APPENDIX B – FINAL RULES

Part 51 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 51 – INTERCONNECTION

1. The authority citation for part 51 is revised to read as follows:

Authority: Sections 1-5, 7, 201-05, 207-09, 218, 225-27, 251-54, 256, 271, 303(r), 332, 48 Stat. 1070, as amended, 1077; 47 U.S.C. §§ 151-55, 157, 201-05, 207-09, 218, 225-27, 251-54, 256, 271, 303(r), 332, and section 706 of the Telecommunications Act of 1996, Pub. L. No. 104-104, February 8, 1996, 110 Stat. 153, as amended, Pub. L. No. 107-110, January 8, 2002, 115 Stat. 2093, 47 U.S.C. § 157 note, unless otherwise noted.

2. Section 51.5 is amended by adding six new definitions in alphabetical order and by revising the definition of "state commission" to read as follows:

§ 51.5 Terms and Definitions.

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Commingling. Commingling means the connecting, attaching, or otherwise linking of an unbundled network element, or a combination of unbundled network elements, to one or more facilities or services that a requesting telecommunications carrier has obtained at wholesale from an incumbent LEC, or the combining of an unbundled network element, or a combination of unbundled network elements, with one or more such facilities or services. Commingle means the act of commingling.

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Enhanced extended link. An enhanced extended link or EEL consists of a combination of an unbundled loop and unbundled dedicated transport, together with any facilities, equipment, or functions necessary to combine those network elements.

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Intermodal. The term intermodal refers to facilities or technologies other than those found in traditional telephone networks, but that are utilized to provide competing services. Intermodal facilities or technologies include, but are not limited to, traditional or new cable plant, wireless technologies, and power line technologies.

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Non-qualifying service. A non-qualifying service is a service that is not a qualifying service.

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Qualifying service. A qualifying service is a telecommunications service that competes with a telecommunications service that has been traditionally the exclusive or primary domain of incumbent LECs, including, but not limited to, local exchange service, such as plain old telephone service, and access services, such as digital subscriber line services and high-capacity circuits.

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State commission. A state commission means the commission, board, or official (by whatever name designated) which under the laws of any state has regulatory jurisdiction with respect to intrastate operations of carriers. As referenced in this part, this term may include the Commission if it assumes responsibility for a proceeding or matter, pursuant to section 252(e)(5) of the Act or § 51.320. This term shall also include any person or persons to whom the state commission has delegated its authority under sections 251 and 252 of the Act and this part.

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Triennial Review Order. The Triennial Review Order means the Commission's Report and Order and Order on Remand and Further Notice of Proposed Rulemaking in CC Docket Nos. 01-338, 96-98, and 98-147.

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3. Section 51.301 is amended by revising paragraph (c)(8)(ii) to read as follows:

§ 51.301 Duty to negotiate.

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(c) ***

(8) ***

(ii) Refusal by an incumbent LEC to furnish cost data that would be relevant to setting rates if the parties were in arbitration.

4. Section 51.305 is amended by removing paragraph (a)(4), redesignating paragraph (a)(5) as paragraph (a)(4), and revising paragraph (a)(3) to read as follows:

§ 51.305 Interconnection.

(a) ***

(3) That is at a level of quality that is equal to that which the incumbent LEC provides itself, a subsidiary, an affiliate, or any other party. At a minimum, this requires an incumbent LEC to design interconnection facilities to meet the same technical criteria and service standards that are used within the incumbent LEC's network. This obligation is not limited to a consideration of service quality as perceived by end users, and includes, but is not limited to, service quality as perceived by the requesting telecommunications carrier; and

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5. Section 51.309 is amended by revising paragraphs (a) and (b), and by adding paragraphs (d) through (g) to read as follows:

§ 51.309 Use of unbundled network elements.

(a) Except as provided in § 51.318, an incumbent LEC shall not impose limitations, restrictions, or requirements on requests for, or the use of, unbundled network elements for the service a requesting telecommunications carrier seeks to offer.

(b) A requesting telecommunications carrier may not access an unbundled network element for the sole purpose of providing non-qualifying services.

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(d) A requesting telecommunications carrier that accesses and uses an unbundled network element pursuant to section 251(c)(3) of the Act and this part to provide a qualifying service may use the same unbundled network element to provide non-qualifying services.

(e) Except as provided in § 51.318, an incumbent LEC shall permit a requesting telecommunications carrier to commingle an unbundled network element or a combination of unbundled network elements with wholesale services obtained from an incumbent LEC.

(f) Upon request, an incumbent LEC shall perform the functions necessary to commingle an unbundled network element or a combination of unbundled network elements with one or more facilities or services that a requesting telecommunications carrier has obtained at wholesale from an incumbent LEC.

(g) An incumbent LEC shall not deny access to an unbundled network element or a combination of unbundled network elements on the grounds that one or more of the elements:

(1) Is connected to, attached to, linked to, or combined with, a facility or service obtained from an incumbent LEC; or

(2) Shares part of the incumbent LEC's network with access services or inputs for non-qualifying services.

6. Section 51.311 is amended by revising paragraphs (a) and (b), removing paragraph (c), redesignating paragraphs (d) and (e) as paragraphs (c) and (d) to read as follows:

§ 51.311 Nondiscriminatory access to unbundled network elements.

(a) The quality of an unbundled network element, as well as the quality of the access to the unbundled network element, that an incumbent LEC provides to a requesting telecommunications carrier shall be the same for all telecommunications carriers requesting access to that network element.

(b) To the extent technically feasible, the quality of an unbundled network element, as well as the quality of the access to such unbundled network element, that an incumbent LEC provides to a requesting telecommunications carrier shall be at least equal in quality to that which the incumbent LEC provides to itself. If an incumbent LEC fails to meet this requirement, the incumbent LEC must prove to the state commission that it is not technically feasible to provide the requested unbundled network element, or to provide access to the requested unbundled network element, at a level of quality that is equal to that which the incumbent LEC provides to itself.

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7. Section 51.315 is amended by revising paragraphs (c) and (f) to read as follows:

§ 51.315 Combination of unbundled network elements.

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(c) Upon request, an incumbent LEC shall perform the functions necessary to combine unbundled network elements in any manner, even if those elements are not ordinarily combined in the incumbent LEC's network, provided that such combination:

(1) Is technically feasible; and

(2) Would not undermine the ability of other carriers to obtain access to unbundled network elements or to interconnect with the incumbent LEC's network.

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(f) An incumbent LEC that denies a request to combine unbundled network elements pursuant to paragraph (c)(2) of this section must demonstrate to the state commission that the requested combination would undermine the ability of other carriers to obtain access to unbundled network elements or to interconnect with the incumbent LEC's network.

8. Section 51.316 is added to read as follows:

§ 51.316 Conversion of unbundled network elements and services.

(a) Upon request, an incumbent LEC shall convert a wholesale service, or group of wholesale services, to the equivalent unbundled network element, or combination of unbundled network elements, that is available to the requesting telecommunications carrier under section 251(c)(3) of the Act and this part.

(b) An incumbent LEC shall perform any conversion from a wholesale service or group of wholesale services to an unbundled network element or combination of unbundled network elements without adversely affecting the service quality perceived by the requesting telecommunications carrier's end-user customer.

(c) Except as agreed to by the parties, an incumbent LEC shall not impose any untariffed termination charges, or any disconnect fees, re-connect fees, or charges associated with establishing a service for the first time, in connection with any conversion between a wholesale service or group of wholesale services and an unbundled network element or combination of unbundled network elements.

9. Section 51.317 is revised to read as follows:

§ 51.317 Standards for requiring the unbundling of network elements.

Proprietary network elements. A network element shall be considered to be proprietary if an incumbent LEC can demonstrate that it has invested resources to develop proprietary information or functionalities that are protected by patent, copyright or trade secret law. The Commission shall undertake the following analysis to determine whether a proprietary network element should be made available for purposes of section 251(c)(3) of the Act:

(a) Determine whether access to the proprietary network element is "necessary." A network element is "necessary" if, taking into consideration the availability of alternative elements outside the incumbent LEC's network, including self-provisioning by a requesting telecommunications carrier or acquiring an alternative from a third-party supplier, lack of access to the network element precludes a requesting

telecommunications carrier from providing the services that it seeks to offer. If access is "necessary," the Commission may require the unbundling of such proprietary network element.

