



ACCESS

1. GENERAL

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1. GENERAL

- 1.1 **Service Definition.** Access connects the Customer Site to the edge of the Verizon network from which Customer can connect to other Verizon services. Access Service may be provided via Verizon Facilities or from a Third Party, as Verizon may determine from time to time, including, for any reason, changes in or substitution of facilities.
 - 1.1.1 **Platforms.** Except where explicitly stated otherwise, these terms apply to Optimized Service (denoted with a “+” and sometimes referred to as Rapid Delivery) and non-Optimized Services Ethernet Access and Network Services Local Access Service. In particular, standard and optional features that apply to both are set out in this General Section 1. Section 2 (Available Versions) describes the characteristics particular to Optimized Service – Access +, and then to the non-Optimized Services – Ethernet Access and Network Services Local Access Service.
- 1.2 **Standard Features**
 - 1.2.1 Access provides a point-to-point circuit to reach associated Verizon network services.
- 1.3 **Optional Features**
 - 1.3.1 **Network Survivability and Diversity (NS&D).** With NS&D, Verizon provides alternative mechanisms for maintaining network access during a disruption to regular service, as described below for the relevant Access versions. Verizon determines the location of particular NS&D features, all of which are subject to availability.



1.3.2 **Proactive Notification (Optimized Services Only).** Where Customer receives Proactive Notification for a network service, it will also apply to the Access connected to that network service. Proactive Notification is described in Customer's applicable network Service Attachment.

1.3.3 **Unlicensed Band Radio.** With Unlicensed Band Radio (UBR), Verizon provides wireless access to Verizon network services. UBR is only available in India for Customer Sites in remote locations where wireline access is unavailable. In addition to Customer responsibilities in Section 1.4, Customer will provide the space identified by Verizon or Verizon's vendor to install an external antenna and other equipment, including arranging for any permissions that may be required by a building owner if Customer does not own the building. Customer must make available uninterrupted UPS power, earthing and all required internal wiring. Customer acknowledges that UBR: works only in clear line of sight locations; will have high jitter when the link load exceeds 85%; and is susceptible to interference from other radio signals running at the same frequency.

1.4 **Customer Responsibilities**

1.3.4 **Installation.** Unless otherwise provided by Verizon under a separate Service Attachment, Customer will provide the following to support installation activities such as site surveys, testing and activation:

- Space and power for Verizon terminating equipment if required to deliver service.
- All facilities and internal cabling to connect Customer's Site to the Demarcation of the Access circuit.
- Notice to Verizon of the existence and location of wiring or any other risk factors on the Customer's Site which may affect Verizon's installation of the Access circuit.

1.3.5 **Entry to Customer Site.** Where Verizon requires entry to a Customer Site in order to provide Access (including, but not limited to, physical changes to Access facilities), Customer shall (a) grant or shall procure the grant to Verizon of such rights of entry to each Customer Site, including any necessary licenses, waivers and consents and (b) respond promptly to notice from Verizon requiring Customer action, such as to coordinate Verizon entry to Customer Site needed for a change in facilities at a mutually convenient time within 30 days of such notice from Verizon.

2. **AVAILABLE VERSIONS**

2.1 **Optimized Services – Access+**

2.1.1 **Standard Service Features**

2.1.1.1 **Access Speed.** Verizon provides capacity throughput based on the Access Speed selected by the Customer, which is the maximum possible speed.

2.1.1.2 **Performance Grades.** Verizon provides operational performance (e.g., mean time to repair and availability) and application performance (e.g., data delivery ratio) at the performance grade (e.g., Platinum, Gold, Silver, Bronze) selected by the Customer.

2.1.1.3 **Handoff.** Verizon hands off Access service based on Customer's equipment (e.g., Ethernet, TDM, Wireless), which include the following characteristics:

- For Ethernet, Verizon provides a User Network Interface (UNI) that allows Customer to terminate one or more Ethernet virtual connections ("EVC's") onto a single Ethernet Access UNI including Ethernet LAN local – basic UNI (formerly SES) as available in the following areas: CT, DC, DE, MA, MD, NJ, NY, PA, RI and VA.
- For Time Division Multiplexing (TDM), Verizon's handoff may include an Access connection over a Dense Wave Division Multiplexing network.



