

6. SWITCHED ACCESS SERVICE

6.1 GENERAL

6.1.2 RATE CATEGORIES

A.3.e. (Cont'd)

INTERFACE GROUP	COMPANY SWITCH SUPERVISORY	NCI CODE	SWITCHED ACCESS SERVICE			
			FGA	FGB	FGC	FGD <i>DID</i>
9	LO, GO	4DS6-44[1]	X			
	LO, GO	2FCF[2]	X	X	X	X
	RV, EA, EB, EC	4DS6-44		X	X	X
	RV, EA, EB, EC	2FCF-[2]	X	X	X	X
	CCS	4DS6-44				X
	CCS	2FCF-[2]				X

[1] Company equipment is generally required at the customer's premises.

[2] Available when Switched Access Services are ordered in conjunction with DS3 optical.

**6. SWITCHED ACCESS SERVICE**

**6.1 GENERAL**

**6.1.2 RATE CATEGORIES**

A. Switched Transport (Cont'd)

4. Optional Features

Where transmission facilities permit, the Company will, at the option of the customer, provide the following Switched Transport optional features as set forth in 6.8, following.

a. POT Supervisory Signaling Arrangements

Where the transmission parameters permit, and where signaling conversion is required by the customer to meet its signaling capability, the customer may order a POT supervisory signaling arrangement for each transmission path. Available supervisory signaling arrangements for Lineside and Trunkside terminations are set forth in 3., preceding. Technical specifications for supervisory signaling are delineated in Technical Reference GR-334-CORE.

b. Customer Specified Entry Switch Receive Level

This feature allows the customer to specify the receive transmission level at the first point of switching. The range of transmission levels which may be specified is described in Technical Reference GR-334-CORE. This feature is available with Interface Groups 2, 6 and 9 for Feature Groups A and B.

c. Customer Specification of Switched Transport Termination

This option allows the customer to specify, for Feature Group B routed directly to an end office or an access tandem, a four-wire termination of the Switched Transport at the entry switch in lieu of a Company selected two-wire termination. This option is available only when the Feature Group B arrangement is provided with Type B1 performance.

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**6.1.2 RATE CATEGORIES**

A.4. (Cont'd)

d. Multiplexing for EF and DTT Facilities

Multiplexing provides the capability of converting the capacity or bandwidth of a facility from a higher level to a lower level or from a lower level to a higher level. Multiplexing functions for an EF are available at a SWC. For DTT facilities, multiplexing is available at a Company Hub, end office or access tandem. Multiplexing arrangements are associated with the facility with the higher capacity or bandwidth (e.g., a DS1 to Voice Grade multiplexing arrangement is associated with the facility using a DS1 connection). (Common transport multiplexing, as described in 1., preceding, is provided on the end office side of the access tandem when tandem routing is requested.)

EF and DTT multiplexing arrangements are described following.

(1) DS1 to Voice Grade

DS1 to Voice Grade multiplexing is an arrangement that provides a Company multiplexer which converts a DS1 channel to twenty-four Voice Grade channels utilizing time division multiplexing. For example, the customer has the option of ordering a DS1 to Voice Grade multiplexer for a DS1 Entrance Facility at the SWC when Voice Grade DTT is requested to an end office.

(2) DS3 to DS1

DS3 to DS1 multiplexing is an arrangement which converts a DS3 channel to twenty-eight DS1 channels utilizing time division multiplexing. The twenty-eight channels may be further multiplexed utilizing DS1 to Voice Grade multiplexing equipment.

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**6.1 GENERAL**

**6.1.2 RATE CATEGORIES**

A.4.d. (Cont'd)

EF and DTT multiplexing equipment is provided at no charge by the Company (at a location determined by the Company as part of its overall network design) when the following conditions exist:

- a DTT at a DS1 level is requested from a SWC to an access tandem in conjunction with TST from an access tandem to subtending end offices, or
- a DS1 DTT facility terminates in an end office except when Lineside and Trunkside Access are combined on the same facility.

