1. HIGH CAPACITY SERVICE

A. GENERAL

Additional terms and conditions applicable to Special Access Services may be found in Part 2, Section 2.

All rates and charges may be adjusted at a later date.

The Channel Mileage rate is applicable when a High Capacity Service connects a customer designated premises to a Fast Packet Service and the customer serving wire center is not capable of providing the Fast Packet Service. The mileage will be measured from the customer serving wire center to the nearest wire center equipped with Fast Packet Services capabilities; this wire center may be in AT&T service territory.

The Channel Mileage rate is not applicable when a Primary Rate ISDN or SuperTrunk® /1/ service connects a customer designated premises via a Company collocation arrangement to the Company's serving wire center. (C)

/1/ Effective June 30, 2016, SuperTrunk Service is Grandfathered. See Part 30, Section 4. (N)

1. HIGH CAPACITY SERVICE (cont'd)

B. BASIC CHANNEL DESCRIPTION

A High Capacity channel is a channel for the transmission of nominal 64.0 kbps/1/ or 1.544, 3.152, 6.312, 44.736 (DS3, DS3x3 and DS3x12), or 274.176 Mbps isochronous serial data. The actual bit rate and framing format is a function of the network channel interface selected by the customer. DS3, DS3x3 and DS3x12 will be provided with or without Company provided terminal equipment on the customer's premises. When a customer desires to furnish their own terminal equipment, the Company will work cooperatively with the customer to provide a physical interface satisfactory to both parties. High Capacity channels are provided between customer designated premises through serving wire centers or between a customer designated premises and a Company Hub or between a customer designated premises or Company Hub, and an EIS POT. DS3x12 is only provided between a customer designated premises and the serving wire center serving that premises.

High Capacity service offerings are only available where facilities and operating conditions permit. Where facilities and/or operating conditions do not permit, Special Construction as set forth in Schedule Cal. P.U.C. No. 175-T, Section 15, shall apply.

/1/ Available only as a channel of a 1.544 Mbps facility between two Company Digital Data Hub or as a cross connect of two channels of two 1.544 Mbps facilities at a Digital Data Hub(s); or as a through-connect of two channels of two 1.544 Mbps facilities at an Advanced Digital Network Hub. The customer must provide system and channel assignment data.

1. HIGH CAPACITY SERVICE (cont'd)

B. BASIC CHANNEL DESCRIPTION (cont'd)

DS3, DS3x3 and DS3x12 services provide a total capacity of one (DS3), three (DS3x3) or twelve (DS3x12) services. DS3x3 services can be point-to-point or connected at the wire center serving that premises to individual terminating DS3 services, or to individual DS3 services for multiplexing at a Hub. DS3x12 service can only be connected at the serving wire center to individual terminating DS3 services, or to individual DS3 services for multiplexing at a Hub. The DS3 to DS1 multiplexing function is only available in Company Hubs as indicated in The National Exchange Carrier Association (NECA) Tariff F.C.C. No. 4, Section 16. For Information on how to obtain copies of the NECA Tariff see Schedule Cal. P.U.C. No. 175-T, Section 14.

DS3, DS3x3 and DS3x12 High Capacity service offerings are only available where facilities and operating conditions permit. Where facilities and/or operating conditions do not permit, Special Construction as set forth in Part 2, Section 5, shall apply.

1. HIGH CAPACITY SERVICE (cont'd)

B. BASIC CHANNEL DESCRIPTION (cont'd)

Fiber Advantage^{sm} Service is a high performance service providing transmission of 1.544, 3.152, 6.312, 44.736 (DS3, DS3x3, or DS3x12), or 274.176 Mbps isochronous serial data with reliability parameters designed to limit a single event from interrupting service. Fiber Advantage^{sm} Service is offered as end-to-end fiber optic DS1 and DS3 (DS3, DS3x3 and DS3x12) services provided with either an electrical or fiber optic. When the optical interface is selected, the customer must provide the optical line termination at its premises, which must be compatible with the Company's equipment. Fiber Advantage^{sm} Services are only available where facilities and operating conditions permit as determined by the Company. Upon request, a customer may be placed on a Self Healing Fiber ring, when available. Upon request, Fiber Advantage^{sm} service may be placed on diverse fiber facilities where available. Where facilities and/or operating conditions do not permit, Special Construction as set forth in Part 2, Section 5, shall apply. A customer may order any appropriate High Capacity Optional Feature or Function with Fiber Advantage^{sm} Service.

DS3, DS3x3, and DS3x12 High Capacity Service shall only be provided as Fiber Advantage^{sm} Service. At the customer's option, DS1 High Capacity Service may be provided as Fiber Advantage^{sm} Service.

1. HIGH CAPACITY SERVICE (cont'd)

B. BASIC CHANNEL DESCRIPTION (cont'd)

Channel mileage associated with High Capacity Service may be ordered at the 1.544 Mbps service level or as Flexible High Capacity Channel Mileage available in groups of 4 (256 Kbps.), 6 (384 Kbps.), 8 (512 Kbps.),12 (768 Kbps.) and 24 (1.544 Mbps.) DS0 channels. Flexible High Capacity Channel Mileage is available only as a B8ZS/Extended Superframe Format service. Flexible High Capacity Channel Mileage channels are contiguous within the network and can be used to create a wideband circuit. These signals remain separately formatted within the DS-1 signal.

Flexible High Capacity Channel mileage is available between all wire center areas served by the Company where suitable digital transmission facilities are available.

The customer may change from one Flexible High Capacity Channel Mileage service arrangement to another (e.g., the customer has an 8 channel arrangement and increases to an 12 channel arrangement, or has a 24 channel arrangement and decreases to 8 channels). This option is only available when the channel mileage was initially ordered as Flexible High Capacity Channel Mileage. A change in capacity charge will apply.

The customer may provide the Network Channel Terminating Equipment associated with the High Capacity channel at the customer's premises. The interim program for interconnection of such equipment is set forth in Technical Reference PUB AS No. 1.

1. HIGH CAPACITY SERVICE (cont'd)

C. TECHICAL SPECIFICATIONS PACKAGES (cont'd)

	Package HC-					
Parameters	0	1	1C	2	3	4
Error-Free Seconds		X			X	

A channel with technical specifications package HC1 or HC3 will be capable of an error-free second performance of 98.75% over a continuous 24 hour period as measured at the 1.544 Mbps rate through a CSU equivalent which is designed, manufactured, and maintained to conform with the specifications contained in Technical References L-780059-PB/NB and L-780085-PB/NB.

Fiber Advantage[sm] Service will provide at least 99.999% circuit availability and 100% availability of its fiber optic channel termination on a monthly basis. This applies only to the Company-provided service and requires customer-provided equipment to be fully compatible and operational under the specifications set forth in Technical Publication L-780059-PB.

D. NETWORK CHANNEL INTERFACES

The following network channel interfaces (NCIs) define the bit rates that are available for a High Capacity channel:

CI	Bit Rate
DS-15[/1/]	1.544 Mbps (DS1)
DS-27	274.176 Mbps (DS4)
DS-31	3.152 Mbps (DS1C)
DS-44	44.736 Mbps (DS3)
DS-63	6.312 Mbps (DS2)

Compatible network channel interfaces are set forth in the Technical References listed in **C.** preceding.

/1/ A 64.0 kbps channel is available as a channel(s) of a 1.544 Mbps facility to a Company Hub.

1. HIGH CAPACITY SERVICE (cont'd)

E. OPTIONAL FEATURES AND FUNCTIONS

1. Automatic Loop Transfer/1/

   The Automatic Loop Transfer provides protection on a 1xN basis against failure of the facilities between a customer designated premises and the wire center serving that premises. Protection is furnished through the use of a switching arrangement that automatically switches to a spare channel when a working channel fails. The spare channel is not included as a part of the option. This option requires compatible equipment at both the serving wire center and the customer premises. The customer is responsible for providing the equipment at its premises. Equipment at the customer premises will be provided under the Company's tariff only if it existed in the Company inventory as of November 18, 1983.

2. Transfer Arrangement/1/

   An arrangement that affords the customer an additional measure of flexibility in the use of their access channel(s). The arrangement can be utilized to transfer a leg of a Special Access Service to either a spare or working channel that terminates in either the same or a different customer premises. A key activated or dial up control service is required to operate the transfer arrangement. A spare channel, if required, is not included as part of the option.

/1/ Provided only to existing customers and services working as of January 1, 1995.

1. HIGH CAPACITY SERVICE (cont'd)

E. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

3. Digital Cross-Connect System Interface Arrangements

a. Advanced Digital Network Interface Arrangement

An arrangement that connects a 1.544 Mbps (DS1) or Fiber Advantage^{sm} 1.544 Mbps service to a digital cross-connect system. This DCS may cross-connect an entire 1.544 Mbps channel or individual channels. One ADN Interface Arrangement shall apply per termination at the digital cross-connect system.

b. High Capacity Service Interface Arrangement

An arrangement that connects a 1.544 Mbps (DS1) or Fiber Advantage^{sm} DS1 service to a digital cross-connect system (DCS). This DCS may cross-connect an entire DS1 channel to another DS1 or DS3 channel. One High Capacity Service Interface Arrangement charge shall apply per termination at the digital cross-connect system.

1. HIGH CAPACITY SERVICE (cont'd)

E. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

4. Central Office Multiplexing

- DS4 to DS1

An arrangement that converts a 274.176 Mbps channel to 168 DS1 channels using digital time division multiplexing.

- DS3 to DS1

There are two options available with this feature:

Option 1

An arrangement that converts a 44.736 Mbps channel to 28 DS1 channels using digital time division multiplexing.

Option 2

An arrangement that converts a 44.736 Mbps channel to up to 28 channels for use with DS1 service when Network Reconfiguration Service/1/ is requested as set forth in 2. Advanced Digital Network, following. (C)

- DS2 to DS1

An arrangement that converts a 6.312 Mbps channel to four DS1 channels using digital time division multiplexing.

- DS1C to DS

An arrangement that converts a 3.152 Mbps channel to two DS1 channels using digital time division multiplexing.

- DS1 to Voice

An arrangement that converts a 1.544 Mbps channel to 24 channels for use with Voice Grade Services. A channel of this DS1 to the Hub can also be used for a Digital Data, Program Audio or Metallic Service.

/1/ Effective October 30, 2018, Network Reconfiguration Service (NRS) will no longer be available for purchase by new or existing customers. See Part 20, Section 15. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

E. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

5. Synchronous Timing

Synchronous Timing utilizes a point to point DS1 service that connects from a Company BITS timing clock to another customer premises or an EIS arrangement that must be located within the same serving wire center as the BITS timing clock. Synchronous Timing is solely used for network synchronization via a master timing supply. Synchronous Timing is available only where facilities and equipment are available.

6. Clear Channel Capability (CCC)

- per Circuit arranged

Clear Channel Capability (CCC) is a feature that provides the customer with an increase in useable bandwidth from 1.344 Mbps to 1.536 Mbps of an unconstrained data stream across the network. CCC is provided on 1.544 Mbps service and provisioning of CCC in the Company network requires the customer's signal at the channel interface to conform to bipolar with eight zero substitution (B8ZS) line code format. Customer equipment must be compatible with this method of providing the unconstrained signal.

1. HIGH CAPACITY SERVICE (cont'd)

E. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

7. The following table shows the technical specifications packages with which the optional features and functions are available.

	Available with Technical Specifications Package HC-						
	0	1	1C	2	3	3x3	4
Automatic Loop Transfer[/1/]	X						
Central Office Multiplexing:							
DS4 to DS1						X	
DS3 to DS1				X			
- Opt.1				X	X		
- Opt.2				X	X		
DS2 to DS1				X			
DS1C to DS1		X					
DS1 to Voice Transfer Arrangement@		X					
Network Reconfiguration Service[/2/]			X			X	
Advanced Digital Network Interface Arrangement							
High Capacity Service Interface Arrangement			X				
Synchronous Timing			X				

/1/ Provided only to existing customers and services working as of January 1, 1995.
/2/ Applicable regulations, rates and charges are set forth in **2**. (Advanced Digital Network), following.

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES

	Monthly Rate	Nonrecurring Charge 1st	Add'l	USOC	
1. CHANNEL TERMINATION					
- Per point of termination					
a. Non–Collocation/Collocation Schedule					
i Non-Collocation					
1.544 Mbps (DS1)/2/					
Month-to-Month					
- at an End User location	$220.00	$633.50	NA/1/	TMECS	
- at an IC POT location	95.00	633.50	NA/1/	TMEPS	
1-Year Rate Stability Plan					
- at an End User location	205.00	633.50	NA/1/	FA1CP	
- at an IC POT location	150.00	633.50	NA/1/	FA1PP	
3-Year Rate Stability Plan/4/					(C)
- at an End User location	195.00	NO	NO	FA3CP	
- at an IC POT location	195.00	NO	NO	FA3PP	
5-Year Rate Stability Plan/3/					
- at an End User location	180.00	NO	NO	FA5CP	
- at an IC POT location	137.00	NO	NO	FA5PP	

/1/ For 1.544 Mbps service, the charge for each point of termination is the charge shown for the 1st charge.
/2/ The Company will determine the transport facilities for the provisioning of 1.544 Mbps service.
/3/ As of November 1, 2013, Rate Stability Plans greater than 36 months are no longer available for new or renewing subscribers. (C)
/4/ As of January 15, 2021, 3-Year Rate Stability Plans are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	Monthly Rate	Nonrecurring Charge 1st	Add'l	USOC	
1. CHANNEL TERMINATION (cont'd)					
- Per point of termination					
a. Non–Collocation/Collocation Schedule (cont'd)					
ii Collocation/3/					
1.544 Mbps (DS1)/2/					
Month-to-Month					
- at an End User location	$165.94	$600.69	NA/1/	TMECS/TMECS	
1-Year Term Plan					
- at an End User location	160.00	600.69	NA/1/	TMECS/T6XG1	
2-Year Term Plan/5/					(C)
- at an End User location	155.00	NO	NO	TMECS/T6XG2	
3-Year Term Plan/5/					(C)
- at an End User location	140.00	NO	NO	TMECS/T6XG3	
5-Year Term Plan/4/					
- at an End User location	130.00	NO	NO	TMECS/T6XG5	

/1/ For 1.544 Mbps service, the charge for each point of termination is the charge shown for the 1st charge.
/2/ The Company will determine the transport facilities for the provisioning of 1.544 Mbps service.
/3/ Available only in those central offices that are suitably equipped.
/4/ As of November 1, 2013, Term Plans greater than 36 months are no longer available for new or renewing subscribers (C)
/5/ As of January 15, 2021, 2- and 3-Year Term Plans are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	Monthly Rate	Nonrecurring Charge 1st	Add'l	USOC	
1. CHANNEL TERMINATION (cont'd)					
- Per point of termination					
b. Transport for Collocation for Primary Rate ISDN, Primary Interface/3/					
1.544 Mbps (DS1)/2/					
Month-to-Month					
- at an End User location	$165.94	$600.69	NA/1/	TMECS	
1-Year Term Plan					
- at an End User location	160.00	600.69	NA/1/	T6XG1	
2-Year Term Plan/5/					(C)
- at an End User location	155.00	NO	NA/1/	T6XG2	
3-Year Term Plan/5/					(C)
- at an End User location	140.00	NO	NA/1/	T6XG3	
5-Year Term Plan/4/					
- at an End User location	130.00	NO	NA/1/	T6XG5	

