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**INTEREXCHANGE DISTANCE CHARGES**

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**1. GENERAL**

- 1.01 Interexchange distance charges or rentals apply to channels between Exchanges or other Rate Centres. C  
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- 1.02 The capacity of the interexchange channel provided determines the monthly charge or rental applicable. Interexchange channels with three different band-widths are furnished as follows: C  
C
- (a) Voice-grade interexchange channels are those with the band-width to carry telephone speech or its equivalent. C
- (b) Teletype-grade interexchange channels are those with a narrower band-width than voice-grade ones. They are provided to carry electrical impulses (signals). C
- (c) Other interexchange channels with a greater band-width than voice-grade ones are provided for wired music and program transmission and for television transmission when the rate distance exceeds 25 miles/40 kms. C
- 1.03 The rental is as follows for duplex operation and applies to both Ontario-Quebec and Trans-Canada interexchange voice grade channels: C
- (a) Two Point: A surcharge applicable to each channel so arranged equal to 25% of the average monthly distance charges per channel, rounded to the nearest five cents. The average monthly distance charges per channel is calculated as the total monthly distance charges for all channels divided by the number of channels.
- (b) Multi-Point: In addition to the surcharge specified in (a), additional charges may apply based on the expense incurred by the Company.

INTEREXCHANGE DISTANCE CHARGES2. CHANNEL MEASUREMENT**2.01 Voice-Graded Channels and Those with a Greater Band-Width**

(a) For a two-point channel, the distance charge or rental is based on the rate distance between Wire Centres or Rate Centres (N100-1.02) in the Exchanges in which the customer's or lessee's telephones or service points are located as follows:

(1) Adjoining Exchanges: between Wire Centres in whose areas the telephones or service points are located except as in (2) below.

(2) Non-adjointing Exchanges: between Rate Centres of the Exchanges, except for a channel provided between an Exchange or Rate Centre of the Company and a Rate Centre of another telephone company in Ontario and Quebec, the measurement is made between the two Rate Centres via the point(s) of connection. The percentage of this measurement which lies in the Company's territory is then applied to the actual airline distance between the Rate Centres to determine the charge for the Company's portion.

(b) The rate distance is as follows:

(1) Points not more than 10 miles apart by airline (map) measurement: the airline distance between them.

(2) Points more than 10 miles apart by airline measurement: the rate distance is based on the vertical (V) and horizontal (H) coordinates of the points (N620-3.01(b), (c) and (d)). Such distance is the square root of one-tenth the sum of the square of the difference between the V coordinates and the square of the difference between the H coordinates, any remaining fraction of a mile being carried to the next higher mile. The formula is as follows:

$$\text{Rate Distance} = \sqrt{.v .1 ((V_1 - V_2)^2 + (H_1 - H_2)^2)}$$

where  $V_1$  is the larger of the V coordinates and  $H_1$  is the larger of the H coordinates.

(c) For a multi-point channel, the rate distance and charge or rental for each of the combination of pairs of Exchanges (each leg of the circuit) are determined. The total charge is the sum of the charges for the lowest combination of rate distances that connects all points each determined as in Item 2.01 (a).

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**INTEREXCHANGE DISTANCE CHARGES**

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**2. CHANNEL MEASUREMENT CONT'D****2.02 Teletype Grade Channels**

- (a) For a two-point channel, the distance charge is based on the rate distance between Wire Centres or Rate Centres in the Exchanges in which the service points are located as follows (except as in Item 2.01(a)(2)):
- (1) Adjoining Exchanges:  
For Class A and Class B signal channels - between Wire Centres.  
For all other teletype-grade channels - between Rates Centres.
- (2) Non-adjointing Exchanges:  
For Class A and Class B signal channels - between Rate Centres of the Exchanges. For all other teletype-grade channels - between Rate Centres of the Exchanges.
- (i) For a channel provided between an Exchange or Rate Centre of the Company and Rate Centre of another telephone company in Ontario and Quebec the measurement is made between the two Rate Centres via the point of connection. The percentage of this measurement which lies in the Company territory is then applied to the actual airline distance between the Rate Centres to determine the charge for the Company's portion.
- (ii) For a channel provided between an Exchange of the Company and certain Rate Centres in the Province of Ontario and utilizing the facilities of Bell Canada the charge is computed at the Bell Canada/Northern Telephone Limited point of interconnection.
- (b) The rate distance is determined as stated in Item 2.01 (b)(2).
- (c) For a multi-point channel the rate distance and charge or rental for each of the combination of pairs of Exchanges (each leg of the channel) are determined separately. The total charge is the sum of the charges for the lowest combination of rate distances that connects all points each determined as in 2.02(a).

