

REGULATIONS AND RATES APPLICABLE TO THE FURNISHING OF

ACCESS SERVICE

PROVIDED BY

COMCAST PHONE OF CONNECTICUT, INC.

WITHIN THE STATE OF CONNECTICUT

Issued: September 12, 2003

David Lloyd, Director-Tariffs
183 Inverness Drive West
Englewood, CO 80112

Effective: September 19, 2003

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1. APPLICATION OF TARIFF

1.1. GENERAL

This Tariff applies to intrastate Access Service provided by the Company to Customers.

The provision of such services by the Company as set forth in this Tariff does not constitute a joint undertaking with the Customer for the furnishing of any service.

The provision of Access Service is subject to existing regulations and terms and conditions specified in this Tariff as well as in the Company's other current Tariffs, and may be revised, added to, or supplemented by superseding issues.

In addition to the regulations and charges herein, this Tariff is subject to specific regulations as may be prescribed by the Connecticut Public Utilities Regulatory Authority.

(T)
(T)

1.2. TARIFF REVISION SYMBOLS

Revisions to this Tariff are coded through the use of symbols. These symbols appear in the right hand margin of the page. The symbols and their meanings are as follows:

(C) – Change in regulation or rate

(D) – Discontinued rate, regulation or text

(N) – New rate, regulation or text

(T) – Change in text but no change in rate or regulation

1. APPLICATION OF TARIFF

1.3. DEFINITIONS

(D)

(D)

Access Minutes

The usage of exchange facilities in intrastate service for the purpose of calculating chargeable usage.

Access Tandem

A switching system that provides a traffic concentration and distribution function for originating or terminating traffic between end offices and a Customer's premises.

(T)

Advance Payment

The term "Advance Payment" denotes the requirement for partial or full payment required before the start of service.

(N)

(N)

(D)

(D)

Call

A Customer attempt for which the complete address code is provided to the service end office.

(T)

Carrier or Common Carrier

Any individual, partnership, association, corporation or other entity engaged in intrastate communication for hire by wire or radio between two or more exchanges.

Central Office

A local Company switching system where exchange service customer station loops are terminated for purposes of interconnection to each other and to trunks.

1. APPLICATION OF TARIFF

1.3. DEFINITIONS (CONT'D)

Channel

A communications path between two or more points of termination.

Common Carrier

Any individual, partnership, association, joint-stock company, trust, governmental entity or corporation engaged for hire in intrastate communication by wire or radio, between two or more exchanges.

(D)
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(D)

Company

Comcast Phone of Connecticut, Inc. and its affiliate companies.

(T)

Customer

The term "Customer" (when capitalized) denotes any person, firm, partnership, corporation or other entity that uses service under the terms and conditions of this Tariff and is responsible for the payment of charges.

(T)
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(T)

(D)
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(D)

End Office

With respect to each 101-XXXX code prefix assigned to the Company, the location of the Company's "end office" for purposes of this Tariff shall be the point of interconnection associated with that 101-XXXX code in the Local Exchange Routing Guide, issued by Telcordia. Services provided at a Trunk Gateway location (as defined elsewhere) are the functional equivalent of services provided at an End Office location.

(C)
—
(C)

1. APPLICATION OF TARIFF

1.3. DEFINITIONS (CONT'D)

End User

The term "End User" means any wholesale or retail customer of an interstate or foreign telecommunications service that is not a carrier. The term "End User" may also refer to origination or termination locations accessed via contractual or other arrangements with an affiliated or unaffiliated provider of interconnected or non-interconnected VoIP service.

(C)

(C)

Exchange

A group of lines in a unit generally smaller than a LATA established by the Company for the administration of communications service in a specified area. An Exchange may consist of one or more central offices together with the associated facilities used in furnishing communications service within that area.

(D)

(D)

Interconnected VoIP Service

An interconnected VoIP service is a service that (i) enables real-time, two-way voice communications; (ii) requires a broadband connection from the user's location; (iii) requires internet protocol-compatible customer premises equipment (CPE); and (iv) permits users generally to receive calls that originate on the public switched telephone network and to terminate calls to the public switched telephone network.

(N)

(N)

Local Access and Transport Area (LATA)

A geographic area established for the provision and administration of communications service. It encompasses one or more designated exchanges, which are grouped to serve common social, economic and other purposes.

Local Calling Area

A geographical area, as defined in the Company's local or general exchange service Tariff in which an End User may complete a call without incurring toll usage charges.

Message

A Message is a Call as defined above.

1. APPLICATION OF TARIFF

1.3. DEFINITIONS (CONT'D)

Non-interconnected VoIP Service

The term “non-interconnected VoIP service” means a service that (i) enables real-time voice communications that originate from or terminate to the user’s location using Internet protocol or any successor protocol; and (ii) requires Internet protocol compatible customer premises equipment; and (iii) does not include any service that is an interconnected VoIP service.

Point of Termination

The point of termination within a customer-designated premises at which the Company's responsibility for the provision of access service ends. The point of termination is the point of interconnection between Company communications facilities and customer-provided facilities as defined in Part 68 of the FCC’s Rules and Regulations.

“Public Utility Commission”, “PURA”, or “Commission”

(T)

The Connecticut Public Utilities Regulatory Authority.

(T)

Tandem Transport

The term “Tandem Transport” denotes the transport between an access tandem and the Company’s End Office, Trunk Gateway or other functionally equivalent location.

Trunk

A communications path connecting two switching systems in a network, used in the establishment of an end-to-end connection.

Trunk Gateway

The point of interface between the PSTN trunk facility and the Company defined by Common Language Location Identifier (CLLI) codes assigned to the Company, as reflected in the Local Exchange Routing Guide (LERG). Services provided at a Trunk Gateway location are the functional equivalent of services provided at an End Office location.

1. APPLICATION OF TARIFF

1.4. EXPLANATION OF ABBREVIATIONS

ANI - Automatic Number Identification

(D)

CLLI - Common Language Location Identifier

(D)

(N)

(D)

FCC - Federal Communications Commission

(D)

(D)

ICB - Individual Case Basis

(D)

LATA - Local Access and Transport Area

LERG - Local Exchange Routing Guide

(N)

(D)

MOU - Minutes of Use

NECA - National Exchange Carrier Association

NPA - Numbering Plan Area

(D)

PIU - Percentage of Interstate Usage

PSTN - Public Switched Telephone Network

(N)

VoIP - Voice over Internet Protocol

(N)

2. GENERAL REGULATIONS

2.1. UNDERTAKING OF THE COMPANY

2.1.1. SCOPE

The Company undertakes to furnish Access Service in accordance with the terms and conditions set forth in this Tariff.

2.1.2. SHORTAGE OF FACILITIES

All service is subject to the availability of suitable facilities. The Company reserves the right to limit the length of communications or to discontinue furnishing services when necessary because of the lack of transmission medium capacity or because of any causes beyond its control. The Company shall not be liable for errors in transmission or for failure to establish connections.

(N)
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(N)

The furnishing of service under this Tariff is subject to the availability on a continuing basis of all the necessary facilities and is limited to the capacity of the Company's facilities as well as facilities the Company may obtain from other carriers to furnish service from time to time as required at the sole discretion of the Company.

2.1.3. TERMS AND CONDITIONS

- A. The minimum period for which service is provided and for which rates and charges are applicable is one month unless otherwise specified. When a service is discontinued prior to the expiration of the minimum period, charges are applicable, whether the service is used or not. In addition to the one (1) month minimum, termination liabilities may apply to early cancellation of a service purchased under a Term Agreement.
- B. Customers may be required to enter into written service orders which shall contain or reference a specific description of the service ordered, the rates to be charged, the duration of the services, and the terms and conditions in this Tariff. Customers will also be required to execute any other documents as may be reasonably requested by the Company. Orders for Switched Access are deemed made by the Customer, and initiation of the respective obligations of the parties as set forth in this Tariff takes place, upon the routing of calls by the Customer to and from the Company.
- C. In any action between the parties to enforce any provision of this Tariff, the prevailing party shall be entitled to recover its legal fees and court costs from the non-prevailing party in addition to other relief a court may award.

(C)
|
(C)

(N)
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(N)

Text previously on this page has been moved to Section 2, Page 2.

2. GENERAL REGULATIONS

2.1. UNDERTAKING OF THE COMPANY (CONT'D)

2.1.3. TERMS AND CONDITIONS (CONT'D)

D. The Company shall comply with all rules and regulations issued by the Commission. In addition, the regulations set forth herein apply to all services offered throughout this Tariff unless otherwise specified in the service specific section of this Tariff.

E. [Reserved for Future Use]

(T)

(D)

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(D)

F. Use of Service

The services the Company offers shall not be used for any unlawful purpose or for any use for which the Customer has not obtained all required governmental approvals, authorization, licenses, consents and permits.

(T)

The Company may require applicants for service who intend to use the Company's offering for resale and/or for shared use to file a letter with the Company confirming that their use of the Company's offerings complies with relevant laws and regulations, policies, orders and decisions.

The Company may require a Customer to immediately shut down its transmission if such transmission is causing interference to others.

(T)

(D)

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(D)

Recording of telephone conversations of service provided by the Company is prohibited except as authorized by applicable federal, state and local laws.

G. Ownership of Facilities

The Customer obtains no property right or interest in the use of any specific type of facility, service, equipment, number, process, or code. All right, title and interest to such items remain, at all times, solely with the Company.

(T)

Text on this page has been moved from Section 2, Page 1.

2. GENERAL REGULATIONS

2.1. UNDERTAKING OF THE COMPANY (CONT'D)

2.1.3. TERMS AND CONDITIONS (CONT'D)

H. Interconnection

The Company will provide for interconnection with other carriers in accordance with the rules and regulations promulgated by the Commission.

- I. Service may be terminated upon written notice to the Customer if: (T)
1. The Customer is using the service in violation of this Tariff; or (T)
 2. The Customer is using the service in violation of the law. (T)
- J. This Tariff shall be interpreted and governed by the laws of the state of Connecticut without regard for its choice of laws provision.

2. GENERAL REGULATIONS

2.1. UNDERTAKING OF THE COMPANY (CONT'D)

2.1.4. PROVISION OF EQUIPMENT AND FACILITIES

- A. The Company shall use reasonable efforts to make available services to a Customer on or before a particular date, subject to the provisions of and compliance by the Customer with the regulations contained in this Tariff. The Company does not guarantee availability by any such date and shall not be liable for any delays in commencing service to any customer. (T)
(T)
- B. The Company shall use reasonable efforts to maintain facilities and equipment that it furnishes to the Customer. The Customer may not, nor may the Customer permit others to, rearrange, disconnect, remove, attempt to repair, or otherwise interfere with any of the facilities or equipment installed by the Company, except upon the written consent of the Company. (T)
- C. The Company may substitute, change or rearrange any equipment or facility at any time and from time to time, but shall not thereby alter the technical parameters of the service provided the Customer, without the prior consent of the Customer, which shall not be unreasonably withheld. (T)
- D. Equipment the Company provides or installs at the customer premises for use in connection with the services the Company offers shall not be used for any purpose other than that for which the Company provided it.
- E. The Customer shall be responsible for the payment of service charges as set forth herein for visits by the Company's agents or employees to the premises of the Customer when the service difficulty or trouble report results from the use of equipment or facilities provided by any party other than the Company, including but not limited to the Customer. (T)
(T)
(T)

2. GENERAL REGULATIONS

2.1. UNDERTAKING OF THE COMPANY (CONT'D)

2.1.4. PROVISION OF EQUIPMENT AND FACILITIES (CONT'D)

- F. The Company shall not be responsible for the installation, operation, or maintenance of any customer-provided communications equipment. Where such equipment is connected to the facilities furnished pursuant to this Tariff, the responsibility of the Company shall be limited to the furnishing of facilities offered under this Tariff and to the maintenance and operation of such facilities. Subject to this responsibility, the Company shall not be responsible for: (T)
1. The transmission of signals by the customer-provided equipment or for the quality of, or defects in, such transmission; or (T)
 2. The reception of signals by customer-provided equipment.
- G. Service is offered subject to the availability of facilities and provision of this Tariff. The Company's obligation to furnish facilities and service is dependent upon its ability to secure and retain, without unreasonable expense, suitable facilities from the underlying carrier, if an underlying carrier is involved.
- H. The Company shall not be required to furnish, or continue to furnish, facilities or service where the circumstances are such that the proposed use of the facilities or service would tend to adversely affect the Company's property, service or economic conditions.
- I. Service furnished by the Company may be physically or logically connected with services or facilities of affiliated or unaffiliated third parties and with private systems, subject to technical limitations established by the Company. Service furnished by the Company may make use of the services, facilities or equipment owned, or controlled either directly or via contractual or other arrangements, by the Company. (N)
(N)

2. GENERAL REGULATIONS

2.1. UNDERTAKING OF THE COMPANY (CONT'D)

2.1.5. LIABILITY OF THE COMPANY

- A. The liability of the Company for damages arising out of the furnishing of its Services, including but not limited to mistakes, omissions, interruptions, delays, or errors, or other defects, representations, or use of these services or arising out of the failure to furnish the service, whether caused by acts or omission, shall be limited to the extension of allowances for interruption as set forth in Section 2.5. The extension of such allowances for interruption shall be the sole remedy of the Customer and the sole liability of the Company. The Company will not be liable for any direct, indirect, incidental, special, consequential, exemplary or punitive damages to the Customer as a result of any Company service, equipment or facilities, or the acts or omissions or negligence of the Company's employees or agents. (T)
- B. The Company shall not be liable for any delay or failure of performance or equipment due to causes beyond its control, including but not limited to: acts of God, fire, flood, explosion or other catastrophes; any law, order, regulation, direction, action, or request of the United States Government, or of any other local governments having or claiming jurisdiction over the Company, or of any department, agency, commission, bureau, corporation, or other instrumentality of any one or more of these federal, state, or local governments, or of any civil or military authority; national emergencies; insurrections; riots; wars; unavailability of rights-of-way or materials; or strikes, lockouts, work stoppages, or other labor difficulties. (T)
- C. When the services or facilities of third-parties are used separately or in conjunction with the Company's facilities or equipment in establishing a physical or logical connection to points not reached by the Company's facilities or equipment, the Company shall not be liable for any act or omission of such third-parties or their agents or employees. (C)
- D. The Company shall not be liable for any damages or losses due to the fault or negligence of the Customer or due to the failure or malfunction of customer-provided equipment or facilities. (T)

2. GENERAL REGULATIONS

2.1. UNDERTAKING OF THE COMPANY (CONT'D)

2.1.5. LIABILITY OF THE COMPANY (CONT'D)

- E. The Company does not guarantee nor make any warranty with respect to installations it provides for use in an explosive atmosphere. The Customer indemnifies and holds the Company harmless from any and all loss, claims, demands, suits, or other action, or any liability whatsoever, whether suffered, made, instituted, or asserted by any other party or person(s), and for any loss, damage, or destruction of any property, whether owned by the Customer or others, caused or claimed to have been caused directly or indirectly by the installation, operation, failure to operate, maintenance, removal presence, condition, location, or use of any installation so provided. The Company reserves the right to require each Customer to sign an agreement acknowledging acceptance of the provisions of this Section 2.1.5.E as a condition precedent to such installations. (T)
- F. The Company is not liable for any defacement of or damage to customer premises resulting from the furnishing of services or equipment on such premises or the installation or removal thereof, unless such defacement or damage is caused by negligence or willful misconduct of the Company's agents or employees. (T)
- G. The Company shall be indemnified, defended, and held harmless by the Customer against any claim, loss or damage arising from the Customer's use of services involving claims for libel, slander, invasion of privacy, or infringement of copyright arising from the Customer's own communications. (T)
- H. The entire liability for any claim, loss, damage or expense from any cause whatsoever shall in no event exceed sums actually paid to the Company by the Customer for the specific services giving rise to the claim. No action or proceeding against the Company shall be commenced more than one year after the service is rendered. (T)
- I. The Company makes no warranties or representations, express or implied either in fact or by operation of law, statutory or otherwise, including warranties of merchantability or fitness for a particular use, except those expressly set forth herein.

