



# **IFB STPD 12-001-A, C3-A-12-10-TS-12 Amendment #2, Rev. May 12, 2015**

**CALNET 3, Category 1: Voice and Data Services**

**Subcategory 1.2 – MPLS, VPN and Converged VoIP**

**Volume 2 –**

**Response to Unique Subcategory Requirements**

**PART B. SOW TECHNICAL REQUIREMENTS  
RESPONSE**

## TECHNICAL REQUIREMENTS

### SUBCATEGORY 1.2 – MULTIPLE PROTOCOL LABEL SWITCHING (MPLS), VIRTUAL PRIVATE NETWORKING (VPN), AND CONVERGED VOIP TELEPHONY

#### TABLE OF CONTENTS

#### Contents

<b>1.2.1</b>	<b>OVERVIEW</b> .....	<b>1</b>
1.2.1.1	BIDDER RESPONSE REQUIREMENTS .....	1
1.2.1.2	DESIGNATION OF REQUIREMENTS.....	1
1.2.1.3	PACIFIC TIME ZONE .....	2
<b>1.2.2</b>	<b>MULTI-PROTOCOL LABEL SWITCHING (MPLS) SERVICES</b> .....	<b>3</b>
1.2.2.1	MPLS INDUSTRY SECURITY STANDARDS .....	5
1.2.2.2	MPLS WAN VPN STANDARDS.....	8
1.2.2.3	MPLS PERFORMANCE METRICS.....	9
1.2.2.4	MPLS REQUIRED GEOGRAPHIC SERVICE AREAS .....	9
1.2.2.5	MPLS NETWORK DESIGNS AND DIAGRAMS.....	10
1.2.2.6	INTENTIONALLY DELETED.....	11
1.2.2.7	MPLS TECHNICAL REQUIREMENTS.....	11
1.2.2.8	MPLS TRANSPORT SPEEDS.....	22
<b>1.2.3</b>	<b>CONVERGED VOICE OVER INTERNET PROTOCOL (VOIP)</b> .....	<b>78</b>
1.2.3.1	CONVERGED VOIP MINIMUM NETWORK REQUIREMENTS .....	78
1.2.3.2	CONVERGED VOIP SERVICES.....	85
1.2.3.3	ADDITIONAL CONVERGED VOIP SERVICES AND FEATURES .....	104
1.2.3.4	CONVERGED VOIP CALLING REQUIREMENTS.....	117
1.2.3.5	CONVERGED VOIP VOICE MAIL SERVICES .....	127
1.2.3.6	CONVERGED VOIP AND VOICE MAIL GEOGRAPHIC REQUIREMENTS .....	131
<b>1.2.4</b>	<b>AUDIO CONFERENCING</b> .....	<b>147</b>
1.2.4.1	AUDIO CONFERENCING FEATURES.....	148
<b>1.2.5</b>	<b>SESSION INITIATED PROTOCOL (SIP) TRUNKING</b> .....	<b>150</b>
1.2.5.1	SIP SUPPORTED CALLING.....	150
1.2.5.2	CONCURRENT SIP CALLS.....	150
1.2.5.3	ON-NET SIP CALLING .....	151
1.2.5.4	ON-NET ENTERPRISE CALLING .....	151
1.2.5.5	INTEROPERABILITY OF SIP TRUNK WITH OTHER CALNET 3	

	TECHNOLOGIES .....	151
1.2.5.6	SIP CALLING FEATURES .....	152
1.2.5.7	SIP TRUNKING GEOGRAPHIC AVAILABILITY .....	152
1.2.5.8	SIP CALLING PLANS .....	153
1.2.5.9	SIP TRUNK INTERNATIONAL OFF-NET CALLING .....	154
<b>1.2.6</b>	<b>SERVICE RESTORATION.....</b>	<b>163</b>
1.2.6.1	TELECOMMUNICATIONS SERVICE PRIORITY (TSP) PROGRAM .....	163
1.2.6.2	NETWORK DISASTER/OPERATIONAL RECOVERY .....	164
<b>1.2.7</b>	<b>DATA NETWORK MONITORING APPLICATION (DNMA) .....</b>	<b>164</b>
<b>1.2.8</b>	<b>OTHER SERVICES.....</b>	<b>166</b>
1.2.8.1	HOURLY RATES FOR SERVICES.....	166
1.2.8.2	EXTENDED DEMARCATION WIRING SERVICES .....	166
1.2.8.3	SERVICES RELATED HOURLY SUPPORT.....	173
1.2.8.4	INTENTIONALLY DELETED.....	175
<b>1.2.9</b>	<b>SERVICE LEVEL AGREEMENTS (SLA).....</b>	<b>175</b>
1.2.9.1	SERVICE LEVEL AGREEMENT FORMAT .....	175
1.2.9.2	TECHNICAL REQUIREMENTS VERSUS SLA OBJECTIVES .....	176
1.2.9.3	TWO METHODS OF OUTAGE REPORTING: CUSTOMER OR CONTRACTOR.....	176
1.2.9.4	BIDDER RESPONSE TO SERVICE LEVEL AGREEMENTS.....	176
1.2.9.5	CONTRACTOR SLA MANAGEMENT PLAN.....	176
1.2.9.6	TECHNICAL SLA GENERAL REQUIREMENTS.....	177
1.2.9.7	TROUBLE TICKET STOP CLOCK CONDITIONS.....	179
1.2.9.8	TECHNICAL SERVICE LEVEL AGREEMENTS .....	182

## TECHNICAL REQUIREMENTS

### SUBCATEGORY 1.2 - MULTIPLE PROTOCOL LABEL SWITCHING (MPLS), VIRTUAL PRIVATE NETWORKING (VPN), AND CONVERGED VOIP TELEPHONY

#### 1.2.1 OVERVIEW

This Subcategory 1.2 IFB provides the State's solicitation for best value solutions for MPLS, Converged VoIP, IP Audio, and Session Initiated Protocol Trunking services. This IFB also describes the CALNET 3 technical requirements necessary to support the CALNET 3 program requirements.

This IFB will be awarded to Bidders that meet the award criteria as described in IFB Section 4. The CALNET 3 Contract(s) that result from the award of this IFB will be managed on a day-to-day basis by the CALNET 3 Contract Management and Oversight (CALNET 3 CMO).

##### 1.2.1.1 BIDDER RESPONSE REQUIREMENTS

Throughout this IFB, Bidders are required to acknowledge acceptance of the requirements described herein by responding to one (1) of the following:

Example A (for requirements that require confirmation that the Bidder understands and accepts the requirement):

*"Bidder understands the Requirement and shall meet or exceed it? Yes\_\_\_ No\_\_\_"*

Or,

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

*"Bidder understands the requirements in Section xxx and shall meet or exceed them?  
Yes\_\_\_ No\_\_\_"*

*Description:"*

##### 1.2.1.2 DESIGNATION OF REQUIREMENTS

All Technical Requirements specified in this IFB Section are Mandatory and must be responded to as identified in IFB Section 3.4.2.5 by the Bidder. Additionally, some Mandatory requirements are "Mandatory-Scorable" and are designated as "(M-S)". The State will have the option of whether or not to include each item in the Contract, based on the best interest of the State. Furthermore, Customers will have the option whether or not to order services or features included in the Contract. Service Requests for some CALNET 3 services or features may require CALNET 3 CMO approval.

Costs associated with services shall be included in the prices provided by the Bidder for the individual items included in the Subcategory Cost Worksheets. Items not listed

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

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

#### 1.2.1.3 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 X \_\_\_\_\_  
No \_\_\_\_\_*

## 1.2.2 MULTI-PROTOCOL LABEL SWITCHING (MPLS) SERVICES

Bidders shall confirm that the Contractor’s Multi-Protocol Label Switching (MPLS) Wide Area Network (WAN) Virtual Private Network (VPN) service will meet all of the requirements described in Table 1.2.2.

**Table 1.2.2 MPLS Service Functionality**

Item	MPLS Service Functionality	Bidder Meets or Exceeds?	
		Y	N
1	Contractors shall provide a private MPLS WAN (VPN) service for the networking of all voice, video and data applications.	Y	
	<p><b>Bidder’s Product Description:</b></p> <p>NWN’s Private Port MPLS WAN (VPN) service is a packet-forwarding technology that uses labels to make data forwarding decisions. It allows the State to converge communications (voice, video, and data applications) onto a single application-centric network while improving the efficiency of the customers WAN. Our MPLS-based network technology delivers highly scalable, differentiated end-to-end IP services with simplified configuration, management, and provisioning.</p> <p>NWN’s Private Port MPLS WAN (VPN) service applies IP and tag switching speed to the UP net IP network’s inherent connectionless routing environment. The protocol works at the edge of the network with routers known as label switch routers (LSRs) that assign a 20-bit label to the header of IP packets. Each path on the network is assigned a label switched path (LSP) that corresponds to an explicit path across the network, allowing packets to traverse a pre-established path that results in increased efficiencies. Each possible label is stored in a table that permits quicker direct lookups, helps to reduce router overhead and decreases processing time. MPLS eliminates latency experienced by traffic as it transits multiple routers throughout the network where message headers are read and re-encrypted before forwarding decisions are made. MPLS introduces connection-like behavior in a connectionless environment that automates traffic engineering and provides Quality of Service (QoS).</p>		
2	The MPLS WAN VPN service shall support voice, video and data applications over a single access connection with individual Class of Service (CoS) to allow each set of applications to be transported within its service specifications.	Y	
	<p><b>Bidder’s Product Description:</b></p> <p>NWN’s Private Port (MPLS) network supports voice, video, and data applications over a single access connection. NWN supports four-, six-, and eight-class QoS options on the MPLS network.</p> <p>NWN’s QoS relies on IETF-defined IP Precedence (IPP) values for four-class QoS, and differentiated services code point (DSCP) classifications for six- and eight-class QoS. The six- and eight-class templates use queuing method C, which designates Low Latency Queuing (LLQ) scheduler. With LLQ, NWN monitors the P1 queue (EF) up to the maximum bandwidth guarantee and tail drops excess traffic; this is consistent with a conventional strict priority queue when used with LLQ. The remaining queues are configured as Class-based Weighted Fair Queuing and are permitted to burst to port speed provided there are resources available.</p>		

Item	MPLS Service Functionality	Bidder Meets or Exceeds?	
		Y	N
3	The MPLS WAN VPN service shall support the ability to assign specific application priority over other applications.	Y	
	<b>Bidder's Product Description:</b> NWN's solution provides the ability to select IP QoS to expedite time-sensitive traffic, such as specific applications, VoIP, or video streaming. Traffic is sorted into QoS queues based on customer-defined IP precedence bits for flexible control. NWN's solution supports up to eight (8)QoS queues with predefined templates to allow users full control over prioritizing applications into different classes based on either the IP Precedence (IPP) bits or DSCP, commonly referred to as Diffserv..		
4	The MPLS WAN VPN service shall provide any-to-any connectivity	Y	
	<b>Bidder's Product Description:</b> NWN's Private Port MPLS service is a private protected MPLS service that supports fully-meshed and any-to-any-connectivity MPLS configurations.		
5	The MPLS WAN VPN service shall not use the public Internet for transport. Remote access to this solution may use the public Internet.	Y	
	<b>Bidder's Product Description:</b> NWN's solution maintains separate security domains for Internet, MPLS, and NWN provided VoIP services. MPLS services have the following features: <ul style="list-style-type: none"> <li>• Separate dedicated edge routers</li> <li>• Separate Control Planes                             <ul style="list-style-type: none"> <li>○ No signaling from Internet routers is used or forwarded to VPN routers</li> <li>○ No signaling from Internet or VPN network, customers, or peers, is used on the Private Core</li> <li>○ Each Security Domain has its own BGP process</li> </ul> </li> <li>• Separate Forwarding Label-Switched Paths (LSPs)                             <ul style="list-style-type: none"> <li>○ No forwarding path exists from Internet routers to VPN routers</li> <li>○ No IP forwarding in the Core, strictly MPLS LSPs between non-core routers</li> </ul> </li> <li>• No direct connections between the Security Domains</li> </ul>		
6	The MPLS WAN VPN service shall be a fully Managed Service that includes the Customer Edge router as described in 7c below	Y	
	<b>Bidder's Product Description:</b> NWN's solution provides a managed solution that includes a standard MPLS Private Port service, a single local access circuit to connect to a customer to our MPLS network, and a managed router to terminate the services. A standard CPE package is provided based on the port type, local access circuit		

Item	MPLS Service Functionality	Bidder Meets or Exceeds?	
		Y	N
	speeds, CPE required to terminate services, and basic network management services.		
7	The MPLS WAN VPN service shall support the following configurations:		
7a	Port only configuration	Y	
	<b>Bidder's Product Description:</b> NWN's Private Port MPLS services are delivered over on-net or off-net local access services. NWN offers a Port Only configuration which enables the State to provide local access and meet our MPLS solution at the closest termination POP for MPLS services. Customer-provided access is supported for our Managed Data Bundles as we allow customers to provide access while NWN maintains the port, CPE, and management components of the solution.		
7b	Bundled port and access configuration	Y	
	<b>Bidder's Product Description:</b> NWN's Bundled Port and Access configuration (Universal Accessibility) provides integrated access options into the unified global network.  The local access service provides access to terminate MPLS Private Port MPLS services via the following: <ul style="list-style-type: none"> <li>• Dedicated IP – special access, local loop connection from customer premises to NWN IP POP, terminating on our networking infrastructure</li> <li>• Ethernet Local Access – an Ethernet local loop connection from customer premises to the NWN public or private IP POP, terminating on an Ethernet interconnection switch and then interconnected to NWN's networking infrastructure</li> <li>• Collocation access – interconnection between collocated CPE and NWN networking infrastructure at NWN facility via a cross-connect</li> </ul>		
7c	Bundled port, access and Customer Edge router configuration	Y	
	<b>Bidder's Product Description:</b> NWN's solution provides the State with a Private Port, a single local access circuit to connect a customer to NWN's MPLS network, and a managed router to terminate the services.  NWN's solution provides a Managed Service for the required CPE package that includes annual configuration changes including basic operating system and configurations on the router. The bundle includes Monitor & Notification managed services with additional configuration support from NWN engineers.		

1.2.2.1 MPLS INDUSTRY SECURITY STANDARDS

1. Upon demand by the CALNET 3 CMO, Contractor will provide for viewing at Contractor's facility the security controls in force for both the MPLS WAN and converged VoIP infrastructure as well as independent audit results of those

controls for authorized State personnel (under NDA). This will include the full scope of controls NIST SP 800-53, ISO/IEC 27001, or equivalent.

2. If Contractor determines that a breach of data has occurred within the Contractor's MPLS WAN that may involve CALNET 3 Customer data, the nature and scope of the breach (as it affects Customer data) must be reported to both the Customer and the CALNET 3 CMO within 24 hours of that determination.
3. If Contractor determines that a breach of infrastructure has occurred within the Contractor's MPLS WAN that may involve CALNET 3 Customer data, the nature and scope of the breach (as it affects Customer data) must be reported to both the Customer and the CALNET 3 CMO within 24 hours of that determination.
4. Contractor shall apply available patches and/or updates which remediate published vulnerabilities within the following timeframe requirements to the Contractor managed Customer Edge Devices:

**Table 1.2.2.1 Security Patches**

Vulnerability CVSS2 Base Score	Informal Category Name	Max Time to Apply Patch/Update
9.1 – 10.0	Critical	Within 14 days
8.0 – 9.0	High	Within 21 days
5.0 – 7.9	Moderate	Within 60 days
Below 5.0	Low	Within 90 days

5. Contractor shall provide to the CALNET 3 CMO an annual report of the 12 month prior patching/update activity including min/avg/max time from patch/update release to install categorized by the classifications found in table 1.2.2.1 for all Contractor managed Customer Edge Devices.
6. Contractor shall provide to the CALNET 3 CMO an annual report detailing all (if any) actual violations of security protections, policies, practices, and/or procedures involving Contractor managed Customer Edge Devices and what remediation were implemented.

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

**1.2.2.1.1 MPLS Physical Security**

Contractor shall physically secure all data and networking facilities through which data traverses Contractor's MPLS network 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 X No \_\_\_\_\_*

**1.2.2.1.2 Protection against Unauthorized Access**

Contractor shall provide access controls for all equipment through which data traverses Contractor's MPLS WAN complying with the physical security controls of NIST SP 800-53, ISO/IEC 27001, or equivalent standards.

**Bidders shall state the access security controls in force for this equipment.**

*Bidder understands the requirements in 1.2.2.1.2 and shall meet or exceed them?*  
Yes  No

*Description:*

*NWN is providing access controls for all equipment through which data traverses our MPLS WAN. Our user and protocol access controls comply with the physical security controls of NIST SP 800-53, ISO/IEC 27001 standards. Our user and protocol access controls include:*

- Restricted access controls to the management and control planes of the network elements including encryption, MD5 authentication, and two-factor authentication methods*
- Rate limiting and blocking of protocols directed specifically to the network elements*
- Restricted access to the management and control planes of network elements permitted only from a small set of trusted sources.*
- Core Privatization architecture that limits outside visibility to key network elements using MPLS tunneling*
- Deployment of session border controllers for dynamic pinhole firewall controls for signaling and bearer VoIP traffic on SIP, H.323, and MGCP protocols*
- Defense in depth architectures with multiple layers including firewalls, proxies and rate limiters to protect the SS7 infrastructure from cyber attacks*
- Dynamic routing prefix filtering at all carrier and customer interconnects to prevent accidental or malicious route corruption*
- In addition, NWN uses procedures outlined in widely-accepted security policies and guidelines, including the following, to protect the network infrastructure:*
- NIST SP 800-53, Physical and Environmental Controls*
- IETF BCP 38 (RFC 2827), "Network Ingress Filtering: Defeating Denial of Service Attacks which employ IP Source Address Spoofing", May 2000*
- IETF BCP 84 (RFC 3704), "Ingress Filtering for Multihomed Networks", March 2004*
- IETF RFC 3871, "Operational Security Requirements for Large Internet Service Provider (ISP) IP Network Infrastructure", September 2004*
- Bellcore GR-815, Network Element and Network System Security*
- Cisco Best Practices, "SAFE: Best Practices for Securing Routing Protocols"1, "SAFE: Worm Mitigation"2*
- RFC 3631, "Security Mechanisms for the Internet", December 2003*
- RFC 2385, "Protection of BGP Sessions via the TCP MD5 Signature Option", August 1998*

1.2.2.2 MPLS WAN VPN STANDARDS

**Bidders shall confirm that the Contractor's CALNET 3 MPLS WAN VPN services meet all of the standards described in Table 1.2.2.2.**

**Table 1.2.2.2 MPLS WAN VPN Standards**

Item	Standard	Bidder Meets or Exceeds?	
		Y	N
1	International Engineering Task Force (IETF) Standards Track Request for Comments (RFC's) for IPv6 when/where offered commercially by the Contractor.	Y	
2	All Standards Track IETF RFC's associated with MPLS constrained by Border Gateway Protocol (BGP) routing	Y	
3	All Standards Track IETF RFC's associated with Transport of Layer 2 frames over MPLS	Y	
4	IETF MPLS Working Group Standards Track RFCs	Y	
5	IETF Layer 3 VPN Working Group Standards Track RFCs	Y	
6	IETF Pseudo Wire Emulation Edge-to-Edge Working Group Standards Track RFCs	Y	
7	All IETF Standards Track RFC's associated with:		
7a	General IPsec	Y	
7b	Encapsulating Security Payload (ESP) and Authentication Header (AH)	Y	
7c	Key Exchange, Cryptographic Algorithms	Y	
7d	Internet Protocol Security (IPsec) Policy Handling	Y	
7e	IPsec Management Information Bases (MIBs)	Y	
7f	Remote Access, Certificate Authorities	Y	
7g	Secure Socket Layer (SSL) and Transport Layer Security (TLS)	Y	
8	Encryption, if offered, shall meet Triple Data Encryption Standard (3DES) and Advanced Encryption Standard (AES) in accordance with the appropriate Federal Information Processing standard (FIPS) publications and modules, including FIPS 140-2.	Y	

1.2.2.3 MPLS PERFORMANCE METRICS

Bidders shall confirm that the Contractor’s solution will meet all of the requirements described in Table 1.2.2.3.

**Table 1.2.2.3 MPLS Performance Metrics**

Item	Requirement	Bidder Agrees?	
		Y	N
1	Service availability shall be 99.9% measured port to port	Y	
2	MPLS shall have a packet loss of <0.2% measured port to port	Y	
3	MPLS shall have jitter <10ms measured port to port	Y	

1.2.2.4 MPLS REQUIRED GEOGRAPHIC SERVICE AREAS

The Contractor shall provide MPLS services in all Incumbent Local Exchange Carrier (ILEC) territories open to competition as defined by the California Public Utilities Commission (CPUC) where facilities are available either through bidder owned facilities or through resale of Incumbent Local Exchange Carrier facilities.

For DS3 access and below, the Contractor shall provide MPLS services at the same monthly rate and same non-recurring charge in all ILEC territories open to competition as determined by the CPUC for all On-Net and Off-Net locations.

For Optical Carrier (OC) or Ethernet access, the Contractor shall provide MPLS services at the same monthly rate and same non-recurring charge in all ILEC territories open to competition as determined by the CPUC for all Contractor On-net locations. Monthly recurring and non-recurring charges for Off-net locations shall be handled on an Individual Case Basis (ICB).

Ethernet services shall only be used in conjunction with MPLS services and not as a standalone service.

**Bidder shall identify the strategy for establishing agreements with ILECs in areas open to competition as defined by the CPUC necessary to provide end-to-end service in these areas.** Agreements shall be in effect at Contract award.

**Bidder shall describe how MPLS service will be provided in ILEC territories closed to competition as defined by the CPUC necessary to provide service in these areas.** The description shall include billing arrangements (such as “pass-through”, “meet point”), invoicing and price structure. Contractor shall commit to establishing business relationships with these ILECs.

*Bidder understands the requirements in Section 1.2.2.4 and shall meet or exceed them?*  
 Yes X No \_\_\_\_\_

*Description:*

*NWN currently has many agreements with Incumbent Local Exchange Carrier (ILECs) within the State of California and continues to foster these agreements for the term of the CALNET 3 contract and beyond as part of our standard local access agreements for all customers within the State. In addition to agreements with ILECs, NWN has agreements with AT&T and Verizon, the two major local providers within the State. NWN's local service offering within the State allows us to provide local access solutions for the State in every LATA.*

*NWN is able to terminate local services into all areas in the State open to competition or closed to competition based on the CPUC descriptions found in our wholesale agreements with LECs and ILECs.*

1.2.2.5 MPLS NETWORK DESIGNS AND DIAGRAMS

Bidders shall provide network designs and diagrams for the network and MPLS services listed under this Section 1.2.2 (MPLS Services).

**Bidders shall provide two (2) hard copies and one (1) electronic copy with their proposal.** Electronic drawings shall be in .dwg, .dxf, .vsd or any mutually agreed format. Hard copy drawings shall be provided in standard D size.

Drawings must include a thorough presentation of how the Contractor's network(s) deployed for each service type will address the following:

1. **Redundancy** – Having one (1) or more circuits/systems deployed in case of failure of the main circuits/systems; and
2. **Diversity** – Backbone network paths and infrastructure offered in such a way as to minimize the chance of a single point of failure.

The Contractor shall provide revisions upon CALNET 3 CMO request.

Drawings shall include both topology and logical representations of all critical network backbone elements to include but not be limited to the following:

1. Geographic location of equipment;
2. Type and capacity of equipment at each location including any backup systems;
3. Service type;
4. Unique identifier for each element;
5. Circuit type; and,
6. General circuit route

*Bidder understands the requirements in Section 1.2.2.5 and shall meet or exceed them?*  
Yes  No

*Embedded Soft Copy of Drawing (Optional):*



1.2.2.5-1 IP and  
MPLS Network Diagram

*Figure 1.2.2.5-1, NWN IP and MPLS Network Diagram, illustrates the Geographic location of equipment for our IP and MPLS networks, circuit type and capacity, and general circuit route.*

- *Redundancy: Each backbone PoP includes a minimum of dual core routers and/or Private Core (PCOR) routers providing redundancy.*
- *Diversity: Each Backbone PoP is multi-homed to other Backbone PoP's to provide diversity in the event one path should fail.*
- *Edge: Each edge router (which connects to the customer) is multi-homed to the core/PCOR routers providing redundancy to the edge for customer traffic.*

1.2.2.6 INTENTIONALLY DELETED

1.2.2.7 MPLS TECHNICAL REQUIREMENTS

Bidder shall confirm that its MPLS solution to be deployed for CALNET 3 will include the technical features and functionality described in Table 1.2.2.7.

**Table 1.2.2.7 MPLS Technical Requirements**

Item	Requirements	Bidder Meets or Exceeds?	
		Y	N
1	Contractors shall be able to scale the number of VPNs supported by the network.	Y	
	<p><b>Bidders shall describe here the Contractor's ability to scale the number of VPNs:</b></p> <p>NWN's solution provides the ability to scale the number of VPNs for every customer and every network. Our MPLS service will support single or multiple VPNs for each customer connection and meets the IFB STPD 12-001-A requirements.</p>		
2	Contractor shall support multiple VPNs per access loop	Y	
	<p><b>Bidders shall describe here the number of VPN's that will be supported in any one (1) access loop:</b></p> <p>NWN's standard offering supports up to 10 VPNs for any one customer network.</p>		
3	Contractor shall support multiple VPNs across the MPLS network	Y	
	<p><b>Bidders shall describe here the number of VPN's that will be supported across the Bidder's MPLS network:</b></p> <p>NWN supports multiple customer VPNs within our Private Port MPLS service. NWN's standard offering supports up to 10 VPNs for across any one network on the MPLS service.</p>		

Item	Requirements	Bidder Meets or Exceeds?	
		Y	N
4	Contractor shall provide the rapid service restoration practices for all MPLS deployments in accordance with the SLAs in Section 1.2.9.8 (Technical Service Level Agreements)	Y	
	<p><b>Bidders shall describe here the Contractor’s specific processes that will be employed to operate or restore services in the face of unanticipated incidents, disasters or catastrophes: Disaster Recovery and Continuity of Operations (DR-COOP):</b></p> <p>NWN’s rapid service restoration practices for all MPLS deployments meet all IFB STPD 12-001-A requirements. Upon notification there is a disruption in the MPLS service, NWN’s Certified Technician is alerted and is responsible for determining the issue and solution.</p> <p>The Technician addresses the trouble in accordance with IFB STPD 12-001-A requirements and SLA’s. The technician promptly engages the proper resources to support the service restoration solution including dispatching a Level 3 Engineer to the site of the problem.</p> <p>The Level 3 Engineer deploys to the affected location and proceeds to restore in coordination with the Certified Technician. Upon resolution, the Level 3 Engineers tests the Backbone routing to ensure the trouble is resolved and remains on site until the service is fully restored. When the Level 3 Engineers needs additional support, they escalate the issue to upper management. The Level 3 Engineer works until restoration of all MPLS outages.</p> <p>When the trouble is resolved, the NWN Technician documents the event and follows our standard SLA processes for remedies as required in IFB STPD 12-001-A.</p>		
5	Contractor shall provide redundant network circuits in the backbone network	Y	
	<p><b>Bidders shall describe here the specific network configurations that will be utilized to provide redundancy to survive failures in the backbone network:</b></p> <p>The NWN IP/MPLS backbone utilizes a redundant architecture with primary and backup transport circuits. Every core router connects with redundant, diverse circuits. All circuits are protected by MPLS fast reroute for restoration.</p> <p>VPN traffic paths are protected with MPLS fast reroute technology (FRR) from edge to edge. Backbone traffic is transported through MPLS Label Switched Path (LSP) with primary and backup paths. When a transit node fails, LSPs diverts traffic as determined by IGP protocols. Since every link is used as primary and backup, each link is upgraded before 50% capacity is reached. Transport redundancy is introduced by splitting the backbone circuits into different transport physical systems (rails). To provide redundancy:</p> <ul style="list-style-type: none"> <li>• Every IP POP has two or more redundant core routers</li> <li>• Every core and edge router has full processor and power redundancy</li> <li>• All edge routers have dual uplinks to core routers</li> <li>• Every peer has at least two geographically diverse circuits for redundancy</li> </ul>		

Item	Requirements	Bidder Meets or Exceeds?	
		Y	N
6	Contractor shall provide network diversity to eliminate single points of failure in the backbone network	Y	
	<p><b>Bidders shall describe here the diversity that will be designed in the MPLS network to eliminate single points of failure in the backbone network:</b></p> <p>NWN's network backbone is engineered with multiple bandwidth paths that are multi-threaded to ensure comprehensive network backbone diversity, availability, and integrity at all times. NWN fiber routes have diverse, redundant fiber paths available for restoral in the event of an outage. All NWN POPs have multiple diverse paths ensuring diverse/protected routes for the delivery of customer transmissions and traffic.</p>		
7	Contractor shall provide a remote access service that allows an off-net Customer location access to any on-net Customer site contained within the same VPN. The solution may utilize the public Internet.	Y	
	<p><b>Bidders shall describe here the specific remote access Customers shall have to the MPLS:</b></p> <p>NWN provides VPN Extensions that allow a remote site with Internet access to reach the MPLS network by utilizing an IP SEC tunnel. Customers leverage their own Internet access using any type of Internet service with a static IP address that is a dial-up, DSL, Cable, TDM, or other type of physical connection.</p> <p>There are two primary requirements for this service:</p> <ol style="list-style-type: none"> <li>1. The customer has a CE device that can support IP SEC tunnels</li> <li>2. The customer has obtained a static IP address from their Internet provider</li> </ol>		
8	The remote access service shall be secured.	Y	
	<p><b>Bidders shall describe here how the MPLS remote access solution will be secured:</b></p> <p>NWN uses IP SEC tunneling to encrypt traffic between the remote location's CE router and NWN's Edge router before the traffic reaches the MPLS network.</p>		
9	The MPLS WAN VPN service shall support controlled and monitored connections between the MPLS network and the public Internet via a hardened trusted managed firewall	Y	
	<p><b>Bidders shall describe here the hardened trusted managed firewall that will be provided and how it will be used to control and monitor connections between the MPLS network and the public Internet:</b></p> <p>NWN utilizes a next-generation managed and monitored security service providing a layer of protection between the customer's network and the Internet. Technology has been implemented within the NWN network and provides customers with a network-based firewall, IPS, and content filtering options with enhanced self-management and reporting portals.</p>		

Item	Requirements	Bidder Meets or Exceeds?																																																																																																																																																																								
		Y	N																																																																																																																																																																							
10	Contractor shall list points-of-presence (PoP) where provider edge routers are located	Y																																																																																																																																																																								
	<p><b>Bidders shall list here the locations of all PoPs where provider edge routers are deployed for CALNET 3 and the associated common language location identifier (CLLI):</b></p> <p>The following table identifies the MPLS POPs within the State of California. This list is subject to change without notice.</p> <table border="1"> <thead> <tr> <th></th> <th>LATA</th> <th>CLLI</th> <th>NPA</th> <th>NXX</th> <th>CITY</th> </tr> </thead> <tbody> <tr><td>1</td><td>722</td><td>FRMTC A12</td><td>510</td><td>498</td><td>Fremont</td></tr> <tr><td>2</td><td>722</td><td>OKLDCA34</td><td>510</td><td>238</td><td>Oakland</td></tr> <tr><td>3</td><td>722</td><td>OKLDCAOL</td><td>510</td><td>238</td><td>Oakland</td></tr> <tr><td>4</td><td>722</td><td>SNFCCAMM</td><td>415</td><td>822</td><td>San Francisco</td></tr> <tr><td>5</td><td>722</td><td>SNJSCAMC</td><td>408</td><td>271</td><td>San Jose</td></tr> <tr><td>6</td><td>722</td><td>SNVACAHZ</td><td>408</td><td>245</td><td>Sunnyvale</td></tr> <tr><td>7</td><td>724</td><td>CHICCAFI</td><td>530</td><td>879</td><td>Chico</td></tr> <tr><td>8</td><td>724</td><td>RDNGCAGA</td><td>530</td><td>225</td><td>Redding</td></tr> <tr><td>9</td><td>726</td><td>RCRDCAHL</td><td>916</td><td>858</td><td>Rancho Cordova</td></tr> <tr><td>10</td><td>726</td><td>SCRMCAWC</td><td>916</td><td>319</td><td>Sacramento</td></tr> <tr><td>11</td><td>728</td><td>FRSMCAIS</td><td>559</td><td>233</td><td>Fresno</td></tr> <tr><td>12</td><td>730</td><td>ANHMCAXZ</td><td>714</td><td>239</td><td>Anaheim</td></tr> <tr><td>13</td><td>730</td><td>BRBNCACG</td><td>818</td><td>729</td><td>Burbank</td></tr> <tr><td>14</td><td>730</td><td>LSANCAJW</td><td>213</td><td>532</td><td>Los Angeles</td></tr> <tr><td>15</td><td>730</td><td>LSANCA RC</td><td>213</td><td>532</td><td>Los Angeles</td></tr> <tr><td>16</td><td>730</td><td>SNMNCAXP</td><td>310</td><td>264</td><td>Santa Monica</td></tr> <tr><td>17</td><td>730</td><td>VTVLCAXA</td><td>760</td><td>552</td><td>Victorville</td></tr> <tr><td>18</td><td>732</td><td>CRLSCA12</td><td>760</td><td>602</td><td>Carlsbad</td></tr> <tr><td>19</td><td>732</td><td>SNDICATF</td><td>619</td><td>280</td><td>San Diego</td></tr> <tr><td>20</td><td>734</td><td>BKFDCA XN</td><td>661</td><td>395</td><td>Bakersfield</td></tr> <tr><td>21</td><td>736</td><td>SLNSCAMD</td><td>831</td><td>422</td><td>Salinas</td></tr> <tr><td>22</td><td>738</td><td>SKTNCAON</td><td>209</td><td>460</td><td>Stockton</td></tr> <tr><td>23</td><td>740</td><td>SNBBCAMC</td><td>805</td><td>560</td><td>Santa Barbara</td></tr> <tr><td>24</td><td>740</td><td>SNLOCAGX</td><td>805</td><td>756</td><td>San Luis Obispo</td></tr> <tr><td>25</td><td>740</td><td>SNLOCAOT</td><td>805</td><td>756</td><td>San Luis Obispo</td></tr> <tr><td>26</td><td>740</td><td>SNLOCAST</td><td>805</td><td>756</td><td>San Luis Obispo</td></tr> <tr><td>27</td><td>973</td><td>PLSPCAXG</td><td>760</td><td>320</td><td>Palm Springs</td></tr> </tbody> </table>		LATA	CLLI	NPA	NXX	CITY	1	722	FRMTC A12	510	498	Fremont	2	722	OKLDCA34	510	238	Oakland	3	722	OKLDCAOL	510	238	Oakland	4	722	SNFCCAMM	415	822	San Francisco	5	722	SNJSCAMC	408	271	San Jose	6	722	SNVACAHZ	408	245	Sunnyvale	7	724	CHICCAFI	530	879	Chico	8	724	RDNGCAGA	530	225	Redding	9	726	RCRDCAHL	916	858	Rancho Cordova	10	726	SCRMCAWC	916	319	Sacramento	11	728	FRSMCAIS	559	233	Fresno	12	730	ANHMCAXZ	714	239	Anaheim	13	730	BRBNCACG	818	729	Burbank	14	730	LSANCAJW	213	532	Los Angeles	15	730	LSANCA RC	213	532	Los Angeles	16	730	SNMNCAXP	310	264	Santa Monica	17	730	VTVLCAXA	760	552	Victorville	18	732	CRLSCA12	760	602	Carlsbad	19	732	SNDICATF	619	280	San Diego	20	734	BKFDCA XN	661	395	Bakersfield	21	736	SLNSCAMD	831	422	Salinas	22	738	SKTNCAON	209	460	Stockton	23	740	SNBBCAMC	805	560	Santa Barbara	24	740	SNLOCAGX	805	756	San Luis Obispo	25	740	SNLOCAOT	805	756	San Luis Obispo	26	740	SNLOCAST	805	756	San Luis Obispo	27	973	PLSPCAXG	760	320	Palm Springs	
	LATA	CLLI	NPA	NXX	CITY																																																																																																																																																																					
1	722	FRMTC A12	510	498	Fremont																																																																																																																																																																					
2	722	OKLDCA34	510	238	Oakland																																																																																																																																																																					
3	722	OKLDCAOL	510	238	Oakland																																																																																																																																																																					
4	722	SNFCCAMM	415	822	San Francisco																																																																																																																																																																					
5	722	SNJSCAMC	408	271	San Jose																																																																																																																																																																					
6	722	SNVACAHZ	408	245	Sunnyvale																																																																																																																																																																					
7	724	CHICCAFI	530	879	Chico																																																																																																																																																																					
8	724	RDNGCAGA	530	225	Redding																																																																																																																																																																					
9	726	RCRDCAHL	916	858	Rancho Cordova																																																																																																																																																																					
10	726	SCRMCAWC	916	319	Sacramento																																																																																																																																																																					
11	728	FRSMCAIS	559	233	Fresno																																																																																																																																																																					
12	730	ANHMCAXZ	714	239	Anaheim																																																																																																																																																																					
13	730	BRBNCACG	818	729	Burbank																																																																																																																																																																					
14	730	LSANCAJW	213	532	Los Angeles																																																																																																																																																																					
15	730	LSANCA RC	213	532	Los Angeles																																																																																																																																																																					
16	730	SNMNCAXP	310	264	Santa Monica																																																																																																																																																																					
17	730	VTVLCAXA	760	552	Victorville																																																																																																																																																																					
18	732	CRLSCA12	760	602	Carlsbad																																																																																																																																																																					
19	732	SNDICATF	619	280	San Diego																																																																																																																																																																					
20	734	BKFDCA XN	661	395	Bakersfield																																																																																																																																																																					
21	736	SLNSCAMD	831	422	Salinas																																																																																																																																																																					
22	738	SKTNCAON	209	460	Stockton																																																																																																																																																																					
23	740	SNBBCAMC	805	560	Santa Barbara																																																																																																																																																																					
24	740	SNLOCAGX	805	756	San Luis Obispo																																																																																																																																																																					
25	740	SNLOCAOT	805	756	San Luis Obispo																																																																																																																																																																					
26	740	SNLOCAST	805	756	San Luis Obispo																																																																																																																																																																					
27	973	PLSPCAXG	760	320	Palm Springs																																																																																																																																																																					

Item	Requirements	Bidder Meets or Exceeds?	
		Y	N
11	The MPLS WAN VPN service shall be resilient	Y	
	<p><b>Bidders shall describe here the minimum level of service that will be maintained amid network failure:</b></p> <p>NWN uses MPLS fast re-route for redundancy and trunk fail-over in the network. NWN's network has a 100ms routing recovery time in the event of a network outage, as opposed to the 15 - 30 seconds on traditional SONET networks. This quick recovery time ensures that network availability-sensitive applications such as VoIP and Video will not suffer degradation if there is a major failure in the network.</p>		
12	Contractor shall provide support for multiple Layer 2 access protocols	Y	
	<p><b>Bidders shall describe here the Layer 2 access protocols that will be utilized with the Contractor's solution:</b></p> <p>NWN solution allows Layer 3 MPLS services to work with legacy Layer 2 access protocols like Frame Relay and ATM. NWN continues to provide legacy protocol support for multiple Layer 2 services, such as separate ATM and Frame Relay service.</p>		
13	Contractor shall provide segregation of Customer traffic in a VPN environment	Y	
	<p><b>Bidders shall describe here how the solution will segregate Customer traffic in a VPN and any additional features included by the Contractor at no cost that are available to Customers to protect access to Customer data:</b></p> <p>NWN uses the RFC 4364 (formerly RFC 2547bis) standard to deliver an IP VPN service over MPLS. An RFC 4364 MPLS VPN network service uses specialized edge routers (provider edge (PE) routers) connected to a service provider MPLS core network. The PE routers contain VPN routing and forwarding (VRF) tables containing routing information for each customer served by the PE router ports. The VRFs provide a secure, segregated, private routing domain for each customer. VRFs isolate the IP addresses and IP forwarding rules used by each customer. The entire private routing domain joining PE router VRF tables for a customer is referred to a customer VPN.</p>		
14	The MPLS WAN VPN service shall support IPv4 Capability	Y	
	<p><b>Bidder's Product Description:</b></p> <p>IPv4 capability is included as a standard offering in NWN's MPLS WAN VPN service.</p>		
15	The MPLS WAN VPN service shall support IPv6 Capability when/where offered commercially by the Contractor	Y	
	<p><b>Bidder's Product Description:</b></p> <p>All NWN backbone IP POPs are IPv6 enabled. The deployment of IPv6 on the NWN backbone is implemented as an overlay on the MPLS backbone. Native IPv6 is limited to edge devices connecting to IPv6 customers and to the border routers that connect to peers. This design provides incremental deployment with minimal impact to existing services.</p>		