/1/ For 1.544 Mbps service, the charge for each point of termination is the charge shown for the 1st charge.
/2/ The Company will determine the transport facilities for the provisioning of 1.544 Mbps service.
/3/ Available only in those central offices that are suitably equipped.
/4/ As of November 1, 2013, Term Plans greater than 36 months are no longer available for new or renewing subscribers. (C)
/5/ As of January 15, 2021, 2- and 3-Year Term Plans are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	Monthly Rate	Nonrecurring Charge 1st	Add'l	USOC	
1. CHANNEL TERMINATION (cont'd)					
- Per point of termination					
c. Transport for Collocation for SuperTrunk® Service[/4/]					
1.544 Mbps (DS1)[/2/]					
Month-to-Month					
- at an End User location	$165.94	$600.69	NA[/1/]	TMECS	
1-Year Term Plan					
- at an End User location	160.00	600.69	NA[/1/]	T6XG1	
2-Year Term Plan[/5/]					(C)
- at an End User location	155.00	NO	NA[/1/]	T6XG2	
3-Year Term Plan[/5/]					(C)
- at an End User location	140.00	NO	NA[/1/]	T6XG3	
5-Year Term Plan[/3/]					
- at an End User location	130.00	NO	NA[/1/]	T6XG5	

/1/ For 1.544 Mbps service, the charge for each point of termination is the charge shown for the 1st charge.
/2/ The Company will determine the transport facilities for the provisioning of 1.544 Mbps service.
/3/ As of November 1, 2013, Term Plans terms greater than 36 months are no longer available for new or renewing subscribers. (C)
/4/ Effective June 30, 2016, SuperTrunk Service is Grandfathered. See Part 20, Section 4.
/5/ As of January 15, 2021, 2- and 3-Year Term Plans are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	USOC	Monthly Rates	Nonrecurring Charges 1st	Nonrecurring Charges Add'l.
1. CHANNEL TERMINATION (cont'd) - Per point of termination				
d. Fiber Advantage[SM] DS3 and DS3x3 Rate Stability Payment Plan				
i. 1 Year Plan				
- Fiber Advantage[SM] DS3 with Terminal Equipment at an End User Location	Z31AC	$2,970.00	$2,750.00	NA[/1/]
Monthly Extension Rate	TVJ8X	3,500.00	NA	NA
- Fiber Advantage[SM] DS3 with Terminal Equipment at an IC POT location	Z31AP	2,310.00	2,750.00	NA[/1/]
Monthly Extension Rate	TVJ4X	2,750.00	NA	NA
- Fiber Advantage[SM] DS3 without Terminal Equipment at an End User location	ZO1AC	2,100.00	2,310.00	NA[/1/]
Monthly Extension Rate	TVJ9X	2,400.00	NA	NA

/1/ For DS3 service, the charge for each point of termination is the charge shown for the 1st charge.

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	USOC	Monthly Rates	Nonrecurring Charges 1st	Nonrecurring Charges Add'l.
1. CHANNEL TERMINATION (cont'd)				
- Per point of termination				
d. Fiber Advantage[SM] DS3 and DS3x3 Rate Stability Payment Plan (Cont'd)				
i. 1 Year Plan (cont'd)				
- Fiber Advantage[SM] DS3 without Terminal Equipment at an IC POT location	ZO1AP	$1,710.00	$2,310.00	NA/1/
Monthly Extension Rate	TVJ6X	2,000.00	NA	NA
- Fiber Advantage[SM] DS3x3 with Terminal Equipment at an End User location	Z31AC	ICB	ICB	NA/1/
- Fiber Advantage[SM] DS3x3 with Terminal Equipment at an IC POT location	Z31AP	ICB	ICB	NA/1/

/1/ For DS3 service, the charge for each point of termination is the charge shown for the 1st charge.

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	USOC	Monthly Rates	Nonrecurring Charges 1st	Add'l.
1. CHANNEL TERMINATION (cont'd) - Per point of termination				
d. Fiber Advantage^{sm} DS3 and DS3x3 Rate Stability Payment Plan (cont'd)				
i. 1 Year Plan (cont'd)				
- Fiber Advantage^{sm} DS3x3 without Terminal Equipment at an End User location	ZO1AC	ICB	ICB	NA /1/
- Fiber Advantage^{sm} DS3x3 without Terminal Equipment at an IC POT location	ZO1AP	ICB	ICB	NA /1/

/1/ For DS3 service, the charge for each point of termination is the charge shown for the 1st charge.

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	USOC	Monthly Rates	Nonrecurring Charges 1st	Nonrecurring Charges Add'l.
1. CHANNEL TERMINATION (cont'd) - Per point of termination				
d. Fiber Advantage[SM] DS3 and DS3x3 Rate Stability Payment Plan (cont'd)				
ii. 3 Year Plan[/2/]				(C)
- Fiber Advantage[SM] DS3 with Terminal Equipment at an End User location	Z33AC	$2,420.00	NO	NA[/1/]
Monthly Extension Rate	TVJ8X	3,500.00	NA	NA
- Fiber Advantage[SM] DS3 with Terminal Equipment at an IC POT location	Z33AP	1,980.00	NO	NA[/1/]
Monthly Extension Rate	TVJ4X	2,750.00	NA	NA
- Fiber Advantage[SM] DS3 without Terminal Equipment at an End User location	ZO3AC	1,760.00	NO	NA[/1/]
Monthly Extension Rate	TVJ9X	2,400.00	NA	NA
- Fiber Advantage[SM] DS3 without Terminal Equipment at an IC POT location	ZO3AP	1,375.00	NO	NA[/1/]
Monthly Extension Rate	TVJ6X	2,000.00	NA	NA

/1/ For DS3 service, the charge for each point of termination is the charge shown for the 1st charge.
/2/ As of January 15, 2021, 3-Year Rate Stability Payment Plans are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	USOC	Monthly Rates	Nonrecurring Charges 1st	Add'l.	
1. CHANNEL TERMINATION (cont'd) - Per point of termination					
d. Fiber Advantage[sm] DS3 and DS3x3 Rate Stability Payment Plan (cont'd)					
ii. 3 Year Plan[/2/] (cont'd)					(C)
- Fiber Advantage[sm] DS3x3 with Terminal Equipment at an End User location	Z33AC	ICB	NO	NA[/1/]	
- Fiber Advantage[sm] DS3x3 with Terminal Equipment at an IC POT location	Z33AP	ICB	NO	NA[/1/]	
- Fiber Advantage[sm] DS3x3 without Terminal Equipment at an End User location	ZO3AC	ICB	NO	NA[/1/]	

/1/ For DS3 service, the charge for each point of termination is the charge shown for the 1st charge.
/2/ As of January 15, 2021, 3-Year Rate Stability Payment Plans are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	USOC	Monthly Rates	Nonrecurring Charges 1st	Nonrecurring Charges Add'l.
1. CHANNEL TERMINATION (cont'd) - Per point of termination				
d. Fiber Advantage[sm] DS3 and DS3x3 Rate Stability Payment Plan (cont'd)				
ii. 3 Year Plan[/2/] (cont'd)				(C)
- Fiber Advantage[sm] DS3x3 without Terminal Equipment at an IC POT location	ZO3AP	ICB	NO	NA[/1/]
- Fiber Advantage[sm] DS3x12 with Terminal Equipment at an End User location	Z23EE	ICB	NO	NA[/1/]
- Fiber Advantage[sm] DS3x12 with Terminal Equipment at an IC POT location	Z23AE	ICB	NO	NA[/1/]
- Fiber Advantage[sm] DS3x12 without Terminal Equipment at an End User location	Z23EO	ICB	NO	NA[/1/]
- Fiber Advantage[sm] DS3x12 without Terminal Equipment at an IC POT location	Z23AO	ICB	NO	NA[/1/]

/1/ For DS3 service, the charge for each point of termination is the charge shown for the 1st charge.
/2/ As of January 15, 2021, 3-Year Rate Stability Payment Plans are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	USOC	Monthly Rate	Nonrecurring Charge 1st	Nonrecurring Charge Add'l	
1. CHANNEL TERMINATION (cont'd)					
- Per point of termination					
d. Fiber Advantage[sm] DS3 and DS3x3 Rate Stability Payment Plan (cont'd)					
iii. 5 Year Plan[/2/]					(C)
- Fiber Advantage[sm] DS3 with Terminal Equipment at an End User location	Z35AC	ICB	NO	NA[/1/]	
- Fiber Advantage[sm] DS3 with Terminal Equipment at an IC POT location	Z35AP	ICB	NO	NA[/1/]	
- Fiber Advantage[sm] DS3 without Terminal Equipment at an End User location	ZO5AC	ICB	NO	NA[/1/]	

/1/ For DS3 service, the charge for each point of termination is the charge shown for the 1st charge.
/2/ As of November 1, 2013, Term Pricing Plan terms greater than 36 months are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	USOC	Monthly Rate	Nonrecurring Charge 1st	Nonrecurring Charge Add'l
1. CHANNEL TERMINATION (cont'd)				
- Per point of termination				
d. Fiber Advantage[sm] DS3 and DS3x3 Rate Stability Payment Plan (cont'd)				
iii. 5 Year Plan[/2/] (cont'd)				
- Fiber Advantage[SM] DS3 without Terminal Equipment at an IC POT location	ZO5AP	ICB	NO	NA[/1/]
- Fiber Advantage[SM] DS3x3 with Terminal Equipment at an End User location	Z35AC	ICB	NO	NA[/1/]
- Fiber Advantage[SM] DS3x3 with Terminal Equipment at an IC POT location	Z35AP	ICB	NO	NA[/1/]
- Fiber Advantage[SM] DS3x3 without Terminal Equipment at an End User location	ZO5AC	ICB	NO	NA[/1/]
- Fiber Advantage[SM] DS3x3 without Terminal Equipment at an IC POT location	ZO5AP	ICB	NO	NA[/1/]

(C)

/1/ For DS3 service, the charge for each point of termination is the charge shown for the 1st charge.
/2/ As of November 1, 2013, Term Pricing Plan terms greater than 36 months are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

	Monthly Rate	Nonrecurring Charge 1st	Nonrecurring Charge Add'l	USOC	
1. CHANNEL TERMINATION (cont'd)					
- Per point of termination					
d. Fiber Advantage[sm] DS3 and DS3x3 Rate Stability Payment Plan (cont'd)					
iii. 5 Year Plan[/2/] (cont'd)					(C)
- Fiber Advantage DS3x12 with Terminal Equipment at an End User location	ICB	ICB	NA[/1/]	Z25EE	
- Fiber Advantage DS3x12 with Terminal Equipment at an IC POT location	ICB	ICB	NA[/1/]	Z25AE	
- Fiber Advantage DS3x12 without Terminal Equipment at an End User location	ICB	ICB	NA[/1/]	Z25EO	
- Fiber Advantage DS3x12 without Terminal Equipment at an IC POT location	ICB	ICB	NA[/1/]	Z25AO	

/1/ For DS3 service, the charge for each point of termination is the charge shown for the 1st charge.
/2/ As of November 1, 2013, Term Pricing Plan terms greater than 36 months are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

2. CHANNEL MILEAGE

	Monthly Rates		USOC
	Fixed	Per Mile	
a. 1.544 Mbps			
i. Mileage Bands			
0	None	None	1L5XX
Over 0	$125.00	$25.00	1L5XX
Fiber Advantage[sm]			
0	None	None	1L5XX
Over 0	125.00	25.00	1L5XX

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

2. CHANNEL MILEAGE (cont'd)

a. 1.544 Mbps (cont'd)

	Monthly Rates Fixed	Per Mile	USOC CABS/CRIS	
i. Mileage Bands (cont'd)				
Collocation				
- Month-to-month				
0	None	None	1L5XX/1L5XX	
Over 0	$118.53	$23.71	1L5XX/1L5XX	
- One Year Term Plan				
0	None	None	1L5XX/1L5X1	
Over 0	$105.00	$20.00	1L5XX/1L5X1	
- Two Year Term Plan/2/				(C)
0	None	None	1L5XX/1L5PS	
Over 0	$95.00	$18.00	1L5XX/1L5PS	
- Three Year Term Plan/2/				(C)
0	None	None	1L5XX/1L5X3	
Over 0	$85.00	$17.00	1L5XX/1L5X3	
- Five Year Term Plan/1/				
0	None	None	1L5XX/1L5X5	
Over 0	$75.00	$16.00	1L5XX/1L5X5	

/1/ As of November 1, 2013, Term Plans terms greater than 36 months are no longer available for new or renewing subscribers. (C)

/2/ As of January 15, 2021, Two - and Three -Year Term Plans are no longer available for new or renewing subscribers. (N) (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

2. CHANNEL MILEAGE (cont'd)

		Monthly Rates	
	USOC	Fixed	Per Mile
a. 1.544 Mbps (cont'd)			
ii. Flexible Mileage			
4 Channels			
Over 0	FT1M4	$155.00	$10.00
6 Channels			
0	FT1M6	None	None
Over 0	FT1M6	155.00	12.50
8 Channels			
0	FT1M8	None	None
Over 0	FT1M8	155.00	14.00
12 Channels			
0	FT1M1	None	None
Over 0	FT1M1	155.00	16.00
24 Channels			
0	FT1M2	None	None
Over 0	FT1M2	155.00	31.00

	Nonrecurring Charge
Change in Capacity	
Per circuit SCCFT	$250.00

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

2. CHANNEL MILEAGE (cont'd)

b. Fiber Advantage[sm] 44.736 Mbps[/1/]

	Monthly Rates Fixed	Per Mile	USOC	
Mileage Bands				
- 1 Year Term Plan				(C)
0	None	None	1L5XX	
Over 0	$ 833.00	$66.00	1L5XX	
Monthly Extension Rate	1,075.00	85.00	1YA1X	
- 3 Year Term Plan[/3/]				(C)
0	None	None	1L5X3	
Over 0	675.00	44.00	1L5X3	
Monthly Extension Rate	1,075.00	85.00	1YA1X	
- 5 Year Term Plan[/2/]				(C)
0	None	None	1L5X5	
Over 0	650.00	44.00	1L5X5	
Monthly Extension Rate	1,075.00	85.00	1YA1X	

/1/ If a customer chooses to order a DS3x3 service, the channel mileage applicable to that service would be three times the appropriate channel mileage rates.
/2/ As of November 1, 2013, Term Plans greater than 36 months are no longer available for new or renewing subscribers. (C)
/3/ As of January 15, 2021, 3-Year Term Plans are no longer available for new or renewing subscribers. (N)

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

3. OPTIONAL FEATURES AND FUNCTIONS

	Monthly Rate	Nonrecurring Charge 1st	Add'l.	USOC
a. Multiplexing				
DS3 to DS1 or Fiber Advantage[sm] DS1 Option 1[/1/] Option 2[/2/] - Per arrangement	$500.00	$500.00	$400.00z	MQ3/MQ4
DS1 or Fiber Advantage DS1 to Voice[/3/] - Per arrangement	400.00	None	None	MQ1

/1/ A channel of this DS3 can be connected to a DS1.
/2/ A channel of this DS3 can be connected to a DS1 and reconfigured within the DCS hub.
/3/ A channel of this DS1 to the Hub can be used for a Digital Data Service.

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

3. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

	USOC	Monthly Rates	Nonrecurring Charges	
b. Advanced Digital Network Interface Arrangement - per termination	MQO	$115.50	NONE	
c. Reserved				(C) /1/

/1/ Material now appears in Part 20, Section 15, Sheet 59.

