2, Sec. 10	PUC Tariff #2, Sec. 10
SBC Telecom	PUC #1 Tariff, Sec. 4	PUC #1 Tariff, Sec. 4
Worldcom (MCImetro)	PUC Tariff #1, Sec. 10	PUC Tariff #1, Sec. 3 and 11 (Small Bus.)
XO Comm	PUC #12, Sec. 3 (Lifeline)	PUC #12, Sec. 3

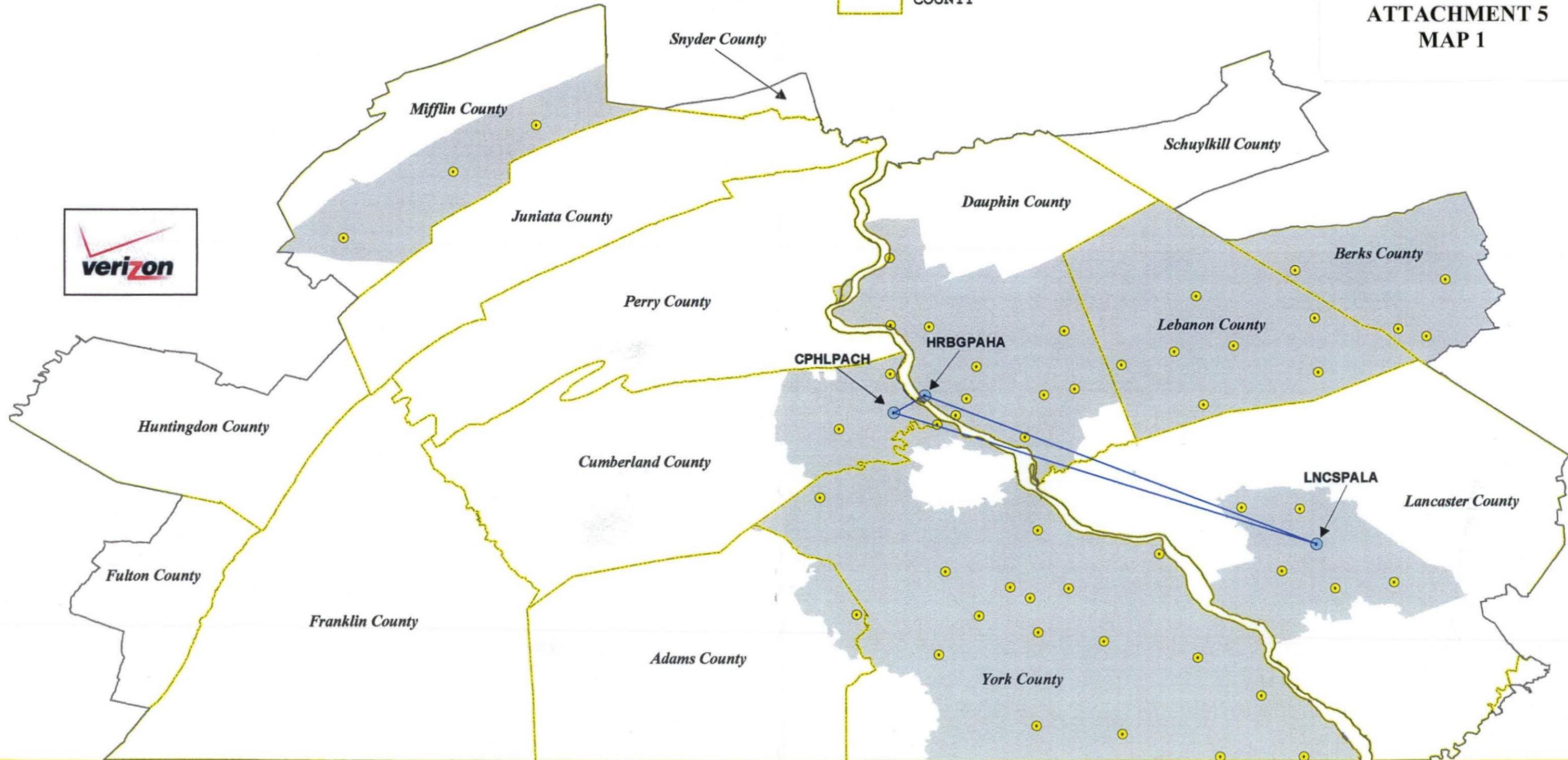
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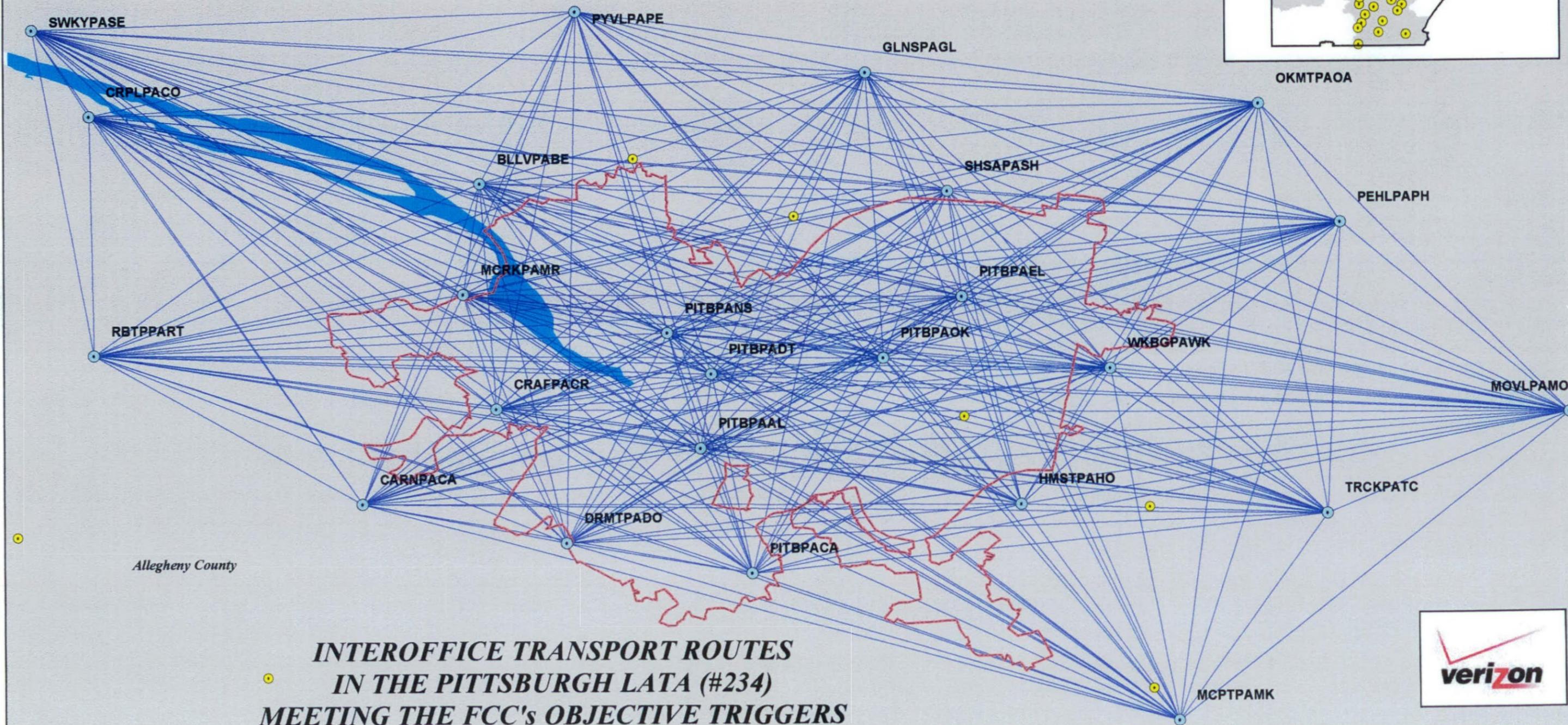
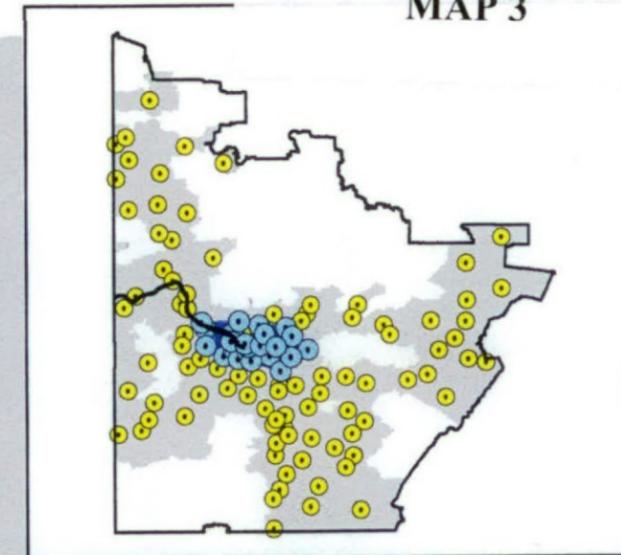
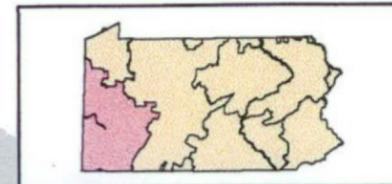
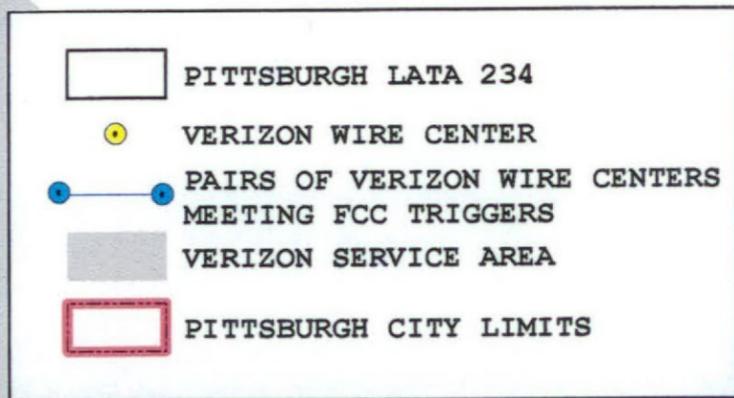
INTEROFFICE TRANSPORT ROUTES IN THE CAPITAL LATA (#226) MEETING THE FCC'S OBJECTIVE TRIGGERS

-  PAIRS OF VERIZON WIRE CENTERS MEETING FCC TRIGGERS
-  VERIZON WIRE CENTER
-  CAPITAL LATA 226
-  VERIZON SERVICE AREA
-  COUNTY



ATTACHMENT 5
MAP 1





**INTEROFFICE TRANSPORT ROUTES
IN THE PITTSBURGH LATA (#234)
MEETING THE FCC'S OBJECTIVE TRIGGERS**



LATA 226 - Capital

Count				CLEC Number				
Wire Center 1	Wire Center 1 Name	Wire Center 2	Wire Center 2 Name	008	053	057	071	079
CPHLPACH	CAMP HILL	HRBGPAHA	HARRISBURG	1	1	1		
		LNCSPALA	LANCASTER	1	1	1		
HRBGPAHA	HARRISBURG	LNCSPALA	LANCASTER	1	1	1	1	1

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LATA 226 - Capital					
Count				CLEC Number	
Wire Center 1	Wire Center 1 Name	Wire Center 2	Wire Center 2 Name	053	057
CPHLPACH	CAMP HILL	HRBGPAHA	HARRISBURG	1	1
		LNCSPALA	LANCASTER	1	1
HRBGPAHA	HARRISBURG	LNCSPALA	LANCASTER	1	1

LATA 226 - Capital

Wire Center 1	Wire Center 1 Name	Wire Center 2	Wire Center 2 Name	LATA	Count Of CLECs In Common >=3 Self-Providers	Count Of CLECs In Common >=2 Wholesale Providers
CPHLPACH	CAMP HILL	HRBGPAHA	HARRISBURG	226	3	2
CPHLPACH	CAMP HILL	LNCSPALA	LANCASTER	226	3	2
HRBGPAHA	HARRISBURG	LNCSPALA	LANCASTER	226	5	2

LATA 228 - Philadelphia																					
Count	Wire Center 1 Name	Wire Center 2 Name	CLEC #	007	008	014	026	033	044	045	050	053	057	060	074	075	077	079			
ALTWPAAL	ALLEN TOWN	BHLHPABE	BETHLEHEM		1	1	1						1	1					1		
		CNSHPACN	CONSHOHOCKEN				1						1	1							
		HTBOPAHB	HATBORO				1						1	1							
		PAOLPAPA	PAOLI				1						1	1							
		PHLAPALO	LOCUST				1						1	1							
		PHLAPAMK	MARKET				1						1	1						1	
		PHLAPAPE	PENNYPACKER				1						1	1							
AMBLPAAM	AMBLER	ARMRPAAR	ARDMORE	1			1			1											
		BCYNPABC	BALA CYNWYD	1			1			1				1							
		CNSHPACN	CONSHOHOCKEN			1	1							1							
		HTBOPAHB	HATBORO	1			1							1	1						
		JENKPAJK	JENKINTOWN				1							1	1						
		KGPRPAKP	KING OF PRUSSIA				1	1						1	1						
		NRTWPANR	NORRISTOWN				1	1						1	1						
		PAOLPAPA	PAOLI				1	1						1	1						
		PHLAPAEV	EVERGREEN				1							1	1						
		PHLAPAGE	GERMANTOWN				1							1	1						
		PHLAPAJE	JEFFERSON				1							1	1						
		PHLAPALO	LOCUST	1			1	1						1	1						
		PHLAPAMK	MARKET	1			1	1						1	1						
		PHLAPAPE	PENNYPACKER	1			1	1						1	1						
		PHLAPAPI	PILGRIM				1							1	1						
		PHLAPATR	TRINITY				1							1	1						
		PHLAPAWV	WAVERLY				1							1	1						
TRPRPATR	TROOPER	1			1							1	1								
WAYNPAWY	WAYNE	1			1							1	1								
WCHSPAWC	WEST CHESTER	1			1							1	1								
WLMGDEWL	WILMINGTON	1			1							1	1								
ARMRPAAR	ARDMORE	BCYNPABC	BALA CYNWYD	1			1			1				1							
		BRYMPABM	BRYN MAWR	1			1							1	1						
		CNSHPACN	CONSHOHOCKEN				1							1	1						
		HTBOPAHB	HATBORO	1			1							1	1						
		KGPRPAKP	KING OF PRUSSIA				1	1						1	1						
		NRTWPANR	NORRISTOWN				1	1						1	1						
		PAOLPAPA	PAOLI				1							1	1						
		PHLAPAEV	EVERGREEN				1	1						1	1						
		PHLAPALO	LOCUST	1			1	1						1	1						
		PHLAPAMK	MARKET	1			1	1						1	1						
		PHLAPAPE	PENNYPACKER	1			1	1						1	1						
PHLAPATR	TRINITY				1							1	1								
WAYNPAWY	WAYNE	1			1							1	1								
WLMGDEWL	WILMINGTON	1			1							1	1								
BCYNPABC	BALA CYNWYD	BRYMPABM	BRYN MAWR	1			1							1	1						
		CNSHPACN	CONSHOHOCKEN				1							1	1						
		HTBOPAHB	HATBORO	1			1							1	1						
		KGPRPAKP	KING OF PRUSSIA				1	1						1	1						
		NRTWPANR	NORRISTOWN				1	1						1	1						
		PAOLPAPA	PAOLI				1							1	1						
		PHLAPAEV	EVERGREEN				1	1						1	1						
		PHLAPALO	LOCUST	1			1	1						1	1						
		PHLAPAMK	MARKET	1			1	1						1	1						
		PHLAPAPE	PENNYPACKER	1			1	1						1	1						
		PHLAPATR	TRINITY				1							1	1						
		TRPRPATR	TROOPER	1			1							1	1						
		WAYNPAWY	WAYNE	1			1							1	1						
WCHSPAWC	WEST CHESTER	1			1							1	1								

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		PHLAPATR	TRINITY					1	1		1	1						
		TRRRPATR	TROOPER				1											
		WAYNPAWY	WAYNE				1			1		1	1					
		WCHSPAWC	WEST CHESTER				1			1		1						
		WLMGDEWL	WILMINGTON				1			1								
PHLAPAPI	PILGRIM	PHLAPATR	TRINITY				1			1		1						
		PHLAPAWW	WAVERLY				1			1		1						
		WAYNPAWY	WAYNE							1		1	1					
PHLAPATR	TRINITY	PHLAPAWW	WAVERLY				1			1		1						
		WAYNPAWY	WAYNE							1		1	1					
WAYNPAWY	WAYNE	WCHSPAWC	WEST CHESTER				1			1		1						

LATA 228 - Philadelphia																	
Count				CLEC #													
Wire Center 1	Wire Center 1 Name	Wire Center 2	Wire Center 2 Name	003	007	014	026	033	044	045	050	053	057	060	075		
AL TWPAAL	ALLENTOWN	AMBLPAAM	AMBLER					1							1		
		BCYNPABC	BALA CYNWYD					1							1		
		BHLHPABE	BETHLEHEM		1		1						1	1			
		CNSHPACN	CONSHOHOCKEN					1					1	1			
		HTBOPAHB	HATBORO					1					1	1			
		KGPRPAKP	KING OF PRUSSIA					1							1		
		NRTWPANR	NORRISTOWN				1								1		
		PAOLPAPA	PAOLI					1						1	1		
		PHLAPADE	DEWEY						1						1		
		PHLAPALO	LOCUST						1					1	1		
		PHLAPAMK	MARKET							1				1	1		
		PHLAPAPE	PENNYPACKER							1				1	1		
		PHLAPAPI	PILGRIM											1	1		
		TRPRPATR	TROOPER						1						1		
		WAYNPAWY	WAYNE												1	1	
		AMBLPAAM	AMBLER	ARMRPAAR	ARDMORE		1		1			1					
				BCYNPABC	BALA CYNWYD		1		1			1				1	
BHLHPABE	BETHLEHEM							1							1		
BRYMPABM	BRYN MAWR				1		1										
CNSHPACN	CONSHOHOCKEN						1	1			1				1		
HTBOPAHB	HATBORO				1		1				1				1		
JENKPAJK	JENKINTOWN							1			1				1		
KGPRPAKP	KING OF PRUSSIA							1	1			1				1	
NRTWPANR	NORRISTOWN							1	1			1			1		
NWRKDENB	NEWARK				1							1					
PAOLPAPA	PAOLI							1	1			1			1		
PHLAPACH	CHESTNUT HILL							1				1					
PHLAPADE	DEWEY								1						1		
PHLAPAEV	EVERGREEN									1			1			1	
PHLAPAGE	GERMANTOWN								1			1			1		
PHLAPAJE	JEFFERSON									1			1			1	
PHLAPALO	LOCUST						1		1	1			1			1	
PHLAPAMK	MARKET						1		1	1			1			1	
PHLAPAMY	MAYFAIR									1			1				
PHLAPAPE	PENNYPACKER						1		1			1			1		
PHLAPAPI	PILGRIM									1			1			1	
PHLAPAPO	POPLAR									1			1			1	
PHLAPARE	REGENT									1			1			1	
PHLAPATR	TRINITY									1			1			1	
PHLAPAWV	WAVERLY									1			1			1	
TLVLDETV	TALLEYVILLE				1								1				
TRPRPATR	TROOPER				1				1						1		
WAYNPAWY	WAYNE		1								1			1			
WCHSPAWC	WEST CHESTER		1								1			1			
WLGPAWVG	WILLOW GROVE										1			1			
WLMGDEWL	WILMINGTON		1				1			1							
ARMRPAAR	ARDMORE	BCYNPABC	BALA CYNWYD		1		1			1				1			
		BRYMPABM	BRYN MAWR		1		1							1			
		CNSHPACN	CONSHOHOCKEN					1			1				1		
		HTBOPAHB	HATBORO		1		1				1				1		
		KGPRPAKP	KING OF PRUSSIA					1			1				1		
		NRTWPANR	NORRISTOWN					1			1				1		
		NWRKDENB	NEWARK		1						1						
		PAOLPAPA	PAOLI					1			1				1		
		PHLAPAEV	EVERGREEN							1		1			1		
PHLAPALO	LOCUST		1			1	1		1				1				