Item	Requirements	Bidder Meets or Exceeds?	
		Y	N
16	The Contractor shall provide MPLS port diversity capability within the same MPLS POP	Y	
	<p><b>Bidders shall describe here the MPLS port diversity capability to be included in the Contractor’s solution:</b></p> <p>The NWN network backbone is engineered with multiple bandwidth paths that are multi-threaded to ensure comprehensive network backbone diversity, availability, and integrity. All NWN fiber routes have diverse, redundant fiber paths available for restoral in the event of an outage. All NWN POPs have multiple diverse paths ensuring diverse/protected routes for the delivery of customer transmissions and traffic.</p> <p>In Addition, NWN provides diversity at a port level for routed circuit(s) that originates into the same POP and is provided to the designated demarcation points and is separate from local access diversity.</p>		
17	The Contractor shall provide MPLS PoP diversity capability	Y	
	<p><b>Bidders shall describe here the MPLS point-of-presence diversity capability to be included in the Contractor’s solution:</b></p> <p>The NWN network backbone is engineered with multiple bandwidth paths that are multi-threaded to ensure comprehensive network backbone diversity, availability, and integrity. All NWN fiber routes have diverse, redundant fiber paths available for restoral in the event of an outage. All NWN POPs have multiple diverse paths ensuring diverse/protected routes for the delivery of customer transmissions and traffic.</p> <p>In Addition, NWN provides diversely routed circuit(s) that originates and/or terminates into the same POP building that provides the primary on-net circuit. POP diversity is provided to the designated demarcation points and is separate from local access diversity.</p>		
18	The Contractor shall provide dial backup capability to support routing of traffic outside of the MPLS network in case of MPLS network failure	Y	
	<p><b>Bidders shall describe here the dial backup capability supported by the Contractor’s solution:</b></p> <p>NWN provides dial backup access outside of our standard MPLS service and is supported by 56/64k phone line services. These same 56/64k dial backup services provide dial remote access between our equipment bundles and our network management services as part of our local access, MPLS port, and equipment bundle.</p> <p>In the event of a MPLS failure the 56/64k phone lines provide access to the NWN network at the limited speed of 56/64k per instance. In the event that the MPLS services and the dial backup services are both out of service, no MPLS access is available until one or both services are repaired as specified in the standard repair requirements of this IFB.</p>		

Item	Requirements	Bidder Meets or Exceeds?	
		Y	N
19	The MPLS WAN VPN service shall support IP Multicasting	Y	
	<p><b>Bidders shall describe here the maximum number of multicast routes that will be supported by the Contractor's solution:</b></p> <p>NWN's solution is not limited to a maximum number of multicasts. Multicasts are limited to the customer edge (CE) equipment and the amount of multicast traffic that CE termination equipment can support.</p> <p>The IP routing protocol used in the NWN product is an independent multicast (PIM) protocol. The independent aspect of PIM relates to how PIM uses the IP unicast forwarding table in routers, regardless of what unicast routing protocols are configured (BGP, OSPF, etc.). PIM uses the existing unicast forwarding table inside routers to prevent multicast forwarding loops: multicast packets are never forwarded back to the sender and a multicast packet must arrive on the router interface that is used as a return path to reach the sender's IP address. PIM routers perform this reverse path forwarding (RPF) check because the sender's unicast source address appears in the IP multicast packet.</p>		
20	The MPLS WAN VPN service shall provide Multiple CoS to support the prioritization of Entity applications and traffic flows	Y	
	<p><b>Bidders shall describe here the CoS levels that will be supported for CALNET 3 and the ingress/egress profiles supported by the Contractor's solution. Bidders shall describe here the mechanisms that will be used for CALNET 3 that allow the Customer to mark packets for treatment that corresponds to the ingress/egress policy chosen:</b></p> <p>NWN's MPLS WAN VPN solution provides compatible QoS settings on the ingress when MPLS network congestion occurs. NWN maintains a non-congested network and provides the ability to identify critical traffic with additional safeguards in the event of some catastrophic and unforeseen event.</p> <p>NWN's Private Port network supports voice, video, and data applications over a single access connection and supports four-, six, and eight-class QoS/CoS on our MPLS network. Our QoS/CoS provides egress edge prioritization and rely on IETF-defined IP Precedence (IPP) values for four-class QoS/CoS, and differentiated services code point (DSCP) classifications for six- and eight-class QoS/CoS.</p> <p>The six- and eight-class templates use queuing method C, which designates Low Latency Queuing (LLQ) scheduler. LLQ polices the P1 queue (EF) to the maximum bandwidth guarantee and tail drops excess traffic; this is consistent with a conventional strict priority queue when used with LLQ.</p>		
21	The MPLS WAN VPN service shall support the division of an MPLS port into multiple logical channels such that each logical channel can be used to support a VPN.	Y	
	<p><b>Bidder's Product Description:</b></p> <p>NWN's solution supports the division of an MPLS port by providing the State the ability to segment MPLS traffic on an MPLS port via multiple VPN/CUGs as described above in this table under #1, 2 and 3.</p>		

Item	Requirements	Bidder Meets or Exceeds?	
		Y	N
22	The MPLS WAN VPN service shall support access speeds from 128 Kbps to 10 Gbps	Y	
	<b>Bidder's Product Description:</b> Ports are available that support access speeds of 56 Kbps to 2.4 Gbps and Ethernet speeds from 2 Mbps to 1,000 Mbps and 10 Gigabit Ethernet (GigE).		
23	The MPLS WAN VPN service shall support multiple network interfaces	Y	
	<b>Bidders shall list here the network interfaces that will be supported for CALNET 3, e.g., Dedicated Private Line, SONET, or Ethernet:</b> NWN's universal accessibility supports the integration of Private Line, Frame Relay, ATM, Ethernet and other access options into the customer's network. Our service supports the following network interfaces: <ul style="list-style-type: none"> <li>• Dedicated IP – special access, local loop connection from customer premises to NWN IP POP, terminating on NWN's networking infrastructure</li> <li>• Dedicated ATM access – special access, local loop connection from customer premises to NWN ATM POP, terminating on Customer Premise Equipment interconnecting to the NWN networking infrastructure via a virtual connection</li> <li>• Dedicated frame access – special access local loop connection from customer premises to NWN Frame Relay POP, terminating on Customer Premise Equipment interconnecting to the NWN networking infrastructure via a virtual connection</li> <li>• ATM partner access – local loop connection from customer premises to local exchange carrier (LEC) ATM POP that is interconnected to NWN ATM POP via a user network interface (UNI) and then interconnected to NWN's networking infrastructure via a virtual connection</li> <li>• Frame partner access – local loop connection from customer premises to LEC Frame Relay POP that is interconnected to NWN Frame Relay POP via a network node interface (NNI) and then interconnected to NWN's networking infrastructure via a virtual connection</li> <li>• Ethernet Local Access – an Ethernet local loop connection from customer premises to the NWN public or private IP POP, terminating on Ethernet interconnection switch and then interconnected to NWN's networking infrastructure.</li> <li>• Collocation access – interconnection between collocated CPE and NWN's networking infrastructure at NWN facility via a cross-connect</li> </ul>		
24	The MPLS WAN VPN service shall support multiple Layer 2 protocols	Y	
	<b>Bidders shall list here the Layer 2 protocols that will be supported for CALNET 3:</b> NWN's MPLS WAN VPN service supports Frame Relay, ATM, and Ethernet, layer 2 network interfaces.		
25	The MPLS WAN VPN service shall support wireless Customer access capability to the MPLS network	Y	
	<b>Bidders Product Description:</b> NWN's MPLS WAN VPN service provides Wireless Access capabilities for remote locations and works with all major carriers.		

Item	Requirements	Bidder Meets or Exceeds?																															
		Y	N																														
26	The MPLS WAN VPN service shall support Digital Subscriber Line (DSL) with speeds from 128 Kbps to 1500 Kbps	Y																															
	<b>Bidder's Product Description:</b> NWN provides Digital Subscriber Line (DSL) Access for remote locations from 128k to 1500k.																																
27	The MPLS WAN VPN service shall support Customer access to the MPLS network via satellite communications	Y																															
	<b>Bidders shall list here all of the satellite communications speeds that will be supported for CALNET 3:</b> NWN provides satellite communication speeds as noted below:																																
	<table border="1"> <thead> <tr> <th>Service Plan</th> <th>Applications</th> <th>Transmit Speed</th> </tr> </thead> <tbody> <tr> <td>D-50</td> <td>Fast, "always-on", economical support for transaction based or polling applications (e.g. retail POS transactions, SCADA) for fast network response times. Typically 1 to 2 simultaneous users per site.</td> <td>64 Kbps</td> </tr> <tr> <td>D-100</td> <td>Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 1 to 2 simultaneous users per site.</td> <td>128 Kbps</td> </tr> <tr> <td>D-200</td> <td>Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 3 to 4 simultaneous users per site.</td> <td>256 Kbps</td> </tr> <tr> <td>D-300</td> <td>Designed for larger offices with bandwidth intensive applications. Typically 5 to 10 simultaneous users per site.</td> <td>512 Kbps</td> </tr> <tr> <td>D-400</td> <td>Designed for larger offices with bandwidth intensive applications. Typically 5 to 10 simultaneous users per site.</td> <td>1024 Kbps</td> </tr> <tr> <td>S-50</td> <td>Fast, "always-on", economical support for transaction based or polling applications (e.g. retail POS transactions, SCADA) for fast network response times. Typically 1 to 2 simultaneous users per site.</td> <td>64 Kbps/ 1024 Kbps</td> </tr> <tr> <td>S-100</td> <td>Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 1 to 2 simultaneous users per site.</td> <td>128 Kbps/ 1024 Kbps</td> </tr> <tr> <td>S-200</td> <td>Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 3 to 4 simultaneous users per site.</td> <td>256 Kbps/ 1536 Kbps</td> </tr> <tr> <td>S-300</td> <td>Designed for larger offices with bandwidth intensive applications. Typically 5 to 10 simultaneous users per site.</td> <td>512 Kbps/ 2048 Kbps</td> </tr> </tbody> </table>			Service Plan	Applications	Transmit Speed	D-50	Fast, "always-on", economical support for transaction based or polling applications (e.g. retail POS transactions, SCADA) for fast network response times. Typically 1 to 2 simultaneous users per site.	64 Kbps	D-100	Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 1 to 2 simultaneous users per site.	128 Kbps	D-200	Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 3 to 4 simultaneous users per site.	256 Kbps	D-300	Designed for larger offices with bandwidth intensive applications. Typically 5 to 10 simultaneous users per site.	512 Kbps	D-400	Designed for larger offices with bandwidth intensive applications. Typically 5 to 10 simultaneous users per site.	1024 Kbps	S-50	Fast, "always-on", economical support for transaction based or polling applications (e.g. retail POS transactions, SCADA) for fast network response times. Typically 1 to 2 simultaneous users per site.	64 Kbps/ 1024 Kbps	S-100	Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 1 to 2 simultaneous users per site.	128 Kbps/ 1024 Kbps	S-200	Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 3 to 4 simultaneous users per site.	256 Kbps/ 1536 Kbps	S-300	Designed for larger offices with bandwidth intensive applications. Typically 5 to 10 simultaneous users per site.	512 Kbps/ 2048 Kbps
	Service Plan	Applications	Transmit Speed																														
	D-50	Fast, "always-on", economical support for transaction based or polling applications (e.g. retail POS transactions, SCADA) for fast network response times. Typically 1 to 2 simultaneous users per site.	64 Kbps																														
	D-100	Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 1 to 2 simultaneous users per site.	128 Kbps																														
	D-200	Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 3 to 4 simultaneous users per site.	256 Kbps																														
	D-300	Designed for larger offices with bandwidth intensive applications. Typically 5 to 10 simultaneous users per site.	512 Kbps																														
	D-400	Designed for larger offices with bandwidth intensive applications. Typically 5 to 10 simultaneous users per site.	1024 Kbps																														
	S-50	Fast, "always-on", economical support for transaction based or polling applications (e.g. retail POS transactions, SCADA) for fast network response times. Typically 1 to 2 simultaneous users per site.	64 Kbps/ 1024 Kbps																														
	S-100	Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 1 to 2 simultaneous users per site.	128 Kbps/ 1024 Kbps																														
S-200	Designed for full range of retail or small office applications (POS, credit, polling, email, and corporate intranet). Typically 3 to 4 simultaneous users per site.	256 Kbps/ 1536 Kbps																															
S-300	Designed for larger offices with bandwidth intensive applications. Typically 5 to 10 simultaneous users per site.	512 Kbps/ 2048 Kbps																															

Item	Requirements	Bidder Meets or Exceeds?	
		Y	N
28	The MPLS service shall include inside wiring/demarcation extension up to 300 feet in Customer provided conduit.	Y	
	<b>Bidder's Product Description:</b> NWN's solution includes inside wiring/demarcation extension up to 300 feet in customer provided conduit.		
29	The MPLS service shall include business line and modem for out-of-band emergency access to the managed router	Y	
	<b>Bidder's Product Description:</b> NWN's solution includes business line and modem and is configured for out-of-band access to the managed router via a standard business line.		
30	Contractor shall identify managed router reports available at no additional charge. Bidder shall describe the method of accessing these reports.	Y	
	<b>Bidder's Product Description:</b> NWN's solution provides Managed Router Reporting that meets IFB STPD 12-001-A requirements. NWN's solution includes reporting on our CPE bundle and the State will have access to real-time and historical reporting.		
Contractor shall provide fully managed router service bundles that include:			
31a	Router Maintenance. Proactively detect, isolate and resolve hardware, software and firmware faults associated with the managed router and modem used for access to the managed router. The Contractor shall also respond to Customer reported faults. Router maintenance shall be provided 24x365. If dispatch is required, a Field Service Repair Technician shall arrive within four (4) hours of isolating the fault to the managed router/modem. Customer shall be notified of router faults and be provided trouble status at (1) hour intervals.	Y	
	<b>Bidder's Product Description:</b> NWN's solution includes proactive detection, isolation and resolution of hardware, software and firmware faults associated with the managed router and modem used for access to the managed router and responds to Customer reported faults. NWN's router maintenance is provided on a 24x7x365 basis and when dispatch is required, a Field Service Repair Technician arrives within four (4) hours from isolating the fault to the managed router/modem. Customers are notified of router faults and are provided trouble status at one (1) hour intervals.		

Item	Requirements	Bidder Meets or Exceeds?	
		Y	N
31b	Router Monitoring. Proactively detect, isolate and resolve logical faults associated with the managed router. Router monitoring shall be provided 24x365.	Y	
	<b>Bidder's Product Description:</b> NWN's solution includes monitoring and notification proactive 24x7x365 detection, isolation and resolution of logical faults associated with the managed router and includes: <ul style="list-style-type: none"> <li>• Continuous network monitoring – 24x7x365 proactive network monitoring to identify issues with monitored devices</li> <li>• Real-time notification – NWN designated maintenance personnel contacted to resolve issues</li> <li>• Network Operations Center – available 24x7x365</li> </ul>		
31c	Router Management. Manage router configuration. This includes passwords, access lists and configuration changes due to moves, adds, changes and deletes.	Y	
	<b>Bidder's Product Description:</b> NWN's solution includes router management and router configuration management that includes passwords, access lists, and configuration changes due to moves, adds, changes and deletes (MACD). NWN manages configurations and performs user-requested changes to ensure configuration integrity.		
31d	Network Monitoring. Proactively detect, isolate and resolve network faults. Network monitoring shall be provided 24x365. Customer shall be notified of network faults and be provided trouble status at one (1) hour intervals.	Y	
	<b>Bidder's Product Description:</b> NWN's solution includes proactive 24x7x365 detection, isolation and resolution on network faults. Customers are notified of network faults and provided trouble status at one (1) hour intervals. The following services are included: <ul style="list-style-type: none"> <li>• Continuous network monitoring – 24x7x365 proactive network monitoring to identify issues with monitored devices</li> <li>• Real-time notification – NWN's designated maintenance personnel contacted to resolve issues</li> <li>• Network operations center – available 24x7x365</li> </ul>		

### 1.2.2.8 MPLS TRANSPORT SPEEDS

Contractor's CALNET 3 solution shall include transport options to one (1) endpoint for each of the speeds detailed in Tables 1.2.2.8. Pricing for each of these speeds will be provided by the Bidder in the response to the Subcategory Cost Worksheets.

#### 1.2.2.8.1 MPLS Port Transport Speeds

**Table 1.2.2.8.1.a MPLS Port Transport Speeds**

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
1	MPLS Transport DS1 Port service at minimum line rate of 128 Kbps	Y		NWNCA-128
	<b>Bidder's Product Description:</b> Supports 128 Kbps MPLS services via dedicated fractional DS1 local access.			
2	MPLS Transport DS1 Port service at minimum line rate of 384 Kbps	Y		NWNCA-384
	<b>Bidder's Product Description:</b> Supports 384 Kbps MPLS services via dedicated fractional DS1 local access.			
3	MPLS Transport DS1 Port service at minimum line rate of 512 Kbps	Y		NWNCA-512
	<b>Bidder's Product Description:</b> Supports 512 Kbps MPLS services via dedicated fractional DS1 local access.			
4	MPLS Transport DS1 Port service at minimum line rate of 768 Kbps	Y		NWNCA-768
	<b>Bidder's Product Description:</b> Supports 768 Kbps MPLS services via dedicated fractional DS1 local access.			
5	MPLS Transport DS1 Port service at minimum line rate of 1.024 Mbps	Y		NWNCA-1024
	<b>Bidder's Product Description:</b> Supports 1.024 Mbps MPLS services via dedicated fractional DS1 local access.			
6	MPLS Transport DS1 Port service at minimum line rate of 1.544 Mbps	Y		NWNCA-1544
	<b>Bidder's Product Description:</b> Supports 1.544 Mbps MPLS services via dedicated DS1 local access.			
7	MPLS Transport NxDS1 Port service at minimum line rate of 3.088 Mbps	Y		NWNCA-3088
	<b>Bidder's Product Description:</b> Supports 2xDS1 MPLS services via Multilink Point to Point Protocol (MLPPP) to bond two DS1 local access loops.			
8	MPLS Transport NxDS1 Port service at minimum line rate of 4.632 Mbps	Y		NWNCA-4632
	<b>Bidder's Product Description:</b> Supports 3xDS1 MPLS services via Multilink Point to Point Protocol (MLPPP) to bond three DS1 local access loops.			
9	MPLS Transport NxDS1 Port service at minimum line rate of 6.176 Mbps	Y		NWNCA-6176
	<b>Bidder's Product Description:</b> Supports 4xDS1 MPLS services via MLPPP to bond four DS1 local access loops.			
10	MPLS Transport NxDS1 Port service at minimum line rate of 7.720 Mbps	Y		NWNCA-7720

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
	<b>Bidder's Product Description:</b> Supports 5xDS1 MPLS services via MLPPP to bond five DS1 local access loops			
11	MPLS Transport NxDS1 Port service at minimum line rate of 9.264 Mbps	Y		NWNCA-9264
	<b>Bidder's Product Description:</b> Supports 6xDS1 MPLS services via MLPPP to bond six DS1 local access loops.			
12	MPLS Transport DS3 Port service at minimum line rate of 10 Mbps	Y		NWNCA-10KDS
	<b>Bidder's Product Description:</b> Supports DS3 MPLS services via dedicated tiered fractional DS3 local access circuits ranging from 3 Mbps to 45 Mbps in 3 Mbps increments.			
13	MPLS Transport NxDS1 Port service at minimum line rate of 12.352 Mbps	Y		NWNCA-12352
	<b>Bidder's Product Description:</b> Supports 8xDS1 MPLS services via MLPPP to bond eight DS1 local access loops.			
14	MPLS Transport DS3 Port service at minimum line rate of 20 Mbps	Y		NWNCA-20KDS
	<b>Bidder's Product Description:</b> Supports DS3 MPLS services via dedicated fractional DS3 local access circuits ranging from 3 Mbps to 45 Mbps in 3 Mbps increments.			
15	MPLS Transport DS3 Port service at minimum line rate of 45 Mbps	Y		NWNCA-45KDS
	<b>Bidder's Product Description:</b> Supports DS3 MPLS services via a dedicated flat DS3 local access circuit at 45 Mbps.			
16	MPLS Transport OC3 Port service at minimum line rate of 155 Mbps	Y		NWNCA-155KOC
	<b>Bidder's Product Description:</b> Supports OC3 MPLS services via dedicated Flat OC3 local access circuit at 155 Mbps.			
17	MPLS Transport OC12 Port service at minimum line rate of 622 Mbps	Y		NWNCA-622KOC
	<b>Bidder's Product Description:</b> Supports OC12 MPLS services via dedicated Flat OC12 local access s circuits.			
18	MPLS Transport Ethernet Port service at minimum line rate of one (1) Mbps	Y		NWNCA-1Mbps
	<b>Bidder's Product Description:</b> Supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments.			
19	MPLS Transport Ethernet Port service at minimum line rate of two (2) Mbps	Y		NWNCA-2Mbps
	<b>Bidder's Product Description:</b> Supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments.			
20	MPLS Transport Ethernet Port service at minimum line rate of three (3) Mbps	Y		NWNCA-3Mbps
	<b>Bidder's Product Description:</b> Supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
21	MPLS Transport Ethernet Port service at minimum line rate of four (4) Mbps	Y		NWNCA-4Mbps
	<b>Bidder's Product Description:</b> Supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments.			
22	MPLS Transport Ethernet Port service at minimum line rate of five (5) Mbps	Y		NWNCA-5Mbps
	<b>Bidder's Product Description:</b> Supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments.			
23	MPLS Transport Ethernet Port service at minimum line rate of six (6) Mbps	Y		NWNCA-6Mbps
	<b>Bidder's Product Description:</b> Supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments.			
24	MPLS Transport Ethernet Port service at minimum line rate of seven (7) Mbps	Y		NWNCA-7Mbps
	<b>Bidder's Product Description:</b> Supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments.			
25	MPLS Transport Ethernet Port service at minimum line rate of eight (8) Mbps	Y		NWNCA-8Mbps
	<b>Bidder's Product Description:</b> Supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments.			
26	MPLS Transport Ethernet Port service at minimum line rate of nine (9) Mbps	Y		NWNCA-9Mbps
	<b>Bidder's Product Description:</b> Supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments.			
27	MPLS Transport Ethernet Port service at minimum line rate of 10 Mbps	Y		NWNCA-10Mbps
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps in 10 Mbps increments, also supporting a 15 Mbps line rate.			
28	MPLS Transport Ethernet Port service at minimum line rate of 20 Mbps	Y		NWNCA-20Mbps
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals.			
29	MPLS Transport Ethernet Port service at minimum line rate of 30 Mbps	Y		NWNCA-30Mbps
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals.			
30	MPLS Transport Ethernet Port service at minimum line rate of 40 Mbps	Y		NWNCA-40Mbps
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals.			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
31	MPLS Transport Ethernet Port service at minimum line rate of 50 Mbps	Y		NWNCA-50Mbps
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals.			
32	MPLS Transport Ethernet Port service at minimum line rate of 60 Mbps	Y		NWNCA-60Mbps
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals.			
33	MPLS Transport Ethernet Port service at minimum line rate of 70 Mbps	Y		NWNCA-70Mbps
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals.			
34	MPLS Transport Ethernet Port service at minimum line rate of 80 Mbps	Y		NWNCA-80Mbps
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals.			
35	MPLS Transport Ethernet Port service at minimum line rate of 90 Mbps	Y		NWNCA-90Mbps
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals.			
36	MPLS Transport Ethernet Port service at minimum line rate of 100 Mbps	Y		NWNCA-100Mbps
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals.			
37	MPLS Transport Ethernet Port service at minimum line rate of 200 Mbps	Y		NWNCA-200Mbps
	<b>Bidder's Product Description:</b> Supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps			
38	MPLS Transport Ethernet Port service at minimum line rate of 300 Mbps	Y		NWNCA-300Mbps
	<b>Bidder's Product Description:</b> Supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps			
39	MPLS Transport Ethernet Port service at minimum line rate of 400 Mbps	Y		NWNCA-400Mbps
	<b>Bidder's Product Description:</b> Supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps			
40	MPLS Transport Ethernet Port service at minimum line rate of 500 Mbps	Y		NWNCA-500Mbps

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
	<b>Bidder's Product Description:</b> Supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps			
41	MPLS Transport Ethernet Port service at minimum line rate of 600 Mbps	Y		NWNCA-600Mbps
	<b>Bidder's Product Description:</b> Supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps			
42	MPLS Transport Ethernet Port service at minimum line rate of 700 Mbps	Y		NWNCA-700Mbps
	<b>Bidder's Product Description:</b> Supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps.			
43	MPLS Transport Ethernet Port service at minimum line rate of 900 Mbps	Y		NWNCA-900Mbps
	<b>Bidder's Product Description:</b> Supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps.			
44	MPLS Transport Ethernet Port service at minimum line rate of one (1) Gbps	Y		NWNCA-1Gbps
	<b>Bidder's Product Description:</b> Supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps (1 Gbps) line rates increasing in 100 Mbps increments to 1000 Mbps.			

The Contractor may offer additional unsolicited MPLS Port Transport Speeds in Table 1.2.2.8.1.b.

Table 1.2.2.8.1.b Unsolicited MPLS Port Transport Speeds

Item	Feature Name	Feature Description	Bidder's Product Identifier
1	MPLS Transport – 10.808 Mbps	MPLS Transport NxDS1 Port service at minimum line rate of 10.808 Mbps	NWNCA-10808Mbps
	<b>Bidder's Product Description:</b> Supports 7xDS1 via Multilink Point to Point Protocol (MLPPP) to bond seven DS1 local access loops.		
2	MPLS Transport – 10 Mbps E	MPLS Transport Ethernet Port service at a minimum line rate of 10 Mbps Via Ethernet local access	NWNCA-10MbpsE
	<b>Bidder's Product Description:</b> Supports Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments to 10 Mbps		

Item	Feature Name	Feature Description	Bidder's Product Identifier
3	MPLS Transport – 100 FastE	MPLS Transport Ethernet Port service at minimum line rate of 100 Mbps Via FastE local access.	NWNCA-100MbpsFE
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals.		
4	<b>NWN Fully Managed Telepresence Solutions</b>	NWN managed and hosted video collaboration service that utilizes the NWN VPN architecture	Several: See Items 5-14 below
	<b>Bidder's Product Description:</b> <b>NWN Fully Managed Telepresence Solution</b> is a managed and hosted video collaboration service that utilizes the NWN VPN architecture. It provides a number of flexible options to meet a wide range of customer needs. The Hosted deployment option provides a fully managed solution with full call control and scheduling support in a cloud based solution.		
5	<b>Video Conference - Personal Conferencing Endpoint NWN-Provided</b>	Monthly Charge for <b>Video Conference</b> equipment	NWNCA-APV-MED
	<b>Bidder's Product Description:</b> Fully managed and Installed Telepresence endpoint (EX60 or Comparable product). This service is an <b>Telepresence Personal Video</b> unit with remote access for single or small group of persons and includes: a single medium screen, microphone, speaker cameras, and video and audio processing devices (or a single PC/Laptop) plus Design, Installation/Implementation and Management of Equipment		
6	<b>Video Conference - Advanced Personal Conferencing Endpoint (NWN Provided Equipment)</b>	Monthly Charge for <b>Video Conference</b> equipment	NWNCA-APV-LRG
	<b>Bidder's Product Description:</b> Fully managed and installed Telepresence endpoint (EX90 or SX20 or Comparable product). This service is an <b>Advanced Telepresence Personal Video</b> unit with remote access for single or small group of persons and includes a single large screen, microphone, speaker cameras, and video and audio processing devices (or a single PC/Laptop) plus Design, Installation/Implementation and Management of Equipment		
7	<b>Video Conference - Small Conferencing Room NWN-Provided</b>	Monthly Charge for <b>Video Conference</b> equipment	NWNCA-SRV
	<b>Bidder's Product Description:</b> Fully Managed Telepresence Solution (MX200 or MX300 or Comparable product). This service is for a <b>Small Conference Room</b> that allows for smaller groups to share Web Conferencing and includes HD screens, microphones, speakers, cameras, and video and audio processing devices plus Design, Installation/Implementation and Management of Equipment.		
8	<b>Video Conference - Medium Conferencing Room NWN-Provided</b>	Monthly Charge for <b>Video Conference</b> equipment	NWNCA-MRV
	<b>Bidder's Product Description:</b> Fully Managed Telepresence Solution (C40 or Comparable product). This service is for a <b>Medium Conference Room</b> that allows for medium groups to share Web Conferencing and includes 55" HD single screen, microphones, speakers, cameras, and video and audio processing devices plus Design, Installation/Implementation and Management of Equipment.		

Item	Feature Name	Feature Description	Bidder's Product Identifier
9	<b>Video Conference - Larger Conferencing Room NWN-Provided</b>	Monthly Charge for <b>Video Conference</b> equipment	NWNCA-LRV
	<b>Bidder's Product Description:</b> Fully Managed Telepresence Solution (C90 or Comparable product). This service is for a <b>Large Conference Room</b> that allows for large groups to share Web Conferencing and includes dual 65" screens, microphones, speakers, cameras, and video and audio processing devices plus Design, Installation/Implementation and Management of Equipment.		
10	<b>Video Conference - Larger Conferencing Room Single Screen NWN Provided Equipment)</b>	Monthly Charge for <b>Video Conference</b> equipment	NWNCA-LRV-SINGLE
	<b>Bidder's Product Description:</b> Fully Managed Telepresence Solution (TX1310 or Comparable product). This service is for a <b>Large Conference Room-Single Screen</b> that allows for large groups to share Web Conferencing and includes single 65" screen, microphones, speakers, cameras, and video and audio processing devices plus Design, Installation/Implementation and Management of Equipment.		
11	<b>Video Conference - Larger Conferencing Room – MultiScreen - NWN Provided Equipment</b>	Monthly Charge for <b>Video Conference</b> equipment	NWNCA-LRV-MULTI
	<b>Bidder's Product Description:</b> Fully Managed Telepresence Solution (TX9000 or Comparable product). This service is for a <b>Large Conference Room-MultiScreen</b> that allows for large groups to share Web Conferencing and includes three 65" screens, microphones, speakers, cameras, and video and audio processing devices plus Design, Installation/Implementation and Management of Equipment.		
12	<b>Telepresence Management Suite - NWN Provided</b>	Monthly Charge for Video Conference equipment	NWNCA-TMS
	<b>Bidder's Product Description:</b> Fully Managed <b>Telepresence Management Suite</b> (hardware included in monthly fee). This service centralizes the control for telepresence conferences with the ability to mass provision devices and users and provide an enhanced FindMe portal for end user availability settings. With directory integration, access to multiple directories is simplified and centralized views of available resources plus Design, Installation/Implementation and Management of Equipment		
13	<b>Video Conferencing (MCU) Port - NWN Provided</b>	Monthly Charge for <b>Video Conference</b> equipment	NWNCA-B2BP
	<b>Bidder's Product Description:</b> Fully Managed Teleconferencing Service (Hosted Not On Premises) that provides the customer with a <b>B2B Video and Web Conferencing Port</b> to enable all listed Video Conferencing & Telepresence solutions. This solution is provided in addition to the Video Conferencing Feature. One port per conferenced device required. plus Design, Installation/Implementation and Management of Equipment		
14	<b>NWN Fully Managed Telepresence Solutions-Room Readiness Survey</b>	Technical Services for <b>Room Readiness</b>	NWNCA-VTECH
	<b>Bidder's Product Description:</b> Technical Services provided on a per room basis to review and assess the Customers Infrastructure/ <b>Room Readiness</b> to implement a Fully Managed Telepresence Solution		

1.2.2.8.2 MPLS Port and Access Bundled Transport Speeds

**Table 1.2.2.8.2.a MPLS Port and Access Bundled Transport Speeds**

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
1	MPLS Transport DS1 Port and Access service at minimum line rate of 128 Kbps	Y		NWNCA-128Kbps
	<b>Bidder's Product Description:</b> Supports 128 Kbps MPLS port and access services via a dedicated fractional DS1 local access circuit connected directly to a local MPLS port.			
2	MPLS Transport DS1 Port and Access service at minimum line rate of 256 Kbps	Y		NWNCA-256Kbps
	<b>Bidder's Product Description:</b> Supports 256 Kbps MPLS port and access services via a dedicated fractional DS1 local access circuit connected directly to a local MPLS port.			
3	MPLS Transport DS1 Port and Access service at minimum line rate of 384 Kbps	Y		NWNCA-384Kbps
	<b>Bidder's Product Description:</b> Supports 384 Kbps MPLS port and access services via a dedicated fractional DS1 local access circuit connected directly to a local MPLS port.			
4	MPLS Transport DS1 Port and Access service at minimum line rate of 512 Kbps	Y		NWNCA-512Kbps
	<b>Bidder's Product Description:</b> Supports 512 Kbps MPLS port and access services via a dedicated fractional DS1 local access circuit connected directly to a local MPLS port.			
5	MPLS Transport DS1 Port and Access service at minimum line rate of 768 Kbps	Y		NWNCA-768Kbps
	<b>Bidder's Product Description:</b> Supports 768 Kbps MPLS port and access services via a dedicated fractional DS1 local access circuit connected directly to a local MPLS port.			
6	MPLS Transport DS1 Port and Access service at minimum line rate of 1.024 Mbps	Y		NWNCA-1024Mbps
	<b>Bidder's Product Description:</b> Supports 1.024 Mbps MPLS port and access services via a dedicated fractional DS1 local access circuit connected directly to a local MPLS port.			
7	MPLS Transport DS1 Port and Access service at minimum line rate of 1.544 Mbps	Y		NWNCA-1544Mbps
	<b>Bidder's Product Description:</b> Supports 1.544 Mbps MPLS port and access services via a dedicated DS1 local access circuit connected directly to a local MPLS port.			
8	MPLS Transport NxDS1 Port and Access service at minimum line rate of 3.088 Mbps	Y		NWNCA-3088Mbps
	<b>Bidder's Product Description:</b> Supports 2xDS1 MPLS port and access services via MLPP bonding two DS1 local access loops connected directly to a local MPLS port and supporting 3.088 Mbps service.			
9	MPLS Transport NxDS1 Port and Access service at minimum line rate of 4.632 Mbps	Y		NWNCA-4632Mbps
	<b>Bidder's Product Description:</b> Supports 3xDS1 MPLS port and access services via MLPPP bonding three DS1 local access loops connected directly to a local MPLS port and supporting 4.632 Mbps service.			
10	MPLS Transport NxDS1 Port and Access service at minimum line rate of 6.176 Mbps	Y		NWNCA-6176Mbps
	<b>Bidder's Product Description:</b> Supports 4xDS1 MPLS port and access services via MLPPP bonding			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
	three DS1 local access loops connected directly to a local MPLS port and supporting 6.176 Mbps service.			
11	MPLS Transport NxDS1 Port and Access service at minimum line rate of 7.720 Mbps	Y		NWNCA-7720Mbps
	<b>Bidder's Product Description:</b> Supports 5xDS1 MPLS port and access services via MLPPP bonding three DS1 local access loops connected directly to a local MPLS port and supporting 7.720 Mbps service.			
12	MPLS Transport NxDS1 Port and Access service at minimum line rate of 9.264 Mbps	Y		NWNCA-9264Mbps
	<b>Bidder's Product Description:</b> Supports 6xDS1 MPLS port and access services via MLPPP bonding three DS1 local access loops connected directly to a local MPLS port and supporting 9.264 Mbps service.			
13	MPLS Transport DS3 Port and Access service at minimum line rate of 10 Mbps	Y		NWNCA-10KDS3
	<b>Bidder's Product Description:</b> Supports DS3 MPLS port and access services via a dedicated tiered fractional DS3 local access circuit connecting directly to a MPLS Port. Port Speeds ranging from 3 Mbps to 45 Mbps in 3 Mbps increments are available and will support 10 Mbps service.			
14	MPLS Transport NxDS1 Port and Access service at minimum line rate of 12.352 Mbps	Y		NWNCA-12352Mbps
	<b>Bidder's Product Description:</b> Supports 8xDS1 MPLS port and access services via MLPPP bonding eight DS1 local access loops connected directly to a local MPLS port and will support 12.352 Mbps service.			
15	MPLS Transport DS3 Port and Access service at minimum line rate of 15 Mbps	Y		NWNCA-15KMbps
	<b>Bidder's Product Description:</b> Supports DS3 MPLS port and access services via a dedicated tiered fractional DS3 local access circuit connecting directly to a MPLS Port. Port Speeds ranging from 3 Mbps to 45 Mbps in 3 Mbps increments are available and will support 15 Mbps service.			
16	MPLS Transport DS3 Port and Access service at minimum line rate of 20 Mbps	Y		NWNCA-20KDS3
	<b>Bidder's Product Description:</b> Supports DS3 MPLS port and access services via a dedicated tiered fractional DS3 local access circuit connecting directly to a MPLS Port. Port Speeds ranging from 3 Mbps to 45 Mbps in 3 Mbps increments are available and will support 20 Mbps service.			
17	MPLS Transport DS3 Port and Access service at minimum line rate of 25 Mbps	Y		NWNCA-25KDS3
	<b>Bidder's Product Description:</b> Supports DS3 MPLS port and access services via a dedicated tiered fractional DS3 local access circuit connecting directly to a MPLS Port. Port Speeds ranging from 3 Mbps to 45 Mbps in 3 Mbps increments are available and will support 25 Mbps service.			
18	MPLS Transport DS3 Port and Access service at minimum line rate of 30 Mbps	Y		NWNCA-30KDS3
	<b>Bidder's Product Description:</b> Supports DS3 MPLS port and access services via a dedicated tiered fractional DS3 local access circuit connecting directly to a MPLS Port. Port Speeds ranging from 3 Mbps to 45 Mbps in 3 Mbps increments are available and will support 30 Mbps service.			
19	MPLS Transport DS3 Port and Access service at minimum line rate of 45 Mbps	Y		NWNCA-45KDS3

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
	<p><b>Bidder's Product Description:</b> Supports DS3 MPLS port and access services via a dedicated tiered fractional DS3 local access circuit connecting directly to a MPLS Port. Port Speeds ranging from 3 Mbps to 45 Mbps in 3 Mbps increments are available and will support 45 Mbps service.</p>			

The Contractor may offer additional unsolicited MPLS Port and Access Bundled Transport Speeds in Table 1.2.2.8.2.b.