- For Wireless Connection (Outside the US), Verizon provides Access via a wireless connection (used as primary or backup access) into Customer's Verizon-provided services.
- For Software Defined Interconnect (SDI), Verizon provides an interconnection across a Third Party vendor network interface between a Customer's Private IP service and their equipment within select Third Party data centers. Customer must separately have a suitable existing physical connection to select Third Party vendor networks. Customer must separately have a Contract for the Verizon Private IP service in order to utilize SDI service.

2.1.1.4 **UNI Speed.** For an Ethernet handoff from Customer Equipment, Verizon provides the UNI at the speed ordered by Customer.

2.1.1.5 **Demarcation Interface Options.** Verizon provides electrical and optical demarcation interface options or virtual for SDI.

2.1.2 **Optional Service Features**

2.1.2.1 **Express Connect.** With Express Connect, Verizon provides access to supported Verizon network services through a wireless connection until the wired service is activated except for customers outside the U.S. who requested a wireless connection only. At the time wired service is activated, this wireless connection is converted to wireless backup service. Details on supported Verizon network services is available from Verizon on request.

2.1.2.2 **Wireless Backup.** With Wireless Backup, Verizon provides wireless backup for Customer Internet Dedicated or Broadband service, or connectivity for a remote location into a Verizon-provided network service.

2.1.2.3 **Network Survivability & Diversity.** The following NS&D options are available:

- **Layer 2 Aggregation Geographic Diversity.** With Layer 2 Aggregation Geographic Diversity, Verizon provides two circuits in a mated pair relationship between the Customer Site and the Service Edge of the provisioned circuits. The Layer 2 aggregation devices on the first circuit will be located in different buildings and/or survivable from the Layer 2 aggregation devices on the second circuit.
- **Customer Premises Diversity (U.S. Only).** With Customer Premises Diversity, Verizon will deliver Access via either a 2 or 4 wire facility, rather than a single wire facility.
- **Carrier Diversity.** Where Verizon provides the primary Access circuit, and Customer orders Carrier Diversity, Verizon will obtain an additional access circuit from an alternate access provider, where available. Carrier Diversity does not provide path diversity nor ensure full geographic diversity.
- **Preferred Carrier Designation.** With the Preferred Carrier Designation feature, Verizon will obtain the access circuit from an access provider selected by Customer from available carriers. The Preferred Carrier Designation feature does not provide path diversity nor ensure full geographic diversity.
- **Network Connection Protection.** With Network Connection Protection, the access circuit will be routed automatically to a secondary route in the event the primary route is unavailable. Both routes share the same Customer handoff and demarcation interface.
- **NS&D options are not available for SDI.** However, for select SDI Customer locations, in addition to the primary interconnect, Verizon may offer a secondary interconnect.

2.1.2.4 **Customer-Provided Carrier Facility Assignment (CFA) (U.S. Only).** Upon Customer request, Verizon will deliver Access to the designated meet-me point on the Customer's private Verizon or ILEC dedicated rings, hubs and channelized facilities.



- 2.1.2.5 **Customer-Provided Access.** With the Customer-Provided Access feature, where Customer has a third-party local access circuit (subject to an interconnection arrangement with Verizon) at a Verizon-approved location, Verizon will connect that local access circuit to its related Verizon network service(s).
- 2.1.2.6 **Customer Provided UNI (U.S. Only).** Where Customer has a qualifying Verizon ILEC UNI (e.g., for an existing Ethernet service), Verizon will deliver Access to that UNI. Details on qualifying UNIs are available on request.
- 2.1.2.7 **Oversubscription.** With Oversubscription, Customer may subscribe to more than the Access speed of a circuit. Verizon provides the Oversubscription feature for Customers who may be using Access to connect to more than one Verizon Network service or to connect to more than one endpoint e.g., multiple data centers. Customer is solely responsible for managing its traffic utilization on the circuit to avoid any overutilization which may indiscriminately drop data packets (regardless of the class of service selected by Customer in using a Network service).

