
ACCESS SERVICE

7. Special Access Service++ (T)

7.1 General

Special Access Service provides a channel, or transmission path, to connect two or more customer premises⁽¹⁾ or to connect a customer premises to a Wide Area Telephone Service (WATS) serving office or Telephone Company location where multiplexing functions are performed.

7.2 Service Types

For purposes of ordering, Special Access Services have been categorized by type. The categories are not intended to limit a customer's use of a service, nor to imply that a service is limited to a particular use, e.g., if a customer's equipment is capable of transmitting voice over a Metallic Service, there is no restriction against such use⁽²⁾.

The various types of Special Access Services can be further differentiated according to technical parameters which define the technical characteristics of each service. Customers can order Special Access Services in accordance with predefined technical specifications packages which are described in the appropriate technical reference publication(s) for the service ordered. In addition, customers may request a custom technical specifications package in association with certain services to meet specific transmission requirements. The Telephone Company will provide customer packages subject to technical feasibility and compatibility. Additional Engineering Charges, as set forth in Sec. 8, may be required in association with a request for such services.

⁽¹⁾ For the purpose of administering the rates and regulations associated with the provision of Special Access Service, Telephone Company Centrex CO-like Switches, and Telephone Company Answering Service Concentrators are considered to be customer premises.

⁽²⁾ A customer may use a service in any privately beneficial manner. Upon request, the Telephone Company will arrange service under this tariff such that the customer can select different types of transmission at different times, which is referred to Alternate Use. Rates, charges and regulations for such arrangements will be handled on an individual case basis under Section 12 and will apply in addition to those for the service(s) ordered.

++ Pursuant to FCC 17-43, released April 28, 2017, Frontier has detariffed (1) TDM channel terminations for wire centers in competitive counties; (2) TDM transport charges and optional features; and (3) packet-based services. Terms and Conditions for detariffed services can be found in the Interstate Service Guide and Pricelist. (C)

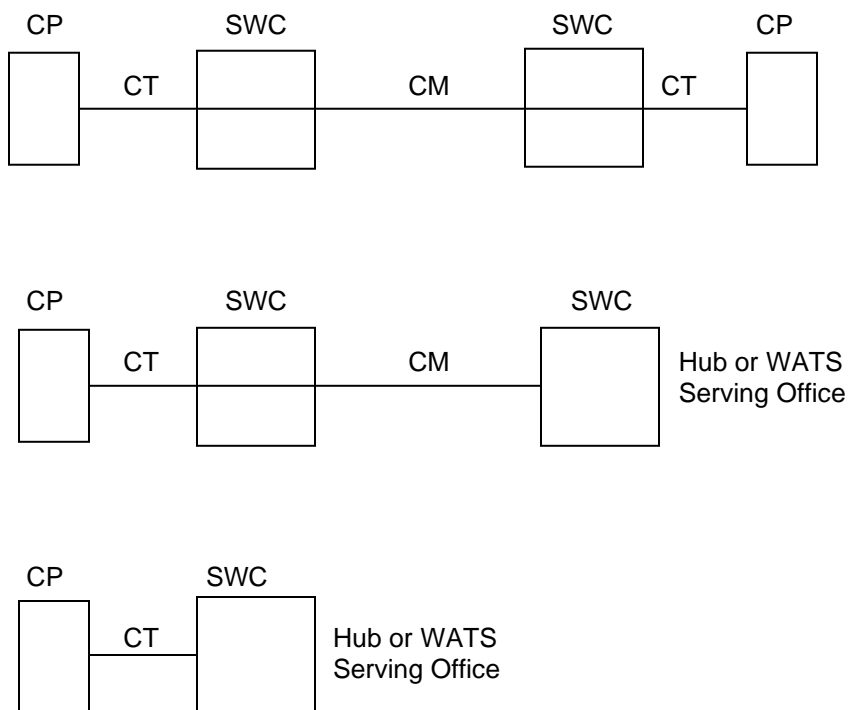
ACCESS SERVICE

7. Special Access Service (Cont'd)7.3 Special Access Service Configuration and Arrangements7.3.1 Two-Point Service

A two-point Special Access Service connects:

- (A) two customer premises;
- (B) a customer premises and a Telephone Company Hub location where bridging and/or multiplexing functions are performed; or
- (C) a customer premises and a WATS Serving Office, either on a directly connected basis or through a Hub.

Example:



Legend: CM - Channel Mileage CT - Channel Termination
CP - Customer Premises SWC - Serving Wire Center

ACCESS SERVICE

7. Special Access Service (Cont'd)7.3 Special Access Service Configuration and Arrangements (Cont'd)7.3.2 Multipoint Service

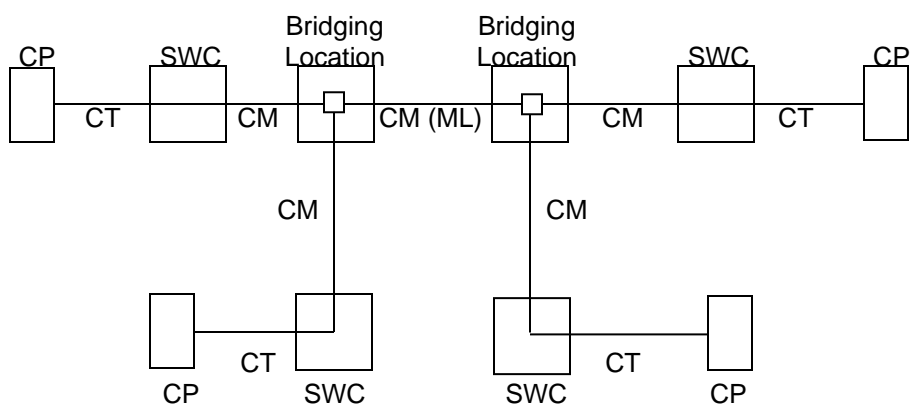
A customer has the option of ordering certain Special Access services, as designated in separate subsections which follow, to a bridging location to connect three or more customer premises in a multipoint arrangement. When ordering bridging, the customer must specify the desired bridging location(s), as set forth in National Exchange Carrier Association, Inc. Tariff F.C.C. No. 4.

When Hubs are involved, mileage is computed and rates are applied separately for each section of the Channel Mileage. However, when any service is routed through a Hub for purposes other than customer specified bridging or multiplexing, e.g., the Telephone Company routes a service via a Hub location for test access purposes, rates will be applied only to the distance calculated between the SWCs associated with the customer premises.

Channels are connected to a bridging arrangement through what is referred to as a port. A channel between bridging locations is referred to as a mid-link.

Although there is no limitation on the number of mid-links available with multipoint service, when more than three mid-links are provided in tandem, the quality of the service may be degraded.

Example:



Legend: □ - Bridging Function
 CM - Channel Mileage
 CP - Customer Premises
 CT - Channel Termination
 ML - Mid-link
 SWC - Serving Wire Center

In this example, rates for four channel terminations, five sections of channel mileage and six bridging ports would apply.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.3 Special Access Service Configuration and Arrangements (Cont'd)7.3.3 Video and Program Audio Hubs

The Telephone Company will designate certain Telephone Company locations as Program Audio and Video Hubs. A customer may order service(s) between customer premises and such Hubs, as set forth in National Exchange Carrier Association, Inc. Tariff F.C.C. No. 4. At the request of the customer, these services may be connected together at the Hub location to form an end-to-end service between customer premises.

7.3.4 Central Office Multiplexing

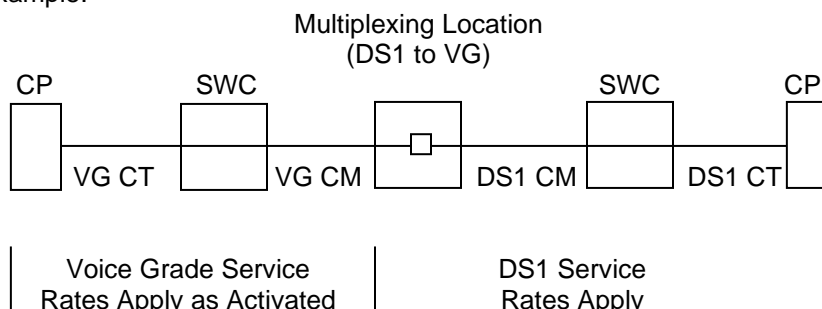
A customer has the option of ordering certain Special Access services to a Telephone Company multiplexing location to derive individual lower capacity channels. Descriptions of the types of multiplexing available and the number of individual channels which may be derived from each type of service may be found in separate subsections which follow. When ordering multiplexing, the customer must specify the desired multiplexing location(s), as set forth in National Exchange Carrier Association, Inc. Tariff F.C.C. No. 4. Billing for the higher capacity service to the multiplexing location and the multiplexing function commences on the date specified by the customer on the Access Order.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.3 Special Access Service Configuration and Arrangements (Cont'd)7.3.4 Central Office Multiplexing (Cont'd)(A) Derived Channel Activation

Channels derived from multiplexing a higher capacity service may be utilized to provide end-to-end services. The customer activates and/or extends the derived channels by placing an order which includes the individual connecting facility assignment associated with the higher capacity service for each end-to-end service. Such services may be installed initially, or they may be ordered and installed at a later date, at the option of the customer. As individual lower capacity services are installed, rates and charges will be billed. At the option of the customer, these services may include optional features and functions.

Example:



Legend:

CM - Channel Mileage
CP - Customer Premises
CT - Channel Termination

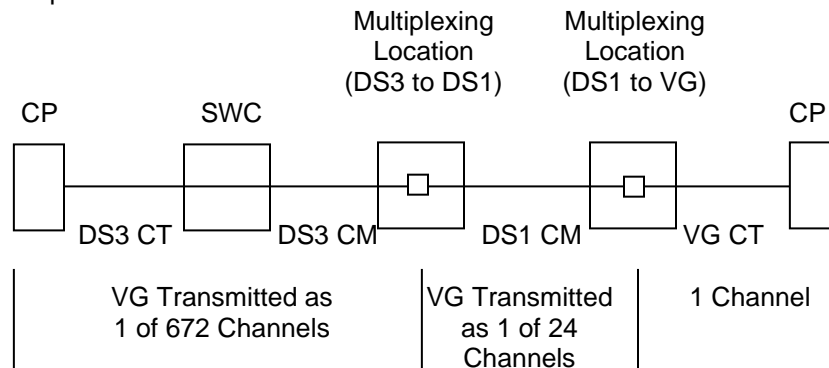
□ - Multiplexing Function
SWC - Serving Wire Center
DS1 - 1.544 Mbps High Capacity

ACCESS SERVICE

7. Special Access Service (Cont'd)7.3 Special Access Service Configuration and Arrangements (Cont'd)7.3.4 Central Office Multiplexing (Cont'd)(B) Cascade Multiplexing

When a derived channel of a High Capacity Service is itself multiplexed to derive additional channels with a lesser capacity, this is referred to as cascade multiplexing. When cascading is ordered, a charge for the additional multiplexing function applies. When cascade multiplexing is performed at a different multiplexing location, as depicted in the example which follows, Channel Mileage charges apply between the multiplexing locations.

Example:



Legend:

CM - Channel Mileage CP - Customer Premises CT - Channel Termination VG - Voice Grade Service	<div style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; margin-right: 5px;"></div> - Multiplexing Function SWC - Serving Wire Center DS1 - 1.544 Mbps High Capacity DS3 - 44.736 Mbps High Capacity
--	---

ACCESS SERVICE

7. Special Access Service (Cont'd)7.3 Special Access Service Configuration and Arrangements (Cont'd)7.3.4 Central Office Multiplexing (Cont'd)(C) Shared Use (Derived Channels Used for Switched and Special Access)

Shared Use refers to a rate application applicable only when the customer orders High Capacity Special Access facilities between a customer designated premises and a Telephone Company hub where the Telephone Company performs multiplexing/de-multiplexing functions and the same customer then orders the derived channels as Special and Switched Access Services. If the customer has Switched Access Service between a customer designated premises and an end office that is multiplexed at a Telephone Company hub and subsequently orders the derived channels as Special and Switched Access Service, rates and charges will apply as if the service were ordered as shared use.