**Table 1.2.2.8.2.b Unsolicited MPLS Port and Access Bundled Transport Speeds**

Item	Feature Name	Feature Description	Bidder's Product Identifier
1	<b>MPLS Port and Access – 10.808</b>	MPLS Port & Access 7xDS1 Port service at minimum line rate of 10.808 Mbps	NWNCA-10808DS
	<b>Bidder's Product Description:</b> Supports 7xDS1 via Multilink Point to Point Protocol (MLPPP) to bond seven DS1 local access loops.		
2	<b>MPLS Port and Access -10 Mbps E</b>	MPLS Port & Access Ethernet Port service at a minimum line rate of 10 Mbps Via Ethernet local access	NWNCA-10MbE
	<b>Bidder's Product Description:</b> Supports Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments to 10 Mbps		
3	<b>MPLS Port and Access – 100 FastE</b>	MPLS Transport Ethernet Port service at minimum line rate of 100 Mbps Via FastE local access.	NWNCA-100FastE
	<b>Bidder's Product Description:</b> Supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps intervals		
4	<b>MPLS port and access Ethernet on-net Transport service with minimum line</b>	<b>On-Net Transport Services rates – Ranging from one (1) Mbps to 10 Gbps</b>	<b>Several: See Items 5-52 below</b>
	<b>Bidder's Product Description:</b>		
5	<b>MPLS port and access Ethernet on-net Transport service at minimum line rate of one (1) Mbps</b>	<b>MPLS port and access Ethernet on-net Transport service at minimum line rate of one (1) Mbps</b>	<b>NWNCA-1901</b>
	<b>Bidder's Product Description:</b>		
6	<b>MPLS port and access Ethernet on-net Transport service at minimum line rate of two (2) Mbps</b>	<b>MPLS port and access Ethernet on-net Transport service at minimum line rate of two (2) Mbps</b>	<b>NWNCA-1902</b>
	<b>Bidder's Product Description:</b>		
7	<b>MPLS port and access Ethernet on-net Transport service at minimum line rate of three (3) Mbps</b>	<b>MPLS port and access Ethernet on-net Transport service at minimum line rate of three (3) Mbps</b>	<b>NWNCA-1903</b>
	<b>Bidder's Product Description:</b>		

Item	Feature Name	Feature Description	Bidder's Product Identifier
8	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of four (4) Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of four (4) Mbps</i>	<b>NWNCA-1904</b>
	<b>Bidder's Product Description:</b>		
9	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of five (5) Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of five (5) Mbps</i>	<b>NWNCA-1905</b>
	<b>Bidder's Product Description:</b>		
10	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of six (6) Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of six (6) Mbps</i>	<b>NWNCA-1906</b>
	<b>Bidder's Product Description:</b>		
11	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of seven (7) Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of seven (7) Mbps</i>	<b>NWNCA-1907</b>
	<b>Bidder's Product Description:</b>		
12	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of eight (8) Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of eight (8) Mbps</i>	<b>NWNCA-1908</b>
	<b>Bidder's Product Description:</b>		
13	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of nine (9) Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of nine (9) Mbps</i>	<b>NWNCA-1909</b>
	<b>Bidder's Product Description:</b>		
14	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 10 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 10 Mbps</i>	<b>NWNCA-1910</b>
	<b>Bidder's Product Description:</b>		
15	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 20 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 20 Mbps</i>	<b>NWNCA-1911</b>
	<b>Bidder's Product Description:</b>		
16	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 30 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 30 Mbps</i>	<b>NWNCA-1912</b>
	<b>Bidder's Product Description:</b>		
17	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 40 Mbps</i>	<b>NWNCA-1913</b>

Item	Feature Name	Feature Description	Bidder's Product Identifier
	<i>of 40 Mbps</i>		
	<b>Bidder's Product Description:</b>		
18	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 50 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 50 Mbps</i>	<i>NWNCA-1914</i>
	<b>Bidder's Product Description:</b>		
19	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 60 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 60 Mbps</i>	<i>NWNCA-1915</i>
	<b>Bidder's Product Description:</b>		
20	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 70 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 70 Mbps</i>	<i>NWNCA-1916</i>
	<b>Bidder's Product Description:</b>		
21	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 80 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 80 Mbps</i>	<i>NWNCA-1917</i>
	<b>Bidder's Product Description:</b>		
22	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 90 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 90 Mbps</i>	<i>NWNCA-1918</i>
	<b>Bidder's Product Description:</b>		
23	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 100 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 100 Mbps</i>	<i>NWNCA-1919</i>
	<b>Bidder's Product Description:</b>		
24	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 150 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 150 Mbps</i>	<i>NWNCA-1919-150</i>
	<b>Bidder's Product Description:</b>		
25	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 200 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 200 Mbps</i>	<i>NWNCA-1920</i>
	<b>Bidder's Product Description:</b>		
26	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 250 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 250 Mbps</i>	<i>NWNCA-1920-150</i>

Item	Feature Name	Feature Description	Bidder's Product Identifier
	<b>Bidder's Product Description:</b>		
27	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 300 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 300 Mbps</i>	<i>NWNCA-1921</i>
	<b>Bidder's Product Description:</b>		
28	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 400 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 400 Mbps</i>	<i>NWNCA-1922</i>
	<b>Bidder's Product Description:</b>		
29	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 450 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 450 Mbps</i>	<i>NWNCA-1922-150</i>
	<b>Bidder's Product Description:</b>		
30	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 500 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 500 Mbps</i>	<i>NWNCA-1923</i>
	<b>Bidder's Product Description:</b>		
31	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 600 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 600 Mbps</i>	<i>NWNCA-1924</i>
	<b>Bidder's Product Description:</b>		
32	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 700 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 700 Mbps</i>	<i>NWNCA-1925</i>
	<b>Bidder's Product Description:</b>		
33	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 800 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 800 Mbps</i>	<i>NWNCA-1926</i>
	<b>Bidder's Product Description:</b>		
34	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 900 Mbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 900 Mbps</i>	<i>NWNCA-1927</i>
	<b>Bidder's Product Description:</b>		
35	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 1 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 1 Gbps</i>	<i>NWNCA-1928</i>
	<b>Bidder's Product Description:</b>		

Item	Feature Name	Feature Description	Bidder's Product Identifier
36	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 2 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 2 Gbps</i>	<i>NWNCA-1929</i>
	<b>Bidder's Product Description:</b>		
37	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 2.5 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 2.5 Gbps</i>	<i>NWNCA-1930</i>
	<b>Bidder's Product Description:</b>		
38	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 3 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 3 Gbps</i>	<i>NWNCA-1931</i>
	<b>Bidder's Product Description:</b>		
39	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 3.5 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 3.5 Gbps</i>	<i>NWNCA-1932</i>
	<b>Bidder's Product Description:</b>		
40	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 4 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 4 Gbps</i>	<i>NWNCA-1933</i>
	<b>Bidder's Product Description:</b>		
41	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 4.5 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 4.5 Gbps</i>	<i>NWNCA-1934</i>
	<b>Bidder's Product Description:</b>		
42	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 5 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 5 Gbps</i>	<i>NWNCA-1935</i>
	<b>Bidder's Product Description:</b>		
43	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 5.5 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 5.5Gbps</i>	<i>NWNCA-1936</i>
	<b>Bidder's Product Description:</b>		
44	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 6 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 6 Gbps</i>	<i>NWNCA-1937</i>
	<b>Bidder's Product Description:</b>		
45	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate</i>	<i>MPLS port and access Ethernet on-net Transport</i>	<i>NWNCA-1938</i>

Item	Feature Name	Feature Description	Bidder's Product Identifier
	<i>of 6.5 Gbps</i>	<i>service at minimum line rate of 6.5 Gbps</i>	
<b>Bidder's Product Description:</b>			
46	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 7 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 7 Gbps</i>	<i>NWNCA-1939</i>
<b>Bidder's Product Description:</b>			
47	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 7.5 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 7.5 Gbps</i>	<i>NWNCA-1940</i>
<b>Bidder's Product Description:</b>			
48	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 8 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 8 Gbps</i>	<i>NWNCA-1941</i>
<b>Bidder's Product Description:</b>			
49	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 8.5 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 8.5 Gbps</i>	<i>NWNCA-1942</i>
<b>Bidder's Product Description:</b>			
50	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 9 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 9 Gbps</i>	<i>NWNCA-1943</i>
<b>Bidder's Product Description:</b>			
51	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 9.5 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 9.5 Gbps</i>	<i>NWNCA-1944</i>
<b>Bidder's Product Description:</b>			
52	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 10 Gbps</i>	<i>MPLS port and access Ethernet on-net Transport service at minimum line rate of 10 Gbps</i>	<i>NWNCA-1945</i>
<b>Bidder's Product Description:</b>			
53	<i>MPLS port and access Ethernet OFF-NET Transport service with minimum line</i>	<i>Off-Net Transport Services rates – Ranging from one (1) Mbps to 10 Gbps</i>	<i>Several: See Items 54-101 below</i>
<b>Bidder's Product Description:</b>			
54	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of one (1) Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of one (1) Mbps</i>	<i>NWNCA-1901-O</i>

Item	Feature Name	Feature Description	Bidder's Product Identifier
	<b>Bidder's Product Description:</b>		
55	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of two (2) Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of two (2) Mbps</i>	<i>NWNCA-1902-O</i>
	<b>Bidder's Product Description:</b>		
56	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of three (3) Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of three (3) Mbps</i>	<i>NWNCA-1903-O</i>
	<b>Bidder's Product Description:</b>		
57	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of four (4) Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of four (4) Mbps</i>	<i>NWNCA-1904-O</i>
	<b>Bidder's Product Description:</b>		
58	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of five (5) Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of five (5) Mbps</i>	<i>NWNCA-1905-O</i>
	<b>Bidder's Product Description:</b>		
59	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of six (6) Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of six (6) Mbps</i>	<i>NWNCA-1906-O</i>
	<b>Bidder's Product Description:</b>		
60	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of seven (7) Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of seven (7) Mbps</i>	<i>NWNCA-1907-O</i>
	<b>Bidder's Product Description:</b>		
61	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of eight (8) Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of eight (8) Mbps</i>	<i>NWNCA-1908-O</i>
	<b>Bidder's Product Description:</b>		
62	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of nine (9) Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of nine (9) Mbps</i>	<i>NWNCA-1909-O</i>
	<b>Bidder's Product Description:</b>		
63	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 10 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 10 Mbps</i>	<i>NWNCA-1910-O</i>
	<b>Bidder's Product Description:</b>		

Item	Feature Name	Feature Description	Bidder's Product Identifier
64	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 20 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 20 Mbps</i>	<i>NWNCA-1911-O</i>
	<b>Bidder's Product Description:</b>		
65	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 30 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 30 Mbps</i>	<i>NWNCA-1912-O</i>
	<b>Bidder's Product Description:</b>		
66	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 40 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 40 Mbps</i>	<i>NWNCA-1913-O</i>
	<b>Bidder's Product Description:</b>		
67	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 50 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 50 Mbps</i>	<i>NWNCA-1914-O</i>
	<b>Bidder's Product Description:</b>		
68	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 60 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 60 Mbps</i>	<i>NWNCA-1915-O</i>
	<b>Bidder's Product Description:</b>		
69	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 70 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 70 Mbps</i>	<i>NWNCA-1916-O</i>
	<b>Bidder's Product Description:</b>		
70	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 80 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 80 Mbps</i>	<i>NWNCA-1917-O</i>
	<b>Bidder's Product Description:</b>		
71	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 90 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 90 Mbps</i>	<i>NWNCA-1918-O</i>
	<b>Bidder's Product Description:</b>		
72	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 100 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 100 Mbps</i>	<i>NWNCA-1919-O</i>
	<b>Bidder's Product Description:</b>		
73	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate</i>	<i>MPLS port and access Ethernet off-net Transport</i>	<i>NWNCA-1919-</i>

Item	Feature Name	Feature Description	Bidder's Product Identifier
	<i>of 150 Mbps</i>	<i>service at minimum line rate of 150 Mbps</i>	<i>150-O</i>
	<b>Bidder's Product Description:</b>		
74	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 200 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 200 Mbps</i>	<i>NWNCA-1920-O</i>
	<b>Bidder's Product Description:</b>		
75	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 250 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 250 Mbps</i>	<i>NWNCA-1920-150-O</i>
	<b>Bidder's Product Description:</b>		
76	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 300 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 300 Mbps</i>	<i>NWNCA-1921-O</i>
	<b>Bidder's Product Description:</b>		
77	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 400 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 400 Mbps</i>	<i>NWNCA-1922-O</i>
	<b>Bidder's Product Description:</b>		
78	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 450 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 450 Mbps</i>	<i>NWNCA-1922-150-O</i>
	<b>Bidder's Product Description:</b>		
79	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 500 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 500 Mbps</i>	<i>NWNCA-1923-O</i>
	<b>Bidder's Product Description:</b>		
80	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 600 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 600 Mbps</i>	<i>NWNCA-1924-O</i>
	<b>Bidder's Product Description:</b>		
81	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 700 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 700 Mbps</i>	<i>NWNCA-1925-O</i>
	<b>Bidder's Product Description:</b>		
82	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 800 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 800 Mbps</i>	<i>NWNCA-1926-O</i>

Item	Feature Name	Feature Description	Bidder's Product Identifier
	<b>Bidder's Product Description:</b>		
83	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 900 Mbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 900 Mbps</i>	<i>NWNCA-1927-O</i>
	<b>Bidder's Product Description:</b>		
84	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 1 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 1 Gbps</i>	<i>NWNCA-1928-O</i>
	<b>Bidder's Product Description:</b>		
85	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 2 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 2 Gbps</i>	<i>NWNCA-1929-O</i>
	<b>Bidder's Product Description:</b>		
86	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 2.5 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 2.5 Gbps</i>	<i>NWNCA-1930-O</i>
	<b>Bidder's Product Description:</b>		
87	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 3 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 3 Gbps</i>	<i>NWNCA-1931-O</i>
	<b>Bidder's Product Description:</b>		
88	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 3.5 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 3.5 Gbps</i>	<i>NWNCA-1932-O</i>
	<b>Bidder's Product Description:</b>		
89	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 4 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 4 Gbps</i>	<i>NWNCA-1933-O</i>
	<b>Bidder's Product Description:</b>		
90	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 4.5 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 4.5 Gbps</i>	<i>NWNCA-1934-O</i>
	<b>Bidder's Product Description:</b>		
91	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 5 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 5 Gbps</i>	<i>NWNCA-1935-O</i>
	<b>Bidder's Product Description:</b>		

Item	Feature Name	Feature Description	Bidder's Product Identifier
92	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 5.5 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 5.5 Gbps</i>	<i>NWNCA-1936-O</i>
	<b>Bidder's Product Description:</b>		
93	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 6 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 6 Gbps</i>	<i>NWNCA-1937-O</i>
	<b>Bidder's Product Description:</b>		
94	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 6.5 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 6.5 Gbps</i>	<i>NWNCA-1938-O</i>
	<b>Bidder's Product Description:</b>		
95	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 7 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 7 Gbps</i>	<i>NWNCA-1939-O</i>
	<b>Bidder's Product Description:</b>		
96	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 7.5 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 7.5 Gbps</i>	<i>NWNCA-1940-O</i>
	<b>Bidder's Product Description:</b>		
97	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 8 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 8 Gbps</i>	<i>NWNCA-1941-O</i>
	<b>Bidder's Product Description:</b>		
98	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 8.5 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 8.5 Gbps</i>	<i>NWNCA-1942-O</i>
	<b>Bidder's Product Description:</b>		
99	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 9 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 9 Gbps</i>	<i>NWNCA-1943-O</i>
	<b>Bidder's Product Description:</b>		
100	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 9.5 Gbps</i>	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate of 9.5 Gbps</i>	<i>NWNCA-1944-O</i>
	<b>Bidder's Product Description:</b>		
101	<i>MPLS port and access Ethernet off-net Transport service at minimum line rate</i>	<i>MPLS port and access Ethernet off-net Transport</i>	<i>NWNCA-1945-O</i>

Item	Feature Name	Feature Description	Bidder's Product Identifier
	<i>of 10 Gbps</i>	<i>service at minimum line rate of 10 Gbps</i>	
<b>Bidder's Product Description:</b>			

1.2.2.8.3 MPLS Port, Access and Router Bundled Transport Speeds

**Table 1.2.2.8.3.a MPLS Port, Access and Router Bundled Transport Speeds**

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
1	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 128 Kbps	Y		NWNCA-50108
	<b>Bidder's Product Description:</b> The equipment package provides port, access, and a router for 128 Kbps based DS1 service. The included router will terminate a DS1 access loop and support a 128 Kbps MPLS port. 7x24x365 4-Hour response for router maintenance, router monitoring, router management, network monitoring. All maintenance agreements will be in place for the set term of the agreement per IFB requirements. NWN also includes the modem, a basic phone line, and up to but not exceeding 300 feet of inside wiring from the MPOE to the extended DMARC point.			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
2	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 384 Kbps	Y		NWNCA-50109
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 384 Kbps based DS1 service. The included router will terminate a DS1 access loop and support a 384 Kbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
3	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 512 Kbps	Y		NWNCA-50110
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 512 Kbps based DS1 service. The included router will terminate a DS1 access loop and support a 512 Kbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
4	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 768 Kbps	Y		NWNCA-50111
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 768 Kbps based DS1 service. The included router will terminate a DS1 access loop and support a 768 Kbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
5	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 1.024 Mbps	Y		NWNCA-50112
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 1.024 Mbps based DS1 service. The included router will terminate a DS1 access loop and support a 1.024 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
6	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 1.544 Mbps	Y		NWNCA-50113
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 1.544 Mbps based on DS1 service. The included router will terminate a DS1 access loop and support a 1.544 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
7	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 3.088 Mbps	Y		NWNCA-50114
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 3.088 Mbps based on 2xDS1 service. The included router will terminate 2 DS1 access loops and support a 3.088 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
8	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 4.362 Mbps	Y		NWNCA-50115
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 4.362 Mbps based on 3xDS1 service. The included router will terminate 3 DS1 access loops and support a 4.362 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
9	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 5.000 Mbps	Y		NWNCA-50116
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 5.000 Mbps based on Ethernet service. The included router will terminate Ethernet access loops and support a 5.000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
10	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 6.176 Mbps	Y		NWNCA-50117
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 6.176 Mbps based on 4xDS1 service. The included router will terminate 4 DS1 access loops and support a 6.176 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
11	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 7.720 Mbps	Y		NWNCA-50118A
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 7.720 Mbps based on 5xDS1 service. The included router will terminate 5 DS1 access loops and support a 7.720 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
12	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 9.264 Mbps	Y		NWNCA-50119A
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 9.264 Mbps based on 6xDS1 service. The included router will terminate 6 DS1 access loops and support a 9.264 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
13	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 12.352 Mbps	Y		NWNCA-50120A
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 12.352 Mbps based on 8xDS1 service. The included router will terminate 8 DS1 access loops and support a 12.352 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
14	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 10 Mbps	Y		NWNCA-50118
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 10 Mbps based on DS3 or Ethernet local access service. The included router will terminate DS3 or Fast Ethernet access loops and support a 10 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
15	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 15 Mbps	Y		NWNCA-50119
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 15.000 Mbps based on DS3 or Ethernet service. The included router will terminate DS3 or Fast Ethernet access loops and support a 15.000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
16	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 20 Mbps	Y		NWNCA-50120
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 20 Mbps based on DS3 or Ethernet service. The included router will terminate a DS3 or Fast Ethernet access loops and support a 20 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
17	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 25 Mbps	Y		NWNCA-50121
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 25 Mbps based on DS3 or Ethernet service. The included router will terminate a DS3 or Fast Ethernet access loops and support a 25 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
18	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 30 Mbps	Y		NWNCA-50122
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 30 Mbps based on DS3 or Ethernet service. The included router will terminate a DS3 or Fast Ethernet access loops and support a 30 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
19	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 40 Mbps	Y		NWNCA-50123
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 40 Mbps based on DS3 or Ethernet service. The included router will terminate a DS3 or Fast Ethernet access loop and support a 40 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
20	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 45 Mbps	Y		NWNCA-50124
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 45 Mbps based on DS3 or Ethernet service. The included router will terminate a DS3 or Fast Ethernet access loop and support a 45 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

**The Contractor may offer additional unsolicited MPLS Port, Access and Router Bundled Transport Speeds in Table 1.2.2.8.3.b.**

**Table 1.2.2.8.3.b Unsolicited MPLS Port, Access and Router Bundled Transport Speeds**

Item	Feature Name	Feature Description	Bidder's Product Identifier

1.2.2.8.4 MPLS Port, Access and Router Bundled On-Net Transport Speeds

**Table 1.2.2.8.4.a MPLS Port, Access and Router Bundled On-Net Transport Speeds**

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
1	MPLS port, access and router on-net Transport service at minimum line rate of 155 Mbps (OC3)	Y		NWNCA-50125
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 155 Mbps based on OC3 service. The included router will terminate an OC3 access loop and support a 155 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
2	MPLS port, access and router on-net Transport service at minimum line rate of 625 Mbps (OC12)	Y		NWNCA-50126
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 625 Mbps based on OC12 service. The included router will terminate an OC12 access loop and support a 625 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
3	MPLS port, access and router on-net Transport service at minimum line rate of 2.5 Gbps (OC48)	Y		NWNCA-50127
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 2.5 Gbps based on OC48 service. The included router will terminate an OC48 access loop and support a 2.5 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
4	MPLS port, access and router on-net Transport service at minimum line rate of 10 Gbps (OC192)	Y		NWNCA-50128
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 10 Gbps based on OC12 service. The included router will terminate a 10 Gbps access loop and support a 10 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

**The Contractor may offer additional unsolicited MPLS Port, Access and Router Bundled On-Net Transport Speeds in Table 1.2.2.8.4.b.**

**Table 1.2.2.8.4.b Unsolicited MPLS Port, Access and Router Bundled On-Net Transport Speeds**

Item	Feature Name	Feature Description	Bidder's Product Identifier

1.2.2.8.5 MPLS Port, Access and Router Bundled Off-Net Transport Speeds

**Table 1.2.2.8.5.a, MPLS Port, Access and Router Bundled Off-Net Transport Speeds**

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
1	MPLS port, access and router off-net Transport service at minimum line rate of 155 Mbps (OC3)	Y		NWNCA-50129
	<b>Bidder's Product Description:</b> NWN supports port, access, and router service for 155 Mbps based OC3 service. The included router will terminate OC3 access loops and support a 155 Mbps MPLS port. 24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.			
2	MPLS port, access and router off-net Transport service at minimum line rate of 625 Mbps (OC12)	Y		NWNCA-50130
	<b>Bidder's Product Description:</b> NWN supports port, access, and router service for 625 Mbps based OC12 service. The included router will terminate OC12 access loops and support a 625 Mbps MPLS port. 24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
3	MPLS port, access and router off-net Transport service at minimum line rate of 2.5 Gbps (OC48)	Y		NWNCA-50131
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 2.5 Gbps based OC48 service. The included router will terminate OC48 access loops and support a 2.5 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
4	MPLS port, access and router off-net Transport service at minimum line rate of 10 Gbps (OC192)	Y		NWNCA-50132
	<p><b>Bidder's Product Description:</b> NWN supports port, access, and router service for 10 Gbps based OC12 service. The included router will terminate 10 Gbps access loops and support a 10 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

**The Contractor may offer additional unsolicited MPLS Port, Access and Router Bundled Off-Net Transport Speeds in Table 1.2.2.8.5.b.**

**Table 1.2.2.8.5.b Unsolicited MPLS Port, Access and Router Bundled Off-Net Transport Speeds**

Item	Feature Name	Feature Description	Bidder's Product Identifier

1.2.2.8.6 MPLS Port, Access and Router Bundled Ethernet On-Net Transport Speeds

**Table 1.2.2.8.6.a MPLS Port, Access and Router Bundled Ethernet On-Net Transport Speeds**

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
1	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of one (1) Mbps	Y		NWNCA-50133
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments. This bundle supports port, access, and router service for 1 Mbps-based Ethernet service. The included router will terminate Ethernet access loops and support a 1 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
2	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of two (2) Mbps	Y		NWNCA-50134
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1Mbps to 10Mbps in 1Mbps increments. This bundle supports port, access and router service for 2 Mbps-based Ethernet service. The included router will terminate Ethernet access loops and support a 2 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
3	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of three (3) Mbps	Y		NWNCA-50135
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1Mbps to 10Mbps in 1Mbps increments. This bundle supports port, access and router service for 3 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 3 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
4	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of four (4) Mbps	Y		NWNCA-50136
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1Mbps to 10Mbps in 1Mbps increments. This bundle supports port, access and router service for 4 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 4 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
5	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of five (5) Mbps	Y		NWNCA-50137
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1Mbps to 10Mbps in 1Mbps increments. This bundle supports port, access and router service for 5 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 5 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
6	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of six (6) Mbps	Y		NWNCA-50138
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1Mbps to 10Mbps in 1Mbps increments. This bundle supports port, access and router service for 6 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 6 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
7	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of seven (7) Mbps	Y		NWNCA-50139
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1Mbps to 10Mbps in 1Mbps increments. This bundle supports port, access and router service for 7 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 7 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
8	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of eight (8) Mbps	Y		NWNCA-50140
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1Mbps to 10Mbps in 1Mbps increments. This bundle supports port, access and router service for 8 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 8 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
9	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of nine (9) Mbps	Y		NWNCA-50141
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1Mbps to 10Mbps in 1Mbps increments. This bundle supports port, access and router service for 9 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 9 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
10	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 10 Mbps	Y		NWNCA-50142
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 10 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
11	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 20 Mbps	Y		NWNCA-50143
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps and 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 20 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
12	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 30 Mbps	Y		NWNCA-50144
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 30 Mbps MPLS port</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
13	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 40 Mbps	Y		NWNCA-50145
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 40 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
14	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 50 Mbps	Y		NWNCA-50146
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 50 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
15	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 60 Mbps	Y		NWNCA-50147
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Fast E Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 60 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
16	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 70 Mbps	Y		NWNCA-50148
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 70 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
17	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 80 Mbps	Y		NWNCA-50149
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 80 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
18	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 90 Mbps	Y		NWNCA-50150
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 90 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
19	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 100 Mbps	Y		NWNCA-50151
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 100 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
20	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 150 Mbps	Y		NWNCA-50151A
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 150 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
21	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 200 Mbps	Y		NWNCA-50152
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 200 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
22	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 250 Mbps	Y		NWNCA-50152A
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 250 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
23	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 300 Mbps	Y		NWNCA-50153
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 300 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
24	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 400 Mbps	Y		NWNCA-50154
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 400 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
25	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 450 Mbps	Y		NWNCA-50154A
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 450 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
26	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 500 Mbps	Y		NWNCA-50155
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 500 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 500 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
27	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 600 Mbps	Y		NWNCA-50156
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 600 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
28	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 700 Mbps	Y		NWNCA-50157
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 700 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
29	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 800 Mbps	Y		NWNCA-50157A
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 800 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
30	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 900 Mbps	Y		NWNCA-50158
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 900 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
31	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 1 Gbps	Y		NWNCA-50159
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 1 Gbps circuits. The included router will terminate Ethernet access loops and support a 1 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
32	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 2 Gbps	Y		NWNCA-50159A
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 2 Gbps circuits. The included router will terminate Ethernet access loops and support a 2 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
33	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 2.5 Gbps	Y		NWNCA-50159B
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 2.5 Gbps circuits. The included router will terminate Ethernet access loops and support a 2.5 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
34	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 3 Gbps	Y		NWNCA-50159C
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 3 Gbps circuits. The included router will terminate Ethernet access loops and support a 3 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
35	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 3.5 Gbps	Y		NWNCA-50159D
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 3.5 Gbps circuits. The included router will terminate Ethernet access loops and support a 3.5 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
36	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 4 Gbps	Y		NWNCA-50159E
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 4 Gbps circuits. The included router will terminate Ethernet access loops and support a 4 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
37	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 4.5 Gbps	Y		NWNCA-50159F
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 4.5 Gbps circuits. The included router will terminate Ethernet access loops and support a 4.5 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
38	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 5 Gbps	Y		NWNCA-50159G
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 5 Gbps circuits. The included router will terminate Ethernet access loops and support a 5 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
39	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 5.5 Gbps	Y		NWNCA-50159H
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 5.5 Gbps circuits. The included router will terminate Ethernet access loops and support a 5.5 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
40	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 6 Gbps	Y		NWNCA-50159I
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 6 Gbps circuits. The included router will terminate Ethernet access loops and support a 6 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
41	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 6.5 Gbps	Y		NWNCA-50159J
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 6.5 Gbps circuits. The included router will terminate Ethernet access loops and support a 6.5 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
42	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 7 Gbps	Y		NWNCA-50159K
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 7 Gbps circuits. The included router will terminate Ethernet access loops and support a 7 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
43	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 7.5 Gbps	Y		NWNCA-50159L
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 7.5 Gbps circuits. The included router will terminate Ethernet access loops and support a 7.5 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
44	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 8 Gbps	Y		NWNCA-50159M
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 8 Gbps circuits. The included router will terminate Ethernet access loops and support a 8 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
45	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 8.5 Gbps	Y		NWNCA-50159N
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 8.5 Gbps circuits. The included router will terminate Ethernet access loops and support a 8.5 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
46	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 9 Gbps	Y		NWNCA-50159O
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 9 Gbps circuits. The included router will terminate Ethernet access loops and support a 9 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
47	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 9.5 Gbps	Y		NWNCA-50159P
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 9.5 Gbps circuits. The included router will terminate Ethernet access loops and support a 9.5 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
48	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 10 Gbps	Y		NWNCA-50159Q
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access 10 Gbps circuits. The included router will terminate Ethernet access loops and support a 10 Gbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

**The Contractor may offer additional unsolicited MPLS Port, Access and Router Bundled Ethernet On-Net Transport Speeds in Table 1.2.2.8.6.b.**

**Table 1.2.2.8.6.b Unsolicited MPLS Port, Access and Router Bundled Ethernet On-Net Transport Speeds**

Item	Feature Name	Feature Description	Bidder's Product Identifier

1.2.2.8.7 MPLS Port, Access and Router Bundled Ethernet Off-Net Transport Speeds

**Table 1.2.2.8.7.a MPLS Port, Access and Router Bundled Ethernet Off-Net Transport Speeds**

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
1	MPLS port, access, and router Ethernet off-net Transport service at minimum line rate of one (1) Mbps	Y		NWNCA-50160
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments. This bundle supports port, access and router service for 1 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 1 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
2	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of two (2) Mbps	Y		NWNCA-50161
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments. This bundle supports port, access and router service for 2 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 2 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
3	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of three (3) Mbps	Y		NWNCA-50162
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments. This bundle supports port, access and router service for 3 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 3 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
4	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of four (4) Mbps	Y		NWNCA-50163
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments. This bundle supports port, access and router service for 4 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 4 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
5	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of five (5) Mbps	Y		NWNCA-50164
	<p><b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments. This bundle supports port,</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
	access and router service for 5 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 5 Mbps MPLS port.  24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.			
6	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of six (6) Mbps	Y		NWNCA-50165
	<b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments. This bundle supports port, access and router service for 6 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 6 Mbps MPLS port.  24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.			
7	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of seven (7) Mbps	Y		NWNCA-50166
	<b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments. This bundle supports port, access and router service for 7 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 7 Mbps MPLS port.  24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.			
8	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of eight (8) Mbps	Y		NWNCA-50167
	<b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments. This bundle supports port, access and router service for 8 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 8 Mbps MPLS port.  24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.			
9	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of nine (9) Mbps	Y		NWNCA-50168
	<b>Bidder's Product Description:</b> NWN supports Tiered Ethernet Local Access (ELA) MPLS services via dedicated ELA access circuits from 1 Mbps to 10 Mbps in 1 Mbps increments. This bundle supports port, access and router service for 9 Mbps based Ethernet service. The included router will terminate Ethernet access loops and support a 9 Mbps MPLS port.  24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.			
10	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 10 Mbps	Y		NWNCA-50169
	<b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps and 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 10 Mbps MPLS port.			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
	24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.			
11	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 20 Mbps	Y		NWNCA-50170
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 20 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
12	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 30 Mbps	Y		NWNCA-50171
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 30 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
13	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 40 Mbps	Y		NWNCA-50172
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 40 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
14	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 50 Mbps	Y		NWNCA-50173
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 50 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
15	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 60 Mbps	Y		NWNCA-50174
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 60 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
16	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 70 Mbps	Y		NWNCA-50175
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 70 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
17	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 80 Mbps	Y		NWNCA-50176
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 80 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
18	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 90 Mbps	Y		NWNCA-50177
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 90 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
19	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 100 Mbps	Y		NWNCA-50178
	<p><b>Bidder's Product Description:</b> NWN supports Tiered FastE Local Access (ELA) MPLS services via dedicated ELA access circuits from 10 Mbps to 100 Mbps at 10 Mbps, 15 Mbps to 20 Mbps line rates then increasing in 10 Mbps increments to 100 Mbps. The included router will terminate Ethernet access loops and support a 100 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
20	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 150 Mbps	Y		NWNCA-50178A
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 150 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
21	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 200 Mbps	Y		NWNCA-50179
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 200 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
22	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 300 Mbps	Y		NWNCA-50180
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 300 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
23	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 400 Mbps	Y		NWNCA-50181
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 400 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
24	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 450 Mbps	Y		NWNCA-50181A
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 450 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
25	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 500 Mbps	Y		NWNCA-50182
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 500 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
26	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 600 Mbps	Y		NWNCA-50183
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 600 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
27	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 700 Mbps	Y		NWNCA-50184
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 700 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
28	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 800 Mbps	Y		NWNCA-50184A
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 800 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
29	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 900 Mbps	Y		NWNCA-50185
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 900 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
30	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one (1) Gbps	Y		NWNCA-50186
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 1000 Mbps line rates increasing in 100 Mbps increments to 1000 Mbps. The included router will terminate Ethernet access loops and support a 1000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
31	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 2 Gbps	Y		NWNCA-50186A
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 2000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
32	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 2.5 Gbps	Y		NWNCA-50186B
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 2500 Mbps MPLS port. Router installation is based on plug and play configurations.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
33	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 3 Gbps	Y		NWNCA-50186C
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 3000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
34	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 3.5 Gbps	Y		NWNCA-50186D
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 3500 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
35	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 4 Gbps	Y		NWNCA-50186E
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 4000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
36	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 4.5 Gbps	Y		NWNCA-50186F
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 4500 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
37	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 5 Gbps	Y		NWNCA-50186G
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 5000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
38	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 5.5 Gbps	Y		NWNCA-50186H
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 5500 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
39	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 6 Gbps	Y		NWNCA-50186I
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 6000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
40	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 6.5 Gbps	Y		NWNCA-50186J
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 6500 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
41	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 7 Gbps	Y		NWNCA-50186K
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 7000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
42	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 7.5 Gbps	Y		NWNCA-50186L
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 7500 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
43	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 8 Gbps	Y		NWNCA-50186M
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support an 8000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
44	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 8.5 Gbps	Y		NWNCA-50186N
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support an 8500 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

Item	Requirement	Bidder Agrees?		Bidder's Product Identifier
		Y	N	
45	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 9 Gbps	Y		NWNCA-50186O
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 9000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
46	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 9.5 Gbps	Y		NWNCA-V50186P
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 9500 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			
47	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 10 Gbps	Y		NWNCA-50186Q
	<p><b>Bidder's Product Description:</b> NWN supports Tiered GigE Local Access (ELA) MPLS services via dedicated ELA access circuits from 100 Mbps to 10000 Mbps line rates. Circuits ranging from 100 Mbps increments to 1000 Mbps will be available in 100 Mbps increments. Circuits ranging from 1000Mbps to 10000Mbps circuits will be available in 500 Mbps increments. The included router will terminate Ethernet access loops and support a 10000 Mbps MPLS port.</p> <p>24x7x365 4-hour response router maintenance agreements will be in place for the set term of the agreement. NWN will pre-configure basic MPLS router configurations.</p>			

**The Contractor may offer additional unsolicited MPLS Port, Access and Router Bundled Ethernet Off-Net Transport Speeds in Table 1.2.2.8.7.b.**

**Table 1.2.2.8.7.b Unsolicited MPLS Port, Access and Router Bundled Ethernet Off-Net Transport Speeds**

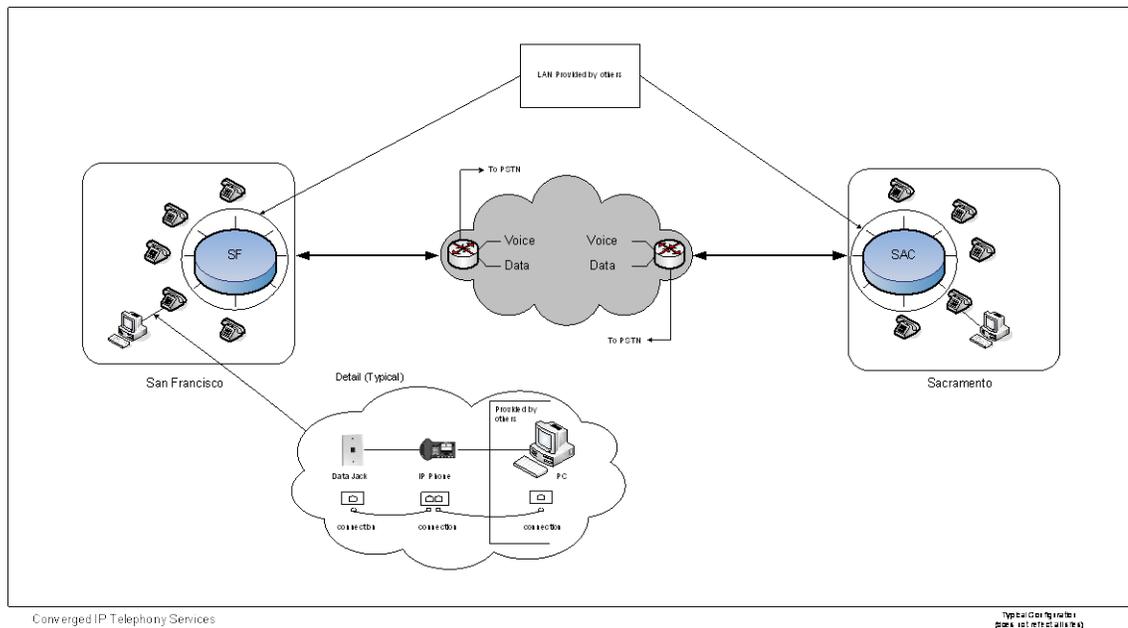
Item	Feature Name	Feature Description	Bidder's Product Identifier

### 1.2.3 CONVERGED VOICE OVER INTERNET PROTOCOL (VOIP)

#### 1.2.3.1 CONVERGED VOIP MINIMUM NETWORK REQUIREMENTS

The Contractor shall provide a VoIP network in Converged configurations that is provisioned in conjunction with the Contractor's MPLS services identified in this Subcategory. The Converged VoIP service shall utilize the MPLS circuit to access Converged VoIP calling services.

#### Converged VoIP Topography Example:



The VoIP network shall deliver business-class features that support standard business lines, direct inward dial (DID) lines, gateway services to local Public Switched Telephone Networks (PSTNs), and least cost (monetary) routing.

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

#### 1.2.3.1.1 Converged VoIP Network Designs and Diagrams

Bidders shall provide network designs and diagrams for the network and Converged VoIP services.

**Bidders shall provide two (2) hard copies and one (1) electronic copy with their proposal.** Electronic drawings shall be in .dwg, .dxf, .vsd or any mutually agreed format. Hard copy drawings shall be provided in standard D size.

Drawings must include a thorough presentation of how the Contractor's network(s) deployed for each service type will address the following:

1. Redundancy – Having one (1) or more circuits/systems deployed in case of failure of the main circuits/systems, and;
2. Diversity – Backbone network paths and infrastructure offered in such a way as to minimize the chance of a single point of failure.

The Contractor shall provide revisions upon CALNET 3 CMO request. Drawings shall include both topology and logical representations of all critical network backbone elements to include but not be limited to the following:

1. Geographic location of equipment;
2. Type and capacity of equipment at each location including any backup systems;
3. Service type; and,
4. Unique identifier for each element.

*Bidder understands the requirements in Section 1.2.3.1.1 and shall meet or exceed them? Yes X No \_\_\_\_\_*

*Embedded Soft Copy of Drawing (Optional):*



Figure 1.2.3.1.1-1  
High Level Network O



Figure 1.2.3.1.1-2  
Architectural Overvie

#### 1.2.3.1.2 Intentionally Deleted

#### 1.2.3.1.3 Public Switched Telephone Network Interoperability

The VoIP solution shall be interoperable with the Public Switched Telephone Network (PSTN).

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.1.4 Number Portability

The Contractor shall comply with the local number portability regulations.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.1.5 E9-1-1 Database Updates

The Contractor shall comply with FCC emergency service requirements including E9-1-1 services to identify the location of an originating station and route the call to the appropriate Public Safety Answering Point (PSAP).

The Contractor shall be responsible for updating the E9-1-1 database when End-User equipment is moved to a location with a different street address.

**The Bidder shall describe the method(s) that will be deployed to accomplish this requirement and identify any conditions that the Customer must comply with.**

*Bidder understands the requirements in Section 1.2.3.1.5 and shall meet or exceed them? Yes  No*

#### *Description:*

*NWN's solution includes an E9-1-1 emergency services that meets the above requirements. The provided SIP Trunk service routes 911 calls through IP network, to the PSTN and then to a PSAP with the proper information needed to identify the location of an originating station and route the call to the appropriate Public Safety Answering Point (PSAP).*

*The PSAP to which the call is directed is based on the street address of the calling party number (the 911 Emergency Response Locations). The 911 emergency services provided is Enhanced 911 (E911) emergency service, and the calling party number is delivered to the PSAP with the 911 call. The PSAP has (via a lookup in the ALI database) the 911 Emergency Address associated with that calling party number.*

*To accommodate the correct 911 solutions, a Primary Place of Use (PPU)/911 Emergency Address is captured for each Telephone Number (TN) using SIP Trunk service. This address is a physical location of the customer's business that has been approved as a VoIP available address (i.e., in a lit rate center). The contractor defines the number of PPU addresses and the associated TNs to each address (This information is included in the service order). NWN Provisioning configures these PPU/911 Emergency Addresses and the TNs associated to the network and implements an appropriate Move-Add-Change (MAC) process to ensure ongoing accuracy of data.*

*NWN provides a "911 Update Confirmation" in the form of an email sent to an end user that needs to be confirmed and approved by the customer. The physical location information is*

***what associates the emergency caller's ANI with an Emergency Response Location or where the PSAP sends emergency response personnel.***

1.2.3.1.6 Network Based

The system shall be network based with all call control components residing in the Contractor's network including network gatekeepers and network gateways.