(b) In the event that such access is not "necessary," the Commission may require unbundling if it is determined that:

(1) The incumbent LEC has implemented only a minor modification to the network element in order to qualify for proprietary treatment;

(2) The information or functionality that is proprietary in nature does not differentiate the incumbent LEC's services from the requesting telecommunications carrier's services; or

(3) Lack of access to such element would jeopardize the goals of the Act.

10. Section 51.318 is added to read as follows:

§ 51.318 Eligibility criteria for access to certain unbundled network elements.

(a) Except as provided in paragraph (b) of this section, an incumbent LEC shall provide access to unbundled network elements and combinations of unbundled network elements without regard to whether the requesting telecommunications carrier seeks access to the elements to establish a new circuit or to convert an existing circuit from a service to unbundled network elements.

(b) An incumbent LEC need not provide access to an unbundled DS1 loop in combination, or commingled, with a dedicated DS1 transport or dedicated DS3 transport facility or service, or to an unbundled DS3 loop in combination, or commingled, with a dedicated DS3 transport facility or service, unless the requesting telecommunications carrier certifies that all of the following conditions are met:

(1) The requesting telecommunications carrier has received state certification to provide local voice service in the area being served or, in the absence of a state certification requirement, has complied with registration, tariffing, filing fee, or other regulatory requirements applicable to the provision of local voice service in that area.

(2) The following criteria are satisfied for each combined circuit, including each DS1 circuit, each DS1 enhanced extended link, and each DS1-equivalent circuit on a DS3 enhanced extended link:

(i) Each circuit to be provided to each customer will be assigned a local number prior to the provision of service over that circuit;

(ii) Each DS1-equivalent circuit on a DS3 enhanced extended link must have its

own local number assignment, so that each DS3 must have at least 28 local voice numbers assigned to it;

(iii) Each circuit to be provided to each customer will have 911 or E911 capability prior to the provision of service over that circuit;

(iv) Each circuit to be provided to each customer will terminate in a collocation arrangement that meets the requirements of paragraph (c) of this section;

(v) Each circuit to be provided to each customer will be served by an interconnection trunk that meets the requirements of paragraph (d) of this section;

(vi) For each 24 DS1 enhanced extended links or other facilities having equivalent capacity, the requesting telecommunications carrier will have at least one active DS1 local service interconnection trunk that meets the requirements of paragraph (d) of this section; and

(vii) Each circuit to be provided to each customer will be served by a switch capable of switching local voice traffic.

(c) A collocation arrangement meets the requirements of this paragraph if it is:

(1) Established pursuant to section 251(c)(6) of the Act and located at an incumbent LEC premises within the same LATA as the customer's premises, when the incumbent LEC is not the collocator; and

(2) Located at a third party's premises within the same LATA as the customer's premises, when the incumbent LEC is the collocator.

(d) An interconnection trunk meets the requirements of this paragraph if the requesting telecommunications carrier will transmit the calling party's number in connection with calls exchanged over the trunk.

10. Section 51.319 is revised to read as follows:

§ 51.319 Specific unbundling requirements.

(a) Local loops. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to the local loop on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part and as set forth in paragraphs (a)(1) through (a)(9) of this section. The local loop network element is defined as a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and the loop demarcation point at an end-user customer premises. This element includes all features,

functions, and capabilities of such transmission facility, including the network interface device. It also includes all electronics, optronics, and intermediate devices (including repeaters and load coils) used to establish the transmission path to the end-user customer premises as well as any inside wire owned or controlled by the incumbent LEC that is part of that transmission path.

(1) Copper loops. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to the copper loop on an unbundled basis. A copper loop is a stand-alone local loop comprised entirely of copper wire or cable. Copper loops include two-wire and four-wire analog voice-grade copper loops, digital copper loops (*e.g.*, DS0s and integrated services digital network lines), as well as two-wire and four-wire copper loops conditioned to transmit the digital signals needed to provide digital subscriber line services, regardless of whether the copper loops are in service or held as spares. The copper loop includes attached electronics using time division multiplexing technology, but does not include packet switching capabilities as defined in paragraph (a)(2)(i) of this section. The availability of DS1 and DS3 copper loops is subject to the requirements of paragraphs (a)(4) and (a)(5) of this section.

(i) Line sharing. Beginning on the effective date of the Commission's Triennial Review Order, the high frequency portion of a copper loop shall no longer be required to be provided as an unbundled network element, subject to the transitional line sharing conditions in paragraphs (a)(1)(i)(A) and (a)(1)(i)(B) of this section. Line sharing is the process by which a requesting telecommunications carrier provides digital subscriber line service over the same copper loop that the incumbent LEC uses to provide voice service, with the incumbent LEC using the low frequency portion of the loop and the requesting telecommunications carrier using the high frequency portion of the loop. The high frequency portion of the loop consists of the frequency range on the copper loop above the range that carries analog circuit-switched voice transmissions. This portion of the loop includes the features, functions, and capabilities of the loop that are used to establish a complete transmission path on the high frequency range between the incumbent LEC's distribution frame (or its equivalent) in its central office and the demarcation point at the end-user customer premises, and includes the high frequency portion of any inside wire owned or controlled by the incumbent LEC.

(A) Line sharing customers before the effective date of the Commission's Triennial Review Order. An incumbent LEC shall provide a requesting telecommunications carrier with the ability to engage in line sharing over a copper loop where, prior to the effective date of the Commission's Triennial Review Order, the requesting telecommunications carrier began providing digital subscriber line service to a particular end-user customer and has not ceased providing digital subscriber line service to that customer. Until such end-user customer cancels or otherwise discontinues its subscription to the digital subscriber line service of the requesting telecommunications carrier, or its successor or assign, an incumbent LEC shall continue to provide access to the high frequency portion of the loop at the same rate that the incumbent LEC charged for such access prior to the effective date of the Commission's Triennial

Review Order.

(B) Line sharing customers on or after the effective date of the Commission's Triennial Review Order. An incumbent LEC shall provide a requesting telecommunications carrier with the ability to engage in line sharing over a copper loop, between the effective date of the Commission's Triennial Review Order and three years after that effective date, where the requesting telecommunications carrier began providing digital subscriber line service to a particular end-user customer on or before the date one year after that effective date. Beginning three years after the effective date of the Commission's Triennial Review Order, the incumbent LEC is no longer required to provide a requesting telecommunications carrier with the ability to engage in line sharing for this end-user customer or any new end-user customer. Between the effective date of the Commission's Triennial Review Order and three years after that effective date, an incumbent LEC shall provide a requesting telecommunications carrier with access to the high frequency portion of a copper loop in order to serve line sharing customers obtained between the effective date of the Commission's Triennial Review Order and one year after that effective date in the following manner:

(1) During the first year following the effective date of the Commission's Triennial Review Order, the incumbent LEC shall provide access to the high frequency portion of a copper loop at 25 percent of the state-approved monthly recurring rate, or 25 percent of the monthly recurring rate set forth in the incumbent LEC's and requesting telecommunications carrier's interconnection agreement, for access to a copper loop in effect on that date.

(2) Beginning one year plus one day after the effective date of the Commission's Triennial Review Order until two years after that effective date, the incumbent LEC shall provide access to the high frequency portion of a copper loop at 50 percent of the state-approved monthly recurring rate, or 50 percent of the monthly recurring rate set forth in the incumbent LEC's and requesting telecommunications carrier's interconnection agreement, for access to a copper loop in effect on the effective date of the Commission's Triennial Review Order.

(3) Beginning two years plus one day after effective date of the Commission's Triennial Review Order until three years after that effective date, the incumbent LEC shall provide access to the high frequency portion of a copper loop at 75 percent of the state-approved monthly recurring rate, or 75 percent of the monthly recurring rate set forth in the incumbent LEC's and requesting telecommunications carrier's interconnection agreement, for access to a copper loop in effect on the effective date of the Commission's Triennial Review Order.

(ii) Line splitting. An incumbent LEC shall provide a requesting telecommunications carrier that obtains an unbundled copper loop from the incumbent LEC with the ability to engage in line splitting arrangements with another competitive LEC using a splitter collocated at the central office where the loop terminates into a distribution frame or its equivalent. Line splitting is the process in which one competitive LEC provides narrowband voice service over the low frequency portion of a copper loop and a second competitive LEC provides digital subscriber line service over the high frequency portion of that same loop.

