

INVITATION FOR BID
IFB C4DNCS19
Data Networks and Communications Services
**CATEGORY 24 – FLAT RATE INTERNET
SERVICES**

Zayo Group, LLC

Statement of Work

TECHNICAL REQUIREMENTS

March 5, 2020

BAFO

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PO Box 1810

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Disclaimer: The original PDF version and any subsequent addendums of the IFB released by the Procurement Official of this Bid remain the official version. In the event of any inconsistency between the Bidder's versions, articles, attachments, specifications or provisions which constitute the Contract, the official State version of the IFB in its entirety shall take precedence.

AMENDMENT LOG

Amendment #	Date	Amendment Description
1	01/25/2021	Table 24.4.4.b Updated Table
3	08/13/2025	Table 24.2.7 Added Line Items 1-27 Modified Technical Service Level Agreements Sections 24.6.8.1, 24.6.8.3-24.6.8.4, 24.6.8.6 – 24.6.8.10.

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TECHNICAL REQUIREMENTS

CATEGORY 24 – Flat Rate Internet Services

24.1 OVERVIEW

This Category 24 IFB C4DNCS19 (IFB) provides the State's solicitation for best value solutions for Flat Rate Internet Services. This IFB also describes the technical requirements necessary to support the CALNET program requirements.

This IFB will be awarded to Bidders that meet the award criteria as described in IFB C4DNCS19 Part 1, Bid Evaluation. The CALNET Data Networks and Communications (DNCS) Contract(s) that result from the award of this IFB will be managed on a day-to-day basis by the CALNET Contractor Management Organization (CALNET CMO).

24.1.1 Bidder Response Requirements

Throughout this IFB, Bidders are required to acknowledge acceptance of the requirements described herein by responding to one of the following:

1. Example A (for responses that require confirmation that the Bidder understands and accepts the requirement):

“Bidder understands this requirement and shall meet or exceed it?”

Or,

2. Example B (for responses that require the Bidder to provide a description or written response to the requirement):

“Bidder understands the requirements and shall meet or exceed them? ”

Description:”

Or,

3. Example C (for responses contained in Technical Feature and/or Service Tables):

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No.
1					Choose an item.

24.1.2 Designation of Requirements

All Technical Requirements specified in this IFB are Mandatory and must be responded to as identified in IFB Part 1, SOW Mandatory Technical Requirements by the Bidder. Additionally, some Mandatory requirements are "Mandatory-Scorable" and are designated as "(M-S)".

Costs associated with services shall be included in the prices provided by the Bidder for the individual items included in the Category Cost Worksheets.

Items not listed in the Category Cost Worksheets will not be billable by the Contractor. If additional unsolicited items include the features described in this IFB and are not included as billable in the Category Cost Worksheets, the cost associated with the features shall not be included in the unsolicited price.

Services and features included in the Category Cost Worksheets are those that the Bidder must provide. All Bidders must provide individual prices as indicated in the Category Cost Worksheets in the Bidder's Final Proposal. Items submitted with no price will be considered as offered at no cost.

24.1.3 Pacific Time Zone

Unless specified otherwise, all times stated herein are times in the Pacific Time Zone.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2 FLAT RATE INTERNET SERVICE

The Contractor shall provide dedicated Internet access service that provides high-speed Internet access through communications facilities managed by the Contractor.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.1 Internet Services General Requirements

The Contractor's network shall connect a Customer's Local Area Network (LAN) or application to the Internet by providing highly reliable transport and Internet Protocol (IP) connectivity. The service shall use the Transmission Control Protocol/Internet Protocol (TCP/IP) to interconnect customer premise equipment (CPE) to the public Internet Service Provider (ISP) networks.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.2 Network Capabilities

The Contractor's network shall have:

1. Established public peering arrangements from the Contractor's network to the Internet.

Bidder understands the Requirement and shall meet or exceed it? Yes

2. Private peering arrangements established from the Contractor's network with redundant links to connect to its private peering partners.

Bidder understands the Requirement and shall meet or exceed it? Yes

3. Support for Customer assigned and Internet Corporation for Assigned Names and Numbers (ICANN) registered IP addresses and domain names.

Bidder understands the Requirement and shall meet or exceed it? Yes

4. Primary and Secondary Domain Name Service (DNS) to provide an authoritative name server for the Customer.

Bidder understands the Requirement and shall meet or exceed it? Yes

5. The Contractor shall provide support for the border gateway protocol (BGP) for Customers with registered Autonomous System (AS) numbers, if applicable.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.2.1 Contractor Wi-Fi Hotspot Service Offerings

The Contractor shall not configure services utilizing state-funded (or leased) infrastructure or resources to provide Contractor branded Wi-Fi hotspots for a fee/subscription to the general public. Use of any publicly funded power, facilities, or infrastructure in State leased or owned buildings to provide Contractor fee based Wi-Fi services is considered a gift of public funds.

The Contractor shall not provide Contractor branded Wi-Fi hotspot services for non-CALNET users by piggybacking onto CALNET Customer primary installations or by any other means that utilize publicly funded assets. This restriction includes but is not limited to installation of secondary equipment, circuits, or data channels both land based and wireless.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.3 Standards

Dedicated Internet Services shall comply with the following standards, as applicable, and when commercially available by the Contractor:

1. Internet Engineering Task Force (IETF) Requests for Comments (RFCs);

Bidder understands this Requirement and shall meet or exceed it? Yes

2. ANSI T1;

Bidder understands the Requirement and shall meet or exceed it? Yes

3. ATM Forum

Bidder understands the Requirement and shall meet or exceed it? Yes

4. ITU TSS Recommendations;

Bidder understands the Requirement and shall meet or exceed it? Yes

5. Frame Relay Forum implementation agreements;

Bidder understands the Requirement and shall meet or exceed it? Yes

6. North American ISDN Users Forum (NIUF);

Bidder understands the Requirement and shall meet or exceed it? Yes

7. IEEE 802.3 Ethernet Standards;

Bidder understands the Requirement and shall meet or exceed it? Yes

8. Metro Ethernet Forum (MEF);

Bidder understands the Requirement and shall meet or exceed it? Yes

9. IETF RFCs for IPv6 when offered commercially by the Contractor;

Bidder understands the Requirement and shall meet or exceed it? Yes

10. All new versions, amendments, and modifications to the above documents and standards as they become commercially available.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.4 Network Operations and Management

24.2.4.1 General Description

The Contractor's data network(s) shall meet established industry standards.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.4.2 Network Operations Center

The Contractor shall maintain a Network Operations Center (NOC) that is staffed 24x7 that coordinates and manages all data traffic.

The NOC shall perform the following services:

1. Network surveillance;

Bidder understands the Requirement and shall meet or exceed it? Yes

2. Fault management (trouble identification, isolation and notification); and,

Bidder understands the Requirement and shall meet or exceed it? Yes

3. Monitor network performance in near real-time to identify capacity blockages and implement controls to optimize network health and performance immediately.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.4.3 Security

24.2.4.3.1 Physical Access

Contractor shall physically secure all data and networking facilities through which data traverses Contractor's WAN complying with the physical security controls of NIST SP 800-53, ISO/IEC 27001, or equivalent standards.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.4.3.2 Network Security

The Contractor's network security solution shall incorporate the following features:

1. The Contractor's network equipment locations and data centers shall use carrier grade platforms; and,
2. All equipment shall be in a hardened facility and all unnecessary services shall be disabled or removed.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.4.3.3 Security Incident Notifications

Upon discovery, the Contractor shall provide the Customer and designated State representatives with Security Incident notifications that impact CALNET Customers, via telephonic means and email. For purposes of this section, Security Incident is defined in the State Administrative Manual (SAM), Section 5300.4.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.4.3.4 Data Breach Reporting

If Contractor determines that a breach of data has occurred that may involve CALNET Customer data, the nature and scope of the breach (as it affects Customer data) shall be reported to both the Customer and the CALNET CMO within 24 hours of that determination.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.5 Dedicated Internet Flat Rate Services Technical Requirements

The service shall connect a Customer's LAN or application to the Internet by providing highly reliable transport and IP connectivity to the internet.

The speeds in the Feature Names in Table 24.2.5.1b indicate download speeds. Bidder shall indicate the upload speeds in the Bidder's Product Description in Tables 24.2.5.1.b, 24.2.5.2.a, 24.2.5.3.b.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.5.1 Internet Flat Rate Service (InFRa)

The Contractor shall provide Internet Flat Rate Service (InFRa) at the speeds identified in Table 24.2.5.1.b. The services shall consist of a dedicated Internet port and transport, on the Contractor's private network, from the Customer site to the nearest Contractor Point-of-Presence (POP). The service shall include all equipment, cabling and labor required to provide a User-to-Network Interface (UNI) at the Customer premise Minimum Point of Entry (MPOE).

The Bidder shall describe the User-to-Network Interface characteristics in the Bidder's Product Description, Features, Limitations and Restrictions column row provided in Table 24.2.4.1.b using Table 24.2.4.1.a below, which

is provided only as a guide. Contractors shall follow the format as closely as possible if the guide content does not align with a particular Contractor technology or offering.

The Bidder's Product Description shall include the following at a minimum:

1. Interface/Access Type(s);
2. Network-Side Interface, if applicable;
3. Protocol(s) applicable to each speed; and,
4. Upload Speed.

Table 24.2.5.1.a – InFRA UNI Guide

Line Item	Interface/Access Type	Network-Side Interface	Protocol
1	Cable High Speed Access	DOCSISx	Point-to-Point Protocol, IPv4/v6
2	Ethernet Interface	1 Mbps up to 1 GbE (Gigabit Ethernet) 10 GbE	Point-to-Point Protocol, IPv4/v6
3	IP over SONET Service	OC-3c OC-12c OC-48c OC-192c	IP/PPP over SONET
4	Private Line Service (PLS)	T1 Fractional T3 T3 OC-3c OC-12c OC-48c OC-192c	IPv4/v6 over PLS
5	DSL Service	xDSL Access	Point-to-Point Protocol IPv4/v6
6	Other - IP over OTN	10 GbE, 100 GbE	LANPHY IPv4/v6

Bidders must provide at least one service/solution for each InFRA speed listed in Table 24.2.5.1.b. Additional Internet Flat Rate Services that utilize different UNI's with different product identifiers and associated costs should be listed in an Unsolicited table in the same fashion as Table 24.2.5.1.b.

