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May 19, 2010

Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, AZ 85007

T-01051B-11-0203
T-03943A-11-0203

Re: Unbundled Loops Used to Provide xDSL Services Amendment to the Interconnection Agreement between Qwest Corporation and tw telecom of Arizona llc for the State of Arizona

Dear Madam or Sir:

Accompanying this transmittal is an Amendment to the Interconnection Agreement between Qwest Corporation ("Qwest") and tw telecom of arizona llc ("CLEC"). Qwest files this Amendment for approval under 47 U.S.C. §252(e) and A.A.C. R14-2-1508.

The Agreement is amended by adding terms and conditions relating to xDSL Capable Loops, as set forth in Attachments 1-3 and Exhibit A, into the Interconnection Agreement. The Agreement was approved by the Commission on August 18, 2004, Docket Nos. T-01051B-04-0516 and T-03943A-04-0516.

Please contact me if you have any questions concerning the enclosed. Thank you for your assistance in this matter.

Sincerely,

Norman G. Curtright

Norman G. Curtright

Enclosure

cc: Tina Davis
tw telecom
10475 Park Meadows Drive
Littleton, CO 80124

Pamela Sherwood
tw telecom
4625 W. 86th Street, Suite 500
Indianapolis, IN 42628

Arizona Corporation Commission
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Unbundled Loops Used to Provide xDSL Services Amendment to the Interconnection Agreement between Qwest Corporation and tw telecom of arizona llc for the State of Arizona

This is an Amendment ("Amendment") to the Interconnection Agreement between Qwest Corporation ("Qwest"), a Colorado corporation, and tw telecom of arizona llc ("CLEC"). Qwest and CLEC shall be referred to jointly as the "Parties."

RECITALS

WHEREAS, the Parties entered into an Interconnection Agreement ("Agreement") in the state of Arizona, which was approved by the Commission;

WHEREAS, the Parties agree to amend the Agreement under the terms and conditions contained herein.

AGREEMENT

NOW THEREFORE, in consideration of the mutual terms, covenants and conditions contained in this Amendment and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

Amendment Terms

The Agreement is hereby amended by adding terms and conditions relating to xDSL Capable Loops, as set forth in Attachments 1-3 and Exhibit A to this Amendment, attached hereto and incorporated herein by this reference.

Qwest will restore Asymmetric Digital Subscriber Line ("ADSL"), including the NC code of LXR-, which Qwest previously grandparented. Qwest will reverse changes made via its Change Request ("CR") (CR #PC121106-1). Qwest will not re-notify or implement the changes initially announced in its March 13, 2009 notice (PROS.03.13.09.F.06150.LoopQualCLECJobAid_V25) that Qwest did not implement (but indicated in its April 3, 2009 Response it will re-notify). Qwest will not take actions, or make statements in notices to CLECs, that are inconsistent with Qwest's obligation, under 47 C.F.R. § 51.319(a)(8), to 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 the local loop.

Intrabuilding cable is not addressed in this Amendment. CLEC and Qwest reserve their rights with respect to intrabuilding cable.

Effective Date and Implementation Date

This Amendment shall be deemed effective upon approval by the Commission; however, the Parties agree to begin implementation of the provisions of this Amendment the later of March 14, 2011 or upon execution.

Further Amendments

Except as modified herein, the provisions of the Agreement shall remain in full force and effect. Except as provided in the Agreement, this Amendment may not be amended or altered, and no waiver of any provision thereof shall be effective, except by written instrument executed by an authorized representative of both Parties.

Entire Agreement

The Agreement, as amended (including this Amendment), constitutes the full and entire understanding and agreement between the Parties with regard to the subject matter of the Agreement, as amended, and supersedes any prior understandings, agreements, or representations by or between the Parties, written or oral, to the extent they relate in any way to the subject matter of the Agreement, as amended.

The Parties intending to be legally bound have executed this Amendment as of the dates set forth below, in multiple counterparts, each of which is deemed an original, but all of which shall constitute one and the same instrument.

tw telecom of arizona llc
By: tw telecom holdings inc.,
its sole member

DocuSigned by:
Tina Davis
5FFA297A4A684CF...
Signature

Tina Davis
Name Printed/Typed

Senior Vice President and Deputy General Counsel
Title

5/4/2011
Date

Qwest Corporation

05E9FC68BD57454...
L T Christensen
DocuSigned By: L T Christensen
Signature

L. T. Christensen
Name Printed/Typed

Director – Wholesale Contracts
Title

5/4/2011
Date

ATTACHMENT 1

2.0 Interpretation and Construction

2.3 Unless otherwise specifically determined by the Commission, in cases of conflict between the Agreement, as amended, and Qwest's Tariffs, PCAT, methods and procedures, technical publications, policies, product notifications or other Qwest documentation relating to Qwest's or CLEC's rights or obligations under this Agreement, as amended, then the rates, terms and conditions of this Agreement, as amended, shall prevail. To the extent another document abridges or expands the rights or obligations of either Party under this Agreement, as amended, the rates, terms and conditions of this Agreement, as amended, shall prevail.

4.0 Definitions

Defined terms used but not defined in this Amendment are as defined in the Agreement. To the extent that a term is defined in both the Agreement and Section 4.0 of this Amendment, the definition in the Agreement is deemed deleted, and that definition is replaced with the definition in this Section 4.0 of this Amendment, unless the definition below indicates otherwise.

For purposes of the Agreement and this Amendment, the following terms are defined as follows:

"ADSL Compatible Loop" means the unbundled Loop complies with technical parameters of the specified Network Channel/Network Channel Interface codes as specified in the relevant technical publications and industry standards for Asymmetric Digital Subscriber Line ("ADSL"), which is further described in the definition of Digital Subscriber Loop. Qwest makes no assumptions as to the capabilities of CLEC's Central Office equipment or the Customer Premises Equipment. CLEC orders ADSL Compatible Loops using the LXR- NC code.

"Best Available Pair" means, for facilities assignment purposes, the Loop that has the least Estimated Measured Loss ("EML") and that is assigned taking into account the least amount of Conditioning, as described in Section 9.2.2.3.5.1.

"Bridged Tap" means the unused sections of a twisted pair subtending the Loop between the end user customer and the Serving Wire Center or extending beyond the end user customer. Regarding stub cable, see Section 9.2.2.3.5.2.5.1.1.1.

"Condition" or "Conditioning" has the meaning set forth in 47 C.F.R. §51.319 and as interpreted in the rules and orders of the Federal Communications Commission ("FCC"). Conditioning includes when Qwest dispatches personnel and removes at least load coils, low pass filters, range extenders, any single Bridged Tap(s) greater than 2000 feet, total Bridged Tap(s) greater than 2500 feet, any Near-End Bridged Tap(s), and any Far-End Bridged Tap(s) from a copper unbundled Loop or Subloop. Different rates and terms apply to Remove All Conditioning, as that term is defined in this Amendment.