DIRECT ROUTES MEETING FCC'S WHOLESALE TRIGGER

		PHLAPAMK	MARKET	1		1	1	1		1
		PHLAPAPE	PENNYPACKER	1		1	1	1		1
		PHLAPATR	TRINITY			1	1			1
		TLVLDETV	TALLEYVILLE	1				1		
		TRPRPATR	TROOPER	1		1				
		WAYNPAWY	WAYNE	1				1		1
		WCHSPAWC	WEST CHESTER	1				1		
		WLMGDEWL	WILMINGTON	1		1		1		
BCYNPABC	BALA CYNWYD	BHLHPABE	BETHLEHEM			1				1
		BRYMPABM	BRYN MAWR	1		1				1
		CNSHPACN	CONSHOCKEN			1		1		1
		HTBOPAHB	HATBORO	1		1		1		1
		JENKPAJK	JENKINTOWN					1		1
		KGPRPAKP	KING OF PRUSSIA			1		1		1
		NRTWPANR	NORRISTOWN			1		1		1
		NWRKDENB	NEWARK	1				1		1
		PAOLPAPA	PAOLI			1		1		1
		PHLAPADE	DEWEY			1				1
		PHLAPAEV	EVERGREEN					1		1
		PHLAPAGE	GERMANTOWN			1				1
		PHLAPAJE	JEFFERSON					1		1
		PHLAPALO	LOCUST	1		1				1
		PHLAPAMK	MARKET	1		1		1		1
		PHLAPAPE	PENNYPACKER	1		1		1		1
		PHLAPAPI	PILGRIM					1		1
		PHLAPATR	TRINITY					1		1
		PHLAPAWV	WAVERLY					1		1
		TLVLDETV	TALLEYVILLE	1				1		
		TRPRPATR	TROOPER	1		1				1
		WAYNPAWY	WAYNE	1				1		1
		WCHSPAWC	WEST CHESTER	1				1		1
		WLMGDEWL	WILMINGTON	1		1		1		1
		WLMGDEWL	WILMINGTON	1		1		1		1
BHLHPABE	BETHLEHEM	CNSHPACN	CONSHOCKEN			1		1		1
		HTBOPAHB	HATBORO			1		1		1
		KGPRPAKP	KING OF PRUSSIA			1				1
		NRTWPANR	NORRISTOWN			1				1
		PAOLPAPA	PAOLI			1		1		1
		PHLAPADE	DEWEY			1				1
		PHLAPALO	LOCUST	1		1		1		1
		PHLAPAMK	MARKET			1		1		1
		PHLAPAPE	PENNYPACKER			1		1		1
		PHLAPAPI	PILGRIM					1		1
		TRPRPATR	TROOPER			1				1
		WAYNPAWY	WAYNE					1		1
BRYMPABM	BRYN MAWR	CNSHPACN	CONSHOCKEN			1				1
		HTBOPAHB	HATBORO	1		1				
		KGPRPAKP	KING OF PRUSSIA			1				1
		NRTWPANR	NORRISTOWN			1				1
		PAOLPAPA	PAOLI			1				1
		PHLAPALO	LOCUST	1		1				1
		PHLAPAMK	MARKET	1		1				1
		PHLAPAPE	PENNYPACKER	1		1				1
		TRPRPATR	TROOPER	1		1				1
		WAYNPAWY	WAYNE	1						1
		WLMGDEWL	WILMINGTON	1		1				1
CNSHPACN	CONSHOCKEN	HTBOPAHB	HATBORO			1		1		1
		JENKPAJK	JENKINTOWN			1		1		1
		KGPRPAKP	KING OF PRUSSIA			1	1	1		1

DIRECT ROUTES MEETING FCC'S WHOLESALE TRIGGER

		NRTWPANR	NORRISTOWN			1	1			1	1		1	1
		PAOLPAPA	PAOLI			1	1			1	1	1	1	1
		PHLAPACH	CHESTNUT HILL			1	1			1				
		PHLAPADE	DEWEY			1	1					1		
		PHLAPAEV	EVERGREEN			1				1	1		1	1
		PHLAPAGE	GERMANTOWN			1				1		1		
		PHLAPAJE	JEFFERSON			1				1		1		
		PHLAPALO	LOCUST			1	1			1	1	1	1	1
		PHLAPAMK	MARKET			1	1			1	1	1	1	1
		PHLAPAMY	MAYFAIR			1				1				
		PHLAPAPE	PENNYPACKER			1				1		1	1	1
		PHLAPAPI	PILGRIM			1				1		1	1	
		PHLAPAPO	POPLAR			1				1				
		PHLAPARE	REGENT			1				1				
		PHLAPATR	TRINITY			1				1		1	1	
		PHLAPAWV	WAVERLY			1				1		1		
		TRRPRATR	TROOPER				1					1		
		WAYNPAWY	WAYNE							1		1	1	1
		WCHSPAWC	WEST CHESTER							1		1		
		WLGPAWVG	WILLOW GROVE							1		1		
		WLMGDEWL	WILMINGTON			1				1				
HTBOPAHB	HATBORO	JENKPAJK	JENKINTOWN									1		
		KGPRPAKP	KING OF PRUSSIA			1				1		1		
		NRTWPANR	NORRISTOWN			1				1		1		
		NWRKDENB	NEWARK	1						1				
		PAOLPAPA	PAOLI			1				1		1	1	1
		PHLAPADE	DEWEY			1						1		
		PHLAPAEV	EVERGREEN							1		1		
		PHLAPAGE	GERMANTOWN							1		1		
		PHLAPAJE	JEFFERSON							1		1		
		PHLAPALO	LOCUST	1		1				1		1	1	1
		PHLAPAMK	MARKET	1		1				1		1	1	1
		PHLAPAPE	PENNYPACKER	1		1				1		1	1	1
		PHLAPAPI	PILGRIM			1				1		1	1	
		PHLAPATR	TRINITY							1		1		
		PHLAPAWV	WAVERLY							1		1		
		TLVLDETV	TALLEYVILLE	1						1				
		TRRPRATR	TROOPER	1		1						1		
		WAYNPAWY	WAYNE	1						1		1	1	1
		WCHSPAWC	WEST CHESTER	1						1		1		
		WLGPAWVG	WILLOW GROVE							1		1		
		WLMGDEWL	WILMINGTON	1		1				1				
JENKPAJK	JENKINTOWN	KGPRPAKP	KING OF PRUSSIA			1				1		1		
		NRTWPANR	NORRISTOWN			1				1		1		
		PAOLPAPA	PAOLI			1				1		1		
		PHLAPACH	CHESTNUT HILL			1				1				
		PHLAPAEV	EVERGREEN			1				1		1		
		PHLAPAGE	GERMANTOWN			1				1		1		
		PHLAPAJE	JEFFERSON			1				1		1		
		PHLAPALO	LOCUST			1				1		1		
		PHLAPAMK	MARKET			1				1		1		
		PHLAPAMY	MAYFAIR			1				1				
		PHLAPAPE	PENNYPACKER							1		1		
		PHLAPAPI	PILGRIM			1				1		1		
		PHLAPAPO	POPLAR			1				1				
		PHLAPARE	REGENT			1				1				
		PHLAPATR	TRINITY			1				1		1		
		PHLAPAWV	WAVERLY			1				1		1		
		WAYNPAWY	WAYNE							1		1		

DIRECT ROUTES MEETING FCC'S WHOLESALE TRIGGER

		WAYNPAWY	WAYNE					1			1	1
		WCHSPAWC	WEST CHESTER					1			1	
		WLGPAWG	WILLOW GROVE					1			1	
PHLAPAWV	WAVERLY	WAYNPAWY	WAYNE					1			1	
		WCHSPAWC	WEST CHESTER					1			1	
		WLGPAWG	WILLOW GROVE					1			1	
TLVDETV	TALLEYVILLE	WAYNPAWY	WAYNE	1				1				
		WCHSPAWC	WEST CHESTER	1				1				
		WLMGDEWL	WILMINGTON	1				1				
TRPRPATR	TROOPER	WAYNPAWY	WAYNE	1							1	
		WCHSPAWC	WEST CHESTER	1							1	
		WLMGDEWL	WILMINGTON	1		1						
WAYNPAWY	WAYNE	WCHSPAWC	WEST CHESTER	1				1			1	
		WLGPAWG	WILLOW GROVE					1			1	
		WLMGDEWL	WILMINGTON	1				1				
WCHSPAWC	WEST CHESTER	WLGPAWG	WILLOW GROVE					1			1	
		WLMGDEWL	WILMINGTON	1				1				

LATA 228 - Philadelphia

Wire Center 1	Wire Center 1 Name	Wire Center 2	Wire Center 2 Name	LATA	Count Of CLECs In Common >=3 Self-Providers	Count Of CLECs In Common >=2 Wholesale Providers
ALTWPAAL	ALLENTOWN	AMBLPAAM	AMBLER	228	0	2
ALTWPAAL	ALLENTOWN	BCYNPABC	BALA CYNWYD	228	0	2
ALTWPAAL	ALLENTOWN	BHLHPABE	BETHLEHEM	228	6	4
ALTWPAAL	ALLENTOWN	CNSHPACN	CONSHOHOCKEN	228	3	3
ALTWPAAL	ALLENTOWN	HTBOPAHB	HATBORO	228	3	3
ALTWPAAL	ALLENTOWN	KGPRPAKP	KING OF PRUSSIA	228	0	2
ALTWPAAL	ALLENTOWN	NRTWPANR	NORRISTOWN	228	0	2
ALTWPAAL	ALLENTOWN	PAOLPAPA	PAOLI	228	3	3
ALTWPAAL	ALLENTOWN	PHLAPADE	DEWEY	228	0	2
ALTWPAAL	ALLENTOWN	PHLAPALO	LOCUST	228	3	3
ALTWPAAL	ALLENTOWN	PHLAPAMK	MARKET	228	4	3
ALTWPAAL	ALLENTOWN	PHLAPAPE	PENNYPACKER	228	3	3
ALTWPAAL	ALLENTOWN	PHLAPAPI	PILGRIM	228	0	2
ALTWPAAL	ALLENTOWN	TRPRPATR	TROOPER	228	0	2
ALTWPAAL	ALLENTOWN	WAYNPAWY	WAYNE	228	0	2
AMBLPAAM	AMBLER	ARMRPAAR	ARDMORE	228	3	3
AMBLPAAM	AMBLER	BCYNPABC	BALA CYNWYD	228	4	4
AMBLPAAM	AMBLER	BHLHPABE	BETHLEHEM	228	2	2
AMBLPAAM	AMBLER	BRYMPABM	BRYN MAWR	228	0	2
AMBLPAAM	AMBLER	CNSHPACN	CONSHOHOCKEN	228	4	4
AMBLPAAM	AMBLER	HTBOPAHB	HATBORO	228	4	4
AMBLPAAM	AMBLER	JENKPAJK	JENKINTOWN	228	3	3
AMBLPAAM	AMBLER	KGPRPAKP	KING OF PRUSSIA	228	4	4
AMBLPAAM	AMBLER	NRTWPANR	NORRISTOWN	228	4	4
AMBLPAAM	AMBLER	NWRKDENB	NEWARK	228	0	2
AMBLPAAM	AMBLER	PAOLPAPA	PAOLI	228	4	4
AMBLPAAM	AMBLER	PHLAPACH	CHESTNUT HILL	228	0	2
AMBLPAAM	AMBLER	PHLAPADE	DEWEY	228	0	2
AMBLPAAM	AMBLER	PHLAPAEV	EVERGREEN	228	3	3
AMBLPAAM	AMBLER	PHLAPAGE	GERMANTOWN	228	3	3
AMBLPAAM	AMBLER	PHLAPAJE	JEFFERSON	228	3	3
AMBLPAAM	AMBLER	PHLAPALO	LOCUST	228	5	5
AMBLPAAM	AMBLER	PHLAPAMK	MARKET	228	5	5
AMBLPAAM	AMBLER	PHLAPAMY	MAYFAIR	228	0	2
AMBLPAAM	AMBLER	PHLAPAPE	PENNYPACKER	228	4	4
AMBLPAAM	AMBLER	PHLAPAPI	PILGRIM	228	3	3
AMBLPAAM	AMBLER	PHLAPAPO	POPLAR	228	0	2
AMBLPAAM	AMBLER	PHLAPARE	REGENT	228	0	2
AMBLPAAM	AMBLER	PHLAPATR	TRINITY	228	3	3
AMBLPAAM	AMBLER	PHLAPAWV	WAVERLY	228	3	3
AMBLPAAM	AMBLER	TLVLDETV	TALLEYVILLE	228	0	2
AMBLPAAM	AMBLER	TRPRPATR	TROOPER	228	3	3
AMBLPAAM	AMBLER	WAYNPAWY	WAYNE	228	3	3
AMBLPAAM	AMBLER	WCHSPAWC	WEST CHESTER	228	3	3
AMBLPAAM	AMBLER	WLGRPAWG	WILLOW GROVE	228	0	2
AMBLPAAM	AMBLER	WLMGDEWL	WILMINGTON	228	3	3
ARMRPAAR	ARDMORE	BCYNPABC	BALA CYNWYD	228	4	4
ARMRPAAR	ARDMORE	BRYMPABM	BRYN MAWR	228	3	3
ARMRPAAR	ARDMORE	CNSHPACN	CONSHOHOCKEN	228	3	3
ARMRPAAR	ARDMORE	HTBOPAHB	HATBORO	228	3	3
ARMRPAAR	ARDMORE	KGPRPAKP	KING OF PRUSSIA	228	3	3
ARMRPAAR	ARDMORE	NRTWPANR	NORRISTOWN	228	3	3
ARMRPAAR	ARDMORE	NWRKDENB	NEWARK	228	0	2
ARMRPAAR	ARDMORE	PAOLPAPA	PAOLI	228	3	3
ARMRPAAR	ARDMORE	PHLAPAEV	EVERGREEN	228	3	3
ARMRPAAR	ARDMORE	PHLAPALO	LOCUST	228	5	5

CNSHPACN	CONSHOHOCKEN	NRTWPANR	NORRISTOWN	228	6	6
CNSHPACN	CONSHOHOCKEN	PAOLPAPA	PAOLI	228	7	7
CNSHPACN	CONSHOHOCKEN	PHLAPACH	CHESTNUT HILL	228	0	2
CNSHPACN	CONSHOHOCKEN	PHLAPADE	DEWEY	228	0	2
CNSHPACN	CONSHOHOCKEN	PHLAPAEV	EVERGREEN	228	5	5
CNSHPACN	CONSHOHOCKEN	PHLAPAGE	GERMANTOWN	228	3	3
CNSHPACN	CONSHOHOCKEN	PHLAPAJE	JEFFERSON	228	3	3
CNSHPACN	CONSHOHOCKEN	PHLAPALO	LOCUST	228	7	7
CNSHPACN	CONSHOHOCKEN	PHLAPAMK	MARKET	228	7	7
CNSHPACN	CONSHOHOCKEN	PHLAPAMY	MAYFAIR	228	0	2
CNSHPACN	CONSHOHOCKEN	PHLAPAPE	PENNYPACKER	228	5	5
CNSHPACN	CONSHOHOCKEN	PHLAPAPI	PILGRIM	228	4	4
CNSHPACN	CONSHOHOCKEN	PHLAPAPO	POPLAR	228	0	2
CNSHPACN	CONSHOHOCKEN	PHLAPARE	REGENT	228	0	2
CNSHPACN	CONSHOHOCKEN	PHLAPATR	TRINITY	228	4	4
CNSHPACN	CONSHOHOCKEN	PHLAPAWW	WAVERLY	228	3	3
CNSHPACN	CONSHOHOCKEN	TRPRPATR	TROOPER	228	0	2
CNSHPACN	CONSHOHOCKEN	WAYNPAWY	WAYNE	228	4	4
CNSHPACN	CONSHOHOCKEN	WCHSPAWC	WEST CHESTER	228	0	2
CNSHPACN	CONSHOHOCKEN	WLGPAWG	WILLOW GROVE	228	0	2
CNSHPACN	CONSHOHOCKEN	WLMGDEWL	WILMINGTON	228	0	2
HTBOPAHB	HATBORO	JENKPAJK	JENKINTOWN	228	0	2
HTBOPAHB	HATBORO	KGPRPAKP	KING OF PRUSSIA	228	3	3
HTBOPAHB	HATBORO	NRTWPANR	NORRISTOWN	228	3	3
HTBOPAHB	HATBORO	NWRKDENB	NEWARK	228	0	2
HTBOPAHB	HATBORO	PAOLPAPA	PAOLI	228	4	4
HTBOPAHB	HATBORO	PHLAPADE	DEWEY	228	0	2
HTBOPAHB	HATBORO	PHLAPAEV	EVERGREEN	228	0	2
HTBOPAHB	HATBORO	PHLAPAGE	GERMANTOWN	228	0	2
HTBOPAHB	HATBORO	PHLAPAJE	JEFFERSON	228	0	2
HTBOPAHB	HATBORO	PHLAPALO	LOCUST	228	5	5
HTBOPAHB	HATBORO	PHLAPAMK	MARKET	228	5	5
HTBOPAHB	HATBORO	PHLAPAPE	PENNYPACKER	228	4	5
HTBOPAHB	HATBORO	PHLAPAPI	PILGRIM	228	3	3
HTBOPAHB	HATBORO	PHLAPATR	TRINITY	228	0	2
HTBOPAHB	HATBORO	PHLAPAWW	WAVERLY	228	0	2
HTBOPAHB	HATBORO	TLVLDETV	TALLEYVILLE	228	0	2
HTBOPAHB	HATBORO	TRPRPATR	TROOPER	228	3	3
HTBOPAHB	HATBORO	WAYNPAWY	WAYNE	228	4	4
HTBOPAHB	HATBORO	WCHSPAWC	WEST CHESTER	228	3	3
HTBOPAHB	HATBORO	WLGPAWG	WILLOW GROVE	228	0	2
HTBOPAHB	HATBORO	WLMGDEWL	WILMINGTON	228	3	3
JENKPAJK	JENKINTOWN	KGPRPAKP	KING OF PRUSSIA	228	3	3
JENKPAJK	JENKINTOWN	NRTWPANR	NORRISTOWN	228	3	3
JENKPAJK	JENKINTOWN	PAOLPAPA	PAOLI	228	3	3
JENKPAJK	JENKINTOWN	PHLAPACH	CHESTNUT HILL	228	0	2
JENKPAJK	JENKINTOWN	PHLAPAEV	EVERGREEN	228	3	3
JENKPAJK	JENKINTOWN	PHLAPAGE	GERMANTOWN	228	3	3
JENKPAJK	JENKINTOWN	PHLAPAJE	JEFFERSON	228	3	3
JENKPAJK	JENKINTOWN	PHLAPALO	LOCUST	228	3	3
JENKPAJK	JENKINTOWN	PHLAPAMK	MARKET	228	3	3
JENKPAJK	JENKINTOWN	PHLAPAMY	MAYFAIR	228	0	2
JENKPAJK	JENKINTOWN	PHLAPAPE	PENNYPACKER	228	0	2
JENKPAJK	JENKINTOWN	PHLAPAPI	PILGRIM	228	3	3
JENKPAJK	JENKINTOWN	PHLAPAPO	POPLAR	228	0	2
JENKPAJK	JENKINTOWN	PHLAPARE	REGENT	228	0	2
JENKPAJK	JENKINTOWN	PHLAPATR	TRINITY	228	3	3
JENKPAJK	JENKINTOWN	PHLAPAWW	WAVERLY	228	3	3
JENKPAJK	JENKINTOWN	WAYNPAWY	WAYNE	228	0	2