2.1.3 Customer Responsibilities

- 2.1.3.1 **Customer Provided Carrier Facility Assignment.** Where Access is provided to a Customer-provided Carrier Facility Assignment (CFA), Customer will provide a letter of authorization (LOA) when the terminating facilities are not provided by Verizon as part of Access, including when the terminating facilities are provided by a Verizon ILEC. Customer will ensure there is adequate capacity on the facility when providing CFA.
- 2.1.3.2 **Customer-Provided UNI.** Customers providing the UNI between Verizon's Access service and the Customer's equipment will obtain an LOA authorizing Verizon to order an Ethernet virtual connection to the Customer-provided UNI. Customer will ensure there is adequate capacity on the UNI.
- 2.1.3.3 **Abuse or Fraudulent Use of SIM Cards.** Customer will use SIM cards provisioned by Verizon in connection with Access service only to use that service. Any other use is a material breach of the Agreement.
- 2.1.3.4 **Quality of Signal.** Customer will check the quality of the signal at the location where the Access with a wireless connection will be installed prior to ordering the service. Wireless network coverage and other factors may affect the availability and performance of the service.

2.2 **Optimized Services - Satellite Access+.** Satellite Access provides a connection to Customer's network using satellite connectivity, which can be used for primary or backup networking.

2.2.1 Standard Service Features

- 2.2.1.1 **Satellite Bandwidth Access** is a shared satellite connection between a remote VSAT terminal (VSAT) and the Satellite Hub (Teleport) based on a default class of service that is designed for transactional and Internet (inconsistent traffic levels usually sustained with variable bursts of data transmissions).
- 2.2.1.2 **Satellite Bandwidth Access (Primary)** connects Customer sites via a satellite access network, a managed network based on VPN Service. The service will provide for data rates up to the subscribed level and is assumed to be active on the network full time.
- 2.2.1.3 **Satellite Bandwidth Access (Backup)** provides an alternate diverse access path for Customer's occasional use if Customer's primary communications path fails, or for mobile emergency response systems. The service will provide for data rates up to the subscribed level, provided an individual site

is not active on VSAT more than 10% of the time in a calendar month or if no more than 10% of a subscribed group of sites is active on VSAT at any one point in time. When sites are inactive, latency and packet delivery are not measured for SLA purposes. A site is considered inactive when it requires no traffic over that required to maintain the site in the VSAT network. A subscribed group is defined as two or more sites with Backup service.

2.2.1.4 Standard Teleport Redundancy. The standard configuration for Satellite Access includes a fully redundant Satellite Teleport facility with redundancy on all network components critical to the operation of the network.

2.2.1.5 Customer Support Help Desk is available 7x24x365.

2.2.2 Optional Service Features

2.2.2.1 Geographic Teleport Diversity. In this optional feature mode of operation there is an “Online” network at a minimum of two geographically diverse teleports with each network sharing the total distribution of remote VSATs. Both networks would have the remote VSAT definitions for all the VSAT remotes being served from their alternate teleport to accommodate the full network load automatically in the unlikely event of a catastrophic failure of the alternate network. In this solution if the satellite link is lost to the active teleport, the VSAT remotes wait a configurable period of time (5 minutes is the default) and then load the alternate parameters for the alternate teleport without any user intervention at the remote VSAT locations. In this option there is the ability to failover the entire network or a single remote VSAT because both teleports are always online with their own diverse frequency assignments on the satellite. This feature is only available for VSATs with a subscription data rate $\leq 1.5\text{Mbps} \times .5\text{Mbps}$.

2.2.2.2 Satellite vETM is an option to provide VSAT Enhanced Traffic Management (vETM) to allow for prioritizing traffic based on a DiffServ marking in the header.

2.2.2.3 Satellite vETM (Primary) is an option to provide dedicated satellite bandwidth in the form of a CIR to a site or sites operating in Satellite Bandwidth Access (Primary). This option provides a dedicated level of bandwidth that can be utilized for streaming type services and is applicable on a site by site basis and is not shared among a group of sites.

2.2.2.4 Satellite vETM (Backup) is an option added to the Satellite Bandwidth Access (Backup) to provide additional bandwidth for a site or subscribed group up to the subscribed bandwidth level. Specifically, 32 kb/s of additional bandwidth can be allocated to a site to allow servicing of a standard G.729 VoIP connection.

