HIGH CAPACITY SERVICES (REGION 14)

A. AVAILABILITY OF SERVICE

This Product Guide contains the terms and conditions, rates and charges for Special Access Lines other than Non-Competitive End User Special Access Lines, Special Transport, and certain Supplemental Features ordered for such Special Access Lines, including Multiplexing Arrangements. Ordering options for other Special Access Services needed to complete a circuit are available under Company FCC Tariffs as described in Part 0, Section 1.

DS1 (1.544 Mbps) Standard Arrangements (month to month) and Individual System DS3s High Capacity Services with a 1-year minimum service period are available in Region 14. (C) (C)

Effective December 1, 2020, orders for 3-System and Unlimited System DS3s with 1-year minimum service periods and orders for new Individual System, 3-System and/or Unlimited System DS3s with 3-year minimum service periods are no longer permitted. Subject to Part 0, Section 1, the Company will continue to provide such DS3s pursuant to this Section on any existing 3-System and Unlimited System DS3s with 1-year minimum service periods and on any existing Individual System, 3-System and/or Unlimited System DS3s with 3-year minimum service periods that were in-service as of December 1, 2020 or any order for such DS3s placed with the Company prior to December 1, 2020 (collectively, Existing 1-year 3-System and Unlimited System DS3s and Existing 3-year Individual System, 3-System and Unlimited System DS3s), subject to the following conditions: (N)

- The Company will continue to provide Existing 1-year 3-System and Unlimited System DS3s and Existing 3-year Individual System, 3-System and Unlimited System DS3s until (i) the Customer discontinues its 3-year DS3; or (ii) the current service commitment period expires, whichever comes first.
- Renewals of Existing 1-year 3-System and Unlimited System DS3s and Existing 3-year Individual System, 3-System and Unlimited System DS3s are not permitted.
- Moves and changes are permitted provided that they do not require a new minimum service period. (N)

Effective May 30, 2019, orders for new DS3s with 5- or 7-year minimum service periods are no longer permitted. Subject to Part 0, Section 1, the Company will continue to provide DS3s with 5- and 7-year minimum service periods pursuant to this Section on any existing DS3s with 5- and 7-year minimum service periods that were in-service as of May 30, 2019, or any order for DS3s with 5- or 7-year minimum service periods that was placed with the Company prior to May 30, 2019 (collectively, Existing 5-year and 7-year DS3s), subject to the following conditions:

- The Company will continue to provide Existing 5- and 7-year DS3s until (i) the Customer discontinues its 5-year or 7-year DS3; or (ii) the current service commitment period expires, whichever comes first.
- Renewals of Existing 5-year and 7-year DS3s are not permitted.
- Moves and changes are permitted provided that they do not require a new minimum service period.

B. SERVICE DESCRIPTION (USOC - XDH++)

These facilities are two-point and are furnished between Customer designated locations (**CDLs**) or between a CDL and a Company designated Hub Wire Center where multiplexing is offered. High Capacity facilities may be used to provide Special Access Lines as set forth in Part B, Section 3B1b. A High Capacity to Voice multiplexing arrangement, as described in Section D2 following, is required at the Hub Wire Center. High Capacity DS1 and DS3 Services may also be connected to Customer transmission equipment and facilities where the Customer is provided Expanded Interconnection Services as defined in The Verizon Telephone Companies Tariff FCC No. 14, Section 17.

High Capacity channels may also be connected to Company provided SONET services and to DS1 facilities, provided that such connections are technically and operationally feasible, as determined by the Company.

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B. SERVICE DESCRIPTION (USOC - XDH++) (Cont'd)

DS3 facilities provide for the simultaneous two-way transmission of isochronous bipolar serial data signals at a rate of 44.736 Mbps. The Company will provide either an interface with Company electronics (electrical) or without Company electronics (optical) at the option of the Customer. Ordering conditions are set forth in Part 0, Section 5. Expanded Interconnection Service is not available with DS3 Services provided with an optical interface.

C. DS3 HIGH CAPACITY SERVICE

A DS3 (44.736 Mbps) High Capacity SAL, whether an Individual#, 3-System# or Unlimited System#, may be purchased with or without electronics (where available). When a SAL is ordered with electronics, the Company will place electronics at both the CDL and the serving wire center. When a SAL is ordered without electronics, the Company will only place electronics at the serving wire center and not at the CDL. Effective May 18, 2002 when a DS3 SAL is ordered without electronics the interface must be optical unless an Additional SAL is added to an existing System with an electrical interface. When ordered with electronics the interface may be electrical or optical. (T) (T)

DS3 SALs are non-distance sensitive and are provided on a protected basis.