JENKPAJK	JENKINTOWN	WCHSPAWC	WEST CHESTER	228	0	2
JENKPAJK	JENKINTOWN	WLGRPAWG	WILLOW GROVE	228	0	2
KGPRPAKP	KING OF PRUSSIA	NRTWPANR	NORRISTOWN	228	5	5
KGPRPAKP	KING OF PRUSSIA	PAOLPAPA	PAOLI	228	5	5
KGPRPAKP	KING OF PRUSSIA	PHLAPACH	CHESTNUT HILL	228	0	2
KGPRPAKP	KING OF PRUSSIA	PHLAPADE	DEWEY	228	0	2
KGPRPAKP	KING OF PRUSSIA	PHLAPAEV	EVERGREEN	228	4	4
KGPRPAKP	KING OF PRUSSIA	PHLAPAGE	GERMANTOWN	228	3	3
KGPRPAKP	KING OF PRUSSIA	PHLAPAJE	JEFFERSON	228	3	3
KGPRPAKP	KING OF PRUSSIA	PHLAPALO	LOCUST	228	5	5
KGPRPAKP	KING OF PRUSSIA	PHLAPAMK	MARKET	228	5	5
KGPRPAKP	KING OF PRUSSIA	PHLAPAMY	MAYFAIR	228	0	2
KGPRPAKP	KING OF PRUSSIA	PHLAPAPE	PENNYPACKER	228	4	4
KGPRPAKP	KING OF PRUSSIA	PHLAPAPI	PILGRIM	228	3	3
KGPRPAKP	KING OF PRUSSIA	PHLAPAPO	POPLAR	228	0	2
KGPRPAKP	KING OF PRUSSIA	PHLAPARE	REGENT	228	0	2
KGPRPAKP	KING OF PRUSSIA	PHLAPATR	TRINITY	228	4	4
KGPRPAKP	KING OF PRUSSIA	PHLAPAWW	WAVERLY	228	3	3
KGPRPAKP	KING OF PRUSSIA	TRPRPATR	TROOPER	228	0	2
KGPRPAKP	KING OF PRUSSIA	WAYNPAWY	WAYNE	228	3	3
KGPRPAKP	KING OF PRUSSIA	WCHSPAWC	WEST CHESTER	228	0	2
KGPRPAKP	KING OF PRUSSIA	WLGRPAWG	WILLOW GROVE	228	0	2
KGPRPAKP	KING OF PRUSSIA	WLMGDEWL	WILMINGTON	228	0	2
NRTWPANR	NORRISTOWN	PAOLPAPA	PAOLI	228	6	6
NRTWPANR	NORRISTOWN	PHLAPACH	CHESTNUT HILL	228	0	2
NRTWPANR	NORRISTOWN	PHLAPADE	DEWEY	228	0	2
NRTWPANR	NORRISTOWN	PHLAPAEV	EVERGREEN	228	5	5
NRTWPANR	NORRISTOWN	PHLAPAGE	GERMANTOWN	228	3	3
NRTWPANR	NORRISTOWN	PHLAPAJE	JEFFERSON	228	3	3
NRTWPANR	NORRISTOWN	PHLAPALO	LOCUST	228	6	6
NRTWPANR	NORRISTOWN	PHLAPAMK	MARKET	228	6	6
NRTWPANR	NORRISTOWN	PHLAPAMY	MAYFAIR	228	0	2
NRTWPANR	NORRISTOWN	PHLAPAPE	PENNYPACKER	228	4	4
NRTWPANR	NORRISTOWN	PHLAPAPI	PILGRIM	228	3	3
NRTWPANR	NORRISTOWN	PHLAPAPO	POPLAR	228	0	2
NRTWPANR	NORRISTOWN	PHLAPARE	REGENT	228	0	2
NRTWPANR	NORRISTOWN	PHLAPATR	TRINITY	228	4	4
NRTWPANR	NORRISTOWN	PHLAPAWW	WAVERLY	228	3	3
NRTWPANR	NORRISTOWN	TRPRPATR	TROOPER	228	0	2
NRTWPANR	NORRISTOWN	WAYNPAWY	WAYNE	228	3	3
NRTWPANR	NORRISTOWN	WCHSPAWC	WEST CHESTER	228	0	2
NRTWPANR	NORRISTOWN	WLGRPAWG	WILLOW GROVE	228	0	2
NRTWPANR	NORRISTOWN	WLMGDEWL	WILMINGTON	228	0	2
NWRKDENB	NEWARK	PHLAPALO	LOCUST	228	0	2
NWRKDENB	NEWARK	PHLAPAMK	MARKET	228	0	2
NWRKDENB	NEWARK	PHLAPAPE	PENNYPACKER	228	0	2
NWRKDENB	NEWARK	TLVLDETV	TALLEYVILLE	228	0	2
NWRKDENB	NEWARK	WAYNPAWY	WAYNE	228	0	2
NWRKDENB	NEWARK	WCHSPAWC	WEST CHESTER	228	0	2
NWRKDENB	NEWARK	WLMGDEWL	WILMINGTON	228	0	2
PAOLPAPA	PAOLI	PHLAPACH	CHESTNUT HILL	228	0	2
PAOLPAPA	PAOLI	PHLAPADE	DEWEY	228	0	2
PAOLPAPA	PAOLI	PHLAPAEV	EVERGREEN	228	5	5
PAOLPAPA	PAOLI	PHLAPAGE	GERMANTOWN	228	3	3
PAOLPAPA	PAOLI	PHLAPAJE	JEFFERSON	228	3	3
PAOLPAPA	PAOLI	PHLAPALO	LOCUST	228	8	8
PAOLPAPA	PAOLI	PHLAPAMK	MARKET	228	9	8
PAOLPAPA	PAOLI	PHLAPAMY	MAYFAIR	228	0	2
PAOLPAPA	PAOLI	PHLAPAPE	PENNYPACKER	228	5	5

PAOLPAPA	PAOLI	PHLAPAJ	PILGRIM	228	4	4
PAOLPAPA	PAOLI	PHLAPAO	POPLAR	228	0	2
PAOLPAPA	PAOLI	PHLAPARE	REGENT	228	0	2
PAOLPAPA	PAOLI	PHLAPATR	TRINITY	228	4	4
PAOLPAPA	PAOLI	PHLAPAWW	WAVERLY	228	3	3
PAOLPAPA	PAOLI	TRPRPATR	TROOPER	228	0	2
PAOLPAPA	PAOLI	WAYNPAWY	WAYNE	228	4	4
PAOLPAPA	PAOLI	WCHSPAWC	WEST CHESTER	228	0	2
PAOLPAPA	PAOLI	WLGRPAWG	WILLOW GROVE	228	0	2
PAOLPAPA	PAOLI	WLMGDEWL	WILMINGTON	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPAEV	EVERGREEN	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPAGE	GERMANTOWN	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPAJE	JEFFERSON	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPALO	LOCUST	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPAMK	MARKET	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPAMY	MAYFAIR	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPAPI	PILGRIM	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPAO	POPLAR	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPARE	REGENT	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPATR	TRINITY	228	0	2
PHLAPACH	CHESTNUT HILL	PHLAPAWW	WAVERLY	228	0	2
PHLAPADE	DEWEY	PHLAPALO	LOCUST	228	0	2
PHLAPADE	DEWEY	PHLAPAMK	MARKET	228	0	2
PHLAPADE	DEWEY	PHLAPAPE	PENNYPACKER	228	0	2
PHLAPADE	DEWEY	TRPRPATR	TROOPER	228	0	2
PHLAPAEV	EVERGREEN	PHLAPAGE	GERMANTOWN	228	3	3
PHLAPAEV	EVERGREEN	PHLAPAJE	JEFFERSON	228	3	3
PHLAPAEV	EVERGREEN	PHLAPALO	LOCUST	228	6	6
PHLAPAEV	EVERGREEN	PHLAPAMK	MARKET	228	6	6
PHLAPAEV	EVERGREEN	PHLAPAMY	MAYFAIR	228	0	2
PHLAPAEV	EVERGREEN	PHLAPAPE	PENNYPACKER	228	4	4
PHLAPAEV	EVERGREEN	PHLAPAPI	PILGRIM	228	3	3
PHLAPAEV	EVERGREEN	PHLAPAO	POPLAR	228	0	2
PHLAPAEV	EVERGREEN	PHLAPARE	REGENT	228	0	2
PHLAPAEV	EVERGREEN	PHLAPATR	TRINITY	228	5	5
PHLAPAEV	EVERGREEN	PHLAPAWW	WAVERLY	228	3	3
PHLAPAEV	EVERGREEN	WAYNPAWY	WAYNE	228	3	3
PHLAPAEV	EVERGREEN	WCHSPAWC	WEST CHESTER	228	0	2
PHLAPAEV	EVERGREEN	WLGRPAWG	WILLOW GROVE	228	0	2
PHLAPAGE	GERMANTOWN	PHLAPAJE	JEFFERSON	228	3	3
PHLAPAGE	GERMANTOWN	PHLAPALO	LOCUST	228	3	3
PHLAPAGE	GERMANTOWN	PHLAPAMK	MARKET	228	3	3
PHLAPAGE	GERMANTOWN	PHLAPAMY	MAYFAIR	228	0	2
PHLAPAGE	GERMANTOWN	PHLAPAPE	PENNYPACKER	228	0	2
PHLAPAGE	GERMANTOWN	PHLAPAPI	PILGRIM	228	3	3
PHLAPAGE	GERMANTOWN	PHLAPAO	POPLAR	228	0	2
PHLAPAGE	GERMANTOWN	PHLAPARE	REGENT	228	0	2
PHLAPAGE	GERMANTOWN	PHLAPATR	TRINITY	228	3	3
PHLAPAGE	GERMANTOWN	PHLAPAWW	WAVERLY	228	3	3
PHLAPAGE	GERMANTOWN	WAYNPAWY	WAYNE	228	0	2
PHLAPAGE	GERMANTOWN	WCHSPAWC	WEST CHESTER	228	0	2
PHLAPAGE	GERMANTOWN	WLGRPAWG	WILLOW GROVE	228	0	2
PHLAPAJE	JEFFERSON	PHLAPALO	LOCUST	228	3	3
PHLAPAJE	JEFFERSON	PHLAPAMK	MARKET	228	3	3
PHLAPAJE	JEFFERSON	PHLAPAMY	MAYFAIR	228	0	2
PHLAPAJE	JEFFERSON	PHLAPAPE	PENNYPACKER	228	0	2
PHLAPAJE	JEFFERSON	PHLAPAPI	PILGRIM	228	3	3
PHLAPAJE	JEFFERSON	PHLAPAO	POPLAR	228	0	2
PHLAPAJE	JEFFERSON	PHLAPARE	REGENT	228	0	2

PHLAPAJE	JEFFERSON	PHLAPATR	TRINITY	228	3	3
PHLAPAJE	JEFFERSON	PHLAPAWV	WAVERLY	228	3	3
PHLAPAJE	JEFFERSON	WAYNPAWY	WAYNE	228	0	2
PHLAPAJE	JEFFERSON	WCHSPAWC	WEST CHESTER	228	0	2
PHLAPAJE	JEFFERSON	WLGRPAWG	WILLOW GROVE	228	0	2
PHLAPALO	LOCUST	PHLAPAMK	MARKET	228	12	11
PHLAPALO	LOCUST	PHLAPAMY	MAYFAIR	228	0	2
PHLAPALO	LOCUST	PHLAPAPE	PENNYPACKER	228	7	7
PHLAPALO	LOCUST	PHLAPAPI	PILGRIM	228	4	4
PHLAPALO	LOCUST	PHLAPAPO	POPLAR	228	0	2
PHLAPALO	LOCUST	PHLAPARE	REGENT	228	0	2
PHLAPALO	LOCUST	PHLAPATR	TRINITY	228	5	5
PHLAPALO	LOCUST	PHLAPAWV	WAVERLY	228	3	3
PHLAPALO	LOCUST	TLVLDETV	TALLEYVILLE	228	0	2
PHLAPALO	LOCUST	TRPRPATR	TROOPER	228	3	3
PHLAPALO	LOCUST	WAYNPAWY	WAYNE	228	5	5
PHLAPALO	LOCUST	WCHSPAWC	WEST CHESTER	228	3	3
PHLAPALO	LOCUST	WLGRPAWG	WILLOW GROVE	228	0	2
PHLAPALO	LOCUST	WLMGDEWL	WILMINGTON	228	3	3
PHLAPAMK	MARKET	PHLAPAMY	MAYFAIR	228	0	2
PHLAPAMK	MARKET	PHLAPAPE	PENNYPACKER	228	7	7
PHLAPAMK	MARKET	PHLAPAPI	PILGRIM	228	4	4
PHLAPAMK	MARKET	PHLAPAPO	POPLAR	228	0	2
PHLAPAMK	MARKET	PHLAPARE	REGENT	228	0	2
PHLAPAMK	MARKET	PHLAPATR	TRINITY	228	5	5
PHLAPAMK	MARKET	PHLAPAWV	WAVERLY	228	3	3
PHLAPAMK	MARKET	TLVLDETV	TALLEYVILLE	228	0	2
PHLAPAMK	MARKET	TRPRPATR	TROOPER	228	3	3
PHLAPAMK	MARKET	WAYNPAWY	WAYNE	228	5	5
PHLAPAMK	MARKET	WCHSPAWC	WEST CHESTER	228	3	3
PHLAPAMK	MARKET	WLGRPAWG	WILLOW GROVE	228	0	2
PHLAPAMK	MARKET	WLMGDEWL	WILMINGTON	228	3	3
PHLAPAMY	MAYFAIR	PHLAPAPI	PILGRIM	228	0	2
PHLAPAMY	MAYFAIR	PHLAPAPO	POPLAR	228	0	2
PHLAPAMY	MAYFAIR	PHLAPARE	REGENT	228	0	2
PHLAPAMY	MAYFAIR	PHLAPATR	TRINITY	228	0	2
PHLAPAMY	MAYFAIR	PHLAPAWV	WAVERLY	228	0	2
PHLAPAPE	PENNYPACKER	PHLAPAPI	PILGRIM	228	3	3
PHLAPAPE	PENNYPACKER	PHLAPATR	TRINITY	228	4	4
PHLAPAPE	PENNYPACKER	PHLAPAWV	WAVERLY	228	0	2
PHLAPAPE	PENNYPACKER	TLVLDETV	TALLEYVILLE	228	0	2
PHLAPAPE	PENNYPACKER	TRPRPATR	TROOPER	228	3	3
PHLAPAPE	PENNYPACKER	WAYNPAWY	WAYNE	228	5	5
PHLAPAPE	PENNYPACKER	WCHSPAWC	WEST CHESTER	228	3	3
PHLAPAPE	PENNYPACKER	WLGRPAWG	WILLOW GROVE	228	0	2
PHLAPAPE	PENNYPACKER	WLMGDEWL	WILMINGTON	228	3	3
PHLAPAPI	PILGRIM	PHLAPAPO	POPLAR	228	0	2
PHLAPAPI	PILGRIM	PHLAPARE	REGENT	228	0	2
PHLAPAPI	PILGRIM	PHLAPATR	TRINITY	228	3	3
PHLAPAPI	PILGRIM	PHLAPAWV	WAVERLY	228	3	3
PHLAPAPI	PILGRIM	WAYNPAWY	WAYNE	228	3	3
PHLAPAPI	PILGRIM	WCHSPAWC	WEST CHESTER	228	0	2
PHLAPAPI	PILGRIM	WLGRPAWG	WILLOW GROVE	228	0	2
PHLAPAPO	POPLAR	PHLAPARE	REGENT	228	0	2
PHLAPAPO	POPLAR	PHLAPATR	TRINITY	228	0	2
PHLAPAPO	POPLAR	PHLAPAWV	WAVERLY	228	0	2
PHLAPARE	REGENT	PHLAPATR	TRINITY	228	0	2
PHLAPARE	REGENT	PHLAPAWV	WAVERLY	228	0	2
PHLAPATR	TRINITY	PHLAPAWV	WAVERLY	228	3	3

PHLAPATR	TRINITY	WAYNPAWY	WAYNE	228	3	3
PHLAPATR	TRINITY	WCHSPAWC	WEST CHESTER	228	0	2
PHLAPATR	TRINITY	WLGRPAWG	WILLOW GROVE	228	0	2
PHLAPAWW	WAVERLY	WAYNPAWY	WAYNE	228	0	2
PHLAPAWW	WAVERLY	WCHSPAWC	WEST CHESTER	228	0	2
PHLAPAWW	WAVERLY	WLGRPAWG	WILLOW GROVE	228	0	2
TLVLDETV	TALLEYVILLE	WAYNPAWY	WAYNE	228	0	2
TLVLDETV	TALLEYVILLE	WCHSPAWC	WEST CHESTER	228	0	2
TLVLDETV	TALLEYVILLE	WLMGDEWL	WILMINGTON	228	0	2
TRPRPATR	TROOPER	WAYNPAWY	WAYNE	228	0	2
TRPRPATR	TROOPER	WCHSPAWC	WEST CHESTER	228	0	2
TRPRPATR	TROOPER	WLMGDEWL	WILMINGTON	228	0	2
WAYNPAWY	WAYNE	WCHSPAWC	WEST CHESTER	228	3	3
WAYNPAWY	WAYNE	WLGRPAWG	WILLOW GROVE	228	0	2
WAYNPAWY	WAYNE	WLMGDEWL	WILMINGTON	228	0	2
WCHSPAWC	WEST CHESTER	WLGRPAWG	WILLOW GROVE	228	0	2
WCHSPAWC	WEST CHESTER	WLMGDEWL	WILMINGTON	228	0	2