(A) An incumbent LEC's obligation, under paragraph (a)(1)(ii) of this section, to provide a requesting telecommunications carrier with the ability to engage in line splitting applies regardless of whether the carrier providing voice service provides its own switching or obtains local circuit switching as an unbundled network element pursuant to paragraph (d) of this section.

(B) An incumbent LEC must make all necessary network modifications, including providing nondiscriminatory access to operations support systems necessary for pre-ordering, ordering, provisioning, maintenance and repair, and billing for loops used in line splitting arrangements.

(iii) Line conditioning. The incumbent LEC shall condition a copper loop at the request of the carrier seeking access to a copper loop under paragraph (a)(1) of this section, the high frequency portion of a copper loop under paragraph (a)(1)(i) of this section, or a copper subloop under paragraph (b) of this section to ensure that the copper loop or copper subloop is suitable for providing digital subscriber line services, including those provided over the high frequency portion of the copper loop or copper subloop, whether or not the incumbent LEC offers advanced services to the end-user customer on that copper loop or copper subloop. If the incumbent LEC seeks compensation from the requesting telecommunications carrier for line conditioning, the requesting telecommunications carrier has the option of refusing, in whole or in part, to have the line conditioned; and a requesting telecommunications carrier's refusal of some or all aspects of line conditioning will not diminish any right it may have, under paragraphs (a) and (b) of this section, to access the copper loop, the high frequency portion of the copper loop, or the copper subloop.

(A) Line conditioning is defined as the removal from a copper loop or copper subloop of any device that could diminish the capability of the loop or subloop to deliver high-speed switched wireline telecommunications capability, including digital subscriber line service. Such devices include, but are not limited to, bridge taps, load coils, low pass filters, and range extenders.

(B) Incumbent LECs shall recover the costs of line conditioning from the requesting telecommunications carrier in accordance with the Commission's forward-looking pricing principles promulgated pursuant to section 252(d)(1) of the Act and in compliance with rules governing nonrecurring costs in § 51.507(e).

(C) Insofar as it is technically feasible, the incumbent LEC shall test and report troubles for all the features, functions, and capabilities of conditioned copper lines, and may not restrict its testing to voice transmission only.

(D) Where the requesting telecommunications carrier is seeking access to the high frequency portion of a copper loop or copper subloop pursuant to paragraphs (a) or (b) of this section and the incumbent LEC claims that conditioning that loop or subloop will significantly degrade, as defined in § 51.233, the voiceband services that the incumbent LEC is currently providing over that loop or subloop, the incumbent LEC must either:

(1) Locate another copper loop or copper subloop that has been or can be conditioned, migrate the incumbent LEC's voiceband service to that loop or subloop, and provide the requesting telecommunications carrier with access to the high frequency portion of that alternative loop or subloop; or

(2) Make a showing to the state commission that the original copper loop or copper subloop cannot be conditioned without significantly degrading voiceband services on that loop or subloop, as defined in § 51.233, and that there is no adjacent or alternative copper loop or copper subloop available that can be conditioned or to which the end-user customer's voiceband service can be moved to enable line sharing.

(E) If, after evaluating the incumbent LEC's showing under paragraph (a)(1)(iii)(D)(2) of this section, the state commission concludes that a copper loop or copper subloop cannot be conditioned without significantly degrading the voiceband service, the incumbent LEC cannot then or subsequently condition that loop or subloop to provide advanced services to its own customers without first making available to any requesting telecommunications carrier the high frequency portion of the newly conditioned loop or subloop.

(iv) Maintenance, repair, and testing. (A) An incumbent LEC shall provide, on a nondiscriminatory basis, physical loop test access points to a requesting telecommunications carrier at the splitter, through a cross-connection to the requesting telecommunications carrier's collocation space, or through a standardized interface, such as an intermediate distribution frame or a test access server, for the purpose of testing, maintaining, and repairing copper loops and copper subloops.

(B) An incumbent LEC seeking to utilize an alternative physical access methodology may request approval to do so from the state commission, but must show that the proposed alternative method is reasonable and nondiscriminatory, and will not disadvantage a requesting telecommunications carrier's ability to perform loop or service testing, maintenance, or repair.

(v) Control of the loop and splitter functionality. In situations where a requesting telecommunications carrier is obtaining access to the high frequency portion of a copper loop either through a line sharing or line splitting arrangement, the incumbent LEC may maintain control over the loop and splitter equipment and functions, and shall provide to the requesting telecommunications carrier loop and splitter functionality that is compatible with any transmission technology that the requesting telecommunications carrier seeks to deploy using the high frequency portion of the loop, as defined in paragraph (a)(1)(i) of this section, provided that such transmission technology is presumed to be deployable pursuant to § 51.230.

(2) Hybrid loops. A hybrid loop is a local loop composed of both fiber optic cable, usually in the feeder plant, and copper wire or cable, usually in the distribution plant.

(i) Packet switching facilities, features, functions, and capabilities. An incumbent LEC is not required to provide unbundled access to the packet switched features, functions and capabilities of its hybrid loops. Packet switching capability is the routing or forwarding of packets, frames, cells, or other data units based on address or other routing information contained in the packets, frames, cells or other data units, and the functions that are performed by the digital subscriber line access multiplexers, including but not limited to the ability to terminate an end-user customer's copper loop (which includes both a low-band voice channel and a high-band data channel, or solely a data channel); the ability to forward the voice channels, if present, to a circuit switch or multiple circuit switches; the ability to extract data units from the data channels on the loops; and the ability to combine data units from multiple loops onto one or more trunks connecting to a packet switch or packet switches.

(ii) Broadband services. When a requesting telecommunications carrier seeks access to a hybrid loop for the provision of broadband services, an incumbent LEC shall provide the requesting telecommunications carrier with nondiscriminatory access to the time division multiplexing features, functions, and capabilities of that hybrid loop, including DS1 or DS3 capacity (where impairment has been found to exist), on an unbundled basis to establish a complete transmission path between the incumbent LEC's central office and an end user's customer premises. This access shall include access to all features, functions, and capabilities of the hybrid loop that are not used to transmit packetized information.

(iii) Narrowband services. When a requesting telecommunications carrier seeks access to a hybrid loop for the provision of narrowband services, the incumbent LEC may either:

(A) Provide nondiscriminatory access, on an unbundled basis, to an entire hybrid loop capable of voice-grade service (*i.e.*, equivalent to DS0 capacity), using time division multiplexing technology; or

(B) Provide nondiscriminatory access to a spare home-run copper loop serving that customer on an unbundled basis.

(3) Fiber-to-the-home loops. A fiber-to-the-home loop is a local loop consisting entirely of fiber optic cable, whether dark or lit, and serving a residential end user's customer premises.

(i) New builds. An incumbent LEC is not required to provide nondiscriminatory access to a fiber-to-the-home loop on an unbundled basis when the incumbent LEC deploys such a loop to a residential unit that previously has not been served by any loop facility.

(ii) Overbuilds. An incumbent LEC is not required to provide nondiscriminatory access to a fiber-to-the-home loop on an unbundled basis when the incumbent LEC has deployed such a loop parallel to, or in replacement of, an existing copper loop facility, except that:

(A) The incumbent LEC must maintain the existing copper loop connected to the particular customer premises after deploying the fiber-to-the-home loop and provide nondiscriminatory access to that copper loop on an unbundled basis unless the incumbent LEC retires the copper loop pursuant to paragraph (a)(3)(iii) of this section.

(B) An incumbent LEC that maintains the existing copper loop pursuant to paragraph (a)(3)(ii)(A) of this section need not incur any expenses to ensure that the existing copper loop remains capable of transmitting signals prior to receiving a request for access pursuant to that paragraph, in which case the incumbent LEC shall restore the copper loop to serviceable condition upon request.

(C) An incumbent LEC that retires the copper loop pursuant to paragraph (a)(3)(iii) of this section shall provide nondiscriminatory access to a 64 kilobits per second transmission path capable of voice grade service over the fiber-to-the-home loop on an unbundled basis.

(iii) Retirement of copper loops or copper subloops. Prior to retiring any copper loop or copper subloop that has been replaced with a fiber-to-the-home loop, an incumbent LEC must comply with:

(A) The network disclosure requirements set forth in section 251(c)(5) of the Act and in § 51.325 through § 51.335; and

(B) Any applicable state requirements.