1. HIGH CAPACITY SERVICE (cont'd)

F. RATES AND CHARGES (cont'd)

3. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

d. Rollover

	Nonrecurring Charge 1st	Nonrecurring Charge Add'l.	USOC
- Per Point of Termination			
- DS1	$375.00	$250.00	SVR
- DS3	230.00	206.00	SVR
- DS3x3	690.00	618.00	SVR

e. Rollover when Point of Termination Changes

- Per point of Termination			
- DS1	427.00	321.00	SVRPT
- DS3	427.00	321.00	SVRPT

	Nonrecurring Charge	USOC
f. Fiber Advantage[sm] Diversity		
- Per DS1, DS3, DS3x3 or DS3x12 service	$200.00	SHF

2. ADVANCED DIGITAL NETWORK

GENERAL

Additional terms and conditions applicable to Special Access Services may be found in Part 2, Section 2.

All rates and charges may be adjusted at a later date.

Advanced Digital Network may be terminated on a channel port of Access Advantage Plus as found in AT&T California Guidebook Part 6, Section 7.

2. ADVANCED DIGITAL NETWORK (cont'd)

A. BASIC CHANNEL DESCRIPTION

Advanced Digital Network service provides full duplex four-wire transmission of synchronous serial data at the fixed rate of 2.4, 4.8, 9.6, 19.2, 56.0 64.0 Kbps and 1.544/1/ Mbps.

Customer speed selectability will be provided when ordered as variable/2/. There are two variable speed bands; (1) 1.2 to 38.4 Kbps which include digital rates of 1.2, 2.4, 4.8, 9.6, 19.2, 32.0 and 38.4 Kbps, (2) 1.2 to 64.0 Kbps which include digital rates of 1.2, 2.4, 4.8, 9.6, 19.2, 32.0, 38.4 and 64.0 Kbps.

Variable speed selection will allow the customer to change bit rate without issuing an order through the Company. The actual bit rate is a function of Company equipment and the channel interface selected by the customer. Synchronous timing is provided by the Company through the Company's facilities to the customer in the received bit stream.

Advanced Digital Network services are provided between customer designated premises through Serving Wire Centers, or through a Company Advanced Digital Network Hub or between a customer designated premises, or Company Hub, and an EIS POT. 1.544/1/ Mbps service is only available via Company designated Advanced Digital Network Hubs.

Advanced Digital Nework Service connected to Access Advantage Plus is only offered between customer designated presence and not a carrier point of presence.

The customer will provide the Network Channel Terminating Equipment compatible with Advanced Digital Network service at the customer premises.

/1/ Regulations, Rates and Charges for 1.544 Mbps service are set forth in **1.** (High Capacity Service), preceding and **E.** following.

/2/ Provided only to existing customers and services working as of January 1, 1995. Not available with Access Advantage Plus.

2. ADVANCED DIGITAL NETWORK (cont'd)

B. TECHNICAL SPECIFICATIONS

Technical specifications and examples of application are set forth in Technical Reference PUB L-780036-PB.

While in service, the monthly average of error-free seconds will be equal to or greater than 99.5%.

C. CHANNEL INTERFACES

Compatible channel interfaces are set forth in Technical Reference PUB L-780036-PB/NB.

2. ADVANCED DIGITAL NETWORK (cont'd)

D. OPTIONAL FEATURES AND FUNCTIONS

1. Central Office Bridging Capability

2. Secondary Channel

Secondary Channel is associated with Advanced Digital Network service channel(s) and describes a second, totally independent, lower speed channel operating in parallel with the primary Advanced Digital Network circuit.

Secondary Channel is only available for fixed speeds as set forth following and is not available with Network Control and Diagnostics. All terminations on a circuit must be similarly equipped.

The types of Secondary Channels offered to provide for the simultaneous, independent two-way transmission of digital signals between two or more customer premises, each having Secondary Channels, are as follows:

Advanced Digital Network Data Rate	Associated Secondary Channel Rate
2.4 Kbps	133 bps
4.8 Kbps	266 bps
9.6 Kbps	533 bps
19.2 Kbps	1,066 bps
56.0 Kbps	2,666 bps

2. ADVANCED DIGITAL NETWORK (cont'd)

D. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

3. Network Control and Diagnostics

Network Control and Diagnostics will provide the ability for the customer to accomplish such tasks as monitoring and isolation testing.

Network Control and Diagnostics is only available with variable speed selection. All terminations in a circuit must be similarly equipped.

/1/

/1/ Material now appears in Part 20, Section 15, Sheet 56.

2. ADVANCED DIGITAL NETWORK (cont'd)

D. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

/1/

/1/ Material now appears in Part 20, Section 15, Sheet 57.

2. ADVANCED DIGITAL NETWORK (cont'd)

D. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

4. Advanced Digital Network Channel Interface (C)

   An Interface which provides an ADN channel to connect to a 1.544 Mbps multiplexer to be transported on a separate 1.544 Mbps service. One channel Interface shall apply per channel.

5. Central Office Multiplexing (C)

   An arrangement that converts a 56.0 kbps channel to subspeeds of up to twenty 2.4 kbps, ten 4.8 kbps, or five 9.6 kbps channels using digital time division multiplexing./1/

6. Through-connect/1/ (C)

   An arrangement that provides a customer the ability to connect two channels of two different 1.544 Mbps facilities terminating in the same digital cross-connect switch (DCS) in an ADN Hub. The two 1.544 Mbps facilities must be billed to the same customer. The customer must provide system and channel assignment data.

/1/ Available only on a channel of a 1.544 Mbps facility to a Company ADN Hub. The Network Reconfiguration Service feature is not offered on this arrangement.

2. ADVANCED DIGITAL NETWORK (Cont'd)

E. RATES

1. CHANNEL TERMINATION

	USOC	Monthly Rates	Nonrecurring Charges
- Per point of Termination			
Fixed Speeds			
2.4 Kbps	VAN++	$75.00	$1,200.00
4.8 Kbps	VAN++	75.00	1,200.00
9.6 Kbps	VAN++	75.00	1,200.00
19.2 Kbps	VAN++	75.00	1,200.00
56.0 Kbps	VAN++	75.00	1,200.00
64.0 Kbps	VAN++	75.00	1,200.00

2. CHANNEL MILEAGE

		Monthly Rates	
	USOC	Fixed	Per Mile
- Per Mile			
Fixed Speeds			
2.4 Kbps	1L5XX	$25.00	$6.00
4.8 Kbps	1L5XX	25.00	6.00
9.6 Kbps	1L5XX	25.00	6.00
19.2 Kbps	1L5XX	25.00	6.00
56.0 Kbps	1L5XX	25.00	6.00
64.0 Kbps	1L5XX	25.00	6.00

3. OPTIONAL FEATURES AND FUNCTIONS

a. Bridging			
- per port	DFOBR	6.00	None
b Secondary Channel			
- per station	DFOSC	4.85	None

2. ADVANCED DIGITAL NETWORK (cont'd)

E. RATES (cont'd)

3. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

	USOC	Monthly Rates	Nonrecurring Charges	
				/1/

/1/ Material now appears in Part 20, Section 15, Sheet 58.

2. ADVANCED DIGITAL NETWORK (cont'd)

E. RATES (cont'd)

3. OPTIONAL FEATURES AND FUNCTIONS (cont'd)

	USOC	Monthly Rates	Nonrecurring Charges	
				/1/
				/1/
c. Advanced Digital Network Channel Interface				(C)
- per channel	MQQ	$26.40	$357.00	
d. Central Office Multiplexing				(C)
- Per arrangement				
- Up to 20 2.4 kbps services	QSU24	125.00	None	
- Up to 10 4.8 kbps services	QSU48	125.00	None	
- Up to 5 9.6 kbps services	QSU96	125.00	None	
e. Through-connect, 64 kbps cross-connection				(C)
- Per cross-connect	DFOTC	None	$30.00	

/1/ Material now appears in Part 20, Section 15, Sheet 58.

3. OPTICAL CARRIER NETWORK (OCN) POINT TO POINT SERVICE

GENERAL

Additional terms and conditions applicable to Special Access Services may be found in Part 2, Section 2.

All rates and charges may be adjusted at a later date.

Optical Carrier Network (OCN) Point to Point service is available at the listed rates in this Guidebook where facilities and operating conditions permit. Where facilities can only be provided as a Special Construction offering, Special Construction charges as set forth in Part 2, Section 5 on an Individual Case Basis (ICB) will apply.

3. OPTICAL CARRIER NETWORK (OCN) POINT TO POINT SERVICE (cont'd)

A. SERVICE DESCRIPTION

Optical Point-to-Point service will be designed to provide the customer with a custom point-to-point linear network. Optical Carrier Network (OCN) Point-to-Point service offers a highly reliable transport service that connects customer premises and Company Serving Wire Center in point-to-point linear configuration. OCN supports voice, data, video, imaging, Internet traffic and other advanced broadband applications.

OCN Point-to-Point channels provide high speed synchronous optical fiber-based full duplex data transmission capabilities between two points. These services provide optical data transmission with the following characteristics:

- OC-3/OC-3c provides channels operating at the terminating bit rate of 155.52 Mbps;
- OC-12/OC-12c provides channels operating at the terminating bit rate of 622.08 Mbps;

OC-3, and OC-12 channels may be used to connect:

- a customer designated premises to another customer designated premises, without add/drop multiplexing capability.
- a customer designated premises to a Company Serving Wire Center where add/drop multiplexing and add/drop functions are performed.

Optical Transmission paths for OC-3/OC-3c and OC-12/OC-12c, differentiated by bit rate and the quality of transmission is as delineated by the Optical Interface definitions in the appropriate technical reference publication(s) for the service ordered.

OC-3, and OC-12 may be connected by (1) using the appropriate OC-3 or OC-12 add/drop multiplexer (mux) along with the add/drop function to a DS1 and/or DS3 at suitably equipped wire centers, or (2) by using the full bandwidth premises to premises.

Optical Carrier Network (OCN) Point-to-Point service is only available where facilities and/or operating conditions permit. Where facilities and/or operating conditions do not permit, Special Construction as set forth in Part 2, Section 5, shall apply.

3. OPTICAL CARRIER NETWORK (OCN) POINT TO POINT SERVICE (cont'd)

A. SERVICE DESCRIPTION (cont'd)

Ethernet Over SONET (EoS)

EoS allows the efficient transport of Ethernet frames using SONET. Ethernet Optical Add/Drop capability will be available in bandwidths up to 1 Gbps on an OCN Point–to-Point Service. As SONET bandwidths will be preset, the customer will be unable to transmit data beyond these preset SONET bandwidths. Only single-mode fiber is available in the Central Office. The EoS line rates are based on the theoretical SONET payload line rates as specified in Telcordia Publication GR-253-CORE, Issue 4. These values are not representative of the true Ethernet transport capacity of the EoS circuit.

The customer is responsible via the ordering process to identify what STS signal configuration is to be contained in each OC-3/OC-3c and OC-12/OC-12c service connection and each STS-1, STS-3 and/or STS-12 payload content. This information is required for routing and connection purposes in the network. OCN Point-to-Point service does not extend the SONET data communication channel overhead across the network interface to the customer's equipment.

OCN Point-to-Point Diversity

OCN Point-to-Point Diversity provides a separate transmission path that is diversely routed from the first and normally routed transmission path. The second OCN service must be at the same line speed level as the first OCN service.

OCN Point-to-Point Diversity requires the two circuits to be purchased by the same customer of record for the service. The customer premises locations for the two Diverse OCN services may differ respectively in A to Z locations for the two circuits and both circuits must be served by the same type of Company equipment. Two Channel termination are applicable to the diverse circuit in addition to the original circuit. Network Survivability (Protection) options as set forth in Part 2, Section 2.1.13 are also available on the Diverse service. When the premises locations of the first and the Diverse service are the same, and the customer does not order any Protection with Route Survivability features, the rate element for Per Quarter Route Mile (S2DXY) as set forth **C.**, following, applies and does not require the related Protection rate element P8T.

3. OPTICAL CARRIER NETWORK (OCN) POINT-TO-POINT SERVICE (cont'd)

B. CONFIGURATIONS

OCN Point-to-Point services OC-3/OC-3c and OC-12/OC-12c can be configured in any of the following ways based upon customer requirements:

(A) OC-3

(1) Three STS-1 (Synchronous Transport Signals) channels, which each contain:

- one DS3 that is STS-1 mapped; or
- up to 28 asynchronous DS1s that are VT-mapped; or
- an STS-1 channel without constraint to payload mapping when the STS-1 channel does not terminate via an add/drop function to DS1 or DS3 services within the network.
- 1 Gbps Ethernet STS-1, 1-2v

(2) A single concatenated STS-3c channel.

3. OPTICAL CARRIER NETWORK (OCN) POINT-TO-POINT SERVICE (cont'd)

B. CONFIGURATIONS (cont'd)

OCN Point-to-Point services OC-3/OC-3c and OC-12/OC-12c can be configured in any of the following ways based upon customer requirements: (cont'd)

(A) OC-12

(1) Twelve STS-1 channels, which each contain:

- one DS3 that is STS-1 mapped; or
- up to 28 asynchronous DS1s that are VT-mapped; or
- an STS-1 channel without constraint to payload mapping when the STS-1 channel does not terminate via an add/drop function to DS1 or DS3 services within the network;
- 1 Gbps Ethernet STS-1, 1-9v
- 1 Gbps Ethernet STS-3c, 1-3v

(2) Four concatenated STS-3c channels.

(3) From one to three STS-3c channels mixed with from three to nine STS-1 channels subject to utilization of the total OC-12 capacity.

(4) A single concatenated STS-12c channel.

3. OPTICAL CARRIER NETWORK (OCN) POINT-TO-POINT SERVICE (cont'd)

B. CONFIGURATIONS (cont'd)

OCN Point-to-Point services OC-3/OC-3c and OC-12/OC-12c can be configured in any of the following ways based upon customer requirements: (cont'd)

(D) Technical Specifications

The technical specifications for OC-3 and OC-12 are specified in **4**., following, and Part 2, Section 2.3. In addition, the following technical reference also applies:

Network Channel and Network Channel Interface Codes
AM-TR-TMO-000080

Synchronous Optical Network (SONET) Transport Systems: Common Generic Criteria, Telcordia Technologies, GR-253-CORE, Issue 4

These publications may be obtained from:

APEx Support Team (734) 523-7348

The Telcordia publication can be obtained from:

Telcordia Technologies
One Telcordia Drive, RRC 1B-180
Piscataway, New Jersey 08854

(E) Network Channel Interfaces

The network channel interfaces define the bit rates that are available for OC-3/OC-3c and OC-12/OC-12c services operating at speeds of 155.52 Mbps, 622.08 Mbps, 2488.32 Mbps and 9953.28 Mbps, respectively. Network Channel interfaces and codes are described in the Technical Publication referenced in Part 2, Section 2.3.

(F) Demarcation

Denotes the point (referred to as Demarcation Point or Network Interface) of interconnection between the Company's facilities and the wiring at the subscriber's premises. The Demarcation Point shall consist of wire or a jack conforming to Subpart F of Part 68 of the F.C.C. Rules and Regulations.