"Digital Subscriber Loop," "DSL," "xDSL," or "xDSL Service" refers to a set of service-enhancing copper technologies that are designed to provide digital services over copper Loops or Subloops either in addition to or instead of analog voice service including, but not limited to, the following types of xDSL Service, and successor or successive (*e.g.*, HDSL, HDSL2, HDSL4) technologies:

"ADSL" or "Asymmetric Digital Subscriber Line" is a Passband digital Loop transmission technology that typically permits the transmission of up to 8 Mbps downstream (from the Central Office to the End User Customer) and up to 1 Mbps digital signal upstream (from the End User Customer to the Central Office) over one (1) copper pair.

"ADSL2" and ADSL2+" refer to technologies that extend the capability of ADSL in data rates up to 24 Mbit/s downstream and 3.5 Mbit/s upstream. ADSL2+ may achieve rates of 24 Mbps on telephone lines as long at 5,000 feet. ADSL2+ solutions will interoperate with ADSL and ADSL2, as well as with ADSL2+. ADSL2 is based on ITU standard G.992.3, and ADSL2+ is based on ITU standard G.992.5.

"HDSL" or "High-Data Rate Digital Subscriber Line" is a synchronous baseband DSL technology operating over one or more copper pairs. HDSL can offer 784 Kbps circuits over a single copper pair, T1 service over two (2) copper pairs, or future E1 service over three (3) copper pairs.

"HDSL2" or "High-Data Rate Digital Subscriber Line 2" is a synchronous baseband DSL technology operating over a single pair capable of transporting a bit rate of 1.544 Mbps.

HDSL4" or "High-Data Rage Digital Subscriber Line 4" is a synchronous baseband DSL technology operating over two copper pairs and is capable of transporting an aggregate bit rate of 1.544. This transport offers extended reach in comparison to HDSL2.

"IDSL" or "ISDN Digital Subscriber Line" or "Integrated Services Digital Network Digital Subscriber Line" is a symmetrical, baseband DSL technology that permits the bi-directional transmission of up to 128 Kbps using ISDN CPE but not circuit switching.

"RADSL" or "Rate Adaptive Digital Subscriber Line" is a form of ADSL that can automatically assess the condition of the Loop and optimize the line rate for a given line quality.

"SDSL" or "Symmetric Digital Subscriber Line" is a baseband DSL transmission technology that permits the bi-directional transmission from up to 160 kbps to 2.048 Mbps on a single pair.

"SHDSL" or "Singe-Pair High Speed DSL" provides for sending and receiving high-speed symmetrical data streams over a single pair of copper wires. The SHDSL payload may be 'clear channel' (unstructured), T1 or E1 (full rate or fractional), multiple ISDN Basic Rate Access (BRA), Asynchronous Transfer Mode (ATM) cells, or Ethernet packets. "G.SHDSL" or "Symmetric High Bit Rate DSL" features symmetrical data rates from 192 kbit/s to 2,304 kbit/s of payload in 64 kbit/s increments per pair. "E.SHDSL" or "Extended Singe-Pair High Speed DSL" offers

symmetrical data rates of up to 5,696 kbit/s in 64k increments per a pair. SHDSL is based on ITU standard G.991.2 with additional coverage of E.SHDSL in 802.3ah.

"VDSL" or "Very High Speed Digital Subscriber Line" is a baseband DSL transmission technology that permits the transmission of up to 52 Mbps downstream (from the Central Office to the End User Customer) and up to 2.3 Mbps digital signal upstream (from the End User Customer to the Central Office). VDSL can also be 26 Mbps symmetrical, or other combination.

"Embedded Base xDSL Capable Loop" refers to an xDSL Capable Loop (including ADSL Compatible Loop and Non-Loaded Loop) installed for CLEC before the Final Implementation Date of this Amendment.

"Estimated Measured Loss" or "EML" is an estimate based on a mathematical formula or algorithm and individual Loop make up. EML estimates how a requested Loop is likely to perform at the applicable specifications for a specified xDSL Service. EML is used to calculate insertion loss for various xDSL technologies based on Loop make up information in Qwest records. EML is described further in Section 9.2.2.3.5.1.

"Far-End" and/or "Near-End" Bridged Tap means Bridged Tap within 1,000 feet of the end user customer location or within 1,000 feet of the main distribution frame in the Central Office.

"LXR- xDSL Capable Loop" means an xDSL Capable Loop that is associated with the NC Code of "LXR-," including the codes identified with a Qwest LXR- NC code in Attachment 2 to this Amendment. LXR- xDSL Capable Loops include Loops with any of the NCI codes used in association with an LXR- NC code to identify the type of xDSL Service. LXR- xDSL Capable Loops are sometimes referred to as ADSL Compatible Loops.

"LX-N xDSL Capable Loop means an xDSL Capable Loop that is associated with the NC Code of "LX-N," including the codes identified with a Qwest LX-N NC code in Attachment 2 to this Amendment. LX-N xDSL Capable Loops include Loops with any of the NCI codes used in association with an LX-N NC code to identify the type of xDSL Service. LX-N xDSL Capable Loops are sometimes referred to as Non-Loaded Loops.

"Near-End" Bridged Tap – See Far-End and/or Near-End Bridged Tap

"Network Channel" or "NC" codes identify the technical details of channels provided by a Carrier, from the Point of Termination (POT) at another Carrier's Point of Presence (POP) to the central office.
"Network Channel Interface" or "NCI" codes identify interface elements such as physical conductors, protocol, impedance, protocol options, and transmission level points that reflect physical and electrical characteristics located at a POT at the switch or customer location. The NCI code communicates to Qwest the character of the signals CLEC is connecting to the network at each end-point of the metallic circuit. The NCI code tells Qwest of CLEC's specific technical

requirements at a network interface. The NCI code indicates the type of xDSL Service to be deployed on the requested Loop or Subloop.

"Non-Embedded Base xDSL Capable Loop" refers to an xDSL Capable Loop (including ADSL Compatible Loop and Non-Loaded Loop) installed for CLEC on or after the Final Implementation Date of this Amendment.

"Performance Parameter Tests" means the threshold tests that Qwest will perform for Loops and Subloops used to provide xDSL Services, as set forth in Sections 9.2.2.3.5.3.1 and 9.2.2.3.5.4.2 of this Amendment.

"Remove All Conditioning" means Qwest dispatches personnel and removes all Bridged Taps, as well as any load coils, low pass filters, and range extenders, from a copper unbundled Loop or Subloop.

"xDSL Capable Loop" refers to 2-wire and 4-wire copper Loop(s) and copper Subloop(s) that transmit the digital signals needed to provide xDSL Service. Unbundled digital Loops may be provided using a variety of transmission technologies pursuant to the Agreement. For purposes of this Amendment, "xDSL Capable Loops" is used to refer specifically to Loops and Subloops used to provide narrowband or broadband services (or both) to customers served by copper Loops and Subloops (including those that are in active service and those that are deployed in the network as spares).

"xDSL Service" – See definition above for Digital Subscriber Loop.

9.0 Unbundled Network Elements

9.2.2.3.5 **xDSL Capable Loops**

9.2.2.3.5.1 **Assignment of Facilities - xDSL Capable Loops.** Qwest will assign facilities for xDSL Capable Loops using the criteria described in this Section.