The Contractor shall not be permitted to use State property for the deployment, collocation or supplementation of the Contractors' network signaling and management equipment, call control and setup equipment, or access to other PSTN or VoIP network providers.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

1.2.3.1.7 Private VoIP Network

No voice traffic will be routed through the public Internet. All voice traffic will traverse the Contractor's private MPLS network.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

1.2.3.1.8 SIP Based Open Architecture

The VoIP network deployed for CALNET 3 shall be non-proprietary. The system shall use Session Initiation Protocol (SIP) standards based open architecture.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

1.2.3.1.9 Intentionally Deleted

1.2.3.1.10 Directory Redundancy and Addressing

The VoIP network shall include redundant network-based directory or gatekeeper functionality to prevent call set up failure.

The VoIP network shall partition call addressing in such a manner that failure of gatekeepers will not result in a VoIP network failure for all State facilities. At its sole discretion, the CALNET 3 CMO may direct the partitioning and physical location of Customer or department directories to diverse gatekeepers within the VoIP network

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

1.2.3.1.11 Technical Measurement Metrics

The VoIP network shall meet the technical measurement metrics listed below.

**Table 1.2.3.1.11 Technical Measurement Metrics**

Item	Metric	Bidder Meets or Exceeds?	
		Y	N
1	Mean Opinion Score ITU P.800 – 3.6 or above (or equivalent industry standard measurement)	Y	
2	Dial Tone Delay – Not to exceed 300ms for any call	Y	
3	Call Setup Time – Not to exceed three (3) seconds for any call	Y	

Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_

1.2.3.1.12 Standards Conformance

The VoIP Network and associated services shall conform to the Standards described in Table 1.2.3.1.12 as applicable.

**Table 1.2.3.1.12 VoIP Standards**

Item	Standards	Bidder Meets or Exceeds?	
		Y	N
1	IETF RFC 3261 SIP (Session Initiation Protocol) and all subsequent RFC's	Y	
2	IETF RFC 2132 for DHCP 4703, 6355	Y	
3	IETF RFC's 2916 ENUM, 2806, 6116, 6117	Y	
4	IPv4	Y	
5	IPv6 when and where offered commercially by the Contractor	Y	
6	IETF RFC 1349 ToS, 2474, 2475 DiffServ 3260	Y	
7	ITU-T E.164	Y	
8	ITU G.165/G.168 and subsequent standards for echo cancellation	Y	
9	ITU-T G.711, G.723.x, G.726, G.728, or G.729.x	Y	
10	ITU-T H.248.1 (MEGACO), H.323, H.350 when and where offered commercially by the Contractor	Y	
11	ITU-T P.800 series of Standards for telephone transmission quality. ITU-T P.910	Y	
12	ITU-T T.30, T.37 and T.38, Group III fax	Y	
13	Media Gateway Control Protocol (MGCP) IETF RFC 3435 when and where offered commercially by the Contractor	Y	

Item	Standards	Bidder Meets or Exceeds?	
		Y	N
14	IETF RFC 3550 Real-Time Transport Protocol (RTP) 5506, 5761, 6015, 6222	Y	
15	IETF RFC 2205 Resource Reservation Protocol (RSVP) 2750, 4495, 5946, 6437	Y	
16	IETF RFC 768 User Datagram Protocol (UDP)	Y	

1.2.3.1.13 Class of Service

The network shall be configured with the appropriate Class of Service (CoS) required for the proper operation of the service. The CoS shall be included in the per seat price and shall not be charged separately.

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

1.2.3.1.14 Voice Compression

The VoIP network shall include Voice Compression that will:

1. Pass all applicable ITU test vectors;
2. Support configurable packetization for maximum flexibility; and,
3. Not degrade when all channels are active.

**Bidder shall list the voice compression CODEC(s) that will be used with the VoIP network.**

*Bidder understands the requirements in Section 1.2.3.1.14 and shall meet or exceed them? Yes X No \_\_\_\_\_*

*Description:*

*The voice compression CODEC(s) that NWN uses with the VoIP network are G.711 and G.729 A/B.*

1.2.3.1.15 Network Operations Center

The Contractor shall maintain a Network Operations Center (NOC) that is staffed 24x365 that coordinates and manages all voice traffic.

The NOC shall perform network surveillance, traffic analysis, control of access and egress traffic, and fault management (trouble identification, isolation and notification).

The NOC shall monitor network performance in near real-time to identify capacity blockages and implement controls to optimize the VoIP network

health and performance immediately.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.1.16 VoIP Security

The Contractor shall implement security measures that detect and prevent unauthorized access to the network for the following types of security breaches:

1. Denial of Service (DoS);
2. Invasion of Privacy;
3. Man-in-the-Middle (MITM) attacks; and,
4. Protocol specific security vulnerabilities

The Contractor shall ensure security practices and policies are updated and audited every six (6) months.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.1.16.1 Physical Access

Contractor shall physically secure all data and networking facilities through which data traverses Contractor's VoIP network 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  No*

#### 1.2.3.1.16.2 Network Security

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

1. The Contractor's VoIP Network equipment locations shall use carrier grade platforms;
2. All network equipment shall be in a hardened, secure facility;
3. All unnecessary services shall be disabled or removed;
4. Access control policies shall be used to deny suspicious traffic;
5. Core servers shall be accessed through an authentication server;
6. Administrators shall be required to log into a central server to access any other server on the network; and,

7. Proxy servers shall be protected by redundant firewalls which include features such as:
  - a. Network attack detection;
  - b. Denial of Service (DoS) and Distributed Denial of Service (DDOS) protections;
  - c. Transmission Control Protocol (TCP) reassembly for fragmented packet protection;
  - d. Malformed packet protections;
  - e. Deep inspection firewall;
  - f. Protocol anomaly; and,
  - g. Stateful protocol signatures.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.1.16.3 Client Authentication

The Contractor shall provide SIP Digest Authentication for Customer VoIP handsets

The Contractor shall set passwords on VoIP handsets before they are shipped.

Telnet shall be disabled to the VoIP handsets.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2 CONVERGED VOIP SERVICES

The Contractor shall provide Converged VoIP that will connect to a Customer's Local Area Network (LAN). This service will allow for the ordering and provisioning of hosted voice and data over a single VoIP network interface. This service shall be interoperable with and traverse successfully across the subscribing Customer's firewalls and security layers.

The proposed design shall be network based where all major components reside at a central office or off-premises location. Bandwidth requirements shall be determined by the ITU compression mechanisms defined by the Contractor's network design.

The handsets shall be provided by the Contractor as part of the service package and per-seat price (Table 1.2.3.2.4) but will connect directly to the Customer's infrastructure/network.

In the event at Contractor is awarded a CALNET 3 Contract for Standalone VoIP services, this service shall be interoperable and the State shall not incur any charges to place calls between the two (2) services.

The Converged VoIP service shall be charged on a per-seat basis. The Contractor's per-seat price shall include all handsets, network gatekeepers, gateways, call control components, labor and materials to make the service fully operational on a Customer provided LAN.

Converged VoIP service shall provide dial tone and full functionality of features to the on-site telephone.

No additional chargeable service or feature components required to comply with the requirements of this Section 1.2.3.2 shall be allowed and all costs shall be bundled into the service components identified.

All LAN functionality, components, cabling, and equipment shall be the responsibility of the Customer and shall be acquired elsewhere. Remediation of the LAN shall be the Customers responsibility and shall be acquired elsewhere.

Any service provided by this Subcategory shall only be used for Converged VoIP and shall not be used for traditional LAN installations.

The Converged VoIP service shall be provisioned in conjunction with MPLS Transport Services.

**The Bidder shall describe its Converged VoIP network architecture, components and services that will be deployed for CALNET 3 to provide a VoIP solution for the application described.**

*Bidder understands the requirements in Section 1.2.3.2 and shall meet or exceed them?*  
Yes  No

*Description:*

*NWN Corporation's Converged VoIP Solution is a component of our nCloud Practice, which is dedicated to Hosted solutions such as our Hosted Collaboration Service (HCS). NWN's HCS has all the components of a complete Cloud Solution integrated with the Customer LAN and includes gateways and call control components. Our solution meets the service requirements in this IFB including proper site survey, design, LAN Assessment, and implementation of Converged VoIP, and training, on-going administration, maintenance and upgrades.*

*NWN's Converged VoIP Network architecture consists of a robust redundant Data Center architecture including Unified Computing Systems, Virtual Switching, Cisco ASR routers, Cisco ASA firewalls, and SAN storage & switches. When a new VoIP application is requested a dedicated server is set up each time and is not shared with other NWN customers. This allows flexibility & scalability and does not force an upgrade on the customer when other customers are upgrading their own applications in the cloud. All individual customer applications are secure and kept separate from one another by using Data Center "Best Practice" measures. A Data Center firewall is used to protect all traffic (customer and management) to Unified Communications applications.*

*The core components that make up our Hosted VoIP offering include:*

- *Hosted VoIP Communication Services*
- *MPLS Connectivity to NWN's Hosted Datacenters & Customer's site(s)*
- *Local, Long Distance, International and Toll Free Calling Services*
- *SIP Trunking, PSTN, and E911 functionality*
- *24x7x365 Network Monitoring and Managed Services*
- *Administrative and End User Moves, Adds or Changes*
- *IT Administrator Web Portal to manage the Hosted VoIP*

*NWN's meets the IFB requirements for our Hosted VoIP offering through our NCare managed services team. They provide On-Going Administrative and Maintenance Services which includes software maintenance and upgrades plus all requirements as listed in Section 1.3.5.6 "Technical SLA General Requirements"*

*NWN has provided 24x7x365 NCare Managed Service offerings to clients for almost twenty years. That experience of delivery combined with the technical knowledge of our engineering team provides our clients with the best overall experience. Our NCare resources are 100% US-based and our NOC has been located in the Boston area.*

*For management, NWN will provide an online portal with real-time monitoring information for virtual, hosted and premise-based environments through our 24x7 monitoring tools.*

#### 1.2.3.2.1 Converged VoIP Minimum Requirements

The Converged VoIP service shall include all equipment, hardware, software, training and ongoing administration, maintenance and upgrades in the "per-seat per-month" cost. These requirements are described in detail below.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.1.1 Converged VoIP Equipment and Hardware

Unless otherwise noted in the detailed product listing below, the Contractor shall furnish and install all equipment and hardware required to deliver the service to the workstation handset including routers, wire management, cross-connects, patch and device cords, and the workstation handset.

Horizontal closet racks, raceway, environmental components and AC electrical power will be acquired through other procurement vehicles.

Horizontal station cabling will be the responsibility of the Customer and will be acquired through other procurement vehicles.

As stated in Section 1.2.3.2, all LAN functionality, components, cabling, and equipment shall be the responsibility of the

Customer and shall be acquired elsewhere.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.1.2 Converged VoIP Software

The Contractor shall provide all software and ongoing software patches or upgrades required to deliver the Converged VoIP service to the workstation handset.

Contractor shall provide all configuration and programming.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.1.3 Converged VoIP Administration

The Contractor shall perform all initial and ongoing administrative functions to deliver the Converged VoIP service to the workstation handset.

The Contractor shall provide the Customer with the option to perform selected on-site administrative functions.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.1.4 Converged VoIP Maintenance

The Contractor shall provide all maintenance (including software upgrades and patches) required for continuous delivery of the Converged VoIP service to the workstation handset.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.1.5 Converged VoIP Handset Power Supplies

The Contractor shall provide ancillary handset power supplies with the handset.

The Customer will have the option of providing Power Over Ethernet (PoE) switches in lieu of ancillary handset power supplies.

The Contractor shall provide handsets that utilize POE at the Customer's request.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.1.6 Converged VoIP Class of Service (CoS)

The network shall be configured with the appropriate class of service (CoS) required for the proper operation of the Converged VoIP service.

The CoS shall be included in the per-seat price and shall not be charged separately.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.2 Interoperability of Converged VoIP with Other CALNET 3 Technologies

The Contractor's Converged VoIP services shall be interoperable with the Contractor's SIP Trunking services (Section 1.2.5) and the State shall not incur any charges for calls between these two (2) services.

In the event at Contractor is awarded a CALNET 3 Contract for Standalone VoIP services (Subcategory 1.3), this Converged VoIP service shall be interoperable with the Contractor's Standalone VoIP services and the State shall not incur any charges for calls between these two (2) services.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.3 Converged VoIP Basic Feature Package

The Contractor shall provide a basic feature package for all handset configurations listed in Section 1.2.3.2.4 (Converged VoIP Handsets). The basic feature package shall include the call features described in Table 1.2.3.2.3.

**Table 1.2.3.2.3 Converged VoIP Basic Feature Package**

Item	Converged VoIP Basic Call Package Features	Bidder Meets or Exceeds?	
		Y	N
1	<b>900 Blocking</b> – No calls from 900-xxx-xxxx will be processed to any subscribers	Y	
2	<b>Auto Attendant</b> – A service that automatically answers incoming calls within a predefined number of rings without assistance from a live attendant. It prompts callers with a series of choices and actions to perform. Based on selected action, the caller may listen to a recorded announcement, leave a message, place a call, activate another voice service or be routed to a particular service. Customers with Administrative authority shall have the ability to perform Auto Attendant configuration and modifications through a web interface.	Y	
3	<b>Call Forward – Busy Don't Answer</b> – Allows a station End-User to choose to reroute incoming calls to another specified telephone number. This shall be available for all incoming calls on a busy or ring-no-answer condition. <b>(Indicate the limitation of paths the call may take)</b>	Y	
4	<b>Call Forward – All Calls</b> – Allows the station End-User to choose to reroute all incoming calls to another specified telephone number. The feature shall have the capability to restrict call forwarding to internal, local or long distance numbers	Y	
5	<b>Call Hold</b> – Allows the called party to put a caller on hold and retrieve them from the hold state	Y	
6	<b>Call Notify</b> - Enables a subscriber to define criteria that causes certain incoming calls to initiate an email notification.	Y	
7	<b>Call Transfer</b> – Allows a station End-User to transfer any call in progress to another telephone number without the assistance of an operator	Y	
8	<b>Call Pickup</b> – Allows a subscriber to answer any calls directed to another station line within his or her own predefined call pickup group	Y	
9	<b>Call Park</b> – Allows a call to be parked at a subscriber's number for retrieval by another subscriber line. The capability shall be administered on an individual station basis according to the subscribing Agencies needs	Y	
10	<b>Conference</b> – Allows a voice station End-User to establish a multiparty conference connection of a minimum of three (3) conferees including themselves without attendant assistance.	Y	
11	<b>Call Waiting</b> - When a second call is received while a subscriber is engaged in a call, the subscriber is informed via an audible tone.	Y	
12	<b>Caller ID</b> – Phone number of the calling party is displayed on the terminal equipment	Y	
13	<b>Class of Service</b> - The CoS configured on the transport required for the proper operation of the service.	Y	

Item	Converged VoIP Basic Call Package Features	Bidder Meets or Exceeds?	
		Y	N
14	<b>Conference Bridge</b> – Allows callers from diverse locations/platforms to dial in to a specified telephone number to participate in a conference call	Y	
15	<b>DID</b> - Direct inward dial phone number including Single Line appearance.	Y	
16	<b>Directory Phone Display</b> – Directory of Customer’s VoIP subscribers via the phone display	Y	
17	<b>Four-digit Extension Dialing</b> – All ‘on-net’ numbers can be reached by dialing the 4-digit extension from ‘on-net’ phones	Y	
18	<b>Group Pickup</b> – Allows an incoming call to be picked up from any one (1) of a predefined group of phones	Y	
19	<b>Hunt Groups</b> – Route inbound calls to a predetermined sequence of telephone numbers until it is answered	Y	
20	<b>Message Waiting Indicator</b> – Visual indication on phone that a message is in queue for review	Y	
21	<b>Multi-Line Appearance</b> – Provide the ability for multiple line appearances on a subscriber’s phone	Y	
22	<b>Redial</b> – Allow a station End-User to automatically originate a call to the last number dialed from the station End-User’s phone	Y	
23	<b>Speed Dial</b> – Allows abbreviated digit dialing capability on a per station basis	Y	

**Bidders shall identify any additional features available at no additional charge.**

*Bidder understands the requirements in Section 1.2.3.2.3 and shall meet or exceed them? Yes X No \_\_\_\_\_*

*Description:*

***NWN Corporation meets the Converged Basic Feature Package requirements. There are no additional features available at no additional charge***

#### 1.2.3.2.4 Converged VoIP Handsets

The Contractor shall provide the Converged VoIP service in six (6) specific handset configurations as defined below.

##### 1.2.3.2.4.1 Standard Converged VoIP Handset Features

1. Single line;
2. LCD Display;
3. Full Duplex Hands Free Speakerphone;
4. Shared call / bridged line appearance;
5. Visual message waiting indicator;
6. Ring volume control;
7. Minimum six (6) Programmable function keys or a soft key interface;
8. Single 10/100 Ethernet port;
9. Power over Ethernet; and,
10. ADA Compliant section 508.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

##### 1.2.3.2.4.2 Midrange Converged VoIP Handset Features

Standard Converged VoIP handset features plus:

1. Minimum three (3) lines;
2. Intercom feature;
3. Two-Port 10/100 Ethernet Port 802.3af;
4. 3 Way conferencing; and,
5. User Configurable Contact Directory.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

##### 1.2.3.2.4.3 Executive Converged VoIP Handset Features

Midrange Converged VoIP handset features plus:

1. Minimum four (4) lines; and,
2. Two-Port 10/100/1000 Mbps Port.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.4.4 Attendant Converged VoIP Handset Features

Executive Converged VoIP handset features Plus

1. Minimum Six (6) Lines;
2. Expansion Module(s) Capability;
3. USB port for call recording function; and,
4. XML API functionality.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.4.5 Standard Conference Room Converged VoIP Speakerphone Features and Functionality

1. IEEE 802.3af functionality;
2. IEEE 1329 full duplex standards;
3. RFC 3261 & companion RFCs (SIP);
4. IEEE 802.1 p/Q tagging;
5. Expansion microphone compatible;
6. Audio compression standards: G.711, G.729, G.722;
7. Ethernet 10/100Mbps connection;
8. Visual time & display;
9. Lightweight Directory Access Protocol (LDAP) corporate directory integration; and,
10. Layer 3 Type of Service (ToS) and Differentiated Services Code Point (DSCP).

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.4.6 Converged VoIP Executive Conference Room Speakerphone Features and Functionality

All Converged VoIP Standard Conference Room Speakerphone features and functionality, plus:

1. Integration with video conferencing systems;
2. High Definition Voice functionality;
3. Cell phone connection port;
4. 255x128 pixel display;
5. Multi-unit connectivity; and,
6. 2 expansion microphones included.

Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_

**Bidders shall provide the Converged VoIP Handset Service Packages described in Table 1.2.3.2.4.a**

**Table 1.2.3.2.4.a Converged VoIP Handset Service Packages**

Item	Feature Name	Feature Description	Bidder Meets or Exceeds?		Bidder's Product Identifier
			Y	N	
1	<b>Standard Converged VoIP Handset Service Package</b>	Service Package with Standard Converged VoIP Handset Service Package as described in 1.2.3.2.4.1 and the Basic Feature Package as described in 1.2.3.2.3	Y		NWNCA-7013
	Bidder's Product Description: : Intended to meet the needs of transaction-type workers with significant phone traffic - Includes XML functionality				
2	<b>Midrange Converged VoIP Handset Service Package</b>	Service Package with Midrange Converged VoIP Handset Service Package as described in 1.2.3.2.4.2 and the Basic Feature Package as described in 1.2.3.2.3	Y		NWNCA-7014M
	Bidder's Product Description: : Intended to meet the needs of managers and administrative assistants- Includes a minimum of 6 lines, Two-Port 10/100/1000 Mbps Port, and XML API functionality				
3	<b>Executive Converged VoIP Handset Service Package</b>	Service Package with Executive Converged VoIP Handset as described in 1.2.3.2.4.3 and the Basic Feature Package as described in 1.2.3.2.3	Y		NWNCA-7014E
	Bidder's Product Description: Intended to meet the needs of managers and administrative assistants- Includes a minimum of 6 lines and XML API functionality				

Item	Feature Name	Feature Description	Bidder Meets or Exceeds?		Bidder's Product Identifier
			Y	N	
4	<b>Attendant Converged VoIP Handset Service Package</b>	Service Package with Attendant Converged VoIP Handset Service Package as described in 1.2.3.2.4.4 and the Basic Feature Package as described in 1.2.3.2.3	Y		NWNCA-7015+
	Bidder's Product Description: Intended to meet the needs of managers and administrative assistants- Includes a minimum of 6 lines and XML API functionality. Extends the capabilities of the Executive Plus and Executive-Advance Phone models with additional buttons and a Black and White LCD display. With this expansion module, you add 12 physical keys with access to 12 additional keys through the page keys for a total of 24 buttons to the existing six buttons of the IP Phone. You can use up to two IP Phone Expansion Modules				
5	<b>Converged VoIP Standard Conference Room Speakerphone Service Package</b>	Service Package with Converged VoIP conference phone Service Package with no external speakers as described in 1.2.3.2.4.5 and the Basic Feature Package as described in 1.2.3.2.3	Y		NWNCA-7016CS
	Bidder's Product Description: Designed for use on desktops, in conference rooms, and in executive suites- Includes integration with video conferencing, HD voice functionality, 255x128 pixel display, multi-unit connectivity, and 2 expansion microphones				
6	<b>Converged VoIP Executive Conference Room Speakerphone Service Package</b>	Converged VoIP conference phone Service Package with two (2) external speakers as described in 1.2.3.2.4.6 and the Basic Feature Package as described in 1.2.3.2.3	Y		NWNCA-7016CSE
	Bidder's Product Description: Designed for use on desktops, in conference rooms, and in executive suites				

**The Contractor may offer additional unsolicited Converged VoIP Handset Service Packages in Table 1.2.3.2.4.b.**

**Table 1.2.3.2.4.b Unsolicited Converged VoIP Handset Service Packages**

Item	Feature Name	Feature Description	Bidder's Product Identifier
1	<b>Entry Level VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Entry Level Phone</b>	NWNCA-7001
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package with the addition of an Eco-friendly, single-line phone that supports two calls per line. Provides a cost-effective solution to reduce cabling infrastructure and administration costs at the desktop.		
2	<b>Trimline Style VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Trimline-like Phone</b>	NWNCA-7002
	<b>Bidder's Product Description:</b> Fully managed service that is an economical solution that has limited functionality and is an ideal earth-friendly, single-line endpoint solution areas such as lobbies, hallways, elevators, or hotel bathrooms that have an occasional need for voice communications  Includes all of the requirements of the Standard Converged VoIP Handset Service Package except for the features listed in the Additional Information section		
3	<b>Light VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Light Communication</b>	NWNCA-7003
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package with the addition of an Eco-friendly, single-line phone that supports two calls per line. Ideal for light communication areas such as classrooms, manufacturing floors, employee cubicles, or teleworker sites		
4	<b>Small Business VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Small Business Grade Phone</b>	NWNCA-7004
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package with the addition of an Energy-efficient and eco-friendly phone that offers two line and a full-duplex speakerphone that delivers affordable, business-grade voice communication and support for video communications services		
5	<b>Small Business Plus VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Small Business Grade-Plus Phone</b>	NWNCA-7005
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package with the addition of an Energy-efficient and eco-friendly phone that offers two line and a full-duplex speakerphone that delivers affordable, business-grade voice communication and support for video communications services		

Item	Feature Name	Feature Description	Bidder's Product Identifier
6	<b>PoE Class 1 Phone VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>PoE Class 1</b> Phone	NWNCA-7006C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package with the addition of a Gigabit Ethernet enhanced business IP phone supports wideband audio handset and headset communications in a business environment with the lowest-power consumption IP phone.		
7	<b>Business Class VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Business Class</b> Phone	NWNCA-7007C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package with the addition of an Energy-efficient and eco-friendly phone with Deep-Sleep option that introduces multi-call per line appearance and ability to handle multiple calls per directory number (DN)		
8	<b>Business Communications Solution VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Business Communications Solution</b> Phone	NWNCA-7008C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package and is intended for low to moderate telephone traffic with areas such as cubicle, retail, classroom or manufacturing. Provides intuitive features, calling information, extensible Markup Language (XML) and important security features plus the choice of IEEE 802.3af PoE		
9	<b>Converged Wireless VoIP Handset Service Package with Station Cabling</b>	Monthly charge for Converged VoIP <b>Converged Wireless Solution</b> Phone	NWNCA-7009C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package and is an Advanced Media IP Phone that delivers on-campus mobility leveraging the voice-over-wireless LAN that supports presence		
10	<b>Mobile VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Wireless</b> Phone	NWNCA-7010C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package that is designed for users in rigorous workspaces as well as general office environments. Long battery life with protection against dust and splashing water		
11	<b>Certified Wireless VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>ATEX and CSA Certified Wireless</b> Phone	NWNCA-7011C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package with the addition of an ATEX Zone 2 Certified, CSA Class 1 Division II Certified – Provides the ruggedness and resiliency that is certified for deployment in environments such as chemical, manufacturing plants, utilities, and oil refineries		

Item	Feature Name	Feature Description	Bidder's Product Identifier
12	<b>Business Plus VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Business Plus</b> Phone	NWNCA-7012C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package that is designed for moderate telephone traffic with specific call requirements for areas such as retail, commercial and Manufacturing		
13	<b>Standard-Advance VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Standard-Advance</b> Phone	NWNCA-7034C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package with the addition of a wideband audio support, backlit color display, and an integrated Gigabit Ethernet port. Designed for transaction-type workers with significant phone traffic and those working with bandwidth-intensive applications on collocated PC's		
14	<b>Executive Plus VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Executive Plus</b> Phone	NWNCA-7017C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package that provides the features of the Executive VoIP Handset plus wideband audio support, backlit color display, and an integrated Gigabit Ethernet port. Designed for executive or major decision maker, administrative assistants, and those working with bandwidth-intensive applications on collocated PC's		
15	<b>Executive-Advance VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Executive-Advance</b> Phone	NWNCA-7018C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package that provides the features of the Executive Plus increases the display from 5.0" to 5.6" and the number of Line Keys from 6 to 8, as well as Programmable (Soft) Keys from 4 to 5		
16	<b>Video VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Video</b> Phone	NWNCA-7019C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package that provides video communications with a built-in, high-quality video for both encoding and decoding.		
17	<b>Business Video VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Business Video</b> Phone	NWNCA-7020C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package that provides the features of the Video phone and adds IEEE 10/100/1000 network and PC ports reducing costs with the ability to consolidate wiring infrastructure for the station cabling plus Bluetooth headset capabilities		

Item	Feature Name	Feature Description	Bidder's Product Identifier
18	<b>Professional Media VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Professional Media</b> Phone	NWNCA-7021C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package that provides advanced media endpoint for enhanced user experience with easy-to-use and eco-friendly ergonomics. Introduces higher-resolution (VGA) color displays, a USB port, Gigabit Ethernet connectivity and High-definition (HD) voice support		
19	<b>Executive Professional VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Executive Professional</b> Phone	NWNCA-7022C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package that provides an executive class collaboration phone with video support, Gigabit Ethernet network connectivity, embedded Bluetooth radio and 2 USB ports, Wideband Audio, Color VGA Display		
20	<b>Executive Professional Wi-Fi VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Executive Professional Wi-Fi</b> Phone	NWNCA-7023C
	<b>Bidder's Product Description:</b> Fully managed service that meets all requirements of the Standard Converged VoIP Handset Service Package that provides the features of Executive Professional phone with 802.11a/b/g Wi-Fi capabilities and a 5.6" screen		
21	<b>Smart Desk Endpoint - Converged VoIP Handset Service Package</b>	Monthly charge for Converged VoIP <b>Smart Desk Endpoint</b>	NWNCA-7039V
	<b>Bidder's Product Description:</b> Fully managed service that includes all of the requirements of the Standard Converged VoIP Handset Service Package that provides a Smart Desk Endpoint - Converged VoIP Handset Service that is specifically designed for integrated, always-on and secure, high-definition (HD) voice and video communications; conferencing; presence and instant messaging; and on-demand access to cloud services.		

#### 1.2.3.2.5 Converged VoIP Site Survey

The Contractor shall provide site survey, design, and implementation of Converged VoIP services which shall be included in the nonrecurring per seat price.

The Contractor shall perform an assessment of the environment to identify all required components and tasks needed for implementation of this service.

The Site Survey will include the completion of the Contractor's Site Survey Assessment form that will identify the steps required to facilitate a successful implementation of the Converged VoIP services. Upon completion of the survey, the Contractor shall provide the Customer a copy of the completed Site Survey Assessment form. The Site Survey

Assessment form will identify potential deficiencies found at the location and the necessary steps that will be required to correct them so that the Customer can order and implement Converged VoIP services.

The Contractor shall certify existing cabling. **The Bidder shall describe in detail and list all cabling requirements that must be met by the Customer to certify existing horizontal cabling for Converged VoIP services.**

*Bidder understands the requirements in Section 1.2.3.2.5 and shall meet or exceed them? Yes  No*

*NWN will conduct a site survey, LAN Assessment, develop the design, and implement Hosted VoIP services. An assessment of the environment will be performed to identify all required components and tasks needed for implementation of this service. Using floor plan drawings, engineers review all patch panels and all connected customer premise equipment. NWN will survey all MDF/IDF closets to verify station cabling to ensure compliance with the requirements for Hosted VoIP service.*

*NWN will confirm existing infrastructure cabling certification on rated Category 5, 5E and or Category 6 cabling and fiber for provided VoIP services. NWN will validate all related jack terminations and conduct an end to end test from end point placement jack location termination back to the designated MDF/IDF. This will verify that the continuity connection/termination meets industry standards performance with an industry standard qualification tester.*

*As part of the checklist process, the following items will be verified:*

- *Wire/Cable*
  - *Type:*
    - ◇ *Cat5 or higher;*
    - ◇ *4-pair, 100-ohm UTP or Scope cable (24 AWG, solid conductors) (EIA/TIA-568-B.2) or 2-fiber (or more) 50- and 62.5-micron fiber optic cable (EIA/TIA-568-B.3).*
  - *Length: Not to exceed 90 meters from the telecommunications outlet to the horizontal cross-connect*
  - *Requirements:*
    - ◇ *Cables are marked with the correct performance category.*
    - ◇ *Cable matches performance categories of the channel equipment, such as jacks, patch cords, patch panels, etc.*
- *Jacks & Connectors*
  - *Type:*
    - ◇ *8-position modular jack and plug with T568A or T568B pinning*
  - *SC and ST® fiber connectors.*
  - *Small form-factor fiber connectors Patch Panels*
- *Wire/cable support structure required within drop tile ceilings:*

- *A minimum clearance of 75mm (3 in) clear vertical space shall be available above the ceiling tiles for the cabling and pathway*
- *Non-continuous supports shall be located at intervals not to exceed 1.5 m (5 ft.).*
- *Long runs that are not exactly 5ft apart( due to “harmonics” issues per cable manufacturers)*
- *Non-continuous pathways do not need to be bonded together or grounded (see 2011 NEC 250.92.A.1)*
- *Electrical/communication/security wiring methods in a suspended ceiling must be installed on independent support wires/rods*
- *Per the 2011 NEC, all suspended ceilings applications must have visually distinguishable independent support wires (Wire must be affixed at both ends to minimize movement*
  - *Labeling*
    - *Jacks and IDF/MDF closet labeled for identification to complete accurate end to end validation testing*
    - *Patch panel labels correspondence to Jack/Room wall location*
    - *Standard labeling scheme nomenclature*
- *Patch Cord (Maximum horizontal distances)*
  - *Work-area patch cord: 5 meters (16.4 ft.).*
  - *Total of work-area and cross-connect patch cords, equipment cables, jumpers, etc.: 10 meters (32.8 ft.).*
- *Wire/cable pathway is not blocked*
- *Wire/cable pathway does not contain asbestos or other hazardous environment*

***Horizontal topology to meet VoIP cabling requirements for existing infrastructure:***

- *The following are highlights of the TIA/EIA-568-B.1 specifications.*
  - *The horizontal system shall be installed in a star topology.*
  - *Each work-area telecommunications outlet shall be connected to the horizontal cross-connect in the telecommunications room.*
  - *The telecommunications room to be on the same floor as the work area.*
  - *Bridge taps and splices shall not be installed for copper cable.*
  - *No more than one transition point or consolidation point shall be installed.*
  - *Electrical components shall not be installed as part of the horizontal cabling.*

**1.2.3.2.6 Converged VoIP Network LAN Assessment**

The Contractor shall perform a network LAN Assessment to address the following at no charge:

1. Health of the network;
2. Bandwidth requirements;
3. Power requirements;

4. Firewall requirements; and,
5. E9-1-1 requirements.

The Contractor shall perform a network VoIP LAN Assessment for Customer locations to determine the readiness of the network infrastructure to support VoIP traffic. The VoIP LAN Assessment shall identify network and equipment impairments that would cause VoIP to fail.

The Contractor shall measure network infrastructure performance by electronically passing the amount of simulated traffic expected under a VoIP implementation and measuring network infrastructure performance under the increased traffic load.

The Contractor shall provide a corrective action plan that identifies any corrective actions required by the Customer for the Customer's LAN to support the Converged VoIP service.

Upon written confirmation from Customer that the specifically identified corrective actions have been completed, Contractor shall perform any additional LAN Assessments to identify corrective actions required to insure proper operation of the service.

The Contractor shall provide an option for retesting the LAN as described within this Section.

The Contractor shall develop a Scope of Work (SOW) for each location as described in IFB Section A.6 (Contracted Service Project Work).

This service shall only be used for the purposes of determining Customer's site readiness for provisioning of the Contractor's Converged VoIP services under this Contract.

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

#### 1.2.3.2.7 Converged Site Design

The Contractor shall perform design services for each VoIP deployment. The design services shall include engineering and Documentation of all components required for proper implementation of the VoIP service. The site design service will be provided after a Customer has placed an order for Converged VoIP services and before implementation.

The Contractor shall complete a network design for implementation of Converged VoIP service for each Customer location.

The Contractor shall provide Visio Diagram(s) that details the Converged VoIP design for each location including the Customer Premise Equipment (CPE) and VoIP Transport bandwidth that will be installed.

During the network design, the proper grade of service will be engineered and bandwidth allocated to allow all simultaneous channels to be active with no degraded service.

The network design will indicate the Voice Compression CODEC that will be used, the number of simultaneous calls that the network will be able to handle for the P.01 grade of service and the total VoIP transport bandwidth that will be available at the location.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.8 Converged VoIP Site Implementation

The Contractor shall install all on-site equipment at the Customer location implementing a Converged VoIP service. The installation will commence after Customer approval following completion of the Site Survey, and network Design phase.

The Contractor shall install all appropriate components detailed in Section 1.2.3.2.1 (Converged VoIP Minimum Requirements). This includes, but is not limited to, software, a router, firewall, VoIP handsets and required analog phone adapters. The Customer shall be responsible for the required LAN components.

The Contractor shall test the complete system, all phones and associated equipment. The Contractor shall provide written test results to the Customer to assist Customer in determination of the final acceptance.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.9 Converged VoIP Account Codes

The Contractor's system shall allow the Customer to utilize account codes which enable the tracking of calls made outside of the location by prompting subscribers for an account code.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.2.10 Converged VoIP Authorization Codes

The Contractor's system shall allow the Customer to utilize Authorization Codes. This feature allows Customers to enable a prompt for an Authorization Code when making calls outside of the location. Calls will not be connected unless a valid code is entered.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

### 1.2.3.3 ADDITIONAL CONVERGED VOIP SERVICES AND FEATURES

The Contractor shall provide the additional Converged VoIP services and features described below.

#### 1.2.3.3.1 Converged VoIP Site Survivability Network Failure

The Contractor shall provide an option for Converged VoIP site survivability in the event of a network failure. Site Survivability Network Failure is an option where, in the event of a network failure, calling functionality is maintained for all handsets on premise. The installation of an on premise gateway to connect to the PSTN is an acceptable solution.

Failure of a Customer to select this option does not release the Contractor from its SLA obligations as described in Section 1.2.9.8.1 (Availability SLAs).

This solution is for backup purposes only. The Contractor shall not promote, design or offer this service as a standalone primary service and it shall only be used in conjunction with the Converged VoIP Service. Connections to the PSTN shall only be used in the event of Converged VoIP Service failure.

The Contractor shall only route traffic originating from the locally served Customer of record. No other traffic is permitted.

The Converged VoIP Site Survivability Network Failure solution shall provide automatic alarm notification by electronic means to the CALNET 3 CMO whenever traffic is routed through the gateway to the PSTN via locally connected circuits.

This service is exempt from the provisions of Section 1.2.3.1.6 (Network Based).

**Bidder shall describe their CALNET 3 Network Failure Site Survivability solution.**

Any Bidder proposed additional unsolicited local gateway site survivability solutions must conform to these requirements and will fall under the SLA's established in Section 1.2.9 (Service Level Agreements).

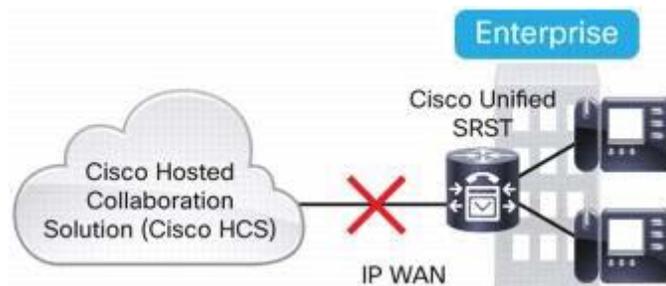
*Bidder understands the requirements in Section 1.2.3.3.1 and shall meet or exceed them? Yes  No*

***The NWN Converged VoIP Solution will provide Network Failure Site Survivability as an option to provide support in the event of WAN network failure. In the NWN Converged VoIP Solution, telephony survivability is accomplished with standard SRST (Survivable Remote Site Telephony) configurations on the customer's premise equipment (CPE).***

**SRST has two parts:**

- **SRST uses the existing remote site network to provide call-processing redundancy for the NWN Converged VoIP environment. In the event that the WAN link to the remote location fails and the connection to the NWN Converged VoIP environment is lost, the phones are automatically redirected to the local SRST router, which takes over and provides the basic call processing functions of the NWN VoIP Solution that originate from the locally served Customer of record. When the disrupted WAN link is restored, the phones automatically re-register with NWN Converged VoIP environment - no manual intervention is required.**
- **NWN configures the cloud-based VoIP Solution to point the phones at a particular site to the SRST device that supports that site only.**

**SRST is configured at the customer premises. An example of one of our SRST solutions is shown below:**



**Example: How Cisco Unified SRST Works:**

**Cisco Unified SRST functions in the remote-location router to automatically detect a failure in the network and initiate a process to provide call-processing backup redundancy for the IP phones in that location and help ensure that the telephony capabilities stay operational. Upon restoration of WAN connectivity, the system intelligently and automatically shifts call processing back to NWN VoIP Solution environment. The Cisco Unified SRST configuration needs to be completed only once, during the initial installation, simplifying deployment, administration, and maintenance. No IT staff is required at the remote sites to manage the Cisco Unified SRST application. NWN utilizes monitoring tools to notify the customer of a WAN failure. The site utilizes SRST to maintain operability during the outage. NWN notifies the customer upon remediation of the WAN failure.**

**1.2.3.3.2 Converged VoIP Network LAN Assessment Retest**

If required, Contractor shall perform a network LAN Assessment retest in accordance with the provisions of Section 1.2.3.2.6 (Converged VoIP Network LAN Assessment) to validate corrective actions have been completed that allow for proper operation of the service.

**Bidder understands the Requirement and shall meet or exceed it? Yes  No**

**1.2.3.3.3 Converged VoIP Block of 20 Additional Direct Inward**

### Dialing (DID) Number Reservation

Contractor shall provide an option that allows the Customer to purchase an additional block of 20 DID numbers. This block will be used to reserve additional blocks of DID numbers for future requirements (20 per block) this charge shall only apply for the reservation of the block of numbers. Upon utilization of all 20 DIDs, this charge shall be terminated.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.3.4 Converged VoIP Web Based Attendant Console

The Contractor shall provide a Converged VoIP web-based Attendant Console that enables a subscriber (e.g., receptionist) to monitor a configurable set of subscribers at the same location as the Attendant. The Attendant Console shall graphically display subscribers' status (busy, idle, do not disturb), as well as detailed call information. The Attendant Console window shall allow the attendant to perform click-to-transfer or click-to-dial.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.3.5 Converged VoIP Additional Line Appearance

The Contractor shall provide additional line appearances for multi-line phones.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.3.6 Converged VoIP Analog and Facsimile Support

The Contractor shall provide analog device or facsimile support services that will:

1. Provide Auto Detection of voice or fax;
2. Provide Facsimile over TCP/IP; and,
3. Provide Fax Messaging.

The network will automatically detect a voice or fax call and use the correct compression code.