3. OPTICAL CARRIER NETWORK (OCN) POINT-TO-POINT SERVICE (cont'd)

C. RATES AND CHARGES

1. OC-3/OC-3c

a. Channel Termination/Local Distribution Channel

i. per Point of Termination	USOC	Monthly Rate	
3 Year Plan	TMECS	ICB	
5 Year Plan/1/	TMECS	ICB	(C)
Monthly Extension	TMECS	ICB	

b. Mileage/Interoffice Transport	CABS/CRIS		
i. Fixed			
3 Year Plan			
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	
5 Year Plan/1/			(C)
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	
Monthly Extension			
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	
ii. Per Mile (Variable)			
3 Year Plan			
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	
5 Year Plan/1/			(C)
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	
Monthly Extension			
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	

/1/ As of November 1, 2013, Term Pricing Plan terms greater than 36 months are no longer available for new or renewing subscribers. (N) (N)

3. OPTICAL CARRIER NETWORK (OCN) POINT-TO-POINT SERVICE (cont'd)

C. RATES AND CHARGES (cont'd)

1. OC-3/OC-3c (cont'd)

c. Optional Features and Functions

i. OC-3 Add/Drop Multiplexing[/1/]

- per arrangement

	USOC	Monthly Rate	Nonrecurring Charges	
3 Year Plan	MPECX	ICB	None	
5 Year Plan[/2/]	MPECX	ICB	None	(C)
Monthly Extension	MPECX	ICB	None	

ii. Add/Drop Function

- Per DS3	MXJBX	ICB	None
- Per DS1	MXJAX	ICB	None
- Per 1000BaseLX Ethernet Drop	MX4LX	ICB	None

iii. 1+1 Protection

- per OC-3/OC-3c Channel Termination/ Local Distribution Channel	P8T	ICB	None

iv. 1+1 Protection with Cable Survivability

- Per OC-3/OC-3c Channel Termination/ Local Distribution Channel	P3S	ICB	ICB

/1/ Multiplexing between two customer premises only available on speeds OC-3 and OC-12; concatenated services cannot be multiplexed.

/2/ As of November 1, 2013, Term Pricing Plan terms greater than 36 months are no longer available for new or renewing subscribers. (N) (N)

3. OPTICAL CARRIER NETWORK (OCN) POINT-TO-POINT SERVICE (cont'd)

C. RATES AND CHARGES (cont'd)

1. OC-3/OC-3c (cont'd)

c. Optional Features and Functions (cont'd)

v. 1+1 Protection with Route Survivability

	USOC	Monthly Rate	Nonrecurring Charges
- Per OC-3/OC-3c Channel Termination/Local Distribution Channel	P8T	Apply P8T above plus Quarter mile rate following (P8T + S2DXY)	
- Per Quarter Route Mile	S2DXY	ICB	None

vi. Shared Network Arrangement

	USOC	Monthly Rate	Nonrecurring Charges
- processing Charge per service order	NRBOP	None	ICB

vii. OCN Point to Point with Diversity OC-3[/1/]

3 Year Plan	CPAPA	ICB	None	
5 Year Plan[/2/]	CPAPA	ICB	None	(C)
Monthly Extension	CPAPA	ICB	None	

viii. Ethernet Optical Collocation Cross-Connect - OC-3

Monthly	CCCA2	ICB	ICB

/1/ The 1+1 Protection with Route Survivability Option as set forth in e. preceding is required for each end of the Diverse circuit.

/2/ As of November 1, 2013, Term Pricing Plan terms greater than 36 months are no longer available for new or renewing subscribers. (N) (N)

3. OPTICAL CARRIER NETWORK (OCN) POINT TO POINT SERVICE (cont'd)

C. RATES AND CHARGES (cont'd)

2. OC-12/OC-12c

a. Channel Termination/Local Distribution Channel

i. per Point of Termination

	USOC CABS/CRIS	Monthly Rate	
3 Year Plan	TMECS	ICB	
5 Year Plan/1/	TMECS	ICB	(C)
Monthly Extension	TMECS	ICB	

b. Mileage/Interoffice Transport

i. Fixed

3 Year Plan			
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	
5 Year Plan/1/			(C)
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	
Monthly Extension			
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	

ii. Per Mile

3 Year Plan			
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	
5 Year Plan/1/			(C)
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	
Monthly Extension			
0	NA	NA	
Over 0	1L5XX/1L5XS	ICB	

/1/ As of November 1, 2013, Term Pricing Plan terms greater than 36 months are no longer available for new or renewing subscribers. (N) (N)

3. OPTICAL CARRIER NETWORK (OCN) POINT TO POINT SERVICE (cont'd)

C. RATES AND CHARGES (cont'd)

2. OC-12/OC-12c (cont'd)

c. Optional Features and Functions

i. OC-12/OC-12c Add/Drop Multiplexing[/1/]

- per arrangement

	USOC	Monthly Rate	Nonrecurring Charges	
3 Year Plan	MPEDX	ICB	None	
5 Year Plan[/2/]	MPEDX	ICB	None	(C)
Monthly Extension	MPEDX	ICB	None	

ii. Add/Drop Function

- per OC-3	MXJCX	ICB	None
- per DS-3	MXJBX	ICB	None
- per 1000BaseLX Ethernet drop	MX4LX	ICB	None

iii. 1+1 Protection

- per OC-12/OC-12c Channel Termination/ Local Distribution Channel	P8T	ICB	None

/1/ Multiplexing between two customer premises only available on speeds OC-3 and OC-12; concatenated services cannot be multiplexed.

/2/ As of November 1, 2013, Term Pricing Plan terms greater than 36 months are no longer available for new or renewing subscribers. (N) (N)

3. OPTICAL CARRIER NETWORK (OCN) POINT TO POINT SERVICE (cont'd)

C. RATES AND CHARGES (cont'd)

2. OC-12/OC-12c (cont'd)

c. Optional Features and Functions (cont'd)

iv. 1+1 Protection with Cable Survivability

	USOC	Monthly Rate	Nonrecurring Charges
- per OC-12/OC-12c Channel Termination/Local Distribution Channel	P3S	ICB	ICB

v. 1+1 Protection with Route Survivability

- per OC-12/OC-12c Channel Termination/Local Distribution Channel Quarter mile rate following (P8T + S2DXY)	P8T	Apply P8T above plus	
- Per Quarter Route Mile	S2DXY	ICB	None

3. OPTICAL CARRIER NETWORK (OCN) POINT TO POINT SERVICE (cont'd)

C. RATES AND CHARGES (cont'd)

2. OC-12/OC-12c (cont'd)

c. Optional Features and Functions (cont'd)

vi. Shared Network Arrangement

	USOC	Monthly Rate	Nonrecurring Charges	
- processing Charge per service order	NRBOP	None	ICB	
vii. OCN Point to Point with Diversity OC-12/1/				
3 Year Plan	CPAPB	ICB	None	
5 Year Plan/2/	CPAPB	ICB	None	(C)
Monthly Extension	CPAPB	ICB	None	
viii. Ethernet Optical Collocation Cross-Connect - OC-12				
Monthly	CCCA2	ICB	ICB	

/1/ The 1+1 Protection with Route Survivability Option as set forth in e. preceding is required for each end of the Diverse circuit.

/2/ As of November 1, 2013, Term Pricing Plan terms greater than 36 months are no longer available for new or renewing subscribers. (N) (N)

3. OPTICAL CARRIER NETWORK (OCN) POINT TO POINT SERVICE (cont'd)

C. RATES AND CHARGES (cont'd)

2. OC-12/OC-12c (cont'd)

c. Optional Features and Functions (cont'd)

ix. Nonrecurring Charges

	USOC	Nonrecurring Charge
Administrative Charge		
- per order		
OC-3/OC-3c	ORCMX	ICB
OC-12/OC-12c	ORCMX	ICB
Design and Central Office Connection Charge		
- per circuit		
OC-3/OC-3c	NRMCK	ICB
OC-12/OC-12c	NRMCK	ICB
Customer Connection Charge		
- per termination		
OC-3/OC-3c	NRBBL	ICB
OC-12/OC-12c	NRBBL	ICB

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE

A. GENERAL

Additional terms and conditions applicable to Special Access Services may be found in Part 2, Section 2.

All rates and charges may be adjusted at a later date.

OC-3, OC-12, OC-48 dedicated SONET Ring Service is available at the listed rates in this Guidebook where facilities and operating conditions permit. Where facilities can only be provided as a Special Construction offering, Special Construction charges as set forth in Part 2, Section 5, on an Individual Case Basis (ICB), will apply.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

OC-3, OC-12 and OC-48 Dedicated SONET Ring service provides dedicated bandwidth capacity over a self-healing ring for a single customer for the purpose of transporting the customer's data.

OC-3, OC-12 and OC-48 Dedicated SONET Ring is offered between customer's premises and Company Serving Wire Centers (SWCs) and is provided where facilities and/or operating conditions exist. Where facilities and/or operating conditions do not exist, Special Construction charges, as set forth in Part 2, Section 5, may apply.

The network is in a ring architecture, including sub-rings (or ARC sub-rings provisioned on appropriate Next Generation SONET equipment), designed to provide increased reliability and functionality.

A minimum of two nodes is required (excluding sub-ring nodes and ARC sub-ring nodes) and cannot exceed 16 nodes, including regenerators. At least one of the nodes must be located at the Company SWC.

The Company's service supports synchronous bandwidth capacities at OC-3 (155 Mbps), OC-12 (622 Mbps) and OC-48 (2.4 Gbps). The SONET add/drop multiplexer aggregates lesser bit speed services onto the dedicated ring configuration. Synchronous Transport Signal-level 1 (STS-1) at 51 Mbps is the basic SONET technology building block. Electrical signals in the form of digital pulses are converted to Optical Carrier rates (OC-n) for transmission on fiber optics.

Connecting facilities carry synchronous and asynchronous transmissions. The service includes enhanced survivability and network management per SONET (Synchronous Optical Network) technology.

All service configurations have one working and one standby transmission path. In the event of a failure of the customer's transmission path, SONET technology will protection switch, within 50 milliseconds of detection, to a dedicated standby path.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

The rate elements associated with OC-3, OC-12 and OC-48 Dedicated SONET Ring service are:

- Customers Premises and Central Office Nodes

- Ports that identify facility interfaces

- Mileage between the Serving Wire Centers (Central Office Nodes)

- Regenerators

- Add/Drop Capability

- Optional Features

Upon request, OC-3, OC-12 and OC-48 Dedicated SONET Ring service may be placed upon diverse fiber facilities where available. Where facilities and/or operating conditions do not exist, Special Construction charges as set forth in Part 2, Section 5, may apply.

Customers may choose to accept the Ring without Diversity (i.e., no dual entrance facility) or prior to cable diversity being available. In this situation out of service Credit Allowances as set forth in Part 2, Section 2 (see 2.3.5.4), are applicable.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

1. Nodes

Customers Premises Nodes and Central Office Nodes

Nodes aggregate lower bandwidth capacities onto the ring through use of the SONET add/drop multiplexer function. The CO Node is located in the Company SWC; the Premises Node, at the customer's location. For ring nodes bandwidth capacities are 155 Mbps (OC-3), 622 Mbps (OC-12), and 2.4 Gbps (OC-48). A Ring must have a minimum of two nodes, excluding sub-rings and ARC sub-rings. One node must be located in the Company SWC. A maximum of 16 nodes including regenerators will be allowed per ring.

When a customer premises node is located in the same building as a CO Node, diversity between the two nodes may not be available.

Additional Node

If a customer requests and has installed two customer premises nodes of the same speed, on the same dedicated ring, at the same customer premises location, the additional node will be billed rates and charges as set forth in **E.**, following. The lower rate does not qualify when the additional node is located in another room or building from the first node. This option does not guarantee diversity between these two nodes and the rest of the ring.

(D)

(D)

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

1. Nodes (cont'd)

(D)

(D)

Flex Ring Node

Flex-Ring feature provides a second independent ring equal to the line rate (bandwidth) of the first ring, located on the same shelf on the same node(s) as the first ring.

Flex Ring Node allows a single customer the ability to add an additional ring of the same line rate. A Flex Ring Node is applicable to only one end user customer and the Flex Ring customer must be the same customer of record for the Dedicated SONET Ring. Flex Ring Node is offered on an OC-12 and OC-48 Dedicated SONET Ring and is limited to two rings (a primary and a secondary ring) per Flex Ring arranged. This feature will provide two rings from the same shelf.

A customer with the Flex Ring option must maintain equal parity on both rings (Primary and Flex). If the customer chooses to add or remove nodes from either Ring in the Flex ring option, but not on both rings, the customer forfeits the Flex Ring option and must purchase two separate Dedicated SONET Rings, and the Flex Ring option will be removed.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

1. Nodes (cont'd)

Flex Ring Node (cont'd)

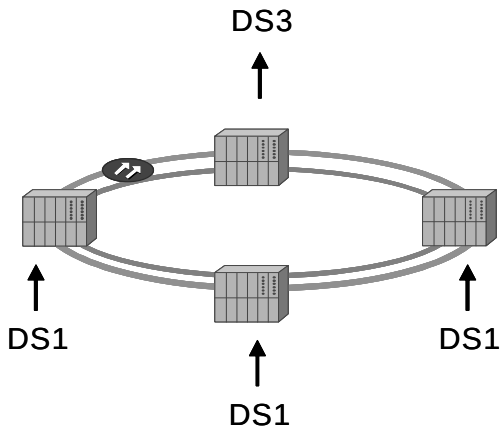
In the event that a customer has a Flex Ring configuration and subsequently disconnects the first (Primary) ring, rate elements and rates and charges as set forth in **E.**, following for the first ring must be assigned to the Flex Ring nodes (which will be understood to have become the Primary Ring nodes) absent a Flex Ring configuration. Riding services on the disconnected ring may be moved to the Primary Ring depending upon the availability on the Ring to accommodate the riding services, which will be determined by the Company. Rates and charges applicable to these circuit rearrangements are set forth in Part 2, Section 3 (see 3.2.8). Early Termination Liability charges as set forth in Part 2, Section 2 (see 2.4.14.E.), are applicable to the forfeited Ring.

DS3 Transmux

DS-3 Transmux provides the ability to aggregate multiple DS-1s to a DS-3 within SONET and also on a single interface. DS1s are aggregated across the SONET network and terminated into a single DS3 interface at a Ring node. The handoff will be a channelized DS3. Aggregation of DS-1s can occur across multiple DS-3/STSs.

When DS3 transmux is provided on an OC-48 dedicated SONET Ring a maximum of 28 DS1s per node is available.

DS-3 Transmux is available where facilities and operating conditions permit.



4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

1. Nodes (cont'd)

Sub-Ring Node

A sub-ring node is a lower speed optical extension off a main ring. A sub-ring node traverses one or more main ring nodes via the use of OC-N port connections on and off the main ring. The primary use of sub-ring nodes is to provide the ability to fully utilize the bandwidth around the ring when the customer requires DS1/VT1.5 circuit paths.

An optional sub-ring node is available at OC-3 and OC-12 speeds from an OC-48 main ring and OC3 speed from an OC-12 main ring. A sub-ring node may only connect to the main ring at the same or an adjacent main ring node. With Next Generation SONET equipment, a sub-ring node may connect to another sub-ring node.

Any service that enters the main ring via a port on a sub-ring node must also exit via a port on another sub-ring node (sub-ring on - sub-ring off). Cascading sub-rings are not permitted off a main ring. Service circuits may not be established between sub-ring nodes connecting to the same main ring node or between a sub-ring node and a port on the same main ring node to which it connects.

Each sub-ring must be implemented as an OC-M on an OC-N ring with full complement of STS-1s, STS-3s or STS-12s depending on the bandwidth of the sub-ring, appearing together at all associated sub-ring nodes on a given sub-ring.

Two OC-N ports and associated node charges apply for each sub-ring node connected to the main ring, as well as applicable mileage for the sub-ring/1/.

A sub-ring node that is located on the same premises with a main ring node located at the customer's premises (for the same dedicated ring) will be billed as an "Additional Node" per **E.**, following. A sub-ring is not available with a two-node main ring configuration. Sub-rings are only available where facilities and/or operating conditions permit as determined by the Company.