LATA 234 - Pittsburgh				CLEC #									
Count	Wire Center 1 Name	Wire Center 2	Wire Center 2 Name	003	012	021	024	026	033	057	066		
BLLVPABE	BELLEVUE	CARNPACA	CARNEGIE		1	1					1		
		CRAFPACR	CRAFTON		1	1					1		
		CRPLPACO	CORAOPOLIS		1	1					1		
		DRMTPADO	DORMONT		1	1					1		
		GLNSPAGL	GLENSHAW		1	1					1		
		MOVLPAMO	MONROEVILLE		1	1					1		
		OKMTPAOA	OAKMONT		1	1					1		
		PEHLPAPH	PENN HILLS		1	1					1		
		PITBPAAL	ALLENTOWN PITTSBURG		1	1					1		
		PITBPACA	CARRICK		1	1					1		
		PITBPAEL	EAST LIBERTY		1	1					1		
		PITBPANS	NORTH SIDE		1	1					1		
		PITBPAOK	OAKLAND		1	1					1		
		PYVLPAPE	PERRYSVILLE		1	1					1		
		RBTTPART	ROBINSON TOWNSHIP		1	1					1		
		SHSAPASH	SHARPSBURG		1	1					1		
		SWKYPASE	SEWICKLEY		1	1					1		
		CARNPACA	CARNEGIE	CRAFPACR	CRAFTON		1	1	1				1
				CRPLPACO	CORAOPOLIS		1	1	1				1
				DRMTPADO	DORMONT		1	1	1				1
				GLNSPAGL	GLENSHAW		1	1					1
MOVLPAMO	MONROEVILLE				1	1	1	1			1		
OKMTPAOA	OAKMONT				1	1		1			1		
PEHLPAPH	PENN HILLS				1	1		1			1		
PITBPAAL	ALLENTOWN PITTSBURG				1	1	1	1			1		
PITBPACA	CARRICK				1	1					1		
PITBPADT	DOWNTOWN				1	1	1	1			1		
PITBPAEL	EAST LIBERTY				1	1					1		
PITBPANS	NORTH SIDE				1	1	1				1		
PITBPAOK	OAKLAND				1	1					1		
PYVLPAPE	PERRYSVILLE				1	1	1				1		
RBTTPART	ROBINSON TOWNSHIP				1	1					1		
SHSAPASH	SHARPSBURG				1	1	1	1			1		
SWKYPASE	SEWICKLEY				1	1					1		
TRCKPATC	TURTLE CREEK				1	1	1	1			1		
WKBGPAWK	WILKINSBURG				1	1	1				1		
CRAFPACR	CRAFTON			CRPLPACO	CORAOPOLIS		1	1	1				1
				DRMTPADO	DORMONT		1	1	1				1
		GLNSPAGL	GLENSHAW		1	1					1		
		MOVLPAMO	MONROEVILLE		1	1	1				1		
		OKMTPAOA	OAKMONT		1	1					1		
		PEHLPAPH	PENN HILLS		1	1					1		
		PITBPAAL	ALLENTOWN PITTSBURG		1	1	1				1		
		PITBPACA	CARRICK		1	1					1		
		PITBPADT	DOWNTOWN		1	1	1				1		
		PITBPAEL	EAST LIBERTY		1	1					1		
		PITBPANS	NORTH SIDE		1	1	1	1			1		
		PITBPAOK	OAKLAND		1	1					1		
		PYVLPAPE	PERRYSVILLE		1	1	1				1		
		RBTTPART	ROBINSON TOWNSHIP		1	1					1		
		SHSAPASH	SHARPSBURG		1	1	1	1			1		
		SWKYPASE	SEWICKLEY		1	1					1		
		TRCKPATC	TURTLE CREEK		1	1					1		
		WKBGPAWK	WILKINSBURG		1	1	1				1		
		CRPLPACO	CORAOPOLIS	DRMTPADO	DORMONT		1	1	1				1
				GLNSPAGL	GLENSHAW		1	1					1

SECRETARY'S BUREAU

2004 JAN 27 PM 3:16

RECEIVED

DIRECT ROUTES MEETING FCC'S SELF-DEPLOYMENT TRIGGER

		MOVLPAMO	MONROEVILLE		1	1	1			1
		OKMTPAOA	OAKMONT		1	1				1
		PEHLPAPH	PENN HILLS		1	1				1
		PITBPAAL	ALLENTOWN PITTSBURG		1	1	1			1
		PITBPACA	CARRICK		1	1				1
		PITBPADT	DOWNTOWN			1	1			1
		PITBPAEL	EAST LIBERTY		1	1				1
		PITBPANS	NORTH SIDE		1	1	1			1
		PITBPAOK	OAKLAND		1	1				1
		PYVLPAPE	PERRYSVILLE		1	1	1			1
		RBTTPART	ROBINSON TOWNSHIP		1	1				1
		SHSAPASH	SHARPSBURG		1	1	1			1
		SWKYPASE	SEWICKLEY		1	1				1
		TRCKPATC	TURTLE CREEK			1	1			1
		WKBGPAWK	WILKINSBURG			1	1			1
DRMTPADO	DORMONT	GLNSPAGL	GLENSHAW		1	1				1
		MCPTPAMK	MCKEESPORT			1	1			1
		MOVLPAMO	MONROEVILLE		1	1	1			1
		OKMTPAOA	OAKMONT		1	1				1
		PEHLPAPH	PENN HILLS		1	1				1
		PITBPAAL	ALLENTOWN PITTSBURG		1	1	1			1
		PITBPACA	CARRICK		1	1				1
		PITBPADT	DOWNTOWN			1	1			1
		PITBPAEL	EAST LIBERTY		1	1				1
		PITBPANS	NORTH SIDE		1	1	1			1
		PITBPAOK	OAKLAND		1	1				1
		PYVLPAPE	PERRYSVILLE		1	1	1			1
		RBTTPART	ROBINSON TOWNSHIP		1	1				1
		SHSAPASH	SHARPSBURG		1	1	1			1
		SWKYPASE	SEWICKLEY		1	1				1
		TRCKPATC	TURTLE CREEK			1	1			1
		WKBGPAWK	WILKINSBURG			1	1			1
GLNSPAGL	GLENSHAW	MOVLPAMO	MONROEVILLE		1	1				1
		OKMTPAOA	OAKMONT		1	1				1
		PEHLPAPH	PENN HILLS		1	1				1
		PITBPAAL	ALLENTOWN PITTSBURG		1	1				1
		PITBPACA	CARRICK		1	1				1
		PITBPAEL	EAST LIBERTY		1	1				1
		PITBPANS	NORTH SIDE		1	1				1
		PITBPAOK	OAKLAND		1	1				1
		PYVLPAPE	PERRYSVILLE		1	1				1
		RBTTPART	ROBINSON TOWNSHIP		1	1				1
		SHSAPASH	SHARPSBURG		1	1				1
		SWKYPASE	SEWICKLEY		1	1				1
MCPTPAMK	MCKEESPORT	MOVLPAMO	MONROEVILLE		1	1				1
		PITBPAAL	ALLENTOWN PITTSBURG		1	1				1
		PITBPADT	DOWNTOWN			1	1			1
		PITBPAEL	EAST LIBERTY			1	1			1
		PITBPANS	NORTH SIDE		1	1				1
		PYVLPAPE	PERRYSVILLE		1	1				1
		TRCKPATC	TURTLE CREEK		1	1				1
		WKBGPAWK	WILKINSBURG			1	1			1
MOVLPAMO	MONROEVILLE	OKMTPAOA	OAKMONT		1	1	1			1
		PEHLPAPH	PENN HILLS		1	1				1
		PITBPAAL	ALLENTOWN PITTSBURG		1	1	1			1
		PITBPACA	CARRICK		1	1				1
		PITBPADT	DOWNTOWN			1	1			1
		PITBPAEL	EAST LIBERTY		1	1				1
		PITBPANS	NORTH SIDE		1	1	1			1

DIRECT ROUTES MEETING FCC'S SELF-DEPLOYMENT TRIGGER

		RBTPPART	ROBINSON TOWNSHIP	1	1				1
		SHSAPASH	SHARPSBURG	1	1				1
		SWKYPASE	SEWICKLEY	1	1				1
		TRCKPATC	TURTLE CREEK					1	1
		WKBGPAWK	WILKINSBURG		1			1	1
PITBPANS	NORTH SIDE	PITBPAOK	OAKLAND	1	1	1			1
		PYVLPAPE	PERRYSVILLE	1	1	1		1	1
		RBTPPART	ROBINSON TOWNSHIP	1	1	1			1
		SHSAPASH	SHARPSBURG	1	1	1			1
		SWKYPASE	SEWICKLEY	1	1	1			1
		TRCKPATC	TURTLE CREEK		1	1		1	1
		WKBGPAWK	WILKINSBURG		1	1		1	1
PITBPAOK	OAKLAND	PYVLPAPE	PERRYSVILLE	1	1				1
		RBTPPART	ROBINSON TOWNSHIP	1	1	1			1
		SHSAPASH	SHARPSBURG	1	1	1			1
		SWKYPASE	SEWICKLEY	1	1	1			1
PYVLPAPE	PERRYSVILLE	RBTPPART	ROBINSON TOWNSHIP	1	1				1
		SHSAPASH	SHARPSBURG	1	1	1			1
		SWKYPASE	SEWICKLEY	1	1				1
		TRCKPATC	TURTLE CREEK		1	1		1	1
		WKBGPAWK	WILKINSBURG		1	1		1	1
RBTPPART	ROBINSON TOWNSHIP	SHSAPASH	SHARPSBURG	1	1	1			1
		SWKYPASE	SEWICKLEY	1	1				1
SHSAPASH	SHARPSBURG	SWKYPASE	SEWICKLEY	1	1				1
		TRCKPATC	TURTLE CREEK		1	1	1		1
		WKBGPAWK	WILKINSBURG		1	1			1
TRCKPATC	TURTLE CREEK	WKBGPAWK	WILKINSBURG		1	1		1	1

ATTACHMENT 6

LATA 234 - Pittsburgh				CLEC #						
Count	Wire Center 1	Wire Center 2	Wire Center 2 Name	003	021	024	026	033	057	068
	BLLVPABE	BELLEVUE	CARNPACA	CARNEGIE	1					1
			CRAFPACR	CRAFTON		1				1
			CRPLPACO	CORAOPOLIS		1				1
			DRMTPADO	DORMONT		1				1
			GLNSPAGL	GLENSHAW		1				1
			HMSTPAHO	HOMESTEAD		1				1
			MCPTPAMK	MCKEESPORT		1				1
			MCRKPAMR	MCKEES ROCKS		1				1
			MOVLPAMO	MONROEVILLE		1				1
			OKMTPAOA	OAKMONT		1				1
			PEHLPAPH	PENN HILLS		1				1
			PITBPAAL	ALLENTOWN PITTSBURG		1				1
			PITBPACA	CARRICK		1				1
			PITBPADT	DOWNTOWN		1				1
			PITBPAEL	EAST LIBERTY		1				1
			PITBPANS	NORTH SIDE		1				1
			PITBPAOK	OAKLAND		1				1
			PYVLPAPE	PERRYSVILLE		1				1
			RBTPPART	ROBINSON TOWNSHIP		1				1
			SHSAPASH	SHARPSBURG		1				1
			SWKYPASE	SEWICKLEY		1				1
			TRCKPATC	TURTLE CREEK		1				1
			WKBGPAWK	WILKINSBURG		1				1
	CARNPACA	CARNEGIE	CRAFPACR	CRAFTON		1	1			1
			CRPLPACO	CORAOPOLIS		1	1			1
			DRMTPADO	DORMONT		1	1			1
			GLNSPAGL	GLENSHAW		1	1			1
			HMSTPAHO	HOMESTEAD		1	1			1
			MCPTPAMK	MCKEESPORT		1	1			1
			MCRKPAMR	MCKEES ROCKS		1	1			1
			MOVLPAMO	MONROEVILLE		1	1	1		1
			OKMTPAOA	OAKMONT		1	1			1
			PEHLPAPH	PENN HILLS		1	1			1
			PITBPAAL	ALLENTOWN PITTSBURG		1	1	1		1
			PITBPACA	CARRICK		1	1			1
			PITBPADT	DOWNTOWN		1	1	1		1
			PITBPAEL	EAST LIBERTY		1	1			1
			PITBPANS	NORTH SIDE		1	1			1
			PITBPAOK	OAKLAND		1	1			1
			PYVLPAPE	PERRYSVILLE		1	1			1
			RBTPPART	ROBINSON TOWNSHIP		1	1			1
			SHSAPASH	SHARPSBURG		1	1	1		1
			SWKYPASE	SEWICKLEY		1	1			1
			TRCKPATC	TURTLE CREEK		1	1	1		1
			WKBGPAWK	WILKINSBURG		1	1			1
	CRAFPACR	CRAFTON	CRPLPACO	CORAOPOLIS		1	1			1
			DRMTPADO	DORMONT		1	1			1
			GLNSPAGL	GLENSHAW		1	1			1
			HMSTPAHO	HOMESTEAD		1	1			1
			MCPTPAMK	MCKEESPORT		1	1			1
			MCRKPAMR	MCKEES ROCKS		1	1			1
			MOVLPAMO	MONROEVILLE		1	1			1
			OKMTPAOA	OAKMONT		1	1			1
			PEHLPAPH	PENN HILLS		1	1			1
			PITBPAAL	ALLENTOWN PITTSBURG		1	1			1
			PITBPACA	CARRICK		1	1			1

		PITBPADT	DOWNTOWN	1	1	1			1
		PITBPAEL	EAST LIBERTY		1				1
		PITBPANS	NORTH SIDE	1	1	1			1
		PITBPAOK	OAKLAND	1	1				1
		PYVLPAPE	PERRYSVILLE	1	1	1			1
		RBTPPART	ROBINSON TOWNSHIP	1	1				1
		SHSAPASH	SHARPSBURG	1	1	1			1
		SWKYPASE	SEWICKLEY	1	1				1
		TRCKPATC	TURTLE CREEK	1	1	1			1
		WKBGPAWK	WILKINSBURG	1	1				1
CRPLPACO	CORANPOLIS	DRMTPADO	DORMONT	1	1				1
		GLNSPAGL	GLENSHAW	1					1
		HMSTPAHO	HOMESTEAD	1					1
		MCPTPAMK	MCKEESPORT	1					1
		MCRKPAMR	MCKEES ROCKS	1					1
		MOVLPAMO	MONROEVILLE	1	1				1
		OKMTPAOA	OAKMONT	1					1
		PEHLPAPH	PENN HILLS	1					1
		PITBPAAL	ALLENTOWN PITTSBURG	1	1				1
		PITBPACA	CARRICK	1					1
		PITBPADT	DOWNTOWN	1	1				1
		PITBPAEL	EAST LIBERTY	1					1
		PITBPANS	NORTH SIDE	1	1				1
		PITBPAOK	OAKLAND	1					1
		PYVLPAPE	PERRYSVILLE	1	1				1
		RBTPPART	ROBINSON TOWNSHIP	1					1
		SHSAPASH	SHARPSBURG	1	1				1
		SWKYPASE	SEWICKLEY	1	1				1
		TRCKPATC	TURTLE CREEK	1	1				1
		WKBGPAWK	WILKINSBURG	1	1				1
DRMTPADO	DORMONT	GLNSPAGL	GLENSHAW	1					1
		HMSTPAHO	HOMESTEAD	1					1
		MCPTPAMK	MCKEESPORT	1					1
		MCRKPAMR	MCKEES ROCKS	1					1
		MOVLPAMO	MONROEVILLE	1	1				1
		OKMTPAOA	OAKMONT	1					1
		PEHLPAPH	PENN HILLS	1					1
		PITBPAAL	ALLENTOWN PITTSBURG	1	1				1
		PITBPACA	CARRICK	1					1
		PITBPADT	DOWNTOWN	1	1				1
		PITBPAEL	EAST LIBERTY	1					1
		PITBPANS	NORTH SIDE	1	1				1
		PITBPAOK	OAKLAND	1					1
		PYVLPAPE	PERRYSVILLE	1	1				1
		RBTPPART	ROBINSON TOWNSHIP	1					1
		SHSAPASH	SHARPSBURG	1	1				1
		SWKYPASE	SEWICKLEY	1					1
		TRCKPATC	TURTLE CREEK	1	1				1
		WKBGPAWK	WILKINSBURG	1	1				1
GLNSPAGL	GLENSHAW	HMSTPAHO	HOMESTEAD	1					1
		MCPTPAMK	MCKEESPORT	1					1
		MCRKPAMR	MCKEES ROCKS	1					1
		MOVLPAMO	MONROEVILLE	1					1
		OKMTPAOA	OAKMONT	1					1
		PEHLPAPH	PENN HILLS	1					1
		PITBPAAL	ALLENTOWN PITTSBURG	1					1
		PITBPACA	CARRICK	1					1
		PITBPADT	DOWNTOWN	1					1
		PITBPAEL	EAST LIBERTY	1					1

DIRECT ROUTES MEETING FCC's WHOLESALE TRIGGER

		PITBPANS	NORTH SIDE		1				1
		PITBPAOK	OAKLAND		1				1
		PYVLPAPE	PERRYSVILLE		1				1
		RBTPPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1				1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1				1
		WKBGPAWK	WILKINSBURG		1				1
HMSTPAHO	HOMESTEAD	MCPTPAMK	MCKEESPORT		1				1
		MCRKPAMR	MCKEES ROCKS		1				1
		MOVLPAMO	MONROEVILLE		1				1
		OKMTPAOA	OAKMONT		1				1
		PEHLPAPH	PENN HILLS		1				1
		PITBPAAL	ALLENTOWN PITTSBURG		1				1
		PITBPACA	CARRICK		1				1
		PITBPADT	DOWNTOWN		1				1
		PITBPAEL	EAST LIBERTY		1				1
		PITBPANS	NORTH SIDE		1				1
		PITBPAOK	OAKLAND		1				1
		PYVLPAPE	PERRYSVILLE		1				1
		RBTPPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1				1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1				1
		WKBGPAWK	WILKINSBURG		1				1
MCPTPAMK	MCKEESPORT	MCRKPAMR	MCKEES ROCKS		1				1
		MOVLPAMO	MONROEVILLE		1		1		1
		OKMTPAOA	OAKMONT		1				1
		PEHLPAPH	PENN HILLS		1				1
		PITBPAAL	ALLENTOWN PITTSBURG		1		1		1
		PITBPACA	CARRICK		1				1
		PITBPADT	DOWNTOWN		1		1		1
		PITBPAEL	EAST LIBERTY		1		1		1
		PITBPANS	NORTH SIDE		1		1		1
		PITBPAOK	OAKLAND		1				1
		PYVLPAPE	PERRYSVILLE		1		1		1
		RBTPPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1				1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1		1		1
		WKBGPAWK	WILKINSBURG		1		1		1
MCRKPAMR	MCKEES ROCKS	MOVLPAMO	MONROEVILLE		1				1
		OKMTPAOA	OAKMONT		1				1
		PEHLPAPH	PENN HILLS		1				1
		PITBPAAL	ALLENTOWN PITTSBURG		1				1
		PITBPACA	CARRICK		1				1
		PITBPADT	DOWNTOWN		1				1
		PITBPAEL	EAST LIBERTY		1				1
		PITBPANS	NORTH SIDE		1				1
		PITBPAOK	OAKLAND		1				1
		PYVLPAPE	PERRYSVILLE		1				1
		RBTPPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1				1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1				1
		WKBGPAWK	WILKINSBURG		1				1
MOVLPAMO	MONROEVILLE	OKMTPAOA	OAKMONT		1		1		1
		PEHLPAPH	PENN HILLS		1		1		1
		PITBPAAL	ALLENTOWN PITTSBURG		1		1		1