2.3 Non-Optimized Services (U.S. Only)

2.3.1 General

2.3.1.1 Versions of Non-Optimized Services

- Ethernet Access
- Network Services Local Access Services (TDM Access – US Interstate and International)
- Analog Access
- DS0 or E0 Access
- T1 or E1 Digital Access
- DS3 or E3 Access
- SONET or STM Access
- Enterprise Digital Subscriber Line

2.3.1.2 **Network Configurations.** Ethernet Access and Network Services Local Access are ordered based on Customer’s network configuration (see types below). Configuration types reflect the performance characteristics and carrier facilities used to provide service. Verizon network optimization and other updates may result in a change in the network configuration used to provide service to Customer but Customer’s performance characteristics will remain the same or better.

Type	Performance Characteristics
1*	On-Net Premium
2 (U.S. Only)	Off-Net Premium
3*	Off-Net Premium
4	Off-Net Premium
5	Off-Net Premium
EA Standard	Off-Net Standard

*Network Services Local Access is only available on Type 1 and Type 3.

2.3.1.3 **Optional Service Feature - Customer-Provided Access.** With the Customer-Provided Access feature available for Network Services Local Access, where Customer has a third-party local access circuit (subject to an interconnection arrangement with Verizon) at a Verizon-approved location, Verizon will connect that local access circuit to its related Verizon network service(s).

2.3.2 Ethernet Access

2.3.2.1 **Service Definition.** With Ethernet Access, Verizon provides Access with the speed and flexibility enabled by Ethernet technology.

2.3.2.2 **Standard Service Features.** Ethernet Access allows Customer to terminate single and/or multiple Ethernet Virtual Circuits (EVCs) from Customer equipment onto a single Ethernet Access UNI.

2.3.2.3 Optional Service Features

- **(NS&D) Layer 2 Switch Geographic Diversity.** With Layer 2 Switch Geographic Diversity, Verizon provides a second Customer circuit connected to a different Verizon Layer 2 switch device (determined by Verizon) in a different building from the primary circuit.
- **(NS&D) UNI Device Diversity (U.S. Only).** Where Customer orders UNI Device Diversity at the same time as the primary Type 1 or Type 3 Access circuit, Verizon provides a second Customer circuit via a unique Network Interface Device (NID) at the same customer premises.
- **(NS&D) UNI Card Diversity (U.S. Only).** Where Customer orders UNI Card Diversity at the same time as the primary Ethernet Access circuit, Verizon provides a second circuit via a unique customer-facing card on the Network Interface Device (NID) at the same customer premises.
- **(NS&D) UNI Port Protection.** With UNI Port Protection for Type 1, and Type 3 on FET and GBE interfaces, Verizon provides an additional interface port connection at Customer’s designated premises.

2.3.3 Network Services Local Access – Analog Access (U.S. Only)

2.3.3.1 **Service Definition.** With Analog Access, Verizon provides Access with the characteristics enabled by analog technology.

2.3.3.2 **Standard Service Features.** With Analog Access, Verizon provides a 56/64kbps Access circuit that provides voice frequency transmission capability in the nominal frequency range of 300 to 3000 Hz.

2.3.3.3 Optional Service Features

- **Signaling.** With Signaling, Verizon provides the capability for one Customer premises to alert another Customer premises of the same service with which it wishes to communicate.
- **Data Conditioning.** With Data Conditioning, Verizon provides transmission characteristics for Voice Grade Services, such as controlling attenuation distortion and envelope delay distortion.
- **Access Integration Option.** With the Access Integration Option, Verizon enables Customers to utilize their dedicated Access lines to carry traffic for both an inbound and an outbound service over the same circuits.

2.3.4 Network Services Local Access – DS0 and E0 Access

2.3.4.1 **Service Definition.** With DS0 and E0 Access, Verizon provides a digital Access circuit up to 64 kbps.

2.3.4.2 Network Services Local Access – T1 or E1 Digital Access

2.3.4.3 **Service Definition.** With T1 or E1 Digital Access, Verizon provides a high capacity digital local Access arrangement, with 24 channels and up to 1.544 Mbps for the T1 and 2.048Mbps for E1.