/1/ Mileage charges apply when the sub-ring is in a different location than the main ring.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

1. Nodes (cont'd)

ARC Sub-Ring Node

ARC sub-ring nodes are only available on appropriate Next Generation SONET equipment. An ARC sub-ring node is a lower speed optical extension off a main ring. It connects to one main ring node via the use of OC-N port connections from and to a main ring. The primary use of ARC sub-ring nodes is to add other locations to the ring that will utilize minimal amounts of bandwidth from the main ring. ARC sub-rings are only available off of UPSR main rings. ARC sub-rings are only available where facilities and/or operating conditions permit as determined by the Company.

An optional ARC sub-ring node is available at OC-3 and OC-12 speeds from an OC-48 main ring, and OC-3 speeds from an OC-12 main ring. An ARC sub-ring node may connect to the main ring at any main ring node.

Cascading ARC sub-rings are not permitted off a main ring. Services entering an ARC sub-ring node cannot drop from the directly connecting main ring node (hairpinning).

More than one ARC sub-ring may be added to a main ring. Each ARC sub-ring must be implemented as an OC-M on an OC-N ring with a full complement of STS-1s, STS-3s or STS-12s, depending on the bandwidth of the ARC sub-ring, appearing together at all associated ARC sub-ring nodes on a given ARC sub-ring.

Two OC-N ports apply for each ARC sub-ring connected to the main ring. A node charge applies for each ARC sub-ring location. Mileage charges are applicable when the ARC sub-ring is in a different location than the main ring. An ARC sub-ring which is co-located in the same room with a main ring node at the customer's premises (for the same dedicated ring) will be billed as an "Additional Node".

ARC sub-rings do not reduce bandwidth capacity of the main ring. As services are added to the main or ARC sub-ring, only the bandwidth capacity of the service is reduced.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

1. Nodes (cont'd)

ARC Sub-Ring Node (cont'd)

ARC sub-rings can be provisioned in two basic configurations:

- Single-node, single-homed ARC
- Multi-node, single-homed ARC

Circuit traffic can be added/dropped from an ARC sub-ring node to another ARC sub-ring node within the same ARC (known as intra-ARC) or between ARCs (known as inter-ARC). Intra-ARC circuits can only be provisioned as unprotected, due to technical limitations. Circuit traffic can also originate on an ARC sub-ring node and route across and drop from a main ring node, but only when UPSR protection schemes are used.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

2. Add/Drop Capacity

OC-48 Add/Drop Capability

OC-48 Add/Drop Capability provides the capability to add/drop lower speed channels from an OC-48 Dedicated Ring node location via OC-12, OC-3 ports. OC-48 Add/Drop Capability at an OC-48 Dedicated Ring Service node location will support any combination of service traffic not to exceed 48 STS-1 equivalents.

The add/drop capability charge is applied only once per Node when the 25th DS3 port is applied per node.

Depending upon the combination of drops an OC-48 Add/Drop Capability may be required to drop the full capacity of the ring. When this occurs, the OC-48 Add/Drop Capability rate applies.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

3. Ports

Lower speed channels are accessible at Nodes via port terminations. Ports provide access to lower speed services at each Node (e.g., DS-1, DS3, OC-3, OC-12) depending on the bandwidth of the SONET Ring. Port configuration requirements are provided by the customer when the Dedicated SONET Ring service is ordered. The capacity of the selected OC-3, OC-12 or OC-48 Dedicated SONET Ring service is determined by the number of individual port-to-port connections available between all nodes on the ring.

Accepted interfaces are as follows:

	OC-3 Node	OC-12 Node	OC-48 Node
DS1 Ports	X (Max. 84/Node)	X (Max. 84/OC-3 or OC-3c Port)/1/	X (Max. 84/OC-3 or OC-3c Port) /1/
DS3 Ports	X (Max. 3/Node)	X (Max. 12/Node)	X (Max. 48/Node)
EC-1 Ports	X (Max. 3/Node)	X (Max. 12/Node)	X (Max. 48/Node)
OC-3 or OC-3c Ports/2/	X (Max 1/Node)	X (Max. 4/Node)	X (Max. 16/Node)
OC-12, or OC-12c Ports/2/	N/A	X (Max 1/Node)	X (Max. 4/Node)
OC-48 Ports	N/A	N/A	X (Max. 1/Node)

/1/ Optical to Electrical DS1 add/drop capability as described in **B**.5. following is needed along with an OC-3.

/2/ OC-3 and OC-3c ports support both OC-3 and OC-3c bandwidths. OC-12 and OC-12c ports support both OC-12 and OC-12c Bandwidths. OC-48 and OC-48c ports support both OC-48 and OC-48c bandwidths.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

3. Ports (cont'd)

Accepted interfaces are as follows: (cont'd)

	OC-3 Node	OC-12 Node	OC-48 Node
10/100BaseT Ethernet Port			
-VT1.5-1v (1.6 Mbps)	X (Max. 84/node)	X (Max. 84/OC-3)	X (Max. 84/OC-3)
-VT1.5-2v (3.2 Mbps)	X (Max 42/Node)	X (Max. 42/OC-3)	X (Max. 42/OC-3)
-VT1.5-3v (4.8 Mbps)	X (Max 28/Node)	X (Max. 28/OC-3)	X (Max. 28/OC-3)
-VT1.5-4v (6.4 Mbps)	X (Max. 21 Node)	X (Max. 21/OC-3)	X (Max. 21/OC-3)
-VT1.5-5v (8.0 Mbps)	X (Max 16/Node)	X (Max. 16/OC-3)	X (Max. 16/OC-3)
-VT1.5-6v (9.6 Mbps)	X (Max 14/Node)	X (Max. 14/OC-3)	X (Max. 14/OC-3)
-VT1.5-7v (11.2 Mbps)	X (Max. 12/Node)	X (Max. 12/OC-3)	X (Max. 12/OC-3)
-VT1.5-8v (12.4 Mbps)	X (Max 10/Node)	X (Max. 10/OC-3)	X (Max. 10/OC-3)
-VT1.5-10v (16.0 Mbps)	X (Max 8/Node)	X (Max. 8/OC-3)	X (Max. 8/OC-3)
-VT1.5-13v (20.8 Mbps)	X (Max. 6/Node)	X (Max. 6/OC-3)	X (Max. 6/OC-3)
-STS-1-1v (48.384 Mbps)	X (Max. 3/Node)	X (Max. 12/Node)	X (Max. 48/Node)
-STS-1-2v (96.768 Mbps)	X (Max. 1/Node)	X (Max. 6/Node)	X (Max. 24/Node)
1000BaseSX/LX Ethernet Port			
STS-1-1v (48.384 Mbps)	X (Max. 3/Node)	X (Max. 12/Node)	X (Max. 48/Node)
STS-1-2v (96.768 Mbps)	X (Max. 1/Node)	X (Max. 6/Node)	X (Max. 24/Node)
STS-1-3v (145.154 Mbps)	X (Max. 1/Node)	X (Max. 4/Node)	X (Max 16/Node)

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

3. Ports (cont'd)

Accepted interfaces are as follows: (cont'd)

	OC-3 Node	OC-12 Node	OC-48 Node
1000BaseSX/LX Ethernet Port (Cont'd)			
STS-1-4v (193.536 Mbps)	N/A	X (Max 3/Node)	X (Max. 12/Node)
STS-1-5v (241.94 Mbps)	N/A	X (Max. 2/Node)	X (Max. 9/Node)
STS-1-6v (290.304 Mbps)	N/A	X (Max. 2/Node)	X (Max. 8/Node)
STS-1-9v (435.456 Mbps)	N/A	X (Max. 1/Node)	X (Max. 5/Node)
STS-1-12v (580.608 Mbps)	N/A	X (Max. 1/Node)	X (Max. 4/Node)
STS-1-21v (1016.064 Mbps)	N/A	N/A	X (Max. 2/Node)
STS-3c-1v (149.76 Mbps)	N/A	X (Max. 4/Node)	X (Max. 16/Node)
STS-3c-2v (299.52 Mbps)	N/A	X (Max. 2/Node)	X (Max. 8/Node)
STS-3c-3v (449.28 Mbps)	N/A	X (Max. 1/Node)	X (Max. 5/Node)
STS-3c-4v (599.04 Mbps)	N/A	X (Max. 1/Node)	X (Max. 4/Node)
STS-3c-7v (1048.32 Mbps)	N/A	N/A	X (Max. 2/Node)
1 Gbps (STS-1) Ethernet Port	N/A	X (Max. 12/Node)	x (Max. 32/Node)
1 Gbps (STS-3c) Ethernet Port	N/A	x (Max. 4/Node)	x (Max. 16/Node)
1 Gbps (STS-12c) Ethernet Port	N/A	N/A	x (Max. 4/Node)
1 Gbps (STS-24c) Ethernet Port	N/A	N/A	x (Max. 2/Node)

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

3. Ports (cont'd)

By utilizing Optical Carrier Network (OCN) Point-to-Point Service as set forth in Section 3. preceding, specifically the existing OC-3 or OC-12 point-to-point service and associated cross-connection capability, the OC-3 point-to-point service may connect to an OC-3 port of an OC-12 or OC-48 Dedicated SONET Ring service, or OC-12 point-to-point service may connect to an OC-12 port of an OC-48 Dedicated SONET Ring service. The port must be located in a Company SWC.

An OC-3 port will permit the connection of STS-1 channels to other STS-1 channels across the OC-12 or OC-48 Dedicated SONET Ring service, subject to the overall ring capacity limits described in 8., following. Additionally, an STS-1 channel with DS1 payload mapping accessing an OC-12 Dedicated SONET Ring via an OC-3 port may be connected to the Optical to Electrical DS1 Add/Drop Capability as set forth in **B.**5. following for the purpose of connecting up to 28 DS1 ports. An STS-1 channel with DS3 payload mapping accessing the OC-12 or OC-48 Dedicated SONET Ring via an OC-3 port may individually connect to a DS3 or EC-1 port.

Ethernet over SONET (EoS)

Ethernet Over SONET allows the efficient transport of Ethernet frames using SONET. Ethernet ports will be available in bandwidths up to the Ethernet interface of 100 Mbps or 1 Gbps on Dedicated Ring Services as set forth in the respective Guidebook(s). As SONET bandwidths will be preset, the customer will be unable to transmit data beyond these preset SONET bandwidths.

Ethernet over SONET (EoS) interfaces have distance limitations from the Company Serving Wire Center to the customer's demarcation point. These limitations will be discussed during the Cooperative Planning process and the Company and customers will determine the appropriate EoS interface for the customer's SONET Ring service.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

3. Ports (cont'd)

Ethernet over SONET (E0S) (cont'd)

Ethernet over SONET (EoS) requires that customers utilize certain settings for their Customer Provided Equipment (CPE). The Company will work cooperatively with the customer to make sure that the customer utilizes the correct settings. In some cases customers may be required to make modifications (including upgrades) to their CPE, which will be entirely at the customer's expense. Failure to use these settings will result in service problems possibly leading to outages for which the customer will not hold the Company liable.

Ethernet over SONET (EoS) throughputs may vary depending on the type of equipment used to provide the service. Certain protocols may not be available. Additional information on the settings that customers must utilize can be found in Technical Publication TP-76-412-000. EoS is available where facilities and/or operating conditions permit.

EoS allows the efficient transport of Ethernet frames using SONET. Ethernet ports will be available in bandwidths up to the Ethernet interface of 100 Mbps or 1 Gbps on an OC-*n* Dedicated Ring Service. As SONET bandwidths will be preset, the customer will be unable to transmit data beyond these preset SONET bandwidths. Interfaces of 100 Mbps or 1 Gbps Ethernet are available only to customers with Next Generation SONET equipment. Only single-mode fiber is available in the Central Office. The EoS line rates are based on the theoretical SONET payload line rates as specified in Telcordia Publication GR-253-CORE, Issue 4. These values are not representative of the true Ethernet transport capacity of the EoS circuit.

Additional features are provided with the Ethernet over SONET (EoS) capability: /1/

Virtual Concatenation (VCAT) provides the ability and flexibility to size the customer's bandwidth (sub-rate VT1.5, super-rate STS-1 and super-rate STS-3c service payloads) based on the customer's traffic requirements. For transport of payloads that do not fit efficiently into the standard set of VT1.5, STS-1 and SRS-*Nc* payload envelopes, virtual concatenation can be used.

/1/ EoS port interfaces offered as 10/100BaseT are only available at the customer premises location.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

4. Mileage

Mileage charges apply to the varying configurations of the OC-3, OC-12, OC-48 Dedicated SONET Ring Service as set forth in Part 2, Section 2 (see 2.3.1.2.B). Mileage is charged based on V&H miles determined from National Exchange Carrier Association (NECA) Tariff FCC No. 4. Fractions of a mile are rounded up to the whole mile for rate calculations.

For the dedicated ring, recurring mileage is for the interoffice facilities between nodes, the total airline distance between the serving wire center of each node involved on the ring. The chargeable mileage is that mileage per link. Distances obtained from V&H coordinates set forth in NECA Tariff, FCC No. 4, will determine the chargeable mileage on a per link basis. The V&H Coordinates of the normal serving wire center of the customer premises will be used for calculating mileage from Premises Nodes. The monthly mileage charge for the dedicated ring is determined by multiplying the applicable rate times the chargeable mileage.

A one-mile minimum will be billed between nodes. A two-node ring configuration has a two-mile minimum; one mile from the wire center node to the customer premises node and one mile from the customer premises node to the wire center node.

5. Electrical Carrier Level 1 (EC-1) Port Interface

The EC-1 service interface is implemented as a standardized SONET electrical service interface as specified in Section 5 of ANSI T1.416.03-1999. The EC-1 interface provides the capability for connecting one SONET STS-1 signal across a SONET electrical service interface to a Company provided Optical Carrier Network (OCN) Point to Point or Company provided Dedicated SONET Ring service. The STS-1 signal connecting across an EC-1 interface may only contain a) one DS3 circuit mapped into the SONET STS-1 signal payload; or b) one STS-1 circuit, without constraint as to payload mapping. Offered as Customer premises port termination, and as a CO termination where facilities and/operating conditions permit on Dedicated SONET Ring service.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

6. Optical to Electrical Add/Drop Capacity

Optical-to-Electrical Add/Drop Capacity DS1 allows an electrical DS1 to be derived from an optical OC-12 or OC-48 ring by using this capability to add/drop the electrical DS1 from an OC-3 port.

Rate regulations for Optical-to-Electrical Add/Drop Capacity are set forth in Part 2, Section 2 (see 2.4.14.N).

7. Dedicated Ring Regenerator

Regenerators provide essential detection and retransmission of SONET signals between nodes. Regenerators will only be provided as required by the Company when actual fiber facility distances between nodes exceed inter-nodal design limits. Regenerators will be located exclusively in Company SWCs and do not allow ports to access customer service connections.

8. Dedicated Ring Connection Capacity

Maximum transport capacity of OC-3, OC-12 and OC-48 Dedicated Ring Service is characterized by the total quantity of individual port-to-port connections allowed between all nodes on the ring.

For OC-3 Dedicated Ring Service, the maximum ring capacity will be equal to one of the following combinations:

DS3 Port to DS3 Port Connections		DS1 Port to DS1 Port Connections
Three	and	None
Two	and	Up to 28
One	and	Up to 56
None	and	Up to 84

An OC-3 sub-ring (or ARC sub-ring) provided as part of an OC-12 or OC-48 Dedicated SONET Ring service has a maximum capacity equal to one of the above combinations.