DIRECT ROUTES MEETING FCC'S WHOLESALE TRIGGER

		PITBPACA	CARRICK		1				1
		PITBPADT	DOWNTOWN		1	1	1	1	1
		PITBPAEL	EAST LIBERTY		1			1	1
		PITBPANS	NORTH SIDE		1	1	1	1	1
		PITBPAOK	OAKLAND		1				1
		PYVLPAPE	PERRYSVILLE		1	1		1	1
		RBTPPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1	1	1		1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1	1	1	1	1
		WKBGPAWK	WILKINSBURG		1	1		1	1
OKMTPAOA	OAKMONT	PEHLPAPH	PENN HILLS		1		1		1
		PITBPAAL	ALLENTOWN PITTSBURG		1	1			1
		PITBPACA	CARRICK		1				1
		PITBPADT	DOWNTOWN		1	1	1		1
		PITBPAEL	EAST LIBERTY		1				1
		PITBPANS	NORTH SIDE		1				1
		PITBPAOK	OAKLAND		1				1
		PYVLPAPE	PERRYSVILLE		1				1
		RBTPPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1	1			1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1	1			1
		WKBGPAWK	WILKINSBURG		1				1
PEHLPAPH	PENN HILLS	PITBPAAL	ALLENTOWN PITTSBURG		1	1			1
		PITBPACA	CARRICK		1				1
		PITBPADT	DOWNTOWN		1	1	1		1
		PITBPAEL	EAST LIBERTY		1				1
		PITBPANS	NORTH SIDE		1				1
		PITBPAOK	OAKLAND		1				1
		PYVLPAPE	PERRYSVILLE		1				1
		RBTPPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1	1			1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1	1			1
		WKBGPAWK	WILKINSBURG		1				1
PITBPAAL	ALLENTOWN PITTSBU	PITBPACA	CARRICK		1	1	1		1
		PITBPADT	DOWNTOWN		1	1	1	1	1
		PITBPAEL	EAST LIBERTY		1			1	1
		PITBPANS	NORTH SIDE		1	1	1		1
		PITBPAOK	OAKLAND		1				1
		PYVLPAPE	PERRYSVILLE		1	1	1		1
		RBTPPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1	1	1		1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1	1	1	1	1
		WKBGPAWK	WILKINSBURG		1	1	1		1
PITBPACA	CARRICK	PITBPADT	DOWNTOWN		1				1
		PITBPAEL	EAST LIBERTY		1				1
		PITBPANS	NORTH SIDE		1				1
		PITBPAOK	OAKLAND		1				1
		PYVLPAPE	PERRYSVILLE		1				1
		RBTPPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1				1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1				1
		WKBGPAWK	WILKINSBURG		1				1
PITBPADT	DOWNTOWN	PITBPAEL	EAST LIBERTY		1			1	1
		PITBPANS	NORTH SIDE		1	1	1	1	1

DIRECT ROUTES MEETING FCC'S WHOLESALE TRIGGER

		PITBPAOK	OAKLAND	1	1			1	1
		PYVLPAPE	PERRYSVILLE		1	1		1	1
		RBTTPART	ROBINSON TOWNSHIP	1	1				1
		SHSAPASH	SHARPSBURG	1	1	1	1		1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1	1	1	1	1
		WKBGPAWK	WILKINSBURG		1	1		1	1
PITBPAEL	EAST LIBERTY	PITBPANS	NORTH SIDE		1			1	1
		PITBPAOK	OAKLAND		1				1
		PYVLPAPE	PERRYSVILLE		1			1	1
		RBTTPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1				1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1			1	1
		WKBGPAWK	WILKINSBURG		1			1	1
PITBPANS	NORTH SIDE	PITBPAOK	OAKLAND	1	1			1	1
		PYVLPAPE	PERRYSVILLE		1	1	1	1	1
		RBTTPART	ROBINSON TOWNSHIP		1	1			1
		SHSAPASH	SHARPSBURG		1	1	1		1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1	1		1	1
		WKBGPAWK	WILKINSBURG		1	1		1	1
PITBPAOK	OAKLAND	PYVLPAPE	PERRYSVILLE		1				1
		RBTTPART	ROBINSON TOWNSHIP		1	1			1
		SHSAPASH	SHARPSBURG		1	1			1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1				1
		WKBGPAWK	WILKINSBURG		1				1
PYVLPAPE	PERRYSVILLE	RBTTPART	ROBINSON TOWNSHIP		1				1
		SHSAPASH	SHARPSBURG		1	1			1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1	1		1	1
		WKBGPAWK	WILKINSBURG		1	1		1	1
RBTTPART	ROBINSON TOWNSHIP	SHSAPASH	SHARPSBURG	1	1				1
		SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1				1
		WKBGPAWK	WILKINSBURG		1				1
SHSAPASH	SHARPSBURG	SWKYPASE	SEWICKLEY		1				1
		TRCKPATC	TURTLE CREEK		1	1	1		1
		WKBGPAWK	WILKINSBURG		1	1			1
SWKYPASE	SEWICKLEY	TRCKPATC	TURTLE CREEK		1				1
		WKBGPAWK	WILKINSBURG		1				1
TRCKPATC	TURTLE CREEK	WKBGPAWK	WILKINSBURG		1	1		1	1

LATA 234 - Pittsburgh

Wire Center 1	Wire Center 1 Name	Wire Center 2	Wire Center 2 Name	LATA	Count Of CLECs In Common >=3 Self-Providers	Count Of CLECs In Common >=2 Wholesale Providers
BLLVPABE	BELLEVUE	CARNPACA	CARNEGIE	234	3	2
BLLVPABE	BELLEVUE	CRAFPACR	CRAFTON	234	3	2
BLLVPABE	BELLEVUE	CRPLPACO	CORAOPOLIS	234	3	2
BLLVPABE	BELLEVUE	DRMTPADO	DORMONT	234	3	2
BLLVPABE	BELLEVUE	GLNSPAGL	GLENSHAW	234	3	2
BLLVPABE	BELLEVUE	HMSTPAHO	HOMESTEAD	234	0	2
BLLVPABE	BELLEVUE	MCPTPAMK	MCKEESPORT	234	0	2
BLLVPABE	BELLEVUE	MCRKPAMR	MCKEES ROCKS	234	0	2
BLLVPABE	BELLEVUE	MOVLPAMO	MONROEVILLE	234	3	2
BLLVPABE	BELLEVUE	OKMTPAOA	OAKMONT	234	3	2
BLLVPABE	BELLEVUE	PEHLPAPH	PENN HILLS	234	3	2
BLLVPABE	BELLEVUE	PITBPAAL	ALLENTOWN PITTSBURG 1	234	3	2
BLLVPABE	BELLEVUE	PITBPACA	CARRICK	234	3	2
BLLVPABE	BELLEVUE	PITBPADT	DOWNTOWN 1	234	0	2
BLLVPABE	BELLEVUE	PITBPAEL	EAST LIBERTY 1	234	3	2
BLLVPABE	BELLEVUE	PITBPANS	NORTH SIDE	234	3	2
BLLVPABE	BELLEVUE	PITBPAOK	OAKLAND 1	234	3	2
BLLVPABE	BELLEVUE	PYVLPAPE	PERRYSVILLE	234	3	2
BLLVPABE	BELLEVUE	RBTTPART	ROBINSON TOWNSHIP	234	3	2
BLLVPABE	BELLEVUE	SHSAPASH	SHARPSBURG 1	234	3	2
BLLVPABE	BELLEVUE	SWKYPASE	SEWICKLEY	234	3	2
BLLVPABE	BELLEVUE	TRCKPATC	TURTLE CREEK	234	0	2
BLLVPABE	BELLEVUE	WKBGPAWK	WILKINSBURG	234	0	2
CARNPACA	CARNEGIE	CRAFPACR	CRAFTON	234	4	3
CARNPACA	CARNEGIE	CRPLPACO	CORAOPOLIS	234	4	3
CARNPACA	CARNEGIE	DRMTPADO	DORMONT	234	4	3
CARNPACA	CARNEGIE	GLNSPAGL	GLENSHAW	234	3	2
CARNPACA	CARNEGIE	HMSTPAHO	HOMESTEAD	234	0	2
CARNPACA	CARNEGIE	MCPTPAMK	MCKEESPORT	234	0	2
CARNPACA	CARNEGIE	MCRKPAMR	MCKEES ROCKS	234	0	2
CARNPACA	CARNEGIE	MOVLPAMO	MONROEVILLE	234	5	4
CARNPACA	CARNEGIE	OKMTPAOA	OAKMONT	234	4	3
CARNPACA	CARNEGIE	PEHLPAPH	PENN HILLS	234	4	3
CARNPACA	CARNEGIE	PITBPAAL	ALLENTOWN PITTSBURG 1	234	5	4
CARNPACA	CARNEGIE	PITBPACA	CARRICK	234	3	2
CARNPACA	CARNEGIE	PITBPADT	DOWNTOWN 1	234	4	4
CARNPACA	CARNEGIE	PITBPAEL	EAST LIBERTY 1	234	3	2
CARNPACA	CARNEGIE	PITBPANS	NORTH SIDE	234	4	3
CARNPACA	CARNEGIE	PITBPAOK	OAKLAND 1	234	3	2
CARNPACA	CARNEGIE	PYVLPAPE	PERRYSVILLE	234	4	3
CARNPACA	CARNEGIE	RBTTPART	ROBINSON TOWNSHIP	234	3	2
CARNPACA	CARNEGIE	SHSAPASH	SHARPSBURG 1	234	5	4
CARNPACA	CARNEGIE	SWKYPASE	SEWICKLEY	234	3	2
CARNPACA	CARNEGIE	TRCKPATC	TURTLE CREEK	234	4	4
CARNPACA	CARNEGIE	WKBGPAWK	WILKINSBURG	234	3	3
CRAFPACR	CRAFTON	CRPLPACO	CORAOPOLIS	234	4	3
CRAFPACR	CRAFTON	DRMTPADO	DORMONT	234	4	3
CRAFPACR	CRAFTON	GLNSPAGL	GLENSHAW	234	3	2
CRAFPACR	CRAFTON	HMSTPAHO	HOMESTEAD	234	0	2
CRAFPACR	CRAFTON	MCPTPAMK	MCKEESPORT	234	0	2
CRAFPACR	CRAFTON	MCRKPAMR	MCKEES ROCKS	234	0	2
CRAFPACR	CRAFTON	MOVLPAMO	MONROEVILLE	234	4	3
CRAFPACR	CRAFTON	OKMTPAOA	OAKMONT	234	3	2
CRAFPACR	CRAFTON	PEHLPAPH	PENN HILLS	234	3	2
CRAFPACR	CRAFTON	PITBPAAL	ALLENTOWN PITTSBURG 1	234	4	3
CRAFPACR	CRAFTON	PITBPACA	CARRICK	234	3	2

DIRECT ROUTES MEETING EITHER FCC TRIGGER

CRAFPACR	CRAFTON	PITBPADT	DOWNTOWN 1	234	4	4
CRAFPACR	CRAFTON	PITBPAEL	EAST LIBERTY 1	234	3	2
CRAFPACR	CRAFTON	PITBPANS	NORTH SIDE	234	5	4
CRAFPACR	CRAFTON	PITBPAOK	OAKLAND 1	234	4	3
CRAFPACR	CRAFTON	PYVLPAPE	PERRYSVILLE	234	4	3
CRAFPACR	CRAFTON	RBTPPART	ROBINSON TOWNSHIP	234	4	3
CRAFPACR	CRAFTON	SHSAPASH	SHARPSBURG 1	234	5	4
CRAFPACR	CRAFTON	SWKYPASE	SEWICKLEY	234	3	2
CRAFPACR	CRAFTON	TRCKPATC	TURTLE CREEK	234	3	3
CRAFPACR	CRAFTON	WKBGPAPWK	WILKINSBURG	234	3	3
CRPLPACO	CORAOPOLIS	DRMTPADO	DORMONT	234	4	3
CRPLPACO	CORAOPOLIS	GLNSPAGL	GLENSHAW	234	3	2
CRPLPACO	CORAOPOLIS	HMSTPAHO	HOMESTEAD	234	0	2
CRPLPACO	CORAOPOLIS	MCPTPAMK	MCKEESPORT	234	0	2
CRPLPACO	CORAOPOLIS	MCRKPAMR	MCKEES ROCKS	234	0	2
CRPLPACO	CORAOPOLIS	MOVLPAMO	MONROVILLE	234	4	3
CRPLPACO	CORAOPOLIS	OKMTPAOA	OAKMONT	234	3	2
CRPLPACO	CORAOPOLIS	PEHLPAPH	PENN HILLS	234	3	2
CRPLPACO	CORAOPOLIS	PITBPAAL	ALLENTOWN PITTSBURG 1	234	4	3
CRPLPACO	CORAOPOLIS	PITBPACA	CARRICK	234	3	2
CRPLPACO	CORAOPOLIS	PITBPADT	DOWNTOWN 1	234	4	4
CRPLPACO	CORAOPOLIS	PITBPAEL	EAST LIBERTY 1	234	3	2
CRPLPACO	CORAOPOLIS	PITBPANS	NORTH SIDE	234	5	4
CRPLPACO	CORAOPOLIS	PITBPAOK	OAKLAND 1	234	4	3
CRPLPACO	CORAOPOLIS	PYVLPAPE	PERRYSVILLE	234	4	3
CRPLPACO	CORAOPOLIS	RBTPPART	ROBINSON TOWNSHIP	234	3	2
CRPLPACO	CORAOPOLIS	SHSAPASH	SHARPSBURG 1	234	4	3
CRPLPACO	CORAOPOLIS	SWKYPASE	SEWICKLEY	234	3	2
CRPLPACO	CORAOPOLIS	TRCKPATC	TURTLE CREEK	234	3	3
CRPLPACO	CORAOPOLIS	WKBGPAPWK	WILKINSBURG	234	3	3
DRMTPADO	DORMONT	GLNSPAGL	GLENSHAW	234	3	2
DRMTPADO	DORMONT	HMSTPAHO	HOMESTEAD	234	0	2
DRMTPADO	DORMONT	MCPTPAMK	MCKEESPORT	234	3	3
DRMTPADO	DORMONT	MCRKPAMR	MCKEES ROCKS	234	0	2
DRMTPADO	DORMONT	MOVLPAMO	MONROEVILLE	234	5	4
DRMTPADO	DORMONT	OKMTPAOA	OAKMONT	234	3	2
DRMTPADO	DORMONT	PEHLPAPH	PENN HILLS	234	3	2
DRMTPADO	DORMONT	PITBPAAL	ALLENTOWN PITTSBURG 1	234	5	4
DRMTPADO	DORMONT	PITBPACA	CARRICK	234	3	2
DRMTPADO	DORMONT	PITBPADT	DOWNTOWN 1	234	4	4
DRMTPADO	DORMONT	PITBPAEL	EAST LIBERTY 1	234	4	3
DRMTPADO	DORMONT	PITBPANS	NORTH SIDE	234	5	4
DRMTPADO	DORMONT	PITBPAOK	OAKLAND 1	234	3	2
DRMTPADO	DORMONT	PYVLPAPE	PERRYSVILLE	234	5	4
DRMTPADO	DORMONT	RBTPPART	ROBINSON TOWNSHIP	234	3	2
DRMTPADO	DORMONT	SHSAPASH	SHARPSBURG	234	4	3
DRMTPADO	DORMONT	SWKYPASE	SEWICKLEY	234	3	2
DRMTPADO	DORMONT	TRCKPATC	TURTLE CREEK	234	4	4
DRMTPADO	DORMONT	WKBGPAPWK	WILKINSBURG	234	4	4
GLNSPAGL	GLENSHAW	HMSTPAHO	HOMESTEAD	234	0	2
GLNSPAGL	GLENSHAW	MCPTPAMK	MCKEESPORT	234	0	2
GLNSPAGL	GLENSHAW	MCRKPAMR	MCKEES ROCKS	234	0	2
GLNSPAGL	GLENSHAW	MOVLPAMO	MONROEVILLE	234	3	2
GLNSPAGL	GLENSHAW	OKMTPAOA	OAKMONT	234	3	2
GLNSPAGL	GLENSHAW	PEHLPAPH	PENN HILLS	234	3	2
GLNSPAGL	GLENSHAW	PITBPAAL	ALLENTOWN PITTSBURG	234	3	2
GLNSPAGL	GLENSHAW	PITBPACA	CARRICK	234	3	2
GLNSPAGL	GLENSHAW	PITBPADT	DOWNTOWN	234	0	2
GLNSPAGL	GLENSHAW	PITBPAEL	EAST LIBERTY	234	3	2

DIRECT ROUTES MEETING EITHER FCC TRIGGER

GLNSPAGL	GLENSHAW	PITBPANS	NORTH SIDE	234	3	2
GLNSPAGL	GLENSHAW	PITBPAOK	OAKLAND	234	3	2
GLNSPAGL	GLENSHAW	PYVLPAPE	PERRYSVILLE	234	3	2
GLNSPAGL	GLENSHAW	RBTPPART	ROBINSON TOWNSHIP	234	3	2
GLNSPAGL	GLENSHAW	SHSAPASH	SHARPSBURG	234	3	2
GLNSPAGL	GLENSHAW	SWKYPASE	SEWICKLEY	234	3	2
GLNSPAGL	GLENSHAW	TRCKPATC	TURTLE CREEK	234	0	2
GLNSPAGL	GLENSHAW	WKBGPAWK	WILKINSBURG	234	0	2
HMSTPAHO	HOMESTEAD	MCPTPAMK	MCKEESPORT	234	0	2
HMSTPAHO	HOMESTEAD	MCRKPAMR	MCKEES ROCKS	234	0	2
HMSTPAHO	HOMESTEAD	MOVLPAMO	MONROEVILLE	234	0	2
HMSTPAHO	HOMESTEAD	OKMTPAOA	OAKMONT	234	0	2
HMSTPAHO	HOMESTEAD	PEHLPAPH	PENN HILLS	234	0	2
HMSTPAHO	HOMESTEAD	PITBPAAL	ALLENTOWN PITTSBURG	234	0	2
HMSTPAHO	HOMESTEAD	PITBPACA	CARRICK	234	0	2
HMSTPAHO	HOMESTEAD	PITBPADT	DOWNTOWN	234	0	2
HMSTPAHO	HOMESTEAD	PITBPael	EAST LIBERTY	234	0	2
HMSTPAHO	HOMESTEAD	PITBPANS	NORTH SIDE	234	0	2
HMSTPAHO	HOMESTEAD	PITBPAOK	OAKLAND	234	0	2
HMSTPAHO	HOMESTEAD	PYVLPAPE	PERRYSVILLE	234	0	2
HMSTPAHO	HOMESTEAD	RBTPPART	ROBINSON TOWNSHIP	234	0	2
HMSTPAHO	HOMESTEAD	SHSAPASH	SHARPSBURG	234	0	2
HMSTPAHO	HOMESTEAD	SWKYPASE	SEWICKLEY	234	0	2
HMSTPAHO	HOMESTEAD	TRCKPATC	TURTLE CREEK	234	0	2
HMSTPAHO	HOMESTEAD	WKBGPAWK	WILKINSBURG	234	0	2
MCPTPAMK	MCKEESPORT	MCRKPAMR	MCKEES ROCKS	234	0	2
MCPTPAMK	MCKEESPORT	MOVLPAMO	MONROEVILLE	234	3	3
MCPTPAMK	MCKEESPORT	OKMTPAOA	OAKMONT	234	0	2
MCPTPAMK	MCKEESPORT	PEHLPAPH	PENN HILLS	234	0	2
MCPTPAMK	MCKEESPORT	PITBPAAL	ALLENTOWN PITTSBURG	234	3	3
MCPTPAMK	MCKEESPORT	PITBPACA	CARRICK	234	0	2
MCPTPAMK	MCKEESPORT	PITBPADT	DOWNTOWN	234	3	3
MCPTPAMK	MCKEESPORT	PITBPael	EAST LIBERTY	234	3	3
MCPTPAMK	MCKEESPORT	PITBPANS	NORTH SIDE	234	3	3
MCPTPAMK	MCKEESPORT	PITBPAOK	OAKLAND	234	0	2
MCPTPAMK	MCKEESPORT	PYVLPAPE	PERRYSVILLE	234	3	3
MCPTPAMK	MCKEESPORT	RBTPPART	ROBINSON TOWNSHIP	234	0	2
MCPTPAMK	MCKEESPORT	SHSAPASH	SHARPSBURG	234	0	2
MCPTPAMK	MCKEESPORT	SWKYPASE	SEWICKLEY	234	0	2
MCPTPAMK	MCKEESPORT	TRCKPATC	TURTLE CREEK	234	3	3
MCPTPAMK	MCKEESPORT	WKBGPAWK	WILKINSBURG	234	3	3
MCRKPAMR	MCKEES ROCKS	MOVLPAMO	MONROEVILLE	234	0	2
MCRKPAMR	MCKEES ROCKS	OKMTPAOA	OAKMONT	234	0	2
MCRKPAMR	MCKEES ROCKS	PEHLPAPH	PENN HILLS	234	0	2
MCRKPAMR	MCKEES ROCKS	PITBPAAL	ALLENTOWN PITTSBURG	234	0	2
MCRKPAMR	MCKEES ROCKS	PITBPACA	CARRICK	234	0	2
MCRKPAMR	MCKEES ROCKS	PITBPADT	DOWNTOWN	234	0	2
MCRKPAMR	MCKEES ROCKS	PITBPael	EAST LIBERTY	234	0	2
MCRKPAMR	MCKEES ROCKS	PITBPANS	NORTH SIDE	234	0	2
MCRKPAMR	MCKEES ROCKS	PITBPAOK	OAKLAND	234	0	2
MCRKPAMR	MCKEES ROCKS	PYVLPAPE	PERRYSVILLE	234	0	2
MCRKPAMR	MCKEES ROCKS	RBTPPART	ROBINSON TOWNSHIP	234	0	2
MCRKPAMR	MCKEES ROCKS	SHSAPASH	SHARPSBURG	234	0	2
MCRKPAMR	MCKEES ROCKS	SWKYPASE	SEWICKLEY	234	0	2
MCRKPAMR	MCKEES ROCKS	TRCKPATC	TURTLE CREEK	234	0	2
MCRKPAMR	MCKEES ROCKS	WKBGPAWK	WILKINSBURG	234	0	2
MOVLPAMO	MONROEVILLE	OKMTPAOA	OAKMONT	234	4	3
MOVLPAMO	MONROEVILLE	PEHLPAPH	PENN HILLS	234	4	3
MOVLPAMO	MONROEVILLE	PITBPAAL	ALLENTOWN PITTSBURG	234	6	5

