
ACCESS SERVICE

Interstate Service Guide and Pricelist
for Customers of Detariffed Access Services
within the operating territories
listed on the Title Pages

LEGAL NOTICE

The FRONTIER Interstate Service Guide and Pricelist (Guide) applies to the FRONTIER "Detariffed Services" (as defined below) and other telecommunications services that are set forth in this Guide.

Detariffed Services, as described in this document, are interstate special access services for which tariffs were withdrawn pursuant to FCC Report and Order, FCC 17-43, released April 28, 2017.

Beginning upon the effectiveness of the withdrawal of Detariffed Service tariffs, Detariffed Services will be subject to and provided pursuant to the rates, terms and conditions of this Service Guide, unless a separately executed service agreement between you and Frontier provides otherwise.

Prospective customers wishing to purchase services at the rates, terms and conditions in the Service Guide may do so by initiating orders through the same processes used to order services from FRONTIER's interstate access tariffs.

Service that is ordered without a separately executed service agreement between you and FRONTIER that applies to that order, will also be subject to the FRONTIER Interstate Access Service Agreement at https://wholesale.frontier.com/dcaas-staticassets/wholesale/SourceFiles/ISG/FTR_Interstate_Access_Service_Agreement_06302023.pdf.

The services described in the Guide may be available through negotiated agreements, which may include rates, terms or conditions more favorable to you than those in the Guide. Prospective customers wishing to purchase Guide services at rates, terms or conditions different from those described in the Guide and the applicable FRONTIER Interstate Access Service Agreement may contact their FRONTIER service representative or go to the FRONTIER website at <https://wholesale.frontier.com/resources/pricing-guides/interstate-service-guide.html>.

FRONTIER reserves the right to change the rates, terms and conditions in the Guide from time to time. Notification of Guide changes will be made available at the FRONTIER website.

Disclaimer: This documentation is for information purposes only and does not obligate Frontier to provide services in the manner herein described. Frontier reserves the right as its sole option to modify or revise the information in this document at any time without prior notice. In no event shall Frontier or its agents, employees, directors, officers, representatives or suppliers be liable under contract, warranty, tort (including but not limited to negligence of Frontier), or any other legal theory, for any damages arising from or relating to this document or its contents, even if advised of the possibility of such damages.

ACCESS SERVICE

Regulations Rates and Charges
applicable to Access Services provided by the
Frontier Telephone Companies
for connection to interstate communications facilities
for Customers within the operating territories of the
Issuing Carriers listed below.

Frontier Communications of Minnesota, Inc.
in the State of Minnesota

VERIZON
ONE VERIZON WAY, MAIL CODE:180WVB (T)
BASKING RIDGE, NJ 07920 (T)
For the State of Minnesota

Frontier Communications of Iowa, LLC
in the State of Iowa

VERIZON
ONE VERIZON WAY, MAIL CODE:180WVB (T)
BASKING RIDGE, NJ 07920 (T)
For the State of Iowa

Access Services are provided by means of wire, fiber optics, radio or any other suitable technology or a combination thereof.

ACCESS SERVICE

TABLE OF CONTENTS

| | <u>Page No.</u> |
|---|-----------------|
| Table of Contents | 1 |
| Concurring Carriers | 7 |
| Connecting Carriers | 7 |
| Other Participating Carriers | 7 |
| Explanation of Symbols | 8 |
| Explanation of Abbreviations | 8 |
| Reference to Other Tariffs | 10 |
| Reference to Technical Publications | 10 |
| 1. <u>Application of Tariff</u> | 1-1 |
| 2. <u>General Regulations</u> | 2-1 |
| 2.1 <u>Undertaking of the Telephone Company</u> | 2-1 |
| 2.1.1 Scope | 2-1 |
| 2.1.2 Limitations | 2-1 |
| 2.1.3 Liability | 2-1 |
| 2.1.4 Provision of Services | 2-2 |
| 2.1.5 Installation and Termination of Services | 2-3 |
| 2.1.6 Maintenance of Services | 2-3 |
| 2.1.7 Changes and Substitutions | 2-3 |
| 2.1.8 Discontinuance and Refusal of Services | 2-4 |
| 2.1.9 Limitation of Use of Metallic Facilities | 2-4 |
| 2.1.10 Rights to Telephone Numbers | 2-4 |
| 2.1.11 Representations | 2-5 |

ACCESS SERVICE

TABLE OF CONTENTS (Cont'd)

| | | |
|-----|--|-----------------|
| 2. | <u>General Regulations (Cont'd)</u> | <u>Page No.</u> |
| 2.2 | <u>Use</u> | 2-5 |
| | 2.2.1 Interference or Impairment | 2-5 |
| | 2.2.2 Unlawful Use | 2-5 |
| 2.3 | <u>Obligations of the Customer</u> | 2-6 |
| | 2.3.1 Damages and Indemnification | 2-6 |
| | 2.3.2 Return of Facilities | 2-7 |
| | 2.3.3 Equipment Space and Power | 2-7 |
| | 2.3.4 Availability for Testing | 2-7 |
| | 2.3.5 Balance | 2-7 |
| | 2.3.6 Design of Customer Services | 2-7 |
| | 2.3.7 References to the Telephone Company | 2-8 |
| | 2.3.8 Coordination with Respect to Network Contingencies | 2-8 |
| | 2.3.9 Assignment or Transfer of Services | 2-8 |
| | 2.3.10 Certification of Special Access Services (Lines) as Interstate | 2-9 |
| 2.4 | <u>Payment Arrangements and Credit Allowances</u> | 2-11 |
| | 2.4.1 Payment of Rates, Charges and Deposits | 2-11 |
| | 2.4.2 Minimum Periods | 2-13 |
| | 2.4.3 Credit Allowance for Service Interruptions | 2-14 |
| | 2.4.4 Access Services Provided by More Than One Telephone Company | 2-17 |
| 2.5 | <u>Connections</u> | 2-21 |
| 2.6 | <u>Definitions</u> | 2-21 |

ACCESS SERVICE

TABLE OF CONTENTS (Cont'd)

| | <u>Page No.</u> |
|--|-----------------|
| 3. <u>RESERVED FOR FUTURE USE</u> | 3-1 |
| 4. <u>RESERVED FOR FUTURE USE</u> | 4-1 |
| 5. <u>Special Access Service</u> | 5-1 |
| 5.1 <u>General</u> | 5-1 |
| 5.1.1 Channel Types | 5-1 |
| 5.1.2 Rate Categories | 5-2 |
| 5.1.3 Protocol Combinations | 5-4 |
| 5.1.4 Service Configurations | 5-4 |
| 5.1.5 Special Facilities Routing | 5-5 |
| 5.1.6 Circuit Design Layout | 5-5 |
| 5.1.7 Acceptance Testing | 5-5 |
| 5.1.8 Ordering Options and Conditions | 5-5 |
| 5.1.9 Alternate Use | 5-6 |
| 5.2 <u>Technical Service Descriptions for Special Access Service</u> | 5-6 |
| 5.2.1 Analog Services | 5-7 |
| 5.2.2 Digital Services | 5-30 |
| 5.3 <u>Protocol Codes</u> | 5-38 |
| 5.3.1 Glossary of Protocol Codes and Options | 5-39 |
| 5.3.2 Impedance | 5-42 |
| 5.3.3 Digital Hierarchy Protocol Codes 4DSX) | 5-43 |

ACCESS SERVICE

TABLE OF CONTENTS (Cont'd)

| | <u>Page No.</u> |
|---|-----------------|
| 5.4 <u>Rate Regulations</u> | 5-44 |
| 5.4.1 Types of Rates and Charges | 5-44 |
| 5.4.2 Minimum Periods | 5-45 |
| 5.4.3 Moves | 5-45 |
| 5.4.4 Mileage Measurement | 5-46 |
| 5.4.5 Shared Use Analog and Digital Capacity Services | 5-46 |
| 5.4.6 Special Access Surcharge | 5-47 |
| 5.4.7 Facility Hubs | 5-50 |
| 5.4.8 Term Discount Plans | 5-52 |
| 6. <u>RESERVED FOR FUTURE USE</u> | 6-1 |
| 7. <u>RESERVED FOR FUTURE USE</u> | 7-1 |
| 8. <u>Additional Engineering, Additional Labor, and Miscellaneous Charges</u> | 8-1 |
| 8.1 <u>Additional Engineering</u> | 8-1 |
| 8.2 <u>Additional Labor</u> | 8-1 |
| 8.2.1 Overtime Installation | 8-2 |
| 8.2.2 Overtime Repair | 8-2 |
| 8.2.3 Additional Installation Testing | 8-2 |
| 8.2.4 Standby | 8-2 |
| 8.2.5 Testing and Maintenance with Other Telephone Companies | 8-2 |
| 8.2.6 Other Labor | 8-2 |
| 8.3 <u>Miscellaneous Charges</u> | 8-3 |
| 8.3.1 Maintenance of Service Charge | 8-3 |
| 8.3.2 Restoration Priority Charge | 8-3 |
| 8.3.3 Testing Services | 8-7 |
| 9. <u>Ordering Options for Special Access Services</u> | 9-1 |
| 9.1 <u>General</u> | 9-1 |
| 9.1.1 Ordering Conditions | 9-1 |
| 9.1.2 Provision of Other Services | 9-3 |
| 9.1.3 Special Construction | 9-4 |
| 9.2 <u>Facilities Access Order</u> | 9-5 |
| 9.2.1 Facilities Access Order Charge | 9-5 |
| 9.2.2 Facilities Access Order Modifications | 9-6 |
| 9.2.3 Selection of Facilities for Access Orders | 9-9 |
| 9.2.4 Minimum Period | 9-10 |

ACCESS SERVICE

TABLE OF CONTENTS (Cont'd)

| | <u>Page No.</u> |
|---|-----------------|
| 9.2.5 Minimum Period Charges | 9-10 |
| 9.2.6 Cancellation of a Facilities Order | 9-11 |
| 9.2.7 Facilities Test and Line Up | 9-12 |
| 9.2.8 Delayed Activation Credit | 9-12 |
| 9.2.9 Discontinuation of Service | 9-13 |
| 9.2.10 Access Orders for Service Provided By More Than One Telephone Company | 9-13 |
| 10. <u>Reserved for Future Use</u> | 10-1 |
| 11. <u>Special Facilities Routing of Access Services</u> | 11-1 |
| 11.1 <u>Description of Special Facilities Routing of Access Services</u> | 11-1 |
| 11.1.1 Diversity | 11-1 |
| 11.1.2 Avoidance | 11-1 |
| 11.1.3 Cable-Only Facilities | 11-1 |
| 11.2 Rates and Charges for Special Facilities Routing of Access Services | 11-2 |
| 11.2.1 Diversity | 11-2 |
| 11.2.2 Avoidance | 11-2 |
| 11.2.3 Diversity and Avoidance Combined | 11-2 |
| 11.2.4 Cable-Only Facilities | 11-2 |
| 12. <u>RESERVED FOR FUTURE USE</u> | 12-1 |
| 13. <u>Private Line Services</u> | 13-1 |
| 13.1 <u>General</u> | 13-1 |
| 13.2 <u>Technical Standards</u> | 13-1 |
| 13.2.1 Description | 13-1 |
| 13.2.2 Transmission Specifications | 13-1 |
| 13.2.3 Standard Protocol Combinations | 13-1 |
| 13.3 <u>Rate Regulations</u> | 13-1 |
| 13.3.1 Rates and Charges | 13-1 |
| 13.3.2 Discontinuance of Term Commitments | 13-2 |
| 13.4 <u>On-Net Wire Centers – Frontier Communications of Minnesota</u> | 13-4 |
| 13.4.1 Metro On-Net | 13-4 |
| 13.4.2 Non-Metro On-Net | 13-4 |

ACCESS SERVICE

TABLE OF CONTENTS (Cont'd)

| | | |
|--------|--|-------|
| 14. | <u>RESERVED FOR FUTURE USE</u> | 14-1 |
| 15. | <u>Rates and Charges</u> | 15-1 |
| 15.1 | <u>Reserved for Future Use</u> | 15-1 |
| 15.2 | <u>Reserved for Future Use</u> | 15-2 |
| 15.3 | <u>Special Access Service</u> | 15-6 |
| 15.4 | <u>Miscellaneous Services</u> | 15-17 |
| 15.5 | <u>Ordering Charges</u> | 15-22 |
| 15.6 | <u>Reserved for Future Use</u> | 15-23 |
| 15.7 | <u>Reserved for Future Use</u> | 15-26 |
| 15.8 | <u>Reserved for Future Use</u> | 15-33 |
| 15.9 | <u>Competitive Counties for Special Access</u> | 15-33 |
| 16. | <u>Grandfathered Services</u> | 16-1 |
| 16.1 | <u>DSL Service</u> | 16-1 |
| 16.1.1 | General | 16-1 |
| 16.1.2 | Responsibility of the Telephone Company | 16-1 |
| 16.1.3 | Rights of the Telephone Company | 16-2 |
| 16.1.4 | DSL Access Port | 16-2 |
| 16.2 | <u>ADSL Service</u> | 16-3 |
| 16.2.1 | Service Description | 16-3 |
| 16.2.2 | ADSL Channel | 16-4 |
| 16.2.3 | Responsibility of the Customer | 16-5 |
| 16.2.4 | Rate Elements | 16-5 |
| 16.3 | <u>SDSL Service</u> | 16-6 |
| 16.3.1 | Service Description | 16-6 |
| 16.3.2 | SDSL Channel | 16-7 |
| 16.3.3 | Responsibility of the Customer | 16-8 |
| 16.3.4 | Rate Regulations | 16-8 |
| 16.3.5 | Rate Elements | 16-9 |
| 16.4 | <u>Rates and Charges</u> | 16-10 |
| 16.4.1 | DSL | 16-10 |
| 16.4.2 | ADSL | 16-10 |
| 16.4.3 | SDSL | 16-14 |

ACCESS SERVICE

CONCURRING CARRIERS

NO CONCURRING CARRIERS

CONNECTING CARRIERS

NO CONNECTING CARRIERS

OTHER PARTICIPATING CARRIERS

NO OTHER PARTICIPATING CARRIERS

ACCESS SERVICE

Explanation of Symbols

| | | |
|-----|---|-----|
| (C) | To signify change. | (C) |
| (D) | To signify discontinued rate or regulation. | |
| (N) | To signify new rate or regulation. | (C) |

Explanation of Abbreviations

| | |
|--------|---|
| ac | Alternating Current |
| ANI | Automatic Number Identification |
| AULP | Annual Underutilization Liability Per Pair |
| AP | Program Audio |
| BNA | Billing Name and Address |
| CCSA | Common Control Switching Arrangement(s) |
| CLLI | Common Language Location Identification |
| CNCC | Customer Network Control Center |
| COCTX | Central Office Centrex |
| Cont'd | Continued |
| CSACC | Customer Service Administration Control Center |
| Ctx | Centrex |
| DA | Digital Data Access |
| db | decibel |
| dBmCO | Decibel Reference Noise C Message Weighted O |
| dc | direct current |
| EPSCS | Enhanced Private Switched Communications Service |
| ESS | Electronic Switching System |
| ESSX | Electronic Switching System Exchange |
| EUCL | End User Common Line |
| 800 DB | 800 Data Base |
| f | frequency |
| FCC | Federal Communications Commission |
| FX | Foreign Exchange |
| HC | High Capacity |
| Hz | Hertz |
| IC | Interexchange Carrier |
| ICB | Individual Case Basis |
| ILP | Initial Liability Period |
| kbps | kilobits per second |
| kHz | kilohertz |
| LDMTS | Long Distance Message Telecommunications Service(s) |
| Ma | millamperes |
| Mbps | Megabits per second |
| Mhz | Megahertz |
| MOU | Minutes of Use |

ACCESS SERVICE

Explanation of Abbreviations (Cont'd)

| | |
|---------|---|
| MRC | Monthly Recurring Charge |
| MTL | Maximum Termination Liability |
| NB | Narrowband |
| NPA | Numbering Plan Area |
| NRC | Nonrecurring Charge |
| NTS | Non Traffic Sensitive |
| NXX | Three Digit Central Office Code |
| PBX | Private Branch Exchange |
| PCM | Pulse Code Modulation |
| PLR | Private Line Ringdown |
| RC | Rate Category |
| rms | root mean square |
| SMS/800 | Service Management System/800 |
| SSN | Switched Service Network |
| SWC | Serving Wire Center |
| TES | Telephone Exchange Service(s) |
| TV | Television |
| USOC | Uniform Service Order Code |
| VG | Voice Grade |
| V&H | Vertical & Horizontal |
| WA | Wideband Analog |
| WATS | Wide Area Telecommunications Service(s) |
| WCH | Wire Center Horizontal |
| WCV | Wire Center Vertical |
| WD | Wideband Digital |

ACCESS SERVICE

Reference to Other Tariffs

Whenever reference is made in this Guide to other tariffs of Frontier Communications of Minnesota and Iowa, the reference is to the tariffs in force as of the effective date of this Guide, and to amendments thereto and successive issues thereof.

Reference to Technical Publications

The following technical publications are referenced in this Guide and may be obtained from the respective agencies listed below, and from the Federal Communications Commission's commercial contractor:

Technical Reference:

Federal Aviation Administration (FAA)
Specifications S-1142a
Issued: April, 1964 Available: April, 1964

Department of Transportation
Federal Aviation Administration
800 Independence Avenue, SW
Washington, D.C. 20591

Electronic Industries Association, RS-250-B
Issued: September, 1976 Available: September, 1976

Electronic Industries Association
2001 Eye Street, NW
Washington, D.C. 20006

Publications as No. 1
Issued: March, 1984 Available: April, 1984

National Exchange Carrier Association, Inc.
Group Manager - Tariff Administration
100 South Jefferson Road
Whippany, N.J. 07981

The following technical publications are reference in this Guide and may be obtained for the Literary Data Center, Inc., G.P.O. Box C-9104, Brooklyn, N.Y. 11202

Technical Reference:

Publication 41001
Issued: October, 1983 Available: October, 1978

Publication 62310
Issued: September, 1983 Available: October, 1983

ACCESS SERVICE

Reference to Technical Publications (Cont'd)

| | |
|--|---------------------------|
| Publication 62411 Issued: September, 1983 | Available: October, 1983 |
| Publication 62500 Issued: December, 1983 | Available: March 15, 1984 |
| Publication 62501 Issued: December, 1983 | Available: March 15, 1984 |
| Publication 62501 Addendum Issued: December, 1983 | Available: April, 1984 |
| Publication 62502 Issued: December, 1983 | Available: January, 1984 |
| Publication TR NPL 000337 Issued: July, 1987 | Available: July, 1987 |
| Publication 62503 Addendum Issued: March, 1984 | Available: April, 1984 |
| Publication 62504 Issued: December, 1983 | Available: March 15, 1984 |
| Publication 62504 Addendum Issued: March, 1984 | Available: April, 1984 |
| Publication 62505 Issued: December, 1983 | Available: January, 1984 |
| Publication 62505 Addendum Issued: March, 1984 | Available: April, 1984 |
| Publication 62506 Issued: December, 1983 | Available: January, 1984 |
| Publication 62507 Issued: December, 1983 | Available: March 15, 1984 |
| Publication 62508 Issued: December, 1983 | Available: January, 1984 |

ACCESS SERVICE

Reference to Technical Publications (Cont'd)

MECAB (Multiple
Exchange Carrier
Access Billing) Issue 2
Issued: December, 1989

Available: December, 1989

MECOD (Multiple
Exchange Carrier
Ordering and Design
Guidelines) Version 3
Issued: November, 1989

Available: November, 1989

The following Service
Vendor Handbook referenced
in this Guide may be obtained
from the following office:

Government Printing Office
Superintendent of Documents
Document Control Branch
941 North Capital Street, NE
Washington, D.C. 20402 9325

NSEP TSP
Service Vendor
Handbook 3 1 2
Issued: July 9, 1990

Available: August, 1990

The following publication is referenced in this Guide and may be obtained from Bellcore Number Administration and Service Center (NASC), 920 West Mount Pleasant Avenue, Livingston, New Jersey 07039 0486.

Guidelines for 800 Data Base, Issue 2.0
Issued: November, 1992

Available: November, 1992

The following publication is referenced in this Guide and may be obtained from Bellcore Communications Research, Customer Services, 8 Corporate Place, Piscataway, NJ 08854

SMS/800 User Guide: 800 Service Management, Issue 10
Issued: January, 1993

Available: January, 1993

ACCESS SERVICE

2. General Regulations

2.1 Undertaking of the Telephone Company

2.1.1 Scope

- (A) The Telephone Company will provide service under this Guide only to Customers in connection with their use and/or provision of interstate communications service.
- (B) The Telephone Company does not undertake to transmit messages under this Guide.
- (C) The Telephone Company shall be responsible only for the installation, operation and maintenance of the services which it provides.
- (D) The Telephone Company will, for maintenance purposes, test its services only to the extent necessary to clear troubles.
- (E) Services are provided twenty-four (24) hours daily, seven (7) days a week unless otherwise stated.

2.1.2 Limitations

- (A) The use and restoration of services shall be in accordance with Part 64, Subpart D, Appendix A of the FCC's Rules and Regulations, which specifies the priority system for such activities.
- (B) Subject to compliance with the above-mentioned rules, the services offered herein will be provided to Customers on a first-come, first-served basis. The Telephone Company will use service order dates to determine the service provision priority.

2.1.3 Liability

- (A) The Telephone Company's liability for damages for its willful misconduct, if any, is not limited by this Guide. The Telephone Company's liability, if any, to a Customer or to others for damages arising from the furnishing of or the failure to furnish service or facilities, including but not limited to errors, interruptions, breakdowns, or other defects, whether caused by act or omission shall be limited to the allocable charges for the service or facilities for the period affected, and shall be further limited under the provisions of Sections 2.1.3(B), (C) and (D) where applicable. The Telephone Company's responsibility, if any, to pay amounts otherwise due as a Credit Allowance for a Service Interruption under this Guide is not affected by this limitation of liability.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.3 Liability (Cont'd)

- (B) The Telephone Company is not liable for any special, incidental or consequential damages, or for commercial loss of any kind, whether or not it has been informed of the possibility of such damages.
- (C) The Telephone Company is not liable for physical damage to a Customer's designated premises resulting from the furnishing of a service, including the installation and removal of equipment and associated wiring, unless the damage is caused solely by the Telephone Company's negligence.
- (D) The Telephone Company does not guarantee or make any warranty with respect to its services when used in an explosive atmosphere. The Telephone Company shall be indemnified, defended and held harmless by the Customer from any and all claims by any person relating to the services so provided to that Customer.
- (E) No license under patents (other than the limited license to use) is granted by the Telephone Company or shall be implied or arise by estoppel, with respect to any service offered under this Guide. The Telephone Company will defend the Customer against claims of patent infringement arising solely from the use by the Customer of services offered under this Guide and will indemnify such Customer for any damages awarded based solely on such claims.
- (F) The Telephone Company's failure to provide or maintain services under this Guide shall be excused by labor difficulties, governmental orders, civil commotions, acts of God, and other circumstances beyond the Telephone Company's reasonable control.
- (G) The Telephone Company shall not be liable for any act or omission of any other carrier or Customer providing a portion of a service, nor shall the Telephone Company for its own act or omission hold liable any other carrier or Customer providing a portion of a service.

2.1.4 Provision of Services

The provision of all services under this Guide is dependent in all situations on the availability of Telephone Company plant and equipment.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.5 Installation and Termination of Services

The services provided under this Guide (A) will include any entrance cable within a building necessary to terminate the services at points, selected by the Customer, reasonably situated so as to serve the Customer's premises and (B) will be installed by the Telephone Company to such points of termination. Wiring to apparatus or facilities of the Customer shall be furnished by the Customer from such points of termination.

2.1.6 Maintenance of Services

The services provided under this Guide shall be maintained by the Telephone Company. The Customer or others may not, except with the prior written consent of the Telephone Company, rearrange, move, disconnect, remove, or attempt to repair any facilities provided by the Telephone Company, other than by connection or disconnection to any interface means used.

2.1.7 Changes and Substitutions

Except as provided for equipment and systems subject to FCC Part 68 regulations, the Telephone Company may, where such action is reasonably required in the operation of its business, (A) substitute, change or rearrange any facilities used in providing service under this Guide, including but not limited to, (1) substitution of different metallic facilities, (2) substitution of carrier or derived facilities for metallic facilities used to provide other than metallic facilities, and (3) substitution of metallic facilities for carrier or derived facilities used to provide other than metallic facilities; (B) change minimum network protection criteria; (C) change operating or maintenance characteristics of facilities; or (D) change operation or procedures of the Telephone Company. In case of any such substitution, change or rearrangement, the facility parameters will be within the ranges set forth in Sections 4 and 5. The Telephone Company shall not be responsible if any such substitution, change or rearrangement renders any Customer furnished services obsolete or requires modification or alteration thereof or otherwise affects their use or performance. If a substitution, change or rearrangement materially affects the operating characteristics of the facility, the Customer will be given adequate notice in writing. Reasonable time will be allowed for any redesign and implementation required by the change in operating characteristics. The Telephone Company will work cooperatively with the Customer to minimize any disruption caused or changes made necessary by changes in service.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.8 Discontinuance and Refusal of Services

Unless the provision of Sections 2.1.2 or 2.2.1(B) apply, if the Customer fails to comply with Sections 2.1.6, 2.2.2, 2.3.3, 2.3.4, 2.3.5, or 2.4 or fails to make any payment to be made by it on the dates and times herein specified, including the payment of a disputed amount, the Telephone Company may, on thirty (30) days written notice given in person, by registered or certified mail, or by recognized overnight courier service to the person designated by that Customer to receive notices of noncompliance:

- (A) refuse additional applications for service and/or refuse to complete any pending orders for service; and/or
- (B) discontinue the provision of services to the Customer. In the case of such discontinuance, all applicable charges shall become due as if that Customer had cancelled service.

If the Telephone Company does not refuse additional applications for service on the date specified in the thirty (30) day notice given pursuant to (A) above, or does not discontinue the provision of the services involved on the date specified in the thirty (30) days notice given pursuant to (B) above, and that Customer's noncompliance continues, the Telephone Company shall have the right to refuse additional applications for service or to discontinue service without further notice.

2.1.9 Limitation of Use of Metallic Facilities

In the case of application of dc telegraph signaling systems, the Customer shall be responsible, at its expense, for the provision of current limiting devices to protect the Telephone Company facilities from excessive current due to abnormal conditions and for the provision of noise mitigation networks when required to reduce excessive noise.

2.1.10 Rights to Telephone Numbers

The Telephone Company reserves the right to assign, designate or change telephone numbers or change the central office prefixes associated with telephone numbers assigned to Customers as is reasonably necessary in the conduct of the Telephone Company business. Written notice of any change will be given to the Customer ninety (90) days in advance of the change. Where extenuating circumstances do not permit notice to be given ninety (90) days in advance, the Telephone Company will give notice within a reasonable period of time as circumstances permit. The notice will contain an explanation of the reasons for the change.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.11 Representations

The Telephone Company does not represent that its facilities will meet standards other than those set forth in Section 5 of this Guide.

2.2 Use

2.2.1 Interference or Impairment

(A) The characteristics and methods of operation of any circuits, facilities or equipment provided by other than the Telephone Company and associated with the facilities utilized to provide services under this Guide shall not interfere with or impair service over any facilities of the Telephone Company or its affiliated companies, cause damage to plant, impair the privacy of any communications carried over facilities or create hazards to employees of the Telephone Company or its affiliated companies or to the public.

(B) Except as provided for equipment or systems subject to the FCC Part 68 rules, if such characteristics or methods of operation are not in accordance with Section 2.2.1(A), the Telephone Company will, where practicable, notify the Customer that temporary discontinuance of the use of a service may be required; however, where prior notice is not practicable, nothing contained herein shall be deemed to preclude the Telephone Company from temporarily discontinuing the use of a service if such action is reasonable under the circumstances. In case of such temporary discontinuance, the Customer will be promptly notified and afforded the opportunity to correct the condition which gave rise to the temporary discontinuance.

2.2.2 Unlawful Use

The services provided under this Guide shall not be used unlawfully or for any unlawful purpose.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.3 Obligations of the Customer

2.3.1 Damages and Indemnification

- (A) The Customer shall reimburse the Telephone Company for damages to the Telephone Company facilities utilized to provide services under this Guide caused by the negligence or willful act of the Customer, its agents, employees, officers, directors, invitees, guests, Customers, and others using the services provided to the Customer by the Telephone Company, or resulting from improper use of the Telephone Company facilities by the Customer, its agents, employees, officers, guests, Customers, and others using the services provided to the Customer by the Telephone Company, or due to malfunction of any facilities or equipment provided by other than the Telephone Company. Nothing in the foregoing provision shall be interpreted to hold one Customer liable for another Customer's actions. The Telephone Company will, upon reimbursement for damages, cooperate with the Customer in prosecuting a claim against the person causing such damage and the Customer shall be subrogated to the right of recovery by the Telephone Company for the damages to the extent of such payment.
- (B) The Telephone Company shall be indemnified, defended and held harmless by the IC or End User against any claim, loss or damage arising from the use of services offered under this Guide. This obligation to indemnify, defend and hold harmless shall attach to the IC or the End User separately, and each shall be responsible for its own acts and omissions, including:
- (1) Claims for libel, slander, invasion of privacy, or infringement of copyright arising from any communications;
 - (2) Claims for patent infringement arising from combining or using the service furnished by the Telephone Company in connection with facilities or equipment furnished by the End User or IC; or
 - (3) All other claims arising out of any act or omission of the End User or IC in the course of using services provided pursuant to this Guide.

Notwithstanding the other provisions of this Section 2.3.1(B), the Telephone Company shall be indemnified, defended and held harmless by the Customer from any and all claims by any person relating to the Customer's use of services provided under this Guide.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.2 Return of Facilities

Facilities provided by the Telephone Company to the possession or control of a Customer shall be returned by that Customer at its expense to the Telephone Company, upon request, within a prompt period of time following the request in as good a condition as when initially provided, reasonable wear and tear accepted.

2.3.3 Equipment Space and Power

The Customer shall furnish or arrange to have furnished to the Telephone Company, at no charge, equipment space and electrical power required by the Telephone Company to provide services under this Guide at the points of termination of such services. The selection of ac or dc power shall be mutually agreed to by the Customer and the Telephone Company. The Customer shall also make necessary arrangements in order that the Telephone Company will have access to such spaces at reasonable times for installing, testing, repairing, or removing services or facilities of the Telephone Company.

2.3.4 Availability for Testing

The service provided under this Guide shall be available to the Telephone Company at times mutually agreed upon in order to permit the Telephone Company to make tests and adjustments appropriate for maintaining the service in satisfactory operating condition. Such tests and adjustments shall be completed within a reasonable time. No credit will be allowed for any interruptions involved during such tests and adjustments.

2.3.5 Balance

All signals for transmission over the services provided under this Guide shall be delivered by the Customer balanced to ground except for loop and duplex (DX) type signaling and dc telegraph transmission at speeds of 75 baud or less.

2.3.6 Design of Customer Services

Subject to the provisions of Section 2.1.7, the Customer shall be solely responsible, at its own expense, for the overall design of its services and for any redesigning or rearrangement of its services.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.7 References to the Telephone Company

The Customer may advise End Users that certain services are provided by the Telephone Company in connection with the service the Customer furnishes to End Users; however, the Customer shall not represent that the Telephone Company jointly participates in the Customer's services.

2.3.8 Coordination with Respect to Network Contingencies

The Customer shall, in cooperation with the Telephone Company, coordinate in planning the actions to be taken to maintain maximum network capability following natural or man-made disasters which affect telecommunications services.

2.3.9 Assignment or Transfer of Services

The Customer may not assign or transfer the use of services provided under this Guide except, where there is no interruption of use or relocation of the services, such assignment or transfer may be made to:

- (A) another Customer, whether an individual, partnership, association, or corporation, provided the assignee or transferee expressly assumes all outstanding indebtedness for such services, and the unexpired portion of the minimum period and the termination liability applicable to such services, if any; or
- (B) a court appointed receiver, trustee or other person acting pursuant to law in bankruptcy, receivership, reorganization, insolvency, liquidation, or other similar proceedings, provided the assignee or transferee expressly assumes the unexpired portion of the minimum period and the termination liability applicable to such services, if any. In all cases of assignment or transfer, the written acknowledgment of the Telephone Company is required prior to such assignment or transfer. The acknowledgment will be made within fifteen (15) days from the receipt of notification. All regulations and conditions contained in this Guide shall apply to such assignee or transferee. The assignment or transfer of services does not relieve or discharge the assignor or transferor from remaining jointly or severally liable with the assignee or transferee for any obligations existing at the time of the assignment or transfer.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.10 Certification of Special Access Services (Lines) as Interstate

(A) Interstate Classification Requirements

Pursuant to Federal Communications Commission Order FCC 89-224 adopted June 24, 1989, and released July 20, 1989, the jurisdiction for mixed interstate and intrastate Special Access Services will be determined as follows:

If the Customer's estimate of the interstate traffic on the service involved constitutes ten percent (10%) or less of the total traffic on that service, the service will be provided in accordance with the applicable rules and regulations of the appropriate intrastate tariff.

If the Customer's estimate of the interstate traffic on the service involved constitutes more than ten percent (10%) of the total traffic on that service, the service will be provided in accordance with the applicable rules and regulations of this Guide.

(B) Certification Requirements

When a Customer orders a Special Access Service under this Guide, the Customer shall certify, in its order, that the Special Access Service carries interstate traffic and the interstate traffic is more than ten percent (10%) of the total traffic carried on the Special Access Service.

Existing Customers of Mixed Use Special Access Service as of July 1, 1990 will be required to certify the jurisdiction of each Special Access line. Implementation of changes in jurisdictional use of the line indicated by Customers of Mixed Use Special Access Service will be completed via an Access Service Request (ASR).

ACCESS SERVICE

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.10 Certification of Special Access Services (Lines) as Interstate (Cont'd)

(C) Verification Information

If a billing dispute arises or a regulatory commission questions the Customer certification the Telephone Company will ask the Customer to provide the data the Customer uses to determine the jurisdiction of each Special Access line. The Customer shall supply the data within 30 days of the Telephone Company request. The Customer shall keep records of system design and functions from which the jurisdiction of each Special Access line can be determined and upon request of the Telephone Company make the records available for inspection as reasonably necessary for purpose of verification of the jurisdiction of each Special Access line.

(D) Nonrecurring Charges and Penalties

Customers of Mixed Use Special Access Service will not incur a nonrecurring charge in accordance with Section 5.4.1(C) of this Guide nor any penalty for changes made to jurisdictional use of the line.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.11 Identification and Rating of VoIP-PSTN Traffic

(A) Scope

VoIP-PSTN Traffic is defined as traffic exchanged between the Telephone Company end user and the customer in time division multiplexing ("TDM") format that originates and/or terminates in Internet protocol ("IP") format. This section governs the identification of VoIP-PSTN Traffic that is required to be compensated at interstate access rates by the Federal Communications Commission in its Report and Order in WC Docket Nos. 10-90, etc., FCC Release No. 11-161 (Nov. 18, 2011) ("FCC Order"). Specifically, this section establishes the method of separating VoIP-PSTN Traffic from the customer's traditional intrastate access traffic, so that such VoIP-PSTN Traffic can be billed in accordance with the FCC Order.