2. GENERAL REGULATIONS

2.1. UNDERTAKING OF THE COMPANY (CONT'D)

2.1.6. DISCONTINUANCE OF SERVICE FOR CAUSE

- A. Upon nonpayment of any amounts owing to the Company, the Company may, by giving 24 hours prior written notice to the Customer, discontinue or suspend service without incurring any liability. (T)
- B. Upon violation of any of the other material terms or conditions for furnishing service the Company may, by giving 24 hours prior notice in writing to the Customer, discontinue or suspend service without incurring any liability if such violation continues during that period. (T)
- C. Upon condemnation of any material portion of the facilities used by the Company to provide service to a Customer or if a casualty renders all or any material portion of such facilities inoperable beyond feasible repair, the Company, by notice to the Customer, may discontinue or suspend service without incurring any liability. (T)
- D. Upon the Customer's insolvency, assignment for the benefit of creditors, filing for bankruptcy or reorganization, or failing to discharge an involuntary petition within the time permitted by law, the Company may immediately discontinue or suspend service without incurring any liability. (T)
- E. Upon any governmental prohibition or required alteration of the services to be provided or any violation of an applicable law or regulation, the Company may immediately discontinue service without incurring any liability.
- F. In the event of fraudulent use of the Company's network, the Company may without notice suspend or discontinue service. The Customer will be liable for all related costs. The Customer will also be responsible for payment of any reconnection charges. (T)
- G. Upon the Company's discontinuance of service to the Customer under 2.1.6.A. or 2.1.6.B., the Company, in addition to all other remedies that may be available to the Company at law or in equity or under any other provision of this Tariff, may declare all future monthly and other charges which would have been payable by the Customer during the remainder of the term for which such services would have otherwise been provided to the Customer to be immediately due and payable. (T)

2. GENERAL REGULATIONS

2.2. OBLIGATIONS OF THE CUSTOMER

2.2.1. CUSTOMER PREMISES PROVISIONS

- A. The Customer shall provide the personnel, power and space required to operate all facilities and associated equipment installed on the premises of the Customer. (T)
(T)
- B. The Customer shall be responsible for providing Company personnel access to premises of the Customer at any reasonable hour for the purpose of testing the facilities or equipment of the Company. (T)
(T)

2.2.2. LIABILITY OF THE CUSTOMER

- A. The Customer will be liable for damages to the facilities of the Company and for all incidental and consequential damages caused by the negligent or intentional acts or omissions of the Customer, its officers, employees, agents, invitees, or contractors where such acts or omissions are not the direct result of the Company's negligence or intentional misconduct. (T)
(T)
- B. To the extent caused by any negligent or intentional act of the Customer as described in A., preceding, the Customer shall indemnify, defend and hold harmless the Company from and against all claims, actions, damages, liabilities, costs and expenses, including reasonable attorneys' fees, for (1) any loss, destruction or damage to property of any third party, (2) the death of or injury to persons, including, but not limited to, employees or invitees of either party, and (3) any liability incurred by the Company to any third party pursuant to this or any other price list or tariff of the Company, or otherwise, for any interruption of, interference to, or other defect in any service provided by the Company to such third party. (T)
(T)
- C. The Customer shall not assert any claim against any other customer or user of the Company's services for damages resulting in whole or in part from or arising in connection with the furnishing of service under this Tariff including but not limited to mistakes, omissions, interruptions, delays, errors or other defects or misrepresentations, whether or not such other customer or user contributed in any way to the occurrence of the damages, unless such damages were caused solely by the negligent or intentional act or omission of the other customer or user and not by any act or omission of the Company. Nothing in this Tariff is intended either to limit or to expand the Customer's right to assert any claims against third parties for damages of any nature other than those described in the preceding sentence. (T)
(T)

2. GENERAL REGULATIONS

2.2. OBLIGATIONS OF THE CUSTOMER (CONT'D)

2.2.3. DETERMINATION OF JURISDICTION

When ordering Switched Access Service, the Customer may be required to provide a projected PIU factor, which may be subject to audit by the Company. Where jurisdiction can be determined from the call detail, the Company will develop a projected PIU factor from the call detail which will be used to bill the Customer.

The Company will use the jurisdictional report provided by the Customer, or, in the absence of such report, the Company projected PIU factor developed from the call detail, to bill all interstate and intrastate rates and/or nonrecurring charges until the Company receives a revised report from the Customer or updates the Company projected PIU factor developed from the call detail.

The Customer shall keep sufficient detail from which the PIU can be ascertained for at least 18 months and upon request of the Company make the records available for inspection. Such a request will be initiated by the Company no more than once per year. The Customer shall supply the data within thirty (30) calendar days of the Company request.

The Company may, in its sole discretion:

- waive any and all of the jurisdictional reporting obligations imposed by this tariff on the Customer and/or the Company, or
- assign a default PIU of 50%.

(T)

(C)

(C)

(D)

(D)

2. GENERAL REGULATIONS

2.2. OBLIGATIONS OF THE CUSTOMER (CONT'D)

2.2.3. DETERMINATION OF JURISDICTION (CONT'D)

(T)

(D)

(D)

2. GENERAL REGULATIONS

2.2. OBLIGATIONS OF THE CUSTOMER (CONT'D)

2.2.3. DETERMINATION OF JURISDICTION (CONT'D)

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(D)

2. GENERAL REGULATIONS

2.2. OBLIGATIONS OF THE CUSTOMER (CONT'D)

2.2.3. DETERMINATION OF JURISDICTION (CONT'D)

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2. GENERAL REGULATIONS

2.2. OBLIGATIONS OF THE CUSTOMER (CONT'D)

2.2.4. CHANGES IN SERVICE REQUESTED

If the Customer makes or requests material changes in circuit engineering, equipment specifications, service parameters, premises locations, or otherwise materially modifies any provision of the application for service, the Customer's installation fees shall be adjusted accordingly.

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2.2.5. NOTICE TO COMPANY FOR CANCELLATION OF SERVICE

Customers desiring to terminate service shall provide the Company 30 days written notice of their desire to terminate service.

2.2.6. CLAIMS

With respect to any service or facility provided by the Company, the Customer shall indemnify, defend and hold harmless the Company from and against all claims, actions, damages, liabilities, costs and expenses, including reasonable attorney fees for:

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- A. Any loss, destruction or damage to property of the Company or any third party, or the death or injury to persons, including, but not limited to, employees or invitees of either party, to the extent caused by or resulting from the negligent or intentional act or omission of the Customer, its employees, agents, representatives or invitees; or

(T)

- B. Any claim, loss, damage, expense or liability for infringement of any copyright, patent, trade secret, or any proprietary or intellectual property right of any third party, arising from any act or omission by the Customer, including, without limitation, use of Company services and facilities in a manner not contemplated by the agreement between the Customer and the Company.

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2.2.7. TRANSFERS AND ASSIGNMENTS

The Customer may not transfer or assign the use of service without the express prior written consent of the Company. The Company will only permit a Customer to transfer its existing service to another entity if the existing Customer has paid all charges owed to the Company. Such transfer or assignment shall only apply where there is no interruption of the use or location of service. All rates, terms and conditions shall apply to all such permitted transferees or assignees.

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2. GENERAL REGULATIONS

2.3. CUSTOMER EQUIPMENT AND CHANNELS

2.3.1. INTERCONNECTION OF FACILITIES

In order to protect the Company's facilities and personnel and the services furnished to other customers by the Company from potentially harmful effects, the signals applied to the Company's service shall be such as not to cause damage to the facilities of the Company. Any special interface equipment necessary to achieve the compatibility between facilities of the Company and the channels or facilities of others shall be provided at the Customer's expense.

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- A. The Company may, upon notification to the Customer, at a reasonable time, make such tests and inspections as may be necessary to determine that the Customer is complying with the Company's requirements for the installation, operation and maintenance of customer-provided equipment and for the wiring of the connection of customer equipment to Company-owned facilities.

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- B. If the protective requirements in connection with customer-provided equipment are not being complied with, the Company may take such action as necessary to protect its facilities and personnel and will promptly notify the Customer by registered mail in writing of the need for protective action. In the event that the Customer fails to advise the Company within 10 days after such notice is received or within the time specified in the notice that corrective action has been taken, the Company may take whatever additional action is deemed necessary, including the suspension of service, to protect its facilities and personnel from harm. The Company will, upon request 24 hours in advance, provide the Customer with a statement of technical parameters that the Customer's equipment must meet.

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2.3.2. INSPECTION AND TESTING

- A. Upon suitable notification to the Customer, and at a reasonable time, the Company may make such tests and inspections as may be necessary, without penalty or liability, to determine that the Customer is complying with the requirements set forth in Section 2.3 for the installation, operation, and maintenance of customer-provided facilities, equipment, and wiring in the connection of customer-provided facilities and equipment to Company-owned facilities and equipment.

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- B. If the protective requirements for customer-provided equipment are not being complied with, the Company may take such action as it deems necessary to protect its facilities, equipment, and personnel. The Company will notify the Customer promptly if there is any need for further corrective action. Within ten days of receiving this notice, the Customer must take this corrective action and notify the Company of the action taken. If the Customer fails to do this, the Company may take whatever additional action is deemed necessary, including the suspension of service, to protect its facilities, equipment and personnel from harm.

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2. GENERAL REGULATIONS

2.4. ORDERING, RATING AND BILLING OF ACCESS SERVICES WHERE MORE THAN ONE EXCHANGE COMPANY IS INVOLVED

The Company accepts and adheres to the Ordering and Billing Forum guidelines, Multiple Exchange Carrier Access Billing (MECAB) and Multiple Exchange Carrier Ordering and Design (MECOD).

2.5. ALLOWANCE FOR INTERRUPTIONS IN SERVICE

2.5.1. GENERAL

- A. A credit allowance will be given when service is interrupted, except as specified in 2.5.2, following. A service is interrupted when it becomes inoperative to the Customer; e.g., the Customer is unable to transmit or receive because of a failure of a component furnished by the Company under this Tariff. (T)
(T)
- B. An interruption period begins when the Customer reports a service, facility or circuit to be inoperative and, if necessary, releases it for testing and repair. An interruption period ends when the service, facility, or circuit is operative. (T)
- C. If the Customer reports a service, facility, or circuit to be interrupted but declines to release it for testing and repair, the service, facility, or circuit is considered to be impaired but not interrupted. No credit allowances will be made for a service, facility, or circuit considered by the Company to be impaired. (T)

2.5.2. NOTIFICATION OF SERVICE-AFFECTING ACTIVITIES

The Company will provide the Customer reasonable notification of service-affecting activities that may occur in normal operation of its business. Such activities may include, but are not limited to, equipment or facilities additions, removals or rearrangements and routine preventative maintenance. Generally, such activities are not specific to an individual Customer but affect many customers' services. No specific advance notification period is applicable to all service activities. The Company will work cooperatively with the Customer to determine the reasonable notification requirements. With some emergency or unplanned service-affecting conditions, such as an outage resulting from cable damage, notification to the Customer may not be possible. (T)
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2. GENERAL REGULATIONS

2.5. ALLOWANCE FOR INTERRUPTIONS IN SERVICE (CONT'D)

2.5.3. LIMITATIONS ON ALLOWANCES

No credit allowance will be made for any interruption in service:

- A. Due to the negligence of or noncompliance with the provisions of this Tariff by any person or entity other than the Company, including but not limited to the Customer or other common carriers connected to the service of the Company; (T)
- B. Due to the failure of power, equipment, systems, connections or services not provided by the Company;
- C. Due to circumstances or causes beyond the control of the Company;
- D. During any period in which the Company is not given full and free access to its facilities and equipment for the purposes of investigating and correcting interruptions;
- E. During any period in which the Customer continues to use the service on an impaired basis; (T)
- F. During any period when the Customer has released service to the Company for maintenance purposes or for implementation of a Customer order for a change in service arrangements; (T)
(T)
- G. That occurs or continues due to the Customer 's failure to authorize replacement of any element of special construction; and (T)
- H. That was not reported to the Company within thirty (30) days of the date that service was affected.

2. GENERAL REGULATIONS

2.5. ALLOWANCE FOR INTERRUPTIONS IN SERVICE (CONT'D)

2.5.4. USE OF ANOTHER MEANS OF COMMUNICATIONS

If the Customer elects to use another means of communications during the period of interruption, the Customer must pay the charges for the alternative service used. (T)
(T)

2.5.5. APPLICATION OF CREDITS FOR INTERRUPTIONS IN SERVICE

In case of an interruption to any service, allowance for the period of interruption, if not due to the negligence of the Customer, shall be as follows: (T)

- A. For Switched Access Service, no credit shall be allowed for an interruption of less than 24 hours. The Customer shall be credited for an interruption of 24 hours or more at the rate of 1/30 of (a) any applicable monthly rates, or (b) the assumed minutes of use charge for each period of 24 hours or major fraction thereof that the interruption continues. (T)
- B. The credit allowance(s) for an interruption or for a series of interruptions shall not exceed (a) any applicable monthly rates, or (b) the assumed minutes of use charge for the service interrupted in any one monthly billing period.

2. GENERAL REGULATIONS

2.6. PRIVACY RULES

Automatic Number Identification (ANI) derived information may be used only for billing, routing, screening, ensuring network performance, completing calls or performing, services directly related to the telephone caller's original call or transaction. Therefore, should the business that receives ANI information have an established customer relationship with the caller, the business may offer products or services to the caller that are directly related to the products or services previously purchased by the caller. The business that receives ANI information may not establish marketing lists or conduct ongoing market calls for unrelated products or services or sell the information derived from ANI (caller's name, address, telephone billing number, purchasing habits, etc.) to third parties unless it gets the prior written consent of the caller.

2. GENERAL REGULATIONS

2.7. APPLICATION OF RATES AND CHARGES

The regulations set forth in this section govern the application of rates for services contained in other sections of this Tariff.

2.7.1. MEASURING ACCESS MINUTES

Customer traffic will be measured in minutes of use by the Company at its End Office, Trunk Gateway, or functionally equivalent locations. Originating and terminating calls will be measured (i.e., recorded or assumed) by the Company to determine the basis for computing chargeable access minutes. Access minutes or fractions thereof are accumulated over the billing period and are then rounded up to the nearest access minute.