INTEREXCHANGE DISTANCE CHARGES

3. RATES AND CHARGES FOR INTEREXCHANGE CHANNELS AND THE ASSOCIATED LOCAL CHANNELS

3.01 Voice-grade channels

The monthly charges or rentals for interexchange channels are determined through the use of one or more of the following rate schedules and/or distance charges. The schedule and/or distance charge to be used is dependent on certain geographic locations or routing arrangements as specified.

3.02 The following rates are established for Northern Telephone Limited's serving area:

(a) Link

The link charge applies for each originating and terminating points on a channel and at the originating and terminating points of each leg of a multi point channel.

	<u>MRC</u>	<u>USOC</u>
IX Link Voice	\$44.29	LKNTV
IX Link Data	\$44.29	LKNTD

(b) Distance

Distance charges per channel consist of a base rate charge and a charge per mile for each mile or fraction thereof:

<u>TYPE</u>	<u>DISTANCE BAND</u>	<u>MRC DISTANCE CHARGE/MILE</u>	<u>USOC</u>	<u>MRC BASE CHARGE</u>	<u>USOC</u>
(i) Voice	0-225	\$7.87	1XVBA	-	-
	226-300	\$3.58	1XVBB	\$495.00	1BVBB
	301-OVER	\$1.99	1XVBC	\$855.00	1BVBC
(ii) Data	0-225	\$9.86	1XDBA	-	-
	226-300	\$4.49	1XDBB	\$618.75	1BDBB
	301-OVER	\$2.49	1XDBC	\$1,068.75	1BDBC

**NOTE:** Charges shown do not include the local channel charges. Local channel charges are based on airline distances measured from the Company Central Office to the customer location. Rates for local channels are shown in Section N260, sub-section 3.03.

INTEREXCHANGE DISTANCE CHARGES

3. RATES AND CHARGES FOR INTEREXCHANGE CHANNELS AND THE ASSOCIATED LOCAL CHANNELS (Cont'd)

Voice-grade channels cont'd

3.03 Ontario - Quebec

For channels between other Exchanges or Rate Centres in Ontario and Quebec for which the monthly charges are not specified in 3.02 (a) and (b) the monthly charges are the sum of (a) and (b) following.

(a) Link charge, each channel, each end (see note)

	<u>MRC</u>	<u>S/C</u>
Voice channels	\$60.00	\$200.00
Data channels	\$60.00	\$200.00

(b) Distance charges per channel consisting of a base charge and a charge per mile for each mile or fraction thereof:

<u>Rate Distance</u>	<u>Base Charge</u>	<u>Charge per Mile</u>
1 - 25	-	\$16.20
26 - 50	\$116.25	11.55
51 - 100	303.75	7.80
101 - 200	783.75	3.00
201 - 500	1033.75	1.75
Over 500	1308.75	1.20

**Note:** For a multi-point channel, two or more link charge apply at each intermediate point.

3.03.01 Discounts apply when seven or more channels are provided between the same two points. See Item 4.

3.03.02 For each local channel provided with an interexchange channel the total distance charge applicable is the sum of the following:

(a) A flat-rate charge based on the local distance charge (Item N260 3.03) for an initial 400 metres and 4 additional 400 metre units for the Exchange in which the channel is furnished (except for connections to Central Office based Centrex systems, in which case the flat-rate charge does not apply). For a multi-point local channel (two or more service points (customer locations) in the same Exchange) a flat-rate charge applies for each additional service point based on the distance charge specified in Item N260 3.03 for 5 additional 400 metre units.