(B) Rating of VoIP-PSTN Traffic

Interstate and Intrastate VoIP-PSTN Traffic identified in accordance with this Guide section will be billed at rates equal to the Telephone Company's applicable tariffed interstate switched access rates as specified in Section 15 following.

(C) Calculation and Application of Percent-VoIP-Usage Factor

The Telephone Company will determine the number of VoIP-PSTN Traffic minutes of use ("MOU") to which interstate rates will be applied under subsection (B), above, by applying a Percent VoIP Usage ("PVU") factor to the total terminating intrastate access MOU received by The Telephone Company from the customer. The PVU will be derived and applied as follows:

- (1) The customer will calculate and furnish to the Telephone Company a factor (the "PVU") representing the percentage of the total intrastate and interstate access MOU that the customer terminates to the Telephone Company in the State, that is sent to the Telephone Company and that originated in IP format. This PVU shall be based on information such as traffic studies, actual call detail, or other relevant and verifiable information. The customer shall retain the call detail, work papers, and information used to develop the PVU factor for a minimum of one year.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.11 Identification and Rating of VoIP-PSTN Traffic (Cont'd)

(C) Calculation and Application of Percent-VoIP-Usage Factor (Cont'd)

- (2) The customer shall not modify their reported PIU factor to account for VoIP-PSTN Traffic.
- (3) The Telephone Company will apply the PVU factor to the total terminating intrastate access MOU received from the customer to determine the number of VoIP-PSTN Traffic MOUs.
- (4) If the customer does not furnish the Telephone Company with a PVU pursuant to the preceding paragraph 1, the Telephone Company will utilize a PVU equal to zero.

(D) Initial PVU Factor

If the PVU factor is not available and/or cannot be implemented in the Telephone Company's billing systems by December 31, 2011, once the factor is available and can be implemented the Telephone Company will adjust the customer's bills to reflect the PVU retroactively to December 31, 2011. This retroactive adjustment will be made to December 31, 2011, provided that the customer provides the factor to the Telephone Company no later than April 15, 2012; otherwise, it will set the initial PVU equal to zero, as specified in subsection (C)(4), above.

The Telephone Company may choose to provide credits based on the reported PVU factors until such time as billing system modifications can be implemented.

(E) PVU Factor Updates

The customer may update the PVU factor quarterly using the method set forth in subsection (C)(1), above. If the customer chooses to submit such updates, it shall forward to the Telephone Company, no later than 15 days after the first day of January, April, July and/or October of each year, a revised PVU factor based on data for the prior three months, ending the last day of December, March, June and September, respectively. The revised PVU factor will apply prospectively and serve as the basis for billing until superseded by a new PVU. No prorating or back billing will be done based on the updated PVU factor.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.11 Identification and Rating of VoIP-PSTN Traffic (Cont'd)

(F) PVU Factor Verification

- (1) Not more than four times in any year, the Telephone Company may request from the customer an overview of the process used to determine the PVU factors, the call detail records, description of the method for determining how the end user originates or terminates calls in IP format, and other information used to determine the customer's PVU factor furnished to the Telephone Company in order to validate the PVU factor supplied. The customer shall comply, and shall reasonably supply the requested data and information within 15 days of the Telephone Company's request.
- (2) The Telephone Company may dispute the customer's PVU factor based upon:
 - (a) A review of the requested data and information provided by the customer.
 - (b) The Telephone Company's reasonable review of other market information, FCC reports on VoIP lines, such as FCC Form 477 or state level results based on FCC Local Competition Report or other relevant data.
 - (c) A change in the reported PVU factor by more than five percentage points from the preceding quarter.
- (3) If after review of the data and information, the customer and the Telephone Company establish a revised PVU factor, the customer and the Telephone Company will begin using that revised PVU factor with the next bill period.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.11 Identification and Rating of VoIP-PSTN Traffic (Cont'd)

(F) PVU Factor Verification (Cont'd)

- (4) If the dispute is unresolved, the Telephone Company may initiate an audit. The Telephone Company shall limit audits of the customer's PVU factor to no more than four times per year. The customer may request that the audit be conducted by an independent auditor. In such cases, the associated auditing expenses will be paid by the customer.
- (a) In the event that the customer fails to provide adequate records to enable the Telephone Company or an independent auditor to conduct an audit verifying the customer's PVU factors, the Telephone Company will bill the usage for all contested periods using the most recent undisputed PVU factors reported by the customer. These PVU factors will remain in effect until the audit can be completed.
- (b) During the audit, the undisputed PVU factors from the previous reporting period will be used by the Telephone Company.
- (c) The Telephone Company will adjust the customer's PVU factors based on the results of the audit and implement the revised PVU in the next billing period or quarterly report date, whichever is first. The revised PVU factors will apply for the next two quarters before new factors can be submitted by the customer.
- (d) If the audit supports the customer's PVU factors, the usage for the contested periods will be adjusted to reflect the customer's audited PVU factors.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances

2.4.1 Payment of Rates, Charges and Deposits

- (A) The Telephone Company may, in order to safeguard its interests, require a Customer which has a history of late payments to the Telephone Company or does not have established credit to make a deposit prior to or at any time after the provision of a service to the Customer. That deposit will be held by the Telephone Company as a guarantee of the payment of rates and charges. No such deposit will be required if a Customer is a successor to a company which has established credit and has no history of late payments to the Telephone Company. The deposit will not exceed the anticipated charges for the service and facilities for a two month period. The fact that a deposit has been made in no way relieves the Customer from complying with the Telephone Company's regulations as to advance payments or the prompt payment of bills. After such time as the provision of the service to the Customer is terminated, the amount of the deposit will be credited to the Customer's account and any credit balance which may remain will be refunded. A deposit will be refunded or credited to the Customer's account after the Customer has established credit or in any event after Customer has established a timely payment record for 12 consecutive months. For the period a cash deposit is held by the Telephone Company, the Customer will receive interest at the same rate as is set forth in Section 2.4.1(D) for late payment charges. A deposit given in connection with Special Construction under the applicable Interstate Special Construction Tariff or Specialized Service or Arrangements under Section 7 of this Guide shall be treated in accordance with those tariff provisions.
- (B) The Telephone Company shall bill on a current basis all charges incurred by and credits due to the Customer under this Guide attributable to services established or discontinued during the preceding billing period. In addition, the Telephone Company shall bill in advance charges for all services to be provided during the ensuing billing period except for charges associated with service usage or with service to the Federal Government, which will be billed in arrears. The bill date shall be printed on the bill. Adjustments for the quantities of services established or discontinued in any billing period, after the expiration of the minimum period for the service (as set forth in this Guide), will be prorated to the number of days or major fraction of days based on a 30-day month. To assist the Customer in verifying a bill, the Telephone Company will provide upon Customer's request, figures and calculations used by the Telephone Company in rendering the bill to the Customer, including information related to the calculation of the subscriber line ratio.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.1 Payment of Rates, Charges and Deposits (Cont'd)

- (C) Payment of bills must result in Immediately Available Funds on or before the payment due date. The payment due date shall be the 30th day following the bill date, provided that if such 30th day falls on a Saturday, Sunday or legally observed Holiday, (i.e., New Year's Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, the second Tuesday in November and a day when Washington's Birthday, Memorial Day, Columbus Day or Martin Luther King's Birthday is legally observed), payment will be due as follows:
- (1) If such 30th day falls on a Sunday or on a holiday observed on a Monday, the payment due date shall be the first non-holiday day following such Sunday or holiday; or
 - (2) If such 30th day falls on a Saturday or on a holiday observed on Tuesday, Wednesday, Thursday, or Friday, the payment due date shall be the last non-holiday day preceding such Saturday or holiday.
- (D) If any amount due is received by the Telephone Company after the payment due date or if any amount due is received by the Telephone Company in funds not immediately available to the Telephone Company on or before the payment due date, then a late payment charge shall be assessed. The late payment charge shall be such amount due times a late factor. The late factor shall be the lesser of:
- (1) The highest interest rate (in decimal value) permissible under state law for commercial transactions in the state where the services were provided, compounded daily for the number of calendar days from the payment due date to and including the date Telephone Company actually receives the payment in immediately available funds, or
 - (2) 0.000590 per day, compounded daily for the number of calendar days from the payment due date to and including the date that Telephone Company actually receives the payment in immediately available funds.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.1 Payment of Rates, Charges and Deposits (Cont'd)

(D) (Cont'd)

If Customer does not receive a bill at least 20 days prior to the payment due date, upon request of Customer submitted with proof of such late receipt of the bill, the late payment charge shall not apply for the number of days the bill was late.

Such proof includes but is not limited to the received date stamp of the Customer on the bill along with certification of the Accounts Payable supervisor of the Customer that the received date stamp is accurate.

- (E) If a billing dispute arises, Customer shall pay the disputed amount by the payment due date and notify Telephone Company in writing of the dispute. Disputed amounts paid after the payment due date are subject to late payment charges. If the dispute is ultimately resolved in favor of Customer, Telephone Company shall refund the overpayment, including any late payment charges collected by Telephone Company with respect to the overpayment, plus interest at the rate prescribed for late payment charges in section 2.4.1(D).

For claims filed with the Telephone Company, interest will be paid from the date the Customer pays the bill to the date the refund is made.

2.4.2 Minimum Periods

The minimum period for which service is provided and for which rates and charges are applicable is one month unless a different minimum period is established elsewhere in this Guide. When a service is discontinued prior to the expiration of the minimum period, a charge is applicable for the remaining portion of the minimum period, whether the service is used or not, and will be based on the rates in effect for the service at the time of discontinuance. In instances where the minimum period is more than thirty (30) days, the charge will be the lesser of the Telephone Company's non-recoverable costs less the net salvage value, if any for the discontinued service or the total monthly charges at the rates in effect at the time service is discontinued, unless otherwise provided elsewhere in this Guide.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.3 Credit Allowance for Service Interruptions

(A) General

A service is interrupted when it becomes unusable to the Customer because of a failure of a facility component used to furnish service under this Guide. For certain Special Access Services (Wideband Digital, Digital Data Access, and High Capacity), any period during which the error performance is below that specified for the service will be considered as an interruption. Except as otherwise provided, an interruption period starts when the Telephone Company becomes aware of the inoperative service, regardless of when it is reported by the Customer, and ends when the service is operative.

For purposes of administering the following regulations a "major fraction" means more than half of the incremental credit period using the unit of time in which the service interruption is measured, i.e., 30 seconds, 5 minutes. For example, a major fraction for a 30 minute period equals 16 minutes and for a 5 minute period equals 2 minutes and 31 seconds.

In case of an interruption to any service, allowance for the period of interruption shall be as follows:

- (1) For services, other than those mentioned in Sections 2.4.3(A)(2), (3) or (5), no credit shall be allowed for an interruption of less than thirty (30) minutes. The Customer shall be credited for an interruption of thirty (30) minutes or more at the rate of 1/1,440 of the monthly charge for the service for each period of thirty (30) minutes or major fraction thereof that the interruption continued from the time that an interruption period starts. For flat rated Switched Access Service rate elements, the monthly charge shall be the total of all monthly rate element charges associated with the service (i.e., Entrance Facility, Direct Trunked Transport and Multiplexing).

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.3 Credit Allowance for Service Interruptions (Cont'd)

(A) General (Cont'd)

- (2) For Video Service provided at daily rates, no credit shall be allowed for an interruption of less than thirty (30) seconds. The Customer shall be credited for an interruption of thirty (30) seconds or more at the rate of 1/288 of the daily charge for the service for each five (5) minutes or fraction thereof that an interruption continues from the time of notice to the designated Telephone Company operating center that an interruption has occurred. Two or more such interruptions occurring during a period of five (5) consecutive minutes shall be considered as one interruption.
 - (3) [Reserved for Future Use]
 - (4) The credit allowance(s) for an interruption or for a series of interruptions shall not exceed the monthly rate or minimum monthly charge for the service interrupted in any one monthly billing period.
 - (5) [Reserved for Future Use]
-

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.3 Credit Allowance for Service Interruptions (Cont'd)

(B) When a Credit Allowance Does Not Apply

No credit allowance will be made for:

- (1) Interruptions caused by the negligence of the Customer.
- (2) Interruptions of a service due to the failure of equipment or systems provided by the Customer or others.
- (3) Interruptions of a service which continue because of the failure of the Customer to authorize replacement of any element of Special Construction, as set forth in the applicable Interstate Special Construction Tariff.
- (4) Periods when the Customer elects not to release the service for testing and/or repair and continues to use it on an impaired basis.
- (5) An interruption or a group of interruptions, resulting from a common cause, for amounts less than one dollar.

(C) Use of an Alternative Service Provided by the Telephone Company

Should the Customer elect to use an alternative service provided by the Telephone Company during the period that a service is interrupted, the Customer must pay the tariffed rates and charges for the alternative service used.

(D) Temporary Surrender of a Service

In certain instances, the Customer may be requested to surrender a service for purposes other than maintenance, testing or activity relating to a service order. If the Customer consents, a credit allowance will be granted. The credit allowance will be determined in the same manner as a credit for service interruptions as set forth in Section 2.4.3(A).

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company

When an Access Service is provided by more than one Telephone Company, the Telephone Companies involved will mutually agree upon one of the billing methods as set forth in (A) and (B) following based upon the types of access services and the interconnection arrangements between the Telephone Companies.

The Telephone Company will notify the Customer which billing methods will be used. The Customer will place the order for the service as set forth in Section 9.2.10 dependent upon the billing method.

(A) [Reserved for Future Use]

(B) Meet Point Billing

Meet Point Billing is required when an access service is provided by multiple Telephone Companies for Special Access.

For usage rated access services the access minutes of use will be determined by the Initial Billing Company and used by the Initial Billing Company and any Subsequent Billing Company(ies) for the development of access charges.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

(B) Meet Point Billing (Cont'd)

- The Initial Billing Company for Feature Groups B, C and D Switched Access Services is normally the end user's end office, for WATS usage the Initial Billing Company is normally the WATS serving office, for Directory Assistance the Initial Billing Company is normally the Directory Assistance location. When the Initial Billing Company is other than the normally designated Telephone Company office, the Telephone Company will notify the Customer.
- The Subsequent Billing Company(ies) is any Telephone Company whose territory a segment of Switched Transport is provided and/or where the Customer's Point of Termination is located.

The Telephone Company will utilize the Multiple Bill Meet Point Billing Option. The Telephone Company shall notify the Customer that this option will be utilized at the time that orders are placed for access service. Additionally, the Telephone Company shall provide this notice in writing 30 days in advance of any change.

Meet Point bills rendered by the Telephone Company will include, based upon Industry Standards, cross reference(s) to the other Telephone Company(ies) service and the common circuit identifiers. Should a billing dispute arise, the terms and conditions of the Telephone Company rendering the bill will apply.

(1) Multiple Bill Option

Each Telephone Company will receive an order or a copy of the order from the Customer as specified in Section 9.2.10(B). Each Telephone company will: prepare its own bill; determine its portion of Switched Transport, Directory Assistance and/or Channel Mileage as set forth in Section 2.4.4(B)(2) following and determine the applicable charges; include all recurring and nonrecurring rates and charges of its tariff; bill in accordance with its tariff; and forward the bill to the Customer.

The Customer will remit the payment directly to each Telephone Company that bills it.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations

Each Telephone Company will calculate its portion of the Switched Transport, Directory Assistance Transport and Channel Mileage as follows:

- (a) Determine the total Direct Trunked Transport Facility Tandem Switched Transport Facility or Channel Mileage Facility by computing the number of airline miles between the Telephone Company premises (end office, access tandem or serving wire centers for Switched Access or serving wire centers for Special Access) using the V&H method set forth in Sections 4.6.12 and 5.4.4.

When Terminating Tandem Switched Transport is provided through a Frontier Telephone ILEC access Tandem and the Terminating End Office is not owned by a Frontier Telephone ILEC Company or through an ILEC Access Tandem not owned by a Frontier Telephone ILEC Company and the Terminating End Office is owned by a Frontier Telephone ILEC Company, Terminating – Tandem 3rd Party rates are applicable, otherwise Terminating – Tandem End Office rates are applicable. When originating Tandem Switched Transport is provided, Originating rates are applicable.

- (b) Each Telephone Company will multiply the total number of airline miles, as set forth in (a) preceding, by its tariffed rate to determine a dollar amount.
- (c) Determine the billing percentage (BP), as set forth in EXCHANGE CARRIER ASSOCIATION TARIFF F.C.C. NO. 4 which represents the portion of the services provided by each Telephone Company.

Multiply the BP times the dollar amount calculated in (b) preceding times the number of direct trunks to obtain the Direct Trunked Transport Facility charges for Switched Access Feature Groups and Directory Assistance.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations

(c) (Cont'd)

Multiply the BP times the dollar amount calculated in (b) preceding, times the number of access minutes to obtain the Tandem Switched Transport Facility charges for Switched Access Feature Groups and Directory Assistance.

Multiply the BP times the dollar amount calculated in (b) preceding to obtain the Channel Mileage Facility charges for Special Access.

Direct Trunked and Tandem Switched Transport Termination charges also apply as set forth in Sections 4.1.2(A) and 15, except as set forth in (d) following. For jointly provided facilities, this charge applies at the Telephone Company end office (i.e., when the Telephone Company is the Initial Billing Company).

Channel Mileage Termination charges also apply as set forth in Sections 5.1.2(B)(2) and 15 except as set forth in (d) following, and apply only where the Telephone Company provides the channel termination. There is no distinction drawn between meet point billing Customers and Customers where the Telephone Company is sole provider.

(d) When three or more Telephone Companies are involved in providing an access service, the intermediate Telephone Company(ies) will determine the appropriate charges as set forth in (a), (b), and (c) preceding, except the Direct Trunked Termination, Tandem Switched Termination or Channel Mileage Termination charges do not apply.

(e) When the tandem office is located within a Telephone Company operating territory, that company will bill 100% of the tandem switching rate.

(f) When the local switching office is located within a Telephone Company operating territory, that company will bill 100% of the Residual Interconnection Charge.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

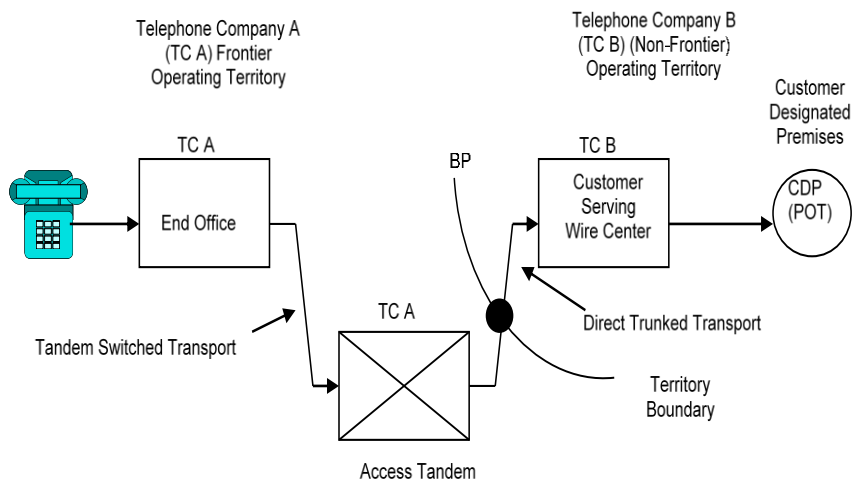
2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations (Cont'd)

(g) Example 1: Originating Switched Access (See Diagram 1)

- Feature Group D Switched Access is ordered to End Office.
- Originating End Office and Access Tandem are in the operating territory of a Telephone Company (TC-A).
- Customer Designated Premises is in the operating territory of a Telephone Company (TC-B)
- Assumptions:
 - TC-A Direct Trunk Transport BP = 40%
 - TC-B Direct Trunk Transport BP = 60%
 - Direct Trunked Transport mileage = 26 mi.
 - Tandem Switched Transport mileage = 23 mi.
- Diagram 1



ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations (Cont'd)

(g) Example 1: Originating Switched Access (Cont'd)
(See Diagram 1)

- Telephone Company A charges are:
 - End Office charges = 9,000 min. x EO rate
 - Tandem Switched Transport Facility charge = 9,000 min. x 23 mi. x TSF rate
 - Tandem Switched Transport Termination charge = 2 terminations x 9,000 min. x TST rate
 - Tandem Switching Rate = 9,000 min. x TS rate
 - Direct Trunked Facility charge = 26 mi. x DTF rate x 40%
 - Direct Trunked Termination charge = 1 termination x DTT rate
 - Shared Multiplexing charge = 9,000 min. x SM rate

Example 2: Terminating Switched Access – Tandem 3rd Party

(See Diagram 2A and 2B)

- Feature Group D Switched Access is ordered to End Office.
- Terminating Access Tandem is owned by Frontier Telephone ILEC Companies (TC-A) and End Office is owned by a non-Frontier Telephone Company (TC –B).
- Assumptions:
 - *TC-A Direct Trunk Transport BP = 40%
 - *TC-B Direct Trunk Transport BP = 60%
 - Direct Trunk Transport mileage = 26 mi.
 - TC-A Tandem Switched Transport BP = 20%
 - TC-B Tandem Switched Transport BP = 80%
 - Tandem Switched Transport mileage = 23 mi.

(N)

*Where applicable see Diagram 2A

ACCESS SERVICE

2. General Regulations (Cont'd)

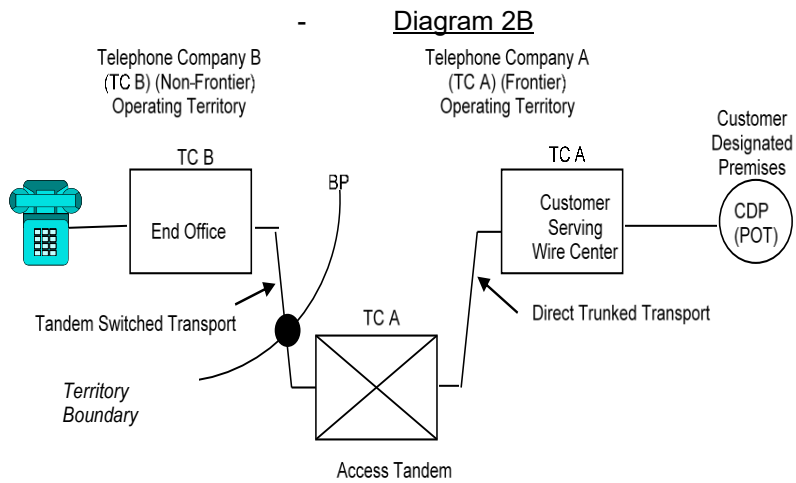
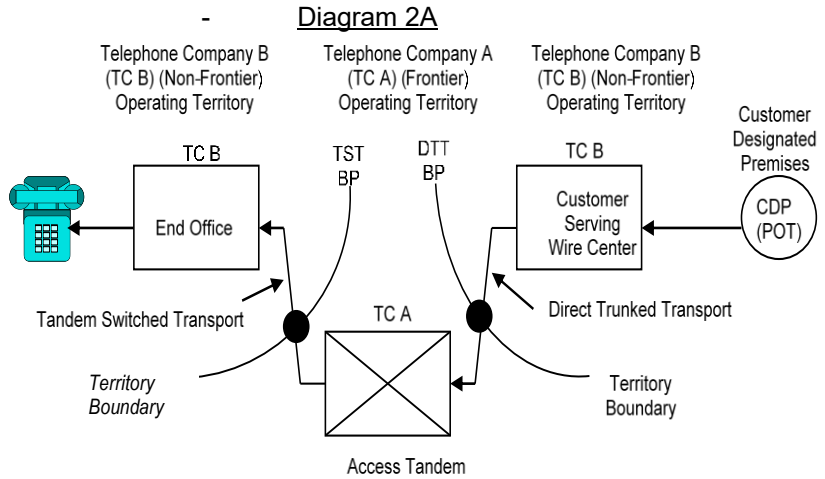
2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations (Cont'd)

(g) Example 2: Terminating Switched Access – Tandem 3rd Party (Cont'd)
(See Diagram 2A and 2B)



ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations (Cont'd)

(g) Example 2: Terminating Switched Access – Tandem 3rd Party (Cont'd)

(See Diagram 2A and 2B)

- Telephone Company A charges are: (N)
- Tandem Switched Transport Facility-3rd Party charge = 9,000 min. x 23 mi. x TSF-3rd Party rate x 20%
- Tandem Switched Transport Termination-3rd Party charge = 1 termination x 9,000 min. x TST – 3rd Party rate
- Tandem Switching-3rd Party Rate = 9,000 min. x TS-3rd Party rate
- Direct Trunked Facility charge
 - 2A = 26 miles. x DTF rate x 40%
 - 2B = 26 miles. x DTF rate
- Direct Trunked Termination charge
 - 2A = 1 termination x DTT rate
 - 2B = 2 termination x DTT rate
- Shared Multiplexing 3rd Party Charge = 9,000 min. x SM-3rd Party rate

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

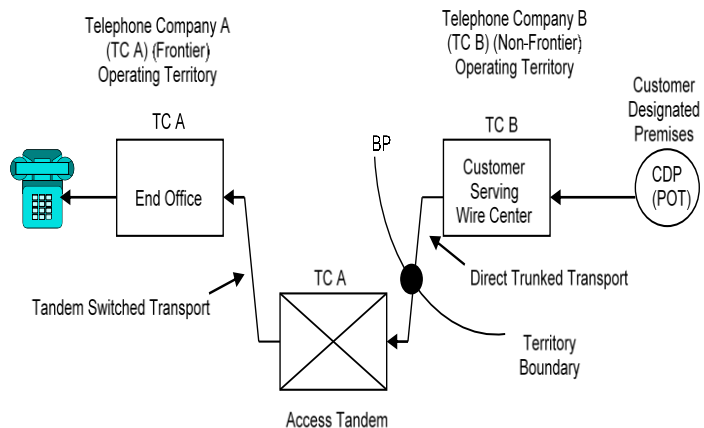
(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations (Cont'd)

(g) Example 3: Terminating Switched Access - Tandem End Office (See Diagram 3)

- Feature Group D Switched Access is ordered to End Office.
- Terminating End Office and Access Tandem are both owned by Frontier Telephone ILEC Companies (TC-A).
- Assumptions:
 - TC-A Direct Trunk Transport BP = 40%
 - TC-B Direct Trunk Transport BP = 60%
 - Direct Trunk Transport mileage = 26 mi.
 - Tandem Switched Transport mileage = 23 mi.
- Diagram 3

(N)



ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

(N)

(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations (Cont'd)

(g) Example 3: Terminating Switched Access - Tandem End Office (Cont'd)
(See Diagram 3)

- Telephone Company A charges are:
 - End Office Charges = 9,000 min. x EO rate
 - Tandem Switched Facility – End Office charge = 9,000 min. x 23 mi. x TSF-End Office rate.
 - Tandem Switched Transport Termination –End Office charge = 2 terminations x 9.000 min. x TST-End Office rate.
 - Tandem Switching – End Office charge = 9,000 min. x TS-End Office rate
 - Direct Trunked Facility Charge = 26 miles x DTF rate x 40%
 - Direct Trunked Termination charge = 1 termination x DTT rate
 - Shared Multiplexing charge = 9,000 min. x SM-End Office rate

(N)

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

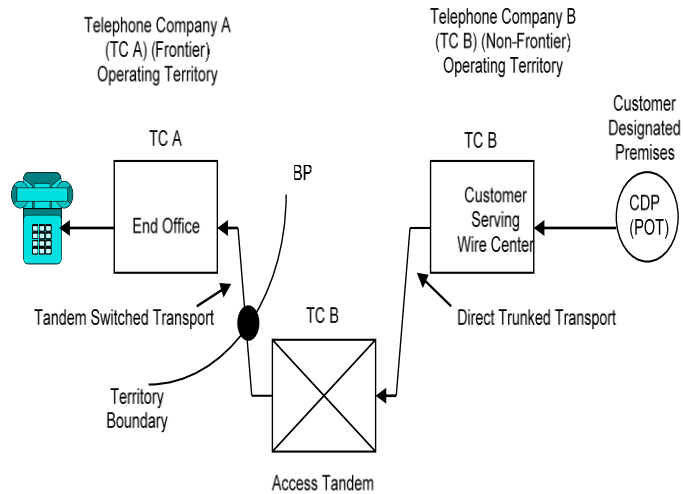
(N)

(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations (Cont'd)

(g) Example 4: Terminating Switched Access-Tandem 3rd Party
(See Diagram 4)

- Feature Group D Switched Access is ordered to End Office.
- End Office is owned by Frontier Telephone Company (TC-A).
- Access Tandem is owned by a non-Frontier Telephone ILEC Company (TC-B).
- Diagram 4



BP = Billing Percentage

(N)

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

(N)

(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations (Cont'd)

(g) Example 4: Terminating Switched Access-Tandem 3rd Party (Cont'd)
(See Diagram 4)

- Telephone Company A charges are:
 - End Office charges = 9,000 min x EO rate
 - Tandem Switched Facility -3rd Party charge = 9,000 min. x 23 mi. x TSF-3rd Party rate x 80%
 - Tandem Switched Termination -3rd party charge = 1 termination x 9,000 min. x TST-3rd Party rate

(N)

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd) (N)

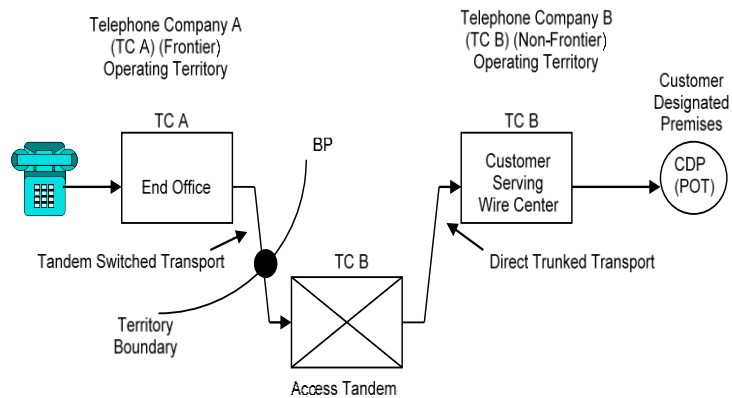
(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations (Cont'd)

(g) Example 5: Originating Switched Access - Frontier Telephone ILEC Company owns only the End Office.
(See Diagram 5)

- Feature Group D Switched Access is ordered to End Office.
- End Office is owned by Frontier Telephone Companies (TC-A).
- Access Tandem is owned by a non-Frontier Telephone ILEC Company (TC-B)
- Assumptions:
 - Direct Trunk Transport mileage = 26 mi.
 - TC-A Tandem Switched Transport BP = 80%
 - TC-B Tandem Switched Transport BP = 20%
 - Tandem Switched Transport mileage = 23 mi.

- Diagram 5



BP = Billing Percentage

ACCESS SERVICE

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Access Services Provided by More Than One Telephone Company (Cont'd)

(N)

(B) Meet Point Billing (Cont'd)

(2) Determination of Meet Point Billed Transport Calculations (Cont'd)

(g) Example 5: Originating Switched Access - Frontier Telephone ILEC Company owns only the End Office.
(Cont'd)
(See Diagram 5)

- Telephone Company A charges are:
 - End Office charges = 9,000 min. x EO rate
 - Tandem Switched Transport Facility charge = 9,000 min. x 23 mi. x TSF rate x 80%.
 - Tandem Switched Transport Termination charge = 1 termination x 9.000 min. x TST rate.

(N)

ACCESS SERVICE

2. General Regulations (Cont'd)

2.5 Connections

Equipment and Systems (i.e., terminal equipment, multiline terminating systems and communications systems) may be connected with Switched and Special Access Services furnished by the Telephone Company where such connection is made in accordance with the provisions specified in Technical Reference Publication AS No. 1 and in Section 2.1.

2.6 Definitions

Certain terms used herein are defined as follows:

Access Code

The term (Access Code) denoted a uniform five or seven digit code assigned by the Telephone Company to an individual Customer. The five digit code has the form 10XXX, and the seven digit code has the form 950-10XX or 950-00XX.

Access Minutes

The term "Access Minutes" denotes that usage of exchange facilities in interstate or foreign service for the purpose of calculating chargeable usage. On the originating end of an interstate or foreign call, usage is measured from the time the originating End User's call is delivered by the Telephone Company to and acknowledged as received by the Customer's facilities connected with the originating exchange. On the terminating end of an interstate or foreign call, usage is measured from the time the call is received by the End User in the terminating exchange. Timing of usage at both originating and terminating ends of an interstate or foreign call shall terminate when the calling or called party disconnects, whichever event is recognized first in the originating and terminating end exchanges, as applicable.

Access Tandem

The term "Access Tandem" denotes a Telephone Company switching system that provides a traffic concentration and distribution function for traffic originating from or terminating to an end office serving a Customer designated premises.

Answer/Disconnect Supervision

The term "Answer/Disconnect Supervision" denotes the transmission of the switch trunk equipment supervisory signal (off-hook or on-hook) to the point of termination for terminating calls to the exchange as an indication that the called party has answered or disconnected.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Asymmetrical Digital Subscriber Line (ADSL)

The term "Asymmetrical Digital Subscriber Line", or "ADSL", denotes a service that is designed to provide high bandwidth services over the existing copper distribution network.

Asynchronous

A method of transmission in which information is sent with each character (byte) providing synchronization via start and stop bits.

Asynchronous Polled interface (API)

Burrough's protocol that parallels IBM's SNA protocol.

Attenuation Distortion

The term "Attenuation Distortion" denotes the difference in loss at specified frequencies relative to the loss at 1004 Hz.

Authorized Billing Agent

The term "Authorized Billing Agent" means a third party hired by a telecommunications service provider to perform billing and collection.

Balance (100 Type) Test Line

The term "Balance (100 Type) Test Line" denotes an arrangement in an end office which provides for balance and noise testing.

Bit

The term "Bit" denotes the smallest unit of information in the binary system of notation.

Business Day

The term "Business Day" denotes the times of day that a company is open for business. Generally, in the business community, these are 8:00 or 9:00 A.M. to 5:00 or 6:00 P.M., respectively, with an hour for lunch, Monday through Friday, resulting in a standard forty (40) hour work week. To determine the specific hours for a particular company, that company should be contacted at the address shown under the Issuing Carrier's name listed on the Title Page.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Busy Hour Minutes of Capacity (BHMC)

The term "Busy Hour Minutes of Capacity" denotes the average of the highest time consistent hour of usage (i.e., the average of a series of measurements for the same clock hour) during the highest twenty consecutive business day period (i.e., a four consecutive week period during a calendar year).