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2. GENERAL REGULATIONS

2.7. APPLICATION OF RATES AND CHARGES (CONT'D)

2.7.2. RATES BASED UPON DISTANCE

Where the charges for service are specified based upon distance, the following rules apply:

- A. Distance between two points is measured as airline distance. In the case of distance measurement for tandem transport, the two points are the access tandem and the Company's End Office, Trunk Gateway, or functionally equivalent location. Their measurement points are a set of geographic "V" (vertical) and "H" (horizontal) coordinates.
- B. The airline distance between any two points is determined as follows:
 1. Obtain the "V" and "H" coordinates for each point.
 2. Compute the difference between the "V" coordinates of the two points; and the difference between the two "H" coordinates.
 3. Square each difference obtained in step (2) above.
 4. Add the square of the "V" difference and the square of the "H" difference obtained in step (3).
 5. Divide the sum of the squares by 10. Round to the next higher whole number if any fraction is obtained.
 6. Obtain the square root of the whole number result obtained above. Round to the next higher whole number if any fraction is obtained. This is the airline mileage.

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2. GENERAL REGULATIONS

2.7. APPLICATION OF RATES AND CHARGES (CONT'D)

2.7.3. NONRECURRING CHARGES

Nonrecurring charges are one-time charges that apply for a specific work activity (i.e., installation or service rearrangements).

A. Installation of Service

Nonrecurring charges apply to each Access Service installed. For Switched Services ordered on a per trunk basis, the charge is applied per trunk. For Switched Services ordered on a busy hour minutes of capacity basis, the charge is also applied on a per trunk basis but the charge applies only when the capacity ordered requires the installation of an additional trunk(s).

B. Service Rearrangements

All changes to existing services other than changes involving administrative activities only will be treated as a discontinuance of the existing service and an installation of a new service. The nonrecurring charge described in A., preceding, will apply for this work activity. Moves that change the physical location of the point of termination are described below.

1. Moves Within the Same Building

When the move is to a new location within the same building, the charge for the move will be an amount equal to one half of the nonrecurring charge for the capacity affected. There will be no change in the minimum period requirements.

2. Moves to a Different Building

Moves to a different building will be treated as a discontinuance and start of service and all associated nonrecurring charges will apply. New minimum period requirements will be established for the new service. The Customer will also remain responsible for satisfying all outstanding minimum period charges for the discontinued service.

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2. GENERAL REGULATIONS

2.8. [RESERVED FOR FUTURE USE]

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2. GENERAL REGULATIONS

2.8. [RESERVED FOR FUTURE USE]

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2. GENERAL REGULATIONS

2.8. [RESERVED FOR FUTURE USE]

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2. GENERAL REGULATIONS

2.8. [RESERVED FOR FUTURE USE]

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2. GENERAL REGULATIONS

2.8. [RESERVED FOR FUTURE USE]

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2. GENERAL REGULATIONS

2.8. [RESERVED FOR FUTURE USE]

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2. GENERAL REGULATIONS

2.8. [RESERVED FOR FUTURE USE]

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2. GENERAL REGULATIONS

2.8. [RESERVED FOR FUTURE USE]

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2. GENERAL REGULATIONS

2.9. BILLING AND PAYMENT

The Company shall bill on a current basis all charges incurred by and credits due to the Customer. The Company shall bill in advance charges for all services provided during the ensuing billing period except for services billed on a per usage basis.

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Billing shall be based on usage as determined by call detail. When call detail is unavailable, bills shall be based on estimated PIU as described in Section 2.2.3. The Company will apply a default 50% assumed PIU factor when call detail is unavailable and the Customer fails to provide PIU.

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All bills for service provided to the Customer by the Company are due (payment date) within 30 calendar days of the bill date and are payable in immediately available funds. If such payment due date would cause payment to be due on a Saturday, Sunday or Legal Holiday, payment for such bills shall be due from the Customer as follows:

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If such payment due date falls on a Sunday or on a Legal Holiday, the payment due date shall be the first non-Holiday date following such Sunday or Legal Holiday. If such payment due date falls on a Saturday or on a Legal Holiday that is observed on Tuesday, Wednesday, Thursday or Friday, the payment due date shall be the last non-Holiday day preceding such Saturday or Legal Holiday.

The Customer will be assessed a charge of twenty-five dollars (\$25.00) for each check submitted by the Customer to the Company which a financial institution refuses to honor.

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If any portion of the payment is received by the Company after the due date, or if any portion of the payment is received by the Company in funds that are not immediately available upon presentment, then a late payment penalty shall be due to the Company. The late payment penalty shall be the portion of the payment not received by the due date, multiplied by a late factor. The late factor shall be 1.5% per month.

Text previously on this page has been moved to Section 2, Page 32.

2. GENERAL REGULATIONS

2.9. BILLING AND PAYMENT (CONT'D)

2.9.1. TAXES

The Customer is responsible for payment of any sales, use, gross receipts, excise, access, franchise or other local, state and federal taxes, charges, fees or surcharges (however designated) (excluding taxes on the Company's net income) imposed on or based upon the provision, sale or use of network services. Where applicable, such taxes will be billed by the Company to the Customer and will be separately stated on the Customer's invoice; provided, however, that the Company will not bill to the Customer such taxes as may be exempted by a tax exemption or resale certificate for operation in any jurisdiction in which the Customer obtains such a certificate. (T)

2.9.2. CLAIMS AND DISPUTES

In the event that a billing dispute occurs concerning any charge billed to the Customer by the Company, the Customer must submit a documented claim for the disputed amount. The Customer will submit all documentation as may reasonably be required to support the claim. All claims must be submitted to the Company within 120 days of receipt of billing for that service. If the Customer does not submit a claim as stated above, the Customer waives all rights to filing a claim thereafter. (T)

The Customer must pay all undisputed charges by the applicable due date. After filing a claim for disputed charges with the Company, the Customer may be required, at the Company's sole discretion, to place all disputed amounts into a U.S.-based, interest bearing escrow account with a third party escrow agent, with costs paid for by the disputing party. (N)

All disputes between the Company and the Customer that cannot be settled through negotiation may be resolved by arbitration upon written demand of either party. Arbitration shall be referred to the American Arbitration Association (AAA) and conducted pursuant to its Commercial Arbitration Rules, unless the parties agree otherwise. The arbitrator shall have the authority to award compensatory damages solely; such award shall be final and binding and may be entered in any court having jurisdiction thereof. The provisions of the Federal Arbitration Act shall govern such arbitration. This dispute process does not preclude the Customer from filing a complaint with the Commission. (T)

Text on this page has been moved from Section 2, Page 31.

2. GENERAL REGULATIONS

2.9. BILLING AND PAYMENT (CONT'D)

2.9.3. PAYMENT OF DEPOSITS

To safeguard its interests, the Company may require a Customer to make a deposit to be held as a guarantee for the payment of charges. A deposit does not relieve the Customer of the responsibility for the prompt payment of bills on presentation. The deposit will not exceed an amount equal to:

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- two month's charges for a service or facility which has a minimum payment period of one month; or
- the charges that would apply for the minimum payment period for a service or facility which has a minimum payment period of more than one month; except that the deposit may include an additional amount in the event that a termination charge is applicable.

A deposit may be required in addition to an Advance Payment.

When a service or facility is discontinued, the amount of a deposit, if any, will be applied to the Customer's account and any credit balance remaining will be refunded. Before the service or facility is discontinued, the Company may, at its option, return the deposit or credit it to the Customer's account. If the amount of the deposit is insufficient to cover the balance due to the Customer's account, the Company retains the right to collect any amounts owing after the deposit has been applied plus any costs related to the collection of any remaining balance.

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Deposits held will accrue interest at a simple interest rate equal to the rate applicable for the late payment charge set forth in 2.9, preceding. Interest will not accrue on any deposit after the date on which reasonable effort has been made to return it to the Customer.

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Text on this page has been moved to Section 2, Page 34.

2. GENERAL REGULATIONS

2.9. BILLING AND PAYMENT (CONT'D)

2.9.4. ADVANCE PAYMENTS

To safeguard its interests, the Company may require a Customer to make an Advance Payment before services and facilities are furnished. The Advance Payment will not exceed an amount equal to the non-recurring charge(s) and one month's charges for the service or facility. In addition, where special construction is involved, the Advance Payment may also include an amount equal to the estimated non-recurring charges for the special construction and recurring charges (if any) for a period to be set between the Company and the Customer. The Advance Payment will be applied, as a credit, to the Customer's billed service charges. When there has been a decrease in the number of services originally ordered, only the portion of the Advance Payment for services actually installed will be credited. An Advance Payment may be required in addition to a deposit.

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2.10. SPECIAL CONSTRUCTION

All rates and charges quoted herein provide for the furnishing of facilities when suitable facilities are available or where the design or construction of the necessary facilities does not involve unusual costs.

When, at the request of the Customer, the Company designs and/or constructs facilities that it would otherwise not construct, or the construction of such facilities involves a greater expense than would otherwise be incurred, Special Construction nonrecurring charges may apply.

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2.11. NON-ROUTINE INSTALLATION

At the Customer's request, installation and/or maintenance may be performed outside the Company's regular business hours or in hazardous locations. In such cases, charges based on cost of the actual labor, material, or other costs incurred by or charged to the Company will apply. If installation is started during regular business hours but at the Customer's request extends beyond regular business hours into time periods including, but not limited to, weekends, holidays, and/or night hours, additional charges may apply.

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Text on this page has been moved from Section 2, Page 33.

3. SWITCHED ACCESS SERVICE

3.1. GENERAL

Switched Access Service provides a physical or logical transmission path for the routing, transport, origination and/or termination of Customer traffic between End Users and a third-party's access tandem (or equivalent) by utilizing the services, facilities or equipment owned or controlled through contract or other means, by the Company.

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3.2. TRAFFIC TYPE DESIGNATION

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The Company affirms that all of its Connecticut traffic either originates from or terminates to a VoIP end user and is therefore, VoIP-PSTN.

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3. SWITCHED ACCESS SERVICE

3.3. SWITCHED ACCESS RATE CATEGORIES

The rate categories that apply to Switched Access Service provided by the Company are as follows:

- Carrier Common Line
- Tandem Transport
- Network Access

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3. SWITCHED ACCESS SERVICE

3.3. SWITCHED ACCESS RATE CATEGORIES (CONT'D)

3.3.1. CARRIER COMMON LINE

The Carrier Common Line rate category provides Customers with the use of services, facilities, and/or equipment owned, or controlled through contractual or other arrangements, by the Company in order to access End Users necessary to furnish intrastate communications. No Carrier Common Line charge is assessed in this Tariff.

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3. SWITCHED ACCESS SERVICE

3.3. SWITCHED ACCESS RATE CATEGORIES (CONT'D)

3.3.2. TANDEM TRANSPORT

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The Tandem Transport rate category provides for the transmission between an access tandem and the Company's End Office, Trunk Gateway, or functionally equivalent location. Rate elements include:

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A. Transport Termination

(T)

The Transport Termination element includes the non-distance sensitive portion of Tandem Transport and is assessed on a per-access-minute-of-use basis.

(T)

B. Transport Mileage

(T)

The Transport Mileage element includes the distance sensitive portion of Tandem Transport and is assessed on a per-access-minute-of-use-per-mile basis. Transport Mileage will be calculated based on the airline mileage between the access tandem (or functional equivalent) and the Company's End Office, Trunk Gateway, or functionally equivalent location within the applicable LATA.

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3. SWITCHED ACCESS SERVICE

3.3. SWITCHED ACCESS RATE CATEGORIES (CONT'D)

3.3.2. TANDEM TRANSPORT (CONT'D)

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3. SWITCHED ACCESS SERVICE

3.3. SWITCHED ACCESS RATE CATEGORIES (CONT'D)

3.3.3. NETWORK ACCESS

Network Access provides the functional equivalent of traditional end office switching. It consists of the following elements: Network Switching and Common Trunk Port.

A. Network Switching

Network Switching provides for (a) the establishment of a call path for the routing of Customer communications from the Company's End Office, Trunk Gateway, or functionally equivalent location to a Company End User and (b) the establishment of a call path for the routing of communications originating from a Company End User for delivery to the Company's End Office, Trunk Gateway, or functionally equivalent location.

The "establishment" of call path and routing is achieved through equipment and facilities, including, in some cases, a soft switch or similar equipment, owned or controlled through contract or other means, by the Company, which allows for the routing of voice communications between the Company's Trunk Gateway Location and End Users via SS7 signaling based on telephone numbers obtained by the Company and assigned to End Users as set forth in the LERG.

B. Common Trunk Port

Common Trunk Port provides for the termination of tandem transport trunks in shared ports at the Company's End Office, Trunk Gateway, or functionally equivalent location. The Common Trunk Port rate is assessed on a per-MOU basis to all trunkside originating and terminating access minutes routed to the Company via a third party access tandem.

3. SWITCHED ACCESS SERVICE

3.3. SWITCHED ACCESS RATE CATEGORIES

3.3.4. 8XX TOLL-FREE ACCESS SERVICE

All appropriate Switched Access rate elements apply to 8XX Toll-Free Access Service.

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8XX Toll-Free Access Service is an originating access service offering. The service provides for the forwarding of End User originated 8XX calls to a Company Service Control Point, which will initiate a query to the database for the identification and delivery of the call. The call is forwarded to the appropriate customer based on the dialed 8XX number.

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A. Customer Identification Charge

The 8XX Toll-Free Access Service Customer Identification Charge applies for the identification of and delivery of 8XX calls to the appropriate customer. The charge is assessed to the Customer on a per query basis.

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3. SWITCHED ACCESS SERVICE

3.4. SWITCHED ACCESS RATES AND CHARGES

3.4.1. SERVICE IMPLEMENTATION

	NONRECURRING CHARGE
A. Installation Charge, Per Location, Per Order	
1. First Trunk	\$0.00
2. Each Subsequent Trunk	0.00

3.4.2. CARRIER COMMON LINE

	RECURRING RATE PER MOU	
A. Originating	[1]	(C)
B. Terminating	[1]	(C)

3.4.3. TANDEM TRANSPORT

A. Transport Termination		
1. Originating	[1]	(C)
2. Terminating	[1]	(C)
B. Transport Mileage, per mile		
1. Originating	[1]	(C)
2. Terminating	[1]	(C)

[1] Switched access rates are billed at the Company's tariffed interstate rates as found in Comcast Phone, LLC Tariff FCC No. 1 which may be viewed at www.comcast.com/tariffs. (C)

3. SWITCHED ACCESS SERVICE

3.4. SWITCHED ACCESS RATES AND CHARGES (CONT'D)

3.4.3. TANDEM TRANSPORT (CONT'D)

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3. SWITCHED ACCESS SERVICE

3.4. SWITCHED ACCESS RATES AND CHARGES (CONT'D)

3.4.4. NETWORK ACCESS

A. Network Switching		RECURRING RATE PER MOU	
1. Originating		[1]	(C)
2. Terminating		[1]	(C)
B. Common Trunk Port			
1. Originating		[1]	(C)
2. Terminating		[1]	(C)

3.4.5. 8XX TOLL-FREE ACCESS

		RECURRING RATE PER QUERY	
A. Customer Identification Charge		[1]	(C)

[1] Switched access rates are billed at the Company's tariffed interstate rates as found in Comcast Phone, LLC Tariff FCC No. 1 which may be viewed at www.comcast.com/tariffs.