Shared use of Special Access Cross Connect and Expanded Interconnection service are not available.

Except as noted above, the High Capacity facility will be ordered, provided and rated as Special Access Service (i.e., Channel Termination, Channel Mileage, as appropriate, and Multiplexing Arrangement). The nonrecurring charge that applies when the shared use facility is installed will be the nonrecurring charge associated with the appropriate Special Access High Capacity Channel Termination. Rating as Special Access will continue until such time as the customer chooses to use a portion of the available capacity for Switched Access Service. Individual service (i.e., Switched or Special Access) nonrecurring charges will not apply to the individual channels of the shared use facility.

When Special Access Service is provided utilizing a channel of the shared use facility to a hub, High Capacity rates and charges will apply for the facility to the hub, as set forth preceding, and individual service rates and charges will apply from the hub to the customer designated premises. The rates and charges that will apply to the portion from the hub to the customer designated premises will be dependent on the specific type of Special Access Service that is provided. The applicable rates and charges will include a Channel Termination and Channel Mileage, if applicable. Rates and charges for optional features and functions associated with the service, if any, will apply for the appropriate channel type

(T)

(T)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.3 Special Access Service Configuration and Arrangements (Cont'd)7.3.4 Central Office Multiplexing (Cont'd)(C) Shared Use (Derived Channels Used for Switched and Special Access) (Cont'd)

As each individual channel is activated for Switched Access Service, the High Capacity Special Access Channel Termination, Channel Mileage, and Multiplexing rates will be reduced accordingly (e.g., 1/24th for a DS1 service, etc.). Switched Access Service rates and charges, as set forth in Section 20 following, will apply for each channel that is used to provide a Switched Access Service. Additionally, the Switched Access Service Entrance Facility, Direct Trunked Transport, and Multiplexing charges, if applicable, will be reduced by multiplying their respective rates by the ratio of derived Switched Access Service channels to the total number of Voice Grade channels that can be derived.

The customer must place an order for each individual Switched or Special Access Services utilizing the Shared Use Facilities and specify the channel assignment for each such service.

(T)

(T)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.4 Special Access Service Rate Categories

The following rate categories apply to Special Access Services:

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

Effective November 16, 2017, Competitive Counties and Non-Competitive Counties have been established and are defined in Section 2.13 and the wire centers within such counties are listed in Section 23.1.3 and 23.1.4.

For all rate elements other than End User channel terminations, price flex rates and charges, as provided in the Interstate Service Guide and Pricelist, apply, regardless of whether the county is Competitive or Non-Competitive. (C)
(C)

For End User channel terminations, the application of "price cap" or "price flex" is dependent upon whether or not the serving wire center is located in a Competitive County. If the End User channel termination is in a Competitive County, price flex rates and charges apply, as provided in the Interstate Service Guide and Pricelist. If the End User channel termination is in a Non-Competitive County, price cap rates and charge apply, as provided in Section 7. (C)
(T)

7.4.1 Standard Channel Termination

A Standard Channel Termination provides for the transmission facilities between a customer premises and the serving wire center of that premises. One Channel Termination charge applies per customer premises at which the Special Access Service is terminated. This charge applies even if the customer premises and the serving wire center are colocated in a Telephone Company building, e.g., Centrex CO type switch.

A Standard Channel Termination includes a standard network channel interface arrangement based on the technical characteristics of the Telephone Company facilities at the point of termination and the type of signaling capability, which, if required, is provided as an optional feature.

The Standard Channel Termination rate will apply for all Telephone Company Access Connections except High Capacity Services utilizing an Expanded Interconnection Arrangement. A Standard Channel Termination monthly rate will apply even when the customer designated premises and the serving wire center are located in the same Telephone Company building unless the customer establishes an Expanded Interconnection Arrangement, in which case the Cross-Connect Termination monthly rate will apply as specified in Section 18 following.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.4 Special Access Service Rate Categories

The following rate categories apply to Special Access Services:

(M)

7.4.2 Channel Mileage

Channel Mileage provides for the transmission facilities between:

- (A) the serving wire centers (SWCs) associated with two customer premises;
- (B) a SWC associated with a customer premises and a Telephone Company Hub location;
- (C) a SWC associated with a customer premises and a WATS serving office;
- (D) two Telephone Company Hub locations.

Channel Mileage rates apply according to mileage bands, with two monthly rates applying for each band, i.e., a fixed (flat) rate plus a per mile rate.

(M)

Material on this page previously appeared on Page 7-9.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.4 Special Access Service Rate Categories (Cont'd)7.4.2.1 Collocation Transport

Collocation Transport provides for the transmission facilities between collocation arrangements located in Telephone Company Central Offices.

There are two components of Collocation Transport.

(1) Inter/Intra Office Fixed

Inter/Intra office fixed rate element provides for the electronic equipment required to terminate a channel between two collocation arrangements located either in the same central office (intra) or in two separate central offices (inter).

When the DS1 Intra Office Fixed channel is ordered between two collocation arrangements that are for the same collocator, it will be provisioned as a temporary arrangement and will be in service until the collocator's own facilities are installed, not to exceed 150 days. There is no additional charge to disconnect these temporary facilities.

(2) Inter Office Per Mile

The Per Mile charge provides for the electronic equipment and facilities necessary to provide the interoffice transport between two collocation arrangements.

7.4.3 Optional Features and Functions

Optional features and functions may be ordered to improve the quality or utility of a Special Access Service to meet specific communications requirements. These features and functions are not necessarily identifiable with specific equipment; rather, they represent the overall performance characteristics which may be obtained using various combinations of equipment. Although the equipment necessary to perform a specified function may be installed at various locations on the facility, each optional feature and/or function is charged for as a single rate element.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.4 Special Access Service Rate Categories (Cont'd)7.4.4 Special Access Surcharge

The Special Access Surcharge compensates the Telephone Company for use of the local exchange network when Special Access Service is connected to a PBX or equivalent device which is capable of interconnecting the Special Access Service with Telephone Exchange Service.

The Telephone Company will automatically bill the surcharge to the customer who orders each Special Access Service, regardless of whether the interconnection capability exists in the customer's equipment or in a Centrex CO type switch, unless written certification is received from the customer certifying exemption status as set forth following.

(A) Surcharge Exemptions

A Special Access Service will be exempt from the surcharge if the customer provides the Telephone Company written certification that the Special Access Service termination is in one of the following categories:

- (1) an open-end termination in a Telephone Company switch of an FX line, including CCSA and CCSA-type ONALS;
- (2) an analog channel termination that is used for radio or television transmission;
- (3) a termination used for TELEX service;
- (4) a termination that, by the characteristics of its operating nature, could not make use of Telephone Exchange Service;
- (5) a termination that interconnects, either directly or indirectly, to the local exchange network where the usage is subject to Carrier Common Line charges, e.g., 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 (inter-machine trunks); or
- (6) a termination that the customer certifies is not connected to a PBX or other device capable of interconnecting the Special Access Service to Telephone Exchange Service.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.4 Special Access Service Rate Categories (Cont'd)7.4.4 Special Access Surcharge (Cont'd)(B) Surcharge Exemption Certification

Special Access Services which are terminated as set forth in A. preceding will be exempt from the Surcharge if the customer provides the Telephone Company with a written notification certifying exemption. Such notification shall be provided by the customer (1) at the time the Special Access Service is provided; (2) at such time as the Special Access Service is reterminated in a device not capable of interconnecting to Telephone Exchange Service or (3) at such time as the Special Access Service becomes associated with a Switched Access Service that is subject to Carrier Common Line charges.

If written certification is not received at the time Special Access Service is provided, the surcharge will be applied. Subsequent exemption status will become effective on the certification date indicated by the customer, subject to the regulations in (C) following.

The written certification (1) is to be provided by the customer ordering the service; (2) must be signed by the customer or authorized representative; and (3) must include the category of exemption and the date which the exemption is effective for each termination.

The customer shall also notify the Telephone Company when a Special Access Service with a surcharge exemption is changed or reterminated in such a manner that the exemption is no longer applicable.

(C) Crediting the Surcharge

The Telephone Company will cease billing the Surcharge subject to the receipt of exemption certification. If the status of a Special Access Service was changed prior to the date the exemption certification was received, the Telephone Company will credit the customer's account. Such credit will not exceed ninety (90) days based on the effective date of the change specified in the customer's written certification.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.4 Special Access Service Rate Categories (Cont'd)7.4.4 Special Access Surcharge (Cont'd)(D) Surcharge Monthly Rate Monthly Rate

Special Access Surcharge
- Per surcharge assessed \$25.00

(E) Application of Surcharge

The Surcharge applies on a per voice grade, or voice grade equivalent, basis.

Example:

Special Access Service	Voice Grade or Equivalents		Monthly Charge
Voice Grade	1	1 x \$25 =	\$25.00
DS1	24	24 x \$25 =	\$600.00
DS3	672	672 x \$25 =	\$16,800.00

ACCESS SERVICE

7. Special Access Service (Cont'd)7.5 Special Access Service Description Summaries

There are two sets of identifying codes associated with each service type:

- (A) a three or four position alpha/numeric code set referred to as a Service Designator (SD) and
- (B) a four position code set referred to as a Network Channel (NC) Code. The first two alpha characters are directly related to the Service Designator code, while the remaining positions refer to optional features.

A brief description of each Special Access Service type is set forth in the following table. More detailed information regarding these services may be found in separate subsections which follow and in the appropriate technical reference publication(s) for the service ordered.

<u>Service Type</u> <u>SDs/NCs</u>	<u>Description</u>	<u>Technical</u> <u>Reference</u> <u>Publications</u>
<u>Voice Grade</u> VG1/LB VG8/LJ VG2/LC VG9/LK VG3/LD VG10/LN VG4/LE VG11/LP VG5/LF VG12/LR VG6/LG VGC/LQ VG7/LH	A channel for the transmission of analog signals in the nominal frequency range of 300 to 3000 hz.	TR-TSY-000335 PUB 41004, Table 4
<u>WATS Access Line</u> WAL/SE WAL/SF	A channel for the transmission of analog signals in the nominal frequency range of 300 to 3000 Hz between a customer premises and a WATS serving office for 800 service, WATS, or similar services.	TR-NWT-000334
<u>Program Audio</u> AP1/PE AP2/PF AP3/PJ AP4/PK APC/PQ	A channel for the transmission of complex audio signals suitable for broadcast. The nominal frequency bandwidths are from: - 200 to 3500 Hz (AP1) - 100 to 5000 Hz (AP2) - 50 to 8000 Hz (AP3) - 50 to 15000 Hz (AP4)	TR-NPL-000337

ACCESS SERVICE

7. Special Access Service (Cont'd)7.5 Special Access Service Description Summaries (Cont'd)

<u>Service Type</u> <u>SDs/NCs</u>	<u>Description</u>	<u>Technical</u> <u>Reference</u> <u>Publications</u>
<u>Video</u> TV1/TV TV2/TW TVC/TQ	A channel for the transmission of a standard 525 line/60 field monochrome or National Television Systems Committee signal and one to four associated 5, 15, or 20 kHz audio signals.	TR-TSV-000338
<u>Digital Data</u> DA1/XA DA2/XB DA3/XG DA4/XH DA6/XD	A channel for the digital transmission of synchronous serial data at bit rates of: 2.4 kbps (DA1) 4.8 kbps (DA2) 9.6 kbps (DA3) 56.0 kbps (DA4) 64.0 kbps (DA6)	TR-NPL-000341
<u>High Capacity</u> HC1/HC HC1C/HD HC2/HE HC3/HF	A channel for the transmission of isochronous serial data at bit rates of: - 1.544 Mbps – 24 equivalent voice grade channels (HC1, also referred to as DS1) - 3.152 Mbps – equivalent to two DS1 channels (HC1C, also referred to as DS1C) - 6,312 Mbps – equivalent to four DS1 channels (HC2, also referred to as DS2) - 44.736 Mbps – equivalent to 28 DS1 channels	PUB 62411 GR-342-CORE

ACCESS SERVICE

7. Special Access Service (Cont'd)7.6 Special Access Service Network Channel Interface (NCI) Code Information7.6.1 General

When ordering service, the customer must specify network channel interface (NCI) codes which relate to the desired electrical interface characteristics of a Special Access Service at the points of termination. The NCI codes which are available at the point of termination are set forth according to service type in separate subsections which follow.