If the customer chooses to order multiplexing equipment at a location other than the location determined by the Company, the customer will be assessed EF and DTT multiplexing rates and charges as set forth in 6.8, following.

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**6.1 GENERAL**

**6.1.2 RATE CATEGORIES**

A.4.d. (Cont'd)

EF and DTT multiplexing arrangements are required and the customer will be assessed multiplexing rates and charges as set forth in 6.8, following, when the following conditions exist:

- a DS3 EF facility is requested, or
- a DS3 EF connects to a DS1 DTT facility, or
- a DS3 EF is requested with a DS3/DS1 multiplexer and a DS1/DS0 multiplexer for connection to a Voice Grade DTT facility, or
- a DS1 EF connects to a Voice Grade DTT facility, or
- a higher capacity DTT facility connects to a lower capacity DTT facility at a Company Hub, or
- a DS3 DTT facility connects to an access tandem, end office or Company Hub, or
- a DS1 DTT facility transports a combination of Lineside and Trunkside Access to an end office on the same facility, or
- Shared Use facilities are requested.

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**6.1 GENERAL**

**6.1.2 RATE CATEGORIES (CONT'D)**

B. Local Switching

The Local Switching rate category provides the local end office switching, end user line termination and intercept functions necessary to complete the transmission of Switched Access communications to and from the end users served by the local end office. The Local Switching rate categories are described following. Rates for Local Switching are set forth in 6.8.2, following.

1. Local End Office Switching Functions

a. Common Switching

Common Switching provides the local end office switching functions associated with the various access switching arrangements. The service arrangements are described in 6.2, following.

Included as part of Common Switching are various optional features which the customer can order to meet its specific communications requirements. These optional features are described in 6.3.1, following.

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**6.1.2 RATE CATEGORIES**

B.1. (Cont'd)

b. Transport Termination

Transport Termination provides for the line or trunkside arrangements which terminate the Switched Transport facilities. Included as part of Transport Termination are various optional termination arrangements. These optional terminating arrangements are described in 6.3.2, following.

The number of Transport Terminations provided for lineside or trunkside arrangements will be determined by the Company as set forth in 6.5.8, following. The number of transmission paths will be determined as set forth in 6.5.7, following.

2. Line Termination Functions

WATS Access Line Terminations are provided for end user lines terminating in the local end offices.

The WATS Access Line Terminations are differentiated by lineside vs. trunkside terminations. In addition, there are various types of originating and terminating lineside terminations depending on the type of signaling associated with the WATS Access Line. Lineside terminations are available with either dial pulse or dual tone multifrequency address signaling.

Trunkside terminations are available for WATS Access Lines equipped with Answer Supervision. Only originating WATS Access Lines may be ordered with the Answer Supervision optional feature. The terminations for Answer Supervision use reverse battery type supervisory signaling. The reverse battery and E&M interfaces for two-wire or four-wire may be provided where operating conditions permit. For other technical details see Technical Reference No. GR-334-CORE.

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**6.1.2 RATE CATEGORIES**

B. Local Switching (Cont'd)

3. Intercept Function

The Intercept function provides for the termination of a call at a Company Intercept operator or recording. The operator or recording tells a caller why a call, as dialed, could not be completed, and if possible, provides the correct number.

4. Local Switching Rate Categories

a. End Office Shared Port

The End Office Shared Port rate provides for the termination of common transport trunks in shared end office ports and in remote switching system or module (RSS or RSM) ports. The End Office Shared Port rate is assessed on a per-MOU basis to all trunkside originating and terminating access minutes utilizing tandem routing to an end office. If tandem routing is being utilized to a RSS or RSM (via a host office), the shared port rate is assessed to the access minutes originating or terminating from that RSS or RSM and is not assessed at the host office. If the customer has requested direct routing from the SWC to a RSS or RSM (via a host office), the End Office Shared Port rate is assessed to the access minutes originating or terminating from the RSS or RSM. This rate is in addition to the End Office Dedicated Trunk Port rate assessed for the dedicated trunk terminating in the host office as described below. The port charge is not assessed to FGA or DA traffic.

b. End Office Dedicated Trunk Port

The End Office Dedicated Trunk Port rate provides for termination of a trunk to a dedicated trunk port in an end office. The rate is assessed per month for each FG trunk in service (excludes FGA) directly routed (via DTT) between the SWC and the end office. The rate is not assessed to trunks directly routed to a DA location.