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4. SPECIAL ACCESS SERVICE

4.1. GENERAL

Except as set forth in 4.2 following, Special Access Services are not generally available but may be provided subject to the terms, conditions, and limitations as set forth in Section 5.3, following, for Special Assemblies and Individual Case Basis Arrangements.

4.2. ETHERNET TRANSPORT SERVICES

Comcast's Ethernet Transport Services will be provided in accordance with the service descriptions, technical specifications, and performance standards set forth in this Section 4.2 of this Tariff. If any of the definitions or regulations contained in this Section 4.2 conflict with those elsewhere in this Tariff, those contained in this Section 4.2 shall prevail.

Service is offered subject to facility and equipment availability. Intrastate Ethernet Transport Service may only be purchased by Customers whose traffic on the service will be at least 90% intrastate in nature.

4.2.1. DEFINITIONS

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- A. "Agreement" consists of the Enterprise Master Services Agreement executed by the Customer and accepted by Comcast, the Product-Specific Attachment, the terms and conditions contained in this Tariff, any written amendments executed by both parties, and each Sales Order accepted by Comcast under the Agreement.
- B. "Comcast" refers to the operating company affiliate or subsidiary of Comcast that provides the Services.
- C. "Comcast Equipment" refers to any and all facilities, equipment or devices provided by Comcast or its authorized contractors at the Service Location(s) that are used to deliver any of the Services including, but not limited to, all terminals, wires, modems, lines, circuits, ports, routers, gateways, switches, channel service units, data service units, cabinets, and racks. Notwithstanding the above, inside telephone wiring within the Service Location, whether or not installed by Comcast, shall not be considered Comcast Equipment.

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.1. DEFINITIONS (CONT'D)

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| D. "Comcast Switch" means Comcast's ethernet terminating device located at a Service Location and used for provisioning its services and the delivery of the UNI (as defined in Schedule A-1). The Comcast Switch constitutes Comcast Equipment. | (N)

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| E. "Customer Switch or Router" means the switch or router installed at the Service Location and used to connect to the UNI. The Customer Switch or Router may be Comcast Equipment or Customer-Provided Equipment. | (N) |
| F. "Customer" refers to the company, corporation or other entity that purchases Services from Comcast. | (C)(T)
(C) |
| G. "Estimated Availability Date" means the target date for delivery of Service. | (C)(T) |
| H. "HFC Network" means a hybrid fiber coax network. | (N) |
| I. "Interconnection Facilities" means transmission capacity provided by Comcast, Customer or a third-party supplier to extend the Comcast Equipment from a Comcast terminal to any other location (e.g., a local loop provided by a local exchange company or other communications company). | (C)(T)
(C)

(C) |
| J. "Jitter", also known as Frame Delay Variation, is defined as the short-term variations measured for a portion of successfully delivered service frames over a 30 day period. | (C)(T)
(C)
(C) |
| K. "Latency", also known as Frame Delay, is defined as the maximum delay measured for a portion of successfully delivered service frames over a 30 day period. | (C)(T)
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| L. "Objective" – As it relates to Technical Specifications and Performance Standards is the definition of how the Service is provisioned. It does not constitute a guarantee. For guarantees, please see Section 4.2.15 – Service Level Agreement (SLA). | (C)(T)
(C)

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Material appearing on this page was previously located in Section 4, Pages 1 and 2.

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.1. DEFINITIONS (CONT'D)

- (C)
- (C)
- M. "Off-Net" - means geographical locations that are outside of Comcast's service area and/or geographical locations that are within Comcast's service area generally, but are not readily accessible by Comcast Network facilities. All Off-Net Services are provided by third-party service providers. (T)
- N. "Off-Net Dedicated Fiber" – means Off-Net services that are provisioned over dedicated fiber optic network. (N)
- O. "Off-Net Non-Dedicated Fiber"- means Off-Net services that are provisioned over a non-dedicated fiber optic network.
- P. "Off-Net Non-Fiber– means Off- Net services that are provisioned over a non-fiber network such as coax, fixed wireless, and other non-fiber access technologies. (N)
- Q. "On-Net" - means geographical locations where Comcast currently provides Services through its Comcast Network. On-Net Services may be provisioned over a fiber optic network, ("On-Net Fiber") or via a hybrid fiber coax network ("On Net HFC Network"), as available through Comcast. (T)
- R. "Packet Loss", also known as Frame Loss, is the difference between the number of service frames transmitted at the ingress UNI and the total number of service frames received at the egress UNI over a 30 day period. (T)
- S. "Planned Service Interruption" means any Service Interruption caused by planned work such as scheduled maintenance or planned enhancements or upgrades to the network. (T)

Material previously appearing on this page is now located in Section 4, Page 1.1.

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.1. DEFINITIONS (CONT'D)

- T. “Product Specific Attachment(s) (PSA)” refers to the additional terms and conditions applicable to Services ordered by Customer under the Agreement.
- U. “Sales Order” means a request for Comcast to provide the Services to a service location submitted by Customer to Comcast (a) on a then-current Comcast form designated for that purpose or (b) if available, through a Comcast electronic order processing system designated for that purpose.
- V. “Service” means “Service” means (1) Ethernet Transport Services, and (2) Business Wavelength Services. (T)
(T)
- W. “Service Commencement Date” means the date(s) on which Comcast first makes Service available for use by Customer. A single Sales Order containing multiple Service Locations or Services may have multiple Service Commencement Dates.
- X. “Service Interruption” means a complete loss of signal that renders the Service unusable.
- Y. “Service Location” means the Customer location(s) where Comcast provides Services, to the extent the Customer owns, leases, or otherwise controls such location(s).
- Z. “Service Term” means the duration of time (commencing on the Service Commencement Date) for which Services are ordered, as specified in a Sales Order.
- AA. “Termination Charges” refers to charges that may be imposed by Comcast if, prior to the end of the applicable Service Term (a) Comcast terminates Services for cause or (b) Customer terminates Services without cause. Termination Charges are as set forth in each PSA, and are in addition to any other rights and remedies under the Agreement.

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.2. PROVISIONING ENTITY

On-Net Service shall be provided by Comcast Business Communications, LLC. On-Net Service provided over the HFC Network and Off-Net Services are available in a limited number of Comcast markets.

4.2.3. REGULATORY APPROVAL; TRAFFIC MIX

Comcast's pricing for Service may be subject to FCC, public service commission or other regulatory approval. Further, Customer represents that its use of Service hereunder will be exclusively for the transmission of communications that is classified as jurisdictionally interstate under FCC rules and regulations. For services for which the endpoints of the service are in the same state, Customer specifically represents that more than ten percent (10%) of the traffic transmitted via the Service will be interstate. (For this purpose, Customer's representation relates to the traffic carried over the Service rather than the locations of the physical endpoints of the facility over which the Service is delivered.) If at any time during the term of the Agreement or any Service Term, less than ten percent (10%) of the traffic transmitted via such Service(s) is interstate, Customer shall immediately notify Comcast of the same in writing. Further, Comcast reserves the right, in its reasonable sole discretion, to reclassify Customer's use of Service as jurisdictionally interstate or intrastate, as appropriate. Customer agrees to indemnify, defend, and hold Comcast harmless from any claims by third parties, including, without limitation, any governmental entities, resulting from or arising out of Customer's failure to properly represent or certify the jurisdictional nature of its use of the Service(s).

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4.2.4. CUSTOM INSTALLATION FEES

All rates and charges quoted herein provide for the furnishing of facilities when suitable facilities are available or where the design or construction of the necessary facilities does not involve unusual costs. When, at the request of Customer, Comcast designs and/or constructs facilities that it would otherwise not construct, or the construction of such facilities involves a greater expense than would otherwise be incurred, Custom Installation nonrecurring charges may apply.

Once Comcast accepts a Sales Order for Service, Comcast will invoice Customer for all Custom Installation fee(s). Customer will pay the Custom Installation fee(s) within thirty (30) days of the invoice date unless a payment schedule is specified in the applicable Service Order.

4.2.5. PROVISIONING INTERVAL

Following its acceptance of a Sales Order, Comcast shall notify Customer of the Estimated Availability Date applicable to that Sales Order. Comcast shall use commercially reasonable efforts to provision the Service on or before the Estimated Availability Date; provided, however, that Comcast's failure to provision by said date shall not constitute a breach of the Agreement.

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.6. SERVICE COMMENCEMENT DATE

Comcast shall inform Customer when Service is available and performing in accordance with the “Technical Specifications” set forth in Section 4.2.15 (“Availability Notification”). Charges for Service shall begin to accrue as of the Service Commencement Date. The Service Commencement Date shall be earliest of: (a) the date on which Customer confirms receipt of and concurrence with the Availability Notification; (b) five (5) business days following the date of the Availability Notification, if Customer fails to notify Comcast that the Service does not comply materially with the Technical Specifications set forth in Section 4.2.15 hereto; or (c) the date on which Customer first uses the Service.

4.2.7. MINIMUM SERVICE TERM

The charges set forth or referenced in each Sales Order have been extended to Customer in reliance on the Service Term set forth therein. In the event that a Service Term has not been expressly set forth in a Sales Order, the minimum Service Term for Services is twelve (12) months.

4.2.8. TERMINATION CHARGES

A. Termination Charges for On-Net Services

1. Subject to Section 4.2.8.C, in the event that On-Net Service is terminated following Comcast’s acceptance of the applicable Sales Order but prior to the Service Commencement Date, Customer shall pay Termination Charges equal to one hundred and twenty percent (120%) of the costs and expenses incurred by Comcast in installing or preparing to install the On-Net Service. **(T)**

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.8. TERMINATION CHARGES (CONT'D)

A. Termination Charges for On-Net Services (Cont'd)

2. Subject to Section 4.2.8.C, in the event that On-Net Service is terminated on or following the Service Commencement Date but prior to the end of the applicable Service Term, Customer shall pay Termination Charges equal to a percentage of the monthly recurring charges remaining for the unexpired portion of the then-current Service Term, calculated as follows: (T)
- a. 100% of the monthly recurring charges with respect to months 1-12 of the Service Term; plus
 - b. 80% of the monthly recurring charges with respect to months 13-24 of the Service Term; plus
 - c. 65% of the monthly recurring charges with respect to months 25 through the end of the Service Term; plus
 - d. 100% of any remaining, unpaid Custom Installation Fees.

Termination Charges shall be immediately due and payable upon cancellation or termination and shall be in addition to any and all accrued and unpaid charges for the Service rendered by Comcast through the date of cancellation or termination.

B. Termination Charges for Off-Net Services

1. Subject to Section 4.2.8.C, in the event that Off-Net Service is terminated following Comcast's acceptance of the applicable Sales Order but prior to the Service Commencement Date, Customer shall pay Termination Charges equal to one hundred and twenty percent (120%) of the costs and expenses incurred by Comcast in installing or preparing to install the Off- Net Service, including any third-party incurred by Comcast as a result of the early termination of the Service. (N)
2. Subject to Section 4.2.8.C, in the event that Off-Net Service is terminated on or following the Service Commencement Date but prior to the end of the applicable Service Term, Customer shall pay Termination Charges equal to: (C)
- a. 100% of the monthly recurring charges remaining through the end of the Service Term plus
 - b. 100% of any remaining, unpaid Custom Installation Fees; plus
 - c. any third-party charges, incurred by Comcast as a result of the early termination of Service. (C)

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.8. TERMINATION CHARGES (CONT'D)

C. Exclusions

Termination Charges shall not apply to Service terminated by Customer (a) as a result of Comcast's material and uncured breach of the Agreement.

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D. Portability

Customer may terminate an existing On-Net Service ("Existing Service") and turn up a replacement On-Net Service (i.e. activate Service with termination points on Comcast's network that are different than those of the Existing Service) ("Replacement Service") without incurring Termination Charges with respect to the Existing Service, provided that (a) the Replacement Service must have a Service Term equal to or greater than the remaining Service Term of the Existing Service but in no event less than twelve (12) months; (b) the Replacement Service must have monthly recurring charges equal to or greater than the monthly recurring charges for the Existing Service; (c) Customer submits a Sales Order to Comcast for the Replacement Service within ninety (90) days after termination of the Existing Service and that Sales Order is accepted by Comcast; (d) Customer reimburses Comcast for any and all installation charges that were waived with respect to the Existing Service; and (e) Customer pays the actual costs incurred by Comcast in installing and provisioning the Replacement Service.

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E. Upgrades

Customer may upgrade the speed or capacity of an Existing Service without incurring Termination Charges, provided that (a) the upgraded Service (the "**Upgraded Service**") must assume the remaining Service Term of the Existing Service, but in no event less than twelve (12) months; (b) the Upgraded Service must have the same points of termination on Comcast's network as the Existing Service; (c) Customer submits a Sales Order to Comcast for the Upgraded Service and that Sales Order is accepted by Comcast; (d) Customer pays Comcast's applicable nonrecurring charges for the upgrade; and (e) Customer agrees to pay the applicable monthly recurring charges for the Upgraded Service commencing with the upgrade. Upgrades to Off-Net Services are subject to the applicable third party service provider rules and availability. Comcast has no obligation to upgrade Customer's Off-Net Service.

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4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.8. TERMINATION CHARGES (CONT'D)

F. Off-Net Services

If customer is receiving off-net services, comcast shall, in its sole discretion, have the ability to (a) provide on-net services in lieu of such off-net services and/or (b) substitute the current off-net services provider for an alternate off-net services provider, each, at no additional cost to customer; provided, however, that comcast shall not make any changes to customer's off-net services provider that could, in comcast's reasonable opinion, impair customer's specific network design or provider attributes (*e.g.*, diversity). Comcast shall use commercially reasonable efforts to coordinate a mutually agreeable time with customer to conduct any such changes.

(N)

(N)

4.2.9. ADDITIONAL INFORMATION

As necessary for the interconnection of the Service with services provided by others, Comcast may request (as applicable), and Customer will provide to Comcast, circuit facility assignment information, firm order commitment information, and design layout records necessary to enable Comcast to make the necessary cross-connection between the Service and Customer's other service provider(s). Comcast may charge Customer nonrecurring and monthly recurring cross-connect charges to make such connections.

4.2.10. ETHERNET NETWORK SERVICE (ENS) SERVICE DESCRIPTION

ENS is a multipoint-to-multipoint transport service that enables Customer to connect multiple physically distributed Service Locations across a metropolitan area network ("MAN") or wide area network ("WAN") as if such Service Locations are on the same local area network ("LAN") by providing an ethernet virtual connection ("EVC") between such Service Locations. The EVC is provided by using industry standard 100 Mbps, 1 Gbps, 10 Gbps or 100 Gbps ethernet user-to-network interfaces, which are located on a Comcast Switch ("UNI") to enable bidirectional connections between the Customer Switches or Routers at the Service Locations. ENS provides virtual LAN ("VLAN") transparency, enabling Customer to implement Customer's own VLANs without any coordination with Comcast. ENS is available with flexible bandwidth options from 1 Mbps to 10 Gbps. Comcast offers three (3) classes of ENS, as described in the Technical Specifications.