An NCI code may occupy up to a maximum of twelve filed positions, including periods which are used as delimiters. Depending on the type of service, an NCI code may contain up to five components, as shown in the following example and narrative:

<u>04</u>	<u>GS</u>	<u>2</u>	<u>C</u>	<u>ZA</u>
A	B	C	D	E

- | | | |
|---|--------------------|---|
| A | - <u>Wires</u> | two digits which indicate the number of physical conductors which traverse the point of termination, e.g. "04" signifies four-wire; |
| B | - <u>Signaling</u> | two alpha characters which identify the signaling and/or transmission characteristics of the interface, e.g., "GS" specifies a Voice Grade Service with ground start loop signaling; |
| C | - <u>Impedance</u> | a single digit entry which specifies the nominal reference impedance with which the service will be terminated for the purpose of evaluating transmission performance, e.g., "2" signifies 600 ohms; |
| D | - <u>Options</u> | up to three alpha/numeric characters which provide a more specific definition of the technical capability of a specific interface, e.g., a "C", combined with the "GS" preceding indicates a Centrex Foreign Exchange termination; and |
| E | - <u>Levels</u> | for certain services, alpha/numeric positions are used to indicate transmit and receive transmission level information, e.g., "Z" indicates that the signal level received at the point of termination from the Telephone Company will be +7.0 dB; and "A" indicates that the signal level to be transmitted to the Telephone Company will be -16.0 dB. |

ACCESS SERVICE

7. Special Access Service (Cont'd)7.6 Special Access Service Network Channel Interface (NCI) Code Information (Cont'd)7.6.2 Network Channel Interface Code Translation Information

A summary of the information required to translate NCI codes is included, by service type, in separate subsections which follow, with the exception of the following transmission level information which is common to more than one service:

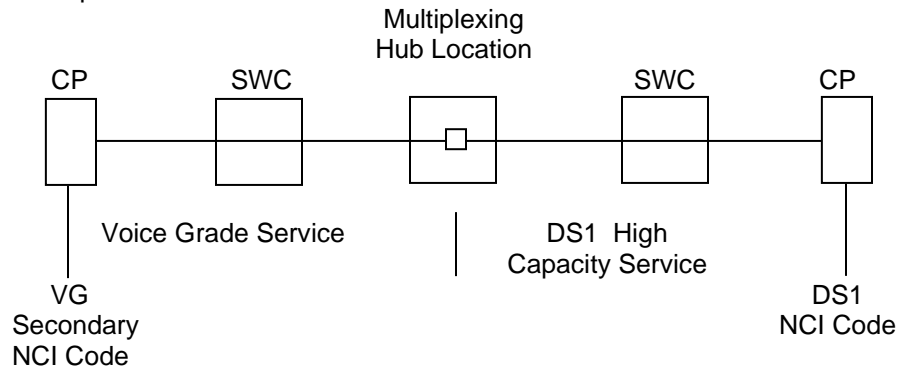
<u>Code Level</u>		<u>Code Level</u>		<u>Code Level</u>	
A	-16 dB	L	-6 dB	X	+5 dB
B	-15	M	-5	Y	+6
C	-14	N	-4	Z	+7
D	-13	P	-3	I	Fractional levels
E	-12	Q	-2	O	No transmission in this direction (one-way service)
F	-11	R	-1	Blank	Use recommended value shown the technical reference manual
G	-10	S	0.0		
H	-9	T	+1		
J	-8	U	+2		
K	-7	W	+4		

ACCESS SERVICE

7. Special Access Service (Cont'd)7.6 Special Access Service Network Channel Interface (NCI) Code Information (Cont'd)7.6.3 Compatibility

The NCI codes specified for the two ends of a Special Access Service may be different or the same. Furthermore, due to the use of optional central office multiplexing, a Special Access Service may have the NCI code of one service, e.g. Voice Grade, at one point of termination and the NCI code of another service, e.g. DS1 High Capacity, at the other (secondary) point of termination.

Example:



Legend:

CP - Customer Premises
 □ - Multiplexing Function

SWC - Serving Wire Center

Only certain NCI code combinations are technically compatible. NCI code compatibility information is set forth in the appropriate technical reference publication(s) for the service ordered.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.9 Voice Grade Special Access Service7.9.1 Basic Service Description

Voice Grade Service provides a channel for the transmission of analog signals in the nominal frequency range of 300 to 3000 Hz.

Voice Grade Service is provided between customer premises or between a customer premises and a Telephone Company Hub location.

7.9.2 Technical Information

Voice Grade Service is available in accordance with twelve technical specifications packages. Custom packages may also be specified.

Voice Grade Service may be terminated at a customer premises on either a two-wire or four-wire basis, as set forth in the following table. When a customer requests that a four-wire channel termination be terminated with a two-wire channel interface, a four-wire to two-wire conversion is required and is included in the basic Channel Termination rate.

<u>Service Designator</u>	<u>Network Channel Code</u>	<u>Customer Premises Termination</u>	
		<u>2-Wire</u>	<u>4-Wire</u>
VG1	LB	A	A
VG2	LC	A	A
VG3	LD	A	A
VG4	LE	-	A
VG5	LF	A	A
VG6	LG	-	A
VG7	LH	A	A
VG8	LJ	A	A
VG9	LK	-	A
VG10	LN	-	A
VG11	LP	A	A
VG12	LR	A	A
VGC	LQ	A	A

ACCESS SERVICE

7. Special Access Service (Cont'd)7.9 Voice Grade Special Access Service (Cont'd)7.9.2 Technical Information (Cont'd)

Voice Grade Service shall be ordered with the options desired with network channel interface (NCI) codes, as shown below, at the point of termination.

02AB2	02AB3	04AB2	04AB3	02AC2	04AC2
02CT3	04CT2	02DA2	04DA2	06DA2	02DB2
04DB2	04DD3	02DE2	04DE2	04DX2	04DX3
06DX2	02DY2	04DY2	06DY2	06DY3	09DY2
09DY3	04EA2	04EA3	06EA2	09EA2	09EA3
06EB2	08EB2	08EC2	06EX2	02G02	02G03
04GO2	04GO3	06GO2	02GS2	02GS3	02GS3
04GS2	04GS2	04GS3	06GS2	02LA2	02LB2
02LC2	02LO2	02LO3	04LO2	04LO3	06LO2
02LR2	02LR3	04LR2	04LR3	02LS2	02LS3
04LS2	04LS3	06LS2	02NO2	04NO2	02PR2
04PR2	02RV2	04RV2	04SF2	04SF3	02TF2
02TF3	04TF2	04CS9			

In addition, NCI codes 06EB3-E and 04RV3-T may be ordered. Furthermore, due to the use of optional multiplexing at a central office or a Hub location, a service may have a Voice Grade NCI code at one customer premises and a Wideband Analog (code AH) or a High Capacity Digital (code DS) NCI code at the other.

The Voice Grade Service NCI code translation information follows:

<u>Wires</u>		<u>Impedance</u>	
<u>Code</u>	<u>No.</u>	<u>Code</u>	<u>ohms</u>
02	2	2	600
04	4	3	900
06	6		
08	8		
09	9		

Note: The following NCI codes require signaling capability:

AB, AC, CT, DX, DY, EA, EB, EC, EX, GO,
GS, LA, LB, LC, LO, LR, LS, RV and SF

ACCESS SERVICE

7. Special Access Service (Cont'd)7.9 Voice Grade Special Access Service (Cont'd)7.9.2 Technical Information (Cont'd)

		Signaling
Code	Option	Description
AB		20-Hz ringing signal at customer
AC		20-Hz ringing signal at customer's customer
	R	2 digit code select 10
CS		Digital hierarchy interface at a central office
CT		Digital crossconnect (or similar) device
DA		Centrex tie trunk termination
		Data stream in voice frequency band at customer's customer
	S	Sealing current option for 4-wire transmission
DB		Data stream in voice frequency band at customer
DX		Duplex signaling at customer X Simplex reversal (4-wire)
DY		Duplex signaling at customer's customer
EA	E	Type I E&M signaling - originates on E lead
M		Type I E&M signaling - originates on M lead
EB	E	Type II E&M signaling - originates on E lead
M		Type II E&M signaling - originates on M lead
EC		Type III E&M signaling - originates on M lead
EX	A	Connects signaling functions of tandem signaling equipment - customer supplies open end functions, e.g. dial tone
EX	B	Connects signaling functions of tandem signaling equipment - customer supplies closed end functions e.g., dial pulsing
GO		Ground start loop signaling - customer or customer's customer supplies open end functions
	X	Simplex reversal (4-wire)
GS		Ground start loop signaling - customer or customer's customer supplies closed end functions
	C	Centrex foreign exchange termination
	M	Central Office answering service concentrator termination
	X	Simplex reversal (4-Wire)

Note: The following NCI codes require signaling capability:

AB, AC, CT, DX, DY, EA, EB, EC, EX, GO,
GS, LA, LB, LC, LO, LR, LS, RV and SF

ACCESS SERVICE

7. Special Access Service (Cont'd)7.9 Voice Grade Special Access Service (Cont'd)7.9.2 Technical Information (Cont'd)

		Signaling
Code	Option	Description
LA		Loop start signaling - Type A registered port, open end
LB		Loop start signaling - Type B registered port, open end
LC		Loop start signaling - Type C registered port, open end
LO		Loop start signaling - open end function by customer or customer's customer
	X	Simplex reversal (4-wire)
LR		20 Hz ringdown with Telephone Company provided private line automatic ringdown (PLAR)
LS		Loop start signaling - closed end function by customer or customer's customer
	M	Central office answering service concentrator termination
	X	Simplex reversal (4-wire)
NO		No signaling interface - transmission only
	S	Sealing current (4-wire)
PR		Protective relaying
RV		Reverse battery signaling, one-way operation
	O	Customer originates
	T	Customer or customer's customer terminates
SF		Single-frequency signaling within VF band
	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		Telephoto interface

Note: The following NCI codes require signaling capability:

AB, AC, CT, DX, DY, EA, EB, EC, EX, GO,
GS, LA, LB, LC, LO, LR, LS, RV and SF

The Voice Grade Service technical specifications, transmission parameters, and compatible NCI codes are set forth in Technical References TR-TSY-000335 and PUB 41004.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.9 Voice Grade Special Access Service (Cont'd)7.9.3 Optional Features and Functions(A) Transmission Enhancement Options

C Conditioning - Provides for the additional control of both attenuation distortion and envelope delay distortion.

Improved Attenuation Distortion - Improved attenuation distortion is provided for additional control of attenuation distortion. The improved attenuation distortion specifications are:

Attenuation Distortion
(Frequency Response)
Relative to 1004 Hz

Frequency Variation	
<u>Range (Hz)</u>	<u>(dB)</u>
404-2804	-1.0 to +2.0
304-3004	-1.0 to +3.0
304-3204	-2.0 to +6.0

Improved Return Loss (Echo Control) - Improved return loss at a four-wire point of termination provides for improved echo control via an upgraded Equal Level Echo Path Loss (ELEPL). Improved return loss at a two-wire point of termination will provide echo control via an upgraded return loss limit. When this option is ordered, Telephone Company equipment may be required at the customer premises.

Sealing Current Conditioning - Helps maintain continuity on dry metallic loops. Usually associated with four-wire DA or NO NCI codes at the point of termination.