INTEREXCHANGE DISTANCE CHARGES

3. RATES AND CHARGES FOR INTEREXCHANGE CHANNELS AND THE ASSOCIATED LOCAL CHANNELS (Cont'd)

Voice-grade Channels Cont'd

3.03.02 Ontario and Quebec Cont'd

- (b) When a local channel is associated with an interexchange channel between non-adjointing Exchanges and the serving Wire Centre is not the Wire Centre designated as the Rate Centre, an additional charge applies based on the local distance charge for additional 400 metre units (Item N260 3.03) for the channel between the serving Wire Centre and the Rate Centre, including Centrex applications. For a multi-point local channel this charge is based on the shortest distance that connects the Rate Centre and the Wire Centres in which the service points (customer locations) are located.
- (c) For a multi-wire local channel associated with an interexchange channel a charge applies for each pair of wires provided as specified in Item N260 3.01 (d).
- (d) Commuted distance charges as specified in Item N260 3.03 (a)(1) a) do not apply for local channels associated with an interexchange channel.

3.03.03 Interexchange channels are provided for periods of one day or more but less than one month at double pro-rata the monthly distance charge or rental, except that the minimum charge or rental for each continuous period is the amount specified in 3.03.04 below or the monthly charge or rental whichever is lower, and the maximum charge or rental for all such periods in one month is the monthly charge or rental.

**Note:** The service charge and monthly rate for each link apply for each continuous period.

3.03.04 Minimum charge \$30.00

**INTEREXCHANGE DISTANCE CHARGES**

**3. RATES AND CHARGES FOR INTEREXCHANGE CHANNELS AND THE ASSOCIATED LOCAL CHANNELS** (Cont'd)

3.04 **Trans-Canada**

For channels between one or more Exchanges or Rate Centres of the Company and one or more other Exchanges, or Rate Centres in Canada for which the monthly charges are not specified in Item 3.02 and 3.03 above the monthly charges are the sum of (a) and (b) following:

(a) Link charge, each channel, each end (see Note 1)

	<u>MRC</u>	<u>S/C</u>
Voice channels	\$30.00(See Note 2)	\$100.00(See Note 2)
Data channels	\$60.00(See Note 2)	\$200.00(See Note 2)

Note 1: For a multi-point channel, two or more link charges apply at each intermediate point.

Note 2: These charges may vary depending on other operating Telephone Company's Tariffs.

(b) Distance charges per channel consisting of a base charge and a charge per mile for each mile or fraction thereof:

<u>Rate Distance</u>	<u>Base Charge</u>	<u>Charge per Mile</u>
1 - 25	-	\$17.15
26 - 50	\$122.50	12.25
51 - 100	280.00	9.10
101 - 200	820.00	3.70
201 - 500	1150.00	2.05
501 -1000	1450.00	1.45
Over 1000	2400.00	0.50

3.04.01 Discounts apply when seven or more channels are provided between the same two points. See Item 4.

3.04.02 For each local channel provided with an interexchange channel the total distance charge applicable is the sum of the following:

(a) A flat-rate charge based on the local distance charge (Item N260 3.03) for an initial 400 metres and 4 additional 400 metre units for the Exchange in which the channel is furnished (except for connections to Central Office based Centrex systems, in which case the flat-rate charge does not apply) For a multi-point local channel (two or more service points (customer locations) in the same Exchange) a flat-rate charge applies for each additional service point based on the distance charge specified in Item N260 3.03 for 5 additional 400 metre units.

INTEREXCHANGE DISTANCE CHARGES3. RATES AND CHARGES FOR INTEREXCHANGE CHANNELS AND THE ASSOCIATED LOCAL CHANNELS (Cont'd)

## 3.04.02 cont'd

- (b) When a local channel is associated with an interexchange channel between non-adjointing Exchanges and the serving Wire Centre is not the Wire Centre designated as the Rate Centre, an additional charge applies based on the local distance charge for additional 400 metre units (Item N260 3.03) for the channel between the serving Wire Centre and the Rate Centre including Centrex applications. For a multi-point local channel this charge is based on the shortest distance that connects the Rate Centre and the Wire Centres in which the service points (customer locations) are located.
- (c) For a multi-wire local channel associated with an interexchange channel a charge applies for each pair of wires provided as specified in Item N260 3.01(d).
- (d) Commuted distance charges as specified in Item N260 3.03(a)(1)a) do not apply for local channels associated with an interexchange channel.