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4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.11. ETHERNET PRIVATE LINE (EPL) SERVICE DESCRIPTION

EPL is a point-to-point transport service that provides an EVC between two (2) Service Locations by using industry standard 100 Mbps, 1 Gbps, 10 Gbps or 100 Gbps UNI to enable bidirectional connections between the Customer Switches or Routers at such Service Locations. EPL is available with flexible bandwidth options from 1 Mbps to 10 Gbps. EPL enables the Customer to use any VLANs without coordination with Comcast. Comcast offers three (3) classes of EPL, as described in the Technical Specifications.

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4.2.12. ETHERNET VIRTUAL PRIVATE LINE (EVPL) SERVICE DESCRIPTION

EVPL is a point-to-multipoint transport service that provides a connection between two (2) Service Locations similar to EPL, but supports the added flexibility to multiplex multiple EVCs on a single UNI at the Customer's hub or aggregation Service Location (the "Aggregation Service Location"). Specifically, EVPL provides an EVC between the Aggregation Service Location and one or more other Service Locations by using industry standard 100 Mbps, 1 Gbps, 10 Gbps or 100 Gbps UNI to enable bidirectional connections between the Customer Switch or Router at Customer's Aggregation Service Location and the Customer Switch or Router at one or more of Customer's other Service Locations. The multiplexing capability is not available at Service Locations served by Comcast On-Net HFC. For clarity, in order for EVPL to enable a connection between two (2) Service Locations, one of such Service Locations must be the Aggregation Service Location. By way of example, in the diagram below, EVPL enables a bidirectional connection between Service Location 1 and Service Location 2, and between Service Location 1 and Service Location 3, but not between Service Location 2 and Service Location 3. EVPL is available with flexible bandwidth options from 1 Mbps to 10 Gbps. Comcast offers three classes of EVPL, as described in the Technical Specifications.

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4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.13. MULTIPLE ACCESS OPTIONS

The services are available with the following access options:

- On-Net Fiber Access – Connectivity to Service Locations is enabled via Comcast On-Net Fiber infrastructure.
- On-Net HFC Access – Connectivity to Service Locations is enabled via Comcast On-Net HFC infrastructure.
- Off-Net Access (Off-Net Dedicated Fiber, Off-Net Non-Dedicated Fiber, and Off-Net Non-Fiber) – Connectivity to Service Locations is enabled through a network-to-network interface (“NNI”) via third-party network provider.

4.2.14. EVC AREA TYPES AND OFF-NET SERVICE LOCATIONS

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- A. The Services are available both within and between certain major metropolitan areas throughout the United States. Each EVC is assigned an EVC area type (Metro, Regional or Continental, as described below) based upon the proximity of Customer’s respective Service Locations. “Region” means a Comcast-defined geographical region, as determined by Comcast from time to time, within Comcast’s cable footprint. “Metro” means a Comcast-defined sales market, as determined by Comcast from time to time, within a Region.

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- Metro – EVC enables connectivity between Service Locations within the same Metro.
- Regional – EVC enables connectivity between Service Locations that are in different Metros, but within the same Region.
- Continental – EVC enables connectivity between Service Locations that are in different Regions.

- B. Customer acknowledges and agrees that without Customer confirmation of the Service, Comcast may be unable to completely deliver the Service. Comcast shall make three (3) attempts to schedule a call during which Customer will confirm readiness to receive the Service. If Comcast’s attempts to schedule a call are unsuccessful, then Comcast may terminate the applicable Service Order at such Service Location, upon prior written notice to Customer (subject to applicable Termination Charges).

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4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.15. TECHNICAL SPECIFICATIONS AND PERFORMANCE STANDARDS FOR SERVICES

A. Ethernet User-to-Network Interface

The Services provide bidirectional, full duplex transmission of untagged ethernet frames using a standard IEEE 802.3 UNI to attach to the Customer Switch or Router. Figure 1 lists the available UNI speeds and their UNI physical interfaces, and available committed information rate (“CIR”) bandwidth increments and committed burst sizes (“CBS”). CIR increments of less than 10 Mbps are generally not available in conjunction with Off-Net Services.

UNI SPEED	UNI PHYSICAL INTERFACE	CIR INCREMENTS	CBS (BYTES)
		1Mbps	25,000
100Mbps	100BaseT	10Mbps	250,000
1Gbps	1000BaseT or 1000BaseSX	100Mbps	2,500,000
10Gbps	10GBase-SR or 10GBase-LR	1Gbps	25,000,000
100 Gbps	100GBASE-LR4	10 Gbps	25,000,000

FIGURE 1: AVAILABLE UNI INTERFACE TYPES AND CBS VALUES FOR DIFFERENT CIR INCREMENTS

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.15. TECHNICAL SPECIFICATIONS AND PERFORMANCE STANDARDS FOR SERVICES (CONT'D)

B. Class of Service Options

The Services are available with three (3) different CoS options that allow for differentiated Service performance levels for different types of network traffic. This includes Basic (Low), Priority (Medium) and Premium (High). CoS is used to prioritize customer mission-critical traffic over lower priority traffic in the network. Customer must specify a CIR for each CoS to indicate how much bandwidth should be assigned to that CoS. The performance metrics associated with each CoS are described in the SLA. As described in the following table, permissible CoS options vary by access type.

Access Type	CoS Options
On-Net Fiber	Basic, Priority & Premium
On-Net HFC	Basic & Priority
Off-Net Dedicated Fiber	Basic, Priority & Premium
Off-Net Non-Dedicated Fiber	Basic & Priority
Off-Net Non-Fiber	Basic & Priority

FIGURE 2: CoS OPTIONS

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.15. TECHNICAL SPECIFICATIONS AND PERFORMANCE STANDARDS FOR SERVICES (CONT'D)

C. CoS Identification and Marking

Customer traffic classification and forwarding is based upon CoS prioritization that is specified in the Sales Order. It is the Customer's responsibility to shape traffic to ordered bandwidth. If the Customer only orders a single CoS solution, Customer is not required to mark Customer's packets and all Customer packets will be forwarded based upon 802.1p value associated with the CoS level specified in the Sales Order. All packets, tagged or untagged, will be mapped into the subscribed CoS.

- If Customer implements a multi-CoS solution or for EVPL ports with service multiplexing, the Customer must mark all packets using C-tag 802.1p CoS values as specified in the table below to ensure the Service will provide the intended CoS performance objectives.
- For multi-CoS solutions, untagged packets will be treated as if they are marked with a 0. Packets with other 802.1p values are mapped to the lowest subscribed CoS.
- For EVPL ports with service multiplexing, untagged packets will be discarded and C-tag VLAN ID values are used to map traffic to applicable EVCs. Based on Ethernet Frame 802.1p values, Customer's traffic is mapped to the Comcast forwarding classes traffic accordingly to the table below:

CoS Type	802.1p Marking
Basic (Low)	0-1
Priority (Medium)	2-3
Premium (High)	5

FIGURE 3: CoS MARKING

D. Traffic Management

Comcast's Network traffic-policing policies restrict traffic flows to the subscribed CIR for each CoS. Comcast will discard non-conforming packets if (a) the Customer transmitted bandwidth rate for any CoS exceeds the subscribed CIR and CBS or (b) 64 byte frames comprise more than 50% of the CIR for On-Net HFC Service. For packets marked with a non-conforming CoS marking, the Service will transmit such packets using the Basic CoS without altering the Customer's CoS markings. Traffic management policies associated with Off-Net Services will conform to the policies enforced by the third-party service provider. Encrypted tunnels cannot exceed 30Gbps for Regional or Continental EVC area types.

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4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.15. TECHNICAL SPECIFICATIONS AND PERFORMANCE STANDARDS FOR SERVICES (CONT'D)

E. Mac Learning and Forwarding (ENS Only)

The ENS is capable of learning up to 2,500 MAC addresses from all interfaces connecting to the Service. It is highly recommended that routing equipment be utilized to minimize the number of MAC addresses exposed directly to the Service in larger networks. Any addresses in excess of 2,500 will not be learned and traffic directed to these addresses will be treated as “unknown unicast”.

F. Maximum Frame Size

Services delivered via fiber support a maximum transmission unit (“MTU”) frame size of 2,000 bytes for untagged, tagged and Q- in-Q traffic with IEEE 802.1q or IEEE 802.1ad encapsulation types.

Services delivered via On-Net Fiber may, if set forth in a Sales Order or change order thereto, support an MTU up to 9,100 bytes for untagged, tagged and Q-in-Q frame sizes.

Services delivered via Off-Net Dedicated Fiber may, if set forth in a Sales Order or change order thereto, support an MTU up to 9,100 bytes for untagged, tagged and Q-in-Q frame sizes, but only, and solely, to the extent the applicable Off-Net provider can support such MTU frame size.

Services delivered via HFC support an MTU frame size of 1,522 bytes for untagged, tagged and Q-in-Q traffic with IEEE 802.1q or IEEE 802.1ad encapsulation types.

Services delivered via On-Net HFC may, if set forth in a Sales Order or change order thereto, support an MTU up to 2,000 bytes for untagged, tagged and Q-in-Q frame sizes.

Services delivered via Off-Net Non-Dedicated Fiber and Off-Net Non-Fiber, if set forth in a Sales Order or change order thereto, support an MTU up to 1,600 bytes for untagged, tagged and Q-in-Q frame sizes, but only, and solely, to the extent the applicable Off-Net provider can support such MTU frame size.

For Services delivered via Fiber or HFC all frames that exceed specifications shall be dropped.

Transport Type	MTU Size
On-Net Fiber and Off-Net Dedicated Fiber	1,600-9,100 bytes
On-Net HFC	1,522-2000 bytes
Off-Net Non-Dedicated Fiber and Off-Net Non-Fiber	1,522 -1,600 bytes

FIGURE 4 MAXIMUM FRAME SIZE

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.15. TECHNICAL SPECIFICATIONS AND PERFORMANCE STANDARDS FOR SERVICES (CONT'D)

G. Customer Traffic Transparency

All fields within a Customer's ethernet frames (unicast, multicast and broadcast, except L2CP) from the first bit of payload are preserved and transparently transported over UNI to UNI connections, as long as the ethernet frames are mapped into the EVC.

H. Ethernet Service Frame Disposition

The Services process different types of ethernet frames differently. Ethernet frames may pass unconditionally through the Network or may be limited, as indicated in the table below. The following table illustrates Comcast's service frame disposition for each service frame type.

Service Frame Type	ENS Frame Delivery	EPL and EVPL Frame Delivery
Unicast	All frames delivered conditionally	All frames delivered unconditionally
Multicast	All frames delivered conditionally	All frames delivered unconditionally
Broadcast	All frames delivered conditionally	All frames delivered unconditionally

ENS only:

- Unicast Traffic. Unicast traffic must be bidirectional in order to facilitate mac-learning and avoid restriction.
- Multicast Traffic. By default, every ENS port is able to support up to 2 Mbps of multicast traffic. If an ENS Customer requires greater than 2 Mbps of multicast bandwidth, Customer must uniquely specify the bandwidth Customer requires for each root site and associated CoS at the time of contracting the ENS.
- Broadcast Traffic. Broadcast and unknown unicast traffic are restricted to 1.2mb or 300pps on ingress to the network.

EVPL only:

- Customer is responsible for mapping multicast, broadcast and unknown unicast traffic to specific Customer VLANs.

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.16. TRANSMISSION PROTOCOLS

User data protocol (“**UDP**”) is the default protocol for communication between two (2) Service Locations. If Customer elects to change from UDP to another protocol (*e.g.*, transmission control protocol (“**TCP**”)), Customer does so at its own risk and acknowledges and agrees that the transmission speed may be negatively impacted.

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4.2.17. ETHERNET TRANSPORT SERVICE LEVEL AGREEMENTS

(T)

A. Availability SLA

(N)

Comcast’s liability and Customer’s sole remedy for Service Interruptions, and errors, omissions, interruptions, delays, outages, or defects in transmission or switching of any Service (individually or collectively, “**Liability**”), shall be limited to the amounts set forth in the Tables below with the stated percentages to be applied against the MRC (as defined below) associated with the impacted portion of the Service set forth in the Sales Order (“**Availability Credit**”). For the purposes of calculating credit for a Service Interruption, the “**Length of Service Interruption**” begins when the Customer reports such Service Interruption and a trouble ticket is opened, and concludes upon the closing of the same trouble ticket or, if sooner, the termination of the Service Interruption, less any time Comcast is awaiting additional information or premises testing from the Customer. In no event shall the total amount of Availability Credit issued to Customer’s account on a per-month basis exceed 50% of the total monthly recurring charge (“**MRC**”) associated with the impacted portion of the Service set forth in the Sales Order. The Length of Service Interruptions for separately occurring Service Interruptions will not be aggregated for purposes of determining Availability Credit allowances. To qualify, Customer must request the Availability Credit from Comcast within thirty (30) days of the beginning of the Service Interruption. Comcast shall not incur any Liability, including Availability Credit, for any failure of the Services caused by force majeure events, Planned Service Interruptions, Customer actions, omissions or equipment (including Customer-Provided Equipment), a Customer Switch or Router, or any other items set forth in the “Exceptions to Credit Allowances” section below.

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4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.17. ETHERNET TRANSPORT SERVICE LEVEL AGREEMENTS (CONT'D)

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A. Availability SLA (Cont'd)

(D)(N)

TABLE 1: Availability SLA for Services provided over On-Net Fiber or Off-Net Dedicated Fiber Transport (99.99% Availability)

Length of Service Interruption:	Availability Credit:
Less than 4 minutes	None
At least 4 minutes but less than 4 hours	5% of Total MRC
At least 4 hours but less than 8 hours	10% of Total MRC
At least 8 hours but less than 12 hours	20% of Total MRC
At least 12 hours but less than 16 hours	30% of Total MRC
At least 16 hours but less than 24 hours	40% of Total MRC
24 hours or greater	50% of Total MRC

TABLE 2: Availability SLA for Services provided over On-Net HFC, Off-Net Non-Dedicated Fiber or Off-Net Non-Fiber Transport (99.9% Availability)

Length of Service Interruption:	Availability Credit:
Less than 40 minutes	None
At least 40 minutes but less than 4 hours	5% of Total MRC
At least 4 hours but less than 8 hours	10% of Total MRC
At least 8 hours but less than 12 hours	20% of Total MRC
At least 12 hours but less than 16 hours	30% of Total MRC
At least 16 hours but less than 24 hours	40% of Total MRC
24 hours or greater	50% of Total MRC

SEPARATELY OCCURRING SERVICE INTERRUPTIONS ARE NOT AGGREGATED FOR THE PURPOSES OF DETERMINING CREDIT ALLOWANCES.