Byte

8 bits of data, also referred to as an octet.

Call

The term "Call" denotes a communication, including an off-hook signal and routing information, initiated by a Customer (calling party) and completed to a Directory Assistance Service access location or End User (called party) or to a Customer designated premises.

Call Set-Up

Any attempt by a CPSN user to establish a circuit to send packetized data.

CCS

The term "CCS" denotes a hundred call seconds which is a standard unit of traffic load that is equal to 100 seconds of usage or capacity of a group of lines or trunks.

Central Office

The term "Central Office" denotes a local Telephone Company switching system where Telephone Exchange Service Customer station loops are terminated for purposes of interconnection to each other and to trunks.

Central Office Code

The term "Central Office Code" denotes the first three digits (NXX) of the 7 digit telephone number assigned to a Customer's Telephone Exchange Service.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Channel(s)

The term "Channel(s)" denotes an electrical or photonic, in the case of fiber optic based transmission systems, communications path between two or more points of termination.

Channel Service Unit

The term "Channel Service Unit" denotes equipment which performs one or more of the following functions: Termination of a digital facility, regeneration of digital signals, detection and/or correction of signal format errors, remote loop back.

Channelize

The term "Channelize" denotes the process of multiplexing-demultiplexing channels using analog or digital techniques.

Circuit Termination

The data circuit and associated conditioning which provides for dedicated access to the network.

Clear Channel Capability (CCC)

The term "Clear Channel Capability" denotes the transport of twenty-four, 64 Kbps channels over a 1.544 Mbps High Capacity service via B8ZS line code format.

Closed User Group (CUG)/International Closed User Group (ICUG)

An optional subscriber feature which allows the Customer to establish a private network within the public network. The ICUG feature allows users in different public packet switching networks to form CUGS.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

C-Message Noise

The term "C-Message Noise" denotes the frequency weighted average noise within an idle voice channel. The frequency weighting, called C-message, is used to simulate the frequency characteristic of the 500-type telephone set and the hearing of the average subscriber.

C-Notched Noise

The term "C-Notched Noise" denotes the C-message frequency weighted noise on a voice channel with a holding tone, which is removed at the measuring end through a notch (very narrow band) filter.

Coin Station

The term "Coin Station" denotes a location where Telephone Company equipment is provided in a public or semi-public place where Telephone Company Customers can originate telephonic communications and pay the applicable charges by inserting coins into the equipment.

Coinless Pay Telephone

The term "Coinless Pay Telephone" denotes a public telephone provided by either the Telephone Company or a Customer through which an End User may originate interstate calls for which he pays by credit card, collect, or third number billing procedures.

Commingling

The term "Commingling" means the connecting, attaching, or otherwise linking of an unbundled network element (UNE), or a combination of unbundled network elements (UNEs), to one or more facilities or services that a requesting telecommunications carrier has obtained at wholesale from an incumbent LEC, or the combining of an UNE, or a combination of UNEs, with one or more such facilities or services.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Common Line

The term "Common Line" (also referred to as "subscriber line") denotes a line, trunk, pay telephone line or other facility provided under the General and/or Local Exchange Service tariffs of the Telephone Company, terminated on a central office switch. A common line-residence is a line or trunk provided under the residence regulations of the General and/or Local Exchange Service tariffs. A common line-business is a line provided under the business regulations of the General and/or Local Exchange Service tariffs. A common line-pay telephone is a line provided under the public, semi-public and inmate service regulations of the General and/or Local Exchange Service tariffs of the Telephone Company. The investment associated with common lines is considered jointly used subscriber plant.

Communications System

The term "Communications System" denotes channels and other facilities which are capable of communications between terminal equipment provided by other than the Telephone Company or Telephone Company stations.

Competitive County

The term "Competitive County" denotes that the geographic unit of a county or county-equivalent that passes or has passed a competitive market test specified by the FCC. Competitive County also denotes a county or county-equivalent that failed a competitive market test specified by the FCC, but was granted Phase II, Level 2 pricing flexibility prior to June 1, 2017.

(N)
|
(N)

Completed Call

The term "Completed Call" denotes a call in which answer supervision is received from the called location.

CCITT

Consultative Committee for International Telephone and Telegraph.

Cost

Except as provided otherwise in this Guide, the term "cost" denotes all sums expended directly by the Telephone Company to provide particular facilities and/or services to a user, plus a pro-rata share of the cost to the Telephone Company of its facilities and personnel, including general and administrative costs, used in the provision of the facilities and/or services, plus a reasonable profit.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Customer(s)

The term "Customer(s)" denotes any individual, partnership, association, joint-stock company, trust, corporation, or governmental entity or any other entity which subscribes to the services offered under this Guide, including both Interexchange Carriers (ICs) and End Users.

(M)

(M)

DTE Backup

An optional Customer feature which allows an alternate Data Network Address (DNA) to be designated for a particular CPSN switch termination in case the original is not in service. If the original DNA is out of order, the calling party will be automatically rerouted to the destination indicated by the alternate DNA.

Data Network Address (DNA)

Ten digit address in accordance with CCITT Recommendation X.121 used to identify terminations on a packet switching network.

Data Terminal Equipment (DTE)

Customer premises equipment that transmits and receives data.

Data Transmission (107 Type) Test Line

The term "Data Transmission (107 Type) Test Line" denotes an arrangement which provides for a connection to a signal source which provides test signals for one-way testing of data and voice transmission parameters.

Decibel (dB)

The term "Decibel" denotes a unit used to express relative difference in power, usually between acoustic or electric signals, equal to ten (10) times the common logarithm of the ratio of two signal powers.

Decibel Reference Noise C-Message Referenced to 0 (dBrnC)

The term "Decibel Reference Noise C-Message Referenced to 0" denotes noise measurements with C-Message weighting in decibels relative to a reference tone of 90 dB below 1 milliwatt.

Detail Billing

The term "Detail Billing" denotes the listing of each message and/or rate element for which charges to a Customer are due on a bill prepared by the Telephone Company.

Material on this page used to appear on page 2-26.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Direct Call

An optional Customer feature which allows a CPSN terminal to be preprogrammed with a called DNA. The CPSN network will reference the preprogrammed DNA at the time of call establishment and connect the Customer with that DNA. If the Customer chooses to override the Direct Call, a Different DNA can be addressed at call set-up.

Discontinuance Non-Recurring Charge

(C)

In addition to any other charges associated with discontinuance of services, the Telephone Company will charge a discontinuance non-recurring charge to disconnect services. This charge applies on a per circuit basis as listed in Section 15.

(C)

Display System Protocol (DSP)

End to end protocol description for support of IBM 3270 devices on an X.25 packet data network.

Dual Tone Multifrequency Address Signaling

The term "Dual Tone Multifrequency Address Signaling" denotes a type of signaling that is an optional feature of Switched Access Feature Group A. It may be utilized when Feature Group A is being used in the terminating direction (from the point of termination with the Customer to the local exchange end office). An office arranged for Dual Tone Multifrequency Signaling would expect to receive address signals from the Customer in the form of Dual Tone Multifrequency signals.

Echo Path Loss (EPL)

The term "Echo Path Loss" denotes the measure of reflected signal at a 4-wire point of interface without regard to the send and receive Transmission Level Point (TLP).

Echo Return Loss (ERL)

The term "Echo Return Loss" denotes a frequency weighted measure of return loss over the middle of the voiceband (approximately 500 to 2500 Hz), where talker echo is most annoying.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Effective 2-Wire

The term "Effective 2-Wire" denotes a condition which permits the simultaneous transmission in both directions over a channel, but it is not possible to insure independent information transmission in both directions. Effective 2-wire channels may be terminated with 2-wire or 4-wire interfaces.

Effective 4-Wire

The term "Effective 4-Wire" denotes a condition which permits the simultaneous independent transmission of information in both directions over a channel. The method of implementing effective 4-wire transmission is at the discretion of the Telephone Company (physical, time domain, frequency-domain separation or echo cancellation techniques). Effective 4-wire channels may be terminated with a 2-wire interface at the Customer premises or central office.

800 Data Base Access Service

The term "800 Data Base Access Service" denotes a service which uses a data base system to identify 800 access customers on a 10-digit basis. For purposes of administering the rules and regulations set forth in this Guide regarding the provision of 800 Database Access, except where otherwise specified, 800 Database Access Service shall include the following service access codes: 800, 888, 877, 866, 855, 844, 833, and 822.

800 Series

The term 800 series denotes the service access codes of 800, 888, 877, 866, 855, 844, 833, and 822.

800 Service Provider

The term "800 Service Provider" denotes a telecommunications company, including Exchange and Interexchange Carriers, that offer 800 Series Service to subscribers.

End Office Switch

The term "End Office Switch" denotes a local Telephone Company switching system where Telephone Exchange Service Customer station loops are terminated for purposes of interconnection to each other and to trunks.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

End User

"End User" means any Customer of an interstate or foreign telecommunications service that is not a carrier, except that a carrier other than a telephone company shall be deemed to be an "end user" when such carrier uses a telecommunications service for administrative purposes, and a person or entity that offers telecommunications service exclusively as a reseller shall be deemed to be an "end user" if all resale transmission offered by such reseller originate on the premises of such reseller.

Entrance Facility

The term "Entrance Facility" denotes a Switched Access Service dedicated Switched Transport facility between the customer's serving wire center and the customer's premises.

Entry Switch

See First Point of Switching.

Envelope Delay Distortion (EDD)

The term "Envelope Delay Distortion" denotes a measure of the linearity of the phase versus frequency of a channel.

Equal Level Echo Path Loss (ELEPL)

The term "Equal Level Echo Path Loss" denotes the measure of Echo Path Loss (EPL) at a 4-wire interface which is corrected by the difference between the send and receive TLP. {ELEP=EPL-TLP(send)+TLP(receive)}.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Exchange

The term "Exchange" denotes a unit generally smaller than a local access and transport area, established by the Telephone Company for the administration of communications service in a specified area which usually embraces a city, town or village and its environs. It consists of one or more central offices together with the associated facilities used in furnishing communications service within that area. The exchange includes any Extended Area Service area that is an enlargement of a Telephone Company's exchange area to include nearby exchanges. One or more designated exchanges comprise a given local access and transport area.

Exchange Termination

Central Office equipment (Modem or Channel Service Unit/Digital Service Unit) required for circuit termination at the switch.

Expected Measured Loss (EML)

The term "Expected Measured Loss" denotes a calculated loss which specified the end-to-end 1004 Hz transducer loss on a terminated test connection between two readily accessible manual or remote test points.

Fast Select

An optional Customer feature which allows the user to send and receive up to 128 characters of user data in the call request and call clear packets. Restricted Fast Select prevents call set-up. Unrestricted Fast Select call allows set-up attempts if required.

Firm Order Confirmation Date

The date on which the Telephone Company confirms to the Customer that the requested services can be provided.

First Point of Switching

The term "First Point of Switching" denotes the first Telephone Company location at which switching occurs on the terminating path of a call proceeding from the Customer designated premises to the terminating end office and, at the same time, the last Telephone Company location at which switching occurs on the originating path of a call proceeding from the originating end office to the Customer designated premises.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Frequency Shift

The term "Frequency Shift" denotes the change in the frequency of a tone as it is transmitted over a channel.

Grandfathered

The term "Grandfathered" denotes station or switching equipment directly connected to the facilities utilized to provide services under the provision of this Guide, and which are considered grandfathered under Part 68 of the FCC Rules and Regulations.

Holding Time

The duration of a public dial call.

Hub

A Hub is a Telephone Company designated serving wire center at which bridging or multiplexing functions are performed. The bridging functions performed may be used to connect three or more Customer designated premises in a multipoint arrangement. The multiplexing functions are to channelize analog or digital facilities to individual services requiring a lower capacity or bandwidth.

Hunt Group

An optional Customer feature which allows for a grouping of CPSN terminations with a single identifying DNA.

IC CDL

The Term "IC CDL" denotes a Customer Designated Location (CDL) where facilities for interstate access is terminated and connected to an Interexchange Carrier.

(N)

Immediately Available Funds

The term "Immediately Available Funds" denotes a corporate or personal check drawn on a bank account and funds which are available for use by the receiving party on the same day on which they are received and include U.S. Federal Reserve Bank wire transfers, U.S. Federal Reserve notes (paper cash), U.S. coins, U.S. Postal Money Orders, and New York Certificates of Deposit.

Impulse Noise

The term "Impulse Noise" denotes any momentary occurrence of the noise on a channel over a specified level threshold. It is evaluated by counting the number of occurrences, which exceed the threshold.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Individual Case Basis (ICB)

The term "Individual Case Basis" denotes a condition in which the regulations, if applicable, rates and charges for an offering under the provisions of this Guide are developed based on the circumstances in each case.

Inserted Connection Loss (ICL)

The term "Inserted Connection Loss" denotes the 1004 Hz power difference (in dBs) between the maximum power available at the originating end and the actual power reaching the terminating end through the inserted connection.

Interexchange Carrier(s) (IC)

The term "Interexchange Carrier(s)" denotes any individual, partnership, association, corporation, or governmental agency or any other entity engaged for hire in interstate or foreign communication by wire or radio, between two or more exchanges.

Intermodulation Distortion

The term "Intermodulation Distortion" denotes a measure of the nonlinearity of a channel. It is measured using four tones, and evaluating the ratios (in dBs) of the transmitted composite four-tone signal power to the second-order products of the tones (R3).

Interstate Communications

The term "Interstate Communications" denotes both interstate and foreign communications.

Interstate Service Arrangement

The term "Interstate Service Arrangement" denotes an arrangement provided pursuant to interstate tariffs, contracts or service arrangement whereby the subscriber who obtains the arrangement permits others to make calls to the telephone number assigned to the arrangement without charges.

Intrastate Communications

The term "Intrastate Communications" denotes any communications within a state subject to oversight by a state regulatory commission as provided by the laws of the state involved.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Jointly Used Subscriber Plant

The term "Jointly Used Subscriber Plant" denotes the local nontraffic sensitive facilities which provide connection between the Customer's service location and the exchange central office serving the Customer and which may alternatively be used to place exchange service calls, interexchange intrastate service calls, or interexchange interstate service calls with no change in the nature of the facilities.

Kilobits Per Second (Kbps)

One thousand bits per second.

Kilopacket

One thousand packets.

Kilosegment

One thousand segments.

Line Side Connection

The term "Line Side Connection" denotes a connection of a transmission path to the line side of a local exchange switching system.

Local Access and Transport Area

The term "Local Access and Transport Area" denotes 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 Circuit Facility

Unconditioned copper facility used as the basis for designing a data circuit.

Local Tandem Switch

The term "Local Tandem Switch" denotes a local Telephone Company operating unit by means of which local or access telephonic communications are switched to and from an end office switch.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Logical Channel

A capability which enables one or more calls to be set up on a CPSN access line equipped with X.25 protocol. An X.25 user may subscribe to more than one logical channel per line to allow two or more simultaneous calls to take place.

Loop Around Test Line

The term "Loop Around Test Line" denotes an arrangement of equipment located on the facility between the test location and the remote loop around test unit in an end office which provides a means for making two-way transmission tests, on a manual basis. This arrangement has two terminations, each reached by means of a separate seven-digit number and does not include network channel terminating equipment.

Loss Deviation

The term "Loss Deviation" denotes the variation of the actual loss from the designed value.

Maintenance Test Unit (MTU)

The term "Maintenance Test Unit" denotes a piece of equipment installed and maintained by the Telephone Company near the end of a transmission path on the central office side of a Customer's premises. Upon proper command, the Maintenance Test Unit can isolate a Customer's wire and terminal equipment from the network loop. It enables remote testing of the transmission path's performance to the MTU.

Market Service Area

See Local Access Transport Area.

Message

The term "Message" denotes a "call" as defined preceding.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Milliwatt (102 Type) Test Line

The term "Milliwatt (102 Type) Test Line" denotes an arrangement in an end office which provides a 1004 Hz tone a 0 dBmO for one-way transmission measurements towards the Customer designated premises from the Telephone Company end office.

Minutes of Use

See Access Minutes.

Multiline Business Customer

The term "Multiline Business Customer" denotes an End User who is provided with more than one Common Line-business line in a state by the same Telephone Company under the business regulations of the General and/or Local Exchange Service tariffs of the Telephone Company.

Negotiation

An optional Customer feature that allows negotiation on a per call basis of the packet size, window size and throughput class for each direction of data transfer.

Network Control Signaling

The term "Network Control Signaling" denotes the transmission of signals used in the telecommunications system which perform functions such as supervision (control, status, and charge signals), address signaling (e.g., dialing), calling and called number identifications, rate of flow, service selection error control and audible tone signals (call progress signals indicating re-order or busy conditions, alerting, coin denominations, coin collect and coin return tones) to control the operation of the telecommunications systems.

Network Processing Charge

A charge, per kilosegment, applied to calls which require packetizing at both the originating and terminating points in the network.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Non-Standard Default Feature

An optional Customer feature that permits a Customer, at the time of subscription, to specify a non-standard default throughput class, window size, and packet size for each direction of data transfer.

Nonsynchronous Test Line

The term "Nonsynchronous Test Line" denotes an arrangement in step-by-step end offices which provides operational tests which are not as complete as those provided by the synchronous test lines, but can be made more rapidly.

North American Numbering Plan

The term "North American Numbering Plan" denotes a three-digit area or Numbering Plan Area (NPA) code and seven-digit telephone number made up of a three-digit Central Office (CO) code plus a four-digit station number.

Off-hook

The term "Off-hook" denotes the active condition of Switched Access or a Telephone Exchange Service line.

On-hook

The term "On-hook" denotes the idle condition of Switched Access or a Telephone Exchange Service line.

Open Circuit Test Line

The term "Open Circuit Test Line" denotes an arrangement in an end office which provides an a.c. open circuit termination of a trunk or line by means of an inductor of several Henries.

Originating Direction

The term "Originating Direction" denotes the use of Access Service for the origination of calls from an End User to an IC designated premises.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Packet

A continuous sequence of binary digits of information which is switched through the network as an integral unit. Consists of Customer data, facilities and addressing/signaling information.

Packet Assembler/Disassembler (PAD)

A device which performs the function of packetizing and depacketizing data for transmission over a packet switched network. A PAD may be located on the Customer premises or in the packet switching central office.

Packet Switch

A central office based switch that establishes a virtual connection between two CPSN DNAs for the transmission of discrete amounts of information. Other than the CPSN access, no dedicated physical transmission path between the two DNAs will exist.

Pay Telephone Line

The term "Pay Telephone Line" denotes a line provided by the Telephone Company for message service through the use of public or semi-public telephones, either coin or coinless, installed by the Telephone Company for the use of the general public.

Permanent Virtual Circuit (PVC)

A virtual circuit through the packet network that is established at service installation and is available on a permanent basis. No call establishment or call termination is associated with a Permanent Virtual Circuit. The PVC feature may be available across X.75 interfaces.

Phase Jitter

The term "Phase Jitter" denotes the unwanted phase variations of a signal.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Point of Termination

The term "Point of Termination" denotes the point of demarcation within a Customer designated premises at which the Telephone Company's responsibility for the provision of Access Service ends.

Premises

The term "Premises" denotes a building or portion(s) of a building including adjacent buildings on the same continuous property not separated by a public thoroughfare.

Primary Exchange Carrier

The term "Primary Exchange Carrier" denotes the Local Exchange Telephone Company in whose exchange a Customer's first point of switching (i.e., dial tone office for FGA, access tandem for FGB) is located.

Protocol

A set of rules governing the format to be followed when transmitting information between communicating devices.

Public Telephone

The term "Public Telephone" denotes the use of a pay telephone line at a location, such as at an airport, public building or city street, where a public need exists and the telephone is placed at the option of the Telephone Company and with the agreement of the owner of the property.

Query

The term "Query" denotes the inquiry to a Telephone Company data base to obtain information, processing instructions or service data.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Registered Equipment

The term "Registered Equipment" denotes the Customer's premises equipment which complies with and has been registered with the FCC pursuant to Part 68 of the FCC's Rules and Regulations or which is grandfathered, as defined in this Section 2.6.

Responsible Organization

The term "Responsible Organization" denotes the entity responsible for the management and administration of 800 Data Base Access Service records in the Service Management System according the Guidelines for 800 Data Base.

Return Loss

The term "Return Loss" denotes a measure of the similarity between the two impedances at the junction of two transmission channels (e.g., four-to-two-wire junctions). The higher the return loss, the higher the similarity.

Reverse Charge Blocking

The capability to deny reverse charge (collect) calls from other network users.

Secondary Exchange Carrier

The term "Secondary Exchange Carrier" denotes the Local Exchange Telephone Company in whose exchange a Customer's end users end office is located and where the Customer's first point of switching is provided by a Primary Exchange Carrier who is not the same Exchange Carrier as the Secondary Exchange Carrier.

Segment

A portion of a packet, defined by the Company as 16 bytes of user data.

Semi-public Telephone

The term "Semi-public Telephone" denotes the use of a pay telephone line at a location, such as at a gasoline station, restaurant, or other commercial establishment, where a general public and specific Customer need exists.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Service Management System/800 (SMS/800)

The term "Service Management System/800 (SMS/800)" denotes the main operations support system of 800 Data Base Access Service. It is used to create and update subscriber 800 series records that are then downloaded to SCPs for handling subscribers' 800 series calls. The system is also used by 800 Responsible Organizations to reserve and assign 800 series numbers.

Serving Wire Center

The term "Serving Wire Center" denotes the wire center from which the Customer designated premises would normally obtain dial tone from the Telephone Company.

Seven Digit Manual Test Line

The term "Seven Digit Manual Test Line" denotes an arrangement which allows the Customer to select balance, milliwatt and synchronous test lines by manually dialing a seven digit number over the associated access connection.

Short Circuit Test Line

The term "Short Circuit Test Line" denotes an arrangement in an end office which provides for an a.c. short circuit termination of a trunk or line by means of a capacitor of at least four microfarads.

Signal-to-C-Notched Noise Ratio

The term "Signal-to-C-Notched Noise Ratio" denotes the ratio in dB of a test signal to the corresponding C-Notched Noise.

Singing Return Loss (SRL)

The term "Singing Return Loss" denotes the frequency weighted measure of return loss at the edges of the voiceband (200 to 500 Hz and 2500 to 3200 Hz), where singing (instability) problems are most likely to occur.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Single Line Business Customer

The term "Single Line Business Customer" denotes an End User who pays for an End User Common Line at a rate that is not described as a residential rate in the Telephone Company's Local Exchange Service tariffs and who does not obtain more than one such line from the same Telephone Company.

Switch Termination

A line port on a central office based packet switch.

Synchronous

A method of transmission in which information being transmitted over a line is controlled by a timing device.

Synchronous Data Line Control (SDLC)

An IBM data communications protocol.

Synchronous Test Line

The term "Synchronous Test Line" denotes an arrangement in an end office which performs marginal operational tests of supervisory and ring-tripping functions.

Telecommunications Service Provider

The term "Telecommunications Service Provider" means interexchange carriers, operator service providers, enhanced service providers, and any other provider of telecommunications services.

Terminating Direction

The term "Terminating Direction" denotes the use of Access Service for the completion of calls from an IC designated premises to an End User.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Throughput Class

The attainable data rate (bits per second) on packet switched data calls.

Toll VoIP-PSTN Traffic

The term "Toll VoIP-PSTN Traffic" denotes a customer's interexchange voice traffic exchanged with the Telephone Company in Time Division Multiplexing format over Public Switched Telephone Network (PSTN) facilities, which originates and/or terminates in Internet Protocol (IP) format. "Toll VoIP-PSTN Traffic" originates and/or terminates in IP format when it originates from and/or terminates to an end user customer of a service that requires IP-compatible customer premises equipment.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Transmission Measuring (105 Type) Test Line/Responder

The term "Transmission Measuring (105 Type) Test Line/Responder" denotes an arrangement in an end office which provides far-end access to a responder and permits two-way loss and noise measurements to be made on trunks from a near end office.

Trunk

The term "Trunk" denotes a communications path connecting two switching systems in a network, used in the establishment of an end-to-end connection.

Trunk Group

The term "Trunk Group" denotes set of trunks which are traffic engineered as a unit for the establishment of connections between switching systems in which all of the communications paths are interchangeable.

Trunk Side Connection

The term "Trunk Side Connection" denotes the connection of a transmission path to the trunk side of a local exchange switching system.

Two-Wire to Four-Wire Conversion

The term "Two-wire to Four-Wire Conversion" denotes an arrangement which converts a four-wire transmission path to a two-wire transmission path to allow a four-wire facility to terminate in a two-wire entity such as a central office switch trunk circuit or switching system.

Unbundled Network Elements (UNEs)

The term "Unbundled Network Elements" denotes the physical facilities of the network, including the associated features, functions and capabilities, that are capable of being used in the provision of a telecommunications service, made available pursuant to Section 251 of the Telecommunications Act of 1996.

ACCESS SERVICE

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

V&H Coordinates Method

The term "V&H Coordinates Method" denotes a method of computing airline miles between two points by utilizing an established formula which is based on the vertical (V) and horizontal (H) coordinates of the two points.

Virtual Circuit

A communications connection that allows transmission of sequenced data packets through the network. The connection is made up of Logical Channels at the originating and terminating ends of the call as well as intra-network facilities. Transmission bandwidth is only allocated when packets are actually being transmitted.

WATS Serving Office

The term "WATS Serving Office" denotes a Telephone Company designated serving wire center where switching, screening and/or recording functions are performed in connection with Special Access Service used in connection with Switched Access Service.

Window Size

The number of outgoing packets that may be sent before confirmation is received indicating that the previous packets have been successfully received.

Wire Center

The term "Wire Center" denotes a building in which one or more central offices, used for the provision of Telephone Exchange Services, are located.

X.25 Packet Mode Protocol

A synchronous network interface protocol as outlined by the CCITT for transmission within a packet switched network (intra-network).

X.75 Packet Mode Protocol

A synchronous network interface protocol as outlined by the CCITT for transmission between packet switching networks (inter-network).

ACCESS SERVICE

3. RESERVED FOR FUTURE USE

ACCESS SERVICE

4. RESERVED FOR FUTURE USE

ACCESS SERVICE

5. Special Access Service

5.1 General

Special Access Service provides a transmission path to connect Customer designated premises, either directly or through a Telephone Company hub where bridging or multiplexing functions are performed*. Special Access Service also provides a transmission path to connect a Customer designated premises and a WATS serving office. Special Access Service includes all exchange access not utilizing Telephone Company end office switches. This type of Access Service is used, for example, by Customers for the provision of private line service.

A list of end offices capable of performing the necessary screening functions for Special Access Service used in connection with Switched Access Service will be provided to the Customer upon request.

The provision of Special Access in all situations is dependent upon the availability of Telephone Company plant and equipment.

5.1.1 Channel Types

There are nine types of channels used to provide Special Access Service. These channels can be either analog or digital. Analog channels are differentiated by spectrum and bandwidth. Digital connections are differentiated by bit rate. The specific types of channels (e.g., Narrowband, Voice Grade, Wideband Digital) provided under Special Access are described in Section 5.2.

Each of the nine channel types has its own characteristics. All of the channel types are subdivided by one or more of the following:

- Transmission specification
- Bandwidth
- Speed (i.e., bit rate)
- Spectrum

The Customer can order a basic channel and select from a list of available transmission parameters, protocol combinations, and optional features to design a channel which meets the Customer's specific communications needs.

For purposes of ordering channels, each has been identified as a type of Special Access Service. However, such identification is not intended to limit a Customer's use of the channel nor to imply that the channel is limited to a particular use. For example, if a Customer's equipment is capable of transmitting voice over a channel that is identified as a Narrowband Service in this Guide, there is no restriction against doing so.

*Telephone Company Centrex CO-like switches are considered to be Customer premises for purposes of this Guide.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.1 General (Cont'd)

5.1.2 Rate Categories

There are three basic rate categories which apply to Special Access Service:

- Channel Termination
- Channel Mileage
- Optional Features and Functions

These categories are described in Sections 5.1.2 (A) through (C).

(A) Channel Termination

The Channel Termination rate category provides for the communications path between a Customer designated premises and the serving wire center of that premises. It also provides for the unrecovered portion of Inside Wire investment assigned to Special Access Service. Included as part of the Channel Termination is a standard channel interface arrangement which defines the technical characteristics associated with the type of facilities to which the Access Service is to be connected at the point of termination (POT) and the type of signaling capability if any. The signaling capability itself is provided as a part of this rate category. One Channel Termination charge applies per Customer designated premises at which the channel is terminated. This charge will apply even if the Customer designated premises and the serving wire center are co-located in a Telephone Company building. For Special Access Service used in connection with Switched Access Service, and for Video service only one Channel Termination charge applies. Special Access Service used in connection with Switched Access Service is provided as set forth in Section 4.1.1. Channel Termination rates for each type of channel are set forth in Section 15 following.

(B) Channel Mileage

The Channel Mileage rate category provides for the end office equipment and the transmission channel between the serving wire centers associated with two Customer designated premises, between a serving wire center associated with a Customer designated premises and a Telephone Company hub, between two Telephone Company hubs or between a WATS Serving Office and a Customer serving wire center when the two are not co-located. Channel Mileage rates are made up of the Channel Mileage Facility rate and the Channel Mileage Termination rate. Channel Mileage charges are set forth in Section 15 following.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.1 General (Cont'd)

5.1.2 Rate Categories (Cont'd)

(B) Channel Mileage (Cont'd)

(1) Channel Mileage Facility

The Channel Mileage Facility rate recovers the cost for the transmission path which extends between the Telephone Company serving wire centers and/or hub(s) and includes primarily outside plant used to provide the facility.

(2) Channel Mileage Termination

The Channel Mileage Termination rate recovers the cost for end office equipment associated with terminating the facility (i.e., basic circuit equipment and terminations at serving wire centers and hubs). Channel Mileage Termination rate will apply at the serving wire center(s) for each Customer designated premises and Telephone Company hub where the channel is terminated. If the Channel Mileage is between Telephone Company bridging hubs, the Channel Mileage Termination rate will apply per Telephone Company designated hub. When the Channel Mileage Facility is zero (i.e., collocated serving wire centers), neither the Channel Mileage Facility rate nor the Channel Mileage Termination rate will apply.

(C) Optional Features and Functions

Optional Features and Functions may be added to a service to improve its quality or utility to meet the Customer's specific communications requirements. These are not necessarily identifiable with specific equipment, but rather represent the end result in terms of performance characteristics which may be obtained. These characteristics may be obtained by using various combinations of equipment. Examples of Optional Features and Functions that are available include, but are not limited to, the following:

- Conditioning
- Automatic Protection Switching
- Bridging

The list of Optional Features and Functions is set forth in Section 15 following.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.1 General (Cont'd)

5.1.3 Protocol Combinations

The protocol (i.e., interface) defines the technical characteristics associated with the type of signaling and type of facilities presented for connection to the Access Service at the Customer designated premises. The protocol specified for the Customer premises may be asymmetrical or symmetrical. However, only certain combinations are technically possible. Therefore, for the purposes of this Guide, protocol is being described in terms of acceptable combinations.

When ordering Special Access Service, the Customer must specify the protocol combination that is desired for the service ordered. Only certain protocol combinations are considered to be standard and included in the charge for the Channel Termination. These protocol combinations are set forth for each Channel type in Section 5.2. When the Customer requests a protocol combination which is not standard, an additional charge will be assessed on an individual case basis. Not all protocol combinations are available at all Telephone Company locations.

5.1.4 Service Configurations

There are two types of service configurations over which Special Access Service is provided: two-point service and multi-point service.

(A) Two-Point Service

A two-point service connects two Customer designated premises, either on a directly connected basis or through a hub where multiplexing functions are performed or a Customer designated premises and a WATS Serving office. All types of Special Access Service may be provided as two-point service.

(B) Multipoint Service

A multipoint service connects three or more Customer designated premises. Only certain types of Special Access Service may be provided as multipoint service. These are so designated in the descriptions for the appropriate channel.

When ordering multipoint service, the Customer may specify the desired bridging hub. EXCHANGE CARRIER ASSOCIATION TARIFF F.C.C. No. 4 identifies serving wire centers, hub locations and the type of bridging functions available.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.1 General (Cont'd)

5.1.5 Special Facilities Routing

A Customer may request that the facilities used to provide Special Access Service be specially routed. The regulations, rates and charges for Special Facilities Routing are as set forth in Section 11.

5.1.6 Circuit Design Layout

At the request of the Customer, the Telephone Company will provide a Design Layout Report (DLR) setting forth the make-up of the facilities and services provided under Special Access to aid the Customer in designing its overall service. The information the DLR will be provided to the Customer at no charge and updated whenever facilities provided to the Customer are materially changed.

5.1.7 Acceptance Testing

At no additional charge, the Telephone Company will, at the Customer's request, cooperatively test, at the time of installation, the following parameters:

For Voice Grade Services (VG): loss, 3-tone slope, d.c. continuity and operational signaling, where technically appropriate. Where a four-wire voice transmission interface provides two-wire voice transmission, (i.e., there is a four-wire to two-wire conversion), balance (equal level echo path loss) will also be tested. Additionally, C-notched noise and C-message noise tests will be provided where technically appropriate, as well as frequency response, harmonic distortion, phase jitter, impulse noise and delay distortion for all analog facilities.

Test results will be made available to the Customer upon request.

All other Special Access Services will be tested to the performance parameters specified for the individual services.

5.1.8 Ordering Options and Conditions

The facilities provided under Special Access can be ordered by using a Facilities Access Order as specified in Section 9. Minimum period and cancellation charges associated with Special Access Service are also included in Section 9.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.1 General (Cont'd)

5.1.9 Alternate Use

Alternate use occurs when a Customer uses a service for different types of transmission at different times. The Customer may transfer from one type of operation to another at will. A Customer may use transmission services in any privately beneficial way but, where technical or engineering changes are required to effectuate an alternate use, charges set forth in Section 8 of this Guide may be applicable.

Alternate uses will be allowed provided that such use meets the technical protection parameters as set forth in Section 5.2.

5.2 Technical Service Descriptions for Special Access Service

This section includes the technical service descriptions for each type of Analog and Digital service provided, typical applications for which each type of service can be used, the Optional Features and Functions available with specific services, transmission performances and the standard protocol combinations with which service can be provided.