DIRECT ROUTES MEETING EITHER FCC TRIGGER

MOVLPAMO	MONROEVILLE	PITBPACA	CARRICK	234	3	2
MOVLPAMO	MONROEVILLE	PITBPADT	DOWNTOWN	234	5	5
MOVLPAMO	MONROEVILLE	PITBPAEL	EAST LIBERTY	234	4	3
MOVLPAMO	MONROEVILLE	PITBPANS	NORTH SIDE	234	5	4
MOVLPAMO	MONROEVILLE	PITBPAOK	OAKLAND	234	3	2
MOVLPAMO	MONROEVILLE	PYVLPAPE	PERRYSVILLE	234	5	4
MOVLPAMO	MONROEVILLE	RBTTPART	ROBINSON TOWNSHIP	234	3	2
MOVLPAMO	MONROEVILLE	SHSAPASH	SHARPSBURG	234	5	4
MOVLPAMO	MONROEVILLE	SWKYPASE	SEWICKLEY	234	3	2
MOVLPAMO	MONROEVILLE	TRCKPATC	TURTLE CREEK	234	5	5
MOVLPAMO	MONROEVILLE	WKBGPAWK	WILKINSBURG	234	4	4
OKMTPAOA	OAKMONT	PEHLPAPH	PENN HILLS	234	4	3
OKMTPAOA	OAKMONT	PITBPAAL	ALLENTOWN PITTSBURG	234	4	3
OKMTPAOA	OAKMONT	PITBPACA	CARRICK	234	3	2
OKMTPAOA	OAKMONT	PITBPAOT	DOWNTOWN	234	3	3
OKMTPAOA	OAKMONT	PITBPAEL	EAST LIBERTY	234	3	2
OKMTPAOA	OAKMONT	PITBPANS	NORTH SIDE	234	3	2
OKMTPAOA	OAKMONT	PITBPAOK	OAKLAND	234	3	2
OKMTPAOA	OAKMONT	PYVLPAPE	PERRYSVILLE	234	3	2
OKMTPAOA	OAKMONT	RBTTPART	ROBINSON TOWNSHIP	234	3	2
OKMTPAOA	OAKMONT	SHSAPASH	SHARPSBURG	234	4	3
OKMTPAOA	OAKMONT	SWKYPASE	SEWICKLEY	234	3	2
OKMTPAOA	OAKMONT	TRCKPATC	TURTLE CREEK	234	3	3
OKMTPAOA	OAKMONT	WKBGPAWK	WILKINSBURG	234	0	2
PEHLPAPH	PENN HILLS	PITBPAAL	ALLENTOWN PITTSBURG	234	4	3
PEHLPAPH	PENN HILLS	PITBPACA	CARRICK	234	3	2
PEHLPAPH	PENN HILLS	PITBPAOT	DOWNTOWN	234	3	3
PEHLPAPH	PENN HILLS	PITBPAEL	EAST LIBERTY	234	3	2
PEHLPAPH	PENN HILLS	PITBPANS	NORTH SIDE	234	3	2
PEHLPAPH	PENN HILLS	PITBPAOK	OAKLAND	234	3	2
PEHLPAPH	PENN HILLS	PYVLPAPE	PERRYSVILLE	234	3	2
PEHLPAPH	PENN HILLS	RBTTPART	ROBINSON TOWNSHIP	234	3	2
PEHLPAPH	PENN HILLS	SHSAPASH	SHARPSBURG	234	4	3
PEHLPAPH	PENN HILLS	SWKYPASE	SEWICKLEY	234	3	2
PEHLPAPH	PENN HILLS	TRCKPATC	TURTLE CREEK	234	3	3
PEHLPAPH	PENN HILLS	WKBGPAWK	WILKINSBURG	234	0	2
PITBPAAL	ALLENTOWN PITTSBURG	PITBPACA	CARRICK	234	3	2
PITBPAAL	ALLENTOWN PITTSBURG	PITBPAOT	DOWNTOWN	234	5	5
PITBPAAL	ALLENTOWN PITTSBURG	PITBPAEL	EAST LIBERTY	234	4	3
PITBPAAL	ALLENTOWN PITTSBURG	PITBPANS	NORTH SIDE	234	5	4
PITBPAAL	ALLENTOWN PITTSBURG	PITBPAOK	OAKLAND	234	3	2
PITBPAAL	ALLENTOWN PITTSBURG	PYVLPAPE	PERRYSVILLE	234	5	4
PITBPAAL	ALLENTOWN PITTSBURG	RBTTPART	ROBINSON TOWNSHIP	234	3	2
PITBPAAL	ALLENTOWN PITTSBURG	SHSAPASH	SHARPSBURG	234	5	4
PITBPAAL	ALLENTOWN PITTSBURG	SWKYPASE	SEWICKLEY	234	3	2
PITBPAAL	ALLENTOWN PITTSBURG	TRCKPATC	TURTLE CREEK	234	5	5
PITBPAAL	ALLENTOWN PITTSBURG	WKBGPAWK	WILKINSBURG	234	4	4
PITBPACA	CARRICK	PITBPAOT	DOWNTOWN	234	0	2
PITBPACA	CARRICK	PITBPAEL	EAST LIBERTY	234	3	2
PITBPACA	CARRICK	PITBPANS	NORTH SIDE	234	3	2
PITBPACA	CARRICK	PITBPAOK	OAKLAND	234	3	2
PITBPACA	CARRICK	PYVLPAPE	PERRYSVILLE	234	3	2
PITBPACA	CARRICK	RBTTPART	ROBINSON TOWNSHIP	234	3	2
PITBPACA	CARRICK	SHSAPASH	SHARPSBURG	234	3	2
PITBPACA	CARRICK	SWKYPASE	SEWICKLEY	234	3	2
PITBPACA	CARRICK	TRCKPATC	TURTLE CREEK	234	0	2
PITBPACA	CARRICK	WKBGPAWK	WILKINSBURG	234	0	2
PITBPAOT	DOWNTOWN	PITBPAEL	EAST LIBERTY	234	3	3
PITBPAOT	DOWNTOWN	PITBPANS	NORTH SIDE	234	6	6

DIRECT ROUTES MEETING EITHER FCC TRIGGER

PITBPADT	DOWNTOWN	PITBPAOK	OAKLAND	234	4	4
PITBPADT	DOWNTOWN	PYVLPAPE	PERRYSVILLE	234	4	4
PITBPADT	DOWNTOWN	RBTTPART	ROBINSON TOWNSHIP	234	3	3
PITBPADT	DOWNTOWN	SHSAPASH	SHARPSBURG	234	5	5
PITBPADT	DOWNTOWN	SWKYPASE	SEWICKLEY	234	0	2
PITBPADT	DOWNTOWN	TRCKPATC	TURTLE CREEK	234	5	5
PITBPADT	DOWNTOWN	WKBGPAWK	WILKINSBURG	234	4	4
PITBPAEL	EAST LIBERTY	PITBPANS	NORTH SIDE	234	4	3
PITBPAEL	EAST LIBERTY	PITBPAOK	OAKLAND	234	3	2
PITBPAEL	EAST LIBERTY	PYVLPAPE	PERRYSVILLE	234	4	3
PITBPAEL	EAST LIBERTY	RBTTPART	ROBINSON TOWNSHIP	234	3	2
PITBPAEL	EAST LIBERTY	SHSAPASH	SHARPSBURG	234	3	2
PITBPAEL	EAST LIBERTY	SWKYPASE	SEWICKLEY	234	3	2
PITBPAEL	EAST LIBERTY	TRCKPATC	TURTLE CREEK	234	3	3
PITBPAEL	EAST LIBERTY	WKBGPAWK	WILKINSBURG	234	3	3
PITBPANS	NORTH SIDE	PITBPAOK	OAKLAND	234	5	4
PITBPANS	NORTH SIDE	PYVLPAPE	PERRYSVILLE	234	5	4
PITBPANS	NORTH SIDE	RBTTPART	ROBINSON TOWNSHIP	234	4	3
PITBPANS	NORTH SIDE	SHSAPASH	SHARPSBURG	234	5	4
PITBPANS	NORTH SIDE	SWKYPASE	SEWICKLEY	234	3	2
PITBPANS	NORTH SIDE	TRCKPATC	TURTLE CREEK	234	4	4
PITBPANS	NORTH SIDE	WKBGPAWK	WILKINSBURG	234	4	4
PITBPAOK	OAKLAND	PYVLPAPE	PERRYSVILLE	234	3	2
PITBPAOK	OAKLAND	RBTTPART	ROBINSON TOWNSHIP	234	4	3
PITBPAOK	OAKLAND	SHSAPASH	SHARPSBURG	234	4	3
PITBPAOK	OAKLAND	SWKYPASE	SEWICKLEY	234	3	2
PITBPAOK	OAKLAND	TRCKPATC	TURTLE CREEK	234	0	2
PITBPAOK	OAKLAND	WKBGPAWK	WILKINSBURG	234	0	2
PYVLPAPE	PERRYSVILLE	RBTTPART	ROBINSON TOWNSHIP	234	3	2
PYVLPAPE	PERRYSVILLE	SHSAPASH	SHARPSBURG	234	4	3
PYVLPAPE	PERRYSVILLE	SWKYPASE	SEWICKLEY	234	3	2
PYVLPAPE	PERRYSVILLE	TRCKPATC	TURTLE CREEK	234	4	4
PYVLPAPE	PERRYSVILLE	WKBGPAWK	WILKINSBURG	234	4	4
RBTTPART	ROBINSON TOWNSHIP	SHSAPASH	SHARPSBURG	234	4	3
RBTTPART	ROBINSON TOWNSHIP	SWKYPASE	SEWICKLEY	234	3	2
RBTTPART	ROBINSON TOWNSHIP	TRCKPATC	TURTLE CREEK	234	0	2
RBTTPART	ROBINSON TOWNSHIP	WKBGPAWK	WILKINSBURG	234	0	2
SHSAPASH	SHARPSBURG	SWKYPASE	SEWICKLEY	234	3	2
SHSAPASH	SHARPSBURG	TRCKPATC	TURTLE CREEK	234	4	4
SHSAPASH	SHARPSBURG	WKBGPAWK	WILKINSBURG	234	3	3
SWKYPASE	SEWICKLEY	TRCKPATC	TURTLE CREEK	234	0	2
SWKYPASE	SEWICKLEY	WKBGPAWK	WILKINSBURG	234	0	2
TRCKPATC	TURTLE CREEK	WKBGPAWK	WILKINSBURG	234	4	4

**CAVALIER TELEPHONE MID-ATLANTIC
ACCESS SERVICES TARIFF**

PA PUC No. 3
Original Sheet 1

COMPETITIVE ACCESS PROVIDER SERVICES TARIFF

Regulations and Schedule of Charges
Applying to Access Services
Within the Commonwealth of Pennsylvania

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Effective: April 16, 2000

Martin Arias
Director of Business Development
Cavalier Telephone Mid-Atlantic, L.L.C.
965 Thomas Drive
Warminster, PA 18974

SECTION 4 - SPECIAL ACCESS SERVICE /CHARGES

The Company provides intrastate Special Access Service for use as a stand-alone service, or in connection with other Company services. Special Access Services are offered on a point-to-point basis. Each Special Access Service (Private Line) is dedicated to the Customer and the entire usable bandwidth for each service is available to the Customer for their exclusive use.

PRIVATE LINE SERVICES

4.1 DS0 Pricing

	Term	Channel Termination	Transmission Function	Fixed Mileage	Per Mile
DS0					
2.4,4.8,9.6,19.2K					
Install Charges (1st Ckt--\$600 per channel Termination)					
Add'l Ckt. (\$354.25--per Channel termination)					
Cell 1	Monthly	\$24.00	\$52.80	\$24.00	\$1.92
Plan #1	2 Year	\$22.29	\$49.03	\$22.29	\$1.73
1-24 CKT	3 Year	\$20.71	\$45.57	\$20.71	\$1.57
	5 Year	\$19.13	\$42.08	\$19.13	\$1.36
Plan #2					
25+ CKT	2 Year	\$21.60	\$47.53	\$21.60	\$1.64
	3 Year	\$19.62	\$43.17	\$19.62	\$1.48
	5 Year	\$18.06	\$39.74	\$18.06	\$1.36
Cell 2	Monthly	\$28.80	\$52.80	\$24.00	\$1.92
Plan #1	2 Year	\$26.74	\$49.03	\$22.29	\$1.73
1-24 CKT	3 Year	\$24.91	\$45.57	\$20.71	\$1.57
	5 Year	\$22.95	\$42.08	\$19.13	\$1.36
Plan #2					
25+ CKT	2 Year	\$25.92	\$47.53	\$21.60	\$1.73
	3 Year	\$23.55	\$43.17	\$19.62	\$1.57
	5 Year	\$21.68	\$39.74	\$18.06	\$1.36

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CAVALIER TELEPHONE MID-ATLANTIC
ACCESS SERVICES TARIFF

PA PUC No. 3
Original Sheet 43

Cell 3	Monthly	\$38.40	\$52.80	\$24.00	\$1.92
Plan #1	2 Year	\$35.66	\$49.03	\$22.29	\$1.73
1-24 CKT	3 Year	\$33.14	\$45.57	\$20.71	\$1.57
	5 Year	\$30.60	\$42.08	\$19.13	\$1.36
Plan #2					
25+ CKT	2 Year	\$34.57	\$47.53	\$21.60	\$1.73
	3 Year	\$31.40	\$43.17	\$19.62	\$1.57
	5 Year	\$28.90	\$39.74	\$18.06	\$1.36
Cell 4	Monthly	\$48.00	\$52.80	\$24.00	\$1.92
Plan #1	2 Year	\$44.57	\$49.03	\$22.29	\$1.73
1-24 CKT	3 Year	\$41.43	\$45.57	\$20.71	\$1.57
	5 Year	\$38.25	\$42.08	\$19.13	\$1.36
Plan #2					
25+ CKT	2 Year	\$43.21	\$47.53	\$21.60	\$1.73
	3 Year	\$39.25	\$43.17	\$19.62	\$1.57
	5 Year	\$36.13	\$39.74	\$18.06	\$1.36

56K/64K

Cell 1	Monthly	\$48.00	\$132.00	\$76.80	\$1.92
Plan #1	2 Year	\$44.57	\$122.57	\$71.31	\$1.73
1-24 CKT	3 Year	\$41.43	\$113.93	\$66.29	\$1.57
	5 Year	\$38.25	\$105.16	\$61.20	\$1.36
Plan #2					
25+ CKT	2 Year	\$43.21	\$118.82	\$71.31	\$1.73
	3 Year	\$39.25	\$107.93	\$66.29	\$1.57
	5 Year	\$36.13	\$99.28	\$61.20	\$1.36
Cell 2	Monthly	\$52.80	\$132.00	\$76.80	\$1.92
Plan #1	2 Year	\$49.03	\$122.57	\$71.31	\$1.73
1-24 CKT	3 Year	\$45.57	\$113.93	\$66.29	\$1.57
	5 Year	\$42.08	\$105.16	\$61.20	\$1.36
Plan #2					
25+ CKT	2 Year	\$47.53	\$118.82	\$71.31	\$1.73
	3 Year	\$43.17	\$107.93	\$66.29	\$1.57
	5 Year	\$39.74	\$99.28	\$61.20	\$1.36
Cell 3	Monthly	\$57.60	\$132.00	\$76.80	\$1.92

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**CAVALIER TELEPHONE MID-ATLANTIC
ACCESS SERVICES TARIFF**

PA PUC No. 3
Original Sheet 44

Plan #1 1-24 CKT	2 Year	\$53.49	\$122.57	\$71.31	\$1.73
	3 Year	\$49.71	\$113.93	\$66.29	\$1.57
	5 Year	\$45.90	\$105.16	\$61.20	\$1.36
Plan #2 25+ CKT	2 Year	\$51.85	\$118.82	\$71.31	\$1.73
	3 Year	\$47.10	\$107.93	\$66.29	\$1.57
	5 Year	\$43.35	\$99.28	\$61.20	\$1.36
Cell 4	Monthly	\$67.20	\$132.00	\$76.80	\$1.92
Plan #1 1-24 CKT	2 Year	\$62.40	\$122.57	\$71.31	\$1.73
	3 Year	\$58.00	\$113.93	\$66.29	\$1.57
	5 Year	\$53.55	\$105.16	\$61.20	\$1.36
Plan #2 25+ CKT	2 Year	\$60.49	\$118.82	\$71.31	\$1.73
	3 Year	\$54.95	\$107.93	\$66.29	\$1.57
	5 Year	\$50.58	\$99.28	\$61.20	\$1.36

4.2 DSI Pricing

DS1					
Install Charges (1st Ckt--\$660 per channel Termination)					
Add'l Ckt. \$292.45--per Channel termination					
		Chan Term	Transmission Function	Fixed Mileage	Per Mile
Cell 1	Monthly	\$201.60	n/a	\$72.00	\$20.47
Plan #1 1-4 CKT	2 Year	\$187.20	n/a	\$66.86	\$16.79
	3 Year	\$174.00	n/a	\$62.14	\$15.94
	5 Year	\$160.65	n/a	\$57.38	\$14.85
Plan #2 5-8 CKT	2 Year	\$185.29	n/a	\$66.17	\$21.60
	3 Year	\$168.51	n/a	\$60.18	\$19.62
	5 Year	\$155.30	n/a	\$55.46	\$17.00
Plan #3 9+ CKT	2 Year	\$181.47	n/a	\$64.81	\$21.60
	3 Year	\$159.35	n/a	\$56.91	\$18.97
	5 Year	\$151.73	n/a	\$54.19	\$16.36
			n/a		