(D)(N)

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.17. ETHERNET TRANSPORT SERVICE LEVEL AGREEMENTS (CONT'D)

B. Performance Objectives SLA

The performance objectives associated with traffic flows between any two (2) Service Locations are dependent upon the performance tier, which is determined by Comcast, in its sole discretion, based on the locations of the respective Service Locations, designated as "Service Location A" and "Service Location Z" on the applicable Sales Order ("**Performance Tier**" or "**PT**"). Traffic flow between Service Location A and Service Location Z is a "**Service Location Pairing**."

For any Sales Order accepted by Comcast on or before June 15, 2023, the PT for a particular Service Location Pairing is assigned by Comcast, in its sole discretion, based on the Market of each Service Location in a Service Location Pairing.

For any Sales Order accepted by Comcast after June 15, 2023, the PT for a particular Service Location Pairing is assigned by Comcast, in its sole discretion, based on the mileage between Service Location A and Service Location Z ("**Mileage Band**"). For clarity and avoidance of doubt, the below table is intended only as a guide and Comcast reserves the right to assign or re-assign a particular Service Location Pairing a different PT than the PT corresponding to the applicable Mileage Band in the table below based on certain factors, including, but not limited to, Force Majeure, Market, the geographic landscape, terrain, and particular fiber route(s).

Performance Tiers	PT0	PT1	PT2	PT3	PT4
Mileage Band	0-50 miles	51-150 miles	151-750 miles	751-2,500 miles	2,501-4,300 miles

1. Access Types

- **On-Net Access.** For On-Net access, the Mileage Band will be determined by multiplying (A) the total number of direct air miles "as the crow flies" ("**Direct Miles**") between Service Location A and Service Location Z, by (B) 1.25.
- **Off-Net Access.** In addition to On-Net access, Comcast enables Off-Net access to Ethernet Transport Services via one or more third party provider(s). The Performance Tier for Off-Net Service is based upon the location of the Off-Net Service Location, the location of the NNI between Comcast and the third party provider and the performance commitment from the third party provider. For Off-Net Access, the Mileage Band will equal the sum of: (A) (the Direct Miles between Service Location A and NNI * 1.25), plus (B) (Direct Miles between NNI and Service Location Z * 2).

4. SPECIAL ACCESS SERVICE**4.2. ETHERNET TRANSPORT SERVICES (CONT'D)****4.2.17. ETHERNET TRANSPORT SERVICE LEVEL AGREEMENTS (CONT'D)****B. Performance Objectives SLA (Cont'd)****2. Performance Tiers and Performance Objectives**

Comcast collects continuous in-band performance measurements for the Services. The calculation of all Latency, Jitter and Packet Loss performance metrics for each calendar month for purposes of this performance objectives service level agreement are based upon the average of sample round trip measurements taken by Comcast during the applicable calendar month, excluding any period during which there is a Service Interruption. The below charts indicate the performance objectives for each of the performance metrics over each calendar month based on the applicable Performance Tier and CoS.

a. Performance Tier 0 (PT0) Agreements

Performance Metric	Class of Service (CoS)		
	Basic	Priority	Premium
Latency (Round Trip Network Delay)	45ms	24ms	4ms
Jitter (Network Delay Variation)	20ms	10ms	1ms
Packet Loss	<1%	<0.01%	<0.001%

b. Performance Tier 1 (PT1) Agreements

Performance Metric	Class of Service (CoS)		
	Basic	Priority	Premium
Latency (Round Trip Network Delay)	90ms	46ms	14ms
Jitter (Network Delay Variation)	20ms	10ms	2ms
Packet Loss	<1%	<0.01%	<0.001%

c. Performance Tier 2 (PT2) Agreements

Performance Metric	Class of Service (CoS)		
	Basic	Priority	Premium
Latency (Round Trip Network Delay)	160ms	90ms	46ms
Jitter (Network Delay Variation)	25ms	15ms	5ms
Packet Loss	<1%	<.02%	<.01%

d. Performance Tier 3 (PT3) Agreements

Performance Metric	Class of Service (CoS)		
	Basic	Priority	Premium
Latency (Round Trip Network Delay)	200ms	160ms	90ms
Jitter (Network Delay Variation)	30ms	20ms	10ms
Packet Loss	<1%	<.04%	<.02%

e. Performance Tier 4 (PT4) Agreements

Performance Metric	Class of Service (CoS)		
	Basic	Priority	Premium
Latency (Round Trip Network Delay)	240ms	200ms	160ms
Jitter (Network Delay Variation)	35ms	25ms	15ms
Packet Loss	<1%	<.05%	<.04%

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4. SPECIAL ACCESS SERVICE**4.2. ETHERNET TRANSPORT SERVICES (CONT'D)****4.2.17. ETHERNET TRANSPORT SERVICE LEVEL AGREEMENTS (CONT'D)****B. Performance Objectives SLA (Cont'd)****3. Credit Allowance**

Customer's sole remedy for Comcast's failure to achieve the applicable performance metric standards above over a given calendar month for the Service are the receipt of the following credit amounts with the stated percentages to be applied against the MRC associated with the impacted portion of the Service set forth in the Sales Order ("**Performance Objective Credits**").

TABLE 1: Credit Allowance for Latency Performance Metric

		Performance Tier									
		PT0		PT1		PT2		PT3		PT4	
		Measurement (ms)	Credit	Measurement (ms)	Credit	Measurement (ms)	Credit	Measurement (ms)	Credit	Measurement (ms)	Credit
Class of Service	Premium	0 - 4	No Credit	0 - 14	No Credit	0 - 46	No Credit	0 - 90	No Credit	0 to 160	No Credit
		4.01 - 24	10%	14.01 - 46	10%	46.01 - 90	10%	90.01 - 160	10%	160.01 - 200	10%
		24.01 - 45	25%	46.01 - 90	25%	90.01 - 160	25%	160.01 - 200	25%	200.01 - 240	25%
		>45	50%	>90	50%	>160.01	50%	>200	50%	>240	50%
	Priority	0 - 24	No Credit	0 - 46	No Credit	0 - 90	No Credit	0 to 160	No Credit	0 to 200	No Credit
		24.01 - 45	10%	46.01 - 90	10%	90.01 - 160	10%	160.01 - 200	10%	200.01 - 240	10%
		45.01 - 60	25%	90.01 - 160	25%	160.01 - 200	25%	200.01 - 240	25%	240.01 - 300	25%
		>60	50%	>160.01	50%	>200	50%	>240	50%	>300	50%
	Basic	0 - 45	No Credit	0 - 90	No Credit	0 to 160	No Credit	0 to 200	No Credit	0 to 240	No Credit
		45.01 - 60	10%	90.01 - 160	10%	160.01 - 200	10%	200.01 - 240	10%	240.01 - 300	10%
		60.01 - 90	25%	160.01 - 200	25%	200.01 - 240	25%	240.01 - 300	25%	300.01 - 360	25%
		>90	50%	>200	50%	>240	50%	>300	50%	>360	50%

TABLE 2: Credit Allowance for Jitter Performance Metric

		Performance Tier									
		PT0		PT1		PT2		PT3		PT4	
		Measurement (ms)	Credit	Measurement (ms)	Credit	Measurement (ms)	Credit	Measurement (ms)	Credit	Measurement (ms)	Credit
Class of Service	Premium	0 - 1	No Credit	0 - 2	No Credit	0 - 5	No Credit	0 - 10	No Credit	0 - 15	No Credit
		1.01 - 3	10%	2.01 - 3	10%	5.01 - 10	10%	10.01 - 15	10%	15.01 - 20	10%
		3.01 - 5	25%	3.01 - 5	25%	10.01 - 15	25%	15.01 - 20	25%	20.01 - 30	25%
		>5	50%	>5	50%	>15	50%	>20	50%	>30	50%
	Priority	0 - 10	No Credit	0 - 10	No Credit	0 - 15	No Credit	0 - 20	No Credit	0 - 25	No Credit
		10.01 - 15	10%	10.01 - 15	10%	15.01 - 20	10%	20.01 - 30	10%	25.01 - 40	10%
		15.01 - 20	25%	15.01 - 20	25%	20.01 - 30	25%	30.01 - 50	25%	40.01 - 60	25%
		>20	50%	>20	50%	>30	50%	>50	50%	>60	50%
	Basic	0 - 20	No Credit	0 - 20	No Credit	0 - 25	No Credit	0 - 30	No Credit	0 - 35	No Credit
		20.01 - 30	10%	20.01 - 30	10%	25.01 - 40	10%	30.01 - 50	10%	35.01 - 60	10%
		30.01 - 50	25%	30.01 - 50	25%	40.01 - 60	25%	50.01 - 80	25%	60.01 - 90.01	25%
		>50	50%	>50	50%	>60	50%	>80	50%	>90	50%

Issued: November 6, 2023

Effective: November 11, 2023

By:

Kelly Clark, Corporate Director – Regulatory Affairs
One Comcast Center, 50th Floor
Philadelphia, PA 19103

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.17. ETHERNET TRANSPORT SERVICE LEVEL AGREEMENTS (CONT'D)

B. Performance Objectives SLA (Cont'd)

3. Credit Allowance (Cont'd)

TABLE 3: Credit Allowance for Packet Loss Performance Metric

		Performance Tier									
		PT0		PT1		PT2		PT3		PT4	
		Measurement	Credit	Measurement	Credit	Measurement	Credit	Measurement	Credit	Measurement	Credit
Class of Service	Premium	0% - 0.001%	No Credit	0% - 0.001%	No Credit	0% - 0.01%	No Credit	0% - 0.02%	No Credit	0% - 0.04%	No Credit
		0.001% - 2.00%	10%	0.001% - 2.00%	10%	0.01% - 2.00%	10%	0.02% - 2.00%	10%	0.04% - 2.00%	10%
		2.01% - 4.00%	25%	2.01% - 4.00%	25%	2.01% - 4.00%	25%	2.01% - 4.00%	25%	2.01% - 4.00%	25%
		>4.00%	50%	>4.00%	50%	>4.00%	50%	>4.00%	50%	>4.00%	50%
	Priority	0% - 0.01%	No Credit	0% - 0.01%	No Credit	0% - 0.02%	No Credit	0% - 0.04%	No Credit	0% - 0.05%	No Credit
		0.01% - 2.00%	10%	0.01% - 2.00%	10%	0.02% - 2.00%	10%	0.04% - 2.00%	10%	0.05% - 2.00%	10%
		2.01% - 4.00%	25%	2.01% - 4.00%	25%	2.01% - 4.00%	25%	2.01% - 4.00%	25%	2.01% - 4.00%	25%
		>4.00%	50%	>4.00%	50%	>4.00%	50%	>4.00%	50%	>4.00%	50%
	Basic	0% - 1.00%	No Credit	0% - 1.00%	No Credit	0% - 1.00%	No Credit	0% - 1%	No Credit	0% - 1%	No Credit
		1.01% - 2.00%	10%	1.01% - 2.00%	10%	1.01% - 2.00%	10%	1.01% - 2.00%	10%	1.01% - 2.00%	10%
		2.01% - 4.00%	25%	2.01% - 4.00%	25%	2.01% - 4.00%	25%	2.01% - 4.00%	25%	2.01% - 4.00%	25%
		>4.00%	50%	>4.00%	50%	>4.00%	50%	>4.00%	50%	>4.00%	50%

Customer shall be entitled to receive a Performance Objective Credit only for one performance metric failure per affected portion of the Service per calendar month. For example, if the applicable metric for Jitter and Latency were missed for the same transport connection (Service Location A to Service Location Z) in a given calendar month, Customer will be entitled only to the Performance Objective Credit associated with either the Jitter or Latency failure for such portion of the Service. In addition, Customer may not receive both the Performance Objective Credit and an Availability Credit for the same portion of the Service in the same calendar month. To qualify for a Performance Objective Credit, Customer must request the applicable Performance Objective Credit from Comcast within thirty (30) days of the end of the applicable calendar month in which the applicable Performance Metric standard was not achieved. Comcast shall not incur any Liability, including Performance Objective Credit, for any failure of the Services caused by force majeure events, Planned Service Interruptions or other scheduled maintenance events, Customer actions or omissions, Customer-provided power or equipment, including Customer-Provided Equipment, a Customer Switch or Router or any other items set forth in the "Exceptions to Credit Allowances" section below.

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.17. ETHERNET TRANSPORT SERVICE LEVEL AGREEMENTS (CONT'D)

C. Exceptions and Terms Applicable to All SLAs

1. Emergency Blocking

The parties agree that if either party hereto, in its reasonable and sole discretion, determines that an emergency action is necessary to protect its own network, the party may, after engaging in reasonable and good faith efforts to notify the other party of the need to block, block any transmission path over its network by the other party where transmissions do not meet material standard industry requirements. The parties further agree that none of their respective obligations to one another under the Agreement will be affected by any such blockage except that the party affected by such blockage will be relieved of all obligations to make payments for charges relating to the circuit(s) which is so blocked and that no party will have any obligation to the other party for any claim, judgment or liability resulting from such blockage.

2. Remedy Processes

All claims and rights arising under this Service Level Agreement must be exercised by Customer in writing within the time period set forth in Sections B.1 and B.2 of this Service Level Agreement, as applicable. The Customer must submit the following information to the Customer's Comcast account representative with any and all claims for credit allowances: (a) Organization name; (b) Customer account number; and (c) basis of credit allowance claim (including date and time, if applicable). Comcast will acknowledge and review all claims promptly and will inform the Customer by electronic mail or other correspondence whether a credit allowance will be issued or the claim rejected, with the reasons specified for the rejection.

3. Exceptions to Credit Allowances

Comcast's failure to meet either of the SLAs set forth on this Schedule A-2 shall not qualify for the remedies set forth herein if such failure is related to, associated with, or caused by: Planned Service Interruptions or other scheduled maintenance events; Customer actions or omissions; a Customer Switch or Router; Customer-provided power or equipment, including Customer-Provided Equipment; any third party not contracted through Comcast, including, without limitation, Customer's users, third-party network providers, any power, equipment or services provided by third parties; or an event of force majeure as defined in the Agreement.

4. Other Limitations

THE TOTAL CREDIT ALLOWANCE PER CALENDAR MONTH UNDER THIS SCHEDULE A-2 IS CAPPED AT 50% OF THAT MONTH'S MRC FOR THE IMPACTED PORTIONS OF SERVICE. In addition, the remedies set forth in this Service Level Agreement shall be Customer's sole and exclusive remedies for any Service Interruption, outage, unavailability, delay, or other degradation, or any Comcast failure to meet the service objectives or otherwise comply with this SLA.

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4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.18. NETWORK MONITORING

Comcast monitors On-Net Service on a 24x7x365 basis.

4.2.19. TECHNICAL SUPPORT AND MAINTENANCE

Comcast provides a toll-free trouble reporting telephone number to the Enterprise Technical Support (ETS) Center that operates on a 24x7x365 basis. Comcast provides technical support for service-related inquiries. Technical support will not offer consulting or advice on issues relating to CPE or other equipment not provided by Comcast.

A. Escalation

Reported troubles are escalated within the Comcast Business Services Network Operations Center (BNOC) to meet the response/restoration interval described below (Response and Restoration Standards). Service issues are escalated within the Comcast BNOC as follows: to a Supervisor at the end of the applicable time interval plus one (1) hour; to a Manager at the end of the applicable time interval plus two (2) hours, and to a Director at the end of the applicable time interval plus four (4) hours.