3.04.03 The total monthly charge for foreign-exchange service is the sum of the following:

- (a) monthly charges as specified in 3.04 above.
- (b) Extra-exchange distance charges for the normal Exchange, if applicable. See Item N260 2.
- (c) The rate for the service furnished from the foreign-exchange, in accordance with the appropriate operating Telephone Company's Tariff.

3.04.04 Interexchange channels are provided for periods of one day or more but less than one month at double pro-rata the monthly distance charge or rental, except that the minimum charge or rental for each continuous period is the amount specified in 3.04.05 below or the monthly charge or rental whichever is lower, and the maximum charge or rental for all such periods in one month is the monthly charge or rental.

**Note:** The service charge and monthly rate for each link apply for each continuous period.

3.04.05 Minimum charge \$30.00



INTEREXCHANGE DISTANCE CHARGES

3. RATES AND CHARGES FOR INTEREXCHANGE CHANNELS AND THE ASSOCIATED LOCAL CHANNELS (Cont'd)

3.05 The following rates are established by Ontario Northland Telecommunications which provide 1.2 to 56K bit a second digital service where facilities permit at the following rates: Destandardized not available for new installations or on changes of address.

<u>Kbps</u> <u>SPEED</u>	<u>DISTANCE</u> <u>BAND</u>	<u>MRC</u> <u>DISTANCE</u> <u>CHARGE/MILE</u>	<u>MRC</u> <u>BASE</u> <u>USOC</u>	<u>CHARGE</u>	<u>USOC</u>
1.2	0- 50	3.55	1XDSE	-	
	51-225	1.20	1XDSE	117.50	1BDSF
	226-300	.68	1XDSE	234.50	1BDSG
	301-OVER	.50	1XDSE	288.50	1BDSH
2.4	0- 50	5.70	1XDSE	-	
	51-225	2.15	1XDSE	177.50	1BDSJ
	226-300	1.10	1XDSE	413.75	1BDSK
	301-OVER	.75	1XDSE	518.75	1BDSL
4.8	0- 50	8.15	1XDSE	-	
	51-225	3.05	1XDSE	255.00	1BDSN
	226-300	1.35	1XDSE	637.50	1BDSE
	301-OVER	1.00	1XDSE	742.85	1BDSP
9.6	0- 50	12.20	1XDSE	-	
	51-225	3.80	1XDSE	420.00	1BDSE
	226-300	1.70	1XDSE	892.50	1BDSE
	301-OVER	1.25	1XDSE	1,027.50	1BDSE
19.2	0- 50	12.50	1XDSE	-	
	51-225	3.90	1XDSE	430.00	1BDSE
	226-300	1.80	1XDSE	902.50	1BDSE
	301-OVER	1.50	1XDSE	992.50	1BDSE
56.0	0- 50	27.50	1XDSE	-	
	51-225	5.00	1XDSE	1,125.00	1BDSE
	226-300	2.00	1XDSE	1,800.00	1BDSE
	300-OVER	1.00	1XDSE	2,100.00	1BDSE

3.06 Channels Between EAS Exchange

(a) For EAS interexchange channels, the monthly distance charge for each mile is as follows:

	<u>MRC</u>	<u>SC</u>	<u>USOC</u>
EAS Interexchange Channel (Two-Wire)	\$25.04	MESC	1LHGY
EAS Interexchange Channel (Four-Wire, Duplex)	\$31.00	MESC	1LHGZ

**INTEREXCHANGE DISTANCE CHARGES**

**3. RATES AND CHARGES FOR INTEREXCHANGE CHANNELS AND THE ASSOCIATED LOCAL CHANNELS (Cont'd)**

**3.07 Teletype-grade channels**

**Ontario - Quebec**

For channels between Exchanges or Rate Centres of the Company in Ontario and Quebec the monthly charges or rentals are as follows:

- (a) For data and teletype channels the monthly charges or rentals, as stated below, apply for each mile of rate distance and provide for duplex operation:

	Rate Distance (miles)				
	1st 100	Next 200	Next 300	Next 400	Over 1000
A. Schedule 1,2 and 3 channels	\$2.30	\$2.00	\$1.30	\$ .90	\$ .55
B. Schedule 3A channel	2.95	2.65	1.90	1.20	.65

- (b) The monthly charge or rental for Class A and B signal channels provides for continuous operation and is as follows:

Class A, each mile	\$3.00
Class B, each mile	5.90

For duplex operation, the charge or rental is 125% of that shown. See Item 1.03.