**6. SWITCHED ACCESS SERVICE**

**6.1 GENERAL (CONT'D)**

**6.1.3 SPECIAL FACILITIES ROUTING**

Any customer may request that the facilities used to provide Switched Access Service be specially routed. The regulations, rates and charges for Special Facilities Routing (i.e., Avoidance, Diversity and Cable Only) are as set forth in Section 11., following.

**6.1.4 DESIGN LAYOUT REPORT**

The Company will provide to the customer the makeup of the facilities and services provided from the customer's premises to the first point of switching. This information will be provided in the form of a Design Layout Report. The Design Layout Report will be provided to the customer at no charge, and will be reissued or updated whenever these facilities are materially changed.

**6.1.5 ACCEPTANCE TESTING**

At no additional charge, the Company will, at the customer's request, cooperatively test, at the time of installation, the following parameters: loss, C-notched noise, C-message noise, 3-tone slope, dc continuity and operational signaling. When the Switched Transport is provided with Interface Groups 2, 6 and 9 as available, and the Transport Termination is two-wire (i.e., there is a four-wire to two-wire conversion in Switched Transport), balance parameters (equal level echo path loss) may also be tested. When the Switched Transport is provided with Interface Groups 6 or 9, the Company will, at the customer's request, mutually negotiate, at the time of installation, the use of the customer's 108 type test line capabilities to conduct digital testing on 56 kbit/s, 64 kbit/s and 64 kbit/s Clear Channel service.

**6.1.6 ORDERING OPTIONS AND CONDITIONS**

Switched Access Service is ordered under the Access Order provisions set forth in Section 5, preceding. Also included in that section are other charges which may be associated with ordering Switched Access Service (e.g., Cancellation Charges, etc.).

**6. SWITCHED ACCESS SERVICE**

**6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES**

Switched Access Service is provided in different serving arrangements. The provision of each type of Switched Access Service requires transport facilities (Entrance Facilities, DTT facilities and TST facilities), multiplexing equipment and the appropriate local switching functions. There are two types of Intrastate WATS Access Lines available: a) a WATS Access Line from the Private Line Transport Services Catalog, which may, at the option of the customer, be provided for use with Feature Groups C and D; and b) a WATS Access Line from the Exchange and Network Services Catalog, Section 7, Wide Area Telecommunications Service, which is capable of providing full intrastate service with the participation of an interexchange carrier.

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Transmission types (i.e., A1, B, B1 and C) have been identified for the provision of Switched Access Services. The transmission types are dependent on the Interface Group and the routing of the service, i.e., whether the service is routed directly to the end office or via an access tandem. The standard parameter limits for the transmission types are set forth in Technical Reference GR-334-CORE.

Serving arrangements are arranged for either originating, terminating or two-way calling, based on the customer end office switching capacity ordered. Originating calling permits the delivery of calls from Telephone Exchange Service locations to the customer's premises. Terminating calling permits the delivery of calls from the customer's premises to Telephone Exchange Service locations. Two-way calling permits the delivery of calls in both directions, but not simultaneously. The Company will determine the type of calling to be provided unless the customer requests that a different type of directional calling be provided. In such cases, the Company will work cooperatively with the customer to determine the directionality.

There are various optional features available with Switched Access Service. These additional optional features are provided as Switched Transport, Common Switching, Transport Termination and Line Termination.

**6. SWITCHED ACCESS SERVICE****6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES (CONT'D)**

Following are detailed descriptions of each of the available Switched Access Services. Each service is described in terms of its specific physical characteristics and calling patterns, the transport provisioning, the transmission specifications with which it is provided, the optional features available for use with it and the standard testing capabilities.