Table 24.2.5.1.b – Internet Flat Rate Service

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
1	InFRa @ 1.544 Mbps	Internet Flat Rate Service (InFRa) at 1.544 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 2 Mbps Protocol: IPv4/v6 Upload Speed: 1.544 Mbps Product Description: Delivery of a T1 (with 1.544Mbps upload speeds) using HDSL2 or special access or its equivalent. T1 access to the dedicated domain (VRF) is very typical for this product. The electronics may change based on the specific access method on which the product is offered.	24251001	Yes
2	InFRa @ 5 Mbps	Internet Flat Rate Service (InFRa) at 5 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 5 Mbps Protocol: IPv4/v6 Upload Speed: 5 Mbps	24251002	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Product Description: Delivery of Ethernet or NxT1 via HDSL2 or special access or its equivalent is provided to deliver 5Mbps upload speeds. T1 access to the dedicated domain (VRF) is very typical for this product. The electronics may change based on the specific access method on which the product is offered.		
3	InFRa @ 10 Mbps	Internet Flat Rate Service (InFRa) at 10 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 10 Mbps Protocol: IPv4/v6 Upload Speed: 10 Mbps Product Description:	24251003	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Delivery of NxT1 via Ethernet or HDSL2 or special access or its equivalent is provided to deliver 10Mbps upload speeds. We also provide direct 10/100base-T connections where fiber optic access is available. The electronics may change based on the specific access method on which the product is offered.		
4	InFRa @ 15 Mbps	Internet Flat Rate Service (InFRa) at 15 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 15 Mbps Protocol: IPv4/v6 Upload Speed: 15 Mbps	24251004	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Product Description: Delivery of 15 Mbps upload speed is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered.		
5	InFRa @ 20 Mbps	Internet Flat Rate Service (InFRa) at 20 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 20 Mbps Protocol: IPv4/v6 Upload Speed: 20 Mbps Product Description: Delivery of 20 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered.	24251005	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
6	InFRa @ 25 Mbps	Internet Flat Rate Service (InFRa) at 25 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 25 Mbps Protocol: IPv4/v6 Upload Speed: 25 Mbps Product Description: Delivery of 25 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered.	24251006	Yes
7	InFRa @ 30 Mbps	Internet Flat Rate Service (InFRa) at 30 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 30 Mbps Protocol: IPv4/v6 Upload Speed: 30 Mbps Product Description:	24251007	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Delivery of 30 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered.		
8	InFRa @ 35 Mbps	Internet Flat Rate Service (InFRa) at 35 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 35 Mbps Protocol: IPv4/v6 Upload Speed: 35 Mbps Product Description: Delivery of 35 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered.	24251008	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
9	InFRa @ 40 Mbps	Internet Flat Rate Service (InFRa) at 40 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 40 Mbps Protocol: IPv4/v6 Upload Speed: 40 Mbps Product Description: Delivery of 40 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered.	24251009	Yes
10	InFRa @ 45 Mbps	Internet Flat Rate Service (InFRa) at 45 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 45 Mbps Protocol: IPv4/v6 Upload Speed: 45 Mbps Product Description:	24251010	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Delivery of 45 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered.		
11	InFRa @ 50 Mbps	Internet Flat Rate Service (InFRa) at 50 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 50 Mbps Protocol: IPv4/v6 Upload Speed: 50 Mbps Product Description: Delivery of 50 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered.	24251011	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
12	InFRa @ 55 Mbps	Internet Flat Rate Service (InFRa) at 55 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 55 Mbps Protocol: IPv4/v6 Upload Speed: 55 Mbps Product Description: Delivery of 55 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered.	24251012	Yes
13	InFRa @ 60 Mbps	Internet Flat Rate Service (InFRa) at 60 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 60 Mbps Protocol: IPv4/v6 Upload Speed: 60 Mbps Product Description:	24251013	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Delivery of 60 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered.		
14	InFRa @ 100 Mbps	Internet Flat Rate Service (InFRa) at 100 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 100 Mbps Protocol: IPv4/v6 Upload Speed: 100 Mbps Product Description: Delivery of 100 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251014	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
15	InFRa @ 150 Mbps	Internet Flat Rate Service (InFRa) at 150 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 150 Mbps Protocol: IPv4/v6 Upload Speed: 150 Mbps Product Description: Delivery of 150 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251015	Yes
16	InFRa @ 200 Mbps	Internet Flat Rate Service (InFRa) at 200 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 200 Mbps Protocol: IPv4/v6 Upload Speed: 200 Mbps Product Description:	24251016	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Delivery of 200 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.		
17	InFRa @ 500 Mbps	Internet Flat Rate Service (InFRa) at 500 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 500 Mbps Protocol: IPv4/v6 Upload Speed: 500 Mbps Product Description: Delivery of 500 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251017	Yes
18	InFRa @ 1 Gbps	Internet Flat Rate Service (InFRa) at 1 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 1 Gbps Protocol: IPv4/v6	24251018	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Upload Speed: 1 Gbps Product Description: Delivery of 1 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.		
19	InFRa @ 10 Gbps	Internet Flat Rate Service (InFRa) at 10 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 10 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 10 Gbps Product Description: Delivery of 10 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251019	Yes

The Contractor may offer Unsolicited Flat Rate Internet Service or features in Table 24.2.5.1.c.

Table 24.2.5.1.c – Unsolicited Internet Flat Rate Service Offering

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
1	InFRa @ 250 Mbps	Internet Flat Rate Service (InFRa) at 250 Mbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 250 Mbps Protocol: IPv4/v6 Upload Speed: 250 Mbps Product Description: Delivery of 250 Mbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251020
2	InFRa @ 2 Gbps	Internet Flat Rate Service (InFRa) at 2 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 2 Gbps Protocol: IPv4/v6 Upload Speed: 2 Gbps Product Description: Delivery of 2 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251021

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
3	InFRa @ 5 Gbps	Internet Flat Rate Service (InFRa) at 5 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet Network-side Interface: 5 Gbps Protocol: IPv4/v6 Upload Speed: 5 Gbps Product Description: Delivery of 5 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251022
4	InFRa @ 20 Gbps	Internet Flat Rate Service (InFRa) at 20 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 20 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 20 Gbps Product Description: Delivery of 20 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251023

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
5	InFRa @ 30 Gbps	Internet Flat Rate Service (InFRa) at 30 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 30 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 30 Gbps Product Description: Delivery of 30 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251024
6	InFRa @ 40 Gbps	Internet Flat Rate Service (InFRa) at 40 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 40 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 40 Gbps Product Description: Delivery of 40 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251025

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
7	InFRa @ 50 Gbps	Internet Flat Rate Service (InFRa) at 50 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 50 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 50 Gbps Product Description: Delivery of 50 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251026
8	InFRa @ 60 Gbps	Internet Flat Rate Service (InFRa) at 60 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 0 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 60 Gbps Product Description: Delivery of 60 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251027

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
9	InFRa @ 70 Gbps	Internet Flat Rate Service (InFRa) at 70 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 70 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 70 Gbps Product Description: Delivery of 70 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251028
10	InFRa @ 80 Gbps	Internet Flat Rate Service (InFRa) at 80 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 80 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 80 Gbps Product Description: Delivery of 80 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251029

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
11	InFRa @ 90 Gbps	Internet Flat Rate Service (InFRa) at 90 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 90 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 90 Gbps Product Description: Delivery of 90 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251030
12	InFRa @ 100 Gbps	Internet Flat Rate Service (InFRa) at 100 Gbps. Includes dedicated Internet port and transport.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 100 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 100 Gbps Product Description: Delivery of 100 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered.	24251031

24.2.5.2 Internet Flat Rate with Managed Router Service (InFRaM)

The Contractor shall provide Internet Flat Rate with Managed IP Enabled Routing Device Service at the speeds identified in Table 24.2.5.2.a. The

services shall consist of a dedicated Internet Port and Transport from the Customer site to the nearest contractor POP. The service shall include all equipment, cabling and labor required to provide a UNI at the Customer premise MPOE and a Contractor owned, maintained and managed IP enabled routing device.

Bidder understands the Requirement and shall meet or exceed it? Yes

The service shall include a Contractor owned, maintained and managed IP enabled routing device. Bidder shall provide a description of the type of equipment, maintenance and management services that the Contractor will deploy to satisfy this requirement.

Bidder understands the Requirement and shall meet or exceed it? Yes

All Bidder equipment, tasks and services required for provisioning of the services described in Table 24.2.5.2.a will be included in the charges for the features/services listed in those tables unless specifically identified as not part of the mandatory service and proposed in Table 24.2.5.2.b.

Bidder understands the Requirement and shall meet or exceed it? Yes

The Contractor's managed IP enabled routing device service shall include proactive Customer notification as identified in the Service Level Agreements.

Bidder understands the Requirement and shall meet or exceed it? Yes

The Contractor shall provide customers full read only access to the managed router or managed IP enabled routing device.

Bidder understands the Requirement and shall meet or exceed it? Yes

The Contractor shall offer the InFRaM Services detailed in Table 24.2.5.2.a.

The Bidder shall describe the User-to-Network Interface characteristics in the Bidder's Product Description, Restrictions, and Limitations column row provided in Table 24.2.5.2.a using Table 24.2.5.1.a, which is provided only as a guide. Contractors shall follow the format as closely as possible if the guide content does not align with a particular Contractor technology or offering.

The Bidder's Product Description shall include the following at a minimum:

1. Interface/Access Type(s);
2. Network-Side Interface, if applicable;
3. Protocol(s) applicable to each speed; and,
4. Upload Speed.

Table 24.2.5.2.a – Internet Flat Rate with Managed Router Service

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
1	InFRaM @ 1.544 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 1.544 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 2 Mbps Protocol: IPv4/v6 Upload Speed: 1.544 Mbps Product Description: Delivery of a T1 via HDSL2 or special access or its equivalent is provided. T1 access to the dedicated domain (VRF) is very typical for this product. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252001	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
2	InFRaM @ 5 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 5 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 5 Mbps Protocol: IPv4/v6 Upload Speed: 5 Mbps Product Description: Delivery of NxT1 via HDSL2 or special access or its equivalent is provided. Bonding of T1 access for larger bandwidths up to 12.352 is a standard service for this product. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252002	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
3	InFRaM @ 10 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 10 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 10 Mbps Protocol: IPv4/v6 Upload Speed: 10 Mbps Product Description: Delivery of 10 Mbps via Ethernet, HDSL2 or special access or its equivalent is provided. Bonding of T1 access for larger bandwidths up to 12.352 is a standard service for this product. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252003	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
4	InFRaM @ 15 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 15 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 15 Mbps Protocol: IPv4/v6 Upload Speed: 15 Mbps Product Description: Delivery of 15 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252004	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
5	InFRaM @ 20 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 20 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 20 Mbps Protocol: IPv4/v6 Upload Speed: 20 Mbps Product Description: Delivery of 20 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252005	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
6	InFRaM @ 25 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 25 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 25 Mbps Protocol: IPv4/v6 Upload Speed: 25 Mbps Product Description: Delivery of 25 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252006	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
7	InFRaM @ 30 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 30 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 30 Mbps Protocol: IPv4/v6 Upload Speed: 30 Mbps Product Description: Delivery of 30 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252007	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
8	InFRaM @ 35 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 35 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 35 Mbps Protocol: IPv4/v6 Upload Speed: 35 Mbps Product Description: Delivery of 35 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252008	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
9	InFRaM @ 40 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 40 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 40 Mbps Protocol: IPv4/v6 Upload Speed: 40 Mbps Product Description: Delivery of 40 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252009	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
10	InFRaM @ 45 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 45 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 45 Mbps Protocol: IPv4/v6 Upload Speed: 45 Mbps Product Description: Delivery of 45 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. DS-3 (TDM) circuits may be used. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252010	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
11	InFRaM @ 50 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 50 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 50 Mbps Protocol: IPv4/v6 Upload Speed: 50 Mbps Product Description: Delivery of 50 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252011	Yes
12	InFRaM @ 55 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 55 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 55 Mbps Protocol: IPv4/v6 Upload Speed: 55 Mbps	24252012	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Product Description: Delivery of 55 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.		
13	InFRaM @ 60 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 60 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 60 Mbps Protocol: IPv4/v6 Upload Speed: 60 Mbps	24252013	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Product Description: Delivery of 60 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.		
14	InFRaM @ 100 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 100 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 100 Mbps Protocol: IPv4/v6 Upload Speed: 100 Mbps	24252014	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Product Description: Delivery of 100 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.		
15	InFRaM @ 150 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 150 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 150 Mbps Protocol: IPv4/v6 Upload Speed: 150 Mbps	24252015	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Product Description: Delivery of 150 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.		
16	InFRaM @ 200 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 200 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 200 Mbps Protocol: IPv4/v6 Upload Speed: 200 Mbps	24252016	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Product Description: Delivery of 200 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.		
17	InFRaM @ 500 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 500 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 500 Mbps Protocol: IPv4/v6 Upload Speed: 500 Mbps	24252017	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Product Description: Delivery of 500 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.		
18	InFRaM @ 1 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 1 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 1 Gbps Protocol: IPv4/v6 Upload Speed: 1 Gbps	24252018	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Product Description: Delivery of 1 Gbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.		
19	InFRaM @ 10 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 10 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 10 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 10 Gbps	24252019	Yes

Line Item #	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes/No
			Product Description: Delivery of 10 Gbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.		