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CAVALIER TELEPHONE MID-ATLANTIC
ACCESS SERVICES TARIFF

PA PUC No. 3
Original Sheet 45

Cell 2	Monthly	\$216.00	n/a	\$72.00	\$20.47
Plan #1	2 Year	\$200.57	n/a	\$66.86	\$16.79
1-4 CKT	3 Year	\$186.43	n/a	\$62.14	\$15.94
	5 Year	\$171.70	n/a	\$57.38	
Plan #2			n/a		\$24.00
5-8 CKT	2 Year	\$198.52	n/a	\$66.17	\$21.60
	3 Year	\$180.54	n/a	\$60.18	\$19.62
	5 Year	\$171.70	n/a	\$55.46	\$17.00
Plan #3					
9+ CKT	2 Year	\$194.43	n/a	\$64.81	\$21.60
	3 Year	\$170.73	n/a	\$56.91	\$18.97
	5 Year	\$162.56	n/a	\$54.19	\$16.36
Cell 3	Monthly	\$230.40	n/a	\$72.00	\$20.47
Plan #1	2 Year	\$213.94	n/a	\$66.86	\$16.79
1-4 CKT	3 Year	\$198.86	n/a	\$62.14	\$15.94
	5 Year	\$183.60	n/a	\$57.38	
Plan #2					\$24.00
5-8 CKT	2 Year	\$211.76	n/a	\$66.17	\$21.60
	3 Year	\$192.58	n/a	\$60.18	\$19.62
	5 Year	\$177.48	n/a	\$55.46	\$17.00
Plan #3					
9+ CKT	2 Year	\$207.39	n/a	\$64.81	\$21.60
	3 Year	\$182.11	n/a	\$56.91	\$18.97
	5 Year	\$173.40	n/a	\$54.19	\$16.36
Cell 4	Monthly	\$259.20	n/a	\$72.00	\$20.47
Plan #1	2 Year	\$240.69	n/a	\$66.86	\$16.79
1-4 CKT	3 Year	\$223.71	n/a	\$62.14	\$15.94
	5 Year	\$206.55	n/a	\$57.38	
Plan #2					\$24.00
5-8 CKT	2 Year	\$238.23	n/a	\$66.17	\$21.60
	3 Year	\$216.65	n/a	\$60.18	\$19.62
	5 Year	\$199.67	n/a	\$55.46	\$17.00
Plan #3					
9+ CKT	2 Year	\$203.32	n/a	\$64.81	\$21.60
	3 Year	\$204.88	n/a	\$56.91	\$18.97
	5 Year	\$195.08	n/a	\$54.19	\$16.36

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Director of Business Development
Cavalier Telephone Mid-Atlantic, L.L.C.
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Warminster, PA 18974

**CAVALIER TELEPHONE MID-ATLANTIC
ACCESS SERVICES TARIFF**

PA PUC No. 3
Original Sheet 46

4.3 DS3 Pricing

All DS3 Pricing is on an Individual Case Basis (ICB)

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Cavalier Telephone Mid-Atlantic, L.L.C.
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SECTION 5 - SPECIAL ARRANGEMENTS

5.1 Individual Case Basis (ICB) Arrangements

Arrangements will be developed on a case-by-case basis in response to a bona fide request from a Customer or prospective Customer to develop a competitive bid for a service or rate not offered under this tariff. Rates quoted in response to such competitive requests may be different than those specified for such services in this tariff. ICB rates will be offered to the Customer in writing and on a nondiscriminatory basis.

ICBs will be filed with the Communications Division of the Commission.

5.2 Special Assembly

The Company may provide a unique intrastate service arrangement for a customer where no tariffed service exists for the service. The unique service can be provided via a Special Assembly.

The Company will file the Special Assembly including the contract of terms, conditions and rates by letter with the Communications Division.

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Martin Arias
Director of Business Development
Cavalier Telephone Mid-Atlantic, L.L.C.
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Warminster, PA 18974

9H.8.2

XO Pennsylvania, Inc.

ACCESS SERVICES
TELEPHONE PA P.U.C. NO. 11
CANCELLING TELEPHONE PA P.U.C. NO. 9

Supplement No. 2
1st Revised Title Page
Replaces Original Title Page

XO PENNSYLVANIA, INC.
(Formerly NEXTLINK Pennsylvania, Inc.)

REGULATIONS, DESCRIPTIONS, AND RATES

APPLICABLE TO FURNISHING COMPETITIVE INTRASTATE ACCESS SERVICES

WITHIN THE STATE OF PENNSYLVANIA

This tariff is on file with the Pennsylvania Public Utility Commission and copies may be inspected during normal business hours at the Company's principal place of business at 925 Berkshire Boulevard, Wyomissing, PA 19610

ISSUED: July 5, 2002

EFFECTIVE: August 4, 2002

Renardo L. Hicks, Vice President
XO Pennsylvania
925 Berkshire Boulevard
Wyomissing, PA 19610

7. RATES AND CHARGES (Cont'd)7.7 IntraLATA Private Line7.7.1 Description of Service

Company IntraLATA Private Line is an IntraLATA service, which is used in conjunction with IntraLATA Network Access. IntraLATA Private Line Service provides a dedicated transmission path that originates and terminates at a Company Point of Presence (POP). Where IntraLATA Private Line is available, service is offered as a high capacity dedicated transmission facility available 24-hours per day, 7 days per week in the following bandwidths: DS1 (1.544 Mbps) and DS3 (44.436 Mbps).

The facilities to the customer-designated premises may be entirely On-Net or Off-Net. Customers may commit to one, two or three year service terms. The minimum service period for IntraLATA Private Line is one year. Should the Customer terminate service prior to the end of the term commitment, the Customer will be billed a termination charge equal to the monthly recurring charge times the number of months remaining in the term.

7.7.2 Rates and Charges

7.7.2.1 Rate Elements: The rate element that applies to IntraLATA Private Line is Longhaul Mileage.

The Longhaul Mileage rate element provides for the dedicated transmission facilities path between the Company POPs. The Longhaul Mileage rate element is made up of one variable charge: a flat, per-mile rate.

The Longhaul Mileage rate element will be rounded up to the next mile for any fraction of a mile. For example, 0.001 miles will be charged at 1 mile.

Longhaul Mileage charges do not apply for a circuit between two on-net locations in the same LATA that are 5 miles or less apart.

ISSUED: July 5, 2002

EFFECTIVE: August 4, 2002

Renardo L. Hicks, Vice President
XO Pennsylvania
925 Berkshire Boulevard
Wyomissing, PA 19610

XO Pennsylvania, Inc.

ACCESS SERVICES
TELEPHONE PA P.U.C. NO. 11
CANCELLING TELEPHONE PA P.U.C. NO. 9

Supplement No. 1
Original Page 80.5

7. RATES AND CHARGES (Cont'd)

7.7 IntraLATA Private Line (Cont'd)

7.7.2.2 Rate Application:

DS 1	1 year	2 Year	3 Year
Installation: NRC	\$355.00	\$145.05	\$133.90
Longhaul Mileage: MRC Per mile	21.40	16.25	14.32
DS 3			
Installation: NRC	\$1,000.00	\$1,000.00	\$1,000.00
Longhaul Mileage: MRC per mile	170.53	162.01	153.48

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ISSUED: July 5, 2002

EFFECTIVE: August 4, 2002

Renardo L. Hicks, Vice President
XO Pennsylvania
925 Berkshire Boulevard
Wyomissing, PA 19610

7. RATES AND CHARGES (Cont'd)

7.8 InterLATA Network Access

7.8.1 Description of Service

Company InterLATA Network Access is an InterLATA service that provides a dedicated transmission path between a customer designated premises and a Company Point of Presence (POP). Where InterLATA Network Access is available, service is offered as a high capacity dedicated transmission facility available 24 hours per day, 7 days per week in the following bandwidths: DS1 (1.544 Mbps) and DS3 (44.436 Mbps).

The facilities to the customer-designated premises may be entirely On-Net or Off-Net. Customers may commit to one, two or three year service terms. The minimum service period for InterLATA Network Access is one year. Should the Customer terminate service prior to the end of the term commitment, the Customer will be billed a termination charge equal to the monthly recurring charge times the number of months remaining in the term.

7.8.1.2 Rates and Charges

Rates and charges for InterLATA Network Access service are defined herein and are based on the locations of the customer designated premises in relation to Company's network. Specifically, Customers will be charged according to whether the customer-designated premises are On-Net or Off-Net. As used herein, On-Net service shall mean service to the Customer designated premises is provided entirely over Company facilities. Off-Net service shall mean service to the Customer designated premises is not provided entirely over Company facilities. Instead, service to the Customer designated premises is provided by Company, in whole or in part, through the use, purchase or lease of facilities from a service provider other than Company.

ISSUED: July 5, 2002

EFFECTIVE: August 4, 2002

Renardo L. Hicks, Vice President
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925 Berkshire Boulevard
Wyomissing, PA 19610

7. RATES AND CHARGES (Cont'd)7.8 InterLATA Network Access (Cont'd)

7.8.1.2.1 Rate Elements: Two rate elements apply to Off-Net InterLATA Network Access: Channel Termination and Network Access Mileage. One rate element applies to On-Net InterLATA Network Access: Channel Termination.

Channel Termination

The Channel Termination rate element provides for the dedicated transmission path between the customer-designated premises and the Company POP. One Channel Termination charge applies per point of termination. A Channel Termination charge applies when the customer designated premises and the serving wire center are collocated in the same building.

Network Access Mileage

The Network Access Mileage rate element provides for the dedicated transmission facilities path between the customer's serving wire centers associated with the customer designated premises and the Company POP. The Mileage rate element is made up of two charges: a flat rate per circuit ("Fixed") and flat a per-mile rate ("Variable").

The Mileage rate element will be rounded up to the next mile for any fraction of a mile. For example, 0.001 miles will be charged at 1 mile. If both the Customer's designated premises and the Company's POP are within the same central office, Mileage charges will not apply.

7.8.1.2.2 Rate Application

The following chart designates the applicable Rate Elements based on the location of the Customer designated Premises.

<i>Locations of Customer Designated Premises</i>	<i>Applicable Rate Elements</i>
On-Net	Channel Termination charge(s);
Off-Net	Channel Termination charges; plus applicable Mileage Charges

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7. RATES AND CHARGES (Cont'd)7.8 InterLATA Network Access (Cont'd)7.8.1.2.2 Rate Application (Cont'd)

On-Net- DS1					
		Channel Termination		Network Access Mileage Charge	
	Term	MRC	NRC-Installation	Fixed	Variable
	1yr	\$158.59	\$355.00	N/A	N/A
	2yr	145.05	355.00	N/A	N/A
	3yr	133.90	355.00	N/A	N/A
Off-Net- DS1					
	1yr	\$356.83	\$355.00	\$46.66	\$21.40
	2 yr	326.36	355.00	42.77	16.25
	3 yr	301.27	355.00	38.89	14.32

On-Net- DS3					
		Channel Termination		Network Access Mileage Charge	
	Term	MRC	NRC-Installation	Fixed	Variable
	1yr	\$2,134.00	\$1,000.00	N/A	N/A
	2yr	2,134.00	1,000.00	N/A	N/A
	3yr	1,920.60	1,000.00	N/A	N/A
Off-Net-DS3					
		Channel Termination		Network Access Mileage Charge	
	Term	MRC	NRC-Installation	Fixed	Variable
	1yr	\$4,801.50	\$1,000.00	\$825.00	\$170.53
	2yr	4,801.50	1,000.00	825.00	162.01
	3yr	4,321.35	1,000.00	742.50	153.48

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7. RATES AND CHARGES (Cont'd)

7.8 InterLATA Network Access (Cont'd)

7.8.1.2.2 Rate Application (Cont'd)

On-Net- DS1					
		Channel Termination		Network Access Mileage Charge	
	Term	MRC	NRC-Installation	Fixed	Variable
	1yr	\$158.59	\$355.00	N/A	N/A
	2yr	145.05	355.00	N/A	N/A
	3yr	133.90	355.00	N/A	N/A
Off-Net- DS1					
	1yr	\$356.83	\$355.00	\$46.66	\$21.40
	2 yr	326.36	355.00	42.77	16.25
	3 yr	301.27	355.00	38.89	14.32

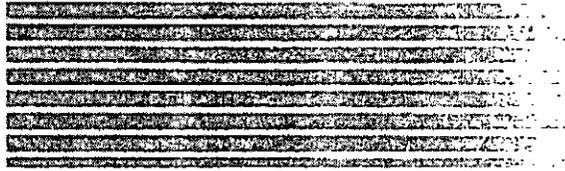
On-Net- DS3					
		Channel Termination		Network Access Mileage Charge	
	Term	MRC	NRC-Installation	Fixed	Variable
	1yr	\$2,134.00	\$1,000.00	N/A	N/A
	2yr	2,134.00	1,000.00	N/A	N/A
	3yr	1,920.60	1,000.00	N/A	N/A
Off-Net-DS3					
		Channel Termination		Network Access Mileage Charge	
	Term	MRC	NRC-Installation	Fixed	Variable
	1yr	\$4,801.50	\$1,000.00	\$825.00	\$170.53
	2yr	4,801.50	1,000.00	825.00	162.01
	3yr	4,321.35	1,000.00	742.50	153.48

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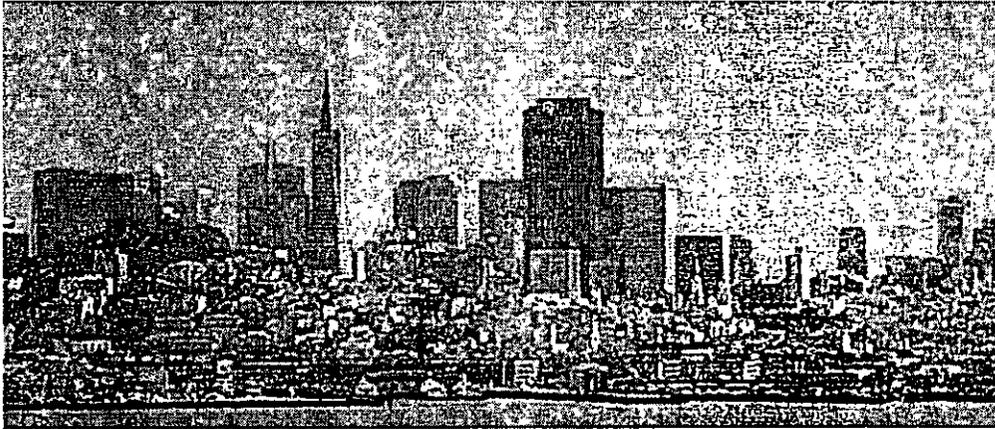
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Att. 8-3



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Frame Relay
Inter-city Private Line
Gigabit Ethernet
> Local Private Line
Private Local SONET Ring
Metro ATM

Local Private Line (LPL)

Your business needs to exchange information between two points in a metropolitan area. We provide Local Private Line Services to satisfy that need on a network giving you guaranteed bandwidth, security and reliability.

Companies that want to keep their business running effectively between two separate locations in a metropolitan area need dedicated bandwidth to transfer voice, data and video. Adelphia Business Solutions' Local Private Line Services provide multiple bandwidth options to prevent network bottlenecks and increase productivity for any-sized business.

Applications

Local Private Line service can connect your business to your long distance carrier or provide a dedicated connection to transmit voice, data or video between two locations in a metropolitan area for applications such as:

- Banking and security
- Legacy operations environments
- Video
- Disaster recovery
- High-capacity offsite storage

Guaranteed Local Bandwidth - DS1 to OC-48

Adelphia's fiber optic SONET network provides a guaranteed bandwidth that is secure, reliable and flexible. Our fiber optic SONET network provides the dedicated bandwidth within a metropolitan area to keep your voice, data or video flowing reliably and securely. Whether your requirements include a DS-1 or an OC-48, Local Private Line Services are the answer to your point-to-point network needs.

Network Availability

The cost of network outages can be astronomical. Weather-related incidents, traffic accidents and vandalism can cut a traditional network connection and interrupt your business communications. Adelphia Business Solutions' fiber optic SONET network is self-healing and quickly restores to ensure maximum network availability.

Your Local Private Line Service is monitored and maintained around the clock from our Network Operations Control Center (NOCC). The reliability of our SONET network ensures that even a cut cable won't prevent your network data from going through.

Network Security

Keeping your data secure is a prime concern. Fiber optics are virtually impossible to tap. A dedicated network provides you with a private connection that prevents intruders from accessing your information.

Adelphia Customer Care

Our regional customer care team will set up your Local Private Line Services based on the exact requirements of your business, modify your service to accommodate growth, and inform you of enhancements and other options. In short, we'll provide you with the kind of customer care you should expect from your communications provider.

Adelphia - A Platform for Productivity

As one of the largest integrated communications providers in the country, Adelphia Business Solutions is your single source for a wide range of services and capabilities. Along with our Local Private Line Services, we also offer an array of local voice and data services, long distance, enhanced data, Internet and messaging services - all on our advanced fiber optic backbone.

Adelphia Business Solutions' network offers all the bandwidth your business needs to support current and future voice and data applications. Our network also utilizes self-healing ring architecture for superior reliability on which you can depend.

Local Private Line Services Features:

- Guaranteed bandwidth
- Reliable service
- Secure network
- Multiple bandwidth options
- Point-to-Point connection
- DS-1 to OC-48
- Within the same metropolitan area



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Our Network

MCI's extensive global network is a key advantage for business customers of all sizes.

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MCI® owns, operates, monitors and maintains one of the largest communications networks in the world. Our network facilities are throughout North America, Latin America, Europe, Africa, and the Asia-Pacific region, in more than 125 countries and over 2,800 cities.

Our 98,000-mile fiber optic network is designed to support the largest array of data communications and voice products in the world.

MCI owns the world's farthest reaching global network (based on company-owned PoPs), and spans more than 4,500 Points of Presence (POPs) throughout the world, with 3.2 million global dial modems and high-capacity connections to more than 91,000 lit buildings. The global IP network can circle the globe more than four times.

MCI offers the fastest speeds available over IP today. We were the first to route and switch OC-192 IP network traffic. MCI also has the most scalable IP network available, offering speeds from dial to OC-48.

MCI's IP data solutions are directly built into a wholly-owned global network, for direct, safe, secure access.

Skilled technicians in Network Operations Centers around the world monitor the network for optimal efficiency 24 hours a day, 365 days a year.

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AT&T COMMUNICATIONS
OF PENNSYLVANIA, LLC

Pa. P.U.C.-No. 17
Canceling Pa. P.U.C.-No. 2
SECTION 10
ORIGINAL SHEET 1

ACCESS SERVICES AND NETWORK INTERCONNECTION SERVICES

10. NETWORK INTERCONNECTION SERVICES

10.1. GENERAL

The Network Interconnection Services (NIS) available under this tariff consist of the following: Physical Network Interconnection Arrangements, Local Traffic Exchange and Interim Local Number Portability.

NIS is available only in connection with the termination of Local Traffic to End Users to whom the Company is able to terminate calls using Access Services as provided elsewhere in this tariff. NIS is only available to Customers who are facility-based Certified Local Exchange Carriers (CLEC), authorized by the Pennsylvania Board of Public Utilities to provide Local Exchange Service in Pennsylvania. The Company shall not be obligated to provide NIS to Customers that do not offer services comparable to NIS to the Company for the termination of Local Traffic originated by the Company. A CLEC providing Local Exchange Service using one or more unbundled network elements provided by another Carrier shall be deemed to be facility-based.

NIS availability is as set forth in Section 16.

10.1.1. Regulations

The provisions of Section 2 and Section 5 of this tariff shall apply to NIS unless otherwise specifically provided herein.

A. Service Rearrangements

Service rearrangements are as described in Section 2.4.1.C.2. All NIS rearrangements, except the "records only" changes set forth in Section 5.4.1.A., and the administrative changes set forth in Section 5.4.2., will be treated as disconnects and starts.