2.3.4.4 **Optional Features Integrated Services Digital Network (“ISDN”) Service.** With ISDN, Verizon transports voice, data, and video communications services on a single circuit via standard interfaces.

- **Access Integration Option.** With the Access Integration Option Verizon enables Customers to utilize their dedicated Access lines to carry traffic for both an inbound and an outbound service over the same circuits.
- **Primary Rate Interface (“PRI”).** With PRI, Verizon will transport traffic from [MCI 800 Service](http://www.verizonenterprise.com/external/service_guide/reg/ncp_mci800.htm) (at http://www.verizonenterprise.com/external/service_guide/reg/ncp_mci800.htm) and [Vnet](http://www.verizonenterprise.com/external/service_guide/reg/ncp_vnet.htm) (at http://www.verizonenterprise.com/external/service_guide/reg/ncp_vnet.htm), and [MCI 800 Service](http://www.verizonenterprise.com/external/service_guide/reg/ncp_vision.htm) and [MCI Vision](http://www.verizonenterprise.com/external/service_guide/reg/ncp_vision.htm) (at http://www.verizonenterprise.com/external/service_guide/reg/ncp_vision.htm) on a single circuit. An attribute of PRI, Call-by-Call Service Configuration, allows for these services to share dynamically allocated individual circuits within the PRI. The PRI consists of a 64 kbps D channel and 23 B channels of 64 kbps each. The bearer, or B, channels are used to access [Verizon](http://www.verizonenterprise.com/external/service_guide/reg/g_general_definitions.htm#mci_legacy_company) (at http://www.verizonenterprise.com/external/service_guide/reg/g_general_definitions.htm#mci_legacy_company) services supported over the PRI. The D channels are used to carry signaling and control information for the associated B channels.
- **Call-by-Call Service Configuration.** With Call-by-Call Service Configuration, Verizon will transport traffic across the B channels within a PRI for multiple subscribed services. Call-by-Call Service Configuration can be used in the following combinations: [Vnet](http://www.verizonenterprise.com/external/service_guide/reg/ncp_prism_i.htm) /MCI 800 Service and [MCI Prism 1](http://www.verizonenterprise.com/external/service_guide/reg/ncp_prism_i.htm) (at http://www.verizonenterprise.com/external/service_guide/reg/ncp_prism_i.htm)/[MCI 800 Service](http://www.verizonenterprise.com/external/service_guide/reg/ncp_prism_i.htm).

2.3.4.5 **Network Services Local Access – DS3 or E3 Local Access.** DS3 and E3 Local Access provides a high capacity digital local Access arrangement that consists of an Access circuit) that relies on DS3 or E3 transmission technology.

2.3.4.6 **Network Services Local Access – SONET or STM Access.** With SONET (Synchronous Optical Networking), Verizon uses a protocol designed to transfer digital data over fiber optic channels to provide a high capacity digital local Access arrangement with OC3/STM-1 and above access.

2.3.4.7 **Enterprise Digital Subscriber Line (eDSL).** With eDSL, Verizon provides a capability to originate and terminate high-speed digital data over twisted-pair copper wire connections at speeds ranging between 128 kbps and 1.024 Mbps. eDSL is no longer available for new installations.



3. SUPPLEMENTAL TERMS

3.1 **Third Party Vendors/Carriers.** When the Access circuit is procured from a third party carrier, and the third party carrier requires certain forms to be signed to process Customer's order (e.g., Warranties of Agency, Letters of Agency, Right of Entry forms, service terms, etc.), Customer will sign such forms promptly in order to procure the Access in a timely manner.

3.2 **Access Availability.** The actual availability of Access cannot be determined definitively until the date of installation. If Customer-ordered Access is determined to be unavailable, Verizon will notify Customer promptly, cancel the unavailable order, and upon Customer request, requote the Access based on the latest availability information. There will be instances where a circuit is quoted, using the information available at the time of a quote, but at the time the order is placed or upon installation, the Access is deemed not available and other Access, sometimes with higher charges may be required and in such instances the circuit is requoted to Customer.