9.2.2.3.5.1.1 Qwest will take into account the NC code and the NCI code when assigning facilities for xDSL Capable Loops.

9.2.2.3.5.1.2 For Loops 4,000 feet in length or longer, Qwest will assign the Best Available Pair using the criteria described in this Section.

9.2.2.3.5.1.2.1 Qwest will calculate Estimated Measured Loss ("EML") and assign Loops based on least EML. Qwest will calculate EML in each case using the following steps with respect to Conditioning assumptions:

9.2.2.3.5.1.2.1.1 First, Qwest will assume no Conditioning is needed. Second, if no qualifying Loop is otherwise available and CLEC pre-approved Conditioning, Qwest will re-calculate EML assuming Conditioning is needed. Finally, if no qualifying Loop is otherwise available and CLEC pre-approved Remove All Conditioning, Qwest will re-calculate EML assuming Remove All Conditioning is needed.

9.2.2.3.5.1.2.1.2 CLEC's pre-approval of Conditioning will not have any negative impacts on CLEC's service request. Qwest will still attempt to locate and assign facilities that do not require Conditioning or, when Conditioning is needed, require the least amount of Conditioning.

9.2.2.3.5.1.2.2 In the case of each Loop assigned, Qwest will provide the EML used by Qwest to assign the Loop to CLEC on the Design Layout Record ("DLR").

9.2.2.3.5.1.2.3 For EML purposes, Qwest will measure insertion loss at 196 kHz (except ISDN BRI), as described in this Section. The maximum dB loss parameters used for EML purposes will vary by type of xDSL Service as follows:

9.2.2.3.5.1.2.3.1 For LXR- xDSL Capable Loops, including ADSL and ADSL2+:
EML ≤ 81 dB (*i.e.*, 78 dB +3db) at 196 kHz; maximum loss of 81 dB

9.2.2.3.5.1.2.3.2 For 2-wire LX-N xDSL Capable Loops, including HDSL2, G.SHDSL, and E.SHDSL - NCI codes of 02QB9.00H and 02QB5.00G:
EML ≤ 31dB (*i.e.*, 28 dB +3db) at 196 kHz; maximum loss of 31 dB

9.2.2.3.5.1.2.3.3 For 4-wire LX-N xDSL Capable Loops, including HDSL4 and G.SHDSL - NCI codes of 04QB9.00H, 04QB5.00G, and 04QB9.00F:
EML ≤ 34dB (*i.e.*, 31 dB +3db) at 196 kHz; maximum loss of 34 dB

9.2.2.3.5.1.2.3.4 For ISDN BRI, with NC/NCI codes of LX-N O2QC5.OOS:
EML ≤ 40 dB at 40 kHz; maximum loss of 40 dB

9.2.2.3.5.1.2.3.5 For all other LX-N xDSL Capable Loops, including Spectrum Management Classes 1-9, Qwest will assign the Best Available Pair using EML measured at 196 kHz (without a maximum dB loss level), except as described in Section 9.2.2.3.5.1.5. A Loop that fails EML or Actual Measured Loss ("AML") for the xDSL Services identified in Sections 9.2.2.3.5.1.2.3.1-9.2.2.3.5.1.2.3.3 may meet EML and/or AML for the xDSL Services identified in this Section 9.2.2.3.5.1.2.3.5.

9.2.2.3.5.1.3 For Loops shorter than 4,000 feet, Qwest will assign facilities using the criteria described in this Section.

9.2.2.3.5.1.3.1 If the facilities available for assignment to the same location do not all have the same cable gauge, Qwest will assign the Best Available Pair pursuant to the criteria in Section 9.2.2.3.5.1.2.

9.2.2.3.5.1.3.2 If the facilities available for assignment all have the same cable gauge, Qwest will assign any pair in the cross box and terminal, subject to Section 9.2.2.3.5.1.3.3.

9.2.2.3.5.1.3.3 If CLEC requests multiple Loops to the same location, all Loops will have the same Loop make-up, including Loop lengths.

9.2.2.3.5.1.3.3.1 If Loops having the same Loop make-up are not available for all of the multiple Loops to the same location, Qwest will assign as many of these Loops as possible with the same Loop make-up, including Loop lengths. For remaining Loops shorter than 4,000 feet, if any, Qwest will assign any pair in the cross box and terminal.

9.2.2.3.5.1.4 Loops and Subloops that require Conditioning, as well as Loops and Subloops that fail EML, fall out of the automatic facilities assignment process. Qwest will follow the manual steps for copper loop assignment, as applicable.

9.2.2.3.5.1.4.1.1 If, after the manual steps for copper loop assignment and Conditioning, no loop meets the criteria described above for facilities assignment, Qwest will validate that there is no such loop. Qwest will notify CLEC using the jeopardy notification process. CLEC may supplement its service request either to modify it or to cancel it. If CLEC does not supplement its service request, Qwest will cancel it consistent with the held order terms in the Agreement.

9.2.2.3.5.1.4.1.2 Regarding Subloops generally, to the extent that processes and procedures for Subloops are different from, or more manual than, the processes and procedures for Loops, the Parties will work together to develop mutually agreeable processes for Subloops.

9.2.2.3.5.1.5 For Non-Embedded Base xDSL Capable Loops, Qwest will not assign any Loop that exceeds a length of 18,000 feet for LXR- xDSL Capable Loops or 22,000 feet for LX-N xDSL Capable Loops. If, however, changes in technologies or industry standards occur that allow CLEC to reasonably use Loops in excess of one or both of these Loop lengths for providing advanced services, Qwest will assign xDSL Capable Loops in excess of the affected Loop length(s) consistent with those standards when requested by CLEC.

9.2.2.3.5.2 **Conditioning - xDSL Capable Loops.**

9.2.2.3.5.2.1 CLEC may indicate on its service request that it pre-approves Conditioning (Conditioning, and/or Remove All Conditioning) in the event

Conditioning is necessary. Upon CLEC pre-approval or approval of Conditioning (except as provided in Section 9.2.2.3.5.2.3), and only if Conditioning is necessary, Qwest will dispatch personnel to Condition the Loop.

9.2.2.3.5.2.1.1 If CLEC pre-approves Remove All Conditioning and Qwest performs Remove All Conditioning, Qwest will bill only one charge (the Remove All Conditioning charge) for Conditioning, even though CLEC may also have pre-approved Conditioning on its service request.

9.2.2.3.5.2.1.2 If CLEC has not pre-approved Conditioning, Qwest will obtain CLEC's consent prior to undertaking any Conditioning efforts, except in the scenario described in Section 9.2.2.3.5.2.3.

9.2.2.3.5.2.1.3 See Section 9.2.2.3.5.1.2.1.2 regarding pre-approval and facilities assignment.

9.2.2.3.5.2.2 Remove All Conditioning During Loop Delivery and Acceptance, When Requested by CLEC but Not Pre-Approved. (After service order completion, see Sections 9.2.2.3.5.2.4 and 9.2.2.3.5.4 regarding Repair.)