- 3.07.01 Interexchange channels, except those for teletype service, are leased for periods of one day or more but less than one month at double prorata the monthly distance charge or rental, except that the minimum charge or rental for each continuous period is the amount specified in 3.07.02(a) below or the monthly charge or rental, whichever is lower, and the maximum charge or rental for all such periods between the same points in the same month is the monthly charge or rental.

**INTEREXCHANGE DISTANCE CHARGES**

**3. RATES AND CHARGES FOR INTEREXCHANGE CHANNELS AND THE ASSOCIATED LOCAL CHANNELS (Cont'd)**

**3.07.02 Other Rates and Charges**

- (a) Minimum charge \$50.00
- (b) Channel termination 

<u>MRC</u>	<u>S/C</u>
\$1000.00	-
- (c) Channel termination \$1000.00 \$1000.00 (Note 1)

**Note 1** (a) One service charge applies regardless of the number of teletype-grade channels provided at one time.  
 (b) Service charge does not apply when a teletype-grade channel is installed coincident with a voice-grade channel.

**3.08 Trans-Canada**

For channels between Exchanges or Rate Centres in Canada for which the monthly charges are not specified in Item 3.07 (a) the monthly charges are as follows:

- (a) For data, teletype and signal channels the monthly charges or rentals, as stated below, apply for each mile or remaining fraction of rate distance and provide for duplex operation:

	Rate Distance (Miles)				
	1 <sup>st</sup> 100	Next 200	Next 300	Next 400	Over 1000
A. Schedule 1,2 and 3 data and teletype channels, Class A and B signal channels	\$1.60	\$1.40	\$ .95	\$ .65	\$ .30
B. Schedule 3A data and teletype channels	2.10	1.90	1.35	.85	.40

INTEREXCHANGE DISTANCE CHARGES

3. RATES AND CHARGES FOR INTEREXCHANGE CHANNELS AND THE ASSOCIATED LOCAL CHANNELS (Cont'd)

3.09 Local Channel with an Interexchange Channel

(a) Voice-grade channels (See Item 3.01)

(b) Teletype-grade channels

(1) A local channel is required in each Exchange in which one or more service points are connected with an interexchange channel. Where there are service points in two or more buildings on the same continuous property additional charges apply as specified in N260 3.03(c).

a. Class A and B signal channels: the charge or rentals specified in N260-3.03(a) (1) d) applies, distance being measured from the service point to the Rate Centre or Wire Centre to which interexchange measurement is made.

b. Schedule 1, 2, 3 and 3A data and teletype channels: the charge or rental specified in N260-3.03(a)(1)(e) applies.

c. For duplex operation the charge or rentals is as stated above for each pair of wires as determined in N260.3.01(d). For a multi-point channel see Item N260.3 (2) c.

d. Schedules 1,2,3 and 3A data and teletype channels:

A service-point terminal is required at each service point connected with an interexchange channel. Where there are service points in two or more buildings on the same continuous property, additional charges apply as specified in Item N260 3.03(c). A channel terminal is required in each Exchange in which a service point is located. Monthly charges or rentals apply as follows:

Service-point terminal each	\$15.00
Channel terminal each	15.00

(c) Channels with greater band-width than voice-grade ones.

(1) A local channel is required in each Exchange in which an interexchange channel terminates, and in each intermediate Exchange in which there is a service point. A distance charge applies for each such channel, the Rate Centre or Wire Centre to which interexchange measurement is made being considered a service point. The initial 400 meter charge applies to the first such channel in each Exchange.

INTEREXCHANGE DISTANCE CHARGES

4. CHANNEL DISCOUNTS

4.01 General

Discounts apply when seven or more voice-grade channels (two-point or legs of multi-point) are provided between the same two points except for program, wired-music and television transmission.