(4) DS1 loops. (i) An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to a DS1 loop on an unbundled basis except where the state commission has found, through application of the competitive wholesale facilities trigger in paragraph (a)(4)(ii) of this section, that requesting telecommunications carriers are not

impaired without access to a DS1 loop at a specific customer location. A DS1 loop is a digital local loop having a total digital signal speed of 1.544 megabytes per second. DS1 loops include, but are not limited to, two-wire and four-wire copper loops capable of providing high-bit rate digital subscriber line services, including T1 services.

(ii) Competitive wholesale facilities trigger for DS1 loops. A state commission shall find that a requesting telecommunications carrier is not impaired without access to a DS1 loop at a specific customer location where two or more competing providers not affiliated with each other or with the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each satisfy the conditions in paragraphs (a)(4)(ii)(A) and (a)(4)(ii)(B) of this section:

(A) The competing provider has deployed its own DS1 facilities, and offers a DS1 loop over its own facilities on a widely available wholesale basis to other carriers desiring to serve customers at that location. For purposes of this paragraph, the competing provider's DS1 facilities may use dark fiber facilities that the competing provider has obtained on an unbundled, leased, or purchased basis if it has attached its own optronics to activate the fiber.

(B) The competing provider has access to the entire customer location, including each individual unit within that location.

(5) DS3 loops. Subject to the cap in paragraph (a)(5)(iii), an incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to a DS3 loop on an unbundled basis except where the state commission has found, through application of either paragraph (a)(5)(i) of this section or the potential deployment analysis in paragraph (a)(5)(ii) of this section, that requesting telecommunications carriers are not impaired without access to a DS3 loop at a specific customer location. A DS3 loop is a digital local loop having a total digital signal speed of 44.736 megabytes per second.

(i) Triggers for DS3 loops. A state commission shall find that a requesting telecommunications carrier is not impaired without access to unbundled DS3 loops at a specific customer location where two or more competing providers not affiliated with each other or with the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, satisfy either paragraph (a)(5)(i)(A) or paragraph (a)(5)(i)(B) of this section:

(A) Self-provisioning trigger for DS3 loops. To satisfy this trigger, a state commission must find that each competing provider has either deployed its own DS3 facilities at that specific customer location and is serving customers via those facilities at that location, or has deployed DS3 facilities by attaching its own optronics to activate dark fiber transmission facilities obtained under a long-term indefeasible right of use and is serving customers via those facilities at that location.

(B) Competitive wholesale facilities trigger for DS3 loops. To satisfy this trigger, a state commission must find that each competing provider satisfies the conditions in paragraphs (a)(5)(i)(B)(1) and (a)(5)(i)(B)(2) of this section.

(1) The competing provider has deployed its own DS3 facilities, and offers a DS3 loop over its own facilities on a widely available wholesale basis to other competing providers seeking to serve customers at the specific customer location. For purposes of this paragraph, the competing provider's DS3 facilities may use dark fiber facilities that the competing provider has obtained on an unbundled, leased, or purchased basis if it has attached its own optronics to activate the fiber.

(2) The competing provider has access to the entire customer location, including each individual unit within that location.

(ii) Potential deployment of DS3 loops. Where neither trigger in paragraph (a)(5)(i) of this section is satisfied, a state commission shall consider whether other evidence shows that a requesting telecommunications carrier is not impaired without access to an unbundled DS3 loop at a specific customer location. To make this determination, a state must consider the following factors: evidence of alternative loop deployment at that location; local engineering costs of building and utilizing transmission facilities; the cost of underground or aerial laying of fiber or copper; the cost of equipment needed for transmission; installation and other necessary costs involved in setting up service; local topography such as hills and rivers; availability of reasonable access to rights-of-way; building access restrictions/costs; and availability/feasibility of similar quality/reliability alternative transmission technologies at that particular location.

(iii) Cap on unbundled DS3 circuits. A requesting telecommunications carrier may obtain a maximum of two unbundled DS3 loops for any single customer location where DS3 loops are available as unbundled loops.

(6) Dark fiber loops. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to a dark fiber loop on an unbundled basis except where a state commission has found, through application of the self-provisioning trigger in paragraph (a)(6)(i) of this section or the potential deployment analysis in paragraph (a)(6)(ii) of this section, that requesting telecommunications carriers are not impaired without access to a dark fiber loop at a specific customer location. Dark fiber is fiber within an existing fiber optic cable that has not yet been activated through optronics to render it capable of carrying communications services.

(i) Self-provisioning trigger for dark fiber loops. A state commission shall find that a requesting telecommunications carrier is not impaired without access to a dark fiber loop at a specific customer location where two or more competing providers not affiliated with each other or with the incumbent LEC, have deployed their own dark fiber facilities at that specific customer location. For purposes of making this

determination, a competing provider that has obtained those dark fiber facilities under a long-term indefeasible right of use shall be considered a competing provider with its own dark fiber facilities. Dark fiber purchased on an unbundled basis from the incumbent LEC shall not be considered under this paragraph.

(ii) Potential deployment of dark fiber loops. Where the trigger in paragraph (a)(6)(i) of this section is not satisfied, a state commission shall consider whether other evidence shows that a requesting telecommunications carrier is not impaired without access to an unbundled dark fiber loop at a specific customer location. To make this determination, a state must consider the following factors: evidence of alternative loop deployment at that location; local engineering costs of building and utilizing transmission facilities; the cost of underground or aerial laying of fiber; the cost of equipment needed for transmission; installation and other necessary costs involved in setting up service; local topography such as hills and rivers; availability of reasonable access to rights-of-way; building access restrictions/costs; and availability/feasibility of similar quality/reliability alternative transmission technologies at that particular location.

(7) State commission proceedings. A state commission shall complete the proceedings necessary to satisfy the requirements in paragraphs (a)(4), (a)(5), and (a)(6) of this section in accordance with paragraphs (a)(7)(i) and (a)(7)(ii) of this section.

(i) Initial review. A state commission shall complete any initial review applying the triggers and criteria in paragraphs (a)(4), (a)(5), and (a)(6) of this section within nine months from the effective date of the Commission's Triennial Review Order.

(ii) Continuing review. A state commission shall complete any subsequent review applying these triggers and criteria within six months of the filing of a petition or other pleading to conduct such a review.

(8) Routine network modifications. (i) An incumbent LEC shall make all routine network modifications to unbundled loop facilities used by requesting telecommunications carriers where the requested loop facility has already been constructed. An incumbent LEC shall perform these routine network modifications to unbundled loop facilities in a nondiscriminatory fashion, without regard to whether the loop facility being accessed was constructed on behalf, or in accordance with the specifications, of any carrier.

(ii) A routine network modification is an activity that the incumbent LEC regularly undertakes for its own customers. Routine network modifications include, but are not limited to, rearranging or splicing of cable; adding an equipment case; adding a doubler or repeater; adding a smart jack; installing a repeater shelf; adding a line card; deploying a new multiplexer or reconfiguring an existing multiplexer; and attaching electronic and other equipment that the incumbent LEC ordinarily attaches to a DS1 loop to activate such loop for its own customer. They also include activities needed to enable a requesting telecommunications carrier to obtain access to a dark fiber loop. Routine network modifications may entail activities such as accessing manholes, deploying bucket

trucks to reach aerial cable, and installing equipment casings. Routine network modifications do not include the construction of a new loop, or the installation of new aerial or buried cable for a requesting telecommunications carrier.

(9) Engineering policies, practices, and procedures. An incumbent LEC shall not engineer the transmission capabilities of its network in a manner, or engage in any policy, practice, or procedure, that disrupts or degrades access to a local loop or subloop, including the time division multiplexing-based features, functions, and capabilities of a hybrid loop, for which a requesting telecommunications carrier may obtain or has obtained access pursuant to paragraph (a) of this section.

(b) Subloops. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to subloops on an unbundled basis in accordance with section 251(c)(3) of the Act and this part and as set forth in paragraph (b) of this section.

(1) Copper subloops. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to a copper subloop on an unbundled basis. A copper subloop is a portion of a copper loop, or hybrid loop, comprised entirely of copper wire or copper cable that acts as a transmission facility between any point of technically feasible access in an incumbent LEC's outside plant, including inside wire owned or controlled by the incumbent LEC, and the end-user customer premises. A copper subloop includes all intermediate devices (including repeaters and load coils) used to establish a transmission path between a point of technically feasible access and the demarcation point at the end-user customer premises, and includes the features, functions, and capabilities of the copper loop. Copper subloops include two-wire and four-wire analog voice-grade subloops as well as two-wire and four-wire subloops conditioned to transmit the digital signals needed to provide digital subscriber line services, regardless of whether the subloops are in service or held as spares.