The Common Switching, Transport Termination and Line Termination optional features, which are described in 6.3, following, unless specifically stated otherwise, are available at all Company end office switches.

**6.2.1 FEATURE GROUP A (FGA)****A. Description of FGA Lineside Service**

1. FGA Access provides lineside access to Company end offices switches with an associated seven digit local telephone number for the customer's use in originating communications from and terminating communications to an Interexchange Carrier's intrastate service or a customer-provided intrastate communications capability. The customer must specify the InterLATA Interexchange Carrier to which the FGA service is connected, or in the alternative, specify the means by which the FGA access communications is transported to another LATA.
2. FGA is provided in connection with Company electronic and electromechanical end offices. FGA may be transported via a DS3, DS1 or Voice Grade Entrance Facility and via a DS3, DS1 or Voice Grade DTT facility. When the customer orders FGA and Trunkside Access to be transported via the same DTT facility, DS1 to Voice Grade multiplexing equipment is always required at the end office at the rates and charges set forth in 6.8, following. When the customer does not combine FGA and Trunkside Access on the same facility, the Company will provide DS1 to Voice Grade multiplexing equipment at no charge. At the option of the customer, FGA is provided on a single or multiple line group basis and is arranged for originating calling only, terminating calling only, or two-way calling.
3. FGA provides a lineside termination at the first point of switching. The lineside termination will be provided with either ground start supervisory signaling or loop start supervisory signaling. The type of signaling is at the option of the customer.

**6. SWITCHED ACCESS SERVICE**

**6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES**

**6.2.1 FEATURE GROUP A (FGA)**

A. Description of FGA Lineside Service (Cont'd)

4. The Company shall select the first point of switching, within the selected LATA, at which the lineside termination is to be provided unless the customer requests a different first point of switching and Company facilities and measurement capabilities are available to accommodate such a request.
5. A seven digit local telephone number assigned by the Company is provided for access to FGA switching in the originating direction. The seven digit local telephone number will be associated with the selected end office switch and is of the form NXX-XXXX.

If the customer requests a specific seven digit telephone number that is not currently assigned, and the Company can, with reasonable effort, comply with that request, the requested number will be assigned to the customer.

6. FGA switching, when used in the terminating direction, is arranged with dial-tone start-dial signaling and dial-pulse address signaling. When used in the terminating direction, FGA switching may, at the option of the customer, be arranged for dual-tone multifrequency (DTMF) address signaling, subject to availability of equipment at the first point of switching. When FGA switching is provided in a hunt group or uniform call distribution arrangement, all FGA switching will be arranged for the same type of address signaling.
7. No address signaling is provided by the Company when FGA Switching is used in the originating direction. Address signaling in such cases, if required by the customer, must be provided by the customer's end user using inband tone signaling techniques. Such inband tone address signals will not be regenerated by the Company and will be subject to the ordinary transmission capabilities of the Switched Transport provided.

**6. SWITCHED ACCESS SERVICE**

**6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES**

**6.2.1 FEATURE GROUP A (FGA)**

A. Description of FGA Lineside Service (Cont'd)

8. FGA switching, when used in the terminating direction, may be used to access valid NXXs in the LATA, local operator service (0- and 0+), Directory Assistance (1+NPA+555-1212), emergency reporting service (911 where available), community information services of an information service provider, and other customer's services (by dialing the appropriate digits). Charges for FGA terminating calls requiring operator assistance, or calls to 911, will only apply where sufficient call details are available. Additional non-access charges will also be billed on a separate account for:
  - a. An operator surcharge, as set forth in the Exchange and Network Services Tariff, for local operator assistance (0- and 0+) calls,
  - b. Calls to certain community information services in accordance with the Information Provider's applicable service rates when the Company performs the billing function for the Information Provider,
  - c. Calls from a FGA line to another customer's service in accordance with that customer's applicable service rates when the Company performs the billing function for that customer.
  - d. In addition, FGA FX/ONAL calls to NXXs outside the toll free calling area of local exchange lines provided from the same end office as the FGA FX/ONAL service will incur all other charges applied to local exchange lines, including intrastate or interstate toll charges of the Company.
9. FGA calls terminating outside of the dial tone office are assessed Tandem Transmission rates in addition to the applicable Switched Access rates when calls are terminated within the dial tone office. Tandem Transmission mileage measurement is described in 6.7.11, following.
10. FGA calls to Directory Assistance (1+NPA+555-1212) are subject to the Directory Assistance Service per call rates as set forth in 9.6, following, and are not subject to Switched Access usage rates as set forth in Section 6.
11. When a FGA switching arrangement for an individual customer (a single line or entire hunt group) is discontinued at an end office, an intercept announcement is provided. This arrangement provides, for a limited period of time, an announcement that the service associated with the number dialed has been disconnected.