Data Capability - Provides for the control of signal to C-notched noise ratio and intermodulation distortion to provide two-point or multipoint transmission characteristics suitable for data communications. When a service equipped with data capability is used for voice transmission, the quality of the voice transmission may not be satisfactory.

Telephoto Capability - Provides for the control of attenuation distortion and envelope delay distortion to provide transmission characteristics suitable for telephotographic communications.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.9 Voice Grade Special Access Service (Cont'd)7.9.3 Optional Features and Functions (Cont'd)(B) Customer Premises Terminating Options

Customer Specified Receive Level - Allows the customer to specify the four- wire receive level at the point of termination within a range.

(C) Signaling Capability

Provides the means by which a customer initiates a request for service, holds a connection, or releases a connection. The signaling desired by the customer is specified in the NCI code.

(D) Selective Signaling Arrangement

Permits code selective ringing for up to ten stations on a multipoint service.

(E) Bridging

Provides the capability of connecting three or more customer premises in a multipoint arrangement at a Telephone Company Hub location on either a two-wire or four-wire basis. The types of bridging available include: Voice, Data, Telephoto, Telemetry and Alarm.

(F) Transfer Arrangement

Provides for the transfer of one Voice Grade Service to another spare or working service which terminates at the same or different customer premises. The arrangement may be (1) key activated over a separately rated Metallic Service control channel; or (2) key activated using a Controller Arrangement as set forth in Section 13.

(G)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.9 Voice Grade Special Access Service (Cont'd)7.9.3 Optional Features and Functions (Cont'd)(H) Network Reconfiguration Service (NRS)

An arrangement that provides the customer the ability to control the reconfiguration of their Special Access services (digital or analog) on a near real-time basis by means of the special provisioning of these services through a Digital Crossconnect Device (DCD). NRS can accommodate the termination and reconfiguration of circuits up to the 56.0 Kbps and 1.544 Mbps signal levels. The reconfiguration of services is accomplished at the DSO level. Customer access to the reconfiguration capability is accomplished through a Network Controller and is on the basis of either a local telephone company dial-up or dedicated facility arrangement.

The DCDs are located in specific Telephone Company serving wire centers, and are connected to a centralized Network Controller. Therefore, NRS is available only from selected serving wire centers.

(I) Data Station Termination Unit (DST)

Line powered environmental (weather protected) data unit provides 4 wire interface and remote loopback capability at 2713 Hz. Available on VG6 and VG7.

The following table shows the optional feature and function availability (A) for the Voice Grade Service technical specifications packages.

	<u>VG1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>VGC</u>
(A) Transmission													
Enhancements:													
- C Conditioning	-	-	-	-	A	A	A	A	A	A	-	-	A
- Improved Attenuation													
Distortion	-	-	-	-	A	A	A	A	A	A	-	-	A
- Improved Return Loss													
- At four-wire POT	A	A	A	A	A	A	A	A	A	A	A	A	A
- At two-wire POT	-	A	A	-	-	-	A	-	-	-	-	-	A
- Sealing Current													
- C Conditioning	-	-	-	-	-	A	-	-	-	A	-	-	A
- Data Capability	-	-	-	-	-	A	A	-	-	A	-	-	A
- Telephoto Capability	-	-	-	-	-	-	-	-	-	-	A	-	A

ACCESS SERVICE

7. Special Access Service (Cont'd)7.9 Voice Grade Special Access Service (Cont'd)7.9.3 Optional Features and Functions (Cont'd)

	<u>VG1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>VGC</u>
(B) Customer Premises Terminating Options:													
- Customer Specified Receive Level	-	A	A	-	-	-	A	A	A	-	-	-	A
(C) Signaling Capability													
- Loop-Start	A	A	A	-	-	-	A	A	-	-	-	-	A
- Ground-Start	A	-	A	-	-	-	A	-	-	-	-	-	A
- E&M Lead	-	-	A	-	-	-	A	A	A	-	-	-	A
- Reverse-Battery	-	-	A	-	-	-	A	-	-	-	-	-	A
- Duplex	-	-	A	-	-	-	A	A	A	-	-	-	A
- Single-Frequency	-	A	-	-	-	-	A	A	A	-	-	-	A
- 20-Hz Ringing	-	A	-	-	-	-	-	-	-	-	-	-	A
(D) Selective Signaling Arrangement	-	A	-	-	-	-	-	-	-	-	-	-	A
(E) Bridging	-	A	-	-	A	A	-	-	-	A	A	A	A
(F) Transfer Arrangement	A	A	A	A	A	A	A	A	A	A	A	A	A
(H) Network Reconfiguration Service	A	A	A	A	A	A	A	A	A	A	A	A	A
(I) Data Station Termination Unit (DST)	-	-	-	-	-	A	A	-	-	-	-	-	-

ACCESS SERVICE

7. Special Access Service (Cont'd)7.9 Voice Grade Special Access Service (Cont'd)7.9.4 Rates and Charges(A) Channel Termination

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>	
Two-wire, Per point of termination	\$20.73	\$202.50	(R)
Four-wire, Per point of termination	\$23.73	\$224.25	(R)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.9 Voice Grade Special Access Service (Cont'd)

7.9.4 Rates and Charges (Cont'd)

(D)

(D)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.9 Voice Grade Special Access Service (Cont'd)

7.9.4 Rates and Charges (Cont'd)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.10 WATS Access Line Service (WAL Service)7.10.1 Basic Service Description

WAL Service provides a channel for the transmission of analog signals in the nominal frequency range of 300 to 3000 Hz. WAL Service may be provided using an effective two-wire or four-wire voice grade channel.

The Service is provided between a customer premises and a WATS serving office associated with the closed end of 800 Service, WATS or similar services. WAL Service is provided for use with Feature Group A, B, or D Switched Access Service as set forth in Section 6.

7.10.2 Technical Information

At the option of the customer, WAL Service is arranged for either: (1) originating, terminating or two-way calling; (2) dial pulse or dual tone multifrequency address signaling; and (3) loop start or ground start, subject to the technical limitations specified in Technical Reference TR-NWT-000334.

The Network Channel code for WAL Service is either SE (standard transmission) or SF (improved two-wire transmission). WAL Service shall be ordered with the following network channel interface (NCI) codes at the point of termination:

WATS Serving Office Supervisory <u>Signaling</u>		NCI Codes			
Loop-Start	02LS2	02LS3	04LS2	04DS9	
Ground-Start	02GS2	02GS3-C*	04GS2-C	04GS2	04DS9

Additional information regarding these NCI codes is set forth under Voice Grade and High Capacity Digital Service.

The technical specifications, transmission parameters and compatible NCI codes for WAL Service are set forth in Technical Reference TR-NWT-000334.

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.10 WATS Access Line Service (WAL Service) (Cont'd)

7.10.3 Optional Features and Functions

WAL Service is available with the following optional features and functions:

Signaling Capability, Two-wire and Four-wire Bridging, Improved
Two-wire Voice Transmission Specifications

In addition, certain other options associated with WAL Service are set forth in
Section 6 under the heading of Switched Access Service End Office Line
Termination or Common Switching optional features.

7.10.4 Rates and Charges

(A) Channel Terminations

Per point of termination
- Two-wire voice grade

The rates and charges are the same
as for Voice Grade Service.

- Four-wire voice grade

The rates and charges are the same
as for Voice Grade Service.

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.11 Program Audio Special Access Service7.11.1 Basic Service Description

Program Audio Service provides a channel for the one-way transmission of a complex audio signal suitable for broadcast. The actual frequency bandwidth of the channel is a function of the channel interface selected by the customer.

Program Audio Service is provided between customer premises or between a customer premises and a Telephone Company Hub location.

7.11.2 Technical Information

Program Audio Service is available in accordance with the following technical specifications packages:

<u>Service Designator</u>	<u>Network Channel Code</u>	<u>Description (bandwidth)</u>
AP1	PE	200 to 3500 Hz
AP2	PF	100 to 5000 Hz
AP3	PJ	50 to 8000 Hz
AP4	PK	50 to 15000 Hz
APC	PQ	Custom Packages

ACCESS SERVICE

7. Special Access Service (Cont'd)7.11 Program Audio Special Access Service (Cont'd)7.11.2 Technical Information (Cont'd)

Program Audio Service shall be ordered with the following network channel interface (NCI) codes at the point of termination:

02PG-1 02PG1-3 02PG1-5 02PG1-8 02PG2-1
02PG2-3 02PG2-5 02PG2-8

In addition, due to the use of optional multiplexing at a central office or a Hub location, a service may have a Program Audio NCI code at one customer premises and a Wideband Analog (code AH) or a High Capacity Digital (code DS) NCI code at the other.

The Program Audio Service NCI code translation follows:

<u>Code</u>	<u>No. of Wires</u>	<u>Code</u>	<u>Option Code</u>	<u>Description</u>
02	2	PG		Program transmission - no signaling
			1	Nominal frequency from 50 to 15000 Hz
			3	Nominal frequency from 200 to 3500 Hz
			5	Nominal frequency from 100 to 5000 Hz
			8	Nominal frequency from 50 to 8000 Hz

Code Impedance (ohms)

1 150
2 600

The program Audio Service technical specifications, transmission parameters and compatible NCI codes are set forth in Technical Reference TR-NPL-000337.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.11 Program Audio Special Access Service (Cont'd)7.11.3 Optional Features and FunctionsBridging

Provides for service interconnection using distribution amplifiers at a Telephone Company Hub location.

Gain Conditioning

Provides for the control of 1004 Hz Actual Measured Loss at initiation of service to 0 dB + 0.5 dB.

Stereo

Provides for gain/phase equalization of two separately ordered Program Audio Services for stereo applications.

The following table shows the optional feature and function availability (A) for the Program Audio Service technical specifications package:

	<u>AP1</u>	<u>AP2</u>	<u>AP3</u>	<u>AP4</u>	<u>APC</u>
Bridging	A	A	A	A	A
Gain Conditioning	A	A	A	A	A
Stereo	-	-	-	A	A

ACCESS SERVICE

7. Special Access Service (Cont'd)7.11 Program Audio Special Access Service (Cont'd)7.11.4 Rates and Charges(A) Channel Terminations

Per point of termination

	<u>Monthly Rate</u>	<u>Daily Rate</u>	<u>Nonrecurring Charge</u>
- AP1 (200 to 3500 Hz)	\$18.20	\$1.58	\$200.41
- AP2 (100 to 5000 Hz)	\$29.91	\$2.59	\$200.41
- AP3 (50 to 8000 Hz)	\$15.00	\$2.65	\$200.41
- AP4 (50 to 15000 Hz)	\$27.50	\$4.00	\$200.41

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.11 Program Audio Special Access Service (Cont'd)

7.11.4 Rates and Charges (Cont'd)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.12 Video Special Access Service7.12.1 Service Description(A) Video Service

Video service provides a channel for the one-way transmission of a standard 525 line/60 field monochrome, or National Television Systems Committee color, video signal and one or more associated 5, 15 or 20 KHz audio signal(s).

Video service is provided between customer premises or between a customer premises and a Telephone Company Hub location.

(1) Broadcast Video

Broadcast Video Service is provided at bandwidths of 30 Hz to 6.6 MHz and 30 Hz to 4.5 MHz, and is provided with one to four associated audio signal(s). At the option of the customer, the associated audio signal(s) may either be combined (diplexed) with the video signal or provided as one to four separate channels at the point of interface.

(2)

(3)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.12 Video Special Access Service (Cont'd)7.12.1 Service Description (Cont'd)(A) Video Service (Cont'd)(4) Multichannel Video Service⁽¹⁾

Multichannel Video Service (MVS) provides one-way transport of standard 525 line/60 field monochrome or National Television Systems Committee (NTSC) color video signals of broadcast quality, and their associated audio signals. MVS provides for the transmission of up to 16 individual 6 Mhz, uncompressed digital signals with up to four associated audio channels.