When ordering Special Access Service, the Customer must select the type of channel desired from the nine categories of Special Access Service. These categories are:

- Analog: Narrowband 1
 Narrowband 2
 Voice Grade
 Program Audio
 Video
 Wideband
- Digital: Wideband
 Digital Data
 High Capacity

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

The Telephone Company will maintain existing transmission specifications on services installed prior to the effective date of this Guide, except that existing services with performance specifications exceeding the standards listed in this provision will be maintained at the performance levels specified in this Guide. All services installed after the effective date of this Guide will conform to the transmission specification standards contained in this Guide or in the following Technical References for each category of service:

| | |
|-----------------------------------|--|
| Narrowband 1 and 2 Voice Grade | PUB 62502 TR-NPL-000335 PUB 41004, Table 4 |
| Program Audio | TR-NPL-000337 and Associated Addendum |
| Video | PUB 62504 and Associated Addendum |
| Wideband Analog | PUB 62505 and Associated Addendum |
| Wideband Digital | PUB 62506 |
| Digital Data | PUB 62507 PUB 62310 |
| High Capacity | TR-NPL-000342 PUB 62411 |

5.2.1 Analog Services

(A) Narrowband Services

(1) Narrowband 1 Service

(a) Description

A Narrowband 1 (NB1) channel is an unconditioned two-wire channel capable of transmitting low speed varying signals at rates up to 30 baud. This channel is provided by metallic or equivalent facilities.

(b) Transmission Specifications

- DC Resistance Between Conductors
- Loop Resistance
- Shunt Capacitance

The technical specifications for these parameters are set forth in Technical Reference PUB 62502.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(A) Narrowband Services (Cont'd)

(1) Narrowband 1 Service (Cont'd)

(c) Standard Protocol Combinations

A Narrowband 1 channel is available with the standard protocol combinations set forth below. Non-standard protocols are available at rates determined on an individual case basis.

| | |
|----------|--------|
| 2DC8-3 - | 2DC8-3 |
| 2DC8-2 - | 2DC8-1 |
| 2DC8-1 - | 2DC8-2 |

(d) Optional Features and Functions

- Central Office Bridging: provides for the parallel connection of one virtual circuit to another virtual circuit without interrupting the integrity or continuity of the first.
- Bridging: up to 25 Customer designated premises - special bridging required for McCullough signaling.

Additional features and functions are available as set forth in Section 15 following.

(2) Narrowband 2 Service

(a) Description

A Narrowband 2 (NB2) channel is an unconditional channel for transmission of asynchronous transitions between two current levels at rates of up to 150 baud. This channel is furnished for half-duplex or duplex operation. Neither direct current continuity of this service nor the capabilities to transport continuously alternating current is assured.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(A) Narrowband Services (Cont'd)

(2) Narrowband 2 Service (Cont'd)

(b) Transmission Specifications

- Telegraph Distortion

The technical specifications for this parameter are set forth in Technical Reference PUB 62502.

(c) Standard Protocol Combinations

A Narrowband 2 channel is available with the standard protocol combination set forth below. Other protocols are available at rates determined on an individual case basis.

| | | | |
|-----------|--------|-----------|--------|
| 2TT2-2 | 2TT2-2 | 4DB2-10 | 4TT2-2 |
| 2TT2-3 | 2TT2-2 | 4DB2-43** | 4TT2-2 |
| 2DB2-10 | 2TT2-2 | 2DB2-10 | 2TT2-6 |
| 2DB2-43** | 2TT2-2 | 2DB2-43** | 2TT2-6 |
| 4DB2-10 | 2TT2-2 | 4DB2-10 | 2TT2-6 |
| 4DB2-43** | 2TT2-2 | 4DB2-43** | 2TT2-6 |
| 2TT2-3 | 4TT2-2 | 2DB2-43** | 4TT2-6 |
| 2DB2-10 | 4TT2-2 | 4TT2-6 | 4TT2-6 |
| 2DB2-43** | TT2-2 | 4DB2-43** | 4TT2-6 |
| 4TT2-2 | 4TT2-2 | 2DB2-10 | 101A2 |
| 4DB2-10 | 101A2 | 2DB2-43** | 101A2 |
| 4DB2-43** | 101A2 | | |

**Supplemental Channel Assignment information required.

(d) Optional Features and Functions

- Central Office Bridging: provides for the parallel connection of one virtual circuit to another virtual circuit without interrupting the integrity or continuity of the first.

Additional features and functions are available as set forth in Section 15 following.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service

(1) Description

A Voice Grade (VG) channel is a channel which provides voice frequency transmission capability in the nominal frequency range of 300 to 3000 Hz and may be terminated two-wire or four-wire.

(2) Transmission Specifications

- Attenuation Distortion
- C-Message Noise
- Echo Control
- Envelope Delay Distortion
- Frequency Shift
- Impulse Noise
- Intermodulation Distortion
- Phase Hits, Gain Hits, and Dropouts
- Phase Jitter
- Signal-to-C Message Noise
- Signal-to-C Notch Noise

The technical specifications for these parameters (except for dropouts, gain hits, and phase hits) are set forth in Technical Reference TR-NPL-000335. The technical specifications for dropouts, phase hits, and gain hits are set forth in Technical Reference PUB 41004, Table 4.

Increased performance specifications can be attained with the provision of the appropriate Optional Features and Functions under Section 15 following.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(3) Standard Protocol Combinations

A Voice Grade channel is available with the standard protocol combination set forth below. Other protocols are available at rates determined on an individual case basis.

| | | | | | |
|----------|------|----------|--------|----------|--------|
| 2N02 | 2N02 | 4DS9* | 2L02 | 4DS9* | 2GS2 |
| 4N02 | 2N02 | 4LS2-X | 2L02 | 4G02-X | 2GS2 |
| 4AH5-B** | 2N02 | 2L02 | 2LS2 | 4LS2 | 2LA2 |
| 4AH6-C** | 2N02 | 4DS0* | 2LS2 | 4LS2 | 2LB2 |
| 4AH6-D** | 2N02 | 4DS6* | 2LS2 | 4LS2 | 2LC2 |
| 4DS0* | 2N02 | 4L02-X | 2LS2 | 4LS2 | 2L03 |
| 4DS6* | 2N02 | 2GS2 | 2G02 | 4SF2 | 2LA2 |
| 4DS9* | 2N02 | 4GS2 | 2G02 | 4SF2 | 2LB2 |
| 4N02 | 4N02 | 4AH5-B** | 2G02 | 4SF2 | 2LC2 |
| 4AH5-B** | 4N02 | 4AH6-C** | 2G02 | 4SF2 | 2L03 |
| 4AH6-C** | 4N02 | 4AH6-D** | 2G02 | 4AH5-B** | 2LA2 |
| 4AH6-D** | 4N02 | 4DS0* | 2G02 | 4AH5-B** | 2LB2 |
| 4DS0* | 4N02 | 4DS6* | 2G02 | 4AH5-B** | 2LC2 |
| 4DS6* | 4N02 | 4DS9* | 2G02 | 4AH5-B** | 2L03 |
| 4DS9* | 4N02 | 4GS2-X | 2G02 | 4DS0* | 2LA2 |
| 4N02 | 2L02 | 2G02 | 2GS2 | 4DS0* | 2LB2 |
| 4LS2 | 2L02 | 4G02 | 2GS2 | 4DS0* | 2LC2 |
| 4AH5-B** | 2L02 | 4AH5-B** | 2GS2 | 4DS0* | 2L03 |
| 4AH6-C** | 2L02 | 4AH6-C** | 2GS2 | 4DS6* | 2LA2 |
| 4AH6-D** | 2L02 | 4AH6-D** | 2GS2 | 4DS6* | 2LB2 |
| 4DS0* | 2L02 | 4DS0* | 2GS2 | 4DS6* | 2LC2 |
| 4DS6* | 2L02 | 4DS6* | 2GS2 | 4DS6* | 2L03 |
| 4DS9* | 2LA2 | 4L02 | 2LS3 | 4DS6* | 2LS2-M |
| 4DS9* | 2LB2 | 4L02 | 2IS3-M | 4DS6* | 2LS3 |
| 4DS9* | 2LC2 | 4SF2 | 2LS2 | 4DS6* | 2LS3-M |
| 4DS9* | 2L03 | 4SF2 | 2LS2-M | 4DS9* | 2LS2 |
| 4GS2 | 2G03 | 4SF2 | 2LS3 | 4DS9* | 2LS2-M |
| 4SF2 | 2G03 | 4SF2 | 2LS3-M | 4DS9* | 2LS3 |

* See Section 5.3.3 following for explanation.

** Compatible only with a multiplex 4-Wire High Capacity analog facility interface option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(3) Standard Protocol Combinations (Cont'd)

| | | | | | |
|----------|--------|----------|---------|----------|--------|
| 4AH6-C** | 2LA2 | 4AH5-B** | 2LS2 | 4DS9* | 2LS3-M |
| 4AH6-C** | 2LB2 | 4AH5-B** | 2LS2-M | 4L02 | 4LS2 |
| 4AH6-C** | 2LC2 | 4AH5-B** | 2LS3 | 4SF2 | 4LS2 |
| 4AH6-C** | 2L03 | 4AH5-B** | 2LS3-M | 4DS0* | 4LS2 |
| 4AH6-D** | 2LA2 | 4AH6-C** | 2LS2 | 4AH5-B** | 4LS2 |
| 4AH6-D** | 2LB2 | 4AH6-C** | 2LS2-M | 4AH6-C** | 4LS2 |
| 4AH6-D** | 2LC2 | 4AH6-C** | 2LS3 | 4AH6-D** | 4LS2 |
| 4AH6-D** | 2L03 | 4AH6-C** | 2LS3-M | 4DS6* | 4LS2 |
| 4AH5-B** | 2G03 | 4AH6-D** | 2LS2 | 4DS9* | 4LS2 |
| 4AH6-C** | 2G03 | 4AH6-D** | 2LS2-M | 4LR2 | 2LR2 |
| 4AH6-D** | 2G03 | 4AH6-D** | 2LS3 | 4SF2 | 2LR2 |
| 4DS0* | 2G03 | 4AH6-D** | 2LS3-M | 4DS0* | 2LR2 |
| 4DS6* | 2G03 | 4DS0* | 2LS2 | 4DS6* | 2LR2 |
| 4DS9* | 2G03 | 4DS0* | 2LS2-M | 4DS9* | 2LR2 |
| 4GS2-X | 2G03 | 4DS0* | 2LS3 | 4AH5-B** | 2LR2 |
| 4L02 | 2LS2 | 4DS0* | 2LS3-M | | |
| 4L02 | 2LS2-M | 4DS6* | 2LS2 | | |
| 4AH6-C** | 2LR2 | 4AH5-B** | 2AC2 | 4DS9* | 2GS3-C |
| 4AH6-D** | 2LR2 | 4AH5-B** | 2AC2-R | 4DS9* | 4GS2-C |
| 4LR2 | 4LR2 | 4AH5-B** | 4AC2 | 4DS9* | 4GS2 |
| 4SF2 | 4LR2 | 4AH5-B** | 4AC2-R | 4AH5-B** | 2GS3-C |
| 4DS0* | 4LR2 | 4AH6-C** | 2AC2 | 4AH5-B** | 4GS2-C |
| 4DS6* | 4LR2 | 4AH6-C** | 2AC2-R | 4AH5-B** | 4GS2 |
| 4DS9* | 4LR2 | 4AH6-C** | 4AC2 | 4AH6-C** | 2GS3-C |
| 4AH5-B** | 4LR2 | 4AH6-C** | 4AC2-R | 4AH6-C* | 4GS2-C |
| 4AH6-C** | 4LR2 | 4AH6-D** | 2AC2 | 4AH6-C** | 4GS2 |
| 4AH6-D** | 4LR2 | 4AH6-D** | 2AC2-R | 4AH6-D** | 2GS3-C |
| 4AB2 | 4AC2 | 4AH6-D** | 4AC2 | 4AH6-D** | 4GS2-C |
| 4AB2 | 4AC2-R | 4AH6-D** | 4AC2-R | 4AH6-D** | 4GS2 |
| 4AB2 | 2AC2 | 4DS0* | 4SF2-L0 | 4SF2 | 2RV2-T |
| 4AB2 | 2AC2-R | 4DS0* | 4SF2-LS | 4SF2 | 2RV3-T |

* See Section 5.3.3 following for explanation.

** Compatible only with a multiplex 4-Wire High Capacity analog facility interface option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(3) Standard Protocol Combinations (Cont'd)

| | | | | | |
|--------|--------|--------|---------|----------|--------|
| 4SF2 | 4AC2 | 4DS6* | 4SF2-LO | 4DS0* | 2RV2-T |
| 4SF2 | 4AC2-R | 4DS6* | 4SF2-LS | 4DS0* | 2RV3-T |
| 4SF2 | 2AC2 | 4DS9* | 4SF2-L0 | 4DS6* | 2RV2-T |
| 4SF2 | 2AC2-R | 4DS9* | 4SF2-LS | 4DS6* | 2RV3-T |
| 4DS0* | 2AC2 | 4G02 | 2GS3-C | 4DS9* | 2RV2-T |
| 4DS0* | 2AC2-R | 4G02 | 4GS2-C | 4DS9* | 2RV3-T |
| 4DS0* | 4AC2 | 4G02 | 4GS2 | 4AH5-B** | 2RV2-T |
| 4DS0* | 4AC2-R | 4SF2 | 2GS3-C | 4AH5-B** | 2RV3-T |
| 4DS6* | 2AC2 | 4SF2 | 4GS2-C | 4AH6-C** | 2RV2-T |
| 4DS6* | 2AC2-R | 4SF2 | 4GS2 | 4AH6-C** | 2RV3-T |
| 4DS6* | 4AC2 | 4DS0* | 2GS3-C | 4AH6-D** | 2RV2-T |
| 4DS6* | 4AC2-R | 4DS0* | 4GS2-C | 6EA2-E | 2RV2-T |
| 4DS9* | 2AC2 | 4DS0* | 4GS2 | 6EA2-E | 2RV3-T |
| 4DS9* | 2AC2-R | 4DS6* | 2GS3-C | 6EA2-M | 2RV2-T |
| 4DS9* | 4AC2 | 4DS6* | 4GS2-C | 6EA2-M | 2RV3-T |
| 4DS9* | 4AC2-R | 4DS6* | 4GS2 | | |
| 8EB2-E | 2RV2-T | 8EB2-M | 4EA2-E | 4DS0* | 6EA2-E |
| 8EB2-E | 2RV3-T | 8EB2-M | 6EB2-M | 4DS0* | 8EB2-M |
| 8EB2-M | 2RV2-T | 8EB2-M | 6EB2-E | 4DS0* | 8EB2-E |
| 8EB2-M | 2RV3-T | 8EB2-M | 6EA2-M | 4DS0* | 2CT3 |
| 6EA2-E | 4EA2-M | 8EB2-M | 6EA2-E | 4DS0* | 4CT2 |
| 6EA2-E | 4EA2-E | 8EB2-M | 8EB2-M | 4DS6* | 4EA2-M |
| 6EA2-E | 6EB2-M | 8EB2-M | 8EB2-E | 4DS6* | 4EA2-E |
| 6EA2-E | 6EB2-E | 8EB2-M | 8EB2-E | 4DS6* | 6EB2-M |
| 6EA2-E | 6EA2-M | 8EB2-M | 2CT3 | 4DS6* | 6EB2-E |
| 6EA2-E | 6EA2-E | 8EB2-M | 4CT2 | 4DS6* | 6EA2-M |
| 6EA2-E | 8EB2-M | 8EC2 | 4EA2-M | 4DS6* | 6EA2-E |
| 6EA2-E | 8EB2-E | 8EC2 | 4EA2-E | 4DS6* | 8EB2-M |
| 6EA2-E | 2CT3 | 8EC2 | 6EB2-M | 4DS6* | 8EB2-E |
| 6EA2-E | 4CT2 | 8EC2 | 6EB2-E | 4DS6* | 2CT3 |

* See Section 5.3.3 following for explanation.

** Compatible only with a multiplex 4-Wire High Capacity analog facility interface option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(3) Standard Protocol Combinations (Cont'd)

| | | | | | |
|----------|--------|-------|--------|----------|--------|
| 6EA2-M | 4EA2-M | 8EC2 | 6EA2-M | 4DS6* | 4CT2 |
| 6EA2-M | 4EA2-E | 8EC2 | 6EA2-E | 4DS9* | 4EA2-M |
| 6EA2-M | 6EB2-M | 8EC2 | 8EB2-M | 4DS9* | 4EA2-E |
| 6EA2-M | 6EB2-E | 8EC2 | 8EB2-E | 4DS9* | 6EB2-M |
| 6EA2-M | 6EA2-M | 8EC2 | CT3 | 4DS9* | 6EB2-E |
| 6EA2-M | 6EA2-E | 8EC2 | 4CT2 | 4DS9* | 6EA2-M |
| 6EA2-M | 8EB2-M | 4SF2 | 4EA2-M | 4DS9* | 6EA2-E |
| 6EA2-M | 8EB2-E | 4SF2 | 4EA2-E | 4DS9* | 8EB2-M |
| 6EA2-M | 2CT3 | 4SF2 | 6EB2-M | 4DS9* | 8EB2-E |
| 6EA2-M | 4CT2 | 4SF2 | 6EB2-E | 4DS9* | 2CT3 |
| 8EB2-E | 4EA2-M | 4SF2 | 6EA2-M | 4DS9* | 4CT2 |
| 8EB2-E | 4EA2-E | 4SF2 | 6EA2-E | 4AH5-B** | 4EA2-M |
| 8EB2-E | 6EB2-M | 4SF2 | 8EB2-M | 4AH5-B** | 4EA2-E |
| 8EB2-E | 6EB2-E | 4SF2 | 8EB2-E | 4AH5-B** | 6EB2-M |
| 8EB2-E | 6EA2-M | 4SF2 | 2CT3 | 4AH5-B** | 6EB2-E |
| 8EB2-E | 6EA2-E | 4SF2 | 4CT2 | 4AH5-B** | 6EA2-M |
| 8EB2-E | 8EB2-M | 4DS0* | 4EA2-M | 4AH5-B** | 6EA2-E |
| 8EB2-E | 8EB2-E | 4DS0* | 4EA2-E | 4AH5-B** | 8EB2-M |
| 8EB2-E | 2CT3 | 4DS0* | 6EB2-M | 4AH5-B** | 8EB2-E |
| 8EB2-E | 4CT2 | 4DS0* | 6EB2-E | 4AH5-B** | 2CT3 |
| 8EB2-M | 4EA2-M | 4DS0* | 6EA2-M | | |
| 4AH5-B** | 4CT2 | 4N02 | 4N02-S | 4DS6* | 4N02-S |
| 4AH6-C** | 4EA2-M | 4DB2 | 4DA2 | 4DS9* | 4DA2 |
| 4AH6-C** | 4EA2-E | 4DB2 | 4DA2-S | 4DS9* | 4DA2-S |
| 4AH6-C** | 6EB2-M | 4DB2 | 6DA2 | 4DS9* | 6DA2 |
| 4AH6-C** | 6EB2-E | 4DB2 | 6DA2-S | 4DS9* | 6DA2-S |
| 4AH6-C** | 6EA2-M | 4DB2 | 4N02 | 4D59* | 4N02-S |
| 4AH6-C** | 6EA2-E | 4DB2 | 4N025S | 4AH5-B** | 4DA2 |
| 4AH6-C** | 8EB2-M | 2DB2 | 2DA2 | 4AH5-B** | 4DA2-S |
| 4AH6-C** | 8EB2-E | 2DB2 | 2N02 | 4AH5-B** | 6DA2 |
| 4AH6-C** | 2CT3 | 4DB2 | 2DA2 | 4AH5-B** | 6DA2-S |
| 4AH6-C** | 4CT2 | 4DB2 | 2N02 | 4AH5-B** | 4N02-S |

* See Section 5.3.3 following for explanation.

** Compatible only with a multiplex 4-Wire High Capacity analog facility interface option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(3) Standard Protocol Combinations (Cont'd)

| | | | | | |
|----------|---------|----------|--------|----------|--------|
| 4AH6-D** | 4EA2-M | 2N02 | 2DA2 | 4AH6-C** | 4DA2 |
| 4AH6-D** | 4EA2-E | 4N02 | 2DA2 | 4AH6-C** | 4DA2-S |
| 4AH6-D** | 6EB2-M | 4N02-S | 2DA2 | 4AH6-C** | 6DA2 |
| 4AH6-D** | 6EB2-E | 4N02-S | 2N02 | 4AH6-C** | 6DA2-S |
| 4AH6-D** | 6EA2-M | 4DS6* | 2DA2 | 4AH6-C** | 4N02-S |
| 4AH6-D** | 6EA2-E | 4DS9* | 2DA2 | 4AH6-D** | 4DA2 |
| 4AH6-D** | 8EB2-M | 4AH5-B** | 2DA2 | 4AH6-D** | 4DA2-S |
| 4AH6-D** | 8EB2-E | 4AH6-C** | 2DA2 | 4AH6-D** | 6DA2 |
| 4AH6-D** | 2CT3 | 4AH6-D** | 2DA2 | 4AH6-D** | 6DA2-S |
| 4AH6-D** | 4CT2 | 4N02-S | 4DA2 | 4AH6-D** | 4N02-S |
| 4DS0* | 4SF2-EA | 4N02-S | 4DA2-S | 4DD3 | 4DE2 |
| 4DS0* | 4SF2-GO | 4N02-S | 6DA2 | 4DD3 | 2DE2 |
| 4DS0* | 4SF2-LO | 4N02-S | 6DA2-S | 4N02 | 4DE2 |
| 4DS6* | 4SF2-EA | 4N02-S | 4N02 | 4N02 | 2DE2 |
| 4DS6* | 4SF2-GO | 4N02-S | 4N02-S | 4DS0* | 4DE2 |
| 4DS6* | 4SF2-LO | 4DS0* | 4DA2 | 4DS0* | 2DE2 |
| 4DS9* | 4SF2-EA | 4DS0* | 4DA2-S | 4DS6* | 4DE2 |
| 4DS9* | 4SF2-GO | 4DS0** | 6DA2 | 4DS6 | 2DE2 |
| 4DS9* | 4SF2-LO | 4DS0* | 6DA2-S | 4DS9* | 4DE2 |
| 4N02 | 4DA2 | 4DS0* | 4N02-S | 4DS9* | 2DE2 |
| 4N02 | 4DA2-S | 4DS6* | 4DA2 | 4AH5-B** | 4DE2 |
| 4N02 | 6DA2 | 4DS6* | 6DA2 | 4AH5-B** | 2DE2 |
| 4N02 | 6DA2-S | 4DS6* | 6DA2-S | 4AH6-C** | 4DE2 |
| 4AH6-C** | 2DE2 | 4G02 | 2GS2-M | 4DS9* | 8EC2 |
| 4AH6-D** | 4DE2 | 4G02-X | 2GS2-M | 4AH5-B** | 8EC2 |
| 4AH6-D** | 2DE2 | 4GO2-X | 2GS3-M | 4AH6-C** | 8EC2 |
| 4DA2 | 4DA2 | 4SF2 | 2GS2 | 4AH6-D** | 8EC2 |
| 4DA2 | 4DA2-S | 4SF2 | 2GS3-M | 6EA2-E | 4DX2 |
| 6DA2 | 4DA2 | 4SF2 | 2GS2-M | 6EA2-M | 4DX2 |
| 6DA2 | 4DA2-S | 4DS0* | 2GS3-M | 8EB2-E | 4DX2 |
| 4DA2-S | 4DA2 | 4DS0* | 2GS2-M | 8EB2-M | 4DX2 |
| 4DA2-S | 4DA2-S | 4DS6* | 2GS2-M | 4SF2 | 4DX2 |
| 6DA2-S | 4DA2 | 4DS6* | 2GS3-M | 4DS0* | 4DX2 |
| 6DA2-S | 4DA2-S | 4DS9* | 2GS2-M | 4DS6* | 4DX2 |

* See Section 5.3.3 following for explanation.

** Compatible only with a multiplex 4-Wire High Capacity analog facility interface option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(3) Standard Protocol Combinations (Cont'd)

| | | | | | |
|----------|--------|----------|--------|----------|--------|
| 4DB2 | 4DA2 | 4DS9* | 2GS3-M | 4DS9* | 4DX2 |
| 4DB2 | 4DA2-S | 4AH5-B** | 2GS2-M | 4AH5-B** | 4DX2 |
| 4DA2 | 6DA2 | 4AH5-B** | 2GS3-M | 4AH6-C** | 4DX2 |
| 4DA2 | 6DA2-S | 4AH6-C** | 2GS2-M | 4AH6-D** | 4DX2 |
| 6DA2 | 6DA2 | 4AH6-D** | 2GS3-M | 4DS0* | 4SF-EA |
| 6DA2 | 6DA2-S | 4G02-X | 2GS2 | 4DS6* | 4SF-EA |
| 4DA2-S | 6DA2 | 4G02-X | 4GS2 | 4DS9* | 4SF-EA |
| 4DA2-S | 6DA2-S | 4G02-X | 2GS3-C | 2TF2 | 2TF2 |
| 6DA2-S | 6DA2 | 4G02-X | 4GS2-C | 4DS0* | 2TF2 |
| 6DA2-S | 6DA2-S | 4L02-X | 2LS2 | 4DS6* | 2TF2 |
| 4DS0* | 4N02-S | 4L02-X | 4LS2 | 4DS9* | 2TF2 |
| 4DS6* | 4N02-S | 4L02-X | 2LS2-M | 4AH5-B** | 2TF2 |
| 4DS9* | 4N02-S | 4L02-X | 2LS3-M | 4AH6-C** | 2TF2 |
| 4AH5-B** | 4N02-S | 6EA2-E | 8EC2 | 4AH6-D** | 2TF2 |
| 4AH6-C** | 4N02-S | 6EA2-M | 8EC2 | 4TF2 | 4TF2 |
| 4AH6-D** | 4N02-S | 8EB2-E | 8EC2 | 4DS0* | 4TF2 |
| 4LS2-X | 2LA2 | 8EB2-M | 8EC2 | 4DS6* | 4TF2 |
| 4LS2-X | 2LB2 | 8EC2 | 8EC2 | 4DS9* | 4TF2 |
| 4LS2-X | 2LC2 | 4SF2 | 8EC2 | 4AH5-B** | 4TF2 |
| 4LS2-X | 2L03 | 4DS0* | 8EC2 | 4AH6-C** | 4TF2 |
| 4G02 | 2GS3-M | 4DS6* | 8EC2 | | |
| 4AH6-D** | 4TF2 | 6EX2-A | 4LS2 | 6EX2-A | 2GS2-M |
| 2PR2 | 2PR2 | 6EX2-A | 2LR2 | 4DX2 | 8EC2 |
| 2DB2 | 2PR2 | 6EX2-A | 2GS3-C | 4DX2-X | 8EC2 |
| 2N02 | 2PR2 | 6EX2-A | 4GS2-C | 4DX2 | 2LS2 |
| 4DS0* | 2PR2 | 6EX2-A | 4GS2 | 6EA2-E | 2LS2 |
| 4DS6* | 2PR2 | 4RV2-0 | 2RV2-T | 6EA2-M | 2LS2 |
| 4DS9* | 2PR2 | 4RV2-0 | 2RV3-T | 8EB2-E | 2LS2 |
| 4AH5-B** | 2PR2 | 4DX2 | 2RV2-T | 8EB2-M | 2LS2 |
| 4AH6-C** | 2PR2 | 4DX2 | 2RV3-T | 4DX2 | 4DX2 |
| 4AH6-D** | 2PR2 | 4DX2-X | 2RV2-T | 4DX2-X | 4DX2 |
| 4PR2 | 4PR2 | 4DX2-X | 2RV3-T | 2N02 | 4N02 |
| 4DB2 | 4PR2 | 4DX2 | 4EA2-M | 2LS2 | 2LA2 |
| 4N02 | 4PR2 | 4DX2 | 4EA2-E | 2LS2 | 2LB2 |

* See Section 5.3.3 following for explanation.

** Compatible only with a multiplex 4-Wire High Capacity analog facility interface option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(3) Standard Protocol Combinations (Cont'd)

| | | | | | |
|----------|--------|--------|--------|--------|--------|
| 4DS0* | 4PR2 | 4DX2 | 6EB2-M | 2LS2 | 2LC2 |
| 4DS6* | 4PR2 | 4DX2 | 6EB2-E | 2LS2 | 2L03 |
| 4DS9* | 4PR2 | 4DX2 | 6EA2-M | 2LR2 | 2LR2 |
| 4AH5-B** | 4PR2 | 4DX2 | 6EA2-E | 2LR2 | 4LR2 |
| 4AH6-C** | 4PR2 | 4DX2 | 83B2-M | 2AC2 | 2AC2 |
| 4AH6-D** | 4PR2 | 4DX2 | 83B2-E | 2AC2 | 4AC2 |
| 6EX2-B | 2L02 | 4DX2 | 2CT3 | 4AC2 | 2AC2 |
| 6EX2-A | 2LS2 | 4DX2 | 4CT2 | 4AC2 | 4AC2 |
| 2L03 | 2LS2 | 4DX2-X | 4EA2-M | 2GS2 | 2G03 |
| 6EX2-B | 2G02 | 4DX2-X | 4EA2-E | 2LS2 | 2L02 |
| 6EX2-A | 2GS2 | 4DX2-X | 6EB2-M | 2LS2 | 4L02 |
| 6EX2-B | 2LA2 | 4DX2-X | 6EB2-E | 4LS2 | 4L02 |
| 6EX2-B | 2LB2 | 4DX2-X | 6EA2-M | 4EA2-E | 4EA2-E |
| 6EX2-B | 2LC2 | 4DX2-X | 6EA2-E | 4EA2-E | 4EA2-M |
| 6EX2-B | 2L03 | 4DX2-X | 8EB2-M | 4EA2-E | 6EA2-E |
| 6EX2-B | 2G03 | 4DX2-X | 8EB2-E | 4EA2-E | 6EA2-M |
| 6EX2-A | 2LS2-M | 4DX2-X | 2CT3 | 4EA2-E | 6EA2-E |
| 6EX2-A | 2LS3 | 4DX2-X | 4CT2 | 4EA2-E | 6EA2-M |
| 6EX2-A | 2LS3-M | 6EX2-A | 2GS3-M | 4EA2-E | 8EB2-E |
| 4EA2-E | 8EB2-M | 4GS2-C | 4G02 | 2DA2 | 4DA2 |
| 4EA2-E | 2CT3 | 2CT3 | 4EA2-E | 2DA2 | 6DA2 |
| 4EA2-E | 4CT2 | 2CT3 | 4EA2-M | 2DA2 | 2N02 |
| 4EA2-M | 4EA2-E | 2CT3 | 6EA2-E | 2DA2 | 4DA2 |
| 4EA2-M | 4EA2-M | 2CT3 | 6EA2-M | 2DA2 | 4DA2-S |
| 4EA2-M | 6EA2-E | 2CT3 | 6EB2-E | 2DA2 | 6DA2-S |
| 4EA2-M | 6EA2-M | 2CT3 | 6EB2-M | 2DA2 | 4N02-S |
| 4EA2-M | 6EB2-E | 2CT3 | 8EB2-E | 4DA2 | 2DA2 |
| 4EA2-M | 6EB2-M | 2CT3 | 8EB2-M | 4DA2 | 2N02 |
| 4EA2-M | 8EB2-E | 2CT3 | 2CT3 | 4DA2 | 4N02 |
| 4EA2-M | 8EB2-M | 2CT3 | 4CT2 | 4DA2 | 4N02-S |
| 4EA2-M | 2CT3 | 4CT2 | 4EA2-E | 6DA2 | 2DA2 |
| 4EA2-M | 4CT2 | 4CT2 | 4EA2-M | 6DA2 | 2N02 |

* See Section 5.3.3 following for explanation.

** Compatible only with a multiplex 4-Wire High Capacity analog facility interface option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(3) Standard Protocol Combinations (Cont'd)

| | | | | | |
|--------|--------|------|--------|--------|--------|
| 6EB2-M | 2CT3 | 4CT2 | 6EA2-E | 6DA2 | 2N02 |
| 6EB2-M | 4CT2 | 4CT2 | 6EA2-M | 6DA2 | 4N02-S |
| 6EB2-E | 2CT3 | 4CT2 | 6EB2-E | 4DA2-S | 2DA2 |
| 6EB2-E | 4CT2 | 4CT2 | 6EB2-M | 4DA2-S | 2N02 |
| 2GS2 | 4G02 | 4CT2 | 8EB2-E | 4DA2-S | 4N02 |
| 2GS3-C | 2G02 | 4CT2 | 8EB2-M | 4DA2-S | 4N02-S |
| 2GS3-C | 4G02 | 4CT2 | 2CT3 | 6DA2-S | 2DA2 |
| 4GS2 | 4G02 | 4CT2 | 4CT2 | 6DA2-S | 2N02 |
| 4GS2-C | 2G02 | 2DA2 | 2DA2 | 6DA2-S | 4N02 |
| | | | | 6DA2-S | 4N02-S |
| 2N02 | 4DA2 | | | | |
| 2N02 | 6DA2 | | | | |
| 2N02 | 2N02 | | | | |
| 2N02 | 4N02 | | | | |
| 2N02 | 4DA2-S | | | | |
| 2N02 | 6DA2-S | | | | |
| 2N02 | 4N02-S | | | | |
| 4N02 | 2N02 | | | | |
| 4N02 | 4N02 | | | | |
| 4N02 | 4N02-S | | | | |
| 4N02-S | 2N02 | | | | |

* See Section 5.3.3 following for explanation.

** Compatible only with a multiplex 4-Wire High Capacity analog facility interface option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(4) Optional Features and Functions

Central Office Bridging Capability

- Voice Bridging (two-wire or four-wire): provides for the parallel connection of one voice circuit to another without interrupting the integrity or continuity of the first.
- Data Bridging (two-wire or four-wire): provides for the parallel connection of one data circuit to another without interrupting the integrity or continuity of the first.
- Telephoto Bridging (two-wire or four-wire): provides for the parallel connection of one Telephoto circuit to another without interrupting the integrity or continuity of the first.

Central Office Multiplexing

Voice to Narrowband: A voice frequency telegraph system arrangement that converts to a Voice Grade channel to Narrowband channels using frequency division multiplexing.

Conditioning

Conditioning provides more specific transmission characteristics for data or telephoto services. C-Type conditioning controls attenuation distortion and envelope delay distortion; DA-Type conditioning controls the Signal to C-Notched Noise Ratio and intermodulation distortion. Sealing Current helps maintain continuity on dry metallic loops. Telephone conditioning controls attenuation distortion and envelope delay distortion.