For OC-3 Dedicated Ring Service, and OC-3 sub-rings (or ARC sub-rings) as part of an OC-12 or OC-48 dedicated SONET Ring service, individual DS1 port-to-DS1 port and DS3 port-to-DS3 port connections capacities may be incrementally distributed between nodes on the ring in any manner.

An OC-3 sub-ring provided as part of an OC-12 Dedicated SONET Ring service reduces the remaining OC-12 ring capacity by the equivalent of three DS3 port-to-DS3-port connections or 84 DS1 port-to-DS1-port connections.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

8. Dedicated Ring Connection Capacity (cont'd)

For OC-12 Dedicated Ring Service, the maximum ring capacity may be equal to one of the following combinations.[1/] This chart is intended to illustrate general combinations and does not represent every combination of service possible as each individual ring capacity varies by service requested. Subsequent capacity changes to the Dedicated Ring service may be service affecting and may require an out of service condition. Each request will be evaluated on an individual case basis.

DS3 Port-to-DS3 Port Connections		DS1 Port-to-DS1 Port Connections
Twelve	and	None
Eleven	and	One Group of 28
Ten	and	Two Groups of 28 (56)
Nine	and	Three Groups of 28 (84)
Eight	and	Four Groups of 28 (112)
Seven	and	Five Groups of 28 (140)
Six	and	Six Groups of 28 (168)
Five	and	Seven Groups of 28 (196)
Four	and	Eight Groups of 28 (224)
Three	and	Nine Groups of 28 (252)
Two	and	Ten Groups of 28 (280)
One	and	Eleven Groups of 28 (308)
None	and	Twelve Groups of 28 (336)

An OC-12 sub-ring (or ARC sub-ring) provided as part of an OC-48 Dedicated SONET Ring service has a maximum capacity equal to one of the above combinations.

For OC-12 Dedicated SONET Ring Service, and OC-12 sub-rings (or ARC sub-rings) as part of an OC-48 Dedicated SONET Ring service, individual DS1 port-to-DS1 port connection capacity and DS3 port to DS3 port connection capacity may be incrementally distributed between nodes on the ring in any manner.

OC-12 Dedicated SONET Ring Service will also provide capability for node-to-node connection of STS-1 or STS-3C channels using OC-3 or OC-3c ports on the OC-12 ring. Each STS-1 to STS-1 channel connection or STS-1 channel to DS3 port connection requested by the customer will reduce the remaining ring capacity by the equivalent of one DS3 port-to-DS3 port connection or 28 DS1 port-to-DS1 port connections. Each STS-3C to STS-3C channel connection requested by the customer will reduce the remaining ring capacity by the equivalent of three DS3 port-to-DS3 port connections or 84 DS1 port-to-DS1 port connections.

Depending upon the combination of drops, an Optical to Electrical DS-1 Add/Drop Capability may be required to drop the full capacity of the ring. When this occurs, the Optical to Electrical DS-1 Add/Drop Capability rate applies.

The DS3 Port connections can be exchanged with EC-1 Port Connections and the Company will decide the appropriate capacity for these connections.

/1/ The maximum node capacity is equal to 12 STS equivalents with any combination of DS-1s, DS-3s and OC-3s, 100 Mbps Ethernet and 1 Gbps Ethernet ports.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

8. Dedicated Ring Connection Capacity (cont'd)

For OC-48 Dedicated Ring Service, the maximum ring capacity may be equal to one of the following combinations/1/. This chart is intended to illustrate general combinations and does not represent every combination of service possible as each individual ring capacity varies by service requested. Subsequent capacity changes to the Dedicated Ring service may be service effecting and may require an out of service condition. Each request will be evaluated on an individual case basis.

DS3 Port-to-DS3 Port Connections		DS1 Port-to-DS1 Port Connections
Forty-eight	and	None
Forty-seven	and	One Group of 28
Forty-six	and	Two Groups of 28 (56)
Forty-five	and	Three Groups of 28 (84)
Forty-four	and	Four Groups of 28 (112)
Forty-three	and	Five Groups of 28 (140)
Forty-two	and	Six Groups of 28 (168)
Forty-one	and	Seven Groups of 28 (196)
Forty	and	Eight Groups of 28 (224)
Thirty-nine	and	Nine Groups of 28 (252)
Thirty-eight	and	Ten Groups of 28 (280)
Thirty-seven	and	Eleven Groups of 28 (308)
Thirty-six	and	Twelve Groups of 28 (336)
Continuing down the scale to: None	and	Forty-eight Groups of 28 (1344)

For OC-48 Dedicated Ring Service, individual DS1 port-to-DS1 port connection capacities may be distributed only in incremental groups of 28 between any two nodes on the ring. Individual DS3 port-to-DS3 port connection capacities may be incrementally distributed between nodes on the ring in any manner.

The DS3 Port connections can be exchanged with EC-1 Port Connections and the Company will decide the appropriate capacity for these connections.

/1/ The maximum node to node capacity is equal to 48 STS equivalents with any combination of DS-1s, DS-3s and OC-3s, 100 Mbps Ethernet and 1 Gbps Ethernet ports.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

B. BASIC SERVICE DESCRIPTION (cont'd)

8. Dedicated Ring Connection Capacity (cont'd)

OC-48 Dedicated SONET ring service also provides capability for node-to-node connection of STS-1 or STS-3c channels using OC-3 or OC-12 on the OC-48 ring. Each STS-1 to STS-1 channel connection or STS-1 channel to DS3 port connection requested by the customer reduces the remaining ring capacity by the equivalent of one DS3 port-to-port connection or 28 DS1 port-to-port connections. Each STS-3c to STS-3c channel requested by the customer reduces the ring capacity by the equivalent of three DS3 port-to-DS3-port connections or 84 DS1 port-to-DS1-port connections.

Depending upon the combination of drops, an Optical to Electrical DS-1 Add/Drop Capability may be required to drop the full capacity of the ring. When this occurs, the optical to Electrical DS1 Add/Drop Capability rate element applies.

9. Unprotected Channel Transport

Unprotected Channel Transport will allow customers to transport traffic over a ring without enabling SONET protection schemes. This is intended for applications in which the customer provides protection for the circuit through means other than those available through SONET. If a fault occurs on the ring along the transport path, the traffic will not be switched to a protection channel. Service will be interrupted on that circuit until the fault is corrected. If a fault occurs in the ring but does not occur along the transport route, service will not be interrupted on that circuit. Without protection, SONET is unable to meet the normal availability, so Credit Allowance credits do not apply and credits will not occur upon an outage of an Unprotected Channel Transport. Credits will not be provided for the whole service when the fault on the ring creates the outage. If a riding service extends off a ring, Credit Allowances for that riding service may be applicable per the respective product Guidebook section. This capability is limited to customers with OC-3, OC-12 and OC-48 Dedicated SONET Ring service installed after July 2, 2007.

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

C. TECHNICAL SPECIFICATIONS

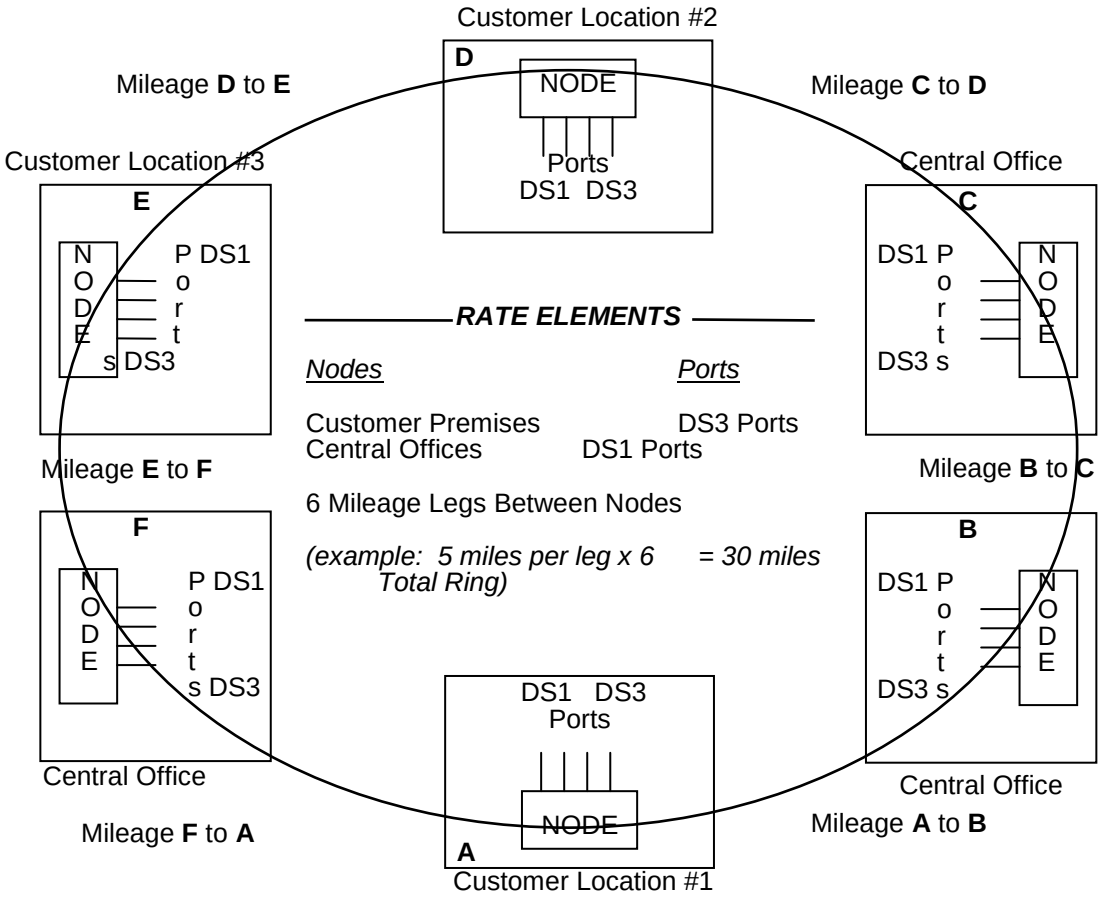
Technical Specification for OC-3, OC-12, and OC-48 Dedicated SONET Ring service are set forth in the following Company technical publications and may be obtained by contacting Network Helpdesk and Documentation Center (734) 523-7348.

SONET	ANSI T1.105-2001
50 mm Multi-Mode Fiber (North American Standard)	ANS/TIA/EIA 492AAAB
Single Mode Fiber (North American Standard)	ANS/TIA/EIA 492CAAA
RJ-45 Cabling	ANSI//TIA/EIA 568B
SONET Transport Systems Generic Criteria	GR-253-CORE
SONET ADM	GR-496-CORE
Transport Systems Generic Requirements	GR-499-CORE
BLSR Rings	GR-1230-CORE
SONET Private Line Service Interface	GR-1365-CORE
Inter-Carrier Interface Physical Layer for Carriers	GR-1374-CORE
Dual-Fed Unidirectional Path Switched Ring	GR-1400–CORE
NEBS	TP76200MP
Demarcation	TP76510MP
High Capacity Digital Service Self-Healing Transport Network Specifications and Transmission Limits	TP 76635
SONET Transmission Requirements Performance and Interface Specifications	TP 76839
Ameritech OC-3, OC-12, OC-48 Service Interface	AM TR-NIS-000111

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

D. FEATURE FUNCTIONALITY

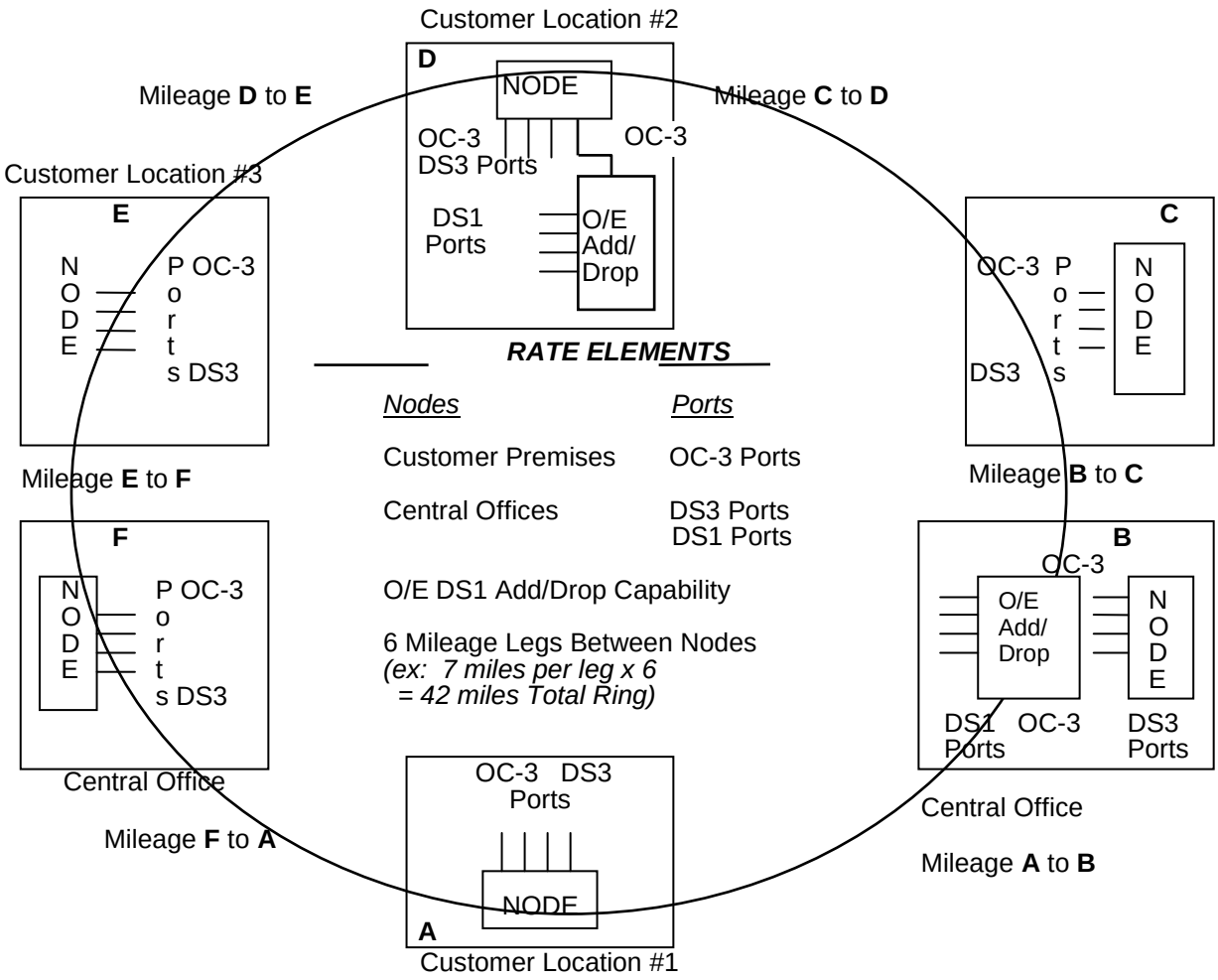
Diagram of OC-3 Dedicated SONET Ring Service