MVS channels are provided over fiber optic facilities for transmission between customer designated premises, or between a customer designated premises and a Telephone Company Hub. Fiber optic facilities associated with MVS are subject to availability between the customer designated premises or Hubs. The Telephone Company will assist the customer in determining if transmission facilities are available, or can be made available, and advise the customer of facility status. Technical specifications are delineated in Technical Publication GR- 2904-CORE, Issue 1.

⁽¹⁾ Effective August 25, 2011, MVS is no longer available to new customers. There is no change for existing customers.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.12 Video Special Access Service (Cont'd)7.12.2 Optional Features and FunctionsVideo Switching Arrangements

Video Switching Arrangements allow the customer to switch the connection of their video signals between different end points. The video switch is located in the Telephone Company central office and can be configured to process video connections to and from other channels located on the same or different customer premises. In the case of one-way transmission circuits, one transmit or one receive port of the video switch is required. For two-way transmission circuits, one transmit and one receive port are required. Each customer connected to the video switch is configured for video switching.

The video switch provides customer security within the switch, thereby preventing unauthorized access.

The switch establishes cross connections via a five digit password access code and a standard touchtone telephone located on the customer's premises. Assignment of the switch capability cross connection(s) and the customer's five digit password access code are provided by the Telephone Company. The customer must provide their own standard touchtone telephone and obtain the control circuit from the Telephone Company as a separate service.

Video switching arrangements will be provided at video central office locations specified in N.E.C.A. Tariff F.C.C. No. 4.

Video Bridging Arrangement

Video Bridging enables Video Service to be provided in a multipoint configuration.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.12 Video Special Access Service (Cont'd)7.12.2 Optional Features and Functions (Cont'd)MVS WDM Feature

The MVS WDM Feature provides the capability to transmit or receive two MVS video channels of two different wavelengths over a single fiber.

MVS Bridging

MVS Bridging enables the composite MVS channel to be optically split to allow one-way transmission to multiple customer designated premises.

Each of the multiple customer premises receives the same composite MVS video channel.

MVS Repeater

MVS Repeaters provide for regeneration of MVS video channels, and are required when the distance of the MVS channel is greater than the single system optical power budget.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.12 Video Special Access Service (Cont'd)7.12.3 Technical Information

Video Services are available in accordance with the following technical specifications packages:

Service Designator	Network Channel Code	Description
TV1	TV	Broadcast quality
TV2	TW	Nonbroadcast quality
TVC	TQ	Custom packages
TV3	TZ	Private Line Video Service
TV5	TS	Video Transport Service

ACCESS SERVICE

7. Special Access Service (Cont'd)7.12 Video Special Access Service (Cont'd)7.12.3 Technical Information (Cont'd)

Video Service shall be ordered with the following network channel interface(NCI) codes at the point of termination:

<u>Channel Interface</u>	<u>Audio Channels</u>		
	<u>Quantity</u>	<u>Bandwidth</u>	<u>Provision Method</u>
2TV6-0	0	N/A	N/A
2TV6-1	1	15 KHz	Diplexed
2TV6-2	2	15 KHz	Diplexed
2TV6-4	4	15 KHz	Diplexed
2TV6-6	3	15 KHz	Diplexed
2TV7-1	1	15 KHz	Diplexed
2TV7-2	2	15 KHz	Diplexed
2DS6-44A	1-4	5-20 KHz	Diplexed/Separate
4TV6-5	1-2	5 KHz	Separate
4TV6-15A	1-4	15 KHz	Separate
4TV6-20	1-4	20 KHz	Separate
4TV7-5	1-2	5 KHz	Separate
6TV6-5	1-2	5 KHz	Separate
6TV6-15A	1-4	15 KHz	Separate
6TV7-5	1-2	5 KHz	Separate
4TV6-15	1-2	15 KHz	Separate
4TV7-15	1-2	15 KHz	Separate
6TV6-15	1-2	15 KHz	Separate
6TV7-15	1-2	15 KHz	Separate
8TV6-15A	1-4	15 KHz	Separate
8TV6-20	1-4	20 KHz	Separate
10TV6-15A	4	15 KHz	Separate
10TV6-20	1-4	20 KHz	Separate
02WVF-L	1	5-20 KHz	Combined
04WVF-L	1	5-20 KHz	Separate
06WVF-L	2	5-20 KHz	Separate
08WVF-L	3	5-20 KHz	Separate
10WVF-L	4	5-20 KHz	Separate
02WVF	0	N/A	N/A

ACCESS SERVICE

7. Special Access Service (Cont'd)7.12 Video Special Access Service (Cont'd)7.12.3 Technical Information (Cont'd)

Video Service NCI code translation information follows:

<u>Wires</u>		<u>Signaling</u>		
<u>Code</u>	<u>No.</u>	<u>Code</u>	<u>Option</u>	<u>Description</u>
02	2	TV		Television interfaces
04	4		0	Video Only
06	6		1	Video and one audio signal combined (diplexed)
08	08		2	Video and two audio signals combined (diplexed)
10	10		4	Combined Video and four 15-kHz audio signals combined (diplexed)
			5	Video plus one or two (2-wire) 5-KHz audio signal(s)(separate)
<u>Impedance</u>				
<u>Code</u>	<u>ohms</u>			
6	75		6	Video and three 15-khz audio signals combined (diplexed)
7	124		15	Video plus one or two 15-KHz audio signal(s)(separate)
			15A	Video plus one through four 15-kHz audio signals(separate)
			20	Video plus one, two, three or
four			44A	20 kHz audio signals (separate) One-way 45 Mb/s digital handoff. One to four 5-20 Khz audio signals combined (diplexed)/separate

Video Service technical specifications, transmission parameters, and compatible NCI codes are set forth in Technical Reference TR-TSV-000338

7.12.4

ACCESS SERVICE

7. Special Access Service (Cont'd)7.12 Video Special Access Service (Cont'd)7.12.5 Rates and Charges(A) Video Service(1) Channel Terminations

- Per Point of Termination

	<u>Monthly Rate</u>	<u>Daily Rate</u>	<u>Nonrecurring Charge</u>
- Broadcast Video	\$349.95	\$200.00	\$250.00
- Multichannel Video Service ⁽¹⁾			
First Four Channels	\$1,000.00	\$780.00	\$0.00
Additional Four Channels	\$350.00	\$280.00	\$0.00

(D)

(D)

⁽¹⁾ Effective August 25, 2011, MVS is no longer available to new customers. There is no change for existing customers.

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.12 Video Special Access Service (Cont'd)

7.12.5 Rates and Charges

(D)

(D)

7.13 RESERVED for FUTURE USE

7.14 RESERVED for FUTURE USE

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.15 Digital Data Special Access Service7.15.1 Basic Service Description

Digital Data Service provides a channel for duplex four-wire transmission of serial synchronous data with timing provided by the Telephone Company on the received bit stream. The actual bit rate is a function of the channel interface selected by the customer.

Digital Data Service is available via designated Telephone Company Hub locations only and is provided between customer premises or between a customer premises and a designated Telephone Company Hub location.

7.15.2 Technical Information

The Telephone Company will provide a channel capable of meeting a monthly average performance equal to or greater than 99.875% error-free seconds while in service, if measured through a channel service unit (CSU) which is designed, manufactured and maintained in conformance with the specifications contained in Technical Reference TR-NPL-000341.

The customer may provide the CSU equipment or other Network Channel Terminating Equipment (NCTE) associated with the Digital Data Service at the customer premises. The interim program for interconnection of such equipment is set forth in Technical Reference PUB AS No. 1.

Digital Data Service is available in accordance with the following technical specifications packages:

<u>Service Designator</u>	<u>Network Channel Code</u>	<u>Description (bit Rate)</u>
DA1	XA	2.4 kbps
DA2	XB	4.8 kbps
DA3	XG	9.6 kbps
DA4	XH	56.0 kbps
DA6	XD	64.0 kbps

ACCESS SERVICE

7. Special Access Service (Cont'd)7.15 Digital Data Special Access Service (Cont'd)7.15.2 Technical Information (Cont'd)

Digital Data Service shall be ordered with the following network channel interface (NCI) codes at the point of termination:

06DU5-24	06DU5-48	06DU5-96	06DU5-56	06DU5-64
04DU5-24	04DU5-48	04DU5-96	04DU5-56	04DU5-64
04DU5-24S	04DU5-48S	04DU5-96S	04DU5-56S	

In addition, Digital Data Service may be provided using a channelized DS1 High Capacity Service, with an NCI code as listed under DS1 containing synchronization to the digital network.

<u>Wires</u>		<u>Signaling</u>		
<u>Code</u>	<u>No.</u>	<u>Code</u>	<u>Option</u>	<u>Description</u>
04	4	DU		Digital access interface
06	6		24	2.4 kbps
			48	4.8 kbps
			96	9.6 kbps
			56	56.0 kbps
			64	64.0 kbps
<u>Impedance</u>			24S	2.4 kbps with secondary channel
<u>Code</u>	<u>ohms</u>		48S	4.8 kbps with secondary channel
5	135		96S	9.6 kbps with secondary channel
9	100		56S	56.0 kbps with secondary channel

The Digital Data Service technical specifications, transmission parameters, compatible voltages, and compatible NCI codes are set forth in Technical Reference TR-NPL-000341.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.15 Digital Data Special Access Service (Cont'd)7.15.3 Optional Features and FunctionsBridging

Bridging is available with all Digital Data technical specifications packages.

Transfer Arrangement

Provides for the transfer of one Digital Data Service to another separately rated spare or working serving which terminates at the same or different customer premises. This arrangement is available only at designated Telephone Company Hub locations. The arrangement may be (1) key activated over a separately rated Metallic Service control channel of the arrangement; or (2) dial activated using a Controller Arrangement, as set forth in Section 13. Both methods use one port of the transfer arrangement.

Secondary Channel Capability (SCC)

Provides for the flexibility of utilizing a secondary channel in conjunction with a primary DDS channel. SCC is only available at the 2.4, 4.8, 9.6 and 56 kbps speeds. The secondary and primary channels operate independently of each other, over the same facilities, and must be coterminated in common customer provided equipment. The SCC is typically used for network management applications and is offered as a two-point or multipoint service. The availability of the service is limited. The addition of the SCC option to an existing DDS service will be treated as a subsequent addition to the existing service.

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.15 Digital Data Special Access Service (Cont'd)

7.15.4 Rates and Charges

(A) Channel Terminations,
Per point of termination

	<u>Monthly Rates</u>	<u>Nonrecurring Charges</u>
- DA1 (2.4 kbps)	\$90.35	\$550.00
- DA2 (4.8 kbps)	\$90.35	\$550.00
- DA3 (9.6 kbps)	\$71.29	\$550.00
- DA4 (56.0 kbps)	\$71.29	\$550.00
- DA6 (64.0 kbps)	\$90.35	\$550.00

	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>Nonrecurring Charges</u>
<u>Optional Payment Plans#</u>				
- DA4 (56.0 kbps)	\$80.00	\$60.00	\$55.00	\$575.00
- DA6 (64.0 kbps)	\$80.00	\$60.00	\$55.00	\$575.00

(T)

Effective November 19, 2021, Optional Payment Plans (OPPs) are no longer permitted. Optional 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 the service will convert to the Month to Month rate. If at any time an existing customer terminates its Optional Payment Plan, the customer may not re-subscribe to the plan.

(N)

(N)

Issued: November 4, 2021

Effective: November 19, 2021

(This page-filed under Transmittal No. 111)
Vice President, Regulatory Affairs
3 High Ridge Park, Stamford, CT 06905

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.15 Digital Data Special Access Service (Cont'd)

7.15.4 Rates and Charges (Cont'd)

(D)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.15 Digital Data Special Access Service (Cont'd)

7.15.4 Rates and Charges (Cont'd)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service7.16.1 Basic Service Description

High Capacity Service provides a channel for the transmission of isochronous serial data. The actual bit rate and framing format is a function of the channel interface selected by the customer.

High Capacity Service is provided between customer premises or between a customer premises and a Telephone Company Hub location. Certain multiplexed channels of High Capacity Service as provided at, or between, Telephone Company Hub locations only.