(i) Point of technically feasible access. A point of technically feasible access is any point in the incumbent LEC's outside plant where a technician can access the copper wire within a cable without removing a splice case. Such points include, but are not limited to, a pole or pedestal, the serving area interface, the network interface device, the minimum point of entry, any remote terminal, and the feeder/distribution interface. An incumbent LEC shall, upon a site-specific request, provide access to a copper subloop at a splice near a remote terminal. The incumbent LEC shall be compensated for providing this access in accordance with §§ 51.501 through 51.515.

(ii) Rules for collocation. Access to the copper subloop is subject to the Commission's collocation rules at §§ 51.321 and 51.323.

(2) Subloops for access to multiunit premises wiring. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to the subloop for access to multiunit premises wiring on an unbundled basis regardless of the capacity level or type of loop that the requesting telecommunications carrier seeks to provision for its

customer. The subloop for access to multiunit premises wiring is defined as any portion of the loop that it is technically feasible to access at a terminal in the incumbent LEC's outside plant at or near a multiunit premises. One category of this subloop is inside wire, which is defined for purposes of this section as all loop plant owned or controlled by the incumbent LEC at a multiunit customer premises between the minimum point of entry as defined in § 68.105 of this chapter and the point of demarcation of the incumbent LEC's network as defined in § 68.3 of this chapter.

(i) Point of technically feasible access. A point of technically feasible access is any point in the incumbent LEC's outside plant at or near a multiunit premises where a technician can access the wire or fiber within the cable without removing a splice case to reach the wire or fiber within to access the wiring in the multiunit premises. Such points include, but are not limited to, a pole or pedestal, the network interface device, the minimum point of entry, the single point of interconnection, and the feeder/distribution interface.

(ii) Single point of interconnection. Upon notification by a requesting telecommunications carrier that it requests interconnection at a multiunit premises where the incumbent LEC owns, controls, or leases wiring, the incumbent LEC shall provide a single point of interconnection that is suitable for use by multiple carriers. This obligation is in addition to the incumbent LEC's obligations, under paragraph (b)(2) of this section, to provide nondiscriminatory access to a subloop for access to multiunit premises wiring, including any inside wire, at any technically feasible point. If the parties are unable to negotiate rates, terms, and conditions under which the incumbent LEC will provide this single point of interconnection, then any issues in dispute regarding this obligation shall be resolved in state proceedings under section 252 of the Act.

(3) Other subloop provisions. (i) Technical feasibility. If parties are unable to reach agreement through voluntary negotiations as to whether it is technically feasible, or whether sufficient space is available, to unbundle a copper subloop or subloop for access to multiunit premises wiring at the point where a telecommunications carrier requests, the incumbent LEC shall have the burden of demonstrating to the state commission, in state proceedings under section 252 of the Act, that there is not sufficient space available, or that it is not technically feasible to unbundle the subloop at the point requested.

(ii) Best practices. Once one state commission has determined that it is technically feasible to unbundle subloops at a designated point, an incumbent LEC in any state shall have the burden of demonstrating to the state commission, in state proceedings under section 252 of the Act, that it is not technically feasible, or that sufficient space is not available, to unbundle its own loops at such a point.

(c) Network interface device. Apart from its obligation to provide the network interface device functionality as part of an unbundled loop or subloop, an incumbent LEC also shall provide nondiscriminatory access to the network interface device on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part. The network interface device element is a stand-alone network element and is defined as any means of interconnection of customer premises

wiring to the incumbent LEC's distribution plant, such as a cross-connect device used for that purpose. An incumbent LEC shall permit a requesting telecommunications carrier to connect its own loop facilities to on-premises wiring through the incumbent LEC's network interface device, or at any other technically feasible point.

(d) Local circuit switching. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to local circuit switching, including tandem switching, on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part and as set forth in paragraph (d) of this section.

(1) Definition. Local circuit switching is defined as follows:

(i) Local circuit switching encompasses all line-side and trunk-side facilities, plus the features, functions, and capabilities of the switch. The features, functions, and capabilities of the switch shall include the basic switching function of connecting lines to lines, lines to trunks, trunks to lines, and trunks to trunks.

(ii) Local circuit switching includes all vertical features that the switch is capable of providing, including custom calling, custom local area signaling services features, and Centrex, as well as any technically feasible customized routing functions.

(2) DS0 capacity (*i.e.*, mass market) determinations. An incumbent LEC shall provide access to local circuit switching on an unbundled basis to a requesting telecommunications carrier serving end users using DS0 capacity loops except where the state commission has found, in accordance with the conditions set forth in paragraph (d)(2) of this section, that requesting telecommunications carriers are not impaired in a particular market, or where the state commission has found that all such impairment would be cured by implementation of transitional unbundled local circuit switching in a given market and has implemented such transitional access as set forth in paragraph (d)(2)(iii)(C) of this section.

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

(ii) Batch cut process. In each of the markets that the state commission defines pursuant to paragraph (d)(2)(i) of this section, the state commission shall either establish an incumbent LEC batch cut process as set forth in paragraph (d)(2)(ii)(A) of this section or issue detailed findings explaining why such a batch

process is unnecessary, as set forth in paragraph (d)(2)(ii)(B) of this section. A batch cut process is defined as a process by which the incumbent LEC simultaneously migrates two or more loops from one carrier's local circuit switch to another carrier's local circuit switch, giving rise to operational and economic efficiencies not available when migrating loops from one carrier's local circuit switch to another carrier's local circuit switch on a line-by-line basis.

(A) A state commission shall establish an incumbent LEC batch cut process for use in migrating lines served by one carrier's local circuit switch to lines served by another carrier's local circuit switch in each of the markets the state commission has defined pursuant to paragraph (d)(2)(i) of this section. In establishing the incumbent LEC batch cut process:

(1) A state commission shall first determine the appropriate volume of loops that should be included in the "batch."

(2) A state commission shall adopt specific processes to be employed when performing a batch cut, taking into account the incumbent LEC's particular network design and cut over practices.

(3) A state commission shall evaluate whether the incumbent LEC is capable of migrating multiple lines served using unbundled local circuit switching to switches operated by a carrier other than the incumbent LEC for any requesting telecommunications carrier in a timely manner, and may require that incumbent LECs comply with an average completion interval metric for provision of high volumes of loops.

(4) A state commission shall adopt rates for the batch cut activities it approves in accordance with the Commission's pricing rules for unbundled network elements. These rates shall reflect the efficiencies associated with batched migration of loops to a requesting telecommunications carrier's switch, either through a reduced per-line rate or through volume discounts as appropriate.

(B) If a state commission concludes that the absence of a batch cut migration process is not impairing requesting telecommunications carriers' ability to serve end users using DS0 loops in the mass market without access to local circuit switching on an unbundled basis, that conclusion will render the creation of such a process unnecessary. In such cases, the state commission shall issue detailed findings regarding the volume of unbundled loop migrations that could be expected if requesting telecommunications carriers were no longer entitled to local circuit switching on an unbundled basis, the ability of the incumbent LEC to meet

that demand in a timely and efficient manner using its existing hot cut process, and the non-recurring costs associated with that hot cut process. The state commission further shall explain why these findings indicate that the absence of a batch cut process does not give rise to impairment in the market at issue.

(iii) State commission analysis. To determine whether requesting telecommunications carriers are impaired without access to local circuit switching on an unbundled basis, a state commission shall perform the inquiry set forth in paragraphs (d)(2)(iii)(A) through (d)(2)(iii)(C) of this section:

(A) Local switching triggers. A state commission shall find that a requesting telecommunications carrier is not impaired without access to local circuit switching on an unbundled basis in a particular market where either the self-provisioning trigger set forth in paragraph (d)(2)(iii)(A)(1) of this section or the competitive wholesale facilities trigger set forth in paragraph (d)(2)(iii)(A)(2) of this section is satisfied.

(1) Local switching self-provisioning trigger. To satisfy this trigger, a state commission must find that three or more competing providers not affiliated with each other or the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each are serving mass market customers in the particular market with the use of their own local circuit switches.

(2) Local switching competitive wholesale facilities trigger. To satisfy this trigger, a state commission must find that two or more competing providers not affiliated with each other or the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each offer wholesale local circuit switching service to customers serving DS0 capacity loops in that market using their own switches.