3.2.1 **Diversity Availability.** Diversity which involves a third party Access provider will be provided only at Customer Sites where such diversity is available and provided by the relevant access provider as selected by Verizon. In the event that Verizon becomes aware of a third party provided Access service failure or outage which impacts the diversity of circuits, Verizon will use commercially reasonable efforts to work with the third party Access provider to restore the diversity as soon as reasonably possible.

3.2.2 **Express Connect and Wireless Backup.** The parties acknowledge and agree that the Express Connect and Wireless Backup features delivered in the U.S. are sold and provided by Cellco Partnership, Inc., d/b/a as Verizon Wireless.

3.3 **Satellite Access**

3.3.1 **Acceptable Use Policy.** For purposes of Verizon's Acceptable Use Policy, Satellite Access is deemed to be a Verizon Internet Service.

3.3.2 **Minimum Commitment Period.** Customer's minimum commitment period for each order of Satellite Access is one year.

3.3.3 **Use of Satellite Access.** Verizon may interrupt the Satellite Access for scheduled or emergency maintenance or as otherwise set forth in the Agreement. Verizon may (without limitation) substitute comparable service or discontinue the Satellite Access at any time. If for any reason this Satellite Access should become unavailable, Verizon will make a commercially reasonable effort to migrate Customer to a comparable service. Satellite Access may be discontinued without liability in response to a request from any governmental authority.

3.4 **Country-Specific Service Limitations**

3.4.1 **Permitted Use.** For Access provided outside Hawaii and the U.S. Mainland or within Alaska, Customer will use Access circuits only in conjunction with a Verizon-provided network service. If Customer violates this use requirement, Verizon may terminate the Access circuit or take other appropriate action to meet its legal and regulatory obligations.

3.4.2 **United States – Interstate Service Only.** Access in the US Mainland is offered only on a jurisdictionally interstate basis. With respect to its use of Access, Customer agrees that more than 10 percent) of



Customer’s per-circuit traffic crosses state line boundaries (which is commonly referred to as 10 PIU – Percent Interstate Usage).

3.4.3 **Vietnam Responsibility Contract.** Where Customer subscribes for Access in Vietnam through Verizon, Customer shall be required to enter into a Responsibility Contract (or other similar agreements) with the Access service provider. Customer is hereby notified that Verizon is not permitted to modify the terms of the Responsibility Contract and is not allowed to enter into that contract on Customer’s behalf.

3.4.4 **Delivery to Puerto Rico.** For delivery of Satellite Access to Puerto Rico, the following shall apply. Where a Service Order (including on a quote) under the Agreement between Customer and Verizon (the “Verizon Signatory”) identifies a Verizon entity other than the Verizon Signatory as the provider of a Service (an “Identified Provider”), then upon execution of the applicable Service Order by the Verizon Signatory, its rights and obligations for that Service Order will be assigned to the Identified Provider, which then becomes the Verizon entity to provide the service (“Verizon Provider”) for that Service Order.

4. **SERVICE LEVEL AGREEMENT (SLA).** There is no separate Service Level Agreement for Access. Access is included in the SLA for the network service to which it is connected (e.g. Private IP, Internet Dedicated, etc.).

5. **FINANCIAL TERMS**

5.1 **Optimized Service.** Customer will pay the charges for Optimized Access + specified in the Agreement, including those below and at the following URL: http://www.verizonenterprise.com/external/service_guide/reg/applicable_charges_toc.htm. Charges below are in U.S. dollars and will be billed in the invoice currency for the associated service. In the U.S., the charges for Optimized Access + are at the following URL: http://www.verizonenterprise.com/external/service_guide/reg/cp_access_plus_access_pricing_toc.htm

5.1.1 **Administrative Charges**

Administrative Charge	Charge Instance	NRC
Administrative Change	Per Change	\$60.00
Cancellation of Order	Per Circuit	\$800.00
Expedite in the United States	Per Circuit	\$1,400.00
Expedite in Canada and France	Per Circuit	\$6,000.00
Expedite in other countries	Per Circuit	\$3,000.00
After Hours Installation	Per Circuit	\$600.00
Pending Order Change	Per Circuit	\$200.00
Physical Change	Per Circuit	\$200.00
Service Date Change	Per Circuit	\$100.00
Bandwidth Reconfiguration	Per Circuit	\$200.00

5.1.2 **Off Net Special Build.** Where Verizon uses third-party network(s) to provide Access, and a third party needs to extend its network to reach the Customer Site, Verizon will arrange for the third party to perform such work. Customer will pay the cost of that third-party work, which will be added to Customer’s Service Order and which will extend the installation period.