The Contractor may offer Unsolicited Flat Rate Internet Service or features in Table 24.2.5.2.b.

Table 24.2.5.2.b – Unsolicited Internet Flat Rate with Managed Router Service

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
1	InFRaM @ 250 Mbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 250 Mbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 250 Mbps Protocol: IPv4/v6 Upload Speed: 250 Mbps Product Description: Delivery of 250 Mbps is part of the service offering. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A customer edge router with interface sized to the service request will be included.	24252020
2	InFRaM @ 2 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 2 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 2 Gbps Protocol: IPv4/v6 Upload Speed: 2 Gbps Product Description:	24252021

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
			Delivery of 2 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	
3	InFRaM @ 5 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 5 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet Network-side Interface: 5 Gbps Protocol: IPv4/v6 Upload Speed: 5 Gbps Product Description: Delivery of 5 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	24252022

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
4	InFRaM @ 20 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 20 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 20 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 20 Gbps Product Description: Delivery of 20 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	24252023
5	InFRaM @ 30 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 30 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 30 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 30 Gbps Product Description:	24252024

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
			Delivery of 30 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	
6	InFRaM @ 40 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 40 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 40 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 40 Gbps Product Description: Delivery of 40 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	24252025

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
7	InFRaM @ 50 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 50 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 50 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 50 Gbps Product Description: Delivery of 50 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	24252026
8	InFRaM @ 60 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 60 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 60 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 60 Gbps Product Description:	24252027

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
			Delivery of 60 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	
9	InFRaM @ 70 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 70 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 70 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 70 Gbps Product Description: Delivery of 70 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	24252028

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
10	InFRaM @ 80 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 80 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 80 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 80 Gbps Product Description: Delivery of 80 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	24252029
11	InFRaM @ 90 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 90 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 90 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6 Upload Speed: 90 Gbps Product Description:	24252030

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
			Delivery of 90 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	
12	InFRaM @ 100 Gbps	Internet Flat Rate Service with Managed IP Enabled Routing Device (InFRaM) at 100 Gbps. Includes dedicated Internet port, transport, and a Contractor owned, maintained and managed IP enabled routing device.	Interface/Access Type: Ethernet or IP over OTN Network-side Interface: 100 Gbps Protocol: IPv4/v6 or LANPHY IPv4/v6Upload Speed: 100 Gbps Product Description: Delivery of 100 Gbps upload speed. We will provide services on Ethernet, dedicated Ethernet, or protected Ethernet fiber optics where available. The electronics may change based on the specific access method on which the product is offered. A router with interface sized to the service request will be included.	24252031

24.2.5.3 LTE Backup Service Options

If the Contractor provides LTE backup services for Managed Equipment the Contractor shall use current CALNET Cellular providers. All Bidders are

required to indicate below that they understand the requirement regardless of their intent to provide LTE backup services.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.2.6 Internet Service Geographic Service Areas

Bidder shall identify the locations where their InFRa, InFRaM, BHIS and BHIMS Internet Services are available in Table 24.2.6.a. The Contractor shall provide the service where commercially available through Contractor owned facilities, third-party agreements, and as allowed by State or Federal regulations. Commitment to provide service is subject to facility availability as determined by the Bidder at time of bid submission and may be reassessed by Contractor at time of service order.

Bidder understands the Requirement and shall meet or exceed it? Yes

Special construction charges that may be required to provide this service are not included in this offering or contained within the CALNET contracts and must be acquired by the customer directly through other procurement means.

Bidder understands the Requirement and shall meet or exceed it? Yes

Bidders may reference Table 24.2.6.a in their Catalog A.

Table 24.2.6.a – Bidder's Flat Rate Internet Service Locations

Line Item	Service Location – City or ZIP Code	InFRa	InFRaM
1	Alhambra	Yes	Yes
2	Anaheim	Yes	Yes
3	Arcadia	Yes	Yes
4	Bakersfield	Yes	Yes
5	Belmont	Yes	Yes
6	Berkeley	Yes	Yes
7	Beverly Hills	Yes	Yes

Line Item	Service Location – City or ZIP Code	InFRa	InFRaM
8	Bishop	Yes	Yes
9	Brisbane	Yes	Yes
10	Burbank	Yes	Yes
11	Burlingame	Yes	Yes
12	Campbell	Yes	Yes
13	Carlsbad	Yes	Yes
14	Chico	Yes	Yes
15	Chino	Yes	Yes
16	Citrus Heights	Yes	Yes
17	Concord	Yes	Yes
18	Costa Mesa	Yes	Yes
19	Cotati	Yes	Yes
20	Daly City	Yes	Yes
21	Dublin	Yes	Yes
22	East Palo Alto	Yes	Yes
23	El Segundo	Yes	Yes
24	Elk Grove	Yes	Yes
25	Escondido	Yes	Yes
26	Fairfield	Yes	Yes
27	Folsom	Yes	Yes
28	Foster City	Yes	Yes

Line Item	Service Location – City or ZIP Code	InFRa	InFRaM
29	Fremont	Yes	Yes
30	Fresno	Yes	Yes
31	Gardena	Yes	Yes
32	Glendale	Yes	Yes
33	Hawaiian Gardens	Yes	Yes
34	Hawthorne	Yes	Yes
35	Hayward	Yes	Yes
36	Hermosa Beach	Yes	Yes
37	Hillsborough	Yes	Yes
38	Huntington Park	Yes	Yes
39	Inglewood	Yes	Yes
40	Irvine	Yes	Yes
41	Lafayette	Yes	Yes
42	Larkspur	Yes	Yes
43	Lawndale	Yes	Yes
44	Livermore	Yes	Yes
45	Los Alamitos	Yes	Yes
46	Los Altos	Yes	Yes
47	Los Angeles	Yes	Yes
48	Los Banos	Yes	Yes
49	Los Gatos	Yes	Yes

Line Item	Service Location – City or ZIP Code	InFRa	InFRaM
50	Manhattan Beach	Yes	Yes
51	Menlo Park	Yes	Yes
52	Millbrae	Yes	Yes
53	Milpitas	Yes	Yes
54	Modesto	Yes	Yes
55	Monte Sereno	Yes	Yes
56	Morro Bay	Yes	Yes
57	Mountain View	Yes	Yes
58	Newark	Yes	Yes
59	Norwalk	Yes	Yes
60	Oakland	Yes	Yes
61	Ontario	Yes	Yes
62	Orinda	Yes	Yes
63	Palo Alto	Yes	Yes
64	Pasadena	Yes	Yes
65	Petaluma	Yes	Yes
66	Pleasanton	Yes	Yes
67	Rancho Cordova	Yes	Yes
68	Redondo Beach	Yes	Yes
69	Redwood City	Yes	Yes
70	Sacramento	Yes	Yes

Line Item	Service Location – City or ZIP Code	InFRa	InFRaM
71	Salinas	Yes	Yes
72	San Anselmo	Yes	Yes
73	San Bruno	Yes	Yes
74	San Carlos	Yes	Yes
75	San Diego	Yes	Yes
76	San Francisco	Yes	Yes
77	San Jose	Yes	Yes
78	San Leandro	Yes	Yes
79	San Luis Obispo	Yes	Yes
80	San Marcos	Yes	Yes
81	San Mateo	Yes	Yes
82	San Rafael	Yes	Yes
83	Santa Ana	Yes	Yes
84	Santa Barbara	Yes	Yes
85	Santa Clara	Yes	Yes
86	Santa Monica	Yes	Yes
87	Santa Rosa	Yes	Yes
88	Saratoga	Yes	Yes
89	Sausalito	Yes	Yes
90	Selma	Yes	Yes
91	Signal Hill	Yes	Yes

Line Item	Service Location – City or ZIP Code	InFRa	InFRaM
92	South Pasadena	Yes	Yes
93	South San Francisco	Yes	Yes
94	Stanton	Yes	Yes
95	Stockton	Yes	Yes
96	Suisun City	Yes	Yes
97	Sunnyvale	Yes	Yes
98	Torrance	Yes	Yes
99	Turlock	Yes	Yes
100	Union City	Yes	Yes
101	Vacaville	Yes	Yes
102	Vallejo	Yes	Yes
103	Vernon	Yes	Yes
104	Walnut Creek	Yes	Yes
105	Watsonville	Yes	Yes
106	West Hollywood	Yes	Yes
107	West Los Angeles	Yes	Yes
108	West Sacramento	Yes	Yes
109	Westminster	Yes	Yes

24.2.7 Additional Unsolicited Internet Services

All Bidder equipment, tasks and services required for provisioning of the services shall be identified in Table 24.2.7.