(B) Additional state authority. If neither of the triggers described in paragraph (d)(2)(iii)(A) of this section has been satisfied, the state commission shall find that requesting telecommunications carriers are not impaired without access to unbundled local circuit switching in a particular market where the state commission determines that self-provisioning of local switching is economic based on the following criteria:

(1) Evidence of actual deployment. The state commission shall consider whether switches actually deployed in the market at issue permit competitive entry in the absence of unbundled local circuit

switching. Specifically, the state commission shall examine whether, in the market at issue, there are either two wholesale providers or three self-provisioners of local switching not affiliated with each other or the incumbent LEC, serving end users using DS1 or higher capacity loops in the market at issue; or there is any carrier, including any intermodal provider of service comparable in quality to that of the incumbent LEC, using a self-provisioned switch to serve end users using DS0 capacity loops. If so, and if the state commission determines that the switch or switches identified can be used to serve end users using DS0 capacity loops in that market in an economic fashion, this evidence must be given substantial weight.

(2) Operational barriers. The state commission also shall examine the role of potential operational barriers in determining whether to find "no impairment" in a given market. Specifically, the state commission shall examine whether the incumbent LEC's performance in provisioning loops, difficulties in obtaining collocation space due to lack of space or delays in provisioning by the incumbent LEC, or difficulties in obtaining cross-connects in an incumbent LEC's wire center render entry uneconomic for requesting telecommunications carriers in the absence of unbundled access to local circuit switching.

(3) Economic barriers. The state commission shall also examine the role of potential economic barriers in determining whether to find "no impairment" in a given market. Specifically, the state commission shall examine whether the costs of migrating incumbent LEC loops to requesting telecommunications carriers' switches or the costs of backhauling voice circuits to requesting telecommunications carriers' switches from the end offices serving their end users render entry uneconomic for requesting telecommunications carriers.

(4) Multi-line DS0 end users. As part of the economic analysis set forth in paragraph (d)(2)(iii)(B)(3) of this section, the state commission shall establish a maximum number of DS0 loops for each geographic market that requesting telecommunications carriers can serve through unbundled switching when serving multiline end users at a single location. Specifically, in establishing this "cutoff," the state commission shall take into account the point at which the increased revenue opportunity at a single location is sufficient to overcome impairment and the point at which multiline end users could be served in an economic fashion by higher capacity loops and a carrier's own switching and

thus be considered part of the DS1 enterprise market.

(C) Transitional use of unbundled switching. If the triggers described in paragraph (d)(2)(iii)(A) of this section have not been satisfied with regard to a particular market and the analysis described in paragraph (d)(2)(iii)(B) of this section has resulted in a finding that requesting telecommunications carriers are impaired without access to local circuit switching on an unbundled basis in that market, the state commission shall consider whether any impairment would be cured by transitional ("rolling") access to local circuit switching on an unbundled basis for a period of 90 days or more. "Rolling" access means the use of unbundled local circuit switching for a limited period of time for each end-user customer to whom a requesting telecommunications carrier seeks to provide service. If the state commission determines that transitional access to unbundled local circuit switching would cure any impairment, it shall require incumbent LECs to make unbundled local circuit switching available to requesting telecommunications carriers for 90 days or more, as specified by the state commission. The time limit set by the commission shall apply to each request for access to unbundled local circuit switching by a requesting telecommunications carrier on a per customer basis.

(iv) DS0 capacity end-user transition. If a state commission finds that no impairment exists in a market or that any impairment could be cured by transitional access to unbundled local circuit switching, all requesting telecommunications carriers in that market shall commit to an implementation plan with the incumbent LEC for the migration of the embedded unbundled switching mass market customer base within 2 months of the state commission determination. A requesting telecommunications carrier may no longer obtain access to unbundled local circuit switching 5 months after the state commission determination, except, where applicable, on a transitional basis as described in paragraph (d)(2)(iii)(C) of this section.

(A) Transition timeline. Each requesting telecommunications carrier shall submit the orders necessary to migrate its embedded base of end-user customers off of the unbundled local circuit switching element in accordance with the following timetable, measured from the day of the state commission determination. For purposes of calculating the number of customers who must be migrated, the embedded base of customers shall include all customers served using unbundled switching that are not customers being served with transitional unbundled switching pursuant to paragraph (d)(3)(iii)(C) of this section.

(1) Month 13: Each requesting telecommunications carrier must submit orders for one-third of all its unbundled local circuit switching end-user customers;

(2) Month 20: Each requesting telecommunications carrier must submit orders for half of its remaining unbundled local circuit switching end-user customers, as calculated pursuant to paragraph (d)(2)(iv)(A)(1) of this section; and

(3) Month 27: Each requesting telecommunications carrier must submit orders for its remaining unbundled local circuit switching end-user customers.

(B) Operational aspects of the migration. Requesting telecommunications carriers and the incumbent LEC shall jointly submit the details of their implementation plans for each market to the state commission within two months of the state commission's determination that requesting telecommunications carriers are not impaired without access to local circuit switching on an unbundled basis. Each requesting telecommunications carrier shall also notify the state commission when it has submitted its orders for migration. Each incumbent LEC shall notify the state commission when it has completed the migration.

(3) DS1 capacity and above (*i.e.*, enterprise market) determinations. An incumbent LEC is not required to provide access to local circuit switching on an unbundled basis to requesting telecommunications carriers for the purpose of serving end-user customers using DS1 capacity and above loops except where the state commission petitions this Commission for waiver of this finding in accordance with the conditions set forth in paragraph (d)(3)(i) of this section and the Commission grants such waiver.

(i) State commission inquiry. In its petition, a state commission wishing to rebut the Commission's finding should petition the Commission to show that requesting telecommunications carriers are impaired without access to local circuit switching to serve end users using DS1 capacity and above loops in a particular geographic market as defined in accordance with paragraph (d)(2)(i) of this section if it finds that operational or economic barriers exist in that market.

(A) In making this showing, the state commission shall consider the following operational characteristics: incumbent LEC performance in provisioning loops; difficulties associated with obtaining collocation space due to lack of space or delays in provisioning by the incumbent LEC; and the difficulties associated with obtaining cross-connects in the incumbent LEC's wire center.

(B) In making this showing, the state commission shall consider the following economic characteristics: the cost of entry into a particular market, including those caused by both operational and economic barriers to entry; requesting telecommunications carriers' potential revenues from

serving enterprise customers in that market, including all likely revenues to be gained from entering that market; the prices requesting telecommunications carriers are likely to be able to charge in that market, based on a consideration of the prevailing retail rates the incumbent LEC charges to the different classes of customers in the different parts of the state.

(ii) Transitional four-line carve-out. Until the state commission completes the review described in paragraph (b)(2)(iii)(B)(4) of this section, an incumbent LEC shall comply with the four-line "carve-out" for unbundled switching established in Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 15 FCC Rcd 3822-31, paras. 276-98 (1999), reversed and remanded in part sub. nom. United States Telecom Ass'n v. FCC, 290 F.3d 415 (D.C. Cir. 2002).

(A) DS1 capacity and above end-user transition. Each requesting telecommunications carrier shall transfer its end-user customers served using DS1 and above capacity loops and unbundled local circuit switching to an alternative arrangement within 90 days from the end of the 90-day state commission consideration period set forth in paragraph (d)(5)(i), unless a longer period is necessary to comply with a "change of law" provision in an applicable interconnection agreement.

(4) Other elements to be unbundled. Elements relating to the local circuit switching element shall be made available on an unbundled basis as set forth in paragraphs (d)(4)(i) and (d)(4)(ii) of this section.

(i) An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to signaling, call-related databases, and shared transport facilities on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part, to the extent that local circuit switching is required to be unbundled by a state commission. These elements are defined as follows:

(A) Signaling networks. Signaling networks include, but are not limited to, signaling links and signaling transfer points.

(B) Call-related databases. Call-related databases are defined as databases, other than operations support systems, that are used in signaling networks for billing and collection, or the transmission, routing, or other provision of a telecommunications service. Where a requesting telecommunications carrier purchases unbundled local circuit switching from an incumbent LEC, an incumbent LEC shall allow a requesting telecommunications carrier to use the incumbent LEC's service control point element in the same manner, and via the same signaling links, as the

incumbent LEC itself.

(1) Call-related databases include, but are not limited to, the calling name database, 911 database, E911 database, line information database, toll free calling database, advanced intelligent network databases, and downstream number portability databases by means of physical access at the signaling transfer point linked to the unbundled databases.