DS1 service may also be provided as free (unframed) format. This option provides a DS1 signal with electrical characteristics identical to the framed 1.544 Mbps signals for DS1 service with B8ZS, except for the lack of an apparent frame format. This format is not compatible with Telephone Company equipment that requires framing, synchronization, error detection or control information and can only be provided where suitable equipment is available.

The customer may provide High Capacity Service Network Channel Terminating Equipment (NCTE) which is required at the customer premises. The interconnection of such equipment is set forth in Technical Reference PUB GR-342-CORE.

7.16.1.1 Fractional DS1 Service

A Fractional DS1 channel provides for the digital transmission of nominal 128, 256, 384, 512, 768 kbps, serial data. The actual bit rate is a function of the channel interface selected by the customer. Fractional DS1 channels are provided for two-point service between customer designated premises or between a customer designated premises and a Telephone Company Digital Hub. Rates for Fractional DS1 Service can be found in Section 7.16.4.

When a single Fractional DS1 channel is ordered to be terminated at a customer's designated POP, which requires a minimum digital interface level at 1.544 Mbps, the Telephone Company will provide the required interface where facilities are available.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.1.1 Fractional DS1 Service (Cont'd)

Fractional DS1 service is offered only where equipment and facilities are available. Fractional DS1 service is provisioned from specific wire centers which are listed in the National Exchange Carrier Association, Inc. Tariff FCC No. 4. Availability is not restricted to customers serviced by the wire centers listed in FCC No. 4, but the service must be routed through the designated offices in FCC No. 4. Mileage, as defined in 2.11.4 (B) (Distance Sensitive Rates) will apply.

It is the customer's responsibility to arrange for the Channel Service Unit-type equipment or other Network Channel Terminating Equipment associated with the Fractional DS1 channel at the customer premises.

Rates and charges for Fractional DS1 Service can be found in Section 7.16.4 following.

Technical Specifications Package HC1 will apply for all speeds of Fractional DS1 Service.

A Fractional DS1 channel with Technical Specifications Package HC1 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 Channel Service Unit equivalent which is designed, manufactured, and maintained to conform with the specifications contained in the Technical Reference for High Capacity Service.

Channel Interfaces (CI)

The following channel interfaces define the bit rates that are available for a Fractional DS1 channel:

<u>CI</u>	<u>Bit Rate</u>
DS-1S	128, 256, 384, 512, 768 kbps

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.2 Technical Information

An HC1 Service will be capable of an error-free second performance of 98.75% over a continuous 24 hour period as measured at the DS1 bit rate through a Channel Service Unit (CSU) designed, manufactured and maintained in conformance with the specifications in Technical Reference PUB 62411.

44.736 Mbps High Capacity Service is usually provided as follows:

- On digital optical equipment and lightwave facilities selected by the Telephone Company, and it is provided only through serving wire centers equipped to furnish such service.
- It is the responsibility of the customer (or any other party in interest, such as the applicant for service or the owner or operator of the premises or the builder) to provide in a manner satisfactory to the Telephone Company, and without cost to the Telephone Company: a means of entrance for the fiber optic cable into the building, space for mounting the necessary terminals and equipment, and, where required, to supply a means to reach each floor and each suite or office on each floor where service is desired. In addition, a suitable AC source must be provided in the customer equipment location.
- 44.736 Mbps High Capacity Service technical parameters are set forth in Technical Reference PUB GR-342-CORE.

The technical specifications for High Capacity Service provided to an Expanded Interconnection Location are delineated in Technical Reference Publication GR-63-CORE.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.2 Technical Information (Cont'd)

High Capacity Service is available in accordance with the following predefined technical specifications packages:

<u>Service Designator</u>	<u>Network Channel Code</u>	<u>Description (bandwidth)</u>
DA1	XA	2.4 kbps
HC0	HS	64 kbps (DS0)
	HX	128, 256, 384 Kbps
HC1	HC	1.544 Mbps (DS1)
HC1C	HD	3.152 Mbps (DS1C)
HC2	HE	6.312 Mbps (DS2)
HC3	HF	44.736 Mbps (DS3)
HC4	HG	274.176 Mbps (DS4)

High Capacity Service shall be ordered with the following network channel interface (NCI) codes at the point of termination:

04DU9-BN	04DU9-DN	04DU9-1KN	04DU9-1SN	04DS9-15
04DS9-15B	04DS9-15J	04DS9-1K	04DS9-1S	04DU9-AN
04DS9-31	04DS0-63	04DS6-44	04DS6-27	04S0F-B
04ST6-A	04CM6-1	04CM6-3	04CM6-C3	04CM6-S

The High Capacity NCI code translation information follows:

<u>Wires</u>		<u>Impedance</u>	
<u>Code</u>	<u>No.</u>	<u>Code</u>	<u>ohms</u>
02	2	0	110
04	4	6	75
06	6	9	100

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.2 Technical Information (Cont'd)

		Signaling	
Code	Option	Description	
DS	O	DSO level to Digital Switch	
		Digital hierarchy interface	
	15	1.544 Mbps (DS1) with superframe format (SF)	
	15B	1.544 Mbps (DS1) Superframe (SF) format and B8ZS CCC	
	15J	1.544 Mbps (DS1) with free (unframed) format (only available on a special case basis)	
	1K	1.544 mbps (DS1) "ANSI" Extended Super Frame (ESF) format	
	1S	1.544 Mbps (DS1) "ANSI" Extended Super Frame (ESF) format and B8ZS CCC	
CM		SONET ADM Termination	
	1	DS1 low speed port termination	
	3	DS3 middle speed port termination	
	C3	OC3 middle speed port termination	
SO	S	STS1 middle speed port termination	
		SONET Optical	
ST		Synchronous Transmission Signal (STS)	
DS	27	274.176 Mbps (DS4)	
	31	3.152 Mbps (DS1C)	
	44	44.736 Mbps (DS3)	
	63	6.312 Mbps (DS2)	
DU		Digital access interface	
	AN	1.544 Mbps (DS1) free (unframed) format (only available on a special case basis), without line power (N)	
	BN	1.544 Mbps (DS1) Superframe (SF) format per GR-54-CORE and without line power	
	DN	1.544 Mbps (DS1) Superframe (SF) format per GR-54-CORE with B8ZS CCC and without line power	
	1KN	1.544 Mbps (DS1) "ANSI" Extended Superframe (ESF) format without line power	
	1SN	1.544 Mbps (DS1) "ANSI" Extended Superframe (ESF) and B8ZS CCC without line power	

The High Capacity Service technical specifications, transmission parameters, compatible voltages, and compatible NCI codes are set forth in Technical Reference TR-INS-000342.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.3 Optional Features and FunctionsMultiplexing

These arrangements use digital time division multiplexing at a Telephone Company Hub location:

<u>DS4 to DS1</u>	-	Converts a DS4 channel to 168 DS1 channels.
<u>DS3 to DS1</u>	-	Converts a DS3 channel to 28 DS1 channels.*
<u>DS2 to DS1</u>	-	Converts a DS2 channel to four DS1 channels.
<u>DS1C to DS1</u>	-	Converts a DS1C channel to two DS1 channels.
<u>DS1 to Voice</u>	-	Converts a DS1 channel to 24 channels suitable for Voice Grade, WATS Access Line, Digital Data, or Program Audio Service.**

* A DS1 channel slot of the DS3-DS1 multiplexing arrangement may be used to provision Fractional DS1 service. Fractional DS1 rates will apply from the Telephone Company hub location providing the multiplexing function to the customer premises.

** Fractional DS1 service may be provisioned on a multiplexed DS1 service if the required capacity exists on contiguous spare channels of the DS1 service. The DS1 service must have B8ZS Clear Channel Capability. The customer must provide the Connecting Facility Assignments (CFA) on the Access Service Request (ASR) for the Fractional DS1 service. Fractional DS1 rates will apply from the Telephone Company hub location providing the multiplexing function to the customer premises.

If an existing DS1 service is multiplexed utilizing D4 channel bank equipment, it is incompatible with Fractional DS1 service provisioning. If the customer desires to use such an existing DS1 service to provision Fractional DS1 service, a DS1 rearrangement charge will apply (as specified in 2.11.5) to rearrange the DS1 to central office equipment which is compatible with Fractional DS1 provisioning.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.3 Optional Features and Functions (Cont'd)Multiplexing (Cont'd)

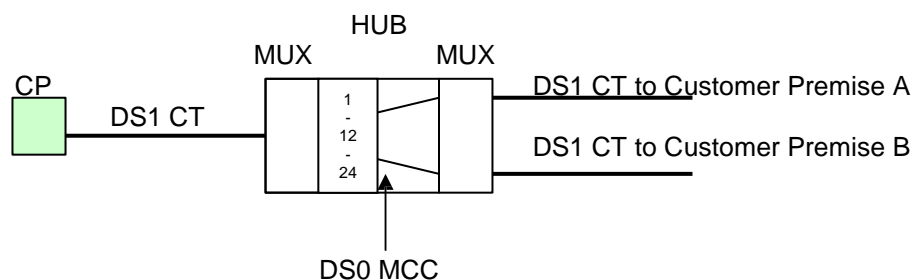
DS1 to DS0 - Converts a DS1 channel to a maximum of 24 DS0 (64.0 kbps) channels to connect to other such channels at the same or different designated Telephone Company Digital Hub. The actual number of DS0 channels is a function of the facility utilized to provide service. The customer must provide digital transmission system and channel assignment data for such applications.

DS0 to Subrate - Converts a DS0 channel to subrate channels (twenty 2.4 kbps, ten 4.8 kbps, or five 9.6 kbps) to connect to other such channels at the same or different designated Telephone Company Digital Hub. The customer must provide system and channel assignment data for such applications.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.3 Optional Features and Functions (Cont'd)Multiplexing (Cont'd)Multiplexer Cross-Connection (MCC) – DS0 to DS0

The Multiplexer Cross-Connection (MCC) function provides for the connection of two digital services of the same bit rate at the Telephone Company Hub locations. This allows one channel of a multiplexed DS1 to cross-connect to a channel of another multiplexed DS1. The MCC must connect two channels of the same speed and like signaling at designated Telephone Company Hub locations.



CT - Channel Termination
 MUX - Multiplexer
 DS0 MCC - DS0 Multiplexer Cross-Connection

DS0 MCC will be provided at Telephone Company locations where DS1 multiplexing is performed. MCC will be charged per cross-connect per central office, where the cross-connection is performed. If MCC is provided between two Telephone Company offices where DS1 multiplexing is performed, Channel Mileage (Fixed and Per Mile) for the lower speed DS0 service will apply between the two central offices along with one MCC charge per cross-connect per central office.

When one DS0 service is cross-connected to another DS0 service, the two cross-connected services are treated separately for service performance measurement and service interruption credit purposes. If two customers are involved, one customer will be responsible for the entire billing of MCC. The customer must provide the channel assignment information for the DS0 channels: Connecting Facility Assignment (CFA) and the Secondary Connecting Facility Assignment (SCFA).

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.3 Optional Features and Functions (Cont'd)Network Reconfiguration Service (NRS)

An arrangement that provides the customer the ability to control the reconfiguration of their Special Access services (digital or analog) on a near real-time basis by means of the special provisioning of these services through a Digital Crossconnect Device (DCD). NRS can accommodate the termination and reconfiguration of circuits up to the 56.0 Kbps and 1.544 Mbps signal levels. The reconfiguration of services is accomplished at the DSO level. Customer access to the reconfiguration capability is accomplished through a Network Controller and is on the basis of either a local telephone company dial-up or dedicated facility arrangement.

The DCDs are located in specific Telephone Company serving wire centers, and are connected to a centralized Network Controller. Therefore, NRS is available only from selected serving wire centers.