Table 24.2.7 – Additional Unsolicited Internet Services

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
1	Zayo - Velo SD-WAN Edge 520 with 10 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 520 10M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC520-010M-HOSG
2	Zayo - Velo SD-WAN Edge 520 with 30 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 520 30M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC520-030M-HOSG
3	Zayo - Velo SD-WAN Edge 520 with 50 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 520 50M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC520-050M-HOSG
4	Zayo - Velo SD-WAN Edge 520 with 100 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 520 100M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC520-100M-HOSG

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
5	Zayo - Velo SD-WAN Edge 540 with 100 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 540 100M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC540-100M-HOSG
6	Zayo - Velo SD-WAN Edge 540 with 200 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 540 200M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC540-200M-HOSG
7	Zayo - Velo SD-WAN Edge 540 with 500 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 540 500M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC540-500M-HOSG
8	Zayo - Velo SD-WAN Edge 840 with 200 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 840 200M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC840-200M-HOSG

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
9	Zayo - Velo SD-WAN Edge 840 with 500 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 840 500M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC840-500M-HOSG
10	Zayo - Velo SD-WAN Edge 840 with 1 Gbps	Zayo - VMware VeloCloud SD-WAN Edge 840 1G	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC840-001G-HOSG
11	Zayo - Velo SD-WAN Edge 610 with 50 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 610 50M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC610-050M-HOSG
12	Zayo - Velo SD-WAN Edge 610 with 100 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 610 100M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC610-100M-HOSG

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
13	Zayo - Velo SD-WAN Edge 620 with 200 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 620 200M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC620-200M-HOSG
14	Zayo - Velo SD-WAN Edge 620 with 500 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 620 500M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC620-500M-HOSG
15	Zayo - Velo SD-WAN Edge 640 with 1Gbps	Zayo - VMware VeloCloud SD-WAN Edge 640 1G	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC640-001G-HOSG
16	Zayo - Velo SD-WAN Edge 680 with 1Gbps	Zayo - VMware VeloCloud SD-WAN Edge 680 1G	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement	QOS-VC680-002G-HOSG

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
17	Zayo - Velo SD-WAN Edge 710-W with 50 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 710-W 50M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Day Replacement	SD-VC-710-W-PRE-SO-SG-50M
18	Zayo - Velo SD-WAN Edge 710-W with 100 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 710-W 100M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Day Replacement	SD-VC-710-W-PRE-SO-SG-100M
19	Zayo - Velo SD-WAN Edge 720 with 200 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 720 200M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Day Replacement	SD-VC-720-PRE-SO-SG-200M
20	Zayo - Velo SD-WAN Edge 720 with 500 Mbps	Zayo - VMware VeloCloud SD-WAN Edge 720 500M	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Day Replacement	SD-VC-720-PRE-SO-SG-500M

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
21	Zayo - Velo SD-WAN Edge 740 with 1 Gbps	Zayo - VMware VeloCloud SD-WAN Edge 740 1G	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Day Replacement	SD-VC-740-PRE-SO-SG-1G
22	Zayo - Velo SD-WAN Edge 740 with 2 Gbps	Zayo - VMware VeloCloud SD-WAN Edge 740 2G	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Day Replacement	SD-VC-740-PRE-SO-SG-2G
23	SFP Adaptor - 1G to RJ45 Copper	Zayo - VMware VeloCloud SD-WAN SFP Adaptor Copper	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Business Day Replacement NOTE: Must be ordered in conjunction with Zayo - VMware VeloCloud SD-WAN Edge 700 Series appliance	QOS-SFP-1G-RJ45
24	SFP Adaptor - 1G to LC/SX/Multimode Fiber	Zayo - VMware VeloCloud SD-WAN SFP Adaptor Multimode Fiber	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Day Replacement	QOS-SFP-1G-SX

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
			NOTE: Must be ordered in conjunction with Zayo - VMware VeloCloud SD-WAN Edge 700 Series appliance	
25	SFP Adaptor - 1G to LC/LX/Singlemode Fiber	Zayo - VMware VeloCloud SD-WAN SFP Adaptor Singlemode Fiber	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Day Replacement NOTE: Must be ordered in conjunction with Zayo - VMware VeloCloud SD-WAN Edge 700 Series appliance	QOS-SFP-1G-LX
26	SFP Adaptor - 10G/1G to LC/SX/Multimode Fiber	Zayo - VMware VeloCloud SD-WAN SFP Adaptor Multimode Fiber	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Day Replacement NOTE: Must be ordered in conjunction with Zayo - VMware VeloCloud SD-WAN Edge 700 Series appliance	QOS-SFP-10G-SX

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
27	VeloCloud Rackmount Kit	VeloCloud Rackmount Kit	Zayo owned and managed SD-WAN appliance, VMware VeloCloud SD-WAN Premium Edition, Proactive Managed Services, Same Day Replacement NOTE: Must be ordered in conjunction with Zayo - VMware VeloCloud SD-WAN Edge 700 Series appliance	VC-AC-RMB

24.3 NETWORK DISASTER/OPERATIONAL RECOVERY

24.3.1 Telecommunications Service Priority (TSP) Program

When applicable, the Contractor shall comply with the Telecommunications Service Priority (TSP) Program, a Federal Communications Commission (FCC) mandate for prioritizing service requests by identifying those services critical to National Security and Emergency Preparedness (NS/EP) and be in compliance with all related CPUC and FCC requirements.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.4 DISTRIBUTED DENIAL OF SERVICE MITIGATION SERVICES

The Contractor shall provide a network based Distributed Denial of Service (DDoS) detection and mitigation service, in support of Contractor's Internet services. All hardware/software necessary to provide service shall reside in the Contractor's network and shall be maintained, monitored and supported by the Contractor. Mitigation shall occur in the Contractor IP Network before traffic reaches Customer edge router. Contractor shall establish User and Entity Behavior Analytical (UEBA) traffic patterns to minimize false positives during the detection/mitigation process and perform periodic "tuning" of normal traffic patterns established. The Contractor shall analyze, identify, report and alert on anomalies in Customer traffic under DDoS attacks. Upon detection of a DDoS

attack, Contractor shall reroute traffic to a network based mitigation center where DDoS attack packets are identified and dropped. Valid packets shall be routed to the Customer edge router. Upon Contractor determination that the DDoS attack has subsided, Contractor shall restore the normal routing of Customer traffic.

The Bidder's DDoS solution shall mitigate volumetric, protocol or resource, and application layer (Layers 3, 4 & 7) attacks.

Bidder's DDoS offering shall defend against the following threats/attacks at a minimum:

1. Network flood attacks (SYN, SYN-ACK, TCP, UDP, IP, ICMP, etc.);

Bidder understands the Requirement and shall meet or exceed it? Yes

2. Address, port scanning and sniffing attacks;

Bidder understands the Requirement and shall meet or exceed it? Yes

3. DNS attacks;

Bidder understands the Requirement and shall meet or exceed it? Yes

4. Web application attacks (HTTP flood attacks, etc.); and,

Bidder understands the Requirement and shall meet or exceed it? Yes

5. Protocol abuse attacks.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.4.1 DDoS Initiation

The Contractor shall support the initiation of DDoS mitigation described below:

1. Customer identifies the DDoS attack and initiates the mitigation; or,
2. Contractor identifies the DDoS attack and Customer authorizes the mitigation.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.4.2 DDoS Activities

The Contractor shall perform the following activities at a minimum:

1. Monitoring of Customer traffic patterns;
2. Establish network traffic baselines;

3. Detection of Customer traffic anomalies;
4. Scrubbing of Customer traffic by dropping DDoS attack packets;
5. Perform detection and anomaly analysis;
6. Develop and provide access to a strategy for identifying and mitigating real time attacks;
7. Issuance of email alert and a verbal person-to-person telephone call to authorized users within 15 minutes when an anomaly or attack is detected;
8. Issuance of email alert and a verbal person-to-person telephone call to authorized users within 15 minutes of when mitigation services commence; and,
9. Analyze attack patterns throughout Contractor IP backbone and alerting authorized users of IP threats, provide authorized users the information via secure portal for addressing/mitigating IP threats.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.4.2.1 U.S. Based DDoS Mitigation Services Waiver

The provisions detailed in eVAQ General Provisions Section 92, U.S. Based Services, will not apply to the Contractor's DDoS mitigation efforts under the following conditions:

1. Attacks where malicious traffic originates outside of the U.S. and is mitigated outside of the U.S.;
2. Contractor personnel located outside the U.S. may access public information (including Public IP address information) only to the extent necessary to mitigate a DDoS attack; and,
3. CPNI shall not be provided to individuals outside of the U.S.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.4.3 DDoS Detection and Mitigation Web Portal and Reporting

Contractor shall provide a secure web based portal for authorized users.

Contractor's portal shall provide authorized users the following at a minimum:

1. A view of their traffic patterns;

Bidder understands the Requirement and shall meet or exceed it? Yes

2. A view of the real time attack and mitigation strategy;

Bidder understands the Requirement and shall meet or exceed it? Yes

3. IP threat alerts;

Bidder understands the Requirement and shall meet or exceed it? Yes

4. Information for addressing and mitigating IP threats; and,

Bidder understands the Requirement and shall meet or exceed it? Yes

Contractor's portal shall provide authorized users access to the following reports:

1. Traffic anomaly detection;

Bidder understands the Requirement and shall meet or exceed it? Yes

2. TCP and UDP protocol summary; and,

Bidder understands the Requirement and shall meet or exceed it? Yes

3. Top IP "talkers" summary.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.4.4 DDoS Detection and Mitigation Features

The Contractor shall offer the DDoS Detection and Mitigation Service detailed in Table 24.4.4.a.

Table 24.4.4.a – DDoS Detection and Mitigation Service

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
1	DDoS Mitigation 1.544–10 Mbps	DDoS Mitigation Services for 1.544–10 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 1.544 Mbps through 10 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444001	Yes
2	DDoS Mitigation 15 Mbps	DDoS Mitigation Services for 15 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 15 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444002	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
3	DDoS Mitigation 25 Mbps	DDoS Mitigation Services for 25 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 25 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444003	Yes
4	DDoS Mitigation 50 Mbps	DDoS Mitigation Services for 50 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 50 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444004	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
5	DDoS Mitigation 100 Mbps	DDoS Mitigation Services for 100 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 100 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444005	Yes
6	DDoS Mitigation 250 Mbps	DDoS Mitigation Services for 250 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 250 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444006	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
7	DDoS Mitigation 500 Mbps	DDoS Mitigation Services for 500 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 500 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444007	Yes
8	DDoS Mitigation 1 Gbps	DDoS Mitigation Services for 1 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 1 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444008	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
9	DDoS Mitigation 5 Gbps	DDoS Mitigation Services for 5 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 5 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444009	Yes

The Contractor may offer Unsolicited DDoS Detection and Mitigation features in Table 24.4.4.b.