9.2.2.3.5.2.2.1 If CLEC does not indicate on its initial service request that it pre-approves Remove All Conditioning and then, during Loop delivery and acceptance (*e.g.*, upon receiving test results), CLEC requests Remove All Conditioning, if the Qwest technician is still available (so that an additional dispatch is not required), Qwest will perform Remove All Conditioning, and CLEC will pay only the Remove All Conditioning charge for Conditioning.

9.2.2.3.5.2.2.1.1 Qwest will use the Provider Initiated Activity ("PIA") field on the Firm Order Confirmation ("FOC") to communicate changes Qwest made to the service order that are different from what CLEC requested on the service request (*i.e.*, to indicate Remove All Conditioning).

9.2.2.3.5.2.2.1.2 No CLEC service request, supplement, or supplemental service request is required in this circumstance.

9.2.2.3.5.2.2.2 Alternatively (or if the terms of Section 9.2.2.3.5.2.2.1 are not met), if CLEC does not indicate on its initial service request that it pre-approves Conditioning or Remove All Conditioning and then, during Loop delivery and acceptance, CLEC desires such conditioning, CLEC may elect to supplement its service request to request the desired conditioning.

9.2.3.5.2.2.3 If CLEC pre-approves Conditioning but not Remove All Conditioning and Qwest performs Conditioning, Qwest may charge CLEC for both Conditioning and Remove All Conditioning if: (1) Qwest performs Conditioning, (2) the scenario described in Section 9.2.2.3.5.3.2 does not apply, and (3) CLEC later requires Qwest to perform another dispatch and perform Remove All Conditioning.

9.2.2.3.5.2.3 Remove All Conditioning During Loop Delivery and Acceptance, When Not Approved. (After service order completion, see Sections 9.2.2.3.5.2.4 and 9.2.2.3.5.4 regarding Repair). In the single scenario described in this Section, Qwest may perform and charge CLEC for Remove All Conditioning, even though CLEC has neither pre-approved nor approved Remove All Conditioning. In this scenario, Qwest will charge only one charge (the Remove All Conditioning charge) for Conditioning.

9.2.2.3.5.2.3.1 The no approval for Remove All Conditioning situation may occur only after both (1) CLEC has pre-approved Conditioning (or, if it did not pre-approve it, CLEC has supplemented its service request to approve it after receiving a jeopardy or reject notice indicating Conditioning is required), and (2) Qwest has performed Conditioning, but such Conditioning does not bring the loop within the applicable dB level and therefore Remove All Conditioning is required to meet the applicable dB level.

9.2.2.3.5.2.3.2 If during Loop delivery and acceptance Qwest conducts the Performance Parameter Tests or other tests as described in Section 9.2.2.3.5.3.1 and, even though the applicable EML was achieved during facilities assignment, actual testing shows that the applicable dB level (as set forth in Section 9.2.2.3.5.4.3 and Attachment 3) cannot be achieved without Remove All Conditioning (*i.e.*, removal of Bridged Taps would bring the Loop within the applicable dB level), Qwest may perform and charge CLEC for Remove All Conditioning, even though CLEC has neither pre-approved nor approved Remove All Conditioning.

9.2.2.3.5.2.3.3 In the scenario described in Section 9.2.2.3.5.2.3.2, if CLEC has enrolled in Provider Test Access ("PTA"), within three (3) business days, Qwest will provide before and after test results in writing to CLEC which confirm that Remove All Conditioning was required to bring the Loop within the applicable dB level. Qwest will provide the before and after test results via PTA, so that CLEC may access them electronically. If Qwest fails to provide complete written before and after test results as described in this Section within three (3) business days, Qwest shall not charge CLEC for performing Remove All Conditioning.

9.2.2.3.5.2.4 Conditioning During Repair.

9.2.2.3.5.2.4.1 CLEC may request Conditioning or Remove All Conditioning when submitting a trouble report. No CLEC service request, supplement, or supplemental request is required. Qwest will apply the applicable charges for conditioning, using the rates in Exhibit A to this Amendment.

9.2.2.3.5.2.4.1.1 When Qwest performs Remove All Conditioning during Repair, Qwest will attempt to condition the Loop and clear the trouble within four (4) hours of receipt of the trouble report, except as provided in Section 9.2.2.3.5.2.5.1.2.1. When Qwest performs Remove All Conditioning during Repair, the 4-hour Repair commitment time described in Section 9.2.2.3.5.4.5 does

not apply, however. In addition, CLEC's trouble report will be excluded from MR-5 (All Troubles Cleared Within 4 Hours) in the Performance Indicator Definitions (PIDs) in Exhibit B to the Agreement. Qwest will code Remove All Conditioning to an excluded code, which does not identify CLEC or CLEC's customer as the cause of the trouble.

9.2.2.3.5.2.4.2 Because Embedded Base xDSL Capable Loops, by definition, were installed before the Final Implementation Date of this Amendment, Conditioning will occur in the context of Repair for Embedded Base xDSL Capable Loops.

9.2.2.3.5.2.5 Exclusions. If an Exclusion pursuant to Section 9.2.2.3.5.2.5.1.1 applies, Qwest will notify CLEC of the Exclusion via jeopardy notice, reject notice, or Customer Electronic Maintenance and Repair (CEMR) (or successor system), as applicable, and CLEC may elect to request a different Loop. (If no compatible Loop is available, see Section 9.2.2.3.5.1.4.1.1.) If an Exclusion pursuant to Section 9.2.2.3.5.2.5.1.2 applies, Qwest may not reject the request and must perform Remove All Conditioning, but the charge may vary as described in Section 9.2.2.3.5.2.5.1.2.1. If a dispute arises as to whether an Exclusion applies, Qwest bears the burden of proof.

9.2.2.3.5.2.5.1 Nothwithstanding anything that may be to the contrary in this Amendment, the following Exclusions apply to Conditioning, subject to Section 9.2.2.3.5.2.5.2.

9.2.2.3.5.2.5.1.1 Exclusions to Conditioning. Qwest is not required to remove the following Stub Cable or Bridged Taps, unless Qwest removes them for itself or its retail customers:

9.2.2.3.5.2.5.1.1.1 Stub Cable. Stub Cable is short lengths (not to exceed 50 feet) of cable that may have been placed in feeder or distribution plant for ease of future additions or changes. Cable or other plant identified as Bridged Tap in Qwest Loop make up records is not Stub Cable for purposes of this Amendment, unless Qwest promptly provides CLEC with mutually agreeable verifying documentation that demonstrates that the device is Stub Cable as described in this Section 9.2.2.3.5.2.5.1.1.1 and is not Bridged Tap (*i.e.*, the Loop make up records are inaccurate).

9.2.2.3.5.2.5.1.1.2 Bridged Tap in Inaccessible Plant – Buried. Inaccessible Plant – Buried means a Direct Buried Splice Enclosure that it is not technically feasible to access.

9.2.2.3.5.2.5.1.1.3 Bridged Tap in Inaccessible Plant – Safety. Inaccessible Plant – Safety means specific plant for which access has been restricted on safety grounds by a regulatory agency, such as the Occupational Safety and

Health Administration ("OSHA"), or by a Commission or court order addressing the specific plant in issue. If Qwest has a permit to access the plant, with no safety restriction, the plant is not excluded as inaccessible. In the event of an emergency that does not fall within this description but poses safety dangers to personnel, Qwest and CLEC will work together to resolve the issue on a case-by-case basis.