Conditioning is charged for on a channel termination basis. C-Type and DA-Type conditioning may be combined on the same service.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(4) Optional Features and Functions (Cont'd)

C-Type Conditioning

C-Type Conditioning is provided for the additional control of attenuation distortion and envelope delay distortion on data services. The attenuation distortion and envelope delay distortion specifications of C-Type Conditioning are:

Attenuation Distortion
(Frequency Response)
Relative 1004 Hz

| <u>Frequency</u> <u>Range (Hz)</u> | <u>Variation</u> <u>(dB)</u> |
|---------------------------------------|---------------------------------|
| 504-2804 | -0.5 + 2.5 |
| 304-3004 | -1.5 + 5.5 |

Envelope Delay Distortion

| <u>Frequency</u> <u>Range (Hz)</u> | <u>Variation</u> <u>Microseconds</u> |
|---------------------------------------|---|
| 1004-2604 | ≤ 475 |
| 604-2604 | ≤ 1450 |
| 504-2804 | ≤ 2950 |

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(4) Optional Features and Functions (Cont'd)

Improved Attenuation Distortion

Improved Attenuation Distortion upgrades the frequency vs. loss response limits as shown below:

| <u>Frequency Range (Hz)</u> | <u>Variation (dB)</u> |
|-----------------------------|-----------------------|
| 404-2804 | -0.8 to + 1.5 dB |
| 304-3004 | -0.8 to + 2.5 dB |
| 304-3204 | -1.5 to + 5.5 dB |

Improved Envelope Delay Distortion

Improved Envelope Delay Distortion upgrades the frequency vs. delay response limits as shown below:

| <u>Frequency Range (Hz)</u> | <u>Variation Microseconds</u> |
|-----------------------------|-------------------------------|
| 1004-2604 | ≤ 85 |
| 804-2604 | ≤ 150 |
| 604-2604 | ≤ 250 |
| 504-2804 | ≤ 550 |
| 504-3004 | ≤ 2950 |

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(4) Optional Features and Functions (Cont'd)

DA-Type Conditioning

DA-Type Conditioning is provided for the control of Signal to C-Notched Noise Ratio and intermodulation distortion. DA-Type conditioning is available for two-point services or multipoint services.

The Signal to C-Notched Ratio and intermodulation distortion parameters for DA-type conditioning are:

- Signal to C-Notched Noise Ratio is equal to or greater than 34 dB.
- Intermodulation distortion.
- Signal to second order modulation products (R2) is equal to or greater than 40 dB.
- Signal to third order modulation products (R3) is equal to or greater than 44 dB.

When a service equipped with DA-Type conditioning is used for voice communications, the quality of the voice transmission may not be satisfactory.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(4) Optional Features and Functions (Cont'd)

Telephoto Conditioning

Telephoto Conditioning is provided for the control of attenuation distortion and envelope delay distortion on telephotographic services. The attenuation distortion and envelope delay distortion parameters for Telephoto Conditioning are:

Attenuation Distortion
(1004 Hz Reference)

| <u>Frequency Range (Hz)</u> | <u>Variation (dB)</u> |
|-----------------------------|-----------------------|
| 500-3000 | -0.5 + 1.5 |
| 300-3200 | -1.0 + 2.5 |

Envelope Delay Distortion

| <u>Frequency Range (Hz)</u> | <u>Variation Microseconds</u> |
|-----------------------------|-------------------------------|
| 1000-2600 | ≤ 75 |
| 800-2800 | ≤ 130 |

Hybrid

Provides conversion from a four-wire channel to two-wire termination at a Customer premises. Required to meet effective four-wire performance with a two-wire Customer premises protocol combination.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(B) Voice Grade Service (Cont'd)

(4) Optional Features and Functions (Cont'd)

Improved Return Loss for Effective Four-Wire Transmission

On Effective Four-Wire Transmission at Four-Wire Point of Termination (applicable to each two-wire port): Provides for a fixed 600 ohm impedance, variable level range and simplex reversal. Telephone Company equipment is required at the Customer's premises where this option is ordered. The improved Return Loss parameters are delineated in Technical Reference TR-NPL-000335.

On Effective Two-Wire Transmission at Two-Wire Point of Termination: Provides for more stringent Echo Control specifications. In order for this option to be applicable, the transmission path must be four-wire at one point of termination and two-wire at the other point of termination. Placement of Telephone Company equipment may be required at the Customer's premises with the two-wire point of termination. The Improved Return Loss parameters are delineated in Technical Reference TR-NPL-000335.

Additional features and functions are available set forth in Section 15 following.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(C) Program Audio Service

(1) Description

A Program Audio (PA) channel is a channel measured in Hz for the transmission of a complex signal voltage. The actual bandwidth is a function of the protocol combination selected by the Customer. Only one-way transmission is provided.

Program Audio channels are provided in the following bandwidths:

- 200 - 3500 Hz
- 100 - 5000 Hz
- 50 - 8000 Hz
- 50 - 15000 Hz

(2) Transmission Specifications

- Actual Measured Loss
- Gain/Frequency Distortion
- Signal-to-Idle Circuit Noise

The technical specifications are set forth in Technical Reference TR-NPL-000337 and associated Addendum.

(3) Standard Protocol Combinations

A Program Audio channel is available with the standard protocol combinations set forth below. Other protocols are available at rates determined on an individual case basis.

| | | | |
|-----------|--------|-----------|--------|
| 2PG2-3 | 2PG2-3 | 2PG2-3 | 2PG1-3 |
| 4DS9-15E* | 2PG2-3 | 4DS9-15E* | 2PG1-3 |
| 4AH5-B** | 2PG2-3 | 4AH5-B** | 2PG1-3 |
| 4AH6-C** | 2PG2-3 | 4AH6-C** | 2PG1-3 |
| 4AH6-D** | 2PG2-3 | 4AH6-D** | 2PG1-3 |
| 2PG2-5 | 2PG2-5 | 2PG2-5 | 2PG1-5 |
| 4DS9-15F* | 2PG2-5 | 4DS9-15F* | 2PG1-5 |
| 4AH5-B** | 2PG2-5 | 4AH5-B** | 2PG1-5 |
| 4AH6-C** | 2PG2-5 | 4AH6-C** | 2PG1-5 |
| 4AH6-D** | 2PG2-5 | 4AH6-D** | 2PG1-5 |

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(C) Program Audio Service (Cont'd)

(3) Standard Protocol Combinations (Cont'd)

| | | | |
|-----------|--------|-----------|--------|
| 2PG2-8 | 2PG2-8 | 2PG2-8 | 2PG1-8 |
| 4DS9-15G* | 2PG2-8 | 4DS9-15G* | 2PG1-8 |
| 4AH5-B** | 2PG2-8 | 4AH5-B** | 2PG1-8 |
| 4AH6-C** | 2PG2-8 | 4AH6-C** | 2PG1-8 |
| 4AH6-D** | 2PG2-8 | 4AH6-D** | 2PG1-8 |
| 2PG2-1 | 2PG2-1 | 2PG2-1 | 2PG1-1 |
| 4DS9-15H* | 2PG2-1 | 4DS9-15H* | 2PG1-1 |
| 4AH5-B** | 2PG2-1 | 4AH5-B** | 2PG1-1 |
| 4AH6-C** | 2PG1-1 | 4AH6-C** | 2PG1-1 |
| 4AH6-D** | 2PG2-1 | 4AH6-D** | 2PG1-1 |

* Compatible only with a multiplexed 4-wire DSX protocol option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

** Compatible only with a multiplexed 4-wire High Capacity Analog protocol option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

(4) Optional Features and Functions

- Gain Conditioning--Control of 1004 Hz Actual Measured Loss at initiation of service to 0 dB + 0.5 dB.
- Central office bridging capability: provides for the parallel connection of one virtual circuit to another virtual circuit without interrupting the integrity or continuity of the first.
- Stereo--provision of a pair of gain/phase equalized channels for stereo applications.

Additional features and functions are available as set forth in Section 15 following.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(D) Video Service

(1) Description

A Video (TV) channel is an operational 4.2 MHz channel with one-way transmission capability for a standard 525 line/60 field monochrome, or National Television Systems Committee color, video signal and one or two associated 5 to 15 kHz audio signal(s). The associated audio signal(s) may be either duplexed or provided as one or two separate channels. The provision and bandwidth of the associated audio signal(s) is a function of the protocol combination selected by the Customer.

For Video service, the standby of technician(s) is mandatory. The Telephone Company will inform the Customer of standby charges before providing a Firm Order Confirmation Date. Standby charges are set forth in Section 8.2.7(B).

(2) Transmission Specifications

- Video Performance: Insertion Gain Variation and Luminance Signal/CCIR Weighted Noise.
- Audio Performance: Insertion Gain and Signal/15 kHz Flat Weighted Noise.

The technical specifications are set forth in Technical Reference PUB 62505 and associated Addendum.

(3) Standard Protocol Combinations

A Video channel is available with the standard protocol combinations set forth below. Other protocols are available at rates determined on an individual case basis.

| | |
|--------|---------|
| 2TV6-1 | 4TV6-15 |
| 2TV7-1 | 4TV7-15 |
| 2TV6-2 | 6TV6-15 |
| 2TV7-2 | 6TV7-15 |
| 4TV6-5 | 4TV6-5 |
| 4TV7-5 | 4TV7-5 |
| 6TV6-5 | 6TV6-5 |
| 6TV7-5 | 6TV7-5 |

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(D) Video Service (Cont'd)

(4) Optional Features and Functions

Optional Features and Functions are available as set forth in Section 15 following.

(E) Wideband Analog Service

(1) Description

A Wideband Analog (WA) channel is a channel with a bandwidth measured in kHz for the transmission of a wideband signal. The actual bandwidth is a function of the protocol combination selected by the Customer.

Wideband Analog channels are provided in the following bandwidths:

60 kHz - 108 kHz
312 kHz - 552 kHz
564 kHz - 3084 kHz
300 kHz - 16 kHz
29 kHz - 44 kHz

(2) Transmission Specifications

- Amplitude Stability
- Background Noise
- Frequency Shift
- Gain/Frequency Characteristics of:
 - Group Connections
 - Supergroup Connections
 - Mastergroup Connections
 - Impulse Noise
 - Net Loss Variations
 - Pilot Slot
 - Spurious Single
 - Frequency Tone

The technical specifications are set forth in Technical Reference PUB 62505 and associated Addendum.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.1 Analog Services (Cont'd)

(E) Wideband Analog Service (Cont'd)

(3) Standard Protocol Combinations

A Wideband Analog channel is available with the standard protocol combinations set forth below. Other protocols are available at rates determined on an individual case basis.

| | |
|--------|--------|
| 4AH5-B | 4AH5-B |
| 4AH6-C | 4AH5-B |
| 4AH6-D | 4AH5-B |
| 4AH6-C | 4AH6-C |
| 4AH6-D | 4AH6-C |
| 4AH6-D | 4AH5-D |
| 4WD-1 | 4WA5-1 |
| 4WD-2 | 4WA5-1 |

* Compatible only with a multiplexed 4-wire High Capacity Analog protocol option at the Customer's designated premises and where the Customer provides subsequent and channel assignment data.

(4) Optional Features and Functions

- Central office multiplexing: provides a voice frequency telegraph system arrangement that converts a Voice Grade channel to a Wideband channel using frequency division multiplexing.

Additional features and functions are available as set forth in Section 15 following.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.2 Digital Services

(A) Wideband Digital Service

(1) Description

A Wideband Digital (WD) channel is a channel for the transmission of synchronous serial data at the rate of 19.2, 50.0, or 230.4 kpbs. Optional arrangements are available for additional transmission rates or for the transmission of nonsynchronous data. The actual bit rate is a function of the protocol combination selected by the Customer. A voiceband coordinating channel is provided with this service.

(2) Transmission Specifications

- Error-Free Seconds

While in service, 98.75% of the one-second intervals will be error-free 95% of the time.

(3) Standard Protocol Combinations

A Wideband Digital channel is available with the standard protocol combinations set forth below. Other protocols are available at rates determined on an individual case basis.

| | |
|----------|-----------|
| 8WB5-19S | 12WC6-10 |
| 8WB5-19S | 12WC6-18 |
| 8WB5-19A | 10WC6-19 |
| 8WB5-50S | 12WC6-50 |
| 8WB5-40S | 12WC6-40 |
| 82B-50A | 10WC6-50 |
| 8WB5-23S | 12WC6-23S |
| 82B5-23A | 12WC6-23 |

(4) Optional Features and Functions

Additional features and functions are available as set forth in Section 15 following.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.2 Digital Services (Cont'd)

(B) Digital Data Access Service

(1) Description

A Digital Data Access (DA) channel is a channel for duplex four-wire transmission of 2.4, 4.8, 9.6, 56, or 64 kbps. The actual bit rate is a function of the protocol combination selected by the Customer. The channel provides a synchronous service with timing provided through the Telephone Company's facilities to the Customer in the received bit stream. Digital Data Access channels are only available via Telephone Company designated digital hubs. All other locations are connectable through an analog off-network extension which is provided as a Voice Grade service as set forth in Section 5.2.1(B).

The Customer may provide in accordance with Part 68 of the FCC Rules and Regulations the Channel Service Unit-type equipment or other Network Channel Terminating Equipment associated with the Digital Data Access channel at the Customer premises.

(2) Transmission Specifications

- Error Free Seconds

While in service, the monthly average of the error-free seconds will be equal to or greater than 99.875%, if the channel is measured through a CSU equivalent which conforms with the specifications set forth in Technical Reference PUB 62310.

Voltages which are compatible with Digital Data Access Service are set forth in Technical Reference PUB 62507.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.2 Digital Services (Cont'd)

(B) Digital Data Access Service (Cont'd)

(3) Standard Protocol Combinations

A Digital Data Access channel is available with the standard protocol combinations set forth below. Other protocols are available at rates determined on an individual case basis.

| | |
|----------|----------|
| 4DS9-15* | 6DU5-24 |
| 6DU5-24 | 6DU5-24 |
| 4D05 | 6DU5-24 |
| DATAPORT | DATAPORT |
| 5DS9-15* | 6DU5-48 |
| 6DU5-48 | 6DU5-48 |
| 6DS9-15* | 6DU5-96 |
| 6DU5-96 | 6DU5-96 |
| 4DS9-15* | 6DU5-56 |
| 6DU5-56 | 6DU5-56 |
| 4DS9-15* | 6DU5-64 |
| 6DU5-64 | 6DU5-64 |

* Compatible only with a multiplexed 4-wire DSX protocol option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

(4) Optional Features and Functions

- Transfer arrangement: Customer controlled equipment used to selectively terminate the service in either of two locations within the same rate center.
- Central office bridging: provides for the parallel connection of one virtual circuit to another virtual circuit without interrupting the integrity or continuity of the first.
- Secondary channel: a data transmission channel having a lower signaling rate capability than the primary channel in a system in which two channels share a common interface.

Additional features and functions are available as set forth in Section 15 following.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.2 Digital Services (Cont'd)

(C) High Capacity Service

(1) Description

A High Capacity channel is a channel for the transmission of nominal 1.544, 44.736 or 155.520 Mbps synchronous serial data. The actual bit rate is a function of the protocol combination selected by the Customer.

Common industry terminology for the offered bit rates is as follows:

| <u>Interface</u> | <u>Bit Rate</u> |
|------------------|-----------------|
| DS1 | 1.544 Mbps |
| DS3 | 44.736 Mbps |
| OC3 or OC3c | 155.520 Mbps |

The Customer may provide in accordance with Part 68 of the FCC Rules and Regulations the Network Channel Terminating Equipment associated with the High Capacity channel at the Customer's premises.

(2) Transmission Specifications

- Error-Free Seconds

1.544 channel will be capable of an error-free second performance of 98.75% over a continuous 24 hour period as measured at the 1.544 Mbps rate through a CSU equivalent which conforms with the specifications set forth in Technical Reference PUB 62411.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.2 Digital Services (Cont'd)

(C) High Capacity Service (Cont'd)

(3) Standard Protocol Combinations

A High Capacity channel is available with the standard protocol combinations set forth below. Other protocols are available at rate determined on an individual case basis.

| | |
|----------|----------------|
| 49S9-15J | 6DU9-A |
| 4DS9-15 | 6DU9-B |
| 4DS9-15K | 6DU9-B |
| 4DS9-15K | 6DU9-C |
| 4DS9-31* | 6DU9-A, B or C |
| 4DS0-63* | 6DU9-A, B or C |
| 4DS6-44* | 6DU9-A, B or C |
| 4DS6-27* | 6DU9-A, B or C |
| 4DS9-31 | 4DS9-31 |
| 4DS0-63 | 4DS0-63 |
| 4DS6-44 | 4DS6-44 |
| 4DS6-27 | 4DS6-27 |

* Compatible only with a multiplexed 4-wired DSX protocol option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

(4) Optional Features and Functions

Automatic Protection Switching

Automatic Protection Switching provides protection against failure of the facilities between a Customer designated premises and the wire center serving that premises.

Protection may be provided on a 1 x 1 nonexpandable basis which automatically switches to the spare channel line when the working channel fails.

Protection may be provided on a 1 x N basis, which provides one spare channel for up to a maximum of twelve working channels which reroutes the signal to the spare line when one of the working lines fail.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.2 Digital Services (Cont'd)

(C) High Capacity Service (Cont'd)

(4) Optional Features and Functions (Cont'd)

Central Office Multiplexing

DS1 to Voice: Under this option the Telephone Company will provide a digital channel bank with 24 channel plug-in mounting positions. The channel plug-in units will be provided by the Telephone Company when the Customer orders each individual service and specifies the channel position to be used and the plug-in unit specific interface code required. The multiplexing is accomplished using time division multiplexing.

DS3 to DS1: Under this option the Telephone Company converts a 44.736 Mbps channel to 28 DS1 channels using time division multiplexing.

OC3 to DS3: Under this option the Telephone Company converts an OC3 (155.520 Mbps) channel to 3 DS3 (44.726 Mbps) channels using time division multiplexing.

OC3 to DS1: Under this option the Telephone Company converts an OC3 (155.520 Mbps) channel to 84 DS1 (1.544 Mbps) channels using time division multiplexing.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.2 Digital Services (Cont'd)

(C) High Capacity Service (Cont'd)

(4) Optional Features and Functions (Cont'd)

Clear Channel Capability

Clear Channel Capability (CCC) is an arrangement that alters a DS1/1.544 Mbps signal with unconstrained information bits, to meet pulse density requirements outlined in TR-NPL-000054 and TA-TSY-000342. This will allow a Customer to transport an all zero octet over a DS1/1.544 Mbps High Capacity channel, providing an available combined maximum 1.536 Mbps data rate. This arrangement requires the Customer signal at the channel interface to conform to Bipolar with 8 Zero Substitution (B8ZS) line code as described in TR-NPL-000054 and TA-TSY-000342.

CCC is provided on DS1/1.544 Mbps High Capacity channels between two Customer designated premises and is subject to the availability of facilities. This optional feature may be ordered at the same time the DS1/1.544 Mbps High Capacity channel is ordered, or it may be ordered as an additional feature of an existing channel.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.2 Technical Service Descriptions for Special Access Service (Cont'd)

5.2.2 Digital Services (Cont'd)

(C) High Capacity Service (Cont'd)

(4) Optional Features and Functions (Cont'd)

Term Discount Plans #

(a) Customers may purchase DS1, DS3, or OC3 services with Term Discount Plans (“TDPs”) as described in Section 5.4.8 following. Customers purchasing DS1, DS3, or OC3 services with a TDP may choose between 18, 36, or 60 month service commitments.

(b) For DS1, DS3, or OC3 term discount plans in effect or ordered before August 5, 2008, the following provision applies:

Should TDP rates increase during the term of any given plan, the Company will continue to provide those services at the then applicable rate of the plan for the lesser of either the remaining life of the term plan or one year.

(c) Reserved For Future Use (C)

Additional features and functions are available as set forth in Section 15 following.

Effective November 19, 2021, DS1 and DS3 Term Payment Plans are no longer permitted. DS1 and DS3 Term Payment Plans in effect as of November 19, 2021 may continue the existing term but will not be eligible to extend, renew, reenroll in, convert to a new term period, or in any other way continue their existing plan beyond its current expiration. At expiration of the term period, the service will be converted to the Month to Month Rate. If at any time an existing customer terminates its DS1 and DS3 Term Payment Plan, the customer may not re-subscribe to the rate.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.3 Protocol Codes

This section explains the protocol codes that the Customer must specify when ordering Special Access Service. Included is an example which explains the specific characters of the code, a glossary of protocol codes and impedance levels. Example: If the Customer specifies a 2AB2 protocol at the Customer premises, it is requesting the following:

2--Number of physical wires at interface is two.

AB--Protocol code for 20 Hz ringing

2--Code for nominal impedance of 600 ohms

5.3.1 Glossary of Protocol Codes and Options

| <u>Code</u> | <u>Option</u> | <u>Definition</u> |
|-------------|---------------|---|
| AB | | Accepts and provides a nominal 20 Hz ringing signal at Customer designated premises. |
| AC | | Accepts and provides 20 Hz ringing signal at point of termination. |
| AH | R | Two-Digit Code Select (≤ 10) |
| | B | Analog high-capacity interface |
| | C | 60 to 108 KHz (12 channels) |
| | D | 312 to 552 KHz (60 channels) |
| CT | | 564 to 3084 KHz (600 channels) |
| DA | | CO Centrex tie trunk termination |
| DB | | Data stream in VF frequency band at point of termination. |
| | S | Sealing current option for 4-wire transmission. |
| | | Data stream in VF frequency band at Customer designated premises. |
| DC | 10 | Frequency shift (108 data set type) |
| | 43 | 43A1 to 43B1 carrier format |
| | | Direct current or voltage |
| | 1 | Monitoring interface with series RC combination (McCullough format) |
| | 2 | Telephone Company energized alarm channel |
| | 3 | Metallic facilities (DC continuity) for Direct Current/low frequency control signals or Slow Speed data (60 baud) |

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.3 Protocol Codes (Cont'd)

5.3.1 Glossary of Protocol Codes and Options (Cont'd)

| <u>Code</u> | <u>Option</u> | <u>Definition</u> |
|-------------|---------------|---|
| DD | | Dataphone Select-A-Station (and TABS) interface at Customer designated premises. |
| DE | | Dataphone Select-A-Station (and TABS) interface at point of termination. |
| DO | | Digital interface at Customer designated premises at the digital signal zero A (DS-OA). |
| DSO | 63 | 6.312 Mb/s; DS-2; Robbed Bit |
| | 63L | 6.312 Mb/s; DS-2; Single Frequency |
| DS6 | 27 | 274.176 Mb/s; DS-4; Robbed Bit |
| | 27L | 274.176 Mb/s; DS-4; Single Frequency |
| | 44 | 44.736 Mb/s; DS-3; Robbed Bit |
| | 44L | 44.736 Mb/s; DS-3; Single Frequency |
| DS9 | 15 | 1.544 Mb/s; DS-1; Robbed Bit |
| | 15L | 1.544 Mb/s; DS-1; Single Frequency |
| | 15K | 1.544 Mb/s; DS-1; Extended Framing Format |
| | 31 | 3.152 Mb/s; DS-1C; Robbed Bit |
| | 31L | 3.152 Mb/s; DS-1C; Single Frequency |
| DU | | Digital access interface at point of termination. |
| | 24 | 2.4 Kb/s |
| | 28 | 4.8 Kb/s |
| | 56 | 56.0 Kb/s |
| | 64 | 64.0 Kb/s |
| | 96 | 9.6 Kb/s |
| | A | 1.544 Mb/s format per PUB 41451 |
| | B | 1.544 Mb/s format per PUB 41451 plus D4 |
| | C | 1.544 Mb/s format per PUB 41451 plus extended framing format |
| DX | | Duplex signaling interface at Customer designated premises |
| | X | Simplex reversal (4-wire) |
| EA | | Type I, EM signaling at either Customer designated premises or point of termination |
| | E | Originates on E lead |
| | M | Originates on M lead |
| EB | | Type II, EM signaling at either Customer designated premises or point of termination |
| | E | Originates on E lead |
| | M | Originates on M lead |
| EC | | Type III, EM signaling at Customer designated premises; originates on M lead |

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.3 Protocol Codes (Cont'd)

5.3.1 Glossary of Protocol Codes and Options (Cont'd)

| <u>Code</u> | <u>Option</u> | <u>Definition</u> |
|-------------|---------------|---|
| EX | | Back-to-back carrier arrangement with tandem signaling |
| | A | LEC has closed end |
| | B | LEC provides dial tone |
| GO | | Ground-start loop signaling - open end |
| | X | Simplex reversal (4-wire) |
| GS | | Ground-start loop signaling - closed end |
| | C | Centrex foreign exchange trunk termination |
| | M | CO answering service concentrator |
| | X | Simplex reversal (4-wire) |
| IA | | E.I.A. (25 pin RS - 232) |
| LA | | End-user loop start loop signaling - Type A registered port, open end |
| LB | | End-user loop start loop signaling - Type B registered port, open end |
| LC | | End-user loop start loop signaling - Type C registered port, open end |
| LO | | Loop-start loop signaling - open end |
| | X | Simplex reversal (4-wire) |
| LR | | 20 Hz automatic ringdown interface at Customer designated premises with LEC provided PLAR |
| LS | | Loop-start loop signaling - closed end |
| | M | CO answering service concentrator |
| | X | Simplex reversal (4-wire) |
| NO | | No signaling interface, transmission only |
| | S | Sealing current option for 4-wire transmission |
| PG | | Program transmission, no dc signaling |
| | 1 | Nominal frequency from 50 to 15,000 Hz |
| | 3 | Nominal frequency from 200 to 3,500 Hz |
| | 5 | Nominal frequency from 100 to 5,000 Hz |
| | 8 | Nominal frequency from 50 to 8,000 Hz |
| PR | | Protective relaying |
| RV | | Loop reverse battery supervision |
| | O | Battery supplied by LEC, Customer originates |
| | T | Battery supplied by Customer, Customer terminates |

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.3 Protocol Codes (Cont'd)

5.3.1 Glossary of Protocol Codes and Options (Cont'd)

| <u>Code</u> | <u>Option</u> | <u>Definition</u> |
|-------------|---------------------------|---|
| SF | | Single-frequency signaling with VF band at Customer designated premises. |
| | AB | SF to manual ring |
| | EA | SF to E&M signaling |
| | GO | SF to loop signaling, ground start, open-end |
| | GS | SF to loop signaling, ground start, closed-end |
| | LO | SF to loop signaling, loop start, open end |
| | LS | SF to loop signaling, loop start, closed end |
| | LR | SF to automatic ring |
| TF | | Telephotograph interface |
| TT | | Telegraph/Teletypewriter interface at either Customer designated premises or point of termination |
| | 2 | 20.0 milliamperes |
| | 3 | 3.0 milliamperes |
| | 6 | 62.5 milliamperes |
| TV | | Television interface |
| | 1 | Combined video and one audio signal |
| | 2 | Combined video and two audio signals |
| | 5 | Video plus one (or two) audio 5 kHz signal(s) on one (or two) two-wire |
| | 15 | Video plus one (or two) audio 15 kHz signal(s) to be duplexed wide-band bandwidth interface at point of termination |
| WA | 1 | Limited bandwidth |
| | 2 | Nominal passband from 29,000 to 44,000 Hz |
| WB | | Wideband data interface at Customer designated premises |
| | 1 | 8S 18.75 Kbps, synchronous |
| | 19A | Up to 19.2 Kbps asynchronous |
| | 19S | 19.2 Kbps synchronous |
| | 23A | up to 230.4 Kbps, asynchronous |
| | 40S | 40.8 Kbps, synchronous |
| | 50A | up to 50.0 Kbps, asynchronous |
| | 50S | 50.0 Kbps, synchronous |
| 64 | 64.0 Kbps, restored polar | |

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.3 Protocol Codes (Cont'd)

5.3.1 Glossary of Protocol Codes and Options (Cont'd)

| <u>Code</u> | <u>Option</u> | <u>Definition</u> |
|-------------|---------------|--|
| WC | 18 | Wideband data interface at point of termination 18.75 Kbps, synchronous |
| | 19 | for 12-wire interface: 19.2 Kbps, synchronous for 10-wire interface: up to 19.2 Kbps, asynchronous |
| | 23 | Up to 230.4 Kbps, asynchronous |
| | 23S | 230.4 Kbps, synchronous |
| | 40 | 40.8 Kbps, synchronous for 12-wire interface: 50.0 Kbps, synchronous |
| | 50 | for 10-wire interface: up to 50.0 Kbps, asynchronous |
| WD | | Wideband bandwidth interface at Customer designated premises |
| | 1 | Nominal passband from 300 to 18,000 Hz |
| | 2 | Nominal passband from 28,000 to 44,000 Hz |
| | 3 | Nominal passband from 29,000 to 44,000 Hz |

5.3.2 Impedance

The nominal reference impedance with which the Customer will terminate the channel for the purpose of evaluating transmission performance are:

| <u>Value (ohms)</u> | <u>Code(s)</u> |
|---------------------|----------------|
| 110 | 0 |
| 150 | 1 |
| 600 | 2 |
| 900 | 3 |
| 1200 | 4 |
| 135 | 5 |
| 75 | 6 |
| 124 | 7 |
| Variable | 8 |
| 100 | 9 |

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.3 Protocol Codes (Cont'd)

5.3.3 Digital Hierarchy Protocol Codes (4DSX)

This protocol is compatible only with a multiplexed four-wire DSX-1 or higher interface option at the Customer's designated premises and where the Customer provides subsequent system and channel assignment data.

The various digital bit rates in the digital hierarchy employ the protocol code 4DS0, 4DS6 or 4DS9 plus the speed options indicated below:

| <u>SPEED OPTION</u> | <u>NOMINAL BIT RATE (Mbps)</u> | <u>DIGITAL HIERARCHY LEVEL</u> |
|---------------------|--------------------------------|--------------------------------|
| 15 | 1.544 | DS1 |
| 31 | 3.152 | DS1C |
| 63 | 6.312 | DS2 |
| 44 | 44.736 | DS3 |
| 27 | 274.176 | DS4 |

HIGH CAPACITY CROSSCONNECT CODE COMBINATIONS

| | |
|--------|--------|
| 4DS*G0 | 4DS*GS |
| 4DS*LO | 4DS*LS |
| 4DS*NO | 4DS*NO |
| 4DS*EA | 4DS*EA |
| 4DS*GS | 4DS*GO |
| 4DS*LS | 4DS*LO |

* 0 = DS1/DS1C rate; 6 = DS2 rate; 9 = DS3 or higher rate

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.4 Rate Regulations

This section contains the specific regulations governing the rates and charges that apply for Special Access Service.

5.4.1 Types of Rates and Charges

There are three types of rates and charges. These are monthly rates, daily rates and nonrecurring charges. The rates and charges are described as follows:

(A) Monthly Rates

Monthly rates are flat recurring rates that apply each month or fraction thereof that a Special Access Service is provided. For billing purposes, each month is considered to have 30 days.

(B) Daily Rates

Daily rates are flat recurring rates that apply to each twenty-four (24) hour period or fraction thereof. Daily rates are available only for Video Service provided for part-time use. For purposes of applying daily rates, the twenty-four (24) hour period is not limited to a calendar day.

(C) Nonrecurring Charges

Nonrecurring charges are one-time charges that apply for specific work activity (e.g., installation or a change to an existing service). The nonrecurring charges are set forth in Section 9.2.

Administrative changes will be made without charge(s) to the Customer. Administrative changes are as follows:

- Change of Customer name,
- Change of Customer or Customer's end user premises address when the change of address is not a result of physical relocation of equipment,
- Change in billing data (name, address, or contact name or telephone number),
- Change of agency authorization,
- Change of Customer circuit identification,
- Change of billing account number,
- Change of Customer test line number,
- Change of Customer or Customer's end user contact name or telephone number, and
- Change of jurisdiction.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.4 Rate Regulations (Cont'd)

5.4.2 Minimum Periods

Special Access Service is provided for a minimum period of one (1) month. Exceptions to the minimum period exists for part-time Video services and Term Discount Plan Services. The part-time Video Services may be ordered and paid for on a daily basis. If the daily rate is greater that one-thirtieth of the monthly rate, then a Customer shall be charged no more than the monthly rate for any given month. The minimum service period for Term Discount Plan (TDP) Services is the length of the TDP specified in the customer's contract. Minimum usage requirements are set forth in Section 9.

5.4.3 Moves

A move involves a change in the physical location of one of the following:

- The point of termination at the Customer designated premises.
- The Customer designated premises.

The charges for the move and the associated minimum period obligation are dependent on whether the move is to a new location within the same wire center area or to a different wire center area.

(A) Moves to a Different Wire Center Area

When a Customer moves to a different wire center area, the move will be treated as a disconnect and a start of service and Facilities Access Order charges as set forth in Section 9 shall apply. A new minimum period will be established. The Customer will also remain responsible for fulfilling all outstanding minimum period obligations associated with the disconnected service.

(B) Moves to a Different Building Within the Same Wire Center

When a Customer designated premise is moved to a new location in a different building in the same wire center area, the existing minimum period obligations will continue in effect.

(C) Moves Within the Same Building

When a Customer moves to a new location within the same building in the same wire center area, the existing minimum period obligations will continue in effect.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.4 Rate Regulations (Cont'd)

5.4.4 Mileage Measurement

The mileage to be used to determine the monthly rate for the Channel Mileage Facility rate element is calculated on the airline distance between the serving wire centers involved, i.e., the serving wire centers associated with two Customer designated premises, a serving wire center associated with a Customer designated premises and a Telephone Company hub, or two Telephone Company hubs or between the serving wire center associated with a Customer designated premises and a WATS serving office. The serving wire center associated with a Customer designated premises is the serving wire center from which the Customer designated premises would normally obtain dial tone. The V&H coordinates method is used to determine mileage. This method is explained in the EXCHANGE CARRIER ASSOCIATION TARIFF F.C.C. No. 4. If the method results in fractional miles, the fractional miles are rounded up to the nearest whole number before determining the rate to be billed. The serving wire center and hub V&H coordinates are also included in that tariff. When hubs are involved, mileage is computed and rates applied separately for each section of the Channel Mileage, i.e., Customer designated premises serving wire center to hub, hub to hub and/or hub to Customer designated premises serving wire center. However, when any service is routed through a hub for purposes other than Customer specified bridging or multiplexing (e.g., the Telephone Company chooses to so route for test access purposes), rates will be applied only to the distance calculated between the serving wire centers associated with the Customer designated premises.

5.4.5 Shared Use Analog and Digital High Capacity Services

Shared use occurs when Special Access Service and Switched Access Service are provided over the same Wideband Analog or High Capacity facilities through a common interface. The facility is ordered and rated as Special Access Service (i.e., Channel Termination, Channel Mileage, as appropriate, and multiplexer) until such time as the Customer chooses to use a portion of the available capacity for providing Switched Access Service. As each individual channel is activated for Switched Access Service, the Special Access Channel Termination, Channel Mileage, and Optional Features and Functions rates will be reduced accordingly (e.g., 1/12th for a Group level service, 1/24th for a DS1 service, etc.) The rates for Switched Access Service set forth in FCC 3 Section 15 apply to (T) Switched Access Services provided over shared facilities. When placing an order for Shared Use Facilities, the Customer must specify the channels to be used for each service. Nonrecurring and ordering charges apply on the basis of the Wideband Analog or the Digital High Capacity facility ordered. After the service date, Facilities Access Order charges apply for a change in the Special Access Service or Switched Access Service configuration provided over shared facilities.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.4 Rate Regulations (Cont'd)

5.4.6 Special Access Surcharge

(A) General

Special Access Services provided under this Guide may be subject to the monthly Special Access Surcharge. Applicable rates and charges can be found in Section 15 following.