Table 24.4.4.b – Unsolicited DDoS Detection and Mitigation Service and Features

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
1	DDoS Mitigation 10 Gbps	DDoS Mitigation Services for 10 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 10 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444010

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
2	DDoS Mitigation 20 Mbps	DDoS Mitigation Services for 20 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 20 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444011
3	DDoS Mitigation 30 Mbps	DDoS Mitigation Services for 30 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 30 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444012
4	DDoS Mitigation 35 Mbps	DDoS Mitigation Services for 35 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 35 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444013
5	DDoS Mitigation 40 Mbps	DDoS Mitigation Services for 40 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 40 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444014

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
6	DDoS Mitigation 45 Mbps	DDoS Mitigation Services for 45 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 45 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444015
7	DDoS Mitigation 55 Mbps	DDoS Mitigation Services for 55 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 55 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444016
8	DDoS Mitigation 60 Mbps	DDoS Mitigation Services for 60 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 60 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444017
9	DDoS Mitigation 150 Mbps	DDoS Mitigation Services for 150 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 150 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444018

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
10	DDoS Mitigation 200 Mbps	DDoS Mitigation Services for 200 Mbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 200 Mbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444019
11	DDoS Mitigation 2 Gbps	DDoS Mitigation Services for 2 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 2 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444020
12	DDoS Mitigation 20 Gbps	DDoS Mitigation Services for 20 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 20 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444022
13	DDoS Mitigation 30 Gbps	DDoS Mitigation Services for 30 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 30 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444023

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
14	DDoS Mitigation 40 Gbps	DDoS Mitigation Services for 40 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 40 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444024
15	DDoS Mitigation 50 Gbps	DDoS Mitigation Services for 50 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 50 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444025
16	DDoS Mitigation 60 Gbps	DDoS Mitigation Services for 60 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 60 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444026
17	DDoS Mitigation 70 Gbps	DDoS Mitigation Services for 70 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 70 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444027

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier
18	DDoS Mitigation 80 Gbps	DDoS Mitigation Services for 80 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 80 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444028
19	DDoS Mitigation 90 Gbps	DDoS Mitigation Services for 90 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 90 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444029
20	DDoS Mitigation 100 Gbps	DDoS Mitigation Services for 100 Gbps of traffic flow.	Network-based DDoS Mitigation on your Zayo-provided Internet Service for 100 Gbps. The cloud-based service includes proactive monitoring, incident notification, traffic mitigation, unlimited scrubbing, reporting and portal access.	2444030

24.5 OTHER SERVICES

24.5.1 Hourly Rates for Services

The hourly classifications of hours worked for services described in this section will be as follows:

1. Regular Hours – Hours worked between 8:00AM and 4:59PM, Monday through Friday.

2. Overtime Hours – Hours worked between 5:00PM and 7:59AM, Monday through Friday and all day Saturday.
3. Sunday and Holiday Hours – Any hours worked on Sunday or State of California holidays.

When coordinated scheduling for projects between the State and the Contractor occurs, the State and the Contractor may mutually agree that hours worked between 5:00PM and 7:59AM, Monday through Friday and all day Saturday and any hours worked on Sunday or State of California holidays can be classified as Regular Hours in accordance with the State of California Department of Industrial Relations.

Bidder understands the Requirement and shall meet or exceed it? Bidder understands the Requirement and shall meet or exceed it? Yes

24.5.2 Services Related Infrastructure (SRI)

The Contractor shall offer infrastructure service as defined below.

24.5.2.1 Extended Demarcation Wiring Services

The Contractor shall provide Extended Demarcation (Extended Demarc) wiring to support the services covered by this IFB C4DNCS19 Category for all of the Customer occupied buildings where services under this Contract are being offered. Extended Demarc wiring includes wire/cable related activities required to extend the demarcation point to the Customer defined termination location or cross-connect point from the Contractor's MPOE.

Bidder understands the Requirement and shall meet or exceed it? Bidder understands the Requirement and shall meet or exceed it? Yes

Extended Demarc wiring shall include the necessary wire/cable, connectors, jumpers, panel, and jack. Extended Demarc wiring shall also include associated trouble shooting, testing and labeling. Extended Demarc wiring is limited to the following:

1. Installation of cabling for extending services from the MPOE location to the Customer's point of utilization;

2. Installation of cross-connects or rearrangement of existing jumpers;
3. Identification and testing of existing cabling beyond the MPOE to the Customer's Equipment location; and,
4. Installation intervals shall be in accordance with the timeframes identified for the services that this cabling will support, and shall be subject to the SLAs associated with that service.

Bidder understands the Requirement and shall meet or exceed it? Yes

The Contractor shall not be required to complete Extended Demarc wiring from the MPOE to the extended Demarc location if:

1. The wire/cable pathway is blocked, and cannot be cleared without significant effort or damage to the Customer site;
2. The wire/cable pathway is in an asbestos or other environment hazardous to the Contractor's personnel, or where such work would be hazardous to the public or to the Customer's staff; or,
3. Upon written release provided by either the Customer or by the CALNET Program.

The Bidder shall provide a price in the Cost Worksheets for all labor and materials required for Extended Demarc wiring necessary to complete the provisioning of one Demarc extension as described herein. The Bidder shall provide one price for each media identified.

Wiring will be installed according to industry Standards and cabling recommendations published in the State Telecommunications Management Manual (STMM), Facilities Management Chapter, and Uniform Building Cabling/Wiring current at the time of this IFB and as periodically updated by the CALNET Program. Additionally, all wiring installation and maintenance activities will be in accordance with all applicable EIA/TIA, BICSI, and ITU-T recommended standards current at the time of installation or maintenance.

Bidder understands the Requirement and shall meet or exceed it? Yes

Bidder shall provide the Extended Demarcation Wiring Services described in Table 24.5.2.1

Table 24.5.2.1 – Extended Demarcation Wiring Services

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
1	Extended Demarcation -Copper – Regular Hours	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment. Includes 300 feet of four-pair cable and an RJ48 or equivalent jack.	The extension of any copper 4 pair facility from the Customer's MPOE to any point up to 300 feet in the Customer-provided conduit or wiring space as defined in 24.5.2.1. The service will include cable, attachments, jumpers and connectors including the proper RJ 48 jacks or equivalent. Work shall conform to the State standards. For service performed Monday through Friday from 8:00 am to 4:59 pm (PT), excepting State Holidays.	24521001	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
2	Extended Demarcation -Copper – Overtime Hours	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment. Includes 300 feet of four-pair cable and an RJ48 or equivalent jack.	The extension of any copper 4 pair facility from the Customer's MPOE to any point up to 300 feet in the Customer-provided conduit or wiring space as defined in 24.5.2.1. The service will include cable, attachments, jumpers and connectors including the proper RJ 48 jacks or equivalent. Work shall conform to the State standards. For service performed Monday through Friday from 5:00 pm to 7:59 am and all day Saturday (PT), excepting State Holidays.	24521002	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
3	Extended Demarcation -Copper – Sunday and Holiday Hours	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment. Includes 300 feet of four-pair cable and an RJ48 or equivalent jack.	The extension of any copper 4 pair facility from the Customer's MPOE to any point up to 300 feet in the Customer-provided conduit or wiring space as defined in 24.5.2.1. The service will include cable, attachments, jumpers and connectors including the proper RJ 48 jacks or equivalent. Work shall conform to the State standards. For service performed any time Sunday and State Holidays.	24521003	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
4	Extended Demarcation -Copper 25 Pair – Regular Hours	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment. Includes 300 feet or less of Category 5 25-pair CMP cable, one patch panel and mounting hardware. Ten Category 5e, three meter jumpers; one 24-port patch panel to be provided in the MPOE and Intermediate Distribution Frame (IDF) for all circuits being extended. Includes associated troubleshooting, testing, and labeling.	The extension of any copper 25 pair facility from the Customer's MPOE to the point of utilization, up to 300 feet in the Customer-provided conduit or wiring space as defined in 24.5.2.1. The service will include cable, attachments, 10 x 3-meter jumpers and connectors including 1 patch panel and mounting hardware at the (IDF) and 1 x 24-port patch panel at the MPOE. The installation will be tested, labeled and documented. Work shall conform to State standards. For service performed Monday through Friday from 8:00 am to 4:59 pm (PT), excepting State Holidays.	24521004	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
5	Extended Demarcation -Copper 25 Pair – Overtime Hours	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment. Includes 300 feet or less of Category 5 25-pair CMP cable, one patch panel and mounting hardware. Ten Category 5e, three meter jumpers; one 24-port patch panel to be provided in the MPOE and Intermediate Distribution Frame (IDF) for all circuits being extended. Includes associated troubleshooting, testing, and labeling.	The extension of any copper 25 pair facility from the Customer's MPOE to the point of utilization, up to 300 feet in the Customer-provided conduit or wiring space as defined in 24.5.2.1. The service will include cable, attachments, 10 x 3-meter jumpers and connectors including 1 patch panel and mounting hardware at the (IDF) and 1 x 24-port patch panel at the MPOE. The installation will be tested, labeled and documented. Work shall conform to State standards. For service performed Monday through Friday from 5:00 pm to 7:59 am (PT), and all day Saturday, excepting State Holidays.	24521005	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
6	Extended Demarcation -Copper 25 Pair – Sunday and Holiday Hours	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment. Includes 300 feet or less of Category 5 25-pair CMP cable, one patch panel and mounting hardware. Ten Category 5e, three meter jumpers; one 24-port patch panel to be provided in the MPOE and Intermediate Distribution Frame (IDF) for all circuits being extended. Includes associated troubleshooting, testing, and labeling.	The extension of any copper 25 pair facility from the Customer's MPOE to the point of utilization, up to 300 feet in the Customer-provided conduit or wiring space as defined in 24.5.2.1. The service will include cable, attachments, 10 x 3-meter jumpers and connectors including 1 patch panel and mounting hardware at the (IDF) and 1 x 24-port patch panel at the MPOE. The installation will be tested, labeled and documented. Work shall conform to State standards. For service performed any time Sunday and State Holidays.	24521006	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
7	Extended Demarcation - Optical Fiber Link – Regular Hours	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a fiber trunk or trunking equipment, Strand count required to provision one/each service only. Includes up to 1,000 feet of 62.5/125 – or 50/125 – micron, two-strand CMP fiber drop cable with adapters, enclosures, connectors, and two SC-SC duplex patch cords for each single circuit extension. Includes associated troubleshooting, testing and labeling.	The extension of 1 each 62.5/125 – or 50/125 – micron, 2-strand CMP fiber drop cable with adapters, enclosures, connectors, and 2 SC-SC duplex patch cords for each single circuit extension. Includes associated troubleshooting, testing and labeling. This facility is from the Customer's MPOE to the point of utilization, up to 1000 feet in the Customer-provided conduit or wiring space as defined in 24.5.2.1. Work shall conform to the State standards. For service performed Monday through Friday from 8:00 am to 4:59 pm (PT), excepting State Holidays.	24521007	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
8	Extended Demarcation - Optical Fiber Link – Overtime Hours	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a fiber trunk or trunking equipment, Strand count required to provision one/each service only. Includes up to 1,000 feet of 62.5/125 – or 50/125 – micron, two-strand CMP fiber drop cable with adapters, enclosures, connectors, and two SC-SC duplex patch cords for each single circuit extension. Includes associated troubleshooting, testing and labeling.	The extension of 1 each 62.5/125 – or 50/125 – micron, 2-strand CMP fiber drop cable with adapters, enclosures, connectors, and 2 SC-SC duplex patch cords for each single circuit extension. Includes associated troubleshooting, testing and labeling. This facility is from the Customer's MPOE to the point of utilization, up to 1000 feet in the Customer-provided conduit or wiring space as defined in 24.5.2.1. Work shall conform to the State standards. For service performed Monday through Friday from 5:00 pm to 7:59 am (PT), and all day Saturday excepting State Holidays.	24521008	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
9	Extended Demarcation - Optical Fiber Link – Sunday and Holiday Hours	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a fiber trunk or trunking equipment, Strand count required to provision one/each service only. Includes up to 1,000 feet of 62.5/125 – or 50/125 – micron, two-strand CMP fiber drop cable with adapters, enclosures, connectors, and two SC-SC duplex patch cords for each single circuit extension. Includes associated troubleshooting, testing and labeling.	The extension of 1 each 62.5/125 – or 50/125 – micron, 2-strand CMP fiber drop cable with adapters, enclosures, connectors, and 2 SC-SC duplex patch cords for each single circuit extension. Includes associated troubleshooting, testing and labeling. This facility is from the Customer's MPOE to the point of utilization, up to 1000 feet in the Customer-provided conduit or wiring space as defined in 24.5.2.1. Work shall conform to the State standards. For service performed Sunday and State Holidays.	24521009	Yes

24.5.2.2 Unsolicited Services Related Infrastructure

Bidder may offer additional unsolicited Services Related Infrastructure in Table 24.5.2.2.