5.1.3 **Special Construction.** If, after an order is placed, Verizon finds that third-party special construction services are needed to build, configure or install any additional facilities and/or equipment necessary for Verizon to provide Access service, Verizon will notify the Customer of any such special construction charges. If Customer does not accept the special construction charges, Customer may terminate the order(s) affected by the special construction charges, with no cancellation fee(s).

5.1.4 **Wireless Connections.** Monthly data plan charges for wireless connections are billed in advance. Overage usage (usage in excess of the monthly data plan amount) will be rounded to the next full GB of traffic and will be billed in arrears. Data usage not used in a particular monthly billing period may not be carried forward to another month the data plan selected by Customer. With regard to Wireless UNI, Customer charges are based on data usage sent through the wireless connection (including resent data), not data usage received by Customer Equipment.

5.1.4.1 **Wireless Connection - Upgrades.** With respect to Customer-requested upgrades to its data plan for Access with Wireless UNI, the MRC will be prorated according to the date the new data plan is available to Customer. Overage usage will be based on the data plan in effect on the last day of the billing period when traffic usage is calculated. The billing period with respect to overage usage may differ according to the country where Access with Wireless UNI is provisioned.

5.1.5 **Wireless Connections - Aggregated Billing.** Customers may, subject to certain exceptions or availability, in any given billing period during the Term associate multiple wireless connections as a group (the "Data Pool"). The Data Pool size is the sum of the monthly data plan amount of each wireless connection that is active on the start date of the billing period. The Aggregated Billing Plan defines those wireless connections that may be included in the same Data Pool.

Overage charges will be assessed if the total actual usage of the member sites of a Data Pool exceeds the Calculated Included Quantity. Calculated Included Quantity means the sum of the monthly data plan amount of each member site of a Data Pool. The overage charges are based on the overage rate associated with the Master Site in each Aggregated Billing Plan at the time of billing. Traffic will be rounded to the next full gigabyte. The Master Site is the first wireless connection activated in the Data Pool.

5.1.55.1.6 **Express Connect – US Only.** Customer will pay Verizon's standard MRC for Wireless UNI plus an NRC that covers all of Customer's usage while Wireless UNI is being used as Express Connect.

5.1.65.1.7 **Express Connect - Outside the US.** Customer will pay Verizon's standard MRC for the data plan selected for the Wireless Connection and the Overage usage charges, as applicable.

5.1.75.1.8 **Carrier Facilities Assignment (CFA).** The MRC and NRC for Carrier Facilities Assignment are inclusive of Verizon charges and include port/rider/appearance charges only when the facility provider charges Verizon back for these charges. Where the facility provider charges Customer directly for port/rider/appearance charges, Customer is responsible for paying for such charges directly to the provider, and Verizon's invoices to Customer will not include such charges. Customer must provide the following information: Meet Me location and ring/hub/parent provider name. If a Verizon (non-Verizon ILEC) Ring, Customer must also provide the Verizon ring/hub status, and Verizon ring/hub type. If Customer provides incorrect information, the CFA may need to be re-quoted.



5.1.85.1.9 Charges for Customer-Provided Access. Where Customer provides its own local access service, an Access MRC and NRC (cross-connect charge) will still apply to cover Verizon's provision of a physical connection from that access service to the Service Equipment used to provide the associated Verizon network service. If incorrect information is provided by Customer, the cross-connect will need to be re-quoted.

5.1.95.1.10 When Local Access with Wireless Connection provided in the U.S. is used with Verizon's Internet Dedicated Service, such connection is subject to the following Wireless Regulatory Surcharge: \$0.02 per connection per month.