(B) Application

- (1) The Special Access Surcharge will apply to each interstate Special Access Service that terminates on an end user's PBX or other device, where through a function of the device, the Special Access Service interconnects to the local exchange network. Interconnection functions include, but are not limited to, wiring and software functions, bridging, switching or patching of calls or stations. The Surcharge will apply irrespective of whether the interconnection function is performed in equipment located at the Customer's premises or in a Centrex CO-type switch.
- (2) Special Access Service will be exempted from the Surcharge by the Telephone Company upon receipt of the Customer's written certification for the following Special Access Service terminations:
 - (a) an open-end termination in a Telephone Company switch of an FX line, including CCSA and CCSA-equivalent ONALS; or
 - (b) an analog channel termination that is used for radio or television program transmission; or
 - (c) a termination used for TELEX service; or
 - (d) a termination that by the nature of its operating characteristics could not make use of Telephone Company common lines such as, terminations which are restricted through hardware or software; or

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.4 Rate Regulations (Cont'd)

5.4.6 Special Access Surcharge (Cont'd)

(B) Application (Cont'd)

(e) a termination that interconnects either directly or indirectly to the local exchange network where the usage is subject to Carrier Common Line charges such as, where the Special Access Service accesses only FGA and no local exchange lines, or Special Access Service between Customer points of termination, or Special Access Service connecting CCSA or CCSA-type equipment; or

(f) a termination that the Customer certifies to the Telephone Company is not connected to a PBX or other device which interconnects the Special Access Service to a local exchange subscriber line.

(C) Exemption of Special Access Service

(1) Special Access Services which are terminated as set forth in Section 5.4.6 (B)(2) preceding will be exempted from the Special Access Surcharge, if the Customer provides the Telephone Company with written exemption certification. The certification may be provided to the Telephone Company as follows:

- at the time the Special Access Service is ordered or installed;
- at such time as the service is reterminated to a device which does not interconnect the service to local exchange facilities; or
- at such time as the service becomes associated with a Switched Access Service that is subject to Carrier Common Line Charges.

(2) The exemption certification is to be provided by the Customer ordering the service. The certification must be signed by the Customer or authorized representative and include the category of exemption, as set forth in Section 5.4.6 (B)(2) preceding, for each termination, and the date which the exemption is effective.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.4 Rate Regulations (Cont'd)

5.4.6 Special Access Surcharge (Cont'd)

(C) Exemption of Special Access Service (Cont'd)

- (3) The Customer shall also notify the Telephone Company when an exempted Special Access Service is changed or reterminated such that the exemption is no longer applicable.
- (4) The Telephone Company will work cooperatively with the Customer to resolve any questions regarding the exemption certification. In addition, the Telephone Company may withhold exemption of the service until the questions are resolved.

(D) Rate Regulations

- (1) The surcharge will apply as set forth in Section 5.4.6 (B) (1) preceding, except that a surcharge will be assessed on a per voice grade equivalent basis for Special Access Services derived from High Capacity Special Access Services as illustrated in the following example:

| <u>Special Access Service</u> | <u>Voice Grade Equivalent</u> | <u>Surcharge</u> | <u>Monthly Charge</u> |
|-------------------------------|-------------------------------|------------------|-----------------------|
| DS1 | 24 x | \$25.00 | |
| \$600.00 | | | |

The preceding example illustrates the maximum number of surcharges applicable to a DS1. If the Customer claims exemption(s) as set forth in Section 5.4.6 (C) preceding or, is not utilizing all available voice grade equivalents and has spare capacity, the number of surcharges would be reduced accordingly.

In the case of multipoint Special Access Services, one Special Access Surcharge will apply for each termination of a Special Access Channel at an end user's premises.

- (2) The Telephone Company will bill the appropriate Special Access Surcharge to the ordering Customer for each interstate Special Access Service installed unless exemption certification is provided as set forth in Section 5.4.6 (C) preceding.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.4 Rate Regulations (Cont'd)

5.4.6 Special Access Surcharge (Cont'd)

(D) Rate Regulations (Cont'd)

- (3) If a written certification is not received at the time the Special Access Service is obtained, the Surcharge will be applied. Exempt status will become effective on the certification date indicated by the Customer, subject to the regulations set forth in (4) following.

(4) Crediting the Surcharge

The Telephone Company will cease billing the Special Access Surcharge when certification, as set forth in Section 5.4.6 (C) preceding, is received. If the status of the Special Access Service was changed prior to receipt of the exemption certification, the Telephone Company will credit the Customer's account, not to exceed ninety (90) days, based on the effective date of the change as specified by the Customer in the letter of certification.

5.4.7 Facility Hubs

A Customer has the option of ordering Voice Grade service or High Capacity services to a facility hub for channelizing to individual services requiring lower capacity facilities (e.g., Telegraph, Voice, Program Audio, etc.).

Different locations may be designated as hubs for different facility capacities, e.g., multiplexing from digital to digital may occur at one location while multiplexing from digital to analog may occur at a different location. When placing an Access Order the Customer will specify the desired hub. Serving wire centers, and hub locations, and the type of multiplexing functions available are identified in EXCHANGE CARRIER ASSOCIATION F.C.C. No. 4. Some of the types of multiplexing available include the following:

- from higher to lower bit rate
- from higher to lower bandwidth
- from digital to voice frequency channels

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.4 Rate Regulations (Cont'd)

5.4.7 Facility Hubs (Cont'd)

Point to point services may be provided on channels of these services to a hub. The transmission performance for the point to point service provided between Customer designated premises will be that of the lower capacity or bit rate. For example, when a 1.544 Mbps channel is multiplexed to voice frequency channels, the transmission performance of the channelized services will be Voice Grade, not High Capacity.

The Telephone Company will commence billing the monthly rate for the service to the hub on the date specified by the Customer on the Access Order. Individual channels utilizing these services may be installed coincident with the installation of the service to the hub or may be ordered and/or installed at a later date at the option of the Customer. The Customer will be billed for a Voice Grade or a High Capacity Channel Termination, Channel Mileage (when applicable), and the multiplexer at the time the service is installed. Individual service rates (by service type) will apply for a Channel Termination and additional Channel Mileage (as required) for each channelized service. These will be billed to the Customer as each individual service is installed.

Cascading multiplexing occurs when a High Capacity service is de-multiplexed to provide channels with lesser capacity and one of the lesser capacity channels is further de-multiplexed. For example, a 6.312 Mbps High Capacity service is de-multiplexed to four DS1 channels and then one of the DS1 channels is further de-multiplexed to 24 individual Voice Grade channels.

When cascading multiplexing is performed, whether in the same or a different hub, a charge for the additional multiplexing unit also applies. When cascading multiplexing is performed at different hubbing locations, Channel Mileage charges also apply between the hubs.

The Telephone Company will designate hubs for Video Services. Full-time or part-time service may be provided between Customer designated premises or between a Customer designated premises and a hub and billed accordingly at the rates set forth in Section 15 following for a Channel Termination, Channel Mileage and Optional Features and Functions, as applicable. When the service is ordered to a hub, the Customer may order a full-time or part-time Video service as needed between that hub and additional Customer designated premises. The rate elements required to provide the part-time service (i.e., Channel Termination, Channel Mileage and Optional Features and Functions as applicable) will be billed at daily rates for the duration of the service requested.

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.4 Rate Regulations (Cont'd)

5.4.8 Term Discount Plans #

(C)

Term Discount Plans ("TDPs) offer reduced rates to customers who commit to purchase service for a specified period of time. The length of available TDPs may vary by type of service.

A customer with a service purchased under a month-to-month agreement may convert that service to a term discount plan. A customer may convert an existing TDP service to a longer period TDP service. Upon converting an existing plan to a longer term plan, the customer's existing applicable contract obligation will be deemed satisfied and a new term plan will be initiated. No service credit will apply towards the new plan; the new TDP service will be treated as a new service and subject to the full rate and contract obligations of the new TDP service, with the exception that nonrecurring charges do not apply.

A customer who discontinues a service purchased under a TDP prior to the end of the term may, without penalty, transfer the remaining months of the term commitment to a new like service which has been installed within 90 days prior to the disconnection of the service under the original TDP. The new service must connect the customer and the end user entirely over the Telephone Company's facilities.

Upon expiration of a TDP, the Service will convert to month to month service.#

(C)

Customers who choose to initiate a TDP following conversion to month to month may do so at any time without penalty or credit against the selected TDP.

Customers purchasing TDPs commit to keep a service for the duration of the chosen plan period. If a customer chooses to discontinue the service prior to the duration of a chosen plan period, that customer is liable for a termination charge. The amount of the termination charge is determined in two ways as set forth in (A) and (B) following.

Service Offer is limited. See footnote on page 5-37

(N)

ACCESS SERVICE

5. Special Access Service (Cont'd)

5.4 Rate Regulations (Cont'd)

5.4.8 Term Discount Plans (Cont'd) #

(C)

(A) For term discount plans ordered after August 27, 2009, the termination liability equals the remaining monthly charges for the term commitment period applied at the rates in effect on the termination date.

(B) For term discount plans in effect or ordered before August 27, 2009, the termination liability is computed as follows: The amount of the termination charge is determined in two ways as set forth in (1) and (2) following. The method which provides the customer with the lowest termination liability will be applied.

(1) Method 1

The termination liability equals a one-time charge of 75% of the payments remaining under the chosen plan.

(2) Method 2

Where there exists a TDP period less than the actual time the service has been in effect, the termination charge will be the difference between the rate for the longest TDP period that could have been satisfied prior to discontinuation of service and the rate for the contracted plan period multiplied by the actual number of months the service has been in effect. For example, if a service under a 60 month TDP is discontinued after 40 months, the highest plan period that could have been satisfied is 36 months. The termination charge is the 36 month TDP rate less the 60 month TDP rate multiplied by 40.

Where the actual time the service was in effect is less than the shortest TDP period, the month-to-month rate will be used. For example, if a service under the 36 month TDP is discontinued after 10 months, which is less than the shortest TDP period of 18 months at present, the termination charge will be the month-to-month rate less the 36 month TDP rate multiplied by 10.

Service Offer is limited. See footnote on page 5-37

(N)

ACCESS SERVICE

6. RESERVED FOR FUTURE USE



ACCESS SERVICE

7. RESERVED FOR FUTURE USE

ACCESS SERVICE

8. Additional Engineering, Additional Labor and Miscellaneous Charges

In this Section 8, Basic Time refers to the period when services are performed by the Telephone Company on business days during regularly scheduled work hours. Overtime refers to the period when services are performed by the Telephone Company on business days but outside of regularly scheduled work hours. Premium time refers to the period when services are performed by the Telephone Company on non-business days, such as weekends and holidays.

8.1 Additional Engineering

Additional Engineering will be provided by the Telephone Company at the request of the Customer only when:

A Customer requests additional technical information after the Telephone Company has already provided the technical information normally included on the Design Layout Report (DLR) as set forth in Section and 5.1.6.

Additional engineering time is incurred by the Telephone Company to engineer a Customer's request for a customized service (i.e., not conforming to the predefined technical specifications for services set forth in Section 5).

The Telephone company will notify the Customer that additional engineering charges, as set forth in Section 15 following, will apply before any additional engineering is undertaken.

8.2 Additional Labor

Additional Labor is that requested by the Customer on a given service as set forth in Sections 8.2.1 through 8.2.6. The Telephone Company will notify the Customer that Additional Labor charges as set forth in Section 15 will apply before any additional labor is undertaken. Charges for additional labor will apply per order submitted.

Hourly charges are calculated from the time Telephone Company personnel are dispatched to the Customer's designated premises and end when the work is completed. Service by a Telephone Company employee at a time not consecutive with his scheduled work period is subject to a minimum charge of 3 hours at the rate specified in Section 15 for overtime or premium time, as applicable.

ACCESS SERVICE

8. Additional Engineering, Additional Labor and Miscellaneous Charges (Cont'd)

8.2 Additional Labor (Cont'd)

8.2.1 Overtime Installation

Overtime installation is Telephone Company installation services performed on a business day but outside of normal work hours.

8.2.2 Overtime Repair

Overtime repair is Telephone Company repair and maintenance services performed on a business day but outside of normal work hours.

8.2.3 Additional Installation Testing

Additional installation testing is that testing performed by the Telephone Company at the time of installation which is in addition to the normal preservice acceptance testing as specified in Section 9.2.7 to ensure the satisfactory performance of Access Service ordered by the Customer. In no event shall a charge be made for Additional Labor that is related solely to testing with other telephone companies.

8.2.4 Standby

Standby includes all time in excess of one-half (1/2) hour during which the Customer requests Telephone Company personnel to standby for any purpose. For Video service, the standby of technician(s) is mandatory.

8.2.5 Testing and Maintenance with Other Telephone Companies

This includes additional testing, maintenance or repair of facilities which connect to facilities of other telephone companies which is in addition to the normal effort required to test, maintain or repair facilities provided solely by the Telephone Company.

8.2.6 Other Labor

Other labor is that additional labor not included in Sections 8.2.1 through 8.2.5, including, but not limited to labor incurred for the installation of inside wire, used to extend the point of termination as set forth in Section 2.1.5, and labor incurred to accommodate a specific Customer request that involves labor which is not covered by any other section of this Guide.

ACCESS SERVICE

8. Additional Engineering, Additional Labor and Miscellaneous Charges (Cont'd)

8.3 Miscellaneous Charges

8.3.1 Maintenance of Service Charge

When a Customer reports a trouble to the Telephone Company for clearance, the Customer shall be responsible for payment of a Maintenance of Service Charge where the Telephone Company dispatches personnel to a Customer premises and the trouble is in equipment or communications systems provided by other than the Telephone Company, or in detariffed CPE provided by the Telephone Company. No charge will apply where trouble is not found in the telephone Company facilities if the trouble is actually in these facilities but not discovered at the time. The time period for which the Maintenance of Service Charge is applied will commence when Telephone Company personnel are dispatched to the Customer's designated premises and end when the work is completed. The applicable charges are set in Section 15, following.

8.3.2 Restoration Priority Charge

The Telephone Company will arrange a Special Access Service for Restoration Priority on receipt of certification in conformance with Part 64, Subpart D, Appendix A of the FCC Rules and Regulations. A charge as set forth in Section 15 following applies when a request to provide or change a Restoration Priority is received subsequent charge applies when a Restoration Priority is discontinued.

(A) Telecommunications Service Priority (TSP) System

(1) General Information

The TSP System is a service, developed to meet the requirements of the TSP Program office, which provides the regulatory, administrative and operational framework for the priority installation and/or restoration of National Security Emergency Preparedness (NSEP) telecommunications services. NSEP services are those critical to the maintenance of a state of readiness or the response to and management of any event or crisis which causes or could cause harm to the population, damage property or threaten the security of the United States. These include both Switched and Special Access Services. The TSP System applies only to NSEP telecommunications services, and requires and authorizes priority action by the Telephone Company providing such services.

ACCESS SERVICE

8. Additional Engineering, Additional Labor and Miscellaneous Charges (Cont'd)

8.3 Miscellaneous Charges (Cont'd)

8.3.2 Restoration Priority Charge (Cont'd)

(A) Telecommunications Service Priority (TSP) System (Cont'd)

(1) General Information (Cont'd)

Restoration means the repair or returning to service of one or more telecommunication services that have experienced a service outage or are unusable for any reason, including a damaged or impaired telecommunications facility. Such repair or returning to service may be done by patching, rerouting, substitution of component parts or pathways, and other means, as determined necessary by a service vendor. Provisioning means the act of supplying telecommunications service to a user, including all associated transmission, wiring and equipment.

Priority installation and/or restoration of NSEP telecommunications services shall be provided in accordance with Part 64.401, Appendix A, of the Federal Communications Commission's (FCC's) Rules and Regulations.

In addition, TSP System service shall be provided in accordance with the guidelines set forth in "Telecommunications Service Priority (TSP) System for National Security Emergency Preparedness (NSEP) Service Vendor Handbook" (NCS) Handbook 3-1-2 dated December 1, 1989.

(2) The elements required for the TSP System are included in other sections of this Guide as general service offerings. They have been repeated in this section to reflect the complete TSP System with appropriate references to those other sections of the tariff for regulations, rates and charges.

(3) The Customer for TSP System Service also must be the same Customer for the Access Service with which it is associated.

ACCESS SERVICE

8. Additional Engineering, Additional Labor and Miscellaneous Charges (Cont'd)

8.3 Miscellaneous Charges (Cont'd)

8.3.2 Restoration Priority Charge (Cont'd)

(A) Telecommunications Service Priority (TSP) System (Cont'd)

- (4) Under certain conditions it may be necessary to preempt one or more Customer services with a lower or no restoration priority in order to install or restore NSEP telecommunications service(s) of a higher priority. If such preemption is necessary, and if circumstances permit, the Telephone Company will make reasonable effort to notify the preempted service Customer of the action to be taken. Credit allowance for such service preemption shall be made in accordance with the provisions set forth in Section 2.4.3 of this Guide.
- (5) The Customer, in obtaining TSP System service, acknowledges and consents to the provision of certain Customer service record information by the Telephone Company to the Federal TSP Program office in order for the TSP Program office to maintain and administer its overall TSP System. This Customer service record information will include only Customer name, TSP Authorization Code, Telephone Company Circuit/Service ID, Customer telephone number and Customer service address.
- (6) When Priority Restoration Maintenance and Administration is discontinued (Revocation of Assigned Restoration Priority), and the associated Access Service is continued in service, no charge applies for such a discontinuance.
- (7) Credit allowance for service interruption for Priority Restoration Maintenance and Administration shall be the same as for the Access Service with which it is associated as set forth in Section 2.4.3 of this Guide.

ACCESS SERVICE

8. Additional Engineering, Additional Labor and Miscellaneous Charges (Cont'd)

8.3 Miscellaneous Charges (Cont'd)

8.3.2 Restoration Priority Charge (Cont'd)

(A) Telecommunications Service Priority (TSP) System (Cont'd)

- (8) With regard to the regulations in Section 8 of this Guide for Additional Labor notwithstanding, the Telephone Company, when performing Priority Restoration (Repair) of an Access Service in compliance with Part 64.401, Appendix A, of the FCC's Rules and Regulations, will attempt to notify the Customer in advance where additional labor is undertaken. However, due to circumstances beyond the Telephone Company's control, the Customer accepts that notification may not be possible and grants the Telephone Company permission to proceed with the Restoration of service and quote charges after restoration has been completed.

In subscribing to TSP service, the Customer recognizes and agrees to adhere to these conditions.

- (9) An access service Customer requesting a TSP number will follow the ordering procedures as set forth in Part 64.401, Appendix A, of the FCC's Rules and Regulations. Once the Customer has obtained a TSP number(s), the Customer will contact the Telephone Company and request TSP service using an Access Service Request (ASR). A Facilities Access Order charge will be incurred for each ASR submitted by the Customer in accordance with the rates described in Section 9.2.1 of this Guide.

- (10) Rates and Charges

Any rates and charges applicable for the provision or restoration of TSP service are set forth in Section 15 following. No other recurring or nonrecurring charges will apply.

ACCESS SERVICE

8. Additional Engineering, Additional Labor and Miscellaneous Charges (Cont'd)

8.3 Miscellaneous Charges (Cont'd)

8.3.3 Testing Services

The Telephone Company will perform such tests as are reasonably necessary (see Section 9.2.7) to ensure that Access Services ordered by a Customer are functioning properly prior to turning over the Access Services to the Customer. In addition, the Telephone Company, as part of the on-going work to maintain the continued satisfactory performance of the Access Services ordered by the Customer will perform on a routine basis such tests as are reasonably necessary to maintain that level of performance. End-to-end through tests which are technically feasible and tests which show trouble to be located solely within the equipment and facilities of the Telephone Company are within the scope of these tests and are performed by the Telephone Company at no additional charge.

Testing Services covered in this section are only those requested by the Customer which are in addition to the tests described in the preceding paragraph and will be provided at the charges set forth in Section 15 following. Testing Services are subject to the availability of test equipment and personnel at the Telephone Company test location. Testing Services are normally provided by the Telephone Company personnel at Telephone Company locations. However, provision is made in Section 8.3.3(B) for a Customer to request Telephone Company personnel to perform Testing Services at the Customer's premises.

Testing Services covered in this section which are to be conducted in coordination with the Customer will be subject to additional stand-by labor charges as set forth in Section 15 following.

(A) Special Access Service

Subject to the availability of test equipment and personnel at the Telephone Company test location, the Telephone Company will provide assistance in performing specific tests requested by the Customer.

(B) Specialized Manual Testing (Switched or Special)

Manual testing consists of providing one or more Telephone Company technicians to perform specialized testing functions as directed by the Customer. Such testing functions may include the performance of testing at the Customer designated premises.

(C) Obligation of the Customer

When the Customer subscribes to Testing Service, the Customer shall make the facilities to be tested available to the Telephone Company at times mutually agreed upon.

ACCESS SERVICE

9. Ordering Options for Special Access Services

9.1 General

This section sets forth the regulations and order related charges of Facilities Access Orders for Special Access Services. These charges are in addition to other applicable charges as set forth in other sections of this Guide.

9.1.1 Ordering Conditions

A Customer may order any number of services of the same type between the same locations on a single Facilities Access Order. All details for services for a particular order must be identical except for those for multipoint service.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.1 General (Cont'd)

9.1.1 Ordering Conditions (Cont'd)

The Telephone Company will make available upon Customer request a standard service interval table for Special Access Services. These tables and any associated relevant information will be made available to the Customer within a reasonable time of request, whether the Customer's service is subject to standard or negotiated intervals.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.1 General (Cont'd)

9.1.1 Ordering Conditions (Cont'd)

Special Access Service ordered for use with Switched Access Service may be ordered separately by a Customer other than the Customer which orders the FGA, FGB, FGC or FGD. For the Special Access Service the Customer shall specify the Customer designated premises at which the Special Access Service terminates, the type of line (i.e., two-wire or four-wire), the type of calling (i.e., originating or terminating) and the type of Supervisory Signaling. When the necessary screening, switching and/or recording functions are not provided at the Customer serving wire center a Special Access Line Extender, subject to charges as set forth in Section 15, must be ordered between that wire center and the nearest wire center premises where the screening, switching and/or recording functions exist.

The Customer shall be required to supply all information necessary to provide service. This information includes Customer name, address, telephone number, type of business entity, date of order, establishment of credit information, billing requirements information, contact person, date service to begin, specific location, quantity, type and description of service, election as to each service option under tariff, and special routing information.

9.1.2 Provision of Other Services

- (A) Testing Service, Additional Labor, Restoration Priority and Special Routing may be ordered with a Facilities Access Order as additional features for new facilities or as changes to existing services. The rates and charges for these services, as set forth in other sections of this Guide, will apply in addition to the ordering charges set forth in this section and the rates and charges for the Access Service with which they are associated.
- (B) Customers may add items listed in Section 9.1.2(A) to a pending order at any time subject to the conditions of Section 9.2.2. However, a change in the service date, to be negotiated between the Customer and the Telephone Company, may be necessary to accommodate the request. When items listed in Section 9.1.2(A) are added to a pending order, charges for order modification as described in Section 9.2.2 will apply.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.1 General (Cont'd)

9.1.2 Provision of Other Services (Cont'd)

- (C) Additional Engineering and Additional Labor is not an ordering option, but will be applied to an Access Order when the Telephone Company determines that Additional Engineering and Additional Labor is necessary to accommodate a Customer request. Additional Engineering and Additional Labor will only be required as set forth in Sections 8.1 and 8.2 preceding and for Expedited Service orders. When it is required, the Customer will be so notified and will be furnished with a written statement setting forth the justification for the Additional Engineering and Additional Labor as well as an estimate of the charges. If the Customer agrees to the Additional Engineering and Additional Labor, a firm order will be established. If the Customer does not want the service or facilities after being notified that Additional Engineering and Additional Labor is required, the order will be withdrawn and no charges will apply. Once a firm order has been established, the total charge to the Customer for the Additional Engineering and Additional Labor may not exceed the estimated amount by more than 10%.

The regulations, rates and charges for Additional Engineering and Additional Labor as described in Sections 8.1 and 8.2 preceding and are in addition to the regulations, rates and charges specified in this section.

9.1.3 Special Construction

The circumstances under which Special Construction is provided are described in the applicable Interstate Special Construction Tariff. The regulations and charges for Special Construction area also set forth in the applicable Interstate Special Construction Tariff and are in addition to the regulations and charges specified in this section.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order

A Facilities Access Order is used by the Telephone Company to provide Access Service as follows:

The Customer must place a Facilities Access Order for the provision of facilities and the discontinuance of existing services. Facilities for Special Access Service include Channel Termination, Channel Mileage, and Optional Features and Functions as described in Section 5. In addition, other services may be requested by the use of a Facilities Access Order.

Facilities Access Orders must be placed separately for each activation date for Special Access Services.

For Special Access Service, separate orders must be placed for each Customer designated premises.

9.2.1 Facilities Access Order Charge

A nonrecurring charge will apply for receiving, recording and processing information necessary to execute a Customer's Facilities Access Order for Special Access Services. The nonrecurring Facilities Access Order Charge will be exempted for end office to tandem rerouting when all of the following conditions apply:

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order (Cont'd)

9.2.1 Facilities Access Order Charge (Cont'd)

Customers will be exempt from non-recurring facilities access order charges when processing an order solely to provision service to allow for the passing of Flex ANI digits 27, 29 or 70 to the customer for the purpose of identifying calls for which per call compensation will be paid to the Payphone Service Provider pursuant to the FCC Order on Reconsideration in CC Docket No. 96-126, released November 8, 1996.

One charge will apply for each order received. An order will include the request for all work to be performed or provided in connection with the Customer's facilities. If the Facilities Order is modified, charges as described in Section 9.2.2 apply.

At the time the Customer places a Facilities Access Order with the Telephone Company, the Customer will be informed that if the Facilities Access Order is canceled prior to installation of access facilities, where installation of access facilities has commenced, a cancellation charge as described in Section 9.2.6 will apply. The Facilities Access Order Charge is set forth in Section 15 following.

9.2.2 Facilities Access Order Modifications

The Customer may request a modification of its Facilities Access Order prior to the service date. The Telephone Company will make every effort to accommodate a requested modification when it is able to do so with the normal work force assigned to complete such orders within normal business hours. If the modification cannot be made with the normal work force during normal business hours, the Telephone Company will notify the Customer. If the Customer still desires the Facilities Access Order modification, the Telephone Company will schedule a new service date and will inform the Customer of which of the charges, described in this Section 9.2.2 will be imposed. All charges for Facilities Access Order modifications will apply on a per occurrence basis.

Any increase in the number of Special Access Service channels or circuit quantities ordered will be treated as a new Facilities Access Order, as would a change in Feature Group type.

If order modifications are necessary to satisfy the transmission performance for a Special Access Service ordered by the Customer, these changes will be made without order modification charges being incurred by the Customer.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order (Cont'd)

9.2.2 Facilities Access Order Modifications (Cont'd)

(A) Service Date Change Charge

Facilities Access Order service dates may be changed subject to the payment of a Service Date Change Charge. A Service Date Change Charge will apply for each service date changed. If the service date is changed to an earlier date, additional labor charges, as set forth in Section 8, may also be required in addition to the Service Date Change Charge. The Telephone Company will not accept orders for service dates which exceed the applicable service date by more than six months.

The Customer may request a change of service date on a pending Access Order prior to the service date. A change of service date is a change of the scheduled service date by the Customer to either an earlier date or a later date which does not exceed 30 calendar days from the original service date.

If the Telephone Company determines that the Customer's request can be accommodated without delaying the service dates for orders of other Customers, the service date will be changed and the Service Date Change Charge applied to the order.

If the service date is changed to an earlier date, and the Telephone Company determines that additional labor, additional engineering, additional testing or miscellaneous charges are necessary to meet the earlier service date requested by the Customer, such charges will apply subject to the terms and conditions in Section 8 in addition to the Service Date Change Charge. The Telephone Company will provide Customers with an estimate of charges to expedite an Access order and the Telephone Company's actual charges therefore shall not exceed those estimated by more than 10%.

If the requested service date exceeds 30 calendar days following the original service date, and the Telephone Company determines that the Customer's request can be accommodated, the Telephone Company will cancel the original order and apply the Cancellation Charges as described in Section 9.2.6 following. A new Access Order with the new service date will be issued. The Service Date Change Charge will not apply.

If the service date is changed due to a Design Change as described in (B) following, the Service Date Change Charge will apply. The Service Date Change Charge is set forth in Section 15 following.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order (Cont'd)

9.2.2 Facilities Access Order Modifications (Cont'd)

(B) Design Change Charge

The Customer may request a design change to the service ordered. A design change is any change to a Facilities Access Order which requires engineering review. Engineering review is reviewed by Telephone Company personnel of the service ordered and the requested change to determine what alterations in the design of the service are necessary to accommodate the change requested by the Customer. A design change may include the cancellation or addition of Optional Features and Functions and type terminations. It may not include a change of Access Connection Interface Group, facility type, Customer premises, end office switch, protocol or Feature Group type. Changes of this nature will require the issuance of a new order and the cancellation of the original order with appropriate charges applied.

The Telephone Company will review the requested change and notify the Customer whether the change can be accommodated. If the Customer authorizes the Telephone Company to proceed with the design change, a Design Change Charge will apply. If, as a result of the change, the original service date cannot be met without the Telephone Company incurring additional labor, and the Customer provides authorization to the Telephone Company to proceed, then charges as set forth in Section 8 will apply. If the Customer is unwilling to pay such costs and the service date must be changed as a result of the design change, a Service Date Change Charge as described in Section 9.2.2(A) would apply.

The Design Change Charge is set forth in Section 15 following.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order (Cont'd)

9.2.2 Facilities Access Order Modifications (Cont'd)

(C) Expedited Order Charge

When placing an Access Order, a Customer may request a service date that is prior to the Telephone Company's published service date interval. A customer may also request an earlier service date on a pending Access Order. If the Telephone Company determines that service can be provided on the requested date, an Expedited Order Charge will apply.

A customer may request a change of end user premises within the same serving wire center. When this occurs, the service date is changed to reflect the standard service date interval. If the customer requests an earlier service date, an Expedited Order Charge will apply.

When an expedited service date is missed, the Expedited Order Charge will apply unless the missed service date is caused by the Telephone Company.

The Expedited Order Charge will apply to all services found in the tariff unless otherwise specified. This charge will be applied when the customer requests a service date that is prior to the standard service date interval on an Access Order, or when a customer requests an earlier service date on a pending Access Order.

The Expedited Order Charge, as set forth in Section 15 following, will apply on a per order basis for each day the service date is advanced.

Access Ordering Guidelines prohibit expedite orders when (C)
disconnecting services. (C)

9.2.3 Selection of Facilities for Facilities Access Orders

When there are analog or digital high capacity facilities to a hub on order or in service for the Customer's use, the Customer may request a specific channel or transmission path be used to provide the Special Access Service requested in a Facilities Access Order. The Telephone Company will make a reasonable effort to accommodate the Customer request. Facilities needed to satisfy Facilities Access Order requirements will be taken from available inventory based on forecasted demand on a first-come, first-served basis. Such inventory does not include facilities reserved specifically to satisfy the requirements of pending Facilities Access Orders.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order (Cont'd)

9.2.4 Minimum Period

- (A) Except as set forth in Section 9.2.4(B) the minimum period for which Access Service is provided and for which charges are applicable, is one month.
- (B) The minimum period for Video Special Access Services offered at a daily rate is one day. The service will be provided only for the duration of the event specified on the order (e.g., one half hour, two hours, five hours, etc.).

9.2.5 Minimum Period Charges

When Access Service is discontinued prior to the expiration of the minimum period, charges are applicable for the remainder of the minimum period. Except as otherwise provided in this Guide, a disconnect constitutes facilities being returned to inventory.

The Minimum Period Charge will be determined as follows:

- (A)
 - (B) For Special Access Service, the charge is the applicable monthly rate for the service as described in Section 5.4.2.
 - (C) The Minimum Period Charge for Video Services offered at a daily rate will be the applicable daily rate for the service as described in Section 5.4.2.
 - (D) The Minimum Period Charge for Minimum Term Discount Plan Services is the monthly rate of the plan designated in the Customer's contract as described in Section 5.4.2.
-

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order (Cont'd)

9.2.6 Cancellation of a Facilities Order

- (A) The Customer may cancel a Facilities Access Order in whole or in part on any date prior to the service date. The cancellation date is the date the Telephone Company receives written notice from the Customer that the order or portion thereof is to be cancelled.

If a Customer or a Customer's end user is unable to accept Access Service within 30 calendar days after the original service date, the Customer has the choice of the following options:

- The Access Order shall be cancelled and charges described below will apply, or
- Billing for the service will commence.

In such instances, the cancellation date or the billing date, depending on which option is selected by the Customer, shall be the 31st day beyond the original service date of the Access Order.

- (B) Installation of Switched or Special Access Service facilities is considered to have started once the Firm Order Confirmation date has been provided to the Customer.
- (C) Where the Customer cancels a Facilities Access Order or portion thereof prior to the start of the installation of the access facilities cancelled, no charges shall apply.
- (D) Where installation of access facilities which the Customer desires to cancel have started prior to the cancellation, the greater of the following shall apply. (C)
- (1) A cancellation charge as determined in accordance with Section 9.2.6(E).
 - (2) The charge for the minimum period of Special Access Service ordered by the Customer.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order (Cont'd)

9.2.6 Cancellation of a Facilities Order (Cont'd)

- (E) When an ASR for Special Access Service is canceled on or after the Application Date the Cancellation Charge is the Nonrecurring Charge for the service(s) multiplied by the quantity ordered on a per ASR basis (C) (C) (C)

9.2.7 Facilities Test and Line Up

- (A) For Special Access Facilities, test and line up will be made by the Telephone Company using the Customer facilities which are installed at the Customer designated premises to terminate the capacity or services provided. The Customer shall provide personnel and equipment necessary to conduct the testing and line up and shall have its facilities available to complete the testing and line up during the period mutually agreed upon for testing. If Customer personnel, equipment or facilities are not provided, and the service date is missed as a result, no Delayed Activation Credit, as set forth in Section 9.2.8, applies.
- (B) Testing and line up as set forth in Section 9.2.7(A) may begin up to thirty (30) days prior to the scheduled service date. The Telephone Company will notify the Customer of the scheduled start date at least ten working days prior to such date. If this date is mutually agreeable, the Telephone Company will begin testing on the scheduled date. If this date is not agreeable to the Customer and a later date is agreed upon, no Delayed Activation Credit will apply if the facilities are not available on the service date.

9.2.8 Delayed Activation Credit

If the Telephone Company misses a service date by more than 30 days due to circumstances over which it has direct control (excluding, e.g., acts of God, governmental requirements, work stoppages and civil commotions), the Customer may cancel the Access Order without incurring cancellation charges.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order (Cont'd)

9.2.9 Discontinuation of Service

Customers must give the Telephone Company written notice thirty (30) (C)
business days before the date on which service is to be discontinued. (C)

9.2.10 Access Orders For Services Provided By More Than One Telephone Company

Access Services provided by more than one Telephone Company are services where one end of the Switched Transport or Channel Mileage element is in the operating territory of one Telephone Company and the other end of the element is in the operating territory of a different Telephone Company or where the Interim 800 Translation service and the end office are not provided by the same Telephone Company.