(2) Service management systems are defined as computer databases or systems not part of the public switched network that interconnect to the service control point and send to the service control point information and call processing instructions needed for a network switch to process and complete a telephone call, and provide a telecommunications carrier with the capability of entering and storing data regarding the processing and completing of a telephone call. Where a requesting telecommunications carrier purchases unbundled local circuit switching from an incumbent LEC, the incumbent LEC shall allow a requesting telecommunications carrier to use the incumbent LEC's service management systems by providing a requesting telecommunications carrier with the information necessary to enter correctly, or format for entry, the information relevant for input into the incumbent LEC's service management system, including access to design, create, test, and deploy advanced intelligent network-based services at the service management system, through a service creation environment, that the incumbent LEC provides to itself.

(3) An incumbent LEC shall not be required to unbundle the services created in the advanced intelligent network platform and architecture that qualify for proprietary treatment.

(C) Shared transport. Shared transport is defined as the transmission facilities shared by more than one carrier, including the incumbent LEC, between end office switches, between end office switches and tandem switches, and between tandem switches, in the incumbent LEC network.

(ii) An incumbent LEC shall provide a requesting telecommunications carrier nondiscriminatory access to operator services and directory assistance on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part, to the extent that local circuit switching is required to be unbundled by a state commission, if the incumbent LEC does not provide that requesting telecommunications carrier with customized routing, or a compatible signaling protocol, necessary to use either a competing provider's operator services and

directory assistance platform or the requesting telecommunications carrier's own platform. Operator services are any automatic or live assistance to a customer to arrange for billing or completion, or both, of a telephone call. Directory assistance is a service that allows subscribers to retrieve telephone numbers of other subscribers.

(5) State commission proceedings. A state commission shall complete the proceedings necessary to satisfy the requirements in paragraphs (d)(2) and (d)(3) of this section in accordance with paragraphs (d)(5)(i) and (d)(5)(ii) of this section.

(i) Timing. A state commission shall complete any initial review applying the triggers and criteria in paragraph (d)(2) of this section within nine months from the effective date of the Commission's Triennial Review Order. A state commission wishing to rebut the Commission's finding of non-impairment for DS1 and above enterprise switches must file a petition with the Commission in accordance with paragraph (d)(3) within 90 days from that effective date.

(ii) Continuing review. A state commission shall complete any subsequent review applying these triggers and criteria within six months of the filing of a petition or other pleading to conduct such a review.

(e) Dedicated transport. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to dedicated transport on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part and as set forth in paragraph (e)(1) through (e)(5) of this section. As used in those paragraphs, a "route" is a transmission path between one of an incumbent LEC's wire centers or switches and another of the incumbent LEC's wire centers or switches. A route between two points (*e.g.*, wire center or switch "A" and wire center or switch "Z") may pass through one or more intermediate wire centers or switches (*e.g.*, wire center or switch "X"). Transmission paths between identical end points (*e.g.*, wire center or switch "A" and wire center or switch "Z") are the same "route," irrespective of whether they pass through the same intermediate wire centers or switches, if any.

(1) Dedicated DS1 transport. (i) An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to dedicated DS1 transport on an unbundled basis except where the state commission has found, through application of the competitive wholesale facilities trigger in paragraphs (e)(1)(ii) of this section, that requesting telecommunications carriers are not impaired without access to dedicated DS1 transport along a particular route. Dedicated DS1 transport consists of incumbent LEC interoffice transmission facilities that have a total digital signal speed of 1.544 megabytes per second and are dedicated to a particular customer or carrier.

(ii) Competitive wholesale facilities trigger for dedicated DS1 transport. A state commission shall find that a requesting telecommunications carrier is not impaired without access to dedicated DS1 transport along a particular route where two or more competing providers not affiliated with each other or with the incumbent LEC, including

intermodal providers of service comparable in quality to that of the incumbent LEC, each satisfy the conditions in paragraphs (e)(1)(ii)(A) through (e)(1)(ii)(D) of this section.

(A) The competing provider has deployed its own transport facilities and is operationally ready to use those facilities to provide dedicated DS1 transport along the particular route. For purposes of this paragraph, the competing provider's DS1 facilities may use dark fiber facilities that the competing provider has obtained on an unbundled, leased, or purchased basis if it has attached its own optronics to activate the fiber.

(B) The competing provider is willing immediately to provide, on a widely available basis, dedicated DS1 transport along the particular route.

(C) The competing provider's facilities terminate in a collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and in a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(D) Requesting telecommunications carriers are able to obtain reasonable and nondiscriminatory access to the competing provider's facilities through a cross-connect to the competing provider's collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and though a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(2) Dedicated DS3 transport. Subject to the cap in paragraph (e)(2)(iii) of this section, an incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to dedicated DS3 transport on an unbundled basis except where the state commission has found, through application of either paragraph (e)(2)(i) of this section or the potential deployment analysis in paragraph (e)(2)(ii) of this section, that requesting telecommunications carriers are not impaired without access to dedicated DS3 transport along a particular route. Dedicated DS3 transport consists of incumbent LEC interoffice transmission facilities that have a total digital signal speed of 44.736 megabytes per second and are dedicated to a particular customer or carrier.

(i) Triggers for dedicated DS3 transport. A state commission shall find that a requesting telecommunications carrier is not impaired without access to unbundled dedicated DS3 transport along a particular route where either of the triggers in paragraphs (e)(2)(i)(A) or (e)(2)(i)(B) of this section is satisfied.

(A) Self-provisioning trigger for dedicated DS3 transport. To satisfy this trigger, a state must find that three or more competing providers not affiliated with each other or with the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each satisfy the conditions in paragraphs (e)(2)(i)(A)(1)

and (e)(2)(i)(A)(2) of this section.

(1) The competing provider has deployed its own transport facilities and is operationally ready to use those transport facilities to provide dedicated DS3 transport along the particular route. For purposes of this paragraph, the competing provider's DS3 transport facilities may use dark fiber facilities that the competing provider has obtained on a long-term, indefeasible-right of use basis and that it has deployed by attaching its own optronics to activate the fiber.

(2) The competing provider's facilities terminate at a collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and in a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(B) Competitive wholesale facilities trigger for dedicated DS3 transport. To satisfy this trigger, a state must find that two or more competing providers not affiliated with each other or with the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each satisfy the conditions in paragraphs (e)(2)(i)(B)(1) through (e)(2)(i)(B)(4) of this section.

(1) The competing provider has deployed its own transport facilities, including transport facilities that use dark fiber facilities that the competing provider has obtained on an unbundled, leased, or purchased basis if it has attached its own optronics to activate the fiber, and is operationally ready to use those facilities to provide dedicated DS3 transport along the particular route.

(2) The competing provider is willing immediately to provide, on a widely available basis, dedicated DS3 transport along the particular route.

(3) The competing provider's facilities terminate in a collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and in a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(4) Requesting telecommunications carriers are able to obtain reasonable and nondiscriminatory access to the competing provider's facilities through a cross-connect to the competing provider's collocation arrangement at each end of the transport

route that is located at an incumbent LEC premises and though a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(ii) Potential deployment of dedicated DS3 transport. Where neither trigger in paragraph (e)(2)(i) of this section is satisfied, a state commission shall consider whether other evidence shows that a requesting telecommunications carrier is not impaired without access to unbundled dedicated DS3 transport along a particular route. To make this determination, a state must consider the following factors: local engineering costs of building and utilizing transmission facilities; the cost of underground or aerial laying of fiber or copper; the cost of equipment needed for transmission; installation and other necessary costs involved in setting up service; local topography such as hills and rivers; availability of reasonable access to rights-of-way; availability/feasibility of similar quality/reliability alternative transmission technologies along the particular route; customer density or addressable market; and existing facilities-based competition.

(iii) Cap on unbundled DS3 circuits. A requesting telecommunications carrier may obtain a maximum of 12 unbundled dedicated DS3 circuits for any single route for which dedicated DS3 transport is available as unbundled transport.

(3) Dark fiber transport. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to dark fiber transport on an unbundled basis except where the state commission has found, through application of either paragraph (e)(3)(i) of this section or the potential deployment analysis in paragraph (e)(3)(ii) of this section, that requesting telecommunications carriers are not impaired without access to unbundled dark fiber transport along the particular route. Dark fiber transport consists of unactivated optical interoffice transmission facilities.