The Contractor shall furnish, install and support all equipment for proper operation of the Customer analog device.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

Contractor shall offer the Converged VoIP service features detailed in Table 1.2.3.3.a.

**Table 1.2.3.3.a Converged VoIP Service Features**

Item	Feature Name	Feature Description	Bidder Meet or Exceeds?		Bidder's Product Identifier
			Y	N	
1	Converged VoIP Site Survivability Network Failure	Site survivability option	Y		NWNCA-1101OP
	<b>Bidder's Product Description</b> On-Premise Gateway with connection to PSTN to ensure calling functionality for all handsets on-premise in case of unanticipated incidents, disasters, or catastrophes				
2	Converged VoIP Network LAN Assessment Retest	Additional test beyond the initial LAN Assessment test as identified in Section (1.2.3.2.6) Converged VoIP Network LAN Assessment. [per seat]	Y		NWNCA-2902LANR
	<b>Bidder's Product Description:</b>				
3	Converged VoIP Block of 20 Additional Direct Inward Dialing (DID) Number Reservation	Block of 20 DID numbers held in reservation.	Y		NWNCA-9190
	<b>Bidder's Product Description:</b>				
4	Converged VoIP Web-Based Attendant Console	Enables a subscriber (e.g., receptionist) to monitor a configurable set of subscribers	Y		NWNCA-8001
	<b>Bidder's Product Description:</b>				
5	Converged VoIP Additional Line Appearance	Additional line appearances for multi-line handsets.	Y		NWNCA-2105
	<b>Bidder's Product Description:</b>				
6	Converged VoIP Analog and Facsimile Support	Analog device or facsimile support	Y		NWNCA-1502
	<b>Bidder's Product Description:</b>				

**The Contractor may offer additional unsolicited Converged VoIP Service Features in Table 1.2.3.3.b.**

**Table 1.2.3.3.b Unsolicited Converged VoIP Service Features**

Item	Feature Name	Feature Description	Bidder's Product Identifier
1	<b>Mobile Solution - Single Number Reach</b>	Monthly Charge for Mobile User -Single Number Reach (SNR) feature	NWNCA-1501MBL
	<b>Bidder's Product Description:</b> Enables callers to dial a single number to reach the user allows user either on their desktop IP phone or at a remote destination, such as a mobile phone.		
2	<b>Mobile Solution - Extension Mobility</b>	Monthly Charge for Extension Mobility feature	NWNCA-1501MEX
	<b>Bidder's Product Description:</b> Allows user to temporarily configure any Unified IP Phone as their own individual user default device and include the proper profile information, including line numbers, speed dials, services links, and other user-specific properties of a phone.		
3	<b>Mobile Solution - Mobile Device Mobility</b>	Monthly Charge for Seamless Transferring features	NWNCA-1501MST
	<b>Bidder's Product Description:</b> Allows calls from user's mobile device back to the user's phone device via a softkey.		
4	<b>Mobile Solution - Mobile Voice Access</b>	Monthly Charge for Mobile Connect (Voice Access) Feature	NWNCA-1501MVA
	<b>Bidder's Product Description:</b> Allows users to manage business calls using a single phone number and pick up in-progress calls on the desktop phone and cellular phone.		
5	<b>Collaboration Solution - Basic Instant Messaging, Presence, Chat and User Presence</b>	Monthly Charge for Basic Instant Messaging, Chat and User Presence functionality	NWNCA-1502IMB
	<b>Bidder's Product Description:</b> Basic Instant Messaging, Chat and User Presence includes: Instant Messaging and Chat/Group Chat; Presence Status; File transfer; Microsoft Office 2007/10 Presence and Click to IM (Windows); and initiate/join Cisco WebEx® meetings for Mac & Windows		
6	<b>Collaboration Solution - Full Feature Instant Messaging, Presence, Chat and User Presence</b>	Monthly Charge for Full Feature Instant Messaging, Chat and User Presence functionality	NWNCA-1502IMFF
	<b>Bidder's Product Description:</b> Includes Basic Instant Messaging, Chat and User Presence Features plus Desktop Sharing, Softphone capabilities, and Multi-device IM support		

Item	Feature Name	Feature Description	Bidder's Product Identifier
7	<b>Multi-Device Solution</b>	Monthly Charge for Multi-Device Solution feature	NWNCA-1502MDS
	<b>Bidder's Product Description:</b> Fully Managed solution that allows user to have multiples hard phones, mobile clients or desktop agents. (NOTE: This is a Monthly Service Fee for an additional single phone- and requires the purchase of a Standard Features Packages)		
8	<b>Unified Attendant Console Premium</b>	Monthly Charge for <b>Highly Scalable Software-Based Attendant</b> feature	NWNCA-1505ACP
	<b>Bidder's Product Description:</b> Console designed for large Unified Communications Manager		
9	<b>Web Based End User Administration Portal</b>	Monthly Charge for <b>Web-based End User Portal interface</b> feature	NWNCA-1505AP
	<b>Bidder's Product Description:</b> Allows user to configure settings for their Phones.		
10	<b>VoIP Feature - Privacy</b>	Monthly Charge for <b>Privacy Enabled Phone</b> feature	NWNCA-1505PRI
	<b>Bidder's Product Description:</b> Removes call information from all phones that share lines and blocks other shared lines from barging in on its calls.		
11	<b>VoIP Feature - Barge</b>	Monthly Charge for <b>Barge</b> feature	NWNCA-1505BAR
	<b>Bidder's Product Description:</b> Allows a user to be added to a call that is in progress. Barge supports built in conference and shared conference bridges.		
12	<b>VoIP Feature - Join Across Lines</b>	Monthly Charge for <b>Join Across Lines</b> feature	NWNCA-1505JAL
	<b>Bidder's Product Description:</b> Allows users to join callers from different lines		
13	<b>VoIP Feature - Do Not Disturb</b>	Monthly Charge for <b>Do Not Disturb (DND)</b> feature	NWNCA-1505DND
	<b>Bidder's Product Description:</b> Allows Call Reject and Ringer Off - When DND is enabled, all new incoming calls with normal priority will honor the DND settings for the device. High-priority calls, such as Cisco Emergency Responder (CER) calls or calls with Multi-Level Precedence & Preemption (MLPP), will ring on the device.		
14	<b>VoIP Feature - Web Dialer</b>	Monthly Charge for <b>Web Dialer</b> feature	NWNCA-1505WD
	<b>Bidder's Product Description:</b> Allows Unified IP Phone users to make calls from web and desktop applications. For example, Web Dialer uses hyperlinked telephone numbers in a company directory to allow users to make calls from a web page by clicking on the telephone number of the person that they are trying to call.		
15	<b>Manager Assistant - Proxy</b>	Monthly Charge for <b>Manager Assistant – Proxy</b> feature	NWNCA-1505MAP
	<b>Bidder's Product Description:</b> Allows an assistant to handle calls on behalf of a manager, intercepts		

Item	Feature Name	Feature Description	Bidder's Product Identifier
		manager calls and routes them appropriately, without the manager and assistant needing to share a directory number	
16	<b>Manager Assistant – Shared</b>	Monthly Charge for <b>Manager Assistant – Shared</b> feature	NWNCA-1505MAS
	<b>Bidder's Product Description:</b> Allows an assistant to handle calls on behalf of a manager, intercepts manager calls and routes them appropriately without the manager and assistant needing to share a directory number. The assistant handles calls for a manager using a proxy number.		
17	<b>VoIP Feature - Pause in Speed Dial</b>	Monthly Charge for <b>Pause in Speed Dials</b> feature	NWNCA-1505PSD
	<b>Bidder's Product Description:</b> Enables users to configure the phone speed-dial button with strings, including directory number (DN), Forced Authorization Code (FAC) or Client Matter Code (CMC), dual-tone multi-frequency (DTMF) digits, and dialing pauses		
18	<b>VoIP Feature - Auto Answer</b>	Monthly Charge for <b>Auto Answer</b> feature	NWNCA-1505AA
	<b>Bidder's Product Description:</b> Prompts your phone to automatically answer incoming calls after one ring.		
19	<b>VoIP Feature - Phone Presence</b>	Monthly Charge for <b>Phone Presence</b> feature	NWNCA-1505PRE
	<b>Bidder's Product Description:</b> Allows a user (watcher) to monitor the real-time status of another user at a directory number or SIP/URI from the device of the watcher.		
20	<b>VoIP Feature - Audio Message Waiting Indicator</b>	Monthly Charge for <b>Audio Message Waiting Indicator/Tone</b> feature	NWNCA-1505AMWI
	<b>Bidder's Product Description:</b> Played when a voicemail message is left		
21	<b>VoIP Feature - Select Call Forward</b>	Monthly Charge for <b>Select Call Forwarding</b> feature	NWNCA-1505SCF
	<b>Bidder's Product Description:</b> Based on the telephone number/extension of an internal and external call		
22	<b>VoIP Feature - Time of Day Forward</b>	Monthly Charge for <b>Time of Day Forward</b> feature	NWNCA-1505TDF
	<b>Bidder's Product Description:</b> Forwards all calls based on the time of day		

Item	Feature Name	Feature Description	Bidder's Product Identifier
23	<b>VoIP Feature - Private-line Automated Ring Tone</b>	Monthly Charge for <b>Private Line Automatic Ringdown (PLAR)</b> feature	NWNCA-1505PLAR
	<b>Bidder's Product Description:</b> Allows user to configure phone so that the user can only dial the designated private line number.		
24	<b>Hotline Automated Ring Tone</b>	Monthly Charge for <b>Hotline Automated Ring Tone</b> feature	NWNCA-1505PLHOT
	<b>Bidder's Product Description:</b> Extends the Private Line Automatic Ringdown (PLAR) feature. The Hotline adds the additional restrictions and administrator controls for phones that use PLAR		
25	<b>VoIP Feature - Call Back Busy</b>	Monthly Charge for <b>Call Back</b> feature	NWNCA-1505CBB
	<b>Bidder's Product Description:</b> Allows user to receive call-back notification on your IP Phone when a called party line becomes available		
26	<b>VoIP Feature - Click to Call</b>	Monthly Charge for <b>Click to Call</b> feature	NWNCA-1505CC
	<b>Bidder's Product Description:</b> Enables ability to initiate calls from Microsoft Office applications and web browsers		
27	<b>VoIP Feature - Intercom</b>	Monthly Charge for <b>Intercom</b> feature	NWNCA-1505INT
	<b>Bidder's Product Description:</b> Allows a user to place a call to a predefined target. The called destination auto-answers the call in speakerphone mode with mute activated. This sets up a one-way voice path between the initiator and the destination, so the initiator can deliver a short message, regardless of whether the called party is busy or idle.		
28	<b>VoIP Feature - Music On Hold</b>	Monthly Charge for <b>Integrated Music On Hold (MOH)</b> feature	NWNCA-1505MOH
	<b>Bidder's Product Description:</b> Allows users to place on-net and off-net users on hold with music that is streamed from a streaming source		
29	<b>Secure Branch Solution – Router Small Office/Branch Office – Managed Solution</b>	Monthly Charge for <b>Secure End-to-End Logical Link with QoS &amp; Self-Healing.</b>	NWNCA-7003SBS
	<b>Bidder's Product Description:</b> Secure Corporate Routers connecting Branch Office sites across the Secure Corporate WAN		
30	<b>Centralized and Automated WAN Provision Solution</b>	Monthly Charge for <b>Centralized and Automated WAN Provisions</b>	NWNCA-7201PS
	<b>Bidder's Product Description:</b> Proactive Monitoring and Management of Secure End-to-End Branch Routers		
31	<b>NWN Managed Local Area Network (MLAN) Services</b>	Monthly Charge for <b>Managed LAN Service:</b> a premises-based Ethernet switching infrastructure of an organization's computer network.	Several: See Items 32-44 below

Item	Feature Name	Feature Description	Bidder's Product Identifier
	<p><b>Bidder's Product Description:</b> The MLAN Service provides design, implementation and remote proactive monitoring and management of a Customer's LAN infrastructure via select NWN business data transport services. MLAN can only be ordered and used with NWN Converged VoIP services, and cannot be ordered or used as a standalone service</p>		
32	<p><b>Managed LAN Infrastructure Services - PoE Layer 2, 24 port 10/100/1000, Switching – NWN-Provided</b></p>	<p>Monthly Charge for <b>Managed MLAN Service:</b> a premises-based PoE Layer 2, 24 port 10/100/1000</p>	<p>NWNCA-PoEL2-24</p>
	<p><b>Bidder's Product Description:</b> Fully Managed MLAN Service that includes design and implementation of PoE switches plus includes: remote, proactive 24x7 monitoring of equipment; management of PoE equipment including health checks, incident assessment &amp; resolution; coordination of equipment vendor support response; and scheduled maintenance &amp; monthly analysis reports.</p>		
33	<p><b>Managed LAN Infrastructure Services - PoE Layer 2, 48 port 10/100/1000, Switching - NWN-Provided</b></p>	<p>Monthly Charge for <b>Managed MLAN Service:</b> a premises-based PoE Layer 2, 48 port 10/100/1000</p>	<p>NWNCA-PoEL2-48</p>
	<p><b>Bidder's Product Description:</b> Fully Managed MLAN Service that includes design and implementation of PoE switches plus includes: remote, proactive 24x7 monitoring of equipment; management of PoE equipment including health checks, incident assessment &amp; resolution; coordination of equipment vendor support response; and scheduled maintenance &amp; monthly analysis reports.</p>		
34	<p><b>Managed LAN Infrastructure Services - PoE Layer 3, 24 port 10/100/1000, Switching - NWN-Provided</b></p>	<p>Monthly Charge for <b>Managed MLAN Service:</b> a premises-based PoE Layer 3, 24 port 10/100/1000</p>	<p>NWNCA-PoEL3-24</p>
	<p><b>Bidder's Product Description:</b> Fully Managed MLAN Service that includes design and implementation of PoE switches plus includes: remote, proactive 24x7 monitoring of equipment; management of PoE equipment including health checks, incident assessment &amp; resolution; coordination of equipment vendor support response; and scheduled maintenance &amp; monthly analysis reports.</p>		
35	<p><b>Managed LAN Infrastructure Services - PoE Layer 3, 48 port 10/100/1000, Switching - NWN-Provided</b></p>	<p>Monthly Charge for <b>Managed MLAN Service:</b> a premises-based PoE Layer 3, 48 port 10/100/1000</p>	<p>NWNCA-PoEL3-48</p>
	<p><b>Bidder's Product Description:</b> Fully Managed MLAN Service that includes design and implementation of PoE switches plus includes: remote, proactive 24x7 monitoring of equipment; management of PoE equipment including health checks, incident assessment &amp; resolution; coordination of equipment vendor support response; and scheduled maintenance &amp; monthly analysis reports.</p>		

Item	Feature Name	Feature Description	Bidder's Product Identifier
36	<b>Managed WLAN - WAP 802.11AC - NWN-Provided</b>	Monthly Charge for <b>Managed WLAN Service:</b> a premises-based WLAN	NWNCA-WLAN11A C
<b>Bidder's Product Description:</b> Fully Managed WLAN Service that includes design and implementation of WLAN equipment plus includes: remote, proactive 24x7 monitoring of equipment; management of PoE equipment including health checks, incident assessment & resolution; coordination of equipment vendor support response; and scheduled maintenance & monthly analysis reports.			
37	<b>Managed WLAN - WAP 802.11N - NWN-Provided</b>	Monthly Charge for <b>Managed WLAN Service:</b> a premises-based WLAN	NWNCA-WLAN11N
<b>Bidder's Product Description:</b> Fully Managed WLAN Service that includes design and implementation of WLAN equipment plus includes: remote, proactive 24x7 monitoring of equipment; management of PoE equipment including health checks, incident assessment & resolution; coordination of equipment vendor support response; and scheduled maintenance & monthly analysis reports. "Physical" in the feature name denotes that the service includes NWN-provided and owned WLAN equipment as part of the service offering.			
38	<b>Managed WLAN - Wireless Controller – NWN-Provided</b>	Monthly Charge for <b>Managed WLAN Service:</b> a premises-based WLAN	NWNCA-WLANCTR
<b>Bidder's Product Description:</b> Fully Managed WLAN Service that includes design and implementation of WLAN equipment plus includes: remote, proactive 24x7 monitoring of equipment; management of PoE equipment including health checks, incident assessment & resolution; coordination of equipment vendor support response; and scheduled maintenance & monthly analysis reports.			

Item	Feature Name	Feature Description	Bidder's Product Identifier
39	<b>Remote Proactive Monitoring and Managed LAN Infrastructure Services - Customer Owned Equipment</b>	Monthly Charge for <b>Remote Proactive Monitoring and Managed LAN Infrastructure Services - Customer Owned Equipment</b>	NWNCA-PoEMGD
	<b>Bidder's Product Description:</b> NWN Managed MLAN or WLAN Services provide remote management capabilities for a customer's LAN switching infrastructure to support a converged VoIP solution. MLAN Monitoring includes remote, proactive 24x7 monitoring of equipment; management of PoE equipment including health checks, incident assessment & resolution; coordination of equipment vendor support response; and scheduled maintenance & monthly performance and health analysis reports		
40	<b>Remote Proactive Monitoring LAN Infrastructure Services - Customer Owned Equipment</b>	Monthly Charge for Remote Proactive Monitoring LAN Infrastructure Services - Customer Owned Equipment	NWNCA-PoEMON
	<b>Bidder's Product Description:</b> MLAN or WLAN Monitoring includes remote, proactive 24x7 monitoring of equipment; management of PoE equipment including health checks, incident assessment & resolution; coordination of equipment vendor support response; and scheduled maintenance & monthly performance and health analysis reports		
41	<b>NWN Fully Managed LAN-Implementation Services for Customer Owned Equipment (1-50 sites)</b>	Technical Services for configuration and installation of Customer Owned LAN equipment.	NWNCA-LANIMPL1
	<b>Bidder's Product Description:</b>		
42	<b>NWN Fully Managed LAN-Implementation Services for Customer Owned Equipment (51-250 sites)</b>	Technical Services for configuration and installation of Customer Owned LAN equipment.	NWNCA-LANIMPL2
	<b>Bidder's Product Description:</b>		
43	<b>NWN Fully Managed LAN-Implementation Services for Customer Owned Equipment (251-500 sites)</b>	Technical Services for configuration and installation of Customer Owned LAN equipment.	NWNCA-LANIMPL3
	<b>Bidder's Product Description:</b>		
44	<b>NWN Fully Managed LAN-Implementation Services for Customer Owned Equipment (500+ sites)</b>	Technical Services for configuration and installation of Customer Owned LAN equipment.	NWNCA-LANIMPL4
	<b>Bidder's Product Description:</b>		
45	<b>NWN Professional and Technical Services</b>	Engineering and Technical activities per Customer Statement of Work	Several: See Items 46-47below
	<b>Bidder's Product Description:</b> Supplemental Engineering and Technical activities, including but not		

Item	Feature Name	Feature Description	Bidder's Product Identifier
	limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon network changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) with the defined deliverable being a design/configuration document. Pricing is based on the below Professional services rates. These services do not include physical or logical changes to the device.		
46	<b>NWN Technical Services – Junior Engineer</b> Standard Hours/Regular Rate (8am – 5pm local time)	<b>NWN Technical Services – Junior Engineer</b> Standard Hours/Regular Rate (8am – 5pm local time)	NWNCA-TSJR
<b>Bidder's Product Description:</b>			
47	<b>NWN Technical Services – Junior Engineer</b> Non-Standard Hours	<b>NWN Technical Services – Junior Engineer</b> Non-Standard Hours	NWNCA-TSJROT
<b>Bidder's Product Description:</b>			

Item	Feature Name	Feature Description	Bidder's Product Identifier
50	<b>NWN Technical Services – Senior Engineer</b> Standard Hours/Regular Rate (8am – 5pm local time)	<b>NWN Technical Services – Senior Engineer</b> Standard Hours/Regular Rate (8am – 5pm local time)	NWNCA-TSSR
	<b>Bidder's Product Description:</b>		
51	<b>NWN Technical Services – Senior Engineer</b> Non-Standard Hours	<b>NWN Technical Services – Senior Engineer</b> Non-Standard Hours	NWNCA-TSSROT
	<b>Bidder's Product Description:</b>		
52	<b>NWN Technical Services – Expert Engineer</b> Standard Hours/Regular Rate (8am – 5pm local time)	<b>NWN Technical Services – Expert Engineer</b> Standard Hours/Regular Rate (8am – 5pm local time)	NWNCA-TSEXP
	<b>Bidder's Product Description:</b>		
53	<b>NWN Technical Services – Expert Engineer</b> Non-Standard Hours	<b>NWN Technical Services – Expert Engineer</b> Non-Standard Hours	NWNCA-TSEXPOT
	<b>Bidder's Product Description:</b>		
54	NWN Professional Services – Senior Design Engineer Standard Hours/Regular Rate (8am – 5pm local time)	NWN Professional Services – Senior Design Engineer Standard Hours/Regular Rate (8am – 5pm local time)	NWNCA-PSSR
	<b>Bidder's Product Description:</b>		
55	<b>NWN Professional Services – Senior Design Engineer</b> Non-Standard Hours	<b>NWN Professional Services – Senior Design Engineer</b> Non-Standard Hours	NWNCA-PSSROT
	<b>Bidder's Product Description:</b>		
56	<b>NWN Professional Services – Expert Design Engineer</b> Standard Hours/Regular Rate (8am – 5pm local time)	<b>NWN Professional Services – Expert Design Engineer</b> Standard Hours/Regular Rate (8am – 5pm local time)	NWNCA-PSEXP
	<b>Bidder's Product Description:</b>		
57	<b>NWN Professional Services – Expert Design Engineer</b> Non-Standard Hours	<b>NWN Professional Services – Expert Design Engineer</b> Non-Standard Hours	NWNCA-PSEXPOT
	<b>Bidder's Product Description:</b>		

#### 1.2.3.4 CONVERGED VOIP CALLING REQUIREMENTS

The Contractor shall provide the Converged VoIP calling solutions described below.

##### 1.2.3.4.1 Converged VoIP On-Net Calling

The Contractor shall provide a Converged VoIP service that provides unlimited on-net calling for both domestic and international calls at no additional charge. On-net calling is defined as calling from a Converged VoIP Customer Site that uses the Contractors VoIP network and terminates at another Converged VoIP site. If the Contractor offers SIP Trunking or Standalone VoIP under another CALNET contract, Converged VoIP calls terminating at such a site shall be considered on-net.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

##### 1.2.3.4.2 Converged VoIP Off-Net Calling

The Contractor shall provide off-net calling at no additional charge. The Converged VoIP service will route call traffic off the VoIP network within the 50 United States, the District of Columbia, the Virgin Islands, and Puerto Rico. This will be accomplished using network based PSTN gateways.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

##### 1.2.3.4.3 On-Net Enterprise Calling

The Contractor shall treat the State of California as a single enterprise for the purpose of on-net calling. On-net calling from one (1) State of California Agency/Department to another shall be treated the same as on-net calling within a State of California Agency or Department.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

##### 1.2.3.4.4 Converged Off-Net Toll-Free

The Contractor shall provide Converged off-net toll-free services that shall only be provided by the Converged VoIP Contractor and shall not be provided by a third party. This service shall only be utilized in conjunction with the awarded Contractor's VoIP service. The Converged VoIP service allows Customers to receive off-net toll-free calls from the 50 United States, the District of Columbia, the U.S. Virgin Islands, and Puerto Rico. The Contractor's CALNET 3 approved applicable rates shall apply.

**Table 1.2.3.4.4.a Converged VoIP Off-Net Toll-Free**

Item	Feature Name	Feature Description	Bidder Meets or Exceeds?		Bidder's Product Identifier
			Y	N	
1	<b>Converged VoIP Off-Net Toll-Free</b>	Allows a Customer to receive off-net toll-free calls from the 50 United States, the District Of Columbia, the Virgin Islands, and Puerto Rico.	Y		NWNCA-9901
	<b>Bidder's Product Description:</b>				

**The Contractor may offer additional Converged VoIP Off-Net Toll-Free features in Table 1.2.3.4.4.b.**

**Table 1.2.3.4.4.b Unsolicited Converged VoIP Off-Net Toll-Free**

Item	Feature Name	Feature Description	Bidder's Product Identifier

**1.2.3.4.5 Converged International Off-Net Calling**

The Contractor shall provide Converged VoIP international off-net calling to the countries listed in Table 1.2.3.3.5. Bidder's rates as provided in the Subcategory Cost Worksheets shall be based on time of day ("Peak Time" or "Off-Peak Time"). Peak Time is between 8:00 a.m. and 4:59 p.m., Monday through Friday based on the time at the CALNET caller's location. Off-Peak time is for all calls where Peak Time rates do not apply.

All usage shall be billed in accordance with the Business Requirements Section A.5.1 (Billing and Invoicing Requirements #11) except Mexico which shall be billed in 60 second increments with a 60 second minimum.

Note: If the Bidder charges the same rate for both Peak Time and Off-Peak time, Bidder may use the same Product Identifier for both products.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

**1.2.3.4.5.1 International Mobile Termination Charges (IMTC)**

Contractor shall provide the ability to terminate international calls on wireless devices. Contractor shall charge International Mobile Termination Charge (IMTC) as an additional per minute rate that is applied to international calls (direct dial business or credit card calls) originating in the U.S. and terminating in certain countries to either wireless communications devices

including mobile telephones, pagers, personal computers, and personal digital assistants, or to a portable telephone number where a forwarding, tracking or other type of location service is used.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

1.2.3.4.5.2 U.S. Based Services Waiver

The provisions detailed in IFB-A Section A.2.4.4 (U.S. Based Services) will not apply to Contractor's International Long Distance Calling services.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

**The Contractor shall offer the Converged VoIP International Off-Net Calling configurations detailed in Table 1.2.3.4.5.a**

**Table 1.2.3.4.5.a Converged VoIP International Off-Net Calling**

Item	Country	Bidders Meets or Exceeds?		Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
		Y	N			
1	Brazil:	Y		NWNCA-9100P	NWNCA-9100oP	NWNCA-9100iMTC
2	Canada:	Y		NWNCA-9101P	NWNCA-9101oP	NWNCA-9101iMTC
3	China:	Y		NWNCA-9102P	NWNCA-9102oP	NWNCA-9102iMTC
4	France:	Y		NWNCA-9103P	NWNCA-9103oP	NWNCA-9103iMTC
5	Germany:	Y		NWNCA-9104P	NWNCA-9104oP	NWNCA-9104iMTC
6	Israel:	Y		NWNCA-9105P	NWNCA-9105oP	NWNCA-9105iMTC
7	Italy:	Y		NWNCA-9106P	NWNCA-9106oP	NWNCA-9106iMTC
8	Japan:	Y		NWNCA-9107P	NWNCA-9107oP	NWNCA-9107iMTC
9	Korea:	Y		NWNCA-9108P	NWNCA-9108oP	NWNCA-9108iMTC
10	Mexico:	Y		NWNCA-9109P	NWNCA-9109oP	NWNCA-9109iMTC
11	Spain:	Y		NWNCA-9110P	NWNCA-9110oP	NWNCA-9110iMTC
12	Switzerland:	Y		NWNCA-9111P	NWNCA-9111oP	NWNCA-9111iMTC
13	United Kingdom:	Y		NWNCA-9112P	NWNCA-9112oP	NWNCA-9112iMTC

**Bidders may offer the Converged VoIP International Off-Net Calling to unsolicited countries listed in Table 1.2.3.4.5.b.**

**Table 1.2.3.4.5.b Unsolicited Converged VoIP International Off-Net Calling**

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
1	Afghanistan	QDA00AF5P	QDA00AF5oP	QDAI0AF5iMTC
2	Albania	QDA00AL5P	QDA00AL5oP	QDAI0AL5iMTC
3	Algeria	QDA00DZ5P	QDA00DZ5oP	QDAI0DZ5iMTC
4	Andorra	QDA00AD5P	QDA00AD5oP	QDAI0AD5iMTC
5	Angola	QDA00AO5P	QDA00AO5oP	QDAI0AO5iMTC
6	Anguilla	QDA00AI5P	QDA00AI5oP	QDAI0AI5iMTC
7	Antarctica (Casey)	QDA00AC5P	QDA00AC5oP	N/A
8	Antarctica (Scott)	QDA00AQ5P	QDA00AQ5oP	N/A
9	Antigua & Barbuda	QDA00AG5P	QDA00AG5oP	QDAI0AG5iMTC
10	Argentina	QDA00AR5P	QDA00AR5oP	QDAI0AR5iMTC
11	Armenia	QDA00AM5P	QDA00AM5oP	QDAI0AM5iMTC
12	Aruba	QDA00AW5P	QDA00AW5oP	QDAI0AW5iMTC
13	American Samoa	QDA00AS5P	QDA00AS5oP	QDAI0AS5iMTC
14	Ascension Island	QDA00AX5P	QDA00AX5oP	N/A
15	Australia	QDA00AU5P	QDA00AU5oP	QDAI0AU5iMTC
16	Austria	QDA00AT5P	QDA00AT5oP	QDAI0AT5iMTC
17	Azerbaijan	QDA00AZ5P	QDA00AZ5oP	QDAI0AZ5iMTC
18	Bahamas	QDA00BS5P	QDA00BS5oP	QDAI0BS5iMTC
19	Bahrain	QDA00BH5P	QDA00BH5oP	QDAI0BH5iMTC
20	Bangladesh	QDA00BD5P	QDA00BD5oP	QDAI0BD5iMTC
21	Barbados	QDA00BB5P	QDA00BB5oP	QDAI0BB5iMTC
22	Belarus	QDA00BY5P	QDA00BY5oP	QDAI0BY5iMTC
23	Belgium	QDA00BE5P	QDA00BE5oP	QDAI0BE5iMTC
24	Belize	QDA00BZ5P	QDA00BZ5oP	QDAI0BZ5iMTC
25	Benin	QDA00BJ5P	QDA00BJ5oP	QDAI0BJ5iMTC
26	Bermuda	QDA00BM5P	QDA00BM5oP	N/A
27	Bhutan	QDA00BT5P	QDA00BT5oP	QDAI0BT5iMTC
28	Bolivia	QDA00BO5P	QDA00BO5oP	N/A

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
29	Bosnia & Herzegovina	QDA00BA5P	QDA00BA5oP	QDAI0BA5iMTC
30	Botswana	QDA00BW5P	QDA00BW5oP	QDAI0BW5iMTC
31	Brunei	QDA00BN5P	QDA00BN5oP	QDAI0BN5iMTC
32	Bulgaria	QDA00BG5P	QDA00BG5oP	QDAI0BG5iMTC
33	Burkina Faso	QDA00BF5P	QDA00BF5oP	QDAI0BF5iMTC
34	Burundi	QDA00BI5P	QDA00BI5oP	QDAI0BI5iMTC
35	British Virgin Islands	QDA00VG5P	QDA00VG5oP	QDAI0VG5iMTC
36	Central African Republic	QDA00CF5P	QDA00CF5oP	QDAI0CF5iMTC
37	Cambodia	QDA00KH5P	QDA00KH5oP	QDAI0KH5iMTC
38	Cameroon	QDA00CM5P	QDA00CM5oP	QDAI0CM5iMTC
39	Cape Verde	QDA00CV5P	QDA00CV5oP	QDAI0CV5iMTC
40	Cayman Islands	QDA00KY5P	QDA00KY5oP	QDAI0KY5iMTC
41	Chad	QDA00TD5P	QDA00TD5oP	QDAI0TD5iMTC
42	Chile	QDA00CL5P	QDA00CL5oP	QDAI0CL5iMTC
43	Christmas and Cocos Islands	QDA00CX5P	QDA00CX5oP	N/A
44	Colombia	QDA00CO5P	QDA00CO5oP	QDAI0CO5iMTC
45	Comoros	QDA00KM5P	QDA00KM5oP	QDAI0KM5iMTC
46	Congo	QDA00CG5P	QDA00CG5oP	N/A
47	Cook Islands	QDA00CK5P	QDA00CK5oP	N/A
48	Costa Rica	QDA00CR5P	QDA00CR5oP	QDAI0CR5iMTC
49	Croatia	QDA00HR5P	QDA00HR5oP	QDAI0HR5iMTC
50	Cuba	QDA00CU5P	QDA00CU5oP	QDAI0CU5iMTC
51	Cyprus	QDA00CY5P	QDA00CY5oP	QDAI0CY5iMTC
52	Czech Republic	QDA00CZ5P	QDA00CZ5oP	QDAI0CZ5iMTC
53	Diego Garcia	QDA00DG5P	QDA00DG5oP	N/A
54	Djibouti	QDA00DJ5P	QDA00DJ5oP	N/A
55	Denmark	QDA00DK5P	QDA00DK5oP	QDAI0DK5iMTC
56	Dominica	QDA00DM5P	QDA00DM5oP	QDAI0DM5iMTC
57	Dominican Republic	QDA00DO5P	QDA00DO5oP	QDAI0DO5iMTC
58	Ecuador	QDA00EC5P	QDA00EC5oP	QDAI0EC5iMTC
59	Egypt	QDA00EG5P	QDA00EG5oP	QDAI0EG5iMTC
60	El Salvador	QDA00SV5P	QDA00SV5oP	QDAI0SV5iMTC

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
61	Equatorial Guinea	QDA00GQ5P	QDA00GQ5oP	N/A
62	Eritrea	QDA00ER5P	QDA00ER5oP	N/A
63	Estonia	QDA00EE5P	QDA00EE5oP	QDAI0EE5iMTC
64	Ethiopia	QDA00ET5P	QDA00ET5oP	QDAI0ET5iMTC
65	East Timor	QDA00TP5P	QDA00TP5oP	N/A
66	Faeroe Islands	QDA00FO5P	QDA00FO5oP	N/A
67	Falkland Islands	QDA00FK5P	QDA00FK5oP	N/A
68	Fiji Islands	QDA00FJ5P	QDA00FJ5oP	QDAI0FJ5iMTC
69	Finland	QDA00FI5P	QDA00FI5oP	QDAI0FI5iMTC
70	French Antilles	QDA00XA5P	QDA00XA5oP	QDAI0XA5iMTC
71	French Guiana	QDA00GF5P	QDA00GF5oP	QDAI0GF5iMTC
72	French Polynesia	QDA00PF5P	QDA00PF5oP	N/A
73	Gabon Republic	QDA00GA5P	QDA00GA5oP	QDAI0GA5iMTC
74	Gambia	QDA00GM5P	QDA00GM5oP	QDAI0GM5iMTC
75	Georgia	QDA00GE5P	QDA00GE5oP	QDAI0GE5iMTC
76	Ghana	QDA00GH5P	QDA00GH5oP	QDAI0GH5iMTC
77	Gibraltar	QDA00GI5P	QDA00GI5oP	QDAI0GI5iMTC
78	Greece	QDA00GR5P	QDA00GR5oP	QDAI0GR5iMTC
79	Greenland	QDA00GL5P	QDA00GL5oP	QDAI0GL5iMTC
80	Grenada	QDA00GD5P	QDA00GD5oP	QDAI0GD5iMTC
81	Guadeloupe	QDA00GP5P	QDA00GP5oP	QDAI0GP5iMTC
82	Guantanamo	QDA00GX5P	QDA00GX5oP	N/A
83	Guatemala	QDA00GT5P	QDA00GT5oP	QDAI0GT5iMTC
84	Guinea-Bissau	QDA00GW5P	QDA00GW5oP	QDAI0GW5iMTC
85	Guinea, People's Revolutionary Republic	QDA00GN5P	QDA00GN5oP	N/A
86	Guyana	QDA00GY5P	QDA00GY5oP	QDAI0GY5iMTC
87	Haiti	QDA00HT5P	QDA00HT5oP	QDAI0HT5iMTC
88	Hong Kong	QDA00HK5P	QDA00HK5oP	QDAI0HK5iMTC
89	Honduras	QDA00HN5P	QDA00HN5oP	QDAI0HN5iMTC
90	Hungary	QDA00HU5P	QDA00HU5oP	QDAI0HU5iMTC
91	Iceland	QDA00IS5P	QDA00IS5oP	QDAI0IS5iMTC

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
92	India	QDA00IN5P	QDA00IN5oP	QDAI0IN5iMTC
93	Indonesia	QDA00ID5P	QDA00ID5oP	QDAI0ID5iMTC
94	Iran	QDA00IR5P	QDA00IR5oP	QDAI0IR5iMTC
95	Iraq	QDA00IQ5P	QDA00IQ5oP	QDAI0IQ5iMTC
96	Ireland	QDA00IE5P	QDA00IE5oP	QDAI0IE5iMTC
97	Ivory Coast	QDA00CI5P	QDA00CI5oP	QDAI0CI5iMTC
98	Jamaica	QDA00JM5P	QDA00JM5oP	QDAI0JM5iMTC
99	Jordan	QDA00JO5P	QDA00JO5oP	QDAI0JO5iMTC
100	Kazakhstan	QDA00KZ5P	QDA00KZ5oP	QDAI0KZ5iMTC
101	Kenya	QDA00KE5P	QDA00KE5oP	QDAI0KE5iMTC
102	Kiribati	QDA00KI5P	QDA00KI5oP	N/A
103	Korea, North	QDA00KP5P	QDA00KP5oP	N/A
104	Kuwait	QDA00KW5P	QDA00KW5oP	QDAI0KW5iMTC
105	Kyrgyzstan	QDA00KG5P	QDA00KG5oP	QDAI0KG5iMTC
106	Laos	QDA00LA5P	QDA00LA5oP	QDAI0LA5iMTC
107	Latvia	QDA00LV5P	QDA00LV5oP	QDAI0LV5iMTC
108	Lebanon	QDA00LB5P	QDA00LB5oP	QDAI0LB5iMTC
109	Lesotho	QDA00LS5P	QDA00LS5oP	QDAI0LS5iMTC
110	Liberia	QDA00LR5P	QDA00LR5oP	QDAI0LR5iMTC
111	Libya	QDA00LY5P	QDA00LY5oP	QDAI0LY5iMTC
112	Liechtenstein	QDA00LI5P	QDA00LI5oP	QDAI0LI5iMTC
113	Lithuania	QDA00LT5P	QDA00LT5oP	QDAI0LT5iMTC
114	Luxembourg	QDA00LU5P	QDA00LU5oP	QDAI0LU5iMTC
115	Macao	QDA00MO5P	QDA00MO5oP	QDAI0MO5iMTC
116	Macedonia	QDA00MK5P	QDA00MK5oP	QDAI0MK5iMTC
117	Madagascar	QDA00MG5P	QDA00MG5oP	QDAI0MG5iMTC
118	Malawi	QDA00MW5P	QDA00MW5oP	QDAI0MW5iMTC
119	Malaysia	QDA00MY5P	QDA00MY5oP	QDAI0MY5iMTC
120	Maldives	QDA00MV5P	QDA00MV5oP	QDAI0MV5iMTC
121	Mali	QDA00ML5P	QDA00ML5oP	QDAI0ML5iMTC
122	Malta	QDA00MT5P	QDA00MT5oP	QDAI0MT5iMTC
123	Marshall Islands	QDA00MH5P	QDA00MH5oP	N/A