ACCESS SERVICES AND NETWORK INTERCONNECTION SERVICES

10. NETWORK INTERCONNECTION SERVICES

10.2. PHYSICAL NETWORK INTERCONNECTION ARRANGEMENTS (Cont'd)

10.2.2. Establishing Points of Interconnection (Cont'd)

The Customer is responsible for providing its own DS1 or DS3 facilities to route calls to the POI. Each party shall bear its own costs related to the provisioning and installation of its facilities. After installation of any facility, only Company personnel will be permitted access to the Company side of the POI for maintenance or any other purpose.

Subject to mutual agreement between the Customer and the Company, a Customer may terminate traffic on the Company's network in one of two ways: 1) separate trunk groups for Local Traffic and non-Local Traffic; or 2) on combined trunk groups.

The Customer will compensate the Company for terminating Local Traffic which the Customer delivers at the POI for termination on the Company's network in accordance with the Interconnection Agreement between the Company and the Customer.

A. DS1 Port Termination

The Company provides for the connection of a Customer's DS1 or DS3 facility at the POI, pursuant to charges set forth in the Price List.

1. DS1 Facility

Provided that facilities are available, at the Customer's option, dedicated DS1 facilities may be provided by the Company for termination at the Company's POI. These facilities transmit electrical signals at 1.544 Mbps with the capability to channelize up to 24 voice frequency transmission paths.

2. DS3 Facility

Upon request, the Company will provide for an arrangement that converts a DS3 channel operating at a terminating speed of 44.736 to 28 DS1 channels operating at a terminating speed of 1.544 Mbps using digital time compression multiplexing pursuant to charges set forth in the Price List. When the Customer elects to connect its DS3 facility via Company provided multiplexing, in addition to the multiplexing charges the Customer will also pay the charges for 28 DS1 Port Terminations.

ACCESS SERVICES AND NETWORK INTERCONNECTION SERVICES

10. NETWORK INTERCONNECTION SERVICES

10.2. PHYSICAL NETWORK INTERCONNECTION ARRANGEMENTS (Cont'd)

10.2.2. Establishing Points of Interconnection (Cont'd)

A. DS1 Port Termination (Cont'd)

3. 64 Clear Channel Capability

The Company, where available and at the Customer's request, will arrange the channels derived from a DS1 facility for 64 Clear Channel Capability pursuant to charges set forth in The Price List. This optional feature employs the Bipolar 8 Zero Suppression (B8ZS) technique to permit Customers to use full 64 Kbps bandwidth of a derived channel.

10.2.3. SS7 Interconnection

A Customer may connect to the Company's SS7 network in one of two ways:

1. On a shared use link and port. If a Customer chooses to connect to the Company's SS7 network using shared link(s) and port(s), the Company shall provide such link(s) and port(s) and the Customer shall pay the charges therefore, as set forth in the Price List, prorated as per a Percent Local Signaling Usage (PLSU) mechanism agreed upon by the Company and the Customer, or in full, if a PLSU has not been agreed to, or
2. The Customer and the Company agree on another signaling interconnection arrangement on an individual case basis.

10.2.4. Charges

The charges applicable to Physical Network Interconnection Arrangements are set forth in the Price List.

10.2.5. Collocation

Nothing in this tariff shall obligate the Company to provide physical collocation services to the Customer. Collocation arrangements, if any, will be made subject to availability and on an Individual Case Basis.

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PRICE LIST
ORIGINAL SHEET 10

ACCESS SERVICES AND NETWORK INTERCONNECTION SERVICES

10. NETWORK INTERCONNECTION SERVICES

10.1. PHYSICAL NETWORK INTERCONNECTION ARRANGEMENTS

A. DS1 MONTHLY RATES

	USOC	Monthly Rate
DS1 Facility- Zero Mileage - per facility	SWCDZ	\$60.00
DS1 Facility- Other than Zero Mileage - per DS1	SWCDF	\$60.00
- per mile	SWCMF	\$17.70
DS1 Port Termination - per port (1-28)	SWCZ1	\$36.00
- per port (29-56)	SWCZ2	\$33.00
- per port (57-84)	SWCZ3	\$26.00
- per port (85-112)	SWCZ4	\$21.00
- per port (113-140)	SWCZ5	\$17.00
- per port (141-168)	SWCZ6	\$13.00
- per port (169 and above)	SWCZ7	\$12.00
DS3 to DS1 Multiplexing - per multiplexer	VUMDS	\$508.20

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ORIGINAL SHEET 11

ACCESS SERVICES AND NETWORK INTERCONNECTION SERVICES

10. NETWORK INTERCONNECTION SERVICES (cont'd)

10.1. PHYSICAL NETWORK INTERCONNECTION ARRANGEMENTS (cont'd)

B. DS1 RATES

	USOC	Nonrecurring Rates
DS1 Facility - Zero Mileage - per facility	NRWD2	N/A
DS1 Facility - Other than Zero Mileage - per facility	NRWD3	N/A
DS1 Port Termination - per port (first 168)	NRWZ1	\$267.00
- per port (169-300)	NRWZ2	\$175.00
- per port (301-500)	NRWZ3	\$125.00
- per port (501-750)	NRWZ4	\$75.00
- per port (751-1000)	NRWZ5	\$50.00
- per port (1001-and above)	NRWZ6	\$25.00
Installation Charges - per 24 trunks	NRWTK	\$1.00
Engineering Charge - per DS1 Trunk Group	NRWE3	ICB
DS3 to DS1 multiplexing - per multiplexer	NRWD1	\$600.00

C. 64 CLEAR CHANNEL CAPABILITY

	USOC	Monthly Rate	USOC	Nonrecurring Rates
Per DS1 arranged, per mile	S4CMF	\$0.00	NRWD4	\$0.00

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ORIGINAL SHEET 12

ACCESS SERVICES AND NETWORK INTERCONNECTION SERVICES

10. NETWORK INTERCONNECTION SERVICES (Cont'd)

10.1. PHYSICAL NETWORK INTERCONNECTION ARRANGEMENTS (Cont'd)

C. SS7 CHARGES

	USOC	Monthly Rate	USOC	Nonrecurring Rate
STP Link Termination - per Termination	SWCLT	\$0.00	NRWL3	\$0.00
STP Link Transport - fixed	SWCLM	\$0.00		\$0.00
- per Mile	8SCMF	\$3.50		\$0.00
STP Port - per port	SWCPP	\$900.00		\$0.00



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For local, intrastate, or interstate communications, AT&T Private Line Services offer an array of choices, all with high availability and performance. Available in a wide variety of speeds ranging from Single Channel to OC-192.

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Provides dedicated, digital, end-to-end connections between US and non-US locations. Circuits of varying speeds can be land-based or provided by satellite in countries where the local infrastructure is not available.

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For high-speed transport, high-level security and a network that can quickly scale to meet growth. AT&T offers industry leading Frame Relay and ATM services over AT&T's ATM switching backbone. The result is high reliability, low congestion, and consistent performance. Available for local, intrastate, interstate or international communications.

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TITLE SHEET**COMPETITIVE ACCESS PROVIDER TARIFF**

This tariff contains the regulations and schedule of intrastate telecommunications charges for competitive access services furnished by Looking Glass Networks, Inc. ("LGN") within the State of Pennsylvania. This tariff is on file with the Pennsylvania Public Utility Commission, and copies may be inspected, during normal business hours, at Company's principal place of business, 18 W. 140 Butterfield Rd., 16th Floor, Oakbrook Terrace, IL 60181.

Issued: August 16, 2000

Effective: February 2, 2001

Issued By: Jodi J. Caro, General Counsel
Looking Glass Networks, Inc.
18 W. 140 Butterfield Rd., 16th Floor
Oakbrook Terrace, IL 60181

5. SERVICE DESCRIPTIONS AND TECHNICAL STANDARDS (Cont'd)

5.4 Looking Glass Private Line Access Service

Looking Glass Private Line Access Service is a point-to-point and multi-point service which provides customers access to private telecommunications networks, wide area networks, connections with information service providers and interexchange carriers who transport interstate traffic.

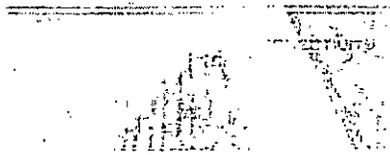
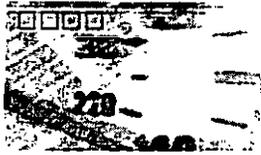
5.4.1 Looking Glass Private Line Access Service is available at varying transmission speeds as follows:

- 5.4.1.1 Digital Data Service: Digital data service provides the duplex four-wire transmission of synchronous serial data at rates ranging from 2.4 to 64 kbps (DSO).
- 5.4.1.2 High Capacity Service (DS-1): High capacity service provides transmission of synchronous serial data at speeds of 1.544 or 2.048 Mbps - Transmission of intermediate bit rate channels in multiple increments of either 56 or 64 kbps up to 1.544 Mbps is also available.
- 5.4.1.3 Very High Capacity Service (DS-3): Very high capacity service provides transmission of synchronous serial data at speeds of 44.736 Mbps or faster.
- 5.4.1.4 Looking Glass Private Line SONET Service: Looking Glass Private Line SONET Service, provides transmission of data at speeds of 155 Mbps or higher through an optical signal on the Synchronous Optical Network (SONET) in Type 1 network configurations. OC3 (155 Mbps) and OC12 (622 Mbps) speeds are available in either concatenated or channelized configurations. OC48 (2.5 Gbps) is available in channelized form.

Issued: August 16, 2000

Effective: February 2, 2001

Issued By: Jodi J. Caro, General Counsel
Looking Glass Networks, Inc.
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Oakbrook Terrace, IL 60181


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Products/Services > Dark Fiber

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Dark Fiber

Collocation

Company Brochure 

Dark Fiber

We provide the dark fiber you need where, when and how you need it. Our DarkGLASSSM dark fiber solutions offer flexible, fixed-cost access to virtually unlimited capacity. You get the security advantages of ring configuration and exclusive use of each fiber pair plus end-to-end control of speed and bandwidth with the option of supplying your own electronics.

Our metro networks are built to carry extraordinarily high capacity - up to 864 strands of fiber. Because we build, own and maintain our networks, we are physically diverse from other fiber providers and can bring the dark fiber and fiber infrastructure you want wherever you need it. You benefit from our scalability and flexibility as we expand our footprint to meet your changing needs.

Our technologically advanced, high-grade fiber optic cable supports the full spectrum of bandwidth applications including disaster recovery, data warehousing, mirroring, streaming audio/video, distance learning and multiple technologies such as IP, SONET/SDH, DWDM, Fibre Channel, ATM, Frame Relay and Gigabit Ethernet. Our presence at data aggregation points in the top U.S. metro areas ensures reliable access to IXC, ISP, ILEC and CLEC locations as well as Web hosting facilities and data centers.

Why DarkGLASS?

- Virtually unlimited capacity
- Flexibility to build to meet your specific needs
- Redundant networks connected to major data aggregation locations
- Support for all applications and technologies
- Your choice of access options

Product Features

Dark Fiber Access Where You Need It

With connectivity in primary Carrier Hotels, ILEC Central Offices (COs) and key enterprise buildings in major U.S. metro markets, DarkGLASS connects you where you need to be. Depending on your location and requirements, we offer the following access options:

- Zero manhole - Street-level access at Looking Glass manholes
- Point of Presence (POP) - Access at Looking Glass termination panels in buildings where Looking Glass maintains a presence
- Customer location - Termination at the customer's location
- ILEC Central Office - Access via the Looking Glass collocation area inside the ILEC central office

At the Leading Edge of Fiber

Our technologically advanced, high-grade fiber optic cable supports the full spectrum of bandwidth applications.

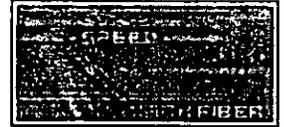
Quality and Security

Our commitment to network quality and security is second to none, and is evident throughout our operations. Quality and security play a prominent role at our national Network Operations Control Center (NOCC), where we provide performance monitoring, alarm surveillance and expert support and service 24x7. Additionally, we participate in local One Call, Call Before You Dig, Dig Safe and Dig Alert programs.

Product Brochure

 [DarkFiber.pdf](#)

Dark Fiber



Flexible, fixed-cost access to virtually unlimited capacity.



For more information contact: sales@lglass.net

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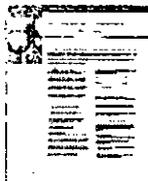


Products & Servi

AboveNet Transport Services - IP Bandwidth

Pure IP Bandwidth at its best.

AboveNet's IP Bandwidth offerings overcome bandwidth limitations by giving you fast, reliable IP connectivity to the Internet within all major metropolitan areas-all over AboveNet's optical Internet long-haul backbone. AboveNet IP Bandwidth Services ensure that your data arrives quickly and reliably, whether you need easily managed Internet access from your cage in an AboveNet Data Center or direct access to the Internet backbone. In addition, AboveNet's customers include major top-tier ISPs. AboveNet IP Transport Services give you fast, direct "on-net" routing to the most in demand Internet networks and sites.



AboveNet, Inc. Emerges From Chapter 11 Bankruptcy with N Financial Backing, Strong Cash Posit and Low Debt

MFN's Disclosure Statement Receive Court Approval an Committee Suppo

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Sales Inquiry Form

AboveNet IP Bandwidth Services also give you a cost-effective path to AboveNet's extensive dark fiber infrastructure, which provides virtually unlimited, unmetered bandwidth at a fixed cost as well as access to our IP backbone. With AboveNet, you can control the growth and development of your own, private, facilities-based network and gain the benefits of dark fiber-unlimited capacity, speed flexibility, security and reliability.

Access Based on Your Needs

AboveNet IP Bandwidth Services are designed to meet your specific requirements for IP connectivity. They include:

Simple Internet Access - This cost-effective service provides easily managed Internet access from y cage in an AboveNet Data Center. Once your order is complete, we'll provide you with a gateway IP address, DNS address and IP address, and turn on your connection, typically within 24 hours.

Direct Internet Access - For carriers and enterprises that need the fastest and most robust Internet connectivity available, this service extends Border Gateway Protocol (BGP) routes directly to you, givin you the ability to effectively control your Internet traffic. We can connect you from a variety of POPs, including telco hotels, PAIX locations and AboveNet Data Centers.

Highest Levels of Reliability

AboveNet IP Bandwidth Services ensure that your customers never find your network unavailable. In f our Service-Level Agreements (SLAs) guarantee 100 percent uptime. Multiple, redundant fiber connections into data centers eliminate any single point of failure and the possibility of downtime from man-made or natural disasters. Redundant network connections are also available.

IP Bandwidth Services Highlights:

- Direct paths to the Internet from all major metro areas over a 100% fiber optic network
- Lightning-fast connectivity, with speeds up to OC-48 (OC-192 in some locations)
- Rich peering relationships put you closer to destination networks on the Internet
- Redundant fiber connections eliminate single points of failure
- 100% uptime SLAs
- Massively over-provisioned network ensures bandwidth availability
- "On-net" direct routing to major providers such as AOL and MSN
- Flexible connection options
- Cost-effective path to AboveNet's dark fiber infrastructure, which offers unlimited, unmetered bandwidth at a fixed cost.

Discover the power of unconstrained information exchange on an all-optical infrastructure to revolutionize productivity and transform your business.

AboveNet. It's about time.

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MFN Network Services

■ MFN Optical Fiber

- Dark Fiber

- DWDM Service

■ Long Haul Services

MFN Managed Services

MFN Internet Services

MFN Carrier Services

Dark Fiber

Meeting Demand At A Fixed Cost

Every first year economy student is taught that as demand increases prices follow. MFN is changing the way that bandwidth is priced. When you lease MFN dark fiber the cost of your fiber will never go up, no matter how much bandwidth you utilize. MFN fiber is priced at a fixed-cost.

With MFN's dark fiber, you can meet your growing bandwidth demands both quickly and cost-effectively. When you lease dark fiber from MFN you gain your own private optical network giving you the flexibility, security, and reliability you need to manage your own infrastructure today and for years to come while keeping cost constant.

Staying ahead of demand

With currently available technology, a single strand of fiber can transmit over 2 terabits of information per second - this number is increasing rapidly. Utilizing MFN's optical fiber you not only meet your growing need for bandwidth but you stay ahead of the demand curve by adding more capacity quickly and cheaply.

With MFN's dark fiber optical network you gain the benefits of:

Unparalleled security

As the only user of your fiber you can rest assured that no other traffic is on your network and no one can access your data. Not simply just a *secure* network, but a *sovereign* one.

Flexibility

Since you control your own infrastructure you decide how much capacity to use and the types of equipment that best meet your needs.

Whether you choose to utilize one of MFN's managed optical solutions or run your own network, you have a wide range of transport protocols and applications available to use:

- Disaster Recovery
- Storage Networks
- Data Mirroring
- Video Conferencing
- Distance Learning
- IP
- SONET
- DWDM
- ATM
- Gigabit Ethernet

MFN can provide the expertise to manage or assist you in managing your network. We offer a wide variety of network services and connectivity options.

QUICK LINKS:

White Paper

MFN: The Sum of the Whole is Great the Parts

 [Click to download a copy.](#)

Press Releases

Electronic Arts Selects Metromedia F Network To Support EA.com in Japan
Japan's Most Popular Online Game Seamlessly Transitions To MFN's Data Center for Superior Co-Location and Connectivity

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Network Maps

Find out about your area of interest:

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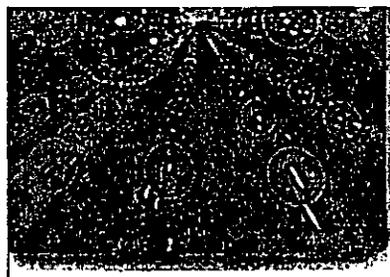
Welcome to City Signal Communications!

City Signal Communications (CSC) delivers metro dark fiber solutions enabling service providers and enterprise customers to deploy broadband applications.

Located in key Mid-Atlantic and Mid-West markets of the United States, our multi-ring networks allow carriers access to a number of highly desirable, yet underserved, metropolitan areas already experiencing explosive commercial and residential growth.

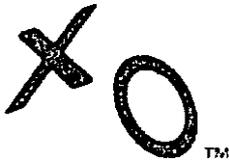
Our strategy is to push the edge of our networks not only into the dense central business districts, but also to ring the suburban commercial centers as well.

Founded in 1999 and based in suburban Philadelphia, PA, the company has received funding by M/C Venture Partners, BB&T Capital Partners and Bank of America.



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Product Portfolio

XO Product Solution	Product Advantage
Carrier Long Distance Termination	With Carrier Long Distance Termination, you can complete interstate calls in all 50 states and intrastate calls in the 48 continental states (excludes AK and HI) with only one interconnection.
High-Speed Dedicated Internet Access	High-Speed Dedicated Internet Access provides unlimited high capacity Internet access via non-shared, non-fractional lines.
Inbound PRI (Primary Rate Interface)	Inbound PRI is a 100% digital circuit designed for organizations that provide dial Internet access to end-users and employees.
Wholesale Dial-Up	Wholesale Dial-Up gives you maximum flexibility in offering highly reliable Internet access while maintaining control of your own subscriber accounts.
Carrier Private Line	Carrier Private Line typically consists of non-switched communications circuits and the required equipment to connect two or more locations. Long-haul and local circuits are available in a variety of configurations.
Collocation	Collocation provides secure, controlled carrier-class space and network access for carriers, such as CLECs (Competitive Local Exchange Carriers), IXC (InterExchange Carriers) and ISPs (Internet Service Providers).
Wavelength Services	Dedicated connections between sites using Wave Division Multiplexing. Available at OC-12, OC-48 and OC-192 capacities
SONET Services	Allows the transmission of large voice, image and data files by maximizing the high-speed capacity of fiber-optic cables

See Also

- [Learn More About the XO™ Network](#)
- [XO Available Markets](#)