The ordering procedure for this service is dependent upon the billing arrangement, as set forth in Section 2.4.4 preceding, to be used by the Telephone Companies involved in providing Access Service. The Telephone Company will notify the Customer which of the ordering procedures will apply.

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order (Cont'd)

9.2.10 Access Orders For Services Provided By More Than One Telephone Company (Cont'd)

(A) Meet Point Billing Ordering

Each Telephone Company will provide its portion of the Access Service within its operating territory to an interconnection point(s) (IP) with the other Telephone Company(ies). The Billing Percentages (BP) associated with the interconnection point(s) will be determined by the Telephone Companies involved in providing the Access Service and listed in EXCHANGE CARRIER ASSOCIATION TARIFF F.C.C. NO. 4. The Telephone Company will bill the Customer for the service in accordance with the billing arrangements as set forth in Section 2.4.4(B) preceding. .

ACCESS SERVICE

9. Ordering Options for Special Access Services (Cont'd)

9.2 Facilities Access Order (Cont'd)

9.2.10 Access Orders For Services Provided By More Than One Telephone Company (Cont'd)

(B) Meet Point Billing Ordering (Cont'd)

- (3) Customers ordering Special Access Service to be interconnected with Switched Access Services at Telephone Company designated WATS Serving Offices must place an order with each Telephone Company in whose territory the end office and the WATS Service Office are located, if they are not collocated.
- (4) Except for Special Access Service as set forth in (3) above or as set forth in (5) below, the Customer may place the order for a Special Access Service with either Exchange Telephone Company.
- (5) For Special Access Service involving a hub(s) the Customer must place the order with the Telephone Company in whose territory the hub(s) is located.

For service(s) ordered as set forth preceding the Customer must also supply a copy of the order to the Telephone Company in whose operating territory a Customer designated premises is located and any other Telephone Company(ies) involved in providing the service.

ACCESS SERVICE

10. RESERVED FOR FUTURE USE

ACCESS SERVICE

11. Special Facilities Routing of Access Services

11.1 Description of Special Facilities Routing of Access Services

The services provided under this Guide are provided over such routes and facilities as the Telephone Company may elect. Special Facilities Routing is involved, when, in order to comply with requirements specified by the Customer, the Telephone Company provides Special Access Service in a manner which includes one or more of the following conditions:

11.1.1 Diversity

Two or more services must be provided over not more than two different physical routes.

11.1.2 Avoidance

A service must be provided on a route which avoids specified geographical locations.

11.1.3 Cable-Only Facilities

Certain Voice Grade services are provided on Cable-Only Facilities to meet the particular needs of a Customer.

Service is provided subject to the availability of Cable-Only facilities. In the event of service failure, restoration will be made through the use of any available facilities as selected by the Telephone Company.

Narrowband, Voice Grade and Wideband Analog Special Access Services are available as set forth in Sections 5.2.1(A),(B) and (E). Voice Grade Special Access Services are available as set forth in Section 5.2.1(B).

In order to avoid special routing compromise, the Telephone Company will provide the ordering Customer with the routing information for each specially routed service. If requested by the Customer, this information will be provided when service is installed and prior to any subsequent changes in routing.

The rates and charges for Special Facilities Routing of Access Services as set forth in Section 11.2 are in addition to all other rates and charges that may be applicable for services provided under other sections of this Guide.

ACCESS SERVICE

11. Special Facilities Routing of Access Services

11.2 Rates and Charges for Special Facilities Routing of Access Services

The rates and charges for Special Facilities Routing of Access Services are as follows:

11.2.1 Diversity

For each service provided in accordance with Section 11.1.1, the rates and charges will be developed on an individual case basis.

11.2.2 Avoidance

For each service provided in accordance with Section 11.1.2 the rates and charges will be developed on an individual case basis.

11.2.3 Diversity and Avoidance Combined

For each service provided in accordance with Sections 11.1.1 and 11.1.2 combined, the rates and charges will be developed on an individual case basis.

11.2.4 Cable-Only Facilities

For each service provided in accordance with Section 11.1.3, the rates and charges will be developed on an individual case basis.

ACCESS SERVICE

12. RESERVED FOR FUTURE USE

ACCESS SERVICE

13. Private Line Services

13.1 General

Private Line Service provides a circuit-based, point-to-point, transmission path (or “channel”) between wire centers on the Company’s SONET fiber network, end user premises served by wire centers on the Company’s SONET fiber network or combinations thereof.

Wire centers served by the Company’s SONET fiber network and listed in Section 13.4, below, are referred to as “On-Net”.

13.2 Technical Standards

13.2.1 Description

Private Line Service is a digital service offering. It is offered at data bit rates of 1.544 Mbps (DS1), 44.736 Mbps (DS3), or 155.520 Mbps (OC3 or OC3c). The actual bit rate is a function of protocol combinations selected by the Customer. The channel provides for the transmission of nominal 1.544 Mbps, 44.736, or 155.520 Mbps synchronous serial data. Private Line Service is only available to and from On-Net wire centers, end user premises served by On-Net wire centers, or combinations thereof. Private Line Service may be connected to Special Access service, as described in Section 5 of this tariff, in order to extend a circuit to wire centers that are not On-Net.

13.2.2 Transmission Specifications

Transmission Specifications contained in Section 5.2.2(C)(2) preceding apply for Private Line Services.

13.2.3 Standard Protocol Combinations

Private Line Service channels are available with the standard protocol combinations set forth in Section 5.2.2(C)(3). Other protocols are available at rates determined on an individual case basis.

13.3 Rate Regulations

This section contains the specific regulations governing the rates and charges that apply for Private Line Services.

13.3.1 Rates and Charges

There are two types of rates and charges: monthly rates and nonrecurring charges. The rates and charges are described as follows:

ACCESS SERVICE

13. Private Line Services (Cont'd)

13.3 Rate Regulations (Cont'd)

13.3.1 Rates and Charges (Cont'd)

(A) Monthly Rates

Monthly rates are flat recurring rates that apply each month or fraction thereof that a Private Line Service is provided. For billing purposes, each month is considered to have 30 days.

Private Line Services are only available under term commitments of one (1) year, two (2) years, three (3) years and five (5) years. Monthly flat rate recurring charges apply to the corresponding term commitment ordered by the Customer.

(B) Nonrecurring Charges

Nonrecurring charges (NRC's) are one-time charges that apply for specific work activity (e.g., installation, a change to an existing service, or discontinuance nonrecurring charge). Nonrecurring charges as set forth in Section 15 shall apply upon issuance of a firm order confirmation by the Telephone Company with the exception for discontinuance nonrecurring charges that are outlined below. In addition to the nonrecurring charges set forth in Section 15, Facilities Access Order charges also apply as described in Section 9.2.

Discontinuance Nonrecurring Charge

In addition to any other charges associated with discontinuance of services, the Telephone Company will charge a discontinuance nonrecurring charge to discontinue services. This charge applies on a per circuit basis. Refer to applicable discontinuance non-recurring charges as listed in section 15. In addition to the discontinuance nonrecurring charge, minimum service period charges and early termination liability may apply if the circuit term or minimum service period has not been met.

(C)

13.3.2 Discontinuance of Term Commitments

(A) Non-Government Persons or Entities

If Customer chooses to discontinue all or a portion of the service before the expiration of the term commitment period, discontinuance charges will apply.

Should the Customer choose to discontinue term commitments prior to completion of the term commitment period, discontinuance charges will apply. Discontinuance charges equal to 100% of the monthly recurring one year commitment rates for the total remaining months of the initial one year period will apply (if cancelled prior to the end of the first year), plus 50% of the monthly one year commitment rates for the remaining portion of the commitment period beyond the first year will apply.

ACCESS SERVICE

13. Private Line Services (Cont'd)

13.3 Rate Regulations (Cont'd)

13.3.2 Discontinuance of Term Commitments (Cont'd)

(B) Government Entities

Discontinuance charges do not apply to commitment period services purchased by local, State or Federal Government entities when services are discontinued prior to completion of the commitment period only when all of the following conditions are met:

- (1) The service(s) purchased by the local, State or Federal government entity are utilized solely for provision of services for that local, State or Federal government entity,
- (2) Funding for the fixed period service ordered by the authorized local, State, or Federal government entity is included in the budget request for each fiscal period appropriation sufficient to cover the authorized local, State or Federal government entity's obligation under the fixed period service for that fiscal period,
- (3) Nonappropriation may not be used as a means of terminating the service to acquire a functionally similar product or service,
- (4) The local, State, or Federal government entity ordered the fixed period service under the good faith belief that the moneys in amounts sufficient to discharge its obligations could and would lawfully be appropriated and be made available for this purpose and,
- (5) The local, State or Federal government entity or the customer who ordered the service on their behalf, must provide the Telephone Company notarized documents agreed upon by both the Telephone Company and the Customer. The documents must show that the entity is allotted insufficient funds for the remainder of the then current fiscal period or for a succeeding fiscal period, by appropriation, appropriation limitation or grant to continue payments under the fixed period of service, and has no other funding source lawfully available to it for such purpose.

If all of the conditions in this subsection are not met, the discontinuance charges specified in Section 13.3.2(A) shall apply.

ACCESS SERVICE

13. Private Line Services (Cont'd)

13.4 On-Net Wire Centers – Frontier Communications of Minnesota

13.4.1 Metro On-Net

The following Frontier Communications of Minnesota wire centers are defined as "Metro On-Net":

Apple Valley
Burnsville
Farmington
Lakeville
Rosemount

13.4.2 Non-Metro On-Net

The following Frontier Communications of Minnesota wire centers are defined as "Non-Metro On-Net":

Avoca
Belle Plaine
Chandler
Currie
Elysian
Fairmont
Iona
Janesville
Jordan
Kilkenny
Lake Wilson
Lakefield
Lecenter
Lewisville
Montgomery
Northrup
Sherburn
Slayton
Truman
Waterville
Welcome
Worthington

ACCESS SERVICE

14. RESERVED FOR FUTURE USE

ACCESS SERVICE

15. Rates and Charges

Rates and charges for Access Service set forth below apply to all of the Issuing Carriers shown on Title Page 1.

15.1 RESERVED FOR FUTURE USE

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.2 RESERVED FOR FUTURE USE

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.2 RESERVED FOR FUTURE USE

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.2 RESERVED FOR FUTURE USE

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.2 RESERVED FOR FUTURE USE

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service

Optional Features and Functions

| <u>Multiplexing</u> | <u>Iowa</u> | <u>Minnesota</u> | |
|--|--------------|------------------|-----|
| DS1 to Voice, per arrangement, per month | \$68,123.50 | \$68,123.50 | (C) |
| DS1 to DS0, per arrangement, per month | ICB | ICB | |
| DS0 to Subrate, per arrangement, per month Up to 20 - 2.4 Kbps | ICB | ICB | |
| DS0 to Subrate, per arrangement, per month Up to 10 - 4.8 Kbps | ICB | ICB | |
| DS0 to Subrate, per arrangement, per month Up to 5 - 9.6 Kbps | ICB | ICB | |
| DS3 to DS1 per arrangement, per month | \$170,309.03 | \$170,309.03 | (C) |
| Nonrecurring charge | \$468,350.11 | \$468,350.11 | (C) |
| OC3 to DS3 per arrangement, per month | \$150,722.74 | \$150,722.74 | |
| Nonrecurring charge | \$130,324.95 | \$130,324.95 | |
| OC3 to DS1 per arrangement, per month | \$180,867.25 | \$180,867.25 | |
| Nonrecurring charge | \$130,324.95 | \$130,324.95 | |
| Channel Service Unit (per termination) - 56 Kbps, per month (Channel Service Units will only be provided under tariff if they existed in the Telephone Company's inventory as of November 18, 1983 | ICB | ICB | |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Optional Features and Functions (Cont'd)

Bridges, per port per month

| | |
|----------------|-----|
| Station Bridge | |
| Iowa | ICB |
| Minnesota | ICB |

| | |
|-------------|-----|
| Data Bridge | |
| Iowa | ICB |
| Minnesota | ICB |

| | |
|---------------|-----|
| Voice Bridget | |
| Iowa | ICB |
| Minnesota | ICB |

| | |
|--------------------------------|-----|
| Multi-Jurisdictional - Digital | |
| Iowa | ICB |
| Minnesota | ICB |

Miscellaneous

| | |
|--|-----|
| C-Type Conditioning, per termination per month | |
| Iowa | ICB |
| Minnesota | ICB |

| | |
|---|-----|
| DA-Type Conditioning, per termination per month | |
| Iowa | ICB |
| Minnesota | ICB |

| | |
|---|-----|
| Telephoto Conditioning, per termination per month | |
| Iowa | ICB |
| Minnesota | ICB |

| | |
|--|-----|
| Gain Conditioning, per termination per month | |
| Iowa | ICB |
| Minnesota | ICB |

| | |
|-------------------------------|-----|
| Stereo, per service per month | |
| Iowa | ICB |
| Minnesota | ICB |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Optional Features and Functions (Cont'd)

Miscellaneous (Cont'd)

Iowa Minnesota

Secondary Channel - 56 Kbps, per month

ICB

ICB

Hybrid, per termination per month

ICB

ICB

Improved Return Loss for Effective Four-Wire
Transmission, per termination, per month

ICB

ICB

Automatic Protection Switching, per service
termination per month

Basic one by one (1 x 1) switching only - non-
expandable:

ICB

ICB

Basic 1 x N expandable to 1 x 12, equipped with
1 x 1:

ICB

ICB

Basic 1 x N expandable to 1 x 12, each
additional working line:

ICB

ICB

Clear Channel Capability (CCC)

Nonrecurring charge per point to point DS1

Initial*

None

None

Subsequent**

\$59,114.26

\$59,114.26

(C)

*No Initial Nonrecurring Charge will apply when CCC is ordered with a new DS1 circuit.

**A Subsequent Nonrecurring Charge will apply when CCC is ordered for a DS1 circuit already in service.

ACCESS SERVICE

15 Rates and Charges (Cont'd)

| 15.3 <u>Special Access Service (Cont'd)</u> | <u>Iowa</u> | <u>Minnesota</u> | |
|---|-------------|------------------|-----|
| <u>Special Access Surcharge</u> | | | |
| Per Voice Grade Equivalent, per month | \$25.00 | \$25.00 | |
| <u>Narrowband 1 Service (NB1)</u> | | | |
| NB1 Channel Termination, per point of termination per month | ICB | ICB | |
| NB1 Channel Mileage Termination, per termination per month | ICB | ICB | |
| NB1 Channel Mileage Facility, per mile per month | ICB | ICB | |
| <u>Narrowband 2 Service (NB2)</u> | | | |
| NB2 Channel Termination, per point of termination per month | | | |
| Two-Wire | ICB | ICB | |
| Four-Wire | ICB | ICB | |
| <u>Voice Grade Service (VG)</u> | | | |
| VG Two-Wire Channel Termination | | | |
| per point of termination, per month | \$3,970.68 | \$3,970.68 | (C) |
| Nonrecurring charge | \$0.00 | \$0.00 | |
| VG Four-Wire Channel Termination | | | |
| per point of termination, per month | \$5,202.91 | \$5,202.91 | |
| Nonrecurring charge | \$0.00 | \$0.00 | |
| VG Channel Mileage Termination | | | |
| per termination per month | \$7,278.58 | \$7,278.58 | |
| VG Channel Mileage Facility | | | |
| per mile per month | \$410.78 | \$410.78 | (C) |
| VG Discontinuance Non-Recurring Charge | | | |
| per Circuit | \$975.00 | \$975.00 | |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Program Audio Service (PA)

| | |
|--|-------------|
| PA Channel Termination, per point of termination | <u>lowa</u> |
| PA 200-3500 Hz | |
| per point of termination,per month | ICB |
| Nonrecurring charge | ICB |
| PA 100-5000 Hz | |
| per point of termination,per month | \$59.00 |
| Nonrecurring charge | \$0.00 |
| PA 50-8000 Hz | |
| per point of termination,per month | \$59.00 |
| Nonrecurring charge | \$0.00 |
| PA 50-15000 Hz | |
| per point of termination,per month | \$63.60 |
| Nonrecurring charge | \$0.00 |
| PA Channel Mileage Termination | |
| PA 100-5000 Hz, per termination per month | \$26.00 |
| PA 50-8000 Hz, per termination per month | \$38.00 |
| PA 50-15000 Hz, per termination per month | \$101.00 |
| PA Channel Mileage Facility | |
| PA 100-5000 Hz, per mile per month | \$5.00 |
| PA 50-8000 Hz, per mile per month | \$5.00 |
| PA 50-15000 Hz, per mile per month | \$5.00 |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Video Service (TV)

TV Channel Termination, per point of termination

Monthly rate

Iowa

ICB

Minnesota

ICB

Daily rate

Iowa

ICB

Minnesota

ICB

Nonrecurring charge

Iowa

ICB

Minnesota

ICB

TV Channel Mileage Termination, per termination per month

Iowa

ICB

Minnesota

ICB

TV Channel Mileage Facility, per mile per month

Iowa

ICB

Minnesota

ICB

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Wideband Analog Service (WA)

WA Channel Termination, per point of termination

Monthly rate

Iowa

ICB

Minnesota

ICB

Nonrecurring charge

Iowa

ICB

Minnesota

ICB

WA Channel Mileage Termination, per termination per month

Iowa

ICB

Minnesota

ICB

WA Channel Mileage Facility, per mile per month

Iowa

ICB

Minnesota

ICB

Wideband Digital Service (WD)

WD Channel Termination, per point of termination

Monthly rate

Iowa

ICB

Minnesota

ICB

Nonrecurring charge

Iowa

ICB

Minnesota

ICB

WD Channel Mileage Termination, per termination per month

Iowa

ICB

Minnesota

ICB

WD Channel Mileage Facility, per mile per month

Iowa

ICB

Minnesota

ICB

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Digital Data Access Service (DA)

Iowa

| | | | |
|--|-------------|-----|-----|
| DA Channel Termination, per point of termination | | | |
| DA 2.4 Kbps | | | |
| per point of termination, per month | | ICB | |
| Nonrecurring charge | | ICB | |
| DA 4.8 Kbps | | | |
| per point of termination, per month | \$12,049.01 | | (C) |
| Nonrecurring charge | \$0.00 | | |
| DA 9.6 Kbps | | | |
| per point of termination, per month | \$12,870.50 | | |
| Nonrecurring charge | \$0.00 | | |
| DA 56 Kbps | | | |
| per point of termination, per month | \$13,760.34 | | |
| Nonrecurring charge | \$0.00 | | |
| DA 64 Kbps | | | |
| per point of termination, per month | \$19,168.59 | | |
| Nonrecurring charge | \$0.00 | | |
| DA Channel Mileage Termination | | | |
| DA 2.4 Kbps, per termination per month | | ICB | |
| DA 4.8 Kbps, per termination per month | \$6,024.38 | | |
| DA 9.6 Kbps, per termination per month | \$6,572.13 | | |
| DA 56 Kbps, per termination per month | \$9,926.61 | | |
| DA 64 Kbps, per termination per month | \$10,953.46 | | |
| DA Channel Mileage Facility | | | |
| DA 2.4 Kbps, per mile per month | | ICB | |
| DA 4.8 Kbps, per mile per month | \$273.86 | | |
| DA 9.6 Kbps, per mile per month | \$410.78 | | |
| DA 56 Kbps, per mile per month | \$684.53 | | |
| DA 64 Kbps, per mile per month | \$821.56 | | (C) |
| DA Discontinuance Non-Recurring Charge | | | |
| All speeds, Per Circuit | \$975.00 | | |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Digital Data Access Service (DA)

Minnesota

| | | | |
|--|-------------|-----|-----|
| DA Channel Termination, per point of termination | | | |
| DA 2.4 Kbps | | | |
| per point of termination, per month | | ICB | |
| Nonrecurring charge | | ICB | |
| DA 4.8 Kbps | | | |
| per point of termination, per month | \$12,049.01 | | (C) |
| Nonrecurring charge | \$0.00 | | |
| DA 9.6 Kbps | | | |
| per point of termination, per month | \$12,870.50 | | |
| Nonrecurring charge | \$0.00 | | |
| DA 56 Kbps | | | |
| per point of termination, per month | \$13,760.34 | | |
| Nonrecurring charge | \$0.00 | | |
| DA 64 Kbps | | | |
| per point of termination, per month | \$19,168.59 | | |
| Nonrecurring charge | \$0.00 | | |
| DA Channel Mileage Termination | | | |
| DA 2.4 Kbps, per termination per month | | ICB | |
| DA 4.8 Kbps, per termination per month | \$6,024.38 | | |
| DA 9.6 Kbps, per termination per month | \$6,572.13 | | |
| DA 56 Kbps, per termination per month | \$9,926.61 | | |
| DA 64 Kbps, per termination per month | \$10,953.46 | | |
| DA Channel Mileage Facility | | | |
| DA 2.4 Kbps, per mile per month | | ICB | |
| DA 4.8 Kbps, per mile per month | \$273.86 | | |
| DA 9.6 Kbps, per mile per month | \$410.78 | | |
| DA 56 Kbps, per mile per month | \$684.53 | | |
| DA 64 Kbps, per mile per month | \$821.56 | | (C) |
| DA Discontinuance Non-Recurring Charge | | | |
| All speeds, Per Circuit | \$975.00 | | |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Iowa

High Capacity Service

| | | |
|---|--------------|-----|
| Channel Termination - 1.544 Mbps (DS1)- End User - Competitive Exchanges IC CDL –Competitive & Non-Competitive Exchanges Month to Month per point of termination, per month | \$57,763.35 | (C) |
| Nonrecurring charge | \$198,693.95 | |
| 18 Month Term Discount Plan <u>#Not Available</u> | | |
| 36 Month Term Discount Plan <u>#Not Available</u> | | |
| 60 Month Term Discount Plan # | | |
| per point of termination, per month | \$41,734.48 | |
| Nonrecurring charge | \$156,116.81 | |
| Channel Mileage Termination - 1.544 Mbps (DS1) per termination, per month Competitive & Non-Competitive Exchanges Month to Month | \$29,423.55 | |
| 18 Month Term Discount Plan <u>#Not Available</u> | | |
| 36 Month Term Discount Plan <u>#Not Available</u> | | |
| 60 Month Term Discount Plan # | \$24,076.06 | |
| Channel Mileage Facility - 1.544 Mbps (DS1) per mile, per month Competitive & Non-Competitive Exchanges Month to Month | \$4,683.61 | |
| 18 Month Term Discount Plan <u>#Not Available</u> | | |
| 36 Month Term Discount Plan <u>#Not Available</u> | | |
| 60 Month Term Discount Plan | \$3,405.98 | (C) |
| Discontinuance Non-Recurring Charge - 1.544 Mbps (DS1) Per circuit, All terms | \$975.00 | |

Effective November 19, 2021, DS1 and DS3 Term Payment Plans are no longer permitted. DS1 and DS3 Term Payment Plans in effect as of November 19, 2021 may continue the existing term but will not be eligible to extend, renew, reenroll in, convert to a new term period, or in any other way continue their existing plan beyond its current expiration. At expiration of the term period, the service will convert to the Month to Month Rate. If at any time an existing customer terminates its DS1 and/or DS3 Term Payment Plan, the customer may not re-subscribe to the rate.

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Minnesota

High Capacity Service

| | | |
|---|--------------|-----|
| Channel Termination - 1.544 Mbps (DS1)- End User - Competitive Exchanges IC CDL –Competitive & Non-Competitive Exchanges Month to Month per point of termination, per month | \$57,763.35 | (C) |
| Nonrecurring charge | \$198,693.95 | |
| 18 Month Term Discount Plan <u>#Not Available</u> | | |
| 36 Month Term Discount Plan <u>#Not Available</u> | | |
| 60 Month Term Discount Plan # per point of termination, per month | \$41,734.48 | |
| Nonrecurring charge | \$156,116.81 | |
| Channel Mileage Termination - 1.544 Mbps (DS1) per termination, per month Competitive & Non-Competitive Exchanges Month to Month | \$29,423.55 | |
| 18 Month Term Discount Plan <u>#Not Available</u> | | |
| 36 Month Term Discount Plan <u>#Not Available</u> | | |
| 60 Month Term Discount Plan # | \$24,076.06 | |
| Channel Mileage Facility - 1.544 Mbps (DS1) per mile, per month Competitive & Non-Competitive Exchanges Month to Month | \$4,683.61 | |
| 18 Month Term Discount Plan <u>#Not Available</u> | | |
| 36 Month Term Discount Plan <u>#Not Available</u> | | |
| 60 Month Term Discount Plan | \$3,405.98 | (C) |
| Discontinuance Non-Recurring Charge - 1.544 Mbps (DS1) Per circuit, All terms | \$975.00 | |

Effective November 19, 2021, DS1 and DS3 Term Payment Plans are no longer permitted. DS1 and DS3 Term Payment Plans in effect as of November 19, 2021 may continue the existing term but will not be eligible to extend, renew, reenroll in, convert to a new term period, or in any other way continue their existing plan beyond its current expiration. At expiration of the term period, the service will convert to the Month to Month Rate. If at any time an existing customer terminates its DS1 and/or DS3 Term Payment Plan, the customer may not re-subscribe to the rate.

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Iowa

High Capacity Service (Cont'd)

Channel Termination - 44.736 Mbps (DS3)

End User – Competitive Exchanges

IC CDL – Competitive and Non-Competitive Exchanges

Month to Month

per point of termination, per month

\$762,534.11

(C)

Nonrecurring charge

\$993,470.37

18 Month Term Discount Plan #Not Available

36 Month Term Discount Plan #Not Available

60 Month Term Discount Plan #Not Available

Channel Mileage Termination - 44.736 Mbps (DS3)

per termination, per month

Competitive & Non-Competitive Exchanges

Month to Month

\$202,639.36

18 Month Term Discount Plan #Not Available

36 Month Term Discount Plan #Not Available

60 Month Term Discount Plan #Not Available

Channel Mileage Facility - 44.736 Mbps (DS3)

per mile, per month

Competitive & Non-Competitive Exchanges

Month to Month

\$81,180.98

(C)

18 Month Term Discount Plan #Not Available

36 Month Term Discount Plan #Not Available

60 Month Term Discount Plan #Not Available

Discontinuance Non-Recurring Charge - 44.736 Mbps (DS3)

Per circuit, All terms

\$975.00

Service Offer is limited. See footnote on page 15-14

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Minnesota

High Capacity Service (Cont'd)

Channel Termination - 44.736 Mbps (DS3)

End User – Competitive Exchanges

IC CDL – Competitive and Non-Competitive Exchanges

Month to Month

per point of termination, per month

\$762,534.11

(C)

Nonrecurring charge

\$993,470.37

18 Month Term Discount Plan #Not Available

36 Month Term Discount Plan #Not Available

60 Month Term Discount Plan #Not Available

Channel Mileage Termination - 44.736 Mbps (DS3)

per termination, per month

Competitive & Non-Competitive Exchanges

Month to Month

\$202,639.36

18 Month Term Discount Plan #Not Available

36 Month Term Discount Plan #Not Available

60 Month Term Discount Plan #Not Available

Channel Mileage Facility - 44.736 Mbps (DS3)

per mile, per month

Competitive & Non-Competitive Exchanges

Month to Month

\$81,180.98

(C)

18 Month Term Discount Plan #Not Available

36 Month Term Discount Plan #Not Available

60 Month Term Discount Plan #Not Available

Discontinuance Non-Recurring Charge - 44.736 Mbps (DS3)

Per circuit, All terms

\$975.00

Service Offer is limited. See footnote on page 15-14

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Iowa

High Capacity Service (Cont'd)

Channel Termination - 155.520 Mbps (OC3)

Month to Month

per point of termination, per month

\$212,030.56 (C)

Nonrecurring charge

\$238,534.29

18 Month Term Discount Plan – Not Available

36 Month Term Discount Plan – Not Available

60 Month Term Discount Plan – Not Available

Channel Mileage Termination - 155.520 Mbps (OC3)

per termination, per month

Month to Month

\$132,519.19

18 Month Term Discount - Not Available

36 Month Term Discount - Not Available

60 Month Term Discount - Not Available

Channel Mileage Facility - 155.520 Mbps (OC3)

per mile, per month

Month to Month

\$18,552.63 (C)

18 Month Term Discount - Not Available

36 Month Term Discount - Not Available

60 Month Term Discount - Not Available

Discontinuance Non-Recurring Charge - 155.520 Mbps (OC3)

Per circuit, All terms

\$975.00

Effective February 28, 2023, SONET 18, 36 and 60 Month Plans are no longer permitted. The SONET 18, 36 and/or 60 Month Plans in effect as of February 28, 2023 may continue the existing term but will not be eligible to extend, renew, reenroll in, convert to a new term period, or in any other way continue their existing plan beyond its current expiration. At expiration of the term period, the service will convert to the Month to Month Rate. If at any time an existing customer terminates its SONET 18, 36 and/or 60 Month Plan, the customer may not re-subscribe to the plan.

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.3 Special Access Service (Cont'd)

Minnesota

High Capacity Service (Cont'd)

| | | |
|--|--------------|-----|
| Channel Termination - 155.520 Mbps (OC3) | | |
| Month to Month | | |
| per point of termination, per month | \$212,030.56 | (C) |
| Nonrecurring charge | \$238,534.29 | |
| 18 Month Term Discount Plan – Not Available | | |
| 36 Month Term Discount Plan – Not Available | | |
| 60 Month Term Discount Plan – Not Available | | |
| Channel Mileage Termination - 155.520 Mbps (OC3) | | |
| per termination, per month | | |
| Month to Month | \$132,519.19 | |
| 18 Month Term Discount - Not Available | | |
| 36 Month Term Discount - Not Available | | |
| 60 Month Term Discount - Not Available | | |
| Channel Mileage Facility - 155.520 Mbps (OC3) | | |
| per mile, per month | | |
| Month to Month | \$18,552.63 | (C) |
| 18 Month Term Discount - Not Available | | |
| 36 Month Term Discount - Not Available | | |
| 60 Month Term Discount - Not Available | | |
| Discontinuance Non-Recurring Charge - 155.520 Mbps (OC3) | | |
| Per circuit, All terms | \$975.00 | |

Effective February 28, 2023, SONET 18, 36 and 60 Month Plans are no longer permitted. The SONET 18, 36 and/or 60 Month Plans in effect as of February 28, 2023 may continue the existing term but will not be eligible to extend, renew, reenroll in, convert to a new term period, or in any other way continue their existing plan beyond its current expiration. At expiration of the term period, the service will convert to the Month to Month Rate. If at any time an existing customer terminates its SONET 18, 36 and/or 60 Month Plan, the customer may not re-subscribe to the plan.