- (a) Discounts apply to the distance charge portion (Items 3.03 (a) and 3.03 (b)) of interexchange channels as follows (Note 1):

- (i) Ontario and Quebec

	<u>Discount</u>
1 to 6 channels	-
7 to 12 channels, each	10%
13 to 24 channels, each	20%
25 to 60 channels, each	30%
61 to 120 channels, each	35%
More than 120 channels, each	40% (x)

(x) Maximum aggregate discount applicable is 35%.

- (ii) Trans-Canada

	<u>Discount</u>
1 to 6 channels	-
7 to 12 channels, each	30%
13 to 24 channels, each	35%
25 to 60 channels, each	35%
More than 60 channels, each	40%

Note 1: The availability of discounts on interexchange channels to points in Canada outside of the Company's territory is determined in conjunction with the other operating telephone companies.

- (b) For rating purposes, a two-point channel may be configured as a non-terminating multi-point channel of greater distance, if such configuration, in combination with channel discounts, results in a lower charge.
- (c) A two-point section of seven or more voice-grade channels may be arranged to permit the alternate use of the channels as a single channel or as a group of channels with a greater band-width. Channel termination arrangements for use with wide-band facilities are charged for as special assemblies of equipment.

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**INTEREXCHANGE DISTANCE CHARGES**

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## 5. Optical Fibre

## 5.01 Service Description

Interexchange (IX) Optical Fibre Service provides for installed single-mode, unlit optical fibre facilities between two Rate Centres of the Company's Exchanges which do not have extended area service (EAS) with each other. Optical repeaters are not provided with this service.

## 5.02 Terms and conditions

- (a) IX Optical Fibre Service will be provided where suitable facilities are available as determined by the Company.
- (b) Service Level Agreements (SLA's) which refers to a guarantee of service performance, normally supported by credits to the customer should the Company fail to meet the performance requirements, are not available on this service. The quality of service is dependant on the customer-provided terminating equipment. It is the sole responsibility of the customer to monitor and maintain the integrity and performance of their equipment.
- (c) Interexchange optical fibre is available where suitable facilities exist. However, when the fibre facilities do not exist and requires new construction, the Company may offer to provide service at additional charges to the General Tariff.
- (d) IX Optical Fibre Service may terminate in either the Company's Central Office or in a co-location area of the Company's Central Office designated as the Rate Centre of the Exchange. For connection to co-located equipment, additional charges may apply as per the co-location tariff, Section N120.
- (e) The provisioning of diverse routing is provided subject to the availability of suitable facilities.

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**INTEREXCHANGE DISTANCE CHARGES**


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## 5. Optical Fibre

## 5.02 Terms and conditions (Cont'd)

(f) IX Optical Fibre Service is provided between Rate Centres of the Company's Exchanges. C  
C

(g) The customer must sign a 1, 3 or 5 year contract at the rates below.

## 5.03 Rates and Charges

(a) The monthly rate for IX Optical Fibre is based on the interexchange private line routed distance between Exchanges. C

(b) IX Optical Fibre Service does not impose a maximum distance limitation. The maximum distance is determined by the technical capabilities of the terminating equipment provided by the customer.

(c) The Minimum number of fibres that can be ordered by the customer is two strands. Additional fibre can be ordered in increments of two strands.

(d) The following monthly rates apply for optical fibres per metre of routed distance:

**Fibre Strands:**

Fibres per Cross Section	Monthly Rate Minimum Contract Period ( <b>Note 1</b> )			Service Charge ( <b>Notes 2, and 3</b> )
	1 Year	3 Year	5 Year	
2	\$0.77	\$0.72	\$0.65	\$3,000.00
4	0.92	0.86	0.78	3,000.00
6	1.04	0.97	0.88	3,000.00
8	1.11	1.04	0.95	3,000.00
10	1.15	1.08	0.98	3,000.00
12	1.18	1.10	1.00	3,000.00
Each additional pair	0.20	0.19	0.17	3,000.00

**Note 1:** 1, 3 and 5 year contracted monthly rate per metre

**Note 2:** A service charge of \$3,000.00 per end, per service

**Note 3:** The service charge applies only once per order per rate