1. Individual System# (T)

An Individual System is a single DS3 between a CDL and the serving wire center. The appropriate NRC is applied per SAL.

Transport rate elements are applied per SAL when transport between offices is required. In instances when a SAL is ordered to a second CDL in conjunction with an Individual System SAL and Transport between offices is required. Transport rate elements are applied per circuit.

2. 3-System# (T)

The 3-System allows the same Customer, between the same CDL and the serving wire center, to order one first DS3 SAL and a maximum of two additional DS3 SALs. Additional SALs may only be added with the same interface, electrical or optical, and with Company electronics or without Company electronics as the First System. The appropriate NRC is applied per SAL.

Transport rate elements are applied per SAL when transport between offices is required. In instances when a SAL is ordered to a second CDL in conjunction with a 3-System SAL and Transport between offices is required, Transport rate elements are applied per circuit.

Limited availability. Refer to Section A preceding. (N)

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C. DS3 HIGH CAPACITY SERVICE (Cont'd)

3. Unlimited System# (T)

The Unlimited System allows the same Customer, between the same CDL and the serving wire center, to order one first DS3 SAL and no maximum of additional DS3 SALs. Additional SALs may only be added with the same interface, electrical or optical, and with Company electronics or without Company electronics as the First System. The appropriate NRC is applied per SAL.

Transport rate elements are applied per SAL when transport between offices is required. In instances when a SAL is ordered to a second CDL in conjunction with an Unlimited System SAL and Transport between offices is required, Transport rate elements are applied per circuit.

4. Terms and Conditions

A DS3 SAL provides a spare transmission path (transmit and receive) connected to an automatic protection switch. In the event of failure in the primary Service, traffic will be automatically transferred to the spare transmission facilities. The spare transmission path will normally be provided on the same route as the primary path. When a Customer orders a DS3 SAL, the Customer may request that the spare transmission path be provided via an alternate route provisioned as the Company may elect. If common points for the primary and alternate route become necessary, these points will be identified by the Company and provided to the ordering Customer. Should the routing arrangement require special routing requirements specified by the Customer, other rates and terms and conditions may be applicable and required under contract.

(D)
(D)

When a Customer requests the disconnect of a DS3 Service in the 3 System DS3 or Unlimited System DS3, an Additional System DS3 SAL must be disconnected first. When only the First DS3 Service exists, that Service will be disconnected.

Any costs associated with Special Construction may apply.

Limited availability. Refer to Section A preceding. (N)

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C. DS3 HIGH CAPACITY SERVICE (Cont'd)
4. Terms and Conditions (Cont'd)

DS3 Special Transport contains two rate elements, Special Transport Termination and Special Transport Facility. Special Transport Termination rates apply for the termination of each end of the interoffice facility. Special Transport Facility rates apply for each airline mile of the interoffice facility.

DS3 Banded Special Transport applies as a single rate per mileage band in accordance with Part E, Section 11.

5. Minimum Service Periods# (T)

Individual DS3s are offered under a 1-year minimum service period. Prior to December 1, 2020, Individual DS3s and System DS3s were offered under four minimum service periods, each with different rate levels. The minimum service periods were 1, 3, 5 and 7 years (where available). However, each DS3 SAL of a two-point DS3 Service must have the same minimum service period. (C) | (C) (D)

(D) | | | | (D)

Although a minimum service period may include a circuit that is provided only in part under this Product Guide, the Company manages each minimum service period for a circuit as a single commitment period.

6. Expiration of Service Period

Upon expiration of a service commitment period: (C)

- For Individual System DS3s under a 1- year minimum service period, a new DS3 minimum service period will begin based on the previously effective service period. |
- For Individual System DS3s under a 3-, 5- or 7-year minimum service period, billing will be converted to Service provided under a 1-year minimum service period, and a new DS3 minimum service period will begin. |
- For 3-System and Unlimited System DS3s, billing will be converted to Individual System(s) provided under a 1-year minimum service period, and new DS3 minimum service period(s) will begin. Nonrecurring charges will not apply for this conversion. | (C)

All terms and conditions, including Subsequent Termination Liabilities, will apply to the new DS3 period.

Limited availability. Refer to Section A preceding.