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
124	Mauritius	QDA00MU5P	QDA00MU5oP	QDAI0MU5iMTC
125	Mauritania	QDA00MR5P	QDA00MR5oP	N/A
126	Mayotte Island	QDA00YT5P	QDA00YT5oP	QDAI0YT5iMTC
127	Micronesia	QDA00FM5P	QDA00FM5oP	N/A
128	Moldova	QDA00MD5P	QDA00MD5oP	QDAI0MD5iMTC
129	Monaco	QDA00MC5P	QDA00MC5oP	QDAI0MC5iMTC
130	Mongolian People's Republic	QDA00MN5P	QDA00MN5oP	QDAI0MN5iMTC
131	Montserrat	QDA00MS5P	QDA00MS5oP	QDAI0MS5iMTC
132	Morocco	QDA00MA5P	QDA00MA5oP	QDAI0MA5iMTC
133	Mozambique	QDA00MZ5P	QDA00MZ5oP	QDAI0MZ5iMTC
134	Myanmar	QDA00MM5P	QDA00MM5oP	N/A
135	Namibia	QDA00NA5P	QDA00NA5oP	QDAI0NA5iMTC
136	Nauru	QDA00NR5P	QDA00NR5oP	N/A
137	New Caledonia	QDA00NC5P	QDA00NC5oP	N/A
138	Nepal	QDA00NP5P	QDA00NP5oP	QDAI0NP5iMTC
139	Netherlands	QDA00NL5P	QDA00NL5oP	QDAI0NL5iMTC
140	Nevis	QDA00NV5P	QDA00NV5oP	QDAI0NV5iMTC
141	Nigeria	QDA00NG5P	QDA00NG5oP	QDAI0NG5iMTC
142	Nicaragua	QDA00NI5P	QDA00NI5oP	QDAI0NI5iMTC
143	Niger	QDA00NE5P	QDA00NE5oP	QDAI0NE5iMTC
144	Niue	QDA00NU5P	QDA00NU5oP	N/A
145	Norfolk Island	QDA00NF5P	QDA00NF5oP	N/A
146	Norway	QDA00NO5P	QDA00NO5oP	QDAI0NO5iMTC
147	Netherlands Antilles	QDA00AN5P	QDA00AN5oP	QDAI0AN5iMTC
148	New Zealand	QDA00NZ5P	QDA00NZ5oP	QDAI0NZ5iMTC
149	Oman	QDA00OM5P	QDA00OM5oP	QDAI0OM5iMTC
150	Pakistan	QDA00PK5P	QDA00PK5oP	QDAI0PK5iMTC
151	Palau	QDA00PW5P	QDA00PW5oP	N/A
152	Panama	QDA00PA5P	QDA00PA5oP	QDAI0PA5iMTC
153	Papua New Guinea	QDA00PG5P	QDA00PG5oP	N/A
154	Paraguay	QDA00PY5P	QDA00PY5oP	QDAI0PY5iMTC
155	Peru	QDA00PE5P	QDA00PE5oP	QDAI0PE5iMTC

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
156	Philippines	QDA00PH5P	QDA00PH5oP	QDAI0PH5iMTC
157	Poland	QDA00PL5P	QDA00PL5oP	QDAI0PL5iMTC
158	Portugal	QDA00PT5P	QDA00PT5oP	QDAI0PT5iMTC
159	Qatar	QDA00QA5P	QDA00QA5oP	QDAI0QA5iMTC
160	Reunion	QDA00RE5P	QDA00RE5oP	QDAI0RE5iMTC
161	Romania	QDA00RO5P	QDA00RO5oP	N/A
162	South Africa	QDA00ZA5P	QDA00ZA5oP	QDAI0ZA5iMTC
163	Russia	QDA00RU5P	QDA00RU5oP	QDAI0RU5iMTC
164	Rwanda	QDA00RW5P	QDA00RW5oP	QDAI0RW5iMTC
165	Samoa	QDA00WS5P	QDA00WS5oP	QDAI0WS5iMTC
166	Sao Tome	QDA00ST5P	QDA00ST5oP	N/A
167	Saudi Arabia	QDA00SA5P	QDA00SA5oP	QDAI0SA5iMTC
168	Senegal Republic	QDA00SN5P	QDA00SN5oP	QDAI0SN5iMTC
169	Seychelles Islands	QDA00SC5P	QDA00SC5oP	N/A
170	Sierra Leone	QDA00SL5P	QDA00SL5oP	QDAI0SL5iMTC
171	Singapore	QDA00SG5P	QDA00SG5oP	QDAI0SG5iMTC
172	Slovakia	QDA00SK5P	QDA00SK5oP	QDAI0SK5iMTC
173	Slovenia	QDA00SI5P	QDA00SI5oP	QDAI0SI5iMTC
174	San Marino	QDA00SM5P	QDA00SM5oP	N/A
175	Solomon Islands	QDA00SB5P	QDA00SB5oP	QDAI0SB5iMTC
176	Somali Republic	QDA00SO5P	QDA00SO5oP	N/A
177	Sri Lanka	QDA00LK5P	QDA00LK5oP	QDAI0LK5iMTC
178	St. Helena	QDA00SH5P	QDA00SH5oP	N/A
179	St. Kitts	QDA00KN5P	QDA00KN5oP	QDAI0KN5iMTC
180	St. Lucia	QDA00LC5P	QDA00LC5oP	QDAI0LC5iMTC
181	St. Pierre and Miquelon	QDA00PM5P	QDA00PM5oP	N/A
182	St. Vincent and The Grenadines	QDA00VC5P	QDA00VC5oP	QDAI0VC5iMTC
183	Sudan	QDA00SD5P	QDA00SD5oP	QDAI0SD5iMTC
184	Suriname	QDA00SR5P	QDA00SR5oP	QDAI0SR5iMTC
185	Swaziland	QDA00SZ5P	QDA00SZ5oP	QDAI0SZ5iMTC
186	Sweden	QDA00SE5P	QDA00SE5oP	QDAI0SE5iMTC
187	Syrian Arab Republic	QDA00SY5P	QDA00SY5oP	QDAI0SY5iMTC

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
188	Taiwan	QDA00TW5P	QDA00TW5oP	QDAI0TW5iMTC
189	Tajikistan	QDA00TJ5P	QDA00TJ5oP	N/A
190	Tanzania	QDA00TZ5P	QDA00TZ5oP	QDAI0TZ5iMTC
191	Thailand	QDA00TH5P	QDA00TH5oP	QDAI0TH5iMTC
192	Turks and Caicos Islands	QDA00TC5P	QDA00TC5oP	QDAI0TC5iMTC
193	Togo	QDA00TG5P	QDA00TG5oP	QDAI0TG5iMTC
194	Tonga Islands	QDA00TO5P	QDA00TO5oP	QDAI0TO5iMTC
195	Trinidad and Tobago	QDA00TT5P	QDA00TT5oP	QDAI0TT5iMTC
196	Turkmenistan	QDA00TM5P	QDA00TM5oP	N/A
197	Tunisia	QDA00TN5P	QDA00TN5oP	QDAI0TN5iMTC
198	Turkey	QDA00TR5P	QDA00TR5oP	QDAI0TR5iMTC
199	Tuvalu	QDA00TV5P	QDA00TV5oP	N/A
200	United Arab Emirates	QDA00AE5P	QDA00AE5oP	QDAI0AE5iMTC
201	Uganda	QDA00UG5P	QDA00UG5oP	QDAI0UG5iMTC
202	Ukraine	QDA00UA5P	QDA00UA5oP	QDAI0UA5iMTC
203	Uruguay	QDA00UY5P	QDA00UY5oP	QDAI0UY5iMTC
204	Uzbekistan	QDA00UZ5P	QDA00UZ5oP	QDAI0UZ5iMTC
205	Vanuatu	QDA00VU5P	QDA00VU5oP	N/A
206	Vatican City	QDA00VA5P	QDA00VA5oP	QDAI0VA5iMTC
207	Venezuela	QDA00VE5P	QDA00VE5oP	QDAI0VE5iMTC
208	Vietnam	QDA00VN5P	QDA00VN5oP	QDAI0VN5iMTC
209	Wallis and Fortuna Islands	QDA00WF5P	QDA00WF5oP	N/A
210	Yemen	QDA00YE5P	QDA00YE5oP	QDAI0YE5iMTC
211	Yugoslavia (Federal Republic)	QDA00YU5P	QDA00YU5oP	QDAI0YU5iMTC
212	Zaire	QDA00ZR5P	QDA00ZR5oP	QDAI0ZR5iMTC
213	Zambia	QDA00ZM5P	QDA00ZM5oP	QDAI0ZM5iMTC
214	Zimbabwe	QDA00ZW5P	QDA00ZW5oP	QDAI0ZW5iMTC

### 1.2.3.5 CONVERGED VOIP VOICE MAIL SERVICES

The Contractor shall provide Converged VoIP Voice Mail services that are interoperable and work with Converged VoIP service. The Converged Voice Mail services will include the capability for End-Users to have callers leave a message to be retrieved at a later time.

The service shall allow VoIP Voice Mail End-Users to forward messages to other End-Users in the same VoIP Voice Mail network.

The service shall offer a variety of message length capabilities, greeting and delivery options, broadcast messaging and the ability to transfer to an attendant.

**Contractors shall provide the Converged VoIP Voice Mail Services and feature requirements are listed in Table 1.2.3.5.a.**

**Table 1.2.3.5.a Converged VoIP Voice Mail Service Features**

Item #	Service Feature	Bidder Meets or Exceeds?	
		Y	N
1	Minimum message length will be at least two (2) minutes each	Y	
2	Message review, including skip back or ahead	Y	
3	Message saving and erasing	Y	
4	Erased message retrieval before call is ended	Y	
5	Messaging forwarding to another voice mailbox in the system with the ability to append additional comments	Y	
6	Message sending	Y	
7	Password protection	Y	
8	Personalized greetings (both permanent and temporary)	Y	
9	Message waiting indicator signal received at workstation within one (1) minute	Y	
10	Remote access capability from any telephone location on or off net	Y	
11	Creation of Group Distribution Lists - Allow an administrator to define voice mail distribution lists to forward and reply to an individual or to a group of predefined recipients	Y	
12	Web based End-User administration software	Y	
13	Ability to integrate with Unified Messaging applications with no hardware modification	Y	

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

**Contractor shall offer the VoIP Voice Mail services and features detailed in Table 1.2.3.5.b.**

**Table 1.2.3.5.b – VoIP Voice Mail Services and Features**

Item	Feature	Feature Description	Bidder Meets or Exceeds?		Bidder's Unique Identifier
			Y	N	
1	<b>Converged VoIP Voice Mail</b>	Minimum feature requirements as listed in Table 1.2.3.5.a	Y		NWNCA-1200R
	<b>Bidder's Product Description</b>				

The Contractor may offer additional unsolicited VoIP Voice Mail features in Table 1.2.3.5.c.

**Table 1.2.3.5.c Unsolicited VoIP Voice Mail Features**

Item	Feature Name	Feature Description	Bidder's Product Identifier
1	<b>Additional Storage-Voice Mail Service</b>	Monthly Charge for <b>Additional Storage</b> in 15 minute increments per user	NWNCA-1201VM
	<b>Bidder's Product Description:</b> Additional storage in 15 minutes increment		
2	<b>Voice Mail - Speech Connect</b>	Monthly Charge for <b>Speech Connect</b> feature	NWNCA-1201VSP
	<b>Bidder's Product Description:</b> Allows people to quickly connect with their colleagues using only their voice		
3	<b>Voice Mail - iDivert</b>	Monthly Charge for <b>Immediate Divert (iDivert)</b> feature	NWNCA-1201ViD
	<b>Bidder's Product Description:</b> Allows immediate diversion of a call to a voice-messaging system		
4	<b>Voice Mail - Messaging Assistant Web Tool</b>	Monthly Charge for <b>Messaging Assistant Web Tool</b> feature	NWNCA-1201MAWT
	<b>Bidder's Product Description:</b> Allows user to customize how callers interact with the voicemail system by phone.		
5	<b>Voice Mail – eMail Integration</b>	Monthly Charge for Voice Mail – eMail Integration to Outlook.	NWNCA-1201eML
	<b>Bidder's Product Description:</b> Allows voice mail integration into Outlook.		

### 1.2.3.6 CONVERGED VOIP AND VOICE MAIL GEOGRAPHIC REQUIREMENTS

#### 1.2.3.6.1 Converged VoIP and Voice Mail Specific Service Areas

The Contractor shall provide Converged VoIP and VoIP Voice Mail services in the cities specified below. Serving area is defined as within the city limits for each location identified.

1. Sacramento;
2. Oakland;
3. San Francisco;
4. Los Angeles;
5. San Diego; and,
6. San Jose.

*Bidder understands the requirement and shall meet or exceed it? Yes  No*

#### 1.2.3.6.2 Additional Commercially Available Areas

The Contractor shall provide Converged VoIP and VoIP Voice Mail services where services are currently commercially available by the Bidder.

*Bidder understands the requirement and shall meet or exceed it? Yes  No*

**Bidder shall identify the locations where their Converged VoIP and VoIP Voice Mail Services are currently commercially available in Table 1.2.3.6.2.a. Bidders shall indicate the locations where the Contractor provides Converged VoIP and VoIP Voice Mail service. By answering "Yes", the Bidder commits to provide service in that specific location. Bidders shall answer "No" for all locations where service will not be available.**

**Table 1.2.3.6.2.a Bidder's Converged VoIP and VoIP Voice Mail Services in Commercially Available Areas**

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
1	Adelanto	Yes		Yes	
2	Agoura Hills	Yes		Yes	
3	Alameda	Yes		Yes	
4	Albany	Yes		Yes	
5	Alhambra	Yes		Yes	
6	Aliso Viejo	Yes		Yes	
7	Alturas	Yes		Yes	
8	Amador	Yes		Yes	
9	American Canyon	Yes		Yes	
10	Anaheim	Yes		Yes	
11	Anderson	Yes		Yes	
12	Angels Camp	Yes		Yes	
13	Antioch	Yes		Yes	
14	Apple Valley	Yes		Yes	
15	Arcadia	Yes		Yes	
16	Arcata	Yes		Yes	
17	Arroyo Grande	Yes		Yes	
18	Artesia	Yes		Yes	
19	Arvin	Yes		Yes	
20	Atascadero	Yes		Yes	
21	Atherton	Yes		Yes	
22	Atwater	Yes		Yes	
23	Auburn	Yes		Yes	
24	Avalon	Yes		Yes	
25	Avenal	Yes		Yes	
26	Azusa	Yes		Yes	
27	Bakersfield	Yes		Yes	
28	Baldwin Park	Yes		Yes	
29	Banning	Yes		Yes	
30	Barstow	Yes		Yes	
31	Beaumont	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
32	Bell	Yes		Yes	
33	Bell Gardens	Yes		Yes	
34	Bellflower	Yes		Yes	
35	Belmont	Yes		Yes	
36	Belvedere	Yes		Yes	
37	Benicia	Yes		Yes	
38	Berkeley	Yes		Yes	
39	Beverly Hills	Yes		Yes	
40	Big Bear Lake	Yes		Yes	
41	Biggs	Yes		Yes	
42	Bishop	Yes		Yes	
43	Blue Lake	Yes		Yes	
44	Blythe	Yes		Yes	
45	Bradbury	Yes		Yes	
46	Brawley	Yes		Yes	
47	Brea	Yes		Yes	
48	Brentwood	Yes		Yes	
49	Brisbane	Yes		Yes	
50	Buellton	Yes		Yes	
51	Buena Park	Yes		Yes	
52	Burbank	Yes		Yes	
53	Burlingame	Yes		Yes	
54	Calabasas	Yes		Yes	
55	Calexico	Yes		Yes	
56	California City	Yes		Yes	
57	Calimesa	Yes		Yes	
58	Calipatria	Yes		Yes	
59	Calistoga	Yes		Yes	
60	Camarillo	Yes		Yes	
61	Campbell	Yes		Yes	
62	Canyon Lake	Yes		Yes	
63	Capitola	Yes		Yes	
64	Carlsbad	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
65	Carmel-By-The-Sea	Yes		Yes	
66	Carpentaria	Yes		Yes	
67	Carson	Yes		Yes	
68	Cathedral City	Yes		Yes	
69	Ceres	Yes		Yes	
70	Cerritos	Yes		Yes	
71	Chico	Yes		Yes	
72	Chino	Yes		Yes	
73	Chino Hills	Yes		Yes	
74	Chowchilla	Yes		Yes	
75	Chula Vista	Yes		Yes	
76	Citrus Heights	Yes		Yes	
77	Claremont	Yes		Yes	
78	Clayton	Yes		Yes	
79	Clearlake	Yes		Yes	
80	Cloverdale	Yes		Yes	
81	Coachella	Yes		Yes	
82	Coalinga	Yes		Yes	
83	Colfax	Yes		Yes	
84	Colma	Yes		Yes	
85	Colton	Yes		Yes	
86	Colusa	Yes		Yes	
87	Commerce	Yes		Yes	
88	Compton	Yes		Yes	
89	Concord	Yes		Yes	
90	Corcoran	Yes		Yes	
91	Corning	Yes		Yes	
92	Corona	Yes		Yes	
93	Coronado	Yes		Yes	
94	Corte Madera	Yes		Yes	
95	Costa Mesa	Yes		Yes	
96	Cotati	Yes		Yes	
97	Covina	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
98	Crescent City	Yes		Yes	
99	Cudahy	Yes		Yes	
100	Culver City	Yes		Yes	
101	Cupertino	Yes		Yes	
102	Cypress	Yes		Yes	
103	Daly City	Yes		Yes	
104	Dana Point	Yes		Yes	
105	Danville	Yes		Yes	
106	Davis	Yes		Yes	
107	Del Mar	Yes		Yes	
108	Del Rey Oaks	Yes		Yes	
109	Delano	Yes		Yes	
110	Desert Hot Springs	Yes		Yes	
111	Diamond Bar	Yes		Yes	
112	Dinuba	Yes		Yes	
113	Dixon	Yes		Yes	
114	Dorris	Yes		Yes	
115	Dos Palos	Yes		Yes	
116	Downey	Yes		Yes	
117	Duarte	Yes		Yes	
118	Dublin	Yes		Yes	
119	Dunsmuir	Yes		Yes	
120	East Palo Alto	Yes		Yes	
121	El Cajon	Yes		Yes	
122	El Centro	Yes		Yes	
123	El Cerrito	Yes		Yes	
124	El Monte	Yes		Yes	
125	El Paso De Robles	Yes		Yes	
126	El Segundo	Yes		Yes	
127	Elk Grove	Yes		Yes	
128	Emeryville	Yes		Yes	
129	Encinitas	Yes		Yes	
130	Escalon	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
131	Escondido	Yes		Yes	
132	Etna	Yes		Yes	
133	Eureka	Yes		Yes	
134	Exeter	Yes		Yes	
135	Fairfax	Yes		Yes	
136	Fairfield	Yes		Yes	
137	Farmersville	Yes		Yes	
138	Ferndale	Yes		Yes	
139	Fillmore	Yes		Yes	
140	Firebaugh	Yes		Yes	
141	Folsom	Yes		Yes	
142	Fontana	Yes		Yes	
143	Fort Bragg	Yes		Yes	
144	Fort Jones	Yes		Yes	
145	Fortuna	Yes		Yes	
146	Foster City	Yes		Yes	
147	Fountain Valley	Yes		Yes	
148	Fowler	Yes		Yes	
149	Fremont	Yes		Yes	
150	Fresno	Yes		Yes	
151	Fullerton	Yes		Yes	
152	Galt	Yes		Yes	
153	Garden Grove	Yes		Yes	
154	Gardena	Yes		Yes	
155	Gilroy	Yes		Yes	
156	Glendale	Yes		Yes	
157	Glendora	Yes		Yes	
158	Goleta	Yes		Yes	
159	Gonzales	Yes		Yes	
160	Grand Terrace	Yes		Yes	
161	Grass Valley	Yes		Yes	
162	Greenfield	Yes		Yes	
163	Gridley	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
164	Grover Beach	Yes		Yes	
165	Guadalupe	Yes		Yes	
166	Gustine	Yes		Yes	
167	Half Moon Bay	Yes		Yes	
168	Hanford	Yes		Yes	
169	Hawaiian Gardens	Yes		Yes	
170	Hawthorne	Yes		Yes	
171	Hayward	Yes		Yes	
172	Healdsburg	Yes		Yes	
173	Hemet	Yes		Yes	
174	Hercules	Yes		Yes	
175	Hermosa Beach	Yes		Yes	
176	Hesperia	Yes		Yes	
177	Hidden Hills	Yes		Yes	
178	Highland	Yes		Yes	
179	Hillsborough	Yes		Yes	
180	Hollister	Yes		Yes	
181	Holtville	Yes		Yes	
182	Hughson	Yes		Yes	
183	Humboldt	Yes		Yes	
184	Huntington Beach	Yes		Yes	
185	Huntington Park	Yes		Yes	
186	Huron	Yes		Yes	
187	Imperial	Yes		Yes	
188	Imperial Beach	Yes		Yes	
189	Indian Wells	Yes		Yes	
190	Indio	Yes		Yes	
191	Industry	Yes		Yes	
192	Inglewood	Yes		Yes	
193	Inyo	Yes		Yes	
194	lone	Yes		Yes	
195	Irvine	Yes		Yes	
196	Irwindale	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
197	Isleton	Yes		Yes	
198	Jackson	Yes		Yes	
199	Kerman	Yes		Yes	
200	Kern	Yes		Yes	
201	King City	Yes		Yes	
202	Kings	Yes		Yes	
203	Kingsburg	Yes		Yes	
204	La Canada Flintridge	Yes		Yes	
205	La Habra	Yes		Yes	
206	La Habra Heights	Yes		Yes	
207	La Mesa	Yes		Yes	
208	La Mirada	Yes		Yes	
209	La Palma	Yes		Yes	
210	La Puente	Yes		Yes	
211	La Quinta	Yes		Yes	
212	La Verne	Yes		Yes	
213	Lafayette	Yes		Yes	
214	Laguna Beach	Yes		Yes	
215	Laguna Hills	Yes		Yes	
216	Laguna Niguel	Yes		Yes	
217	Laguna Woods	Yes		Yes	
218	Lake	Yes		Yes	
219	Lake Elsinore	Yes		Yes	
220	Lake Forest	Yes		Yes	
221	Lakeport	Yes		Yes	
222	Lakewood	Yes		Yes	
223	Lancaster	Yes		Yes	
224	Larkspur	Yes		Yes	
225	Lassen	Yes		Yes	
226	Lathrop	Yes		Yes	
227	Lawndale	Yes		Yes	
228	Lemon Grove	Yes		Yes	
229	Lemoore	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
230	Lincoln	Yes		Yes	
231	Lindsay	Yes		Yes	
232	Live Oak	Yes		Yes	
233	Livermore	Yes		Yes	
234	Livingston	Yes		Yes	
235	Lodi	Yes		Yes	
236	Loma Linda	Yes		Yes	
237	Lomita	Yes		Yes	
238	Lompoc	Yes		Yes	
239	Long Beach	Yes		Yes	
240	Loomis	Yes		Yes	
241	Los Alamitos	Yes		Yes	
242	Los Altos	Yes		Yes	
243	Los Altos Hills	Yes		Yes	
244	Los Angeles	Yes		Yes	
245	Los Banos	Yes		Yes	
246	Los Gatos	Yes		Yes	
247	Loyalton	Yes		Yes	
248	Lynwood	Yes		Yes	
249	Madera	Yes		Yes	
250	Malibu	Yes		Yes	
251	Mammoth Lakes	Yes		Yes	
252	Manhattan Beach	Yes		Yes	
253	Manteca	Yes		Yes	
254	Maricopa	Yes		Yes	
255	Marina	Yes		Yes	
256	Martinez	Yes		Yes	
257	Marysville	Yes		Yes	
258	Maywood	Yes		Yes	
259	Mcfarland	Yes		Yes	
260	Mendota	Yes		Yes	
261	Menlo Park	Yes		Yes	
262	Merced	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
263	Mill Valley	Yes		Yes	
264	Millbrae	Yes		Yes	
265	Milpitas	Yes		Yes	
266	Mission Viejo	Yes		Yes	
267	Modesto	Yes		Yes	
268	Monrovia	Yes		Yes	
269	Montague	Yes		Yes	
270	Montclair	Yes		Yes	
271	Monte Sereno	Yes		Yes	
272	Montebello	Yes		Yes	
273	Monterey	Yes		Yes	
274	Monterey Park	Yes		Yes	
275	Moorpark	Yes		Yes	
276	Moraga	Yes		Yes	
277	Moreno Valley	Yes		Yes	
278	Morgan Hill	Yes		Yes	
279	Morro Bay	Yes		Yes	
280	Mount Shasta	Yes		Yes	
281	Mountain View	Yes		Yes	
282	Murrieta	Yes		Yes	
283	Napa	Yes		Yes	
284	National City	Yes		Yes	
285	Needles	Yes		Yes	
286	Nevada City	Yes		Yes	
287	Newark	Yes		Yes	
288	Newman	Yes		Yes	
289	Newport Beach	Yes		Yes	
290	Norco	Yes		Yes	
291	Norwalk	Yes		Yes	
292	Novato	Yes		Yes	
293	Oakdale	Yes		Yes	
294	Oakland	Yes		Yes	
295	Oakley	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
296	Oceanside	Yes		Yes	
297	Ojai	Yes		Yes	
298	Ontario	Yes		Yes	
299	Orange	Yes		Yes	
300	Orange Cove	Yes		Yes	
301	Orinda	Yes		Yes	
302	Orland	Yes		Yes	
303	Oroville	Yes		Yes	
304	Oxnard	Yes		Yes	
305	Pacific Grove	Yes		Yes	
306	Pacifica	Yes		Yes	
307	Palm Desert	Yes		Yes	
308	Palm Springs	Yes		Yes	
309	Palmdale	Yes		Yes	
310	Palo Alto	Yes		Yes	
311	Palos Verdes Estates	Yes		Yes	
312	Paradise	Yes		Yes	
313	Paramount	Yes		Yes	
314	Parlier	Yes		Yes	
315	Pasadena	Yes		Yes	
316	Patterson	Yes		Yes	
317	Perris	Yes		Yes	
318	Petaluma	Yes		Yes	
319	Pico Rivera	Yes		Yes	
320	Piedmont	Yes		Yes	
321	Pinole	Yes		Yes	
322	Pismo Beach	Yes		Yes	
323	Pittsburg	Yes		Yes	
324	Placentia	Yes		Yes	
325	Placerville	Yes		Yes	
326	Pleasant Hill	Yes		Yes	
327	Pleasanton	Yes		Yes	
328	Plymouth	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
329	Point Arena	Yes		Yes	
330	Pomona	Yes		Yes	
331	Port Hueneme	Yes		Yes	
332	Porterville	Yes		Yes	
333	Portola	Yes		Yes	
334	Portola Valley	Yes		Yes	
335	Poway	Yes		Yes	
336	Rancho Cordova	Yes		Yes	
337	Rancho Cucamonga	Yes		Yes	
338	Rancho Mirage	Yes		Yes	
339	Rancho Palos Verdes	Yes		Yes	
340	Rancho Santa Margarita	Yes		Yes	
341	Red Bluff	Yes		Yes	
342	Redding	Yes		Yes	
343	Redlands	Yes		Yes	
344	Redondo Beach	Yes		Yes	
345	Redwood City	Yes		Yes	
346	Reedley	Yes		Yes	
347	Rialto	Yes		Yes	
348	Richmond	Yes		Yes	
349	Ridgecrest	Yes		Yes	
350	Rio Dell	Yes		Yes	
351	Rio Vista	Yes		Yes	
352	Ripon	Yes		Yes	
353	Riverbank	Yes		Yes	
354	Riverside	Yes		Yes	
355	Rocklin	Yes		Yes	
356	Rohnert Park	Yes		Yes	
357	Rolling Hills	Yes		Yes	
358	Rolling Hills Estates	Yes		Yes	
359	Rosemead	Yes		Yes	
360	Roseville	Yes		Yes	
361	Ross	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
362	Sacramento	Yes		Yes	
363	Salinas	Yes		Yes	
364	San Anselmo	Yes		Yes	
365	San Bernardino	Yes		Yes	
366	San Bruno	Yes		Yes	
367	San Buenaventura	Yes		Yes	
368	San Carlos	Yes		Yes	
369	San Clemente	Yes		Yes	
370	San Diego	Yes		Yes	
371	San Dimas	Yes		Yes	
372	San Fernando	Yes		Yes	
373	San Francisco	Yes		Yes	
374	San Gabriel	Yes		Yes	
375	San Jacinto	Yes		Yes	
376	San Joaquin	Yes		Yes	
377	San Jose	Yes		Yes	
378	San Juan Bautista	Yes		Yes	
379	San Juan Capistrano	Yes		Yes	
380	San Leandro	Yes		Yes	
381	San Luis Obispo	Yes		Yes	
382	San Marcos	Yes		Yes	
383	San Marino	Yes		Yes	
384	San Mateo	Yes		Yes	
385	San Pablo	Yes		Yes	
386	San Rafael	Yes		Yes	
387	San Ramon	Yes		Yes	
388	Sand City	Yes		Yes	
389	Sanger	Yes		Yes	
390	Santa Ana	Yes		Yes	
391	Santa Barbara	Yes		Yes	
392	Santa Clara	Yes		Yes	
393	Santa Clarita	Yes		Yes	
394	Santa Cruz	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
395	Santa Fe Springs	Yes		Yes	
396	Santa Maria	Yes		Yes	
397	Santa Monica	Yes		Yes	
398	Santa Paula	Yes		Yes	
399	Santa Rosa	Yes		Yes	
400	Santee	Yes		Yes	
401	Saratoga	Yes		Yes	
402	Sausalito	Yes		Yes	
403	Scotts Valley	Yes		Yes	
404	Seal Beach	Yes		Yes	
405	Seaside	Yes		Yes	
406	Sebastopol	Yes		Yes	
407	Selma	Yes		Yes	
408	Shafter	Yes		Yes	
409	Shasta Lake	Yes		Yes	
410	Sierra Madre	Yes		Yes	
411	Signal Hill	Yes		Yes	
412	Simi Valley	Yes		Yes	
413	Solana Beach	Yes		Yes	
414	Soledad	Yes		Yes	
415	Solvang	Yes		Yes	
416	Sonoma	Yes		Yes	
417	Sonora	Yes		Yes	
418	South El Monte	Yes		Yes	
419	South Gate	Yes		Yes	
420	South Lake Tahoe	Yes		Yes	
421	South Pasadena	Yes		Yes	
422	South San Francisco	Yes		Yes	
423	St Helena	Yes		Yes	
424	Stanton	Yes		Yes	
425	Stockton	Yes		Yes	
426	Suisun City	Yes		Yes	
427	Sunnyvale	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
428	Susanville	Yes		Yes	
429	Sutter Creek	Yes		Yes	
430	Taft	Yes		Yes	
431	Tehachapi	Yes		Yes	
432	Tehama	Yes		Yes	
433	Temecula	Yes		Yes	
434	Temple City	Yes		Yes	
435	Thousand Oaks	Yes		Yes	
436	Tiburon	Yes		Yes	
437	Torrance	Yes		Yes	
438	Tracy	Yes		Yes	
439	Trinidad	Yes		Yes	
440	Truckee	Yes		Yes	
441	Tulare	Yes		Yes	
442	Tulelake	Yes		Yes	
443	Turlock	Yes		Yes	
444	Tustin	Yes		Yes	
445	Twentynine Palms	Yes		Yes	
446	Ukiah	Yes		Yes	
447	Union City	Yes		Yes	
448	Upland	Yes		Yes	
449	Vacaville	Yes		Yes	
450	Vallejo	Yes		Yes	
451	Vernon	Yes		Yes	
452	Victorville	Yes		Yes	
453	Villa Park	Yes		Yes	
454	Visalia	Yes		Yes	
455	Vista	Yes		Yes	
456	Walnut	Yes		Yes	
457	Walnut Creek	Yes		Yes	
458	Wasco	Yes		Yes	
459	Waterford	Yes		Yes	
460	Watsonville	Yes		Yes	

Item	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
461	Weed	Yes		Yes	
462	West Covina	Yes		Yes	
463	West Hollywood	Yes		Yes	
464	West Los Angeles	Yes		Yes	
465	West Sacramento	Yes		Yes	
466	Westlake Village	Yes		Yes	
467	Westminster	Yes		Yes	
468	Westmorland	Yes		Yes	
469	Wheatland	Yes		Yes	
470	Whittier	Yes		Yes	
471	Williams	Yes		Yes	
472	Willits	Yes		Yes	
473	Willows	Yes		Yes	
474	Windsor	Yes		Yes	
475	Winters	Yes		Yes	
476	Woodlake	Yes		Yes	
477	Woodland	Yes		Yes	
478	Woodside	Yes		Yes	
479	Yorba Linda	Yes		Yes	
480	Yountville	Yes		Yes	
481	Yreka	Yes		Yes	
482	Yuba City	Yes		Yes	
483	Yucaipa	Yes		Yes	
484	Yucca Valley	Yes		Yes	

**Bidder may identify additional locations where their Converged VoIP and VoIP Voice Mail Services are currently commercially available in Table 1.2.3.6.2.b.**

**If Bidder is unable to identify all service areas within Table 1.2.3.6.2.a, Bidder shall provide additional information in the form of a coverage map that includes unincorporated areas.**

**Table 1.2.3.6.2.b Additional Bidder’s Converged VoIP and VoIP Voice Mail Services in Commercially Available Areas**

Item	Service Location	Standalone IP		VoIP Voice Mail	
		Yes	No	Yes	No

**1.2.4 AUDIO CONFERENCING**

The Contractor shall provide Audio Conferencing which shall consist of a multiple port, reserved and reservationless, conferencing bridge.

Basic Audio Conferencing shall include the following:

1. International Access - Callers have the ability to participate in a conference from an international location;
2. Host Controlled Question and Answer Service - The host of a conference can control a question and answer session on a conference call; and,
3. Voting and Polling Service - The capability for participants to vote via touchtone keys and for the host to poll votes.

All Audio Conferencing services shall be available and functional to all subscribers.

Contractor shall support Toll-Free Dial-in and Caller Paid Dial-in conferencing services.

Audio Conferencing services shall support users who are connected via IP and the Public Switched Telephone Network (PSTN).

Contractor shall provide gateway services to support calls through the PSTN.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

1.2.4.1 AUDIO CONFERENCING FEATURES

Contractor shall offer the Audio Conferencing features detailed in Table 1.2.4.1.a.

**Table 1.2.4.1.a Audio Conferencing Service and Features**

Item	Feature Name	Feature Description	Bidder Meets or Exceeds?		Bidder's Product Identifier
			Y	N	
1	<b>Caller Paid Dial-in Reservation-less Service</b>	Also known as "Meet-Me" service, participants dial a pre-established number and access code to join the conference call.	Y		NWNCA-1301R
	<b>Bidder's Product Description:</b>				
2	<b>Toll-Free Dial-in Reservation-less Service</b>	Also known as "Meet-Me" service, participants dial a pre-established toll-free number and access code to join the conference call.	Y		NWNCA-1302R
	<b>Bidder's Product Description:</b>				
3	<b>Caller Paid Dial-in Reserved Service</b>	Host reserves a conference session in advance and receives a temporary dial-in number and access code. Participants dial the number and enter the access code to join the call.	Y		NWNCA-1303R
	<b>Bidder's Product Description:</b>				
4	<b>Toll-Free Dial-in Reserved Service</b>	Host reserves a conference session in advance and receives a temporary toll-free dial-in number and access code. Participants dial the toll-free number and enter the access code to join the call.	Y		NWNCA-1304R
	<b>Bidder's Product Description:</b>				
5	<b>Operator-Dialed Service</b>	An operator sets up the conference call by placing calls to each of the participants.	Y		NWNCA-1305R
	<b>Bidder's Product Description:</b>				

Item	Feature Name	Feature Description	Bidder Meets or Exceeds?		Bidder's Product Identifier
			Y	N	
6	<b>Operator-Assisted Dial-in Service</b>	Participants dial in to the conference number and the operator screens the callers for information such as password, name or location.	Y		NWNCA-1306R
	<b>Bidder's Product Description:</b>				
7	<b>Recording Service</b>	The capability to record to various media including CD, audiocassette or the Digitized Replay option below.	Y		NWNCA-1307R
	<b>Bidder's Product Description:</b>				
8	<b>Digitized Replay</b>	A user can listen to a conference call at their convenience by dialing an access number/code. During replay the caller can control the session utilizing telephone keypad entries.	Y		NWNCA-1308R
	<b>Bidder's Product Description:</b>				
9	<b>Transcription</b>	Contractor provided transcribing a conference call	Y		NWNCA-1309R
	<b>Bidder's Product Description:</b>				
10	<b>Language Interpretation/ Translation</b>	Real-time interpretation and translation services	Y		NWNCA-1310R
	<b>Bidder's Product Description:</b>				
11	<b>Security List Screening</b>	Host specifies a list of participants who dial into the conference call. Conference Attendant screens callers against the list.	Y		NWNCA-1311R
	<b>Bidder's Product Description:</b>				

Item	Feature Name	Feature Description	Bidder Meets or Exceeds?		Bidder's Product Identifier
			Y	N	
12	Participant List	Conference Attendant captures up to three (3) caller attributes and distributes a list of conference participants to the host immediately following the call.	Y		NWNCA-1312R
	Bidder's Product Description:				

The Contractor may offer additional unsolicited Audio Conferencing features in Table 1.2.4.1.b.

Table 1.2.4.1.b Unsolicited Audio Conferencing Features

Item	Feature Name	Feature Description	Bidder's Product Identifier

### 1.2.5 SESSION INITIATED PROTOCOL (SIP) TRUNKING

The Contractor shall provide a network based trunk service using Session Initiated Protocol (SIP) that includes the functionality described below. The SIP trunk service shall allow a Customer to utilize a connection to the Contractors MPLS network provided under this section to access the Public Switched Telephone Network from an end-user device such as an IP PBX, Call Manager or Unified Communications and Collaboration device.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

#### 1.2.5.1 SIP SUPPORTED CALLING

Contractor shall provide access to the PSTN via SIP trunking that supports local, long distance and inbound toll-free calling.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

#### 1.2.5.2 CONCURRENT SIP CALLS

The Contractor shall engineer the SIP trunk service to support the number of concurrent calls requested by the End-User. The SIP trunk service shall support G.711 and G.729a voice compression.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

#### 1.2.5.3 ON-NET SIP CALLING

The Contractor shall provide SIP Trunk service that provides unlimited on-net calling. On-net calling is defined as calling from a SIP Trunk site that uses the Contractor's MPLS network and terminates at a SIP Trunk site or a Converged VoIP site. The Converged VoIP service is that offered by the Contractor under this section. If the Contractor offers Standalone VoIP under another CALNET contract, a SIP Trunk call terminating at such a site shall be considered on-net. Off-net calling is any call that is not on-net. Off-net calling consists of local, long distance (United States) and international.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

#### 1.2.5.4 ON-NET ENTERPRISE CALLING

The Contractor shall treat the State of California as a single enterprise for the purpose of on-net calling. On-net calling from one (1) State of California Agency/Department to another shall be treated the same as on-net calling within a State of California Agency or Department.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

#### 1.2.5.5 INTEROPERABILITY OF SIP TRUNK WITH OTHER CALNET 3 TECHNOLOGIES

The Contractor's SIP Trunk services shall be interoperable with the Contractor's Converged VoIP services (Section 1.2.3.2) and the State shall not incur any charges to call between these two (2) services.

In the event at Contractor is awarded a CALNET 3 Contract for Standalone VoIP services (Subcategory 1.3), this IP Trunking service shall be interoperable with the Contractor's Standalone VoIP services and the State shall not incur any charges to call between these two (2) services.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

#### 1.2.5.6 SIP CALLING FEATURES

The SIP trunk service shall support the following calling features:

1. Direct Inward Dialing (DID);
2. Direct Outward Dialing (DOD);
3. Local Number Portability;
4. 4-1-1 Directory Assistance;
5. 7-1-1 Telecommunications Relay Service;
6. 9-1-1 and E9-1-1 Emergency Calling;
7. Operator Services; and,
8. ITU T.38 Standard for transmission over IP networks between Group 3 fax terminals.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

#### 1.2.5.7 SIP TRUNKING GEOGRAPHIC AVAILABILITY

The Contractor shall provide SIP Trunking at all locations where Contractor is required to provide MPLS service.

*Bidder understands the requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

1.2.5.8 SIP CALLING PLANS

The Contractor shall provide the SIP calling plans identified in Table 1.2.5.8.a

Table 1.2.5.8.a SIP Calling Plans

Item	Feature Name	Feature Description	Bidder Meets or Exceeds?		Bidder's Product Identifier
			Y	N	
1	<b>SIP Calling Plan A</b>	Unlimited Local Calling (inbound/outbound) with unlimited off-net long distance calling (United States). The plan shall include a rate for off-net international and shall not include any other rates. There shall be no charges for on-net calling.	Y		NWNCA-50215
	<b>Bidder's Product Description:</b> NWN's SIP Calling Plan A includes Unlimited Local Calling (inbound/outbound) and Unlimited Off-net long distance calling (United States). Calls between NWN SIP Trunk locations are considered on-net and are free of charges. The SIP Trunk calling plan includes a rate for off-net international and does not include any other rates. There are no charges for on-net calling.				
2	<b>SIP Calling Plan B</b>	Unlimited local calling with off-net long distance (United State) usage. The plan shall include a rate for off-net long distance (United State) and a rate for off-net international and shall not include any other rates. There shall be no charges for on-net calling.	Y		NWNCA-50216
	<b>Bidder's Product Description:</b> NWN's SIP Calling Plan B includes Unlimited Local Calling with off-net long distance (United States). The SIP Trunk calling plan includes a rate for off-net long distance (United States) and a rate for off-net international. It does not include any other rates. There are no charges for on-net calling.				
3	<b>U.S. Off-Net Calling for Calling Plan B</b>	Domestic Off-Net calling for Calling Plan B Customers	Y		NWNCA-50217
	<b>Bidder's Product Description:</b> The NWN SIP Trunk service calling plan includes a rate for Domestic off-net long distance (United States) for Calling Plan B customers.				