Table 24.5.2.2 – Unsolicited Services Related Infrastructure

Line Item	Feature Name	Bidder's Product Identifier	Bidder's Product Description, Restrictions and Limitations
1			
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24.5.3 Services Related Hourly Support

The Contractor shall provide labor for the diagnosis and/or repair of services listed in this Contract and all costs for repair are the responsibility of the service provider unless it is specifically determined that the cause of service failure is outside the scope of the Contractors responsibilities. Work performed under this Section 24.5.3 is authorized only for situations where the Contractor has dispatched personnel to diagnose a service problem that is discovered to be caused by factors outside the responsibility of the Contractor or no trouble is found.

Bidder understands the Requirement and shall meet or exceed it? Yes

In Cost Worksheet 24.5.3, the Contractor shall provide a fixed hourly rate schedule for the labor classifications required to diagnose and/or repair the contracted services. The rates identified shall only be used for the diagnosis and/or repair of contracted services and no materials shall be included in the rates. The total amount of labor hours permitted to be performed is ten hours per dispatch/occurrence.

Bidder understands the Requirement and shall meet or exceed it? Yes

The Contractor shall offer emergency restoration services as detailed in Table 24.5.3.

Table 24.5.3 – Services Related Hourly Support

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
1	Field Service Repair Technician Regular Hours	Field technician properly trained to an expert level for the service being dispatched to diagnose and/or repair a CALNET DNCS service problem that turns out to be caused by factors outside the responsibility of the Contractor.	One hour of service as labor performed by a properly trained field service technician familiar with the suppliers network service components, cabling and systems. This element is for such services performed Monday through Friday from 8:00AM to 4:59PM (PST or PDT), excepting State of California Holidays.	2453001	Yes

Line Item	Feature Name	Feature Description	Bidder's Product Description, Restrictions and Limitations	Bidder's Product Identifier	Bidder Meets or Exceeds? Yes or No
2	Field Service Repair Technician Overtime Hours	Field technician properly trained to an expert level for the service being dispatched to diagnose and/or repair a CALNET DNCS service problem that turns out to be caused by factors outside the responsibility of the Contractor.	One hour of service as labor performed by a properly trained field service technician familiar with the suppliers network service components, cabling and systems. This element is for such services performed Monday through Friday from 5:00PM to 7:59AM (PST or PDT) and all day Saturday, excepting State of California Holidays.	2453002	Yes
3	Field Service Repair Technician Sunday and Holiday Hours	Field technician properly trained to an expert level for the service being dispatched to diagnose and/or repair a CALNET DNCS service problem that turns out to be caused by factors outside the responsibility of the Contractor.	One hour of service as labor performed by a properly trained field service technician familiar with the suppliers network service components, cabling and systems. This element is for such services performed anytime on Sunday or State of California holidays.	2453003	Yes

24.6 SERVICE LEVEL AGREEMENTS (SLA)

The Contractor shall provide Service Level Agreements (SLAs) as defined below. The intent of this section is to provide Customers, CALNET Program and the Contractor with requirements that define and assist in the management of the SLAs. This section includes the SLA formats, general requirements, stop clock conditions, and the Technical SLAs for the services identified in this solicitation.

24.6.1 Service Level Agreement Format

The Contractor shall adhere to the following format and include the content as described below for each Technical SLA added by the Contractor throughout the Term of the Contract:

1. SLA Name – Each SLA Name must be unique;
2. Definition - Describes what performance metric will be measured;
3. Measurements Process - Provides instructions how the Contractor will continuously monitor and measure SLA performance to ensure compliance. The Contractor shall provide details describing how and what will be measured. Details should include source of data and define the points of measurement within the system, application, or network;
4. Service(s) - All applicable services will be listed in each SLA;
5. Objective(s) – Defines the SLA performance goal/parameters; and,
6. Rights and Remedies
7. Per Occurrence: Rights and remedies are paid on a per event basis during the bill cycle; and,
8. Monthly Aggregated Measurements: Rights and remedies are paid once during the bill cycle based on an aggregate of events over a defined period of time.

The Contractor shall proactively apply a credit or refund when an SLA objective is not met. CALNET SLA Rights and Remedies do not require the Customer to submit a request for credit or refund.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.2 Technical Requirements versus SLA Objectives

Sections 24.2 (Flat Rate Internet Services), 24.3 (Network Disaster/Operational Recovery), 24.4 (DDoS Mitigation Services), and 24.5 (Other Services) define

the technical requirements for each service. These requirements are the minimum parameters each Bidder must meet in order to qualify for Contract award. Upon Contract award the committed technical requirements will be maintained throughout the remainder of the Contract.

Committed SLA objectives are minimum parameters which the Contractor shall be held accountable for all rights and remedies throughout Contract Term.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.3 Methods of Outage Reporting: Customer or Contractor

There are two methods in which CALNET service failures or quality of service issues may be reported and Contractor trouble tickets opened: Customer reported or Contractor reported.

The first method of outage reporting results from a Customer reporting service trouble to the Contractor's Customer Service Center via phone call or opening of a trouble ticket using the on-line Trouble Ticket Reporting Tool (SOW Business Requirements Section G.10.4, Trouble Ticket Reporting Tool (TTRT)).

The second method of outage reporting occurs when the Contractor opens a trouble ticket as a result of network/system alarm or other method of service failure identification. In each instance the Contractor shall open a trouble ticket using the Trouble Ticket Reporting Tool (SOW Business Requirements Section G.10.4) and monitor and report to Customer until service is restored.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.4 Bidder Response to Service Level Agreements

Many of the Service Level Agreements described below include multiple objective levels – Basic, Standard and Premier. Bidders shall indicate one specific objective level they are committing to for each service in space provided in the "Objective" section of each SLA description.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.5 Contractor SLA Management Plan

Within 90 calendar days of Contract award, the Contractor shall provide CALNET CMO with a detailed SLA Management Plan that describes how the

Contractor will manage the Technical SLAs for services in this IFB. The SLA Management plan shall provide processes and procedures to be implemented by the Contractor. The SLA Management Plan shall define the following:

1. Contractor SLA Manager and supporting staff responsibilities;
2. Contractor's process for measuring objectives for each SLA. The process shall explain how the Contractor will continuously monitor and measure SLA performance to ensure compliance. The Contractor shall provide details describing how and what will be measured. Details should include source of data and define the points of measurement within the system, application, or network;
3. Creation and delivery of SLA Reports (SOW Business Requirements Section G.10.5). The Contractor shall include a sample report in accordance with SOW Business Requirements Section G.10.5, SLA Reports for the following: SLA Service Performance Report (SOW Business Requirements Section G.10.5.1), SLA Provisioning Report (SOW Business Requirements Section G.10.5.2), SLA Catastrophic Outage Reports (SOW Business Requirements Section G.10.5.3), and Trouble Ticket and Provisioning/SLA Credit Report (SOW Business Requirements Section G.10.5.4). The Contractor shall commit to a monthly due date. The reports shall be provided to the CALNET Program via the Private Oversight Website (SOW Business Requirements Section G.10.2);
4. SLA invoicing credit and refund process;
5. Contractor SLA problem resolution process for SLA management and SLA reporting. The Contractor shall provide a separate process for Customers and CALNET Program; and,
6. Contractor SLA Manager to manage all SLA compliance and reporting. The Contractor shall include SLA Manager contact information for SLA inquiries and issue resolution for Customer and CALNET Program.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.6 Technical SLA General Requirements

The Contractor shall adhere to the following general requirements which apply to all CALNET Technical SLAs (Section 24.6.8):

1. With the exception of the Provisioning SLA (Section 24.6.8.9), the total SLA rights and remedies for any given month shall not exceed the sum of 100% of the Total Monthly Recurring Charges (TMRC). Services with usage charges shall apply the Average Daily Usage Charge (ADUC) in addition to any applicable TMRC rights and remedies;
2. If a circuit or service fails to meet one or more of the performance objectives, only the SLA with the largest monthly Rights and Remedies will be credited to the Customer, per event;
3. The Contractor shall apply CALNET SLAs and remedies for services provided by Subcontractors and/or Affiliates;
4. The Definition, Measurement Process, Objectives, and Rights and Remedies shall apply to all services identified in each SLA. If a Category or Subcategory is listed in the SLA, then all services under that Category or Subcategory are covered under the SLA. Exceptions must be otherwise stated in the SLA; and,
5. TMRC rights and remedies shall include the service, option(s), and feature(s) charges.

Bidder understands the Requirement and shall meet or exceed it? Yes

6. The Contractor shall proactively and continuously monitor and measure all Technical SLA objectives.

Bidder understands the Requirement and shall meet or exceed it? Yes

7. The Contractor shall proactively credit all rights and remedies to the Customer within 60 calendar days of the trouble resolution date on the trouble ticket or within 60 calendar days of the Due Date on the Service Request for the Provisioning SLA.

Bidder understands the Requirement and shall meet or exceed it? Yes

8. To the extent that Contractor offers additional SLAs, or SLAs with more advantageous rights and/or remedies for same or similar services offered through tariffs, online service guides, or other similarly situated government contracts (Federal, State, County, City), The State will be entitled to the same rights and/or remedies therein. The Contractor shall present the SLAs to CALNET Program for possible inclusion via amendments;
9. The Contractor shall apply CALNET DNCS SLAs and remedies to services provided in all areas the Contractor provides service

and/or open to competition (as defined by the CPUC). Any SLAs and remedies negotiated between Contractor and Incumbent Local Exchange Carriers in territories closed to competition shall be passed through to the CALNET DNCS Customer;

Bidder understands the Requirement and shall meet or exceed it? Yes

10. The election by CALNET Program of any SLA remedy covered by this Contract shall not exclude or limit CALNET Program or any Customer's rights and remedies otherwise available within the Contract or at law or equity;
11. The Contractor shall apply rights and remedies when a service fails to meet the SLA objective even when backup or protected services provide Customer with continuation of services;

Bidder understands the Requirement and shall meet or exceed it? Yes

12. The Contractor shall act as the single point of contact in coordinating all entities to meet the State's needs for provisioning, maintenance, restoration and resolution of service issues or that of their Subcontractors, Affiliates or resellers under this Contract;
13. The Customer Escalation Process and/or the CALNET CMO Escalation Process shall be considered an additional right and remedy if the Contractor fails to resolve service issues within the SLA objective(s);
14. Trouble reporting and restoration shall be provided 24x7 for CALNET services;

Bidder understands the Requirement and shall meet or exceed it? Yes

15. SLAs apply 24x7 unless SLA specifies an exception;
16. Contractor invoices shall clearly cross reference the SLA credit to the service Circuit ID in accordance with SOW Business Requirements Section G.6;

Bidder understands the Requirement and shall meet or exceed it? Yes

17. The Contractor shall provide a CALNET DNCS SLA Manager responsible for CALNET DNCS SLA compliance. The SLA Manager shall attend regular meetings and be available upon request to address CALNET Program SLA oversight, report issues, and problem resolution concerns. The CALNET DNCS SLA Manager shall also coordinate SLA support for Customer SLA inquiries and issue resolution;

18. The Contractor shall provide Customer and CALNET Program support for SLA inquiries and issue resolution; and,

19. Any SLAs and remedies negotiated between Contractor and third party service provider in territories closed to competition shall be passed through to the CALNET DNCS Customer.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.7 Trouble Ticket Stop Clock Conditions

Only the following conditions shall be allowed to stop the duration of the Service Level Agreements. The Contractor shall document durations using the Stop Clock Condition (SCC) listed in Table 24.6.7.a, which must include start and stop time stamps in the Contractor's Trouble Ticket Reporting Tool (SOW Business Requirements Section G.10.4) or Customer provisioning Service Request for each application of an SCC.