Clear Channel Capability (CCC)

- (a) CCC is an arrangement that allows a customer to transport 1.536 Mbps information rate signals over a 1.544 Mbps High Capacity channel with no constraint on the quantity or sequence of ones (mark) and zero (space) bits. This arrangement requires the customer signal at the channel interface to conform to Bipolar with Eight Zero Substitution (B8ZS) line code as described in Technical Reference TR-NPL-000054 and TR-INS-000342.
- (b) CCC is provided on 1.544 Mbps High Capacity channels between two customer designated premises or between a customer designated premises and a Telephone Company multiplexing hub and is subject to the availability of facilities.
- (c) The optional feature may be ordered at the same time the High Capacity service is ordered or it may be ordered as an addition to an existing High Capacity service. Customers must agree to out-of-service periods required to add this feature to an existing High Capacity service.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.3 Optional Features and Functions (Cont'd)Shared Network Arrangement⁽¹⁾

A Shared Network Arrangement is a service offering that enables a customer (the "Service User") to connect subtending services to a Telephone Company multiplexed Special Access DS3 or DS1 service of another customer (the "Host Subscriber"). The Telephone Company will maintain separate records and billing for each customer. Each customer will be billed for those rate elements associated with their own portion of the service configuration. Under no circumstances will the rates or charges for individual rate elements be split. This offering is limited to service configurations where a Service User obtains either subtending Voice Grade Special Access or Digital Data Special Access circuits from a Host's multiplexed DS1 service, or Special Access DS1 or Fractional DS1 circuits from a Host's multiplexed DS3 service.

Under the Shared Network Arrangement, the Telephone Company may share record information with the Host Subscriber pertaining to the services of other users of the shared network. Such disclosure will be under the sole discretion of the Telephone Company as is necessary to perform billing reconciliations and/or other functions required in connection with maintaining account records.

Each customer entering into a Shared Network Arrangement is solely responsible to the Telephone Company for charges associated with that customer's portion of the shared network. Disconnection of service by the Host Subscriber does not relieve another user of the network of any obligation to pay access charges associated with the portion of the shared network to which that user subscribes. Billing for services and facilities will continue until a disconnect request from the Service User has been received by the Telephone Company. The Host Subscriber is solely responsible for notifying the connecting Service User in the event of disconnection of the Host service which affects that portion of the shared network service to which the Service User has subscribed.

⁽¹⁾ Effective 05/26/06, this regulation is limited to existing customers. For new customers purchasing Shared Network Arrangement, terms and conditions set forth in Section 5.6.15 will apply.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.3 Optional Features and Functions (Cont'd)Shared Network Arrangement⁽¹⁾ (Cont'd)

For administrative purposes, one "Arrangement" under the Shared Network Arrangement offering shall be limited to the agreement between one Host Subscriber and one Service User permitting the Service User to connect a specified number of subtending circuits to one specified multiplexer on the Host's service. Agreements between one Host Subscriber and two (or three, etc.) Service Users shall be deemed to comprise two (or three, etc., respectively) separate "Arrangements." However, an agreement to expand the scope of an existing Arrangement by subsequently increasing the number of subtending circuits on the same multiplexer shall not constitute a new or separate "Arrangement."

Shared Network Arrangement will not apply to Packet Switched Data Network Service (PSDN) as described in Section 19.

A Shared Network Arrangement shall be established between a Host Subscriber and a Service User upon the completion of the service order for the first circuit(s) in the arrangement. No Shared Network Arrangement shall be deemed to be in effect until at least one subtending circuit has been installed for the Service User. A Shared Network Arrangement shall be deemed canceled when the last subtending circuit has been disconnected.

A Processing Charge will apply for handling each service order in a Shared Network Arrangement when a Service User orders a subtending circuit(s) to be connected to a Host Subscriber's multiplexed service. The Processing Charge is contained in Section 7.16.4(C) and applies in addition to all other applicable rates and charges.

⁽¹⁾ Effective 05/26/06, this regulation is limited to existing customers. For new customers purchasing Shared Network Arrangement, terms and conditions set forth in Section 5.6.15 will apply.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.3 Optional Features and Functions (Cont'd)Enhanced Access Diversity (EAD)

Enhanced Access Diversity (EAD) is an optional feature of DS1 and DS3 service which provides a choice of three levels of diversity. Diversity is provided on transmission facilities for two or more DS1 or DS3 services over two different physical routes. Customers subscribing to the EAD option will be provided a report on a quarterly basis which identifies the routing of each service in the diverse grouping. EAD is offered using existing physically diverse facilities. If diverse facilities are not available, EAD may be provided pursuant to the Telephone company's Special Construction Tariff F.C.C. No. 35.

The customer must identify the services which will be diverse when placing orders for EAD. The customer must also provide all appropriate connecting facility assignments (CFA) and any other pertinent information which will allow the Telephone Company to provide and maintain EAD. EAD is provided on a per DS1 or DS3 basis only, and the rates for EAD are in addition to the rates for DS1 and DS3 Special Access service.

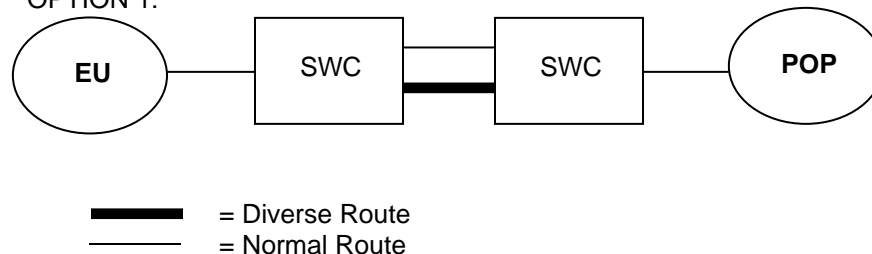
The three levels of diversity offered are described below:

Option 1

Option 1 provides interoffice facility diversity between serving wire centers only. This offering utilizes existing physically diverse interoffice facilities, excluding equipment and facilities located in a serving wire center extending to the first manhole located outside the serving wire center.

Example:

OPTION 1:



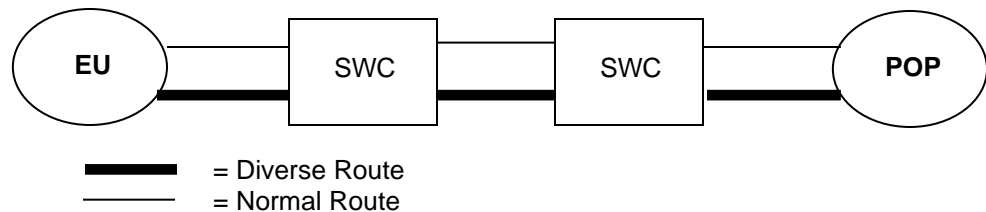
ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.3 Optional Features and Functions (Cont'd)Enhanced Access Diversity (EAD) (Cont'd)Option 2

Option 2 provides local loop and interoffice facility diversity between serving wire centers. This offering utilizes existing physically diverse local loop and interoffice facilities, excluding equipment and facilities located in a serving wire center extending to the first manhole outside the serving wire center, or from the point of termination to the first manhole outside the customer premises. This option provides diversity between two customer premises or between a customer premises and a Telephone Company Hub.

Example:

OPTION 2:



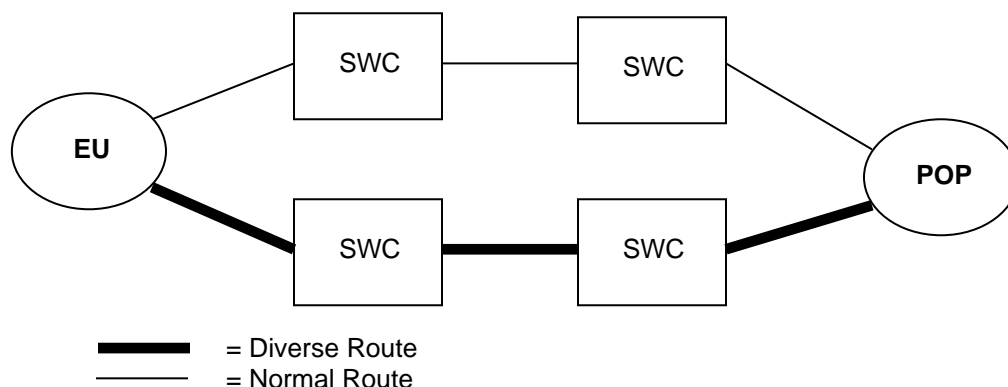
ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.3 Optional Features and Functions (Cont'd)Enhanced Access Diversity (EAD) (Cont'd)Option 3

Option 3 provides end-to-end diversity, including local loop and interoffice facilities. In this offering diverse local loop facilities from the customer's premises to a wire center other than the customer's normal serving wire center must already exist. Existing diverse interoffice facilities must also be available between the serving wire centers. Interoffice mileage will be charged between the serving wire centers where the local loops actually terminate. This option provides diversity between two customer premises or between a customer premises and a Telephone Company Hub.

Example:

OPTION 3:



ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.3 Optional Features and Functions (Cont'd)

The following table shows the optional features and functions availability (A) for High Capacity Service:

	<u>HC0</u>	<u>HC1</u>	<u>HC1C</u>	<u>HC2</u>	<u>HC3</u>	<u>HC4</u>
Central Office Multiplexing						
DS4 to DS1	-	-	-	-	-	A
DS3 to DS1	-	-	-	-	A	-
DS2 to DS1	-	-	-	A	-	-
DS1C to DS1	-	-	A	-	-	-
DS1 to Voice	-	A	-	-	-	-
DS1 to DS0	-	A	-	-	-	-
DS0 to Subrate*	A	-	-	-	-	-
<u>Network Reconfiguration Service</u>	A	A	A	A	A	A
<u>Clear Channel Capability (B8ZS)</u>	-	A	-	-	-	-
<u>Shared Network Arrangement</u>	-	A	-	-	A	-
<u>Enhanced Access Diversity (EAD)</u>	-	A	-	-	A	-

* Available only on a channel of a 1.544 Mbps facility to a Telephone Company Hub.

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges

General Description

This section contains the specific regulations governing the rates and charges, which apply to High Capacity Services.

DS3 High Capacity Service is available under a month-to-month, one, three or five-year billing period as described following. (T)

DS1 and DS3 Services are subject to zone pricing. Rates for three rate zones have been established pursuant to the Federal Communications Commission's Report and Order in the Matter of Expanded Interconnection with Local Telephone Company Facilities, CC Docket No. 91-141, adopted September 17, 1992 and released October 17, 1992.

Each Central Office has been assigned to one of three pricing zones. The pricing zone for each central office is identified in NECA FCC Tariff No. 4.

(1) DS3 High Capacity Service Rate Description

Monthly Extension Rates# (T)

Monthly extension rates are charges that the customer may elect to be converted to at the end of their 1, 3 or 5-year billing period, until a new billing period is selected or service is disconnected. Monthly extension rates are only available once the term plan has expired.

DS3 High Capacity Service Billing Period# (T)

The billing period establishes the amount of time that rates for a service are stabilized by the Telephone Company.

The following billing periods are available for DS3 High Capacity Services and associated optional features and functions:

- Month-to-Month
- Monthly Extension Rate
- 1 Year
- 3 Year
- 5 Year

Effective November 19, 2021, Term Pricing Plans are no longer permitted. Term Pricing 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 the service will convert to the Month to Month rate. If at any time an existing customer terminates its Term Pricing Plan, the customer may not re-subscribe to the plan. In addition, the DS3 Month to Month rate is re-added and the DS3 Monthly Extension Rate is removed.

(N)
 |
 (D)
 (D)
 |
 (N)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

General Description (Cont'd)

(1) DS3 High Capacity Service Rate Description (Cont'd)

DS3 High Capacity Service Billing Period# (Cont'd) (T)

At the expiration of the billing period, the customer will have the option of subscribing to one of the following options:

- (a) Elect to renew the service for a new 1, 3 or 5 year billing period, at rates and charges currently in effect.
- (b) Elect to be converted to monthly extension rates.
- (c) Elect to disconnect the service upon expiration of the billing period.