4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

D. FEATURE FUNCTIONALITY (cont'd)

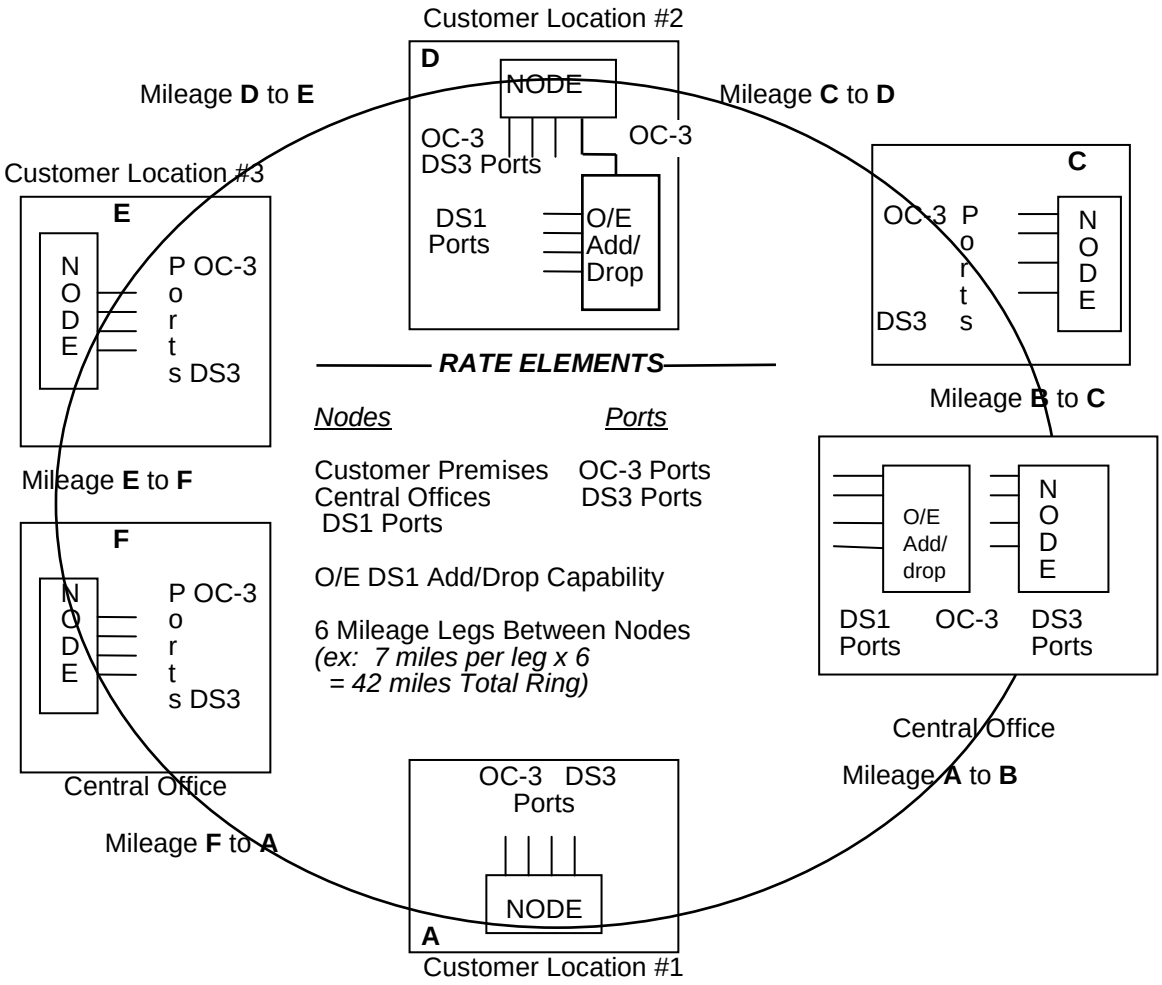
OC-12 Dedicated SONET Ring Diagram



4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

D. FEATURE FUNCTIONALITY (cont'd)

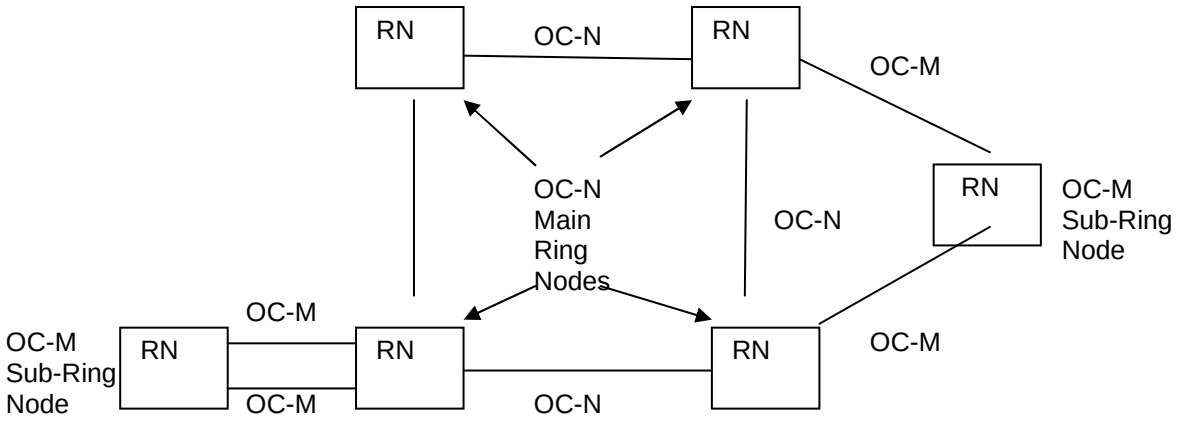
OC-48 Dedicated SONET Ring Diagram



4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

D. FEATURE FUNCTIONALITY (cont'd)

Diagram Sub-Ring Node

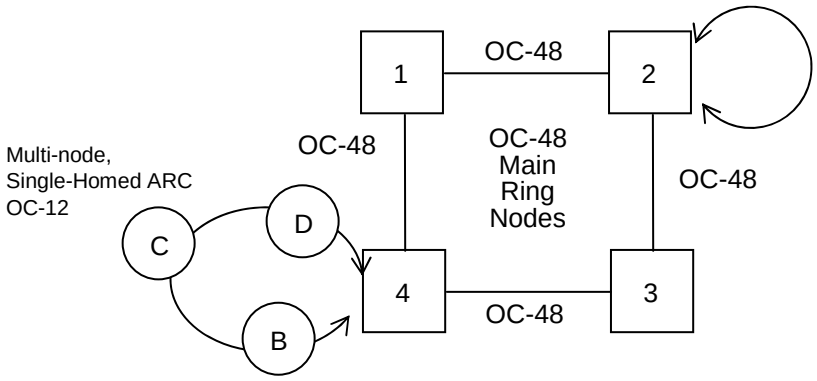


Sub-Ring Nodes, OC-M < OC-N

4. OC-3, OC-12 AND OC-48 DEDICATED SONET RING SERVICE (cont'd)

D. FEATURE FUNCTIONALITY (cont'd)

Diagram ARC Sub-Ring Node



ARC Sub-Ring Nodes, OC-*m* < OC-*n*

OC-48 Dedicated SONET Ring shown as an example

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES

1. NODE

	USOC CABS/CRIS	Monthly Rate
a. OC-3 - Per Node		
i. Customer Premises Node - first		
36 month	FP5CX/FP5CX	ICB
60 month	FP5CX/FP5CX	ICB
Monthly Extension	FP5CX/FP5CX	ICB
ii. Customer Premises Node - additional		
36 month	FP5CA/FP5CA	ICB
60 month	FP5CA/FP5CA	ICB
Monthly Extension	FP5CA/FP5CA	ICB
iii. Central Office Node		
36 month	FC5CX/FC5CX	ICB
60 month	FC5CX/FC5CX	ICB
Monthly Extension	FC5CX/FC5CX	ICB

(D)

(D)

(D)

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

1. NODE (cont'd)

	USOC CABS/CRIS	Monthly Rate
b. OC-12 - Per Node		
i. Customer Premises Node - first		
36 month	FP5DX/FP5DX	ICB
60 month	FP5DX/FP5DX	ICB
Monthly Extension	FP5DX/FP5DX	ICB
ii. Customer Premises Node - additional		
36 month	FP5DA/FP5DA	ICB
60 month	FP5DA/FP5DA	ICB
Monthly Extension	FP5DA/FP5DA	ICB
iii. Central Office Node		
36 month	FC5DX/FC5DX	ICB
60 month	FC5DX/FC5DX	ICB
Monthly Extension	FC5DX/FC5DX	ICB

(D)

(D)

(D)

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

1. NODE (cont'd)

	USOC CABS/CRIS	Monthly Rate
c. OC-48 - Per Node		
i. Customer Premises Node - first		
36 month	FP5EX/FP5EX	ICB
60 month	FP5EX/FP5EX	ICB
Monthly Extension	FP5EX/FP5EX	ICB
ii. Customer Premises Node - additional		
36 month	FP5EA/FP5EA	ICB
60 month	FP5EA/FP5EA	ICB
Monthly Extension	FP5EA/FP5EA	ICB
iii. Central Office Node		
36 month	FC5EX/FC5EX	ICB
60 month	FC5EX/FC5EX	ICB
Monthly Extension	FC5EX/FC5EX	ICB

(D)

(D)

(D)

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

1. NODE (cont'd)

	USOC CABS/CRIS	Monthly Rate
d. Flex Ring Nodes		
i. OC-12		
(a) Central Office Node - for Second Ring on existing SONET Shelf		
36 month	GC5FX/GC5FX	ICB
60 month	GC5FX/GC5FX	ICB
Monthly Extension	GC5FX/GC5FX	ICB
(b) Customer Prem Node - for Second Ring on existing SONET Shelf		
36 month	GP5FX/GP5FX	ICB
60 month	GP5FX/GP5FX	ICB
Monthly Extension	GP5FX/GP5FX	ICB
ii. OC-48		
(a) Central Office Node - for Second Ring on existing SONET shelf		
36 month	GC5GX/GC5GX	ICB
60 month	GC5GX/GC5GX	ICB
Monthly Extension	GC5GX/GC5GX	ICB
(b) Customer Prem Node - for Second Ring on existing SONET shelf		
36 month	GP5GX/GP5GX	ICB
60 month	GP5GX/GP5CX	ICB
Monthly Extension	GP5GX/GP5GX	ICB

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

1. NODE (cont'd)

	USOC CABS/CRIS	Monthly Rate
e. Transmux		
i. DS3 Port with Transmux - per port on OC-3, OC-12		
36 Month	S4NGX/S4NGX	ICB
60 Month	S4NGX/S4NGX	ICB
Monthly Extension	S4NGX/S4NGX	ICB
ii. DS3 Port with Transmux - per port on OC-48		
36 Month	S4NGX/S4NGX	ICB
60 Month	S4NGX/S4NGX	ICB
Monthly Extension	S4NGX/S4NGX	ICB

(D)
(D)

2. OC-48 ADD/DROP CAPABILITY

a. Per arrangement		
36 month	MPEFX/MPEFX	ICB
60 month	MPEFX/MPEFX	ICB
Monthly Extension	MPEFX/MPEFX	ICB

(D)
(D)

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

3. PORTS

	USOC CABS/CRIS	Monthly Rate	
a. Per port - at OC-3 Node			(D)
i. 1.544 Mbps (DS1) at OC-3 Node			
36 Month	SPRAX/SPRAX	ICB	
60 Month	SPRAX/SPRAX	ICB	
Monthly Extension	SPRAX/SPRAX	ICB	
ii. 45 Mbps (DS3) at OC-3 Node			
36 Month	SPRBX/SPRBX	ICB	
60 Month	SPRBX/SRPBX	ICB	
Monthly Extension	SRPBX/SRPBX	ICB	
iii. 100 Mbps Ethernet (STS-1) at OC-3 Node			
36 Month	S9TAX/S9TAX	ICB	
60 Month	S9TAX/S9TAX	ICB	
Monthly Extension	S9TAX/S9TAX	ICB	(D) (D)
iv. EC-1 Port/1/ at OC-3 Node			(C)
36 Month	S4NHX/S4NHX	ICB	
60 Month	S4NHX/S4NHX	ICB	
Monthly Extension	S4NHX/S4NHX	ICB	

/1/ EC-1 Port offered as Customer Premises termination and as a CO termination where facilities and/or operating conditions permit.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

3. PORTS (cont'd)

	USOC CABS/CRIS	Monthly Rate	
a. Per port - at OC-3 Node (cont'd)			(C) (D)
v. 10/100BaseT VCAT Ethernet/1/			(C)
36 Month	S5P1X/S5P1X	ICB	
60 Month	S5P1X/S5P1X	ICB	
Monthly Extension	S5P1X/S5P1X	ICB	
vi. 1000BaseSX VCAT Ethernet			(C)
36 Month	S5P2X/S5P2X	ICB	
60 Month	S5P2X/S5P2X	ICB	
Monthly Extension	S5P2X/S5P2X	ICB	
vii. 1000BaseLX VCAT Ethernet			(C)
36 Month	S5P3X/S5P3X	ICB	
60 Month	S5P3X/S5P3X	ICB	
Monthly Extension	S5P3X/S5P3X	ICB	

/1/ EoS port interface offered as 10/100BaseT are only available at the customer premises location.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

3. PORTS (cont'd)

	USOC CABS/CRIS	Monthly Rate
b. Per port - at OC-12 Node		(D)
i. 1.544 Mbps (DS1) at OC-12 Node/1/		
36 month	SPRGX/SPRGX	ICB
60 month	SPRGX/SPRGX	ICB
Monthly Extension	SPRGX/SPRGX	ICB
ii. 45 Mbps (DS3) at OC-12 Node		
36 month	SPRCX/SPRCX	ICB
60 month	SPRCX/SPRCX	ICB
Monthly Extension	SPRCX/SPRCX	ICB
iii. 155.5 Mbps (OC-3, OC-3c) at OC-12 Node		
36 month	SPREX/SPREX	ICB
60 month	SPREX/SPREX	ICB
Monthly Extension	SPREX/SPREX	ICB
iv. 100 Mbps Ethernet (STS-1) at OC-12 Node/1/		
36 month	S9TBX/S9TBX	ICB
60 month	S9TBX/S9TBX	ICB
Monthly Extension	S9TBX/S9TBX	ICB
v. 100 Mbps Ethernet (STS-3c) at OC-12 Node/1/		
36 month	S9TCX/S9TCX	ICB
60 month	S9TCX/S9TCX	ICB
Monthly Extension	S9TCX/S9TCX	ICB

/1/ Where facilities and/or operating conditions permit.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

3. PORTS (cont'd)	USOC CABS/CRIS	Monthly Rate	
b. Per port - at OC-12 Node (cont'd)			(D)
vi. 1 Gbps Ethernet (STS-1) at OC-12 Node			
36 Month	S9TDX/S9TDX	ICB	
60 Month	S9TDX/S9TDX	ICB	
Monthly Extension	S9TDX/S9TDX	ICB	
vii. 1 Gbps Ethernet (STS-3c) at OC-12 Node			
36 Month	S9TEX/S9TEX	ICB	
60 Month	S9TEX/S9TEX	ICB	
Monthly Extension	S9TEX/S9TEX	ICB	(D) | (D)
viii. EC-1 Port at OC-12 Node/1/			(C)
36 Month	S9NUX/S4NJX	ICB	
60 Month	S9NUX/S4NJX	ICB	
Monthly Extension	S9NUX/S4NJX	ICB	
ix. 10/100BaseT VCAT Ethernet/2/			(C)
36 Month	S5P1X/S5P1X	ICB	
60 Month	S5P1X/S5P1X	ICB	
Monthly Extension	S5P1X/S5P1X	ICB	
x. 1000BaseSX VCAT Ethernet			(C)
36 Month	S5P2X/S5P2X	ICB	
60 Month	S5P2X/S5P2X	ICB	
Monthly Extension	S5P2X/S5P2X	ICB	
xi. 1000BaseLX VCAT Ethernet			(C)
36 Month	S5P3X/S5P3X	ICB	
60 Month	S5P3X/S5P3X	ICB	
Monthly Extension	S5P3X/S5P3X	ICB	