9.2.2.3.5.2.5.1.2 Exclusions to Performing Remove All Conditioning for the Remove All Conditioning rate set forth in Exhibit A. When the following circumstances exist, Qwest will perform Remove All Conditioning and charge for it as follows:

9.2.2.3.5.2.5.1.2.1 More Than Eight (8) Hours of Qwest Technician Time. If more than eight (8) hours of technician time is required to perform Remove All Conditioning, Qwest will provide CLEC with a description of work and not-to-exceed quotation for charges for Qwest technician time in excess of eight (8) hours in Qwest's response to CLEC's service request or trouble report. Qwest will provide the quotation as soon as reasonably possible but no later than within four (4) business days of receiving CLEC's service request or within one (1) business day of receiving CLEC's trouble report. To the extent that Qwest incurs fees for permits that are exclusive to CLEC's request for Remove All Conditioning and under which Qwest will perform no other activity, Qwest may include the amount of the permitting fee(s) in the quotation, provided Qwest also provides documentation of the permitting fee use and expense to CLEC. If CLEC accepts the quotation and Qwest performs Remove All Conditioning, Qwest may charge CLEC for the Remove All Conditioning rate described in Exhibit A to this Amendment, technician time in excess of eight (8) hours at the applicable half hourly rate in Exhibit A to the Agreement, and such documented permitting fees, if any.

9.2.2.3.5.2.5.2 The Exclusions in Section 9.2.2.3.5.2.5 are intended to be narrow exclusions that occur relatively rarely. The Parties have agreed to the negotiated terms in this Amendment, including the rates in Exhibit A, in part based on this assumption made by both Parties.

9.2.2.3.5.2.5.2.1 Regarding the Exclusions pursuant to Section 9.2.2.3.5.2.5.1.1, if after implementation of this Amendment this assumption is inconsistent with actual practice, the Parties reserve the right to request amendment of the Agreement, including changes to the rates, terms, and conditions of this Amendment.

9.2.2.3.5.2.5.2.2 Regarding the Exclusions pursuant to Section 9.2.2.3.5.2.5.1.2, the Parties agree to meet on an annual basis to

review the instances of Remove All conditioning requiring more than Eight (8) hours of technician time to perform, that exceed the greater of 10 instances or ten percent (10%) of all Remove All conditioning performed on behalf of CLEC in a state, and will mutually determine if it is appropriate to make adjustments to the technician time cap, the level of instances requiring greater than Eight (8) hours or the rate for Remove All Conditioning.

9.2.2.3.5.2.6 See Section 9.2.3.11 below regarding Conditioning Rate Elements.

9.2.2.3.5.3 **Loop Delivery and Acceptance - xDSL Capable Loops.** Although an estimate is used for facilities assignment purposes, Loop delivery and acceptance will be based upon actual testing.

9.2.2.3.5.3.1 Qwest will conduct the threshold tests set forth in Attachment 3 to this Amendment, at the levels described in Attachment 3 (Performance Parameter Tests) as needed to deliver a properly working Loop. If Qwest conducts other tests when performing such testing for itself or its retail customers, Qwest will also perform those tests for CLEC. When lack of access to CLEC's central office equipment precludes Qwest from performing the same tests that Qwest performs for itself or its retail customers, however, Qwest will perform comparable tests for CLEC.

9.2.2.3.5.3.1.1 Qwest will perform testing using an insertion loss measured at 196 kHz. The dB loss parameters used to test and validate Actual Measured Loss (AML) will vary by type of xDSL Service, as described in Section 9.2.2.3.5.4.3.1. Qwest will provision a Loop meeting at least the performance parameters specified in Attachment 3.

9.2.2.3.5.3.1.1.1 If upon testing the Loop does not meet the performance parameters specified in Attachment 3, Qwest will take action to bring the Loop within those parameters before Loop acceptance. If meeting the parameters requires Conditioning, see Section 9.2.2.3.5.2.

9.2.2.3.5.3.1.1.2 Failure to Meet AML Due to Incorrect Information in Qwest Records, Including Loop Make Up records.

9.2.2.3.5.3.1.1.2.1 Qwest will attempt to resolve any issues resulting from inaccuracies in Qwest's records (*e.g.*, discrepancies between EML and AML) to ensure timely delivery of a Loop. (Qwest may, for example, correct its records and re-calculate EML based on correct information.) Regardless of any inaccuracies in the records, if AML is met (*e.g.*, AML is below the applicable maximum dB level, as described in Section 9.2.2.3.5.4.3.1), the records discrepancy is not a basis for not delivering the Loop.

9.2.2.3.5.3.1.1.2.2 If failure to meet AML is both (1) caused by incorrect information in Qwest's records (*e.g.*, Loop make up records), and (2) Qwest cannot resolve the discrepancy (such as an inaccurate indication of Loop length in Qwest records that cannot be resolved), then Qwest will notify CLEC of the discrepancy and the cause of the discrepancy (*e.g.*, the actual Loop length is longer than the maximum length allowable under AML) before Loop delivery.

9.2.2.3.5.3.1.1.2.2.1 Qwest will send a jeopardy notice to CLEC for the defective Loop, attempt to identify a compatible Loop and, if available, deliver a different Loop that meets the performance parameters. If no other compatible Loop is available after the manual steps for copper Loop assignment, Qwest will provide CLEC with a jeopardy notice for no available facilities.

9.2.2.3.5.3.1.1.2.3 Qwest will correct its records to indicate accurate information.

9.2.2.3.5.3.2 When Qwest completes testing, Qwest will provide CLEC with test results for all of the types of tests performed for each delivered xDSL Capable Loop, including each of the Performance Parameter Tests. This obligation to provide test results applies when CLEC orders xDSL Capable Loops via any Provisioning Option. When Qwest completes its tests, Qwest will provide the test results to CLEC before Loop acceptance in a mutually agreeable manner that allows CLEC either to view posted results electronically or to designate the personnel to receive the results by email, such as via Qwest's Provider Test Access ("PTA") or similar email system. When requested, Qwest will also provide the test results orally.

9.2.2.3.5.3.3 See Sections 9.2.2.3.5.2.2 and 9.2.2.3.5.2.3 regarding Conditioning during Loop delivery and acceptance.

9.2.2.3.5.4 **Repair - xDSL Capable Loops.** Repairs may occur shortly after service order completion or later (*e.g.*, after a CLEC customer has been receiving service from CLEC for a longer period of time). The terms and conditions for Repair are the same for Embedded Base xDSL Capable Loops and Non-Embedded Base xDSL Capable Loops, except as described in Sections 9.2.2.3.5.4.6 and 9.2.2.3.5.4.7. Although an estimate is used for facilities assignment purposes, Repair will be based upon actual testing, including Actual Measured Loss ("AML").