If the customer does not choose one of the preceding options prior to the expiration date of the commitment period, monthly extension rates will be applied upon expiration of the commitment period.

Option (a) as described preceding is available to customers if the term plans remain in effect and are not grandfathered. If the term plans are grandfathered and the service expires, absent customer notification, the customers expired service will be converted to monthly extension rates upon expiration.

Nonrecurring charges are not applicable for services renewed, as long as the same number of DS3s are renewed. Any change in the number of DS3s will incur the appropriate nonrecurring charges.

The customer must provide the Telephone Company with a written notice of intent to extend the DS3 billing period no later than one month prior to the expiration of the service period.

Service Offer is limited. See Footnote on page 7-67.

(N)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

General Description (Cont'd)

(1) DS3 High Capacity Service Rate Description (Cont'd)

DS3 High Capacity Service Billing Period# (Cont'd) (T)

An existing DS3 under a 1 or 3 year billing period may be converted to a DS3 under a longer term 3 or 5 year billing period without termination liabilities, provided that:

- (a) the expiration date for the new term agreement is beyond the end of the original term agreement,
- (b) the converted DS3 must be based upon the prevailing rates,
- (c) the customer maintains the same or greater number of DS3 circuits under the new billing period, and
- (d) No lapse in service occurs.

Service Offer is limited. See Footnote on page 7-67.

(N)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.4 Rates and Charges (Cont'd)(A) Standard Channel Termination
Per point of termination

		<u>Monthly Rates</u>	<u>Nonrecurring Charges</u>	
DS1 (1.544 Mbps)	Zone 1	\$150.00	\$574.00	
	Zone 2	\$152.23	\$574.00	(R)
	Zone 3	\$165.12	\$574.00	(R)
1 YR-OPP Plan*†#				
DS1 (1.544 Mbps)	Zone 1	\$142.50	\$574.00	
	Zone 2	\$144.61	\$574.00	(R)
	Zone 3	\$156.85	\$574.00	(R)
3 YR-OPP Plan*†#				
DS1 (1.544 Mbps)	Zone 1	\$127.50	\$574.00	
	Zone 2	\$129.39	\$574.00	(R)
	Zone 3	\$140.33	\$574.00	(R)
5 YR-OPP Plan*†#				
DS1 (1.544 Mbps)	Zone 1	\$112.50	\$574.00	
	Zone 2	\$114.97	\$574.00	(R)
	Zone 3	\$123.83	\$574.00	(R)
-	Re-termination to Expanded Interconnection DS1 cross-connect	N/A	\$189.00	

* Rate regulations applicable to the Optional Payment Plans are defined in Section 2.11.1.1

† DS1 Optional Payment Plan 1,3 and 5 year rates are calculated as a percentage discount of the monthly rate as specified in Section 2.11.1.1(A)(2).

Effective November 19, 2021, Optional Payment Plans (OPPs) are no longer permitted. Optional 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 the service will convert to the Month to Month rate. If at any time an existing customer terminates its Optional Payment Plan, the customer may not re-subscribe to the plan.

Issued: June 16, 2025

Effective: July 1, 2025

(This page-filed under Amended Transmittal No. 131)

Vice President, Regulatory Affairs
3 High Ridge Park, Stamford, CT 06905

 ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.4 Rates and Charges (Cont'd)(A) Standard Channel Termination (Cont'd)

Per point of termination

		Monthly Rates	Nonrecurring Charges	
<u>Month to Month Service</u>				
Fractional DS1 (128 Kbps)	Zone 1	\$150.00	\$600.00	(I)
	Zone 2	\$159.00	\$600.00	
	Zone 3	\$165.40	\$600.00	
Fractional DS1 (256 Kbps)	Zone 1	\$150.00	\$600.00	(I)
	Zone 2	\$159.00	\$600.00	
	Zone 3	\$165.40	\$600.00	
Fractional DS1 (384 Kbps)	Zone 1	\$150.00	\$600.00	(I)
	Zone 2	\$159.00	\$600.00	
	Zone 3	\$165.40	\$600.00	
Fractional DS1 (512 Kbps)	Zone 1	\$150.00	\$600.00	(I)
	Zone 2	\$159.00	\$600.00	
	Zone 3	\$165.40	\$600.00	
Fractional DS1 (768 Kbps)	Zone 1	\$150.00	\$600.00	(I)
	Zone 2	\$159.00	\$600.00	
	Zone 3	\$165.40	\$600.00	

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.4 Rates and Charges (Cont'd)(A) Standard Channel Termination (Cont'd)

Per point of termination

		<u>Monthly Rates</u>	<u>Nonrecurring Charges</u>	(T)
<u>1 Yr-OPP Plan**†</u>				
Fractional DS1 (128 Kbps)	Zone 1	\$142.50	\$600.00	
	Zone 2	\$149.15	\$600.00	
	Zone 3	\$157.13	\$600.00	
Fractional DS1 (256 Kbps)	Zone 1	\$142.50	\$600.00	
	Zone 2	\$149.15	\$600.00	
	Zone 3	\$157.13	\$600.00	
Fractional DS1 (384 Kbps)	Zone 1	\$142.50	\$600.00	
	Zone 2	\$149.15	\$600.00	
	Zone 3	\$157.13	\$600.00	
Fractional DS1 (512 Kbps)	Zone 1	\$142.50	\$600.00	
	Zone 2	\$149.15	\$600.00	
	Zone 3	\$157.13	\$600.00	
Fractional DS1 (768 Kbps)	Zone 1	\$142.50	\$600.00	
	Zone 2	\$149.15	\$600.00	
	Zone 3	\$157.13	\$600.00	

* Rate regulations applicable to the Optional Payment Plans are defined in Section 2.11.1.1

† DS1 Optional Payment Plan 1,3 and 5 year rates are calculated as a percentage discount of the monthly rate as specified in Section 2.11.1.1(A)(2).

Service Offer is limited. See Footnote on page 7-70.

(N)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.4 Rates and Charges (Cont'd)(A) Standard Channel Termination (Cont'd)

Per point of termination

		<u>Monthly Rates</u>	<u>Nonrecurring Charges</u>	(T)
<u>3 Yr-OPP Plan*†#</u>				
Fractional DS1 (128 Kbps)				
	Zone 1	\$127.50	\$600.00	
	Zone 2	\$133.45	\$600.00	
	Zone 3	\$140.59	\$600.00	
Fractional DS1 (256 Kbps)				
	Zone 1	\$127.50	\$600.00	
	Zone 2	\$133.45	\$600.00	
	Zone 3	\$140.59	\$600.00	
Fractional DS1 (384 Kbps)				
	Zone 1	\$127.50	\$600.00	
	Zone 2	\$133.45	\$600.00	
	Zone 3	\$140.59	\$600.00	
Fractional DS1 (512 Kbps)				
	Zone 1	\$127.50	\$600.00	
	Zone 2	\$133.45	\$600.00	
	Zone 3	\$140.59	\$600.00	
Fractional DS1 (768 Kbps)				
	Zone 1	\$127.50	\$600.00	
	Zone 2	\$133.45	\$600.00	
	Zone 3	\$140.59	\$600.00	

* Rate regulations applicable to the Optional Payment Plans are defined in Section 2.11.1.1

† DS1 Optional Payment Plan 1,3 and 5 year rates are calculated as a percentage discount of the monthly rate as specified in Section 2.11.1.1(A)(2).

Service Offer is limited. See Footnote on page 7-70.

(N)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.4 Rates and Charges (Cont'd)(A) Standard Channel Termination (Cont'd)

Per point of termination

		<u>Monthly Rates</u>	<u>Nonrecurring Charges</u>	
<u>5 Yr-OPP Plan**†</u>				(T)
Fractional DS1 (128 Kbps)				
	Zone 1	\$112.50	\$600.00	
	Zone 2	\$117.75	\$600.00	
	Zone 3	\$124.05	\$600.00	
Fractional DS1 (256 Kbps)				
	Zone 1	\$112.50	\$600.00	
	Zone 2	\$117.75	\$600.00	
	Zone 3	\$124.05	\$600.00	
Fractional DS1 (384 Kbps)				
	Zone 1	\$112.50	\$600.00	
	Zone 2	\$117.75	\$600.00	
	Zone 3	\$124.05	\$600.00	
Fractional DS1 (512 Kbps)				
	Zone 1	\$112.50	\$600.00	
	Zone 2	\$117.75	\$600.00	
	Zone 3	\$124.05	\$600.00	
Fractional DS1 (768 Kbps)				
	Zone 1	\$112.50	\$600.00	
	Zone 2	\$117.75	\$600.00	
	Zone 3	\$124.05	\$600.00	
DS1C (3.152 Mbps)		ICB	ICB	
DS2 (6.312 Mbps)		ICB	ICB	

ICB Rates and charges are filed in Section 16.

* Rate regulations applicable to the Optional Payment Plans are defined in Section 2.11.1.1

† DS1 Optional Payment Plan 1,3 and 5 year rates are calculated as a percentage discount of the monthly rate as specified in Section 2.11.1.1(A)(2).

Service Offer is limited. See Footnote on page 7-70.

(N)

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.4 Rates and Charges (Cont'd)(A) Standard Channel Termination (Cont'd)

Per point of termination

		<u>Monthly Rates</u>	<u>Nonrecurring Charges</u>	
Month to Month (*)				
DS3 (44.736 Mbps)	Zone 1	\$2,400.00	\$1,250.00	
	Zone 2	\$2,691.13	\$1,250.00	(l)
	Zone 3	\$2,067.51	\$1,250.00	(l)
Monthly Extension#				
DS3 (44.736 Mbps)	Zone 1	\$2,400.00		
	Zone 2	\$2,520.00		
	Zone 3	\$2,776.56		(l)
1 YR Plan#				
DS3 (44.736 Mbps)	Zone 1	\$2,100.00	\$1,250.00	
	Zone 2	\$2,200.00	\$1,250.00	
	Zone 3	\$2,300.00	\$1,250.00	
3 YR Plan**#				
DS3 (44.736 Mbps)	Zone 1	\$1,000.00	\$1,000.00	
	Zone 2	\$1,025.00	\$1,000.00	
	Zone 3	\$1,125.00	\$1,000.00	
5 YR Plan**#				
DS3 (44.736 Mbps)	Zone 1	\$900.00	\$0.00	
	Zone 2	\$950.00	\$0.00	
	Zone 3	\$975.00	\$0.00	
- Retermination to Expanded Interconnection DS3 cross-connect		N/A	\$242.00	

* Minimum period of twelve months applies as specified in Section 2.10.1 F.

** Rate regulations applicable to the three and five year Optional Payment Plans are defined in Section 2.11.1.1.

Service Offer is limited. See Footnote on page 7-67.

ACCESS SERVICE

7. Special Access Service (Cont'd)7.16 High Capacity Special Access Service (Cont'd)7.16.4 Rates and Charges (Cont'd)(A) Standard Channel Termination (Cont'd)

Per point of termination

		<u>Monthly Rates</u>	<u>Nonrecurring Charges</u>
Rollover Charges:			
Per DS1 rearrangement*	Zone 1		\$122.00
	Zone 2		\$122.00
	Zone 3		\$122.00
Per DS3 rearrangement	Zone 1		\$185.00
	Zone 2		\$185.00
	Zone 3		\$185.00
DS4 (274.176 Mbps)		ICB	ICB

ICB rates and charges are filed in Section 16.

* If a test of DS0 circuits which are connected to the DS1 circuit is requested at the time of rollover, then a rearrangement charge per DS0 circuit tested will apply in addition to this charge as specified in Section 2.11.5.

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)
(D)
(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)
(D)
(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)
(D)
(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)
(D)
(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)
(D)
(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)
(D)
(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)

(D)

(D)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)

ACCESS SERVICE

7. Special Access Service (Cont'd)

7.16 High Capacity Special Access Service (Cont'd)

7.16.4 Rates and Charges (Cont'd)

(D)

(D)

(D)

(D)