Bidder understands the Requirement and shall meet or exceed it? Yes

The Contractor shall not consider "cleared while testing" or "no trouble found" as a SCC.

Bidder understands the Requirement and shall meet or exceed it? Yes

Contractor observation timeframes, not requested by End-User, after incident resolution shall not be included in Outage Duration reporting.

Bidder understands the Requirement and shall meet or exceed it? Yes

Note: The Glossary (SOW Appendix A) defines term "End-User" as the "individual within an Entity that is receiving services and/or features provided under the Contract."

Table 24.6.7 – Stop Clock Conditions

Line Item	Stop Clock Condition (SCC)	SCC Definition
1	END-USER REQUEST	Periods when a restoration or testing effort is delayed at the specific request of the End-User. The SCC shall exist during the period the Contractor was delayed, provided that the End-User's request is documented and time stamped in the Contractor's trouble ticket or Service Request system and shows efforts are made to contact the End-User during the applicable Stop Clock period.
2	OBSERVATION	Time after a service has been restored but End-User request ticket is kept open for observation. If the service is later determined by the End-User to not have been restored, the Stop Clock shall continue until the time the End-User notifies the Contractor that the Service has not been restored.
3	END-USER NOT AVAILABLE	Time after a service has been restored but End-User is not available to verify that the Service is working. If the service is later determined by the End-User to not have been restored, the Stop Clock shall apply only for the time period between Contractor's reasonable attempt to notify the End-User that Contractor believes the service has been restored and the time the End-User notifies the Contractor that the Service has not been restored.
4	WIRING	Restoration cannot be achieved because the problem has been isolated to wiring that is not maintained by Contractor or any of its Subcontractors or Affiliates. If it is later determined the wiring is not the cause of failure, the SCC shall not apply.
5	POWER	Trouble caused by a power problem outside of the responsibility of the Contractor.

Line Item	Stop Clock Condition (SCC)	SCC Definition
6	CUSTOMER PROVISIONING DELAY	Delays to Provisioning caused by lack of Customer's building entrance Facilities, conduit structures that are the Customer's responsibilities or Extended demarcation wiring. If the Service Providing Contractor has been contracted by the Customer for extended demarcation, this SCC shall not apply to missed dates/times. The Customer Provisioning Delay SCC is restricted to Provisioning SLAs only.
7	ACCESS	Limited access or contact with End-User provided the Contractor documents in the trouble ticket several efforts to contact End-User for the following: a. Access necessary to correct the problem is not available because access has not been arranged by site contact or End-User representative; b. Site contact refuses access to technician who displays proper identification; c. Customer provides incorrect site contact information which prevents access, provided that Contractor takes reasonable steps to notify End-User of the improper contact information and takes steps to obtain the correct information; or, d. Site has limited hours of business that directly impacts the Contractor's ability to resolve the problem. If it is determined later that the cause of the problem was not at the site in question, then the Access SCC shall not apply.

Line Item	Stop Clock Condition (SCC)	SCC Definition
8	STAFF	Any problem or delay to the extent caused by End-User's staff that prevents or delays Contractor's resolution of the problem. In such event, Contractor shall make a timely request to End-User staff to correct the problem or delay and document in trouble ticket.
9	APPLICATION	End-User software applications that interfere with repair of the trouble.
10	CPE	Repair/replacement of Customer Premise Equipment (CPE) not provided by Contractor if the problem has been isolated to the CPE. If determined later that the CPE was not the cause of the service outage, the CPE SCC will not apply.
11	NO RESPONSE	Failure of the trouble ticket originator or responsible End-User to return a call from Contractor's technician for on-line close of trouble tickets after the Service has been restored as long as Contractor can provide documentation in the trouble ticket substantiating the communication from Contractor's technician.
12	MAINTENANCE	An outage directly related to any properly performed scheduled maintenance or upgrade scheduled for CALNET DNCS service. Any such stop clock condition shall not extend beyond the scheduled period of the maintenance or upgrade. SLAs shall apply for any maintenance caused outage beyond the scheduled maintenance period. Outages occurring during a scheduled maintenance or upgrade period and not caused by the scheduled maintenance shall not be subject to the Maintenance SCC.
13	THIRD PARTY	Any problem or delay caused by a third party not under the control of Contractor, not preventable by Contractor, including, at a minimum, cable cuts not caused by the Contractor. Contractor's Subcontractors and Affiliates shall be deemed to be under the control of Contractor with respect to the equipment, services, or Facilities to be provided under this Contract.

Line Item	Stop Clock Condition (SCC)	SCC Definition
14	FORCE MAJEURE	Force Majeure events, as defined in the eVAQ General Provisions - Telecommunications, Section 28 (Force Majeure).
15	Customer Environmental	An outage directly caused by customer premise environmental conditions, which are outside the control and responsibility of the Contractor. This includes a non-secured location, excessive heat or lack of cooling. If determined later that the environmental conditions were not the cause of the service outage, or a result of the Contractor modifying Contractor provided equipment without Customer's approval, the Customer Environmental SCC will not apply.

Bidder understands the Requirement and shall meet or exceed it? Yes

The Contractor shall provide and manage the following Technical SLAs.

24.6.8 Technical Service Level Agreements (SLA)

24.6.8.1 Availability (M-S)

SLA Name: Availability

Definition:

The percentage of time a CALNET DNCS service is fully functional and available for use each calendar month.

Measurement Process:

The monthly Availability Percentage shall be based on the accumulative total of all Unavailable Time derived from all trouble tickets closed, for the individual affected service (per Circuit ID or Service ID), per calendar month. The monthly Availability Percentage equals the Scheduled Uptime per month less Unavailable Time per month divided by Scheduled Uptime per month multiplied by 100. Scheduled Uptime is based on 24 x number of days in the month. All Unavailable Time applied to other SLAs, which results in a remedy, will be excluded from the monthly accumulated total.

Services:

Flat Rate Internet Service
SD-WAN Orchestration Suite
SD-WAN Edge Device(s)

Objectives:

The objective will be based on the access type identified in the table below:

Access Type	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
InFRa	≥ 99.2%	≥ 99.5%	≥ 99.9%	S
InFRaM	≥ 99.2%	≥ 99.5%	≥ 99.9%	S
SD-WAN Orchestration Suite			≥ 99.95%	P
SD-WAN Edge Device(s)			≥ 99.95%	P

Rights and Remedies:

1. Per Occurrence:
 - End-User Escalation Process
 - CALNET CMO Escalation Process
2. Monthly Aggregated Measurements:
 - First month service fails to meet the committed SLA objective shall result in a 15% credit or refund of the TMRC.
 - The second consecutive month to fail to meet the committed SLA objective shall result in a 30% credit or refund of TMRC.
 - Each additional consecutive month to fail to meet the committed SLA objective shall result in a 50% credit or refund of the TMRC.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.2 Catastrophic Outage 1 (CAT 1) (M-S)

SLA Name: Catastrophic Outage 1 (CAT 1)

Definition:

The total loss of service at a single site resulting in the loss of service to five or more circuits or any single service at 500Mbps or greater.

Measurement Process:

The Outage Duration begins when a network alarm is received by the Contractor from an outage-causing event or the opening of a trouble ticket by a Customer, or the Contractor, whichever occurs first. The Contractor shall open a trouble ticket for each service (Circuit ID or Service ID) affected by the common cause. Each End-User service is deemed out of service from the first notification until the Contractor determines the End-User service (Circuit ID or Service ID) is restored minus SCC. Any service reported by a Customer as not having been restored shall have the outage time adjusted to the actual restoration time.

Services:

Flat Rate Internet Service

Objectives:

The objective restoral time will be:

Service Type	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
Internet Flat Rate Service	≤ 3 hours	≤ 2 hours	≤ 1 hour	S

Rights and Remedies:

- Per Occurrence:
 - 100% credit or refund of the TMRC for each End-User service not meeting the committed objective for each CAT 1 fault.
- Monthly Aggregated Measurements:

- N/A

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.3 Catastrophic Outage 2 (CAT 2) (M-S)

SLA Name: Catastrophic Outage 2 (CAT 2)

Definition:

A total failure of a service type in a central office (or equivalent facility), other than access, that results in a CALNET DNCS service failure. Or, a backbone failure or failure of any part of the equipment associated with the backbone that causes a CALNET DNCS service failure.

Measurement Process:

The Outage Duration begins when a network alarm is received by the Contractor from the outage-causing event or the opening of a trouble ticket by the Customer or Contractor, whichever occurs first. Upon notification from the Customer or network alarm, the Contractor shall compile a list for each End-User service affected by the common cause for tracking and reporting of the SLA rights and remedies. Outage Duration shall be measured on a per-End-User service (Circuit ID or Service ID) basis from information recorded from the network equipment/system or a Customer reported trouble ticket. Each End-User service (Circuit ID or Service ID) is deemed out of service from the first notification until the Contractor determines the End-User service is restored. Any End-User service reported by the End-User/Customer as not having been restored shall have the outage time adjusted to the actual restoration time.

Services:

Flat Rate Internet Service
SD-WAN Orchestration Suite
SD-WAN Edge Device(s)

Objectives:

The objective restoral time will be:

Access Type	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
Internet Flat Rate Service	≤ 1 Hour	≤ 30 Minutes	≤ 15 Minutes	S
SD-WAN Orchestration Suite			≤ 1 Hour	P
SD-WAN Edge Device(s)			≤ 2 Hours	P

Rights and Remedies:

1. Per Occurrence:
 - 100% credit or refund of the TMRC for each End-User service not meeting the committed objective per occurrence objective for a single CAT 2 fault.
2. Monthly Aggregated Measurements:
 - N/A

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.4 Catastrophic Outage 3 (CAT 3) (M-S)

SLA Name: Catastrophic Outage 3 (CAT 3)

Definition:

The total loss of Internet Service or SD-WAN Service on a system wide basis.