9.2.2.3.5.4.1 Qwest will take into account the NC code and the NCI code when Repairing xDSL Capable Loops.

9.2.2.3.5.4.2 Qwest will conduct the Performance Parameter Tests set forth in Attachment 3 to this Amendment (which is not an exhaustive list) as needed to fully resolve the trouble. If Qwest conducts other tests for itself or its retail customers when performing such testing and Repairs, Qwest will also conduct

those tests for CLEC. When lack of access to CLEC's central office equipment precludes Qwest from performing the same tests that Qwest performs for itself or its retail customers, however, Qwest will perform comparable tests for CLEC. Other testing may be needed to repair a Loop so that it performs consistent with industry standards for the type of xDSL Service deployed. If the trouble is not resolved, CLEC may escalate directly to its Qwest service manager, who will immediately escalate internally to ensure needed testing is identified and conducted to resolve the trouble. Tests to be performed after escalation may include, for example, wideband noise and impulse noise, if not performed earlier as part of the testing outlined above. The Qwest Service Manager will track each escalation for purposes of Section 9.2.2.3.5.4.6.

9.2.2.3.5.4.3 Qwest will perform testing using an insertion loss measured at 196 kHz (except ISDN BRI), as described in Section 9.2.2.3.5.4.3.1. As indicated in Section 9.2.2.3.5.4.3.1, the AML must meet or fall below the maximum AML. In addition, except for ISDN BRI, with NC/NCI codes of LX-N 02QC5.OOS, the AML may be no more than five (5) dB greater than the EML calculated for the Loop.

9.2.2.3.5.4.3.1 The dB loss parameters used to test and validate Actual Measured Loss (AML) will vary as follows:

9.2.2.3.5.4.3.1.1 For LXR- xDSL Capable Loops, including ADSL and ADSL2+:
AML = up to 5 dB greater than EML at 196 kHz; maximum loss of 78 dB, if such limit is within test set capability.

9.2.2.3.5.4.3.1.2 For 2-wire LX-N xDSL Capable Loops, including HDSL2, G.SHDSL, and E.SHDSL - NCI codes of 02QB9.00H and 02QB5.00G:
AML = up to 5 dB greater than EML at 196 kHz; maximum loss of 28 dB

9.2.2.3.5.4.3.1.3 For 4-wire LX-N xDSL Capable Loops, including HDSL4 and G.SHDSL - NCI codes of 04QB9.00H, 04QB5.00G, and 04QB9.00F:
AML = up to 5 dB greater than EML at 196 kHz; maximum loss of 31 dB

9.2.2.3.5.4.3.1.4 For ISDN BRI, with NC/NCI codes of LX-N O2QC5.OOS:
AML ≤ 40 dB at 40 kHz; maximum loss of 40 dB

9.2.2.3.5.4.3.1.5 For all other LX-N xDSL Capable Loops, including Spectrum Management Classes 1-9, Qwest will measure AML at 196 kHz (without a maximum dB loss level).
AML = up to 5 dB greater than EML at 196 kHz; no maximum dB loss

9.2.2.3.5.4.3.1.6 Regarding Embedded Base xDSL Capable Loops, see Section 9.2.2.3.5.5.1.

9.2.2.3.5.4.4 In the case of every Repair of an xDSL Capable Loop, when Qwest completes testing, Qwest will provide CLEC with test results for all of the types of tests performed for each repaired xDSL Capable Loop, including each of the Performance Parameter Tests performed. This obligation to provide test results for Repairs applies regardless of the Provisioning Option used by CLEC when ordering the xDSL Capable Loop. When the tests are performed, Qwest will make the test results available through Customer Electronic Maintenance and Repair (CEMR) or successor system. CLEC may access the results electronically. When requested, Qwest will also provide the test results to CLEC orally.

9.2.2.3.5.4.4.1 If Qwest fails to provide complete test results as described in Section 9.2.2.3.5.4.4, Qwest shall not code the Repair to CLEC or CLEC's customer when assigning a disposition code. The trouble is considered in Qwest's network for disposition and billing purposes.

9.2.2.3.5.4.5 Qwest's Repair commitment time for xDSL Capable Loops is four (4) hours, except as provided in Section 9.2.2.3.5.2.4.1.1.

9.2.2.3.5.4.6 Qwest and CLEC will meet to review the root cause analysis as performed by Qwest of the troubles escalated pursuant to Section 9.2.2.3.5 and mutually determine if other tests are appropriate to add to Attachment 3 for a type of xDSL Service.

9.2.2.3.5.4.7 See Section 9.2.2.3.5.2.4 regarding Conditioning during Repair.

9.2.2.3.5.5 NC/NCI CODES – xDSL Capable Loops

9.2.2.3.5.5.1 For Embedded Base xDSL Capable Loops, there may be instances when the NC code and/or NCI code associated with the CLEC customer's xDSL Service [which has been working for the customer, irrespective of the NC/NCI code(s) associated with the customer's xDSL Service] is not the same as the NC code and/or NCI code the Parties will use after the Final Implementation Date. When the need for a Repair occurs or Spectrum Management issues arise (*e.g.*, after a Qwest network maintenance and modernization activity), however, CLEC may desire a change in the NC/NCI code(s) to conform it to the NC/NCI code(s) reflected in this Amendment. Qwest may not decline to proceed with Conditioning or with accepting and working to resolve trouble reports on the grounds that the NC/NCI code(s) are different or need changing for Embedded Base xDSL Capable Loops.

9.2.2.3.5.5.1.1 For Embedded Base xDSL Capable Loops, when submitting a trouble report, CLEC may request that Qwest change the NC code and/or NCI code to the applicable NC code and/or NCI code, such as described in Attachment 2. No CLEC service request, supplement, or supplemental request is needed to change the NC/NCI code(s) before CLEC submits a trouble report or before Qwest performs the Repair. After submitting a trouble report, CLEC will promptly submit a service request to change the NC/NCI codes to the xDSL Service actually deployed on the Embedded Base xDSL Capable Loop. Qwest will implement the change to the NC code and/or NCI code in Qwest's records with no change to the circuit identifier. After processing of the service request, the circuit history in CEMR (or successor system) will reflect the change in

NC/NCI code(s) to identify the new NC/NCI code(s). These NC/NCI code changes do not require project handling.

9.2.2.3.5.5.1.1.1 Regarding future changes to NC/NCI codes, see Section 9.2.2.3.5.5.3.1.

9.2.2.3.5.5.2 For Non-Embedded Base xDSL Capable Loops, the Parties agree to use the NC/NCI codes as described in Attachment 2 and Section 9.2.2.3.5.5.3. If, after a Non-Embedded Base xDSL Capable Loop is installed, CLEC desires a change in the NC/NCI code(s), CLEC will submit a service request to change the NC/NCI code(s) for Non-Embedded Base xDSL Capable Loops.

9.2.2.3.5.5.3 After the Final Implementation Date of this Amendment, CLEC will order xDSL Capable Loops using the applicable NC/NCI codes described in Attachment 2 to this Amendment.