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C. DS3 HIGH CAPACITY SERVICE (Cont'd)

7. Discontinuance Without Liability - DS3 Minimum Service Period

For Minimum Service Periods established prior to December 17, 2019, should the recurring charges for a Customer's DS3 Service increase, in aggregate, by more than 10% from the original recurring charges during the minimum service period, the Customer may, at their option, terminate the DS3 Service without penalty or liability.

The Customer may cancel the minimum service period of a DS3 Service that is provided under this Part E, Section 3 in order to replace the DS3 Service with a Replacing Service pursuant to the Technology Migration terms and conditions set forth in Part 0, Section 2.

8. Discontinuance With Liability – DS3 Minimum Service Period

a. When a DS3 Service is discontinued prior to the end of the minimum service period, the Customer will be liable for a percentage of the total monthly charges for the remaining portion of the applicable minimum service period. Termination liability for the portion of the circuit provided under this Product Guide will be based on the rates in effect at the time of disconnect. There are two liability periods for DS3 Service, "first liability period" and "subsequent liability period". The "first liability period" is the period beginning from the establishment of the DS3 and is based on the Customer's initial commitment term for the DS3. The "subsequent liability period" is the period after the Customer's initial commitment term has expired and the Customer wants to renew the DS3 Service with the existing term period or select a new DS3 term period. The Customer's total liability for the "first liability period" or "subsequent liability period" is dependent upon the number of months remaining within the year that the Service is discontinued times the liability rate for that year plus the total monthly charges for each annual period remaining in the "first liability period" or "subsequent liability period" times the applicable liability rate. The liability rates for each year of the minimum service period are as follows:

Year In Which Service Is Discontinued	1st Liability Period Rate	Subsequent Liability Period Rate
1	45%	20%
2	30%	20%
3	25%	20%
4	20%	20%
5	20%	20%
7	20%	20%

HIGH CAPACITY SERVICES (REGION 14)

C. DS3 HIGH CAPACITY SERVICE (Cont'd)

8. Discontinuance With Liability – DS3 Minimum Service Period (Cont'd)

a. (Cont'd)

For example, if a Customer with a first liability period of seven years discontinues the DS3 Service after six months within the 4th year, the Customer will be liable for 20% of the total monthly charges for six months, 20% of the total monthly charges for the 6th year and 20% of the total monthly charges for the 7th year.

For example, if DS3 Service is disconnected during the subsequent seven year liability period, the Customer will be liable for 20% of the total monthly charges for the remaining months for each annual period remaining in the seven year minimum service period.

9. Upgrades

a. Upgrade to Higher Speed Service

Customers may elect to upgrade DS3 Service(s) to a higher speed during a first liability period or subsequent liability period. The upgraded service will be subject to all appropriate NRCs.

If the following conditions exist, no termination liabilities will be applied:

- Both the existing and the new services are provided solely by the Company.

- The order to discontinue a Service at an existing speed or capacity and the order for the upgraded service are received by the Company at the same time.

- The new service will be provided at the same Customer location(s) as the discontinued service.

HIGH CAPACITY SERVICES (REGION 14)

C. DS3 HIGH CAPACITY SERVICE (Cont'd)

9. Upgrades (Cont'd)

a. Upgrade to Higher Speed Service (Cont'd)

- The fixed-period plan for the upgraded service(s) meets or exceeds the remaining length of the existing fixed-period plan, except where an equal to or longer fixed-period plan is not available, in which case the longest fixed-period plan must be selected.

- The total monthly rate of the new agreement is equal to or greater than the total monthly rate of the existing agreement period.

- The monthly rates for the upgraded services and/or service elements will be those in effect at the time of the service upgrade. The upgraded service will be subject to all appropriate nonrecurring charges.

- Termination liability charges will not apply as long as the upgraded service remains connected at the same point of termination(s) or meets the requirements set forth in Part 0, Section 10B2.

b. Technology Migration

The Customer may disconnect a High Capacity Digital DS3 Service in order to replace such Service with a Replacing Service pursuant to the Technology Migration terms and conditions set forth in Part 0, Section 2.