/1/ EC-1 Port offered as Customer Premises termination and as a CO termination where facilities and/or operating conditions permit.
/2/ EoS port interface offered as 10/100BaseT are only available at the customer premises location.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

3. PORTS (cont'd)	USOC CABS/CRIS	Monthly Rate	
c. Per port - at OC-48 Node			(C)
i. 1.544 Mbps (DS1) at OC-48 Node/1/			
36 month	SPRLX/SPRLX	ICB	
60 month	SPRLX/SPRLX	ICB	
Monthly Extension	SPRLX/SPRLX	ICB	
ii. 45 Mbps (DS3) at OC-48 Node/1/			
36 month	SPRKX/SPRKX	ICB	
60 month	SPRKX/SPRKX	ICB	
Monthly Extension	SPRKX/SPRKX	ICB	
iii. 155.5 Mbps (OC3, OC-3c) at OC-48 Node			
36 month	SPRJX/SPRJX	ICB	
60 month	SPRJX/SPRJX	ICB	
Monthly Extension	SPRJX/SPRJX	ICB	
iv. 622 Mbps (OC-12, OC-12c) at OC-48 Node			
36 month	SPRHX/SPRHX	ICB	
60 month	SPRHX/SPRHX	ICB	
Monthly Extension	SPRHX/SPRHX	ICB	
v. 100 Mbps Ethernet (STS-1) at OC-48 Node/2/			
36 month	S9TGX/S9TGX	ICB	
60 month	S9TGX/S9TGX	ICB	
Monthly Extension	S9TGX/S9TGX	ICB	
vi. 100 Mbps Ethernet (STS-3c) at OC-48 Node/2/			
36 month	S9THX/S9THX	ICB	
60 month	S9THX/S9THX	ICB	
Monthly Extension	S9THX/S9THX	ICB	
vii. 1 Gbps Ethernet (STS-1) at OC-48 Node/2/			
36 month	S9TJX/S9TJX	ICB	
60 month	S9TJX/S9TJX	ICB	
Monthly Extension	S9TJX/S9TJX	ICB	

/1/ For OC-48 SONET Rings, the Add/Drop capability rate element is applicable only once and only when the 25th DS3 port is applied per Node.
/2/ Where facilities and/or operating conditions permit.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

3. PORTS (cont'd)

	USOC CABS/CRIS	Monthly Rate	
c. Per port - at OC-48 Node (cont'd)			(C) (D)
viii. 1 Gbps Ethernet (STS-3c) at OC-48 Node			
36 month	S9TKX/S9TKX	ICB	
60 month	S9TKX/S9TKX	ICB	
Monthly Extension	S9TKX/S9TKX	ICB	
ix. 1 Gbps Ethernet (STS-12c) at OC-48 Node			
36 month	S9TLX/S9TLX	ICB	
60 month	S9TLX/S9TLX	ICB	
Monthly Extension	S9TLX/S9TLX	ICB	
x. 1 Gbps Ethernet (STS-24c) at OC-48 Node			
36 month	S9TMX/S9TMX	ICB	
60 month	S9TMX/S9TMX	ICB	
Monthly Extension	S9TMX/S9TMX	ICB	
			(D) | (D)
xi. EC-1 Port at OC-48 Node/1/			(C)
36 Month	S9NVX/S4NKX	ICB	
60 Month	S9NVX/S4NKX	ICB	
Monthly Extension	S9NVX/S4NKX	ICB	
xii. 10/100BaseT VCAT Ethernet/2/			(C)
36 Month	S5P1X/S5P1X	ICB	
60 Month	S5P1X/S5P1X	ICB	
Monthly Extension	S5P1X/S5P1X	ICB	

/1/ EC-1 Port offered as Customer Premises termination and as a CO termination where facilities and/or operating conditions permit.
/2/ EoS port interfaces offered as 10/100BaseT are only available at the customer premise location.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

3. PORTS (cont'd)

	USOC CABS/CRIS	Monthly Rate	
c. Per Port – at OC-48 Node (cont'd)			(C) (D)
xiii. 1000BaseSX VCAT Ethernet			(C)
36 Month	S5P2X/S5P2X	ICB	
60 Month	S5P2X/S5P2X	ICB	
Monthly Extension	S5P2X/S5P2X	ICB	
xiv. 1000BaseLX VCAT Ethernet			(C)
36 Month	S5P3X/S5P3X	ICB	
60 Month	S5P3X/S5P3X	ICB	
Monthly Extension	S5P3X/S5P3X	ICB	

4. OPTICAL TO ELECTRICAL ADD/DROP CAPABILITY

a. Per OC-3 to DS1 Add/Drop - once per arrangement[/1/]			(D)
36 month	MXJDX/MXJDX	ICB	
60 month	MXJDX/MXJDX	ICB	
Monthly Extension	MXJDX/MXJDX	ICB	(D)

/1/ The Optical-to-Electrical DS1 Add/Drop capability rate element is applicable when the 85th DS1 port is applied per OC-12 Node. (D)

(D)

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

5. MILEAGE

	USOC CABS/CRIS	Monthly Rate Fixed	Monthly Rate Per Mile
a. Mileage Bands			
i. OC- 3			
36 Month Term			
0 Miles	1YAZX/1YAZ3	None	None
Over 0 Miles	1YAZX/1YAZ3	None	ICB
60 Month Term			
0 Miles	1YAZX/1YAZ5	None	None
Over 0 Miles	1YAZX/1YAZ5	None	ICB
Monthly Extension Rate			
0 Miles	1YAZX/1YAZM	None	None
Over 0 Miles	1YAZX/1YAZM	None	ICB
ii. OC- 12			
36 Month Term			
0 Miles	1YAZX/1YAZ3	None	None
Over 0 Miles	1YAZX/1YAZ3	None	ICB
60 Month Term			
0 Miles	1YAZX/1YAZ5	None	None
Over 0 Miles	1YAZX/1YAZ5	None	ICB
Monthly Extension Rate			
0 Miles	1YAZX/1YAZM	None	None
Over 0 Miles	1YAZX/1YAZM	None	ICB
iii. OC- 48			
36 Month Term			
0 Miles	1YAZX/1YAZ3	None	None
Over 0 Miles	1YAZX/1YAZ3	None	ICB
60 Month Term			
0 Miles	1YAZX/1YAZ5	None	None
Over 0 Miles	1YAZX/1YAZ5	None	ICb
Monthly Extension Rate			
0 Miles	1YAZX/1YAZM	None	None
Over 0 Miles	1YAZX/1YAZM	None	ICB

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

6. REGENERATOR

	USOC CABS/CRIS	Monthly Rate
a. OC-3		
36 month	RGY/RGYS3	ICB
60 month	RGY/RGYS5	ICB
Monthly Extension	RGY/RGYSM	ICB
b. OC-12		
36 month	RGY/RGYS3	ICB
60 month	RGY/RGYS5	ICB
Monthly Extension	RGY/RGYSM	ICB
c. OC-48		
36 month	RGY/RGYS3	ICB
60 month	RGY/RGYS5	ICB
Monthly Extension	RGY/RGYSM	ICB

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

7. NON-RECURRING CHARGES

	USOC CABS/CRIS	Non-Recurring Charge
a. Administrative Charge - per order		
OC-3 Dedicated Ring	ORCMX/ORCMX	ICB
OC-12 Dedicated Ring	ORCMX/ORCMX	ICB
OC-48 Dedicated Ring	ORCMX/ORCMX	ICB
b. Design and Central Office Connection Charge - per circuit /1/		
OC-3 Dedicated Ring	NRMCK/NRBCL	ICB
OC-12 Dedicated Ring	NRMCK/NRBCL	ICB
OC-48 Dedicated Ring	NRMCK/NRBCL	ICB

/1/ Per circuit is applied once per the total original Ring design.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

7. NONRECURRING CHARGES (cont'd)

	USOC CABS/CRIS	Non-Recurring Charge	
c. Node			
i. OC-3			
Customer Premises Node - Subsequent Installation	NRBS7/NRBS7	ICB	(C)
Central Office Node - Subsequent Installation	NRBSV/NRBSV	ICB	(D) (D)
ii. OC-12			
Customer Premises Node - Subsequent Installation	NRBS7/NRBS7	ICB	(C)
Central Office Node - Subsequent Installation	NRBSV/NRBSV	ICB	(D) (D)
iii. OC-48			
Customer Premises Node - Subsequent Installation	NRBS7/NRBS7	ICB	(C)
Central Office Node - Subsequent Installation	NRBSV/NRBSV	ICB	(D) (D)

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

7. NON-RECURRING CHARGES (cont'd)

	USOC CABS/CRIS	Non-Recurring Charge
d. Ports[/1/]		
i. Per port - at OC-3 Node		
(a) 45 Mbps (DS3/DS3 with Transmux) at OC-3 Node - per subsequent installation	NRBSX/NRBSX	ICB
(b) 1.544 Mbps (DS1) at OC-3 Node - per subsequent installation	NRBSY/NRBSY	ICB
(c) 100 Mbps Ethernet (STS-1) at OC-3 Node - per subsequent installation	NRM63/NRBY4	ICB
(d) EC-1 port at OC-3 Node - per subsequent installation[/2/]	NRBSX/NRBSX	ICB
(e) 1.544 Mbps (DS1) at OC-3 Node - per subsequent installation	NRBSY/NRBSY	ICB
(f) 10/100BaseT VCAT Ethernet Port - per subsequent installation	NRM63/NRBY4	ICB
(g) 1000BaseSX VCAT Ethernet Port - per subsequent installation	NRM65/NRBY5	ICB
(h) 1000BaseLX VCAT Ethernet Port - per subsequent installation	NRM65/NRBY5	ICB

/1/ Applicable to 36 Month, 60 Month and Monthly Extension Term Plans.

/2/ EC-1 Port offered as Customer Premises termination and as a CO termination where facilities and/or operating conditions permit.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

7. NON-RECURRING CHARGES (cont'd)

	USOC CABS/CRIS	Non-Recurring Charge
d. Ports[/1/] (cont'd)		
ii. Per port, at OC-12 Node		
(a) 1.544 Mbps (DS1) at OC-12 Node - per subsequent installation	NRBSY/NRBSY	ICB
(b) 45 Mbps (DS3/DS3 w/Transmux) at OC-12 Node - per subsequent installation	NRBSX/NRBSX	ICB
(c) 155.5 Mbps (OC-3, OC-3c) at OC-12 Node - per subsequent installation	NRBSW/NRBSW	ICB
(d) 100 Mbps Ethernet (STS-1) at OC-12 Node - per subsequent installation	NRM63/NRBY4	ICB
(e) 100 Mbps Ethernet (STS-3c) at OC-12 Node - per subsequent installation	NRM64/NRBY4	ICB
(f) 1 Gbps Ethernet (STS-1) at OC-12 Node - per subsequent installation	NRM65/NRBY5	ICB
(g) 1 Gbps Ethernet (STS-3c) at OC-12 Node - per subsequent installation	NRM66/NRBY5	ICB
(h) EC-1 port at OC-12 Node - per subsequent installation[/2/]	NRBSX/NRBSX	ICB
(i) 10/100BaseT VCAT Ethernet Port - per subsequent installation	NRM63/NRBY4	ICB
(j) 1000BaseSX VCAT Ethernet Port - per subsequent installation	NRM65/NRBY5	ICB
(k) 1000BaseLX VCAT Ethernet Port - per subsequent installation	NRM65/NRBY5	ICB

/1/ Applicable to 36 Month, 60 Month and Monthly Extension Term Plans.

/2/ EC-1 Port offered as Customer Premises termination and as a CO termination where facilities and/or operating conditions permit.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

7. NON-RECURRING CHARGES (cont'd)

	USOC CABS/CRIS	Non-Recurring Charge
d. Ports[/1/] (Cont'd)		
iii. Per port, at OC-48 Node		
(a) 1.544 Mbps (DS1) at OC-48 Node - per subsequent installation	NRBSY/NRBSY	ICB
(b) 45 Mbps (DS3) at OC-48 Node - per subsequent installation	NRBSX/NRBSX	ICB
(c) 155.5 Mbps (OC3, OC-3c) at OC-48 Node - per subsequent installation	NRBSW/NRBSW	ICB
(d) 622 Mbps (OC-12, OC-12c) at OC-48 Node - per subsequent installation	NRBSZ/NRBSZ	ICB
(e) 100 Mbps Ethernet (STS-1) at OC-48 Node - per subsequent installation	NRM63/NRBY4	ICB
(f) 100 Mbps Ethernet (STS-3c) at OC-48 Node - per subsequent installation	NRM64/NRBY4	ICB
(g) 1 Gbps Ethernet (STS-1) at OC-48 Node - per subsequent installation	NRM65/NRBY5	ICB
(h) 1 Gbps Ethernet (STS-3c) at OC-48 Node - per subsequent installation	NRM66/NRBY5	ICB
(i) 1 Gbps Ethernet (STS-12c) at OC-48 Node - per subsequent installation	NRM67/NRBY5	ICB
(j) 1 Gbps Ethernet (STS-24c) at OC-48 Node - per subsequent installation	NRM68/NRBY5	ICB
(k) EC-1 port at OC-48 Node - per subsequent installation[/2/]	NRBSX/NRBSX	ICB

/1/ Applicable to 36 Month, 60 Month and Monthly Extension Term Plans.

/2/ EC-1 Port offered as Customer Premises termination and as a CO termination where facilities and/or operating conditions permit.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

7. NONRECURRING CHARGES (cont'd)

	USOC CABS/CRIS	Non-Recurring Charge	
d. Ports[/1/] (cont'd)			
iii. Per port, at OC-48 Node (cont'd)			
(l) 10/100BaseT VCAT Ethernet Port - per subsequent installation	NRM63/NRBY4	ICB	
(m) 1000BaseSX VCAT Ethernet Port - per subsequent installation	NRM65/NRBY5	ICB	
(n) 1000BaseLX VCAT Ethernet Port - per subsequent installation	NRM65/NRBY5	ICB	
e. Optical to Electrical Add/Drop Capability [/1/ /2/]			
i. per subsequent installation			
- per arrangement	NRBS8/NRBS6	ICB	
- per OC-3 to DS1 Add/Drop	NRBS8/NRBS6	ICB	
- per subsequent installation, per DS1 off OC-12, OC-48	NRBS8/NRBS6	ICB	
f. Regenerator			
i. OC-3, OC-12, OC-48 for Subsequent Installation	NRBS5/NRBS5	ICB	
g. Shared Network Arrangement			
a. Processing Charge - per Service Order	NRMCL/NRBOP	ICB	
h. OC-48 Add/Drop Capability[/3/]			
- per subsequent installation, per arrangement	NRBS8/NRBS6	ICB	

(D)
(D)

/1/ Applicable to 36 Month, 60 Month and Monthly Extension Term Plans.
/2/ The Optical to Electrical Add/Drop Capability is in addition to the Add/Drop Capability charge as set forth in h. preceding.
/3/ Add/Drop charge applies only with the initial installation of node equipped with drop capacity. This charge is applies to all nodes, excluding regenerators.

4. OC-3, OC-12, OC-48 DEDICATED SONET RING SERVICE (cont'd)

E. RATES AND CHARGES (cont'd)

7. NONRECURRING CHARGES (cont'd)

	USOC CABS/CRIS	Non-Recurring Charge	
			(D)
			(D)