9.2.2.3.5.5.3.1 Particularly as technologies and industry standards change over time, NCI/SECNCI codes may be added or revised and will be available to CLEC. If those NCI/SECNCI codes in any respect replace or modify the codes identified in Attachment 2, Loops installed before Qwest implementation of such new or revised NCI/SECNCI codes will continue with the existing NCI/SECNCI codes as though the code were the new code or, if CLEC desires a change to conform to a revised code, the terms described in Section 9.2.2.3.5.5.1 will apply to changes in NCI/SECNCI codes in these circumstances.

9.2.2.3.5.5.3.1.1 For example, at the time of execution of this Amendment, Qwest has not implemented the Telcordia NCI/NCI codes for HDSL2 (LX-N 02QB9.00E), so CLEC will order HDSL2 using the NC/NCI code identified in Attachment 2 (LX-N 02QB9.00H). If Qwest later implements the Telcordia NC/NCI codes for HDSL2 (LX-N 02QB9.00E), installed CLEC HDSL2 Loops at that time will continue to be treated as HDSL2 Loops (for all purposes, including Repair and Spectrum Management), even though Qwest begins using different NC/NCI codes for HDSL2. Installed CLEC HDSL2 customers will be the equivalent of Embedded Base xDSL Capable Loops at that point for this purpose. See Section 9.2.2.3.5.5.1. Qwest may not withhold services (*e.g.*, Conditioning or trouble report submission) on the grounds that code(s) need changing (such as via CLEC service request, supplement or supplemental service request, or a project conversion) in this circumstance.

9.2.2.8 Loop Qualification/Make Up Information or Tool.

9.2.2.8.8 Qwest will provide CLEC with: (1) the formula(s)/algorithm(s) that Qwest uses for calculation of EML, and/or (2) a Loop Qualification tool that calculates insertion loss for xDSL Capable Loops, using the same formula(s)/algorithm(s) that Qwest uses for calculation of EML.

9.2.3 Unbundled Loop Rate Elements - xDSL Capable Loops

9.2.3.11 **Rate Elements - Conditioning**

9.2.3.11.1 The rates for the following rate elements for Conditioning of xDSL Capable Loops are set forth in Exhibit A of this Amendment.

9.2.3.11.1.1 Conditioning.

9.2.3.11.1.2 Remove All Conditioning.

9.2.3.11.2 The rates for the rate elements in Section 9.2.3.11.1 do not apply unless Qwest dispatches a technician (or other personnel) and performs the specified Conditioning. If, for example, Qwest's records indicate that Conditioning is required but in fact the records are incorrect and therefore none is performed, no Conditioning charge applies.

9.2.3.11.3 Each of the rates for the rate elements in Section 9.2.3.11.1 may be applied no more than one time per Loop per CLEC customer at any time before disconnection. If, for example, CLEC approves Conditioning, Qwest removes a Near-End Bridged Tap, and Qwest charges the Conditioning charge, Qwest may not charge the Conditioning charge again if later it is discovered that a single Bridged Tap greater than 2000 feet requires removal, because removal of a single Bridged Tap greater than 2000 feet is included in the one-time Conditioning charge. Qwest will track payment of Conditioning charges.

9.2.3.11.4 Conditioning is not a prerequisite to Remove All Conditioning. If CLEC pre-approves Remove All Conditioning or CLEC requests only Remove All Conditioning and Qwest performs Remove All Conditioning, only the Remove All Conditioning charge applies for Conditioning.

9.2.3.11.5 If, as part of Conditioning, Qwest removes all Bridged Taps on the Loop, only the applicable Conditioning charge applies for Conditioning. The fact that all Bridged Taps were removed is not a basis for charging the Remove All Conditioning charge in this situation because, although all of the Bridged Taps were removed, they were within the definition of Conditioning. For example, if the only Bridged Tap on a Loop is a Near-End Bridged Tap, removal of that Bridged Tap (which falls within the Conditioning definition) does not result in a Remove All Conditioning charge simply because the only (i.e., all) Bridged Tap on the Loop was removed.

9.2.3.11.6 The need to perform Conditioning is considered trouble in Qwest's network for purposes of disposition coding and billing, except as provided in Section 9.2.2.3.5.2.4.1.1. When Qwest charges CLEC the rate(s) in Exhibit A for Conditioning, Qwest may not also cause charges such as Maintenance of Service charges to apply by coding the need for Conditioning to CLEC or CLEC's customer.

9.2.6 Spectrum Management - xDSL Capable Loops

9.2.6.10 Advanced services Loop technology will be deployed, and spectrum and binder groups will be managed, in accordance with the Act and the Agreement.

9.2.6.11 See Section 9.2.2.3.5.5 regarding NC/NCI codes.

12.4 Maintenance and Repair - xDSL Capable Loops

12.4.1.6.3 When CLEC elects not to perform trouble isolation and CLEC requests Qwest to perform optional testing, Qwest will perform at least the Performance Parameter Tests described in Section 9.2.2.3.5.3.1 and Attachment 3 for xDSL Capable Loops as needed to isolate and fully resolve the trouble. If trouble is isolated to the Qwest network, Qwest will proceed to perform trouble isolation and work to resolve the trouble. At the time Qwest completes testing, Qwest will provide the test results to CLEC electronically. When CLEC does not submit the trouble report electronically, Qwest will contact CLEC by telephone to provide test results at the time Qwest completes testing. Qwest will charge CLEC the applicable optional testing charge.

12.4.1.6.4 Optional testing charges do not apply when CLEC performs trouble isolation. When CLEC submits a trouble report to Qwest with test results isolating trouble to the Qwest network, Qwest will not require CLEC to authorize optional testing charges and Qwest will not decline to proceed with Repair on the grounds that CLEC has not authorized optional testing. For xDSL Capable Loops, CLEC test results isolating trouble to Qwest's network may, for example, result from signal-to-noise ratio, Loop attenuation, margin, circuit resistance, or any of the tests identified in Attachment 3, and may include tests results such as those indicating bad splices, wet cable, opens, grounds, shorts, or Bridged Tap. When CLEC reports that CLEC has isolated trouble to the Qwest network, Qwest will proceed to perform trouble isolation and work to resolve the trouble.

12.4.3.5 Qwest Maintenance and Repair and routine test parameters and levels will be in compliance with Qwest's Technical Publications, which will be consistent with Telcordia's General Requirement Standards for Network Elements, Operations, Administration, Maintenance and Reliability and/or the applicable ANSI standard.

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ATTACHMENT 2:
Qwest NC/NCI Code Combinations for LX-N and LXR- xDSL Capable Loops[1]

NC Code	NCI Code		BRIEF DESCRIPTION
	Qwest CO-NI	Customer EU-NI	
ADVANCED DIGITAL TRANSPORT – SPECTUM MANAGEMENT COMPATIBLE			
LX-N	02QB5.001	02DU5.001	Spectrum Management Class 1
LX-N	02QB5.002	02DU5.002	Spectrum Management Class 2
LX-N	02QB5.003	02DU5.003	Spectrum Management Class 3
LX-N	04QB5.003	04DU5.003	Spectrum Management Class 3
LX-N	02QB5.004	02DU5.004	Spectrum Management Class 4
LX-N	02QB9.005	02DU9.005	Spectrum Management Class 5
LX-N	02QB9.006	02DU9.006	Spectrum Management Class 6
LX-N	02QB5.007	02DU5.007	Spectrum Management Class 7
LX-N	02QB5.008	02DU5.008	Spectrum Management Class 8
LX-N	02QB9.009	02DU9.009	Spectrum Management Class 9
LX-N	04QB5.00F	04DU5.00F	Spectrum Management HDSL4. Technology Specific. Transmission System
LX-N	02QB5.00G	02DU5.00G	Spectrum Management G. SHDSL, E.SHDSL Technology specific. Transmission System
LX-N	04QB5.00G	04DU5.00G	Spectrum Management G. SHDSL Technology Specific. Transmission System
LX-N	02QB5.00S	02DU5.00S	Spectrum Management 281QSDSL.