10. DS3 Multiplexer Cross Connect Arrangement

The DS3 Multiplexer Cross Connect Arrangement allows a Customer to (1) cross connect digital DS-1 channels from a DS3 Multiplexer to another DS3 Multiplexer or (2) to cross connect digital DS1 channels from a DS3 Multiplexer to a Company OC-3 CO-Node. When the DS3 Multiplexer Cross Connect is applied between a DS3 Multiplexer and an OC-3 CO-Node, applicable rate elements are applied in addition to the DS3 Multiplexer Cross Connect. If the DS3 multiplexer is located in a different hub wire center then the other DS3 multiplexer or OC-3 CO-Node, DS1 special transport will apply in addition to the DS3 Cross Connect charge. The Customer must provide the (CFA and SCFA) for both multiplexed Services or OC-3 CO-Node on the ASR.

The rate specified in Part E, Section 14 will apply per cross connect arrangement.

HIGH CAPACITY SERVICES (REGION 14)

D. SUPPLEMENTAL FEATURES

1. Multiplexing Arrangements

Multiplexing Arrangements provide the function to convert a single higher capacity or bandwidth circuit for bulk transport to several lower capacity or bandwidth circuits. Cascading multiplexing occurs when a high capacity analog or digital channel is de-multiplexed to provide channels with a lesser capacity and one of the lesser capacity channels is further de-multiplexed. For example, a DS3 may be de-multiplexed to twenty-eight (28) DS1 facilities and then the DS1 facilities may be further de-multiplexed to twenty-four (24) Voiceband channels.

When cascading multiplexing is performed in the same or different Hub Wire Center, a charge for the additional multiplexing unit will also apply. When cascading multiplexing is performed at a different Hub Wire Center, Special Transport will also apply between the involved Hub Wire Centers.

Listed below are the multiplexing arrangements offered under this Product Guide.

a. DS1 to Voice (USOC - MQ1)

An arrangement that multiplexes twenty-four voice grade circuits to a single DS1 digital circuit at a rate of 1.544 Mbps, or multiplexes a single DS1 digital circuit at a rate of 1.544 Mbps to twenty-four voice grade circuits. If this DS1 terminates in a DDS hub, a channel(s) of the DS1 can be used to provide DDS; however, DDS Service stops at the DS1 interface.

Up to 16 channels of this DS1 can be used for Direct Digital Service (DDS-like Service) with the assurance that circuit performance parameters will be met. If more than 16 channels are used for DDS-like Service, the performance parameters for the DS1 and all circuits riding the DS1 will not be guaranteed.

b. DS3 to DS1 (USOC – MXB++)

An arrangement that multiplexes, at a Hub Wire Center, twenty-eight DS1 digital circuits to a single DS3 digital circuit at a rate of 44.736 Mbps, or multiplexes a single DS3 digital circuit at a rate of 44.736 Mbps to twenty-eight DS1 digital circuits.

c. Digital Data Carrier Multiplexer (USOC - QMU)

An arrangement that multiplexes a single DS1 1.544 Mbps digital circuit to twenty-three DSO digital ports for connection to either a subrate data multiplexer or 56 Kbps digital circuits.

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D. SUPPLEMENTAL FEATURES (Cont'd)

2. Clear Channel Capability (USOC - CCO)

An arrangement that allows the Customer to transport 1.536 Mbps of information through a DS1 with no constraint on the quantity or sequence of one (mark) and zero (space) bits utilizing the Bipolar with Eight Zero Substitution (**B8ZS**) method of providing bit sequence independence. This arrangement is capable of transporting DS1 signals which utilize Superframe or Extended Superframe Format (**ESF**). The installation interval for Clear Channel Capability may exceed standard intervals where equipment in the central office is not readily available. The charges apply on a per SAL basis.

Clear Channel Capability for DS1 is provided to the Federal Government under Part I.

This arrangement requires the Customer signal at the channel interface to conform to the B8ZS method of providing bit sequence independence.

E. SERVICE REARRANGEMENTS

1. Coordinated Retermination

For 1.544 Mbps/DS1 High Capacity or 44.736 Mbps/DS3 High Capacity moves of a primary circuit termination from one Company Central Office to another Company Central Office, the Customer may pay a Coordinated Retermination Charge in lieu of treating the move as a discontinuance and start of Service. The Coordinated Retermination Charge applies per circuit or DS1/DS3 equivalent circuit reterminated. The Company will coordinate the work activities required in order to minimize the length of time the Service being moved is unavailable. Monthly rates will apply as if the circuit remained in service with no disruption. There will be no change in minimum period requirements. No termination liabilities will apply except where the retermination eliminates chargeable Services such as IOF mileage or primary premises Channel Terminations for which specific termination liabilities exist.