Item	Feature Name	Feature Description	Bidder Meets or Exceeds?		Bidder's Product Identifier
			Y	N	
4	<b>SIP Calling Plan C</b>	Unlimited off-net long distance calling (United States) with no local calling. There shall be no rates associated with this plan. There shall be no charges for on-net calling.	Y		NWNCA-50218
	<b>Bidder's Product Description:</b> NWN's solution includes off-net long distance calling (United States) with no local calling. There are no rates associated with this plan. There are no charges for on-net calling.				
5	<b>SIP Calling Plan D</b>	United States Inbound toll-free calling. The plan shall contain a rate for United States inbound toll-free calling and shall not include any other rates.	Y		NWNCA-50219
	<b>Bidder's Product Description</b> NWN's solution includes United States Inbound Toll Free calling. The plan does not include any other rates.				
6	<b>Inbound Toll-Free Calling for Calling Plan D</b>	Inbound Toll-Free calling for SIP Calling Plan D Customers.	Y		NWNCA-50220
	<b>Bidder's Product Description:</b> The NWN SIP Trunk service calling plan contains a rate for United States inbound toll-free calling for Plan D Customers				

**The Contractor may offer additional unsolicited SIP Calling Plans in Table 1.2.5.8.b**

**Table 1.2.5.8.b Unsolicited SIP Trunking Features**

Item	Feature Name	Feature Description	Bidder's Product Identifier

**1.2.5.9 SIP TRUNK INTERNATIONAL OFF-NET CALLING**

The Contractor shall provide SIP Trunk international off-net calling to the countries listed in Table 1.2.5.9. Bidder's rates as provided in the Subcategory Cost Worksheets shall be based on time of day ("Peak Time" or "Off-Peak Time"). Peak Time is

between 8:00 a.m. and 4:59 p.m., Monday through Friday based on the time at the CALNET caller's location. Off-Peak time is for all calls where Peak Time rates do not apply.

Note: If the Bidder charges the same rate for both Peak Time and Off-Peak time, Bidder may use the same Product Identifier for both products.

*Bidder understands the requirement and shall meet or exceed it? Yes  No*

#### 1.2.5.9.1 International Mobile Termination Charges (IMTC)

Contractor shall provide the ability to terminate international calls on wireless devices. Contractor shall charge International Mobile Termination Charge (IMTC) as an additional per minute rate that is applied to international calls (direct dial business or credit card calls) originating in the U.S. and terminating in certain countries to either wireless communications devices including mobile telephones, pagers, personal computers, and personal digital assistants, or to a portable telephone number where a forwarding, tracking or other type of location service is used.

*Bidder understands the requirement and shall meet or exceed it? Yes  No*

#### 1.2.5.9.2 U.S. Based Services Waiver

The provisions detailed in IFB Business Requirements Section A.2.4.4 (U.S. Based Services) will not apply to Contractor's International Long Distance Calling services.

*Bidder understands the requirement and shall meet or exceed it? Yes  No*

The Contractor shall offer the SIP Trunk International Off-Net Calling configurations detailed in Table 1.2.5.9.a.

**Table 1.2.5.9.a SIP Trunk International Off-Net Calling**

Item	Country	Bidders Meets or Exceeds?		Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
		Y	N			
1	Brazil:	Y		NWNCA-S0BZ5STP	NWNCA-S0BZ5SToP	NWNCA-SIBZ5STiMTC
2	Canada:	Y		NWNCA-S0CA1STP	NWNCA-SOCA1SToP	NWNCA-SICA1STiMTC
3	China:	Y		NWNCA-S0CN5STP	NWNCA-SOCN5SToP	NWNCA-SICN5STiMTC
4	France:	Y		NWNCA-S0FR5STP	NWNCA-SOFR5SToP	NWNCA-SIFR5STiMTC
5	Germany:	Y		NWNCA-S0DE5STP	NWNCA-SODE5SToP	NWNCA-SIDE5STiMTC
6	Israel:	Y		NWNCA-S0IL5STP	NWNCA-SOIL5SToP	NWNCA-SIIL5STiMTC
7	Italy:	Y		NWNCA-S0IT5STP	NWNCA-SOIT5SToP	NWNCA-SIIT5STiMTC
8	Japan:	Y		NWNCA-S0JP5STP	NWNCA-SOJP5SToP	NWNCA-SIJP5STiMTC
9	Korea:	Y		NWNCA-S0KR5STP	NWNCA-SOKR5SToP	NWNCA-SIKR5STiMTC
10	Mexico:	Y		NWNCA-S0MX7STP	NWNCA-SOMX7SToP	NWNCA-SIMX7STiMTC
11	Spain:	Y		NWNCA-S0SP5STP	NWNCA-SOSP5SToP	NWNCA-SISP5STiMTC
12	Switzerland:	Y		NWNCA-S0CH5STP	NWNCA-SOCH5SToP	NWNCA-SICH5STiMTC
13	United Kingdom	Y		NWNCA-S0GB5STP	NWNCA-SOGB5SToP	NWNCA-SIGB5STiMTC

**Bidders may offer the SIP Trunk International Off-Net Calling to unsolicited countries listed in Table 1.2.5.9.b.**

**Table 1.2.5.9.b Unsolicited SIP Trunk International Off-Net Calling**

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
1	Afghanistan	QDA00AF5STP	QDA00AF5SToP	QDAI0AF5STiMTC
2	Albania	QDA00AL5STP	QDA00AL5SToP	QDAI0AL5STiMTC
3	Algeria	QDA00DZ5STP	QDA00DZ5SToP	QDAI0DZ5STiMTC
4	Andorra	QDA00AD5STP	QDA00AD5SToP	QDAI0AD5STiMTC
5	Angola	QDA00AO5STP	QDA00AO5SToP	QDAI0AO5STiMTC
6	Anguilla	QDA00AI5STP	QDA00AI5SToP	QDAI0AI5STiMTC
7	Antarctica (Casey)	QDA00AC5STP	QDA00AC5SToP	QDAI0AC5STiMTC
8	Antarctica (Scott)	QDA00AQ5STP	QDA00AQ5SToP	QDAI0AQ5STiMTC
9	Antigua and Barbuda	QDA00AG5STP	QDA00AG5SToP	QDAI0AG5STiMTC
10	Argentina	QDA00AR5STP	QDA00AR5SToP	QDAI0AR5STiMTC
11	Armenia	QDA00AM5STP	QDA00AM5SToP	QDAI0AM5STiMTC
12	Aruba	QDA00AW5STP	QDA00AW5SToP	QDAI0AW5STiMTC
13	American Samoa	QDA00AS5STP	QDA00AS5SToP	QDAI0AS5STiMTC
14	Ascension Island	QDA00AX5STP	QDA00AX5SToP	QDAI0AX5STiMTC
15	Australia	QDA00AU5STP	QDA00AU5SToP	QDAI0AU5STiMTC
16	Austria	QDA00AT5STP	QDA00AT5SToP	QDAI0AT5STiMTC
17	Azerbaijan	QDA00AZ5STP	QDA00AZ5SToP	QDAI0AZ5STiMTC
18	Bahamas	QDA00BS5STP	QDA00BS5SToP	QDAI0BS5STiMTC
19	Bahrain	QDA00BH5STP	QDA00BH5SToP	QDAI0BH5STiMTC
20	Bangladesh	QDA00BD5STP	QDA00BD5SToP	QDAI0BD5STiMTC
21	Barbados	QDA00BB5STP	QDA00BB5SToP	QDAI0BB5STiMTC
22	Belarus	QDA00BY5STP	QDA00BY5SToP	QDAI0BY5STiMTC
23	Belgium	QDA00BE5STP	QDA00BE5SToP	QDAI0BE5STiMTC
24	Belize	QDA00BZ5STP	QDA00BZ5SToP	QDAI0BZ5STiMTC
25	Benin	QDA00BJ5STP	QDA00BJ5SToP	QDAI0BJ5STiMTC
26	Bermuda	QDA00BM5STP	QDA00BM5SToP	QDAI0BM5STiMTC
27	Bhutan	QDA00BT5STP	QDA00BT5SToP	QDAI0BT5STiMTC
28	Bolivia	QDA00BO5STP	QDA00BO5SToP	QDAI0BO5STiMTC

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
29	Bosnia and Herzegovina	QDA00BA5STP	QDA00BA5SToP	QDAI0BA5STiMTC
30	Botswana	QDA00BW5STP	QDA00BW5SToP	QDAI0BW5STiMTC
31	Brunei	QDA00BN5STP	QDA00BN5SToP	QDAI0BN5STiMTC
32	Bulgaria	QDA00BG5STP	QDA00BG5SToP	QDAI0BG5STiMTC
33	Burkina Faso	QDA00BF5STP	QDA00BF5SToP	QDAI0BF5STiMTC
34	Burundi	QDA00BI5STP	QDA00BI5SToP	QDAI0BI5STiMTC
35	British Virgin Islands	QDA00VG5STP	QDA00VG5SToP	QDAI0VG5STiMTC
36	Central African Republic	QDA00CF5STP	QDA00CF5SToP	QDAI0CF5STiMTC
37	Cambodia	QDA00KH5STP	QDA00KH5SToP	QDAI0KH5STiMTC
38	Cameroon	QDA00CM5STP	QDA00CM5SToP	QDAI0CM5STiMTC
39	Cape Verde	QDA00CV5STP	QDA00CV5SToP	QDAI0CV5STiMTC
40	Cayman Islands	QDA00KY5STP	QDA00KY5SToP	QDAI0KY5STiMTC
41	Chad	QDA00TD5STP	QDA00TD5SToP	QDAI0TD5STiMTC
42	Chile	QDA00CL5STP	QDA00CL5SToP	QDAI0CL5STiMTC
43	Christmas and Cocos Islands	QDA00CX5STP	QDA00CX5SToP	QDAI0CX5STiMTC
44	Colombia	QDA00CO5STP	QDA00CO5SToP	QDAI0CO5STiMTC
45	Comoros	QDA00KM5STP	QDA00KM5SToP	QDAI0KM5STiMTC
46	Congo	QDA00CG5STP	QDA00CG5SToP	QDAI0CG5STiMTC
47	Cook Islands	QDA00CK5STP	QDA00CK5SToP	QDAI0CK5STiMTC
48	Costa Rica	QDA00CR5STP	QDA00CR5SToP	QDAI0CR5STiMTC
49	Croatia	QDA00HR5STP	QDA00HR5SToP	QDAI0HR5STiMTC
50	Cuba	QDA00CU5STP	QDA00CU5SToP	QDAI0CU5STiMTC
51	Cyprus	QDA00CY5STP	QDA00CY5SToP	QDAI0CY5STiMTC
52	Czech Republic	QDA00CZ5STP	QDA00CZ5SToP	QDAI0CZ5STiMTC
53	Diego Garcia	QDA00DG5STP	QDA00DG5SToP	QDAI0DG5STiMTC
54	Djibouti	QDA00DJ5STP	QDA00DJ5SToP	QDAI0DJ5STiMTC
55	Denmark	QDA00DK5STP	QDA00DK5SToP	QDAI0DK5STiMTC
56	Dominica	QDA00DM5STP	QDA00DM5SToP	QDAI0DM5STiMTC
57	Dominican Republic	QDA00DO5STP	QDA00DO5SToP	QDAI0DO5STiMTC
58	Ecuador	QDA00EC5STP	QDA00EC5SToP	QDAI0EC5STiMTC
59	Egypt	QDA00EG5STP	QDA00EG5SToP	QDAI0EG5STiMTC
60	El Salvador	QDA00SV5STP	QDA00SV5SToP	QDAI0SV5STiMTC

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
61	Equatorial Guinea	QDA00GQ5STP	QDA00GQ5SToP	QDAI0GQ5STiMTC
62	Eritrea	QDA00ER5STP	QDA00ER5SToP	QDAI0ER5STiMTC
63	Estonia	QDA00EE5STP	QDA00EE5SToP	QDAI0EE5STiMTC
64	Ethiopia	QDA00ET5STP	QDA00ET5SToP	QDAI0ET5STiMTC
65	East Timor	QDA00TP5STP	QDA00TP5SToP	QDAI0TP5STiMTC
66	Faeroe Islands	QDA00FO5STP	QDA00FO5SToP	QDAI0FO5STiMTC
67	Falkland Islands	QDA00FK5STP	QDA00FK5SToP	QDAI0FK5STiMTC
68	Fiji Islands	QDA00FJ5STP	QDA00FJ5SToP	QDAI0FJ5STiMTC
69	Finland	QDA00FI5STP	QDA00FI5SToP	QDAI0FI5STiMTC
70	French Antilles	QDA00XA5STP	QDA00XA5SToP	QDAI0XA5STiMTC
71	French Guiana	QDA00GF5STP	QDA00GF5SToP	QDAI0GF5STiMTC
72	French Polynesia	QDA00PF5STP	QDA00PF5SToP	QDAI0PF5STiMTC
73	Gabon Republic	QDA00GA5STP	QDA00GA5SToP	QDAI0GA5STiMTC
74	Gambia	QDA00GM5STP	QDA00GM5SToP	QDAI0GM5STiMTC
75	Georgia	QDA00GE5STP	QDA00GE5SToP	QDAI0GE5STiMTC
76	Ghana	QDA00GH5STP	QDA00GH5SToP	QDAI0GH5STiMTC
77	Gibraltar	QDA00GI5STP	QDA00GI5SToP	QDAI0GI5STiMTC
78	Greece	QDA00GR5STP	QDA00GR5SToP	QDAI0GR5STiMTC
79	Greenland	QDA00GL5STP	QDA00GL5SToP	QDAI0GL5STiMTC
80	Grenada	QDA00GD5STP	QDA00GD5SToP	QDAI0GD5STiMTC
81	Guadeloupe	QDA00GP5STP	QDA00GP5SToP	QDAI0GP5STiMTC
82	Guantanamo	QDA00GX5STP	QDA00GX5SToP	QDAI0GX5STiMTC
83	Guatemala	QDA00GT5STP	QDA00GT5SToP	QDAI0GT5STiMTC
84	Guinea-Bissau	QDA00GW5STP	QDA00GW5SToP	QDAI0GW5STiMTC
85	Guinea, People's Revolutionary Republic	QDA00GN5STP	QDA00GN5SToP	QDAI0GN5STiMTC
86	Guyana	QDA00GY5STP	QDA00GY5SToP	QDAI0GY5STiMTC
87	Haiti	QDA00HT5STP	QDA00HT5SToP	QDAI0HT5STiMTC
88	Hong Kong	QDA00HK5STP	QDA00HK5SToP	QDAI0HK5STiMTC
89	Honduras	QDA00HN5STP	QDA00HN5SToP	QDAI0HN5STiMTC
90	Hungary	QDA00HU5STP	QDA00HU5SToP	QDAI0HU5STiMTC
91	Iceland	QDA00IS5STP	QDA00IS5SToP	QDAI0IS5STiMTC
92	India	QDA00IN5STP	QDA00IN5SToP	QDAI0IN5STiMTC

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
93	Indonesia	QDA00ID5STP	QDA00ID5SToP	QDAI0ID5STiMTC
94	Iran	QDA00IR5STP	QDA00IR5SToP	QDAI0IR5STiMTC
95	Iraq	QDA00IQ5STP	QDA00IQ5SToP	QDAI0IQ5STiMTC
96	Ireland	QDA00IE5STP	QDA00IE5SToP	QDAI0IE5STiMTC
97	Ivory Coast	QDA00CI5STP	QDA00CI5SToP	QDAI0CI5STiMTC
98	Jamaica	QDA00JM5STP	QDA00JM5SToP	QDAI0JM5STiMTC
99	Jordan	QDA00JO5STP	QDA00JO5SToP	QDAI0JO5STiMTC
100	Kazakhstan	QDA00KZ5STP	QDA00KZ5SToP	QDAI0KZ5STiMTC
101	Kenya	QDA00KE5STP	QDA00KE5SToP	QDAI0KE5STiMTC
102	Kiribati	QDA00KI5STP	QDA00KI5SToP	QDAI0KI5STiMTC
103	Korea, North	QDA00KP5STP	QDA00KP5SToP	QDAI0KP5STiMTC
104	Kuwait	QDA00KW5STP	QDA00KW5SToP	QDAI0KW5STiMTC
105	Kyrgyzstan	QDA00KG5STP	QDA00KG5SToP	QDAI0KG5STiMTC
106	Laos	QDA00LA5STP	QDA00LA5SToP	QDAI0LA5STiMTC
107	Latvia	QDA00LV5STP	QDA00LV5SToP	QDAI0LV5STiMTC
108	Lebanon	QDA00LB5STP	QDA00LB5SToP	QDAI0LB5STiMTC
109	Lesotho	QDA00LS5STP	QDA00LS5SToP	QDAI0LS5STiMTC
110	Liberia	QDA00LR5STP	QDA00LR5SToP	QDAI0LR5STiMTC
111	Libya	QDA00LY5STP	QDA00LY5SToP	QDAI0LY5STiMTC
112	Liechtenstein	QDA00LI5STP	QDA00LI5SToP	QDAI0LI5STiMTC
113	Lithuania	QDA00LT5STP	QDA00LT5SToP	QDAI0LT5STiMTC
114	Luxembourg	QDA00LU5STP	QDA00LU5SToP	QDAI0LU5STiMTC
115	Macao	QDA00MO5STP	QDA00MO5SToP	QDAI0MO5STiMTC
116	Macedonia	QDA00MK5STP	QDA00MK5SToP	QDAI0MK5STiMTC
117	Madagascar	QDA00MG5STP	QDA00MG5SToP	QDAI0MG5STiMTC
118	Malawi	QDA00MW5STP	QDA00MW5SToP	QDAI0MW5STiMTC
119	Malaysia	QDA00MY5STP	QDA00MY5SToP	QDAI0MY5STiMTC
120	Maldives	QDA00MV5STP	QDA00MV5SToP	QDAI0MV5STiMTC
121	Mali	QDA00ML5STP	QDA00ML5SToP	QDAI0ML5STiMTC
122	Malta	QDA00MT5STP	QDA00MT5SToP	QDAI0MT5STiMTC
123	Marshall Islands	QDA00MH5STP	QDA00MH5SToP	QDAI0MH5STiMTC
124	Mauritius	QDA00MU5STP	QDA00MU5SToP	QDAI0MU5STiMTC

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
125	Mauritania	QDA00MR5STP	QDA00MR5SToP	QDAI0MR5STiMTC
126	Mayotte Island	QDA00YT5STP	QDA00YT5SToP	QDAI0YT5STiMTC
127	Micronesia	QDA00FM5STP	QDA00FM5SToP	QDAI0FM5STiMTC
128	Moldova	QDA00MD5STP	QDA00MD5SToP	QDAI0MD5STiMTC
129	Monaco	QDA00MC5STP	QDA00MC5SToP	QDAI0MC5STiMTC
130	Mongolian People's Republic	QDA00MN5STP	QDA00MN5SToP	QDAI0MN5STiMTC
131	Montserrat	QDA00MS5STP	QDA00MS5SToP	QDAI0MS5STiMTC
132	Morocco	QDA00MA5STP	QDA00MA5SToP	QDAI0MA5STiMTC
133	Mozambique	QDA00MZ5STP	QDA00MZ5SToP	QDAI0MZ5STiMTC
134	Myanmar	QDA00MM5STP	QDA00MM5SToP	QDAI0MM5STiMTC
135	Namibia	QDA00NA5STP	QDA00NA5SToP	QDAI0NA5STiMTC
136	Nauru	QDA00NR5STP	QDA00NR5SToP	QDAI0NR5STiMTC
137	New Caledonia	QDA00NC5STP	QDA00NC5SToP	QDAI0NC5STiMTC
138	Nepal	QDA00NP5STP	QDA00NP5SToP	QDAI0NP5STiMTC
139	Netherlands	QDA00NL5STP	QDA00NL5SToP	QDAI0NL5STiMTC
140	Nevis	QDA00NV5STP	QDA00NV5SToP	QDAI0NV5STiMTC
141	Nigeria	QDA00NG5STP	QDA00NG5SToP	QDAI0NG5STiMTC
142	Nicaragua	QDA00NI5STP	QDA00NI5SToP	QDAI0NI5STiMTC
143	Niger	QDA00NE5STP	QDA00NE5SToP	QDAI0NE5STiMTC
144	Niue	QDA00NU5STP	QDA00NU5SToP	QDAI0NU5STiMTC
145	Norfolk Island	QDA00NF5STP	QDA00NF5SToP	QDAI0NF5STiMTC
146	Norway	QDA00NO5STP	QDA00NO5SToP	QDAI0NO5STiMTC
147	Netherlands Antilles	QDA00AN5STP	QDA00AN5SToP	QDAI0AN5STiMTC
148	New Zealand	QDA00NZ5STP	QDA00NZ5SToP	QDAI0NZ5STiMTC
149	Oman	QDA00OM5STP	QDA00OM5SToP	QDAI0OM5STiMTC
150	Pakistan	QDA00PK5STP	QDA00PK5SToP	QDAI0PK5STiMTC
151	Palau	QDA00PW5STP	QDA00PW5SToP	QDAI0PW5STiMTC
152	Panama	QDA00PA5STP	QDA00PA5SToP	QDAI0PA5STiMTC
153	Papua New Guinea	QDA00PG5STP	QDA00PG5SToP	QDAI0PG5STiMTC
154	Paraguay	QDA00PY5STP	QDA00PY5SToP	QDAI0PY5STiMTC
155	Peru	QDA00PE5STP	QDA00PE5SToP	QDAI0PE5STiMTC
156	Philippines	QDA00PH5STP	QDA00PH5SToP	QDAI0PH5STiMTC

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
157	Poland	QDA00PL5STP	QDA00PL5SToP	QDAI0PL5STiMTC
158	Portugal	QDA00PT5STP	QDA00PT5SToP	QDAI0PT5STiMTC
159	Qatar	QDA00QA5STP	QDA00QA5SToP	QDAI0QA5STiMTC
160	Reunion	QDA00RE5STP	QDA00RE5SToP	QDAI0RE5STiMTC
161	Romania	QDA00RO5STP	QDA00RO5SToP	QDAI0RO5STiMTC
162	South Africa	QDA00ZA5STP	QDA00ZA5SToP	QDAI0ZA5STiMTC
163	Russia	QDA00RU5STP	QDA00RU5SToP	QDAI0RU5STiMTC
164	Rwanda	QDA00RW5STP	QDA00RW5SToP	QDAI0RW5STiMTC
165	Samoa	QDA00WS5STP	QDA00WS5SToP	QDAI0WS5STiMTC
166	Sao Tome	QDA00ST5STP	QDA00ST5SToP	QDAI0ST5STiMTC
167	Saudi Arabia	QDA00SA5STP	QDA00SA5SToP	QDAI0SA5STiMTC
168	Senegal Republic	QDA00SN5STP	QDA00SN5SToP	QDAI0SN5STiMTC
169	Seychelles Islands	QDA00SC5STP	QDA00SC5SToP	QDAI0SC5STiMTC
170	Sierra Leone	QDA00SL5STP	QDA00SL5SToP	QDAI0SL5STiMTC
171	Singapore	QDA00SG5STP	QDA00SG5SToP	QDAI0SG5STiMTC
172	Slovakia	QDA00SK5STP	QDA00SK5SToP	QDAI0SK5STiMTC
173	Slovenia	QDA00SI5STP	QDA00SI5SToP	QDAI0SI5STiMTC
174	San Marino	QDA00SM5STP	QDA00SM5SToP	QDAI0SM5STiMTC
175	Solomon Islands	QDA00SB5STP	QDA00SB5SToP	QDAI0SB5STiMTC
176	Somali Republic	QDA00SO5STP	QDA00SO5SToP	QDAI0SO5STiMTC
177	Sri Lanka	QDA00LK5STP	QDA00LK5SToP	QDAI0LK5STiMTC
178	St. Helena	QDA00SH5STP	QDA00SH5SToP	QDAI0SH5STiMTC
179	St. Kitts	QDA00KN5STP	QDA00KN5SToP	QDAI0KN5STiMTC
180	St. Lucia	QDA00LC5STP	QDA00LC5SToP	QDAI0LC5STiMTC
181	St. Pierre and Miquelon	QDA00PM5STP	QDA00PM5SToP	QDAI0PM5STiMTC
182	St. Vincent and The Grenadines	QDA00VC5STP	QDA00VC5SToP	QDAI0VC5STiMTC
183	Sudan	QDA00SD5STP	QDA00SD5SToP	QDAI0SD5STiMTC
184	Suriname	QDA00SR5STP	QDA00SR5SToP	QDAI0SR5STiMTC
185	Swaziland	QDA00SZ5STP	QDA00SZ5SToP	QDAI0SZ5STiMTC
186	Sweden	QDA00SE5STP	QDA00SE5SToP	QDAI0SE5STiMTC
187	Syrian Arab Republic	QDA00SY5STP	QDA00SY5SToP	QDAI0SY5STiMTC
188	Taiwan	QDA00TW5STP	QDA00TW5SToP	QDAI0TW5STiMTC

Item	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
189	Tajikistan	QDA00TJ5STP	QDA00TJ5SToP	QDAI0TJ5STiMTC
190	Tanzania	QDA00TZ5STP	QDA00TZ5SToP	QDAI0TZ5STiMTC
191	Thailand	QDA00TH5STP	QDA00TH5SToP	QDAI0TH5STiMTC
192	Turks and Caicos Islands	QDA00TC5STP	QDA00TC5SToP	QDAI0TC5STiMTC
193	Togo	QDA00TG5STP	QDA00TG5SToP	QDAI0TG5STiMTC
194	Tonga Islands	QDA00TO5STP	QDA00TO5SToP	QDAI0TO5STiMTC
195	Trinidad and Tobago	QDA00TT5STP	QDA00TT5SToP	QDAI0TT5STiMTC
196	Turkmenistan	QDA00TM5STP	QDA00TM5SToP	QDAI0TM5STiMTC
197	Tunisia	QDA00TN5STP	QDA00TN5SToP	QDAI0TN5STiMTC
198	Turkey	QDA00TR5STP	QDA00TR5SToP	QDAI0TR5STiMTC
199	Tuvalu	QDA00TV5STP	QDA00TV5SToP	QDAI0TV5STiMTC
200	United Arab Emirates	QDA00AE5STP	QDA00AE5SToP	QDAI0AE5STiMTC
201	Uganda	QDA00UG5STP	QDA00UG5SToP	QDAI0UG5STiMTC
202	Ukraine	QDA00UA5STP	QDA00UA5SToP	QDAI0UA5STiMTC
203	Uruguay	QDA00UY5STP	QDA00UY5SToP	QDAI0UY5STiMTC
204	Uzbekistan	QDA00UZ5STP	QDA00UZ5SToP	QDAI0UZ5STiMTC
205	Vanuatu	QDA00VU5STP	QDA00VU5SToP	QDAI0VU5STiMTC
206	Vatican City	QDA00VA5STP	QDA00VA5SToP	QDAI0VA5STiMTC
207	Venezuela	QDA00VE5STP	QDA00VE5SToP	QDAI0VE5STiMTC
208	Vietnam	QDA00VN5STP	QDA00VN5SToP	QDAI0VN5STiMTC
209	Wallis and Fortuna Islands	QDA00WF5STP	QDA00WF5SToP	QDAI0WF5STiMTC
210	Yemen	QDA00YE5STP	QDA00YE5SToP	QDAI0YE5STiMTC
211	Yugoslavia (Federal Republic)	QDA00YU5STP	QDA00YU5SToP	QDAI0YU5STiMTC
212	Zaire	QDA00ZR5STP	QDA00ZR5SToP	QDAI0ZR5STiMTC
213	Zambia	QDA00ZM5STP	QDA00ZM5SToP	QDAI0ZM5STiMTC
214	Zimbabwe	QDA00ZW5STP	QDA00ZW5SToP	QDAI0ZW5STiMTC

## 1.2.6 SERVICE RESTORATION

### 1.2.6.1 TELECOMMUNICATIONS SERVICE PRIORITY (TSP) PROGRAM

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 CPUC and FCC Requirements.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.6.2 NETWORK DISASTER/OPERATIONAL RECOVERY

Public safety agencies, major data centers, agencies with supporting roles during disaster or emergency operations, and agencies with significant roles in post-disaster recovery have mission-critical needs to maintain network availability during disasters or emergencies.

It is essential that service be restored as soon as possible, and the services most critical to State operations remain operational during efforts to achieve full service recovery.

The Contractor shall implement processes that will assure the continuity of services for critical operations, producing the greatest benefit from remaining limited resources and achieving a systematic and orderly resumption of all contracted services.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.7 DATA NETWORK MONITORING APPLICATION (DNMA)

The Contractor shall provide a web based Data Network Monitoring Application (DNMA) to provide near real-time and historical network performance and fault detection information to Customers. The DNMA shall identify the availability and performance of contracted MPLS services. Only CALNET 3 services will appear in the DNMA. The Contractor's DNMA shall provide the following features:

1. Dynamic GUI views that show the relationship between devices providing data network services;
2. Alarm indicators for adversely effected network components;
3. Immediate real-time network availability, throughput, congestion, utilization, and error statistics through inquiry responses;
4. Historical network availability, throughput, congestion, error statistics shall be available for a rolling six (6) month period;
5. Notification or indicators when components are in an administrative/ maintenance status;
6. Real-time event log showing network activity;
7. Views shall be partitioned by Customer and Customers will have access only to their department's network components and information. The level of access shall be determined by the Customer department management or Customer administrators;
8. The Contractor shall provide CALNET 3 CMO with an authorization level that

provides access to all CALNET Customer network components and information.  
The Contractor shall provide single sign-on access to view any Customer network;

9. This tool shall provide the capability to run customized reports for the six (6) months of stored data;
10. The statistical information shall be in a data extractable format; and,
11. Contractor shall provide standard and customized reports as determined by CALNET 3 CMO.

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

## 1.2.8 OTHER SERVICES

### 1.2.8.1 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.

### 1.2.8.2 EXTENDED DEMARCATION WIRING SERVICES

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

Extended Demarc wiring shall include all necessary hardware including wire and/or cable, connectors, jumpers, patch panels, minor materials and jacks. Extended Demarc wiring shall also include all necessary labor required to complete the provisioning of service including installation, testing, trouble shooting, labeling and documentation.

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; or,
4. Testing, trouble shooting, labeling and completing documentation.

The Contractor shall provide installations in accordance with the timeframes identified for the services that this cabling will support, and shall be subject to the SLAs detailed in Section 1.2.9.8.11 (Provisioning SLAs) associated with that service.

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 in less than 20 minutes or if the Contractor would cause damage to the Customer site or existing cabling in clearing the pathway;

2. The wire/cable pathway is in an asbestos environment 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. Written release of the responsibility to provide the Extended Demarc is provided by either the Customer or by CALNET 3 CMO.

Bidder shall provide a price in the Subcategory Cost Worksheets for all labor and materials required for Extended Demarc wiring necessary to complete the provisioning of one (1) Demarc extension as described above. Bidder shall provide one (1) price for each media identified.

The Contractor shall install wiring according to industry standards and cabling recommendations published in the State Telecommunications Management Manual (STMM), Facilities Management Chapter, Uniform Building Cabling/Wiring current at the time of this IFB and as periodically updated by CALNET 3 CMO. Additionally, the Contractor shall install and maintain all wiring in accordance with all applicable EIA/TIA, BICSI, and ITU-T recommended standards current at the time of installation or maintenance.

The Contractor shall provide extended Demarcation Services limited to one (1) occurrence or installation for the specific telecommunications service the cabling is meant to support and must be ordered in conjunction with the service being provisioned. All other cabling will be the responsibility of the Customer and will be acquired through other procurement vehicles.

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

**The Contractor shall offer the wiring services for extended demarcation detailed in Table 1.2.8.2.a.**

**Table 1.2.8.2.a Extended Demarcation Wiring Services**

Item	Feature Name	Feature Description	Bidder Meets or Exceeds? Y N		Bidder’s Product Identifier
			Y	N	
1	<b>Extended Demarcation – Copper four-Pair – Regular Hours</b>	Wiring services to extend Facilities from the Customer’s MPOE to the Customer’s point of utilization from a copper trunk or trunking equipment as described above. Includes 300 feet of four-pair cable and an RJ48 or equivalent jack.	Y		NWNCA-9501
	Bidder’s Product Description				
2	<b>Extended Demarcation – Copper four-Pair – Overtime Hours</b>	Wiring services to extend Facilities from the Customer’s MPOE to the Customer’s point of utilization from a copper trunk or trunking equipment as described above. Includes 300	Y		NWNCA-9501OT

Item	Feature Name	Feature Description	Bidder Meets or Exceeds? Y N		Bidder's Product Identifier
		feet of four-pair cable and an RJ48 or equivalent jack.			
<b>Bidder's Product Description:</b>					
3	<b>Extended Demarcation – Copper four-Pair – Sunday and Holiday Hours</b>	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment as described above. Includes 300 feet of four-pair cable and an RJ48 or equivalent jack.	Y		NWNCA-9501OT2
<b>Bidder's Product Description:</b>					
4	<b>Extended Demarcation – Copper 25 Pair – Regular Hours</b>	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment as described above. Includes 300 feet or less of Category 5 25-pair CMP cable, one (1) patch panel and mounting hardware. Ten (10) Category 5e, three (3) meter jumpers; one (1) 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.	Y		NWNCA-9502
<b>Bidder's Product Description:</b>					

Item	Feature Name	Feature Description	Bidder Meets or Exceeds? Y N		Bidder's Product Identifier
5	<b>Extended Demarcation – Copper 25 Pair – Overtime Hours</b>	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment as described above. Includes 300 feet or less of Category 5 25-pair CMP cable, one (1) patch panel and mounting hardware. Ten (10) Category 5e, three (3) meter jumpers; one (1) 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.	Y		NWNCA-9502OT
	<b>Bidder's Product Description:</b>				
6	<b>Extended Demarcation – Copper 25 Pair – Sunday and Holiday Hours</b>	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment as described above. Includes 300 feet or less of Category 5 25-pair CMP cable, one (1) patch panel and mounting hardware. Ten (10) Category 5e, three (3) meter jumpers; one (1) 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.	Y		NWNCA-9502OT2
	<b>Bidder's Product Description:</b>				
7	<b>Extended Demarcation – Optical Fiber Link – Regular Hours</b>	Wiring services to extend Facilities from the Customer's MPOE to the Customers point of utilization from a fiber trunk or trunking equipment as described above with strand count required to provision one (1) 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 (2) SC-SC duplex patch cords for each single circuit extension. Includes associated troubleshooting, testing and labeling.	Y		NWNCA-9503
	<b>Bidder's Product Description:</b>				

Item	Feature Name	Feature Description	Bidder Meets or Exceeds? Y N		Bidder's Product Identifier
8	<b>Extended Demarcation – Optical Fiber Link – Overtime Hours</b>	Wiring services to extend Facilities from the Customer's MPOE to the Customers point of utilization from a fiber trunk or trunking equipment as described above with strand count required to provision one (1) 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 (2) SC-SC duplex patch cords for each single circuit extension. Includes associated troubleshooting, testing and labeling.	Y		NWNCA-9503OT
	<b>Bidder's Product Description:</b>				
9	<b>Extended Demarcation – Optical Fiber Link – Sunday and Holiday Hours</b>	Wiring services to extend Facilities from the Customer's MPOE to the Customers point of utilization from a fiber trunk or trunking equipment as described above with strand count required to provision one (1) 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 (2) SC-SC duplex patch cords for each single circuit extension. Includes associated troubleshooting, testing and labeling.	Y		NWNCA-9503OT2
	<b>Bidder's Product Description:</b>				

**The Contractor may offer additional unsolicited Extended Demarcation Wiring Services in Table 1.2.8.2.b.**

**Table 1.2.8.2.b Unsolicited Extended Demarcation Wiring Services**

Item	Feature Name	Feature Description	Bidder's Product Identifier
1	Eight-Pin	Eight Pin Connecting Device	NWN0050
	Bidder's Product Description: Eight-pin connecting device; holds one 2- or 4-wire circuit (non-registered).		
2	Converter	Convert to 2 Modular Jacks	NWN0051
	Bidder's Product Description: Converts one modular jack to two modular jacks.		
3	Data Jack	Data Jack – Max 8 Lines	NWN0052
	Bidder's Product Description: Data jack—multiple mounting arrangement (maximum 8 lines).		
4	50-Pin	50-Pin, Max 8 Jacks	NWN0053
	Bidder's Product Description: 50-pin miniature ribbon connector to connect a maximum of eight jacks to customer's data equipment.		
5	Data Jack-16	Data Jack – Up to 16 Data Jacks	NWN0054
	Bidder's Product Description: Data jack—multiple line data jack (maximum eight lines). Each mounting cabinet supports a maximum of 16 data jacks.		
6	Data Jack-4by8	Data Jack – up to four 8-lines data jacks	NWN0055
	Bidder's Product Description: Data jack—multiple line data jack with rack mounting for up to four 8-line multiple data jacks.		
7	Weatherproof	Weatherproof housing	NWN0056
	Bidder's Product Description: Weatherproof housing for RJ11C and RJ14C.		
8	Mini Modular Jack	Single line, four wire	NWN0057
	Bidder's Product Description: Single line four-wire T/R - T1/R1 E/M, SB/SG, eight-pos mini-modular jack.		
9	Wall Mount RJ11C	RJ11C wall mount.	NWN0060
	Bidder's Product Description: RJ11C wall mount.		
10	Wall mount RJ14C	RJ14C wall mount.	NWN0062
	Bidder's Product Description: RJ14C wall mount.		

Item	Feature Name	Feature Description	Bidder's Product Identifier
11	Modular Jack	Modular jack with a sliding cover	NWN0063
	Bidder's Product Description: Sixth position modular jack with a sliding cover to facilitate testing or each line. Holds up to two 2-wire circuits.		
12	Standard Mini-Modular	Standard miniature modular jack for series connections	NWN0069
	Bidder's Product Description: Standard miniature modular jack for series connections.		
13	Universal Data Jack.	Universal data jack.	NWN0071
	Bidder's Product Description: Universal data jack.		
14	Programmed Data Jack	Programmed Data Jack for Dial-up	NWN0072
	Bidder's Product Description: Programmed data jack. Dial-up, not for T-1s.		
15	1.544-Mbps Bridged Connection	1.544-Mbps bridged connection, eight-position hardware	NWN0073
	Bidder's Product Description: Single-line four-wire, 1.544-Mbps bridged connection, eight-position hardware; digital data/GDT/ADN.		
16	Eight-position Jack	Eight-position jack to connect terminal equipment for single line	NWN0074
	Bidder's Product Description: Eight-position jack to connect terminal equipment for single line. Holds one 4-wire circuit.		
17	Eight-position Ribbon Jack	Eight-position ribbon jack to connect up to 12 lines of terminal equipment.	NWN0075
	Bidder's Product Description: Eight-position ribbon jack to connect up to 12 lines of terminal equipment.		
18	Eight-position Jack – 1.544	Eight-position jack to connect terminal equipment for single line 1.544.	NWN0076
	Bidder's Product Description: Eight-position jack to connect terminal equipment for single line 1.544.		
19	Standard Mini-Jack	Standard miniature jack for bridged connections.	NWN0077
	Bidder's Product Description: Standard miniature jack for bridged connections.		
20	Data Jack-2 Wire	Data jack two-wire, switched data services 56 - single line.	NWN0078
	Bidder's Product Description: Data jack two-wire, switched data services 56 - single line.		

Item	Feature Name	Feature Description	Bidder's Product Identifier
21	Data Jack-4 Wire	Data jack four-wire, switched data services 56 - multiple lines.	NWN0079
	Bidder's Product Description: Data jack four-wire, switched data services 56 - multiple lines.		
22	Standard 50-pin	Standard 50-pin miniature ribbon connector jack for bridged connections.	NWN0080
	Bidder's Product Description: Standard 50-pin miniature ribbon connector jack for bridged connections.		
23	Line Circuit Card	Line circuit card for use with RJ26X.	NWN0087
	Bidder's Product Description: Used with Data Exchange Service; line circuit card for use with RJ26X.		
24	Multiple-Line Universal Data Jack	Used with Data Exchange Service; multiple-line universal data jack; eight lines maximum, common equipment.	NWN0088
	Bidder's Product Description: Used with Data Exchange Service; multiple-line universal data jack; eight lines maximum, common equipment.		
25	Adaptor Cord	Adaptor cord for RJ26X	NWN0089
	Bidder's Product Description: Adaptor cord for RJ26X. Requires RJ26X.		
26	1.544-Mbps Bridged Connection (12by4)	Up to 12 lines, four-wire, 1.544-Mbps bridged connection, 50-position hardware.	NWN0090
	Bidder's Product Description: Up to 12 lines, four-wire, 1.544-Mbps bridged connection, 50-position hardware.		
27	1.544-Mbps Bridged Connection (8by4)	Up to eight lines, four-wire, 1.544-Mbps bridged connection, 50-position hardware.	NWN0091
	Bidder's Product Description: Up to eight lines, four-wire, 1.544-Mbps bridged connection, 50-position hardware.		