B. Maintenance

Comcast's standard maintenance window for On-Net Services is Sunday to Saturday from 12:00am to 6:00am local time. Scheduled maintenance for On-Net Services is performed during the maintenance window and will be coordinated between Comcast and the Customer. The scheduled maintenance date will be determined by Comcast in its sole discretion; provided, that Comcast provides a minimum of seven (7) days' notice for On-Net Service impacting planned maintenance. Emergency maintenance is performed as needed without advance notice to Customer. Maintenance for Off-Net Services shall be performed in accordance with the applicable third party service provider rules. Therefore, Off-Net Service may be performed without advance notice to Customer.

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4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.20. COMCAST EQUIPMENT

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Comcast provides certain Comcast Equipment for provisioning its Services and the delivery of the UNI, which will reside at the Service Location. Comcast will retain ownership and management responsibility for this Comcast Equipment. This Comcast Equipment must be used only for receipt of Services. Customers are required to shape their egress traffic to the CIR identified in the Sales Order. Comcast will be excused from paying SLA credits, as set forth in Schedule A-2, if the Service Interruption (as defined in Schedule A-2) is the result of Customer's (a) failure to shape Customer's traffic to the contracted CIR or (b) utilization of Comcast Equipment for non-Comcast provided services.

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4.2.21. RESPONSE AND RESTORATION STANDARDS

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Comcast has the following response and restoration objectives:

CATEGORY	TIME INTERVAL	MEASUREMENT	REMEDIES
<i>Mean Time to Respond</i> Telephonically to Call	15 minutes	Averaged Over A Month	Escalation (see above)
<i>Mean Time to Restore</i> On-Net Comcast Equipment	4 hours	Averaged Over A Month	Escalation (see above)
<i>Mean Time to Restore</i> Off-Net Equipment	6 hours	Averaged Over A Month	Escalation (see above)
<i>Mean Time to Restore</i> On-Net Services	6 hours	Averaged Over A Month	Escalation (see above)
<i>Mean Time to Restore</i> Off-Net Services	9 hours	Averaged Over A Month	Escalation (see above)

Customer shall bear any expense incurred, e.g., dispatch/labor costs, where a Service Interruption is found to be the fault of Customer, its end users, agents, representatives or third-party suppliers.

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.22. EMERGENCY BLOCKING

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The parties agree that if either party hereto, in its reasonable and sole discretion, determines that an emergency action is necessary to protect its own network, the party may, after engaging in reasonable and good faith efforts to notify the other party of the need to block, block any transmission path over its network by the other party where transmissions do not meet material standard industry requirements. The parties further agree that none of their respective obligations to one another under the Agreement will be affected by any such blockage except that the party affected by such blockage will be relieved of all obligations to make payments for charges relating to the circuit(s) which is so blocked and that no party will have any obligation to the other party for any claim, judgment or liability resulting from such blockage.

4.2.23. REMEDY PROCESSES

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All claims and rights arising under this Service Level Agreement must be exercised by Customer in writing within the time period set forth in Sections 4.2.17.A and 4.2.17.B, as applicable. The Customer must submit the following information to the Customer's Comcast account representative with any and all claims for credit allowances: (a) Organization name; (b) Customer account number; and (c) basis of credit allowance claim (including date and time, if applicable). Comcast will acknowledge and review all claims promptly and will inform the Customer by electronic mail or other correspondence whether a credit allowance will be issued or the claim rejected, with the reasons specified for the rejection.

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4.2.24. EXCEPTIONS TO CREDIT ALLOWANCES

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Comcast's failure to meet either of the SLAs set forth on this Schedule A-2 shall not qualify for the remedies set forth herein if such failure is related to, associated with, or caused by: Planned Service Interruptions or other scheduled maintenance events; Customer actions or omissions; a Customer Switch or Router; Customer-provided power or equipment, including Customer-Provided Equipment; any third party not contracted through Comcast, including, without limitation, Customer's users, third-party network providers, any power, equipment or services provided by third parties; or an event of force majeure as defined in the Agreement.

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4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.25. OTHER LIMITATIONS

THE TOTAL CREDIT ALLOWANCE PER CALENDAR MONTH UNDER THIS SCHEDULE A-2 IS CAPPED AT 50% OF THAT MONTH'S MRC FOR THE IMPACTED PORTIONS OF SERVICE. In addition, the remedies set forth in this Service Level Agreement shall be Customer's sole and exclusive remedies for any Service Interruption, outage, unavailability, delay, or other degradation, or any Comcast failure to meet the service objectives or otherwise comply with this SLA.

4.2.26. RATES AND CHARGES

Comcast may enter into term agreements with prices that may vary subject to the availability of promotional offers and/or the Customer's choice of term, bandwidth, and associated Special Construction or related charges. Special Construction charges shall be applied on an individual case basis as set forth in Section 4.2.4. The minimum term for these Services is twelve (12) months.

Customer networks are configured by designing a combination of Ports and Bandwidth / Class of Service (CoS) at each location, as shown below. Total bandwidth at a site may not exceed the port limit.

ENS – One Port and Bandwidth (up to three CoS) at each location.
EPL – One Port at each location and Bandwidth (up to three CoS) between each location.
EVPL – One Port at each location and Bandwidth (up to three CoS) between locations. Bandwidth from multiple locations may be multiplexed on a single Port at a Customer's hub or aggregation site.

A. Port Charges

A Port Charge applies in addition to Bandwidth charges.

PORT SPEED	PORT CHARGE PER MONTH
10/100 Mbps	\$195.00
Gig E	\$845.00

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4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.26. RATES AND CHARGES (CONT'D)

B. Ethernet Network Service (ENS)

BANDWIDTH (MBPS)	MAXIMUM MONTHLY RATES			
	EVC (BASIC CoS)	EVC (PRIORITY CoS)	EVC (PREMIUM CoS)	NRC
1	\$90.00	\$100.00	\$105.00	\$500.00
2	\$155.00	\$165.00	\$170.00	\$500.00
3	\$220.00	\$235.00	\$240.00	\$500.00
4	\$285.00	\$300.00	\$320.00	\$500.00
5	\$350.00	\$370.00	\$390.00	\$500.00
6	\$415.00	\$435.00	\$460.00	\$500.00
7	\$480.00	\$505.00	\$535.00	\$500.00
8	\$545.00	\$570.00	\$605.00	\$500.00
9	\$610.00	\$635.00	\$675.00	\$500.00
10	\$675.00	\$715.00	\$740.00	\$1,000.00
20	\$780.00	\$845.00	\$935.00	\$1,000.00
30	\$870.00	\$960.00	\$1,055.00	\$1,000.00
40	\$975.00	\$1,065.00	\$1,170.00	\$1,000.00
50	\$1,065.00	\$1,170.00	\$1,285.00	\$1,000.00
60	\$1,170.00	\$1,275.00	\$1,405.00	\$1,000.00
70	\$1,260.00	\$1,390.00	\$1,520.00	\$1,000.00
80	\$1,365.00	\$1,495.00	\$1,640.00	\$1,000.00
90	\$1,455.00	\$1,600.00	\$1,770.00	\$1,000.00
100	\$1,560.00	\$1,705.00	\$1,885.00	\$2,000.00
200	\$1,675.00	\$1,885.00	\$2,120.00	\$2,000.00
300	\$1,795.00	\$2,055.00	\$2,365.00	\$2,000.00
400	\$1,910.00	\$2,235.00	\$2,600.00	\$2,000.00
500	\$2,030.00	\$2,405.00	\$2,845.00	\$2,000.00
600	\$2,145.00	\$2,585.00	\$3,080.00	\$2,000.00
700	\$2,260.00	\$2,755.00	\$3,330.00	\$2,000.00
800	\$2,380.00	\$2,940.00	\$3,560.00	\$2,000.00
900	\$2,495.00	\$3,105.00	\$3,810.00	\$2,000.00
1000	\$2,615.00	\$3,290.00	\$4,045.00	\$2,000.00

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.26. RATES AND CHARGES (CONT'D)

C. Ethernet Private Line (EPL)

BANDWIDTH (Mbps)	MAXIMUM MONTHLY RATES			
	EVC (BASIC CoS)	EVC (PRIORITY CoS)	EVC (PREMIUM CoS)	NRC
1	\$50.00	\$65.00	\$80.00	\$500.00
2	\$105.00	\$130.00	\$145.00	\$500.00
3	\$170.00	\$180.00	\$220.00	\$500.00
4	\$220.00	\$245.00	\$285.00	\$500.00
5	\$275.00	\$310.00	\$365.00	\$500.00
6	\$325.00	\$375.00	\$430.00	\$500.00
7	\$375.00	\$440.00	\$505.00	\$500.00
8	\$440.00	\$505.00	\$570.00	\$500.00
9	\$495.00	\$560.00	\$650.00	\$500.00
10	\$545.00	\$625.00	\$730.00	\$1,000.00
20	\$625.00	\$730.00	\$830.00	\$1,000.00
30	\$715.00	\$820.00	\$935.00	\$1,000.00
40	\$795.00	\$910.00	\$1,055.00	\$1,000.00
50	\$870.00	\$1,000.00	\$1,155.00	\$1,000.00
60	\$960.00	\$1,105.00	\$1,260.00	\$1,000.00
70	\$1,040.00	\$1,195.00	\$1,380.00	\$1,000.00
80	\$1,120.00	\$1,285.00	\$1,480.00	\$1,000.00
90	\$1,195.00	\$1,380.00	\$1,585.00	\$1,000.00
100	\$1,285.00	\$1,480.00	\$1,705.00	\$2,000.00
200	\$1,480.00	\$1,600.00	\$1,845.00	\$2,000.00
300	\$1,600.00	\$1,730.00	\$1,990.00	\$2,000.00
400	\$1,715.00	\$1,845.00	\$2,130.00	\$2,000.00
500	\$1,835.00	\$1,975.00	\$2,275.00	\$2,000.00
600	\$1,950.00	\$2,105.00	\$2,420.00	\$2,000.00
700	\$2,065.00	\$2,225.00	\$2,560.00	\$2,000.00
800	\$2,185.00	\$2,355.00	\$2,705.00	\$2,000.00
900	\$2,300.00	\$2,485.00	\$2,845.00	\$2,000.00
1000	\$2,420.00	\$2,600.00	\$3,005.00	\$2,000.00

4. SPECIAL ACCESS SERVICE

4.2. ETHERNET TRANSPORT SERVICES (CONT'D)

4.2.26. RATES AND CHARGES (CONT'D)

D. Ethernet Virtual Private Line (EVPL)

BANDWIDTH (MBPS)	MAXIMUM MONTHLY RATES			
	BASIC BANDWIDTH	EVC (PRIORITY CoS)	EVC (PREMIUM CoS)	NRC
1	\$130.00	\$145.00	\$155.00	\$500.00
2	\$260.00	\$285.00	\$310.00	\$500.00
3	\$390.00	\$430.00	\$470.00	\$500.00
4	\$535.00	\$570.00	\$625.00	\$500.00
5	\$665.00	\$715.00	\$780.00	\$500.00
6	\$795.00	\$860.00	\$935.00	\$500.00
7	\$925.00	\$1,000.00	\$1,090.00	\$500.00
8	\$1,055.00	\$1,155.00	\$1,260.00	\$500.00
9	\$1,185.00	\$1,300.00	\$1,415.00	\$500.00
10	\$1,315.00	\$1,445.00	\$1,560.00	\$1,000.00
20	\$1,430.00	\$1,510.00	\$1,585.00	\$1,000.00
30	\$1,545.00	\$1,625.00	\$1,715.00	\$1,000.00
40	\$1,665.00	\$1,755.00	\$1,845.00	\$1,000.00
50	\$1,780.00	\$1,870.00	\$1,965.00	\$1,000.00
60	\$1,900.00	\$2,000.00	\$2,095.00	\$1,000.00
70	\$2,015.00	\$2,120.00	\$2,225.00	\$1,000.00
80	\$2,130.00	\$2,250.00	\$2,355.00	\$1,000.00
90	\$2,250.00	\$2,365.00	\$2,485.00	\$1,000.00
100	\$2,365.00	\$2,485.00	\$2,615.00	\$2,000.00
200	\$2,470.00	\$2,600.00	\$2,755.00	\$2,000.00
300	\$2,575.00	\$2,715.00	\$2,885.00	\$2,000.00
400	\$2,680.00	\$2,835.00	\$3,030.00	\$2,000.00
500	\$2,780.00	\$2,950.00	\$3,160.00	\$2,000.00
600	\$2,885.00	\$3,070.00	\$3,300.00	\$2,000.00
700	\$2,990.00	\$3,185.00	\$3,430.00	\$2,000.00
800	\$3,095.00	\$3,300.00	\$3,575.00	\$2,000.00
900	\$3,200.00	\$3,420.00	\$3,705.00	\$2,000.00
1000	\$3,300.00	\$3,535.00	\$3,850.00	\$2,000.00

E. Equipment Fee

EQUIPMENT FEE PER MONTH
\$34.95

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4. SPECIAL ACCESS SERVICE

4.3. BUSINESS WAVELENGTH SERVICES (CONT'D)

4.3.4. SPECIAL CONSTRUCTION

All rates and charges quoted herein provide for the furnishing of facilities when suitable facilities are available or where the design or construction of the necessary facilities does not involve unusual costs. When, at the request of Customer, Comcast designs and/or constructs facilities that it would otherwise not construct, or the construction of such facilities involves a greater expense than would otherwise be incurred, Special Construction nonrecurring charges may apply.

Once Comcast accepts a Sales Order for Service, Comcast will invoice Customer for all special construction fee(s). Customer will pay such fee(s) within thirty (30) calendar days of the invoice date unless a payment schedule is specified in the applicable Service Order.

4.3.5. PROVISIONING INTERVAL

Following its acceptance of a Sales Order, Comcast shall notify Customer of the Estimated Availability Date applicable to that Sales Order. Comcast shall use commercially reasonable efforts to provision the Service on or before the Estimated Availability Date; provided, however, that Comcast's failure to provision by said date shall not constitute a breach of the Agreement.

4.3.6. SERVICE COMMENCEMENT DATE

Comcast shall inform Customer when Service is available and performing in accordance with the "Technical Specifications" set forth in Section 4.3.11 ("Availability Notification"). Charges for Service shall begin to accrue as of the Service Commencement Date. The Service Commencement Date shall be the earliest of: (A) the date on which Customer confirms receipt of and concurrence with the Availability Notification; (B) five (5) business days following the date of the Availability Notification, if Customer fails to notify Comcast that the Service does not comply materially with the Technical Specifications; or (C) the date on which Customer first uses the Service.

4.3.7. MINIMUM SERVICE TERM

The charges set forth or referenced in each Sales Order have been extended to Customer in reliance on the Service Term set forth therein. To the extent that a Service Term has not been expressly set forth in a Sales Order, the Service Term for such Sales Order shall be twelve (12) months.