[1] References to a type of xDSL Service (*e.g.*, ADSL, HDSL) are general and include successive xDSL Services (*e.g.*, ADSL2+, HDSL2).

NC Code	NCI Code		BRIEF DESCRIPTION
	Qwest CO-NI	Customer EU-NI	
			Technology Specific Transmission System
LX-N	04QB5.00S	04DU5.00S	Spectrum Management 281QSDSL. Technology specific. Transmission System
DIGITAL SUBSCRIBER LINE BASIC RATE ISDN – DSL (ISDN BRI) COMPATIBLE			
LX-N	02QC5.OOS	021S5.N	Digital Subscriber Line with 2B1Q Signaling Format Compatible Loop
HIGH-BIT-RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE			
LX-N	02QB9.00H	02DU9.00H	HDSL and HDSL2 Compatible Loop, Metallic Facility
LX-N	04QB9.00H	04DU9.00H	HDSL and HDSL2 Compatible Loop, Metallic Facility
ASYMMETRIC DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE			
LXR-	02QB9.00A.	02DU9.00A	Revised Resistance Design (RRD)n Non-Loaded Loop with ANSIT1.413 DMT Signaling Format
LXR-	02QB9.01A	02DU9.01A	RRD, Non-Loaded Loop with ANSIT1.413 DMT Signaling Format and one POTS Channel
LXR-	02QB9.00C	02DU9.00C	RRD, Non-Loaded Loop with CAP Signaling Format
LXR-	02QB9.01C	02DU9.01C	RRD, Non-Loaded Loop with CAP Signaling Format one POTS Channel
UNBUNDLED DISTRIBUTION LOOPS			
LX-N	02QE5.001	02DU5.001	Distribution Loop, without loading coils, Spectrum Management Class 1
LX-N	02QE5.002	02DU5.002	Distribution Loop, without loading coils, Spectrum Management Class 2
LX-N	02QE5.003	02DU5.003	Distribution Loop, without loading coils, Spectrum Management Class 3

NC Code	NCI Code		BRIEF DESCRIPTION
	Qwest CO-NI	Customer EU-NI	
LX-N	02QE5.004	02DU5.004	Distribution Loop, without loading coils, Spectrum Management Class 4
LX-N	02QE9.005	02DU9.005	Distribution Loop, without loading coils, Spectrum Management Class 5
LX-N	02QE9.006	02DU9.006	Distribution Loop, without loading coils, Spectrum Management Class 6
LX-N	02QE5.007	02DU5.007	Distribution Loop, without loading coils, Spectrum Management Class 7
LX-N	02QE5.008	02DU5.008	Distribution Loop, without loading coils, Spectrum Management Class 8
LX-N	02QE9.009	02DU9.009	Distribution Loop, without loading coils, Spectrum Management Class 9
LX-N	02QE9.005	02DUM.LS5	Distribution Loop, without loading coils, Spectrum Management Class 5 and one POTS Channel

ATTACHMENT 3:
xDSL CAPABLE LOOP PERFORMANCE PARAMETER TESTS

Note: As between Attachment 1 and Attachment 3, the terms of Attachment 1 control, should any discrepancy or apparent discrepancy be identified. See Attachment 1 regarding Conditioning.

Required Tests	Expected Field Measurement Results	Notes
Loop Length	Actual (Capacitive)	
Load Coils	None	
Opens	None	
Grounds	None	
Shorts	None	
Bridge Tap	LX-N Maximum: Total Length <2500 ft Single Tap Length < 2000ft No Near End /Far End BT(>1000 ft) LXR- Maximum: Total Length <2500 ft Single Tap Length < 2000 ft No Near End /Far End BT(>1000 ft) Remove All Maximum: None	See Exclusions
1004 Hz Loss	< -8.5dBm	
196 kHz Loss	Actual Measured Loss (AML): Maximum AML = EML + 5 dB LX-N Maximum dB Loss: 2- wire (e.g., NCI codes of 02QB9.00H and 02QB5.00G) <28.dB 4- wire (e.g, NCI codes of 04QB9.00H, 04QB5.00G, and 04QB9.00F) <31.dB LXR- Maximum dB Loss: LXR- <78.dB	<78 dB if such limit is within test set capability
40 kHz Loss	ISDN BRI <40.dB	

Insulation Resistance	Tip – Ground > 3.3 Meg Ohms Ring – Ground > 3.3 Meg Ohms Tip – Ring > 3.3 Meg Ohms	
Foreign Voltage - DC	Tip – Ground < 8 VDC Ring – Ground < 8 VDC Tip – Ring < 8 VDC	
Foreign Voltage - AC	Tip – Ground <50VAC Ring to Ground <50VAC	
Noise (C – Message)	< 23 dBrnC Far end 600 Ohm Termination	< 20 dBrnC Acceptable, >20 < 30 dBrnC Marginal, > 30 Unacceptable
Noise (C – Notch)	< 45 dB	1004 Hz, 0 dBm Transmit
Line Balance	< to 10%	The length of the Tip side of the line compared to the length of the Ring to 10% difference
Longitudinal Balance	965 Type Meter <= 50 dB @ 196khz Other Meters <= 40 dB @ 196khz	
Power Influence	<=90 dBrnc	
D-Mark Tagged	Yes	

ARIZONA
xDSL ADSL Amendment

	Recurring	Recurring Per Mile	Non-Recurring	REC	REC per Mile	NRC
9.0 Unbundled Network Elements (UNEs)						
9.2.2 Nonloaded Loops						
9.2.2.4 Cable Unloading / Bridge Tap Removal						
9.2.2.4.2 Cable Unloading / Bridge Tap Removal						
9.2.2.4.2.1 Conditioning (Tier 1)			$40.00			A
9.2.2.4.2.2 Remove All Conditioning (Tier 2)			$250.00			1
9.2.3 Digital Capable Loops						
9.2.3.9 ADSL Compatible Loops						
9.2.3.9.1 Cable Unloading / Bridge Tap Removal						
9.2.3.9.1.1 Conditioning (Tier 1)			$40.00			A
9.2.3.9.1.2 Remove All Conditioning (Tier 2)			$250.00			1

NOTES:

A Cost Docket T-00000A-00-0194 Phase II Order No. 64922 Effective 6/12/02

1 Rate not addressed in Cost Docket (estimated TELRIC).