Measurement Process:

The Outage Duration begins when a network alarm is received by the Contractor from an outage-causing event or the opening of a trouble ticket by the Customer or the Contractor, whichever occurs first. Upon notification from the Customer or network alarm, the Contractor shall open a trouble ticket and compile a list for each End-User service (Circuit ID or Service ID) affected by the common cause for tracking and reporting of the SLA rights and remedies. Outage Duration shall be measured on a per-End-User service (Circuit ID or Service ID) basis from information recorded from the network equipment/system or trouble ticket. Each End-User service

(Circuit ID or Service ID) is deemed out of service from the first notification until the Contractor determines the End-User service is restored. Any End-User service reported by the End-User/Customer as not having been restored shall have the outage time adjusted to the actual restoration time.

Services:

Flat Rate Internet Service
SD-WAN Orchestration Suite
SD-WAN Edge Device(s)

Objectives:

The objective restoral time will be:

Access Type	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B or P)
Internet Flat Rate Service	≤ 30 Minutes	N/A	≤ 15 Minutes	B
SD-WAN Orchestration Suite			≤ 1 Hour	P
SD-WAN Edge Device(s)			≤ 2 Hours	P

Rights and Remedies:

1. Per Occurrence:
 - 100% credit or refund of the TMRC for each service (Circuit ID or Service ID) not meeting the committed objective for each Cat 3 fault.
2. Monthly Aggregated Measurements:
 - N/A

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.5 DDoS Mitigation (M-S)

SLA Name: DDoS Time to Initiate Mitigation

Definition:

The time to initiate DDoS mitigation upon the identification of an attack.

Measurement Process:

The amount of time between the detection via Customer or Contractor identification of an anomaly or attack, and the initiation of the mitigation process.

Services:

DDoS Mitigation

Objectives:

Mitigation shall begin within:

Access Type	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
DDoS Mitigation	≤ 45 Minutes	≤ 30 Minutes	≤ 15 Minutes	P

Rights and Remedies:

1. Per Occurrence:

Basic Time to Initiate Mitigation Minutes	Standard Time to Initiate Mitigation Minutes	Premier Time to Initiate Mitigation Minutes	Credit or Refund Percentage of TMRC for all components of DDoS feature per event
46 – 75	31 – 45	16 – 30	25%
76 – 135	46 – 75	31 – 45	50%
136 and over	76 and over	46 and over	100%

2. Monthly Aggregated Measurements:

- N/A

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.6 Excessive Outage (M-S)

SLA Name: Excessive Outage

Definition:

Any failure that prevents full functionality of the service that remains unresolved for more than the committed objective level.

Measurement Process:

This SLA is based on trouble ticket Unavailable Time. The circuit or service is not fully functional during the time the trouble ticket is reported as opened until restoration of the service, minus SCC. If the Customer reports a partial or complete service that is not fully functional and remains unresolved after the closure of the trouble ticket by the Contractor, the Unavailable Time shall be adjusted to the actual restoration time.

Services:

Flat Rate Internet Service

Objectives:

The Unavailable Time objective shall not exceed:

Access Type	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
Internet Flat Rate Service	16 Hours	12 Hours	8 Hours	S
SD-WAN Orchestration Suite			≤ 1 Hour	P
SD-WAN Edge Device(s)			≤ 2 Hours	P

Rights and Remedies:

1. Per Occurrence:

- 100% credit or refund of the TMRC for each service (Circuit ID or Service ID) out of service for a period greater than the committed objective level.
- Upon request from the Customer or the CALNET Program, the Contractor shall provide a briefing on the excessive outage restoration.

2. Monthly Aggregated Measurements:

- N/A

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.7 Managed Service Proactive Notification (M-S)

SLA Name: Managed Service Proactive Notification

Definition:

The proactive outage notification SLA provides credits if the Contractor fails to open a trouble ticket and notify Customer of an Outage for a managed service. Notification to the Customer shall occur through means agreed to by Contractor and CALNET Program.

An Outage is defined as an unscheduled period in which the managed service is interrupted and unavailable for use by Customer for 60 continuous seconds or more than 60 cumulative seconds within a 15-minute period measured by the Contractor.

Measurement Process:

The Outage Duration start shall be determined by the first Contractor network alarm resulting from the outage-causing event or the opening of a trouble ticket by the Customer, whichever occurs first. The Contractor has fifteen minutes (Notification Period) to open a trouble ticket and notify the Customer from the start point of the first network alarm. The Contractor is in compliance with the proactive outage notification SLA if the Customer opened the trouble ticket prior to the network alarm or Customer is notified by the Contractor within the Notification Period.

Services:

Flat Rate Internet Service with Managed Router or IP Enabled Routing Device
SD-WAN Orchestration Suite
SD-WAN Edge Device(s)

Objectives:

15 Minutes

Rights and Remedies:

1. Per Occurrence:
 - Customer will receive a credit or refund equal to 10% of the TMRC for each Contractor Managed Service (Circuit ID) that was impacted during an outage if the Customer was not proactively notified within the notification period
2. Monthly Aggregated Measurements:
 - N/A

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.8 Notification

SLA Name: Notification

Definition:

The Contractor notification to the CALNET Program and designated stakeholders in the event of a CAT 2 or CAT 3 failure, terrorist activity, threat of natural disaster, or actual natural disaster which results in a significant loss of telecommunication services to CALNET DNCS End-Users or has the potential to impact services in a general or statewide area. The State understands initial information requiring the nature of the outage may be limited.

Measurement Process:

The Contractor shall adhere to the Network Outage Response requirements (SOW Business Requirements Section G.3.3, Network Outage Response) and notify the CALNET Program and designated stakeholders for all CAT 2 and

CAT 3 Outages or for network outages resulting in a significant loss of service. Notification objectives will be based on the start time of the outage failure determined by the opening of a trouble ticket or network alarm, whichever occurs first. For events based on information such as terrorist activity or threat of natural disaster, the Contractor shall notify the CALNET Program and designated stakeholders when information is available for dissemination to the Customers.

Services:

Internet Flat Rate Service
SD-WAN Orchestration Suite
SD-WAN Edge Device(s)

Objectives:

Within 60 minutes of the above mentioned failures' start time, the Contractor shall notify the CALNET Program and designated stakeholders using a method defined in SOW Business Requirements, Network Outage Response.

At 60-minute intervals, updates shall be given on the above-mentioned failures via the method defined in SOW Business Requirements, Network Outage Response.

This objective is the same for Basic, Standard and Premier Commitments.

Rights and Remedies:

1. Per Occurrence:
 - Senior Management Escalation
2. Monthly Aggregated Measurements:
 - N/A

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.9 Provisioning (M-S)

SLA Name: Provisioning

Definition:

Provisioning shall include new services, moves, adds and changes, completed by the Contractor on or before the due dates. The Provisioning SLA shall be based on committed installation intervals established in this SLA or due dates negotiated between the Customer and the Contractor documented on the Contractor's order confirmation notification or Contracted Project Work SOW in accordance with SOW Business Requirements Section G.2.5.4, Provisioning and Implementation. The Contractor shall meet the committed interval dates or due date negotiated with the Customer. If the Customer agrees to a negotiated due date, the negotiated due date supersedes the committed interval. At the Customer's discretion, if the scope of the Service Request(s) meets the Coordinated or Managed Project criteria, negotiated due dates will be established and documented in the Project Timeline per SOW Business Requirements Section G.8, Contracted Service Project Work.

Provisioning SLAs have two objectives:

Objective 1: Individual service installation; and,

Objective 2: Successful Install Monthly Percentage by service type.

Note: Provisioning timelines include extended demarcation wiring when appropriate.

Measurement Process:

Objective 1: Individual Service Installations: Install intervals are based on the committed installation intervals established in this SLA or due dates negotiated between the Customer and the Contractor. This objective requires the Contractor to meet the due date for each individual service installation. This includes individual circuit/service level installations for Coordinated and Managed Projects.

Objective 2: Successful Install Monthly Percentage per Service Type: The Contractor shall sum all individual installations per service, as listed below, meeting the objective in the measurement period and divide by the sum of all individual service installations due per service in the measurement period and multiply by 100 to equal the percentage of service installations completed on time. The Contractor must meet or exceed the objective below in order to avoid the rights and remedies.

Services:

Features must be installed in conjunction with the service except when listed below:

Service	Committed Interval Days	Coordinated/Managed Project
InFRa	30	Coordinated/Managed Project
InFRaM	30	Coordinated/Managed Project
SD-WAN Orchestration Suite Initiation	14	Coordinated/Managed Project
SD-WAN Edge Device(s)	10	Coordinated/Managed Project

Objectives:

Objective 1: Individual service installation: Service provisioned on or before the due date per installation Service Request.

Objective 2: Monthly Average percent by service type:

Access Type	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B or P)
InFRa	≥ 90%	N/A	≥ 95%	B
InFRaM	≥ 90%	N/A	≥ 95%	B
SD-WAN Orchestration Suite			≥ 99%	P
SD-WAN Edge Device(s)			≥ 99%	P

Rights and Remedies:

1. Per Occurrence:

- Objective 1: Individual service installations: 50% of installation fee credited to the Customer for any missed committed objective.

2. Monthly Aggregated Measurements:

- Objective 2: 100% of the installation fee credited to the Customer for all service installations (per service type) that did not complete within the committed objective during the

month if the Successful Install Monthly Percentage is below the committed objective.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.10 Time to Repair (M-S)

SLA Name: Time to Repair

Definition:

Any failure that prevents full functionality of the service that remains unresolved for more than the committed objective level.

Measurement Process:

This SLA is based on trouble ticket Unavailable Time per service (Circuit ID or Service ID). The circuit or service is not fully functional during the time the trouble ticket is reported as opened until restoration of the service, minus SCC. If the Customer reports a service that is not fully functional and remains unresolved after the closure of the trouble ticket by the Contractor, the Unavailable Time shall be adjusted to the actual restoration time. This SLA is applied per occurrence.

Services:

Flat Rate Internet Service
SD-WAN Orchestration Suite
SD-WAN Edge Device(s)

Objectives:

The Unavailable Time objective shall not exceed:

Service Type	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
Internet Flat Rate Service	6 Hours	5 Hours	4 Hours	P
SD-WAN Orchestration Suite			≤ 45 Minutes	P

Service Type	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
SD-WAN Edge Device(s)			≤ 90 minutes	P

Rights and Remedies:

1. Per Occurrence:
 - 25% credit or refund of the TMRC for each service (Circuit ID or Service ID) out of service for a period greater than the committed objective level.
2. Monthly Aggregated Measurements:
 - N/A

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.11 Unsolicited Service Enhancement SLAs

All unsolicited service enhancements shall be considered a feature of the service, and therefore shall be included as such under the SLAs as defined in this section.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.12 Proposed Unsolicited Offerings

The Contractor shall provide SLAs as defined in SLA Section 24.6.8 for each unsolicited offering determined by the CALNET Program not to be a feature of a service or a component of an unbundled service identified in the technical requirements. SLA tables shall be amended after Contract award to include all new unsolicited services.

Bidder understands the Requirement and shall meet or exceed it? Yes

24.6.8.13 Contract Amendment Service Enhancement SLAs

All Contract amendment service enhancements shall be considered a feature of the service, therefore included as such under the SLAs as defined in Section 24.6.8.

Bidder understands the Requirement and shall meet or exceed it? Yes