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4. SPECIAL ACCESS SERVICE

4.3. BUSINESS WAVELENGTH SERVICES (CONT'D)

4.3.8. TERMINATION CHARGES

- A. In the event that Service is terminated prior to the Service Commencement Date, Customer shall pay Termination Charges equal to the costs and expenses incurred by Comcast in installing or preparing to install the Service plus twenty percent (20%).
- B. In the event that Service is terminated on or following the Service Commencement Date but prior to the end of the applicable Service Term, Customer shall pay Termination Charges equal to a percentage of the monthly recurring charges remaining for the unexpired portion of the then-current Service Term, calculated as follows:
 - 1. 100% of the monthly recurring charges with respect to months 1-12 of the Service Term; plus
 - 2. 80% of the monthly recurring charges with respect to months 13-24 of the Service Term; plus
 - 3. 65% of the monthly recurring charges with respect to months 25 through the end of the Service Term; plus
 - 4. 100% of any remaining, unpaid Special Construction Fees.
- C. Termination Charges shall be immediately due and payable upon cancellation or termination and shall be in addition to any and all accrued and unpaid charges for the Service rendered by Comcast through the date of cancellation or termination.
- D. Exclusions

Termination Charges shall not apply to Service terminated by Customer as a result of Comcast's material and uncured breach in accordance with the General Terms and Conditions.

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- A. Unprotected. An “**Unprotected Circuit**” is point-to-point linear circuit utilizing one (1) static physical fiber path (“**Fiber Path**”) terminating on single Comcast-owned Network Terminating Equipment (“**NTE**”) at each circuit endpoint. NTE constitutes Comcast Equipment. Protection Switching (as defined below) is not provided at the NTE or within the transport network, even if Customer has more than one Unprotected Circuit. 10G and 100G circuits are available as Unprotected Circuits.
- B. Protected. A “**Protected Circuit**” is a point-to-point linear circuit utilizing two (2) diverse Comcast Fiber Paths that both terminate on the same NTE at each circuit endpoint, but diverge along the circuit at the nearest point of divergence from each circuit endpoint and are routed to diverse Comcast headends. Each circuit utilizes a dedicated port on the NTE for the Customer handoff. One of the two (2) diverse Fiber Paths is designated by Comcast as the primary Fiber Path and the other Fiber Path is designated by Comcast as the secondary Fiber Path. In the event the primary Fiber Path is unavailable, Comcast re-routes traffic from the primary Fiber Path to the secondary Fiber Path (“**Protection Switching**”). Only one (1) Fiber Path is active at a given time. Only 10G circuits are available as Protected Circuits.

4. SPECIAL ACCESS SERVICE

4.3. BUSINESS WAVELENGTH SERVICES (CONT'D)

4.3.11. TECHNICAL SPECIFICATIONS FOR SERVICES

The Services are bi-directional, point-to-point optical Services capable of transporting high bandwidths (e.g., 10G and 100G) using Ethernet or Optical Transport Network (OTN) protocols. Each Service constitutes an entire wavelength or "Lambda" channel of a DWDM.

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Customer Interface

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Table 1 shows the customer interfaces supported, by protocol, for the Service.

Protocol	Interface(s)
Ethernet – 10G LAN PHY	10GBase-LR
Ethernet – 10G WAN PHY	10GBase-LW
Ethernet – 100G	100GBASE-LR4
OTN – 10G	OTU2, OTU2e
OTN – 100G	OTU4

Table 1: Wavelength Services Protocols and Customer Interfaces

4.3.12. SERVICE MONITORING, TECHNICAL SUPPORT AND MAINTENANCE

- A. Network Monitoring - Comcast monitors Services on a 24x7x365 basis.
- B. Technical Support - Comcast provides a toll-free trouble reporting telephone number to the Network Operations Center that operates on a 24x7x365 basis. Comcast provides technical support for service-related inquiries. Technical support will not offer consulting or advice on issues relating to equipment not provided by Comcast.
- C. Escalation. Reported troubles are escalated within the Comcast Business Services Network Operations Center to meet the response/restoration objectives described below (Response and Restoration Standards). Service issues are escalated within the Comcast Business Services Network Operations Center as follows: to a Supervisor at the end of the applicable objective time interval plus one (1) hour; to a Manager at the end of the applicable objective time interval plus two (2) hours; and to a Director at the end of the applicable objective time interval plus four (4) hours.
- D. Maintenance - Comcast's standard maintenance window for Services is Sunday to Saturday from 12:00 am to 6:00 am local time. Scheduled maintenance for Services is performed during the maintenance window and will be coordinated between Comcast and the Customer. Comcast provides a minimum three (3) business days' notice for maintenance expected to impact service for <=50ms. Comcast provides a minimum of seven (7) business days' notice for maintenance expected to impact service for >50ms. Emergency maintenance is performed as needed without advance notice to Customer.
- E. Comcast Equipment. Comcast provides certain Comcast Equipment, which will reside at the Service Location, for provisioning its Services. Comcast will retain ownership and management responsibility for this Company Equipment. This Comcast Equipment must only be used for receipt of Services.

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4. SPECIAL ACCESS SERVICE

4.3. BUSINESS WAVELENGTH SERVICES (CONT'D)

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4.3.13. CUSTOMER RESPONSIBILITIES

Customer shall have the following responsibilities related to the installation, support, and maintenance of the Service:

- Connecting to the Demarcation Point.
- Responsibility for all equipment and service beyond the Demarcation Point and/or interconnection between Comcast Equipment and the wiring at the Demarcation Point.
- Procuring and maintaining equipment which is technically compatible with the Service and the Network.
- Providing an operating environment with temperatures not below fifty-five (55) or above eighty-five (85) degrees Fahrenheit. Humidity shall not exceed ninety (90) percent at eighty-five (85) degrees Fahrenheit.
- Providing secure space sufficient for access to one (1) standard, freestanding, equipment cabinet at each of the Customer facilities, no further than fifty feet from the Customer router or switch interface.
- Providing outside cable entry conduit(s), entry cable ground point, and internal building conduit to allow Comcast the ability to rod/rope a fiber optic cable to the Demarcation Point.
- Locating and marking all private underground utilities (water, electric, etc.) along path of new underground placement not covered by utility companies.
- Providing a pull rope in any existing duct that Comcast is to use and ensure existing duct is serviceable for Comcast use.
- Obtaining “right-of-way” entry easement for Comcast facilities and equipment from property owners at each Customer location.

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4. SPECIAL ACCESS SERVICE

4.3. BUSINESS WAVELENGTH SERVICES (CONT'D)

4.3.13. CUSTOMER RESPONSIBILITIES (CONT'D)

- Coring of the Service Location's outside wall and internal walls. Upon request, Comcast can perform this activity on an "as needed" basis for an additional one-time fee.
- Providing UPS AC power (back-up battery power) equipment, circuit sizing to be determined, if applicable.
- Emergency local generator backup service, if applicable.
- Providing access to the buildings and Demarcation Point at each Service Location to allow Comcast and its approved contractors to install the Service and for regular (8am - 5pm) and emergency (24 hour) service and maintenance of Comcast's equipment and facilities.
- Providing, installing and maintaining a device that is capable of interconnecting network traffic between the Service and the Customer's Local Area Network ("LAN").
- Providing a point of contact ("POC") for installation, service activation and any maintenance activities.

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4. SPECIAL ACCESS SERVICE

4.3. BUSINESS WAVELENGTH SERVICES (CONT'D)

4.3.14. INTRASTATE WAVELENGTH SERVICE LEVEL AGREEMENTS (SLA) (T)

Comcast's Intrastate Comcast Business Wavelength Services are backed by the following Service Level Agreement (SLA):

A. Availability SLA

Comcast's liability and Customer's sole remedy for Service Interruptions, and errors, omissions, interruptions, delays, outages, or defects in transmission or switching of any Services (individually or collectively, "Liability"), shall be limited to the amounts set forth in the tables below ("Availability Credit"). For the purposes of calculating credit for a Service Interruption, the length of Service Interruption begins when the Customer reports such Service Interruption and a trouble ticket is opened and concludes upon the closing of the same trouble ticket or, if sooner, the termination of the Service Interruption, less any time Comcast is awaiting additional information or premises testing from the Customer. The length of Service Interruptions for separately occurring Service Interruptions will not be aggregated for purposes of determining Availability Credit allowances. For purposes of calculating the Service credit percentage in the following tables, only the MRC of the impacted wavelength circuit shall apply. To qualify, Customer must request the Availability Credit from Comcast within thirty (30) days of the beginning of the Service Interruption. Comcast shall not incur any Liability, including availability credit, for any failure of the Services caused by force majeure events, Planned Service Interruptions, Customer actions, omission or equipment, or any other items set forth in the "Exceptions to Credit Allowances" Section 4.3.15.B following.

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4. SPECIAL ACCESS SERVICE

4.3. BUSINESS WAVELENGTH SERVICES (CONT'D)

4.3.14. INTRASTATE WAVELENGTH SERVICE LEVEL AGREEMENTS (SLA) (CONT'D) (T)

B. SLA for Unprotected and Protected Options

TABLE 1: SLA for Unprotected Circuits

Availability	Length of Service Interruption	Service Credit (Based on MRC of only the impacted wavelength circuit)
>= 99.44%	Less than 4 hours	No Credit
>= 98.89% < 99.44%	At least 4 hours but less than 8 hours	10% of the MRC
>= 98.33% < 98.89%	At least 8 hours but less than 12 hours	25% of the MRC
< 98.33%	At least 12 hours or greater	50% of the MRC

TABLE 2: SLA for Protected Circuits*

Availability	Length of Service Interruption	Service Credit (Based on MRC of only the impacted wavelength circuit)
> 99.99%	Less than 4 minutes 19 seconds	No Credit
>= 99.86% < 99.99%	At least 4 minutes 20 seconds but less than 1 hour	10% of the MRC
>= 98.61% < 99.85%	At least 1 hour but less than 10 hours	25% of the MRC
< 98.61%	At least 10 hours or greater	50% of the MRC

*Availability Credits on protected circuits are available only to the extent both Fiber Paths for such Protected Circuit simultaneously sustain a Service Interruption. For clarity and avoidance of doubt, if either Fiber Path for a Protected Circuit is Available, the entire Protected Circuit shall be considered Available for purposes of calculating Availability.

SEPARATELY OCCURRING SERVICE INTERRUPTIONS ARE NOT AGGREGATED FOR THE PURPOSES OF DETERMINING CREDIT ALLOWANCES.

4. SPECIAL ACCESS SERVICE

4.3. BUSINESS WAVELENGTH SERVICES (CONT'D)

4.3.15. EXCEPTIONS AND TERMS APPLICABLE TO ALL SLAS (T)

A. Remedy Processes

All claims and rights arising under this Service Level Agreement must be exercised by Customer in writing within the time period set forth in Section 4.3.14.A., preceding. The Customer must submit the following information to the Customer's Comcast account representative with any and all claims for credit allowances: (a) Organization name; (b) Customer account number; and (c) basis of credit allowance claim (including date and time, if applicable). Comcast will acknowledge and review all claims promptly and will inform the Customer by electronic mail or other correspondence whether a credit allowance will be issued or the claim rejected, with the reasons specified for the rejection. (T)

B. Exceptions to Credit Allowances

Comcast's failure to meet either of the SLAs set forth in 4.3.14 shall not qualify for the remedies set forth herein if such failure is related to, associated with, or caused by: Planned Service Interruptions or other scheduled maintenance events; Customer actions or inactions; Customer-provided power or equipment; any third party not contracted through Comcast, including, without limitation, Customer's users, third-party network providers, any power, equipment or services provided by third parties; or an event of force majeure as defined in the Agreement (T)

C. Other Limitations

The total credit allowance per calendar month under Section 4.3.14 is capped at 50% of that month's MRC for the impacted portions of the Service. In addition, the remedies set forth in this Service Level Agreement shall be Customer's sole and exclusive remedies for any Service Interruption, outage, unavailability, delay, or other degradation, or any Comcast failure to meet the service objectives. (T)

4. SPECIAL ACCESS SERVICE

4.3. BUSINESS WAVELENGTH SERVICES (CONT'D)

4.3.16. RATES AND CHARGES

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Comcast may enter into term agreements with prices that may vary subject to the availability of promotional offers and/or the Customer's choice of term, bandwidth, and associated Special Construction or related charges. Special Construction charges shall be applied on an individual case basis as described in Section 4.3.4 subject to the terms, conditions, and limitations set forth in Section 5.3, following, for Special Assemblies and Individual Case Basis Arrangements. The minimum term for Business Wavelength Service is thirty-six (36) months.

Business Wavelength Service is offered in 10G and 100G Bandwidths in Protected and Unprotected configurations. Ports are available in 10G and 100G and are priced per port, two ports per circuit.

Comcast Business Wavelength Services Pricing

Charge Type	Bandwidth	Protection	Term (months)	MRC	NRC
Service	10G	Unprotected	36	\$7,000.00	\$0.00
Service	10G	Unprotected	60	\$6,300.00	\$0.00
Service	10G	Protected	36	\$14,000.00	\$0.00
Service	10G	Protected	60	\$12,600.00	\$0.00
Service	100G	Unprotected	36	\$15,000.00	\$0.00
Service	100G	Unprotected	60	\$13,500.00	\$0.00
Service	100G	Protected	36	\$30,000.00	\$0.00
Service	100G	Protected	60	\$27,000.00	\$0.00
Port	10G	N/A	36	\$500.00	\$0.00
Port	10G	N/A	60	\$400.00	\$0.00
Port	100G	N/A	36	\$1,000.00	\$0.00
Port	100G	N/A	60	\$800.00	\$0.00

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5. MISCELLANEOUS SERVICES

5.1. [RESERVED FOR FUTURE USE]

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5. MISCELLANEOUS SERVICES

5.2. SERVICE CHANGE DISPUTE

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If an End User disputes a change in service, the Company will investigate the origin of the change. If the change was due to a Company error, the original service will be restored free of charge. If the change was submitted by a Customer or a third party and either the Customer or the third party is unable to produce evidence of the End User's consent then the responsible Customer or third party will be responsible for all charges and penalties associated with the unauthorized change.

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5.3. SPECIAL ASSEMBLIES AND INDIVIDUAL CASE BASIS ARRANGEMENTS

Arrangements will be developed on an Individual Case Basis (ICB) in response to a bona fide request from a Customer or prospective customer to develop a bid for any switched or special access service that the Company is technically capable of providing but which is not offered under this Tariff (special assembly), or to develop a competitive bid for a service that the Company offers under this Tariff (ICB). Rates quoted in response to such competitive requests may be different than those specified for such services in this Tariff. ICB and special assembly rates will be offered to the Customer in writing and on a nondiscriminatory basis. Customers served on a non-tariffed basis for services offered under this Tariff as of the effective date hereof shall be entitled to continue their existing serving arrangements under the same terms and conditions as "special assemblies," but those terms and conditions will not necessarily be available to new Customers when the same service is available under this Tariff. In addition, the Company may from time to time offer promotional or other special discounts to Customers who initiate service within the time contemplated by the promotional or other special discount offer.

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5. MISCELLANEOUS SERVICES

5.4. [RESERVED FOR FUTURE USE]

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