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.4 Miscellaneous Services

Additional Engineering

Basic Time, per engineer

First half hour or fraction thereof

Iowa \$80.00

Minnesota \$80.00

Each additional half hour or fraction thereof

Iowa \$60.00

Minnesota \$60.00

Overtime, per engineer

First half hour or fraction thereof

Iowa \$120.00

Minnesota \$120.00

Each additional half hour or fraction thereof

Iowa \$90.00

Minnesota \$90.00

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.4 Miscellaneous Services (Cont'd)

Additional Labor

| | | |
|--|--|---------|
| Installation or Repair, Overtime, per technician | | |
| First half hour or fraction thereof | | |
| Iowa | | \$60.00 |
| Minnesota | | \$60.00 |
| Each additional half hour or fraction thereof | | |
| Iowa | | \$45.00 |
| Minnesota | | \$45.00 |

Additional Installation Testing, Standby, Testing and Maintenance with Other Telephone Companies, or Other Labor

| | | |
|---|--|---------|
| Basic time, per technician | | |
| First half hour or fraction thereof | | |
| Iowa | | \$40.00 |
| Minnesota | | \$40.00 |
| Each additional half hour or fraction thereof | | |
| Iowa | | \$30.00 |
| Minnesota | | \$30.00 |
| Overtime, per technician | | |
| First half hour or fraction thereof | | |
| Iowa | | \$60.00 |
| Minnesota | | \$60.00 |
| Each additional half hour or fraction thereof | | |
| Iowa | | \$45.00 |
| Minnesota | | \$45.00 |
| Premium time, per technician | | |
| First half hour or fraction thereof | | |
| Iowa | | \$80.00 |
| Minnesota | | \$80.00 |
| Each additional half hour or fraction thereof | | |
| Iowa | | \$60.00 |
| Minnesota | | \$60.00 |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.4 Miscellaneous Services (Cont'd)

Maintenance of Service Charge

Basic time, per technician

First half hour or fraction thereof

Iowa \$30.00

Minnesota \$30.00

Each additional half hour or fraction thereof

Iowa \$30.00

Minnesota \$30.00

Overtime, per technician

First half hour or fraction thereof

Iowa \$45.00

Minnesota \$45.00

Each additional half hour or fraction thereof

Iowa \$45.00

Minnesota \$45.00

Premium time, per technician

First half hour or fraction thereof

Iowa \$60.00

Minnesota \$60.00

Each additional half hour or fraction thereof

Iowa \$60.00

Minnesota \$60.00

Restoration Priority

Nonrecurring charge, per service arranged

Iowa \$33.85

Minnesota \$33.85

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.4 Miscellaneous Services (Cont'd)

Special Access Testing Service

Basic time, per technician

First half hour or fraction thereof

Iowa \$30.00

Minnesota \$30.00

Each additional half hour or fraction thereof

Iowa \$30.00

Minnesota \$30.00

Overtime, per technician

First half hour or fraction thereof

Iowa \$45.00

Minnesota \$45.00

Each additional half hour or fraction thereof

Iowa \$45.00

Minnesota \$45.00

Premium time, per technician

First half hour or fraction thereof

Iowa \$60.00

Minnesota \$60.00

Each additional half hour or fraction thereof

Iowa \$60.00

Minnesota \$60.00

Specialized Manual Testing

Basic time, per technician

First half hour or fraction thereof

Iowa \$30.00

Minnesota \$30.00

Each additional half hour or fraction thereof

Iowa \$30.00

Minnesota \$30.00

Overtime, per technician

First half hour or fraction thereof

Iowa \$45.00

Minnesota \$45.00

Each additional half hour or fraction thereof

Iowa \$45.00

Minnesota \$45.00

Premium time, per technician

First half hour or fraction thereof

Iowa \$60.00

Minnesota \$60.00

Each additional half hour or fraction thereof

Iowa \$60.00

Minnesota \$60.00

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.4 Miscellaneous Services (Cont'd)

ACCESS SERVICE

15. Rates and Charges (Cont'd)

| 15.5 | <u>Ordering Charges</u> | <u>Iowa</u> | <u>Minnesota</u> | |
|------|--|-------------|------------------|-----|
| | <u>Facilities Access Order Charge</u> | | | |
| | Nonrecurring Charge per Facilities Access Order | \$72.00 | \$72.00 | |
| | <u>Service Date Change Charge</u> | | | |
| | Nonrecurring charge per order | \$50.00 | \$50.00 | |
| | <u>Design Change Charge</u> | | | |
| | Nonrecurring charge per order per order | \$5,960.88 | \$5,960.88 | (C) |
| | <u>Expedited Order Charge</u> | | | |
| | Nonrecurring charge per order, per day advanced | \$300.00 | \$300.00 | |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.6 RESERVED FOR FUTURE USE

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.6 RESERVED FOR FUTURE USE

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.6 RESERVED FOR FUTURE USE

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.7 Private Line Services

End User Premises On-Net to On-Net Wire Center

DS1, Metro to Metro

| | |
|-----------------------|----------|
| One year commitment | |
| Monthly Rate | \$390.00 |
| Nonrecurring Charge | \$650.00 |
| Two year commitment | |
| Monthly Rate | \$325.00 |
| Nonrecurring Charge | \$650.00 |
| Three year commitment | |
| Monthly Rate | \$260.00 |
| Nonrecurring Charge | \$650.00 |
| Five year commitment | |
| Monthly Rate | \$234.00 |
| Nonrecurring Charge | \$650.00 |

DS1, Non-Metro or Metro to Non-Metro

| | |
|-----------------------|----------|
| One year commitment | |
| Monthly Rate | \$715.00 |
| Nonrecurring Charge | \$650.00 |
| Two year commitment | |
| Monthly Rate | \$650.00 |
| Nonrecurring Charge | \$650.00 |
| Three year commitment | |
| Monthly Rate | \$585.00 |
| Nonrecurring Charge | \$650.00 |
| Five year commitment | |
| Monthly Rate | \$520.00 |
| Nonrecurring Charge | \$650.00 |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.7 Private Line Services (Cont'd)

End User Premises On-Net to On-Net Wire Center (Cont'd)

DS3, Metro to Metro

| | |
|-----------------------|------------|
| One year commitment | |
| Monthly Rate | \$2,925.00 |
| Nonrecurring Charge | \$3,250.00 |
| Two year commitment | |
| Monthly Rate | \$2,438.00 |
| Nonrecurring Charge | \$3,250.00 |
| Three year commitment | |
| Monthly Rate | \$1,950.00 |
| Nonrecurring Charge | \$3,250.00 |
| Five year commitment | |
| Monthly Rate | \$1,755.00 |
| Nonrecurring Charge | \$3,250.00 |

DS3, Non-Metro or Metro to Non-Metro

| | |
|-----------------------|------------|
| One year commitment | |
| Monthly Rate | \$5,363.00 |
| Nonrecurring Charge | \$3,250.00 |
| Two year commitment | |
| Monthly Rate | \$4,875.00 |
| Nonrecurring Charge | \$3,250.00 |
| Three year commitment | |
| Monthly Rate | \$4,388.00 |
| Nonrecurring Charge | \$3,250.00 |
| Five year commitment | |
| Monthly Rate | \$3,900.00 |
| Nonrecurring Charge | \$3,250.00 |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.7 Private Line Services (Cont'd)

End User Premises On-Net to End User Premises On-Net

DS1, Metro to Metro

| | |
|-----------------------|----------|
| One year commitment | |
| Monthly Rate | \$650.00 |
| Nonrecurring Charge | \$900.00 |
| Two year commitment | |
| Monthly Rate | \$533.00 |
| Nonrecurring Charge | \$900.00 |
| Three year commitment | |
| Monthly Rate | \$442.00 |
| Nonrecurring Charge | \$900.00 |
| Five year commitment | |
| Monthly Rate | \$390.00 |
| Nonrecurring Charge | \$900.00 |

DS1, Non-Metro or Metro to Non-Metro

| | |
|-----------------------|----------|
| One year commitment | |
| Monthly Rate | \$975.00 |
| Nonrecurring Charge | \$900.00 |
| Two year commitment | |
| Monthly Rate | \$858.00 |
| Nonrecurring Charge | \$900.00 |
| Three year commitment | |
| Monthly Rate | \$767.00 |
| Nonrecurring Charge | \$900.00 |
| Five year commitment | |
| Monthly Rate | \$676.00 |
| Nonrecurring Charge | \$900.00 |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.7 Private Line Services (Cont'd)

End User Premises On-Net to End User Premises On-Net (Cont'd)

| | | |
|--------------------------------------|------------|------------|
| DS3, Metro to Metro | | |
| One year commitment | | |
| Monthly Rate | | \$4,875.00 |
| Nonrecurring Charge | | \$5,000.00 |
| Two year commitment | | |
| Monthly Rate | | \$3,998.00 |
| Nonrecurring Charge | | \$5,000.00 |
| Three year commitment | | |
| Monthly Rate | | \$3,315.00 |
| Nonrecurring Charge | | \$5,000.00 |
| Five year commitment | | |
| Monthly Rate | | \$2,925.00 |
| Nonrecurring Charge | | \$5,000.00 |
| DS3, Non-Metro or Metro to Non-Metro | | |
| One year commitment | | |
| Monthly Rate | | \$7,313.00 |
| Nonrecurring Charge | | \$5,000.00 |
| Two year commitment | | |
| Monthly Rate | | \$6,435.00 |
| Nonrecurring Charge | | \$5,000.00 |
| Three year commitment | | |
| Monthly Rate | | \$5,753.00 |
| Nonrecurring Charge | | \$5,000.00 |
| Five year commitment | | |
| Monthly Rate | | \$5,070.00 |
| Nonrecurring Charge | \$5,000.00 | |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.7 Private Line Services (Cont'd)

End User Premises On-Net to End User Premises On-Net (Cont'd)

| | | |
|--|--|-------------|
| OC3 or OC3c, Metro to Metro | | |
| One year commitment | | |
| Monthly Rate | | \$9,750.00 |
| Nonrecurring Charge | | \$6,500.00 |
| Two year commitment | | |
| Monthly Rate | | \$9,375.00 |
| Nonrecurring Charge | | \$6,500.00 |
| Three year commitment | | |
| Monthly Rate | | \$8,945.00 |
| Nonrecurring Charge | | \$6,500.00 |
| Five year commitment | | |
| Monthly Rate | | \$8,190.00 |
| Nonrecurring Charge | | \$6,500.00 |
| OC3 or OC3c, Non-Metro or Metro to Non-Metro | | |
| One year commitment | | |
| Monthly Rate | | \$11,210.00 |
| Nonrecurring Charge | | \$6,500.00 |
| Two year commitment | | |
| Monthly Rate | | \$10,356.00 |
| Nonrecurring Charge | | \$6,500.00 |
| Three year commitment | | |
| Monthly Rate | | \$9,425.00 |
| Nonrecurring Charge | | \$6,500.00 |
| Five year commitment | | |
| Monthly Rate | | \$8,645.00 |
| Nonrecurring Charge | | \$6,500.00 |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.7 Private Line Services (Cont'd)

On-Net Wire Center to another On-Net Wire Center

DS1, Metro to Metro

| | |
|-----------------------|----------|
| One year commitment | |
| Monthly Rate | \$260.00 |
| Nonrecurring Charge | \$500.00 |
| Two year commitment | |
| Monthly Rate | \$208.00 |
| Nonrecurring Charge | \$500.00 |
| Three year commitment | |
| Monthly Rate | \$156.00 |
| Nonrecurring Charge | \$500.00 |
| Five year commitment | |
| Monthly Rate | \$143.00 |
| Nonrecurring Charge | \$500.00 |

DS1, Non-Metro or Metro to Non-Metro

| | |
|-----------------------|----------|
| One year commitment | |
| Monthly Rate | \$585.00 |
| Nonrecurring Charge | \$500.00 |
| Two year commitment | |
| Monthly Rate | \$533.00 |
| Nonrecurring Charge | \$500.00 |
| Three year commitment | |
| Monthly Rate | \$481.00 |
| Nonrecurring Charge | \$500.00 |
| Five year commitment | |
| Monthly Rate | \$429.00 |
| Nonrecurring Charge | \$500.00 |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.7 Private Line Services (Cont'd)

On-Net Wire Center to another On-Net Wire Center (Cont'd)

DS3, Metro to Metro

| | |
|-----------------------|------------|
| One year commitment | |
| Monthly Rate | \$1,725.00 |
| Nonrecurring Charge | \$1,500.00 |
| Two year commitment | |
| Monthly Rate | \$1,338.00 |
| Nonrecurring Charge | \$1,500.00 |
| Three year commitment | |
| Monthly Rate | \$950.00 |
| Nonrecurring Charge | \$1,500.00 |
| Five year commitment | |
| Monthly Rate | \$855.00 |
| Nonrecurring Charge | \$1,500.00 |

DS3, Non-Metro or Metro to Non-Metro

| | |
|-----------------------|------------|
| One year commitment | |
| Monthly Rate | \$4,163.00 |
| Nonrecurring Charge | \$1,500.00 |
| Two year commitment | |
| Monthly Rate | \$3,775.00 |
| Nonrecurring Charge | \$1,500.00 |
| Three year commitment | |
| Monthly Rate | \$3,388.00 |
| Nonrecurring Charge | \$1,500.00 |
| Five year commitment | |
| Monthly Rate | \$3,000.00 |
| Nonrecurring Charge | \$1,500.00 |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.8 RESERVED FOR FUTURE USE

15.9 Competitive and Non-Competitive Counties for Special Access

15.9.1 General

Certain Special Access rates and charges may be applied based on whether the End User Channel Termination is served from a "Competitive County." Competitive Counties are defined in Section 2.6, and the wire centers within such counties are listed in Section 15.9.2 below.

In wire centers within a Competitive County, monthly rates and nonrecurring charges for Special Access rate elements have been detariffed. In wire centers within a Non-Competitive County, monthly rates and nonrecurring charges for Special Access rate elements are covered by tariff and not subject to this Guide.

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.9 Competitive Counties for Special Access (Cont'd)

15.9.2 Competitive County Lists

(A) The following wire centers are in Competitive Counties:

| State | County | Wire Center |
|--------------|---------------|--------------------|
| IA | Cerro Gordo | MSRVIA XO |
| IA | Cerro Gordo | SWDLIA XO |
| IA | Cerro Gordo | THTNIA XO |
| IA | Crawford | CHROIA XO |
| IA | Crawford | DESNIA XO |
| IA | Crawford | DWCYIA XO |
| IA | Ida | BTCKIA XO |
| IA | Ida | HOLSIAXA |
| IA | Ida | IDGVIA XO |
| IA | Lyon | GERGIA XO |
| IA | Osceola | ASTNIA XO |
| IA | Plymouth | BSVLIAXO |
| IA | Plymouth | KGSLIA XO |
| IA | Plymouth | LMRSIA XO |
| IA | Plymouth | STRBIA XO |
| IA | Pottawattamie | CRSNIA XO |
| IA | Pottawattamie | OKLDIAXA |
| IA | Pottawattamie | TRYNIA XO |
| IA | Sac | ERLYIA XO |
| IA | Sac | NEMHIA XO |
| IA | Sac | SCCYIA XO |
| IA | Sioux | ORCYIA XO |
| IA | Taylor | BDFRIA XO |
| IA | Taylor | LENXIA XO |
| IA | Taylor | SHBGIA XO |
| IA | Webster | FTDDIAXC |
| IA | Webster | OTHOIA XO |
| IA | Woodbury | PRSNIA XO |
| IA | Wright | BLMDIA XO |
| IA | Wright | ROWNIA XO |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.9 Competitive Counties for Special Access (Cont'd)

15.9.2 Competitive County Lists (Cont'd)

(A) The following wire centers are in Competitive Counties: (Cont'd)

| State | County | Wire Center |
|--------------|---------------|--------------------|
| MN | Dakota | APVYMNXA |
| MN | Dakota | BRVLMNXA |
| MN | Dakota | FRTNMNXF |
| MN | Dakota | LKVLMNXL |
| MN | Dakota | RSMTMNXR |
| MN | Jackson | LKFDMNXL |
| MN | Jackson | OKBNMNXO |
| MN | Lac qui Parle | DWSNMNXD |
| MN | Lac qui Parle | MDSNMNXM |
| MN | Le Sueur | KLKNMNXX |
| MN | Le Sueur | LECTMNXL |
| MN | Le Sueur | MTGMMNXM |
| MN | Le Sueur | WTVLMNXW |
| MN | Lincoln | IVNHMNXI |
| MN | Lyon | BLATMNXB |
| MN | Lyon | STLEMNXS |
| MN | Martin | CYLMNXXC |
| MN | Martin | ECHNMNXE |
| MN | Martin | FAMTMNXF |
| MN | Martin | NROPMNXXN |
| MN | Martin | SHBNMNXXS |
| MN | Martin | TRMTMNXT |
| MN | Martin | TRMNMNXT |
| MN | Martin | WLCMMNXW |
| MN | Murray | AVOCMNXA |
| MN | Murray | CHNDMNXXC |
| MN | Murray | CURRMNXXC |
| MN | Murray | IONAMNXXI |
| MN | Murray | LKWLMNXXL |
| MN | Murray | SLTNMNXXS |
| MN | Nobles | ADRNMNXXA |
| MN | Nobles | ELWOMNXXE |
| MN | Nobles | ELYSMNXXE |
| MN | Nobles | LEOTMNXXL |
| MN | Nobles | WOTNMNXXW |
| MN | Pipestone | EGTNMNXXE |

ACCESS SERVICE

15. Rates and Charges (Cont'd)

15.9 Competitive Counties for Special Access (Cont'd)

15.9.2 Competitive County Lists (Cont'd)

(A) The following wire centers are in Competitive Counties: (Cont'd)

| State | County | Wire Center |
|--------------|---------------|--------------------|
| MN | Scott | BLLPMNXA |
| MN | Scott | JRDNMNXJ |
| MN | Sibley | ARTNMNXA |
| MN | Sibley | GRISMNXG |
| MN | Sibley | HNSNMNXH |
| MN | Waseca | JNVLMNXJ |
| MN | Watonwan | LWVLMNXL |
| | Yellow | |
| MN | Medicine | CNBYMNXC |
| | Yellow | |
| MN | Medicine | PTERMNXP |

ACCESS SERVICE

16. Grandfathered Services

Grandfathered services are offerings which are limited to existing customers and are not available to new customers. The services listed in this section are shown to be grandfathered or limited to existing service provided to existing customers. Existing service is service that was in place prior to the service being grandfathered. Existing customers are those customers who were already subscribing to a service prior to the service being grandfathered.

New customers are not eligible to subscribe to a grandfathered service. This includes previously grandfathered customers who have for any reason discontinued their grandfathered service.

16.1 DSL Service

This offering applies to services in place as of December 31, 2005, and to additions to each existing service for the same customer at the same location. Rates for these services are listed in Section 16.4.1.

16.1.1 General

Digital Subscriber Line (DSL) service provides high-speed transmission service over loop facilities. The regulations and rates specified herein are in addition to the regulations and rates specified in other sections of this Guide. Frontier offers two forms of DSL Service: ADSL and SDSL.

16.1.2 Responsibility of the Telephone Company

The Telephone Company will provision and maintain DSL service for the customer from the Network Interface Device (NID) to the DSL connection point. The Telephone Company will advise the end user customer of the equipment necessary to support DSL service.

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.1 DSL Service (Cont'd)

16.1.3 Rights of the Telephone Company

The Telephone Company will not provision DSL service if the Telephone Company reasonably determines that (a) it is not technically feasible over existing facilities, or (b) it will cause interference problems with existing services.

Equipment at the Customer Designated Premises must meet Telephone Company specifications.

During the Telephone Company's network maintenance and software update periods, it may be necessary to place the DSL wire center out of service. The Telephone Company reserves the right to temporarily interrupt DSL Service at other times in emergency situations.

16.1.4 DSL Access Port

The DSL Access Port charges are for connection to the ADSL and SDSL Services only. A DSL Access Port will be available at the DSL connection points specified by the Telephone Company. The DSL Access Port is available as a DS1 or DS3 interface. The ISP Customer will generally need to obtain transport from the DSL Access Port to the ISP Customer's location. Such transport may be obtained by ordering services from Section 5 of this Guide for connection to the DSL Access Port. Rates and charges for the DSL Access Port are set forth in Section 16.4.1.

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.2 ADSL Service

This offering applies to services in place as of December 31, 2005, and to additions to such existing service for the same customer at the same location. Rates for these services are listed in Section 16.4.2.

16.2.1 Service Description

This section contains the rules and regulations pertaining to the provision of Asymmetrical Digital Subscriber Line (ADSL) service. ADSL service is an access data technology offering. The Telephone Company currently offers ADSL service at the nominal speed levels of 1.0 Mbps down/128 Kbps up. The "up" speed represents transmission speed from the customer designated premise (CDP) to the Telephone Company's DSL connection point, while the "down" speed represents transmission speed from the Telephone Company's DSL connection point to the CDP. The connection point is the aggregation point designated by the Telephone Company for connecting multiple Telephone Company serving wire centers of DSL terminations to other Telephone Company provided network interface services.

ADSL Service consists of ADSL Channels, which connect a customer designated premise to the DSL connection point; DSL Access Ports, which allow the aggregation of traffic from multiple ADSL Channels onto the same facility; and Permanent Virtual Circuits (PVCs), which define logical connections between ADSL Channels and DSL Ports. While the Telephone Company envisions that ADSL Channels and PVCs will generally be purchased by end users and DSL Access Ports will generally be purchased by Internet Service Providers (ISPs), there is no restriction as to what type of customer may order the various rate elements. Use of the terms "end user customer" to mean the customer purchasing the ADSL Channel and "ISP customer" to mean the customer purchasing the DSL Access port are meant only to clarify rate relationships and are not meant to limit customer choices. Where this service is ordered with a minimum term commitment, the regulations in Section 5.4.8 of this Guide apply to the discontinuance of such service.

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.2 ADSL Service (Cont'd)

16.2.2 ADSL Channel

The ADSL Channel is provisioned over existing Telephone Company copper facilities and transported to the Telephone Company's backbone network. The ADSL Channel provides a connection from the CDP to the DSL connection point. The ADSL Channel does not include the existing copper facilities.

ADSL is available utilizing the same copper facilities as the basic local exchange service, utilizing the same copper facilities as other tariffed facilities, or on a stand-alone basis utilizing separate facilities.

The Telephone Company will qualify the ADSL Service between the CDP and the serving wire center. The purpose of qualification is to determine the availability and suitability of existing Telephone Company copper facilities to provide the service. The Telephone Company will not provision this service on facilities that are not suitable for ADSL. See Section 16.1.3 preceding.

ADSL will be provided subject to the availability and limitation of Telephone Company wire centers and outside plant facilities and is only available where technical capabilities permit. Downstream data rates depend on a number of factors, including but not limited to (1) the distance from the CDP to the serving wire center, (2) the type of loop facility, and (3) the physical plant.

Each customer may select up to three Permanent Virtual Circuits (PVCs) to be associated with the ADSL Channel. Each PVC represents a virtual connection between the ADSL Channel and a DSL Access Port.

The Telephone Company does not undertake to originate data, but offers the use of its service components, where available, to customers for the purpose of transporting customer-originated data.

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.2 ADSL Service (Cont'd)

16.2.3 Responsibility of the Customer

The end user customer is responsible for providing compatible Customer Premises Equipment (CPE) that is used for connection to ADSL service.

The ISP customer is responsible for providing the Telephone Company with the necessary information to provision the DSL Access Port.

The customer ordering ADSL Channel Service on behalf of its subscriber(s) must obtain a letter of agency. The customer will be responsible for obtaining permission from its subscriber(s) for the Telephone Company's agents or employees to enter the customer's designated locations at a reasonable hour for the purpose of installing, inspecting, repairing, or upon termination of the service, removing the service components of the Telephone Company.

16.2.4 Rate Elements

A nonrecurring charge and a monthly rate apply for the installation of ADSL service. A nonrecurring charge is also applicable when making changes, i.e., bandwidth, access provider, or move.

ADSL service is available in service level packages, and is based on the downstream and upstream speeds chosen by the customer. Service level packages are defined by the downstream and upstream speeds. Currently available service level packages are:

| Package | Downstream | Upstream |
|---------------|------------|----------|
| ADSL Class R1 | 256 Kbps | 128 Kbps |
| ADSL Class R2 | 1.0 Mbps | 128 Kbps |
| ADSL Class B1 | 512 Kbps | 256 Kbps |
| ADSL Class B2 | 1.0 Mbps | 512 Kbps |
| ADSL Class B3 | 2.0 Mbps | 512 Kbps |

Data speeds set forth above are peak speeds. Actual speeds may be affected by loop distance and other factors, and are not guaranteed. Where technically feasible, the Telephone Company may, at its sole discretion, support speeds in excess of the nominal peak speed.

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.3 SDSL Service

This offering applies to services in place as of December 31, 2005, and to additions to such existing service for the same customer at the same location. Rates for these services are listed in Section 16.4.3.

16.3.1 Service Description

This section contains the rules and regulations pertaining to the provision of Symmetrical Digital Subscriber Line (SDSL) service. SDSL service is an access data technology offering. The Telephone Company offers SDSL service, where available, at the nominal speed levels of 144 Kbps, 256 Kbps, 512 Kbps, 768 Kbps, 1.024 Mbps and 1.544 Mbps. These speeds represent transmission between the customer designated premise (CDP) and the Telephone Company's DSL connection point, with transmission speeds being the same in both directions. The connection point is the aggregation point designated by the Telephone Company for connecting multiple Telephone Company serving wire centers of SDSL terminations to other Telephone Company provided network interface services.

SDSL Service consists of SDSL Channels, which connect a customer designated premises to the DSL connection point; DSL Access Ports, described in Section 16.1.4 of this Tariff; and Permanent Virtual Circuits (PVCs), which define logical connections between SDSL Channels and DSL Ports or between SDSL Channels.

Where a service is ordered with a minimum term commitment, the regulations in Section 5.4.8 of this Guide apply to the discontinuation of such service.

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.3 SDSL Service (Cont'd)

16.3.2 SDSL Channel

The SDSL Channel is provisioned over Telephone Company copper facilities and transported to the Telephone Company's backbone network. The SDSL Channel provides a connection from the CDP to the SDSL connection point. Each SDSL Channel requires that copper facilities between the CDP and the Wire Center serving the CDP be dedicated to the SDSL service. The SDSL Channel does not share copper facilities with basic local exchange service.

The Telephone Company will qualify the SDSL Service between the CDP and the serving wire center. The purpose of qualification is to determine the availability and suitability of existing Telephone Company copper facilities to provide the service. The Telephone Company will not provision this service on facilities that are not suitable for SDSL. See Section 16.1.3 preceding.

SDSL will be provided subject to the availability and limitation of Telephone Company wire centers and outside plant facilities and is only available where technical capabilities permit. Data rates depend on a number of factors, including but not limited to (1) the distance from the CDP to the serving wire center, (2) the type of loop facility, and (3) the physical plant.

Each customer must select one Permanent Virtual Circuit (PVC) to be associated with the SDSL Channel. The PVC represents a virtual connection between the SDSL Channel and a DSL Access Port, or between two SDSL Channels of the same nominal speed. No more than one PVC may be associated with each SDSL Channel.

The Telephone Company does not undertake to originate data, but offers the use of its service components, where available, to customers for the purpose of transporting customer-originated data.

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.3 SDSL Service (Cont'd)

16.3.3 Responsibility of the Customer

The customer is responsible for providing compatible Customer Premises Equipment (CPE) that is used for connection to SDSL service. When a customer reports a trouble to the Telephone Company for clearance and Telephone Company personnel are dispatched to the customer's designated premises but no trouble is found in the Telephone Company's facilities or equipment, the customer shall be responsible for payment of a Maintenance of Service Charge as set forth in 16.4.3 following. Failure of Telephone Company Personnel to find trouble in Telephone Company facilities and equipment will result in no charge if the trouble is actually in those facilities or equipment but was not discovered at the time. The customer will be responsible for payment of a Maintenance of Service charge when the Telephone Company dispatches personnel and the trouble is in equipment or communications systems provided by parties other than the Telephone Company, or in detariffed CPE provided by the Telephone Company.

The customer ordering SDSL Channel Service on behalf of its subscriber(s) must obtain a letter of agency. The customer will be responsible for obtaining permission from its subscriber(s) for the Telephone Company's agents or employees to enter the customer's designated locations at a reasonable hour for the purpose of installing, inspecting, repairing, or, upon termination of the service, removing the service components of the Telephone Company.

16.3.4 Rate Regulations

The SDSL Channel rate element is available on a month to month basis, or at lower monthly rates with minimum term commitments. A customer purchasing multiple SDSL channels may be eligible for lower rates based on the volume billed. The following conditions apply to volume discounts:

At the time the Telephone Company processes the customer's bill, the number of SDSL Channels associated with the customer's account at each customer premise will be determined. All qualifying SDSL Channels will be billed at the rate appropriate for the volume of channels on the customer's bill at each customer premise. An SDSL Channel considered "on the bill" if it is in service on the bill date.

All SDSL channels provided at speeds of 144 Kbps, 256 Kbps, 512 Kbps, 768 Kbps, 1.024 Mbps, and 1.544 Mbps on a single bill and at a given customer premise will qualify for inclusion in the volume discount.

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.3 SDSL Service (Cont'd)

16.3.5 Rate Elements

Monthly recurring charges apply for SDSL service, and nonrecurring charges apply to installation or move of the service. A nonrecurring charge is also applicable when changing a service from one data rate to another or when changing the Permanent Virtual Circuit (e.g., changing ISPs). The rates and charges for SDSL Service can be found in Section 16.4.3.

SDSL service is available in service level packages, and is based on the data transmission speeds chosen by the customer. Service level packages are defined by the data transmission speeds. Currently available service level packages are:

- SDSL Channel, 144 Kbps
- SDSL Channel, 256 Kbps
- SDSL Channel, 512 Kbps
- SDSL Channel, 768 Kbps
- SDSL Channel, 1.024 Mbps
- SDSL Channel, 1.544 Mbps

Data speeds set forth above are peak speeds. Actual speeds may be affected.

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.4 Rates and Charges

16.4.1 DSL, Competitive Counties

| | | |
|----------------------|--|------------|
| DS1 Port, per port | | |
| Monthly rate | | \$350.00 |
| Non-Recurring Charge | | \$250.00 |
| DS3 Port, per port | | |
| Monthly rate | | \$1,700.00 |
| Non-Recurring Charge | | \$680.00 |

16.4.2 ADSL, Competitive Counties

| | | |
|----------------------|--|---------|
| ADSL Class R1 | | |
| Minnesota | | |
| Monthly rate | | \$19.95 |
| Non-Recurring Charge | | \$0.00 |
| Iowa | | |
| Monthly rate | | \$19.95 |
| Non-Recurring Charge | | \$0.00 |
| ADSL Class R2 | | |
| Minnesota | | |
| Monthly rate | | \$29.95 |
| Non-Recurring Charge | | \$0.00 |
| Iowa | | |
| Monthly rate | | \$29.95 |
| Non-Recurring Charge | | \$0.00 |

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.4 Rates and Charges (Cont'd)

16.4.2 ADSL, Competitive Counties (Cont'd)

ADSL Class B1

| | |
|----------------------------|---------|
| Month to Month, Minnesota | |
| Monthly rate | \$75.00 |
| Non-Recurring Charge | \$0.00 |
| Month to Month, Iowa | |
| Monthly rate | \$75.00 |
| Non-Recurring Charge | \$0.00 |
| One Year Plan, Minnesota | |
| Monthly rate | \$63.00 |
| Non-Recurring Charge | \$0.00 |
| One Year Plan, Iowa | |
| Monthly rate | \$63.00 |
| Non-Recurring Charge | \$0.00 |
| Two Year Plan, Minnesota | |
| Monthly rate | \$59.00 |
| Non-Recurring Charge | \$0.00 |
| Two Year Plan, Iowa | |
| Monthly rate | \$59.00 |
| Non-Recurring Charge | \$0.00 |
| Three Year Plan, Minnesota | |
| Monthly rate | \$55.00 |
| Non-Recurring Charge | \$0.00 |
| Three Year Plan, Iowa | |
| Monthly rate | \$55.00 |
| Non-Recurring Charge | \$0.00 |

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.4 Rates and Charges (Cont'd)

16.4.2 ADSL, Competitive Counties (Cont'd)

ADSL Class B2

| | |
|----------------------------|----------|
| Month to Month, Minnesota | |
| Monthly rate | \$130.00 |
| Non-Recurring Charge | \$0.00 |
| Month to Month, Iowa | |
| Monthly rate | \$130.00 |
| Non-Recurring Charge | \$0.00 |
| One Year Plan, Minnesota | |
| Monthly rate | \$110.00 |
| Non-Recurring Charge | \$0.00 |
| One Year Plan, Iowa | |
| Monthly rate | \$110.00 |
| Non-Recurring Charge | \$0.00 |
| Two Year Plan, Minnesota | |
| Monthly rate | \$103.00 |
| Non-Recurring Charge | \$0.00 |
| Two Year Plan, Iowa | |
| Monthly rate | \$103.00 |
| Non-Recurring Charge | \$0.00 |
| Three Year Plan, Minnesota | |
| Monthly rate | \$96.00 |
| Non-Recurring Charge | \$0.00 |
| Three Year Plan, Iowa | |
| Monthly rate | \$96.00 |
| Non-Recurring Charge | \$0.00 |

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.4 Rates and Charges (Cont'd)

16.4.2 ADSL, Competitive Counties (Cont'd)

ADSL Class B3

| | |
|----------------------------|----------|
| Month to Month, Minnesota | |
| Monthly rate | \$205.00 |
| Non-Recurring Charge | \$0.00 |
| Month to Month, Iowa | |
| Monthly rate | \$205.00 |
| Non-Recurring Charge | \$0.00 |
| One Year Plan, Minnesota | |
| Monthly rate | \$174.00 |
| Non-Recurring Charge | \$0.00 |
| One Year Plan, Iowa | |
| Monthly rate | \$174.00 |
| Non-Recurring Charge | \$0.00 |
| Two Year Plan, Minnesota | |
| Monthly rate | \$163.00 |
| Non-Recurring Charge | \$0.00 |
| Two Year Plan, Iowa | |
| Monthly rate | \$163.00 |
| Non-Recurring Charge | \$0.00 |
| Three Year Plan, Minnesota | |
| Monthly rate | \$153.00 |
| Non-Recurring Charge | \$0.00 |
| Three Year Plan, Iowa | |
| Monthly rate | \$153.00 |
| Non-Recurring Charge | \$0.00 |

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.4 Rates and Charges (Cont'd)

16.4.3 SDSL, Competitive Counties

SDSL Channel, Month to Month

| | | |
|------------|---------------------|----------|
| 144 Kbps | Monthly Rate | \$75.00 |
| | Nonrecurring Charge | \$299.00 |
| 256 Kbps | Monthly Rate | \$105.00 |
| | Nonrecurring Charge | \$299.00 |
| 512 Kbps | Monthly Rate | \$150.00 |
| | Nonrecurring Charge | \$299.00 |
| 768 Kbps | Monthly Rate | \$220.00 |
| | Nonrecurring Charge | \$299.00 |
| 1.024 Mbps | Monthly Rate | \$245.00 |
| | Nonrecurring Charge | \$299.00 |
| 1.544 Mbps | Monthly Rate | \$295.00 |
| | Nonrecurring Charge | \$299.00 |

SDSL Channel, 12 month plan

| | | |
|------------|---------------------|----------|
| 144 Kbps | Monthly Rate | \$65.00 |
| | Nonrecurring Charge | \$299.00 |
| 256 Kbps | Monthly Rate | \$90.00 |
| | Nonrecurring Charge | \$299.00 |
| 512 Kbps | Monthly Rate | \$130.00 |
| | Nonrecurring Charge | \$299.00 |
| 768 Kbps | Monthly Rate | \$190.00 |
| | Nonrecurring Charge | \$299.00 |
| 1.024 Mbps | Monthly Rate | \$220.00 |
| | Nonrecurring Charge | \$299.00 |
| 1.544 Mbps | Monthly Rate | \$260.00 |
| | Nonrecurring Charge | \$299.00 |

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.4 Rates and Charges (Cont'd)

16.4.3 SDSL, Competitive Counties (Cont'd)

SDSL Channel, 24 month plan

144 Kbps

Monthly Rate \$60.00

Nonrecurring Charge \$199.00

256 Kbps

Monthly Rate \$80.00

Nonrecurring Charge \$199.00

512 Kbps

Monthly Rate \$120.00

Nonrecurring Charge \$199.00

768 Kbps

Monthly Rate \$175.00

Nonrecurring Charge \$199.00

1.024 Mbps

Monthly Rate \$200.00

Nonrecurring Charge \$199.00

1.544 Mbps

Monthly Rate \$230.00

Nonrecurring Charge \$199.00

SDSL Channel, 36 month plan

144 Kbps

Monthly Rate \$50.00

Nonrecurring Charge \$0.00

256 Kbps

Monthly Rate \$70.00

Nonrecurring Charge \$0.00

512 Kbps

Monthly Rate \$115.00

Nonrecurring Charge \$0.00

768 Kbps

Monthly Rate \$160.00

Nonrecurring Charge \$0.00

1.024 Mbps

Monthly Rate \$190.00

Nonrecurring Charge \$0.00

1.544 Mbps

Monthly Rate \$215.00

Nonrecurring Charge \$0.00

ACCESS SERVICE

16. Grandfathered Services (Cont'd)

16.4 Rates and Charges (Cont'd)

16.4.3 SDSL, Competitive Counties (Cont'd)

| | |
|--|----------|
| SDSL Channel, all terms & quantities: Change of PVC | \$100.00 |
| Maintenance of Service Charge - per tech dispatched when no trouble is found in Telephone Company facilities or equipment | \$95.00 |
| Volume Discount for SDSL Channels - 3 to 5 channels per premise | 10% |
| - 6 or more channels per premise | 15% |

DISCLAIMER: THIS DOCUMENTATION IS FOR INFORMATIONAL PURPOSES ONLY AND DOES NOT OBLIGATE FRONTIER TO PROVIDE SERVICES IN THE MANNER DESCRIBED IN THIS DOCUMENT. FRONTIER RESERVES THE RIGHT AS ITS SOLE OPTION TO MODIFY OR REVISE THE INFORMATION IN THIS DOCUMENT AT ANY TIME WITHOUT PRIOR NOTICE. IN NO EVENT SHALL FRONTIER OR ITS AGENTS, EMPLOYEES, DIRECTORS, OFFICERS, REPRESENTATIVES OR SUPPLIERS BE LIABLE UNDER CONTRACT, WARRANTY, TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE OF FRONTIER), OR ANY OTHER LEGAL THEORY, FOR ANY DAMAGES ARISING FROM OR RELATING TO THIS DOCUMENT OR ITS CONTENTS, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.