5.1.105.1.11 Access Speed Changes. Speed changes on an existing Access circuit are only supported by Verizon in specific limited circumstances. Otherwise, where alternative Access speeds are available from Verizon, Customer must present a new order to Verizon to obtain such alternative speeds and simultaneously terminate its existing Access service, for which it will pay early termination charges if applicable. Customer will be responsible for any third party charges incurred by Verizon in order to implement any requested Access speed changes or any termination. The applicable NRC and MRC associated with the new Access circuit speed will be effective from the day the changed Access bandwidth is available to Customer.

5.1.115.1.12 Access Moves. Customer-requested moves of Access to a new location will be quoted on an individual case basis and, as with speed changes, may require the termination of Customer's existing Access circuit and installation of a new one. For Customer-requested moves of Access to a new location, Customer will pay early termination charges as applicable and any third party charges incurred by Verizon in order to implement the move. The newly-contracted Access will include the applicable NRC and MRC associated with the new Access circuit.

5.1.125.1.13 NS&D Features. Customer must order and pay for the two access circuits from Verizon to configure Layer 2 Aggregation Geographic Diversity and Carrier Diversity, plus an additional charge for the Diversity Feature itself, as applicable. With Preferred Carrier Designation Diversity, Customer must order and pay for the access circuit, plus an additional charge for the Diversity Feature itself, as applicable. With Network Connection Protection, an additional charge is applicable.

5.1.135.1.14 Commitment Period. If Customer terminates UBR (except for Cause), Customer will promptly pay Verizon the full amount of the remaining payments that would have been due under the Service Order if not terminated.

5.1.145.1.15 Third Party Vendor Charges for Cross-Connection and Extended Wiring. Section 1.4.1 above requires Customer to provide all facilities and internal cabling to connect Customer's site to the Demarcation of the Access circuit. In some instances Customer's site may be located at a data center or other facility owned by a third party and the third party may not permit Verizon to connect directly to Customer's site. In such instances, a third party data center/facility owner may only permit the third party to install a cross-connection from the Verizon Demarcation to Customer's site. If the third party data center/facility owner charges for that cross-connection and Customer does not directly pay the third party for such connection, Verizon will pay the third party for the cross-connection and Customer will be billed by Verizon for such charges.

5.2 Non-Optimized Service. Customer will pay MRCs and NRCs for non-Optimized Access Service as specified in the Agreement. The online pricing for Access provided by a U.S. entity is at http://www.verizonenterprise.com/external/service_guide/reg/cp_access_network_services_local_access.htm.



- 5.2.1 **Commitment Period.** Customer will pay the applicable circuit MRC for any Network Services Local Access Service circuit of DS3 or larger or for any Ethernet Access for a minimum of 12 months, which Customer will pay even if the circuit is cancelled sooner (unless cancelled by Customer for Cause, as defined in Customer's Agreement). If Customer terminates UBR (except for Cause), Customer will promptly pay Verizon the full amount of the remaining payments that would have been due under the Service Order if not terminated.
- 5.2.2 **Special Construction.** If, after an order is placed, Verizon finds that third-party special construction services are needed to build, configure or install any additional facilities and/or equipment necessary for Verizon to provide Access service, Verizon will notify the Customer of any such special construction charges. If Customer does not accept the special construction charges, Customer may terminate the order(s) affected by the special construction charges, with no cancellation fee(s).
6. **DEFINITIONS.** The following definitions apply to Access, in addition to those identified in the Master Terms and the administrative charge definitions at the following URL www.verizonenterprise.com/external/service_guide/reg/definitions_toc_2017DEC01.htm.

Term	Definition
Demarcation	The point where the access circuit is delivered. For jointly used office buildings, it is often a common entrance point for telecommunication providers, which may not be the Customer's physical location.
Meet Me Location	If the customer has a dedicated ring, the Meet Me Location is the node on the ring where customer will provide Carrier Facility Assignment (CFA). For customer provided access, the Meet Me Location is the edge of the Verizon network where the customer is bringing their access (usually a Patch Panel on which the Customer's vendor resides).
Time Division Multiplexing (TDM)	A technique for transmitting two or more signals over the same telephone line, radio channel, or other medium. Each signal is sent as a series of pulses or packets, which are interleaved with those of the other signal or signals and transmitted as a continuous stream.