**6. SWITCHED ACCESS SERVICE**

**6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES**

**6.2.1 FEATURE GROUP A (FGA)**

A. Description of FGA Lineside Service (Cont'd)

12. FX/ONAL FGA Switching can be ordered by an end user when used as a Foreign Exchange (FX) service or an Off Network Access Line (ONAL) service. FX/ONAL FGA charges will be billed to the end user. FX/ONAL FGA Switching is not permitted for use with the provisioning of MTS/WATS-type service. FX/ONAL FGA Switching is not intended as an intrastate intraLATA service. IntraLATA FX/ONAL service will not be available after September 30, 1996 and existing customers will be converted to other services prior to October 1, 1996.

B. Optional Features

1. Switched Transport Optional Features

- Supervisory Signaling
- Customer Specified Entry Switch Receive Level

2. Common Switching Optional Features

- Call Denial
- Service Code Denial
- Hunt Group Arrangement
- Uniform Call Distribution Arrangement
- Nonhunting Number for Use with Hunt Group Arrangement or Uniform Call Distribution Arrangement
- Feature Group A InterLATA Toll Denial

**6. SWITCHED ACCESS SERVICE**

**6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES**

**6.2.1 FEATURE GROUP A (FGA)**

B. Optional Features (Cont'd)

3. Transport Termination Optional Features

- Two-way operation with dial pulse address signaling and loop start supervisory signaling
- Two-way operation with dial pulse address signaling and ground start supervisory signaling
- Two-way operation with dual tone multifrequency address signaling and loop start supervisory signaling
- Two-way operation with dual tone multifrequency address signaling and ground start supervisory signaling
- Terminating operation with dial pulse address signaling and loop start supervisory signaling.
- Terminating operation with dial pulse address signaling and ground start supervisory signaling
- Terminating operation with dual tone multifrequency address signaling and loop start supervisory signaling
- Terminating operation with dual tone multifrequency address signaling and ground start supervisory signaling
- Originating operation with loop start supervisory signaling
- Originating operation with ground start supervisory signaling

**6. SWITCHED ACCESS SERVICE**

**6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES**

**6.2.1 FEATURE GROUP A (FGA)**

B. Optional Features (Cont'd)

4. Where technically feasible and operating conditions permit, certain other features which may be available in connection with Feature Group A are provided under the Company's local and/or general exchange service tariff. These are:
  - Bill Number Screening
  - Open Switching Interval Protection (OSIP)
  - Message Delivery Service
  - Message Waiting Indication - Audible
  - Queuing on UCD
  - Delay Announcement on UCD
  - Music on Queue on UCD
  - Abbreviated Access/Activation
  - Answer supervision - Lineside
  - Call Forwarding - Busy Line
  - Call Forwarding - Busy Line (Expanded)
  - Call Forwarding - Busy Line (Programmable)
  - Call Forwarding - Busy Line/Don't Answer

**6. SWITCHED ACCESS SERVICE**

**6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES**

**6.2.1 FEATURE GROUP A (FGA)**

B.4. (Cont'd)