(i) Triggers for dark fiber transport. A state commission shall find that a requesting telecommunications carrier is not impaired without access to dark fiber transport along a particular route where either of the triggers in paragraph (e)(3)(i)(A) or paragraph (e)(3)(i)(B) of this section is satisfied.

(A) Self-provisioning trigger for dark fiber transport. To satisfy this trigger, a state commission must find three or more competing providers not affiliated with each other or with the incumbent LEC, each satisfy paragraphs (e)(3)(i)(A)(1) and (e)(3)(i)(A)(2) of this section.

(1) The competing provider has deployed its own dark fiber facilities, which may include dark fiber facilities that it has obtained on a long-term, indefeasible-right of use basis.

(2) The competing provider's facilities terminate in a collocation arrangement at each end of the transport route that is located at an

incumbent LEC premises and in a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(B) Competitive wholesale facilities trigger for dark fiber transport. To satisfy this trigger, a state commission must find that two or more competing providers not affiliated with each other or with the incumbent LEC, each satisfy paragraphs (e)(3)(i)(B)(1) through (e)(3)(i)(B)(4) of this section. In applying this trigger, the state commission may consider whether competing providers have sufficient quantities of dark fiber available to satisfy current demand along that route.

(1) The competing provider has deployed its own dark fiber, including dark fiber that it has obtained from an entity other than the incumbent LEC, and is operationally ready to lease or sell those facilities for the provision of fiber-based transport along the particular route.

(2) The competing provider is willing immediately to provide, on a widely available basis, dark fiber along the particular route.

(3) The competing provider's dark fiber terminates in a collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and in a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(4) Requesting telecommunications carriers are able to obtain reasonable and nondiscriminatory access to the competing provider's dark fiber through a cross-connect to the competing provider's collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and though a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(ii) Potential deployment of dark fiber transport. Where neither trigger in paragraph (e)(3)(i) of this section is satisfied, a state commission shall consider whether other evidence shows that a requesting telecommunications carrier is not impaired without access to unbundled dark fiber transport along a particular route. To make this determination, a state must consider the following factors: local engineering costs of building and utilizing transmission facilities; the cost of underground or aerial laying of fiber; the cost of equipment needed for transmission; installation and other necessary costs involved in setting up service; local topography such as hills and rivers; availability of reasonable access to rights-of-way; availability/feasibility of similar quality/reliability alternative

transmission technologies along the particular route; customer density or addressable market; and existing facilities-based competition.

(4) State commission proceedings. A state commission shall complete the proceedings necessary to satisfy the requirements in paragraphs (e)(1), (e)(2), and (e)(3) of this section in accordance with paragraphs (e)(4)(i) and (e)(4)(ii) of this section.

(i) Initial review. A state commission shall complete any initial review applying the triggers and criteria in paragraphs (e)(1), (e)(2), and (e)(3) of this section within nine months from the effective date of the Commission's Triennial Review Order.

(ii) Continuing review. A state commission shall complete any subsequent review applying these triggers and criteria within six months of the filing of a petition or other pleading to conduct such a review.

(5) Routine network modifications. (i) An incumbent LEC shall make all routine network modifications to unbundled dedicated transport facilities used by requesting telecommunications carriers where the requested dedicated transport facilities have already been constructed. An incumbent LEC shall perform all routine network modifications to unbundled dedicated transport facilities in a nondiscriminatory fashion, without regard to whether the facility being accessed was constructed on behalf, or in accordance with the specifications, of any carrier.

(ii) A routine network modification is an activity that the incumbent LEC regularly undertakes for its own customers. Routine network modifications include, but are not limited to, rearranging or splicing of cable; adding an equipment case; adding a doubler or repeater; installing a repeater shelf; and deploying a new multiplexer or reconfiguring an existing multiplexer. They also include activities needed to enable a requesting telecommunications carrier to light a dark fiber transport facility. Routine network modifications may entail activities such as accessing manholes, deploying bucket trucks to reach aerial cable, and installing equipment casings. Routine network modifications do not include the installation of new aerial or buried cable for a requesting telecommunications carrier.

(f) 911 and E911 databases. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to 911 and E911 databases on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part.

(g) Operations support systems. An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to operations support systems on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part. Operations support system functions consist of pre-ordering, ordering, provisioning, maintenance and repair, and billing functions supported by an incumbent LEC's databases and information. An

incumbent LEC, as part of its duty to provide access to the pre-ordering function, shall provide the requesting telecommunications carrier with nondiscriminatory access to the same detailed information about the loop that is available to the incumbent LEC.

11. Section 51.320 is added to read as follows:

§ 51.320 Assumption of responsibility by the Commission.

If a state commission fails to exercise its authority under § 51.319, any party seeking that the Commission step into the role of the state commission shall file with the Commission and serve on the state commission a petition that explains with specificity the bases for the petition and information that supports the claim that the state commission has failed to act. Subsequent to the Commission's issuing a public notice and soliciting comments on the petition from interested parties, the Commission will rule on the petition within 90 days of the date of the public notice. If it agrees that the state commission has failed to act, the Commission will assume responsibility for the proceeding, and within nine months from the date it assumed responsibility for the proceeding, make any findings in accordance with the Commission's rules.

12. Section 51.325 is amended by adding paragraph (a)(4) to read as follows:

§ 51.325 Notice of network changes: Public notice requirement.

(a) ***

(4) Will result in the retirement of copper loops or copper subloops, and the replacement of such loops with fiber-to-the-home loops, as that term is defined in § 51.319(a)(3).

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13. Section 51.331 is amended by adding paragraph (c) to read as follows:

§ 51.331 Notice of network changes: Timing of notice.

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(c) Competing service providers may object to incumbent LEC notice of retirement of copper loops or copper subloops and replacement with fiber-to-the-home loops in the manner set forth in § 51.333(c).

14. Section 51.333 is amended by revising the section heading, paragraphs (b) and (c) introductory test, and by adding paragraph (f) to read as follows:

§ 51.333 Notice of Network Changes: Short term notice, objections thereto and objections to retirement of copper loops or copper subloops.

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(b) Implementation date. The Commission will release a public notice of filings of such short term notices or notices of replacement of copper loops or copper subloops with fiber-to-the-home loops. The effective date of the network changes referenced in those filings shall be subject to the following requirements:

(i) Short term notice. Short term notices shall be deemed final on the tenth business day after the release of the Commission's public notice, unless an objection is filed pursuant to paragraph (c) of this section.

(ii) Replacement of copper loops or copper subloops with fiber-to-the-home loops. Notices of replacement of copper loops or copper subloops with fiber-to-the-home loops shall be deemed approved on the 90th day after the release of the Commission's public notice of the filing, unless an objection is filed pursuant to paragraph (c) of this section. Incumbent LEC notice of intent to retire any copper loops or copper subloops and replace such loops or subloops with fiber-to-the-home loops shall be subject to the short term notice provisions of this section, but under no circumstances may an incumbent LEC provide less than 90 days notice of such a change.

(c) Objection procedures for short term notice and notices of replacement of copper loops or copper subloops with fiber-to-the-home loops. An objection to an incumbent LEC's short term notice or to its notice that it intends to retire copper loops or copper subloops and replace such loops or subloops with fiber-to-the-home loops may be filed by an information service provider or telecommunications service provider that directly interconnects with the incumbent LEC's network. Such objections must be filed with the Commission, and served on the incumbent LEC, no later than the ninth business day following the release of the Commission's public notice. All objections filed under this section must:

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(f) Resolution of objections to replacement of copper loops or copper subloops with fiber-to-the-home loops. An objection to a notice that an incumbent LEC intends to retire any copper loops or copper subloops and replace such loops or subloops with fiber-to-the-home loops shall be deemed denied 90 days after the date on which the Commission releases public notice of the incumbent LEC filing, unless the Commission rules otherwise within that time. Until the Commission has either ruled on an objection or the 90-day period for the Commission's consideration has expired, an incumbent LEC may not retire those copper loops or copper subloops at issue for replacement with fiber-to-the-home loops.

15. Section 51.509 is amended by revising paragraph (a) and adding paragraph (h) to read as follows:

§ 51.509 Rate structure standards for specific elements.

(a) Local loop and subloop. Loop and subloop costs shall be recovered through flat-rated charges.

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(h) Network interface device. An incumbent LEC must establish a price for the network interface device when that unbundled network element is purchased on a stand-alone basis pursuant to § 51.319(c).