### 1.2.8.3 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 Contractor's responsibilities. Work performed under this Section 1.2.8.3 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.

In Subcategory Cost Worksheet 1.2.8.3, 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 (10) hours per dispatch/occurrence.

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

**The Contractor shall offer Services Related Hourly Support as detailed in Table 1.2.8.3.**

**Table 1.2.8.3 Services Related Hourly Support**

Item	Labor Classification Name	Classification Description	Bidder Meets or Exceeds?		Bidder's Product Identifier
			Y	N	
1	<b>Field Service Repair Technician</b>  <b>Regular Hours</b>	Field technician properly trained to an expert level for the service being dispatched to diagnose and/or repair a CALNET 3 service problem that turns out to be caused by factors outside the responsibility of the Contractor.	Y		NWNCA-2901
	<b>Bidder's Product Description:</b> Certified field technician that meets the above Classification Description				
2	<b>Field Service Repair Technician</b>  <b>Overtime Hours</b>	Field technician properly trained to an expert level for the service being dispatched to diagnose and/or repair a CALNET 3 service problem that turns out to be caused by factors outside the responsibility of the Contractor.	Y		NWNCA-2901OT
	<b>Bidder's Product Description:</b> Certified field technician that meets the above Classification Description				
3	<b>Field Service Repair Technician</b>  <b>Sunday and Holiday Hours</b>	Field technician properly trained to an expert level for the service being dispatched to diagnose and/or repair a CALNET 3 service problem that turns out to be caused by factors outside the responsibility of the Contractor.	Y		NWNCA-2901OT2

Item	Labor Classification Name	Classification Description	Bidder Meets or Exceeds?		Bidder's Product Identifier
			Y	N	
	<b>Bidder's Product Description:</b> Certified field technician that meets the above Classification Description				

1.2.8.4 INTENTIONALLY DELETED

**1.2.9 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 3 CMO 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 Category solicitation.

1.2.9.1 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
  - a. Per Occurrence: Rights and remedies are paid on a per event basis during the bill cycle; and,
  - b. 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 a 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 X No \_\_\_\_\_*

#### 1.2.9.2 TECHNICAL REQUIREMENTS VERSUS SLA OBJECTIVES

Sections 1.2.2 through 1.2.7 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  No*

#### 1.2.9.3 TWO METHODS OF OUTAGE REPORTING: CUSTOMER OR CONTRACTOR

There are two (2) methods in which CALNET 3 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 (IFB-A Business Requirements Section A.9.4, 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 (IFB-A Business Requirements Section A.9.4) and monitor and report to Customer until service is restored.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

#### 1.2.9.4 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 (1) 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  No*

#### 1.2.9.5 CONTRACTOR SLA MANAGEMENT PLAN

Within 90 calendar days of Contract award, the Contractor shall provide CALNET 3 CMO with one (1) SLA Management Plan that describes how the Contractor will monitor and 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 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. Process may differ per service type;
3. Creation and delivery of SLA Reports (IFB-A Business Requirements Section A.9.5). The Contractor shall include a sample report in accordance with the SLA Reports (IFB-A Business Requirements Section A.9.5) for the following: SLA Service Performance Report (IFB-A Business Requirements Section A.9.5.1), SLA Provisioning Report (IFB-A Business Requirements Section A.9.5.2), and SLA Catastrophic Outage Reports (IFB-A Business Requirements Section A.9.5.3). The Contractor shall commit to a monthly due date that reports shall be provided to the CALNET 3 CMO via the Private Oversight Website (IFB-A Business Requirements Section A.9.2);
4. SLA invoicing credit and refund process;
5. Contractor SLA problem resolution process for Customer SLA and SLA reporting issues. The Contractor shall provide a separate process for Customers and CALNET 3 CMO; and,
6. Contractor SLA Manager to manage all SLA compliance and reporting. The Contractor shall include the SLA Manager contact information for SLA inquiries and issues resolution for Customer and CALNET 3 CMO.

*Bidder understands the Requirement and shall meet or exceed it? Yes X No*

#### 1.2.9.6 TECHNICAL SLA GENERAL REQUIREMENTS

The Contractor shall adhere to the following general requirements which apply to all CALNET 3 Technical SLAs (Section 1.2.9.8):

1. With the exception of Provisioning SLA (Section 1.2.9.8.11), the total SLA rights and remedies for any given month shall not exceed the sum of 100 percent of the Total Monthly Recurring Charges (TMRC);
2. If a circuit or service fails to meet one (1) 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 3 SLAs and remedies for services provided by Affiliates and/or Subcontractors under this Contract;
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;
5. TMRC rights and remedies shall include the service, option(s), and feature(s)

charges.

6. The Contractor shall proactively and continuously monitor and measure all SLA objectives;
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 form for the Provisioning SLA (Section 1.2.9.8.11);
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 SLAs to CALNET 3 CMO for possible inclusion via amendments;
9. The Contractor shall apply CALNET 3 SLAs and remedies to services provided in geographic areas which the Contractor is required to provide service;
10. The election by CALNET 3 CMO of any SLA remedy covered by this Contract shall not exclude or limit CALNET 3 CMO's 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;
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 Affiliates, Subcontractors or resellers under this Contract;
13. The Customer Escalation Process (IFB-A Business Requirements Section A.3.4.2) and/or the CALNET 3 CMO Escalation Process (IFB-A Business Requirements Section A.3.4.1) 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 24x365 for CALNET 3 services;
15. SLAs apply 24x365 unless SLA specifies an exception;
16. Contractor invoices shall clearly cross reference the SLA credit to the service Circuit ID in accordance with IFB-A Business Requirements Section A.5.1 (Billing and Invoicing Requirements, #14);
17. The Contractor shall provide a CALNET 3 SLA Manager responsible for CALNET 3 SLA compliance. The SLA Manager shall attend regular meetings and be available upon request to address CALNET 3 CMO SLA oversight, report issues, and problem resolution concerns. The CALNET 3 SLA Manager shall also coordinate SLA support for Customer SLA inquiries and issue resolution;
18. The Contractor shall provide Customer and CALNET 3 CMO 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

3 Customer.

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

#### 1.2.9.7 TROUBLE TICKET STOP CLOCK CONDITIONS

The following conditions shall be allowed to stop the trouble ticket outage duration for CALNET 3 Contractor trouble tickets. The Contractor shall document the trouble ticket outage duration using the Stop Clock Condition (SCC) listed in Table 1.2.9.7 and include start and stop time stamps in the Contractor's Trouble Ticket Reporting Tool (IFB-A Business Requirements Section A.9.4) for each application of a SCC. The Contractor shall not consider "cleared while testing" or "no trouble found" as a SCC unless cause is ultimately determined to have been the fault of a third party outside the control of the Contractor.

Note: The Glossary (SOW Appendix A) defines term "End-User" as the "individual within an Entity that is utilizing the feature or service provided under the Contract."

Stop Clock Conditions are limited to the conditions listed in Table 1.2.9.7.

**Table 1.2.9.7 – Stop Clock Conditions (SCC)**

Item#	Stop Clock Condition (SCC)	SCC Definition
1	<b>END-USER REQUEST</b>	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 order system and shows efforts are made to contact the End-User during the applicable Stop Clock period.
2	<b>OBSERVATION</b>	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	<b>END-USER NOT AVAILABLE</b>	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	<b>WIRING</b>	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	<b>POWER</b>	Trouble caused by a power problem outside of the responsibility of the Contractor. Power is a stop clock condition for a Customer owned LAN switch and router, but not a stop clock condition for a Contractor owned router when used for Converged VoIP.
6	<b>FACILITIES</b>	Lack of building entrance Facilities or conduit structure that are the End-User's responsibility to provide.
7	<b>ACCESS</b>	<p>Limited access or contact with End-User provided the Contractor documents in the trouble ticket several efforts to contact End-User for the following:</p> <ul style="list-style-type: none"> <li><b>a.</b> Access necessary to correct the problem is not available because access has not been arranged by site contact or End-User representative;</li> <li><b>b.</b> Site contact refuses access to technician who displays proper identification;</li> <li><b>c.</b> 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 reasonable steps to obtain the correct information; and,</li> <li><b>d.</b> Site has limited hours of business that directly impacts the Contractor's ability to resolve the problem.</li> </ul> <p>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.</p>
8	<b>STAFF</b>	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	<b>APPLICATION</b>	End-User software applications that interfere with repair of the trouble.

Item#	Stop Clock Condition (SCC)	SCC Definition
10	<b>CPE</b>	Repair/replacement of 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	<b>NO RESPONSE</b>	Failure of the trouble ticket originator or responsible End-User to return a call from Contractor's technician for on-line close-out 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	<b>MAINTENANCE</b>	An outage directly related to any properly performed scheduled maintenance or upgrade scheduled for CALNET 3 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	<b>THIRD PARTY</b>	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 Affiliates, and Subcontractors shall be deemed to be under the control of Contractor with respect to the equipment, services, or Facilities to be provided under this Contract.
14	<b>FORCE MAJEURE</b>	Force Majeure events, as defined in the terms and conditions of the PMAC General Provisions - Telecommunications, Section 28 (Force Majeure).

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

1.2.9.8 TECHNICAL SERVICE LEVEL AGREEMENTS

The Contractor shall provide and manage the following Technical SLAs.

1.2.9.8.1 Availability (M-S)

<b>SLA Name:</b> Availability					
<b>Definition:</b> The percentage of time a CALNET service is fully functional and available for use each calendar month.					
<b>Measurement Process:</b> The monthly Availability Percentage shall be based on the accumulative total of all Unavailable Time derived from all trouble tickets closed, for the affected Circuit ID (as defined in the Data Dictionary), 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 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.					
<b>Objective(s) A applies to the following Services:</b> <ul style="list-style-type: none"> <li>• Converged VoIP Service (1.2.3.2)</li> <li>• Converged VoIP Voice Mail Service (1.2.3.5)</li> <li>• Audio Conferencing (1.2.4)</li> <li>• SIP Trunk</li> <li>• NWN Managed Local Area Network (MLAN) Services (1.2.3.3)</li> <li>• NWN Fully Managed Telepresence Solutions Services (1.2.3.3)</li> </ul>	<b>Objective(s) A:</b>				
		<b>Basic (B)</b>	<b>Standard (S)</b>	<b>Premier (P)</b>	<b>Bidder's Objective Commitment (B, S or P)</b>
	Converged VoIP Service	≥ 98.7%	≥ 99.2%	≥ 99.5%	<b>P</b>
	Converged VoIP Voice Mail Service	≥ 98.9%	≥ 99.2%	≥ 99.5%	<b>P</b>
	SIP Trunk	≥ 98.9%	≥ 99.2%	≥ 99.5%	<b>P</b>
	NWN Managed Local Area Network (MLAN) Services	N/A	N/A	≥ 99.5%	<b>P</b>
NWN Fully Managed Telepresence Solutions Services	N/A	N/A	≥ 99.5%	<b>P</b>	
<b>Objective(s) B applies to the following Service(s):</b> <ul style="list-style-type: none"> <li>• MPLS (1.2.2) (Includes 1.2.2.8.1 through 1.2.2.8.7)</li> </ul>	<b>Objective(s) B:</b> The objectives will be based on the transport type. The speeds appear in ranges.				
	<b>Service</b>	<b>Basic (B)</b>	<b>Standard (S)</b>	<b>Premier (P)</b>	<b>Bidder's Objective Commitment (B, S or P)</b>
	DS1	≥ 99.2%	≥ 99.5%	≥ 99.8%	<b>P</b>
	DS3	≥ 99.7%	≥ 99.8%	≥ 99.9%	<b>P</b>
	OCx	≥ 99.7%	≥ 99.8%	≥ 99.9%	<b>P</b>
Ethernet	≥ 99.2%	≥ 99.5%	≥ 99.8%	<b>P</b>	

<b>SLA Name:</b> Availability	
<b>Rights and Remedies</b>	<b>Per Occurrence:</b> N/A
	<b>Monthly Aggregated Measurements:</b> First month the service fails to meet the committed SLA objective shall result in a 15 percent rebate of the TMRC and two (2) Business Days of the ADUC, when usage applies.
	The second consecutive month the service fails to meet the committed SLA objective shall result in a 30 percent rebate of TMRC and two (2) Business Days of the ADUC, when usage applies.  Each additional consecutive month the service fails to meet the Committed SLA objective shall result in a 50 percent rebate of the TMRC, and two (2) Business Days of the ADUC, when usage applies.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*



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

<b>SLA Name:</b> Catastrophic Outage 2 (CAT 2)					
<b>Definition:</b> Any service affecting failure in the Contractor's (or subcontractor's or Affiliate's) network up to and including the Provider Edge (PE) equipment.					
<b>Measurement Process:</b> 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 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) basis from information recorded from the network equipment/system or Customer reported trouble ticket. Each End-User service (Circuit 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.					
<b>Service(s):</b>					
MPLS (1.2.2.2) (includes (1.2.2.8.1 - 1.2.2.8.7))	NWN Managed Local Area Network (MLAN) Services (1.2.3.3)				
	NWN Fully Managed Telepresence Solutions Services (1.2.3.3)				
Converged VoIP Service (1.2.3.2)	Audio Conferencing (1.2.4)				
VoIP Voice Mail Service (1.2.3.5)	SIP Trunking (1.2.5)				
<b>Objective (s):</b> The objective restoral time shall be:					
	<b>Service</b>	<b>Basic (B)</b>	<b>Standard (S)</b>	<b>Premier (P)</b>	<b>Bidder's Objective Commitment (B, S or P)</b>
	MPLS:	≤ 1 hour	≤ 30 minutes	≤ 15 minutes	<b>P</b>
	Converged VoIP Service:	≤ 1 hour	≤ 30 minutes	≤ 15 minutes	<b>P</b>
	VoIP Voice Mail Service:	≤ 1 hour	≤ 30 minutes	≤ 15 minutes	<b>P</b>
	Audio Conferencing:	≤ 1 hour	≤ 30 minutes	≤ 15 minutes	<b>P</b>
	SIP Trunking	≤ 1 hour	≤ 30 minute	≤ 15 minutes	<b>P</b>
	NWN Managed Local Area Network (MLAN) Services	N/A	N/A	≤ 15 minutes	<b>P</b>
	NWN Fully Managed Telepresence Solutions Services	N/A	N/A	≤ 15 minutes	<b>P</b>
<b>Rights and Remedies</b>	<b>Per Occurrence:</b> 100 percent of the TMRC and ten (10) Business Days of the ADUC (when applicable) for each End-User service not meeting the committed objective for each CAT 2 fault.				
	<b>Monthly Aggregated Measurements:</b> N/A				

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

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

<b>SLA Name:</b> Catastrophic Outage 3 (CAT 3)					
<b>Definition:</b> The total loss of more than one (1) CALNET 3 service type in a central office, or the loss of any service type on a system wide basis					
<b>Measurement Process:</b> 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, whichever occurs first. Upon notification from the Customer or network alarm, the Contractor shall open a trouble ticket and compile a list of each End-User service (Circuit 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) basis from information recorded from the network switches or trouble ticket. Each End-User service (Circuit ID) is deemed out of service from the first notification until the Contractor determines service is restored. Any service reported by End-User/Customer as not having been restored shall have the outage time adjusted to the actual restoration time.					
<b>Service(s):</b>					
MPLS (1.2.2.2) (includes 1.2.2.8.1 - 1.2.2.8.7)	NWN Managed Local Area Network (MLAN) Services (1.2.3.3)				
	NWN Fully Managed Telepresence Solutions Services (1.2.3.3)				
Converged VoIP Service (1.2.3.2)	Audio Conferencing (1.2.4)				
VoIP Voice Mail Service (1.2.3.5)	SIP Trunking (1.2.5)				
<b>Objective (s):</b> The objective restoral time shall be:					
	<b>Service</b>	<b>Basic (B)</b>	<b>Standard (S)</b>	<b>Premier (P)</b>	<b>Bidder's Objective Commitment (B or P)</b>
	MPLS	≤ 30 minutes	N/A	≤ 15 minutes	P
	Converged VoIP Service	≤ 30 minutes	N/A	≤ 15 minutes	P
	VoIP Voice Mail Service	≤ 30 minutes	N/A	≤ 15 minutes	P
	Audio Conferencing	≤ 30 minutes	N/A	≤ 15 minutes	P
	SIP Trunking	≤ 30 minutes	N/A	≤ 15 minutes	P
	NWN Managed Local Area Network (MLAN) Services	N/A	N/A	≤ 15 minutes	P
	NWN Fully Managed Telepresence Solutions Services	N/A	N/A	≤ 15 minutes	P
<b>Rights and Remedies</b>	<b>Per Occurrence:</b> 100 percent of the TMRC and ten (10) Business Days of the ADUC (when applicable) for each End-User service not meeting the committed occurrence objective for each Cat 3 fault.				
	<b>Monthly Aggregated Measurements:</b> N/A				

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

1.2.9.8.5 Delay - Round Trip Transmission for MPLS Services (M-S)

<b>SLA Name:</b> Delay – Round Trip Transmission for MPLS Services					
<b>Definition:</b> the average round trip transfer delay measured from the Customer Edge (CE) to the remote CE back to CE (Site A to Site Z to Site A) within the geographic confines of the state of California.					
<b>Measurement Process:</b> The End-User/Customer is responsible for opening a trouble ticket with the Contractor’s Customer Service Center (helpdesk) when the Customer suspects the delay is not meeting the committed level. CALNET 3 CMO shall determine the sample interval, provided that a minimum of 100 pings or more shall constitute test. The Contractor shall provide timely verification, consistent with industry standards. Trouble tickets opened as Delay – Round Trip Transmission for MPLS Services shall not count in availability or Time to Repair measurements unless and until the End-User reports service as unusable.					
<b>Service(s):</b>					
MPLS (1.2.2) (includes 1.2.2.8.1 - 1.2.2.8.7)					
<b>Objective (s):</b> based on a 1,000 byte ping:					
	<b>Service</b>	<b>Basic (B)</b>	<b>Standard (S)</b>	<b>Premier (P)</b>	<b>Bidder’s Objective Commitment (S or P)</b>
	MPLS ≥ 128 Kbps to < 1.536 Mbps	N/A	<400ms	<340ms	<b>P</b>
	MPLS ≥ 1.536 Mbps to < 40 Mbps	N/A	<120ms	<95ms	<b>P</b>
	MPLS ≥ 40 Mbps	N/A	<110ms	<90ms	<b>P</b>
<b>Rights and Remedies</b>	<b>Per Occurrence:</b> N/A				
	<b>Monthly Aggregated Measurements:</b> 25 percent of TMRC per occurrence for the reported service. The second consecutive month service fails to meet the committed SLA objectives shall result in a 35 percent rebate of TMRC.  Each additional consecutive month service fails to meet the committed SLA objective shall result in a 50 percent rebate of the TMRC.				

Bidder understands the Requirement and shall meet or exceed it? Yes  No

1.2.9.8.6 VoIP Delay, One-Way Transmission (M-S)

<b>SLA Name:</b> VoIP Delay – One-Way Transmission					
<b>Definition:</b> Average one-way transfer delay measured from Customer Equipment (CE) to the remote CE					
<b>Measurement Process:</b> End-User/Customer is responsible for opening a trouble ticket with the Contractor’s Customer Service Center (helpdesk) when the Customer suspects the VoIP delay is not meeting the committed level. The problem requires timely verification, consistent with industry Standards, by the Contractor. Tickets opened as VoIP Delay One-Way Transmission SLA shall not count in availability or Time to Repair measurements unless and until the End-User reports service as unusable.					
<b>Service(s):</b>					
Converged VoIP Service (1.2.3.2)					
<b>Objective (s):</b>					
	<b>Service</b>	<b>Basic (B)</b>	<b>Standard (S)</b>	<b>Premier (P)</b>	<b>Bidder’s Objective Commitment (B, S or P)</b>
	Converged VoIP Service	≤ 170 ms	≤ 130 ms	≤ 90 ms	<b>P</b>
<b>Rights and Remedies</b>	<b>Per Occurrence:</b> N/A				
	<b>Monthly Aggregated Measurements:</b> 25 percent of TMRC per occurrence for the reported service.				
	The second month service fails to meet the committed SLA objectives shall result in a 35 percent rebate of TMRC.  Each additional consecutive month service fails to meet the committed SLA objective shall result in a 50 percent rebate of the TMRC.				

Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_

1.2.9.8.7 Excessive Outage (M-S)

<b>SLA Name:</b> Excessive Outage					
<b>Definition:</b> A Service failure that remains unresolved for more than the committed objective,.					
<b>Measurement Process:</b> This SLA is based on the trouble ticket Unavailable Time. The circuit or service is unusable during the time the trouble ticket is reported as opened until restoration of the service, minus SCC. If Customer reports a service failure as unresolved after the closure of the trouble ticket by the Contractor, the Unavailable Time shall be adjusted to the actual restoration time.					
<b>Service(s):</b>					
MPLS (1.2.2) (includes 1.2.2.8.1 - 1.2.2.8.7)	Audio Conferencing (1.2.4)				
Converged VoIP Service (1.2.3.2)	SIP Trunking (1.2.5)				
VoIP Voice Mail Service (1.2.3.5)	NWN Managed Local Area Network (MLAN) Services (1.2.3.3)				
	NWN Fully Managed Telepresence Solutions Services (1.2.3.3)				
<b>Objective (s):</b>					
	<b>Service</b>	<b>Basic (B)</b>	<b>Standard (S)</b>	<b>Premier (P)</b>	<b>Bidder's Objective Commitment (B, S or P)</b>
	MPLS	16 hours	12 hours	8 hours	<b>P</b>
	Converged VoIP Service	16 hours	12 hours	8 hours	<b>P</b>
	VoIP Voice Mail Service	16 hours	12 hours	8 hours	<b>P</b>
	Audio Conferencing	16 hours	12 hours	8 hours	<b>P</b>
	SIP Trunking	16 hours	12 hours	8 hours	<b>P</b>
	NWN Managed Local Area Network (MLAN) Services	16 hours	12 hours	8 hours	<b>P</b>
	NWN Fully Managed Telepresence Solutions Services	16 hours	12 hours	8 hours	<b>P</b>
<b>Rights and Remedies</b>	<p><b>Per Occurrence:</b> 100 percent of the TMRC and ten (10) Business Days of the ADUC (when applicable) per occurrence for each service (Circuit ID) out of service for a period greater than the committed objective level.</p> <p>Upon request from the Customer or the CALNET 3 CMO, the Contractor shall provide a briefing on the excessive outage restoration.</p> <p><b>Monthly Aggregated Measurements:</b> N/A</p>				

Bidder understands the Requirement and shall meet or exceed it? Yes X No

1.2.9.8.8 Jitter (M-S)

<b>SLA Name:</b> Jitter					
<b>Definition:</b> Variations in transfer delay measured from the Customer Edge (CE) to the remote CE					
<b>Measurement Process:</b> End-User/Customer is responsible for opening a trouble ticket with the Contractor's Customer Service Center (helpdesk) when the Jitter exceeds the committed level. The problem requires timely verification, consistent with industry Standards, by the Contractor. Tickets identified as a jitter issue shall not count in availability or Time-to-Repair measurements unless and until the End-User reports service as unusable for its intended uses. This measurement applies to local loop transport (1) under the control of the Contractor or (2) not under the control of Contractor that do not exceed 70% peak utilization for three (3) consecutive Business Days.					
<b>Service(s):</b>					
Converged VoIP Service (1.2.3.2)					
<b>Objective (s):</b>					
	<b>Service</b>	<b>Basic (B)</b>	<b>Standard (S)</b>	<b>Premier (P)</b>	<b>Bidder's Objective Commitment (B or S)</b>
	Converged VoIP Service	≤ 30ms	≤ 15ms	N/A	<b>S</b>
<b>Rights and Remedies</b>	<b>Per Occurrence:</b> 25 percent of TMRC and two (2) Business Days of the ADUC per occurrence for the reported service. Second month service fails to meet the committed SLA objectives shall result in a 35 percent rebate of TMRC and two (2) Business Days of ADUC. Each additional consecutive month service fails to meet the committed SLA objective shall result in a 50 percent rebate of the TMRC and two (2) Business Days of the ADUC.				
	<b>Monthly Aggregated Measurements:</b> N/A				

Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_

1.2.9.8.9 Notification

<b>SLA Name:</b> Notification	
<b>Definition:</b> The Contractor notification to CALNET 3 CMO 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 3 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.	
<b>Measurement Process:</b> The Contractor shall adhere to the Network Outage Response requirements (IFB-A Business Requirements Section A.3.3) and notify the CALNET 3 CMO 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 CALNET 3 CMO and designated stakeholder when information is available for dissemination to Customers.	
<b>Service(s):</b> All services	
<b>Objective (s):</b> Within 60 minutes of the above mentioned failures' start time, the Contractor shall notify CALNET 3 CMO and designated stakeholders using a method defined in IFB-A Business Requirements Section A.3.3 (Network Outage Response).  At 60 minute intervals, updates shall be given on the above mentioned failures via the method defined in IFB-A Business Requirements Section A.3.3 (Network Outage Response).  This objective is the same for Basic, Standard and Premium commitments	
<b>Rights and Remedies</b>	<b>Per Occurrence:</b> Senior Management Escalation
	<b>Monthly Aggregated Measurements:</b> N/A

*Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_*

1.2.9.8.10 Packet Loss (M-S)

<b>SLA Name:</b> Packet Loss					
<b>Definition:</b> A measurement of lost or dropped packet traveling across the Contractor's, Affiliate's or Subcontractor's network. Packet loss is measured from Contractor's handoff to the Customer at each end of the data channel measured port to port.					
<b>Measurement Process:</b> End-User/Customer is responsible for opening a trouble ticket with the Contractor's Customer Service Center (helpdesk) when the data loss exceeds the committed level. The problem requires timely verification, consistent with industry standards, by the Contractor. Tickets identified as a packet loss issue shall not count in availability or Time-to-Repair measurements unless and until the End-User reports service as unusable for its intended uses.  This measurement includes the local loop transport under the control of the Contractor and any local loops acquired from a third party by the Contractor.					
<b>Service(s):</b>					
MPLS (1.2.2) (includes 1.2.2.8.1 - 1.2.2.8.7)		NWN Managed Local Area Network (MLAN) Services (1.2.3.3)			
Converged VoIP Service (1.2.3.2)		NWN Fully Managed Telepresence Solutions Services (1.2.3.3)			
<b>Objective (s):</b>					
	<b>Service</b>	<b>Basic (B)</b>	<b>Standard (S)</b>	<b>Premier (P)</b>	<b>Bidder's Objective Commitment (B, S or P)</b>
	MPLS	≤ .75% packet loss	≤ .5% packet loss	≤ .25% packet loss	<b>P</b>
	Converged VoIP Service	≤ .75% packet loss	≤ .5% packet loss	≤ .25% packet loss	<b>P</b>
	NWN Managed Local Area Network (MLAN) Services	≤ .75% packet loss	≤ .5% packet loss	≤ .25% packet loss	<b>P</b>
	NWN Fully Managed Telepresence Solutions Services	≤ .75% packet loss	≤ .5% packet loss	≤ .25% packet loss	<b>P</b>
<b>Rights and Remedies</b>	<b>Per Occurrence:</b> 25 percent of TMRC per occurrence for the reported service. Next consecutive month to fail to meet the committed SLA objectives shall result in a 35 percent rebate of TMRC. Each additional consecutive month to fail to meet the committed SLA objective shall result in a 50 percent rebate of the TMRC.				
	<b>Monthly Aggregated Measurements:</b> N/A				

Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_

1.2.9.8.11 Provisioning (M-S)

<b>SLA Name:</b> Provisioning		
<p><b>Definition:</b> 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 Customer and Contractor documented on the Contractor's order confirmation notification or Contracted Service Project Work Scope of Work in accordance with Section A.2.5.4 #7 (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 Requests(s) meets the Coordinated or Managed Project criteria, negotiated due dates will be established and documented in the Project Timeline per IFB-A Business Requirements Section A.6 (Contracted Service Project Work).</p> <p>Provisioning SLAs have two (2) objectives:</p> <p>Objective 1: Individual Service Request</p> <p>Objective 2: Successful Install Monthly Percentage by Service Type</p> <p>Note: Provisioning timelines include extended demarcation wiring, when appropriate.</p>		
<b>Measurement Process:</b>		
<p><u>Objective 1: Individual Service Request:</u> Install intervals are based on the committed installation intervals established in this SLA or due dates negotiated between Customer and Contractor. This objective requires the Contractor to meet the due date for each individual Service Request.</p> <p><u>Objective 2: Successful Install Monthly Percentage per Service Type:</u> The Contractor shall sum all individual Service Requests per service, as listed below, meeting the objective in the measurement period (per month) and divide by the sum of all individual Service Requests due per service in the measurement period and multiply by 100 to equal the percentage of Service Requests installed on time. The Contractor must meet or exceed the objective below in order to avoid the rights and remedies.</p>		
<b>Service (Features must be installed in conjunction with the service except when listed below)</b>	<b>Committed Interval Calendar Days</b>	<b>Coordinated/Managed Project</b>
MPLS Port Transport (1.2.2.8.1)	35	Coordinated/Managed Project
MPLS Port and Access Bundle Transport (1.2.2.8.2)	35	Coordinated/Managed Project
MPLS Port, Access and Router Transport (1.2.2.8.3)	45	Coordinated/Managed Project
MPLS Port, Access and Router Bundled On-Net Transport Speeds (1.2.2.8.4)	45	Coordinated/Managed Project
MPLS Port, Access and Router Bundled Off-Net Transport Speeds (1.2.2.8.5)	45	Coordinated/Managed Project
MPLS Port, Access and Router Bundled Ethernet On-Net Transport (1.2.2.8.6)	45	Coordinated/Managed Project
MPLS Port, Access and Router Bundled Ethernet Off-Net Transport (1.2.2.8.7)	45	Coordinated/Managed Project
Converged VoIP Service (1.2.3.2)	45	Coordinated/Managed Project
VoIP Voice Mail Services (1.2.3.5)	30	Coordinated/Managed Project
Audio Conferencing (1.2.4)	30	Coordinated/Managed Project
SIP Trunking (1.2.5)	35	Coordinated/Managed Project

<b>SLA Name:</b> Provisioning																																																																										
NWN Managed Local Area Network (MLAN) Services	45	Coordinated/Managed Project																																																																								
NWN Fully Managed Telepresence Solutions Services	45	Coordinated/Managed Project																																																																								
<p><b>Objective (s):</b> Individual Service Requests: Service installed on or before the committed or negotiated due date. Successful Install Monthly Percentage per Service:</p> <table border="1"> <thead> <tr> <th>Service</th> <th>Basic (B)</th> <th>Standard (S)</th> <th>Premier (P)</th> <th>Bidder's Objective Commitment (B, S or P)</th> </tr> </thead> <tbody> <tr> <td>MPLS Port Transport:</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>MPLS Port and Access Bundle Transport:</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>MPLS Port, Access and Router Transport:</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>Converged VoIP Service:</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>VoIP Voice Mail Service:</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>Audio Conferencing:</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>SIP Trunking</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>MPLS Port, Access and Router Bundled On-Net Transport Speeds</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>MPLS Port, Access and Router Bundled Off-Net Transport Speeds</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>MPLS Port, Access and Router Bundled Ethernet On-Net Transport</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>MPLS Port, Access and Router Bundled Ethernet Off-Net Transport</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>NWN Managed Local Area Network (MLAN) Services</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> <tr> <td>NWN Fully Managed Telepresence Solutions Services</td> <td>N/A</td> <td>≥ 90%</td> <td>≥ 95%</td> <td><b>P</b></td> </tr> </tbody> </table>					Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)	MPLS Port Transport:	N/A	≥ 90%	≥ 95%	<b>P</b>	MPLS Port and Access Bundle Transport:	N/A	≥ 90%	≥ 95%	<b>P</b>	MPLS Port, Access and Router Transport:	N/A	≥ 90%	≥ 95%	<b>P</b>	Converged VoIP Service:	N/A	≥ 90%	≥ 95%	<b>P</b>	VoIP Voice Mail Service:	N/A	≥ 90%	≥ 95%	<b>P</b>	Audio Conferencing:	N/A	≥ 90%	≥ 95%	<b>P</b>	SIP Trunking	N/A	≥ 90%	≥ 95%	<b>P</b>	MPLS Port, Access and Router Bundled On-Net Transport Speeds	N/A	≥ 90%	≥ 95%	<b>P</b>	MPLS Port, Access and Router Bundled Off-Net Transport Speeds	N/A	≥ 90%	≥ 95%	<b>P</b>	MPLS Port, Access and Router Bundled Ethernet On-Net Transport	N/A	≥ 90%	≥ 95%	<b>P</b>	MPLS Port, Access and Router Bundled Ethernet Off-Net Transport	N/A	≥ 90%	≥ 95%	<b>P</b>	NWN Managed Local Area Network (MLAN) Services	N/A	≥ 90%	≥ 95%	<b>P</b>	NWN Fully Managed Telepresence Solutions Services	N/A	≥ 90%	≥ 95%	<b>P</b>
Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)																																																																						
MPLS Port Transport:	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
MPLS Port and Access Bundle Transport:	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
MPLS Port, Access and Router Transport:	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
Converged VoIP Service:	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
VoIP Voice Mail Service:	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
Audio Conferencing:	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
SIP Trunking	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
MPLS Port, Access and Router Bundled On-Net Transport Speeds	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
MPLS Port, Access and Router Bundled Off-Net Transport Speeds	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
MPLS Port, Access and Router Bundled Ethernet On-Net Transport	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
MPLS Port, Access and Router Bundled Ethernet Off-Net Transport	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
NWN Managed Local Area Network (MLAN) Services	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
NWN Fully Managed Telepresence Solutions Services	N/A	≥ 90%	≥ 95%	<b>P</b>																																																																						
<b>Rights and Remedies</b>	<p><b>Per Occurrence:</b> Objective 1: Individual Service Requests: 50 percent of installation fee credited to Customer for any missed committed objective.</p>																																																																									
	<p><b>Monthly Aggregated Measurements:</b> Objective 2: 100 percent of the installation fee credited to Customer for all Service Requests (per same service type) that did not complete on time during the month if the successful install monthly percentage is below the committed objective.</p>																																																																									

Bidder understands the Requirement and shall meet or exceed it? Yes  No

1.2.9.8.12 Time to Repair (TTR) (M-S)

<b>SLA Name:</b> Time to Repair (TTR)					
<b>Definition:</b> A service outage that remains unresolved for more than the objective level.					
<b>Measurement Process:</b> This SLA is based on trouble ticket Unavailable Time. The circuit or service is unusable during the time the trouble ticket is reported as opened until restoration of the service, minus SCC. If Customer reports a service failure as 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.					
<b>Service(s):</b>					
MPLS (1.2.2) (includes 1.2.2.8.1 - 1.2.2.8.7)					
Converged VoIP Service (1.2.3.2)		Audio Conferencing (1.2.4)			
VoIP Voice Mail Service (1.2.3.5)		SIP Trunking (1.2.5)			
NWN Managed Local Area Network (MLAN) Services (1.2.3.3)		NWN Fully Managed Telepresence Solutions Services (1.2.3.3)			
Objective (s): The Unavailable Time objective shall not exceed:					
	<b>Service</b>	<b>Basic (B)</b>	<b>Standard (S)</b>	<b>Premier (P)</b>	<b>Bidder's Objective Commitment (B or S)</b>
	MPLS:	6 hours	4 hours	N/A	<b>S</b>
	Converged VoIP Service:	8 hours	4 hours	N/A	<b>S</b>
	VoIP Voice Mail Service:	6 hours	4 hours	N/A	<b>S</b>
	Audio Conferencing:	6 hours	4 hours	N/A	<b>S</b>
	SIP Trunking	6 hours	4 hours	N/A	<b>S</b>
	NWN Managed Local Area Network (MLAN) Services	6 hours	4 hours	N/A	<b>S</b>
	NWN Fully Managed Telepresence Solutions Services	6 hours	4 hours	N/A	<b>S</b>
<b>Rights and Remedies</b>	<b>Per Occurrence:</b> 25 percent of the TMRC three (3) Business Days ADUC, when applicable per occurrence for each service (Circuit ID) out of service for a period greater than the committed objective level.				
	<b>Monthly Aggregated Measurements:</b> N/A				

Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_

1.2.9.8.13 Managed Service Proactive Notification

<b>SLA Name:</b> Managed Service Proactive Notification	
<p><b>Definition:</b> 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 3 CMO.</p> <p>An Outage is defined as an unscheduled period in which the managed service 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.</p>	
<p><b>Measurement Process:</b> 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 (15) 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.</p>	
<b>Service(s):</b>	
MPLS Port, Access and Router Bundled Transport Speeds (Section 1.2.2.8.3)	
MPLS Port, Access and Router Bundled On-Net Transport Speeds (Section 1.2.2.8.4)	
MPLS Port, Access and Router Bundled Off-Net Transport Speeds (Section 1.2.2.8.5)	
MPLS Port, Access and Router Bundled Ethernet On-Net Transport Speeds (Section 1.2.2.8.6)	
MPLS Port, Access and Router Bundled Ethernet Off-Net Transport Speeds (Section 1.2.2.8.6)	
NWN Managed Local Area Network (MLAN) Services (Section 1.2.3.3)	
NWN Fully Managed Telepresence Solutions Services (Section 1.2.3.3)	
<b>Objective (s):</b> 15 Minutes	
<b>Rights and Remedies</b>	<b>Per Occurrence:</b> Customer will receive a credit equal to ten percent (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.
	<b>Monthly Aggregated Measurements:</b> N/A

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*

1.2.9.8.14 Excessive Usage of Site Survivability Network Failure Service (M-S)

<b>SLA Name:</b> Excessive Usage of Site Survivability Network Failure Service											
<b>Definition:</b> The usage of Site Survivability Network Failure Service shall not exceed the objective commitment identified below in a month, per site.											
<b>Measurement Process:</b> The monthly usage duration shall be based on the accumulated total of all service activation events during a given month. A service usage event shall begin from alarm or activation of service and ending when a Site Survivability Network Failure Service resumes to a standby state and no traffic traverses the PSTN on the back-up circuit.											
Objective (s) applied to the following Services:	<p><b>Objective(s):</b></p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #e0f2f1;"> <th style="padding: 5px;">Service</th> <th style="padding: 5px;">Basic (B)</th> <th style="padding: 5px;">Standard (S)</th> <th style="padding: 5px;">Premier (P)</th> <th style="padding: 5px;">Bidder's Objective Commitment (B, S or P)</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Converged VoIP Site Survivability Network Failure</td> <td style="padding: 5px;">240 hours</td> <td style="padding: 5px;">120 hours</td> <td style="padding: 5px;">72 hours</td> <td style="padding: 5px;"><b>P</b></td> </tr> </tbody> </table>	Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)	Converged VoIP Site Survivability Network Failure	240 hours	120 hours	72 hours	<b>P</b>
Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)							
Converged VoIP Site Survivability Network Failure	240 hours	120 hours	72 hours	<b>P</b>							
<b>Rights and Remedies</b>	<p><b>Per Occurrence:</b> N/A</p> <p><b>Monthly Aggregated Measurements:</b> First month the service fails to meet the committed SLA objective shall result in a 15 percent rebate of the TMRC and two (2) Business Days of the ADUC of all usage charges as a result of the activation of the Site Survivability Network Failure Service.</p> <p>The second consecutive month the service fails to meet the committed SLA objective shall result in a 30 percent rebate of TMRC and five (5) Business Days of ADUC of all usage charges as a result of the activation of Site Survivability Network Failure Service.</p> <p>Each additional consecutive month the service fails to meet the Committed SLA objective shall result in a 50 percent rebate of the TMRC, and ten (10) Business Days of the ADUC of all usage charges as a result of the activation of Site Survivability Network Failure Service.</p>										

Bidder understands the Requirement and shall meet or exceed it? Yes X No \_\_\_\_\_

#### 1.2.9.8.15 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  No*

#### 1.2.9.8.16 Proposed Unsolicited Offerings

The Contractor shall provide SLAs as defined throughout SLA Section 1.2.9 (Availability, Catastrophic Outage, Provisioning etc.) for each unsolicited offering determined by the CALNET 3 CMO 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  No*

#### 1.2.9.8.17 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 this Section 1.2.9.8.

*Bidder understands the Requirement and shall meet or exceed it? Yes  No*