- Call Forwarding - Busy Line/Don't Answer (Expanded)
- Call Forwarding - Don't Answer
- Call Forwarding - Don't Answer (Expanded)
- Call Forwarding - Don't Answer (Programmable)
- Call Forwarding - Variable
- Call Forwarding - Variable Remote Activation
- Call Forwarding - Variable without Call Completion
- Call Rejection
- Call Trace
- Call Transfer
- Call Waiting
- Caller Identification - Name and Number
- Caller Identification - Number
- Caller Identification - Bulk
- Continuous Redial
- Custom Ringing

**6. SWITCHED ACCESS SERVICE**

**6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES**

**6.2.1 FEATURE GROUP A (FGA)**

B.4. (Cont'd)

- Dial Call Waiting
- Directed Call Pickup
- Directed Call Pickup with Barge - In
- Distinctive Alert
- Hot Line
- Last Call Return
- Make Busy
- Message Waiting Indication - Visual
- Priority Call
- Selective Call Forwarding
- Speed Calling (8 Number)
- Speed Calling (30 Number)
- Three-Way Calling
- Warm Line

(D)

**6. SWITCHED ACCESS SERVICE**

**6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES**

**6.2.1 FEATURE GROUP A (FGA) (CONT'D)**

C. Transmission Performance

FGA is provided with either Transmission Type B or Type C performance. The standard parameter limits associated with these Transmission Types are guaranteed to the first point of switching. Transmission Type C performance is provided with Interface Group 1 and Transmission Type B performance is provided with Interface Groups 2, 6 and 9, as available. Voice band Data Transmission Type DB parameter limits are provided with FGA to the first point of switching as delineated in Technical Reference GR-334-CORE.

D. Testing Capabilities

Where equipment is available and seven-digit access is provided, FGA can be tested in the terminating direction to balance (100-type) test line and milliwatt (102-type) test line. In addition to the tests described in 6.1.5, preceding, which are included with the installation of service, Additional Cooperative Acceptance Testing and Non-Scheduled Testing are available as set forth in 13.3.5, following.

**6.2.2 FEATURE GROUP B (FGB)**

A. Description

1. FGB access provides trunkside access to Company end office switches for the customer's use in originating communications from and terminating communications to an Interexchange Carrier's intrastate service or a customer-provided intrastate communications capability. The customer must specify the Interexchange Carrier to which the FGB Service is connected, or in the alternative, specify the means by which the FGB Access Communications is transported within the LATA.
2. FGB, when directly routed to an end office via DTT, is provided at appropriately equipped Company electronic end office switches. When provided via Company designated electronic access tandem switches with TST, FGB switching is provided at Company electronic and electromechanical end office switches.

**6. SWITCHED ACCESS SERVICE**

**6.2 PROVISION AND DESCRIPTION OF SWITCHED ACCESS SERVICES**

**6.2.2 FEATURE GROUP B (FGB)**

A. Description (Cont'd)

3. When Feature Group B service is directly routed to an end office, the Switched Transport configuration is composed of an Entrance Facility and DTT facilities to an end office. When Feature Group B is switched through an access tandem, the Switched Transport configuration is composed of an Entrance Facility, a DTT facility between the SWC and the access tandem and TST from the access tandem to the end offices subtending the access tandem. Multiplexing options are described in 6.1.2, preceding.
4. FGB is provided as trunkside switching through the use of end office or access tandem switch trunk equipment. The switch trunk equipment is provided with wink-start start-pulsing signals and answer-disconnect supervisory signaling.
5. FGB switching is provided with MF address signaling in both the originating and terminating directions. Address signals and address information required by the customer must be provided by the customer's end user using inband tone signaling techniques. Such inband tone address signals will not be regenerated by the Company and will be subject to the ordinary transmission capabilities of the Switched Transport provided.
6. The access code for non-8XX FGB Access Service switching is a uniform access code. The form of the uniform access code is 950-XXXX for carriers. These uniform access codes will be the assigned access numbers of all non-8XX Access Service FGB Switched Access Service provided to the customer by the Company. No access code is required for FGB switching used to provide 800 DB Access Service. The telephone number dialed by the customer's end users is of the form 1+8XX+NXX-XXXX.